



Australian Product Catalogue 2018

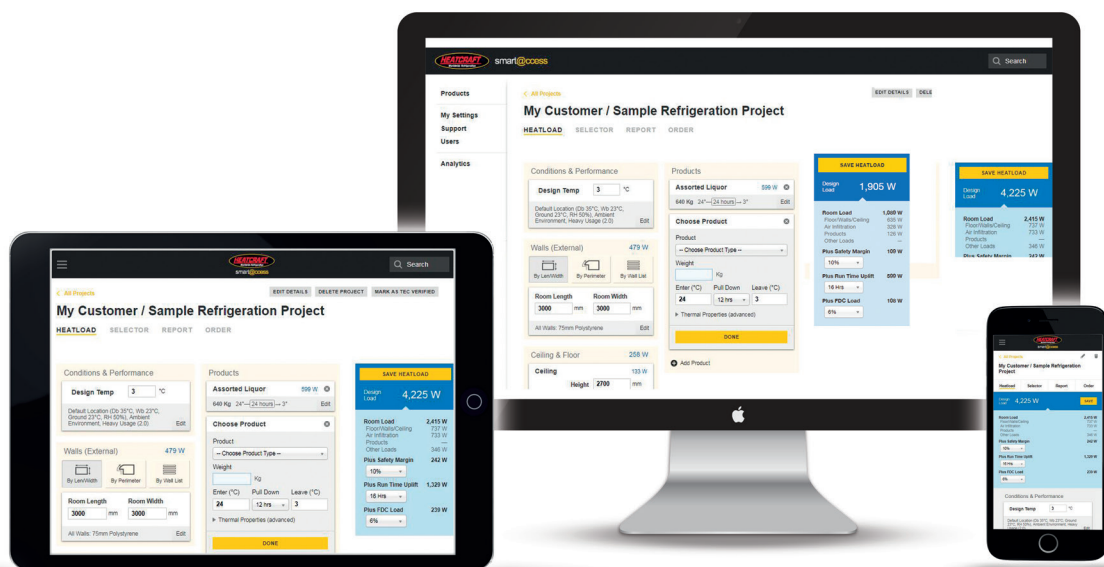


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Refrigeration Equipment

11

- Compressors • Condensing Units and Packaged Systems
- Water Coolers • Ice Machines • Evaporators & Condensers
- Pressure Vessels • Electronic Oil Management



HVAC Equipment

157

- Lennox Air Conditioners • Air Conditioners - Other • Lennox Gas Furnaces
- Lennox Heaters • Lennox Add-On Cooling and Ancillaries • Lennox Stand-Alone
- Outdoor Condensing Units & Stand-Alone Coils • Ancillaries, Humidifiers
- Furnace Guide Charts • Lennox Commercial DX & Chillers



Refrigerants & Lubricants

225

- Refrigerants • Lubricants



Controls

237

- TX Valves and Orifices • Electronic Expansion Valves • TX Valves
- Solenoid Valves and Coils • Pressure Regulating Valves
- Water Regulating Valves • Valves and Fittings • Driers • Sight Glasses
- Reversing Valves • Water Regulating Valves • Water Flow Switches
- Mechanical Controls • Refrigeration Controls • Electronic Controls
- Defrost Timers • Electronic HVAC Controls • HVAC Field Devices



Install

313

- Mini Condensate Pumps • Peristaltic Pumps • Tank Pumps • Evaporative Cooler Pumps • Ice Maker Pumps • PVC Pipe Ducting & Fittings • Drain Hose
- PVC Pressure Pipe and Fittings • Condensate Traps • Mounting Brackets & Blocks • Pipe Support Systems • Fasteners • Ducting & Install Parts
- Air Filtration • Coldroom & Cabinet Hardware • Gauges



Motors, Blades & Fan Decks

353

- Motors • Hub Drive Motors • Motor Brackets & Accessories • Axial Motor/Fan Assemblies • Fan Blades • Fan Blowers • Fan Decks



Copper Tube, Fittings & Insulation

373

- Soft Drawn Copper Tube • Pair Coil • Fire Retardant Pair Coil • Hard Drawn Copper Tube • Capillary Tubing & Service Packs • Brass Fittings • Copper Fittings
- Insulation



Tools

403

- Manifold and Gauge Sets • Hoses and Hose Sets • Leak Detectors • Tube Tools
- Vacuum Pumps & Accessories • Refrigerant Recovery • Electrical Test Equipment • Hand Tools • Service and Support Tools • Tool Bags



Consumables

435

- Welding & Brazing Consumables • Oil & Acid Test Kits • Oil Conversion
- Cleaners • Treatments • Indoor Air Quality • Protectants • Flushing Solvents
- Filler Foam • Leak Detectors • Tapes, Sealants and Adhesives
- General Consumables



Electrical

447

- Contactors, Overloads & Auxiliaries • Compressors Universal Relays & Overloads
- Electrical Ancillaries • Heating Cable • Electrical Cable & Plugs



Coils

455



Engineering

459



Locations/Terms & Conditions

517

Brand		Page	Brand		Page	Brand		Page
Actron / Leasam	Electronic HVAC Controls	296	CPS	Manometers	421	Dixell	CX Prime	275
AFMC	Fan Blowers	368		Refrigerant Recovery Machines	416		Dairy Controller	277
	Fan Decks	369		Riveted Tube Expanders	413		E-Class	278
Airepure	Air Filtration	344-348		Service Tools	425, 428		Encl. / Mounting Boxes	281
Aspen	Condensate Pumps	314		Tool Bags	428		Fitted Controller for Kirby Semi Hermetic Basic Units	86
	Mini Peristaltic Pumps	317		Tube Benders	412		Transport Controllers	280
	Tank Pumps	318		Tube Cutters	410		Universal-R	277
Aqua Cooler	Water Cooler	112		UV Leak Detectors	409, 441		Wing Series	279
Bitzer	Compressor Oil	229		Vacuum Pumps & Accessories	414		XR100 Series	278
Bristol	Hermetic Compressors	22-23		Welding & Brazing Equipment	432		XM600 Series	279
CABAC	Electrical Ancillaries	451-452	CRH	Coolroom Hardware	349-350	Dorin	Open Drive Compressors	69
	Hand Tools	426		Condensate Evaporative Pan Heaters	452		Semi Hermetic Compressors	59-63
Cigweld	Brazing & Welding Accessories	313		Ball Valves	252-253		Semi Hermetic Compressors Basic Units	86-88
Clipsal	Electrical Switches & Plugs	451	Danfoss	Bi-Flow Heatpump Driers	259		Semi Hermetic Compressors Subcritical	71
Coldshield	Air Curtains	172		Blackstar Condensing Units	75-76		Semi Hermetic Compressors Spare Parts	63-67
Copeland (Emerson Climate Technologies)	Scroll Compressors	28-29, 33-35, 40-45		Check Valves	254		Semi Hermetic Condensing Units	82-85
	Scroll Compressor Spare Parts	35-38		Contactors & Overloads	449	Duradrive	HVAC Field Devices	307
	Scroll Compressors Subcritical CO ₂	70		Electronic Controls	288	EBM Papst	Axial Motor/Fan Assemblies	363-365
	Semi Hermetic Stream Compressors & Spares	53-58		Electronic Expansion Valves: ETS	242		Axitop Diffuser	139-140
	Semi Hermetic Compressors & Spares	48-52		Electronic Expansion Valves: AKV	243		Compact Axial Fan Motor	358
CPS	Anemometers & Accessories	420		EVR Coils	247		ESM Programmable Motor & Fan Assembly	358
	Bending Springs	412		Hermetic Compressors	24-26		ESM Programmer	358
	Capillary Tube	272		Hermetic Compressors - Spare Parts	26-27		Evaporative Cooler Pumps	319
	Charging Scales	417		Hermetic Scroll Compressor	46-48		Hyblade EC Fan	139-140
	Clamp Meters	418		Liquid Line Driers	258-259		Q & IQ Motors	358
	Data Loggers	422		Pressure Controls	270-272	Eberle	Controls	300
	Deburring & Reaming Tools	411		Pressure Regulating Valves	249		Electronic HVAC Controls	300
	Digital Manifold Sets	405		Replaceable Cores	263	EFCO	Locks, Latches & Strikes	349
	Electronic Refrigerant Leak Detectors	408-409		Refrigerant Gas Detectors	289	Emailair	Lug Mount for Fasco Series 'H' Frame	360
	Flaring & Swaging Tools	411		Service Thermostats	269	Emerson	CPC Controls	285
	Gauges	405		Sight Glasses	265		Compact Suction Line Filter Drier	262
	Hand Tools	426		Solenoid Valves & Coils: EVR & EVRH	246-247		Electronic Oil Management	154-155
	Hoses & Hose Sets	405-407		Suction Line Burnout Filter Driers	260		Refrigerant Gas Detectors	285
	Manifold Sets	404		Temperature Controls	268		2 to 4 Stage Controllers	280
				TX Valves & Orifices: T2 & TE2	238	Emkarate	Lubricants	229
				TX Valves & Orifices: TUA & TUAЕ	239	Erie	HVAC Field Devices	304-305
				TX Valves: TGE	241	Evolve Group	Floor Mounts	330
				Water Regulating Valves	251		Internal Benders	413

Brand		Page
Fasco	56 Frame Motors	360
	D Series Motors	356
	Evaporative Cooler Pumps	319
	Hub Drive Motors	357
	S Series Motors "H" Frame	360
Fieldpiece	Accessories	424-425
	Charging Scales	417
	Electrical Test Equipment	418-419, 421, 423-425
	Electronic Refrigerant Leak Detectors	408-409
	Manifold & Gauge Sets	405
	Refrigerant Recovery	417
	Vacuum Pumps & Accessories	416
Floyd	Gauges	351
Friga-Bohn	Evaporators MH	118
	Evaporators CO ₂ 3C-Advanced	130
Forta	HVAC Field Devices	304
Gas2Go	Refrigerant	226-228
Gemline	Motor Kit	354
Hanbell	Screw Compressors	68-69
Hanwest	HVAC Control Solution	295
	Water Cooled Condensers	150
Hawkeye	HVAC Field Devices	308
Henry	Ball Valves	252
	Check Valves	254
	EC Motors	357
	Electronic Oil Management	152-153
	Line Valves & Fittings	254-256
	Manifold & Gauge Sets	404
	Oil Separators	144, 147-149
	Sight Glasses	265
	Strainers	264
Hevac	HVAC Control Solutions	296
HLP	Electrical Test Equipment	420
	Remote Monitoring	293
Honeywell	Electronic HVAC Controls	297-298

Brand		Page
Imperial Eastman	Deburring & Reaming Tools	411
	Flaring & Swaging Tools	411
	Gauges	405
	Hand Tools	426
	Hoses & Hose Sets	406
	Manifold & Gauge Sets	404
	Manifold, Gauge & Hoses - Spares & Accessories	407
	Tube Benders	412
	Tube Cutters	410
Inaba Denko	Mounting Blocks	329
	Mounting Blocks & Feet	330
	Mounting Brackets	327-328
	PVC Pipe Ducting	320-322
Inline Brolga	Water Cooled Condensers	151
InterLINK	AC Motors	357
	Bi-Flow Heatpump Driers	259
	Capillary Tube	272
	Copper Tube Dehydrated & Sealed	374
	Demountable Drier Shells	262
	Electronic Controls	286
	Fire Retardant Pair Coil	375
	Hard Drawn Copper	378
	Liquid Line Filter Driers	257
	Pair Coil	374
	Replaceable Cores with Gasket	263
	Sight Glasses	265
	Service Tools	430
	Solenoid Valves	248
	Suction Burnout Filter Driers	260
JAVAC	Electronic Refrigerant Leak Detectors	408
	Refrigerant Recovery Machines	417
	Vacuum Pumps & Accessories	414
JMD	Pipe Support Systems	331
Kembla	Capillary Tube	380
	Conti Coil	400
	Hard Drawn Copper Tube Dehydrated & Sealed	376
	Soft Drawn Copper Tube - Dehydrated & Sealed	374
KFlex	Insulation	396-397
	Insulation Accessories	401

Brand		Page
Kirby	9000 Series Evaporators	120-125
	Cabinet Coolers	117-118
	Centurion Packaged Condensing Unit	105-106
	Commander Blue Condensing Unit	77-81
	Commander Semi Hermetic Condensing Unit	82-85
	Drop-in Packaged Units	108-109
	e-Compact CO ₂ Condensing Unit	107
	Fridgebox Digital Scroll Outdoor Condensing Unit	91
	Fridgebox Series IV Microchannel Outdoor Condensing Unit	92
	Fridgebox Series IV Outdoor Condensing Unit	89-92
	Glycol Evaporators	128
	Heavy Duty Evaporators	131-132
	Hermetic Compressors - Reciprocating	12-18
	Hermetic Compressors - Spare Parts	18-21
	KLC CO ₂ Evaporators	129
	KRC Series Condensers	136
	MXW EC High Efficiency Remote Condensers	143
	Multiwave Cascade CO ₂	109
	NK Heavy Commercial Industrial Unit	132-135
	Nullarbor Condensing Unit	72-74
	Oil Separators	145
	Polar Pack Outdoor Condensing Unit	92-97
	Pressure Vessels	144
	Semi-Hermetic Basic Units	86-88
	TA Evaporators	119
	Titan Outdoor Condensing Unit	100
	Titan with VSD Outdoor Condensing Unit	101-104
	Polar Pack Outdoor Condensing Unit	92-97
	Ultra Low Frost Evaporators	125-128
	WRC High Efficiency Remote Condensers	137-138
	WRC EC Remote Series Condensers	139-140
Kulthorn	D Frame Motors	359
	H Frame Motors	359
	K-Line Motors	355

Brand		Page	Brand		Page	Brand		Page
Lennox	Add-on Cooling & Ancillaries	179	Lennox	Internal Efficiency Multi-Position Gas Furnace Single Stage	175	Ranco	Commercial Thermostats	269
	Ancillaries, Humidifiers & Accessories	183-186		Inverter Cassette Split System	166		Domestic Thermostats	269
	Aqua4 Series Reverse Cycle Heat Recovery Scroll	219-223		Inverter High-Wall Dred Compatible	158		Pressure Controls	270-272
	Aquean Series Reverse Cycle Packaged Unit	206-207		Inverter Multi Split System	164-165		Reversing Valves and Coils	266
	Baltic Series Rooftop Packaged Unit	198-200		Landmark Series Rooftop Packaged Unit	194-195		Temperature Controls	268
	CH33 & CH23 Series Stand Alone Cased Coils	181		LCS Stand Alone Outdoor Condensing Unit	180	Refrigeration Technologies	Coil Cleaners	438
	Commercial Unit & Duct Heaters	119		Merit Series Furnaces Guide Chart	190-191	Regulator System	Electronic HVAC Controls	296
	CR33 Series Downflow Stand Alone Cased Coils	182		Neosys Series Reverse Cycle Scroll Chiller	213-218	Saginomiya	Condenser Fan Speed Controls	274
	C33 Series Upflow Stand Alone Cased Coils	182-183		TSA Stand Alone Condensing Unit	180		Pressure Controls	270-271
	C33 Series Upflow Stand Alone Uncased Coils	183	Magnehelic	Differential Pressure Gauges	348		Reversing Valves	266
	DC Inverter Ducted Splits	160-161		Compressor Oil	229		Temperature Controls	268
	DC Inverter High-Wall Split System	158	Maneurop	Hermetic Compressors	29-31	Sauer mann	Condensate Pumps for Kirby TA Evaporators	119
	DC Inverter Multi Split System	162-163		Hermetic Compressors - Spare Parts	31-33		Mini Condensate Pumps	316
	Ecolean Series Scroll Chiller	208-212		Scroll Compressors	38-39		Peristaltic Pumps	317
	Energence Series Rooftop Packaged Unit	196-198	Manitowoc	Ice Makers	114-115		Tank Pumps	318
	Energy Series Rooftop Packaged Unit	203-205		Accessories	172	Satchwell	HVAC Field Devices	304, 306-309
	Expansion Valve Kit	183	MHI	Inverter Ceiling Suspended System	167		Contactors, Overloads & Auxiliaries	448
	External Gas Furnace Two-Stage	173		Inverter Ceiling Cassette System	167	Schneider	HVAC Field Devices	305-306
	External Gas Furnace with Integral Cooling Coil	174, 176		Inverter Cooling Only High-Wall Split System	171		Cleaners	438
	External Mid Efficiency Gas Furnace ML180 Series	107		Inverter Ducted Split System	168	Silbraz	Lubricants	229-230
	External High Efficiency Gas Furnace - G61E Series	106		Inverter High-Wall Split System	169-170	Sporlan	Filter Driers	259
	Fixed Speed Heat Pump High-Wall Split	159	P&M	Defrost Timers	292		Pressure Regulating Valves	250
	Fixed Speed Heat Pump Window Unit	159-160		Impellers	368		Solenoid Valves	250
	Flexair Series Rooftop Packaged Unit	201-202		Capillary Tube	272		TX Valves	245
	Furnace & Ancillaries Checklist	187-188		Flaring & Swaging Tools	411	Sprecher & Schuh	Contactors & Overloads	450
	G61 Series Furnaces Guide Chart	188-189	Paragon	Tube Benders	412		Indoor Air Quality	440
	Gas Furnace Optional Accessories	176-177		Tube Expanders	413	Sterilecare	Lubricants	229-230
	Internal Multi-Position Gas Furnaces Two Stage	173		Defrost Timers	291-292		HVAC Field Devices	290
			Parker	Check Valves	253	TAC	Data Loggers	422
				TX Valves	245		Oil Separators	146-147
Lennox			Penn	Mechanical Controls	274	Temprite	Water Coolers	111
				Pressure Controls	270		Auto Ranging Insulation Tester	421
				Temperature Controls	268	Tesonic	Air Curtains	172
				Water Regulating Valves	251, 267		Hub Drive Motors	357
			Phasefale	Refrigeration Controls	290	Theben	Time Switches	292
				Refrigerant Gas Detectors	289		Heating Cable	453
			Polyslab	Mounting Slabs	330	Thermon	Fan Blades	370
							Ice Machines	113
						Ziehl Abegg	Axial Motor/Fan Assemblies	362

A	Access Valves	431
	Acid Test Kits	436
	AC Motors	357
	Actuators	307
	Actuators – Damper	302,304, 310
	Add-on Cooling	179
	Air Conditioning	
	- Compressors	34-35, 39-40
	- Ducting	336-343
	- PVC Ducting	320-322
	Air Cooled Chillers	208-223
	Air Curtains	172
	Air Filtration	344-348
	Alarm and Monitoring Systems - XWEB	284
	Alkyl Benzene	230
	Anemometers	420

B	Bag Filters	348
	Ball Valves	252-253
	Barrel Dampers	339
	Batteries	445
	Benders - Tube	412
	Bi-Flow Heatpump Driers	259
	Blades - Fans	
	- Aluminium	367
	- Metal	367
	- Plastic	367
	Blower Wheel - Fans	368
	Blowers - Fans	369
	Bottlechock	230, 432
	Boxes – Return Air & Supply Air	342
	Brackets	
	- Motor	361
	- Mounting	327
	Branch Take-Offs	

	- Double	338
	- Double, Plastic Insulated	337
	- Multi Fit Plastic Y Piece	339
	Brass Fittings	381
	Brazing Equipment	432
	Burnout Driers	260, 262

C	Cabinet Coolers	117-118
	Cabinet Hardware	349-350
	Cable Ties	452
	Cantilever Bracket	328
	Cardboard Filters	344-345
	Cascade CO ₂ /HFC Refrigeration System	109
	Centrifugal Compressor Oil	229
	Charging Hoses & Accessories	406
	Charging Scales	417
	Check Valves	253
	Clamp Meters	418
	Cleaners	
	- Ice Machine	113-116
	Clips	
	- Pipe Positioning	332-333
	CO ₂	228
	CO ₂ Evaporators	129-130
	Coil - Pair	374-375
	Coil Cleaners	438
	Coils - Solenoid	250
	Coolroom Evaporators (9000 Series)	120-125
	Commercial DX & Chillers	194-223
	Compressor Oil	229
	Compressors	
	- Air Conditioning	34-35, 39-40
	- CO ₂	70
	- Hermetic Reciprocating	12-33
	- Open Drive	69
	- Screw	68
	- Scroll	33-48
	- Semi-Hermetic	48-67
	Condensate Pumps – Split System	314-316
	Condenser Cages	330
	Condensers	

	- KRC	136
	- MXW	143
	Condensers	
	- WRC	137-138
	- WRC Axitop	139-141
	Condensing Units	
	- Air Cooled	105-107
	- Drop-In & Packaged	108-110
	- CO ₂	107
	- Indoor Hermetic	72-81
	- Indoor Semi-Hermetic	82-88
	- Outdoor	89-104
	Connectors - Electrical	451
	Consumables - Service	444-445
	Contactors & Overloads	448-450
	Controls	
	- HVAC	295-303
	- Pressure	270-274
	- Refrigeration	275-286
	- Temperature	268-269
	- Timers	291-292
	Cooler Pumps – Evaporative	319
	Coldroom Hardware	349-350
	Copper Spun Filter Driers	264
	Copper Tube	374-380
	Core Cutters	432
	Cores - Replaceable Drier	263
	CPC Controls	285
	Cylinder Storage	432

D	Domestic Damper Actuators	343
	Damper Blades	339
	Dampers - Barrel	339
	Data Loggers	422
	DC Inverter Split System	158-163
	Deburring Tube Tools	411
	Decks - Fan	370
	Defrost Timers	291-292
	Dektites	323
D	Detectors	

- Leak	408-409	End Caps - Copper	394	- Pocket	347
- Liquid Leak	441	Evaporative Cooler		- Pure V	346
- Refrigerant Gas	285, 289	- Pumps	319	- Vee Mesh	346
Differential Pressure Gauges	309	Evaporative Pan Heaters	452	Fin Combs	428
Diffusers	340	Evaporators		Fittings	
Domestic Damper Actuators	343	- CO ₂	129-130	- Brass	381-387
Domestic Thermostats	186	- Coolroom, Heavy Duty	131-135	- Copper	388-395
Door Gasket Material	350	- Coolroom, Low Profile	119	- PVC Drainage Systems	323
Door Guides	349	- Glycol	128	Flaring Tools	411
Drain Hose	323	- Ultra Low Frost	125-127	F Flex Duct	336
Drain Pipe	323	Expanders - Riveted Tube	413	Flex Duct – Fire Rated	336
Drain Trays	183-185	Extended Surface Filters	348	Floor Mount Slabs	330
Drainage – PVC Systems	323	External Gas Furnaces	173-176	Flushing Solvents	441
Driers				Flux & Silver Solder	436
- Bi-Flow Heatpump	259	F Fan Assemblies	362-363	Fridgebox Digital Scroll Outdoor Condensing Unit	91
- Demountable	162-163	Fan Blades		Frigbot	294
- Liquid Line	257-258	- Plastic	367		
- Strainers	264	- Steel Boss / Aluminium Blades	367-368	G Gas Furnace Guide Charts (Lennox)	
- Suction Burnout	260-262	- Universal	367	- Alternate Brands	191
Drill Bits	426	Fan Blowers	369	- G61	188-189
Drive Motors - Hub	357	Fan Decks	370	- ML180	190
Drop-In Packaged Systems	108	Fan Speed Controls	274	Gas Cylinders	227-228
Dual Pressure Controls	271	Fasteners – Screws, Bolts, Anchors	335	Gas Furnaces	173-176
Duct Heater Range	177-178	Fastening Straps	428	Gas Furnace Accessories	176-177
Ducting		Filler Foam	441	Gasket Door	350
- Flex	336	Filter Driers		Gauges	
- Pipe & Fittings	320-322	- Bi-flow	259	- Pressure and Compound	405
Duct Tape	442	- Copper Spun	264	- Rear and Front Flange	351
Dyna Bolts	335	- Heatpump	259	Glycol	228
		- Liquid Line	257-258	Glycol Evaporators	128
E EC Motors	357	- Suction Burnout	260-262	Grease Filters	348
Elbows		Filters		Grilles	341
- Brass	386	- Bag	348		
- Copper	379, 388-390	- Cardboard	344-345	H HACCP Digital Controller	278
Electrical Cable	453	- Flat Panel	345	Hand Cleaner	444
Electrical Test Equipment	418-425	- Grease	348	Hand Tools	426
Electronic Leak Detectors	408	- Media	344	Hand Valves	254
Electronic Expansion Valves	242-244	- Multi Peak	348	Hard Drawn Copper – Dehydrated & Sealed	376-378
Eliminators – Vibration	257	- Periframe	346	Hardware	349
Enclosures / Mounting Boxes	281	- Pleated Service	345	Heat Shrink Tubing	452

Heating Cable	453
Heatpump - Bi-Flow Driers	259
Heavy Duty Coolroom Evaporators	131-135
Hermetic Compressors	
- Reciprocating	12-33
- Scroll	33-48
- Spare Parts	20-21
Hermetic Scroll Compressors	46
Air Conditioning	
High Efficiency Gas Furnace	173-174
H Frame Motors	359-360
H Hinges	349
Hi-Wall Split Systems	158-172
Hoses, Charging & Accessories	406
HRC Fuses	451
Hub Drive Motors	355-357
Humidifier (Lennox)	183-186
HVAC Field Devices	304-311
HVAC Controls	295-303
I Ice Machines	113-116
Ice Machine Cleaners	438
Ice Maker Pumps	319
In-Line Fans	342
Insulation	
- Conti Coil	400
- Pipe Insulation	397-401
- Sheet	400
- Tapes	401
Indoor Hermetic Condensing Units	72-81
Indoor Semi-Hermetic Condensing Units	82-88
Internal Multi-Position Gas Furnaces	173
Inverter Split Systems	158-171
J Joiners	322, 340
K KRC Remote Condensers	136
L Latches, Locks & Strikes	349
Leak Detection Equipment	
- Electronic & Accessories	408-409

- Liquid Leak Detectors	441
- Refrigerant Gas	285,289
- Ultra Violet & Accessories	409
Line Valves	254-256
Liquid Receivers	150
Lubricants	229-230
M Magnahelic Differential Pressure Gauges & Kits	348
Manifold Spares	289-290
Manometers	421
Mapp Gas	436
Mechanical Timers/Time Clocks	292
Meters	
- Clamp	418
- Digital Stick & Accessories	423
- Multimeters	423
Mid Efficiency Gas Furnace	175-176
Moonshine Universal Dye	441
Motor Brackets & Accessories	361
Motor Protection	451
Motors	
- 42 Frame	359
- 48 Frame	359
- 56 Frame	360
- Compact Axial	358
- D Series	356
- Henry EC	357
- Hub Drive	357
- InterLINK AC	357
- IQ Motors EC	358
- K-Line	355
- Motor Kit	354
- Open Frame	354
- Q Motors	358
- S Series	360
Mounting Brackets – Outdoor	327-328
Mounting Blocks and Feet	329-330
Multimeters	423
Multi-Split Systems	162-166
Multiwave Cascade CO ₂ /HFC Refrigeration System	109
N Neck Adaptors	340
Night Blinds	350

Nitrogen	228
O Oil	229
Oil Test Kits	436
Oxy Acetylene Equipment	432
Oil Conversion	436
O Oil Separators	
- Heavy Duty	144
- Standard	144
- Temprite Coalescent Accessible	144-145
Open Drive Compressor Spares	69
Open Drive Compressors	69
Open Frame Motors	354
Outdoor Condensing Units	89-104
Overloads	448-450
P Packaged Rooftop Units	194-205
Pair Coil	374-375
Pan Heaters	452
Periframe Filters	346
Phasefale Controls	290
Pipe Positioning Clips	332-333
Pipe Support Systems	331-334
Piston Type (Condensate Pumps)	316
Plastic Downjet Diffusers	340
Pleated Service Filters	345
Pocket Filters	347
Polyurethane Foam	441
Portable Lifters	427
Pressure Controls	273
Pressure Regulating Valves	249-250
Pressure Washer	427
Pressure Relief Valves	255
Pressure Switches	273
Pressure Temp Chart	232-233
Pressure Vessels	144
Probes	281
Pumps	
- Condensate	314-316
- Evaporative Cooler	319
- Ice Maker Pumps	319
- Peristaltic	317
- Styruip	430
- Tank	318

PVC Drainage Systems	323	Regulators	428	Strainers	264
PVC Pipe Ducting	320-322	Relays & Overloads	450	Straps – Fastening	428
R Rags	444	Replaceable Cores	263	Strikes	349
Receivers, Liquid	150	Return Air & Supply Air Boxes	342	Strut Piping Systems	331
Recovery Machines	417	R Remote Condensers		Styrup Pumps	430
Reducers	340, 343	- KRC	136	Suction Accumulators – Standard	149
Refrigerant Acid/Oil Test Kits	436	- MXW	143	Suniso Application Guide	230
Refrigerant Gas Detectors	285, 289	- WRC	137-141	Supermarket Pumps	318
Refrigeration Controls	275-286	Remote Monitoring	293-294	Suniso Lubricant	229
- XWEB	284	Reversing Valves	266	Swaging Tools	411
- Cool Mate	283	Riveted Tube Expanders	413		
- CX Prime	275-276	Roller Assemblies	349	T TA Evaporators	119
- Dairy Controller	277	Roof Mount Mounting Brackets	328	Tapes – Duct, Insulation & General	442-444
- Electronic	288	Rooftop Packaged Units	194-205	Tank Pumps	318
- Wing Series	279	Rota Lock Valves	255	Tek Screw	335
- E-Class	278	Rubber Mounting Feet	329	Temperature Controls	286-288
- Fan Speed Control	274, 280			Temperature Monitoring	293-294
- Sensors	285, 303, 309	S Screw Compressors	68	Terminals	451
- Transport	280	Sealants & Heat Transfer Compounds	443	Test Kits, Oil & Acid	436
- Universal-R	277	Semi-Hermetic Compressors	48-67	Thermostats	
- XT100	280	Semi-Hermetic Condensing Units	82-104	- Commercial	268
- XV	280	Sensors		- Domestic	259
- XM600	279	- CO ₂	309	- HVAC Controls	309-311
Refrigerant Recovery Machines	416-417	- HVAC	310	Timers & Spares	291-292
Refrigerants		Service Access Valves	431	Time Switches	292
- CO ₂ (R744)	228	Service Consumables	444-445	Tools Bags & Accessories	428
- Glycol	228	Service Packs - Copper Tube	380	Tools	
- H34ME	126	Service Thermometers	425	- Fin Combs	428
- R123	227	Service Wrenches	428	- Hand Tools	426
- R1234	227	Sheet, Insulation	400	- Service Tools & Equipment	428-430
- R134a	228	Shelving Strips	350	- Torque Wrench	426
- R22	227	Sight Glasses	265	- Tube	410-413
- R23	228	Silicone	443	- Wrenches	426
- R32	227	Silver Solder	436	Torches	430, 445
- R404A	227	Slabs – Mounting	330	Transformers	282, 285
- R407C	228	Soft Drawn Copper – Dehydrated & Sealed	374	Transitions	183-185
- R407F	228	Solenoid Valves	246-248	Transport Controllers	280
- R409A	227	Solest Application Guide	230	Tube Benders	412
- R410A	227	Solest-Polyolester (POE)	229	Tube Cutters & Spares	410
- R422D	227	S Square Diffusers	340	T TX Valves	238-241
- R438A	227	Standard Efficiency Gas Furnace	175-177		
- R507	227	Starters	341		
- R717	228				

U Ultra Low Frost Evaporators	125-128
Universal Controllers	298
UV Leak Detectors	441

V Vacuum Pump Oil	229
Vacuum Pumps & Accessories	414
Valves	
- Ball	252-253
- Bullet	431
- Capped Line	256
- Check	253
- Electronic Expansion	242-244
- Hand	254
- Line	254
- Pressure Relief	255
- Pressure Regulating	249-250
- Reversing	266
- Rotalock	256
- Solenoid	246, 248
- TX	238-241
- TX Electronic	242-244
- Water Regulating	251
- Zone	295
- Zone, Actuators	302
Vee Mesh Filters	346
Vibration Eliminators	257

W Wall Anchors	335
Wall Mount Mounting Brackets	327-328
Washable Panel Filters	345
Water Cooled Condensers	150-151
Water Cooled Packaged Units	206-207
Water Coolers	111
Water Flow Switches	267
Water Regulating Valves	251, 267
Water Treatment Chemicals	440
Welding & Brazing Equipment	432

Welding and Brazing Consumables	436
Window Unit Air Conditioners	159-160
Wing Series Electronic Controls	279
Wire Support Systems	335
Workplace Safety	333
W WRC Remote Condensers	137-141
Wrenches	
- Service	428
- Torque	426

Refrigeration Equipment



Compressors



HERMETIC COMPRESSORS - RECIPROCATING

KIRBY HERMETIC COMPRESSORS - R134a

Part Number	Nominal HP	Displ. cc/rev	Nominal Capacity: R134a (watts)								Motor Type
			Evaporating Temperature: °C								
			-30	-23.3	-20	-15	-10	-6.7	0	7.2	

Domestic R134a LBP Compressors (POE Oil)

AZ33LY-1KS	1/12	3.28	54	67	94	126	168				RSIR 240V/50Hz
AZ36LY-1KS	1/10	3.59	57	79	101	134	179				RSIR 240V/50Hz
AZ40LY-1KS	1/8	4.00	66	93	111	142	185				RSIR 240V/50Hz
AZ56LY-1KS	1/6	5.59	83	116	140	182	238				RSIR 240V/50Hz
AEV6LY-1KS	1/5	5.99	89	130	150	195	255				RSIR 240V/50Hz
AEV7LY-1KS	1/5	6.91	108	158	182	236	309				RSIR 240V/50Hz
AEV8LY-1KS	1/4	8.12	124	186	209	272	356				RSIR 240V/50Hz
AEV9LY-1KS	1/4	9.42	147	220	248	322	421				RSIR 240V/50Hz

Commercial R134a L/M/HBP Compressors (POE Oil)

BA8LMY-1KS	1/5	7.57	85	135	182	240	310	330	500		RSIR 240V/50Hz
BA9MHY-1KS	1/4	8.86			210	270	350	370	570	820	RSIR 240V/50Hz
BA12LMY-1KS	1/4	12.04	150	225	300	390	480	525	730		CSIR 240V/50Hz
BA14LMY-1KS	1/3	14.14	175	270	340	445	560	645	860		CSIR 240V/50Hz
BA16LMY-1KS	3/8	16.08	220	310	420	540	680	765	1030		CSIR 240V/50Hz
BA16LZ-1KS	3/8	16.08	225	355	430	550	695	780	1055		CSIR 240V/50Hz
BA18LZ-1KS	1/2	18.00	280	410	480	600	750	870	1140		CSIR 240V/50Hz
WJ22LZ-1C	5/8	21.50			420	620	820	1010	1430	1980	CSIR 240V/50Hz
WJ26LZ-3C	3/4	26.70			510	730	1010	1250	1740	2440	CSIR 240V/50Hz
WJ31LZ-1C	1	30.50			580	830	1140	1420	2040	2830	CSIR 240V/50Hz
AW40LZ-1C	1	39.60			740	1090	1480	1800	2500	3050	CSIR 240V/50Hz
AW43LZ-5C	1	43.10			840	1240	1690	2053	2850	3480	CSIR 240V/50Hz
AW48MHY-3C	1-1/2	48.40			820	1210	1790	2200	3150	4600	CSIR 240V/50Hz
AW48MHY-4C	1-1/2	48.40			820	1210	1790	2200	3150	4600	3 PH 415V/50Hz
AW54LZ-1C*	1	53.50	510	980	1200	1690	2200	2620	3610	4500	CSIR 240V/50Hz
AV79MHY-1C	2	79.00			1180	1770	2530	3100	5000	6800	CSIR 240V/50Hz
AV79MHY-2C	2	79.00			1180	1770	2530	3100	5000	6800	3 PH 415V/50Hz

KIRBY HERMETIC COMPRESSORS - R134a (CONT'D)

Part Number	Optional External Crankcase Heater	Motor Current RLA	Cooling	Oil Charge (cm³)	O/A Height (mm)	Net Weight (kg)	Service Connections (inches)	
							Suct.	Disch.

Domestic R134a LBP Compressors (POE Oil)

AZ33LY-1KS	-	0.50	AC	400	168	6.8	5/16 ST	1/4 ST
AZ36LY-1KS	-	0.60	AC	400	155	6.4	5/16 ST	1/4 ST
AZ40LY-1KS	-	0.80	AC	300	155	6.4	5/16 ST	1/4 ST
AZ56LY-1KS	-	1.00	AC	300	168	6.8	5/16 ST	1/4 ST
AEV6LY-1KS	-	1.60	AC	296	189	9.4	5/16 ST	1/4 ST
AEV7LY-1KS	-	1.00	AC	485	189	9.6	5/16 ST	1/4 ST
AEV8LY-1KS	-	1.20	AC	485	189	9.8	5/16 ST	1/4 ST
AEV9LY-1KS	-	1.40	OC	485	189	10.2	5/16 ST	1/4 ST

KIRBY HERMETIC COMPRESSORS - R134a (CONT'D)

Part Number	Optional External Crankcase Heater	Motor Current RLA	Cooling	Oil Charge cm ³	O/A Height (mm)	Net Weight (kg)	Service Connections (inches)	
							Suct.	Disch.
Commercial R134a L/M/HBP Compressors (POE Oil)								
BA8LMY-1KS	018-0096-00 (40W-240V)	1.50	FC	490	193	10.1	5/16 ST	1/4 ST
BA9MHY-1KS	018-0096-00 (40W-240V)	2.10	FC	417	193	10.3	5/16 ST	1/4 ST
BA12LMY-1KS	018-0096-00 (40W-240V)	2.50	FC	417	203	11.7	3/8 ST	1/4 ST
BA14LMY-1KS	018-0096-00 (40W-240V)	2.80	FC	417	215	12.7	3/8 ST	1/4 ST
BA16LMY-1KS	018-0096-00 (40W-240V)	2.50	FC	417	215	13.1	3/8 ST	1/4 ST
BA16LZ-1KS	018-0096-00 (40W-240V)	2.40	FC	417	214	13.0	3/8 ST	1/4 ST
BA18LZ-1KS	018-0096-00 (40W-240V)	2.90	FC	417	215	13.6	3/8 ST	1/4 ST
WJ22LZ-1C	02-5452-00 (40W-240V)	2.70	FC	950	275	23.5	1/2 SV	3/8 ST
WJ26LZ-3C	02-5452-00 (40W-240V)	4.20	FC	950	275	23.5	1/2 SV	3/8 ST
WJ31LZ-1C	02-5452-00 (40W-240V)	4.20	FC	950	275	24.0	5/8 SV	3/8 ST
AW40LZ-1C	02-5452-00 (40W-240V)	4.50	FC	950	305	27.0	5/8 SV	3/8 ST
AW43LZ-5C	02-5452-00 (40W-240V)	6.90	FC	950	305	27.0	5/8 SV	3/8 ST
AW48MHY-3C	02-5452-00 (40W-240V)	9.20	FC	946	305	28.9	7/8 SV	1/2 SV
AW48MHY-4C	02-5452-00 (40W-240V)	3.20	FC	946	305	28.9	7/8 SV	1/2 SV
AW54LZ-1C*	02-5452-00 (40W-240V)	7.90	FC	946	305	32.6	5/8 SV	3/8 ST
AV79MHY-1C	Included 50W	12.50	FC	1597	391	36.0	7/8 SV	1/2 SV
AV79MHY-2C	Included 50W	4.2/PH	FC	1597	391	36.0	7/8 SV	1/2 SV

*AW54LZ-1C - Use without run capacitor on LBP applications

**KIRBY HERMETIC COMPRESSORS - R134a - MINERAL OIL**

Part Number	Nominal HP	Displ. cc/rev	Nominal Capacity: R134a (watts)							Rating Point R12	
			Evaporating Temperature: °C								
			-40	-30	-25	-20	-15	-10	-5	-23.3	-6.7

Domestic Replacement LBP Compressors with Mineral Oil **

AE1411A-7KS**	1/4	14.14	200	425	570	735				338	
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Commercial Replacement L/M/HBP Compressors with Mineral Oil **

AE10LMA-1KS**	1/4	10.25	110	135	210	415	525	655	805	250	480
AGA4534AXG**	2-3/4	100.70		1520	2400	3400	4500	5100	7200		5300

KIRBY HERMETIC COMPRESSORS - R134a - MINERAL OIL (CONT'D)

Part Number	Optional External Crankcase Heater	Motor Type	Motor Current RLA	Cooling	Oil Charge (cm ³)	O/A Height (mm)	Net Weight (kg)	Service Connections (inches)	
								Suct.	Disch.

Domestic Replacement LBP Compressors with Mineral Oil **

AE1411A-7KS**	02-5452-00 (40 W-240 V)	RSIR	2.20	OC	600	202	11.2	5/16 ST	1/4 ST
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Commercial Replacement L/M/HBP Compressors with Mineral Oil **

AE10LMA-1KS**	02-5452-00 (40 W-240 V)	CSIR	2.50	OC	505	189	9.5	5/16 ST	1/4 ST
AGA4534AXG**	Included 50 W	3 PH	5.5/PH	AC	1955	412	42.6	1 1/8 SV	1/2 ST

**Mineral Oil Compressors are not suitable for R134a refrigerants.
Oil change required to POE32.



HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)

STANDARD CONDITIONS - NOMINAL CAPACITIES ARE ESTABLISHED THROUGH ASHRAE-T STANDARD CONDITIONS

Application	Evaporating	Ambient	Cond	Liquid Entering
	Temp °C	Temp °C	Temp °C	Temp °C
Low Suction Temp	-23.3	32	55	32
Med Suction Temp	-6.7	35	55	47
High Suction Temp	7.2	35	55	47
A/C Suction Temp	7.2	35	55	47

1 Phase Motor = 220/240 V / 50 Hz.
3 Phase Motor = 380/5420 V / 50 Hz.

Features:

- All hermetic compressors are offered as service packs and include feet mounting kit, electrical components and rotalock service valve where nominated.
- Compressor auxiliary cooling requirements.

AC = Ambient Air Cooling

FC = Fan Air Cooling

OC = Oil Cooling

- Compressor service port connection types vary for different model.

SV = Solder connection Rotalock Valve

ST = Solder connection Tube

- Low start torque compressors (i.e. with RSIR motors) require capillary refrigerant control.
- High start torque compressors (i.e. with CSIR, CSR or 3 Phase motors) can be used with capillary or TX Valve control
- Crankcase Heaters available, please order separately

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative.

KIRBY HERMETIC COMPRESSORS - R404A / R507

Part Number	Nominal HP	Displ. cc/rev	Nominal Capacity: R404A (watts)								Motor Type
			Evaporating Temperature: °C								
			-40	-35	-30	-25	-20	-15	-10	-5	

BA Commercial Series LBP Compressors (POE Oil) 240 V / 1 Phase

BA8MG-1KS	1/4	7.57		137	210	295	385	490			CSIR 240V/50Hz
BA12LMY-1KS	1/3	12.04		190	310	440	585	745			CSIR 240V/50Hz
BA16LMY-1KS	3/8	16.08		330	465	620	810	1025			CSIR 240V/50Hz
BA16LZ-1KS	3/8	16.08		335	475	635	830	1050			CSIR 240V/50Hz
BA18LZ-1KS	1/2	18.00		400	550	720	930	1180			CSIR 240V/50Hz

WJ Commercial Series LBP Compressors (POE Oil) 240 V / 1 Phase

WJ22LZ-1C	3/4	21.50		360	560	810	1130	1490			CSIR 240V/50Hz
WJ26LZ-3C	7/8	26.75		420	670	990	1390	1850			CSIR 240V/50Hz
WJ31LZ-1C	1	30.50		530	820	1180	1610	2130			CSIR 240V/50Hz

AW Commercial Series LBP Compressors (POE Oil) 240 V / 1 Phase

AW40LZ-1C	1	39.60		590	900	1325	1890	2590			CSIR 240V/50Hz
AW43LZ-5C	1-1/4	43.10		680	1030	1540	2160	2890			CSIR 240V/50Hz
AW54LZ-1C	1-1/2	53.50		780	1250	1920	2760	3660			CSIR 240V/50Hz

AV Commercial Series LBP Compressors (POE Oil) 415 V / 3 Phase

AVA2490ZXG	2	73		900	1600	2400	3350	4500			3 PH 415V/50Hz
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KIRBY HERMETIC COMPRESSORS - R404A / R507 (CONT'D)

Part Number	Optional External Crankcase Heater	Motor Current RLA	Cooling	Oil Charge (cm ³)	O/A Height (mm)	Nett Weight (kg)	Service Connections (inches)	
							Suct.	Disch.

BA Commercial Series LBP Compressors (POE Oil) 240V / 1 Phase

BA8MG-1KS	018-0096-00 (40 W - 240 V)	2.60	FC	417	193	10.7	1/4 ST	3/16 ST
BA12LMY-1KS	018-0096-00 (40 W - 240 V)	2.50	FC	417	203	11.7	3/8 ST	1/4 ST
BA16LMY-1KS	018-0096-00 (40 W - 240 V)	2.50	FC	417	215	13.1	3/8 ST	1/4 ST
BA16LZ-1KS	018-0096-00 (40 W - 240 V)	2.40	FC	417	214	13.0	3/8 ST	1/4 ST
BA18LZ-1KS	018-0096-00 (40 W - 240 V)	2.90	FC	417	215	13.6	3/8 ST	1/4 ST

KIRBY HERMETIC COMPRESSORS - R404A / R507 (CONT'D)

Part Number	Optional External Crankcase Heater	Motor Current RLA	Cooling	Oil Charge (cm ³)	O/A Height (mm)	Nett Weight (kg)	Service Connections (inches)	
							Suct.	Disch.
WJ Commercial Series LBP Compressors (POE Oil) 240V / 1 Phase								
WJ22LZ-1C	02-5452-00 (40W-240V)	2.70	FC	850	266	22.6	1/2 ST	3/8 ST
WJ26LZ-3C	02-5452-00 (40W-240V)	4.20	FC	850	266	23.7	1/2 ST	3/8 ST
WJ31LZ-1C	02-5452-00 (40W-240V)	4.20	FC	850	266	24.0	1/2 ST	3/8 ST
AW Commercial Series LBP Compressors (POE Oil) 240V / 1 Phase								
AW40LZ-1C	02-5452-00 (40W-240V)	4.50	FC	946	305	32.6	5/8 SV	5/16 ST
AW43LZ-5C	02-5452-00 (40W-240V)	6.90	FC	946	305	32.6	5/8 SV	5/16 ST
AW54LZ-1C	02-5452-00 (40W-240V)	7.90	FC	946	340	29.8	5/8 SV	5/16 ST
AV Commercial Series LBP Compressors (POE Oil) 415V / 3 Phase								
AVA2490ZXG	Included 50 W	3.6/PH	FC	1600	500	35.0	7/8 SV	1/2 SV

**KIRBY HERMETIC COMPRESSORS - R22 / R407C**

Part Number	Nominal HP	Displ. cc/ rev	Nominal Capacity: R407C (watts)							
			Evaporating Temperature: °C							
			-25	-20	-15	-10	-5	0	5	10
BA Commercial Series - 240V / 1 PHASE M/HBP (POE Oil)										
BA5MHG-1KS	1/5	4.50			225	275	340	415	505	610
BA6MHG-1KS	1/4	5.5			270	325	407	490	590	705
BA8MG-1KS	1/4	7.6			360	465	580	720	870	
BA9MG-1KS	1/3	8.9			460	565	705	860	1030	
BA12MG-1KS	3/8	12.0			665	820	1020	1220	1440	
BA14MG-1KS	1/2	14.1			790	995	1230	1490	1800	
BA16MG-4KS	3/4	16.1			880	1120	1390	1700	2060	
BA18MG-1KS	7/8	18.0			980	1230	1530	1870	2250	
WJ Commercial Series - 240V / 1 PHASE M/HBP (POE Oil)										
WJ22MHG-1C	1	21.5			1180	1530	1920	2390	2920	3540
WJ26MHG-3C	1-1/4	26.8			1520	1950	2430	2960	3540	4170
WJ31MHG-1C	1-1/2	30.5			1650	2130	2680	3300	4000	4770
AW Commercial Series - 240V / 1 PHASE M/HBP (POE Oil)										
AW38MG-1C	1-1/2	37.5			1685	2239	2860	3620	4519	
AW43MHG-1C	2	43.1			2097	2799	3600	4469	5490	6760
AW48MHG-1C	2-1/2	48.4			2360	3150	3980	4990	6210	7717
AW54MHG-3C	2-1/2	53.5			2612	3540	4508	5710	7109	8710
AW Commercial Series - 415V / 3 PHASE M/HBP (POE Oil)										
AW43MHG-4C	2	43.1			2097	2799	3600	4469	5490	6760
AW48MHG-4C	2-1/4	48.4			2360	3150	3980	4990	6210	7717
AW54MHG-4C	2-1/2	53.5			2612	3540	4508	5710	7109	8710
AV Commercial Series - 415V / 3 PHASE M/HBP (POE Oil)										
AV67MHG-2C	2-3/4	67			2500	3660	5000	6570	8360	10370
AV73MHG-2C	3	73.3			2920	4170	5560	7340	9200	11340
AV91MHG-2C	4-1/2	91.0			4260	5750	7500	9740	12000	14470
AV92MHG-2C	5	91.0			4440	5930	7700	9990	12350	14990
AG Commercial Series - 415V / 3 PHASE M/HBP (POE Oil)										
AG125MHG-2C	5-3/4	125.0			4750	6450	8650	11370	14600	18340
AG135MHG-2C	6	135.0			5140	6970	9350	12290	15780	19830





HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)

KIRBY HERMETIC COMPRESSORS - R22 / R407C

Part Number	Motor Type	Optional External Crankcase Heater	Motor Current RLA	Cooling	Oil Charge (cm ³)	O/A Height (mm)	Nett Weight (kg)	Service Connections (inches)	
								Suct.	Disch.

BA Commercial Series - 240V / 1 PHASE M/HBP (POE Oil)

BA5MHG-1KS	RSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	1.70	FC	417	193	10.1	5/16 ST	1/4 ST
BA6MHG-1KS	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	2.20	FC	417	193	10.7	5/16 ST	1/4 ST
BA8MG-1KS	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	2.50	FC	417	193	10.7	1/4 ST	3/16 ST
BA9MG-1KS	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	2.90	FC	417	205	11.8	3/8 ST	1/4 ST
BA12MG-1KS	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	2.50	FC	417	215	12.5	3/8 ST	1/4 ST
BA14MG-1KS	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	2.90	FC	417	215	13.1	3/8 ST	1/4 ST
BA16MG-4KS	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	3.50	FC	417	215	13.1	3/8 ST	1/4 ST
BA18MG-1KS	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	3.80	FC	417	215	13.8	3/8 ST	1/4 ST

WJ Commercial Series - 240V / 1 PHASE M/HBP (POE Oil)

WJ22MHG-1C	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	5.3	FC	950	275	23.5	1/2 SV	3/8 ST
WJ26MHG-3C	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	6.7	FC	950	275	23.5	1/2 SV	3/8 ST
WJ31MHG-1C	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	6.5	FC	950	275	24.0	5/8 SV	3/8 ST

AW Commercial Series - 240V / 1 PHASE M/HBP (POE Oil)

AW38MG-1C	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	7.90	FC	950	310	28.2	5/8 SV	3/8 ST
AW43MHG-1C	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	9.6	FC	950	340	28.2	5/8 SV	3/8 ST
AW48MHG-1C	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	11.2	FC	950	340	29.8	5/8 SV	3/8 ST
AW54MHG-3C	CSIR 240V/50Hz	018-0096-00 (40 W - 240 V)	12.5	FC	950	340	29.8	5/8 SV	3/8 ST

AW Commercial Series - 415V / 3 PHASE M/HBP (POE Oil)

AW43MHG-4C	3 PH 415V/50Hz	018-0096-00 (40 W - 240 V)	3.4/PH	FC	950	340	28.2	5/8 SV	3/8 ST
AW48MHG-4C	3 PH 415V/50Hz	018-0096-00 (40 W - 240 V)	4.2/PH	FC	950	340	29.8	5/8 SV	3/8 ST
AW54MHG-4C	3 PH 415V/50Hz	018-0096-00 (40 W - 240 V)	4.2/PH	FC	950	340	29.8	5/8 SV	3/8 ST

AV Commercial Series - 415V / 3 PHASE M/HBP (POE Oil)

AV67MHG-2C	3 PH 415V/50Hz	Included 50 W	5.2/PH	FC	1600	500	37.7	7/8 SV	1/2 SV
AV73MHG-2C	3 PH 415V/50Hz	Included 50 W	5.8/PH	FC	1600	500	37.7	7/8 SV	1/2 SV
AV91MHG-2C	3 PH 415V/50Hz	Included 50 W	7.8/PH	FC	1600	500	40.0	7/8 SV	1/2 SV
AV92MHG-2C	3 PH 415V/50Hz	Included 50 W	7.6/PH	FC	1600	500	40.0	7/8 SV	1/2 SV

AG Commercial Series - 415V / 3 PHASE M/HBP (POE Oil)

AG125MHG-2C	3 PH 415V/50Hz	Included 50 W	9.8/PH	AC	2000	580	52.3	7/8 SV	1/2 SV
AG135MHG-2C	3 PH 415V/50Hz	Included 50 W	10.9/PH	AC	2000	580	47.7	7/8 SV	1/2 SV

STANDARD CONDITIONS - NOMINAL CAPACITIES ARE ESTABLISHED THROUGH ASHRAE-T STANDARD CONDITIONS

Application	Evaporating	Ambient	Cond	Liquid Entering
	Temp °C	Temp °C	Temp °C	Temp °C
Low Suction Temp	-23.3	32	55	32
Med Suction Temp	-6.7	35	55	47
High Suction Temp	7.2	35	55	47
A/C Suction Temp	7.2	35	55	47

1 Phase Motor = 220/240V / 50Hz.

3 Phase Motor = 380/5420V / 50Hz.

Features:

- All hermetic compressors are offered as service packs and include feet mounting kit, electrical components and rotalock service valve where nominated.
- Compressor auxiliary cooling requirements.
 - AC = Ambient Air Cooling
 - FC = Fan Air Cooling
 - OC = Oil Cooling
- Compressor service port connection types vary for different model.
 - SV = Solder connection Rotalock Valve

ST = Solder connection Tube

- Low start torque compressors (i.e. with RSIR motors) require capillary refrigerant control.
- High start torque compressors (i.e. with CSIR, CSR or 3 Phase motors) can be used with capillary or TX Valve control
- Crankcase Heaters available, please order separately

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative.

KIRBY HERMETIC COMPRESSORS - R22 / R407C AIR CONDITIONING

Part Number	Nominal HP	Displ. cc/rev	Power Input (watts)	Nominal Capacity: R22 (watts)					Rating Point	Motor Type
				Evaporating Temperature: °C						
				-10	-5	0	5	10	7.2	

AK Series 240V / 1 PHASE M/HBP

AKA5512EXC	1	22.3	1175	1300	1680	2110	2670	3310	2930	PSC
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AJ Series 240V / 1 PHASE M/HBP

AJB5515EXC	1-1/4	26.1	1610	1680	2175	2730	3340	4020	3670	PSC
AJA5518EXC	1-1/2	32.7	1980	2200	2760	3420	4190	5010	4510	PSC
AJA5519EXC	1-1/2	34.2	2110	2300	2860	3570	4380	5270	4720	PSC

AW Series 240V / 1 PHASE M/HBP

AW5522EK-3C	1-3/4	39.6	1900	2240	2980	3860	4880	6000	5330	PSC
AW5524EK-3C	2	43.1	2100	2530	3380	4360	5540	6790	6050	PSC
AW5528EK-3C	2-1/4	48.4	2440	2930	3870	4980	6280	7650	6830	PSC

AW Series 415V / 3 PHASE M/HBP

AW5532EK-3C	2-1/2	53.5	2700	3320	4340	5580	7040	8560	7630	PSC
AW5528EXG-4C	2-1/4	48.4	2440	2930	3870	4980	6280	7650	6830	3 PH

AV Series M/HBP (EXC = 240V / 1 PHASE, EXG = 415V / 3 PHASE)

AVA5535EXG	2-3/4	62.4	2900	3260	4440	5870	7675	9600	8590	3 PH
AVA5538EXC	3	67	3015	3570	4855	6400	8380	10480	9380	PSC
AVA5538EXG	3	67	3015	3570	4855	6400	8380	10480	9380	3 PH
AVA5542EXC	3-1/2	73.3	3505	3950	5370	7090	9270	11600	10380	PSC
AVA5542EXG	3-1/3	73.3	3505	3950	5370	7090	9270	11600	10380	3 PH
AVA5546EXC	4	79	3830	4320	5880	7760	10150	12700	11360	PSC
AVA5546EXG	5	79	3830	4320	5880	7760	10150	12700	11360	3 PH
AVA5555EXG	4-1/2	91	4500	5100	6950	9170	12000	15010	13430	3 PH
AVB5558EXG	4-3/4	91	4640	5220	7100	9370	12260	15340	13720	3 PH

AG Series 415V / 3 PHASE M/HBP

AGC5561EXG	5	112.5	5250	6135	8165	10590	13600	16800	14880	3 PH
AGC5568EXG	5-3/4	124.5	6040	6970	9180	11860	15250	18880	17800	3 PH
AG125MHG-2C	5-3/4	125.0	5970	6450	8650	11370	14600	18340	16240	3 PH
AG135MHG-2C	6	135.0	6290	6970	9350	12290	15780	19830	17560	3 PH
AGA5573EXG	6	135.1	6250	7500	9800	12630	16300	20230	17680	3 PH

KIRBY HERMETIC COMPRESSORS - R22 / R407C AIR CONDITIONING (CONT'D)

Part Number	Motor Current RLA	Optional External Crankcase Heater	Cooling	Oil Type	Oil Charge (cm ³)	O/A Height (mm)	Net Weight (kg)	Service Connections (inches)	
								Suct.	Disch.

AK Series 240V / 1 PHASE M/HBP

AKA5512EXC	6.0	018-0091-18 (70 W - 240 V)	FC	1 or 2	503	247	18	3/8 ST	1/4 ST
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AJ Series 240V / 1 PHASE M/HBP

AJB5515EXC	8.0	018-0091-18 (70 W - 240 V)	FC	1 or 2	768	272	23	1/2 ST	5/16 ST
AJA5518EXC	9.4	018-0091-18 (70 W - 240 V)	FC	1 or 2	768	283	23	1/2 ST	5/16 ST
AJA5519EXC	10.9	018-0091-18 (70 W - 240 V)	FC	1 or 2	768	283	23	1/2 ST	5/16 ST

AW Series 240V / 1 PHASE M/HBP

AW5522EK-3C	8.5	018-0091-18 (70 W - 240 V)	FC	1	946	322	28	3/4 ST	3/8 ST
AW5524EK-3C	9.7	018-0091-18 (70 W - 240 V)	FC	1	946	322	28	3/4 ST	3/8 ST
AW5528EK-3C	11.3	018-0091-18 (70 W - 240 V)	FC	1	946	322	30	3/4 ST	3/8 ST

AW Series 415V / 3 PHASE M/HBP

AW5532EK-3C	13.6	Included 50 W	FC	1	946	322	30	3/4 ST	3/8 ST
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HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)

KIRBY HERMETIC COMPRESSORS - R22 / R407C AIR CONDITIONING (CONT'D)

Part Number	Motor Current RLA	Optional External Crankcase Heater	Cooling	Oil Type	Oil Charge (cm ³)	O/A Height (mm)	Net Weight (kg)	Service Connections (inches)	
								Suct.	Disch.

AW Series 415V / 3 PHASE M/HBP (Cont'd)

AVA5535EXG	4.76	Included 50 W	FC	1 or 2	1597	388	36	7/8 ST	1/2 ST
AVA5538EXC	14.6	018-0091-18 (70 W - 240 V)	FC	1 or 2	1597	391	38	7/8 ST	1/2 ST
AVA5538EXG	5.3	Included 50 W	FC	1 or 2	1597	391	38	7/8 ST	1/2 ST
AVA5542EXC	15.6	018-0091-18 (70 W - 240 V)	FC	1 or 2	1597	370	38	7/8 ST	1/2 ST
AVA5542EXG	5.96	Included 50 W	FC	1 or 2	1597	370	38	7/8 ST	1/2 ST
AVA5546EXC	18.5	018-0091-18 (70 W - 240 V)	FC	1 or 2	1597	370	38	7/8 ST	1/2 ST
AVA5546EXG	6.6	Included 50 W	FC	1 or 2	1597	370	38	7/8 ST	1/2 ST
AVA5555EXG	7.8	Included 50 W	FC	1 or 2	1597	391	40	7/8 ST	1/2 ST
AVB5558EXG	7.6	Included 50 W	FC	1 or 2	1597	391	40	7/8 ST	1/2 ST

AG Series 415V / 3 PHASE M/HBP

AGC5561EXG	8.8	Included 50 W	AC	3	1922	399	41	7/8 ST	1/2 ST
AGC5568EXG	9.8	Included 50 W	AC	3	1922	412	41	7/8 ST	1/2 ST
AG125MHG-2C	9.8	Included 50 W	AC	4	2000	580	52.3	7/8 SV	1/2 SV
AG135MHG-2C	10.9	Included 50 W	AC	4	2000	580	47.7	7/8 SV	1/2 SV
AGA5573EXG	10.9	Included 50 W	AC	3	1922	412	47	7/8 ST	1/2 ST

Oil Type - Legend

*Oil Type 1 is a Mineral oil

*Oil Type 2 is a Synthetic oil

*Oil Type 3 is a Alkyl Benzene (AB) oil

*Oil Type 4 is a Polyol Ester (POE) oil

EXC Designates 1 Phase Motor = 220/240 V / 50 Hz

EXG Designates 3 Phase Motor = 380/5420 V / 50 Hz

STANDARD CONDITIONS

Application	Ambient Temp °C	Condensing Temp °C	Liquid Entering Temp °C	Return Vapour Temp °C	Standard
Air Conditioning	35	55	47	35	ARI

Features:

- All hermetic compressors are offered as service packs and include feet mounting kit, electrical components and rotalock service valve where nominated.
- Compressor auxiliary cooling requirements.
 - AC = Ambient Air Cooling
 - FC = Fan Air Cooling
 - OC = Oil Cooling
- Compressor service port connection types vary for different model.
 - SV = Solder connection Rotalock Valve

ST = Solder connection Tube

- Low start torque compressors (i.e. with RSIR motors) require capillary refrigerant control.
- High start torque compressors (i.e. with CSIR, CSR or 3 Phase motors) can be used with capillary or TX Valve control

** Crankcase Heaters available please order separately

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative.

KIRBY HERMETIC COMPRESSOR - SPARE PARTS

Compressor Model	Phase	Volts/Hz	Overload P/No.	Relay P/No.	Start Capacitor	
					P/No.	MFD
AE10LMA-1KS	1	240V/50Hz	KME660-9/C	KME684-2	92A047B330BD4X	43-52 µF 330 VAC.
AE1411A-7KS	1	240V/50Hz	KME660-11/C	KME680-16		
AEV6LY-1KS	1	240V/50Hz	KME660-34/C	KME680-3		
AEV7LY-1KS	1	240V/50Hz	KME 660-7/C	KME 680-21		
AEV8LY-1KS	1	240V/50Hz	KME660-7/C	KME680-10		
AEV9LY-1KS	1	240V/50Hz	KME671-4/C	KME680-20		
AG125MHG-2C	3	415V/50Hz	Internal			
AG135MHG-2C	3	415V/50Hz	Internal			
AGA4534AXG	3	415V/50Hz	Internal			
AGA5573EXG	3	415V/50Hz	Internal			
AGC5561EXG	3	415V/50Hz	Internal			
AGC5568EXG	3	415V/50Hz	Internal			
AJA5518EXC	1	240V/50Hz	83726			
AJA5519EXC	1	240V/50Hz	8300CSTB14			

KIRBY HERMETIC COMPRESSOR - SPARE PARTS (CONT'D)

Compressor Model	Phase	Volts/Hz	Overload P/No.	Relay P/No.	Start Capacitor	
					P/No.	MFD
AJB5515EXC	1	240V/50Hz	8300CSTA48			
AKA5512EXC	1	240V/50Hz	8300MRAB80			
AV67MHG-2C	3	415V/50Hz	Internal			
AV73MHG-2C	3	415V/50Hz	Internal			
AV79MHY-1C	1	240V/50Hz	Internal			
AV79MHY-2C	3	415V/50Hz	Internal			
AV91MHG-2C	3	415V/50Hz	Internal			
AV92MHG-2C	3	415V/50Hz	Internal			
AVA2490ZXG	3	415V/50Hz	Internal			
AVA5535EXC	1	240V/50Hz	Internal	82831		
AVA5535EXG	3	415V/50Hz	Internal			
AVA5538EXC	1	240V/50Hz	Internal	82269-1		
AVA5538EXG	1	240V/50Hz	Internal			
AVA5542EXC	1	240V/50Hz	Internal	82269-1		
AVA5542EXG	3	415V/50Hz	Internal			
AVA5546EXC	1	240V/50Hz	Internal	82269-1		
AVA5546EXG	3	415V/50Hz	Internal			
AVA5555EXG	3	415V/50Hz	Internal			
AVB5558EXG	3	415V/50Hz	Internal			
AW38MG-1C	1	240V/50Hz	Internal	4043KME692-1	92A120B330CE7X	124-149 µF 330 VAC.
AW40LZ-1C	1	240V/50Hz	Internal	KME 692-1	92A120B330CE7X	124-149 µF 330 VAC.
AW43LZ-5C	1	240V/50Hz	Internal	RVA3H6D	92A120B330CE7X	124-149 µF 330 VAC.
AW43MHG-1C	1	240V/50Hz	Internal	RVA3H6D	92A108B250BD4X	108-130 µF 330 VAC.
AW43MHG-4C	3	415V/50Hz	Internal			
AW48MHG-1C	1	240V/50Hz	Internal	RVA3G6D		108-130 µF 330 VAC.
AW48MHG-4C	3	415V/50Hz	Internal			
AW48MHY-3C	1	240V/50Hz	Internal	4043KGE681-4	92A120B330CE7X	124-149 µF 330 VAC.
AW54LZ-1C LBP	1	240V/50Hz	Internal	RVA3H6D	92A120B330CE7X	124-149 µF 330 VAC.
AW54LZ-1C M/HBP	1	240V/50Hz	Internal	RVA3H6D	92A120B330CE7X	124-149 µF 330 VAC.
AW54MHG-3C	1	240V/50Hz	Internal	KGE 681-4	92A108B250BD4X	108-130 µF 330 VAC.
AW54MHG-4C	3	415V/50Hz	Internal			
AW5522EK-3C	1	240V/50Hz	Internal			
AW5524EK-3C	1	240V/50Hz	Internal			
AW5528EK-3C	1	240V/50Hz	Internal			
AW5528EXG-4C	3	415V/50Hz	Internal			
AW5532EK-3C	1	240V/50Hz	Internal			
AZ33LY-1KS	1	240V/50Hz	KME660-2/C	KME680-1		
AZ36LY-1KS	1	240V/50Hz	KME660-32/C	KME681-2		
AZ40LY-1KS	1	240V/50Hz	KME660-3/C	4043KME690-20		
AZ56LY-1KS	1	240V/50Hz	KME660-5/CD	KME680-13		
BA12LMY-1KS	1	240V/50Hz	KME 660-10/C	KME 684-1	92A047B330BD4X	43-52 µF 330 VAC.
BA12MG-1KS	1	240V/50Hz	KME660-24/C	KME682-1N	92A047B330BD4X	43-52 µF 330 VAC.
BA14LMY-1KS	1	240V/50Hz	KME660-8/C	KME684-1	92A047B330BD4X	43-52 µF 330 VAC.
BA14MG-1KS	1	240V/50Hz	KME660-24/C	KME682-1N	92A047B330BD4X	43-52 µF 330 VAC.
BA16LMY-1KS	1	240V/50Hz	KME660-24/C	KME682-1N	92A047B330BD4X	43-52 µF 330 VAC.
BA16LZ-1KS	1	240V/50Hz	KME660-41/C	KME692-1	92A047B330BD4X	43-52 µF 330 VAC.
BA16MG-4KS	1	240V/50Hz	KME671-6/C	RVA6M6D	92A047B330BD4X	43-52 µF 330 VAC.
BA18LZ-1KS	1	240V/50Hz	KME664-3/C	4043KME692-1	92A047B330BD4X	43-52 µF 330 VAC.
BA18MG-1KS	1	240V/50Hz	KME664-3/C	RVA8R6D	92A047B330BD4X	43-52 µF 330 VAC.
BA5MHG-1KS	1	240V/50Hz	KME660-6/C	KME680-4		
BA6MHG-1KS	1	240V/50Hz	KME660-10/C	KME684-1	92A047B330BD4X	43-52 µF 330 VAC.
BA8LMY-1KS	1	240V/50Hz	KME660-6/C	KME680-4		
BA8MG-1KS	1	240V/50Hz	KME660-10/C	KME684-1	92A047B330BD4X	43-52 µF 330 VAC.
BA9MG-1KS	1	240V/50Hz	KME660-10/C	KME684-1	92A047B330BD4X	43-52 µF 330 VAC.
BA9MHY-1KS	1	240V/50Hz	KME660-9/C	KME684-2	92A047B330BD4X	43-52 µF 330 VAC.
WJ22LZ-1C	1	240V/50Hz	KME664-19/C	RVA3H6D)	92A108B250BD4X	108-130 µF 330 VAC.





HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)

KIRBY HERMETIC COMPRESSOR - SPARE PARTS (CONT'D)

Compressor Model	Phase	Volts/Hz	Overload P/No.	Relay P/No.	Start Capacitor	
					P/No.	MFD
WJ22MHG-1C	1	240V/50Hz	KME664-15/C	RVA3H6D	92A088B330BD4X	88-106 µF 330 VAC.
WJ26LZ-3C	1	240V/50Hz	3KME664-15/ CASY	RVA3H6D	92A145B250BD4X	145-174 µF 330 VAC.
WJ26MHG-3C	1	240V/50Hz	3KME664-17/ CASY	RVA3H6D	92A145B250BD4X	145-174 µF 330 VAC.
WJ31LZ-1C	1	240V/50Hz	3KME664-15/ CASY	RVA3H6D	92A145B250BD4X	145-174 µF 330 VAC.
WJ31MHG-1C	1	240V/50Hz	3KME664-17/ CASY	RVA3H6D	92A145B250BD4X	145-174 µF 330 VAC.

KIRBY HERMETIC COMPRESSOR - SPARE PARTS (CONT'D)

Compressor Model	Run Capacitor		Black Electrical Box - Excluding Controls	R/L Suct. P/No.	R/L Disch. P/No.
	P/No.	MFD			
AE10LMA-1KS					
AE1411A-7KS					
AEV6LY-1KS					
AEV7LY-1KS					
AEV8LY-1KS					
AEV9LY-1KS					
AG125MHG-2C				2606-142030	2606-081620
AG135MHG-2C				2606-142030	2606-081620
AGA4534AXG				2606-142030	2606-081620
AGA5573EXG					
AGC5561EXG					
AGC5568EXG					
AJA5518EXC	AI7A250P7T	25 µF 370 VAC.			
AJA5519EXC	AI7A250P7T	25 µF 370 VAC.			
AJB5515EXC	AI7A250P7T	25 µF 370 VAC.			
AKA5512EXC	AI7A150N6T	15 µF 370 VAC.			
AV67MHG-2C				2606-142030	2606-081620
AV73MHG-2C				2606-142030	2606-081620
AV79MHY-1C	AI7A400P9T	40 µF 450 VAC.		2606-142030	2606-081620
AV79MHY-2C				2606-142030	2606-081620
AV91MHG-2C				2606-142030	2606-081620
AV92MHG-2C				2606-142030	2606-081620
AVA2490ZXG				2606-142030	2606-081620
AVA5535EXC	AI7A400P9T	40 µF 450 VAC.	KWA099-3		
AVA5535EXG			KWA099-3		
AVA5538EXC	AI7A350P9T	35 µF 450 VAC.	KWA099-3		
AVA5538EXG			KWA099-3		
AVA5542EXC	AI7A400P9T	40 µF 450 VAC.	KWA099-3		
AVA5542EXG			KWA099-3		
AVA5546EXC	AI7A400P9T	40 µF 450 VAC.	KWA099-3		
AVA5546EXG					
AVA5555EXG					
AVB5558EXG					
AW38MG-1C	AI7A200N7T	20 µF 450 VAC.	KWA099-3	2605-101620	
AW40LZ-1C	AI7A200N7T	20 µF 450 VAC.	KWA099-3	2605-101620	
AW43LZ-5C	AI7A300P7T	30 µF 450 VAC.	KWA099-3	2605-101620	
AW43MHG-1C	AI7A350P9T	35 µF 450 VAC.	KWA099-3	2605-101620	
AW43MHG-4C			KWA099-3	2605-101620	

KIRBY HERMETIC COMPRESSOR - SPARE PARTS (CONT'D)

Compressor Model	Run Capacitor		Black Electrical Box - Excluding Controls	R/L Suct. P/No.	R/L Disch. P/No.
	P/No.	MFD			
AW48MHG-1C	AI7A350P9T	35 µF 450 VAC.	KWA099-3	2605-101620	
AW48MHG-4C			KWA099-3	2605-101620	
AW48MHY-3C	AI7A200N7T	20 µF 450 VAC.	KWA099-3	2605-101620	
AW54LZ-1C LBP		Not required	KWA099-3	2605-101620	
AW54LZ-1C M/HBP	AI7A200N7T	20 µF 450 VAC.	KWA099-3	2605-101620	
AW54MHG-3C	AI7A450R9T	45 µF 450VAC.	KWA099-3	2605-101620	
AW54MHG-4C				2605-101620	
AW5522EK-3C					
AW5524EK-3C	AI7A350P9T	35 µF 450 VAC.			
AW5528EK-3C	AI7A350P9T	35 µF 450 VAC.			
AW5528EXG-4C					
AW5532EK-3C	AI7A450R9T	45 µF 450 VAC.			
AZ33LY-1KS					
AZ36LY-1KS					
AZ40LY-1KS					
AZ56LY-1KS					
BA12LMY-1KS			KWA099-3		
BA12MG-1KS	AI7A080L6T	8 µF 450 VAC.	KWA099-3		
BA14LMY-1KS			KWA099-3		
BA14MG-1KS	AI7A120N6T	12 µF 450 VAC.	KWA099-3		
BA16LMY-1KS	AI7A080L6T	8 µF 450 VAC.	KWA099-3		
BA16LZ-1KS	AI7A100L6T	10 µF 450 VAC	KWA099-3		
BA16MG-4KS	AI7A150N6T	15 µF 450 VAC.	KWA099-3		
BA18LZ-1KS	AI7A200N7T	20 µF 450 VAC	KWA099-3		
BA18MG-1KS	AI7A200N7T	20 µF 450 VAC.	KWA099-3		
BA5MHG-1KS					
BA6MHG-1KS			KWA099-3		
BA8LMY-1KS					
BA8MG-1KS			KWA099-3		
BA9MG-1KS			KWA099-3		
BA9MHY-1KS			KWA099-3		
WJ22LZ-1C	AI7A200N7T	20 µF 450 VAC.	KWA099-3	2605-081620	
WJ22MHG-1C	AI7A200N7T	20 µF 450 VAC.	KWA099-3	2605-081620	
WJ26LZ-3C	AI7A250P7T	25 µF 450 VAC.	KWA099-3	2605-081620	
WJ26MHG-3C	AI7A250P7T	25 µF 450 VAC.	KWA099-3	2605-081620	
WJ31LZ-1C	AI7A250P7T	25 µF 450 VAC.	KWA099-3	2605-101620	
WJ31MHG-1C	AI7A250P7T	25 µF 450 VAC.	KWA099-3	2605-101620	



HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)

BRISTOL HERMETIC COMPRESSORS POE OIL R22 / R407C / R134a AIR CONDITIONING



Part Number	Nominal HP	Displacement cc/rev	Nominal kW Capacity @7.2 °C SST.		Motor Type	*Nominal Current MOC (A)	Motor O/L Protection
			R407C / R22	R134a			

Single Phase 240V-50Hz

H79B24UABHA	2	44.2	5421	3900	PT-CSR	17.0	Internal
H79B28UABHA	2.3	50.1	6385	4300	PT-CSR	20.0	Internal
H79B30UABHA	2.5	52.4	6710	4600	PT-CSR	21.0	Internal
H79B32UABHA	2.8	55.1	7032	5100	PT-CSR	22.0	Internal
H79B35UABHA	2.9	60.6	8058	5400	PT-CSR	23.0	Internal
H73A383ABKA	3	68.0	8468	5800	PT-CSR	28.0	Internal
H73A423ABKA	3.3	73.8	9142	6600	PT-CSR	28.0	Internal
H73A463ABKA	3.8	80.7	10138	7400	PT-CSR	33.0	Internal

Three Phase 415V-50Hz

H73A383DBEA	3	68.0	8466	5800	DOL	9.5	Internal
H73A423DBEA	3.5	73.8	9142	6600	DOL	11	Internal
H73A463DBEA	3.5	80.7	10138	7400	DOL	13	Internal
H73A543DBEA	4	92.7	12042	9900	DOL	12.5	Internal
H73A563DBEA	4.5	95.3	12423	10300	DOL	12.5	Internal
H73A623DBEA	5	103.4	13683	11300	DOL	16	Internal
H79A683DBVA	5.9	117	16000	12700	DOL	16.9	Internal
H79A723DBVA	6	117.15	16320	12800	DOL	17.3	Internal
H7BG094DBEE	7.5	167.4	21200	15700	DOL	18.0	**INT69 Module
H7BG104DBEE	9	190.5	24700	18300	DOL	20.2	**INT69 Module
H75G104DBVE	8.3	190.5	24900	18400	DOL	20.2	**INT69 Module
H7BG124DBEE	10	219.5	28500	21100	DOL	25.0	**INT69 Module
H75G124DBVE	10	219.5	28800	21200	DOL	25.0	**INT69 Module
H75G144DBEE	12	246.5	34200	25300	DOL	30.0	**INT69 Module
H75G144DBVE	12	246.5	34200	25200	DOL	30.0	**INT69 Module
H7NG184DPEF	15	334.8	43100	31900	DOL	40.0	**INT69 Module
H7NG184GPEF	15	334.8	43100	31900	DOL	40.0	**INT69 Module
H7NG204DREF	17	381.1	50900	37700	DOL	49.0	**INT69 Module
H7NG204GPEF	17	381.1	50900	37700	DOL	49.0	**INT69 Module
H7NG244DREF	20	439.1	58600	43400	DOL	56.0	**INT69 Module
H7NG244GPEF	20	439.1	58600	43400	DOL	56.0	**INT69 Module
H7NG294DPEF	25	508.2	69800	51700	DOL	69.0	**INT69 Module

BRISTOL HERMETIC COMPRESSORS POE OIL R22 / R407C / R134a AIR CONDITIONING (CONT'D)

Part Number	Oil Type	Oil Charge cc.	O/A Height (mm)	Net Weight (kg)	Connection Type	Service Connections (inches)			
						Suct.	R/L Valve	Disch.	R/L Valve

Single Phase 240V-50Hz

H79B24UABHA	POE32	1000	357	31.5	Solder Tube	3/4	-	1/2	-
H79B28UABHA	POE32	1000	357	31.5	Solder Tube	3/4	-	1/2	-
H79B30UABHA	POE32	1000	357	31.5	Solder Tube	3/4	-	1/2	-
H79B32UABHA	POE32	1000	357	32.7	Solder Tube	3/4	-	1/2	-
H79B35UABHA	POE32	1000	357	33.3	Solder Tube	3/4	-	1/2	-
H73A383ABKA	POE32	1183	379	36.0	Solder Tube	7/8	-	1/2	-
H73A423ABKA	POE32	1183	379	37.4	Solder Tube	7/8	-	1/2	-
H73A463ABKA	POE32	1183	379	40.6	Solder Tube	7/8	-	1/2	-

BRISTOL HERMETIC COMPRESSORS POE OIL R22 / R407C / R134a AIR CONDITIONING (CONT'D)

Part Number	Oil Type	Oil Charge cc.	O/A Height (mm)	Net Weight (kg)	Connection Type	Service Connections (inches)			
						Suct.	R/L Valve	Disch.	R/L Valve
Three Phase 415V-50Hz									
H73A383DBEA	POE32	1479	390	33.6	Solder Tube	7/8	-	1/2	-
H73A423DBEA	POE32	1479	390	33.6	Solder Tube	7/8	-	1/2	-
H73A463DBEA	POE32	1627	390	33.6	Solder Tube	7/8	-	1/2	-
H73A543DBEA	POE32	1627	418	37.7	Solder Tube	7/8	-	1/2	-
H73A563DBEA	POE32	1627	418	39.7	Solder Tube	7/8	-	1/2	-
H73A623DBEA	POE32	1627	418	37.7	Solder Tube	7/8	-	1/2	-
H79A683DBVA	POE32	1627	418	39	Solder Tube	7/8	-	1/2	-
H79A723DBVA	POE32	1627	418	41	Solder Tube	7/8	-	1/2	-
H7BG094DBEE	POE32	2839	418	62.7	Rotalock	1 1/8	2606-182835	7/8	2606-142030
H7BG104DBEE	POE32	2839	455	69.5	Rotalock	1 1/8	2606-182836	7/8	2606-142030
H75G104DBVE	POE32	2839	474	69.5	Solder Tube	1 1/8	-	7/8	-
H7BG124DBEE	POE32	2839	474	70.5	Rotalock	1 1/8	2606-182835	7/8	2606-142030
H75G124DBVE	POE32	2839	474	74.4	Solder Tube	1 1/8	-	7/8	-
H75G144DBEE	POE32	2839	474	79.8	Rotalock	1 3/8	2606-222835	7/8	2606-142030
H75G144DBVE	POE32	2839	568	72	Solder Tube	1 3/8	-	7/8	-
H7NG184DPEF	POE32	6624	568	114.8	Rotalock	1 5/8	2606-262835	1 1/8	2606-182835
H7NG184GPEF	POE32	6624	568	115	Rotalock	1 5/8	2606-262835	1 1/8	2606-182835
H7NG204DREF	POE32	6624	568	118.2	Rotalock	1 5/8	2606-262835	1 1/8	2606-182835
H7NG204GPEF	POE32	6624	568	118.2	Rotalock	1 5/8	2606-262835	1 1/8	2606-182835
H7NG244DREF	POE32	6624	568	123.3	Rotalock	1 5/8	2606-262835	1 1/8	2606-182835
H7NG244GPEF	POE32	6624	568	123.3	Rotalock	1 5/8	2606-262835	1 1/8	2606-182835
H7NG294DPEF	POE32	6624	568	127.3	Rotalock	1 5/8	2606-262835	1 1/8	2606-182835

**INT69 Motor Protection Module Part number 8564342

Note -

- Compressors are charged with POE Oil.
- Compressors supplied with rubber mounting kit, CCH & Solid State Modules where applicable.
- Service valves & Single Phase electrics are excluded from price. **Contact Heatcraft for further information.**

MOC(A) = Maximum Operating Current

STANDARD CONDITIONS

Application	Ambient Temp °C	Condensing Temp °C	Liquid Entering Temp °C	Return Vapour Temp °C	Nom. Capacity & Power Input W @ SST °C	Standard
Air Conditioning	35	55	47	35	7.2	ARI



HERMETIC COMPRESSORS – RECIPROCATING (CONT'D)

DANFOSS HERMETIC COMPRESSORS R507, R404A, R22, R134a

Part Number	Model Number	Nominal HP	Displ. cc/rev	Nominal Capacity (watts)								Rating Point
				Evaporating Temperature: °C								
				-25	-20	-15	-10	-5	0	5	10	

R507/R404A/R22 M/HBP Compressors

103U2680SP	FR6DL	1/4	6.23		317	385	471	576	698	840	999	795
104L2525SP	SC10DL	3/8	10.29	471	611	775	968	1192	1450	1747	2085	1345
104L2625SP	SC12DL	1/2	12.87	609	806	1028	1279	1565	1890	2258	2674	1662
104L2684SP	SC12D	3/8	10.29			583	783	1004	1250	1525	1835	1661
104L2839SP	SC15D	3/4	15.28			738	976	1241	1538	1872	2249	2038
104L2856SP	SC15DL	3/4	15.28	759	964	1207	1493	1825	2210	2652	3156	2021
195B0437	GS26MLX	1-1/4	26.3			1791	2238	2751	3341	4015		-
195B0438	GS34MLX	1-1/2	33.8			2388	2938	3563	4276	5087		-

R507/R404A LBP Compressors

103U2670SP	FR6CL	1/5	6.23	243	307	383	473	578				-
103U2890SP	FR8.5CL	1/4	7.95	290	372	468	577					-
104L2523SP	SC10CL	1/3	10.29	365	489	634	800	991				-
104L2623SP	SC12CL	3/8	12.87	490	650	835	1048	1292				-
104L2853SP	SC15CL	1/2	15.28	615	792	988	1206	1458				-
104L2123SP	SC18CL	5/8	17.69	715	918	1154	1425	1735				-
104L2322SP	SC21CL	7/8	20.95	813	1042	1306	1606					-
195B0427	GS26CLX	1	26.3	1243	1612	2042	2539					-
195B0439	GS34CLX	1-1/4	33.8	1782	2284	2869	3547					-

R134a L/MBP Compressors

102G4452SP	TL4G	1/8	3.86	58	80	107	140	180	226	280	342	325
102G4550SP	TL5G	1/6	5.08	79	107	139	178	224	278	341	414	410
103G6660SP	FR6G	1/5	6.23	83	124	171	226	290	365	452	552	545
103G6680SP	FR7.5G	1/4	6.93	99	142	193	254	325	408	513	618	610
103G6780SP	FR8.5G	1/3	7.95	123	171	228	298	381	478	592	722	688
103G6880SP	FR10G	1/3	9.05	136	188	250	324	412	516	638	779	759
104G8000SP	SC10G	1/3	10.29	113	183	268	369	486	618	764	925	909
103G6980SP	FR11G	1/3	11.15	170	233	307	395	501	628	780		934
104G8240SP	SC12G	3/8	12.87	175	252	348	464	603	768	960	1182	1137
104G8520SP	SC15G	3/8	15.28	164	290	424	568	728	908	1110	1340	1316
104G8820SP	SC18G	1/2	17.69	283	394	526	684	870	1087	1337	1624	1592
104G8140SP	SC21G	5/8	20.95	333	453	606	792	1012	1268	1560	1889	1856
195B0433	GS26MFX	1.0	26.3			975	1249	1568	1941	2373		
195B0435	GS34MFX	1-1/4	33.8			1272	1626	2043	2531	3098		

R134a LBP Compressors

102G4501SP	TL5F	1/6	5.08	82	110	144	183					-
105G6606SP	NL6F	1/5	6.13	110	151	200	258					-
105G6706SP	NL7F	1/4	7.27	136	182	238	303					-
105G6900SP	NL11F	1/3	11.15	200	268	351	453					-
104G8500SP	SC15F	3/8	15.28	230	325	439	573	726				-
104G8800SP	SC18F	1/2	17.69	280	388	518	669	842				-

R12 Replacement

103U2154SP	FR11B	1/3	11.15	275	345	430	520	625	735	850	980	822
104L2670SP	SC12B	3/8	12.90	305	395	495	610	735	875	1030	1195	1034
104L2830SP	SC15B	3/8	16.30	390	495	615	755	905	1070	1250	1445	1200
104L2110SP	SC18B	1/2	17.70	445	565	705	860	1035	1220	1425	1640	1399
104L2310SP	SC21B	5/8	20.95	490	625	780	955	1155	1375	1610	1870	1589

DANFOSS HERMETIC COMPRESSORS R507, R404A, R22, R134a (CONT'D)

Part Number	Motor Type 220/240 V-50 Hz Single Phase	Nominal Current RLA	Compressor Cooling Type		Oil Type	Oil Charge (cm ³)	O/A Height (mm)	Net Weight (kg)	Service Connections (inches)	
			LBP	HBP					Suct.	Disch.

R507/R404A/R22 M/HBP Compressors

103U2680SP	CSIR/HST	2.30	-	F2	POE	450	196	10.5	8.2	6.2
104L2525SP	CSIR/HST	3.24	-	F2	POE	600	209	13.1	8.2	6.2
104L2625SP	CSIR/HST	4.23	-	F2	POE	600	219	13.6	10.2	6.2
104L2684SP	CSIR/HST	3.67	-	F2	POE	600	219	13.5	10.2	6.2
104L2839SP	CSIR/HST	3.69	-	F2	POE	600	219	12.0	10.2	6.2
104L2856SP	CSIR/HST	4.26	-	F2	POE	600	219	12.7	10.2	6.2
195B0437	CSIR/HST	6.80	-	F2	POE	900	259	21.4	16.1	9.7
195B0438	CSIR/HST	10.20	-	F2	POE	900	279	22.3	16.1	9.7

R507/R404A LBP Compressors

103U2670SP	CSIR/HST	1.63	F2	-	POE	450	196	10.5	8.2	6.2
103U2890SP	CSIR/HST	2.24	F2	-	POE	450	196	10.6	8.2	6.2
104L2523SP	CSIR/HST	2.41	F2	-	POE	550	209	12.6	8.2	6.2
104L2623SP	CSIR/HST	3.09	F2	-	POE	550	209	13.4	8.2	6.2
104L2853SP	CSIR/HST	3.79	F2	-	POE	550	219	13.5	10.2	6.2
104L2123SP	CSIR/HST	4.02	F2	-	POE	600	219	13.5	10.2	6.2
104L2322SP	CSIR/HST	4.25	F2	-	POE	600	219	14.0	10.2	6.2
195B0427	CSIR/HST	4.43	F2	-	POE	900	259	20.0	12.9	8.2
195B0439	CSIR/HST	7.16	F2	-	POE	900	279	22.0	12.9	8.2

R134a L/MBP Compressors

102G4452SP	CSIR HST/RSIR LST	0.95	S	F2	POE	280	173	7.5	6.2	5
102G4550SP	CSIR HST/RSIR LST	1.12	S	F2	POE	280	173	7.5	6.2	5
103G6660SP	CSIR HST/RSIR LST	1.10	S	F2	POE	450	196	10.5	8.2	6.2
103G6680SP	CSIR HST/RSIR LST	1.26	S1	F2	POE	450	196	10.6	8.2	6.2
103G6780SP	CSIR HST/RSIR LST	1.53	S2	F2	POE	450	196	10.6	8.2	6.2
103G6880SP	CSIR HST/RSIR LST	1.89	S2	F2	POE	450	196	10.6	8.2	6.2
104G8000SP	CSIR HST/RSIR LST	1.80	F2	F2	POE	550	199	12.4	8.2	6.2
103G6980SP	CSIR HST/RSIR LST	2.08	F2	F2	POE	450	196	10.5	8.2	6.2
104G8240SP	CSIR HST/RSIR LST	2.34	O/F1	F2	POE	550	209	12.7	8.2	6.2
104G8520SP	CSIR/HST	2.90	O/F1	F2	POE	550	209	13.2	10.2	6.2
104G8820SP	CSIR/HST	3.15	O/F1	F2	POE	600	219	13.8	10.2	6.2
104G8140SP	CSIR/HST	3.20	F3	F2	POE	600	219	13.8	10.2	6.2
195B0433	CSIR/HST	3.70	F2	F2	POE	900	259	19.1	12.9	8.2
195B0435	CSIR/HST	5.19	F2	F2	POE	900	259	20.0	12.9	8.2

R134a LBP Compressors

102G4501SP	CSIR HST/RSIR LST	0.85	S	-	POE	180	173	7.5	6.2	5
105G6606SP	CSIR HST/RSIR LST	0.91	S	-	POE	320	188	9.3	6.2	5
105G6706SP	CSIR HST/RSIR LST	1.07	S	-	POE	320	190	9.6	6.2	5
105G6900SP	CSIR HST/RSIR LST	1.63	O/F1	-	POE	321	203	10.7	8.2	6.2
104G8500SP	CSIR/HST	2.10	O/F1	-	POE	450	209	13.1	10.2	6.2
104G8800SP	CSIR/HST	2.45	O/F1	-	POE	550	209	13.1	10.2	6.2

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HERMETIC COMPRESSORS – RECIPROCATING (CONT'D)

DANFOSS HERMETIC COMPRESSORS R507, R404A, R22, R134a (CONT'D)

Part Number	Motor Type 220/240 V-50 Hz Single Phase	Nominal Current RLA	Compressor Cooling Type		Oil* Type	Oil Charge (cm³)	O/A Height (mm)	Net Weight (kg)	Service Connections (inches)	
			LBP	HBP					Suct.	Disch.
R12 Replacement										
103U2154SP	CSIR/HST	2.08	-	F2	MINERAL	450	198	10.5	8.2	6.2
104L2670SP	CSIR/HST	2.34	-	F2	MINERAL	550	210	12.4	8.2	6.2
104L2830SP	CSIR/HST	2.90	-	F2	MINERAL	550	210	13.1	10.2	6.2
104L2110SP	CSIR/HST	3.15	-	F2	MINERAL	550	219	13.7	10.2	6.2
104L2310SP	CSIR/HST	3.20	-	F2	MINERAL	600	219	13.5	10.2	6.2

12/24 V DC R134a Compressors (Capacity rated @3500RPM). Refer to product support documentation.
 Compressor includes Control Module
 Motors are Variable speed DC/PM.

			Nominal Capacity (watts)	-25	-10	-5
195B0722	BD35F	LMHBP	1/12 Nominal HP	36	70	122
195B0723	BD50F	LBP	1/12 Nominal HP	52	95	157
195B0742	BD80F	LMBP	1/12 Nominal HP	78	138	221

Features:

All hermetic compressors are offered as service packs and include feet mounting kit, electrical components and rotalock service valve where nominated.

Recommended Compressor Cooling

S—Static cooling normally sufficient

S1—Oil cooling & 1.5 m/s fan cooling required at 43°C ambient

S2—Oil cooling & 1.5 m/s fan cooling required at 38°C & 43°C ambient

O—Oil cooling

F1—Fan cooling 1.5 m/s (Compressor compartment temperature equal to ambient temperature)

F2—Fan cooling 3.0 m/s necessary

F3—Not applicable below -25°C evaporating temp. in 43°C ambient temp. above 240V

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative.

DANFOSS HERMETIC COMPRESSOR SPARE PARTS

Compressor Model	PTC Starting Device -LST	Starting Current Relay - HST	Start Capacitor		CSR Starting Pack Relay + Capacitor Assy.
			P/No.	MFD	
R507/R404A/R22 M/HBP Compressors					
FR6DL	-	117U6010	117U5015	80uF	-
SC10DL	-	117U6005	117U5017	80uF	-
SC12DL	-	117U6005	117U5017	80uF	-
SC12D	-	117U6005	117U5017	80uF	-
SC15D	-	117U6005	117U5017	80uF	-
SC15DL	-	-	-	-	1177028
GS26MLX	-	-	-	-	1177072
GS34MLX	-	-	-	-	1177056
R507/R404A LBP Compressors					
FR6CL	-	117U6015	117U5015	80uF	-
FR8.5CL	-	117U6010	117U5015	80uF	-
SC10CL	-	117U6003	117U5017	80uF	-
SC12CL	-	117U6005	117U5017	80uF	-
SC15CL	-	117U6019	117U5017	80uF	-
SC18CL	-	-	-	-	1177012
SC21CL	-	-	-	-	1177012
GS26CLX	-	-	-	-	1177056
GS34CLX	-	-	-	-	1177056

DANFOSS HERMETIC COMPRESSOR SPARE PARTS (CONT'D)

Compressor Model	PTC Starting Device -LST	Starting Current Relay - HST	Start Capacitor		CSR Starting Pack Relay + Capacitor Assy.
			P/No.	MFD	
R134a L/MBP Compressors					
TL4G	103N0011	117U6004	117U5014	60uF	-
TL5G	103N0011	117U6000	117U5014	60uF	-
FR6G	103N0011	117U6000	117U5015	80uF	-
FR7.5G	103N0011	117U6001	117U5015	80uF	-
FR8.5G	103N0011	117U6015	117U5015	80uF	-
FR10G	103N0011	117U6010	117U5015	80uF	-
SC10G	103N0011	117U6002	117U5017	80uF	-
FR11G	103N0011	117U6010	117U5015	80uF	-
SC12G	103N0002	117U6003	117U5017	80uF	-
SC15G	-	117U6005	117U5017	80uF	-
SC18G	-	117U6019	117U5017	80uF	-
SC21G	-	-	-	-	1177056
GS26MFX	-	-	-	-	1177055
GS34MFX	-	-	-	-	1177056
R134a LBP Compressors					
TL5F	103N0011	117U6004	117U5014	60uF	-
NL6F	103N0012	117U6004	117U5015	80uF	-
NL7F	103N0013	117U6000	117U5015	80uF	-
NL11F	103N0014	117U6002	117U5015	80uF	-
SC15F	103N0015	117U6003	117U5017	80uF	-
SC18F	103N0016	117U6005	117U5017	80uF	-
R12 Replacement					
FR11B	-	117U6010	117U5017	80uF	-
SC12B	103N0002	117U6003	117U5017	80uF	-
SC15B	-	117U6005	117U5017	80uF	-
SC18B	-	117U6011	117U5017	80uF	-
SC21B	-	-	-	-	1177011
12V/24V DC R134a Compressors (Capacity rated @2000RPM)					
BD35F	101N0221 Control Module - Replacement				-
BD50F	101N0221 Control Module - Replacement				-
BD80F	101N0290 Control Module - Replacement				-

Danfoss



HERMETIC COMPRESSORS – RECIPROCATING (CONT'D)

CS COPELAND SCROLL COMPRESSORS - REFRIGERATION

Part Number	Nominal HP	Displ. m³/hr	Capacity (watts)			Motor Type	Motor Overload Protection	Nominal Current *MCC (A)	Oil Type
			R404A		R134a				
			-25 °C SST.	-5 °C SST.	-5 °C SST.				

Compressors 240V/1/50Hz

CS10K6E-PFJ-595	1.75	38.1	650	3450	1755	DOL	Internal	11.2	POE 32
CS14K6E-PFJ-595	2.25	48.6	1300	4650	2435	DOL	Internal	14.5	POE 32
CS18K6E-PFJ-595	2.75	61.4	1495	6000	3300	DOL	Internal	19.1	POE 32

Compressors 415V/3/50Hz

CS14K6E-TFD-595	2.25	48.6	1300	4650	2435	CSR	Internal	6.6	POE 32
CS18K6E-TFD-595	2.75	61.4	1495	6000	3450	CSR	Internal	6.6	POE 32
CS20K6E-TFD-595	3.00	74.3	1705	6800	3850	CSR	Internal	7.1	POE 32
CS27K6E-TFD-595	4.00	92.4	2365	8850	5050	CSR	Internal	10.8	POE 32
CS33K6E-TFD-595	5.00	106.2	2950	10600	5900	CSR	Internal	12.7	POE 32

CS COPELAND SCROLL COMPRESSORS - REFRIGERATION (CONT'D)

Part Number	Oil Charge cc	O/A Height (mm)	Weight (kg)	Rotalock Service Valves - Standard	Service - Solder Connections (inches)		Crankcase Heater	
					Suct.	Disch.	Part No.	Spec.

Compressors 240V/1/50Hz

CS10K6E-PFJ-595	1270	348	31.0	Yes	3/4	3/8	918-0031-05	240V-40W
CS14K6E-PFJ-595	1270	348	32.0	Yes	3/4	3/8	918-0031-05	240V-40W
CS18K6E-PFJ-595	1270	348	32.0	Yes	3/4	3/8	918-0031-05	240V-40W

Compressors 415V/3/50Hz

CS14K6E-TFD-595	1270	348	32.0	Yes	3/4	3/8	918-0031-05	240V/480V-70W
CS18K6E-TFD-595	1270	348	32.0	Yes	3/4	3/8	918-0031-05	240V/480V-70W
CS20K6E-TFD-595	1270	360	33.0	Yes	3/4	1/2	918-0031-05	240V/480V-70W
CS27K6E-TFD-595	1500	386	33.0	Yes	3/4	1/2	918-0031-05	240V/480V-70W
CS33K6E-TFD-595	1500	386	35.0	Yes	7/8	1/2	918-0031-05	240V/480V-70W

*MCC(A) = Maximum Continuous Current

CS - 240 V/1/50 Hz FIXED CAPACITY - ELECTRICAL SPARE PARTS

Part Number	Start Capacitor	Run Capacitor
	Description	Description
CS10K6E-PFJ-595	130 -156 µF 250 VAC.	30 µF 370 VAC.
CS14K6E-PFJ-595	145-174 µF 220 VAC.	35 µF 370 VAC.
CS18K6E-PFJ-595	216-259 µF 250 VAC.	45 µF 370 VAC.

CS COMPRESSOR SERVICE VALVE GUIDE

Valve Part Number	2606-122030	2606-142030	2606-061620	2606-081620
Valve Size	3/4"ID x 1-1/4"RL	7/8"ID x 1-1/4"RL	3/8"ID x 1"RL	1/2"ID x 1"RL
Compressor	Connection	Connection	Connection	Connection
CS10K6E-PFJ-595	Suction	-	Discharge	-
CS14K6E-PFJ-595	Suction	-	Discharge	-
CS18K6E-PFJ-595	Suction	-	Discharge	-
CS14K6E-TFD-595	Suction	-	Discharge	-
CS18K6E-TFD-595	Suction	-	Discharge	-
CS20K6E-TFD-595	Suction	-	-	Discharge
CS27K6E-TFD-595	Suction	-	-	Discharge
CS33K6E-TFD-595	-	Suction	-	Discharge

Features:

- All hermetic compressors are offered as service packs and include feet mounting kit, electrical components for Single Phase models.
- Crankcase Heaters available please order separately

- Rotalock Service Valves available as an optional extra.

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative.

Copeland®**STANDARD CONDITIONAL - NOMINAL CAPACITIES ARE ESTABLISHED THROUGH ASHRAE-T STANDARD CONDITIONS**

Application	Evaporating	Ambient	Cond	Liquid Entering	Evaporating
	Temp °C	Temp °C	Temp °C	Temp °C	Temp °C
Low Suction Temp	-23.3	32	55	32	-23.3
Med Suction Temp	-6.7	35	55	47	-6.7
High Suction Temp	7.2	35	55	47	7.2
A/C Suction Temp	7.2	35	55	47	7.2

MANEUROP HERMETIC COMPRESSORS R507, R404A

Part Number	Nominal HP	Cylinder Number	Displacement		Nominal Capacity: R404A, R507 (watts)				R407C / R22 Air Cond. +7.2 °C
					Evaporating Temperature: °C				
			cm³/rev	m³/h @ 2900 rpm	-10	-5	0	5	

R507/R404A M/HBP Compressors (POE Oil)

MTZ18-4VI	1.5	1	30.2	5.26	1580	2110	2760	3540	3880
MTZ18-5VI	1.5	1	30.2	5.26	1580	2110	2760	3540	3880
MTZ22-4VI	1.8	1	38.12	6.63	2270	2920	3670	4540	5360
MTZ22-5VI	1.8	1	38.12	6.63	2270	2920	3670	4540	5360
MTZ28-4VI	2.3	1	48.06	8.36	2880	3720	4710	5860	7380
MTZ28-5VI	2.3	1	48.06	8.36	2880	3720	4710	5860	7380
MTZ32-4VI	2.7	1	53.86	9.37	3230	4220	5390	6770	8060
MTZ32-5VI	2.7	1	53.86	9.37	3230	4220	5390	6770	8060
MTZ36-4VI	3	1	60.47	10.52	3800	4870	6160	7680	9270
MTZ36-5VI	3	1	60.47	10.52	3800	4870	6160	7680	9270
MTZ40-4VI	3.3	1	67.89	11.81	4280	5490	6900	8540	10480
MTZ44-4VI	3.8	2	76.22	13.26	4420	5840	7570	9660	10520
MTZ50-4VI	4.2	2	85.64	14.90	5290	6920	8910	11300	12230
MTZ56-4VI	4.8	2	96.13	16.73	6060	7880	10020	12520	13750
MTZ64-4VI	5.4	2	107.71	18.74	7080	9130	11540	14340	15730
MTZ72-4VI	6.1	2	120.94	21.04	7960	10230	12900	16010	18190
MTZ80-4VI	6.8	2	135.78	23.63	9160	11720	14680	18090	20730
MTZ100-4VI	8.3	4	171.26	29.80	10390	13500	17220	21620	23400
MTZ125-4VI	10.4	4	215.44	37.49	13650	17500	22060	27420	30430
MTZ144-4VI	12	4	241.87	42.09	15740	20120	25310	31400	34340
MTZ160-4VI	13.3	4	271.55	47.25	17690	22520	28220	34900	38270

Maneurop®
RECIPROCATING COMPRESSORS



HERMETIC COMPRESSORS – RECIPROCATING (CONT'D)

MANEUROP HERMETIC COMPRESSORS R507, R404A (CONT'D)

Part Number	Electrical Supply Volts/Hz/Phase	Nominal MCC (A)	Motor Type	Oil Type (Pre- Charged)	Oil Charge cm³	O/A Height (mm)	Net Weight (kg)	Service Connections Size (Inches)	
								Suct. Solder Tube	Disch. Solder tube
R507/R404A M/HBP Compressors (POE Oil)									
MTZ18-4VI	380-400V/3/50Hz	5.0	DOL	POE 160 PZ	950	333	22	1/2	3/8
MTZ18-5VI	220-240V/1/50Hz	10.0	PCS/CSR	POE 160 PZ	950	333	22	1/2	3/8
MTZ22-4VI	380-400V/3/50Hz	6.0	DOL	POE 160 PZ	950	333	23	5/8	3/8
MTZ22-5VI	220-240V/1/50Hz	15.0	PCS/CSR	POE 160 PZ	950	333	23	5/8	3/8
MTZ28-4VI	380-400V/3/50Hz	7.5	DOL	POE 160 PZ	950	358	24	5/8	3/8
MTZ28-5VI	220-240V/1/50Hz	20.0	PCS/CSR	POE 160 PZ	950	358	24	5/8	3/8
MTZ32-4VI	380-400V/3/50Hz	8.0	DOL	POE 160 PZ	950	358	25	5/8	1/2
MTZ32-5VI	220-240V/1/50Hz	20.0	PCS/CSR	POE 160 PZ	950	358	25	5/8	1/2
MTZ36-4VI	380-400V/3/50Hz	9.0	DOL	POE 160 PZ	950	358	25	5/8	1/2
MTZ36-5VI	220-240V/1/50Hz	22.0	PCS/CSR	POE 160 PZ	950	358	25	5/8	1/2
MTZ40-4VI	380-400V/3/50Hz	10.0	DOL	POE 160 PZ	950	358	26	5/8	1/2
MTZ44-4VI	380-400V/3/50Hz	9.5	DOL	POE 160 PZ	1800	415	36	7/8	3/4
MTZ50-4VI	380-400V/3/50Hz	11.5	DOL	POE 160 PZ	1800	415	37	7/8	3/4
MTZ56-4VI	380-400V/3/50Hz	12.0	DOL	POE 160 PZ	1800	415	37	7/8	3/4
MTZ64-4VI	380-400V/3/50Hz	14.0	DOL	POE 160 PZ	1800	415	37	7/8	3/4
MTZ72-4VI	380-400V/3/50Hz	17.0	DOL	POE 160 PZ	1800	415	39	7/8	3/4
MTZ80-4VI	380-400V/3/50Hz	19.0	DOL	POE 160 PZ	1800	415	42	1-1/8	3/4
MTZ100-4VI	380-400V/3/50Hz	22.0	DOL	POE 160 PZ	3900	520	66	1-1/8	3/4
MTZ125-4VI	380-400V/3/50Hz	27.0	DOL	POE 160 PZ	3900	520	68	1-1/8	3/4
MTZ144-4VI	380-400V/3/50Hz	36.0	DOL	POE 160 PZ	3900	540	69	1-1/8	3/4
MTZ160-4VI	380-400V/3/50Hz	36.0	DOL	POE 160 PZ	3900	540	69	1-1/8	3/4

Note - Rating Conditions: 50 °C Condensing, 11.1 K Suction Super Heat, 8.3 K Liquid Subcooling.

Features:

- All hermetic reciprocating compressors are offered as service packs that include anti-vibration rubber mounts, rotalock connection service ports with solder sleeve adaptors and oil level sightglass.
- Oil level sightglass allows fitting of oil equalisation adapter connection.
- Insertion type Crankcase Heater PTC heater 27 W available as an option.

- Rotalock service valves and Rotalock adaptors are available as an optional extra.
- MCC = Maximum Continuous Current (A). RLA = Run Load Amps *MCC ÷ 1.4
- Compressor models listed are suction cooled design

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative

MANEUROP HERMETIC COMPRESSORS R507, R404A

Part Number	Nominal HP	Cylinder Number	Displacement		Nominal Capacity				
					Evaporating Temperature: °C				
			cm³/rev	m³/h @ 2900 rpm	-40	-35	-30	-25	-20

R507/R404A LBP Compressors (POE Oil)

NTZ048-5LR1	1.8	1	48.06	8.4	370	550	810	1140	1560
NTZ068-4LR1	2.3	1	67.89	11.8	550	850	1230	1710	2310
NTZ096-4LR1	3.3	2	96.13	16.7	910	1310	1870	2600	3550
NTZ108-4LR1	3.8	2	107.71	18.7	910	1410	2070	2950	4050
NTZ136-4LR1	4	2	135.78	23.6	1330	1990	2850	3920	5250
NTZ215-4LR1	7.3	4	215.44	37.5	1650	2670	4030	5770	7970
NTZ271-4LR1	8.3	4	271.55	47.3	2340	3710	5450	7650	10340

MANEUROP HERMETIC COMPRESSORS R507, R404A (CONT'D)

Part Number	Electrical Supply Volts/Hz/Phase	MCC Amps (A)	Motor Type	Oil Type (Pre-Charged)	Oil Charge cm³	O/A Height (mm)	Net Weight (kg)	Service Connections Size (inches)	
								Suct. Solder Tube	Disch. Solder tube

R507/R404A LBP Compressors (POE Oil)

NTZ048-5LR1	220-240V/1/50Hz	11.0	PCS/CSR	160 PZ	950	333	21	5/8	1/2
NTZ068-4LR1	380-400V/3/50Hz	8.4	DOL	160 PZ	950	358	23	5/8	1/2
NTZ096-4LR1	380-400V/3/50Hz	10.1	DOL	160 PZ	1800	413	35	7/8	3/4
NTZ108-4LR1	380-400V/3/50Hz	12.1	DOL	160 PZ	1800	413	35	7/8	3/4
NTZ136-4LR1	380-400V/3/50Hz	14.3	DOL	160 PZ	1800	413	35	1-1/8	3/4
NTZ215-4LR1	380-400V/3/50Hz	22.3	DOL	160 PZ	3900	519	62	1-1/8	3/4
NTZ271-4LR1	380-400V/3/50Hz	27.0	DOL	160 PZ	3900	540	64	1-1/8	3/4

Note - Rating Conditions: 50 °C Condensing, 11.1K Suction Super Heat, 8.3K Liquid Subcooling.

Features:

- All hermetic reciprocating compressors are offered as service packs that include anti-vibration rubber mounts, rotalock connection service ports with solder sleeve adaptors and oil level sightglass.
- Oil level sightglass allows fitting of oil equalisation adapter connection.
- Insertion type Crankcase Heater PTC heater 27W available as an option.

- Rotalock service valves and Rotalock adaptors are available as an optional extra.
- MCC = Maximum Continuous Current (A) .. RLA = Run Load Amps *MCC ÷ 1.4
- Compressor models listed are suction cooled design

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative

MANEUROP HERMETIC COMPRESSORS - SPARE PARTS

Compressor Model	Electrical Supply	Start - Run Elec Service Pack Kit	Start Relay (RVA-6AMKL /3ARR3J4A4)	CSR Only Start Capacitor	
	Volts/Hz/Phase			P/No.	MFD
MTZ18-4VI	380-400V/3/50Hz	-	-	-	-
MTZ18-5VI	220-240V/1/50Hz	77001022	8173022	92A108B250BD4X	108-130 µF 330 VAC.
MTZ22-4VI	380-400V/3/50Hz	-	-	-	-
MTZ22-5VI	220-240V/1/50Hz	77001022	8173022	92A108B250BD4X	108-130 µF 330 VAC.
MTZ28-4VI	380-400V/3/50Hz	-	-	-	-
MTZ28-5VI	220-240V/1/50Hz	77001022	8173022	92A108B250BD4X	108-130 µF 330 VAC.
MTZ32-4VI	380-400V/3/50Hz	-	-	-	-
MTZ32-5VI	220-240V/1/50Hz	77001022	8173022	92A145B250BD4X	145-174 µF 330 VAC.
MTZ36-4VI	380-400V/3/50Hz	-	-	-	-
MTZ36-5VI	220-240V/1/50Hz	77001022	8173022	92A145B250BD4X	145-174 µF 330 VAC.
MTZ40-4VI	380-400V/3/50Hz	-	-	-	-
MTZ44-4VI	380-400V/3/50Hz	-	-	-	-
MTZ50-4VI	380-400V/3/50Hz	-	-	-	-
MTZ56-4VI	380-400V/3/50Hz	-	-	-	-
MTZ64-4VI	380-400V/3/50Hz	-	-	-	-
MTZ72-4VI	380-400V/3/50Hz	-	-	-	-

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RECIPROCATING COMPRESSORS





HERMETIC COMPRESSORS – RECIPROCATING (CONT'D)

MANEUROP HERMETIC COMPRESSORS - SPARE PARTS (CONT'D)

Compressor Model	Electrical Supply	Start - Run Elec Service Pack Kit	Start Relay (RVA-6AMKL /3ARR3J4A4)	CSR Only Start Capacitor	
	Volts/Hz/Phase			P/No.	MFD
MTZ80-4VI	380-400V/3/50Hz	-	-	-	-
MTZ100-4VI	380-400V/3/50Hz	-	-	-	-
MTZ125-4VI	380-400V/3/50Hz	-	-	-	-
MTZ144-4VI	380-400V/3/50Hz	-	-	-	-
MTZ160-4VI	380-400V/3/50Hz	-	-	-	-
NTZ048-5LR1	220-240V/1/50Hz	77001022	8173022	92A108B250BD4X	108-130 µF 330 VAC.
NTZ068-4LR1	380-400V/3/50Hz	-	-	-	-
NTZ096-4LR1	380-400V/3/50Hz	-	-	-	-
NTZ108-4LR1	380-400V/3/50Hz	-	-	-	-
NTZ136-4LR1	380-400V/3/50Hz	-	-	-	-
NTZ215-4LR1	380-400V/3/50Hz	-	-	-	-
NTZ271-4LR1	380-400V/3/50Hz	-	-	-	-

MANEUROP HERMETIC COMPRESSORS - SPARE PARTS (CONT'D)

Compressor Model	PSC/CSR Run Capacitors				Crankcase Heater 27 W.
	P/No.	A' MFD Circuit	P/No.	B' MFD Circuit	
MTZ18-4VI	-	-	-	-	120Z0459
MTZ18-5VI	AI7A200N7T	20 µF 450 VAC.	AI7A100L6T	10 µF 450 VAC	120Z0459
MTZ22-4VI	-	-	-	-	120Z0459
MTZ22-5VI	AI7A200N7T	20 µF 450 VAC.	AI7A100L6T	10 µF 450 VAC	120Z0459
MTZ28-4VI	-	-	-	-	120Z0459
MTZ28-5VI	AI7A200N7T	20 µF 450 VAC.	AI7A100L6T	10 µF 450 VAC	120Z0459
MTZ32-4VI	-	-	-	-	120Z0459
MTZ32-5VI	AI7A250P7T	25 µF 450 VAC.	AI7A100L6T	10 µF 450 VAC	120Z0459
MTZ36-4VI	-	-	-	-	120Z0459
MTZ36-5VI	AI7A250P7T	25 µF 450 VAC.	AI7A100L6T	10 µF 450 VAC	120Z0459
MTZ40-4VI	-	-	-	-	120Z0459
MTZ44-4VI	-	-	-	-	120Z0459
MTZ50-4VI	-	-	-	-	120Z0459
MTZ56-4VI	-	-	-	-	120Z0459
MTZ64-4VI	-	-	-	-	120Z0459
MTZ72-4VI	-	-	-	-	120Z0459
MTZ80-4VI	-	-	-	-	120Z0459
MTZ100-4VI	-	-	-	-	120Z0459
MTZ125-4VI	-	-	-	-	120Z0459
MTZ144-4VI	-	-	-	-	120Z0459
MTZ160-4VI	-	-	-	-	120Z0459
NTZ048-5LR1	AI7A200N7T	20 µF 450 VAC.	AI7A100L6T	10 µF 450 VAC	120Z0459
NTZ068-4LR1	-	-	-	-	120Z0459
NTZ096-4LR1	-	-	-	-	120Z0459
NTZ108-4LR1	-	-	-	-	120Z0459
NTZ136-4LR1	-	-	-	-	120Z0459
NTZ215-4LR1	-	-	-	-	120Z0459
NTZ271-4LR1	-	-	-	-	120Z0459

MTZ/NTZ COMPRESSOR SERVICE VALVE GUIDE

Valve Part Number	2606-061620	2606-081620	2606-101620	2606-122030	2606-142030	2606-142830	2606-182835	Compressor Acoustic Hood
Valve Size	3/8"ID x 1"RL	1/2"ID x 1"RL	5/8"ID x 1-1/4"RL	3/4"ID x 1-1/4"RL	7/8"ID x 1-1/4"RL	7/8"ID x 1-3/4"RL	1-1/8"ID x 1-3/4"RL	
Compressor	Connection	Connection	Connection	Connection	Connection	Connection	Connection	
MTZ18	Discharge	Suction	-	-	-	-	-	120Z0575
MTZ22	Discharge	Suction	-	-	-	-	-	120Z0575
MTZ28	Discharge	Suction	-	-	-	-	-	120Z0575
MTZ32	-	Discharge	Suction	-	-	-	-	120Z0575
MT36	-	Discharge	Suction	-	-	-	-	120Z0575
MTZ40	-	Discharge	Suction	-	-	-	-	120Z0575
MTZ44 / 45	-	-	-	Discharge	-	Suction	-	120Z0576
MTZ50 / 51	-	-	-	Discharge	-	Suction	-	120Z0576
MTZ56 / 57	-	-	-	Discharge	-	Suction	-	120Z0576
MTZ64 / 65	-	-	-	Discharge	-	Suction	-	120Z0576
MTZ72 / 73	-	-	-	Discharge	-	Suction	-	120Z0576
MTZ80 / 81	-	-	-	Discharge	-	-	Suction	120Z0576
MTZ100	-	-	-	-	Discharge	-	Suction	120Z0577
MTZ125	-	-	-	-	Discharge	-	Suction	120Z0577
MTZ144	-	-	-	-	Discharge	-	Suction	120Z0577
MTZ160	-	-	-	-	Discharge	-	Suction	120Z0577
NTZ048	-	Discharge	Suction	-	-	-	-	-
NTZ068	-	Discharge	Suction	-	-	-	-	-
NTZ096	-	-	-	Discharge	-	Suction	-	-
NTZ108	-	-	-	Discharge	-	Suction	-	-
NTZ136	-	-	-	Discharge	-	-	Suction	-
NTZ125	-	-	-	Discharge	-	-	Suction	-
NTZ271	-	-	-	Discharge	-	-	Suction	-

Waneurop
RECIPROCATING COMPRESSORS

**HERMETIC COMPRESSORS – SCROLL****ZF COPELAND SCROLL COMPRESSORS - REFRIGERATION**

Part Number	Nominal HP	Displ. m³/hr	Nominal Capacity (watts)							Motor Type
			Evaporating Temperature: °C							
			-45	-35	-25	-15	-5	0	5	

R404A L/M/HBP Compressors 415V/3 Phase/50Hz (POE Oil)

ZF09K4ETFD550-C	3.0	46.4	1200	1500	2300	3300	4700	5600	6600	DOL
ZF11K4ETFD550-C	3.5	57.5	1500	1800	2800	4100	5800	7000	8300	DOL
ZF13K4ETFD551-C	4.0	67.8	1700	2100	3200	4800	6900	8200	9700	DOL
ZF15K4ETFD551-C	5.0	83.3	2100	2600	3900	5800	8300	10000	11800	DOL
ZF18K4ETFD551-C	6.0	98.8	2500	3100	4800	6900	10000	12000	14200	DOL
ZF24K4ETWD551-C	7.5	126.0	3060	3800	5800	8500	12300	14700	17400	DOL
ZF33K4ETWD551-C	10.0	166.0	4350	5300	8200	12200	17500	20800	24500	DOL
ZF40K4ETWD551-C	13.0	204.0	5200	6400	10000	14800	21300	25500	30100	DOL
ZF48K4ETWD551-C	15.0	244.0	6000	7400	11400	16900	24500	29300	34600	DOL

Copeland



HERMETIC COMPRESSORS – SCROLL (CONT'D)

ZF COPELAND SCROLL COMPRESSORS - REFRIGERATION (CONT'D)

Part Number	Nominal Current MOC (A)	Oil Type	Oil Charge cc	O/A Height (mm)	Net Weight (kg)	Rotalock Service Valves	Service - Solder Stub Connections (inches)	
							Suct.	Disch.
R404A L/M/HBP Compressors 415V/3 Phase/50Hz (POE Oil)								
ZF09K4ETFD550-C	5.4	POE	1100	391	30	No	3/4	1/2
ZF11K4ETFD550-C	6.4	POE	1100	405	31	No	3/4	1/2
ZF13K4ETFD551-C	4.6	POE	1900	442	39	Yes	7/8	1/2
ZF15K4ETFD551-C	5.7	POE	1900	442	43	Yes	7/8	1/2
ZF18K4ETFD551-C	8.0	POE	1900	442	43	Yes	7/8	1/2
ZF24K4ETWD551-C	12.2	POE	4100	525	100	Yes	1-3/8	7/8
ZF33K4ETWD551-C	17.0	POE	4100	540	100	Yes	1-3/8	7/8
ZF40K4ETWD551-C	18.4	POE	4100	560	110	Yes	1-3/8	7/8
ZF48K4ETWD551-C	22.5	POE	4100	610	119	Yes	1-3/8	7/8

STANDARD CONDITIONS - NOMINAL CAPACITIES ARE ESTABLISHED THROUGH ASHRAE-T STANDARD CONDITIONS

Application	Evaporating	Cond	Liquid Entering	Return Vapour
	Temp °C	Temp °C	Temp °C	Temp °C
Low Suction Temp	-23.3	55	32	32
Med Suction Temp	-6.7	55	47	35
High Suction Temp	7.2	55	47	35
A/C Suction Temp	7.2	55	47	35

ZR COPELAND SCROLL COMPRESSORS - AIR CONDITIONING

Part Number	Nominal HP	Displ. m³/hr	R22 / R407C Rating Point 7.2 °C	Motor Start Type	Motor Start Type	Nominal Current MOC (A)	Oil* Type	Oil Charge cc	O/A Height (mm)	Weight (kg)	Rotalock Service Valves	Service - Solder Stub Connections (inches)	
												Suct.	Disch.
R22 / R407C HBP Compressors 240 V/Single Phase/50 Hz (POE Oil)													
ZR22K3EPFJ522-C	1.8	30.7	5240	PSC	PSC	9.6	POE	1000	383	26.0	No	3/4	1/2
ZR28K3EPFJ522-C	2.3	39.2	6970	PSC	PSC	12.9	POE	1000	383	27.3	No	3/4	1/2
ZR34K3EPFJ522-C	2.8	46.1	8260	PSC	PSC	13.6	POE	1100	406	29.5	No	3/4	1/2
ZR36K3EPFJ522-C	3.0	49.5	8850	PSC	PSC	16.4	POE	1100	406	29.5	No	3/4	1/2
ZR42K3EPFJ522-C	3.5	56.8	10140	PSC	PSC	17.1	POE	1100	420	30.0	No	3/4	1/2
ZR47K3EPFJ522-C	3.9	64.1	11500	PSC	PSC	19.3	POE	1100	436	32.6	No	7/8	1/2
R22 / R407C HBP Compressors 415 V/3 Phase/50 Hz (POE Oil)													
ZR28K3ETFD522-C	2.3	39.2	6970	DOL	DOL	5.0	POE	1000	383	26.0	No	3/4	1/2
ZR36K3ETFD522-C	3.0	49.5	8850	DOL	DOL	5.7	POE	1000	406	29.5	No	3/4	1/2
ZR40K3ETFD522-C	3.3	51.2	9260	DOL	DOL	6.4	POE	1100	420	32.0	No	3/4	1/2
ZR47KCETFD522-C	3.9	63.2	11400	DOL	DOL	7.2	POE	1200	436	32.6	No	7/8	1/2
ZR48KCETFD522-C	4.1	67.2	11500	DOL	DOL	7.5	POE	1400	460	33.0	No	7/8	1/2
ZR54KCETFD522-C	4.5	73.2	13000	DOL	DOL	8.2	POE	1800	460	35.5	No	7/8	1/2
ZR57KCETFD522-C	4.8	76.0	13660	DOL	DOL	8.2	POE	1800	460	36.0	No	7/8	1/2
ZR61KCETFD522-C	5.0	82.4	14700	DOL	DOL	10.0	POE	2000	460	35.9	No	7/8	1/2
ZR68KCETFD522-C	5.8	93.0	16500	DOL	DOL	10.0	POE	1600	460	38.2	No	7/8	1/2
ZR72KCETFD522-C	6.0	98.0	17800	DOL	DOL	10.0	POE	1800	460	38.2	No	7/8	1/2
ZR81KCETFD522-C	6.8	110.6	19800	DOL	DOL	12.0	POE	1800	460	40.0	No	7/8	3/4
ZR94KCETFD522-C	8.0	127.2	23000	DOL	DOL	16.2	POE	2500	496	59.0	No	1-1/8	7/8
ZR94KCETFD523-C	8.0	127.2	23200	DOL	DOL	16.2	POE	2400	496	64.0	Yes	1-1/8	7/8

ZR COPELAND SCROLL COMPRESSORS - AIR CONDITIONING (CONT'D)

Part Number	Nominal HP	Displ. m³/hr	R22 / R407C Rating Point 7.2 °C	Motor Start Type	Motor Start Type	Nominal Current MOC (A)	Oil* Type	Oil Charge cc	O/A Height (mm)	Weight (kg)	Rotalock Service Valves	Service - Solder Stub Connections (inches)	
												Suct.	Disch.
ZR108KCETFD522C	9.0	147.5	26670	DOL	DOL	17.3	POE	3300	553	64.0	No	1 3/8	7/8
ZR108KCETFD523C	9.0	147.5	26670	DOL	DOL	17.3	POE	3100	553	64.0	Yes	1 3/8	7/8
ZR125KCETFD522C	10.0	171.4	30660	DOL	DOL	19.2	POE	3300	553	64.0	No	1 3/8	7/8
ZR125KCETFD523C	10.0	165.6	31000	DOL	DOL	19.2	POE	3100	553	62.7	Yes	1 3/8	7/8
ZR144KCETFD522C	12.0	191.7	34700	DOL	DOL	19.6	POE	3300	553	62.7	No	1 3/8	7/8
ZR144KCETFD523C	12.0	191.7	34700	DOL	DOL	19.6	POE	3100	553	62.7	Yes	1 3/8	7/8
ZR160KCETFD523C	13.0	204.3	37700	DOL	DOL	17.3	POE	3300	572	64.9	Yes	1 3/8	7/8
ZR190KCETFD523C	15.0	241.9	45900	DOL	DOL	23.8	POE	3300	572	66.2	Yes	1 3/8	7/8

Copeland®**STANDARD CONDITIONS**

Application	Ambient Temp °C	Condensing Temp °C	Liquid Entering Temp °C	Return Vapour Temp °C	Nom. Capacity & Power Input W @ SST °C	Standard
Air Conditioning	35	55	47	35	7.2	ARI

IMPORTANT - WARNING TO BE CLEARLY UNDERSTOOD PRIOR TO RUNNING ANY SCROLL COMPRESSOR

- It is important that the SCROLL compressor is charged as quickly as possible by way of LIQUID REFRIGERANT INTO THE LIQUID LINE, this is to avoid insufficient volume of suction gas that would be detrimental to the compressor.
- DO NOT VAPOUR CHARGE THE SYSTEM!!**

- It is recommended the required refrigerant charge is bomb charged into the liquid side of the system.
- Topping up the system can be done carefully on the low side with liquid refrigerant through manifold service gauges.
- The suction service valve must NOT BE FULLY CLOSED at any time when the compressor is running.

Note - Stated Capacity (watt) in the above chart have been established at these conditions using nominated refrigerants and are accurate to +/-5 %. To establish capacities at design conditions, the following factors may be used:

- For lower condensing temperatures: increase capacity 6 % for every 5 °C lower condensing temperature.
- For higher condensing temperatures: decrease capacity 6 % for every 5 °C higher condensing temperature.

- For lower liquid entering temperatures: increase capacity 1 % for every 1 °C lower liquid entering temperature.

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative.

**COPELAND SCROLL COMPRESSORS - SPARE PARTS**

Compressor Model	Capillary Kit	Solenoid Valve	Solenoid Coil	Drier	Current Sensing Relay	Discharge Temp Control (DTC)	Crankcase Heater 240 V 70 W
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ZF Liquid Injection Kit R404A - Parts Listing (Less than -25°C SST application)

ZF08K4ETFD550-C	998-1583-00	032F1201	018F6702	023Z5048	2982097	8563054	8561105
ZF09K4ETFD550-C	998-1583-00	032F1201	018F6702	023Z5048	2982097	8563054	8561105
ZF11K4ETFD550-C	998-1583-00	032F1201	018F6702	023Z5048	2982097	8563054	8561105
ZF13K4ETFD551-C	998-1583-01	032F1201	018F6702	023Z5048	2982097	8563054	8561105
ZF15K4ETFD551-C	998-1583-03	032F1201	018F6702	023Z5048	2982097	8563054	8561105
ZF18K4ETFD551-C	998-1583-04	032F1201	018F6702	023Z5048	2982097	8563054	8561105
ZF24K4ETWD551-C	854637	032F1201	018F6702	023Z5048	2982097	8563054	8561105
ZF33K4ETWD551-C	856415	032F1201	018F6702	023Z5048	2982097	8563054	8561105
ZF40K4ETWD551-C	856448	032F1201	018F6702	023Z5048	2982097	8563054	8561105
ZF48K4ETWD551-C	856448	032F1201	018F6702	023Z5048	2982097	8563054	8561105

HERMETIC COMPRESSORS – SCROLL (CONT'D)

ZF COMPRESSOR SERVICE VALVE GUIDE

Valve Part Number	2606-081620	2606-142030	2606-182835	2606-222835	2606-263650	Braze to RL Valve Adaptor	
Valve Size	1/2"ID x 1"RL	7/8"ID x 1-1/4"RL	1-1/8"ID x 1-3/4"RL	1-3/8"ID x 1-3/4"RL	1-5/8"ID x 2-1/4"RL	Optional Accessories	
Compressor	Connection	Connection	Connection	Connection	Connection	Suction	Discharge
ZF09K4ETFD550-C	Discharge	Suction	-	-	-	MRV214-1	293-8016
ZF11K4ETFD550-C	Discharge	Suction	-	-	-	MRV214-1	293-8016
ZF13K4ETFD551-C	Discharge	Suction	-	-	-	-	-
ZF15K4ETFD551-C	Discharge	Suction	-	-	-	-	-
ZF18K4ETFD551-C	Discharge	Suction	-	-	-	-	-
ZF24K4ETWD551-C	-	Discharge	Suction	-	-	-	-
ZF33K4ETWD551-C	-	Discharge	-	Suction	-	-	-
ZF40K4ETWD551-C	-	Discharge	-	Suction	-	-	-
ZF48K4ETWD551-C	-	-	Discharge	-	Suction	-	-

Part Number	Description	Where Used
8564342	INT69 Motor Protection Module	All Copeland Scroll Compressors Where Required ZF,ZS,ZB,ZP

ZR COMPRESSOR SPARE PARTS

Compressor Model	Phase	Volts/Hz	Overload P/ No.	Relay P/No.	Start Capacitor	
					P/No.	MFD
ZR28K3EPFJ522-C	1 PH.	240V / 50Hz	Internal	040-0166-37	92A088B330BD4X	88-106 µF 330 VAC.
ZR34K3EPFJ522-C	1 PH.	240V / 50Hz	Internal	040-0166-37	92A088B330BD4X	88-106 µF 330 VAC.
ZR36K3EPFJ522-C	1 PH.	240V / 50Hz	Internal	040-0166-37	92A088B330BD4X	88-106 µF 330 VAC.
ZR42K3EPFJ522-C	1 PH.	240V / 50Hz	Internal	040-0166-37	92A088B330BD4X	88-106 µF 330 VAC.
ZR47K3EPFJ522-C	1 PH.	240V / 50Hz	Internal	040-0166-37	92A088B330BD4X	88-106 µF 330 VAC.
ZR28K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR36K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR40K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR47KCETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR48KCETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR54KCETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR57KCETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR61KCETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR68KCETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR72KCETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR81KCETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR94KCETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR94KCETFD523-C	3 PH.	415V / 50Hz	-	-	-	-
ZR108KCETFD522C	3 PH.	415V / 50Hz	-	-	-	-
ZR108KCETFD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR125KCETFD522C	3 PH.	415V / 50Hz	-	-	-	-
ZR125KCETFD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR144KCETFD522C	3 PH.	415V / 50Hz	-	-	-	-
ZR144KCETFD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR160KCETFD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR190KCETFD523C	3 PH.	415V / 50Hz	-	-	-	-



**ZR COMPRESSOR SPARE PARTS (CONT'D)**

Compressor Model	Run Capacitor		Crankcase Heater	
	P/No.	MFD	P/No.	Type
ZR28K3EPFJ522-C	A17A300P7T	30 µF 450 VAC.	018-0095-00	240V 70W
ZR34K3EPFJ522-C	A17A500R9T	50 µF 450 VAC.	018-0095-00	240V 70W
ZR36K3EPFJ522-C	A17A500R7T	50 µF 450 VAC.	018-0095-00	240V 70W
ZR42K3EPFJ522-C	A17A550R9T	55 µF 450 VAC.	018-0095-00	240V 70W
ZR47K3EPFJ522-C	A17A600V9T	60 µF 370 VAC.	018-0095-00	240V 70W
ZR28K3ETFD522-C	-	-	018-0095-00	240V 70W
ZR36K3ETFD522-C	-	-	018-0095-00	240V 70W
ZR40K3ETFD522-C	-	-	018-0095-00	240V 70W
ZR47KCETFD522-C	-	-	018-0095-00	240V 70W
ZR48KCETFD522-C	-	-	018-0095-00	240V 70W
ZR54KCETFD522-C	-	-	018-0095-00	240V 70W
ZR57KCETFD522-C	-	-	018-0095-00	240V 70W
ZR61KCETFD522-C	-	-	018-0095-00	240V 70W
ZR68KCETFD522-C	-	-	018-0095-00	240V 70W
ZR72KCETFD522-C	-	-	018-0095-00	240V 70W
ZR81KCETFD522-C	-	-	018-0095-00	240V 70W
ZR94KCETFD522-C	-	-	018-0091-22	240V 90W
ZR94KCETFD523-C	-	-	018-0091-22	240V 90W
ZR108KCETFD522C	-	-	018-0091-22	240V 90W
ZR108KCETFD523C	-	-	018-0091-22	240V 90W
ZR125KCETFD522C	-	-	018-0091-22	240V 90W
ZR125KCETFD523C	-	-	018-0091-22	240V 90W
ZR144KCETFD522C	-	-	018-0091-22	240V 90W
ZR144KCETFD523C	-	-	018-0091-22	240V 90W
ZR160KCETFD523C	-	-	018-0091-22	240V 90W
ZR190KCETFD523C	-	-	018-0091-22	240V 90W

ZR COMPRESSOR SERVICE VALVE GUIDE

Valve Part Number	2606-081620	2606-122030	2606-142030	2606-182835	2606-222835	2606-263650	Braze to RL Valve Adaptor	
Valve Size	1/2"ID x 1"RL	3/4"ID x 1-1/4"RL	7/8"ID x 1-1/4"RL	1-1/8"ID x 1-3/4"RL	1-3/8"ID x 1-3/4"RL	1-5/8"ID x 2-1/4"RL	Optional Accessories	
Compressor	Connection	Connection	Connection	Connection	Connection	Connection	Suction	Discharge
ZR28K3EPFJ522-C	Discharge	Suction	-	-	-	-	MR362-3	293-8016
ZR34K3EPFJ522-C	Discharge	Suction	-	-	-	-	MR362-3	293-8016
ZR36K3EPFJ522-C	Discharge	Suction	-	-	-	-	MR362-3	293-8016
ZR42K3EPFJ522-C	Discharge	Suction	-	-	-	-	MR362-3	293-8016
ZR47K3EPFJ522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
ZR28K3ETFD522-C	Discharge	Suction	-	-	-	-	MR362-3	293-8016
ZR36K3ETFD522-C	Discharge	Suction	-	-	-	-	MR362-3	293-8016
ZR40K3ETFD522-C	Discharge	Suction	-	-	-	-	MR362-3	293-8016
ZR47KCETFD522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
ZR48KCETFD522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
ZR54KCETFD522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
ZR57KCETFD522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
ZR61KCETFD522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
ZR68KCETFD522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
ZR72KCETFD522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016

HERMETIC COMPRESSORS – SCROLL (CONT'D)

ZR COMPRESSOR SERVICE VALVE GUIDE (CONT'D)

Valve Part Number	2606-081620	2606-122030	2606-142030	2606-182835	2606-222835	2606-263650	Braze to RL Valve Adaptor	
Valve Size	1/2"ID x 1"RL	3/4"ID x 1-1/4"RL	7/8"ID x 1-1/4"RL	1-1/8"ID x 1-3/4"RL	1-3/8"ID x 1-3/4"RL	1-5/8"ID x 2-1/4"RL	Optional Accessories	
Compressor	Connection	Connection	Connection	Connection	Connection	Connection	Suction	Discharge
ZR81KCETFD522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
ZR94KCETFD522-C	-	Discharge	-	Suction	-	-	8515168	8026935
ZR94KCETFD523-C	-	Discharge	-	Suction	-	-	-	-
ZR108KCETFD522C	-	Discharge	-	Suction	-	-	8515146	8026935
ZR108KCETFD523C	-	Discharge	-	Suction	-	-	-	-
ZR125KCETFD522C	-	Discharge	-	Suction	-	-	8515146	8026935
ZR125KCETFD523C	-	Discharge	-	Suction	-	-	-	-
ZR144KCETFD522C	-	-	Discharge	-	Suction	-	8515146	8026935
ZR144KCETFD523C	-	-	Discharge	-	Suction	-	-	-
ZR160KCETFD523C	-	-	Discharge	-	Suction	-	-	-
ZR190KCETFD523C	-	-	Discharge	-	Suction	-	-	-

Note - Compressor model BOM 523 C designates that they are Rotolock Valve ready.

MANEUROP SCROLL R134a MHBP - REFRIGERATION 415 V - 50 HZ - 3 PHASE

Model	Nominal HP	Displ. m³/hr @ 2900 rpm	Displ. m³/rev	Nominal Capacity: R134a watts @ 50 °C SCT.							Motor Type
				Evaporating Temperature: °C							
				-15	-10	-5	0	5	7.2	10	
SZ090-4VI	7.5	20.97	120.5	5485	7181	9158	11445	14073	15574	17074	DOL
SZ100-4VI	8.5	22.13	127.2	6076	7866	9940	12330	15066	16622	18177	DOL
SZ110-4VI	9.2	25.09	144.2	6781	8797	11151	13881	17024	18821	20618	DOL
SZ115-4RI	9.6	26.79	155	7305	9593	12244	15298	18791	20776	22761	DOL
SZ120-4RI	10	28.99	166.6	7705	10022	12746	15924	19604	21719	23834	DOL
SZ125-4RI	10.4	28.99	166.6	7782	10220	13045	16298	20019	22134	24249	DOL
SZ160-4RI	13.3	37.69	216.6	10112	13231	16878	21114	25998	28795	31591	DOL
SZ175-4RI	13.3	40.54	233	10745	14058	17394	22434	27624	30595	33566	DOL
SZ185-4RI	16.6	43.48	249.9	11435	14962	19086	23876	29400	32562	35724	DOL

MANEUROP SCROLL R134a MHBP - REFRIGERATION 415 V - 50 Hz - 3 PHASE (CONT'D)

Model	Nominal Current FLA	Auxillary Cooling Option	Oil Type	Oil Charge cc	O/A Height (mm)	Net Weight (kg)	Service Connections (inches)	
							Suct.	Disch.
SZ090-4VI	18.5A MCC	FAN	POE 160SZ	3250	508	65	1 1/8	3/4
SZ100-4VI	19A MCC	FAN	POE 160SZ	3250	508	65	1 1/8	3/4
SZ110-4VI	22A MCC	FAN	POE 160SZ	3250	558	73	1 3/8	7/8
SZ115-4RI	29A MCC	FAN	POE 160SZ	3800	586	78	1 3/8	7/8
SZ120-4RI	25A MCC	FAN	POE 160SZ	3300	558	73	1 3/8	7/8
SZ125-4RI	25A MCC	FAN	POE 160SZ	3800	586	78	1 3/8	7/8
SZ160-4RI	35A MMT	FAN	POE 160SZ	4000	631	90	1 3/8	7/8
SZ175-4RI	35A MMT	FAN	POE 160SZ	6200	678	88	1 3/8	7/8
SZ185-4RI	35A MMT	FAN	POE 160SZ	6200	678	100	1 3/8	7/8

MANEUROP R22 / R407C MHBP AIR CONDITIONING 415 V-50 Hz - 3 PHASE

Model	Oil Type	Model	Oil Type	Nominal HP	Displ. m³/hr @ 2900rpm	Displ. m³/rev	Capacity Watts Rating Point 7.2 °C SST. (@55 °C SCT.)	Motor Type
SM090-4VI	MO 160P	SZ090-4VI	POE 160SZ	7.5	20.97	120.5	20200	DOL
SM100-4VI	MO 160P	SZ100-4VI	POE 160SZ	8.5	22.13	127.2	21379	DOL
SM110-4VI	MO 160P	SZ110-4VI	POE 160SZ	9.2	25.09	144.2	24374	DOL
SM115-4RI	MO 160P	SZ115-4RI	POE 160SZ	9.6	26.79	155	26599	DOL
SM120-4RI	MO 160P	SZ120-4RI	POE 160SZ	10	28.99	166.6	28294	DOL
SM125-4RI	MO 160P	SZ125-4RI	POE 160SZ	10.4	28.99	166.6	28298	DOL
SM160-4RI	MO 160P	SZ160-4RI	POE 160SZ	13.3	37.69	216.6	38252	DOL
SM175-4RI	MO 160P	SZ175-4RI	POE 160SZ	13.3	40.54	233	39746	DOL
SM185-4RI	MO 160P	SZ185-4RI	POE 160SZ	16.6	43.48	249.9	42705	DOL

Maneurop
RECIPROCATING COMPRESSORS

**MANEUROP R22 / R407C MHBP AIR CONDITIONING 415 V-50 Hz - 3 PHASE (CONT'D)**

Model	Nominal Current FLA	Auxiliary Cooling Option	Oil Charge cc	O/A Height (mm)	Net Weight (kg)	Connection Type	Service Connections (inches)	
							Suct.	Disch.
SM090-4VI	18.5A MCC	FAN	3250	508	65	Stub Tube	1 1/8	3/4
SM100-4VI	19A MCC	FAN	3250	508	65	Stub Tube	1 1/8	3/4
SM110-4VI	22A MCC	FAN	3250	558	73	Stub Tube	1 3/8	7/8
SM115-4RI	29A MCC	FAN	3800	586	78	Rotalock	1 3/8	7/8
SM120-4RI	25A MCC	FAN	3300	558	73	Rotalock	1 3/8	7/8
SM125-4RI	25A MCC	FAN	3800	586	78	Rotalock	1 3/8	7/8
SM160-4RI	35A MMT	FAN	4000	631	90	Rotalock	1 3/8	7/8
SM175-4RI	35A MMT	FAN	6200	678	88	Rotalock	1 3/8	7/8
SM185-4RI	35A MMT	FAN	6200	678	100	Rotalock	1 3/8	7/8

- All hermetic compressors are offered as service packs and include feet mounting kit, electrical components and rotalock service valve where nominated.
- Oil Sight Glass fitted as standard with provision for 3/8" Flare Oil Equalization Connection.
- Rotalock Valves and Crankcase Heater are supplied as optional accessory. Refer to following table for part numbers.

MMC: Maximum Continuous Current MMT: Maximum Must Trip Current

STANDARD CONDITIONAL - NOMINAL CAPACITIES ARE ESTABLISHED THROUGH ASHRAE-T STANDARD CONDITIONS

Application	Evaporating	Ambient	Cond	Liquid Entering
	Temp °C	Temp °C	Temp °C	Temp °C
Low Suction Temp	-23.3	32	55	32
Med Suction Temp	-6.7	35	55	47
High Suction Temp	7.2	35	55	47
A/C Suction Temp	7.2	35	55	47

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative.

SM & SZ COMPRESSOR SERVICE VALVE GUIDE

Valve Part Number	2606-122030	2606-142830	2606-182835	2606-222835	2606-263650	Optional Addition
Valve Size	3/4"ID x 1-1/4"RL	7/8"ID x 1-3/4"RL	1-1/8"ID x 1-3/4"RL	1-3/8"ID x 1-3/4"RL	1-3/8"ID x 2-1/4"RL	
Compressor	Connection	Connection	Connection	Connection	Connection	
SM / SZ090-4VI	Discharge	-	Suction	-	-	Yes
SM / SZ100-4VI	Discharge	-	Suction	-	-	Yes
SM / SZ110-4VI	-	Discharge	-	Suction	-	Yes
SM / SZ115-4RI	Discharge	-	-	-	-	Yes
SM / SZ120-4RI	Discharge	-	-	-	-	Yes
SM / SZ125-4RI	Discharge	-	-	-	-	Yes
SM / SZ160-4RI	-	Discharge	-	-	Suction	Yes
SM / SZ175-4RI	-	Discharge	-	-	Suction	Yes
SM / SZ185-4RI	-	Discharge	-	-	Suction	Yes



HERMETIC COMPRESSORS – SCROLL (CONT'D)

ZP COPELAND SCROLL COMPRESSORS - AIR CONDITIONING

Part Number	Displ. m³/ hr	R410A Capacity (watts) @ 7.2 °C SST	Motor Type	*Nominal Current MOC (A)	Oil Type	Oil Charge cc	O/A Height (mm)	Weight (kg)	Rotalock Service Valves	Service - Solder Stub Connections (inches)		Crankcase Heater 240V - 50 Hz
										Suct.	Disch.	
R410A HBP Compressors 415V/3/50Hz												
ZP51KSETFM522-C	8.4	10060	DOL	8.6	POE	1120	436	33.0	No	7/8	1/2	018-0096-00 (40 W)
ZP54KSETFM522-C	8.9	11750	DOL	8.6	POE	1120	436	34.4	No	7/8	1/2	018-0096-00 (40 W)
ZP57KSETFM522-C	9.5	11650	DOL	10.7	POE	1540	436	41.7	No	7/8	1/2	018-0095-00 (70 W)
ZP61KCETFM522-C	10.0	13250	DOL	10.9	POE	1660	436	40.3	No	7/8	1/2	018-0095-00 (70 W)
ZP67KCETFM522-C	10.9	14325	DOL	11.8	POE	1660	420	40.0	No	7/8	1/2	018-0095-00 (70 W)
ZP72KCETFM522-C	11.7	15400	DOL	12.5	POE	1660	476	40.0	No	7/8	1/2	018-0095-00 (70 W)
ZP83KCETFM522-C	13.5	17950	DOL	13.6	POE	1660	462	40.0	No	7/8	1/2	018-0095-00 (70 W)
ZP90KCETFM522-C	14.7	19650	DOL	16.4	POE	2400	495	95.0	No	1 1/8	7/8	018-0095-00 (70 W)
ZP103KCETFM522-C	16.8	22700	DOL	18.6	POE	3130	552	111.0	No	1 3/8	7/8	018-0095-00
ZP120KCETFM522-C	19.7	26900	DOL	20.0	POE	3130	552	118.0	No	1 3/8	7/8	018-0091-22 (93 W)
ZP137KCETFM522-C	12.2	30100	DOL	20.7	POE	3130	552	118.0	No	1 3/8	7/8	018-0091-22 (93 W)
ZP154KCETFM522-C	24.9	33700	DOL	25.0	POE	3130	570	140.0	No	1 3/8	7/8	018-0091-22 (93 W)
ZP182KCETFM522-C	29.1	40100	DOL	28.6	POE	3130	570	174.0	No	1 3/8	7/8	018-0091-22 (93 W)

* MOC(A) = Maximum Operating Current

STANDARD CONDITIONS

Application	Ambient Temp °C	Condensing Temp °C	Liquid Entering Temp °C	Return Vapour Temp °C	Nom. Capacity & Power Input W @ SST°C	Standard
Air Conditioning	35	55	47	35	7.2	ARI

IMPORTANT - WARNING TO BE CLEARLY UNDERSTOOD PRIOR TO RUNNING ANY SCROLL COMPRESSOR

- It is important that the SCROLL compressor is charged as quickly as possible by way of LIQUID REFRIGERANT INTO THE LIQUID LINE, this is to avoid insufficient volume of suction gas that would be detrimental to the compressor.
- DO NOT VAPOUR CHARGE THE SYSTEM!!**

- It is recommended the required refrigerant charge is bomb charged into the liquid side of the system.
- Topping up the system can be done carefully on the low side with liquid refrigerant through manifold service gauges.
- The suction service valve must **NOT BE FULLY CLOSED** at any time when the compressor is running.

Note - Stated Capacity (watt) in the above chart have been established at these conditions using nominated refrigerants and are accurate to +/-5 %. To establish capacities at design conditions, the following factors may be used:

- For lower condensing temperatures: increase capacity 6 % for every 5 °C lower condensing temperature.
- For higher condensing temperatures: decrease capacity 6 % for every 5 °C higher condensing temperature.

- For lower liquid entering temperatures: increase capacity 1 % for every 1 °C lower liquid entering temperature.

Features:

- All hermetic compressors are offered as service packs and include feet mounting kit, electrical components and rotalock service valve where nominated.
- Crankcase Heaters available, please order separately

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative.

COPELAND SCROLL COMPRESSOR - SOUND SHELL OPTION

- The complete sound shell offered by Emerson Climate Technologies provides a 10 to 12 dBA sound attenuation solution.
- The base Bottom Plate option is highly recommended accounting to a contribution of 2 dBA minimum sound attenuation.

Copeland®

Refrigeration Scroll Compr. Model(s)	Sound Shell Kit	Description	Refrigeration Scroll Compr. Model(s)	Sound Shell Kit	Description
ZF06K4E	8562528	With Bottom Plate			
	8562539	Without Bottom Plate			
ZF08K4E	8562540	With Bottom Plate			
	8562551	Without Bottom Plate			
ZF09K4E	8562540	With Bottom Plate			
	8562551	Without Bottom Plate			
ZF11K4E	8562562	With Bottom Plate			
	8562573	Without Bottom Plate			
ZF13,15,18K4	8561729	With Bottom Plate			
	8561730	Without Bottom Plate			
ZB15KCE	8562528	With Bottom Plate	ZBD21KCE	8562540	With Bottom Plate
	8562539	Without Bottom Plate		8562551	Without Bottom Plate
ZB19KCE	8562540	With Bottom Plate	ZBD30, 38, 45KCE	8561729	With Bottom Plate
	8562551	Without Bottom Plate		8561730	Without Bottom Plate
ZB21KCE	8562540	With Bottom Plate			
	8562551	Without Bottom Plate			
ZB26KCE	8562562	With Bottom Plate			
	8562573	Without Bottom Plate			
ZB30, 38,42, 45KCE	8561729	With Bottom Plate			
	8561730	Without Bottom Plate			
Z034KCE	8562528	With Bottom Plate	ZOD104KCE	8561729	With Bottom Plate
	8562539	Without Bottom Plate		8561730	Without Bottom Plate
Z045KCE	8562540	With Bottom Plate			
	8562551	Without Bottom Plate			
Z058KCE	8562562	With Bottom Plate			
	8562573	Without Bottom Plate			
Z080,104KCE	8561729	With Bottom Plate			
	8561730	Without Bottom Plate			
ZR22K3E	8562528	With Bottom Plate	ZRD42KS/KCE	8562540	With Bottom Plate
	8562539	Without Bottom Plate		8562551	Without Bottom Plate
ZR28K3E	8562528	With Bottom Plate	ZRD48KS/KCE	8562540	With Bottom Plate
	8562539	Without Bottom Plate		8562551	Without Bottom Plate
ZR34K3E	8562540	With Bottom Plate	ZRD61, 72, 81KCE	8561729	With Bottom Plate
	8562551	Without Bottom Plate		8561730	Without Bottom Plate
ZR40K3E	8562562	With Bottom Plate			
	8562573	Without Bottom Plate			
ZR48K3E	8562562	With Bottom Plate			
	8562573	Without Bottom Plate			





HERMETIC COMPRESSORS – SCROLL (CONT'D)

COPELAND SCROLL COMPRESSOR - SOUND SHELL OPTION (CONT'D)

Refrigeration Scroll Compr. Model(s)	Sound Shell Kit	Description	Refrigeration Scroll Compr. Model(s)	Sound Shell Kit	Description
ZR49, 61, 72, 81K3E	8561729	With Bottom Plate			
	8561730	Without Bottom Plate			
ZP23K3/KCE	8562528	With Bottom Plate	ZPD34KS/KCE	8562562	With Bottom Plate
	8562539	Without Bottom Plate		8562573	Without Bottom Plate
ZP26K3/KCE	8562528	With Bottom Plate	ZPD42KS/KCE	8562562	With Bottom Plate
	8562539	Without Bottom Plate		8562573	Without Bottom Plate
ZP32K3/KCE	8562540	With Bottom Plate	ZPD61, 72, 81KS/KCE	8561729	With Bottom Plate
	8562551	Without Bottom Plate		8561730	Without Bottom Plate
ZP41K3/KCE	8562562	With Bottom Plate			
	8562573	Without Bottom Plate			
ZP54, 73, 83, 91K3/KCE	8561729	With Bottom Plate			
	8561730	Without Bottom Plate			

ZB COPELAND SCROLL COMPRESSORS - REFRIGERATION

Part Number	Nominal HP	Displ. m³/hr	Capacity (watt) @ - 6.7 °C SST.		Motor Type	Motor Overload Protection	Nominal Current *MOC (A)	Oil Type	Oil Charge cc
			R404A	R134a					
R404A / R134a M/HBP Compressors 415V/3/50Hz (Fixed Capacity)									
ZB15KQE-TFD-551	2.0	5.9	3290	2270	DOL	Internal	8.6	POE 32	1180
ZB19KQE-TFD-551	2.5	6.8	4320	2610	DOL	Internal	8.6	POE 32	1450
ZB21KQE-TFD-551	3.0	8.9	5210	3300	DOL	Internal	10.7	POE 32	1450
ZB26KQE-TFD-551	3.5	9.9	6070	3810	DOL	Internal	10.9	POE 32	1450
ZB30KQE-TFD-551	4.0	11.5	7110	4470	DOL	Internal	11.8	POE 32	1890
ZB38KQE-TFD-551	5.0	14.5	8860	5590	DOL	Internal	12.5	POE 32	1890
ZB45KQE-TFD-551	6.0	17.5	10450	6570	DOL	Internal	13.6	POE 32	1660
ZB50KQE-TFD-551	7.5	18.5	12500	7600	DOL	Internal	16.4	POE 32	2510
ZB58KQE-TFD-551	8.0	22.1	13750	8500	DOL	Internal	18.6	POE 32	2510
ZB66KQE-TFD-551	9.0	25.7	15600	9700	DOL	Internal	20.0	POE 32	3250
ZB76KQE-TFD-551	10.0	28.8	18550	11100	DOL	Internal	20.7	POE 32	3250
ZB88KQE-TFD-551	12.0	32.4	20660	12660	DOL	Internal	25.0	POE 32	3250
ZB95KQE-TFD-551	13.0	36.4	22200	13650	DOL	Internal	25.0	POE 32	3250
ZB114KQE-TFD-551	15.5	43.4	30300	16300	DOL	Internal	27.9	POE 32	3250
R404A / R134a M/HBP Compressors 240V/1/50Hz (Fixed Capacity)									
ZB15KQE-PFJ-558	2.0	5.9	3290	2270	CSR	Internal	12.8	POE 32	1180
ZB19KQE-PFJ-559	2.5	6.8	4320	2610	PSC	Internal	12.8	POE 32	1450
ZB21KQE-PFJ-558	3.0	8.9	5210	3300	PSC	Internal	16.4	POE 32	1450
ZB26KQE-PFJ-559	3.5	9.9	6070	3810	PSC	Internal	18.0	POE 32	1450

* MOC(A) = Maximum Operating Current

ZB COPELAND SCROLL COMPRESSORS - REFRIGERATION (CONT'D)

Part Number	O/A Height (mm)	Weight (kg)	Rotolock Service Valves - Standard	Service - Solder Connections (inches)		Crankcase Heater	
				Suct.	Disch.	Part No.	Spec.

Copeland®**R404A / R134a M/HBP Compressors 415V/3/50Hz (Fixed Capacity)**

ZB15KQE-TFD-551	436	23.0	Yes	3/4	1/2	018-0095-00	240V-70W
ZB19KQE-TFD-551	436	25.0	Yes	3/4	1/2	018-0095-00	240V-70W
ZB21KQE-TFD-551	436	25.0	Yes	3/4	1/2	018-0095-00	240V-70W
ZB26KQE-TFD-551	436	28.0	Yes	3/4	1/2	018-0095-00	240V-70W
ZB30KQE-TFD-551	420	38.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZB38KQE-TFD-551	476	38.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZB45KQE-TFD-551	462	59.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZB50KQE-TFD-551	495	59.0	Yes	1 1/8	7/8	018-0091-22	240V-90W
ZB58KQE-TFD-551	495	60.0	Yes	1 1/8	7/8	018-0091-22	240V-90W
ZB66KQE-TFD-551	566	65.0	Yes	1 1/8	7/8	018-0091-22	240V-90W
ZB76KQE-TFD-551	566	65.0	Yes	1 1/8	7/8	018-0091-22	240V-90W
ZB88KQE-TFD-551	566	65.0	Yes	1 3/8	7/8	018-0091-22	240V-90W
ZB95KQE-TFD-551	573	65.0	Yes	1 3/8	7/8	018-0091-22	240V-90W
ZB114KQE-TFD-551	573	65.0	Yes	1 3/8	7/8	018-0091-22	240V-90W

R404A / R134a M/HBP Compressors 240V/1/50Hz (Fixed Capacity)

ZB15KQE-PFJ-558	436	23.0	Solder Stub	3/4	1/2	018-0095-00	240V-70W
ZB19KQE-PFJ-559	436	25.0	Yes	3/4	1/2	018-0095-00	240V-70W
ZB21KQE-PFJ-558	436	25.0	Solder Stub	3/4	1/2	018-0095-00	240V-70W
ZB26KQE-PFJ-559	436	28.0	Yes	3/4	1/2	018-0095-00	240V-70W

**ZB - 240V/1/50HZ FIXED CAPACITY - ELECTRICAL SPARE PARTS**

Part Number	Start Capacitor		Run Capacitor		Relay
	Part No.	Type	Part No.	Type	
ZB15KQE-PFJ-558	2.0	98-106 -330V	AI7A400P9T	40 µF 450 VAC.	040-0166-37
ZB19KQE-PFJ-559	-	-	AI7A450R9T	45 µF 450VAC.	-
ZB21KQE-PFJ-558	-	-	AI7A600V9T	60 µF 450VAC.	-
ZB26KQE-PFJ-559	-	-	AI7A600V9T	60 µF 450VAC.	-

HERMETIC COMPRESSORS – SCROLL (CONT'D)

ZBD SCROLL DIGITAL™ R404A / R134A M/HBP COMPRESSORS 415 V/3/50 HZ (VARIABLE CAPACITY CONTROL)

Features

- The Next Generation in Modulated Compressor Technology
- Efficient and simple technology applications for variable refrigerant flow systems

- Each compressor is supplied with Digital Control Solenoid Valve + Coil & Capacity Load Tube Assembly.

For application and selection assistance please contact your local Heatcraft Representative.



Part Number	Nominal HP	Displ. m³/hr	Capacity (watts) @ -6.7 °C SST.		Motor Type	Motor Overload Protection	Nominal Current *MOC (A)	Oil Type	Oil Charge cc
			R404A	R134a					
ZBD21KQE-TFD-551	3	8.3	5460	3480	DOL	Internal	7.9	POE 32	1360
ZBD29KQE-TFD-558	4	11.4	6210	4115	DOL	Internal	7.9	POE 32	1360
ZBD30KCETFD-551	4.5	11.7	7270	4720	DOL	Internal	7.9	POE 32	1900
ZBD38KQE-TFD558	5	14.4	8970	5900	DOL	Internal	12.8	POE 32	1900
ZBD45KQE-TFD -559	6	17.1	10750	6600	DOL	Internal	12.5	POE 32	1900
ZBD48KQE-TFD -559	6.5	18.8	13900	8500	DOL	Internal	15.2	POE 32	1900
ZBD76KCE-TFD-551	10	28.8	18550	11100	DOL	Internal	20.4	POE 32	3300

ZBD SCROLL DIGITAL™ R404A / R134A M/HBP COMPRESSORS 415 V/3/50 HZ (VARIABLE CAPACITY CONTROL) (CONT'D)

Part Number	O/A Height (mm)	Weight (kg)	Rotalock Service Valves - Standard	Service - Solder Connections (inches)		Crankcase Heater	
				Suct.	Disch.	Part No.	Spec.
ZBD21KQE-TFD-551	480	33.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZBD29KQE-TFD-558	480	33.0	Solder Stub	7/8	1/2	018-0095-00	240V-70W
ZBD30KCETFD-551	480	37.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZBD38KQE-TFD558	495	38.0	Solder Stub	7/8	1/2	018-0095-00	240V-70W
ZBD45KQE-TFD -559	495	40.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZBD48KQE-TFD -559	495	41.0	Yes	7/8	3/4	018-0095-00	240V-70W
ZBD76KCE-TFD-551	533	62.0	Yes	1 1/8	7/8	018-0095-00	240V-70W

Replacement Digital Control Solenoid Valve Part number = 010-0125-00

Replacement 240 V 50 Hz Coil Part number = 023-0088-04

Optional EC3-D13 Digital Driver Part Number = 807-806

* MOC(A) = Maximum Operating Current

STANDARD CONDITIONS. NOMINAL CAPACITIES ARE ESTABLISHED THROUGH ASHRAE-T STANDARD CONDITIONS

Application	Evaporating	Ambient	Cond	Liquid Entering	Evaporating
	Temp °C	Temp °C	Temp °C	Temp °C	Temp °C
Low Suction Temp	-23.3	32	55	32	-23.3
Med Suction Temp	-6.7	35	55	47	-6.7
High Suction Temp	7.2	35	55	47	7.2
A/C Suction Temp	7.2	35	55	47	7.2

Features:

- All hermetic compressors are offered as service packs and include feet mounting kit, electrical components and rotalock service valve where nominated .
- Crankcase Heaters available please order separately

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative.



ZB COMPRESSOR SERVICE VALVE GUIDE

Valve Part Number	2606-081620	2606-122030	2606-142030	2606-142030	2606-182835	2606-222835	Braze to RL Valve Adaptor	
Valve Size	1/2"ID x 1"RL	3/4"ID x 1-1/4"RL	7/8"ID x 1"RL	7/8"ID x 1-1/4"RL	1-1/8"ID x 1-3/4"RL	1-3/8"ID x 1-3/4"RL	Optional Accessories	
Compressor	Connection	Connection	Connection	Connection	Connection	Connection	Suction	Discharge
ZB15KQE-TFD-551	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB15KQE-PFJ-558	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB19KQE-TFD-551	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB21KQE-TFD-551	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB21KQE-PFJ-558	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB26KQE-TFD-551	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB30KQE-TFD-551	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB38KQE-TFD-551	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZB45KQE-TFD-551	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZB50KQE-TFD-551	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZB58KQE-TFD-551	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZB66KQE-TFD-551	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZB76KQE-TFD-551	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZB88KQE-TFD-551	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZB95KQE-TFD-551	-	-	-	Discharge	-	Suction	NA	965-26XX-20S
ZB114KQE-TFD-551	-	-	-	Discharge	-	Suction	NA	965-26XX-20S
ZBD29KQE-TFD-558	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD30KQE-TFD-551	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD38KQE-TFD-558	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD45KQE-TFD-559	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD48KQE-TFD-559	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD76KQE-TFD-551	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S

Compressor BOM / Features	Rotalock	Stub Tube	Oil Shrader valve	Oil Sight Glass	Anti-Vibration Mount Kit	Digital Control Solenoid Valve + Coil & Capacity Load Tube Assembly
558	-	Yes	-	Yes	Yes	Designated Models
559	Yes	-	-	Yes	Yes	Designated Models
551	Yes	-	Yes	Yes	Yes	Designated Models

IMPORTANT - WARNING TO BE CLEARLY UNDERSTOOD PRIOR TO RUNNING ANY SCROLL COMPRESSOR

- It is important that the SCROLL compressor is charged as quickly as possible by way of LIQUID REFRIGERANT INTO THE LIQUID LINE, this is to avoid insufficient volume of suction gas that would be detrimental to the compressor.

DO NOT VAPOUR CHARGE THE SYSTEM!!

- It is recommended the required refrigerant charge is bomb charged into the liquid side of the system.
- Topping up the system can be done carefully on the low side with liquid refrigerant through manifold service gauges.
- The suction service valve must **NOT BE FULLY CLOSED** at any time when the compressor is running.

Note:

Stated Capacity (watt) in the above chart have been established at these conditions using nominated refrigerants and are accurate to +/-5 %. To establish capacities at design conditions, the following factors may be used:

- For lower condensing temperatures: increase capacity 6 % for every 5 °C lower condensing temperature.
- For higher condensing temperatures: decrease capacity 6 % for every 5 °C higher condensing temperature.
- For lower liquid entering temperatures: increase capacity 1 % for every 1 °C lower liquid entering temperature.

Features:

- All hermetic compressors are offered as service packs and include feet mounting kit, electrical components and rotalock service valve where nominated.
- Crankcase Heaters available please order separately

Application of R407F and other HFC refrigerant alternatives should be verified with your local Heatcraft Representative.

HERMETIC COMPRESSORS – SCROLL (CONT'D)

DANFOSS HERMETIC SCROLL COMPRESSORS POE OIL R22 -R407C AIR CONDITIONING

Part Number	Nominal HP	Displacement		Nominal KW Capacity @ 7.2 °C SST. R407C / R22	Electrical Rating Volts / Phase / Hertz	Motor Type	*Nominal Current MOC (A)	Motor O/L Protection	Oil Type
		cm³/rev	m³/hr						
HRP034T5LP6	2.8	46.2	8.0	8.1	240 / 1 / 50	PSC(CSR)	27.0	Internal	PVE320HV
HRP038T5LP6	3.0	54.4	9.5	8.9	240 / 1 / 50	PSC(CSR)	27.0	Internal	PVE320HV
HRP038T4LP6	3.0	54.4	9.5	8.9	415 / 3 / 50	DOL	9.5	Internal	PVE320HV
HRP040T5LP6	3.3	54.4	9.5	9.5	240 / 1 / 50	PSC(CSR)	25.0	Internal	PVE320HV
HRP040T4LP6	3.3	54.4	9.5	9.7	415 / 3 / 50	DOL	11.5	Internal	PVE320HV
HRP045T5LP6	3.5	54.4	9.5	10.7	240 / 1 / 50	PSC(CSR)	31.2	Internal	PVE320HV
HRP045T4LP6	3.5	54.4	9.5	10.9	415 / 3 / 50	DOL	12.0	Internal	PVE320HV
HRP047T4LP6	3.8	64.1	11.2	11.6	415 / 3 / 50	DOL	12.0	Internal	PVE320HV
HRP058T5LP6	4.5	64.1	11.2	13.8	240 / 1 / 50	PSC(CSR)	40.0	Internal	PVE320HV
HRP058T4LP6	4.5	64.1	11.2	14.0	415 / 3 / 50	DOL	15.0	Internal	PVE320HV
HRP060T5LP6	5.0	80.9	14.1	14.3	240 / 1 / 50	PSC(CSR)	40.0	Internal	PVE320HV
HRP060T4LP6	5.0	80.9	14.1	14.5	415 / 3 / 50	DOL	16.0	Internal	PVE320HV
HRP068T5LP6	5.7	93.1	16.2	16.0	240 / 1 / 50	PSC(CSR)	40.0	Internal	PVE320HV
HLP068T4LP6	5.7	93.1	16.2	16.0	415 / 3 / 50	DOL	15.0	Internal	PVE320HV
HLP072T4LC6	6.0	98.7	17.2	17.5	415 / 3 / 50	DOL	15.0	Internal	PVE320HV
HLP075T4LC6	6.5	102.7	17.9	18.4	415 / 3 / 50	DOL	16.0	Internal	PVE320HV
HLP081T4LC6	7.5	110.9	19.3	20.0	415 / 3 / 50	DOL	17.0	Internal	PVE320HV
HCP094T4LC6	8.3	126.0	21.9	23.1	415 / 3 / 50	DOL	21.0	Internal	PVE320HV
HOP109T4LC6	9.0	148.8	25.9	27.0	415 / 3 / 50	DOL	24.0	Internal	PVE320HV
HOP120T4LC6	10.0	162.4	28.3	29.1	415 / 3 / 50	DOL	25.0	Internal	PVE320HV

DANFOSS HERMETIC SCROLL COMPRESSORS POE OIL R22 -R407C AIR CONDITIONING (CONT'D)

Part Number	Oil Charge cc.	O/A Height (mm)	Net Weight (kg)	Connection Type	Service Connections (inches)		Optional Crank Case Heater - Wrap Around		
					Suct.	Disch.	40 W 240 V	50 W 240 V	70 W 240 V
HRP034T5LP6	1000	413	31	Solder Tube	3/4 ODF	1/2 ODF	120Z0055	-	-
HRP038T5LP6	1000	413	31	Solder Tube	3/4 ODF	1/2 ODF	120Z0055	-	-
HRP038T4LP6	1000	413	31	Solder Tube	3/4 ODF	1/2 ODF	120Z0055	-	-
HRP040T5LP6	1000	413	31	Solder Tube	3/4 ODF	1/2 ODF	120Z0055	-	-
HRP040T4LP6	1000	413	31	Solder Tube	3/4 ODF	1/2 ODF	120Z0055	-	-
HRP045T5LP6	1000	413	31	Solder Tube	3/4 ODF	1/2 ODF	120Z0055	-	-
HRP045T4LP6	1000	413	31	Solder Tube	3/4 ODF	1/2 ODF	120Z0055	-	-
HRP047T4LP6	2000	439	31	Solder Tube	7/8 ODF	1/2 ODF	120Z0055	-	-
HRP058T5LP6	2000	455	37	Solder Tube	7/8 ODF	1/2 ODF	-	120Z0057	-
HRP058T4LP6	2000	455	37	Solder Tube	7/8 ODF	1/2 ODF	-	120Z0057	-
HRP060T5LP6	2000	455	37	Solder Tube	7/8 ODF	1/2 ODF	-	120Z0057	-
HRP060T4LP6	2000	455	37	Solder Tube	7/8 ODF	1/2 ODF	-	120Z0057	-
HRP068T5LP6	2000	455	37	Solder Tube	7/8 ODF	1/2 ODF	-	120Z0057	-
HLP068T4LP6	2000	455	37	Solder Tube	7/8 ODF	1/2 ODF	-	120Z0057	-
HLP072T4LC6	2000	455	37	Solder Tube	7/8 ODF	1/2 ODF	-	120Z0057	-
HLP075T4LC6	2000	455	37	Solder Tube	7/8 ODF	1/2 ODF	-	120Z0057	-
HLP081T4LC6	2000	455	37	Solder Tube	7/8 ODF	1/2 ODF	-	-	120Z0059
HCP094T4LC6	3000	536	44	Solder Tube	1-1/8 ODF	7/8 ODF	-	-	120Z0059
HOP109T4LC6	3000	545	45	Solder Tube	1-1/8 ODF	7/8 ODF	-	-	120Z0059
HOP120T4LC6	3000	545	45	Solder Tube	1-1/8 ODF	7/8 ODF	-	-	120Z0059

Danfoss



Use **less energy** to grow your business

- **Lowest running sound** in scroll compressor industry with smooth start up - shut down
- **Common, smaller foot prints** for easy drop in replacements
- **Increased reliability** with improved durability for reverse rotation and unique Danfoss design of Hot Oil Over Protection (HOOP).

Energy efficient
product with higher
COP of up to

3 to 5%



Danfoss			Emerson	Bristol	Carlyle
Model	Code	*Cooling (Kw)			
Scroll - R407C - 230V / 1Ph / 50Hz					
HRP034T5LP6	120U2019	8	ZR34K3E-PFJ	H20C343ABKA	SCE340AC
HRP040T5LP6	120U1929	9.5	ZR40K3E-PFJ ZR42K3E-PFJ	H73C383ABKA H20C403ABKA	SCE400AC
HRP047T5LP6	120U0986	11	ZR47K3E-PFJ ZR48K3E-PFJ	H20R453ABKA H73C473ABKA	SRE450AC
HRP060T5LP6	120U1606	14	ZR61KCE-PFZ	H20R583ABKA H73R603ABKA	SRE600AC
HLP068T5LP6	120U1621	16	ZR68KCE-PFJ		
Scroll - R407C - 400V / 3Ph / 50Hz					
HRP034T4LP6	120U2024	8	ZR34K3E-TFD	H20C343DBKA	
HRP040T4LP6	120U1016	9	ZR40K3E-TFD ZR42K3E-TFD	H20C403DBEA H73C383DBEA H73C403DBEA	SCH402AC
HRP047T4LP6	120U1036	11	ZR47K3E-TFD ZR48K3E-TFD	H20R453DBEA H20R483DBEA H73C473DBEA	SRH482AC
HRP054T4LP6	121L1691	13	ZR54KCE-TFD	H73R543DBVA	
HRP060T4LP6	121L1726	14	ZR61KCE-TFD	H20R603DBEA H73R603DBEA	SRH600AC
HLP068T4LC6	120U2014	16	ZR68KCE-TFD	H73R683DBEA	SRH682BC
HLP072T4LC6	121L1756	17	ZR72KCE-TFD	H20R723DBEA H73R723DBEA	SRH722AE
HLP081T4LC6	121L1781	19	ZR81KCE-TFD	H20R943DBEA H73R813DBEA	SRH812AC
HCP094T4LC6	121L0601	21.5	ZR90K3E-TWD ZR94KCE-TFD	H20R943DBEA H70R943DBEA	SRH942AE
HCP109T4LC6	121L0376	26	ZR108KCE-TFD	H70R104DBEA	
HCP120T4LC6	121L0401	28	ZR125KCE-TFD	H20R124DBEA H70R124DBEA	SRH120AE

* Cooling capacity declared at ARI AC conditions. Evaporating temp = 7.2 deg C. Condensing temp = 54.4 deg C. Superheat = 11.1 K. Subcooling = 8.3 K. Please refer catalogue for detailed performance charts. Refer detailed drawings for dimensions. Models for single compressor applications only. For manifold applications please contact Danfoss.




HERMETIC COMPRESSORS – SCROLL (CONT'D)

ELECTRICAL SPARES 240V-1-50HZ COMPRESSORS

	Run Capacitor PSC	Relay -HST	Start Capacitor HST
HRP034T5LP6	70uF / 370VAC	3ARR3-3-3AL	145-174uF / 330VAC
HRP038T5LP6	70uF / 370VAC	3ARR3-3-3AL	145-174uF / 330VAC
HRP040T5LP6	70uF / 370VAC	3ARR3-3-3AL	145-174uF / 330VAC
HRP045T5LP6	70uF / 370VAC	3ARR3-3-3AL	145-174uF / 330VAC
HRP058T5LP6	60uF / 370VAC	3ARR3-25AS	88-108uF / 330VAC
HRP060T5LP6	55uF / 440VAC	3ARR3-25AS	88-108uF / 330VAC
HRP068T5LP6	55uF / 440VAC	3ARR3-25AS	88-108uF / 330VAC

Note -

- Compressors are charged with POE Oil.
- Compressors supplied with rubber mounting kit, CCH & Solid State Modules where applicable.
- Service valves & Single Phase electrics are excluded from price. Contact Heatcraft for further information.

* MOC(A) = Maximum Operating Current

STANDARD CONDITIONS

Application	Ambient Temp °C	Condensing Temp °C	Liquid Entering Temp °C	Return Vapour Temp °C	Nom. Capacity & Power Input (watts) @ SST °C	Standard
Air Conditioning	35	55	47	35	7.2	ARI

SEMI-HERMETIC COMPRESSORS

COPELAND REED SEMI-HERMETIC COMPRESSORS - R134a / R404A / R507 (CONT'D)

Part Number	Nominal HP	Displ. m³/hr	Nominal Capacity: watts @ Evaporating Temperature °C (50 Hz)								Capacity Control -Solenoid Valve
			R134a				R404A / R507				
			-10	-5	0	5	-25	-15	-10	-5	

Copeland Reed L/M/HBP Compressors 415V/3/50Hz

DKJ10X-EWL	1.0	5.0	1770	2280	2880	3590	1080	1880	2390	2990	N/A
DKSJ-15X-EWL	1.5	6.3	2540	3240	4070	5040	1420	2410	3040	370	N/A
DKSL20X-EWL	2	9.1	2640	3350	4220	5250	2130	3540	4440	5500	N/A
DLE-20X-EWL	2	9.9	3800	4900	6210	7740	1750	3370	4400	5600	N/A
DLJ-30X-EWL	3	14.5	4870	6350	8100	10150	3060	5400	6900	8650	N/A
DLL-40X-EWL	4	18.2					3940	6940	8910	11250	N/A
D2SA-45X-EWL	4.5	22.4	6340	8160	10350	12950	3900	6940	8910	11250	N/A
D2SC-55X-EWL	5.5	26.8	7690	9800	12300	15250	490	8450	10620	13200	N/A
D2SC-55X-AWM	5.5	26.8	7690	9800	12300	15250	5870	10150	12900	16150	N/A
D2SC-65X-EWL	6.5	26.9	8580	11000	13850	17250	5950	10100	12800	15900	N/A
D3SA-75X-AWM	7.5	32.2					6630	11700	14950	18800	N/A
D3SC-100X-AWM	10	38.0					8480	14450	18250	22700	N/A
D3SS-100X-AWM	10	49.9	13350	17100	21700	27100	11400	18000	23600	2200	N/A
D3SS-150X-AWM	15	49.9					12000	85000	25000	30900	N/A
D4SF-100X-AWM	10	56.0	15800	20500	25900	32300	12450	20900	26300	32700	50%
D4SL-150X-AWM	15	70.8	20700	26600	33500	41700	16850	2700	35100	43600	50%
D4SA-200X-AWM	20	56.0					11900	20800	26500	33200	50%
D4ST-200X-AWM	20	84.5	25000	32000	40300	50000	20200	33400	41900	51500	50%
D4SH-250X-AWM	25	70.8					15500	26700	33800	42300	50%
D4SJ-300X-AWM	30	84.5					19050	32800	41300	51100	50%
D6SL-250X-AWM	25	106.0	31200	39800	50000	61900	24500	40400	50400	61900	33/66%
D6ST-320X-AWM	32	127.0	37300	48100	60700	72500	29300	49600	62400	77100	33/66%



COPELAND REED SEMI-HERMETIC COMPRESSORS - R134a / R404A / R507 (CONT'D)

Part Number	Nominal HP	Displ. m³/hr	Nominal Capacity: watts @ Evaporating Temperature °C								Capacity Control -Solenoid Valve
			R134a				R404A / R507				
			-10	-5	0	5	-25	-15	-10	-5	
D6SH-350X-AWM	35	106.0					24300	41300	52100	64900	33/66%
D6SJ-400X-AWM	40	127.0					28200	48000	60500	75100	33/66%
D6SU-400X-AWM	40	151.8	44900	57300	71800	88800	36700	59600	74200	88800	33/66%
D6SK-500X-AWM	50	151.8					32500	55800	70500	87800	33/66%
D8SJ-450X-AWM	45	181.0	51500	66600	84300	105000	41000	69300	87300	10/850	50/75%

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COPELAND REED SEMI-HERMETIC COMPRESSORS - R134a / R404A / R507

Part Number	Electrical Amps/ Phase			Motor Type	Oil Type	Oil Charge cc	O/A Height (mm)	Net Weight (kg)	Service Solder Connections (inches)	
	RLA*	MCC**	LRA						Suct.	Disch.

Copeland Reed L/M/HBP Compressors 415V/3/50Hz

DKJ10X-EWL	2.6	3.2	15.5	Y - Star Only	POE-32	650	280	39	5/8	1/2
DKSJ-15X-EWL	3.2	3.4	19.1	Y - Star Only	POE-32	650	280	40	5/8	1/2
DKSL20X-EWL	4.4	4.7	23.3	Y - Star Only	POE-32	650	385	40	5/8	1/2
DLE-20X-EWL	4.6	5.7	37.6	Y - Star Only	POE-32	2000	385	78	7/8	5/8
DLJ-30X-EWL	6.7	74	50.6	Y - Star Only	POE-32	2000	385	83	7/8	5/8
DLL-40X-EWL	7.9	9.9	58.9	Y - Star Only	POE-32	2000	385	87	1 1/8	5/8
D2SA-45X-EWL	10.3	11.4	68.5	Y - Star Only	POE-32	2400	395	95	1 1/8	7/8
D2SC-55X-EWL	12.0	13.1	74.1	Y - Star Only	POE-32	2400	395	91	1 1/8	7/8
D2SC-55X-AWM	12.0	13.1	74.1	PWS 2/3-1/3	POE-32	2400	395	91	1 1/8	7/8
D2SC-65X-EWL	12.7	16.2	85.3	Y - Star Only	POE-32	2400	395	91	1 1/8	7/8
D3SA-75X-AWM	14.6	17.9	82.0	PWS 2/3-1/3	POE-32	3700	480	15	1 3/8	1 1/8
D3SC-100X-AWM	17.2	21.6	106.0	PWS 2/3-1/3	POE-32	3700	480	159	1 3/8	1 1/8
D3SS-100X-AWM	23.7	26.0	109.0	PWS 2/3-1/3	POE-32	3700	480	162	1 3/8	1 1/8
D3SS-150X-AWM	23.3	30.2	125.0	PWS 2/3-1/3	POE-32	3700	480	162	1 3/8	1 5/8
D4SF-100X-AWM	23.3	27.1	105.0	PWS 2/3-1/3	POE-32	3300	495	178	1 5/8	1 1/8
D4SL-150X-AWM	31.3	35.6	156.0	PWS 2/3-1/3	POE-32	3300	495	186	1 5/8	1 1/8
D4SA-200X-AWM	25.2	32.7	175.0	PWS 2/3-1/3	POE-32	3300	495	183	1 5/8	1 1/8
D4ST-200X-AWM	37.4	42.4	175.0	PWS 2/3-1/3	POE-32	3300	495	198	2 1/8	1 3/8
D4SH-250X-AWM	31.9	41.0	199.0	PWS 2/3-1/3	POE-32	3300	495	194	2 1/8	1 1/8
D4SJ-300X-AWM	36.1	48.0	221.0	PWS 2/3-1/3	POE-32	3300	495	210	2 1/8	1 3/8
D6SL-250X-AWM	31.4	56.5	199.0	PWS 2/3-1/3	POE-32	3300	490	216	2 1/8	1 3/8
D6ST-320X-AWM	39.2	62.9	255.0	PWS 2/3-1/3	POE-32	6800	545	252	2 1/8	1 3/8
D6SH-350X-AWM	49.6	65.5	304.0	PWS 2/3-1/3	POE-32	4300	490	224	2 1/8	1 3/8
D6SJ-400X-AWM	55.2	71.8	304.0	PWS 2/3-1/3	POE-32	6800	545	252	2 1/8	1 3/8
D6SU-400X-AWM	67.5	73.7	306.0	PWS 2/3-1/3	POE-32	6800	542	265	2 5/8	1 5/8
D6SK-500X-AWM	66.6	89.4	393.0	PWS 2/3-1/3	POE-32	6800	542	268	2 5/8	1 5/8
D8SJ-450X-AWM	66.9	90.8	441.0	PWS 2/3-1/3	POE-32	7600	670	345	3 1/8	1 5/8

Note -

Capacity watts @ Evaporating Temperature °C, 45 °C SCT, 20 K Suction Superheat & 0 K Liquid Subcooling.

*Compressor Rated Load Amps (RLA) at - 5 °C SST R404A and 45 °C SCT. Use M.C.C. for power supply selection.

**Maximum Continuous Current (MCC) = Compressor Manufacturer's data

2/3/4/6 & 8 Cylinder Compressors include Oil Pressure Safety Control (OPS2), Crankcase Heater, Mounting (feet/spring) Kit & Pre-Charged POE Oil.

4 Cylinder Compressors Include Inactive Provision For 50% Capacity Control Solenoid Valve Option.

4, 6 & 8 Cylinder Compressors are Frequency Drive (VSD) compatible with a working range of 35 > 65 Hz range and compressor will require positive oil management control e.g. TraxOil Control.

Start Unload Kits and Head Cooling Fan Kits are available on request



SEMI-HERMETIC COMPRESSORS (CONT'D)

COPELAND REED SEMI-HERMETIC COMPRESSORS - R134a / R404A / R507

New Compressor models are part of Copeland streamline offering and range rationalisation; availability along with capacity, refrigeration and electrical connections, mounting and application should be verified with a Heatcraft engineer

Refer to Emerson Climate Technologies Copeland Replacement Guidelines Document D5.4.6/1113/E

MODEL NUMBER REPLACEMENT OVERVIEW GUIDE

Curent Model Number	Nom HP	Displ. m³/hr	Curent Stream™ Model	Current Model Number	Nom HP	Displ. m³/hr	Current Stream™ Model
DKSJ-15X-EWL	1.5	6.3	KSJP-15X-EWL	D4SA-200X-AWM	20 / 22	56 / 61.7	AMA-22X-AWM
DKSL20X-EWL	2	9.1	KSLP-20X-EWL	D4ST-200X-AWM	20	84.7 / 78	4MM-20X-AWM
DLE-20X-EWL	2	9.9	LEP-20X-EWL	D4SH-250X-AWM	25	70.8 / 71.4	4MH-25X-AWM
DLJ-30X-EWL	3	14.5	LJP-30X-EWL	D4SJ-300X-AWM	30	84.7 / 78	4MI-30X-AWM
DLL-40X-EWL	4	18.2	LLP-40X-EWL	D6SL-250X-AWM	25	106 / 99.5	4MU-25X-AWM
D3SA-75X-AWM	7.5	32.2	3DA5-75X-AWM-D	D6ST-320X-AWM	32 / 30	127 / 120.5	6MM-30X-AWM
D3SC-100X-AWM	10	38.0	3DC5-100X-AWM-D	D6SH-350X-AWM	35	106 / 99.5	4MK-35X-AWM
D2SC-65X-EWL	6.5 / 7.5	26.9 / 23.7	2DL3-75X-AWM/D	D6SJ-400X-AWM	40	127 / 120.5	6MI-40X-AWM
D3SS-100X-AWM	10	49.9	3DS5-100X-AWM-D	D6SU-400X-AWM	40	151.8 / 153	6MU-40X-AWM
D3SS-150X-AWM	15	49.9	3DS5-150X-AWM-D	D6SK-500X-AWM	50 / 45	151.8 / 153	6MJ-45X-AWM
D4SF-100X-AWM	Oct-13	56.0 / 61.7	4MF-13X-AWM	D8SJ-450X-AWM	45	181	8DT-450X-AWM
D4SL-150X-AWM	15	70.8 / 71.4	4ML-15X-AWM				

For other rating conditions and for information on how this product can be configured on a parallel system please contact your Heatcraft Technical Specialist

COPELAND DWM REED SEMI-HERMETIC COMPRESSORS SPARE PARTS

Part Number	Part Description	Suits Compressor Model number
Thermistor Module Control		
3216455	INT69	DK/DL/D2/D3
3216466	INT69TM-2	D4/D6/D8
Gaskets & Full Gasket Kits		
2490785	Gasket Kit -Complete	DLSJ-15X/DKSL-20X
2488802	Gasket Kit -Complete	DLE-20X
2830685	Gasket Kit -Complete	DLJ-30X
2490832	Gasket Kit -Complete	DLL-40X
3120445	Gasket Kit -Complete	D2SC-65X
3120456	Gasket Kit -Complete	D3SA-75X/D3SC-100X/D3SS-100X/D3SS150X
2049530	Gasket Kit -Complete	D4SF-100X/D4SA-200X/D6SU-400X/D6SK-500X/D8SJ-450X
2050409	Gasket Kit -Complete	D4SL-150X/D4SH-250X/D6SL-250X/D6SH-350X
2828951	Gasket Kit -Complete	D4ST-200X/D4SJ-300X/D6ST-320X/D6SJ-400X
3121642	Gasket Kit -Complete	D6SU-400X/D6SK-500X
2830618	Gasket Kit -Complete	D8SJ-450X
2954954	Capacity Control Gasket	D4/D6/D8
2882802	Stator Gasket	All D4/D6
2880771	Stator Gasket	All D8
3199949	Oil Screen gasket	All D4/D6/D8
2529947	Discharge Sevice Valve gasket	DK/DL/D2SC-65X
2050772	Discharge Sevice Valve gasket	D3SA-75X/D3SC-100X/D3SS-100X/D4ST-200X/D6SL-250X/D6ST-320X/D6SH-350X/D6SJ-400X (Can use CTL264-3)
2880851	Discharge Sevice Valve gasket	D3SS-150X/D4SF-100X/D4SL-150X/D4SA-200X
2880908	Discharge Sevice Valve gasket	D4SH-250X/D4SJ-300X

COPELAND DWM REED SEMI-HERMETIC COMPRESSORS SPARE PARTS (CONT'D)

Part Number	Part Description	Suits Compressor Model number
Gaskets & Full Gasket Kits		
2529947	Suction Service Valve gasket	DK
2963043	Suction Service Valve gasket	DL/D2SC-65X/D3SA-75X/D3SC-100X/D3SS-100X/D3SS-150X/D4SF-100X/D4SL-150X/D4SA-200X/D4ST-200X/D4SH-250X/D4SJ-300X
2880862	Suction Service Valve gasket	D6SL-250X/D6ST-320X/D6SH-350X/D6SJ-400X/D6SU-400X/D6SK-500X
2880873	Suction Service Valve gasket	D8SJ-450X
Crankcase Heaters		
2497184	Heater Crankcase	DK
4577420	Heater Crankcase	DL
3210140	Heater Crankcase	D2
3210162	Heater Crankcase	D3
3210093	Heater Crankcase	D4 inc D6SL-250X/D6SH-350X
3210208	Heater Crankcase	D6ST-320X/D6SJ-400X/D6SU-400X/D6SK-500X/D8SJ-450X
Valve Plates		
2490774	Valve Plate Kit	DKSJ-15X
3112622	Valve Plate Kit	DKSL-20X
2830345	Valve Plate Kit	DLE-20X/DLJ-30X
2490843	Valve Plate Kit	DLL-40X
3120401	Valve Plate Kit	D2SC-65X
3120434	Valve Plate Kit	D3SA-75X/D3SS-100X
3127537	Valve Plate Kit	D3SC-100X/D3SS-150X
3805759	Valve Plate Kit	D4SF-100X
3805771	Valve Plate Kit	D4SL-150X/D6SL-250X
3805760	Valve Plate Kit	D4SA-200X
3805793	Valve Plate Kit	D4ST-200X/D6ST-320X
3805782	Valve Plate Kit	D4SH-250X/D6SH-350X
3805806	Valve Plate Kit	D4SJ-300X/D6SJ-400X/D8SJ-450X
3128392	Valve Plate Kit	D6SU-400X
3121595	Valve Plate Kit	D6SK-500X
Electrical Terminal Plates		
2727274	Terminal Plate n/gasket	All DK/DL/D2 series
2727887	Terminal Plate gasket	All DK/DL/D2 series
2834596	Terminal Plate c/w gasket	D3SA-75X/D3SC-100X/D3SS-100X/D3SS-150X
2514225	Terminal Plate c/w gasket	D4SF-100X/D4SL-150X/D4SA-200X/D4ST-200X/D4SH-250X/D4SJ-300X/D6SL-250X
3196702	Terminal Plate c/w gasket	D6ST-320X/D6SH-350X/D6SJ-400X/D6SU-400X
3068247	Terminal Plate c/w gasket	D6SK-500X/D8SJ-450X
Oil Sump Parts		
2832761	Oil PumpKit	D2/D3
3121722	Oil PumpKit	D4/D6/D8
3164918	OPS2 Oil Pressure Switch	All Semi Hermetic Compressors with oil pumps
2834052	Oil Sightglass kit	DK/DL
2482519	Oil Sightglass kit	D2/D3/D4/D6/D8
Capacity Control		
2835339	Capacity Control Kit inc 240v coil and gasket	All Semi Hermetic Compressors with capacity control heads fitted
3160518	Replacement 240v solenoid coil	All Semi Hermetic Compressors with capacity control heads fitted
2640831	Replacement solenoid valve	All Semi Hermetic Compressors with capacity control heads fitted

Copeland®



SEMI-HERMETIC COMPRESSORS (CONT'D)

COPELAND DWM REED SEMI-HERMETIC COMPRESSORS SPARE PARTS (CONT'D)

Part Number	Part Description	Suits Compressor Model number
Service Valves		
38066782	Discharge Service Valve	DK
3806683	Discharge Service Valve	DL
2837073	Discharge Service Valve	D2SC-65X
2837131	Discharge Service Valve	D3SA-75X/D3SC-100X/D3SS-100X
2837084	Discharge Service Valve	D3SS-150X/D4SF-100X/D4SL-150X/D4SA-200X/D6SU-400X/D6SK-500X/D8SJ-450X
2837120	Discharge Service Valve	D4ST-200X/D6SL-250X/D6ST-320X/D6SH-350X/D6SJ-400X
3806683	Suction Service Valve	DK
2837039	Suction Service Valve	DLE-20X
2837040	Suction Service Valve	DLJ-30X/DLL-40X/D2SC-65X
2837062	Suction Service Valve	D3SA-75X/D3SC-100X/D3SS-100X/D3SS-150X/D4SF-100X/D4SL-150X/D4SA-200X
2837119	Suction Service Valve	D4ST-200X/D4SH-250X/D4SJ-300X/D6SL-250X/D6ST-320X/D6-350X/D6SJ-400X
3121620	Suction Service Valve	D6SU-400X/D6SK-500X
2837153	Suction Service Valve	D8SJ-450X
Auxiliary Cooling		
2988095	Head Cooling Fan less bracket	All Fan cooling kits except DK (Can use S4E300-FJ08-05)
2987536	Head Cooling Fan kit	DL
3117229	Head Cooling Fan kit	D2S
2988095	Head Cooling Fan kit	D3S
2986260	Head Cooling Fan kit	D4S
2987616	Head Cooling Fan kit	D6S
2986293	Head Cooling Fan kit	D8S
2987627	Head Cooling Fan kit	D6SJ-400X/D6SU-400X

COPELAND STREAM™ SEMI-HERMETIC COMPRESSORS

Part Number	Nominal HP	Displ. m ³ /hr	*Capacity watts (100% Load / 50 Hz) @ Evaporating Temperature °C									
			R134a		R404A / R507		R407F				R450A	
			-10	-5	-25	-5	-25	-5	-25	-5	-25	-5

Copeland®**Stream 4 Cylinder L/M/HBP Compressors (POE Oil)**

4MA-22X-AWM	22	61.7	19250	24400	14800	39000	14400	39800	14000	39400	6600	20700
4MAD-22X-AWM	22	61.7	18950	24100	14600	38600	-	39300	14000	39400	6600	20700
4MF-13X-AWM	13	61.7	18450	23500	14300	37700	13900	36600	13450	34100	6810	20800
4MFD-13X-AWM	13	61.7	18250	23300	14100	37300	13750	36300	13450	34100	6810	20800
4MH-25X-AWM	25	71.4	22100	28100	17250	46000	17000	46100	16700	44400	7240	23700
4MHD-25X-AWM	25	71.4	21800	27900	17050	45600	-	45700	16700	44400	7240	23700
4ML-15X-AWM	15	71.4	22300	28300	18000	45600	17350	45400	17450	43700	8170	24800
4MLD-15X-AWM	15	71.4	22100	28000	17750	45100	17150	44900	17450	43700	8170	24800
4MI-30X-AWM	30	78.0	24400	30900	20100	50600	19300	50700	19100	50000	7930	26000
4MID-30X-AWM	30	78.0	24100	30600	19850	50100	-	50100	19100	50000	7930	26000
4MM-20X-AWM	20	78.0	24700	31100	20100	49600	19000	49500	19400	47600	8830	26600
4MMD-20X-AWM	20	78.0	24400	30800	19850	49100	18750	49000	19400	47600	8830	26600
4MJ-33X-AWM	33	87.5	27300	34500	22100	56700	21600	56300	20900	55200	9320	28000
4MJD-33X-AWM	33	87.5	27000	34200	21800	56100	-	55700	20900	55200	9320	28000
4MT-22X-AWM	22	87.5	28100	35300	22500	56500	21500	55000	22000	62100	9800	29400
4MTD-22X-AWM	22	87.5	27800	35000	22300	55900	21300	54400	22000	62100	9800	29400
4MK-35X-AWM	35	99.5	30600	38700	24700	63800	24600	63000	23600	60100	10650	32900
4MKD-35X-AWM	35	99.5	30300	38300	24400	63200	-	62400	23600	60100	10650	32900
4MU-25X-AWM	25	99.5	30900	39200	24800	63100	24100	62000	23700	75200	11000	32800
4MUD-25X-AWM	25	99.5	30600	38800	24500	62500	23800	61300	23700	75200	11000	32800

**Stream 6 Cylinder L/M/HBP Compressors (POE Oil)**

6MI-40X-AWM	40	120.5	35900	45700	29900	77000	29100	77400	29500	75200	13700	39600
6MID-40X-AWM	40	120.5	35500	45300	29500	76200	28700	76700	29500	75200	13700	39600
6MU-40X-AWM	40	153.2	46100	58100	37900	97000	36500	93900	37200	92200	19150	51100
6MUD-40X-AWM	40	153.2	45600	57500	37400	96000	36100	92900	37200	92200	19150	51100
6MM-30X-AWM	30	120.5	37300	47000	30100	76500	29500	75100	29100	70800	13450	40200
6MMD-30X-AWM	30	120.5	37300	47000	30100	76500	29500	75100	29100	70800	13450	40200
6MJ-45X-AWM	45	135.0	40700	51700	33600	85900	33100	85600	33400	83800	15550	44700
6MJD-45X-AWM	45	135.0	40400	51200	33200	85000	32700	84700	33400	83800	15550	44700
6MT1-35X-AWM	35	135.1	42100	52900	33800	86200	33400	83700	32500	78300	15400	45100
6MTD-35X-AWM	35	135.1	42100	52900	33800	86200	33400	83700	32500	78300	15400	45100
6MK-50X-AWM	50	153.2	43700	56200	37400	96100	37100	96500	36200	93100	16200	48600
6MKD-50X-AWM	50	153.2	43300	55700	37000	95100	36700	95500	36200	93100	16200	48600

**Stream R134a Optimised 4 & 6 Cylinder M/HBP Compressors (POE Oil)**

4MF-13X-AWM-D134	13	61.7	18250	23300	-	-	-	-	-	-	-	-
4ML-15X-AWM-D134	15	71.4	22100	28000	-	-	-	-	-	-	-	-
4MM-20X-AWM-D134	20	78.0	24400	30800	-	-	-	-	-	-	-	-
4MT-22X-AWM-D134	22	87.5	27800	35000	-	-	-	-	-	-	-	-
4MU1-25X-AWM-D134	25	99.5	30900	39200	-	-	-	-	-	-	-	-
6MU-40X-AWM-D134	40	153.2	45600	57500	-	-	-	-	-	-	-	-
6MM-30X-AWM-D134	30	120.5	37300	47000	-	-	-	-	-	-	-	-
6MT1-35X-AWM-D134	35	135.1	42100	52900	-	-	-	-	-	-	-	-

SEMI-HERMETIC COMPRESSORS (CONT'D)

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COPELAND STREAM™ SEMI-HERMETIC COMPRESSORS

Part Number	Motor Type	Variable Speed Drive Approved	Capacity Control Stages (Digital = Stepless)	Electrical 380-420V/50Hz (Amps/Phase)		Oil Type	Oil Charge cc	O/A Height (mm)	Net Weight (kg)	Service Connections (inches)	
				**MOC(A)	LRA					Suct.	Disch.
Stream 4 Cylinder L/M/HBP Compressors (POE Oil)											
4MA-22X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	36.3	175	POE32	3300	452	177	1 5/8	1 1/8
4MAD-22X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital	36.3	175	POE32	3300	452	183	1 5/8	1 1/8
4MF-13X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	30.8	105	POE32	3300	452	177	1 5/8	1 1/8
4MFD-13X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital	30.8	105	POE32	3300	452	183	1 5/8	1 1/8
4MH-25X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	41.6	199	POE32	3300	452	187	2 1/8	1 1/8
4MHD-25X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital	41.6	199	POE32	3300	452	193	2 1/8	1 1/8
4ML-15X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	35.4	156	POE32	3300	452	180	1 5/8	1 1/8
4MLD-15X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital	35.4	156	POE32	3300	452	186	1 5/8	1 1/8
4MI-30X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	46.6	221	POE32	3300	452	188	2 1/8	1 1/8
4MID-30X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital	46.6	221	POE32	3300	452	194	2 1/8	1 1/8
4MM-20X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	39.0	175	POE32	3300	452	182	2 1/8	1 1/8
4MMD-20X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital	39.0	175	POE32	3300	452	188	2 1/8	1 1/8
4MJ-33X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	52.9	221	POE32	3300	452	190	2 1/8	1 3/8
4MJD-33X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital	52.9	221	POE32	3300	452	196	2 1/8	1 3/8
4MT-22X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	44.5	175	POE32	3300	452	183	2 1/8	1 3/8
4MTD-22X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital	44.5	175	POE32	3300	452	189	2 1/8	1 3/8
4MK-35X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	61.1	255	POE32	3300	452	202	2 1/8	1 3/8
4MKD-35X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital	61.1	255	POE32	3300	452	202	2 1/8	1 3/8
4MU-25X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	51.9	199	POE32	3300	452	186	2 1/8	1 3/8
4MUD-25X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital	51.9	199	POE32	3300	452	192	2 1/8	1 3/8
Stream 6 Cylinder L/M/HBP Compressors (POE Oil)											
6MI-40X-AWM	PWS (YY/Y) DOL (Y)	Yes	33% /66%	71.4	304	POE32	3300	450	219	2 1/8	1 3/8
6MID-40X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital + 33% Step	71.4	304	POE32	3300	450	225	2 1/8	1 3/8
6MU-40X-AWM	PWS (YY/Y) DOL (Y)	Yes	33% /66%	75.8	306	POE32	3300	450	225	2 5/8	1 5/8
6MUD-40X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital + 33% Step	75.8	306	POE32	3300	450	231	2 5/8	1 5/8
6MM-30X-AWM	PWS (YY/Y) DOL (Y)	Yes	33% /66%	59.7	255	POE32	3300	450	215	2 1/8	1 3/8
6MMD-30X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital + 33% Step	59.7	255	POE32	3300	450	221	2 1/8	1 3/8
6MJ-45X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%	81.5	304	POE32	3300	450	223	2 1/8	1 5/8
6MJD-45X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital + 33% Step	81.5	304	POE32	3300	450	229	2 1/8	1 5/8

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SEMI-HERMETIC COMPRESSORS (CONT'D)

COPELAND STREAM™ SEMI-HERMETIC COMPRESSORS

Part Number	Motor Type	Variable Speed Drive Approved	Capacity Control Stages (Digital = Stepless)	Electrical 380-420V/50Hz (Amps/Phase)		Oil Type	Oil Charge cc	O/A Height (mm)	Net Weight (kg)	Service Connections (inches)	
				**MOC(A)	LRA					Suct.	Disch.
6MT1-35X-AWM	PWS (YY/Y) DOL (Y)	Yes	33% /66%	67.3	255	POE32	3300	450	221	2 1/8	1 5/8
6MTD-35X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital + 33% Step	67.3	255	POE32	3300	450	227	2 1/8	1 5/8
6MK-50X-AWM	PWS (YY/Y) DOL (Y)	Yes	33% /66%	92.9	393	POE32	3300	450	230	2 5/8	1 5/8
6MKD-50X-AWM	PWS (YY/Y) DOL (Y)	Yes	50%-100% Digital + 33% Step	92.9	393	POE32	3300	450	236	2 5/8	1 5/8

Stream R134a Optimised 4 & 6 Cylinder M/HBP Compressors (POE Oil)

4MF-13X-AWM-D134	PWS (YY/Y) DOL (Y)	Yes	50%	22.0	105	POE32	3300	452	177	1 5/8	1 1/8
4ML-15X-AWM-D134	PWS (YY/Y) DOL (Y)	Yes	50%	26.4	156	POE32	3300	452	180	1 5/8	1 1/8
4MM-20X-AWM-D134	PWS (YY/Y) DOL (Y)	Yes	50%	29.3	175	POE32	3300	452	182	2 1/8	1 1/8
4MT-22X-AWM-D134	PWS (YY/Y) DOL (Y)	Yes	50%	33	175	POE32	3300	452	183	2 1/8	1 3/8
4MU1-25X-AWM-D134	PWS (YY/Y) DOL (Y)	Yes	50%	38.1	199	POE32	3300	452	186	2 1/8	1 3/8
6MU-40X-AWM-D134	PWS (YY/Y) DOL (Y)	Yes	33% /66%	57.3	304	POE32	3300	450	225	2 5/8	1 5/8
6MM-30X-AWM-D134	PWS (YY/Y) DOL (Y)	Yes	33% /66%	45.4	255	POE32	3300	450	215	2 1/8	1 3/8
6MT1-35X-AWM-D134	PWS (YY/Y) DOL (Y)	Yes	33% /66%	50.6	255	POE32	3300	450	221	2 1/8	1 5/8

Important Notes -

*Capacity watts = Evaporating Temperature °C, 45 °C SCT, 20 K.Suction Superheat & 0K Liquid Subcooling.

**Compressor Rated Load Amps (RLA) at -5°SST R404A and 45 °C SCT. * Use M.C.C. for power supply selection

** MOC(A) = Maximum Operating Current

4,6 & 8 Cylinder Compressors are Frequency Drive (VSD) compatible with a working range of 35 > 65 Hz range and compressor will require positive oil management control eg: TraxOil control.

Start Unload Kits and Head Cooling Fan Kits Are Available On Request

For other rating conditions, applications and for information on how this product can be configured on a parallel system please contact your local Heatcraft representative.

Compressor Service Pack include the following accessories as standard:

Anti-vibration base mounting kit
 Crank case heater
 CoreSense™ Diagnostics - advanced compressor protection module
 Suction & Discharge service valves
 Oil Pressure Control Sensor Protection
 Oil Sight Glass - TraxOil oil level control ready

Individual compressor capacity configuration ordering is as follows:

All 4 cylinder compressors without Digital Control Designation include one (1) bank of inactive capacity control head less solenoid valve = 50% capacity (order Part Number 3006870)
 All 6 cylinder compressors without Digital Control Designation include two (2) banks of inactive capacity control head less Solenoid Valve = 33/66% step capacity (order 2 off Part Number 3006870)

All 4 cylinder compressors with Digital Control Designation are ready to connect = 50% - 100% stepless capacity. (Order Part Number 3006870)

All 6 cylinder compressors with Digital Control Designation include extra one (1) 33% bank of inactive step control head less solenoid valve = 30% - 100% stepless capacity + 33% individual step load share (order 2 off Part Number 3006870)

COPELAND STREAM™ SEMI-HERMETIC COMPRESSORS (CONT'D)

Part Number	Description
3006870	Capacity Control Stream
3009744	Digital Capacity Control Head Assy - Conversion Kit
3013781	Sound Shell Kit - Stream 4CYL Compressor
3013792	Sound Shell Kit - Stream 6CYL Compressor

Copeland®**STREAM COMPRESSOR APPLICATION LINE UP**

Refrigerant	Stream		Stream Digital	
R404A	MT	LT	MT	LT
R407C	MT	-	MT	-
R134a	MT	-	MT	-
R22	MT	LT	MT	-
R744 (CO ₂)	MT	LT	-	-
R407A	MT	LT	MT	-
R407F	MT	LT	MT	-
R448A	MT	LT	MT	LT
R449A	MT	LT	MT	LT
R450A	MT	-	MT	-
R513A	MT	-	-	-

COPELAND STREAM™ SEMI-HERMETIC COMPRESSORS SPARE PARTS

Service Part	Part Number	Part Description	Suits Compressor Model number
Module / Control	3009120	Coresense Module & Harness	4M & 6M
	3011241	Curent Sensor -Motor	4M & 6M
	3011230	Thermistor Sensor Module - Motor	4M & 6M
Gaskets & Full Gasket Kits	3011070	Gasket Kit - Full	All 4M & 4MD
	3011081	Gasket Kit - Full	All 6M & 6MD
	3005059	Gasket -Capacity Control Valve Base	4M/6M
	3006132	Gasket -Digital Control Valve Base	4MD/6MD
	2882802	Stator Gasket	All 4M/6M & 4MD/6MD
	3199949	Oil Screen gasket	All 4M/6M & 4MD/6MD
	2880908	Discharge Sevice Valve gasket	All 4M & 4MD
	2050772	Discharge Sevice Valve gasket	6MI/MM/D
	2880851	Discharge Sevice Valve gasket	6MU/MJ/MT/MK/D
	2880851	Suction Service Valve gasket	4MA/MF/ML/D
	2880862	Suction Service Valve gasket	4MH/MI/MM/MJ/MT/MK/MU/6MI/MU/MM/MJ/MT/MK/D
	2042028	Oil Sightglass Gasket	4M/6M
Crankcase Heaters	6610169	Heater Crankcase - 100W 240V (Insert)	4M & 6M
	3232933	Valve Plate Kit (Includes gaskets top & bottom)	6MI/6MJ/4MA/4MH/4MI/4MJ
Valve Plates	3232944	Valve Plate Kit (Includes gaskets top & bottom)	6MM/6MT/4MF/4ML/4MM/4MT
	3232911	Valve Plate Kit (Includes gaskets top & bottom)	6MK/4MU
	3232922	Valve Plate Kit (Includes gaskets top & bottom)	6MU/4MK
	3010453	Valve Plate Kit Capacity Control (Includes gaskets top & bottom)	6MI/6MJ/4MA/4MH/4MI/4MJ
	3010442	Valve Plate Kit Capacity Control (Includes gaskets top & bottom)	6MM/6MT/4MF/4ML/4MM/4MT
	3010464	Valve Plate Kit Capacity Control (Includes gaskets top & bottom)	6MK/4MU
	3010475	Valve Plate Kit Capacity Control (Includes gaskets top & bottom)	6MU/4MK



Copeland®

SEMI-HERMETIC COMPRESSORS (CONT'D)

COPELAND STREAM™ SEMI-HERMETIC COMPRESSORS SPARE PARTS

Service Part	Part Number	Part Description	Suits Compressor Model number
Electrical Terminal Plate	3005377	Terminal Plate c/w gasket	All 4M/6M & 4MD/6MD
	3236877	Oil Pump Kit	All 4M/6M & 4MD/6MD
Oil Sump Parts	2482519	Oil Sightglass kit	All 4M/6M & 4MD/6MD
	3159332	Oil Pressure Switch - Coresense	All 4M/6M & 4MD/6MD
Capacity Control	3009744	Capacity Control Head Assembly Complete (240V.)	4MF/4ML/4MM/4MT/6MM/6MT & Digital compressors where standard CC head required.
	3009733	Capacity Control Head Assembly Complete (240V.)	4MA/4MH/4MI/4MJ/6MI/6MJ & Digital compressors where standard CC head required.
	3009755	Capacity Control Head Assembly Complete (1 x 240V.)	6MH/4MU & Digital compressors where standard CC head required.
	3009722	Capacity Control Head Assembly Complete (1 x 240V.)	6MK/4MK & Digital compressors where standard CC head required.
	3006870	Capacity Control Valve Kit (240V.)	4M & 6M ... & Digital compressors where standard CC head required.
	3160518	Solenoid Coil Only (240V. Capacity Control)	4M & 6M ... & Digital compressors where standard CC head required.
	2640831	Valve Less Coil (Capacity Control)	4M & 6M ... & Digital compressors where standard CC head required.
	3011058	Capacity Control Kit and gasket Digital	All 4MD/6MD
	3185504	Replacement 240V solenoid coil suit Digital only	All 4MD/6MD
	3008069	Relacement capacity Control stem Digital	All 4MD/6MD
Service Valves	3011478	Discharge Service Valve	4MA/MF/MH/ML/MI/MM/D
	3011467	Discharge Service Valve	4MJ/MT/MK/MU/D
	2837120	Discharge Service Valve	6MI/MM/D
	3164009	Discharge Service Valve	6MU/MJ/MT/MK/D
	3164009	Suction Service Valve	4MA/MF/ML/D
	3163993	Suction Service Valve	4MH/MI/MM/MJ/MT/MK/MU/6MI/MM/MJ/MT/D
	3121620	Suction Service Valve	6MU/MK/D
Auxillary Cooling	2998245	Head Cooling Fan 240V/1/50Hz - Less bracket	All 4M & 6M and Digital
	3011707	Head Cooling Fan Bracket Kit Only (Less motor and fan)	4M/D
	3011694	Head Cooling Fan Bracket Kit Only (Less motor and fan)	4M Only
	3011718	Head Cooling Fan Bracket Kit Only (Less motor and fan)	6M/6MD

DORIN SEMI HERMETIC COMPRESSORS R404A / R507 & R134a

Part Number	Dorin Range Series	Nom. HP	Displ. m³/hr	Electrical Supply	Capacity (watts) 100% Load @ Evaporating Temperature °C								
					R404A / R507					R134a			
					-35	-25	-15	-10	-5	-10	-5	0	5

**Dorin 2 Cylinder L/M/HBP Compressors (POE Oil)**

H40CC-S/HTCR	H1	0.50	2.89	220-240V/1/50Hz	370	660	1050	1300	1580	790	1010	1270	1570
H40CC/HTCR	H1	0.50	2.89	380-420V/3/50Hz	370	660	1050	1300	1580	790	1010	1270	1570
H80CC-S/HTCR	H11	0.75	4.42	220-240V/1/50Hz		1030	1658	2049	2520	1110	1440	1840	2300
H80CC/HTCR	H11	0.80	4.42	380-420V/3/50Hz		1030	1658	2049	2520	1110	1440	1840	2300
H101CC-S/HTCR	H11	1.00	5.37	220-240V/1/50Hz	701	1301	2132	2651	3280	1360	1780	2270	2840
H101CC/HTCR	H11	1.00	5.37	380-420V/3/50Hz	701	1301	2132	2651	3280	1360	1780	2270	2840
H151CC-S/HTCR	H11	1.50	6.71	220-240V/1/50Hz	873	1591	2573	3184	3920	1727	2250	2860	3560
H151CC/HTCR	H11	1.50	6.71	380-420V/3/50Hz	685	1591	2573	3184	3920	1727	2250	2860	3560
H181CC/HTCR	H11	1.80	7.50	380-420V/3/50Hz	981	1774	3577	4381	4410	1984	2590	3300	4120
H201CC/HTCR	H11	3.00	9.16	380-420V/3/50Hz	1206	2559	3580	4394	5380	2479	3220	4090	5090
H221CC/HTCR	H11	2.00	9.88	380-420V/3/50Hz	1289	2363	3832	4748	5840	2770	3560	4490	5560
H281CC/HTCR	H11	3.50	11.64	380-420V/3/50Hz	1520	2818	4592	5697	7010	3325	4240	5310	6540
H300CC/HTCR	H2	3.00	14.74	380-420V/3/50Hz	1984	3567	5759	7134	8730	4160	5310	6661	8228
H350CC/HTCR	H2	3.50	15.94	380-420V/3/50Hz	2301	3994	6332	7795	9450	4478	5730	7204	818
H380CC/HTCR	H2	3.80	17.53	380-420V/3/50Hz	2650	4500	7040	8635	10470	4910	6200	7710	9450
H403CC/HTCR	H32	4.00	19.98	380-420V/3/50Hz	4577	5876	7427	9257	11400	5738	7386	9323	11573
H503CC/HTCR	H32	5.00	22.83	380-420V/3/50Hz	3092	5650	9182	13938	13870	6564	8443	10652	13218

**Dorin 4 Cylinder L/M/HBP Compressors**

H551CC	H35	5.5	23.13	380-420V/3/50Hz	3230	5830	9460	11770	14440	7000	8890	11100	13670
H551CS	H35	5.5	27.33	380-420V/3/50Hz	3860	6810	10840	13350	16220	8170	10350	12910	15880
H701CC	H35	7.0	27.33	380-420V/3/50Hz	3880	6880	11000	13580	16570	8100	10220	12710	15600
H701CS	H35	7.0	31.88	380-420V/3/50Hz	4590	8120	12990	16030	19520	9480	12010	14970	18400
H751CC	H35	7.5	31.88	380-420V/3/50Hz	4590	8120	12990	16030	19520	9480	12010	14970	18400
H751CS	H35	7.5	38.06	380-420V/3/50Hz	5540	9660	15340	18900	22990	11820	14970	18660	22950
H800EP	HEP41	8.0	48.82	380-420V/3/50Hz						13666	17649	22380	27490
H1001CC	H41	10.0	42.81	380-420V/3/50Hz	6360	11330	18230	22550	27560	12960	16470	20590	25390
H1001CS	H41	10.0	48.82	380-420V/3/50Hz	7580	13290	21170	26080	31730	15060	19010	23620	28980
H1201CC	H41	12.0	42.81	380-420V/3/50Hz	6167	11006	17688	21873	26700	12852	15234	19251	23936
H1501CC	H41	15.0	48.82	380-420V/3/50Hz	7460	13110	20940	25860	31540	14950	18920	26650	32660
H1501CS	H41	15.0	56.87	380-420V/3/50Hz	8750	15430	24360	29980	36420	17360	21800	27000	33030
H1601CS	H41	16.0	63.76	380-420V/3/50Hz	9700	17020	27050	33280	40450	19420	24500	30450	37350
H1700EP	HEP5	17.0	102.35	380-420V/3/50Hz						30912	39351	49273	60850
H2001CC	H41	20.0	56.87	380-420V/3/50Hz	8760	15360	24390	30030	36540	19430	21930	27460	33910
H2000CS	H41	20.0	75.83	380-420V/3/50Hz	11630	19990	31460	38650	46950	22510	28910	36450	45260
H2201CC	H41	22.0	63.76	380-420V/3/50Hz	9730	17110	27200	33510	40790	1430	24240	30200	37150
H2400EP	HEP6	24.0	127.52	380-420V/3/50Hz						38778	48885	60762	74614
H2500CC	H5	25.0	75.83	380-420V/3/50Hz	10900	19450	30960	38150	46470	22770	29110	36590	45320
H2500CS	H5	25.0	85.01	380-420V/3/50Hz	13170	22590	35370	43330	52520	26510	33380	41390	50700
H3000CC	H5	30.0	85.01	380-420V/3/50Hz	12470	22130	35070	43140	52470	26110	33200	41560	51340

Dorin 6 & 8 Cylinder Compressors

H3000CS	H6	30.0	113.74	380-420V/3/50Hz	17250	29800	46960	57720	70140	34090	43540	54670	67680
H3000EP	HEP6	30.0	153.52	380-420V/3/50Hz						46500	58865	73383	90318
H3500CC	H6	35.0	113.74	380-420V/3/50Hz	16340	29110	46350	57140	69640	34150	43670	54480	67980
H3500CS	H6	35.0	127.52	380-420V/3/50Hz	19090	33020	52000	63850	77540	39710	50080	62260	76500
H4000CC	H6	40.0	127.52	380-420V/3/50Hz	18860	33260	52550	64570	78470	38690	49220	61630	76160



SEMI-HERMETIC COMPRESSORS (CONT'D)

DORIN SEMI HERMETIC COMPRESSORS R404A / R507 & R134a (CONT'D)

Part Number	Dorin Range Series	Nom. HP	Displ. m³/hr	Electrical Supply	Capacity (watts) 100% Load @ Evaporating Temperature °C								
					R404A / R507					R134a			
					-35	-25	-15	-10	-5	-10	-5	0	5
H4500CS	H6	45.0	153.52	380-420V/3/50Hz	22170	39030	62150	76640	93370	47110	59700	74530	91870
H5000CC	H6	50.0	153.52	380-420V/3/50Hz	23140	40060	62870	77130	93630	46580	58150	72870	90100
H6000CC (8 Cyl.)	H7	60.0	184.19	380-420V/3/50Hz	22300	46810	76090	93540	113410	61940	78290	97300	119330

DORIN SEMI HERMETIC COMPRESSORS R404A / R507 & R134a (CONT'D)

Part Number	Motor Type	Motor Protection	Variable Speed Drive Approved	Capacity Control (Blocked Suction Solenoid Valve)	Electrical 380-420V/50Hz (Amps/Phase)			Oil Type	Oil Charge cc	O/A Height (mm)	Net Weight (kg)	Service Valve Field Connections (Solder / mm.)	
					*RLA	**MCC (A)	LRA					Suct.	Disch.

Dorin 2 Cylinder L/M/HBP Compressors (POE Oil)

H40CC-S/HTCR	DOL	Thermik Thermistors	No	100%	4.4	6.0	30.0	POE32	1000	286	35	12	12
H40CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	1.6	2.4	11.1	POE32	1000	286	35	12	12
H80CC-S/HTCR	DOL	Thermik Thermistors	No	100%	5.6	7.5	31.0	POE32	1000	286	36	12	12
H80CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	2.2	2.4	11.1	POE32	1000	286	36	12	12
H101CC-S/HTCR	DOL	Thermik Thermistors	No	100%	7.2	9.0	47.0	POE32	1000	286	37	16	12
H101CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	2.8	2.9	13.8	POE32	1000	286	37	16	12
H151CC-S/HTCR	DOL	Thermik Thermistors	No	100%	11.8	13.5	73.0	POE32	1000	286	38	16	12
H151CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	3.2	3.4	15.5	POE32	1000	286	38	16	12
H181CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	3.6	4.4	20.0	POE32	1000	286	39	16	12
H201CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	4.4	6.0	24.5	POE32	1000	291	40	16	12
H221CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	4.7	6.0	24.5	POE32	1000	291	40	18	16
H281CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	6.8	7.3	32.0	POE32	1000	294	44	18	16
H300CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	6.9	9.4	43.5	POE32	1400	310	54	22	16
H350CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	7.3	9.4	43.5	POE32	1400	310	54	28	16
H380CC/HTCR	Star (Y)	Thermik Thermistors	No	100%	8.1	9.4	43.5	POE32	1400	310	56	28	16
H403CC/HTCR	Star (Y)	INT69	No	100%	8.3	10.5	53.0	POE32	2000	351	75	28	16
H503CC/HTCR	Star (Y)	INT69	No	100%	9.8	12.9	63.0	POE32	2000	351	79	28	16

Dorin 4 Cylinder L/M/HBP Compressors

H551CC	Star (Y) / DOL	INT69	Yes	50%	9.6	14.5	63.0	POE32	2000	336	91	28	18
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DORIN SEMI HERMETIC COMPRESSORS R404A / R507 & R134a (CONT'D)

Part Number	Motor Type	Motor Protection	Variable Speed Drive Approved	Capacity Control (Blocked Suction Solenoid Valve)	Electrical 380-420V/50Hz (Amps/Phase)			Oil Type	Oil Charge cc	O/A Height (mm)	Net Weight (kg)	Service Valve Field Connections (Solder / mm)	
					*RLA	**MCC (A)	LRA					Suct.	Disch.
H551CS	Star (Y) / DOL	INT69	Yes	50%	11.2	12.3	63.0	POE32	2000	336	91	28	22
H701CC	Star (Y) / DOL	INT69	Yes	50%	12.3	19.5	86.0	POE32	2000	340	91	28	22
H701CS	Star (Y) / DOL	INT69	Yes	50%	12.4	14.5	63.0	POE32	2000	340	91	28	22
H751CC	Star (Y) / DOL	INT69	Yes	50%	13.5	19.5	86.0	POE32	2000	340	91	28	22
H751CS	Star (Y) / DOL	INT69	Yes	50%	15.4	19.5	86.0	POE32	2000	340	91	35	22
H800EP	PWS	INT69	Yes	50%	11.8	20.0	105.0	POE32	2000	340	111	35	28
H1001CC	PWS/DOL	INT69	Yes	50%	18.7	28.0	135.0	POE32	2000	340	127	35	22
H1001CS	PWS/DOL	INT69	Yes	50%	21.0	24.0	109.0	POE32	2000	340	127	35	28



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HEP Series ideal for R134a applications
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SEMI-HERMETIC COMPRESSORS (CONT'D)

DORIN SEMI HERMETIC COMPRESSORS R404A / R507 & R134a (CONT'D)

Part Number	Motor Type	Motor Protection	Variable Speed Drive Approved	Capacity Control (Blocked Suction Solenoid Valve)	Electrical 380-420 V / 50 Hz (amps/Phase)			Oil Type	Oil Charge cc	O/A Height (mm)	Net Weight (kg)	Service Valve Field Connections (Solder / mm)	
					*RLA	**MCC (A)	LRA					Suct.	Disch.

Dorin 4 Cylinder L/M/HBP Compressors (Cont'd)

H1201CC	PWS	INT69	Yes	50%	18.7	28.0	135.0	POE32	2500	407	130	35	28
H1501CC	PWS	INT69	Yes	50%	24.5	34.0	171.0	POE32	2500	407	131	42	28
H1501CS	PWS	INT69	Yes	50%	24.5	28.0	135.0	POE32	2500	407	127	35	28
H1601CS	PWS	INT69	Yes	50%	30.1	34.0	171.0	POE32	2500	407	134	42	28
H1700EP	PWS	INT69	Yes	50%	26.2	34.0	171.0	POE32	3500	470	185	54	35
H2001CC	PWS	INT69	Yes	50%	26.6	38.0	177.0	POE32	2500	407	131	42	28
H2000CS	PWS	INT69	Yes	50%	24.0	38.0	177.0	POE46	2500	445	190	42	28
H2201CC	PWS	INT69	Yes	50%	31.8	45.0	203.0	POE32	2500	407	136	42	28
H2400EP	PWS	INT69	Yes	50%	32.4	48.0	203.0	POE32	3500	475	220	54	35
H2500CC	PWS	INT69	Yes	50%	33.6	48.0	203.0	POE46	3500	470	185	54	28
H2500CS	PWS	INT69	Yes	50%	37.7	45.0	203.0	POE46	3500	470	185	54	28
H3000CC	PWS	INT69	Yes	50%	36.9	56.0	245.0	POE46	3500	470	199	54	28

Dorin 6 & 8 Cylinder Compressors

H3000CS	PWS	INT69	Yes	33% / 66%	36.6	60.0	245.0	POE46	3500	465	235	54	35
H3000EP	PWS	INT69	Yes	33% / 66%	38.4	56.0	245.0	POE46	3500	475	234	54	42
H3500CC	PWS	INT69	Yes	33% / 66%	36.0	60.0	260.0	POE46	3500	465	246	54	35
H3500CS	PWS	INT69	Yes	33% / 66%	36.6	66.0	245.0	POE46	3500	465	233	54	35
H4000CC	PWS	INT69	Yes	33% / 66%	43.2	75.0	290.0	POE46	3500	465	249	54	35
H4500CS	PWS	INT69	Yes	33% / 66%	43.2	75.0	290.0	POE46	3500	465	252	54	42
H5000CC	PWS	CPM	Yes	33% / 66%	55.8	93.0	358.0	POE46	3500	465	253	54	42
H6000CC (8 Cyl.)	PWS	CPM	Yes	25% / 50%	72.0	120.0	544.0	POE46	8500	605	355	80	42

Dorin Compressor Series "HEP" = R134a Optimised Application

* Capacity Watts - Evaporating Temperature °C, 45 °C SCT, 20 K. Suction Superheat and 0 K Liquid Subcooling / 50 Hz. Operation.

Compressor Electrical Notes

* = Compressor Rated Load Amps at -10 °SST R404A and 45 °C SCT. Values for comparison purposes only.

* = Compressor Rated Load Amps at -5 °SST R134a and 45 °C SCT. Values for comparison purposes only.

**Maximum Continuous Current (MCC) = Activation Point Of Motor Overload Protection Device / Dorin Compressor -Manufacture Design Data -Serial Plate Details.

(Maximum Operating Current (MOC) = Motor Operating Envelope / Dorin Compressor -Manufacture Design Data -Serial Plate Details).

> Single Phase 240 V / 50 Hz Models Include Start Capacitor & Relay.

Semi Hermetic Compressor Configuration Notes

- 4 & 6 Cylinder Compressors have 1 x Inactive Capacity Control Head - All 8 Cylinder Compressors have 2 x Inactive Capacity Control Heads.
- 6 Cylinder Compressors can be ordered with 2 x Inactive Heads - 8 Cylinder Compressors can be ordered to include 3 x Inactive Capacity Control Heads.
- 4, 6 & 8 Cylinder Compressors are Frequency Drive (VSD) compatible with a working range of 35 > 65 Hz. range and compressor will require positive oil management control e.g. TraxOil control.
- Start Unload Kits and Head Cooling Fan Kits Are Available On Request
- All Compressors are pre-charged with P.O.E. Oil, Suction & Discharge Service Valves, Crankcase Heater, Thermal Motor Protection, Oil Switch where applicable & Anti Vibration Mounting Feet Kit.
- 2, 4, 6 & 8 Cylinder Compressors where nominated include Electronic Thermistor Protection Control Module.
- Compressors up to H380CC include Thermik Motor Protection as standard.
- Compressors H2001CS up to H6000CC include a safety oil differential switch (ODPS) for all other models below H2001CS it is recommended to use a Oil watch Control - Level Alarm function .
- HEP ECOPREMIUM Dorin Compressor designed for R134a application now available - Range: 5 - 30 HP - Contact Heatcraft for further information.

For other rating conditions, applications and for information on how this product can be configured on a parallel system please contact your local Heatcraft representative.

DORIN H11 SERIES SEMI-HERMETIC COMPRESSORS PARTS**Models:**

H80CC / H101CC / H151CC / H181CC / H201CC / H221CC / H281CC

Part Number	Description	Compressor Model No.
Electrical Parts		
2CC4010	Themister Module INT69	H80-H281CC
1RKJ006	Terminal plate and gasket	H80-H281CC
MUE880-29	Electrical kit 240v	H80CC-S
MUE880-30	Electrical kit 240v	H101CC-S
MUE880-31	Electrical kit 240v	H151CC-S
RVAH4AN6D	Start relay	H80-H151CC-S
2EG2020	Crankcase heater 240v	H80-H281CC
Gasket Kits		
1CCM160	Gasket Kit	H80CC/H101CC
1CCM161	Gasket Kit	H151CC/H181CC
1CCM162	Gasket Kit	H201CC/H221CC
1CCM163	Gasket Kit	H281CC
Mounting feet		
1CC5024	Mounting feet	H80CC-H281CC
Mechanical Parts		
1PKP010	Valve Plate kit inc gaskets	H80CC/H101CC
1PKP011	Valve Plate kit inc gaskets	H151CC/H181CC
1PCB097	Valve Plate kit inc gaskets	H201CC/H221CC
1PCB098	Valve Plate kit inc gaskets	H281CC
1CCQ501	Oil sightglass kit	H80-H281CC
1RKA024	Suction Service valve kit inc gasket & bolts	H80CC
1RKA025	Suction Service valve kit inc gasket & bolts	H101CC-H201CC
1RKA020	Suction Service valve kit inc gasket & bolts	H221CC/H281CC
1RKC024	Discharge Service Valve kit inc gasket & bolts	H80-H201CC
1RKC025	Discharge Service Valve kit inc gasket & bolts	H221CC-H281CC

**DORIN H35 SEMI-HERMETIC COMPRESSORS PARTS****Models:**

H551CC / H551CS / H701CC / H701CS / H751CC / H751CS

Part Number	Description	Suits Model No.
Electrical Parts		
2CC4010	Themister Module INT69	H551-H751CS
1RKJ008	Terminal plate and gasket	H551-H751CS
2EG2020	Crankcase heater 240v	H551-H751CS
Gasket Kits		
1CCM131	Gasket Kit	H551CC
1CCM132	Gasket Kit	H551CS
1CCM133	Gasket Kit	H701CS/H751CC
1CCM134	Gasket Kit	H751CS
Mounting feet		
1CC5042	Mounting feet	H550-H750CS



SEMI-HERMETIC COMPRESSORS (CONT'D)

DORIN H41 SEMI-HERMETIC COMPRESSORS PARTS (CONT'D)

Part Number	Description	Suits Model No.
Mechanical Parts		
1PKP056	Valve Plate kit inc gaskets	H551CC
1PKP057	Valve Plate kit inc gaskets	H551CS/H701CC
1PKP058	Valve Plate kit inc gaskets	H701CS/H751CC
1PKP059	Valve Plate kit inc gaskets	H751CS
1CCQ501	Oil sightglass kit	H551CC-H751CS
1RKA066	Suction Service valve kit inc gasket & bolts	H551CC-H751CC
1RKA067	Suction Service valve kit inc gasket & bolts	H751CS
1RKC055	Discharge Service Valve kit inc gasket & bolts	H551CC
1RKA030	Discharge Service Valve kit inc gasket & bolts	H551CS-H751CS
2PN0521	Capacity control kit inc screws & gasket	All 4/6/8 cylinder compressors
2P21010	Capacity control stem coil 240v	All 4/6/8 cylinder compressors
1LGB061	Capacity control valve gasket	All 4/6/8 cylinder compressors

DORIN H41 SEMI-HERMETIC COMPRESSORS PARTS

Models:

H1201CC / H1001CS / H1501CC / H1501CS / H2001CC / H1600CS / H2201CC

Part Number	Description	Suits Model No.
Electrical Parts		
2CC4010	Thermister Module INT69	H1201CC-H2201CC
1RKJ0038	Terminal plate and gasket	H1201CC/H1001CS/H1501CC/H1501CS/H1601CS
1RKJ0041	Terminal plate and gasket	H2001CC/H2201CC
2EG2020	Crankcase heater 240v	H1201CC-H2201CC
Gasket Kits		
1CCM142	Gasket Kit	H1201CC/H1001CS/H1501CC
1CCM144	Gasket Kit	H1501CS/H2001CC/H1601CS/H2201CC
Mounting feet		
1CC5042	Mounting feet	H1201CC-H2201CC
Mechanical Parts		
1PCP083	Valve Plate kit inc gaskets	H1001CS
1PKP084	Valve Plate kit inc gaskets	H1201CC/H1501CC
1PKP085	Valve Plate kit inc gaskets	H1501CS/H1601CS
1PKP085	Valve Plate kit inc gaskets	H2001CC/H2201CC
1RKC147	Suction Service valve kit inc gasket & bolts	H1501CC/H2001CC/H1601CS/H2201CC
1RKA052	Discharge Service Valve kit inc gasket & bolts	H1201CC-H2201CC
2PN0521	Capacity control kit inc screws & gasket	All 4/6/8 cylinder compressors
2P21010	Capacity control stem coil 240v	All 4/6/8 cylinder compressors
1LGB061	Capacity control valve gasket	All 4/6/8 cylinder compressors

DORIN H2 SEMI-HERMETIC COMPRESSORS PARTS**Models:**

H300CC H350CC H380CC



Part Number	Description	Suits Model No.
Electrical Parts		
2CC4010	Themister Module INT69	H300-H380CC
1RKJ008	Terminal plate and gasket	H300-H380CC
2EG2020	Crankcase heater 240v	H300-H380CC
Gasket Kits		
1CCM170	Gasket Kit	H300-H380CC
Mounting feet		
1CC5035	Mounting feet	H300-H380CC
Mechanical Parts		
1PCB0962	Valve Plate kit inc gaskets	H300-H380CC
1CCQ501	Oil sightglass kit	H300-H380CC
1RKA030	Suction Service valve kit inc gasket & bolts	H300CC
1RKA031	Suction Service valve kit inc gasket & bolts	H350-H380CC

**DORIN H32 SEMI-HERMETIC COMPRESSORS PARTS****Models:**

H403CC / H503CC

Part Number	Description	Suits Model No.
Electrical Parts		
2CC4010	Themister Module INT69	H403-H503CC
1RKJ008	Terminal plate and gasket	H403-H503CC
2EG2020	Crankcase heater 240v	H403-H503CC
Gasket Kits		
1CCM171	Gasket Kit	H403-H503CC
Mounting feet		
1CC5035	Mounting feet	H403-H503CC
Mechanical Parts		
1PCB074	Valve Plate kit inc gaskets	H403-H503CC
1CCQ501	Oil sightglass kit	H403-H503CC
1RKA035	Suction Service valve kit inc gasket & bolts	H403-H503CC
1RKC026	Discharge Service Valve kit inc gasket & bolts	H403-H503CC

DORIN H5 SEMI-HERMETIC COMPRESSORS PARTS**Models:**

H2000CS / H2500CC / H2500CS / H3000CC

Part Number	Description	Suits Model No.
Electrical Parts		
2CC4010	Themister Module INT69	H2000-H3000CC
1RKJ041	Terminal plate and gasket	H2000CS/H2500CC/H2500CS
1RKJ042	Terminal plate and gasket	H3000CC
2EG2020	Crankcase heater 240v	H2000CS-H3000CC
1CCM183	Gasket Kit	H2000CS/H2500CC
1CCM200	Gasket Kit	H2500CS/H3000CC



SEMI-HERMETIC COMPRESSORS (CONT'D)

DORIN H5 SEMI-HERMETIC COMPRESSORS PARTS (CONT'D)

Part Number	Description	Suits Model No.
Mounting Feet		
1CC5021	Mounting feet	H2000-H3000CC
Mechanical Parts		
1PKP065	Valve Plate kit inc gaskets	H2000CS
1PKP066	Valve Plate kit inc gaskets	H2500CC
1PKP067	Valve Plate kit inc gaskets	H2500CS
1PKP068	Valve Plate kit inc gaskets	H3000CC
1CCQ010	Oil sightglass kit	H5-H6-H7
1RKA055	Suction Service valve kit inc gasket & bolts	H2000CS
1RKA060	Suction Service valve kit inc gasket & bolts	H2500CC/H2500CS/H3000CC
1RKC060	Discharge Service Valve kit inc gasket & bolts	H2000CC-H3000CC
1LKF030	Oil Pump assy	H5-H6
2PN0521	Capacity control kit inc screws & gasket	All 4/6/8 cylinder compressors
2P21010	Capacity control stem coil 240v	All 4/6/8 cylinder compressors
1LGB061	Capacity control valve gasket	All 4/6/8 cylinder compressors
2CG9030	Delta 11 Oil Diff switch assy	H5-H6-H7
2CG1070	Discharge temp probe	H5-H6-H7

DORIN H6 SEMI-HERMETIC COMPRESSORS PARTS

Models:

H3000CS / H3500CC / H3500CS / H4000CC / H4500CS / H5000CC

Part Number	Description	Suits Model No.
Electrical Parts		
2CC1070	Thermister Module INT69TM	H6-H7
1RKJ043	Terminal plate and gasket	H6-H7
2EG1090	Crankcase heater 240v	H6-H7
Gasket Kits		
1CCM184	Gasket Kit	H3000CS/H3500CC
1CCM203	Gasket Kit	H3500CS/H4000CC
1CCM205	Gasket Kit	H4500CS/H5000CC
Mounting Feet		
1CC5021	Mounting feet	H3000CS/H3500CC/H3500CS/H4000CC/H4500CS/H5000CC
Mechanical Parts		
1PKP065	Valve Plate kit inc gaskets	H3000CS
1PKP066	Valve Plate kit inc gaskets	H3500CC
1PKP067	Valve Plate kit inc gaskets	H3500CS
1PKP068	Valve Plate kit inc gaskets	H4000CC
1PKP076	Valve Plate kit inc gaskets	H4500CS
1PKP077	Valve Plate kit inc gaskets	H5000CC
1CCQ010	Oil sightglass kit	H5-H6-H7
1RKA060	Suction Service valve kit inc gasket & bolts	H3000CS/H3500CC/H3500CS/H4000CC/H4500CS/H5000CC
1RKC062	Discharge Service Valve kit inc gasket & bolts	H3000CS/H3500CC/H3500CS/H4000CC
1RKC055	Discharge Service Valve kit inc gasket & bolts	H4500CS/H5000CC
1LKF030	Oil Pump assy	H5-H6
2PN0521	Capacity control kit inc screws & gasket	All 4/6/8 cylinder compressors

DORIN H6 SEMI-HERMETIC COMPRESSORS PARTS (CONT'D)**Mechanical Parts (Cont'd)**

2P21010	Capacity control stem coil 240v	All 4/6/8 cylinder compressors
1LGB061	Capacity control valve gasket	All 4/6/8 cylinder compressors
2CG9030	Delta 11 Oil Diff switch assy	H5-H6-H7
2CG1070	Discharge temp probe	H5-H6-H7

**DORIN H7 SEMI-HERMETIC COMPRESSORS PARTS****Models:**

H6000CC

Part Number	Description	Suits Model no
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Electrical Parts

2CC1070	Thermister Module INT69TM	H6-H7
1RKJ043	Terminal plate and gasket	H6-H7
2EG1090	Crankcase heater 240v	H6-H7

Gasket Kits

1CCM206	Gasket Kit	H6000CC
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Mounting feet

1CC5022	Mounting feet	H6000CC
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Mechanical Parts

1PKP068	Valve Plate kit inc gaskets	H6000CC
1CCQ010	Oil sightglass kit	H5-H6-H7
1RKA081	Suction Service valve kit inc gasket & bolts	H6000CC
1RKC082	Discharge Service Valve kit inc gasket & bolts	H6000CC
1LKF031	Oil Pump assy	H7
2PN0521	Capacity control kit inc screws & gasket	All 4/6/8 cylinder compressors
2P21010	Capacity control stem coil 240v	All 4/6/8 cylinder compressors
1LGB061	Capacity control valve gasket	All 4/6/8 cylinder compressors
2CG9030	Delta 11 Oil Diff switch assy	H5-H6-H7
2CG1070	Discharge temp probe	H5-H6-H7

SCREW COMPRESSORS

HANBELL SCREW COMPRESSORS

With its small footprint, the Hanbell Screw Compressor provides an efficient means of compressing refrigerant in larger applications. The RC2 model has a wide operating envelope, designed to cover low, medium and high temperature applications using R134a and other refrigerants. With very few moving parts, the Hanbell Screw Compressor offers excellent reliability and is quieter than other alternatives. A highly efficient motor allows optimum output, no matter what running capacity the compressor is set at. This results in a high displacement of refrigerant, energy efficiency and lower running costs. Hanbell uses long life bearings for higher levels of reliability. **Heatcraft can configure a locally manufactured Screw Set to your requirements complete with switchboard, control and pre-wiring.**



RC2-A & RC2-B TECHNICAL DATA

Model	Compressor							Motor Start Type	Lubricant Charge L	Lubricant Type POE
	Displacement 60 / 50 Hz	VI (Volume Ratio)	Economiser Operation	Cap. Control (%)		Nominal Hp				
				Step	Stepless	60 Hz	50 Hz			
RC2-A R134a										
RC2-100A	118 / 98	Aplication Selection	PHE & Controls Kit Option	33, 66, 100	33-100	23	19	Y-s / DOL	7	RL170H
RC2-140A	165 / 137	Application Selection	PHE & Controls Kit Option	33, 66, 100	33-100	32	26	Y-s / DOL	7	RL170H
RC2-170A	207 / 172	Application Selection	PHE & Controls Kit Option	25, 50, 75, 100	25-100	40	33	Y-s / DOL	7	RL170H
RC2-180A	216 / 180	Application Selection	PHE & Controls Kit Option	33, 66, 100	33-100	42	35	Y-s / DOL	7	RL170H
RC2-200A	233 / 193	Application Selection	PHE & Controls Kit Option	25, 50, 75, 100	25-100	45	37	Y-s / DOL	8	RL170H
RC2-230A	277 / 230	Application Selection	PHE & Controls Kit Option	35, 50, 75, 100	35-100	53	44	Y-s / DOL	14	RL170H
RC2-260A	309 / 257	Application Selection	PHE & Controls Kit Option	25, 50, 75, 100	25-100	59	49	Y-s / DOL	14	RL170H
RC2-300A	352 / 293	Application Selection	PHE & Controls Kit Option	25, 50, 75, 100	25-100	67	56	Y-s / DOL	16	RL170H
RC2-310A	371 / 308	Application Selection	PHE & Controls Kit Option	35, 50, 75, 100	35-100	71	59	Y-s / DOL	14	RL170H
RC2-320A	384 / 320	Application Selection	PHE & Controls Kit Option	25, 50, 75, 100	25-100	72	60	Y-s / DOL	16	RL170H
RC2-340A	407 / 339	Application Selection	PHE & Controls Kit Option	35, 50, 75, 100	35-100	77	64	Y-s / DOL	16	RL170H
RC2-B R407C - R404A - R407F - R507 (R22 Retrofit)										
RC2-100B	116 / 98	Aplication Selection	PHE & Controls Kit Option	33, 66, 100	33-100	38	31	Y-s / DOL	7	RL170H
RC2-140B	165 / 137	Application Selection	PHE & Controls Kit Option	33, 66,100	33-100	50	41	Y-s / DOL	7	RL170H
RC2-170B	207 / 172	Application Selection	PHE & Controls Kit Option	25, 50, 75, 100	25-100	63	52	Y-s / DOL	7	RL170H
RC2-200B	233 / 193	Application Selection	PHE & Controls Kit Option	25, 50, 75, 100	25-100	70	58	Y-s / DOL	8	RL170H
RC2-260B	309 / 257	Application Selection	PHE & Controls Kit Option	25, 50, 75, 100	25-100	90	75	Y-s / DOL	14	RL170H
RC2-300B	352 / 293	Application Selection	PHE & Controls Kit Option	25, 50, 75, 100	25-100	107	89	Y-s / DOL	16	RL170H
RC2-320B	384 / 320	Application Selection	PHE & Controls Kit Option	25, 50, 75, 100	25-100	114	94	Y-s / DOL	16	RL170H

Other model compressors / applications are available on request, please contact your Heatcraft representative.

VI (Volume Ratio) standard variations available are 2.2, 2.6, 3.0 & 3.5

Standard motor type is 3 Phase, 2 Pole, Squirrel cage, Induction type with Class F insulation.

All RC2 screws can be inverter driven to 65 Hz and special models are available.

RC2-A & RC2-B TECHNICAL DATA

Motor - Voltage Options	
50 Hz	60 Hz
380	208
400	220
415	230
	380
	440
	460
	480
	575

Hanbell offer RC2 models from 19 HP through to 445 HP.
Hanbell also offer ranges of Low Temp, Centrifugal and Ammonia Compressors.

OPEN DRIVE COMPRESSORS**DORIN OPEN DRIVE COMPRESSORS**

- 1HVS model supersedes the 1VT and will run up to 1450 r/min. The compressor is fitted with a sight glass. The discharge service valve is fitted to the cylinder head improving low temperature R22 performance. (Note: 1HVS has different mounting holes and flywheel diameter to 1VT.)
- 2GVS model supersedes the 2VT and will run up to 1450 r/min. The discharge service valve is fitted to the cylinder head improving low temperature R22 performance. (Note: 2GVS has different mounting holes and flywheel diameter to 2VT.)
- 3LVS model supersedes the 3VT and will run up to 1220 r/min. The discharge service valve is fitted to the cylinder head improving low temperature R22 performance. (Note - 3LVS is interchangeable with 3VT except for suction and discharge valve positions.)
- 41VS, 51VS, models are unchanged.
- All models are now available with Polyol Ester Oil (POE) RL32-3MAF which is required for applications with R134a R407C, R404A.
- Compressor rotation is clockwise when looking at the flywheel.



Part Number	Cyl.	Bore (mm)	Stroke (mm)	Disp cm ³ /hr	Flywheel		Oil Charge (litres)	Connections (Inches)		r/min		Motor Required kW		Weight (kg)
					Dia (mm)	Belt Sect		Suction	Discharge	Min.	Max.	Min.	Max.	
1HVS	2	45	24	76.0	160	2A	0.56	5/8 MF	1/2 MF	900	1450	0.37	1.5	17
2GVS	2	60	30	169.5	160	2A	1.15	3/4 MF	5/8 MF	760	1450	1.5	3.0	22
3LVS	2	60	60	340.0	270	3A	1.75	1 1/8	3/4 MF	650	1250	3.0	5.5	38
41VS-M	2	74	65	560.0	303	3B	3.12	1 1/8	1 1/8	550	1300	5.5	7.5	78
51VS-M	2	88	78	949.0	335	4B	4.45	1 5/8	1 3/8	550	1300	9.3	11.0	118

DORIN COMPRESSORS

Part Number	Description
1HVS	DORIN Compressor Belt Drive
2GVS	DORIN Compressor
3LVS	DORIN Compressor
41VS-M	DORIN Compressor Belt Drive Polyol Oil
51VS-M	DORIN Compressor Belt Drive

OPEN DRIVE SPARES

Part Number	Description
1TCC004	DORIN Seal Kit 3VT
1TCC024	DORIN Seal Kit 4VS/41VS
7055283	Seal Shaft HCFC 4CC/6CC

COMPRESSORS FOR R744 (CO₂) SUBCRITICAL LOW TEMPERATURE APPLICATIONS

COPELAND SCROLL™ COMPRESSORS

With the combination of scroll ZB and scroll Digital ZBD range for R134a in medium temperature and scroll ZO compressors for CO₂ subcritical in low temperatures - Emerson is able to offer a complete range of compressor for cascade systems. The use of scroll and Digital modulation technologies in these hybrid systems helps customers and end users to offset the additional capital costs related to R134a and R744 compared to standard HFCs. Cost savings can be as high as 40%. Digital technology (10-100% stepless capacity modulation) can be used to avoid the high cost associated with variable speed technology, resulting in important cost savings while ensuring the highest equipment efficiency level.

Features and Benefits

- Optimised for high efficiency in CO₂ - subcritical cascade
- High condensing temperature limit allowing for optimized System Design
- Compact design minimizing required machine room space
- Half the weight of equivalent semi-hermetic compressors
- High bearing reliability and lubrication to all critical parts
- Optional Sound Shell allowing 10 dBA sound attenuation

COPELAND SCROLL™ R744 SUBCRITICAL LOW TEMPERATURE COMPRESSORS (CASCADE)

Model	Nominal HP	Displ. m ³ /hr	*R744 Capacity watts (100% Load / 50 Hz) @ Evaporating Temperature °C				Electrical 380-420V / 50 Hz Amps/Phase / DOL (m)		Motor Overload Protection	Service Connections - Rotalock Valves Solder (mm)		Net Weight (kg)	Standstill Pressures LP/HP bar (g)
			-45	-40	-35	-30	**MOC(A)	LRA		Suct.	Disch.		

Full Capacity Models 100%

ZO21K5E-TFDN551	1.5	2.6	3200	4100	5100	6200	3.6	27.0	Internal	15.88	12.7	22.2	30 / 52
ZO34K3E-TFDN551	2.0	4.1	4800	6200	7800	9700	5.5	26.0	Internal	15.88	12.7	30.0	30 / 52
ZO45K3E-TFDN551	2.5	5.4	7000	8800	10900	13300	6.2	35.0	Internal	15.88	12.7	31.0	30 / 52
ZO58K3E-TFDN551	3.5	6.9	8900	11200	13900	17000	8.0	48.0	Internal	15.88	12.7	32.5	30 / 52
ZO88KCE-TFDN551	5.0	10.1	13300	17000	21000	25400	11.8	34.0	Internal	15.88	12.7	40.3	30 / 52
ZO104KCE-TFDN551	6.0	11.7	15900	19700	24100	29200	15.0	74.0	Internal	15.88	12.7	40.0	30 / 52

Digital Capacity Models 10 >100%

ZO34K3E-TFDN551	2.0	4.07	5100	6400	7900	9700	5.5	26.0	Internal	15.88	12.7	30.0	30 / 52
ZO58K3E-TFDN551	3.5	Future Release											
ZO104KCE-TFDN551	6.0	11.7	15600	19100	23200	27900	15.0	75.0	Internal	15.88	12.7	41.0	30 / 52

*R744 Subcritical Conditions -10 °C Condensing Temp. 20 K Suct Superheat. 0 K Liquid Sub-Cooling

**Maximum Operating Current (MOC) = Compressor Manufacturers Data

Compressors Are Supplied With Service Connection Rotalock Valves & Anti Vibration Mounting Kit (digital compressors include a High Discharge Temperature safety thermostat/klixon.) Compressor Oil Management Required For All Model Compressors. POE RL68H

ANCILLARY COMPONENTS REQUIRED - TO BE ORDERED SEPARATELY

Part Number	Description
8561105	Crankcase Heater 240V 70W .. All ZO Models
010-0125-00	Digital Valve (less coil) All ZOD Models
123-0088-04	240V Coil - Digital Valve

For other rating conditions and for information on how the Copeland range of R744 (CO₂) Subcritical and Transcritical Compressors can be configured on a parallel system. **Please contact your local Heatcraft representative.**



DORIN COMPRESSORS FOR SUBCRITICAL R744 (CO₂) APPLICATIONS

CDS-B Series have been developed to solve regional requests of modern subcritical CO₂ systems. Dorin offers on the market R744(CO₂) compressors ideal for subcritical cascade applications combined with high efficiency Dorin R134a compressors. CDS-B Series compressors offer high levels of resistance to static loads, providing extreme resilience to the system and overcoming any presence of refrigerant charge during prolonged stand still periods and short load cycles. CDS-B models are designed to capture greater compactness, efficiency and optimization of the compressors.



New model features are characterised by:

- 2 and 4 cylinder models
- Extra smooth and balanced operation.
- Low vibration and low pulsation
- Extra compactness to common motor diameter design.
- Highly efficient motor special design
- Peculiar tribology solutions coming from the automotive industry
- Optimized internal passages for optimum suction gas flow giving a cooling result of the motor temperature
- Wear resistant drive gear with high technological forgery solutions
- Highly efficient and robust working values
- Frequency drive capability on the 4 cylinder models
- Optimization of components and spare parts
- Full Range Displacement from 1,9 m³/h to 48.8 m³/h @ 50 Hz Operation
- Nominal motor power from 1 to 25 hp

DORIN SEMI HERMETIC RECIPROCATING COMPRESSORS - R744 SUB CRITICAL SINGLE STAGE LOW TEMPERATURE COMPRESSORS

Model	No. Cyl. / Nom. HP	Displ. m ³ / hr	*R744 Capacity Watts (100% Load / 50 Hz) @ Evaporating Temperature °C				Electrical 380-420V/50Hz Amps / Phase / Star (m)	
			-45	-40	-35	-30	**MOC (A)	LRA

Full Capacity Models 100%

CDS151B	2/1.5	2.53	2720	3590	4588	5730	3.4	15.5
CDS181B	2/1.8	2.60	3879	5071	6431	7980	4.4	20.0
CDS301B	2/3.0	4.34	4994	6472	8147	10046	6.0	24.5
CDS351B	2/3.5	5.53	6538	8468	10621	13039	7.3	32.0
CDS401B	2/4.0	8.20	9494	12183	15358	19051	9.4	43.5
CDS501B	4/5.0	10.61	11472	14920	18952	23615	12.9	63.0

DORIN SEMI HERMETIC RECIPROCATING COMPRESSORS - R744 SUB CRITICAL SINGLE STAGE LOW TEMPERATURE COMPRESSORS (CONT'D)

Model	Motor Overload Protection	Cap.Steps	Service Connections - Rotolock Valves Solder (mm)		Net Weight (kg)	Range Series	Standstill Pressures LP/HP bar (g)
			Suct.	Disch.			

Full Capacity Models 100%

CDS151B	Internal Thermik	VSD Variable	16.0	14.0	43.0	CDS11	36 / 55
CDS181B	Internal Thermik	VSD Variable	16.0	14.0	44.0	CDS11	36 / 55
CDS301B	Internal Thermik	VSD Variable	16.0	14.0	46.0	CDS11	36 / 55
CDS351B	Internal Thermik	VSD Variable	16.0	14.0	48.0	CDS12	36 / 55
CDS401B	Internal Thermik	VSD Variable	16.0	16.0	49.0	CDS11	36 / 55
CDS501B	INT69 Module	50% Blocked Suction or VSD	22.0	18.0	99.0	CDS35	36 / 55

*R744 Subcritical Conditions -10 °C Condensing Temp .. 20 K Suct Superheat .. 0 K Liquid Sub-Cooling

**Maximum Operating Current (MOC) = Compressor Manufacturers Data

Compressors are VSD/frequency drive compatible within 30>65Hz range

Compressors Are Supplied As Standard With Service Connection Valves, Anti Vibration Mounting Kit, Crankcase Heater & LP/HP Pressure Relief Valves.

4 Cylinder Compressors have 1 x Inactive Capacity Control Head 50% - Capacity Control Solenoid Valve To Be Ordered Separately.

Compressor Oil Management Required For All Model Compressors - Applications PAG68 / RFL68EP

ANCILLARY COMPONENTS REQUIRED - TO BE ORDERED SEPARATELY

Part Number	Description
2PN0521	Capacity Control Solenoid Valve Stem Only
2P21010	Coil 240 VAC - Capacity Control Solenoid Valve
2CC4010	INT69 Motor Protection 240 VAC

For other rating conditions and for information on how the Dorin range of R744 (CO₂) Subcritical and Transcritical Compressors can be configured on a parallel system.

Please contact your local Heatcraft representative.

Condensing Units & Packaged Systems



CONDENSING UNITS & PACKAGED SYSTEMS

KIRBY NULLARBOR CONDENSING UNIT

Developed for harsh Australian conditions, our Nullarbor Hi-Ambient condensing units are rated for operation up to 45 °C ambient. With improved performance due to the inclusion of large condensers, the Kirby Nullarbor range delivers high output and efficiency. They're from Kirby, so they're robust and reliable - guaranteed.

Features & Benefits

The Nullarbor Condensing Units offer proven design attributes to be installation ready:

- Incorporating the latest Kirby BA, WJ and AW series compressors delivers reliability and proven performance
- High ambient condenser optimises efficiency and airflow for continuous operation at temperatures up to 45 °C ambient temperatures
- Durable painted galvabond bases maximise service life
- Lower noise and vibration levels through clever compressor design
- Compact footprint for ease of installation
- Premium quality inclusions and controls
- KN units include liquid line dryer, sight glass and HP/LP control



Optional Enhancements

- Designed for ultimate flexibility, the following options are available:
- Built-in condensate tray eliminates the need for a separate tray and condensate heater*
- *Standard fitment on models BA6MHGBC1, BA8MGBC1, BA9GBC1, BA12MGBC1. Not available on other models

Part Number	Capacity (watts) *					Volts	RLA	HP	Displ. (cc)	Receiver Vol. (litres) 'B" & KN Models
	Saturated Suction Temperature (SST) °C									
	-35	-30	-25	-20	-15					
R404A / R507 - Low Temperature Application										
BA8MGB	190	250	315	385	460	240	2.6	1/4	7.55	1.4
BA12LMYA/B	285	365	455	555	665	240	2.8	1/3	12.1	1.4
BA14LMYA/B	340	435	545	665	800	240	4.0	1/3	14.1	1.4
BA16LMYA/B	385	495	615	755	910	240	2.8	3/8	16.2	1.4
BA18LZA/B	470	630	810	1010	1230	200/240	3.5	1/2	18	2.4
KN014MH1	480	665	870	1100	1350	200/240	3.3	3/4	21.5	2.4
KN017MH1	600	830	1090	1380	1690	200/240	4.8	7/8	26.8	2.4
KN014L1	740	1020	1330	1660	2020	200/240	5.5	1	30.5	2.4
KN015L1	785	1070	1370	1680	1990	200/240	4.7	1	39.6	2.4
KN023MH1	795	1090	1400	1740	2110	200/240	4.6	1	39.6	2.4
KN029MH1	1090	1460	1860	2300	2810	200/240	5.8	1-1/4	43.1	4.4
KN024L1	1260	1690	2180	2740	3390	200/240	7.8	1-1/2	53.5	4.4

Note - Some models are available without receiver - check with your local branch

KIRBY NULLARBOR CONDENSING UNIT (CONT'D)

Part Number	Capacity (watts) *					Volts	RLA	HP	Displ. (cc)	Receiver Vol. (litres) 'B" & KN Models
	Saturated Suction Temperature (SST) °C									
	-15	-10	-5	0	5					
R404A / R507 - Medium / High Temperature Application										
BA6MHGB	280	350	425	515	600	240	2.8	1/4	5.51	1.4
BA8MGB	460	545	635	730	835	240	2.8	1/4	7.55	1.4
BA9MGB	520	630	760	900	1030	240	3.2	1/3	8.88	1.4
BA12MGB	680	845	1020	1210	1390	240	2.8	3/8	12.1	1.4
BA14MGB	780	950	1150	1360	1560	240	3.4	1/2	14.1	1.4
BA16MGB	965	1190	1430	1690	1980	240	3	3/4	16.2	2.4
BA18MGB	1210	1460	1750	2050	2360	200/240	4.4	3/4	18	2.4
KN024MH1	1500	1820	2170	2550	2980	200/240	5.6	7/8	21.5	2.4
KN028MH1	1770	2150	2560	3020	3530	200/240	7	1	26.8	2.4
KN036MH1	2280	2790	3360	3980	4650	200/240	7.9	1 1/4	30.5	2.4
KN035MH1	2260	2720	3290	3890	4490	200/240	7.9	1 1/2	37.5	4.4
KN044MH1-1	2650	3280	4020	4820	5660	200/240	9.6	2	43.1	4.4
KN044MH1-2	2650	3280	4020	4820	5660	380/420	3.2/PH	2	43.1	4.4
KN048MH1-1	2820	3570	4410	5350	6370	200/240	11.2	2 1/4	48.4	4.4
KN048MH1-2	2820	3570	4410	5350	6370	380/420	4.0/PH	2 1/4	48.4	4.4
KN051MH1-1	3050	3860	4730	5620	6570	200/240	12.5	2 1/2	53.5	4.4
KN051MH1-2	3050	3860	4730	5620	6570	380/420	4.6/PH	2 1/2	53.5	4.4

Note - Some models are available without receiver - check with your local branch

Part Number	Capacity (watts) *					Volts	RLA	HP	Displ. (cc)	Receiver Vol. (litres) 'B" & KN Models
	Saturated Suction Temperature (SST) °C									
	-15	-10	-5	0	5					
R134a - Medium / High Temperature Application										
BA8LMYA	225	285	360	455	575	240	1.8	1/4	7.55	-
BA9MHYA/B	295	370	465	590	755	240	2.6	1/4	8.88	1.4
BA12LMYA/B	400	505	635	795	995	240	2.9	1/3	12.1	1.4
BA14LMYA/B	455	580	725	915	1150	240	4	1/3	14.1	1.4
BA16LMYA/B	635	815	1030	1300	1620	240	3	3/8	16.2	1.4
BA18LZB	745	920	1140	1410	1760	220/240	3.5	1/2	18	2.4
KN014MH1	780	1030	1340	1710	2140	220/240	4.1	5/8	21.5	2.4
KN017MH1	965	1270	1630	2050	2540	220/240	4.6	3/4	26.8	2.4
KN022MH1	1160	1490	1880	2340	2880	220/240	5.5	1	30.5	2.4
KN023MH1	1340	1710	2150	2670	3300	220/240	4.6	1	39.6	2.4
KN029MH1	1640	2100	2670	3380	4280	220/240	5.8	1	43.1	4.4
KN031MH1	1810	2300	2900	3660	4630	220/240	8.2	1 1/2	48.1	4.4

Note - Some models are available without receiver - check with your local branch

*Performance calculations are intended as a guide only and actual capacity is subject to specific conditions and the operating environment. Unit ratings at 35 °C ambient temperature.





CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY NULLARBOR CONDENSING UNIT (CONT'D)

Part Number	Connections (Inches)		Dimensions (mm)			Nett Weight (kg)
			Depth	Width	Height	
BA6MHGBC1	3/8 S.T.	1/4 S.V.	470	330	276	17
BA8MGBC1	3/8 S.T.	1/4 S.V.	470	330	276	17
BA9MGBC1	3/8 S.T.	1/4 S.V.	470	330	276	21
BA12MGBC1	3/8 S.T.	1/4 S.V.	470	330	276	22
BA6MHGB	3/8 S.T.	1/4 S.V.	470	330	235	17
BA8LMYA	3/8 S.T.	1/4 S.V.	470	330	235	15
BA8MGB	3/8 S.T.	1/4 S.V.	470	330	235	17
BA9MGB	3/8 S.T.	1/4 S.V.	470	330	276	21
BA9MHYA	3/8 S.T.	1/4 S.V.	470	330	276	16
BA9MHYB	3/8 S.T.	1/4 S.V.	470	330	276	18
BA12LMYA	3/8 S.T.	1/4 S.V.	470	330	276	19
BA12LMYB	3/8 S.T.	1/4 S.V.	470	330	276	21
BA12MGB	3/8 S.T.	1/4 S.V.	550	435	338	32
BA14LMYA	3/8 S.T.	1/4 S.V.	470	330	276	20
BA14LMYB	3/8 S.T.	1/4 S.V.	470	330	276	22
BA14MGB	3/8 S.T.	1/4 S.V.	550	435	338	34
BA16LMYA	3/8 S.T.	1/4 S.V.	550	435	338	30
BA16LMYB	3/8 S.T.	1/4 S.V.	550	435	338	32
BA16MGB	3/8 S.T.	1/4 S.V.	550	435	338	35
BA18LZB	3/8 S.T.	3/8 S.V.	550	435	338	34
BA18MGB	3/8 S.T.	3/8 S.V.	620	520	395	35
KN014MH1	1/2 S.T.	3/8 S.V.	550	435	338	37
KN024MH1	1/2 S.T.	3/8 S.V.	620	520	395	41
KN017MH1	1/2 S.T.	3/8 S.V.	550	435	338	38
KN028MH1	1/2 S.T.	3/8 S.V.	620	520	446	42
KN014L1	5/8 S.T.	3/8 S.V.	620	520	395	41
KN036MH1	5/8 S.T.	3/8 S.V.	620	520	446	43
KN022MH1	5/8 S.T.	3/8 S.V.	620	520	446	42
KN035MH1	5/8 S.T.	3/8 S.V.	550	860	418	63
KN015L1	5/8 S.T.	3/8 S.V.	550	635	345	61
KN023MH1	5/8 S.T.	3/8 S.V.	620	520	446	60
KN029MH1	5/8 S.T.	3/8 S.V.	550	860	345	61
KN044MH1	5/8 S.T.	3/8 S.V.	550	860	418	69
KN048MH1	5/8 S.T.	3/8 S.V.	550	860	418	71
KN031MH1	5/8 S.T.	3/8 S.V.	550	860	418	70
KN024L1	5/8 S.T.	3/8 S.V.	550	860	418	68

S.T. = Solder Tube
S.V. = Solder Valve

DANFOSS BLACKSTAR CONDENSING UNIT

The Danfoss Black Star range of units are suitable for light commercial applications such as display counters, small cold rooms and catering appliances. Danfoss condensing units are available for use with R134a, R404A & R507 refrigerants.


**Features & Benefits**

- Compact design makes for easy fitment into tight spaces
- Receiver and two stop valves fitted as standard on all models
- Ready for fitment of expansion valve.



Part Number	Model	Nominal HP	Capacity (watts) *												Receiver Capacity (litres)
			Evaporating Temperature °C												
			-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5		

R404A LBP

114H2726	FR6CLX T2	1/5	88	125	166	212	264	322	385	453	525			0.8
114H3728	FR8.5CLX T2	1/4	126	156	201	260	330	408	492	580	671			1.1
114H3730	SC10CLX T2	1/3			210	291	381	481	589	705	830			1.1
114H4731	SC12CLX T2	1/3	125	213	311	416	530	651	778	912	1052			1.1
114H5732	SC15CLX T2	3/8	192	283	388	505	634	774	924	1084	1253			1.1
114H5733	SC18CLX T2	1/2	225	338	461	591	728	870	1018	1171	1330			1.1
114H5734	SC21CLX T2	5/8	282	393	519	659	813	980	1161	1356				1.1

R404A M/HBP

114H3727	FR6DLX T2	1/4							415	495	585	683	787	1.1
114H4728	FR8.5CLXHD T2	1/4							485	587	701	825	957	1.1
114H5743	SC10DLX T2	3/8							608	747	899	1065	1242	1.65
114H5744	SC12DLX T2	1/2							766	932	1112	1298		1.65
114H6745	SC15DLX T2	3/4							884	1074	1282	1508	1746	1.65

Part Number	Model	Electrical Data		Connections (mm)		Dimensions (mm)			Weight (kg)
		Power Consumption (W)	Current Consumption (A)	Suction	Liquid	Height	Width	Depth	
114H2726	FR6CLX T2	267	1.64	10	6	226	304	432	16.2
114H3728	FR8.5CLX T2	336	2.17	10	6	256	321	444	18.2
114H3730	SC10CLX T2	373	2.39	10	6	256	321	444	21.5
114H4731	SC12CLX T2	479	3.06	10	6	296	331	451	25.1
114H5732	SC15CLX T2	558	3.45	10	6	296	331	473	25.1
114H5733	SC18CLX T2	649	3.76	10	6	296	331	513	26.3
114H5734	SC21CLX T2	754	4.09	10	6	296	331	513	27.1
114H3727	FR6DLX T2	502	2.77	10	6	256	321	444	18.6
114H4728	FR8.5CLXHD T2	575	3.81	10	6	256	321	444	22.1
114H5743	SC10DLX T2	625	4.7	10	6	296	331	473	25.2
114H5744	SC12DLX T2	777	5.4	10	6	296	331	473	25.2
114H6745	SC15DLX T2	903	6.6	10	6	350	442	610	37.5

CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

DANFOSS BLACKSTAR CONDENSING UNIT (CONT'D)

Part Number	Model	Nominal HP	Capacity (watts) *											Receiver Capacity (litres)
			Evaporating Temperature °C											
			-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	
R134a L/HBP														
114G2716	FR8.5GX T2	1/3			101	138	183	236	298	370	451	541	640	0.8
114G2719	FR10GX T2	1/3			107	147	194	250	315	390	474	570	675	0.8
114G3717	FR11GX T2	1/3				166	243	322	408	502	606	725	859	1.1
114G3726	SC12GX T2	3/8			134	199	280	375	482	600	728	865	1010	1.1
114G4727	SC15GX T2	3/8			156	242	342	456	581	719	868	1027	1197	1.1
114G5728	SC18GX T2	1/2			183	285	398	523	663	819	994	1189	1406	1.1
114G5730	SC21GX T2	5/8			242	343	467	612	778	964	1168	1388	1621	1.1

Part Number	Model	Electrical Data - 240 V 1Ph		Connections (mm)		Dimensions (mm)			Weight (kg)
		Power Consumption (W)	Current Consumption (A)	Suction	Liquid	Height	Weight	Depth	
		-25 / 5	-25 / 5						
114G2716	FR8.5GX T2	181 / 334	1.41 / 1.91	10	6	226	304	432	16.2
114G2719	FR10GX T2	207 / 373	1.77 / 2.29	10	6	226	304	432	16.2
114G3717	FR11GX T2	236 / 464	1.87 / 2.60	10	6	256	321	444	18.3
114G3726	SC12GX T2	261 / 506	2.07 / 2.83	10	6	256	321	444	20.5
114G4727	SC15GX T2	323 / 625	2.54 / 3.39	10	6	296	331	451	20.9
114G5728	SC18GX T2	367 / 714	2.91 / 3.96	10	6	296	331	473	21.4
114G5730	SC21GX T2	437 / 834	2.64 / 4.22	10	6	296	331	513	22.2

*Performance calculations are intended as a guide only and actual capacity is subject to specific conditions and the operating environment. Unit ratings at 32 °C ambient temperature, return vapour temperature 20 °C and inherent sub-cooling averaging 2 to 3 °K

KIRBY COMMANDER BLUE CONDENSING UNIT

The Kirby Commander Blue Condensing Unit offers a tough, compact design that will handle the extremes of our climate. Ideal for coolrooms and food service, the Commander Blue builds on the reputable Aussie Blue Unit that served these industries for over 20 years.

Features & Benefits

- High efficiency Maneurop compressors offer reduced operating noise levels and are optimised for R404A and R134a
- Proven Ziehl/EBM external rotor fan motors for long life and increased efficiency
- Powder coated Galvabond base and condenser casing

Optional Enhancements

- Phase fail protection
- Suction accumulator
- Suction filter (PCH046, 051, 059, 064 and 072 only. Standard fitment on other models)



Part Number	Ambient Temperature °C	Capacity (watts) R404A *								Receiver Capacity (litres)
		Evaporating Temperature °C								
		-25	-20	-15	-10	-5	0	5	10	
R404A										
PCH046MHA1-2	32	1960	2510	3150	3850	4610	5410	6220	7030	8.2
	38	1670	2190	2780	3430	4120	4830	5530		
PCH051MHA1-2	32	2060	2690	3410	4220	5080	5950	6820	7630	8.2
	38	1720	2330	3020	3740	4500	5260	6020		
PCH059MHA1-2	32	2610	3300	4080	4960	5910	6920	7940	8950	8.2
	38	2270	2900	3630	4430	5280	6160	7030		
PCH064MHA1-2	32	2700	3510	4430	5410	6440	7480	8490	9440	8.2
	38	2340	3120	3960	4850	5740	6630	7500		
PCH072MHA1-2	32	2890	3790	4820	5960	7180	8450	9730	10980	10.9
	38	2310	3160	4140	5230	6360	7500	8590		
PCH087MHA1-2	32	3620	4730	5960	7300	8690	10110	11510	12850	10.9
	38	2960	4030	5180	6370	7590	8810	10000		
PCH096MHA1-2	32	4190	5320	6630	8070	9630	11250	12880	14450	10.9
	38	3660	4700	5890	7200	8580	9980	11360		
PCH112MHA1-2	32	5180	6450	7910	9510	11230	13020	14840	16610	10.9
	38	4480	5670	7010	8470	10000	11570	13110		
PCH131MHA1-2	32	6090	7480	9150	11040	13120	15340	17640	19910	14.5
	38	5210	6540	8090	9820	11690	13670	15710		
PCH144MHA1-2	32	6550	8160	10040	12140	14390	16700	19000	21210	14.5
	38	5590	7130	8880	10790	12800	14870	16920		
PCH168MHA1-2	32	6910	8930	11280	13910	16770	19740	22740	25620	14.5
	38	6000	7870	10040	12450	15040	17720	20360		
PCH209MHA1-2	32	9110	11560	14390	17520	20860	24310	27740	31050	14.5
	38	7920	10260	12880	15700	18650	21680	24680		
PCH246MHA1-2	32	10830	13680	16960	20620	24570	28700	32880	36940	14.5
	38	9350	12120	15200	18530	22060	25750	29470		
PCH271MHA1-2	32	12150	15290	18890	22860	27080	31410	35720	39880	14.5
	38	10680	13610	16950	20590	24440	28350	32140		
PCZ308MHA1-2	32		22110	26290	30840	35670	40670	45640		14.5
	38				28040	32290	36680	40960		



CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY COMMANDER BLUE CONDENSING UNIT (CONT'D)

Part Number	Ambient Temperature °C	Capacity (watts) R134a *								Receiver Capacity (litres)
		Evaporating Temperature °C								
		-25	-20	-15	-10	-5	0	5	10	
R134a										
PCH046MHA1-2	35		1150	1560	2080	2700	3420	4230	5120	8.2
	43		980	1360	1820	2380	3020	3740	4540	
PCH051MHA1-2	35		1300	1810	2410	3120	3930	4830	5800	8.2
	43		1080	1550	2100	2740	3460	4260		
PCH059MHA1-2	35		1900	2500	3200	3990	4880	5850	6890	8.2
	43		1650	2210	2850	3570	4370	5240	6180	
PCH064MHA1-2	35		2280	2910	3610	4390	5250	6160	7130	8.2
	43		2030	2620	3270	3990	4760	5590		
PCH072MHA1-2	35		1920	2680	3550	4530	5610	6770	8020	10.9
	43		1420	2130	2950	3870	4860	5910	7040	
PCH087MHA1-2	35		2280	3210	4260	5420	6670	8000	9430	10.9
	43		1820	2670	3640	4700	5830	7030	8300	
PCH096MHA1-2	35		2730	3630	4710	5960	7390	8980	10720	10.9
	43		2300	3120	4080	5210	6480	7890	9450	
PCH112MHA1-2	35		3550	4490	5640	6990	8530	10250	12130	10.9
	43		3060	3900	4920	6120	7510	9050	10740	
PCH131MHA1-2	35		3890	5100	6560	8250	10180	12330	14710	14.5
	43		3080	4210	5560	7130	8910	10890	13060	
PCH144MHA1-2	35		4550	5860	7440	9280	11360	13680	16230	14.5
	43		3730	4950	6400	8100	10010	12140		
PCH168MHA1-2	35		4320	5960	7900	10160	12720	15540	18600	14.5
	43		3570	5110	6900	8970	11290	13860	16650	
PCH209MHA1-2	35		5460	7480	9830	12510	15500	18790	22360	14.5
	43		4410	6300	8480	10950	13690	16690	19960	
PCH246MHA1-2	35		7370	9800	12630	15850	19430	23350	27590	14.5
	43		6250	8530	11140	14090	17370	20940	24790	
PCH271MHA1-2	35		8150	10790	13890	17390	21260	25500	30100	14.5
	43		7020	9480	12320	15500	18990	22790	26930	

*Performance calculations are intended as a guide only and actual capacity is subject to specific conditions and the operating environment.

**KIRBY COMMANDER BLUE CONDENSING UNIT (CONT'D)**

Part Number	Volts / PH	Electrical Data		Input Power (Watts)	Connections (inches)		Dimensions (mm)			Weight (kg)
		LRA (amps/ph)	RLA (amps/ph)		Liquid	Suction	Height	Weight	Depth	
PCH046MHA1-2	415 V / 3	23.6	5.1	2700	5/8	1/2	555	790	710	60
PCH051MHA1-2	415 V / 3	25.6	5.6	3130	3/4	1/2	555	790	710	61
PCH059MHA1-2	415 V / 3	30.6	6.4	3520	3/4	1/2	555	790	710	72
PCH064MHA1-2	415 V / 3	38.6	7.1	4000	3/4	1/2	555	790	710	73
PCH072MHA1-2	415 V / 3	50.1	8.4	3970	1-3/8	1/2	655	980	770	94
PCH087MHA1-2	415 V / 3	50.1	9.4	4360	1-3/8	1/2	655	980	770	96
PCH096MHA1-2	415 V / 3	65.6	10.8	4890	1-3/8	1/2	655	980	770	105
PCH112MHA1-2	415 V / 3	65.2	10.0	5530	1-3/8	5/8	655	980	770	113
PCH131MHA1-2	415 V / 3	83.1	13.1	6680	1-3/8	5/8	670	1270	870	117
PCH144MHA1-2	415 V / 3	83.1	14.4	7640	1-3/8	5/8	670	1270	870	117
PCH168MHA1-2	415 V / 3	81.6	17.7	8680	1-3/8	5/8	825	1270	870	151
PCH209MHA1-2	415 V / 3	109.0	21.4	11940	1-3/8	5/8	925	1270	870	164
PCH246MHA1-2	415 V / 3	119.0	26.8	13230	1-3/8	5/8	925	1270	870	192
PCH271MHA1-2	415 V / 3	134.0	26.2	12670	1-3/8	5/8	925	1270	870	199
PCZ308MHA1-2	415 V / 3	180.6	28.8	13840	5/8	1-3/8 (1-1/8)	975	1610	910	265

RLA = Compressor RLA + Condenser Fan RLA.

Input Watts = Compressor Input Watts @ nominal rating condition & 32 °C amb + Condenser Fan Input Watts.

KIRBY COMMANDER BLUE HIGH AMBIENT CONDENSING UNIT

The Kirby Commander Blue Condensing Unit offers a tough, compact design that will handle the extremes of our climate. Ideal for coolrooms and food service, the Commander Blue builds on the reputable Aussie Blue unit that served these industries for over 20 years. A reliable performer, the Kirby Commander Blue operate in ambients to 46 °C.

Features & Benefits

- High efficiency Manureop compressors offer reduced operating noise levels and are optimised for R404A and R134a
- Proven Ziehl/EBM external rotor fan motors for long life and increased efficiency
- Full wiring, oil separator, fan speed control, liquid line assembly with drier and sightglass and HP/LP universal pressure.

- Phase fail protection
- HP/LP universal pressure controls.
- Powder coated Galvabond base and condenser casing

Optional Enhancements

- Suction accumulator (MT models only)

Part Number	Ambient Temperature °C	Capacity (watts) R404A *									Receiver Capacity (litres)
		Evaporating Temperature °C									
		-30	-25	-20	-15	-10	-5	0	5	10	
R404A - Medium/High Temperature Application											
PCH078MHA1-2	35		2870	3800	4890	6110	7450	8890	10410	11990	8.2
	46			2840	3760	4820	5960	7150	8350	9550	
PCH093MHA1-2	35	2490	3390	4510	5790	7200	8740	10280	11860	13480	8.2
	46		2460	3340	4370	5500	6720	7950	9160		
PCH103MHA1-2	35	2600	3570	4800	6250	7910	9760	11590	13530	15540	10.9
	46		2640	3600	4770	6140	7650	9100	10570	12010	
PCH120MHA1-2	35	3230	4340	5750	7390	9270	11360	13380	15520	17730	10.9
	46		3190	4280	5630	7200	8930	10550	12210	13850	
PCH140MHA1-2	35	3740	5000	6650	8580	10780	13230	15650	18210	20800	10.9
	46		3760	5010	6560	8360	10370	12350	14390	16370	
PCH156MHA1-2	35	4520	5960	7790	9860	12170	14710	17400	20280	23290	10.9
	46		4520	5950	7620	9510	11540	13640	15760		
PCH175MHA1-2	35	4950	6590	8590	10940	13600	16540	19740	23180	26810	10.9
	46		4730	6360	8340	10580	12990	15480	18000		
PCH221MHA1-2	35	6830	8900	11390	14250	17450	20930	24660	28580	32570	10.9
	46		6510	8610	11050	13730	16530	19350	22070		



CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY COMMANDER BLUE HIGH AMBIENT CONDENSING UNIT (CONT'D)

Part Number	Ambient Temperature °C	Capacity (Watts) R404A *									Receiver Capacity (litres)
		Evaporating Temperature°C									
		-30	-25	-20	-15	-10	-5	0	5	10	
R404A - Medium/High Temperature Application											
PCH256MHA1-2	35	8000	10370	13210	16480	20150	24170	28500	33070	37750	14.5
	46		7580	9970	12740	15800	19050	22380	25690		
PCH282MHA1-2	35	9030	11650	14770	18370	22370	26690	31270	36030	40920	14.5
	46	6440	8630	11310	14370	17660	21050	24460	27790		

Part Number	Ambient Temperature °C	Capacity (Watts) R134a *									Receiver Capacity (litres)
		Evaporating Temperature°C									
		-30	-25	-20	-15	-10	-5	0	5	10	
R134a - Medium/High Temperature Application											
PCH078MHA1-2	35				2740	3650	4710	5910	7210	8540	8.2
	46					2760	3670	4740	5900	7120	
PCH093MHA1-2	35			2360	3300	4390	5610	6970	8440	10020	8.2
	46				2510	3430	4510	5710	7010	8350	
PCH103MHA1-2	35			2800	3700	4820	6150	7690	9430	11350	10.9
	46				2950	3880	5010	6340	7860	9550	
PCH120MHA1-2	35			3630	4580	5760	7180	8830	10710	12770	10.9
	46				3670	4650	5860	7300	8940	10730	
PCH140MHA1-2	35			4000	5220	6710	8490	10540	12850	15410	10.9
	46					5200	6800	8680	10780	13090	
PCH156MHA1-2	35			4700	6030	7690	9660	11950	14510	17330	10.9
	46				4610	6080	7860	9900	12160	14610	
PCH175MHA1-2	35				6050	8030	10360	13030	16010	19310	10.9
	46					6490	8540	10880	13490	16330	
PCH221MHA1-2	35				7650	10070	12880	16060	19580	23440	10.9
	46				5850	7970	10500	13350	16450	19770	
PCH256MHA1-2	35			7450	9880	12770	16090	19810	23920	28400	14.5
	46				7910	10480	13460	16760	20310	24120	
PCH282MHA1-2	35			8270	10890	14020	17610	21660	26120	30980	14.5
	46			6600	8880	11630	14800	18300	22080	26120	

**KIRBY COMMANDER BLUE HIGH AMBIENT CONDENSING UNIT (CONT'D)**

Part Number	Volts / PH	Electrical Data		Input Power (watts)	Connections (inches)		Dimensions (mm)			Weight (kg)
		LRA (Amps/ Ph)	RLA (A/Ph)		Liquid	Suction	Height	Width	Depth	
R134a - Medium/High Temperature Application										
PCH078MHA1-2	415 V / 3	50.1	8.4	3970	1/2	1 3/8 (7/8)	655	980	770	108
PCH093MHA1-2	415 V / 3	49.7	9.0	4320	1/2	1 3/8 (7/8)	655	980	770	111
PCH103MHA1-2	415 V / 3	67.1	12.3	5240	1/2	1 3/8 (7/8)	670	1270	870	115
PCH120MHA1-2	415 V / 3	67.1	11.9	5930	1/2	1 3/8 (7/8)	670	1270	870	121
PCH140MHA1-2	415 V / 3	83.1	13.1	6680	1/2	1 3/8 (7/8)	825	1270	870	132
PCH156MHA1-2	415 V / 3	84.0	15.3	8220	1/2	1 3/8 (7/8)	925	1270	870	141
PCH175MHA1-2	415 V / 3	82.5	18.6	9260	1/2	1 3/8 (1-1/8)	925	1270	870	172
PCH221MHA1-2	415 V / 3	109.0	21.4	11940	1/2	1 3/8 (1-1/8)	925	1270	870	194
PCH256MHA1-2	415 V / 3	119.0	26.8	13230	5/8	1 3/8 (1-1/8)	975	1610	910	250
PCH282MHA1-2	415 V / 3	134.0	26.2	12670	5/8	1 3/8 (1-1/8)	975	1610	910	269

RLA = Compressor RLA + Condenser Fan RLA. Input Watts = Compressor Input Watts @ nominal rating condition & 32 °C amb + Condenser Fan Input Watts.

Part Number	Ambient Temperature °C	Capacity R404A *						Receiver Capacity Litres
		Evaporating Temperature°C						
		-40	-35	-30	-25	-20	-15	

R404A - Low Temperature Application

PCH032LA1-2	35	1300	1820	2410	3050	3750	4530	4.4
	46		1360	1860	2420	3040	3710	
PCH040LA1-2	35		2100	2880	3770	4790	5980	8.2
	46		1440	2020	2710	3610	4820	
PCH061LA1-2	35	2420	3370	4510	5800	7230	8860	10.9
	46		2450	3370	4490	5790	7300	
PCH094LA1-2	35	3640	5140	6930	8900	11070	13520	10.9
	46		3670	5140	6890	8920	11280	
PCH128LA1-2	35	5190	7210	9550	12150	15010	18210	10.9
	46		5350	7250	9520	12090	14940	

*Performance calculations are intended as a guide only and actual capacity is subject to specific conditions and the operating environment.

Part Number	Volts / PH	Electrical Data		Input Power (watts)	Connections (inches)		Dimensions (mm)			Weight (kg)
		LRA (A/Ph)	RLA (A/Ph)		Liquid	Suction	Height	Width	Depth	

R404A - Low Temperature Application

PCH032LA1-2	415 V / 3	25.6	4.0	1670	3/8	5/8	555	790	710	65
PCH040LA1-2	415 V / 3	33.6	4.8	2084	1/2	7/8	655	980	770	94
PCH061LA1-2	415 V / 3	54.1	9.2	3596	1/2	7/8	670	1270	870	111
PCH094LA1-2	415 V / 3	77.1	10.6	4849	1/2	1 1/8	925	1270	870	153
PCH128LA1-2	415 V / 3	100.0	13.6	6903	1/2	1 1/8	925	1270	870	176

RLA = Compressor RLA + Condenser Fan RLA.
Input Watts = Compressor Input Watts @ nominal rating condition & 32°C amb + Condenser Fan Input Watts.



CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY COMMANDER SEMI-HERMETIC AIR COOLED CONDENSING UNITS

Built smart, compact and tough the Kirby Commander range offers leading performance, efficiency and reliability. External rotor fan motors and Dorin compressors set the standard for smooth quiet operation across a wide application range. Ultimate reliability comes standard when you combine Kirby and Dorin - trusted to handle the extremes of our climate.

Features & Benefits

- High efficiency Dorin compressors offer reduced operating noise levels and are optimised for R404A, R407F and R134a
- Proven Ziehl/EBM external rotor fan motors for long life and increased efficiency
- Powder coated Galvabond base and condenser casing
- Ease of installation and service



Optional Enhancements

- 50% capacity control available as an option on all models from PCS146 upwards.
- Ex Factory Kits available for inverter (VSD) operation from 30 to 65 Hz
- Phase fail protection
- Accumulator

Part Number 0.4HP - 5HP	Ambient Temperature °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-40	-35	-30	-25	-20	-15	-10	-5	0	5	
R404A - Medium/High Temperature Application												
PCS022LMHA1-4	35	505	685	885	1110	1360	1640	1945	2275	2615	2955	4.4
	43		545	720	920	1140	1390	1655	1935			
PCS031LMHA1-4	35		865	1140	1455	1815	2220	2675	3165	3690	4235	4.4
	43			935	1210	1525	1885	2280	2710	3160	3615	
PCS039LMHA1-4	35		1075	1400	1770	2190	2665	3185	3750	4345	4955	4.4
	43			1150	1470	1840	2255	2715	3205	3710		
PCS044LMHA1-4	35		1220	1585	2010	2505	3065	3695	4395	5165	5990	4.4
	43			1290	1665	2095	2590	3145	3760	4435	5145	
PCS057LMHA1-4	35	1135	1565	2045	2585	3200	3890	4660	5490	6375	7280	4.4
	43		1250	1670	2145	2680	3285	3960	4680	5435		
PCS071LMHA1-4	35		1875	2470	3145	3920	4800	5780	6855	8005	9205	8.2
	43			2030	2630	3310	4085	4950	5890	6885	7895	
PCS084LMHA1-2	35		2420	3155	4010	4990	6100	7340	8700	10170	11710	8.2
	43			2625	3365	4220	5190	6275	7460	8725	10020	
PCS101LMHA1-2	35	2340	3090	3935	4900	6005	7255	8635	10130	11720	13350	8.2
	43		2585	3325	4175	5140	6230	7435	8735	10085		
PCS115LMHA1-2	35		3180	4090	5180	6460	7940	9630	11530	13625	15900	14.5
	43			3405	4360	5485	6795	8290	9960	11780	13700	
PCS136LMHA1-2	35		3750	4935	6300	7850	9610	11580	13760	16145	18690	14.5
	43			4110	5290	6645	8185	9915	11805	13820	15880	

KIRBY COMMANDER SEMI-HERMETIC AIR COOLED CONDENSING UNITS (CONT'D)

Part Number 0.4HP - 5HP	Ambient Temperature °C	Capacity (Watts) R134a *								Receiver Capacity Litres
		Evaporating Temperature °C								
		-25	-20	-15	-10	-5	0	5	10	

R134a - Medium/High Temperature Application

PCS022LMHA1-4	35	530	735	975	1245	1550	1890	2265	2660	4.4
	43		615	830	1075	1355	1665	2000		
PCS031LMHA1-4	35		940	1245	1595	1995	2445	2945	3480	4.4
	43		785	1060	1380	1745	2155	2605	3090	
PCS039LMHA1-4	35		1190	1570	2000	2490	3040	3640	4285	4.4
	43		1000	1345	1740	2185	2685	3230	3820	
PCS044LMHA1-4	35		1380	1825	2340	2930	3600	4345	5155	4.4
	43			1570	2035	2575	3185	3865	4610	
PCS057LMHA1-4	35	1430	1925	2490	3140	3875	4700	5605	6590	4.4
	43		1660	2180	2775	3450	4205	5035	5940	
PCS071LMHA1-4	35		2360	3035	3805	4685	5680	6780	7975	8.2
	43		2065	2680	3390	4200	5110	6115	7215	
PCS084LMHA1-2	35		2990	3830	4805	5920	7185	8590	10130	8.2
	43		2585	3360	4250	5280	6440	7735	9155	
PCS101LMHA1-2	35	2625	3485	4470	5600	6890	8340	9950	11700	8.2
	43		3015	3920	4960	6145	7480	8960	10570	
PCS115LMHA1-2	35		4030	5230	6625	8225	10040	12055	14265	14.5
	43		3470	4575	5860	7335	9010	10875	12910	
PCS136LMHA1-2	35		4600	5965	7550	9365	11415	13690	16190	14.5
	43		3960	5215	6665	8335	10220	12310	14600	

Part Number	Electrical Data			Input Power (watts)	Connections		Dimensions (mm)		
	Volts / PH	LRA	RLA		Liquid	Suction	Height	Weight	Depth
		(A/Ph)	(A/Ph)						
PCS022LMHA1-4	415 V / 3	14.4	3.4	1660	3/8"	5/8" - 5/8"	451	903	602
PCS031LMHA1-4	415 V / 3	21.1	4.7	2230	1/2"	5/8" - 5/8"	496	947	784
PCS039LMHA1-4	415 V / 3	25.6	5.5	2670	1/2"	5/8" - 5/8"	496	947	784
PCS044LMHA1-4	415 V / 3	25.7	5.6	2750	1/2"	5/8" - 5/8"	496	953	784
PCS057LMHA1-4	415 V / 3	25.7	5.6	2750	1/2"	3/4" - 5/8"	496	953	784
PCS071LMHA1-4	415 V / 3	44.7	8.0	5160	1/2"	3/4" - 5/8"	556	955	784
PCS084LMHA1-2	415 V / 3	44.8	8.1	5420	1/2"	7/8" - 3/4"	658	973	798
PCS101LMHA1-2	415 V / 3	44.8	9.3	5670	1/2"	1-1/8" - 3/4"	658	973	798
PCS115LMHA1-2	415 V / 3	67.1	12.5	8880	5/8"	1-1/8" - 1-1/8"	808	1262	921
PCS136LMHA1-2	415 V / 3	90.0	15.1	9880	5/8"	1-1/8" - 1-1/8"	909	1262	920

Input Watts & Rated Load Amps at +5 ° SST R404A (M/HT), -25° SST R404A (LT), S.C.T. at nominal rating condition.





CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY COMMANDER SEMI-HERMETIC AIR COOLED CONDENSING UNITS (CONT'D)

Part Number 5.5HP - 22HP	Ambient Temp °C	Capacity (Watts) R404A *											Receiver Capacity (litres)
		Evaporating Temperature °C											
		-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	

R404A - Medium/High Temperature Application

PCS146LMHA1-6	35		3610	4745	6090	7670	9490	11545	13805	16235	18785	21395	10.9
	43		2990	3980	5160	6550	8155	9950	11925	14025	16205		
PCS174LMHA1-6	35		4310	5665	7270	9150	11305	13725	16375	19200	22135	25085	10.9
	43			4755	6160	7815	9715	11840	14155	16595	19085		
PCS200LMHA1-6	35		4950	6505	8350	10520	13030	15865	18995	22365	25895	29525	14.5
	43			5470	7075	8975	11185	13695	16445	19355	22350	25390	
PCS284LMHA1-6	35		7370	9595	12170	15145	18540	22355	26545	31045	35765	40605	24.5
	43			8080	10350	12975	15970	19330	23000	26905	30940		
PCS361LMHA2-6	35	7475	10000	12835	16090	19825	24065	28770	33840	39150	44530	49835	24.5
	40*		8940	11575	14590	18050	21970	26310	30975	35825	40650		
PCS194LMA1-6	35		5010	6565	8350	10380	12645	15110	17745				10.9
	43		4190	5545	7105	8890	10885	13050	15325				
PCS228LMA1-6	35	4370	5960	7795	9900	12275	14915	17785	20835				14.5
	43	3560	4965	6590	8445	10535	12840	15335	17960				
PCS318LMA1-6	35	6410	8570	11060	13920	17170	20800	24770	29030				24.5
	43		7065	9285	11830	14715	17910	21385	25070				
PCS360LMA1-6	35	7400	9915	12785	16060	19765	23890	28380	33165				24.5
	43		8235	10790	13700	16985	20620	24555	28695				
PCS391LMA2-6	35	8305	11055	14195	17790	21880	26440	31400	36650				24.5
	40*	7310	9870	12785	16125	19915	24130	28700	33500				

Part Number 5.5HP - 22HP	Ambient Temperature °C	Capacity (Watts) R134a *								Receiver Capacity (litres)
		Evaporating Temperature °C								
		-25	-20	-15	-10	-5	0	5	10	

R134a - Medium/High Temperature Application

PCS146LMHA1-6	35	3525	4710	6060	7620	9400	11410	13645	16085	10.9
	46		3875	5080	6465	8050	9840	11820		
PCS174LMHA1-6	35	4095	5440	6985	8770	10815	13125	15690	18495	10.9
	46	3315	4515	5885	7470	9285	11340	13620		
PCS200LMHA1-6	35	5010	6610	8430	10510	12875	15545	18515	21755	14.5
	46		5445	7085	8955	11080	13465	16105	18990	
PCS284LMHA1-6	35		8255	10735	13605	16905	20655	24840	29425	24.5
	46			8935	11480	14415	17745	21450	25495	
PCS361LMHA2-6	35	7990	10760	13940	17605	21795	26500	31705	37340	24.5
	46		8770	11590	14845	18565	22745	27355		
PCS194LMA1-6	35	4990	6525	8295	10335	12655	15240	18080	21150	10.9
	46		5415	7020	8865	10955	13300			
PCS228LMA1-6	35	5665	7460	9545	11940	14655	17685	21010	24605	14.5
	46	4530	6110	7965	10090	12490	15180			
PCS318LMA1-6	35	7475	9915	12725	15945	19585	23640	28080	32860	24.5
	46		8095	10620	13525	16795	20425			

KIRBY COMMANDER SEMI-HERMETIC AIR COOLED CONDENSING UNITS (CONT'D)

Part Number 5.5HP - 22HP	Ambient Temperature °C	Capacity (Watts) R134a *								Receiver Capacity (litres)
		*Evaporating Temperature °C								
		-25	-20	-15	-10	-5	0	5	10	

R134a - Medium/High Temperature Application (Cont'd)

PCS360LMA1-6	35	8725	11470	14625	18235	22315	26860	31830	37165	24.5
	46	6955	9420	12255	15495	19155	23215			
PCS391LMA2-6	35	9625	12655	16150	20160	24695	29755	35285	41220	24.5
	46	7645	10365	13520	17135	21210	25735			

*Performance calculations are intended as a guide only and actual capacity is subject to specific conditions and the operating environment.

Part Number	Electrical Data		Input	Connections (inches)		Dimensions (mm)			Weight (kg)
	LRA (A/Ph)	RLA (A/Ph)	Power (watts)	Liquid	Suction	Height	Width	Depth	
PCS022LMHA1-3	14.4	2.7	1540	3/8	5/8 - 5/8	451	903	602	55
PCS022LMHA1-4	14.4	3.4	1660	3/8	5/8 - 5/8	451	903	602	55
PCS031LMHA1-3	21.1	3.8	2260	1/2	5/8 - 5/8	496	947	784	65
PCS031LMHA1-4	21.1	4.7	2230	1/2	5/8 - 5/8	496	947	784	65
PCS039LMHA1-3	25.5	4.2	2710	1/2	5/8 - 5/8	496	947	784	68
PCS039LMHA1-4	25.6	5.5	2670	1/2	5/8 - 5/8	496	947	784	68
PCS044LMHA1-4	25.7	5.6	2750	1/2	5/8 - 5/8	496	953	784	88
PCS057LMHA1-3	25.6	5.7	3770	1/2	3/4 - 5/8	496	953	784	94
PCS057LMHA1-4	25.7	5.6	2750	1/2	3/4 - 5/8	496	953	784	94
PCS071LMHA1-3	44.8	7.4	4870	1/2	3/4 - 5/8	556	955	784	110
PCS071LMHA1-4	44.7	8.0	5160	1/2	3/4 - 5/8	556	955	784	110
PCS084LMHA1-3	44.8	8.1	5420	1/2	7/8 - 3/4	658	973	798	112
PCS101LMHA1-3	44.8	9.3	5670	1/2	1 1/8 - 3/4	658	973	798	154
PCS115LMHA1-3	67.1	12.5	8880	5/8	1 1/8 - 1 1/8	808	1262	921	197
PCS136LMHA1-3	90.0	15.1	9880	5/8	1 1/8 - 1 1/8	909	1262	920	197

*Input Watts & Rated Load Amps at +5° SST R404A (M/HT), -25° SST R404A (LT), S.C.T. at nominal rating condition.

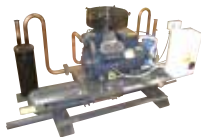
For other refrigerants please contact your Heatcraft Representative

Part Number	Volts / PH	Electrical Data		Input	Connections (inches)		Dimensions (mm)			Weight (kg)
		LRA (A/Ph)	RLA (A/Ph)	Power (Watts)	Liquid	Suction	Height	Width	Depth	
PCS146LMHA1-6	415V / 3	66.2	12.7	6260	15.9	28.6	845	1400	900	195
PCS174LMHA1-6	415V / 3	89.1	15.4	7340	15.9	34.9	882	1400	900	205
PCS200LMHA1-6	415V / 3	91.6	19.1	8870	15.9	34.9	981	1400	900	235
PCS284LMHA1-6	415V / 3	140.3	24.3	11950	22.2	34.9	1033	1650	900	325
PCS361LMHA2-6	415V / 3	182.6	32.2	16010	22.2	34.9	1033	1650	900	370
PCS273MHA2-6	415V / 3	208.6	37.1	17860	22.2	34.9	1033	1650	900	370
PCS194LMA1-6	415V / 3	66.2	15.5	8110	15.9	34.9	882	1400	900	205
PCS228LMA1-6	415V / 3	91.6	21	10240	15.9	34.9	981	1400	900	125
PCS318LMA1-6	415V / 3	114.3	26.6	13980	22.2	34.9	1033	1650	900	325
PCS360LMA1-6	415V / 3	140.3	30.1	15930	22.2	34.9	1033	1650	900	350
PCS391LMA2-6	415V / 3	176.1	35.7	18140	22.2	34.9	1033	1650	900	370

Input Watts & Rated Load Amps at +5° SST R404A (M/HT), -25° SST R404A (LT), S.C.T. at nominal rating condition.

For other refrigerants please contact your Heatcraft Representative





CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY SEMI-HERMETIC BASIC UNITS (WITH DORIN 2 CYLINDER COMPRESSORS)

The Kirby Basic Unit range covers from 2.89 to 221.75 m³/h and nominal capacities from 0.5 hp t

Features & Benefits

- High COP values as a result of the optimised internal vanes shape, high efficiency motors and latest technology components
- High efficiency Dorin compressors offer reduced operating noise levels and are optimised for R404A and R134a
- Low vibration due to optimised mass balance

Standard Configuration includes:

- Oil Separator
- Liquid Receiver
- Liquid Line Drier
- Liquid Line SG. Moisture Indicator
- Auto LP/HP Pressure Control
- Powder Coated - Galvanised Sheet metal Base

Optional Configurations available on request:

- DOL Electrical Control Box - Fully Wired
- Phase Failure Safety Control
- Compressor-Head Cooling Fan
- Liquid Line Solenoid Valve
- Pump Down LP Control
- Suction Accumulator
- Water Cooled Condenser & Condensing Pressure Water Valve
- Dixell Controller Fitted



Part Number	Displ. (m³/hr)	Volts / PH	Capacity (Watts) R404A (45 °C Saturated Condensing Temperature) *									Receiver Capacity (litres)
			Evaporating Temperature °C									
			5	0	-5	-10	-15	-20	-25	-30	-35	
R404A - Low / Medium / High Temperature Units												
PCS016LMHB-1 (H40CC-S/HTCR)	2.89	240 / 1	2290	1910	1580	1300	1050	840	660	500	370	4.4
PCS016LMHB-2 (H40CC/HTCR)	2.89	420 / 3	2290	1910	1580	1300	1050	840	660	500	370	4.4
PCS025MHB-3 H80CC-S/HTCR	4.42	240 / 1	3810	3120	2520	2010	1570	1200	895			4.4
PCS025MHB-4 H80CC/HTCR	4.42	420 / 3	3810	3120	2520	2010	1570	1200	895			4.4
PCS032LMHB-3 H101CC-S/HTCR	5.37	240 / 1		4070	3280	2590	2020	1530	1140	810	550	4.4
PCS032LMHB-4 H101CC/HTCR	5.37	420 / 3		4070	3280	2590	2020	1530	1140	810	550	4.4
PCS039LMHB-3 H151CC-S/HTCR	6.71	240 / 1		4860	3920	3110	2430	1860	1390	995	685	4.4L
PCS039LMHB-4 H151CC/HTCR	6.71	420 / 3		4860	3920	3110	2430	1860	1390	995	685	4.4L
PCS044LMHB-4 H181CC/HTCR	7.50	420 / 3	6740	5490	4410	3500	2720	2070	1540	1110	770	4.4L
PCS053LMHB-4 H201CC/HTCR	9.16	420 / 3	8130	6650	5380	4300	3380	2600	1950	1410	945	4.4L
PCS058LMHB-4 H221CC/HTCR	9.88	420 / 3	8860	7250	5840	4640	3620	2770	2060	1480	1010	4.4L
PCS070LMHB-4 H281CC/HTCR	11.64	420 / 3	10670	8710	7010	5560	4330	3310	2450	1760	1190	8.2L
PCS084LMHB-2 (H300CC/HTCR)	14.74	420 / 3	12630	10550	8730	7130	5760	4570	3560	2700	1980	8.2L
PCS092LMHB-2 (H350CC/HTCR)	15.94	420 / 3	13620	11400	9450	7770	6310	5060	3990	3080	2310	8.2L

KIRBY SEMI-HERMETIC BASIC UNITS (WITH DORIN 2 CYLINDER COMPRESSORS) (CONT'D)

Part Number	Displ. (m³/hr)	Volts / PH	Capacity (Watts) R404A (45 °C Saturated Condensing Temperature) *									Receiver Capacity (litres)
			Evaporating Temperature °C									
			5	0	-5	-10	-15	-20	-25	-30	-35	
R404A - Low / Medium / High Temperature Units (Cont'd)												
PCS103LMHB-2 (H380CC/HTCR)	17.53	420 / 3		12570	10470	8630	7040	5680	4500	3500	2650	8.2L
PCS114LMHB-2 (H403CC/HTCR)	19.98	420 / 3	16760	13880	11400	9270	7450	5910				8.2L
PCS139LMHB-2 (H503CC/HTCR)	22.83	420 / 3	19920	16710	13870	11380	9200	7320	5690	4300	3110	8.2L



Part Number	Displ. (m³/hr)	Volts / PH	Capacity (Watts) R134a (45 °C Saturated Condensing Temperature) *									Receiver Capacity (litres)
			Evaporating Temperature °C									
			20	15	10	5	0	-5	-10	-15	-20	

R134a - Low / Medium / High Temperature Units

PCS016LMHB-1 (H40CC-S/HTCR)	2.89	240 / 1	2770	2320	1920	1570	1270	1010	790	600	440	4.4L
PCS016LMHB-2 (H40CC/HTCR)	2.89	420 / 3	2770	2320	1920	1570	1270	1010	790	600	440	4.4L
PCS025MHB-3 H80CC-S/HTCR	4.42	240 / 1	4130	3440	2840	2300	1840	1440	1100	820	585	4.4L
PCS025MHB-4 H80CC/HTCR	4.42	420 / 3	4130	3440	2840	2300	1840	1440	1100	820	585	4.4L
PCS032LMHB-3 H101CC-S/HTCR	5.37	240 / 1	5070	4230	3490	2840	2270	1780	1370	1020	730	4.4L
PCS032LMHB-4 H101CC/HTCR	5.37	420 / 3	5070	4230	3490	2840	2270	1780	1370	1020	730	4.4L
PCS039LMHB-3 H151CC-S/HTCR	6.71	240 / 1	6340	5300	4380	3560	2860	2250	1730	1300	935	4.4L
PCS039LMHB-4 H151CC/HTCR	6.71	420 / 3	6340	5300	4380	3560	2860	2250	1730	1300	935	4.4L
PCS044LMHB-4 H181CC/HTCR	7.50	420 / 3	7330	6130	5060	4120	3300	2590	1990	1490	1070	4.4L
PCS053LMHB-4 H201CC/HTCR	9.16	420 / 3	9040	7560	6240	5090	4090	3220	2480	1870	1360	4.4L
PCS058LMHB-4 H221CC/HTCR	9.88	420 / 3	9760	8180	6790	5560	4490	3560	2770	2110	1560	4.4L
PCS070LMHB-4 H281CC/HTCR	11.64	420 / 3	11390	9570	7960	6540	5310	4240	3330	2560	1920	8.2L
PCS084LMHB-2 (H300CC/HTCR)	14.74	420 / 3	13820	11570	9590	7860	6360	5060	3960	3020	2240	8.2L
PCS092LMHB-2 (H350CC/HTCR)	15.94	420 / 3	15310	12810	10620	8700	7030	5600	4370	3330	2460	8.2L
PCS103LMHB-2 (H380CC/HTCR)	17.53	420 / 3	16430	13800	11490	9460	7710	6200	4910	3820	2900	8.2L
PCS114LMHB-2 (H403CC/HTCR)	19.98	420 / 3	19520	16430	13550	11130	9040	7250	5720	4420	3320	8.2L
PCS139LMHB-2 (H503CC/HTCR)	22.83	420 / 3	23000	19240	15960	13110	10640	8530	6730	5200	3900	8.2L

*Performance calculations are intended as a guide only and actual capacity is subject to specific conditions and the operating environment.



CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY SEMI-HERMETIC BASIC UNITS (WITH DORIN 2 CYLINDER COMPRESSORS)

Part Number	Electrical Data			Input Power (Watts)	Connections (inches)			Dimensions (mm)			Weight (kg)
	Volts / PH	LRA (A/Ph)	RLA (A/Ph)		Liquid	Suction	Suction Size with Accumulator	Height	Width	Depth	
PCS016LMHB-1 (H40CC-S/HTCR)	240 / 1	30	4.4	810	1/2	1/2	5/8	577	963	400	67
PCS016LMHB-2 (H40CC/HTCR)	420 / 3	11.1	1.6	830	1/2	1/2	5/8	577	963	400	67
PCS025MHB-3 H80CC-S/HTCR	240 / 1	44.0	5.6	1240.0	1/2	5/8	5/8	577	963	400	69
PCS025MHB-4 H80CC/HTCR	420 / 3	13.8	2.2	1210.0	1/2	5/8	5/8	577	963	400	69
PCS032LMHB-3 H101CC-S/HTCR	240 / 1	62.0	7.2	1600.0	1/2	5/8	5/8	577	963	400	71
PCS032LMHB-4 H101CC/HTCR	420 / 3	20.0	2.8	1570.0	1/2	5/8	5/8	577	963	400	71
PCS039LMHB-3 H151CC-S/HTCR	240 / 1	69.0	11.8	1870.0	1/2	5/8	5/8	577	963	400	72
PCS039LMHB-4 H151CC/HTCR	420 / 3	24.5	3.2	1820.0	1/2	5/8	5/8	577	963	400	72
PCS044LMHB-4 H181CC/HTCR	420 / 3	24.5	3.6	2050.0	1/2	5/8	5/8	577	963	400	74
PCS053LMHB-4 H201CC/HTCR	420 / 3	24.5	4.4	2490.0	1/2	5/8	5/8	577	963	400	75
PCS058LMHB-4 H221CC/HTCR	420 / 3	24.5	4.7	2670.0	1/2	5/8	5/8	577	963	400	76
PCS070LMHB-4 H281CC/HTCR	420 / 3	43.5	6.8	3340.0	5/8	3/4	5/8	577	963	400	79
PCS084LMHB-2 (H300CC/HTCR)	420 / 3	43.6	6.9	4510	5/8	7/8	3/4	631	1086	500	102
PCS092LMHB-2 (H350CC/HTCR)	420 / 3	43.6	7.3	4660	5/8	1-1/8	3/4	631	1086	500	102
PCS103LMHB-2 (H380CC/HTCR)	420 / 3	43.6	8.1	4730	5/8	1-1/8	3/4	631	1086	500	104
PCS114LMHB-2 (H403CC/HTCR)	420 / 3	63.1	8.5	5770	5/8	1-1/8	1-1/8	631	1086	500	128
PCS139LMHB-2 (H503CC/HTCR)	420 / 3	86	11.1	6560	5/8	1-3/8	1-1/8	631	1086	500	131

* Evaporating temperatures below -35 °C available on request.

† Compressor Rated Load Amps at -5° SST R22 (HT), -5 °SST R404A (MT) and 45 °C SCT. For comparison purposes only.
 Auxiliary Cooling Fan Required @ -25 °SST and lower.

KIRBY FRIDGEBOX SERIES IV OUTDOOR CONDENSING UNIT

The latest generation Kirby® Fridgebox™ Series IV builds on Kirby's reputation of extremely durable, low maintenance refrigeration products. Built on a compact and highly flexible platform the Kirby® Fridgebox™ includes features such as indoor or outdoor installation, side discharge fans and dual pressure controls. The inclusion of Copeland's latest generation of scroll compressors guarantees the lowest levels of noise and vibration whilst delivering optimum performance across a wide range of ambient temperatures.

**Features & Benefits**

- The Kirby® Fridgebox™ Series IV Condensing Units offer premium inclusions and is install ready:
- Latest generation Copeland ZB scroll compressors (fixed speed) offer reduced noise, increased reliability and are optimised for R404A and R134a
- High efficiency Hypercore™ microchannel condenser coil technology boosts efficiency and reduces the required refrigerant charge to limit environmental impact
- Condenser fan speed controller
- Pre-wired with phase failure protection, saving time during installation
- Removable panels offer easy access for installation and servicing
- Engineered for Australia's harsh conditions guarantees operation up to 43 °C ambient
- Compact and light footprint for easy installation

Part Number	Ambient Temperature °C	Capacity (Watts) R404A *									Receiver Capacity (litres)
		Evaporating Temperature°C									
		-30	-25	-20	-15	-10	-5	0	5	10	

R404A Medium/High Temperature

FBH043MHZ1-2	35	1450	1860	2340	2870	3440	4050	4710	5420	6180	8.2
	43	1160	1530	1950	2410	2910	3450	4030	4640	5280	
FBH051MZ1-2	35	2000	2430	2940	3500	4130	4820	5580	6420	7330	8.2
	43		2110	2550	3040	3590	4200	4870	5610	6400	
FBH066MHZ1-2	35	2480	3050	3720	4490	5360	6330	7400	8580	9880	10.9
	43	2160	2660	3250	3920	4670	5510	6440	7470	8590	
FBH075MHZ1-2	35	2880	3520	4270	5130	6090	7180	8380	9710	11180	10.9
	43	2500	3060	3720	4470	5310	6260	7320	8490	9790	
FBH086MHZ1-2	35	3300	4040	4910	5890	7000	8230	9580	11060	12680	10.9
	43	2850	3500	4250	5100	6060	7140	8350	9680	11100	
FBH103MHZ1-2	35	4050	4940	5950	7110	8390	9800	11340	12990	14750	10.9
	43		4300	5180	6170	7290	8520	9870	11320	12860	
FBH116MHZ1-2	35	4650	5680	6850	8160	9580	11110	12750	14510	16390	10.9
	43		4870	5930	7100	8350	9700	11110	12600		

Extended capacity envelope for low temperature applications. Suction accumulator to be installed externally of unit.

Part Number	Ambient Temperature °C	Capacity (Watts) R134a *									Receiver Capacity (litres)
		Evaporating Temperature °C									
		-30	-25	-20	-15	-10	-5	0	5	10	

R134a Medium/High Temperature

FBH043MHZ1-2	35			1490	1870	2310	2820	3400	4030	4710	8.2
	46					2040	2500	3020	3590	4210	
FBH051MZ1-2	35			1570	2010	2530	3150	3840	4600	5370	8.2
	46					2290	2840	3480	4160	4860	
FBH066MHZ1-2	35			2190	2740	3400	4170	5040	6020	7100	10.9
	46				2480	3080	3790	4590	5480	6450	
FBH075MHZ1-2	35			2180	2820	3570	4440	5420	6480	7600	10.9
	46				2460	3170	3980	4890	5880	6930	



CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY FRIDGEBOX SERIES IV OUTDOOR CONDENSING UNIT (CONT'D)

Part Number	Ambient Temperature °C	Capacity (watts) R134a									Receiver Capacity (litres)
		*Evaporating Temperature°C									
		-30	-25	-20	-15	-10	-5	0	-5	10	
R134a Medium/High Temperature (Cont'd)											
FBH086MHZ1-2	35			2900	3660	4550	5570	6710	7960	9300	10.9
	46					4090	5020	6060	7200	8420	
FBH103MHZ1-2	35			3480	4430	5530	6760	8110	9580	11170	10.9
	46					5020	6140	7360	8690	10120	
FBH116MHZ1-2	35			4220	5250	6460	7850	9380	11040	12820	10.9
	46					5760	7000	8380	9890	11500	

*Performance calculations are intended as a guide only and actual capacity is subject to specific conditions and the operating environment.

Part Number	Electrical Data			Input Power (watts)	Connections (mm)		Dimensions (mm)			Weight (kg)
	Volts / PH	LRA(A/Ph)	RLA(A/Ph)		Suction	Liquid	Height	Width	Depth	
FBH043MHZ1-2	380-420 / 3	27.6	4.8	2,120	19.0	12.7	569	1414	560	84
FBH051MHZ1-2	380-420 / 3	33.6	5.8	2,440	19.0	12.7	569	1414	560	86
FBH066MHZ1-2	380-420 / 3	42.0	7.0	2,970	19.0	12.7	729	1491	575	83
FBH075MHZ1-2	380-420 / 3	48.0	7.8	3,400	19.0	12.7	729	1491	575	84
FBH086MHZ1-2	380-420 / 3	51.3	9.4	3,790	22.2	12.7	729	1491	575	93
FBH103MHZ1-2	380-420 / 3	67.5	11.3	4,670	22.2	12.7	729	1491	575	94
FBH116MHZ1-2	380-420 / 3	76.0	11.5	5,260	22.2	12.7	729	1491	575	96

* RLA and Input Watts data are taken at -5°C SST / +45°C SCT with refrigerant R404A. For other refrigerants please contact your Heatcraft Representative

KIRBY DIGITAL SCROLL FRIDGEBOX OUTDOOR CONDENSING UNIT

The NEW Kirby® Digital Scroll Fridgebox™ with Copeland Scroll Digital™ compressor matched to highly efficient Hypercore micro channel condensers achieves best in class capacity and close temperature modulation, excellent COP's and system efficiency. With its wide variable capacity between 20% and 100%, the Copeland Scroll Digital™ Scroll compressor is unmatched by any other compressor technology on the market today. The Dixell XC Controller is included for ultimate controllability.

Features & Benefits

- The Kirby® Digital Scroll Fridgebox™ Condensing Units offers premium inclusions and is install ready:
- Latest generation Copeland ZB Digital scroll compressors offer capacity modulation from 20% - 100%, perfectly matching demand whilst maximising system efficiency and performance
- High efficiency Hypercore™ microchannel condenser coil technology boosts efficiency and reduces the required refrigerant charge to limit environmental impact
- All models compatible with R404A, R134a and R407F
- Dixell XC controller ensures optimal performance of the Digital scroll compressor
- Multi speed fan perfectly matches compressor modulation
- Oil safety control switch
- Pre-wired with phase failure protection, saving time during installation



Part Number	Ambient Temperature °C	Capacity (Watts) R404A *							Receiver Capacity (litres)
		Evaporating Temperature °C							
		-20	-15	-10	-5	0	5	10	

R404A Medium/High Temperature

FBDH066MHZ1-2	35	3760	4500	5390	6390	7470	8600	9760	10.9
	45		4000	4780	5580	6400	7250	8160	
FBDH088MHZ1-2	35	5040	5970	7030	8220	9530	10930	12380	10.9
	45		5110	5980	6930	7950	9040	10170	
FBDH103MHZ1-2	35	6150	7220	8490	9940	11510	13120	14680	10.9
	45		6250	7310	8520	9840	11210	12540	
FBDH116MHZ1-2	35	7160	8380	9790	11390	13110	14860	16540	10.9
	45		7230	8410	9750	11210	12680		
FBDH125MHZ1-2	35	7680	8930	10370	11970	13670	15340	16870	10.9
	45			8790	10080	11450			

Part Number	Ambient Temperature °C	Capacity (Watts) R134a *							Receiver Capacity (litres)
		Evaporating Temperature °C							
		-20	-15	-10	-5	0	5	10	

R134a Medium/High Temperature

FBDH066MHZ1-2	35	2150	2700	3320	4020	4820	5740	6790	10.9
	46	1970	2480	3030	3640	4340	5150	6070	
FBDH088MHZ1-2	35	2650	3350	4180	5150	6250	7490	8860	10.9
	46	2350	2970	3720	4590	5580	6690	7920	
FBDH103MHZ1-2	35	3410	4410	5430	6540	7760	9140	10700	10.9
	46		4050	4980	5960	7020	8220	9580	
FBDH116MHZ1-2	35	4000	5000	6150	7460	8940	10600	12430	10.9
	46		4450	5470	6640	7970	9450	11090	
FBDH125MHZ1-2	35	4460	5520	6770	8200	9800	11560	13480	10.9
	46			6040	7300	8700	10240	11930	

*Performance calculations are intended as a guide only and actual capacity is subject to specific conditions and the operating environment.

CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY DIGITAL SCROLL FRIDGEBOX OUTDOOR CONDENSING UNIT (CONT'D)

Part Number	Electrical Data			Input Power (watts)	Connections (mm)		Dimensions (mm)			Weight (kg)
	Volts / PH	LRA (A/Ph)	RLA A/Ph		Suction	Liquid	Height	Width	Depth	
FBDH066MHZ1-2	380-420 / 3	42.0	6.4	2,800	19.0	12.7	729	1491	575	83
FBDH088MHZ1-2	380-420 / 3	50.0	7.6	3,620	19.0	12.7	729	1491	575	93
FBDH103MHZ1-2	380-420 / 3	66.0	9.5	4,600	22.2	12.7	729	1491	575	94
FBDH116MHZ1-2	380-420 / 3	76.0	10.8	5,400	22.2	12.7	729	1491	575	96
FBDH125MHZ1-2	380-420 / 3	102.0	12.4	5,880	22.2	12.7	729	1491	575	97

RLA and Input Watts data are taken at -5 °C SST / +45 °C SCT with refrigerant R404A. For other refrigerants please contact your Heatcraft Representative

KIRBY POLAR PACK OUTDOOR CONDENSING UNIT

Compact and robust, our Polar Pack commercial refrigeration unit is specially designed for harsh ambient refrigeration unit is specially designed for harsh ambient. Polar Pack is easy to install, and because it's from Kirby, Polar Pack is tough and reliable – guaranteed! Kirby's outdoor condensing units have always been renowned for their durability and clever design. The Polar Pack is no exception. being a fully enclosed system, it can be installed indoors or outside.

Features & Benefits

- Hi-Ambient (45°C)
- Easy Servicing
- Fully pre-wired
- Fan speed control
- Coil protection standard on all units
- Optional Enhancements
- EC Condenser Fan Option available
- Horizontal airflow kits*



Part Number	Ambient Temperature °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	
R404A - Reciprocating Hermetic Compressors												
PPH010LA1-1	35	520	700	915	1160	1440						2.4
	45		540	700	905	1165						
PPH012LA1-1	35	625	845	1105	1405	1745						2.4
	45		630	835	1090	1390						
PPH014LA1-1	35	705	975	1280	1620	2000						2.4
	45		740	1005	1300	1640						
PPH020LA1-1	35	1085	1445	1855	2310	2815						4.4
	45		1020	1405	1825	2285						
PPH024LA1-1	35		1750	2200	2785	3495						4.4
	45		1190	1665	2230	2890						
PPH028LA1-2	35	1840	2430	3085	3810	4600						4.4
	45	1450	1955	2520	3145	3830						
PPH043LA1-2	35		2945	3865	4950	6190						8.2
	45		2250	3050	3980	5035						
PPH050LA1-2	35	2675	3605	4680	5905	7280						8.2
	45		2800	3725	4785	5975						
PPH061LA1-2	35	3385	4490	5755	7180	8760						8.2
	45	2620	3575	4670	5900	7270						

KIRBY POLAR PACK OUTDOOR CONDENSING UNIT

Part Number	Ambient Temperature °C	Capacity (Watts) R134a *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R134a - Reciprocating Hermetic Compressors

PPH010LA1-1	35					900	1,160	1,450	1,780	2,150	2,560	2.4
	45					730	970	1,240	1,540	1,880	2,240	
PPH012LA1-1	35					1,100	1,410	1,760	2,160	2,590	3,060	2.4
	45					900	1,180	1,500	1,860	2,260	2,680	
PPH014LA1-1	35					1,250	1,610	2,010	2,460	2,960	3,510	2.4
	45					1,030	1,350	1,720	2,130	2,590	3,070	
PPH020LA1-1	35					1,530	2,020	2,580	3,210	3,900	4,660	4.4
	45					1,180	1,630	2,150	2,720	3,350	4,040	
PPH024LA1-1	35					2,050	2,670	3,390	4,180	5,060	6,020	4.4
	45					1,640	2,210	2,860	3,590	4,390	5,260	



Part Number	Electrical Data			Input Power (Watts)	Connections (mm)		Dimensions (mm)			Weight (kg)
	Volts / PH	LRA (A/Ph)	RLA (A/Ph)		Suction	Liquid	Height	Width	Depth	
PPH010LA1-1	200-240 / 1	30.3	3.0	855	12.7	9.5	730	750	660	70
PPH012LA1-1	200-240 / 1	30.3	4.5	995	12.7	9.5	730	750	660	70
PPH014LA1-1	200-240 / 1	37.3	4.5	1125	12.7	9.5	730	750	660	70
PPH020LA1-1	200-240 / 1	43.3	7.2	1273	15.9	9.5	730	750	660	75
PPH024LA1-1	200-240 / 1	43.6	8.5	1795	15.9	9.5	730	750	660	80
PPH028LA1-2	200-240 / 1	25.6	4.0	1646	15.9	9.5	730	750	660	75
PPH043LA1-2	200-240 / 1	33.2	4.4	1994	22.2	15.9	730	1220	660	110
PPH050LA1-2	200-240 / 1	46.2	5.7	2339	22.2	15.9	730	1220	660	115
PPH061LA1-2	200-240 / 1	52.2	7.3	3156	22.2	15.9	730	1220	660	115

RLA and Input Watts data are taken at -25°C SST / +55°C SCT with refrigerant R404A. For other refrigerants please contact your Heatcraft Representative

Part Number	Ambient Temperature °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R404A - Reciprocating Hermetic Compressors

PPH016MA1-1	35				900	1095	1310	1545	1795	2070		2.4
	45				735	905	1090	1285	1495	1720		
PPH018MA1-1	35				1005	1230	1475	1730	2005	2300		2.4
	45				820	1010	1210	1425	1645	1885		
PPH022MA1-1	35					1435	1745	2090	2465	2875	3310	2.4
	45					1130	1420	1735	2075	2435	2820	
PPH027MA1-1	35					1765	2170	2580	2995	3415	3845	2.4
	45					1440	1805	2165	2515	2860		
PPH030MA1-1	35					2005	2440	2890	3360	3845	4350	2.4
	45					1635	2020	2405	2795	3180		
PPH040MA1-1	35					2520	3145	3810	4525	5285	6090	4.4
	45					1910	2485	3075	3675	4280		
PPH040MA1-2	35					2520	3145	3810	4525	5285	6090	4.4
	45					1910	2485	3075	3675	4280		
PPH046MA1-1	35					2830	3640	4505	5430	6415	7455	4.4
	45					2290	3045	3815	4595	5400		



CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY POLAR PACK OUTDOOR CONDENSING UNIT (CONT'D)

Part Number	Ambient Temperature °C	Capacity (Watts) R134a *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	
R404A - Reciprocating Hermetic Compressors (Cont'd)												
PPH046MA1-2	35					2830	3640	4505	5430	6415	7455	4.4
	45					2290	3045	3815	4595	5400		
PPH052MA1-1	35					3120	4015	4955	5940	6970	8050	4.4
	45					2520	3365	4195	5010	5805		
PPH052MA1-2	35					3120	4015	4955	5940	6970	8050	4.4
	45					2520	3365	4195	5010	5805		
PPH062MA1-1	35			2495	3235	4050	4935	5890	6915	8015		8.2
	45				2570	3255	3990	4765	5585	6455		
PPH062MA1-2	35			2495	3235	4050	4935	5890	6915	8015		8.2
	45				2570	3255	3990	4765	5585	6455		
PPH068MA1-2	35			2550	3465	4420	5405	6435	7500	8600		8.2
	45				2775	3600	4425	5255	6090	6935		
PPH075MA1-2	35			2770	3780	4855	6000	7210	8490	9835		8.2
	45				3005	3950	4920	5920	6950	8005		
PPH089MA1-2	35			3260	4420	5645	6930	8275	9685	11155		8.2
	45				3505	4565	5645	6755	7890	9050		
PPH100MA1-2	35			3490	4755	6110	7565	9115	10760	12500		8.2
	45				3805	4980	6200	7480	8805	10180		
PPH113MA1-2	35			4150	5600	7130	8745	10445	12235	14105		8.2
	45				4445	5785	7145	8525	9930	11360		

Part Number	Ambient Temperature °C	Capacity (Watts) R134a *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	
R134a - Reciprocating Hermetic Compressors												
PPH062MA1-1	35					2,550	3,270	4,090	5,015	6,040	7,170	8.2
	45					2,185	2,830	3,560	4,380	5,285	6,275	
PPH062MA1-2	35					2,550	3,270	4,090	5,015	6,040	7,170	8.2
	45					2,185	2,830	3,560	4,380	5,285	6,275	
PPH068MA1-2	35					2,960	3,690	4,495	5,380	6,345	7,385	8.2
	45					2,615	3,265	3,990	4,780	5,635	6,560	
PPH075MA1-2	35					2,760	3,640	4,630	5,740	6,960	8,300	8.2
	45					2,095	2,855	3,735	4,735	5,850	7,080	
PPH089MA1-2	35					3,305	4,355	5,520	6,805	8,195	9,705	8.2
	45					2,635	3,545	4,575	5,715	6,975	8,345	
PPH100MA1-2	35					3,730	4,785	6,040	7,500	9,155	11,015	8.2
	45					2,995	3,990	5,125	6,410	7,835	9,410	
PPH113MA1-2	35					4,530	5,675	7,010	8,535	10,250	12,160	8.2
	45					3,745	4,740	5,900	7,230	8,730	10,395	

KIRBY POLAR PACK OUTDOOR CONDENSING UNIT (CONT'D)

Part Number	Electrical Data			Input Power (Watts)	Connections (mm)		Dimensions (mm)			Weight (kg)
	Volts / PH	LRA (A/Ph)	RLA (A/Ph)		Suction	Liquid	Height	Width	Depth	
PPH 016 M A1-1	220 - 240 / 1	14.9	3.8	885	12.7	9.5	730	750	660	55
PPH 018 M A1-1	220 - 240 / 1	18.3	4.1	975	12.7	9.5	730	750	660	55
PPH 022 M A1-1	220 - 240 / 1	25.3	5.6	1295	12.7	9.5	730	750	660	70
PPH 027 M A1-1	220 - 240 / 1	31.3	7.0	1655	12.7	9.5	730	750	660	70
PPH 030 M A1-1	220 - 240 / 1	40.3	6.8	1915	12.7	9.5	730	750	660	70
PPH 040 M A1-1	220 - 240 / 1	46.3	9.9	2175	15.9	12.7	730	750	660	80
PPH 040 M A1-2	380 - 420 / 3	25.3	3.7	2225	15.9	12.7	730	750	660	80
PPH 046 M A1-1	220 - 240 / 1	55.6	12.2	2570	15.9	12.7	730	750	660	80
PPH 046 M A1-2	380 - 420 / 3	36.6	4.8	2630	15.9	12.7	730	750	660	80
PPH 052 M A1-1	220 - 240 / 1	82.6	13.5	2900	15.9	12.7	730	750	660	80
PPH 052 M A1-2	380 - 420 / 3	36.6	4.8	2900	15.9	12.7	730	750	660	80
PPH 062 M A1-1	220 - 240 / 1	70.6	15.1	3515	19.1	15.9	730	1220	660	100
PPH 062 M A1-2	380 - 420 / 3	30.6	6.4	3515	19.1	15.9	730	1220	660	100
PPH 068 M A1-2	380 - 420 / 3	38.6	7.1	3995	22.2	15.9	730	1220	660	100
PPH 075 M A1-2	380 - 420 / 3	49.1	7.5	3765	22.2	15.9	730	1220	660	115
PPH 089 M A1-2	380 - 420 / 3	49.7	9.0	4270	22.2	15.9	730	1220	660	110
PPH 100 M A1-2	380 - 420 / 3	65.2	10.4	4800	22.2	15.9	730	1220	660	115
PPH 113 M A1-2	380 - 420 / 3	65.2	10.0	5490	22.2	15.9	730	1220	660	120

RLA and Input Watts data are taken at -25 °C SST / +55 °C SCT with refrigerant R404A. For other refrigerants please contact your Heatcraft Representative

Part Number	Ambient Temperature °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R404A - Semi-Hermetic Compressors

PPS016LMA1-3	35	450	580	730	905	1105	1330	1575	1830	2105		2.4
	45	345	455	585	730	890	1075	1275	1490	1710		
PPS016LMA1-4	35	450	580	730	905	1105	1330	1575	1830	2105		2.4
	45	345	455	585	730	890	1075	1275	1490	1710		
PPS026LMHA1-5	35	695	905	1140	1405	1710	2050	2425	2830	3260		2.4
	45	515	695	895	1120	1375	1660	1970	2305			
PPS026LMHA1-6	35	695	905	1140	1405	1710	2050	2425	2830	3260		2.4
	45	515	695	895	1120	1375	1660	1970	2305			
PPS031LMHA1-5	35	860	1130	1445	1805	2210	2655	3140	3655	4180		2.4
	45	640	875	1145	1450	1795	2170	2570	2985			
PPS031LMHA1-6	35	860	1130	1445	1805	2210	2655	3140	3655	4180		2.4
	45	640	875	1145	1450	1795	2170	2570	2985			
PPS039LMHA1-5	35	1080	1410	1790	2225	2715	3260	3850	4475	5130		4.4
	45		1090	1415	1780	2195	2650	3140	3655			
PPS039LMHA1-6	35	1080	1410	1790	2225	2715	3260	3850	4475	5130		4.4
	45		1090	1415	1780	2195	2650	3140	3655			
PPS046LMHA1-6	35	1230	1600	2035	2535	3115	3770	4495	5280	6115		4.4
	45		1235	1605	2035	2530	3085	3695	4355	5035		
PPS056LMHA1-6	35	1510	1990	2520	3105	3760	4485	5275	6115	7000		4.4
	45		1535	2000	2510	3065	3675	4325	5010	5700		
PPS057LMHA1-6	35	1580	2070	2630	3265	3980	4765	5620	6515	7435		4.4
	45		1605	2080	2620	3220	3885	4590	5315			

CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

Part Number	Ambient Temperature °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R404A - Semi-Hermetic Compressors (Cont'd)

PPS074LMHA1-6	35	1890	2490	3190	3990	4895	5905	7010	8200	9455		8.2
	45		1950	2545	3230	4005	4870	5810	6800	7815		
PPS084LMA1-4	35	2400	3125	3960	4920	6010	7225	8545	9935	11340		8.2
	45		2455	3170	3985	4910	5935	7045	8200			
PPS094LMA1-4	35	2750	3535	4450	5500	6690	8020	9465	11005	12595		8.2
	45		2835	3605	4500	5520	6660	7875	9120			
PPS103LMA1-4	35	3105	3955	4930	6055	7330	8750	10300	11940	13630		8.2
	45	2450	3175	4025	4990	6075	7260	8540	9880			

Part Number	Ambient Temperature °C	CAPACITY (Watts) R134a *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R134a - Semi-Hermetic Compressors

PPS016LMA1-3	35					660	850	1,070	1,315	1,590	1,885	2.4
	45					530	705	900	1,115	1,360	1,620	
PPS016LMA1-4	35					660	850	1,070	1,315	1,590	1,885	2.4
	45					530	705	900	1,115	1,360	1,620	
PPS026LMHA1-5	35				755	1,000	1,285	1,610	1,980	2,380	2,820	2.4
	45				595	810	1,065	1,350	1,675	2,035	2,420	
PPS026LMHA1-6	35				755	1,000	1,285	1,610	1,980	2,380	2,820	2.4
	45				595	810	1,065	1,350	1,675	2,035	2,420	
PPS031LMHA1-5	35				930	1,235	1,580	1,970	2,415	2,905	3,435	2.4
	45				740	1,005	1,315	1,665	2,060	2,495	2,955	
PPS031LMHA1-6	35				930	1,235	1,580	1,970	2,415	2,905	3,435	2.4
	45				740	1,005	1,315	1,665	2,060	2,495	2,955	
PPS039LMHA1-5	35				1,195	1,580	2,015	2,515	3,075	3,700	4,375	4.4
	45				960	1,295	1,685	2,125	2,625	3,175	3,775	
PPS039LMHA1-6	35				1,195	1,580	2,015	2,515	3,075	3,700	4,375	4.4
	45				960	1,295	1,685	2,125	2,625	3,175	3,775	
PPS046LMHA1-6	35					1,830	2,345	2,940	3,610	4,360	5,180	4.4
	45					1,500	1,955	2,485	3,085	3,750	4,485	
PPS056LMHA1-6	35				1715	2245	2860	3560	4350	5230	6185	4.4
	45				1380	1855	2405	3035	3740	4530	5385	
PPS057LMHA1-6	35				1,930	2,495	3,145	3,885	4,715	5,635	6,630	4.4
	45				1,590	2,100	2,680	3,345	4,090	4,910		
PPS074LMHA1-6	35				2,380	3,055	3,830	4,720	5,720	6,830	8,045	8.2
	45				1,995	2,605	3,300	4,095	4,995	5,990	7,075	
PPS084LMA1-4	35				2,975	3,810	4,765	5,850	7,075	8,425	9,895	8.2
	45				2,465	3,215	4,075	5,055	6,160	7,395	8,745	
PPS094LMA1-4	35				3,195	4,115	5,165	6,370	7,730	9,235	10,860	8.2
	45				2,660	3,465	4,405	5,490	6,720	8,070	9,510	
PPS103LMA1-4	35				3,510	4,505	5,645	6,945	8,410	10,030	11,795	8.2
	45				2,900	3,790	4,815	5,985	7,305	8,765	10,360	

* Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment.

KIRBY POLAR PACK OUTDOOR CONDENSING UNIT (CONT'D)

Part Number	Electrical Data			Input Power (Watts)	Connections (mm)		Dimensions (mm)			Weight (kg)
	Volts / PH	LRA (A/Ph)	RLA (A/Ph)		Suction	Liquid	Height	Width	Depth	
PPS 016 LM A1-3	220 - 240 / 1	30.32	4.69	1100	12.7	9.5	730	750	660	75
PPS 016 LM A1-4	380 - 420 / 3	11.42	1.94	1125	12.7	9.5	730	750	660	75
PPS 022 LM A1-3	220 - 240 / 1	44.32	6.88	1560	12.7	9.5	730	750	660	80
PPS 022 LM A1-4	220 - 240 / 1	44.32	5.92	1315	12.7	9.5	730	750	660	80
PPS 026 LMHA1-5	380 - 420 / 3	14.12	2.43	1525	12.7	9.5	730	750	660	80
PPS 026 LMHA1-6	380 - 420 / 3	14.12	3.12	1645	12.7	9.5	730	750	660	80
PPS 031 LM A1-3	220 - 240 / 1	62.32	7.15	2085	15.9	9.5	730	750	660	80
PPS 031 LM A1-4	220 - 240 / 1	62	8	1675	15.9	9.5	730	750	660	80
PPS 031 LMHA1-5	380 - 420 / 3	20	3	2155	15.9	9.5	730	750	660	80
PPS 031 LMHA1-6	380 - 420 / 3	20	4	2125	15.9	9.5	730	750	660	80
PPS 039 LM A1-3	220 - 240 / 1	69	8	2475	15.9	12.7	730	750	660	85
PPS 039 LM A1-4	220 - 240 / 1	69	12	1945	15.9	12.7	730	750	660	85
PPS 039 LMHA1-5	380 - 420 / 3	25	3	2605	15.9	12.7	730	750	660	85
PPS 039 LMHA1-6	380 - 420 / 3	25	5	2565	15.9	12.7	730	750	660	85
PPS 046 LM A1-4	380 - 420 / 3	25	4	3010	15.9	12.7	730	750	660	90
PPS 046 LMHA1-6	380 - 420 / 3	25	5	2620	15.9	12.7	730	750	660	90
PPS 051 LM A1-4	380 - 420 / 3	25	5	3010	15.9	12.7	730	750	660	90
PPS 056 LMHA1-6	380 - 420 / 3	25	5	2620	15.9	12.7	730	750	660	90
PPS 057 LM A1-4	380 - 420 / 3	25	5	3640	15.9	12.7	730	750	660	90
PPS 057 LMHA1-6	380 - 420 / 3	25	5	2620	15.9	12.7	730	750	660	90
PPS 074 LM A1-4	380 - 420 / 3	44	7	4755	19.1	15.9	730	1220	660	120
PPS 074 LMHA1-6	380 - 420 / 3	44	7	5045	19.1	15.9	730	1220	660	120
PPS 084 LM A1-4	380 - 420 / 3	44.76	8.1	5420	19.1	15.9	730	1220	660	130
PPS 094 LM A1-4	380 - 420 / 3	44.76	8.44	5590	22.2	15.9	730	1220	660	130
PPS 103 LM A1-4	380 - 420 / 3	44.76	9.27	5670	22.2	15.9	730	1220	660	135

RLA and Input Watts data are taken at -25 °C SST / +55 °C SCT with refrigerant R404A. For other refrigerants please contact your Heatcraft Representative





CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY TITAN OUTDOOR CONDENSING UNIT

The Kirby Titan Outdoor Condensing Units offers impressive performance using Dorin Semi Hermetic or Maneurop Hermetic compressors within a small footprint. Pre-wired for convenient installation, the Titan thrives in harsh ambient conditions and under heavy loads. Being a fully enclosed system, it can be installed indoors or outside, and because it's from Kirby, the Titan has an enviable reputation for toughness, efficiency and reliability.

Features & Benefits

- High efficiency Dorin and Maneurop compressors compatible with R404A, R134a and R407F**
- True High Ambient (45 °C) Condenser Design
- Inactive Capacity Control Function for Semi Hermetic compressors
- Liquid Receiver Drier & Moisture Indicator Sight Glass
- Oil Separator
- High Efficiency Low Noise External Rotor Condenser Fan Motors
- Fan speed control
- Electrical Panel - Fully wired complete with 3 PH main isolator switch
- Phase Failure Control
- Kirby Blue Kote Protection to Condenser Coil

Optional Enhancements

- Head Fan*
- EC fans
- VSD Kits*
- Oil Watch*
- Liquid line solenoid valve
- Capacity control*



*Available on select models only. Please contact your Heatcraft representative for further details

** Selected models only

Part Number	Ambient Temp °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	
R404A - Maneurop Hermetic Compressors												
PPH131MHA1-2	35			4510	6090	7830	9780	11970	14450	17220	20220	14.5
	45			3480	4690	6120	7770	9620	11660	13870		
PPH153MHA1-2	35			5560	7270	9240	11490	13990	16760	19800	23080	14.5
	45			4280	5710	7380	9270	11390	13700	16160		
PPH170MHA1-2	35			6370	8540	10880	13385	16065	18915	21930	25120	14.5
	45			4985	6880	8910	11070	13360	15785	18340	21030	
PPH217MHA1-2	35			8680	11375	14225	17230	20385	23700	27165	30785	14.5
	45			6625	9025	11435	13865	16305	18765	21240		
PPH251MHA1-2	35			10140	13195	16475	19970	23690	27630	31790	36170	24.5
	45			7770	10520	13335	16215	19160	22175	25255		
PPH283MHA1-2	35			11815	15110	18755	22745	27085	31770	36805	42185	24.5
	45			9030	11980	15080	18330	21735	25290	29000	32855	
R404A - Dorin Semi-Hermetic Compressors												
PPS124LMA1-2	35	3030	3880	4900	6140	7640	9440	11490	13750	16130	18570	14.5
	45	2370	3030	3870	4930	6220	7730	9450	11340	13360		
PPS149LMA1-2	35	3470	4430	5670	7200	9050	11220	13720	16530	19610	22920	14.5
	45	2660	3450	4480	5760	7330	9190	11320	13670	16180		
PPS152LMHA1-4	35		5080	6460	8080	9960	12100	14470	17030	19700	22420	14.5
	45			5210	6570	8170	10000	11990	14070	16160		
PPS178LMHA1-4	35		6050	7630	9450	11560	13960	16610	19460	22440	25460	14.5
	45			6160	7710	9500	11530	13750	16090	18450		
PPS205LMHA1-4	35		7170	9020	11160	13630	16410	19470	22750	26160	29570	14.5
	45			7290	9110	11210	13560	16110	18780	21440		

KIRBY TITAN OUTDOOR CONDENSING UNIT (CONT'D)

Part Number	Ambient Temp °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R404A - Dorin Semi-Hermetic Compressors (Cont'd)

PPS242LMA1-4	35	6640	8500	10620	13090	15940	19140	22640				24.5
	45		6740	8520	10620	13070	15800	18730				
PPS289LMHA1-4	35	7610	9920	12570	15630	19160	23130	27540	32300	37320	42450	24.5
	45		7920	10120	12690	15670	19030	22700	26570	30500	34320	
PPS328LMA1-4	35		11870	14840	18280	22230	26650	31440				24.5
	45		9390	11890	14830	18200	21910	25830				
PPS338LMHA1-4	35	9040	11710	14760	18270	22300	26880	31980	37570	43540	49710	24.5
	45		9260	11800	14760	18220	22180	26570	31300	36170	40900	
PPS370LMA1-4	35		13260	16560	20380	24740	29570	34730				24.5
	45		10560	13380	16650	20360	24390	28600				
PPS411LMA1-4	35		14820	18510	22780	27670	33120	39020				24.5
	45		11760	14900	18570	22750	27360	32210				



Part Number	Ambient Temp °C	Capacity (Watts) R134a *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R134a - Maneurop Hermetic Compressors

PPH131MHA1-2	35						6490	8300	10420	12880	15660	14.5
	45						5200	6840	8740	10940	13420	
PPH153MHA1-2	35						7510	9550	11950	14740	17920	14.5
	45						6130	8000	10140	12620	15450	
PPH170MHA1-2	35						7,950	10,210	12,755	15,595	18,720	14.5
	45						6,645	8,660	10,910	13,390	16,100	
PPH217MHA1-2	35						10,050	12,800	15,875	19,295	23,060	14.5
	45						8,300	10,770	13,510	16,520	19,820	
PPH251MHA1-2	35						12,745	15,990	19,610	23,595	27,950	24.5
	45						10,830	13,740	16,945	20,445	24,240	
PPH283MHA1-2	35						14,100	17,705	21,750	26,235	31,160	24.5
	45						12,040	15,215	18,730	22,585	26,780	

R134a - Dorin Semi-Hermetic Compressors

PPS124LMA1-2	35				4030	5235	6630	8230	10045	12070	14285	14.5
	45				3335	4415	5665	7100	8730	10535	12510	
PPS149LMA1-2	35				4635	6020	7615	9455	11540	13870	16425	14.5
	45					5065	6500	8150	10020	12100	14380	
PPS152LMHA1-4	35				4755	6135	7730	9555	11630	13950	16500	14.5
	45				3980	5220	6650	8290	10145	12210	14475	
PPS178LMHA1-4	35				5485	7060	8885	10980	13370	16040	18975	14.5
	45					6030	7660	9535	11665	14040	16650	
PPS205LMHA1-4	35				6650	8490	10595	13000	15725	18760	22090	14.5
	45				5575	7245	9155	11325	13770	16485	19445	
PPS242LMA1-4	35				7,670	9,855	12,400	15,315	18,605	22,250	26,225	24.5
	45				6,405	8,355	10,635	13,255	16,205	19,475	23,045	
PPS289LMHA1-4	35				8,320	10,835	13,755	17,120	20,955	25,255	30,000	24.5
	45					9,160	11,775	14,795	18,225	22,065	26,280	
PPS328LMA1-4	35				10,080	12,970	16,295	20,090	24,355	29,070	34,190	24.5
	45				8,375	11,000	14,020	17,455	21,300	25,530	30,100	



CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY TITAN OUTDOOR CONDENSING UNIT (CONT'D)

Part Number	Ambient Temp °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R134a - Dorin Semi-Hermetic Compressors (Cont'd)

PPS338LMHA1-4	35					12,700	16,110	20,045	24,540	29,595	35,180	
	45					10,790	13,885	17,455	21,515	26,060	31,065	
PPS370LMA1-4	35			8,835	11,635	14,860	18,575	22,790	27,515	32,725	38,360	24.5
	45				9,730	12,660	16,025	19,835	24,095	28,760	33,790	
PPS411LMA1-4	35			9,820	12,940	16,560	20,745	25,525	30,895	36,835	43,295	24.5
	45				10,795	14,090	17,890	22,225	27,085	32,450	38,280	

* Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment.
 R407F available on select models. Please contact your Heatcraft representative for capacity information for these refrigerants

Part Number	Electrical Data 380-420V 3 Ph			Connections (mm)		Dimensions (mm)			Weight (kg)
	LRA	RLA	Input Power (Watts)	Suction	Liquid	Height	Width	Depth	
	(A/Ph)	(A/Ph)							
PPH 131 MH A1-2	81.3	10.8	5,415	34.9	15.9	1060	1846	840	225
PPH 153 MH A1-2	83.1	13.4	6,810	34.9	15.9	1094	1846	840	229
PPH 170 MH A1-2	93.1	15.9	7,965	34.9	15.9	1094	1846	840	235
PPH 217 MH A1-2	108.1	17.9	9,860	34.9	15.9	1094	1846	840	255
PPH 251 MH A1-2	119.7	22.0	11,650	34.9	22.2	1094	2413	840	320
PPH 283 MH A1-2	144.7	24.2	13,100	34.9	22.2	1094	2413	840	335
PPS 124 LM A1-2	54.3	9.6	5,030	28.6	12.7	1060	1846	840	260
PPS 149 LM A1-2	66.1	12.9	6,390	28.6	12.7	1094	1846	840	262
PPS 152 LMH A1-4	66.2	12.7	6,260	28.6	15.9	1094	1846	840	279
PPS 178 LMH A1-4	89.1	15.4	7,340	34.9	15.9	1094	1846	840	287
PPS 205 LMH A1-4	89.1	16.6	8,290	34.9	15.9	1094	1846	840	304
PPS 242 LM A1-4	90.7	20.1	10,010	34.9	22.2	1094	2413	840	365
PPS 289LMH A1-4	139.4	23.4	11,720	34.9	22.2	1094	2413	840	405
PPS 328 LM A1-4	113.4	25.7	13,750	34.9	22.2	1094	2413	840	405
PPS 338 LMH A1-4	174.1	28.1	14,700	34.9	22.2	1094	2413	840	425
PPS 370 LM A1-4	139.4	29.2	15,700	34.9	22.2	1094	2413	840	425
PPS 411 LM A1-4	174.1	33.7	18,870	34.9	22.2	1094	2413	840	425

RLA and Input Watts data are taken at - 5 °C SST / + 45 °C SCT with refrigerant R404A. For other refrigerants please contact your Heatcraft Representative

KIRBY TITAN WITH VSD OUTDOOR CONDENSING UNIT

With the increased demand for higher efficiency and improved capacity control, Kirby now offer a range of Titan Outdoor Semi Hermetic Condensing Units configured with a Variable Speed Compressor Drive kit. The VSD option ensures excellent load matching to the conditions and stable storage temperatures with less start and stop cycles of the compressor.

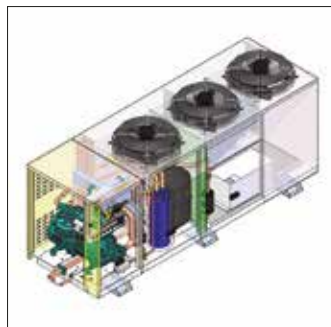
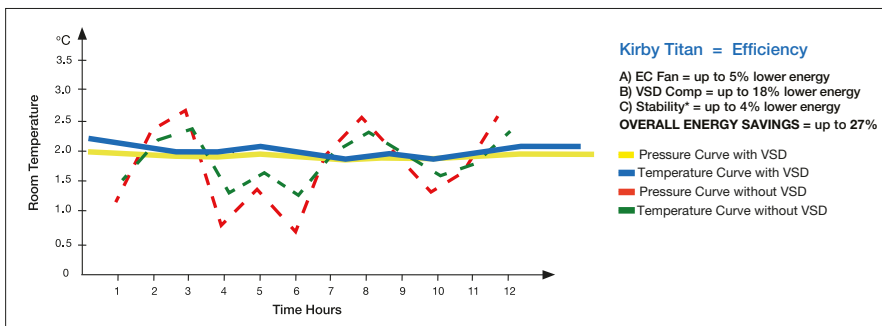
Features & Benefits

- High efficiency Dorin Semi Hermetic compressors compatible with R404A, R134A and R407F refrigerants
- Auto tuning feature in VSD ensures optimum smooth constant suction pressure control that maintains a stable storage temperature
- Factory pre-configured VSD minimises on-site programming and ensures ease of installation & commissioning
- Soft-start feature of VSD reduces compressor starting current by up to 40%
- Fail safe fixed speed 50Hz mechanical control backup changeover in the event of failed VSD and/or electrical power supply issue

- True High Ambient (45°C) Condenser Design
- Trax Oil management system installed
- Fan speed control fitted
- All standard wiring and controls are factory installed and tested

Optional Enhancements

- Head Fan
- EC fans
- Liquid line solenoid valve



Part Number	Ambient Temperature °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R404A - Medium/High Temperature Application

PPS152LMHA1-4

65HZ	35	4665	6110	7805	9780	12050	14585	17340	20225	23125	25875	14.5
	45	3655	4865	6305	7985	9885	11980	14230				
50HZ	35		4820	6175	7770	9615	11720	14065	16590	19240	21950	14.5
	45		3850	4985	6320	7875	9645	11590	13655	15750		
30HZ	35			3855	4890	6090	7485	9070	10825	12730	14770	14.5
	45				3975	4985	6150	7480	8965	10585	12295	

PPS178LMHA1-4

65HZ	35	5575	7290	9285	11620	14295	17285	20510	23845	27130	30155	14.5
	45	4390	5830	7515	9465	11695	14160	16785				
50HZ	35		5755	7365	9245	11430	13915	16675	19640	22735	25850	14.5
	45		4590	5945	7530	9360	11430	13705	16125	18580		
30HZ	35			4595	5825	7260	8920	10790	12860	15110	17530	14.5
	45				4740	5945	7330	8910	10660	12555	14545	

CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY TITAN WITH VSD OUTDOOR CONDENSING UNIT (CONT'D)

Part Number	Ambient Temperature °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R404A - Medium/High Temperature Application (Cont'd)

PPS205LMHA1-4

65HZ	35	6375	8350	10655	13325	16370	19775	23465	27335	31205	34790	14.5
	45		6690	8615	10855	13405	16235	19245				
50HZ	35		6570	8435	10605	13110	15940	19075	22465	26035	29640	14.5
	45		5255	6815	8635	10735	13105	15710	18485	21300		
30HZ	35			5260	6670	8320	10220	12370	14750	17335	20100	14.5
	45				5430	6810	8405	10215	12220	14395	16675	

PPS242LMA1-4

65HZ	35	7835	10220	12950	16035	19465	23200	27170				24.5
	45	6195	8220	10530	13115	15965	19030	22215				
50HZ	35	6155	8065	10265	12775	15600	18725	22125				24.5
	45		6490	8340	10440	12795	15395	18195				
30HZ	35			6430	8060	9925	12035	14375				24.5
	45				6590	8145	9900	11860				

PPS289LMHA1-4

65HZ	35	9475	12305	15560	19290	23510	28210	33315	38720	44225	49535	24.5
	45	7375	9810	12625	15810	19355	23220	27350				
50HZ	35	7440	9710	12320	15330	18775	22660	26960	31625	36570	41650	24.5
	45		7765	9985	12545	15460	18725	22295	26095	30000		
30HZ	35			7685	9635	11890	14475	17385	20600	24085	27825	24.5
	45				7900	9805	11990	14455	17180	20125	23225	

PPS328LMA1-4

65HZ	35	11100	14280	17915	22030	26610	31605	36930				24.5
	45	8615	11370	14495	17965	21760	25825	30060				
50HZ	35	8755	11310	14240	17585	21360	25550	30120				24.5
	45		9010	11505	14345	17520	21015	24760				
30HZ	35			8945	11130	13635	16460	19595				24.5
	45			7245	9095	11210	13605	16265				

PPS338LMHA1-4

65HZ	35	11135	14385	18110	22375	27205	32590	38455	44675	51065	57325	24.5
	45	8680	11455	14630	18245	22305	26785	31600	36570			
50HZ	35		11320	14315	17765	21705	26135	31050	36405	42105	48010	24.5
	45		9035	11570	14485	17805	21535	25640	30045	34630		
30HZ	35				11130	13700	16640	19965	23650	27660	31955	24.5
	45					11265	13740	16535	19640	23020	26615	

PPS370LMA1-4

65HZ	35	12785	16445	20605	25265	30390	35875	41570				24.5
	45	10000	13215	16800	20720	24945	29415					
50HZ	35	10120	13045	16390	20210	24490	29195	34225				24.5
	45	7935	10470	13350	16590	20185	24085	28200				
30HZ	35			10330	12830	15680	18885	22415				24.5
	45			8420	10550	12970	15690	18685				

KIRBY TITAN WITH VSD OUTDOOR CONDENSING UNIT (CONT'D)

Part Number	Ambient Temperature °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R404A - Medium/High Temperature Application (Cont'd)**PPS411LMA1-4**

65HZ	35	14395	18505	23190	28480	34355	40720	47405				24.5
	45	11255	14790	18800	23285	28200	33425					
50HZ	35	11355	14660	18455	22780	27645	33020	38855				24.5
	45	8895	11725	14960	18635	22750	27260	32065				
30HZ	35			11610	14440	17680	21335	25380				24.5
	45			9430	11835	14585	17685	21130				

Part Number	Ambient Temperature °C	Capacity (Watts) R134a *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R134a - Medium/High Temperature Application**PPS152LMHA1-4**

65HZ	35				6085	7820	9810	12070	14615	17445	20540	14.5
	45				5095	6660	8440	10465	12750	15290		
50HZ	35				4755	6135	7730	9555	11630	13950	16500	14.5
	45				3980	5220	6650	8290	10145	12210	14475	
30HZ	35						4780	5950	7295	8825	10535	14.5
	45						4110	5155	6360	7725	9250	

PPS178LMHA1-4

65HZ	35				7020	9000	11275	13875	16800	20050	23605	14.5
	45				5935	7700	9725	12045	14670	17585		
50HZ	35				5485	7060	8885	10980	13370	16040	18975	14.5
	45					6030	7660	9535	11665	14040	16650	
30HZ	35						5495	6840	8395	10160	12130	14.5
	45						4730	5925	7310	8880	10635	

PPS205LMHA1-4

65HZ	35				8510	10820	13455	16440	19785	23475	27470	14.5
	45				7130	9235	11620	14310	17315	20615		
50HZ	35				6650	8490	10595	13000	15725	18760	22090	14.5
	45				5575	7245	9155	11325	13770	16485	19445	
30HZ	35						6555	8090	9850	11845	14075	14.5
	45						5665	7050	8635	10425	12415	

PPS242LMA1-4

65HZ	35				9780	12530	15685	19270	23295	27730	32515	24.5
	45				8185	10635	13455	16675	20300	24310		
50HZ	35				7670	9855	12400	15315	18605	22250	26225	24.5
	45				6405	8355	10635	13255	16205	19475	23045	
30HZ	35						7710	9590	11745	14175	16860	24.5
	45						6600	8290	10225	12405	14810	

PPS289LMHA1-4

65HZ	35				10645	13820	17480	21660	26385	31635	37370	24.5
	45				8840	11695	14980	18735	22960	27635		
50HZ	35				8320	10835	13755	17120	20955	25255	30000	24.5
	45					9160	11775	14795	18225	22065	26280	

CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY TITAN WITH VSD OUTDOOR CONDENSING UNIT (CONT'D)

Part Number	Ambient Temperature °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	

R134a - Medium/High Temperature Application (Cont'd)

PPS338LMHA1-4

65HZ	35				12500	16225	20515	25425	30980	37170	43960	24.5
	45				10405	13795	17690	22135	27145	32725	38830	
50HZ	35					12700	16110	20045	24540	29595	35180	24.5
	45					10790	13885	17455	21515	26060	31065	
30HZ	35						9935	12425	15305	18595	22285	24.5
	45							10805	13410	16375	19695	

PPS370LMA1-4

65HZ	35				14815	18865	23470	28660	34420	40715	47490	24.5
	45				12390	16075	20250	24925	30100			
50HZ	35				11635	14860	18575	22790	27515	32725	38360	24.5
	45				9730	12660	16025	19835	24095	28760		
30HZ	35					9205	11570	14295	17395	20865	24695	24.5
	45						9980	12445	15250	18375	21805	

PPS411LMA1-4

65HZ	35				16495	21035	26235	32130	38700	45915	53705	24.5
	45				13785	17900	22620	27965	33930			
50HZ	35				12940	16560	20745	25525	30895	36835	43295	24.5
	45				10795	14090	17890	22225	27085	32450	38280	
30HZ	35					10250	12905	15980	19490	23430	27785	24.5
	45						11120	13915	17095	20665	24590	

* Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment.

Part Number	Electrical Data 380-420 V 3 Ph 50 hz			Connections (mm)		Dimensions (mm)			Weight (kg)
	LRA (A/Ph)	RLA (A/Ph)	Input Power (Watts)	Suction	Liquid	Height	Width	Depth	
PPS152LMHA1-4	66.2	12.7	6,260	28.6	15.9	1094	1,846	840	279
PPS178LMHA1-4	89.1	15.4	7,340	34.9	15.9	1094	1,846	840	287
PPS205LMHA1-4	89.1	16.6	8,290	34.9	15.9	1094	1,846	840	304
PPS242LMA1-4	90.7	20.1	10,010	34.9	22.2	1,094	2,413	840	365
PPS289LMHA1-4	139.4	23.4	11,720	34.9	22.2	1,094	2,413	840	405
PPS328LMA1-4	113.4	25.7	13,750	34.9	22.2	1,094	2,413	840	405
PPS338LMHA1-4	174.1	28.1	14,700	34.9	22.2	1,094	2,413	840	425
PPS370LMA1-4	139.4	29.2	15,700	34.9	22.2	1,094	2,413	840	425
PPS411LMA1-4	174.1	33.7	18,870	34.9	22.2	1,094	2,413	840	425

RLA and Input Watts data are taken at - 5 °C SST / + 45 °C SCT with refrigerant R404A. For other refrigerants please contact your Heatcraft Representative

KIRBY CENTURION PACKAGED CONDENSING UNIT

The Kirby Centurion Condensing Unit provides an all-in-one solution for the commercial refrigeration and air conditioning sectors that require larger capacity systems. It offers the benefits of quick installation turnaround and energy efficiencies are gained from advanced technologies within the compressor and air cooled condenser. Designed as a smart solution for convenience stores, liquor stores, cold storage applications, control environment preparation rooms and also for the non-food industry, the Kirby Centurion showcases Heatcraft local know how in providing efficient, environmentally friendly and reliable cooling solutions for the Australasian market place.

Features & Benefits

- High efficiency Dorin 'H' Series semi hermetic compressors compatible with R404A, R134a and R407F refrigerants
- Optimised coil design featuring Kiby Blue Fin
- Fan speed control fitted as standard (EC fans are available as an option)
- System safety controls - including voltage phase protection
- Standard Traxoil system (4 & 6 fan models only. Optional on 3 fan models)
- Fully pre-wired for simplified installation
- Durable powder coated base and panels

Optional Enhancements

- Head fan
- Suction accumulator
- Traxoil (3 fan models)
- VSD kits
- EC condenser Fans



For a complete range of ancillary "KP Kits", view the product brochure at www.heatcraft.com.au, or contact your local Heatcraft branch on 13 23 50.

Part Number	Ambient Temp °C	Capacity (Watts) R404A *										Receiver Capacity (litres)
		Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	10	
PPS332LMHA1-4 H1501CC	35	8,660	11,225	14,160	17,535	21,405	25,775	30,630	35,915	41,520	47,315	40.0
	45	6,755	8,930	11,410	14,260	17,520	21,185	25,205	29,495	33,900		
PPS421LMA1-4 H1601CS	35	11,470	14,860	18,765	23,225	28,260	33,875	40,045				40.0
	45		11,885	15,195	18,980	23,255	27,990	33,115				
PPS477LMA1-4 H2000CS	35	12,395	16,315	20,785	25,865	31,570	37,875	44,710				40.0
	45		13,040	16,830	21,125	25,925	31,175	36,750				
PPS491LMHA1-2 H2500CC	35		16,115	20,810	26,210	32,355	39,270	46,945	55,345	64,390	73,910	75.0
	45		12,775	16,770	21,345	26,550	32,395	38,830	45,745	52,965		
PPS543LMA1-2 H2500CS	35	13,790	18,270	23,460	29,400	36,110	43,590	51,795				75.0
	45		14,640	18,990	24,000	29,695	36,010	42,790				
PPS551LMHA1 H3000CC	35	13,290	17,755	22,900	28,830	35,600	43,230	51,685	60,875	70,635	80,695	75.0
	45		14,010	18,380	23,415	29,160	35,595	42,635	50,120	57,790		
PPS740LMA1-2 H3000CS	35		24,490	31,255	39,030	47,855	57,715	68,560				75.0
	45			25,225	31,835	39,365	47,805	57,055				
PPS747LMHA1-2 H3500CC	35		24,305	30,930	38,605	47,405	57,360	68,460	80,650	93,805	107,700	75.0
	45			25,075	31,600	39,085	47,555	56,935	67,070	77,690		
PPS803LMA1-2 H3500CS	35	20,335	26,730	34,145	42,665	52,325	63,125	75,030				75.0
	45		21,185	27,465	34,700	42,945	52,155	62,140				
PPS825LMHA1-2 H4000CC	35	20,855	27,210	34,530	42,950	52,550	63,365	75,370	88,480	102,490	117,010	75.0
	45		21,755	28,015	35,195	43,390	52,580	62,660	73,405	84,450		
PPS950LMA1-2 H4500CS	35	25,245	32,625	41,075	50,715	61,580	73,650	86,805				75.0
	45		26,365	33,560	41,745	50,930	61,030	71,825				

Inherent Subcooling, 20 °C Return Gas



CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY CENTURION PACKAGED CONDENSING UNIT (CONT'D)

Part Number	Ambient Temp °C	Capacity (Watts) R134a								Receiver Capacity (litres)
		Evaporating Temperature °C								
		-25	-20	-15	-10	-5	0	5	10	
PPS332LMHA1-4 H1501CC	35		10850	13930	17440	21450	25990	31100	34700	40.0
	45		9220	12010	15210	18850	22980	27620	43150	
PPS421LMA1-4 H1601CS	35		14300	18240	22730	27830	33570	39940	44130	40.0
	45		11910	15500	19650	24310	29510	35240	49450	
PPS477LMA1-4 H2000CS	35		15340	20140	25590	31730	38590	46200	51410	40.0
	45		12850	17080	21940	27500	33730	40630	62950	
PPS373MHA1-4 H2500CS	35		18530	23730	29530	35980	43120	50940	55910	40.0
	45		15800	20450	25680	31500	37890	44830	84870	
PPS543LMA1-2 H2500CS	35		18,380	23,605	29,625	36,495	44,235	52,810	62,140	40.0
	45		15,465	20,225	25,690	31,905	38,880	46,575	54,900	
PPS492MHA1-2 H3000CS	35	17,880	23,550	30,065	37,535	46,000	55,455	65,855	77,175	40.0
	45	14,545	19,690	25,590	32,340	39,970	48,460	57,745		
PPS803LMA1-2 H3500CS	35		27,175	34,980	43,990	54,285	65,895	78,765	92,735	75
	45		22,750	29,845	38,020	47,340	57,800	69,345	81,885	
PPS950LMA1-2 H4500CS	35	24,345	32,245	41,375	51,890	63,875	77,330	92,140	108,065	75
	45		26,870	35,200	44,790	55,690	67,890	81,315		

* Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment.
Inherent Subcooling, 20 °C Return Gas

Part Number	Electrical Data 380-420 V 3 Ph			Connections (mm)		Dimensions (mm)			Weight (kg)
	LRA (A/Ph)	RLA (A/Ph)	Input Power (Watts)	Suction	Liquid	Height	Width	Depth	
PPS 332 LMHA1-4	170.5	32.5	14,520	41.3	22.2	1,090	1,005	3,300	500
PPS 373 LMHA1-4**	206.0	33.6	13,340	41.3	22.2	1,090	1,005	3,300	570
PPS 421 LMA1-4	170.5	38.1	18,690	41.3	22.2	1,090	1,005	3,300	565
PPS 477 LMA1-4	177.0	41.1	21,070	41.3	22.2	1,090	1,005	3,300	570
PPS 491 LMHA1-2	213.6	44.6	20,910	54.0	28.0	1270	2230	2500	920
PPS 492 MHA1-2**	255.6	42.1	17,810	54.0	28.0	1270	2230	3240	920
PPS 543 LMA1-2	213.6	36.2	24,860	54.0	28.0	1270	2230	2500	920
PPS 551 LMHA1-2	255.6	49.3	23,520	54.0	28.0	1270	2230	2500	920
PPS 740 LMA1-2	260.9	67.1	33,500	54.0	28.0	1270	2230	3240	1070
PPS 747 LMHA1-2	275.9	66.5	31,980	54.0	28.0	1270	2230	3240	1070
PPS 803 LMA1-2	275.9	72.5	37,090	54.0	28.0	1270	2230	3240	1070
PPS 825 LMHA1-2	305.9	69.8	35,430	54.0	28.0	1270	2230	3240	1080
PPS 950 LMA1-2	305.9	81.0	42,600	54.0	28.0	1270	2230	3240	1090

RLA and Input Watts data are taken at -5 °C SST / +45 °C SCT with refrigerant R404A.

** For PPS373LMHA1-4 and PPS492MHA1-3 the RLA and Input Watts data are taken at -5 °C SST / +45 °C SCT with refrigerant R134a.

For other refrigerants please contact your Heatcraft Representative

KIRBY E-COMPACT CO₂ CONDENSING UNIT

The Kirby e-Compact CO₂ Condensing Units is a low temperature CO₂ cascade refrigeration system offering significantly lower global warming potential and improved energy efficiency. Incorporating the Copeland Scroll Digital Compressor or Dorin semi-hermetic compressor fitted with inverter drive for optimum capacity control.

Features & Benefits

- Designed and manufactured by Heatcraft in Australia
- Fully pre-wired for simplified installation - plug and play
- Low noise and compact footprint ensures suitability for installation in tight spaces
- System safety controls - including voltage phase protection
- Durable powder coated base

**Optional Enhancements**

- Vertical legs raise the unit by 650mm

R744 Refrigeration Capacity						Minimum Capacity to Select High Stage Cond Unit.					Approx. Capacity to Select Optional Backup Cond Unit.		Receiver Capacity (litres)
R744 Capacity Data +/- 5 % based on calorimeter data where possible.		Capacity Table											
Part Number	SCT (R744)	SST (R744)				SST (R134a)	SST (R744)				SST (R134a)	Watts	
		-35	-30	-25	-20		-35	-30	-25	-20			
ECS703LP1-2 CDS181B	0	5390	6790	8350	10100	-4	7655	9135	10690	12370	-10	700	6.0
	-2	5600	7030	8630	10420	-6	7790	9280	10855	12560			
	-4	5820	7270	8910	10750	-8	7940	9430	11025	12760			
ECS890LP1-2 CDS301B	0	6870	8600	10530	12680	-4	9745	11550	13470	15520	-10	875	6.0
	-2	7130	8900	10870	13080	-6	9900	11730	13660	15750			
	-4	7400	9190	11210	13470	-8	10070	11895	13850	15970			
ECZ872LP1-2 ZOD34KCE-TFD	0	6910	8470	10250		-4	9670	11265	13060		-10	850	6.0
	-2	7120	8720	10550		-6	9765	11400	13240				
	-4	7330	8960	10850		-8	9870	11530	13440				

* Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment.

Part Number	Electrical Data 380-420 V 3 Ph			Connections (mm)		Dimensions (mm)			Weight (kg)
	LRA (A/Ph)	RLA (A/Ph)	Input Power (Watts)	Suction	Liquid	Height	Width	Depth	
ECS703LP1-2	20	3.6	1870	28.58	12.7	850	980	810	370
ECS890LP1-2	24.5	4.5	2330	28.58	12.7	850	980	810	375
ECZ872LP1-2	26	4.0	2200	28.58	12.7	850	980	810	350

RLA at -30 °C SST & -2 °C SCT. LRA value is for compressor only.

CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)

KIRBY DROP IN PACKAGED UNITS

The Kirby Drop-in unit range will make it easier for you to install and complete your project. All Kirby Drop-In units include a Dixell control installed as standard on all models, plus the medium temperature application units come with an extended cable for remote mounting of the digital thermostat.

Features & Benefits

- All units are ready to install straight from the box - plug and play
- Dixell XW60K electronic thermostat control installed on all models.
- Evaporator coil corrosion protection and pressure safety control
- All units designed for reduced refrigerant charge
- Medium Temperature Units feature off cycle defrost
- Low Temperature Units feature real time electric defrost with temperature switch termination and a low pressure safety switch



Electronic controls on all units - Larger models have additional cable to mount the control at the door.

Part Number	Ambient Temperature °C	Capacity (Watts) *						Refrigerant Charge (gm)	Air Flow (l/s)	HP
		Air On Temperature								
		0	2	4	6	8	10			

R134a Medium Temperature - Low Profile

KPC800-6	35	690	750	810	870	940	1,010	910	165	1/3
	45	570	630	680	740	800	870			
KPC1000-6	35	920	990	1,080	1,160	1,260	1,360	1000	235	3/8
	45	760	840	920	1,000	1,090	1,180			
KPC1400-6	35	1,270	1,370	1,480	1,590	1,710	1,830	1190	270	5/8
	45	1,090	1,180	1,280	1,380	1,490	1,600			
KPC1700-6	35	1,470	1,570	1,690	1,810	1,950	2,090	1190	270	3/4
	45	1,260	1,360	1,460	1,570	1,700	1,820			

R134a Medium Temperature - Standard

KSC2000-6	35	1,870	2,010	2,170	2,310	2,500	2,690	1710	388	1
	45	1,600	1,740	1,890	2,050	2,210	2,380			
KSC2700-6	35	2,380	2,580	2,800	3,030	3,260	3,510	1990	750	1-1/4
	45	1,980	2,170	2,380	2,590	2,810	3,040			
KSC3500-6	35	3,030	3,290	3,550	3,830	4,120	4,420	2420	760	1-1/2
	45	2,570	2,800	3,040	3,300	3,580	3,860			

Part Number	Ambient Temperature °C	Capacity (Watts)				Refrigerant Charge (gm)	Air Flow (l/s)	HP
		Air On Temperature						
		-25	-20	-15	-10			

R404A Low Temperature - Low Profile

KPF1000-4	35	455	645	870	1,060	975	235	3/4
	43	290	460	680	905			
KPF1200-4	35	555	790	1,065	1,295	820	235	1
	43	355	565	830	1,110			

CONDENSING UNITS & PACKAGED SYSTEMS (CONT'D)**KIRBY DROP IN PACKAGED UNITS (CONT'D)****R404A Low Temperature - Standard**

KSF1500-4	35	735	1,050	1,410	1,720	1450	530	1-1/4
	43	470	745	1,100	1,470			
KSF2000-4	35	950	1,355	1,820	2,220	1500	750	1-1/2
	43	610	965	1,420	1,900			
KSFT2600-4	35	1,225	1,745	2,345	2,865	1700	820	2
	43	785	1,245	1,835	2,450			



Copeland®



Part Number	Electrical Data 240 V 1 Ph			Dimensions (mm)			Weight (kg)
	LRA (A/Ph)	RLA (A/Ph)	MCC (A/Ph)	Height	Width	Depth	
KPC800-6	13.9	3.9	4.9	500	890	500	35
KPC1000-6	14.4	4.4	5.4	577	1117	507	50
KPC1400-6	31.9	4.6	5.5	577	1117	507	65
KPC1700-6	35.9	6.4	8.0	577	1117	507	65
KSC2000-6	35.9	5.8	7.5	950	705	595	112
KSC2700-6	44.8	8.7	11.2	996	1150	730	145
KSC3500-6	44.8	9.7	12.5	1057	1150	730	177
KPF1000-4	30	4.2	7.7	577	1117	507	48
KPF1200-4	36	6.7	8.9	577	1117	507	60
KSF1500-4	43	7.9	10.9	964	705	595	108
KSF2000-4	43	10.6	14.1	996	1150	730	155

* Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment.

Part Number	Electrical Data 415 V 3 Ph			Dimensions (mm)			Weight (kg)
	LRA (A/Ph)	RLA (A/Ph)	MCC (A/Ph)	Height	Width	Depth	
KSFT 2600 - 4	38.3	6.4	10.1	1067	1150	730	160

RLA data are taken at -15 °C air on, +32 °C ambient condition for L/T application units

KIRBY MULTIWAVE CASCADE CO₂/HFC SYSTEM

The Kirby Multiwave offers the supermarket and cold storage segments a CO₂ refrigeration solution that has the potential to deliver a 30% saving across the refrigeration plant costs. The reduction in plant costs come through the elimination of a conventional central plant room, which can cost in excess of \$60,000 in construction costs. The innovative design includes a low-medium temperature multi-compressor rack system, condenser and fully configured switchboard all-in-one, so it's delivered to site 'ready-to-install.' The addition of EC motors and compressor speed variation further enhance efficiency. The compact design is ideal for installations where space may be a problem.

Features & Benefits

- Copeland Scroll Digital or Dorin semi-hermetic compressor fitted with inverter drive
- Compact footprint
- Fully pre-wired for simplified installation

Application Range

- Low temperature 10 kW - 35 kW
- Medium temperature 30 kW - 100 kW





Your HVAC&R Business Partner

A customised offer

At Heatcraft, we not only supply an extensive range of standard off-the-shelf Kirby® equipment, but we are also able to work with you to manufacture customised equipment when your project requires a unique solution.

Kirby® made to order compressor racks are designed and built to meet AU/NZ standards. They are supplied fully featured and offer contractors and end users great value through high performance, low maintenance and ease of installation.

Our equipment can be tailored to various Refrigeration & HVAC applications, meeting your installation and refrigerant requirements. Refrigerant options range from (R744) CO₂ to HFC variants with leading innovation to support new generation refrigerants.

When you select Kirby®, you reap the rewards;

- Design standards that exceed expectations
- Assured design compliance with local standards
- Maximum system efficiency through advanced compressor technologies
- System integration with fully wired system options and control supply/configurations packages
- Capital cost solutions to meet all types of projects and budgets
- Extended warranty options and after-market support
- Compressors, components and refrigerants are fully supported by the Heatcraft Wholesale Network.



13 23 50

heatcraft.com.au



WATER COOLERS

TEMPRITE WATER COOLERS

Features & Benefits

- All models charged with HFC R134a Refrigerant
- Anti-surge protection on filtered models includes:
 - Pressure relief valve rated at 750 kPa
 - Open vented style glass filler
 - Pressure relief via glass filler to drain



Part Number	Description	Capacity	Dimensions (mm)		
		Glasses / Hr	Width	Depth	Height

Free Standing Upright Models

60831	Stainless Steel, With Bubbler	60	350	350	903
68831	Stainless Steel, With Bubbler	90	350	350	903
62831	Stainless Steel, With Bubbler	160	350	350	903
60833	Stainless Steel, With Bubbler & Glass Filler	60	350	350	903
68833	Stainless Steel, With Bubbler & Glass Filler	90	350	350	903
62833	Stainless Steel, With Bubbler & Glass Filler	160	350	350	903
68838	Stainless Steel with Bubbler, Glass Filler, Filter & Surge Protector	90	350	350	903

Under Bench Models

63802	With Bubbler and Glass Filler	160	348	348	401
63807	With Bubbler, Glass Filler & Filter	160	348	348	401

Part Number	Description
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Common Spare Parts

107710	Bubbler Assembly - All Models
81001	In Line Filter
Z-3019	Glass Filler Z-3019
90224	Thermostat - All Models
GH00020	Fan Motor Glass Chiller
11-55299-01	Filter HSG AP11S Opaque
107711	Cartridge Suit Kelv Bubbler
AP110	Filter Cartridge AP110 2 PK
778818	Black Handle - Gooseneck Tap 778818

WATER COOLERS (CONT'D)

AQUA COOLER MAINS CONNECTED DRINKING WATER FOUNTAINS

Features & Benefits

- Industrial grade 304 stainless steel water tank
- Robust construction to ensure longevity
- Polished stainless steel top
- Front panel removes for ease of servicing
- Tamper proof non-squirt bubbler
- Colour-bond cabinet

Optional Enhancements

- Stainless steel cabinet
- Proprietary carbon block water filter
- Glass filler

AQUA
COOLER



Part Number	Description	Capacity	Glass Filler	Cabinet	Filtered	Dimensions (mm)		
		Litres per hour		Colourbond / Stainless Steel		Height	Width	Depth
M2-AQUA	Bubbler Iron Stone 10 L	10	No	Colour-bond	No	1080	305	305
M2F-AQUA	Bubbler Iron Stone 10 L W/F	10	No	Colour-bond	Yes	1080	305	305
M3-AQUA	Bubbler & GF Iron Stone 10 L	10	Yes	Colour-bond	No	1130	305	305
M3F-AQUA	Bubbler & GF Iron Stone 10 L W/F	10	Yes	Colour-bond	Yes	1130	305	305
M4-AQUA	Bubbler Iron Stone 19 L	19	No	Colour-bond	No	1080	305	305
M4F-AQUA	Bubbler Iron Stone 19 L W/F	19	No	Colour-bond	Yes	1080	305	305
M4FSS-AQUA	Bubbler Stainless Steel 19 L W/F	19	No	Stainless Steel	Yes	1080	305	305
M4SS-AQUA	Bubbler Stainless Steel 19 L	19	No	Stainless Steel	No	1080	305	305
M5-AQUA	Bubbler & GF Iron Stone 19 L	19	Yes	Colour-bond	No	1130	305	305
M5F-AQUA	Bubbler & GF Iron Stone 19 L W/F	19	Yes	Colour-bond	Yes	1130	305	305
M5FSS-AQUA	Bubbler & GF Stainless Steel 19 L W/F	19	Yes	Stainless Steel	Yes	1130	305	305
M5SS-AQUA	Bubbler & GF Stainless Steel 19 L	19	Yes	Stainless Steel	No	1130	305	305
M10-AQUA	Bubbler Iron Stone 26 L	26	No	Colour-bond	No	1080	305	305
M10F-AQUA	Bubbler Iron Stone 26 L W/F	26	No	Colour-bond	Yes	1080	305	305
M10FSS-AQUA	Bubbler Stainless Steel 26 L W/F	26	No	Stainless Steel	Yes	1080	305	305
M10SS-AQUA	Bubbler Stainless Steel 26 L	26	No	Stainless Steel	No	1080	305	305
M11-AQUA	Bubbler & GF Iron Stone 26 L	26	Yes	Colour-bond	No	1130	305	305
M11F-AQUA	Bubbler & GF Iron Stone 26 L W/F	26	Yes	Colour-bond	Yes	1130	305	305
M11FSS-AQUA	Bubbler & GF Stainless Steel 26 L W/F	26	Yes	Stainless Steel	Yes	1130	305	305
M11SS-AQUA	Bubbler & GF Stainless Steel 26 L	26	Yes	Stainless Steel	No	1130	305	305

ICE MACHINES

ZANUSSI ICE MACHINES

Features & Benefits

- Crystal clear ice cubes
- Easy Installation
- Simple thermostat operation
- Electromechanical (No PC boards)
- 2 years warranty – parts & labour
- Suitable for high temperature environments
- Parts available from leading refrigeration wholesalers nationwide
- HACCP compliant – easy clean

ZANUSSI
 PROFESSIONAL


Part Number	Cube Type	Type	Ice Produced (kg/24hr)	Dimensions W x D x H (mm)
CIM 24A	18 g Cube	Self-Contained	21	345 x 400 x 590
CIM 29A	18 g Cube	Self-Contained	28	390 x 460 x 690
CIM 38A	18 g Cube	Self-Contained	33	500 x 580 x 800
CIM 50A	18 g Cube	Self-Contained	46	500 x 580 x 910
CIM 67A	18 g Cube	Self-Contained	65	738 x 600 x 920
CIM 85A	18 g Cube	Self-Contained	80	738 x 600 x 920
FIM 94A	Flaker	Self-Contained	90	550 x 660 x 800
229UJO	Flaker	Self-Contained	90	550 x 660 x 800
CIM143AS	18 g Cube	Self-Contained	130	840 x 740 x 1075
ZAN 350A	7 g	Head Only	140	540 x 544 x 747
CB1565	13 g	Self-Contained	155	840 x 740 x 1075
ZAN 500A	7 g	Head Only	200	770 x 550 x 805
ZANG 250A	Flaker	Head Only	250	640 x 470 x 700
ZAN 900A	7 g	Head Only	400	770 x 550 x 805
ZANG 500A	Flaker	Head Only	500	640 x 700 x 700
BIN 200	Ice Bin	Bin Only	-	870 x 790 x 1000
BINT 350 YM9	Ice Bin	Bin Only	-	1250 x 790 x 1000
ZAN 1700	7 g	Head Only	770	1250 x 645 x 950

APPROXIMATE QUICK REFERENCE SIZING GUIDE BY CUSTOMER VOLUME

Application: Daily ice use	Customer Quantity: Figures include 20% safety factor			
	100 (kg)	250 (kg)	500 (kg)	1000 (kg)
Restaurant: 608 g ice per meals sold	82	205	410	820
Cocktail Bar: 1.3 kg ice per seat	163	408	816	1632
Beverage Only: 142 g per (10 oz) 285 ml cup	17	43	85	170
Beverage Only: 70 g per (12 oz) 340 ml glass/cup	20	51	102	204
Beverage Only: 227g per (16 oz) 454 ml glass/cup	27	68	137	272
Beverage Only: 340 g per (24 oz) 680 ml glass/cup	41	103	204	408
Hotel/Function Catering: 454 g per person	54	136	272	544
Hospitals: 4.5 g per patient	544	1361	2722	5444
Cafeteria: 454 g per person	54	136	272	544
Catering: 450 g per person	45	112.5	225	450

ICE MACHINES (CONT'D)

MANITOWOC ICE MAKERS

No one knows ice better than Manitowoc.

Building the perfect ice machine wasn't easy, but inside-of-the-box thinking is just what you've come to expect from Manitowoc®. Manitowoc has combined intuition and innovation for the perfect ice machine. Manitowoc call it Indigo, you'll call it "ice assurance" because you'll never have to worry about ice again. The Indigo™ un-complicates everything about the ice making process. State-of-the-art diagnostics provide constant and reliable monitoring of refrigeration systems. In turn, that information is used to improve energy management, set proper ice production levels, streamline cleaning processes, ease food safety concerns, maintain ice quality, and quickly display up-to-date service information. No one knows ice better than Manitowoc, that's why all you need to know is that with the Indigo, great tasting ice will be waiting for you when you need it most.



Part Number	Description	Ice Production* (kg)	Ice Storage (kg)	Ice Type	Power Supply	Dimensions (mm) Height x Width x Depth
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The Little Guys

Suited to on-the-spot installations at coffee shops, stadium boxes, refreshment break areas, or wherever limited ice needs require equipment with a small footprint.

UG30	Includes Ice Bin	31	10	Gourmet	10A/1ph	650 x 450 x 475
UG50	Includes Ice Bin	57	25	Gourmet	10A/1ph	800 x 550 x 550
UG80	Includes Ice Bin	65	44	Gourmet	10A/1ph	900 x 700 x 600
QM45	Includes Ice Bin	40	14	Dice	10A/1ph	942 x 500 x 567
U140	Includes Ice Bin	55	40	Dice/Half Dice	10A/1ph	978 x 660 x 711
U190	Includes Ice Bin	79	36	Dice/Half Dice	10A/1ph	978 x 660 x 711
U240	Includes Ice Bin	87	36	Dice/Half Dice	10A/1ph	978 x 660 x 711
U310	Includes Ice Bin	132 Dice 135 Half Dice 120 Regular	45	Dice/Half Dice/ Regular	10A/1ph	978 x 762 x 711

To Fit Tight Spaces

Use these slender 55.9 cm wide models to save valuable floor space.

I322	Head Only	146 Dice 152 Half Dice	~	Dice/Half Dice	10A/1ph	546 x 558 x 622
I522	Head Only	207 Dice 211 Half Dice	~	Dice/Half Dice	10A/1ph	546 x 558 x 622

Our Regular Machines

Ideal for restaurants, hotels, motels, and a wide variety of commercial applications. The most popular size for mounting on storage bins, or floor-standing dispensers.

I450	Head Only	183	~	Dice	10A/1ph	546 x 762 x 622
I500	Head Only	218	~	Regular	10A/1ph	546 x 762 x 622
I606	Head Only	275 Dice 277 Half Dice	~	Dice/Half Dice	10A/1ph	546 x 762 x 622
I906	Head Only	381 Dice 409 Half Dice	~	Dice/Half Dice	15A/1ph	673 x 762 x 622
I1106	Head Only	497 Dice 523 Half Dice	~	Dice/Half Dice	15A/1ph	673 x 762 x 622
I1200	Head Only	479 Dice 525 Half Dice	~	Dice/Half Dice	20A/1ph (hard wired)	749 x 762 x 622

MANITOWOC ICE MAKERS (CONT'D)

Part Number	Description	Ice Production* (kg)	Ice Storage (kg)	Ice Type	Power Supply	Dimensions (mm) Height x Width x Depth
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The Big Guys

121.9cm ice machine models are perfect for fast-food outlets, full-service restaurants, institutional kitchens, cafeteria's, and other foodservice operations requiring continuous large-volume ice production.

I1400	Head Only	653 Dice 675 Half Dice	~	Dice/Half Dice	20A/1ph (hard wired)	673 x 1219 x 622
I1800	Head Only	801 Dice 810 Half Dice	~	Dice/Half Dice	25A/1ph (hard wired)	749 x 1219 x 622
S3070	Head Only	1203	~	Dice	15A/1ph (hard wired) CDU 15A/1ph	749 x 1219 x 622

**Flake Ice**

Flake ice is small hard bits of ice ideally suited for any "contact" presentation. It forms completely around the contact item and cools quickly.

RF0266A	Includes Ice Bin	77	27	Flaker	10A/1ph	978 x 660 x 673
RF0385A	Includes Ice Bin	152	40	Flaker	10A/1ph	1003 x 738 x 690
RF0644A	Includes Ice Bin	312	54	Flaker	10A/1ph	1167 x 741 x 678
RFS0300A	Head Only	174	~	Flaker	15A/1ph	660 x 559 x 600
RFS0650A	Head Only	290	~	Flaker	15A/1ph	660 x 559 x 600
RFS1200A	Head Only	545	~	Flaker	15A/1ph	696 x 760 x 600
RF2300A	Head Only	1039	~	Flaker	15A/1ph	700 x 944 x 683

Ice Bins

Internal scoop holder stays above ice line, promoting easy access and better sanitation. Bin door holds open while in use via a patented hinge pin design.

BIN A320	Suit I322	~	95	~	~	1117 x 559 x 864
BIN A400	Suit I450 & I500	~	132	~	~	1117 x 762 x 864
BIN A420	Suit I322 & I422	~	141	~	~	1422 x 559 x 864
BIN A570	Suit I450 up to I1200	~	195	~	~	1422 x 559 x 864
K-00365	Adaptor Plates for A570 Bin	~	~	~	~	~
BIN A970	Suit S850 up to S1800	~	322	~	~	1422 x 1219 x 864
K-00370	Adaptor Plates for A970 Bin	~	~	~	~	~
BIN F700	Suit RF2300, S1400, S1800	~	308	~	~	1485 x 762 x 787
BIN F1300	Suit RF2300, S1400, S1800	~	600	~	~	1612 x 1219 x 787

* Kilos produce per day. Approximate ice-making capacity based on air cooled condensing unit. Nominated production is based on 21°C air/10°C water.

ICE MACHINES (CONT'D)

BREMA ICE MACHINES

Since 1985 Brema have considered ice as an evolution of water, designing it into forms suitable to meet every need. The requirements and features of each market are the principles on which Brema have developed their range of products.

By studying the ice properties Brema developed different forms to satisfy the demands and needs of each sector. The machines are used in the retail, transport, food preservation, fish, bakery, dairy, chemical, pharmaceutical, medical, sports, wellness, industrial and construction sectors.



Part Number	Description	Cube Type	Type	Ice Produced (kg/24hr)	Dimensions (mm)		
					Width	Depth	Height
CB184	Brema 21 kg Self-Contained Ice Maker	Cube Ice	Self contained	22	355	404	590
CB249	Brema 28 kg Self-Contained Ice Maker	Cube Ice	Self contained	29	390	460	690
CB316	Brema 33 kg Self-Contained Ice Maker	Cube Ice	Self contained	35	500	580	690
CB416	Brema 42 kg Self-Contained Ice Maker	Cube Ice	Self contained	44	500	580	690
CB640	Brema 65 kg Self-Contained Ice Maker	Cube Ice	Self contained	67	738	600	920
CB840	Brema 80 kg Self-Contained Ice Maker	Cube Ice	Self contained	85	738	600	920
CB955	Brema 90 kg Self-Contained Ice Maker	Cube Ice	Self contained	95	738	600	1020
CB1265	Brema 130 kg Self-Contained Ice Maker	Cube Ice	Self contained	130	840	740	1075
GB902	Brema 90 kg Self-Contained Ice Flaker	Flake Ice	Self contained	95	500	660	690
GB903	Brema 90 kg Self-Contained Ice Flaker	Flake Ice	Self contained	95	500	660	800
G280	Brema 280 kg Ice Flaker Head	Flake Ice	Head Only	280	560	569	695
G510	Brema 510 kg Ice Flaker Head	Flake Ice	Head Only	510	560	569	695
VM350	Brema 140 kg Ice Maker Head	Fast Ice	Head Only	140	540	544	747
VM500	Brema 200 kg Ice Maker Head	Fast Ice	Head Only	200	770	550	805

Evaporators & Condensers

EVAPORATORS

KIRBY CABINET COOLERS

With a smart and functional design, Heatcraft has delivered a range of Cabinet Coolers to give you more top shelf cabinet space and greater cabinet storage capability. With low noise levels, the Kirby Cabinet Coolers are efficient as well as inconspicuous.

Features

- Compact, low profile design which gives more shelf space
- Removable, discreet drain tray which is easily removed for cleaning and service
- Heat exchanger with rifled bore tubing for high performance and exceptional oil return
- Fan motors which can be easily removed for servicing
- E-Kote coil protection for protection against the elements (medium temperature coolers only)
- Larger capacity twin blower coolers, suitable for larger sized cabinets
- Suitable for high and medium temperature applications where a defrost heater is not required



Part Number	Description	Capacity W @ 6KTD		Air Flow		Motors (Max) 1 Phase (amps)	Dimensions (mm)			Nett Weight (kg)	TX Valve
		R404A	R134a	(l/s)	Fans Dia. & Qty		Width	Height	Depth		

Medium Temperature

KC301	CAB. COOLER (NORM TEMP)	360	320	72	178 x 1	0.26	420	125	390	3.9	Internal
KC401	CAB. COOLER (NORM TEMP)	490	420	77	178 x 1	0.26	420	125	390	4.2	Internal
KC550	CAB. COOLER (NORM TEMP)	630	520	110	178 x 2	0.43	526	130	410	5.9	Internal
KC651	CAB. COOLER (NORM TEMP)	730	600	105	178 x 2	0.47	526	130	410	6.5	Internal
KC750	CAB. COOLER (NORM TEMP)	850	700	120	178 x 2	0.43	526	130	410	6.7	Internal
KC1001	CAB. COOLER (NORM TEMP)	1180	970	165	178 x 3	0.72	796	130	410	7.9	Internal
KC1201	CAB. COOLER (NORM TEMP)	1280	1140	175	178 x 3	0.65	796	130	410	8.5	Internal
KC1350	CAB. COOLER (MED TEMP)	1580	1220	265	178 x 3	0.82	1010	185	400	14.0	External
KC1700	CAB. COOLER (MED TEMP)	1880	1460	380	200 x 3	0.67	1245	217	474	15.0	External
KC2100	CAB. COOLER (MED TEMP)	2350	1810	350	200 x 3	0.67	1245	217	474	18.0	External

Twin Blow

KCT400	CAB. COOLER (N/TEMP) TWIN	510	420	210	254 x 1	0.32	613	175	388	6.7	Internal
KCT600	CAB. COOLER (N/TEMP) TWIN	730	550	210	254 x 1	0.32	613	175	388	7.9	Internal
KCT800	CAB. COOLER (N/TEMP) TWIN	810	650	190	254 x 1	0.32	613	175	388	8.5	Internal
KCT1000	CAB. COOLER (N/TEMP) TWIN	1090	820	210	254 x 1	0.40	613	205	388	15.0	Internal
KCT1200	CAB. COOLER (N/TEMP) TWIN	1360	1070	230	254 x 1	0.40	1000	205	468	15.0	External
KCT1600	CAB. COOLER (N/TEMP) TWIN	1780	1340	280	300 x 1	0.30	1000	205	468	18.0	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on +2 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

EVAPORATORS (CONT'D)

KIRBY CABINET COOLERS (CONT'D)

Part Number	Description	Capacity @ 6KTD R404A	Air Flow		Motors (Max) 1 Phase (amps)	Dimensions (mm)			Heaters (Defrost) 240/1		Nett Weight (kg)	TX Valve
			(l/s)	Fans Dia. & Qty		Width	Height	Depth	(watts)	(amps)		

Low Temperature

KF450	CAB COOLER (LOW TEMP)	470	120	178 x 2	0.43	526	135	410	460	1.9	6.7	Internal
KF600	CAB COOLER (LOW TEMP)	620	160	178 x 3	0.72	796	135	410	720	3	7.9	Internal
KF750	CAB COOLER (LOW TEMP)	790	175	178 x 3	0.65	796	135	410	720	3	8.5	External
KF1000	CAB COOLER (LOW TEMP)	1170	270	178 x 3	0.82	1010	185	400	1225	5.1	15.0	External
KF1380	UNIT COOLER (LOW TEMP)	1470	380	200 x 3	0.67	1245	217	474	1700	7.1	15.0	External
KF1650	UNIT COOLER (LOW TEMP)	1710	350	200 x 3	0.67	1245	217	474	2200	9.2	18.0	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on -18 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

FRIGA-BOHN MH EVAPORATORS

The models in the MH range meet the requirements of small storage cold rooms, freezer and reach-in coolers. Sturdy casing made of sheet metal, with a low depth enabling optimum use of space in the cold room. Unit coolers specifically designed for performance in display cool-rooms for maximum retail space.

Features

- Low depth enables optimum use of storage space in the cold space and the visible display area
- The highly efficient and compact finned coils are designed with corrugated aluminium fins and internally grooved copper tubes
- The MH range has been designed for easy commissioning, maintenance and cleaning. The casing is fitted with hinges offering easy access to all elements of the ceiling unit cooler (coil, fan, defrost heater, connections). The electric heating elements are fitted in slots under the coil offering unimpeded front access which considerably simplifies maintenance.



Part Number	R404A watts @ 6KTD	R134a watts @ 6KTD	Air Flow (l/s)	Air Throw (m)	Fan Qty	Motors (Max) (amps)	Dimensions (mm)			Nett Weight (kg)
							Width	Depth	Height	

Medium Temperature

MH380RA-BAE	2703	2514	575	16	2	2 x 0.77	1531	607	228	35
MH460RA-BAE	3465	3223	952	16	3	3 x 0.77	2197	607	228	46
MH550RA-BAE	4010	3729	863	16	3	3 x 0.77	2197	607	228	48
MH770RA-BAE	5515	5129	1155	16	4	4 x 0.77	2499	607	260	57

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on +1 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

Part Number	R404A watts @ 6KTD	R134a watts @ 6KTD	Air Flow (l/s)	Air Throw (m)	Fan Qty	Motors (Max) (amps)	Dimensions (mm)			Nett Weight (kg)
							Width	Depth	Height	

Low Temperature

MH380EA	2018	N/A	575	16	2	2 x 0.77	1531	607	228	35
MH460EA	2427		952	16	3	3 x 0.77	2197	607	228	46
MH550EA	3045		863	16	3	3 x 0.77	2197	607	228	48
MH770EA	4063		1155	16	4	4 x 0.77	2499	607	260	57

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on -24 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

KIRBY TA EVAPORATORS

The twin air flow TA unit coolers with direct expansion or glycol water coils are designed for installation in cold rooms, air locks, laboratories, meat cutting and packing rooms, etc.

Features:

- High efficiency coil includes corrugated aluminium fins and grooved internal copper tubes, low velocity air discharge
- Intelligent housing design and drainage offers for superior drainage and hygienic performance
- The hinged drain pan offers improved accessibility to all the components and the housing is designed to accommodate installation of a condensate pump
- Glycol application available
- The casing with integrated fan guards offers improved aesthetics, perfect for open food preparation areas.



Part Number	R404A watts @ 10KTD	R134a watts @ 10KTD	Air Flow (l/s)	Air Throw (m)	Fan Qty	Motors (Max) (amps)	Dimensions (mm)			Nett Weight (kg)	TX Valve
							Width	Depth	Height		

Medium Temperature - 350mm Fan Diameter

TA1R6P-C	3930	3654	340	3.5	1	0.45	866	800	361	22.6	External
TA2R6P-C	6090	5664	779	3.5	2	0.9	1366	800	361	24.5	External
TA3R6P-C	7460	6938	727	3.5	2	0.9	1366	800	361	27.6	External
TA4R6P-C	8060	7496	683	3.5	2	0.9	1366	800	361	32.9	External
TA5R6P-C	11260	10472	1090	3.5	3	1.35	1866	800	379	36.4	External
TA6R6P-C	13210	12285	972	3.2	3	1.35	1866	800	379	45.3	External
TA7R6P-C	16320	15178	1366	3.7	4	1.8	2366	800	379	54.7	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on +10 °C air inlet temperature and 0 °C air inlet temperature

Part Number	Description
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Recommended condensate pump - single TA unit

SI33	SAUERMANN Condensate Pump
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EVAPORATORS (CONT'D)

KIRBY 9000 SERIES EVAPORATORS

The Kirby® 9000 Series Evaporator has been specifically designed to overcome the usual limitations of a typical compact coil design.

This low frost innovation uses a unique fin pattern to minimise latent load and maximise sensible load. Enhanced fin configuration means less moisture removal and vastly improved run times before ice formation. By increasing the ratio of fin surface to tube surface, the Kirby 9000 Series Evaporator maintains airflow as ice builds up and the coil is able to hold ice for longer. The result is stable room conditions, longer time between defrosts and greater energy efficiency.



Part Number	Capacity @ 6KTD		Air Flow (l/s)	Air Throw (m)	Fans Qty	Motors (Max) 1 Phase		Dimensions (mm)			Nett Weight (kg)	TX Valve
	R404A (watts)	R134a (watts)						Width	Depth	Height		
						(watts)	(amps)					
Medium Temperature - 300mm Fan Diameter												
KMT013W	1320	1150	380	7.2	1	73	0.32	750	470	430	9.4	Internal
KMT016W	1620	1410	360	6.9	1	73	0.32	750	470	430	10.3	Internal
KMT020W	2010	1750	340	6.5	1	73	0.32	750	470	430	11.5	External
KMT027W	2700	2350	760	10.5	2	146	0.64	1155	470	430	15.1	External
KMT034W	3400	2960	720	9.8	2	146	0.64	1155	470	430	16.9	External
KMT038W	3780	3290	680	9.3	2	146	0.64	1155	470	430	18.7	External
KMT051W	5050	4400	1080	12.1	3	219	0.96	1560	470	430	22.4	External
KMT060W	5960	5190	1020	11.5	3	219	0.96	1560	470	430	26	External
KMT067W	6650	5790	1440	13.6	4	292	1.28	1970	470	430	29.9	External
KMT081W	8050	7010	1360	12.9	4	292	1.28	1970	470	430	32.1	External
Medium Temperature - 350mm Fan Diameter												
KMT023W	2320	2020	700	8.8	1	155	0.65	850	470	545	14.7	External
KMT045W	4500	3920	1400	12.6	2	310	1.3	1485	470	545	25.3	External
KMT063W	6250	5440	1400	12.6	2	310	1.3	1485	470	545	26.3	External
KMT071W	7100	6180	1375	11.9	2	310	1.3	1485	470	545	30.4	External
KMT093W	9300	8100	2160	15.4	3	465	1.95	2060	470	545	37.7	External
KMT106W	10600	9230	2060	14.7	3	465	1.95	2060	470	545	42.6	External
KMT121W	12100	10530	1970	14.2	3	465	1.95	2060	470	545	47.6	External
KMT132W	13200	11490	2880	17.3	4	620	2.6	2630	470	545	49.5	External
KMT154W	15400	13410	2630	15.9	4	620	2.6	2630	470	545	63.7	External
KMT165W	16500	14360	3600	19.3	5	775	3.25	3200	470	545	60.5	External
KMT198W	19800	17230	3280	17.8	5	775	3.25	3200	470	545	77.5	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on +2 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".



KIRBY 9000 SERIES EVAPORATORS WITH HEATERS FITTED

Part Number	Capacity @ 6KTD		Air Flow (l/s)	Air Throw (m)	Fans Qty	Motors (Max) 1 Phase		Heaters (Defrost)				Nett Weight (kg)	TX Valve
	R404A (watts)	R134a (watts)						240/1		415/3			
						(watts)	(amps)	(watts)	(amps)	(watts)	(amps)		
Medium Temperature with Heater (wired) - 300mm Fan Diameter													
KMT013WH	1320	1150	380	7.2	1	73	0.32	900	3.75	-	-	9.8	Internal
KMT016WH	1620	1410	360	6.9	1	73	0.32	900	3.75	-	-	10.7	Internal
KMT020WH	2010	1750	340	6.5	1	73	0.32	900	3.75	-	-	12.0	External
KMT027WH	2700	2350	760	10.5	2	146	0.64	1800	7.5	-	-	15.7	External
KMT034WH	3400	2960	720	9.8	2	146	0.64	1800	7.5	-	-	17.6	External
KMT038WH	3780	3290	680	9.3	2	146	0.64	1800	7.5	-	-	19.4	External
KMT051WH	5050	4400	1080	12.1	3	219	0.96	-	-	2700	3.75	23.3	External
KMT060WH	5960	5190	1020	11.5	3	219	0.96	-	-	2700	3.75	27.0	External
KMT067WH	6650	5790	1440	13.6	4	292	1.28	-	-	3600	5	31.1	External
KMT081WH	8050	7010	1360	12.9	4	292	1.28	-	-	3600	5	33.4	External

Medium Temperature with Heater (wired) - 350mm Fan Diameter

KMT023WH	2320	2020	700	8.8	1	155	0.65	1600	6.67	-	-	15.3	External
KMT045WH	4500	3920	1400	12.6	2	310	1.3	-	-	3200	6.7	26.3	External
KMT063WH	6250	5440	1400	12.6	2	310	1.3	-	-	3200	6.7	27.4	External
KMT071WH	7100	6180	1375	11.9	2	310	1.3	-	-	3200	6.7	31.6	External
KMT093WH	9300	8100	2160	15.4	3	465	1.95	-	-	4800	10	39.2	External
KMT106WH	10600	9230	2060	14.7	3	465	1.95	-	-	4800	10	44.3	External
KMT121WH	12100	10530	1970	14.2	3	465	1.95	-	-	4800	10	49.5	External
KMT132WH	13200	11490	2880	17.3	4	620	2.6	-	-	6400	13.33	51.5	External
KMT154WH	15400	13410	2630	15.9	4	620	2.6	-	-	6400	13.33	66.2	External
KMT165WH	16500	14360	3600	19.3	5	775	3.25	-	-	8000	16.67	62.9	External
KMT198WH	19800	17230	3280	17.8	5	775	3.25	-	-	8000	16.67	80.6	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on +2 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

Part Number	Capacity @ 6KTD	Air Throw	Fans Qty	Motors (Max) 1 Phase		Heaters (Defrost)				Dimensions (mm)			Nett Weight (kg)	TX Valve
	240/1					415/3			Depth	Height				
	R404A (watts)	(m)		(watts)	(amps)	(watts)	(amps)				(watts)	(amps)		
Low Temperature - 300mm Fan Diameter														
KLT013W	1280	6.4	1	73	0.32	900	3.75		-	750	470	430	10.8	Internal
KLT015W	1470	6	1	73	0.32	900	3.75		-	750	470	430	11.8	Internal
KLT024W	2400	9.1	2	146	0.64	1800	7.5		-	1155	470	430	17.5	External
KLT028W	2780	8.6	2	146	0.64	1800	7.5		-	1155	470	430	19.4	External
KLT030W	3000	8.6	2	146	0.64	1800	7.5		-	1155	470	430	19.5	External
KLT036W	3600	11.2	3	219	0.96	-	-	2700	3.75	1560	470	430	24.4	External
KLT042W	4150	10.6	3	219	0.96	-	-	2700	3.75	1560	470	430	26.5	External
KLT062W	6200	11.9	4	292	1.28	-	-	3600	5	1970	470	430	34.6	External
Low Temperature - 350mm Fan Diameter														
KLT021W	2050	8.1	1	155	0.65	1600	6.67		-	850	470	545	15.5	External
KLT045W	4500	11.6	2	310	1.3	-	-	3200	6.67	1485	470	545	27.0	External
KLT050W	4950	11.6	2	310	1.3	-	-	3200	6.67	1485	470	545	27.8	External
KLT054W	5350	11	2	310	1.3	-	-	3200	6.67	1485	470	545	31.2	External
KLT067W	6650	14.3	3	465	1.95	-	-	4800	10	2060	470	545	38.1	External
KLT075W	7450	14.3	3	465	1.95	-	-	4800	10	2060	470	545	38.9	External
KLT089W	8900	13.6	3	465	1.95	-	-	4800	10	2060	470	545	44.5	External

EVAPORATORS (CONT'D)

KIRBY 9000 SERIES EVAPORATORS WITH HEATERS FITTED (CONT'D)

Part Number	Capacity @ 6KTD	Air Throw (m)	Fans Qty	Motors (Max) 1 Phase		Heaters (Defrost)				Dimensions (mm)			Nett Weight (kg)	TX Valve
	R404A (watts)					240/1		415/3		Width	Depth	Height		
				(watts)	(amps)	(watts)	(amps)	(watts)	(amps)					

Low Temperature - 350mm Fan Diameter (Cont'd)

KLT100W	10000	15.2	4	620	2.6	-	-	6400	13.33	2630	470	545	58.9	External
KLT113W	11300	15.2	4	620	2.6	-	-	6400	13.33	2630	470	545	63.0	External
KLT126W	12600	17.9	5	775	3.25	-	-	8000	16.67	3200	470	545	69.6	External
KLT136W	13600	17	5	775	3.25	-	-	8000	16.67	3200	470	545	77.8	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on -18 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

KIRBY SERIES 9000 EVAPORATORS WITH EC FANS

Superior energy efficiency ensures lower operating costs

Built smart, compact and tough, Kirby's 9000 Series with EC Fans offers leading performance, efficiency, high durability and a quiet operation. Building on this proven platform the addition of EC Fans enables better space temperature control whilst delivering average energy savings of 23 % on high fan speed and 69 % on low fan speed. When simulated over a 24 hour operation period this equals an approximated;

Saving of over 30% on fan energy and operating costs

Additional benefits of EC Fans include:

- Soft start feature reducing in-rush current and providing quieter start
- Longer service life due to lower bearing temperatures
- Plastic fan blade for quieter operation



Part Number	Max. Speed		Fan Motor Data 240V 50Hz 1 Phase				2nd Speed		Fan Motor Data 240V 50Hz 1 Phase				Fans Qty	TX Valve
	Cap. Watt @ 6KTD		Air Flow (l/s)	Air Throw (m)	Total		Cap. Watt @ 6KTD		Air Flow (l/s)	Air Throw (m)	Total			
	R404A	R134a			(watts)	(amps)	R404A	R134a			(watts)	(amps)		

Medium Temperature - 2 Speed EC Fan 300mm Fan Diameter

KMT013W-EC	1320	1148	380	7.2	55	0.47	1015	883	240	4.6	22	0.21	1	Internal
KMT016W-EC	1620	1409	360	6.9	56	0.49	1220	1061	220	4.4	22	0.21	1	Internal
KMT020W-EC	2010	1749	340	6.5	57	0.51	1520	1322	210	4.2	23	0.22	1	External
KMT027W-EC	2700	2349	760	10.3	112	0.94	2130	1853	480	6.4	44	0.42	2	External
KMT034W-EC	3400	2958	720	9.8	112	0.98	2625	2284	450	6.1	44	0.42	2	External
KMT038W-EC	3780	3289	680	9.3	114	1.02	2930	2549	420	5.9	46	0.44	2	External
KMT051W-EC	5050	4394	1080	12.1	168	1.47	3945	3432	690	7.6	66	0.63	3	External
KMT060W-EC	5960	5185	1020	11.5	171	1.53	4575	3980	650	7.2	69	0.66	3	External
KMT067W-EC	6650	5786	1440	13.6	224	1.96	5135	4467	900	8.6	88	0.84	4	External
KMT081W-EC	8050	7004	1360	12.9	228	2.04	5970	5194	850	8.3	92	0.88	4	External

Medium Temperature - 2 Speed EC Fan 350mm Fan Diameter

KMT023W-EC	2320	2018	700	8.8	140	1.04	1770	1540	430	5.4	41	0.35	1	External
KMT045W-EC	4500	3915	1400	12.6	280	2.08	3400	2958	880	7.7	82	0.7	2	External
KMT063W-EC	6250	5438	1400	12.6	280	2.08	4920	4280	880	7.7	82	0.7	2	External
KMT071W-EC	7100	6177	1375	11.9	284	2.1	5200	4524	840	7.3	84	0.72	2	External
KMT093W-EC	9300	8091	2160	15.4	420	3.12	7530	6551	1310	9.5	123	1.05	3	External
KMT106W-EC	10600	9222	2060	14.7	426	3.15	7880	6856	1250	9.1	126	1.08	3	External
KMT121W-EC	12100	10527	1970	14.2	429	3.18	8860	7708	1220	8.7	128	1.08	3	External



KIRBY SERIES 9000 EVAPORATORS WITH EC FANS (CONT'D)

Part Number	Max. Speed		Fan Motor Data 240V 50Hz 1 Phase				2nd Speed		Fan Motor Data 240V 50Hz 1 Phase				Fans Qty	TX Valve
	Cap. Watt @ 6KTD		Air Flow (l/s)	Air Throw (m)	Total		Cap. Watt @ 6KTD		Air Flow (l/s)	Air Throw (m)	Total			
	R404A	R134a			(watts)	(amps)	R404A	R134a			(watts)	(amps)		

Medium Temperature - 2 Speed EC Fan 350mm Fan Diameter (Cont'd)

KMT132W-EC	13200	11484	2880	17.3	560	4.16	10200	8874	1750	10.6	164	1.4	4	External
KMT154W-EC	15400	13398	2630	15.9	572	4.24	11350	9875	1620	9.8	170	1.44	4	External
KMT165W-EC	16500	14355	3600	19.3	700	5.2	12560	10927	2190	11.8	205	1.75	5	External
KMT198W-EC	19800	17226	3280	17.8	715	5.3	15100	13137	2030	10.9	212	1.8	5	External

CCAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on +2 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

KIRBY SERIES 9000 EVAPORATORS WITH EC FANS AND HEATERS FITTED

Part Number	Heater Defrost			
	Volts/Phase	Total Watts	Max. Amps/Ph	Connection

300mm Fan Diameter - MT Application with Heater (wired)

KMT013WH-EC	240 / 1	900	3.75	PARALLEL
KMT016WH-EC	240 / 1	900	3.75	PARALLEL
KMT020W-EC	240 / 1	900	3.75	PARALLEL
KMT027WH-EC	240 / 1	1800	7.5	PARALLEL
KMT034WH-EC	240 / 1	1800	7.5	PARALLEL
KMT038WH-EC	240 / 1	1800	7.5	PARALLEL
KMT051WH-EC	415 / 3	2700	3.75	STAR
KMT060WH-EC	415 / 3	2700	3.75	STAR
KMT067WH-EC	415 / 3	2700	3.75	STAR
KMT081WH-EC	415 / 3	3600	5	STAR

350mm Fan Diameter - MT Application with Heater (wired)

KMT023WH-EC	240 / 1	1600	6.67	PARALLEL
KMT045WH-EC	415 / 3	3200	6.67	STAR
KMT063WH-EC	415 / 3	3200	6.67	STAR
KMT071WH-EC	415 / 3	3200	6.67	STAR
KMT093WH-EC	415 / 3	4800	10	STAR
KMT106WH-EC	415 / 3	4800	10	STAR
KMT121WH-EC	415 / 3	4800	10	STAR
KMT132WH-EC	415 / 3	6400	13.33	STAR
KMT154WH-EC	415 / 3	6400	13.33	STAR
KMT165WH-EC	415 / 3	8000	16.67	STAR
KMT198WH-EC	415 / 3	8000	16.67	STAR



EVAPORATORS (CONT'D)

KIRBY SERIES 9000 EVAPORATORS WITH EC FANS

Part Number	Max. Speed Capacity watt @ 6KTD	Fan Motor Data 240V 50Hz 1 Phase				2nd Speed Capacity watt @ 6KTD		Fan Motor Data 240V 50Hz 1 Phase				Fans Qty	TX Valve
		Air Flow (l/s)	Air Throw (m)	Total				Air Flow (l/s)	Air Throw (m)	Total			
	R404A			(watts)	(amps)	R404A	R134a			(watts)	(amps)		

Low Temperature - 2 Speed EC Fan 300mm Fan Diameter

KLT013W-EC	1280	360	6.4	55	0.47	975	1005	220	4.1	22	0.21	1	Internal
KLT015W-EC	1470	340	6	56	0.49	1110	1145	210	3.9	22	0.21	1	Internal
KLT024W-EC	2400	720	9.1	112	0.94	1815	1870	450	5.6	44	0.42	2	External
KLT028W-EC	2780	680	8.6	112	0.98	2190	2260	420	5.4	44	0.42	2	External
KLT030W-EC	3000	680	8.6	114	1.02	2315	2385	420	5.4	46	0.44	2	External
KLT036W-EC	3600	1080	11.2	168	1.47	2795	2880	690	7	66	0.63	3	External
KLT042W-EC	4150	1020	10.6	171	1.53	3240	3340	650	6.6	69	0.66	3	External
KLT062W-EC	6200	1360	11.9	224	1.96	4635	4775	850	7.8	88	0.84	4	External

Low Temperature - 2 Speed EC Fan 350mm Fan Diameter

KLT021W-EC	2050	700	8.1	140	1.04	1520	1570	430	5	41	0.35	1	External
KLT045W-EC	4500	1400	11.6	280	2.08	3330	3430	880	7.2	82	0.7	2	External
KLT050W-EC	4950	1400	11.6	280	2.08	3810	3925	880	7.2	82	0.7	2	External
KLT054W-EC	5350	1375	11	284	2.1	4030	4155	840	6.8	84	0.72	2	External
KLT067W-EC	6650	2160	14.3	420	3.12	5070	5225	1310	8.8	123	1.05	3	External
KLT075W-EC	7450	2160	14.3	426	3.15	5440	5605	1310	8.8	126	1.08	3	External
KLT089W-EC	8900	2060	13.6	429	3.18	6710	6915	1250	8.4	128	1.08	3	External
KLT100W-EC	10000	2750	15.2	560	4.16	7840	8080	1520	9.4	164	1.4	4	External
KLT113W-EC	11300	2750	15.2	572	4.24	8790	9055	1520	9.4	170	1.44	4	External
KLT126W-EC	12600	3600	17.9	700	5.2	9230	9510	2190	11.1	205	1.75	5	External
KLT136W-EC	13600	3440	17	715	5.3	10200	10510	2030	10.5	212	1.8	5	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on -18 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

KIRBY SERIES 9000 EVAPORATORS WITH EC FANS AND HEATERS FITTED

Part Number	Heater Defrost			
	Volts/Phase	Total watts	Max. amps/Ph	Connection

300mm Fan Diameter - LT Application with Heater (wired)

KLT013W-EC	240 / 1	900	3.75	PARALLEL
KLT015W-EC	240 / 1	900	3.75	PARALLEL
KLT024W-EC	240 / 1	1800	7.5	PARALLEL
KLT028W-EC	240 / 1	1800	7.5	PARALLEL
KLT030W-EC	240 / 1	1800	7.5	PARALLEL
KLT036W-EC	415 / 3	2700	3.75	STAR
KLT042W-EC	415 / 3	2700	3.75	STAR
KLT062W-EC	415 / 3	3600	5	STAR

350mm Fan Diameter - MT Application with Heater (wired)

KLT021W-EC	240 / 1	1600	6.67	PARALLEL
KLT045W-EC	415 / 3	3200	6.67	STAR
KLT050W-EC	415 / 3	3200	6.67	STAR
KLT054W-EC	415 / 3	3200	6.67	STAR
KLT067W-EC	415 / 3	4800	10	STAR

KIRBY SERIES 9000 EVAPORATORS WITH EC FANS AND HEATERS FITTED (CONT'D)

Part Number	Heater Defrost			
	Volts/Phase	Total watts	Max. amps/Ph	Connection
350mm Fan Diameter - MT Application with Heater (wired) (Cont'd)				
KLT075W-EC	415 / 3	4800	10	STAR
KLT089W-EC	415 / 3	4800	10	STAR
KLT100W-EC	415 / 3	6400	13.33	STAR
KLT113W-EC	415 / 3	6400	13.33	STAR
KLT126W-EC	415 / 3	8000	16.67	STAR
KLT136W-EC	415 / 3	8000	16.67	STAR



KIRBY ULTRA LOW FROST EVAPORATORS

The Kirby Ultra Low Frost Evaporators are designed to provide maximum time between defrosts in situations where you have high humidity or high influx of moist outside air. Optimal fin design and spacing has been incorporated to minimise frost build up. Performance of these evaporators exceeds traditional designs.



Optional Enhancements

- Heater kits (KMT models only. Heaters standard on KLT models)

Part Number	Capacity @ 6KTD		Air Flow (l/s)	Air Throw (m)	Fans Qty	Motors (Max) 240V 1 Phase		Dimensions (mm)			Nett Weight (kg)	TX Valve
	R404A (watts)	R134a (watts)						Width	Depth	Height		
						(watts)	(amps)					
ULF Positive Temperature - 300mm Fan Diameter												
KMT020ULF	1425	1183	340	6.5	1	73	0.32	750	470	430	11.5	External
KMT027ULF	1820	1511	760	10.3	2	146	0.64	1155	470	430	15.1	External
KMT038ULF	2875	2386	680	9.3	2	146	0.64	1155	470	430	18.7	External
KMT060ULF	4485	3723	1020	11.5	3	219	0.96	1560	470	430	26.0	External
KMT081ULF	5550	4607	1360	12.9	4	292	1.28	1970	470	430	32.4	External
ULF Positive Temperature - 350mm Fan Diameter												
KMT023ULF	2120	1760	700	8.8	1	155	0.65	850	470	545	14.7	External
KMT063ULF	4700	3901	1400	12.6	2	310	1.30	1485	470	545	26.3	External
KMT071ULF	5905	4901	1375	11.9	2	310	1.30	1485	470	545	30.4	External
KMT093ULF	7165	5947	2160	15.4	3	465	1.95	2060	470	545	37.7	External
KMT121ULF	9685	8039	1970	14.2	3	465	1.95	2060	470	545	47.6	External
KMT140ULF	12090	10035	2750	16.4	4	620	2.60	2630	470	545	58.3	External
KMT198ULF	16785	13932	3280	17.8	5	775	3.25	3200	470	545	77.5	External

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EVAPORATORS (CONT'D)

KIRBY ULTRA LOW FROST EVAPORATORS

Part Number	Capacity @ 6KTD R404A (watts)	Air Flow (l/s)	Air Throw (m)	Fans Qty	Motors (Max)		Defrost Heaters			
					240V 1 Phase		240V 1 Phase		415V 3 Phase	
					(watts)	(amps)	(watts)	(amps)	(watts)	(amps)

ULF-H Negative Temperature - 300 mm Fan Diameter

KLT015ULF	1140	340	6.0	1	73	0.32	900	3.75	-	-
KLT018ULF	1455	760	9.6	2	146	0.64	1800	7.50	-	-
KLT028ULF	2300	680	8.6	2	146	0.64	1800	7.50	-	-
KLT042ULF	3585	1020	10.6	3	219	0.96	-	-	2700	3.75
KLT062ULF	4440	1360	11.9	4	292	1.28	-	-	3600	5.00

ULF-H Negative Temperature - 350 mm Fan Diameter

KLT021ULF	1695	700	8.1	1	155	0.65	1600	6.67	-	-
KLT050ULF	3760	1400	11.6	2	310	1.30	-	-	3200	6.67
KLT054ULF	4720	1375	11.0	2	310	1.30	-	-	3200	6.67
KLT075ULF	5730	2160	14.3	3	465	1.95	-	-	4800	10.00
KLT093ULF	7745	1970	13.1	3	465	1.95	-	-	4800	10.00
KLT113ULF	9675	2750	15.2	4	620	2.60	-	-	6400	13.33
KLT162ULF	13430	3280	16.5	5	775	3.25	-	-	8000	16.67

Part Number	Dimensions (mm)			Nett Weight (kg)	TX Valve
	Width	Depth	Height		

ULF-H Negative Temperature - 300 mm Fan Diameter (Cont'd)

KLT015ULF	750	470	430	12.0	External
KLT018ULF	1155	470	430	15.7	External
KLT028ULF	1155	470	430	19.4	External
KLT042ULF	1560	470	430	27.0	External
KLT062ULF	1970	470	430	33.7	External

ULF-H Negative Temperature - 350 mm Fan Diameter (Cont'd)

KLT021ULF	850	470	545	15.3	External
KLT050ULF	1485	470	545	27.4	External
KLT054ULF	1485	470	545	31.6	External
KLT075ULF	2060	470	545	39.2	External
KLT093ULF	2060	470	545	49.5	External
KLT113ULF	2630	470	545	60.6	External
KLT162ULF	3200	470	545	80.6	External

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KIRBY ULTRA LOW FROST EVAPORATORS WITH EC FANS

Kirby's Ultra Low Frosts Evaporators with EC Fans offers leading performance, efficiency, high durability and a quiet operation. Building on this proven platform the addition of EC Fans enables better space temperature control whilst delivering average energy savings of 23% on high fan speed and 69% on low fan speed. When simulated over a 24 hour operation period this equals an approximated;



Saving of over 30% on fan energy and operating costs

Additional benefits of EC Fans include:

- Soft start feature reducing in-rush current and providing quieter start
- Longer service life due to lower bearing temperatures
- Plastic fan blade for quieter operation

Optional Enhancements

- Heater kits (KMT models only. Heaters standard on KLT models)

Part Number	Max. Speed		Fan Motor Data 240V 50Hz 1 Phase				2nd Speed		Fan Motor Data 240V 50Hz 1 Phase				Fans Qty	TX Valve
	Cap. Watt @ 6KTD		Air Flow	Air Throw (m)	240V 1 Phase		Cap. Watt @ 6KTD		Air Flow	Air Throw (m)	240V 1 Phase			
	R404A	R134a			(watts)	(amps)	R404A	R134a			(watts)	(amps)		

Positive Temperature - 2 Speed EC Fan 300 mm Fan Diameter

KMT020ULF-EC	1425	1183	340	6.5	73	0.32	1095	909	220	4.2	22	0.21	1	External
KMT027ULF-EC	1820	1511	760	10.3	146	0.64	1415	1174	490	6.4	44	0.42	2	External
KMT038ULF-EC	2875	2386	680	9.3	146	0.64	2250	1868	430	5.9	46	0.44	2	External
KMT060ULF-EC	4485	3723	1020	11.5	219	0.96	3400	2822	680	7.2	69	0.66	3	External
KMT081ULF-EC	5550	4607	1360	12.9	292	1.28	4280	3552	870	8.3	92	0.88	4	External

Positive Temperature - 2 Speed EC Fan 350 mm Fan Diameter

KMT023ULF-EC	2120	1760	700	8.8	140	1.04	1620	1345	440	5.4	41	0.35	1	External
KMT063ULF-EC	4700	3901	1400	12.6	280	2.08	3500	2905	910	7.7	82	0.70	2	External
KMT071ULF-EC	5905	4901	1375	11.9	284	2.10	4420	3669	860	7.3	84	0.72	2	External
KMT093ULF-EC	7165	5947	2160	15.4	420	3.12	5260	4366	1360	9.8	123	1.05	3	External
KMT121ULF-EC	9685	8039	1970	14.2	429	3.18	7280	6042	1250	8.7	128	1.08	3	External
KMT140ULF-EC	12090	10035	2750	16.4	560	4.16	9100	7553	1710	10.1	164	1.40	4	External
KMT198ULF-EC	16785	13932	3280	17.8	715	5.30	12500	10375	2080	10.9	212	1.80	5	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on +2 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

Part Number	Max. Speed	Fan Motor Data 240V 50Hz 1 Phase				2nd Speed	Fan Motor Data 240V 50Hz 1 Phase				Fans Qty	TX Valve
	Cap. watt @ 6KTD	Air Flow	Air Throw (m)	240V 1 Phase		Cap. watt @ 6KTD	Air Flow	Air Throw (m)	240V 1 Phase			
	R404A			(watts)	(amps)				R404A	(watts)		

Negative Temperature - 2 Speed EC Fan 300 mm Fan Diameter

KLT015ULF-EC	1140		340	6.0	73	0.32	865		220	3.9	22	0.21	1	External
KLT018ULF-EC	1455		760	9.6	146	0.64	1130		490	5.9	44	0.42	2	External
KLT028ULF-EC	2300		680	8.6	146	0.64	1800		430	5.4	46	0.44	2	External
KLT042ULF-EC	3585		1020	10.6	219	0.96	2715		680	6.6	69	0.66	3	External
KLT062ULF-EC	4440		1360	11.9	292	1.28	3400		870	7.7	92	0.88	4	External

Negative Temperature - 2 Speed EC Fan 350 mm Fan Diameter

KLT021ULF-EC	1695		700	8.1	140	1.04	1280		440	5.0	41	0.35	1	External
KLT050ULF-EC	3760		1400	11.6	280	2.08	2980		910	7.2	82	0.70	2	External
KLT054ULF-EC	4720		1375	11.0	284	2.10	3590		860	6.8	84	0.72	2	External
KLT075ULF-EC	5730		2160	14.3	420	3.12	4370		1360	8.8	123	1.05	3	External
KLT093ULF-EC	7745		1970	13.1	429	3.18	5990		1250	8.1	128	1.08	3	External
KLT113ULF-EC	9675		2750	15.2	560	4.16	7340		1710	9.4	164	1.40	4	External
KLT162ULF-EC	13430		3280	16.5	715	5.30	10420		2080	10.2	212	1.80	5	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on -18 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

EVAPORATORS (CONT'D)

KIRBY ULTRA LOW FROST EVAPORATORS WITH EC FANS (CONT'D)

Part Number	Defrost Heaters			
	240V 1 Phase		415V 3 Phase	
	(watts)	(amps)	(watts)	(amps)
Negative Temperature - 2 Speed EC Fan 300 mm Fan Diameter				
KLT015ULF-EC	900	3.75	-	-
KLT018ULF-EC	1800	7.50	-	-
KLT028ULF-EC	1800	7.50	-	-
KLT042ULF-EC	-	-	2700	3.75
KLT062ULF-EC	-	-	3600	5.00
Negative Temperature - 2 Speed EC Fan 350 mm Fan Diameter				
KLT021ULF-EC	1600	6.67	-	-
KLT050ULF-EC	-	-	3200	6.67
KLT054ULF-EC	-	-	3200	6.67
KLT075ULF-EC	-	-	4800	10.00
KLT093ULF-EC	-	-	4800	10.00
KLT113ULF-EC	-	-	6400	13.33
KLT162ULF-EC	-	-	8000	16.67

KIRBY GLYCOL EVAPORATORS

The Kirby Glycol evaporator range has been engineered to achieve optimum functionality and high performance. Designed specifically for commercial and semi-industrial applications the Kirby Glycol range delivers ease of installation, quality and ultimate reliability.



Optional Enhancements:

- EC fan motors fitted

Part Number	Capacity @ 10KTD (watts)	Glycol Flow Rate (l/s)	Air Flow (l/s)	Air Throw (m)	Fans Qty	Motors (Max)				Dimensions (mm)			Nett Weight (kg)
						240V 1 Phase		415V 3 Phase		Width	Depth	Height	
						(watts)	(amps)	(watts)	(amps)				
Medium Temperature - 300 mm Fan Diameter													
KTM038G	2800	0.17	680	6.3	2	146	0.64	-	-	1155	470	430	21.7
KMT060G	4100	0.26	1020	9.9	3	219	0.96	-	-	1560	470	430	29.0
Medium Temperature - 350 mm Fan Diameter													
KMT071G	5700	0.35	1375	11.1	2	310	1.3	-	-	1485	470	545	33.4
KMT093G	5900	0.38	2160	12.4	3	465	1.95	-	-	2060	470	545	40.7
KMT140G	9100	0.58	2880	15.9	4	620	2.6	-	-	2630	470	545	61.3
Medium Temperature - 500 mm Fan Diameter													
KHDC136G	10400	0.62	3960	22.0	2	-	-	1200	2.30	2215	490	890	125.0
KHDC161G	14900	0.89	3920	22.0	2	-	-	1200	2.30	2215	490	890	135.0
KHDC188G	19700	1.18	3880	22.0	2	-	-	1200	2.30	2215	490	890	145.0
KHDC214G	24700	1.48	3840	22.0	2	-	-	1200	2.30	2215	490	890	160.0
KHDC316G	31400	1.88	5770	24.0	3	-	-	1800	3.45	3165	490	890	230.0
KHDC430G	40100	2.4	7960	25.0	4	-	-	2400	4.60	3315	490	1015	290.0
KHDC538G	50500	3.01	9610	26.0	5	-	-	3000	5.75	4065	490	1015	350.0

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on -8 °C glycol entering temperature and 4K glycol temperature change."

KIRBY KLC CO₂ EVAPORATORS

Backed by substantial research and development, the Kirby CO₂ evaporator delivers state of the art technology. Each evaporator coil has been designed to take full advantage of the benefits of CO₂ and oil circulation within the system has been improved. The result is an optimum heat exchange efficiency and an impressive capacity.

Optional Enhancements:

- EC fans fitted



Part Number	Capacity @ 6KTD CO ₂ (watts)	Air Flow (l/s)	Air Throw (m)	Fans Qty	Motors (Max) 415V 3 Phase		Defrost Heaters			
					(watts)	(amps)	240V 1 Phase		415V 3 Phase	
							(watts)	(amps)	(watts)	(amps)

Low Temperature - 300 mm Fan Diameter

KLC013	1330	340	6.0	1	73	0.32	900	3.75	-	-
KLC027	2690	680	8.6	2	146	0.64	1800	7.50	-	-
KLC035	3480	1080	11.2	3	219	0.96	-	-	2700	3.75

Low Temperature - 350 mm Fan Diameter

KLC045	4490	1400	11.6	2	310	1.30	-	-	3200	6.67
KLC054	5350	1375	11.0	2	310	1.30	-	-	3200	6.67
KLC068	6780	2160	14.3	3	465	1.95	-	-	4800	10.00
KLC081	8050	2060	13.6	3	465	1.95	-	-	4800	10.00
KLC090	9030	2800	16.0	4	620	2.60	-	-	6400	13.33
KLC107	10650	2750	15.2	4	620	2.60	-	-	6400	13.33
KLC131	13140	3440	17.0	5	775	3.25	-	-	8000	16.67

Part Number	Dimensions (mm)			Nett Weight (kg)	TX Valve
	Width	Depth	Height		

Low Temperature - 300 mm Fan Diameter (Cont'd)

KLC013	750	470	430	11.5	External
KLC027	1155	470	430	18.7	External
KLC035	1560	470	430	26.0	External

Low Temperature - 350 mm Fan Diameter (Cont'd)

KLC045	1485	470	545	26.3	External
KLC054	1485	470	545	30.4	External
KLC068	2060	470	545	37.7	External
KLC081	2060	470	545	47.6	External
KLC090	2630	470	545	54.2	External
KLC107	2630	470	545	58.3	External
KLC131	3200	470	545	73.4	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on -18 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

EVAPORATORS (CONT'D)

FRIGA-BOHN 3C-A ADVANCED CO₂ EVAPORATORS

The 3C-A evaporator range is designed for commercial and semi industrial refrigeration applications or low temperature storage. Perfect for transcritical or high pressure CO₂ applications (60 Bar) the 3C-A range includes standard high efficiency EC fans. These fans guarantee lower energy consumption, lower service life and lower noise levels whilst offering Eurovent certified performance.

FRIGA-BOHN



Features

- Removable side panels and articulated drain pans offer fast and easy access to the coil, fans, defrost heaters and connections
- Rounded corners on the drain pan eliminate condensate retention zones and no sharp edges guarantee safety

Part Number	Capacity @ 6KTD	Fans	Fan Diameter (mm)	Airflow (l/s)	Air Throw (m)	Dimensions (mm)			Weight (kg)	Included Options		
						Length	Width	Height				

Medium Temperature - 6mm Fin Spacing

3C-A 3165 L	2430	1	300	444	16	859	484	428	23	BAE	PEI	EC3
3C-A 3244 L	3330	2	300	817	17	1059	484	428	29	BAE	PEI	EC3
3C-A 3245 L	3608	2	300	769	16	1059	484	428	30	BAE	PEI	EC3
3C-A 3343 L	4080	3	300	1300	21	1554	484	428	39	BAE	PEI	EC3
3C-A 3354 L	5873	3	300	1316	22	1854	484	428	46	BAE	PEI	EC3
3C-A 3444 L	6855	4	300	1630	23	1954	484	428	52	BAE	PEI	EC3
3C-A 3445 L	7665	4	300	1538	22	1954	484	428	55	BAE	PEI	EC3

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on +2 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

Part Number	Capacity @ 6KTD	Fans	Fan Diameter (mm)	Airflow (l/s)	Air Throw (m)	Dimensions (mm)			Weight (kg)	Included Options		
						Length	Width	Height				

Low Temperature - 6mm Fin Spacing

3C-A 3155 C	2057	1	300	422	15	759	484	428	21	2TH	PEI	EC3
3C-A 3243 C	2623	2	300	866	18	1059	484	428	28	2TH	PEI	EC3
3C-A 3343 C	3591	3	300	1300	21	1554	484	428	39	2TH	PEI	EC3
3C-A 3345 C	5229	3	300	1152	19	1554	484	428	43	2TH	PEI	EC3
3C-A 3455 C	8040	4	300	1683	24	2354	484	428	62	2TH	PEI	EC3
3C-A 4364 C	14254	3	450	4872	36	2198	610	635	81	2TH	PEI	EC2
3C-A 4366 C	17700	3	450	4938	34	2198	610	635	90	2TH	PEI	EC2

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on -18 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

Option Descriptions:

BAE = Paint coil protection

2TH = Defrost & safety thermostats

PEI = White painted case

EC3/EC2 = Dual speed EC fans

Part Number	Heaters (Defrost)				
	Qty Coil	Qty Drain	watts	240/1	400/3

Low Temperature - 6mm Fin Spacing

3C-A 3155 C	5	1	2160	9.4	-
3C-A 3243 C	3	1	2320	10.1	-
3C-A 3343 C	3	1	3440	15	-
3C-A 3345 C	5	1	5160	-	7.4
3C-A 3455 C	5	1	8640	-	12.5
3C-A 4364 C	8	1	9720	-	14
3C-A 4366 C	8	1	9720	-	14

KIRBY HEAVY DUTY EVAPORATORS

Designed specifically for semi-industrial and large commercial applications where optimum cold air flow is paramount, the enhanced Kirby® Heavy Duty Evaporator range delivers economical choice, ease of installation, quality, reliability and powerful performance.

Kirby's legendary toughness and dependability in critical applications means that you can be confident in achieving desired operating conditions through varied applications. All models are now wired ex-factory for express installation.

Features & Benefits:

- Simplified installation including factory wiring on all models for fans and heaters (excludes controls)
- High airflow from the latest generation fan assemblies ensures efficient pull down and air throw
- Positive electric defrost standard inclusion for all models (includes medium temperature units)
- Reversible drain tray
- A supporting spare parts range accessible 24/7 through the Heatcraft wholesale network

Optional Enhancements:

- Unique circuiting to suit glycol, CO₂, water, split circuit and special operating conditions
- Koil Kote coil protection
- Expansion valves fitted
- EC fan motors fitted



Part Number	Nominal Capacity @ 6KTD		Air Flow (l/s)	Air Throw (m)	Fans Qty	Motors (Max)		Heaters Defrost		Dimensions (mm)			Nett Weight (kg)	TX Valve
	R404A	R134a				415/3		415/3		Width	Depth	Height		
						(watts)	(amps)	(watts)	(amps)					

Medium Temperature - 500mm Fan Diameter

KHDCE103	11210	9482	1920	20	1	600	1.15	5250	8.5	1265	490	890	90	External
KHDCE136	14080	12627	3960	22	2	1200	2.3	8700	14.6	2215	490	890	130	External
KHDCE161	17270	15030	3920	22	2	1200	2.3	8700	14.6	2215	490	890	140	External
KHDCE188	20100	17502	3880	22	2	1200	2.3	8700	14.6	2215	490	890	155	External
KHDCE214	23040	19944	3840	22	2	1200	2.3	8700	14.6	2215	490	890	165	External
KHDCE263	29860	25769	5820	24	3	1800	3.45	13600	23.3	3165	490	890	215	External
KHDCE316	34280	28867	5770	24	3	1800	3.45	13600	23.3	3165	490	890	240	External
KHDCE366	38900	34005	7770	25	4	2400	4.6	15320	28.2	3315	490	1015	285	External
KHDCE430	43780	37794	7690	25	4	2400	4.6	15320	28.2	3315	490	1015	305	External
KHDCE538	53980	46862	9610	26	5	3000	5.75	18280	33.6	4065	490	1015	370	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on +2 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".



EVAPORATORS (CONT'D)

KIRBY HEAVY DUTY EVAPORATORS

Part Number	Nominal Capacity watts @ 6KTD	Air Flow (l/s)	Air Throw (m)	Fans Qty	Motors (Max)		Defrost Heaters		Dimensions (mm)			Nett Weight (kg)	TX Valve
	R404A				415/3		415/3						
					(watts)	(amps)	(watts)	(amps)					
Low Temperature - 500mm Fan Diameter													
KHDFE086	9160	1920	18	1	600	1.15	5250	8.5	1265	490	890	90	External
KHDFE088	9990	3960	20	2	1200	2.3	8700	14.6	2215	490	890	130	External
KHDFE117	13330	3920	20	2	1200	2.3	8700	14.6	2215	490	890	140	External
KHDFE151	16100	3880	20	2	1200	2.3	8700	14.6	2215	490	890	155	External
KHDFE173	18340	3840	20	2	1200	2.3	8700	14.6	2215	490	890	165	External
KHDFE212	23430	5820	22	3	1800	3.45	13600	23.3	3165	490	890	215	External
KHDFE252	26760	5770	22	3	1800	3.45	13600	23.3	3165	490	890	240	External
KHDFE286	29400	7770	23	4	2400	4.6	15320	28.2	3315	490	1015	285	External
KHDFE320	33830	7690	23	4	2400	4.6	15320	28.2	3315	490	1015	305	External
KHDFE380	38530	9610	24	5	3000	5.75	18280	33.6	4065	490	1015	370	External

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on -18 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".

KIRBY NK HEAVY COMMERCIAL INDUSTRIAL UNIT COOLER

Features:

- The NK range is designed for industrial refrigeration, storage or deep-freezing applications.
- NK version H (high efficiency): Adapted to the storage of packed products. Economical choice, wide range of options for specific industrial applications (pressure sleeve, defrost)
- 3 fin spacing distances: 4, 6 or 9 mm (6, 4 or 3 FPI).



Natural fluids:
Glycol water



PRODUCT OVERVIEW

Casing

- The casing is made of pre-painted, galvanised steel offering a high resistance to corrosion and impact damage.
- An internal aluminium drain pan limits the effects of condensation under the main drain pan during the defrost process.
- The NK unit coolers are delivered in mounting position in reinforced crates.

Ventilation

- 2 fan types are used for the NK range: Ø 630 mm 4/6 pole (1,500/1,000 rpm) - Ø 800 mm 6/8 pole (1,000/750 rpm).

Coil

- The finned coils of the NK range are designed with aluminium fins spaced at 4, 6, or 9 mm, crimped onto copper tubes.
- High-efficiency H type fins for an economical solution. This type of fin is particularly suitable for the storage of packed products. The reduced size of the heat exchanger also enables fast defrosting.

Defrost

NKH ... C, NKH ... S

- The shielded electric heating elements are inserted in sleeves located in the finned coil, 2 or 3 heating elements are placed under the intermediate drain pan.
- This facility enables homogenous heat distribution for fast and efficient defrosting.

NKH ... R, NKH ... L

- Light electric defrost (E1U) and "low temperature" electric defrost (ELU) models available as optional extra.
- A water defrost (DAE) option is available for room temperature equal to or greater than +4 °C. In this case the unit cooler depth is increased by 40 mm.
- Maximum water flow-rate with NK:
1 fan = 5 m³/h. - 2 fans = 10 m³/h
3 fans = 15 m³/h. - 4 fans = 20 m³/h

OPTIONS

Ventilation

- VPA (Kit): Air pressure shell also allowing the connection of a textile duct.

Coil

- BXT (Factory): Blygold Polual XT coil protection (Local).
- WCO (Factory): Glycol water, coolant (please contact us for details).

Defrost

- E1U (Factory): Light electric defrost.
- ELU (Factory): Electric defrost (coil + drain pan).
- HGT (Factory): Hot gas (coil and drain pan).



NOMENCLATURE DATA

NKH⁽¹⁾ 3x6⁽²⁾ D⁽³⁾ B2⁽⁴⁾ R⁽⁵⁾

(1) H = High-efficiency fin

(2) Number of fans x Ø: 6 = Ø 630 mm - 8 = Ø 800 mm

(3) Motor connection: D = Delta

(4) Module

(5) Fin spacing: R = 4 mm - L/C = 6 mm - S = 9 mm

Part Number	Capacity @ 6KTD (kW)	Fan Qty x Dia.	Air Flow (l/s)	Std. Throw	With VPA Option - Throw	Motors (Max) 400/3 (watts x amps)	Heaters Defrost 400/3 Optional Light Defrost Kit (E1U) (watts x amps)
Medium Temperature							
NKH1X6DB3R	21.18	1 x 630	3236	38	53	1900 x 3.2	10350 x 14.9
NKH1X8DC2R	29.60	1 x 800	4958	40	55	2000 x 4.0	9000 x 13.00
NKH2X6DB2R	38.24	2 x 630	7000	42	57	3800 x 6.4	13200 x 19.1
NKH3X6DB1R	47.71	3 x 630	11375	50	65	5700 x 9.6	19500 x 28.1
NKH2X8DC1R	49.21	2 x 800	10833	44	59	4000 x 8.0	17400 x 25.1
NKH2X8DC2R	58.27	2 x 800	9917	41	56	4000 x 8.0	17400 x 25.1
NKH3X6DB2R	59.66	3 x 630	10500	47	62	5700 x 9.6	19500 x 28.1
NKH4X6DB1R	63.94	4 x 630	15167	55	70	7600 x 12.8	25800 x 37.2
NKH3X8DC1R	65.42	3 x 800	16250	50	65	6000 x 12.0	25800 x 37.2
NKH4X6DB2R	76.40	4 x 630	14000	52	67	7600 x 12.8	25800 x 37.2
NKH4X6DB3R	85.70	4 x 630	12944	49	64	7600 x 12.8	38700 x 55.9
NKH3X8DC2R	86.20	3 x 800	14875	47	62	6000 x 12.0	25800 x 37.2
NKH4X8DC2R	102.02	4 x 800	19833	52	67	8000 x 16.0	34200 x 49.4
NKH1X6DB3L	20.38	1 x 630	3500	40	55	1900 x 3.2	10350 x 14.9
NKH1X8DC2L	27.59	1 x 800	5333	43	58	2000 x 4.0	9000 x 13.00
NKH2X6DB1L	28.28	2 x 630	7944	46	61	3800 x 6.4	13200 x 19.1
NKH2X6DB3L	40.90	2 x 630	7000	42	57	3800 x 6.4	19800 x 28.6
NKH2X8DC1L	43.83	2 x 800	11472	46	61	4000 x 8.0	17400 x 25.1
NKH2X8DC2L	54.64	2 x 800	10667	43	58	4000 x 8.0	17400 x 25.1
NKH3X6DB2L	54.85	3 x 630	11167	49	64	5700 x 9.6	19500 x 28.1
NKH3X6DB3L	60.78	3 x 630	10500	47	62	5700 x 9.6	29250 x 42.2
NKH4X6DB2L	71.08	4 x 630	14889	55	70	7600 x 12.8	25800 x 37.2
NKH3X8DC2L	80.76	3 x 800	16000	50	65	6000 x 12.0	25800 x 37.2
NKH4X6DB3L	82.13	4 x 630	14000	52	67	7600 x 12.8	38700 x 55.9
NKH4X8DC2L	95.99	4 x 800	21333	55	70	8000 x 16.0	34200 x 49.4

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on +2 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".



EVAPORATORS (CONT'D)

KIRBY NK HEAVY COMMERCIAL INDUSTRIAL UNIT COOLER (CONT'D)

Part Number	Dimensions (mm)			Nett Weight (kg)
	Width	Depth	Height	
Medium Temperature (Cont'd)				
NKH1X6DB3R	1665	900	1115	200
NKH1X8DC2R	2115	1060	1375	270
NKH2X6DB2R	2865	900	1115	300
NKH3X6DB1R	4065	900	1158	370
NKH2X8DC1R	3715	1060	1375	420
NKH2X8DC2R	3715	1060	1375	480
NKH3X6DB2R	4065	900	1158	430
NKH4X6DB1R	5265	900	1158	480
NKH3X8DC1R	5315	1060	1375	570
NKH4X6DB2R	5265	900	1158	550
NKH4X6DB3R	5265	900	1158	630
NKH3X8DC2R	5315	1060	1375	670
NKH4X8DC2R	6915	1060	1375	840
NKH1X6DB3L	1665	900	1115	190
NKH1X8DC2L	2115	1060	1375	260
NKH2X6DB1L	2865	900	1115	260
NKH2X6DB3L	2865	900	1115	330
NKH2X8DC1L	3715	1060	1375	400
NKH2X8DC2L	3715	1060	1375	460
NKH3X6DB2L	4065	900	1158	410
NKH3X6DB3L	4065	900	1158	460
NKH4X6DB2L	5265	900	1158	530
NKH3X8DC2L	5315	1060	1375	650
NKH4X6DB3L	5265	900	1158	600
NKH4X8DC2L	6915	1060	1375	800

Part Number	Capacity @ 6KTD (kW)	Fan Qty x Dia.	Air Flow (l/s)	Std. Throw	With VPA Option - Throw	Motors (Max) 400/3 (watts x amps)	Heaters Defrost 400/3 (watts x amps)
Low Temperature Nominal Capacity Watts -24 °C SST @ 6KTD							
NKH1X6DB3C	17.02	1 x 630	3500	40	55	1900 x 3.2	13800 x 19.9
NKH1X8DC2C	22.30	1 x 800	5333	43	58	2000 x 4.0	13500 x 19.5
NKH2X6DB1C	22.55	2 x 630	7944	46	61	3800 x 6.4	13200 x 19.1
NKH2X6DB2C	29.57	2 x 630	7444	44	59	3800 x 6.4	19800 x 28.6
NKH2X6DB3C	34.48	2 x 630	7000	42	57	3800 x 6.4	26400 x 38.1
NKH2X8DC1C	35.72	2 x 800	11472	46	61	4000 x 8.0	17400 x 25.1
NKH3X6DB2C	44.53	3 x 630	11167	49	64	5700 x 9.6	29250 x 42.2
NKH3X6DB3C	51.86	3 x 630	10500	47	62	5700 x 9.6	39000 x 56.3
NKH3X8DC2C	58.71	3 x 800	16000	50	65	6000 x 12.0	38700 x 55.9
NKH4X6DB3C	60.19	4 x 630	14000	52	67	7600 x 12.8	51600 x 74.5
NKH1X6DB3S	15.29	1 x 630	3722	42	57	1900 x 3.2	13800 x 19.9
NKH2X6DB1S	19.23	2 x 630	8222	47	62	3800 x 6.4	13200 x 19.1
NKH1X8DC2S	19.65	1 x 800	5597	44	59	2000 x 4.0	13500 x 19.5
NKH2X8DC1S	30.23	2 X 800	11889	48	63	4000 x 8.0	17400 x 25.1

KIRBY NK HEAVY COMMERCIAL INDUSTRIAL UNIT COOLER (CONT'D)

Part Number	Capacity @ 6KTD (kW)	Fan Qty x Dia.	Air Flow (l/s)	Std. Throw	With VPA Option - Throw	Motors (Max) 400/3 (watts x amps)	Heaters Defrost 400/3 (watts x amps)
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Low Temperature Nominal Capacity Watts -24 °C SST @ 6KT (Cont'd)

NKH2X6DB3S	30.93	2 x 630	7444	44	59	3800 x 6.4	26400 x 38.1
NKH2X8DC2S	35.01	2 x 800	11194	45	60	4000 x 8.0	26100 x 37.7
NKH3X6DB2S	38.97	3 X 630	11708	51	66	5700 x 9.6	29250 x 42.2
NKH3X8DC1S	39.26	3 X 800	17833	55	70	6000 x 12.0	25800 x 37.2
NKH3X6DB3S	46.59	3 x 630	11167	49	64	5700 x 9.6	39000 x 56.3
NKH3X8DC2S	51.96	3 x 800	16792	52	67	6000 x 12.0	38700 x 55.9
NKH4X6DB3S	54.65	4 x 630	14889	55	70	7600 x 12.8	51600 x 74.5
NKH4X8DC2S	65.31	4 x 800	22389	48	63	8000 x 16.0	51300 x 74.0

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on -18 °C air on temperature, and 6KTD. KTD is defined as "air on temperature - leaving refrigerant saturation temperature".



Part Number	Dimensions (mm)			Nett Weight (kg)
	Width	Depth	Height	

Low Temperature Nominal Capacity Watts -24 °C SST @ 6KTD (Cont'd)

NKH1X6DB3C	1665	900	1115	210
NKH1X8DC2C	2115	1060	1375	280
NKH2X6DB1C	2865	900	1115	290
NKH2X6DB2C	2865	900	1115	320
NKH2X6DB3C	2865	900	1115	360
NKH2X8DC1C	3715	1060	1375	440
NKH3X6DB2C	4065	900	1158	460
NKH3X6DB3C	4065	900	1158	520
NKH3X8DC2C	5315	1060	1375	700
NKH4X6DB3C	5265	900	1158	670
NKH1X6DB3S	1665	900	1115	210
NKH2X6DB1S	2865	900	1115	280
NKH1X8DC2S	2115	1060	1375	280
NKH2X8DC1S	3715	1060	1375	430
NKH2X6DB3S	2865	900	1115	360
NKH2X8DC2S	3715	1060	1375	480
NKH3X6DB2S	4065	900	1158	450
NKH3X8DC1S	5315	1060	1375	590
NKH3X6DB3S	4065	900	1158	510
NKH3X8DC2S	5315	1060	1375	670
NKH4X6DB3S	5265	900	1158	640
NKH4X8DC2S	6915	1060	1375	860



REMOTE CONDENSERS

KIRBY KRC SERIES CONDENSERS

The Kirby® KRC Remote Condenser range includes the latest refrigeration technologies for upgraded performance such as 9000 series fin coils and pre coated fin for optimal corrosion protection. The units can be installed vertically or horizontally for maximum flexibility. Standard inclusions include powder coated panels, quality external rotor motor fans for long life and serviceability and coils rated for high pressure refrigerants such as R410A.



Optional Enhancements

- EC fan with Orbus™ fan speed control.
- 1 Phase fan assemblies - 350, 500 and 630 mm diameters.
- Fan motors pre-wired to terminal junction box.
- Special Applications on request - Sub Cooling Circuit, Multiple Circuits, Dry Cooler, Oil Cooler, Fluid Cooler, Subcritical CO₂ Desuperheater.

Part Number	Total Heat Rejection Capacity				Motors (Max) 1 Phase		No. of Fans	Dimensions (mm)			Noise Data Sound Pressure dBA @ 3m	Nett Weight (kg)
	Capacity in Watts/K based on 32 °C amb, 50 °C cond, 0K S/C							Width	Depth	Height		
	R404A	R134a	R410A	Airflow (l/s)								
(watts/k)				(watts)	(amps)							
Single Coil Models - 350 mm Dia 4P Fan - High Speed 1380 RPM 240 V/1 PH												
KRC80-4PH	803	746	819	1260	260	1.2	2	951	470	705	56.5	29
KRC107-4PH	1076	1001	1097	1295	260	1.2	2	951	570	705	56.5	34
KRC134-4PH	1338	1245	1365	1210	260	1.2	2	951	670	725	56.5	46
Single Coil Models - 500 mm Dia 6P Fan- High Speed 935 RPM / Low Speed 780 RPM 240 V/1 PH*												
KRC137-6PH	1366	1271	1394	1095	360	1.8	1	951	670	745	55/52	51
KRC181-6PH	1807	1681	1843	2435	720	3.6	2	1262	849	1020	58/55	93
KRC254-6PH	2544	2366	2595	2170	720	3.6	2	1262	954	1020	58/55	68
Single Coil Models - 500 mm Dia 4P Fan- High Speed 1340 RPM / Low Speed 1070 RPM 240 V/1 PH*												
KRC164-4PH	1635	1520	1667	1530	640	2.8	1	951	670	745	61/53	68
KRC213-4PH	2135	1986	2178	3290	1280	5.6	2	1262	849	1020	64/56	51
KRC317-4PH	3171	2949	3234	2910	1280	5.6	2	1262	954	1020	64/56	93
Single Coil Models - 630 mm Dia 6P Fan- High Speed 890 RPM / Low Speed 680 RPM 240 V/1 PH*												
KRC389-6PH	3885	3613	3963	3745	1220	5.4	2	1675	1004	1050	61/55	129
KRC457-6PH	4572	4252	4663	6475	1830	8.1	3	2408	1004	1050	63/57	158
KRC574-6PH	5738	5337	5853	5620	1830	8.1	3	2408	1004	1050	63/57	186
KRC693-6PH	6927	6442	7065	8755	2440	10.8	4	3205	1107	1050	64/58	208
KRC861-6PH	8611	8008	8783	7755	2440	10.8	4	3205	1107	1050	64/58	263
Twin Coil Models - 630 mm Dia 6P Fan - High Speed 890 RPM / Low Speed 680 RPM 240 V/1 PH*												
KRC778-6PH	7770	7226	7926	7490	2440	10.8	4	1581	1929	1145	64/58	271
KRC914-6PH	9143	8503	9326	12950	3660	16.2	6	2316	1929	1145	66/60	309
KRC1148-6PH	11477	10674	11707	11240	3660	16.2	6	2316	1929	1145	66/60	365
KRC1386-6PH	13853	12883	14130	17510	4880	21.6	8	3205	2135	1000	67/61	501
KRC1722-6PH	17221	16016	17566	15510	4880	21.6	8	3205	2135	1000	67/61	612

MAXIMUM OPERATING PRESSURE 3650kPa is suitable for R410a

KIRBY WRC HIGH EFFICIENCY REMOTE SERIES CONDENSERS

The Kirby WRC Remote Condenser is recognised for its technical excellence and efficiency by the Australian Institute of Refrigeration, Airconditioning and Heating (AIRAH). The Kirby WRC has been specifically designed for supermarkets and other cold storage applications with low noise or energy savings in mind.

The WRC offers significant energy efficiency and power savings as a result of having an optimised coil surface to fan ratio. This ensures even air distribution at reduced pressure drop across a wide fan speed range, which in turn reduces electricity consumption and operating costs.

Features

- Vertical or horizontal airflow configurations.
- Floating coil technology with 'split length fins' vastly improves the life of the condenser.
- Dual refrigerant circuits with header protection covers where circuiting is standard (twin coil model only).
- Fans are pre-wired to (IP55) junction box with individual fan circuit breakers.
- High quality powder coat finish
- Kirby Blue Coat fin protection

Optional Enhancements

- Multiple circuit configuration and Cooler.
- Sub-cooling circuits.
- Blygold coil treatment.
- Special application on request (Dry coolers/oil coolers/Glycol circuiting).



Part Number	Total Heat Rejection Capacity			Motors (Max) 415/3		No. of Fans	Noise Data Sound Pressure	
	Capacity in watts/k based on 32 °C amb, 50 °C cond, 0K Sub-Cooling							
	R404A	R134a	Airflow - High Speed (l/s)					
	(watts/k)							
(watts)								RLA amps/Ph
Single Coil - 6 Pole 800 mm Fans								
WRC112B	11210	10430	11360	4000	8	2	69	
WRC123B	12310	11450	10010	4000	8	2	69	
WRC167B	16740	15570	17040	6000	12	3	71	
WRC185B	18460	17170	15010	6000	12	3	71	
WRC225B	22470	20900	22720	8000	16	4	72	
WRC247B	24650	22920	20010	8000	16	4	72	
WRC277B	27680	25740	28400	10000	20	5	73	
WRC307B	30690	28540	25010	10000	20	5	73	
Double Coil - 6 Pole 800 mm Fans								
WRC224B	22420	20850	22720	8000	16	4	72	
WRC246B	24630	22910	20010	8000	16	4	72	
WRC335B	33480	31140	34080	12000	24	6	74	
WRC369B	36920	34340	30020	12000	24	6	74	
WRC449B	44940	41790	45450	16000	32	8	75	
WRC493B	49290	45840	40020	16000	32	8	75	
WRC554B	55360	51480	56800	20000	40	10	76	
WRC614B	61380	57080	50030	20000	40	10	76	



REMOTE CONDENSERS (CONT'D)

KIRBY WRC HIGH EFFICIENCY REMOTE SERIES CONDENSERS (CONT'D)

Part Number	Dimensions Horizontal Airflow (mm)			Nett Weight Horizontal Airflow	Dimensions Vertical Airflow (mm)			Nett Weight (kg)
	Length	Width	Height (max)		Length	Width	Height (max)	

Single Coil - 6 Pole 800 mm Fans

WRC112B	3260	1136	1250	430	3260	1250	1585	430
WRC123B	3260	1136	1250	500	3260	1250	1585	500
WRC167B	4660	1136	1250	610	4660	1250	1585	610
WRC185B	4660	1136	1250	710	4660	1250	1585	710
WRC225B	6068	1136	1250	820	6068	1250	1585	820
WRC247B	6068	1136	1250	960	6068	1250	1585	960
WRC277B	7469	1136	1250	1035	7469	1250	1585	1035
WRC307B	7469	1136	1250	1210	7469	1250	1585	1210

Double Coil - 6 Pole 800 mm Fans

WRC224B	3260	1136	2406	810	3260	2406	1585	810
WRC246B	3260	1136	2406	950	3260	2406	1585	950
WRC335B	4660	1136	2406	1170	4660	2406	1585	1170
WRC369B	4660	1136	2406	1370	4660	2406	1585	1370
WRC449B	6068	1136	2406	1570	6068	2406	1585	1570
WRC493B	6068	1136	2406	1830	6068	2406	1585	1830
WRC554B	7469	1136	2406	1975	7469	2406	1585	1975
WRC614B	7469	1136	2406	2300	7469	2406	1585	2300

KIRBY WRC AXITOP EC REMOTE SERIES CONDENSERS

The Kirby WRC Remote Condenser is a market leading and energy efficient remote condenser specifically designed for supermarkets and other applications with low noise and energy savings in mind.

The ebm-papst HyBlade® EC Fan with ebm-papst AxiTop® Diffuser enhancement provides improved energy efficiency (lower input power), lower noise and increased capacity on a proven condenser platform.

The AxiTop® models provide additional airflow at the same blade speed (RPM) as the standard EC fan assembly. This results in additional capacity and lower energy equaling improved COP and power/cost savings for the end user. The other benefit of the AxiTop® is that there is a significant reduction in noise at the same blade speed (RPM). This allows end users to increase the speed of the condenser fans achieving capacity and not increasing the noise.

The combination of the ebm-papst HyBlade® EC Fans and AxiTop® Diffuser enhances the ability to select a condenser at a speed, capacity or noise condition that suits your customers needs.



WRC Standard Features

- Vertical or horizontal airflow configurations.
- Floating coil technology with 'split length fins' vastly improves the life of the condenser.
- Dual refrigerant circuits with header protection covers where circuiting is standard (twin coil model only).
- Fans are pre-wired to (IP55) junction box with individual fan circuit breakers
- High quality powder coat finish
- Kirby Blue Coat fin protection
- Easy communication connections to vary speed control.
- Additional value achieving reduced overall running costs and selection in refrigeration equipment.
- Lower noise levels for noise sensitive installations achieved with no sacrifice to condenser performance by using the EC AxiTop® Diffuser.

Optional Enhancements

- Multiple circuit configuration.
- Sub-cooling circuits.
- Blygold coil treatment.
- Special application on request (Dry coolers/oil coolers/Glycol circuiting).

EC HyBlade® Axial Fans offer:

- Lower energy consumption of fan motors.
- More precise control of condenser pressure / temp - variable fan speed.

Part Number	Total Heat Rejection Capacity		Total Heat Rejection Capacity		Airflow - High Speed (l/s)	Max Power Input 415/3		No. of Fans	Noise Data Sound Pressure dBA @ 3m
	watts/k based on 32 °C Amb, 40 °C Cond, 0K Sub-Cooling, 100 °C Discharge Gas		watts/k based on 32 °C Amb, 40 °C Cond, 0K Sub-Cooling, 80 °C Discharge Gas						
	R404A	R134a	R404A	R134a		RLA Amps/Ph	(watts)		
	(watts/k)		(watts/k)						

Single Coil - 800 mm AXITOP EC Fans

WRC112BECA	10690	10140	10030	9520	13200	8.6	5520	2	65.4
WRC123BECA	12380	11970	11580	11190	11920	8.6	5520	2	65.9
WRC167BECA	16080	14940	15080	14010	19800	12.9	8280	3	67.2
WRC185BECA	18620	17570	17380	16410	17870	12.9	8280	3	67.7
WRC225BECA	20970	19610	19610	18340	26400	17.2	11040	4	68.4
WRC247BECA	24110	22790	22470	21240	23830	17.2	11040	4	68.9
WRC277BECA	26160	23620	24480	22110	33000	21.5	13800	5	69.4
WRC307BECA	30100	27430	28030	25540	29790	21.5	13800	5	69.9

Double Coil - 800 mm AXITOP EC Fans

WRC(V)224BECA	21370	20280	20060	19040	26400	17.2	11040	4	68.4
WRC(V)246BECA	24760	23920	23160	22380	23840	17.2	11040	4	68.9
WRC(V)335BECA	32160	29880	30160	28020	39600	25.8	16560	6	70.2

REMOTE CONDENSERS (CONT'D)

KIRBY WRC AXITOP EC REMOTE SERIES CONDENSERS (CONT'D)

Part Number	Total Heat Rejection Capacity		Total Heat Rejection Capacity		Airflow - High Speed (l/s)	Max Power Input 415/3		No. of Fans	Noise Data Sound Pressure dBa @ 3m
	watts/k based on 32 °C Amb, 40 °C Cond, 0K Sub-Cooling, 100 °C Discharge Gas		watts/k based on 32 °C Amb, 40 °C Cond, 0K Sub-Cooling, 80 °C Discharge Gas						
	R404A	R134a	R404A	R134a		RLA Amps/Ph	(watts)		
	(watts/k)		(watts/k)						

Double Coil - 800 mm AXITOP EC Fans (Cont'd)

WRC(V)369BECA	37220	35150	34760	32820	35740	25.8	16560	6	70.7
WRC(V)449BECA	41950	39220	39220	36680	52800	34.4	22080	8	71.4
WRC(V)493BECA	48230	45590	44940	42480	47660	34.4	22080	8	71.9
WRC(V)554BECA	52310	47260	48960	44220	66000	43	27600	10	72.4
WRC(V)614BECA	60220	54870	56060	51080	59580	43	27600	10	72.9

Single Coil - 910 mm AXITOP EC Fans

WRCXV144CECA	23960	21940	21820	20580	25280	10	6200	4	64.6
WRCXV146CECA	26880	25070	24390	23430	22730	10	6200	4	65.5
WRCXV154CECA	29840	26640	27200	25110	31600	12.5	7750	5	65.5
WRCXV156CECA	33780	30850	30650	28910	28410	12.5	7750	5	66.5
WRCXV164CECA	34750	30500	31760	28940	37920	15	9300	6	66.3
WRCXV166CECA	40000	35950	36340	33810	34090	15	9300	6	67.3

Double Coil - 910 mm AXITOP EC Fans

WRCXV244CECA	47930	43880	43650	41170	50560	20	12400	8	67.6
WRCXV246CECA	53750	50130	48780	46860	45460	20	12400	8	68.5
WRCXV254CECA	59690	53280	54400	50210	63200	25	15500	10	68.5
WRCXV256CECA	67570	61690	61290	57810	56820	25	15500	10	69.5
WRCXV264CECA	69490	61010	63520	57880	75840	30	18600	12	69.3
WRCXV266CECA	80010	71900	72680	67620	68190	30	18600	12	70.3

Note - High speed is 1090RPM for 800mm fan and 800RPM for 910mm fan

Part Number	Dimensions Horizontal Airflow (mm)			Dimensions Vertical Airflow (mm)			Nett Weight Approx (kg)
	Length	Width	Height (max)	Length	Width	Height (max)	

Single Coil - 800 mm AXITOP EC Fans

WRC112BECA	3260	1225	1250	3260	1250	1755	440
WRC123BECA	3260	1225	1250	3260	1250	1755	510
WRC167BECA	4660	1225	1250	4660	1250	1755	625
WRC185BECA	4660	1225	1250	4660	1250	1755	725
WRC225BECA	6068	1225	1250	6068	1250	1755	840
WRC247BECA	6068	1225	1250	6068	1250	1755	980
WRC277BECA	7469	1225	1250	7469	1250	1755	1060
WRC307BECA	7469	1225	1250	7469	1250	1755	1235

Double Coil - 800 mm AXITOP EC Fans

WRC(V)224BECA	3260	1225	2406	3260	2406	1755	830
WRC(V)246BECA	3260	1225	2406	3260	2406	1755	970
WRC(V)335BECA	4660	1225	2406	4660	2406	1755	1200
WRC(V)369BECA	4660	1225	2406	4660	2406	1755	1400
WRC(V)449BECA	6068	1225	2406	6068	2406	1755	1610

KIRBY WRC AXITOP EC REMOTE SERIES CONDENSERS (CONT'D)

Part Number	Dimensions Horizontal Airflow (mm)			Dimensions Vertical Airflow (mm)			Nett Weight Approx (kg)
	Length	Width	Height (max)	Length	Width	Height (max)	

Double Coil - 800 mm AXITOP EC Fans (Cont'd)

WRC(V)493BECA	6068	1225	2406	6068	2406	1755	1870
WRC(V)554BECA	7469	1225	2406	7469	2406	1755	2025
WRC(V)614BECA	7469	1225	2406	7469	2406	1755	2350

Single Coil - 910 mm AXITOP EC Fans

WRCXV144CECA	Contact your local Heatcraft representative	7470	1250	1790	990
WRCXV146CECA		7470	1250	1790	1170
WRCXV154CECA		9220	1250	1790	1240
WRCXV156CECA		9220	1250	1790	1460
WRCXV164CECA		10970	1250	1790	1490
WRCXV166CECA		10970	1250	1790	1750

Double Coil - 910 mm AXITOP EC Fans

WRCXV244CECA	Contact your local Heatcraft representative	7470	2410	1790	1990
WRCXV246CECA		7470	2410	1790	2340
WRCXV254CECA		9220	2410	1790	2480
WRCXV256CECA		9220	2410	1790	2920
WRCXV264CECA		10970	2410	1790	2980
WRCXV266CECA		10970	2410	1790	3500

Note - All single coil units are shipped in the horizontal airflow position standard dual coil units are shipped in horizontal airflow position and "V" models are supplied in the vertical airflow position. Refer to installation manual for instructions to lay over for vertical airflow installation.

All selections should be verified using the Smart@ccess prior to order. For further information please contact your local Heatcraft representative on 13 23 50





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The engineer's choice

KIRBY CONDENSERS

KIRBY MXW EC - HIGH EFFICIENCY 'W' SHAPED MICROCHANNEL COIL / REMOTE CONDENSERS

MXW is the latest range of air cooled condensers from Kirby and offers both a compact footprint and reduced refrigerant charge through the combination of original design and innovative technology. This design incorporates W-shaped coils ensuring the smallest possible footprint and making it ideal for installation in confined spaces. The microchannel coil offers up to 75% refrigerant charge reduction compared to traditional designs. The modular construction allows each module to be field connected independently even with different refrigerants in the one unit. A unique sound wall and EC motor design gives up to 10dB(A) sound reduction in the horizontal plane. Optimised footprint, reduced refrigerant charge, sleek and innovative design make this Kirby MXW range a perfect remote condenser choice for all direct expansion application projects.



Features

- High reliability EC fans.
- Microchannel coil.
- Compact footprint.

Optional Enhancements

- Protection guards (removable grilles) offering protection against external impact.



Part Number	Total Heat Rejection Capacity			Motors (Max) 3 Ph 400V		No. of Fans	Dimensions (mm)			Nett Weight (kg)
	Capacity kW Heat Rejection @ 10 KTD									
	R404A	R134a	Airflow (l/s)				(watts)	(amps)	Length	
	(watts/k)									
MXW223-2V	223	207	25933	9600	15.2	4	2460	2195	2030	677
MXW335-3V	335	311	38900	14400	22.8	6	3490	2195	2030	972
MXW446-4V	446	415	51867	19200	30.4	8	4520	2195	2030	1267
MXW558-5V	558	519	64834	24000	38.0	10	5550	2195	2030	1562
MXW669-6V	669	623	77801	28800	45.6	12	6580	2195	2030	1857
MXW781-7V	781	726	90768	33600	53.2	14	7610	2195	2030	2152
MXW893-8V	893	830	103735	38400	60.8	16	8640	2195	2030	2447
MXW1004-9V	1004	934	116702	43200	68.4	18	9670	2195	2030	2742
MXW1116-10V	1116	1038	129669	48000	76.0	20	10700	2195	2030	3120

CAPACITY – Performance calculations are intended as a guide only and actual capacity is subject to specific application conditions and the operating environment. Capacities are based on 85 °C discharge gas temperature and 40 °C ambient.

Pressure Vessels



RECEIVERS - HEAVY DUTY

COMPLETE WITH FULL FLOW ROTALOCK VALVES (RL) OR FLANGED CONNECTION (FLG) VALVES WHERE NOMINATED

Part Number	Inlet & Outlet	Dimensions (mm)		Pump Down Capacity (kg)
	Connections ODS (inches)	Diameter	Length	80% Full R404A / R134a

Horizontal

HR35-1	2 x 3/4 RL. **	219	1355	42 / 36
HR60-3	2 x 1-3/8 RL. **	280	1387	66 / 56
HR80-3	2 x 1-5/8 RL. **	356	1170	95 / 76
HR100-54FLG	2 x 2-1/8 Flanged	356	1427	109 / 87
HR130-54FLG	2 x 2-1/8 Flanged	406	1465	155 / 132
HR180-54FLG	2 x 2-1/8 Flanged	457	1555	209 / 177
HR200-67FLG	2 x 2-5/8 Flanged	457	1757	233 / 200
HR225-2	2 x 1-3/8 RL. **	457	1541	207 / 178

Vertical

VR35-2	3/4 RL. **	273	906	41 / 35
VR60-3	1-3/8 RL. **	273	1406	66 / 56
VR80-3	1-5/8 RL. **	356	1185	98 / 82
VR100-3-FLG	1-5/8 x 2-1/8 Flange	356	1481	123 / 104
VR100-54FLG-2	2-1/8 Flange	356	1481	123 / 104
VR130-54FLG-2	2-1/8 Flange	400	1481	157 / 133
VR180-54FLG-2	2-1/8 Flange	457	1567	209 / 177
VR200-54-67FLG2	2-1/8 Inlet x 2-5/8 Outlet Flanges	457	1757	233 / 200
VR200-67FLG	2-5/8 Flange	457	1757	233 / 200

Flanged type receivers include 3 off Liquid Sight Glasses where Rotalock type receivers include 2 off Liquid Sight Glasses. All liquid receivers include Liquid Level & Pressure Relief valve port connections. Order Henry Technologies Liquid Level Switch S-9420 240V. Open on low level liquid.

Vessels are painted with an enamel finish as standard

Vessels conform to AS1210 Standards.

Contact your Heatcraft Representative for customised design-build options available.

OIL SEPARATORS

HENRY TECHNOLOGIES - STANDARD

Part Number	Connection Size ODS (Inches)	Connection Tube Centres (mm)	Dimensions (mm)		Nominal Capacity (kW) R404A/R134a @ 0 °C SST. 30 °C SST.	Maximum Working Pressure (kPa)	Oil Charge (ml)	Oil Return Feed Connection	Weight (kg)
			Dia.	Length					
3210-6406	3/8	48	107	280	3.8	3500	480	1/4" MSAE	2.2
3210-6406S	3/8	48	107	180	3.8	3500	480	1/4" MSAE	1.8
3210-6408	1/2	48	107	280	6.8	3500	480	1/4" MSAE	2.5
3210-6410	5/8	48	107	339	18.5	3500	480	1/4" MSAE	2.9
3210-6414	7/8	48	107	384	28.0	3500	480	1/4" MSAE	3.2
3210-6418	1-1/8	48	107	415	36.0	3500	480	1/4" MSAE	3.6
3210-6422	1-3/8	48	107	525	48.0	3500	1230	1/4" MSAE	4.5
3210-9622	1-3/8	75	153	395	49.5	3500	1230	1/4" MSAE	3.2
3210-9626	1-3/8	75	153	479	63.6	3500	1230	1/4" MSAE	3.5
3210-9634	2-1/8	75	153	487	106.0	3500	1230	1/4" MSAE	3.6

Always select oil separator with connection size not less than actual compressor discharge line size
Add Oil Charge to separator before installing



KIRBY DUAL USAGE

Specially designed for traditional ball float injected oil return feed or reservoir oil injection feed distributed by external electronic oil management control.

- *No need to replace oil separator—easily converted by increasing oil fill level and making ball float injection in operative.
- Standard fittment of two (2) oil level sight glasses.
- For Reservoir Return function order MRV311-1 Rotalock Service Valve 1/4" MF x 3/4"-16UNF

Manufacturing Standards

- Manufactured in accordance with AS2971
- Safe working pressure: 3200 kPa



Part Number	Connection Size Solder ODS (inches)	Connection Tube Centres (mm)	Dimensions		Nominal Capacity (kW) R404a/R134a @ 0°C SST. 30°C SCT	Max. Work. Press. (kPa)	*Oil Charge Float Operation (ml)	*Oil Charge Reservoir Operation (ml)	Dry Weight (kg)
			Dia. (mm)	Length (mm)					
MRD475-1	7/8"	48	102	447	28.0	3500	480	830	3.7
MRD475-2	1-1/8"	48	102	452	36.0	3500	480	830	4.2
MRD475-3	1-3/8"	48	102	525	48.0	3500	480	830	5.0
MRD476-1	1-3/8"	75	159	453	49.5	3500	1250	2000	
MRD476-2	1-3/8"	75	159	478	63.6	3500	1250	2000	

Always select oil separator with connection size not less than actual compressor discharge line size
Add Oil Charge to separator before installing

TEMPRITE COALESCENT ACCESSIBLE**Advantages**

- Latest in oil separator technology
- Temprite Standard Filter technology cleans contaminants down to 0.3 microns in size and aerosols in liquid form to 0.001 microns.
- Particularly compatible with CO₂ Sub-Critical & Ammonia (NH₃) refrigerant systems; Designed for 4480 kPa (650 PSI)
- Maintains the same level of effectiveness down to 20% of maximum flow
- Easy access for filter cartridge changes
- Equal 98.5 %+ efficiency in all types of systems; in ultra-low temperature applications; even or uneven multiplex systems, split suction groups
- systems, low, medium and A/C; during refrigeration load shifting/matching.
- High efficiency performance reduces energy consumption through better heat transfer through the coils, translating into significant kW savings.
- Maximises protection against the compressor running dry or oil slugging
- 920 Series models are Impingement screen / ball float oil feed designed.
- 920R Series have internal Coalescent Filter Cartridge(s) technology and ample volume oil reservoirs, maximising space, eliminating attendant reservoirs, check valves and leak-causing equalisation lines.

**Operation**

Temprite 920 and 920R Series coalescent oil separators employ a matrix-type borosilicate coalescent filter to do the work formerly done by impingement screens. These exceptionally pure, extremely fine glass fibres cause the oil molecules to collide, creating bigger droplets, until each is large enough to be forced to the outer drain layer of the filter. The droplets fall to the bottom of the separator and the oil is returned to the compressor.

In large parallel rack/multiplex systems with long lines, dirt and excess oil put an even greater drag on the system. This can be eliminated with the 920 or 920R Series coalescent oil separator because the Temprite Standard Filter is finer than any other filter/drier, picking up all effluent and dirt in the system down to 0.3 microns in size, increasing system capacity and efficiency and lowering energy costs. Conventional centrifugal and impingement screen oil separators only work to 100 microns, thus missing 50% of the aerosols in the mass flow of the refrigerant.



OIL SEPARATORS (CONT'D)

TEMPRITE COALESCENT ACCESSIBLE (CONT'D)

Part Number	Model	Connections Inlet / Outlet (inches/solder)	Capacity (kW)					
			R404A / R507		R407C		R134a	
			Evaporator Temperature °C					
			-40	+4.4	-40	+4.4	-23.3	+4.4

Temprite Coalescent Oil Separator - Accessible

092200000	922	5/8"	4.7	30.6	5.7	31.2	6.2	19.9
092201000AU	922R	5/8"	4.7	30.6	5.7	31.2	6.2	19.9
092300000	923	7/8"	6.5	42.6	7.9	43.4	8.7	27.7
092301000AU	923R	7/8"	6.5	42.6	7.9	43.4	8.7	27.7
092400000	924	1-1/8"	11.7	76.5	14.1	78.1	15.6	49.9
092401000AU	924R	1-1/8"	11.7	76.5	14.1	78.1	15.6	49.9
092500000	925	1-3/8"	17.9	116	21.5	117	23.7	75.8
092501000AU	925R	1-3/8"	17.9	116	21.5	117	23.7	75.8
092600000	926	1-5/8"	30.6	199	36.8	203	40.5	130
092601000AU	926R	1-5/8"	30.6	199	36.8	203	40.5	130
092700000	927	2-1/8"	41.7	272	50.2	277	55.3	177
092701000AU	927R	2-1/8"	41.7	272	50.2	277	55.3	177
092800000	928	2-5/8"	69.7	453.7	84	463	92.4	295.6
092801000AU	928R	2-5/8"	69.7	453.7	84	463	92.4	296.6
093001000	930R	3-1/8"	69.7	453.7	84	463	92.4	296.6

Part Number	Model	Capacity (kW)						Max. Working Pressure AS2971 (kPa)	Oil Charge (l)
		R410A		Ammonia / R717		CO2 Sub-Critical			
		Evaporator Temperature °C							
		-40	+4.4	-40	+4.4	-40	+4.4		

Temprite Coalescent Oil Separator - Accessible (Cont'd)

092200000	922	8.4	45.5	5.3	35.0	10.8	70.6	4480	0.48
092201000AU	922R	8.4	45.5	5.3	35.0	10.8	70.6	4480	2.27
092300000	923	11.6	63.3	7.3	48.8	15.1	98.1	4480	0.48
092301000AU	923R	11.6	63.3	7.3	48.8	15.1	98.1	4480	2.27
092400000	924	20.9	113.7	13.3	87.8	27	176.1	4480	0.48
092401000AU	924R	20.9	113.7	13.3	87.8	27	176.1	4480	3.22
092500000	925	31.7	172.9	20.2	133.5	41.5	267.9	4480	0.48
092501000AU	925R	31.7	172.9	20.2	133.5	41.5	267.9	4480	3.22
092600000	926	54.3	295.8	34.6	228.6	70.3	450.2	4480	1.00
092601000AU	926R	54.3	295.8	34.6	228.6	70.3	450.2	4480	6.70
092700000	927	73.9	403.0	47.2	311.6	96	624.7	4480	1.00
092701000AU	927R	73.9	403.0	47.2	311.6	96	624.7	4480	6.70
092800000	928	123.5	673.4	47.2	311.6	160.4	1043.6	4480	1.00
092801000AU	928R	123.5	673.4	47.2	311.6	160.4	1043.6	4480	7.55
093001000	930R	123.5	673.4	47.2	311.6	160.4	1043.6	4480	2.13

TEMPRITE COALESCENT ACCESSIBLE (CONT'D)

Part Number	Model	O/All Height (mm)	Top Plate Diameter (mm)	Body Diameter (mm)	Oil Connection	Replacement Standard Filter Kit Part Number	Clean Up Filter Cartridge Kit Part Number
092200000	922	438	165	102	1/4" SAE	*62034000	*62024000
092201000AU	922R	495	165	102	1/4" SAE	*62034000	*62024000
092300000	923	438	165	102	1/4" SAE	*62034000	*62024000
092301000AU	923R	495	165	102	1/4" SAE	*62034000	*62024000
092400000	924	549	165	102	1/4" SAE	*62037000	*62047000
092401000AU	924R	727	165	102	1/4" SAE	*62037000	*62047000
092500000	925	549	165	102	1/4" SAE	*62037000	*62047000
092501000AU	925R	727	165	102	1/4" SAE	*62037000	*62047000
092600000	926	889	216	152	3/8" SAE	**62028000	**62030000
092601000AU	926R	975	216	152	3/8" SAE Valve Incl.	**62028000	**62030000
092700000	927	889	216	152	3/8" SAE	**62028000	**62030000
092701000AU	927R	975	216	152	3/8" SAE Valve Incl.	**62028000	**62030000
092800000	928	1003	219	219	3/8" SAE	***62051000	***62092802
092801000AU	928R	940	219	219	3/8" SAE Valve Incl.	***62051000	***62092802
093001000	930R	1085	324	324	3/8" SAE Valve Incl.	***62085000	***62086000

Note:

Oil reservoir models (Nil float) are denoted by suffix "R" and include standard Coalescent Cartridge.

Always select oil separator with connection size not less than actual compressor discharge line size

Add Oil Charge to separator before installing

* Denotes that kit includes Filter,Gasket & Sealing Washer

** Denotes that kit includes Filter,Gasket,O-Ring & Sealing Washer

*** Denotes that kit includes Filter,2 off different size O-Rings & Sealing Washer

Temprite

Part Number	Description
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Accessory - Temprite Coalescent Oil Separator

224-PDI Temprite Coalescent - Pressure Differential Indicator Model 224 (650psi operating pressure) Visual & Alarm Contacts Switch

Other Oil Management Devices

040B0010	Oil Separator (Danfoss OUB1 - 3/8"FL Union Connections)
003658000	Temprite Oil Return Float - Demountable (Require to order fittings 1/4"MSAE x 3/8"MNPT Union #204-0606 + 1/4"MSAE x1/4"MNPT Union #204-0404)
3458	Temprite Oil Float - High Side (Require to order fittings 1/4"MSAE x 3/8"MNPT Union #204-0606 + 1/4"MSAE x1/4"MNPT Union #204-0404)
003358000	Temprite Oil Return Float - Hermetic: BitzerM/Fit (Require to order fittings 1/4"MSAE x 3/8"MNPT Union #204-0606 + 1/4"MSAE x1/4"MNPT Union #204-0404 & 1 off Rotolock Elbow Connection 3/8"IDX3/4"SS #263-0612)

HENRY TECHNOLOGIES HELICAL HEAVY DUTY RANGE

Part Number	Connection Size (inches)	Oil Return Fitting Only	Nominal Evap Capacity (kW)		Dimensions (mm)		Oil Charge (litres)	
			5 °C SST. 45 °C SCT.					
	ODS Inlet/Outlet		R134a	R404A	Diameter	Height	Max	Min
S-5387-AU	7/8	3/8"SAE	20.64	25.90	168	750	3.00	6.00
S-5388-AU	1-1/8	3/8"SAE	30.81	38.65	168	750	3.00	6.00
S-5390-AU	1-3/8	3/8"SAE	48.90	57.69	168	855	3.00	6.00
S-5392-AU	1-5/8	3/8"SAE	67.18	80.55	168	855	3.00	6.00
S-5394-AU	2-1/8	3/8"SAE	103.41	124.52	168	855	3.00	6.00
S-5302-AU	2-1/8	3/8"SAE	123.10	148.08	219	694	6.30	9.50
S-5303-AU	2-5/8	3/8"SAE	204.36	251.85	273	770	6.30	9.50
S-5304-AU	3-1/8	3/8"SAE	299.00	369.68	305	770	6.30	9.50

HENRY
TECHNOLOGIES

OIL SEPARATORS (CONT'D)

HENRY TECHNOLOGIES COALESCENT ACCESSIBLE

Specially designed for Australian conditions, Coalescing units are capable of delivering up to 99% + efficiency by capturing the small oil droplets and a large percentage of atomised oil vapour.

This is achieved by utilising "Deep Filtration - Multi Wrap Design" Coalescent cartridges.

Features

- Designed for maximum flow and minimal pressure drop
- Large filtration surface area
- Replaceable filter
- 7 Models -Wide Application

Benefits

- Legible loss in system efficiency
- Filtration to 0.3 micron
- Easy to change filter when required
- Locally Supported - Products and Engineering

Materials of construction

- Shell and end caps are carbon steel
- Connections are carbon steel
- Filter is proprietary composition

Manufacturing standards

- Manufactured in accordance with AS2971.2
- Safe working pressure: 4500 kPa

Part Number	Connections Inlet / Outlet (inches/solder)	Capacity (kW)									
		R134a				R404A					
		Evaporator Temperature °C									
		-10	-5	0	5	-40	-30	-20	-15	-10	-5

Coalescent Oil Separator - Accessible

HCOS-022R	5/8 ODS	14	14.3	14.6	15	15.5	17	18.4	19	19.7	20.3
HCOS-023R	7/8 ODS	31.6	32.3	33	33.7	35	38.3	41.4	42.9	44.4	45.8
HCOS-024R	1-1/8 ODS	49.4	50.5	51.6	52.7	54.8	59.8	64.7	67.1	69.4	71.6
HCOS-025R	1-3/8 ODS	87.8	89.8	91.8	93.8	97.4	106.5	115	119.3	123.4	127.4
HCOS-026R	1-5/8 ODS	126.4	129.4	132.2	135.1	140.3	153.2	165.5	171.6	177.6	183.5
HCOS-027R	2-1/8 ODS	224.8	230	235.1	240.2	249	272.5	294.4	305.4	316	326
HCOS-028R	2-5/8 ODS	351.3	359.5	367.4	375.3	389	425	460	477	493	509.5



Part Number	Capacity (kW)			Maximum Working Pressure AS2971-2 (kPa)	Oil Charge (ml)
	R744 CO ₂ Sub-Critical				
	Evaporator Temperature °C				
	-40	-30	-20		

Coalescent Oil Separator - Accessible (Cont'd)

HCOS-022R	35	35.1	35.2	4500	2300
HCOS-023R	78.5	79	79.2	4500	2300
HCOS-024R	123	123.5	123.8	4500	3250
HCOS-025R	218.7	219.5	220.1	4500	3250
HCOS-026R	315	316.8	317	4500	6700
HCOS-027R	560	563.2	563.6	4500	6700
HCOS-028R	-	-	-	4500	7500

Capacity Table is based on 45 °C Condensing Temperature & -10 °C for R744 Cascade condenser
kW = Maximum kW for line size and pressure drop

HENRY TECHNOLOGIES COALESCENT ACCESSIBLE (CONT'D)

Part Number	O/AII Height (mm)	Top Plate Diameter (mm)	Body Diameter (mm)	Oil Connection	Filter Kit Part Number Order with Oil Separator
HCOS-022R	495	142	102	1/4" SAE	3500-34000
HCOS-023R	495	142	102	1/4" SAE	3500-34000
HCOS-024R	727	142	102	1/4" SAE	3500-37000
HCOS-025R	727	142	102	1/4" SAE	3500-37000
HCOS-026R	977	192	152	1/4" SAE	3500-28000
HCOS-027R	977	192	152	1/4" SAE	3500-28000
HCOS-028R	930	219	219	1/4" SAE	3500-28000

Note - All models are "Oil Reservoir" design (oil float) and are denoted by suffix "R".
 Coalescent Filter Cartridge Kit not included with oil separator. To be ordered separately.
 Always select oil separator with connection size not less than actual compressor discharge line size.
 Add Oil Charge to separator before installing.



Part Number	Description
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Accessory - Henry Technologies Coalescent Oil Separator

1002PIS-4A-2.5M-C 1.5BAR	Differential Pressure Gauge Switch (Visual & Alarm Circuit .. 1.5 Bar Differential)
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SUCTION ACCUMULATORS**STANDARD COMMERCIAL**

Part Number	Connection Size ODS (inches)	Nominal Capacity kW @ 5 °C SST. 30 °C SCT. (PD = 7 kPa)			Dimensions (mm)		Liquid Holding Capacity (litres)	Working Pressure (kPa)	Weight (kg)
		R404A	R134a	R410A	Diameter	Overall Height			
3100-083007	1/2	3.1	1.6	3.1	102	218	0.7	2500	1.1
3100-104016	5/8	7.4	6.2	7.4	102	218	1.8	2500	2.2
3100-124016	3/4	13.4	11.2	13.4	102	244	1.6	2500	2.6
3100-124017	3/4	13.4	11.2	13.4	102	252	1.9	2500	1.9
3100-125024P	3/4	13.4	11.2	13.4	127	215	2.4	2500	2.2
3100-125029	3/4	13.4	11.2	13.4	127	288	2.4	2500	3.20
3100-145034	7/8	19.0	15.8	16.0	128	300	3.4	2500	3.50
3100-145040	7/8	19.0	15.8	19.0	127	368	4	2500	3.80
3100-185559	1-1/8	31.4	16.3	31.4	140	430	5.9	2500	6.20
3100-186055P	1-1/8	31.4	16.3	31.4	159	390	5.5	2500	5.90
3100-186063	1-1/8	31.4	16.3	31.4	159	470	6.3	2500	6.80
3100-186572	1-1/8	31.4	16.3	31.4	180	442	7.2	2500	7.00
3100-226071	1-3/8	95.0	49.3	95.0	159	460	7.1	2500	7.40
3100-226563	1-3/8	95.0	49.3	95.0	160	350	6.3	2500	8.10
3100-226596	1-3/8	95.0	49.3	95.0	159	569	9.6	2500	8.10
3100-266510	1-5/8	201.0	109.0	201.0	160	575	10.5	2500	9.3
3100-348615	2-1/8	201.0	109.0	201.0	219	533	15	2500	13.3
3100-421125	2-5/8	200.0	150.0	221.0	273	522	25	2500	16.0
3100-421135	2-5/8	200.0	150.0	221.0	273	522	35	2500	16.0
3100-501135	3-1/8	204.0	156.0	225.0	273	683	35	2500	23.0



LIQUID RECEIVERS

STANDARD

Part Number	Connections (inches)		Dimensions (mm)		Volume (litres)	Working Pressure (kPa)	Weight (kg)
	Inlet	Outlet MF	Diameter	Overall Height			
3310-064014	1/4 I.D. Cu.Solder Tail / Side Mount	3/4 ODS. R/LOCK Nut Fitting / Top Mount	120	200	2.4	3000	1.1
3310-064724A	3/8 I.D. Cu.Solder Tail / Side Mount	3/4 ODS. R/LOCK Nut Fitting / Side Mount	120	250	2.4	3000	2.3
3310-084724	1/2 I.D. Cu.Solder Tail / Side Mount	3/4 ODS. R/LOCK Nut Fitting / Top Mount	120	250	2.4	3000	2.3
3310-105544	1/2 I.D. Cu.Solder Tail / Side Mount	3/4 ODS. R/LOCK Nut Fitting / Side Mount	140	340	4.4	3000	3.3
3310-167082	1 R/LOCK Nut Fitting / Side Mount	1 R/LOCK Nut Fitting / Side Mount	180	400	8.2	3000	6.1
3310-1670109	1 R/LOCK Nut Fitting / Side Mount	1 R/LOCK Nut Fitting / Side Mount	180	510	10.9	3000	7.2
3310-1686145	1 R/LOCK Nut Fitting / Side Mount	1 R/LOCK Nut Fitting / Side Mount	220	430	14.5	3000	10.3



WATER COOLED CONDENSERS

HANWEST WATER COOLED CONDENSERS / SEALED SHELL - VERTICAL APPLICATION

Aqua Systems water cooled condensers are a high efficiency heat exchanger for refrigeration and air conditioning systems. The patented design incorporates a unique tube geometry with extended surface tube with an internal spiral fin. This results in a high level of heat exchange efficiency with reduced water flow, close approach temperature and providing up to 8 k liquid subcooling. Freeze cleaning of the water tubes - condenser can be cleaned in under one hour. Enquire about the portable unit for hire or sale.

Part Number	Nominal THR	Nominal Flow Water L/sec	Water In/Out	Refrigerant Connections		Dimensions (mm)			Weight (kg)
				In	Out	Length	Width	Height	

Aqua Systems Condensers - Fresh Water

S-2	10 kW	0.28	7/8	7/8	7/8	155	223	225	7
S-3	14 kW	0.43	7/8	7/8	7/8	155	223	260	9
S-4	19 kW	0.57	7/8	7/8	7/8	155	223	310	10
S-5	24 kW	0.63	7/8	7/8	7/8	155	233	355	12
S-6	30 kW	0.72	7/8	7/8	7/8	155	223	398	14

Aqua Systems Condensers - Salt Water

CN-2	10 kW	0.28	7/8	7/8	7/8	155	223	225	7
CN-3	14 kW	0.43	7/8	7/8	7/8	155	223	260	9
CN-4	19 kW	0.57	7/8	7/8	7/8	155	223	310	10
CN-5	24 kW	0.63	7/8	7/8	7/8	155	233	355	12
CN-6	30 kW	0.72	7/8	7/8	7/8	155	223	398	14

Nominal ratings based on 30 °C water entering, 36 °C water leaving and 42 °C condensing.

Standard Vessels are painted with a black enamel finish and include service connection.

For other rating conditions, applications and additional information please contact your local Heatcraft representative.



WATER COOLED CONDENSERS (CONT'D)

INLINE BROLGA - WATER COOLED CONDENSERS / SHELL & TUBE MECHANICALLY CLEANABLE

The series RCC is a compact mechanically cleanable shell and tube condenser especially designed to meet the growing demand for water cooled refrigeration and air Conditioning systems. The large ruggedly designed constructed vessel is ideally suited for use as a condenser/muffler. Adequate storage and pump down capacity allows the condenser to be used as a liquid receiver for most standard applications. High efficiency extruded copper tubing provides maximum heat transfer over the given length, with the resulting low pressure drops.

Application:

Ideal as a replacement for existing equipment, or as a component for built up or specialised refrigeration and air conditioning systems. Model RCC condensers are of the mechanically cleanable shell and extruded tube construction. Removable water heads provide ready access for tube inspection, cleaning and replacement.

Specifications:

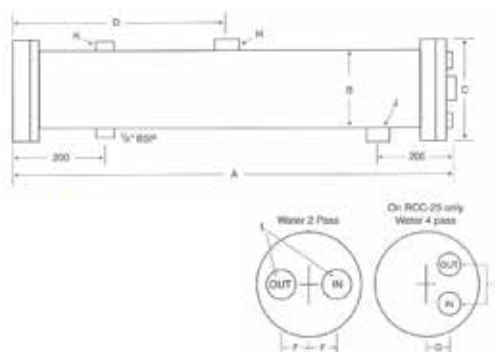
- Water In - 29.4 °C
- Water Out - 35 °C
- Condensing - 40.5 °C
- Fouling factor - 0.088

Shell Side Pressures

- Design - 3.0 MPa
- Test - 4.5 MPa

Water Side Pressures

- Design - 0.69 MPa
- Test - 1.38 MPa



Part Number	Overall Length (mm)	Capacity	Water		Pump Down	Dry
		T.H.R. (kW)	(l/s)	(kPa)	Capacity R404A (kg)	Weight (kg)
6 Pass						
RCC - 1424	760	12.8	0.55	18	14.7	65
RCC - 2024	760	18.3	0.79	18	14.0	67
RCC - 2624	760	23.7	1.02	18	13.6	69
RCC - 3824	760	34.7	1.50	18	12.0	72
RCC - 4824	760	43.8	1.90	18	11.0	76
RCC - 1436	1070	19.9	0.86	43	23.0	82
RCC - 2036	1070	28.4	1.22	43	22.0	84
RCC - 2636	1070	36.9	1.59	43	21.2	87
RCC - 3836	1070	54.0	2.33	43	18.8	92
RCC - 4836	1070	68.2	2.94	43	17.0	96
RCC - 1442	1220	23.6	1.02	66	27.0	85
RCC - 2042	1220	33.8	1.46	66	25.8	90
RCC - 2642	1220	43.9	1.89	66	25.0	95
RCC - 3842	1220	64.2	2.77	66	22.0	100
RCC - 4842	1220	81.1	2.94	66	20.0	106
RCC - 1448	1360	27.0	1.16	92	31.2	95
RCC - 2048	1360	38.6	1.66	92	29.7	98
RCC - 2648	1360	50.1	2.16	92	28.8	102
RCC - 3848	1360	73.2	3.16	92	25.4	110
RCC - 4848	1360	92.5	4.00	92	23.0	117
3 Pass						
RCC - 4860	1660	117.5	5.00	45	30.0	136
RCC - 4872	1960	142.0	6.12	55	37.0	155

Marine Options

316 Stainless steel tubesheets
Copper nickel tubes
Gun metal water boxes

General

Vessels conform to AS1210 Standard & are locally fabricated.
Standard Vessels are painted black enamel finish and include service connection configured to order.
Larger capacities and design profiles are available on request.

Condensers are selected and configured to customers requirements and should be verified with your local Heatcraft Representative.



ELECTRONIC OIL MANAGEMENT

HENRY TECHNOLOGIES - INTELOIL - ELECTRONIC OIL MANAGEMENT CONTROLLER

The function of the IntelOil Controller is to monitor and maintain the oil level in the compressor crankcase using proven high resolution float sensor technology. This protects the compressor from damage.

Applications

The IntelOil Controller is suitable for low and high pressure oil management systems. It is designed for use with both scroll and reciprocating compressors.

The oil controller is approved for HCFC, HFC and CO₂ refrigerants and their associated oils.

Main Features

- High resolution float sensor
- Integral diagnostics
- Supplied with 3m power and relay cables
- Reliable performance even with foaming or dirty oil
- Compact and lightweight
- Precise level sensing
- Low energy solenoid valve
- Easy to install adapters
- Alarm relay

Part No.	Description
IntelOil Base Units	
HOC1-24-3	24V AC with 3 m power and relay cables - Max 60 bar
HOC1-230-3	230V AC with 3 m power and relay cables - Max 60 bar
HOC1H-24-3	24V AC with 3 m power and relay cables - Max 120 bar
HOC1H-230-3	230V AC with 3 m power and relay cables - Max 120 bar

Part No.	Compressor Type	Mounting Style
IntelOil Adapters - Compressor Fittment		
H12070	Multi-Adapter	3 & 4 bolt combination flange with O-ring
H12071	Bitzer/Bock/Copeland	1 1/8" - 18 UNEF thread with O-ring
H12072	Dorin	1 1/8" - 18 UNEF thread with aluminium seal
H12073	Copeland Scroll	3/4" - 14 NPTF
H12074	Copeland Scroll	1 3/4" - 12 UN thread Rotalock with teflon gasket
H12075	Copeland Scroll	1 1/4" - 12 UNF thread Rotalock with teflon gasket
H12076	Danfoss/Maneurop	1 1/8" - 18 UNEF thread with O-ring and adapter ring

Part No	Description
IntelOil Cable Accessories	
HOC-P300	Power Cable 3 metre
HOC-S300	Relay Cable 3 metre
HOC-P600	Power Cable 6 metre
HOC-S600	Relay Cable 6 metre

HENRY TECHNOLOGIES - INTELOIL - ELECTRONIC LIQUID LEVEL SENSOR CONTROL (CONT'D)

The function of the IntelOil Liquid Level Sensor is to monitor the liquid level in a vessel and generate an alarm signal if the level either exceeds or falls below an acceptable limit. To achieve this, the unit uses proven high resolution float sensor technology.

**Applications**

The IntelOil Liquid Level Sensor is suitable for both high and low pressure systems and is approved for HCFC, HFC, HFO and CO₂ refrigerants and their associated oils.

Main Features

- High resolution float sensor
- Units can be used for either high or low level monitoring
- Integral diagnostics
- Supplied with 3 m power and relay cables
- Reliable performance even with foaming or dirty oil
- Compact and lightweight
- Precise level sensing
- Easy to install adapters

Part Number	Description
HLS-24-3	24V AC with 3 m power and relay cable*
HLS-230-3	230V AC with 3 m power and relay cable*
HLSH-24-3	24V AC with 3 m power and relay cable*
HLSH-230-3	230V AC with 3 m power and relay cable*

Part Number	Mounting Style
IntelOil - Liquid Levels Sensor Adaptors	
H12070	3 & 4 bolt combination flange with O-ring
H12071	1 1/8"-18 UNEF thread with O-ring
H12072	1 1/8"-18 UNEF thread with aluminium seal
H12073	3/4"-14 NPTF
H12074	1 3/4"-12 UN thread Rotalock with Teflon gasket
H12075	1 1/4"-12 UNF thread Rotalock with Teflon gasket
H12076	1 1/8"-18 UNEF thread with O-ring and adapter ring
H12077	1 1/8"-18 UNEF thread with O-ring - extended length
H12078	6/6 hole mounting
H12079	1/2" - 14 NPTF

Part No	Description
IntelOil - Liquid Level Sensor Cables	
HOC-N300	Power Cable 3 m
HOC-5300	Relay Cable 3 m.
HOC-N600	Power Cable 6 m
HOC-S600	Relay Cable 6 m

*Adapter kits sold separately

ELECTRONIC OIL MANAGEMENT (CONT'D)

EMERSON CLIMATE TECHNOLOGIES - ELECTRONIC OIL MANAGEMENT CONTROLLER

OM3, OM4 and OM5 TraxOil Oil Management

The OM3/OM4 TraxOil oil management is a self-contained system which provides both functions of oil level monitoring and active oil level balancing including alarm relay activation for compressor protection.

Features

- OM4 Series for CO₂ and R410A
- OM3 Series for HFC refrigerants
- IP65 rating with molded housing and cable assemblies
- Supply 24 VAC or 230 VAC
- 3-Zone-Level-Control—by using precise Hall-Sensor measurement, not prone to errors by foaming or light like optical sensors
- SPDT output contact for compressor shut down or alarming, rating 230 V AC / 3 A
- Easy installation by sight-glass replacement and front side mounting without nuts
- Self contained unit with oil level sensor and integral solenoid to manage oil level supply
- Alarm, status and level indication by LED's
- Adapters suitable for various types of compressors
- Recommended by leading compressor manufacturers

OM3 FOR HFC REFRIGERANTS - MAX. WORKING PRESSURE 46 BAR20 SECOND TIME DELAY ALARM

Part Number	Installation Kit	Suitable For Compressor Series HFC Refrigerants Only	Kit Parts Included					
			Base Unit	Part No.	Adapter	Part No.	Coil	Part No.
805029	OM3-CCE	Copeland Scroll	OM3-020	805133	OM0-CCE	805043	ASC3 24 VAC	801079
805030	OM3-CUA	Copeland & Dorin Semi Herm Recip.	OM3-020	805133	OM0-CUA	805037	ASC3 24 VAC	801079
805031	OM3-CCD	Copeland Scroll	OM3-020	805133	OM0-CCD	805042	ASC3 24 VAC	801079
805032	OM3-CBB	Dorin Semi Herm & Maneurop Herm.	OM3-020	805133	OM0-CBB	805038	ASC3 24 VAC	801079
805033	OM3-CCA	Copeland Scroll	OM3-020	805133	OM0-CCA	805039	ASC3 24 VAC	801079
805034	OM3-CCB	Copeland Semi Herm Recip.	OM3-020	805133	OM0-CCB	805040	ASC3 24 VAC	801079
805035	OM3-CCC	Copeland Semi Herm Recip.	OM3-020	805133	OM0-CCC	805041	ASC3 24 VAC	801079

OM4 FOR SUBCRITICAL R744 CO2 AND HFC REFRIGERANTS - MAX. WORKING PRESSURE 60 BAR. 20 SECOND TIME DELAY ALARM

Part Number	Installation Kit	Suitable For Compressor Series CO2 Refrigerant Only	Kit Parts Included					
			Base Unit	Part No.	Adapter	Part No.	Coil	Part No.
805066	OM4-CCE	Copeland Scroll	OM4-020	805135	OM0-CCE	805043	ASC3 24 VAC	801079
805060	OM4-CUA	Copeland & Dorin Semi Herm Recip.	OM4-020	805135	OM0-CUA	805037	ASC3 24 VAC	801079
805062	OM4-CBB	Dorin Semi Herm & Maneurop Herm.	OM4-020	805135	OM0-CBB	805038	ASC3 24 VAC	801079
805063	OM4-CCA	Copeland Scroll	OM4-020	805135	OM0-CCA	805039	ASC3 24 VAC	801079

Part Number	Description	Specification
Adapter Flanges		
805037	OM0-CUA Copeland & Dorin Semi Herm Recip.	Flange adapter 3-/4-hole
805038	OM0-CBB Dorin Semi Herm & Maneurope Herm.	Screw adapter 1-1/8" - 18 UNF
805039	OM0-CCA Copeland Scroll	Screw adapter 3/4" - 14 NPTF
805040	OM0-CCB Copeland Semi Herm Recip.	Screw adapter 1-1/8" - 12 UNF
805041	OM0-CCC Copeland Semi Herm Recip.	Flange adapter 3-hole
805042	OM0-CCD Copeland Scroll	Rotalock adapter 1-3/4" - 12UNF
805043	OM0-CCE Copeland Scroll	Rotalock adapter 1-1/4" - 12UNF


OM5 FOR TRANSCRITICAL R744 CO₂ REFRIGERANT - MAX. WORKING PRESSURE 130 BAR. 20 SECOND TIME DELAY ALARM

Part Number	Description	Suitable For Compressor Series CO ₂ Refrigerant Only
805230	OM5-020 Base Unit Only	Copeland & Dorin Semi Herm Recip.
805049	OM0-CUA Adapter	Dorin CD Semi Herm Recip.
805338	OM0-CBB Adapter	Copeland 4MSL,4MTL Semi Herm Recip.
801074	ASC3 -W24 VAC Coil Only (38VA)	Copeland & Dorin Semi Herm Recip.

Accessories And Spare Parts - OM3, OM4 & OM5.

805141	Alarm Relay Cable - 3 m Long	Common All 24 V.
805151	Power Supply Cable 24 V AC - 3m Long	Common All 24 V.
804421	ECT-623 Transformer 230 V AC / 24 VAC 60VA	Power Supply (For Up to 3 Off Controls).
805036	OM3-K01 Repair Kit OM3/OM4	Consists Of Sight Glass With O-Ring,Screws,Oil Adapter With Strainer & O-Ring Back Side.
805067	OM5-K01 Repair Kit OM5 For CO ₂	Consists Of Sight Glass With O-Ring,Screws,Oil Adapter With Strainer & O-Ring Back Side.
805081	OM-HFC-K01 Sealing Repair Kit	Consists Of All O-Rings For OM3/OM4 Base Unit & For All Types Of Adapters.

EMERSON CLIMATE TECHNOLOGIES - ELECTRONIC OIL MANAGEMENT CONTROLLER
OW4 TraxOil Oil Level Watch

The OW4 is a self-contained system which provides oil level monitoring and alarm functionality, protecting especially compressors that do not have an oil pump.

Features

- Suitable for HFC's, R410A & R744 (CO₂) - 60 bar
- Supply 24 V AC 50/60 Hz
- IP65 rating with molded housing and cable assemblies
- 3 Zone Level Control by using precise Hall-Sensor measurement, not prone to errors by foaming or light like optical sensors
- SPDT output contact for compressor shut down or alarming, rating 230 VAC / 3 A
- Easy installation by sight-glass replacement and front side mounting without nuts
- Self contained unit with oil level sensor
- Alarm, status and I3 zone indication by LED's
- Adapters suitable for various types of compressors
- Recommended by leading compressor manufacturers

Part Number	Description	Specification
805116	OW4-20 Base Unit Only	60 bar MWP. 20 sec Time Delay Alarm
804672	OW-24V-3 Power Supply Cable - 3 m Long	24 VAC.
805141	OM3-N30 Alarm Relay Cable - 3 m Long	Relay connection

Part Number	Description	Specification
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Adapter Flanges

805037	OM0-CUA Copeland & Dorin Semi Herm Recip.	Flange adapter 3-/4-hole
805038	OM0-CBB Dorin Semi Herm & Maneurop Herm.	Screw adapter 1-1/8"-18 UNEF
805039	OM0-CCA Copeland Scroll	Screw adapter 3/4"-14 NPTF
805040	OM0-CCB Copeland Semi Herm Recip.	Screw adapter 1-1/8"-12 UNF
805041	OM0-CCC Copeland Semi Herm Recip.	Flange adapter 3-hole
805042	OM0-CCD Copeland Scroll	Rotalock adapter 1-3/4"-12 UNF
805043	OM0-CCE Copeland Scroll	Rotalock adapter 1-1/4"-12 UNF

HVAC Equipment



Lennox Air Conditioners

WINDOW UNIT & WALL-SPLIT, DUCTED-SPLIT, MULTI-SPLIT & CASSETTE-SPLIT SYSTEMS

LENNOX DC INVERTER HEAT-PUMP HIGH-WALL SPLIT SYSTEM (R410A)

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Indoor Air Flow - SH/H/M/L (L/Sec.)
	Cooling (Min–Max)	Heating (Min–Max)			Cooling	Heating	
System							
LNINV2610-D	2.60 (0.35–3.0)	2.80 (0.75–3.5)	3.82	3.97	3.0	3.0	161/138/111/83
LNINV3510-D	3.50 (0.95–4.0)	3.85 (0.88–4.30)	3.69	3.72	2.5	2.5	167/138/111/83
LNINV5210-D	5.20 (0.65–6.00)	5.85 (0.9–7.00)	3.31	3.38	2.0	2.0	236/216/180/152
LNINV6310-D	6.30 (0.70–7.00)	6.30 (0.95–8.00)	3.28	3.36	2.0	2.0	263/222/194/152
LNINV7010-D	7.00 (1.40 - 8.70)	7.50 (1.05–10.00)	3.37	3.39	2.0	2.0	305/295/265/250
LNINV8010-D	8.00 (1.40 - 8.70)	8.40 (1.05–10.00)	3.35	3.45	2.0	2.0	333/305/277/250

Part Number	Sound Levels dB(A)		Power Supply (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)	Max. Pipe Length (m)	Max. Elevation (m)
	Indoor SH/H/M/L	Outdoor				

System (Cont'd)

LNINV2610-D	40/37/35/32	50	240/50/1	1/4 & 3/8	15	10
LNINV3510-D	42/39/36/33	52	240/50/1	1/4 & 1/2	20	10
LNINV5210-D	46/44/40/35	56	240/50/1	1/4 & 1/2	20	10
LNINV6310-D	51/45/42/39	56	240/50/1	1/4 & 5/8	25	10
LNINV7010-D	51/47/43/40	59	240/50/1	1/4 & 5/8	25	10
LNINV8010-D	51/48/43/40	59	240/50/1	1/4 & 5/8	30	10

NOTES:

1. Thermal data is in accordance with AS/NZS 3823.1.1 & AS/NZS 3823.2 Standards.
2. Sound data is Sound Pressure Levels @ 1 m distance.
3. Indoor Air Flow settings & corresponding Sound Pressure Levels are Super-High/High/Medium/Low (SH/H/M/L)

LENNOX INVERTER HEAT-PUMP HIGH-WALL SPLIT SYSTEM - DRED COMPATIBLE WITH WIFI CAPABILITY (R410A)

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Indoor Air Flow - T/H/M/L/S (L/Sec.)
	Cooling (Min–Max)	Heating (Min–Max)			Cooling	Heating	
Indoor/Outdoor							
LNMT026V2/ LNINVC026V2	2.55 (1.02–3.06)	2.70 (1.10–3.25)	4.30	4.01	4.0	3.5	167/161/133/ 105/77
LNMT035V2/ LNINVC035V2	3.50 (1.40–4.20)	3.60 (1.45–4.32)	3.76	3.94	3.0	3.0	194/180/158/ 116/97
LNMT050V2/ LNINVC050V2	5.00 (2.00–6.00)	5.20 (2.10–6.25)	3.56	3.76	2.5	3.0	333/305/263/ 211/158
LNMT070V2/ LNINVC070V2	7.10 (2.84–7.81)	7.50 (3.00–8.25)	3.54	3.79	2.5	3.0	402/386/355/ 241/144
LNMT080V2/ LNINVC080V2	8.00 (3.20–8.80)	8.30 (3.32–9.13)	3.55	3.53	2.5	2.5	402/386/355/ 241/208

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LENNOX INVERTER HEAT-PUMP HIGH-WALL SPLIT SYSTEM - DRED COMPATIBLE WITH WIFI CAPABILITY (R410A) (CONT'D)



Part Number	Sound Levels dB(A)		Power Supply (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)	Max. Pipe Length (m)	Max. Elevation (m)
	Indoor T/H/M/L/S	Outdoor				
Indoor/Outdoor (Cont'd)						
LNMT026V2/ LNINVC026V2	43/41/35/33/27	53	220-240/50/1	1/4 & 3/8	25	10
LNMT035V2/ LNINVC035V2	44/42/36/34/28	55	220-240/50/1	1/4 & 1/2	25	10
LNMT050V2/ LNINVC050V2	48/46/40/33/30	57	220-240/50/1	1/4 & 1/2	30	20
LNMT070V2/ LNINVC070V2	52/50/45/37/35	57	220-240/50/1	3/8 & 5/8	50	25
LNMT080V2/ LNINVC080V2	55/51/45/36/35	60	220-240/50/1	3/8 & 5/8	50	25

NOTES:

1. Thermal data is in accordance with AS/NZS 3823.1.1 & AS/NZS 3823.2 Standards.
2. Sound data is Sound Pressure Levels @ 1 m distance.
3. Indoor Air Flow settings & corresponding Sound Pressure Levels are Turbo/High/Medium/Low/Silent (T/H/M/L/S)

LENNOX FIXED-SPEED HEAT-PUMP HIGH-WALL SPLIT SYSTEM (R410A)



Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Indoor Air Flow - H/M/L (L/Sec.)
	Cooling	Heating			Cooling	Heating	
System							
LNFS2710	2.7	2.8	3.72	3.80	2.5	3.0	175/150/115
LNFS3610	3.5	3.5	3.70	3.70	2.5	2.5	225/190/170
LNFS5210	5.1	5.3	3.28	3.30	2.0	2.0	305/286/233
LNFS6410	6.4	7.0	3.29	3.29	2.0	2.0	319/288/235
LNFS8310	8.3	8.6	3.31	3.35	2.0	2.0	388/340/311



Part Number	Sound Levels dB(A)		Power Supply (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)	Max. Pipe Length (m)	Max. Elevation (m)
	Indoor - H/M/L	Outdoor				

System (Cont'd)

LNFS2710	41/35/29	56	240/50/1	1/4 & 3/8	25	10
LNFS3610	44/39/35	58	240/50/1	1/4 & 1/2	25	10
LNFS5210	46/42/38	62	240/50/1	1/4 & 1/2	30	20
LNFS6410	48/44/38	62	240/50/1	3/8 & 5/8	30	20
LNFS8310	51/47/44	59	240/50/1	3/8 & 5/8	50	25

NOTES:

1. Thermal data is in accordance with AS/NZS 3823.1.1 & AS/NZS 3823.2 Standards.
2. Sound data is Sound Pressure Levels @ 1 m distance.
3. Indoor Air Flow settings & corresponding Sound Pressure Levels are High/Medium/Low (H/M/L)

LENNOX FIXED-SPEED HEAT-PUMP WINDOW UNIT PACKAGED AIR-CONDITIONERS (R410A)



Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Indoor Air Flow H/M/L (L/Sec.)
	Cooling	Heating			Cooling	Heating	
System							
LNWR21X	2.2	1.9	3.32	3.31	2.0	2.0	131/116/102
LNWR39X	3.9	3.6	3.30	3.29	2.0	2.0	175/161/147
LNWR53X	5.3	5.0	3.31	3.33	2.0	2.0	236/222/208
LNWR59X	6.0	5.5	3.27	3.12	2.0	1.5	236/222/208





WINDOW UNIT & WALL-SPLIT, DUCTED-SPLIT, MULTI-SPLIT & CASSETTE-SPLIT SYSTEMS (CONT'D)

LENNOX FIXED-SPEED HEAT-PUMP WINDOW UNIT PACKAGED AIR-CONDITIONERS (R410A) (CONT'D)

Part Number	Sound Levels dB(A)	Power Supply (V/Hz/Φ)	Dimensions W x H x D (mm)	Weight (kg)	
	(H/M/L)			Nett	Gross

System (Cont'd)

LNWR21X	49/47/45	240/50/1	560 x 375 x 668	44	48
LNWR39X	53/51/49	240/50/1	660 x 428 x 700	57	62
LNWR53X	55/53/51	240/50/1	660 x 428 x 770	68	73
LNWR59X	56/54/52	240/50/1	660 x 428 x 770	70	75

NOTES:

1. Thermal data is in accordance with AS/NZS 3823.1.1 & AS/NZS 3823.
2. Standards 2. Sound data is Sound Pressure Levels @ 1 m distance.
3. Indoor Air Flow settings & corresponding Sound Pressure Levels are High/Medium/Low (H/M/L).



LENNOX DC INVERTER HEAT-PUMP DUCTED-SPLIT SYSTEM (R410A)

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) Indoor (H/M/L) - Outdoor
	Cooling (Min–Max)	Heating (Min–Max)			Cooling	Heating	

Indoor/Outdoor

LED735V5/ LCD735V5	7.4 (3.40–8.66)	8.5 (4.44–10.20)	3.35	3.88	2.0	3.0	403/333/ 278–972
LED104V5/ LCD104V5	10.4 (5.30–12.00)	11.0 (5.70–14.00)	3.17	3.64	1.5 2.5	2.5 3.1	903/764/ 639–1525
LED135V5/ LCD135V5	13.5 (6.88–15.50) 13.50	16.0 (8.15–19.50) 16.00	3.18	3.65	1.5 2.5	2.5 3.1	917/792/ 653–2000
LED168V5/ LCD168V5	16.8 (8.50–19.00) 15.80	17.7 (9.00–22.00) 17.50	3.24	3.62	1.5 2.3	2.5 3.0	1028/889/ 819–2080
LED235V5/ LCD235V5	23.5 (8.90–26.60) 15.80	25.5 (12.30–28.30) 17.50	3.27	3.29	2.0	2.0	1069/1018/ 935–3374
LED265V5/ LCD265V5	26.5 (10.00–30.00) 15.80	26.5 (13.00–30.00) 17.50	3.16	3.23	1.5	1.5	1513/1431/ 1343–3374

Part Number	Sound Levels dB(A) Indoor (H/M/L) - Outdoor	Max. Pipe Length (m)	Max. Elevation (m)	Power Supply Indoor - Outdoor (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)	Spigot Sizes - Supply/Return (mm)
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Indoor/Outdoor (Cont'd)

LED735V5/ LCD735V5	42/38/34–59	50	25	240/50/1 - 240/50/1	3/8 & 5/8	1054 x 185/ 1061 x 226
LED104V5/ LCD104V5	49/46/42–62	65	30	240/50/1 - 240/50/1	3/8 & 5/8	1000 x 253/ 1145 x 334
LED135V5/ LCD135V5	49/45/42–63	65	30	240/50/1 - 240/50/1	3/8 & 3/4	1000 x 253/ 1145 x 334
LED168V5/ LCD168V5	49/46/42–63	65	30	240/50/1 - 240/50/1	3/8 & 3/4	1188 x 385/ 1188 x 385
LED235V5/ LCD235V5	51/49/48–66	50	30	240/50/1 - 415/50/3	1/2 & 1-1/8	799 x 199/ 1138 x 390
LED265V5/ LCD265V5	54/52/51–66	50	30	240/50/1 - 415/50/3	1/2 & 1-1/8	799 x 199/ 1138 x 390

NOTES:

1. Thermal data are in accordance with AS/NZS 3823.1.2 & AS/NZS 3823.2 Standards.
2. Sound data is Sound Pressure Levels @ 1 m distance.
3. Indoor Air Flow settings & corresponding Sound Pressure Levels are High/Medium/Low (H/M/L).





LENNOX INVERTER HEAT-PUMP DUCTED-SPLIT SYSTEM (R410A)

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) Indoor (H/M/L) - Outdoor
	Cooling (Min–Max)	Heating (Min–Max)			Cooling	Heating	

Indoor/Outdoor

LED070V6/ LCD070V6	7.0 (2.80–8.40)	7.5 (3.00–9.00)	3.25	3.26	2.0	2.0	388/319/ 272 - 972
LED100V6/ LCD100V6	10.0 (4.00–12.00)	10.5 (4.20–12.50)	3.24	3.27	1.5 2.5	2.0 3.1	555/458/ 361 - 1527
LED125V6/ LCD125V6	12.5 (5.00–15.00) 13.50	12.5 (5.00–15.00) 16.00	3.27	3.27	2.0 2.5	2.0 3.1	902/763/ 638 - 1944
LED140V6/ LCD140V6	14.0 (5.60–16.10)	14.5 (5.80–17.50)	3.27	3.35	2.0	2.0	916/791/ 652 - 2000
LED170V6/ LCD170V6	17.0 (6.80–19.50) 15.80	17.5 (7.00–21.00) 17.50	3.28	3.34	2.0 2.3	2.0 3.0	1055/888/ 819 - 2083
LED235V5/ LCD235V5	23.5 (8.90–26.60) 15.80	25.5 (12.30–28.30) 17.50	3.27	3.29	2.0	2.0	1069/1018/ 935 - 3374
LED265V5/ LCD265V5	26.5 (10.00–30.00) 15.80	26.5 (13.00–30.00) 17.50	3.16	3.23	1.5	1.5	1513/1431/ 1343 - 3374

Part Number	Sound Levels dB(A) Indoor (H/M/L) - Outdoor	Max. Pipe Length (m)	Max. Elevation (m)	Power Supply Indoor - Outdoor (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)	Spigot Sizes - Supply/Return (mm)
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Indoor/Outdoor (Cont'd)

LED070V6/ LCD070V6	45/41/38 - 58	50	25	240/50/1 - 240/50/1	3/8 & 5/8	927 x 175/ 1001 x 226
LED100V6/ LCD100V6	49/46/42 - 61	50	25	240/50/1 - 240/50/1	3/8 & 5/8	1186 x 175/ 1260 x 226
LED125V6/ LCD125V6	49/46/42 - 62	65	30	240/50/1 - 240/50/1	3/8 & 3/4	1044 x 226/ 1100 x 280
LED140V6/ LCD140V6	49/45/42 - 62	65	30	240/50/1 - 240/50/1	3/8 & 3/4	1044 x 226/ 1100 x 280
LED170V6/ LCD170V6	49/46/42 - 62	65	30	240/50/1 - 240/50/1	3/8 & 3/4	1044 x 226/ 1100 x 280
LED235V5/ LCD235V5	51/49/48 - 66	50	30	240/50/1 - 415/50/3	1/2 & 1–1/8	799 x 199/ 1138 x 390
LED265V5/ LCD265V5	54/52/51 - 66	50	30	240/50/1 - 415/50/3	1/2 & 1–1/8	799 x 199/ 1138 x 390

NOTES:

1. Thermal data is in accordance with AS/NZS 3823.1.2 & AS/NZS 3823.2 Standards.
2. Sound data is Sound Pressure Levels @ 1 m distance. 2. Sound data is Sound Pressure Levels @ 1 m distance.
3. Indoor Air Flow settings & corresponding Sound Pressure Levels are High/Medium/Low (H/M/L)



WINDOW UNIT & WALL-SPLIT, DUCTED-SPLIT, MULTI-SPLIT & CASSETTE-SPLIT SYSTEMS (CONT'D)

LENNOX DC INVERTER HEAT-PUMP MULTI-SPLIT SYSTEM (R410A)

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) @ Sound Levels dB(A)	Power Supply (V/Hz/Φ)
	Cooling	Heating			Cooling	Heating		

Outdoor Units

LNMT54	5.4	5.8	3.353	3.521	2.0	2.5	305 @ 60	220-240/50/1
LNMT78	7.8	8.5	3.262	3.516	2.0	2.5	610 @ 61	220-240/50/1
LNMT105	10.5	11.6	3.322	3.51	2.0	2.5	750 @ 64	220-240/50/1
LNMT135	13.5	16.0	3.425	3.438	2.0	2.0	2000 @ 64	220-240/50/1

Part Number	Max. Pipe Length (m)		Max. Δ Height (m)		Liquid & Gas Pipe Sizes (inches)	Max. Number of Indoor Units
	System	Per Indoor	Outdoor/Indoor-Indoor/Outdoor	Between Indoor Units		

Outdoor Units (Cont'd)

LNMT54	30	20	10 & 15	10	2 x 1/4 - 2 x 3/8	2
LNMT78	60	30	10 & 15	10	4 x 1/4 - 3 x 3/8 & 1 x 1/2	4
LNMT105	75	30	10 & 15	10	5 x 1/4 - 4 x 3/8 & 1 x 1/2	5
LNMT135	75	30	10 & 15	10	5 x 1/4 - 3 x 3/8 & 2 x 1/2	5

NOTES:

1. Thermal data is in accordance with AS/NZS 3823.1.4 & AS/NZS 3823.2 Standards.
2. Sound data is Sound Pressure Levels @ 1 m distance

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) @ Sound Levels dB(A) - H/M/L	Power Supply (V/Hz/Φ)
	Cooling	Heating			Cooling	Heating		

High-Wall Indoor Units

LNMTE020	2.0	2.3	See Outdoor	See Outdoor	See Outdoor	See Outdoor	147/125/97 @ 40/37/28	220-240/50/1
LNMTE026	2.6	2.9	See Outdoor	See Outdoor	See Outdoor	See Outdoor	147/125/97 @ 40/37/28	220-240/50/1
LNMTE035	3.5	3.8	See Outdoor	See Outdoor	See Outdoor	See Outdoor	175/150/119 @ 42/38/31	220-240/50/1
LNMTE052	5.2	5.5	See Outdoor	See Outdoor	See Outdoor	See Outdoor	305/236/194 @ 46/39/32	220-240/50/1
LNMTE070	7.0	7.5	See Outdoor	See Outdoor	See Outdoor	See Outdoor	400/360/275 @ 50/44/37	220-240/50/1

Part Number	Max. Pipe Length (m)		Max. Δ Height (m)		Liquid & Gas Pipe Sizes (inches)	Max. Number of Indoor Units
	System	Per Indoor	Outdoor/Indoor-Indoor/Outdoor	Between Indoor Units		

High-Wall Indoor Units (Cont'd)

LNMTE020	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTE026	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTE035	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTE052	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 1/2	See Outdoor
LNMTE070	See Outdoor	See Outdoor	See Outdoor	See Outdoor	3/8 & 5/8	See Outdoor

LENNOX DC INVERTER HEAT-PUMP MULTI-SPLIT SYSTEM (R410A) (CONT'D)


Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) @ Sound Levels dB(A) - H/M/L	Power Supply (V/Hz/Φ)
	Cooling	Heating			Cooling	Heating		

Mini-Cassette Indoor Units

LNMTCASS20	2.0	2.3	See Outdoor	See Outdoor	See Outdoor	See Outdoor	185/140/115 @ 43/39/36	220-240/50/1
LNMTCASS26	2.6	2.9	See Outdoor	See Outdoor	See Outdoor	See Outdoor	185/140/115 @ 43/39/36	220-240/50/1
LNMTCASS35	3.5	3.8	See Outdoor	See Outdoor	See Outdoor	See Outdoor	210/180/145 @ 48/43/41	220-240/50/1
LNMTCASS52	5.2	5.5	See Outdoor	See Outdoor	See Outdoor	See Outdoor	210/180/145 @ 48/43/41	220-240/50/1



Part Number	Max. Pipe Length (m)		Max. Δ Height (m)		Liquid & Gas Pipe Sizes (inches)	Max. Number of Indoor Units
	System	Per Indoor	Outdoor/Indoor - Indoor/Outdoor	Between Indoor Units		

Mini-Cassette Indoor Units (Cont'd)

LNMTCASS20	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTCASS26	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTCASS35	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTCASS52	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 1/2	See Outdoor

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) @ Sound Levels dB(A) - H/M/L	Power Supply (V/Hz/Φ)
	Cooling	Heating			Cooling	Heating		

Low-Profile Ducted Indoor Units

LNMTDSS20	2.0	2.3	See Outdoor	See Outdoor	See Outdoor	See Outdoor	166/150/125 @ 37/34/32	220-240/50/1
LNMTDSS26	2.6	2.9	See Outdoor	See Outdoor	See Outdoor	See Outdoor	166/150/125 @ 37/34/32	220-240/50/1
LNMTDSS35	3.5	3.8	See Outdoor	See Outdoor	See Outdoor	See Outdoor	200/166/150 @ 41/37/34	220-240/50/1
LNMTDSS52	5.2	5.5	See Outdoor	See Outdoor	See Outdoor	See Outdoor	222/165/140 @ 42/38/34	220-240/50/1
LNMTDSS70	7.0	7.3	See Outdoor	See Outdoor	See Outdoor	See Outdoor	222/165/140 @ 42/38/34	220-240/50/1



Part Number	Max. Pipe Length (m)		Max. Δ Height (m)		Liquid & Gas Pipe Sizes (in.)	Max. Number of Indoor Units
	System	Per Indoor	Outdoor/Indoor - Indoor/Outdoor	Between Indoor Units		

Low-Profile Ducted Indoor Units (Cont'd)

LNMTDSS20	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTDSS26	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTDSS35	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTDSS52	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 1/2	See Outdoor
LNMTDSS70	See Outdoor	See Outdoor	See Outdoor	See Outdoor	3/8 & 5/8	See Outdoor

WINDOW UNIT & WALL-SPLIT, DUCTED-SPLIT, MULTI-SPLIT & CASSETTE-SPLIT SYSTEMS (CONT'D)

LENNOX INVERTER HEAT-PUMP MULTI-SPLIT SYSTEM (R410A)

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) @ Sound Levels dB(A)	Power Supply (V/Hz/Φ)
	Cooling	Heating			Cooling	Heating		

Outdoor Units

LNMT052V2	5.191	5.682	3.509	3.487	2.5	2.0	777 @ 60	220-240/50/1
LNMT075V2	7.423	7.92	3.54	3.778	2.5	3.0	1000 @ 60	220-240/50/1
LNMT086V2	9.619	9.669	3.779	3.652	3.0	2.5	1000 @ 61	220-240/50/1
LNMT106V2	10.688	10.948	3.471	3.798	2.0	3.0	1000 @ 64	220-240/50/1
LNMT135V2	13.266	14.45	3.398	3.404	2.0	2.0	2000 @ 64	220-240/50/1

Part Number	Max. Pipe Length (m)		Max. ΔHeight (m)		Liquid & Gas Pipe Sizes (inches)	Max. Number of Indoor Units
	System	Per Indoor	Outdoor/Indoor- Indoor/Outdoor	Between Indoor Units		

Outdoor Units (Cont'd)

LNMT052V2	30	20	10 & 15	10	2 x 1/4 - 2 x 3/8	2
LNMT075V2	45	25	10 & 15	10	3 x 1/4 - 2 x 3/8 & 1 x 1/2	3
LNMT086V2	60	30	10 & 15	10	4 x 1/4 - 3 x 3/8 & 1 x 1/2	4
LNMT106V2	75	30	10 & 15	10	5 x 1/4 - 4 x 3/8 & 1 x 1/2	5
LNMT135V2	75	30	10 & 15	10	5 x 1/4 - 3 x 3/8 & 2 x 1/2	5

NOTES:

1. Thermal data are in accordance with AS/NZS 3823.1.4 & AS/NZS 3823.2 Standards.
2. Sound data is Sound Pressure Levels @ 1 m distance.

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) @ Sound Levels dB(A) - T/H/M/L/S	Power Supply (V/Hz/Φ)
	Cooling	Heating			Cooling	Heating		

High-Wall Indoor Units

LNMT026V2	2.55	2.70	See Outdoor	See Outdoor	See Outdoor	See Outdoor	166/161/133/105/77 @ 43/41/35/33/27	220-240/50/1
LNMT035V2	3.50	3.60	See Outdoor	See Outdoor	See Outdoor	See Outdoor	194/180/158/116/97 @ 44/42/36/34/28	220-240/50/1
LNMT050V2	5.00	5.20	See Outdoor	See Outdoor	See Outdoor	See Outdoor	333/305/263/211/158 @ 48/46/40/33/30	220-240/50/1
LNMT070V2	7.10	7.50	See Outdoor	See Outdoor	See Outdoor	See Outdoor	402/386/355/241/144 @ 52/50/45/37/35	220-240/50/1

Part Number	Max. Pipe Length (m)		Max. ΔHeight (m)		Liquid & Gas Pipe Sizes (inches)	Max. Number of Indoor Units
	System	Per Indoor	Outdoor/Indoor- Indoor/Outdoor	Between Indoor Units		

High-Wall Indoor Units (Cont'd)

LNMT026V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMT035V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 1/2	See Outdoor
LNMT050V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 1/2	See Outdoor
LNMT070V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	3/8 & 5/8	See Outdoor


LENNOX INVERTER HEAT-PUMP MULTI-SPLIT SYSTEM (R410A) (CONT'D)

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) @ Sound Levels dB(A) - H/M/L	Power Supply (V/Hz/Φ)
	Cooling	Heating			Cooling	Heating		

Mini-Cassette Indoor Units

LNMTCAS020V2	2.0	2.3	See Outdoor	See Outdoor	See Outdoor	See Outdoor	186/141/116 @ 43/39/36	220-240/50/1
LNMTCAS026V2	2.6	2.9	See Outdoor	See Outdoor	See Outdoor	See Outdoor	186/141/116 @ 43/39/36	220-240/50/1
LNMTCAS035V2	3.5	3.8	See Outdoor	See Outdoor	See Outdoor	See Outdoor	211/180/147 @ 48/43/41	220-240/50/1
LNMTCAS052V2	5.2	5.5	See Outdoor	See Outdoor	See Outdoor	See Outdoor	211/180/147 @ 48/43/41	220-240/50/1



Part Number	Max. Pipe Length (m)		Max. ΔHeight (m)		Liquid & Gas Pipe Sizes (inches)	Max. Number of Indoor Units
	System	Per Indoor	Outdoor/Indoor - Indoor/Outdoor	Between Indoor Units		

Mini-Cassette Indoor Units (Cont'd)

LNMTCAS020V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTCAS026V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTCAS035V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTCAS052V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 1/2	See Outdoor

Part Number	Capacities (kW)		AEER Cooling	ACOP heating	Star Ratings		Air Flows (L/Sec.) @ Sound Levels dB(A) - H/M/L	Power Supply (V/Hz/Φ)
	Cooling	Heating			Cooling	Heating		

Slim-Line Ducted Indoor Units

LNMTDSS020V2	2.0	2.3	See Outdoor	See Outdoor	See Outdoor	See Outdoor	166/150/127 @ 36/33/30	220-240/50/1
LNMTDSS026V2	2.6	2.9	See Outdoor	See Outdoor	See Outdoor	See Outdoor	166/150/127 @ 36/33/30	220-240/50/1
LNMTDSS035V2	3.5	3.8	See Outdoor	See Outdoor	See Outdoor	See Outdoor	200/166/150 @ 39/36/34	220-240/50/1
LNMTDSS052V2	5.2	5.5	See Outdoor	See Outdoor	See Outdoor	See Outdoor	222/169/144 @ 42/39/37	220-240/50/1
LNMTDSS070V2	7.0	7.3	See Outdoor	See Outdoor	See Outdoor	See Outdoor	388/333/302 @ 45/41/38	220-240/50/1



Part Number	Max. Pipe Length (m)		Max. Δ Height (m)		Liquid & Gas Pipe Sizes (inches)	Max. Number of Indoor Units
	System	Per Indoor	Outdoor/Indoor - Indoor/Outdoor	Between Indoor Units		

Slim-Line Ducted Indoor Units (Cont'd)

LNMTDSS020V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTDSS026V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTDSS035V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 3/8	See Outdoor
LNMTDSS052V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	1/4 & 1/2	See Outdoor
LNMTDSS070V2	See Outdoor	See Outdoor	See Outdoor	See Outdoor	3/8 & 5/8	See Outdoor

WINDOW UNIT & WALL-SPLIT, DUCTED-SPLIT, MULTI-SPLIT & CASSETTE-SPLIT SYSTEMS (CONT'D)

LENNOX INVERTER HEAT-PUMP CASSETTE-SPLIT SYSTEM (R410A)

Part Number	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Indoor Air Flow - H/M/L (L/Sec.)
	Cooling (Min–Max)	Heating (Min–Max)			Cooling	Heating	
Indoor/Outdoor Units							
LEC050V6 LCD050V6	5.3 (2.1 - 6.36)	5.8 (2.32 - 6.96)	3.51	3.52	2.5	2.5	347/291/250
LEC070V6 LCD070V6	7.0 (2.8 - 8.4)	7.5 (3 - 9)	3.44	3.37	2	2	438/333/277
LEC100V6 LCD100V6	10.5 (4.2 - 12.6)	10.8 (4.32 - 12.95)	3.27	3.34	2	2	638/555/500
LEC125V6 LCD125V6	12.5 (5 - 15)	13 (5.2 - 15.6)	3.27	3.35	2	2	638/555/500
LEC140V6 LCD140V6	14 (5.6 - 16.8)	14.5 (5.8 - 17.5)	3.27	3.35	2	2	638/555/500

Part Number	Sound Levels dB(A)		Power Supply (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)	Max. Pipe Length (m)	Max. Elevation (m)
	Indoor - H/M/L	Outdoor				
Indoor/Outdoor Units (Cont'd)						
LEC050V6 LCD050V6	49/44/39	58	220-240/50/1	1/4 & 1/2	30	20
LEC070V6 LCD070V6	49/45/41	58	220-240/50/1	3/8 & 5/8	50	25
LEC100V6 LCD100V6	52/49/45	61	220-240/50/1	3/8 & 3/4	50	25
LEC125V6 LCD125V6	53/49/45	62	220-240/50/1	3/8 & 3/4	65	30
LEC140V6 LCD140V6	54/51/48	62	220-240/50/1	3/8 & 3/4	65	30

NOTES:

1. Thermal data is in accordance with AS/NZS 3823.1.1 & AS/NZS 3823.2 Standards.
2. Sound data is Sound Pressure Levels @ 1m distance.
3. Indoor Air Flow settings & corresponding Sound Pressure Levels are High/Medium/Low (H/M/L)



Air Conditioners - Other

NON-LENNOX HVAC EQUIPMENT

MHI INVERTER HEAT-PUMP CEILING SUSPENDED SYSTEM (R410A)



Part Number	Model Numbers(s)	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) Indoor (P-Hi/H/M/L)
	Indoor/Outdoor	Cooling (Min–Max)	Heating (Min–Max)			Cooling	Heating	

System

M-FDEN125AVNXVF	FDEN125VF/ FDCA125VNX	12.5 (5.0–14.0)	14.0 (4.0–17.0)	2.96	3.49	1	2	466/433/383/350
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Part Number	Model Number(s)	Sound Levels dB(A) Indoor (P-Hi/H/M/L)/ Outdoor	Max. Pipe Length (m)	Refrigerant Factory Charge (kg)	Power Supply Indoor/ Outdoor (V/Hz/Φ)	Liquid & Gas Pipe Sizes (in.)	Net Weight Indoor Outdoor (kg)	Dimensions Indoor/ Outdoor (H x W x D) (mm)	External Static Pressure (Pa)
	Indoor/Outdoor								

System (Cont'd)

M-FDEN125AVNXVF	FDEN125VF/ FDCA125VNX	(50/46/44/43)/ 50	100	4.5	220–240/ 50/1	3/8 & 5/8	49 105	250 x 1620 x 690/ 1300 x 970 x 370	200
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MHI INVERTER HEAT-PUMP CEILING CASSETTE SYSTEM (R410A)



Part Number	Model Number(s)	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) Indoor (P-Hi/H/M/L)
	Indoor/Outdoor	Cooling (Min–Max)	Heating (Min–Max)			Cooling	Heating	

System

M-FDT71AVNXVF	FDT71VF1/ FDCA71VNX	7.1 (3.2–8.0)	8.0 (3.6–9.0)	3.18	3.81	1.5	3	466/350/316/283
M-FDT100AVNVF	FDT100VF1/ FDCA100VN	10.0 (4.0–11.2)	11.2 (4.0–12.5)	3.23	3.84	1.5	3	616/450/400/333
M-FDT125AVNXVF	FDT125VF/ FDCA125VNX	12.5 (5.0–14.0)	14.0 (4.0–17.0)	3.41	3.87	2	3	616/500/450/383
M-FDT140AVNXVF	FDT140VF/ FDCA140VNX	14.0 (5.0–16.0)	16.0 (4.0–18.0)	3.15	3.66	1.5	2.5	616/500/450/383

Part Number	Model Number(s)	Sound Levels dB(A) Indoor (P-Hi/H/M/L)/ Outdoor	Max. Pipe Length (m)	Refrigerant Factory Charge (kg)	Power Supply Indoor/ Outdoor (V/Hz/Φ)	Liquid & Gas Pipe Sizes (in.)	Net Weight Indoor Outdoor (kg)	Dimensions Indoor/ Outdoor (H x W x D) (mm)	External Static Pressure (Pa)
	Indoor/Outdoor								

System (Cont'd)

M-FDT71AVNXVF	FDT71VF1/ FDCA71VNX	(46/35/33/31)/ 51	50	2.95	220–240/ 50/1	3/8 & 5/8	Unit 24/ Panel 5.5 60	246 x 840 x 840/ 750 x 880 x 340	100
M-FDT100AVNVF	FDT100VF1/ FDCA100VN	(51/40/37/35)/ 49	50	3.8	220–240/ 50/1	3/8 & 5/8	Unit 24/ Panel 5.5 81	298 x 840 x 840/ 845 x 970 x 370	200
M-FDT125AVNXVF	FDT125VF/ FDCA125VNX	(51/42/40/37)/ 50	100	4.5	220–240/ 50/1	3/8 & 5/8	Unit 24/ Panel 5.5 105	298 x 840 x 840/ 1300 x 970 x 370	0
M-FDT140AVNXVF	FDT140VF/ FDCA140VNX	(51/43/41/38)/ 52	100	4.5	220–240/ 50/1	3/8 & 5/8	Unit 24/ Panel 5.5 105	298 x 840 x 840/ 1300 x 970 x 370	0



MHI INVERTER HEAT-PUMP DUCTED-SPLIT SYSTEM (R410A)

Part Number	Model Number(s)	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) Indoor (P-Hi/H/M/L)
	Indoor/Outdoor	Cooling (Min-Max)	Heating (Min-Max)			Cooling	Heating	

System

M-FDUA125AVNXVF	FDUA125VF/ FDCA125VNX	12.5 (5.0-14.0)	14.0 (4.0-17.0)	3.28	3.77	NA	NA	717/650/600/500
M-FDUA140AVNXVF	FDUA140VF/ FDCA140VNX	14.0 (5.0-14.5)	16.0 (4.0-18.0)	3.13	3.65	NA	NA	850/800/700/600
M-FDUA160AVSAVF	FDUA160VF/ FDCA160VSA	16.0 (6.9-20.0)	18.0 (5.5-22.4)	3.13	3.66	NA	NA	850/800/700/600

Part Number	Model Number(s)	Sound Levels dB(A) Indoor (P-Hi/H/M/L)/ Outdoor	Max. Pipe Length (m)	Refrigerant Factory Charge (kg)	Power Supply Indoor - Outdoor (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)
	Indoor/Outdoor					

System (Cont'd)

M-FDUA125AVNXVF	FDUA125VF/ FDCA125VNX	(45/43/41/37)/ 48	100	4.5	220 - 240/50/1	3/8 & 5/8
M-FDUA140AVNXVF	FDUA140VF/ FDCA140VNX	(47/46/43/40)/ 49	100	4.5	220 - 240/50/1	3/8 & 5/8
M-FDUA160AVSAVF	FDUA160VF/ FDCA160VSA	(49/48/45/42)/ 59	70	30	220 - 240/50/1 415/50/3	1/2 & 7/8

Part Number	Model Number(s)	Net Weight Indoor Outdoor (kg)	Dimensions Indoor/Outdoor (H x W x D) (mm)	Spigot Sizes - Supply/Return (mm)	External Static Pressure (Pa)
	Indoor/Outdoor				

System (Cont'd)

M-FDUA125AVNXVF	FDUA125VF/ FDCA125VNX	52 105	398 x 1150 x 650/ 1300 x 970 x 370	348 x 898/ 348 x 898	200
M-FDUA140AVNXVF	FDUA140VF/ FDCA140VNX	52 105	398 x 1150 x 650/ 1300 x 970 x 370	348 x 898/ 348 x 898	200
M-FDUA160AVSAVF	FDUA160VF/ FDCA160VSA	52 143	398 x 1150 x 650/ 1505 x 970 x 370	348 x 898/ 348 x 898	200

NOTES:

1. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions
2. Indoor Air Flow settings & corresponding Sound Pressure Levels are High Power/High/Medium/Low (P-HiH/M/L)
3. When wireless remote control is used, fan is 3 speed setting (Hi-Me-Low) only
4. For further details, refer to MHI technical data.

MHI INVERTER HEAT-PUMP HIGH-WALL SPLIT SYSTEM (R410A)

Part Number	Model Number(s)	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) Indoor (P-Hi/H/M/L)
	Indoor/Outdoor	Cooling (Min-Max)	Heating (Min-Max)			Cooling	Heating	

System

M-SRK20ZMA-S	SRK20ZMA-S/ SRC20ZMA-S	2.0 (1.0~2.7)	2.7 (1.2~3.9)	4.42	4.35	4	4	130/93/88/80
M-SRK25ZMA-S	SRK25ZMA-S/ SRC25ZMA-S	2.5 (1.0~2.9)	3.2 (1.2~4.6)	4.36	4.65	4	4.5	132/100/88/83
M-SRK35ZMA-S	SRK35ZMA-S/ SRC35ZMA-S	3.3 (1.0~3.8)	4.0 (1.3~4.8)	3.79	4.27	3	4	190/107/90/83
M-SRK50ZMA-S	SRK50ZMA-S/ SRC50ZMA-S	5.0 (1.6~5.5)	5.8 (1.6~6.6)	3.16	3.62	1.5	2.5	188/130/100/88
M-SRK63ZMA-S	SRK63ZMA-S/ SRC63ZMA-S	6.3 (2.15~7.1)	7.1 (1.7~9.5)	3.63	3.80	2.5	3	308/267/217/133
M-SRK71ZMA-S	SRK71ZMA-S/ SRC71ZMA-S	7.1 (2.15~8.0)	8.0 (1.6~10.0)	3.35	3.63	2	2.5	325/292/233/133
M-SRK80ZMA-S	SRK80ZMA-S/ SRC80ZMA-S	8.0 (2.15~9.0)	9.0 (1.7~10.5)	3.35	3.42	2	2	350/308/250/133
M-SRK92ZMA-S	SRK92ZMA-S/ SRC92ZMA-S	9.2 (2.4~10.0)	10.0 (2.2~11.2)	3.59	3.42	2.5	2	350/308/250/133
M-SRK60ZMXA-S	SRK60ZMXA-S/ SRC60ZMXA-S	6.0 (1.1~6.8)	6.8 (0.6~8.2)	3.22	4.08	1.5	3.5	242/208/142/117

Part Number	Model Number(s)	Sound Levels dB(A) Indoor (P-Hi/H/M/L)/ Outdoor	Max. Pipe Length (m)	Refrigerant Factory Charge (kg)	Power Supply Indoor/Outdoor (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)	Net Weight Indoor/Outdoor (kg)	Dimensions Indoor/Outdoor (H x W x D) (mm)
	Indoor/Outdoor							

System (Cont'd)

M-SRK20ZMA-S	SRK20ZMA-S/ SRC20ZMA-S	33/27/24/21	15	0.75	220~240/ 50/1	1/4 & 3/8	9.5/ 31.5	294 x 798 x 229/ 540 x 780 x 290
M-SRK25ZMA-S	SRK25ZMA-S/ SRC25ZMA-S	34/28/24/21	15	1.15	220~240/ 50/1	1/4 & 3/8	9.5/ 35	294 x 798 x 229/ 595 x 780 x 290
M-SRK35ZMA-S	SRK35ZMA-S/ SRC35ZMA-S	45/32/26/22	15	1.15	220~240/ 50/1	1/4 & 3/8	9.5/ 35	294 x 798 x 229/ 595 x 842 x 290
M-SRK50ZMA-S	SRK50ZMA-S/ SRC50ZMA-S	46/37/28/25	25	1.35	220~240/ 50/1	1/4 & 1/2	9.5/ 41	294 x 798 x 229/ 640 x 800 x 290
M-SRK63ZMA-S	SRK63ZMA-S/ SRC63ZMA-S	47/43/37/26	30	1.8	220~240/ 50/1	1/4 & 5/8	16/ 57	318 x 1098 x 248/ 750 x 880 x 340
M-SRK71ZMA-S	SRK71ZMA-S/ SRC71ZMA-S	49/45/39/26	30	1.8	220~240/ 50/1	1/4 & 5/8	16/ 57	318 x 1098 x 248/ 750 x 880 x 340
M-SRK80ZMA-S	SRK80ZMA-S/ SRC80ZMA-S	51/47/41/26	30	2.2	220~240/ 50/1	1/4 & 5/8	16/ 63	318 x 1098 x 248/ 845 x 970 x 370
M-SRK92ZMA-S	SRK92ZMA-S/ SRC92ZMA-S	51/47/41/26	30	3.15	220~240/ 50/1	1/4 & 5/8	16/ 92	318 x 1098 x 248/ 1300 x 970 x 370
M-SRK60ZMXA-S	SRK60ZMXA-S/ SRC60ZMXA-S	51/41/29/25	30	1.5	220~240/ 50/1	1/4 & 1/2	13.5/ 45.5	309 x 890 x 220/ 640 x 871 x 290

MHI INVERTER HEAT-PUMP HIGH-WALL SPLIT SYSTEM (R32)

Part Number	Model Number(s)	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.)
	Indoor/Outdoor	Cooling (Min-Max)	Heating (Min-Max)			Cooling	Heating	Indoor (P-Hi/H/M/L)

System

SRK20ZSA-W-SET	SRK20ZSA-W / SRC20ZSA-W	2.0 (0.9 ~ 3.0)	2.7 (1.0 ~ 4.2)	4.75	4.8	5	5	165/127/93/83
SRK25ZSA-W-SET	SRK25ZSA-W / SRC25ZSA-W	2.5 (0.9 ~ 3.5)	3.2 (0.9 ~ 5.2)	4.88	4.96	5	5	182/140/88/78
SRK35ZSA-W-SET	SRK35ZSA-W / SRC35ZSA-W	3.5 (0.9 ~ 4.4)	3.7 (0.9 ~ 5.4)	4.26	4.66	4	4.5	205/152/117/78
SRK50ZSA-W-SET	SRK50ZSA-W / SRC50ZSA-W	5.0 (1.2 ~ 5.5)	5.8 (1.2 ~ 6.6)	3.6	3.87	2.5	3	213/175/113/93
SRK63ZRA-W-SET	SRK63ZRA-W / SRC63ZRA-W	6.3 (1.2 ~ 7.4)	7.1 (0.8 ~ 9.2)	3.89	4.34	3	4	342/310/262/173
SRK71ZRA-W-SET	SRK71ZRA-W / SRC71ZRA-W	7.1 (2.3~8.3)	8 (2.0~10.9)	3.82	3.99	3	3	342/310/270/173
SRK80ZRA-W-SET	SRK80ZRA-W / SRC80ZRA-W	8 (2.3~9.5)	9 (2.1~11.2)	3.59	3.75	2.5	3	342/310/270/173
SRK95ZRA-W-SET	SRK95ZRA-W / SRC95ZRA-W	TBA						

Part Number	Model Number(s)	Sound Levels dB(A) Indoor (P-Hi/H/M/L)	Max. Pipe Length (m)	Refrigerant Factory Charge (kg)	Power Supply Indoor - Outdoor (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)	Net Weight Indoor Outdoor (kg)	Dimensions Indoor/Outdoor (H x W x D) (mm)
	Indoor/Outdoor							

System (Cont'd)

SRK20ZSA-W-SET	SRK20ZSA-W / SRC20ZSA-W	35/27/22/19	20	0.58	220-240/50/1	1/4 & 3/8	9.5 33	290 x 870 x 230 / 540 x 842 x 290
SRK25ZSA-W-SET	SRK25ZSA-W / SRC25ZSA-W	40/31/22/19	20	0.75	220-240/50/1	1/4 & 3/8	10 36	290 x 870 x 230 / 540 x 842 x 290
SRK35ZSA-W-SET	SRK35ZSA-W / SRC35ZSA-W	43/34/27/19	20	0.75	220-240/50/1	1/4 & 3/8	10 36	290 x 870 x 230 / 540 x 842 x 290
SRK50ZSA-W-SET	SRK50ZSA-W / SRC50ZSA-W	43/36/28/22	25	1.05	220-240/50/1	1/4 & 1/2	10 43.5	290 x 870 x 230 / 540 x 842 x 290
SRK63ZRA-W-SET	SRK63ZRA-W / SRC63ZRA-W	44/39/35/25	30	1.25	220-240/50/1	1/4 & 1/2	15.5 45	339 x 1197 x 262 / 640 x 871 x 290
SRK71ZRA-W-SET	SRK71ZRA-W / SRC71ZRA-W	43/40/36/24	30	1.6	220-240/50/1	1/4 & 5/8	15.5 58	339 x 1197 x 262 / 750 x 968 x 340
SRK80ZRA-W-SET	SRK80ZRA-W / SRC80ZRA-W	46/43/38/25	30	1.6	220-240/50/1	1/4 & 5/8	15.5 58	339 x 1197 x 262 / 750 x 968 x 340
SRK95ZRA-W-SET	SRK95ZRA-W / SRC95ZRA-W	TBA						

MHI INVERTER COOLING ONLY HIGH-WALL SPLIT SYSTEM (R410A)

Part Number	Model Number(s)	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) Indoor (H/M/L)
	Indoor/Outdoor	Cooling (Min-Max)	Heating (Min-Max)			Cooling	Heating	

System

SRK10YL-SET	SRK10YL-S / SRC10YL-S	2.5 (1.0~2.7)	NA	3.75	NA	2.5	NA	133/103/75
SRK13YL-SET	SRK13YL-S / SRC13YL-S	3.5 (1.0~3.7)	NA	3.6	NA	2.5	NA	167/113/77
SRK18YL-SET	SRK18YL-S / SRC18YL-S	5.0 (1.6~5.5)	NA	3.08	NA	1.5	NA	200/127/78



Part Number	Model Number(s)	Sound Power Levels dB(A)	Max. Pipe Length (m)	Refrigerant Factory Charge (kg)	Power Supply Indoor - Outdoor (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)	Net Weight Indoor/Outdoor (kg)	Dimensions Indoor/Outdoor (H x W x D) (mm)
System	Indoor/Outdoor	Indoor (H/M/L)						

System (Cont'd)

SRK10YL-SET	SRK10YL-S / SRC10YL-S	59	15	0.7	220-240 / 50 / 1	1/4 & 3/8	8.5/29	268 x 790 x 213 / 540 x 780 (+62) x 290
SRK13YL-SET	SRK13YL-S / SRC13YL-S	62	15	0.95	220-240 / 50 / 1	1/4 & 3/8	8.5/32	268 x 790 x 213 / 540 x 780 (+62) x 290
SRK18YL-SET	SRK18YL-S / SRC18YL-S	67	15	1.3	220-240 / 50 / 1	1/4 & 1/2	9.5/35	268 x 790 x 213 / 595 x 780 x (+62) x 290

NOTES:

1. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions
2. Indoor Air Flow settings & corresponding Sound Pressure Levels are High Power/High/Medium/Low (P-HiH/M/L)
3. When wireless remote control is used, fan is 3 speed setting (Hi-Me-Low) only
4. For further details, refer to MHI technical data.

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NON-LENNOX HVAC EQUIPMENT

MHI INVERTER HEAT-PUMP FLOOR CONSOLE SPLIT SYSTEM (R410A)

Part Number	Model Number(s)	Capacities (kW)		AEER Cooling	ACOP Heating	Star Ratings		Air Flows (L/Sec.) Indoor (P-Hi/H/M/L)
	Indoor/Outdoor	Cooling (Min–Max)	Heating (Min–Max)			Cooling	Heating	

System

M-SRF35ZMXA-S	SRF35ZMXA-S/ SRC35ZMXA-S	3.5 (0.9–4.1)	4.5 (0.9–5.1)	3.59	3.76	2.5	3	153/130/121/106
M-SRF50ZMXA-S	SRF50ZMXA-S/ SRC50ZMXA-S	5.0 (1.1–5.2)	6.0 (0.6–6.9)	3.56	3.77	2.5	3	192/160/123/110

Part Number	Model Number(s)	Sound Levels dB(A) Indoor (P-Hi/H/M/L) Outdoor	Max. Pipe Length (m)	Refrigerant Factory Charge (kg)	Power Supply Indoor - Outdoor (V/Hz/Φ)	Liquid & Gas Pipe Sizes (in.)	Net Weight Indoor/Outdoor (kg)	Dimensions Indoor/Outdoor (H x W x D) (mm)
	Indoor/Outdoor							

System (Cont'd)

M-SRF35ZMXA-S	SRF35ZMXA-S/ SRC35ZMXA-S	41/34/33/28	15	1.2	220–240/ 50/1	1/4 & 3/8	19/ 38	600 x 860 x 238/ 595 x 780 x 290
M-SRF50ZMXA-S	SRF50ZMXA-S/ SRC50ZMXA-S	46/42/35/32	30	1.5	220–240/ 50/1	1/4 & 3/8	19/ 45	600 x 860 x 238/ 640 x 800 x 290

NOTES:

1. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions
2. Indoor Air Flow settings & corresponding Sound Pressure Levels are High Power/High/Medium/Low (P-HiH/M/L)
3. When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only
4. For further details, refer to MHI technical data.

MHI ACCESSORIES

Part Number	Description	Used With
M-RC-EX1A	Mitsubishi ECO Wired Remote	All models
M-RC-E5	Mitsubishi Wired Remote	All models
M-SC-BIKN-E	Interface Kit	SRK series

COLD SHIELD AIR CURTAINS

Part Number	Air Flows (m/Sec.) (H/M/L)	Sound Levels (dB)	Dimensions (L x W x H) (mm)	Net Weight (kg)	Input Power (W)
ACF09	17/15/11	54–57	900 x 230 x 215	13	300
ACF12	17/15/11	55–58	1200 x 230 x 215	15.5	400
ACF15	17/15/11	58–61	1500 x 230 x 215	20	500
ACF18	17/15/11	61–63	1800 x 230 x 215	23.5	600

NOTES:

1. For further details, refer Cold Shield technical data. 2. Units are with 3-speed fans.

TESONIC AIR CURTAINS

Part Number	Air Flows (m/Sec.) (H/M/L)	Sound Levels (dB)	Dimensions (L x W x H) (mm)	Net Weight (kg)	Input Power (W)
PC3388FA	7–9.5	57	900 x 205 x 180	17	140
PC3488FA	7–9.5	58	1200 x 205 x 180	20	230
PC5355FA	9–12.5	69	900 x 268 x 220	21.5	230/200
PC5465FA	9–12.5	70	1200 x 268 x 220	24.5	300/270

NOTES:

1. For further details, refer Tesonic technical data. 2. PC5355FA & PC5465FA models are dual-speed.



Lennox Gas Furnaces

HIGH EFFICIENCY SERIES

INTERNAL MULTI-POSITION GAS FURNACES - TWO STAGE



Part Number	Model Number	Nominal Heating Capacity		Temperature Rise Range		Energy Rating (Stars)	Power Supply (V/Hz/Φ)	Airflow Range (L/Sec)
	Gas Furnace	High Heat (kW)	Low Heat (kW)	High Heat (°C)	Low Heat (°C)			

Gas Furnace

20W90	G61MPVT-36B-070	17.9	12.6	25 - 41	14 - 31	5.3	240/50/1	295 - 660
20W91	G61MPVT-60C-090	23.7	16.7	22 - 39	11 - 28	5.3	240/50/1	410 - 1020
20W92	G61MPVT-60C-110	29	21.1	28 - 44	17 - 33	5.3	240/50/1	350 - 1045
20W93	G61MPVT-60D-135	35.7	25.5	36 - 53	22 - 39	5.3	240/50/1	430 - 1035

Part Number	Model Number	Weight (Kg)	Dimensions (Upflow) (W x H x D) (mm)	High Static Pressure (Pa)	Condensate Drain (I.D.) (inches)	Gas Pipe Size (IPS) (inches)	Natural Gas Manifold Pressure	
	Gas Furnace						High Heat (kPa)	Low Heat (kPa)

Gas Furnace (Cont'd)

20W90	G61MPVT-36B-070	68	446 x 1016 x 724	200	1/2	1/2	0.87	0.42
20W91	G61MPVT-60C-090	82	533 x 1016 x 724	200	1/2	1/2	0.87	0.42
20W92	G61MPVT-60C-110	85	533 x 1016 x 724	200	1/2	1/2	0.87	0.42
20W93	G61MPVT-60D-135	94	622 x 1016 x 724	200	1/2	1/2	0.87	0.42

NOTES:

1. G61MPVT-60D-135 can only be installed in horizontal-right or down flow applications.



EXTERNAL GAS FURNACES - TWO STAGE

Part Number	Model Number	Nominal Heating Capacity		Temperature Rise Range (°C)	Nominal Cooling Add-On (kW)	Energy Rating (Stars)	Power Supply (V/Hz/Φ)	Airflow Range (L/Sec)
	Gas Furnace	High Heat (kW)	Low Heat (kW)					

Gas Furnace

20W90E	G61EVT-36B-070					5.3	240/50/1	
20W91E	G61EVT-60C-090	24.6	17	9 - 31	17.5	5.3	240/50/1	568 - 908
20W92E	G61EVT-60C-110	30.5	21.1	14 - 39	17.5	5.3	240/50/1	568 - 908
20W93E	G61EVT-60D-135	36.3	25.2	18 - 42	17.5	5.3	240/50/1	568 - 908

Part Number	Model Number	Weight (kg)	Dimensions (Upflow) (W x H x D) (mm)	High Static Pressure (Pa)	Condensate Drain (I.D.) (inches)	Gas Pipe Size (IPS) (inches)	Natural Gas Manifold Pressure	
	Gas Furnace						High Heat (kPa)	Low Heat (kPa)

Gas Furnace (Cont'd)

20W90E	G61EVT-36B-070			200	1/2	1/2	0.87	0.42
20W91E	G61EVT-60C-090	82	543 x 1132 x 1387	200	1/2	1/2	0.87	0.42
20W92E	G61EVT-60C-110	85	543 x 1132 x 1387	200	1/2	1/2	0.87	0.42
20W93E	G61EVT-60D-135	94	632 x 1132 x 1387	200	1/2	1/2	0.87	0.42



WARNING

For Horizontal applications, to protect against water damage in the event of a malfunction or blockage in the condensate drain, a safety drain tray must be installed under the unit.

HIGH EFFICIENCY SERIES (CONT'D)

EXTERNAL GAS FURNACES WITH INTEGRAL COOLING COIL

Part Number	Model Number		TX Valve & Drier	Nominal Heating Capacity (kW)	Nominal Cooling Capacity (kW)	Energy Rating (Stars)	Power Supply (V/Hz/Φ)	Airflow Range (L/Sec)	Weight (Kg)
	Gas Furnace	Coil							

Gas Furnace with Coil

20W90EC	G61EVT-36B-070	C33-48B-2	TBA						
20W91EC	G61EVT-60C-090	C33-50/60C-2	91M02	24.6/17	14.1/17.6	5.3	240/50/1	568 - 908	82
20W92EC	G61EVT-60C-110	C33-50/60C-2	91M02	30.5/21.1	14.1/17.6	5.3	240/50/1	568 - 908	85
20W93EC	G61EVT-60D-135	C33-50/60C-2	91M02	36.3/25.2	14.1/17.6	5.3	240/50/1	568 - 908	94

Part Number	Model Number		Dimensions (Upflow) (W x H x D) (mm)	High Static Pressure (Pa)	Condensate Drain (I.D.) (inches)	Gas Pipe Size (IPS) (inches)	Natural Gas Manifold Pressure	
	Gas Furnace	Coil					High Heat (kPa)	Low Heat (kPa)

Gas Furnace with Coil (Cont'd)

20W90EC	G61EVT-36B-070	C33-48B-2	TBA					
20W91EC	G61EVT-60C-090	C33-50/60C-2	543 x 1132 x 1387	200	1/2	1/2	0.87	0.42
20W92EC	G61EVT-60C-110	C33-50/60C-2	543 x 1132 x 1387	200	1/2	1/2	0.87	0.42
20W93EC	G61EVT-60D-135	C33-50/60C-2	632 x 1132 x 1387	200	1/2	1/2	0.87	0.42

NOTES:

1. Thermal data are based on 35°C DB outdoor ambient temperature and entering air temperatures of 27 °C DB and 19 °C WB. All values are nominal capacities..

STANDARD EFFICIENCY SERIES



INTERNAL MULTI-POSITION GAS FURNACES - SINGLE STAGE

Part Number	Nominal Heating Capacity (kW)	Temperature Rise Range (°C)	Nominal Cooling Add-On (kW)	Energy Rating (Stars)	Power Supply (V/Hz/Φ)	Airflow Range (L/Sec)
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Gas Furnace

ML180UH070AP36A	15.5	14 - 31	10.6	3.8	220-240/50/1	282-716
ML180UH090AP48B	20.6	14 - 31	14.1	3.7	220-240/50/1	229-890
ML180UH110AP36C	25.8	19 - 36	14.1	3.8	220-240/50/1	239-827
ML180UH110AP60C	25.8	17 - 33	17.6	3.8	220-240/50/1	665-1165
ML180UH135AP60D	31	17 - 33	17.6	3.9	220-240/50/1	627-1153



Part Number	Weight (kg)	Dimensions (Upflow) (W x H x D) (mm)	High Static Pressure (Pa)	Gas Pipe Size (IPS) (inches)	Natural Gas Manifold Pressure	
					Natural Gas (kPa)	LPG/Propane (kPa)

Gas Furnace (Cont'd)

ML180UH070AP36A	54	368 x 838 x 705	125	1/2	0.87	2.3
ML180UH090AP48B	63	445 x 838 x 705	125	1/2	0.87	2.3
ML180UH110AP36C	70	533 x 838 x 705	125	1/2	0.87	2.3
ML180UH110AP60C	71	533 x 838 x 705	125	1/2	0.87	2.3
ML180UH135AP60D	79	622 x 838 x 705	125	1/2	0.87	2.3

EXTERNAL MULTI-POSITION GAS FURNACES - SINGLE STAGE



Part Number	Nominal Heating Capacity (kW)	Temperature Rise Range (°C)	Nominal Cooling Add-On (kW)	Energy Rating (Stars)	Power Supply (V/Hz/Φ)	Airflow Range (L/Sec)
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Gas Furnace

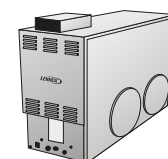
ML18009048B-E	20.6			2.8		
ML18011060C-E	25.8	17 - 33	17.5	2.8 (*)	220-240/50/1	665-1165
ML18013560D-E	31	17 - 33	17.5	2.8 (*)	220-240/50/1	627-1153

Part Number	Weight (kg)	Dimensions (Upflow) (W x H x D) (mm)	High Static Pressure (Pa)	Gas Pipe Size (IPS) (inches)	Gas Manifold Pressure	
					Natural Gas (kPa)	LPG/Propane (kPa)

Gas Furnace (Cont'd)

ML18009048B-E				TBA		
ML18011060C-E	100	600 x 1107 x 1374	125	1/2	0.87	2.3
ML18013560D-E	110	690 x 1107 x 1374	125	1/2	0.87	2.3

NOTE: (*) denotes projected Energy Star Rating based on test data for ML180090048B-E model.



STANDARD EFFICIENCY SERIES (CONT'D)

EXTERNAL GAS FURNACES WITH INTEGRAL COOLING COIL

Part Number	Model Number		TX Valve & Drier	Nominal Heating Capacity (kW)	Nominal Cooling Capacity (kW)	Energy Rating (Stars)	Power Supply (V/Hz/Φ)	Airflow Range (L/Sec)
	Gas Furnace	Coil						

Gas Furnace with Coil

ML18009048B-EC	ML18009048B-E	C33-48B-2		20.6		2.7		
ML18011060C-EC	ML18011060C-E	C33-50/60C-2	91M02	25.8	17.5	2.7 (*)	220-240/50/1	665-1165
ML18013560D-EC	ML18013560D-E	C33-50/60C-2	91M02	31	17.5	2.7 (*)	220-240/50/1	627-1153

Part Number	Model Number		Weight kg	Dimensions (Upflow) (W x H x D) (mm)	High Static Pressure (Pa)	Gas Pipe Size (IPS) inches	Gas Manifold Pressure	
	Gas Furnace	Coil					Natural Gas (kPa)	LGP/ Propane (kPa)

Gas Furnace with Coil (Cont'd)

ML18009048B-EC	ML18009048B-E	C33-48B-2					TBA	
ML18011060C-EC	ML18011060C-E	C33-50/60C-2	115	600 x 1107 x 1374	125	1/2	0.87	2.3
ML18013560D-EC	ML18013560D-E	C33-50/60C-2	125	690 x 1107 x 1374	125	1/2	0.87	2.3

NOTES:

1. Thermal data are based on 35°C DB outdoor ambient temperature and entering air temperatures of 27 °C DB and 19 °C WB. All values are nominal capacities..
2. (*) denotes projected Energy Star Rating based on test data for ML18009048B-EC model.

OPTIONAL ACCESSORIES - HIGH EFFICIENCY GAS FURNACES (MUST BE ORDERED SEPARATELY)

Part Number	Description
700960	Wall Flashing Kit (External Only) -150mm suits G61E/EC
51W11	Flush Mount Flue Termination - Suits G61 (2" & 3")
69M29	Concentric Flue Terminal Kit (2") - Suits G61-070 & 090
60L46	Concentric Flue Terminal Kit (3") - Suits G61-110 & 135
44W48	LPG Conversion Kit (Field Installation Kit) - Suits G61 Series
50XCE	50mm x 4 Metre Length Grey Class 12 PVC Pipe
80XCE	80mm x 4 Metre Length Grey Class 12 PVC Pipe
2103050	50mm 90° Equal PVC Elbow
2103080	80mm 90° Equal PVC Elbow
2117050	50mm 45° Equal PVC Elbow
2117080	80mm 45° Equal PVC Elbow
2108050	50mm Equal PVC Socket
2108080	80mm Equal PVC Socket
2109080050	80mm to 50mm Reducing PVC Socket

OPTIONAL ACCESSORIES - STANDARD EFFICIENCY GAS FURNACES (MUST BE ORDERED SEPARATELY)

Part Number	Description
700960	Wall Flashing Kit (External Only) -150 mm suits ML180E/EC
51W11	Flush Mount Flue Termination - Suits ML180 (2" & 3")
97W04	LPG Conversion Kit for ML180 Series, (Field Installation) For High Altitude Only 1525 - 1981 m
96W94	LPG Conversion Kit for ML180 Series (Field Installation) Up to 1524m
700955	Flue Cowl-Horizontal to suit ML180 Series
XP0040-33	Flue Assembly for ML180E

Lennox Heaters

UNIT HEATERS

Part Number	Model Number	Nominal Heating Capacity (Natural Gas) (kW)	Power Supply (V/Hz/Φ)	Gas Pipe Size (IPS) (inches)
	Duct Heater			

Duct Heater

16J70A	LF24-100A	21.2	240/50/1	1/2
23W54A	LF24-145A	39.2	240/50/1	1/2
89K88A	LF24-200A	41	240/50/1	1/2
26J78A	LF24-250A	54.1	240/50/1	3/4
26J80A	LF24-300A	63.7	240/50/1	3/4
65K97A	LF24-345A	72.8	240/50/1	3/4
86K41A	LF24-400A	82.3	240/50/1	3/4

Part Number	Model Number	Weight (kg)	Dimensions (W x H x D) (mm)	No. of Fans	Full Load Amps (A)	Airflow (L/Sec)
	Duct Heater					

Duct Heater (Cont'd)

16J70A	LF24-100A	64	512 x 995 x 817	1	1	895
23W54A	LF24-145A	75	588 x 1115 x 817	1	1	895
89K88A	LF24-200A	79	588 x 1115 x 817	1	1	1035
26J78A	LF24-250A	129	1041 x 1115 x 817	2	2	2075
26J80A	LF24-300A	138	1041 x 1115 x 817	2	2	2075
65K97A	LF24-345A	141	1041 x 1143 x 817	2	2	2075
86K41A	LF24-400A	315	1041 x 1143 x 817	2	2	2075

Lennox Heaters

DUCT HEATERS

Part Number	Model Number	Nominal Heating Capacity (kW)	Temperature Rise Range (°C)	Airflow Range (L/Sec)
	Duct Heater			

Duct Heater

32K56A	LD24-125A	25.7	11-51	480-2220
32K57A	LD24-150A	30.8	11-47	625-2645
32K58A	LD24-200A	41.4	19-57	700-1995
32K59A	LD24-250A	51.4	19-57	875-2495
32K60A	LD24-300A	61.6	20-57	1050-2920

Part Number	Model Number	Power Supply (V/Hz/Φ)	Condensate Drain (I.D.) (inches)	Gas Pipe Size (IPS) (inches)	Weight (kg)	Dimensions (W x H x D) (mm)
	Duct Heater					

Duct Heater (Cont'd)

32K56A	LD24-125A	240/50/1	1/4	1/2	61	511 x 818 x 795
32K57A	LD24-150A	240/50/1	1/4	1/2	68	587 x 818 x 795
32K58A	LD24-200A	240/50/1	1/4	3/4	111	795 x 818 x 795
32K59A	LD24-250A	240/50/1	1/4	3/4	118	795 x 818 x 795
32K60A	LD24-300A	240/50/1	1/4	3/4	125	795 x 818 x 795

OPTIONAL ACCESSORIES (MUST BE ORDERED SEPERATLY)

Part Number	Description
45L88	LPG Conversion Kit - LF24 (250 - 300 l/s)
20L06	LPG Conversion Kit - LF24 (400 l/s)

Lennox Add-On Cooling and Ancillaries



ADD-ON COOLING OUTDOOR CONDENSING UNITS & INDOOR COIL COMBINATIONS

Part Number	Model Number	Cooling Capacity (kW)	Input Power (kW)	AEER (kW/kW)	Star Rating (SRI)	Airflow (Dry/Wet) (L/Sec)	Air Pressure Drop (Dry/Wet) (Pa)
	Outdoor Unit/Indoor Coil						

Outdoor Unit/Indoor Coil Combinations

TSA036S4-1/ 76L07	TSA036S4N42T/ CH33-36B-2F-3	10.26	2.85	3.45	2	695/692	74/84.1
TSA048S4-1/ 76L09	TSA048S4N43T/ CH33-44/48B-2F-3	11.42	3.08	3.57	2.5	710/722	74/82.7
TSA048S4-3/ 76L09	TSA048S4N42M/ CH33-44/48B-2F-3	13.42	3.83	3.42	2	715/718	74/85.5
TSA060S4-1/ 76L12	TSA060S4N42T/ CH33-50/60C-2F-3	14.78	3.89	3.68	2.5	820/838	74/85.6
TSA060S4-3/ 76L14	TSA060S4N42M/ CH33-62D-2F-3	17.04	5.07	3.30	2	970/983	74/81.9
TSA072S4-3/ 76L14	TSA072S4SN1M/ CH33-62D-2F-3	16.95	4.37	3.73	2.5	970/969	74/80.5

Part Number	Model Number	Weight		Dimensions (W x H x D)	
	Outdoor Unit/Indoor Coil	Indoor (kg)	Outdoor (kg)	Indoor (mm)	Outdoor (mm)

Outdoor Unit/Indoor Coil Combinations (Cont'd)

TSA036S4-1/ 76L07	TSA036S4N42T/ CH33-36B-2F-3	20	81	546 x 445 x 692	616 x 743 x 616
TSA048S4-1/ 76L09	TSA048S4N43T/ CH33-44/48B-2F-3	33	88	546 x 445 x 819	718 x 946 x 718
TSA048S4-3/ 76L09	TSA048S4N42M/ CH33-44/48B-2F-3	33	88	546 x 445 x 819	718 x 946 x 718
TSA060S4-1/ 76L12	TSA060S4N42T/ CH33-50/60C-2F-3	40	99	546 x 533 x 819	718 x 845 x 718
TSA060S4-3/ 76L14	TSA060S4N42M/ CH33-62D-2F-3	45	99	546 x 622 x 819	718 x 845 x 718
TSA072S4-3/ 76L14	TSA072S4SN1M/ CH33-62D-2F-3	45	147	546 x 622 x 819	956 x 1172 x 1238

Part Number	Model Number	Outdoor Sound Rating (dB)	Power Supply (V/Hz/Φ)	Liquid & Gas Pipe Sizes (inches)	Spigot Sizes - Inlet/Outlet (mm)
	Outdoor Unit/Indoor Coil				

Outdoor Unit/Indoor Coil Combinations (Cont'd)

TSA036S4-1/ 76L07	TSA036S4N42T/ CH33-36B-2F-3	80	220 - 240/50/1	3/8 & 7/8	546 x 445/508 x 407
TSA048S4-1/ 76L09	TSA048S4N43T/ CH33-44/48B-2F-3	80	220 - 240/50/1	3/8 & 7/8	546 x 445/508 x 407
TSA048S4-3/ 76L09	TSA048S4N42M/ CH33-44/48B-2F-3	80	380 - 420/50/3	3/8 & 7/8	546 x 445/508 x 407
TSA060S4-1/ 76L12	TSA060S4N42T/ CH33-50/60C-2F-3	80	220 - 240/50/1	3/8 & 7/8 EXP TO 1-1/8	546 x 433/508 x 495
TSA060S4-3/ 76L14	TSA060S4N42M/ CH33-62D-2F-3	80	380 - 420/50/3	3/8 & 1-1/8	546 x 622/508 x 584
TSA072S4-3/ 76L14	TSA072S4SN1M/ CH33-62D-2F-3	81	380 - 420/50/3	5/8 & 1-1/8	546 x 622/508 x 584

NOTES:

1. Thermal data are in accordance with AS/NZS 3823.1.2 & AS/NZS 3823.2 Standards.
2. Sound data are in accordance with AHRI 270-95.
3. Product data are subject to change without prior notice for continuous improvement. Please consult your local Account Manager or Dealer for further details.



Lennox Stand-Alone Outdoor Condensing Units & Stand-Alone Coils



LENNOX TSA STAND-ALONE OUTDOOR CONDENSING UNITS

Part Number	Nominal Capacity (kW)	Compressor Type	Nominal Sound Rating Number (dB)	Power Supply (V/Hz/Φ)	Nominal Rated Load Amps (A)
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Stand-Alone Condensing Unit

TSA030S4-1	8.8	Scroll	76	220–240/50/1	12.2
TSA036S4-1	10.5	Scroll	80	220–240/50/1	16
TSA048S4-1	14.1	Scroll	80	220–240/50/1	15.9
TSA060S4-1	17.6	Scroll	80	220–240/50/1	20.2
TSA036S4-3	10.6	Scroll	80	380–420/50/3	6
TSA048S4-3	14.0	Scroll	80	380–420/50/3	7.8
TSA060S4-3	17.6	Scroll	80	380–420/50/3	10.6
TSA072S4-3	21.0	Scroll	81	380–420/50/3	9.7

Part Number	Weight (kg)	Dimensions (W x H x D) (mm)	Refrigerant Type	Nominal Refrigerant Charge (kg)	Pipe Sizes	
					Liquid (inches)	Gas (inches)

Stand-Alone Condensing Unit (Cont'd)

TSA030S4-1	60	616 x 794 x 616	R410A	1.9	3/8	3/4
TSA036S4-1	81	718 x 794 x 718	R410A	2.9	3/8	7/8
TSA048S4-1	88	718 x 997 x 718	R410A	3.4	3/8	7/8
TSA060S4-1	99	718 x 896 x 718	R410A	4.5	3/8	1-1/8
TSA036S4-3	61	616 x 794 x 616	R410A	2.5	3/8	7/8
TSA048S4-3	88	718 x 997 x 718	R410A	3.4	3/8	7/8
TSA060S4-3	99	718 x 896 x 718	R410A	4.5	3/8	1-1/8
TSA072S4-3	138	1013 x 1238 x 1229	R410A	5.0	5/8	1-1/8

NOTES:

1. Thermal data are in accordance with AHRI Standard 210/240
2. Sound data are in accordance with AHRI 270-95.



LENNOX LCS STAND-ALONE OUTDOOR CONDENSING UNITS

Part Number	Nominal Capacity (kW)	Compressor Type	Nominal Sound Pressure @ 1M (dB(A))	Power Supply (V/Hz/Φ)	Nominal Full Load Current (A)
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Stand-Alone Condensing Unit

LCS-18C-1X-3	16.6	Scroll	65	240/50/1	27.7
LCS-17C-3X-2	17.9	Scroll	59	415/50/3	9.8

Part Number	Weight (kg)	Dimensions (W x H x D) (mm)	Refrigerant Type	Nominal Refrigerant Charge (kg)	Pipe Sizes	
					Liquid (inches)	Gas (inches)

Stand-Alone Condensing Unit (Cont'd)

LCS-18C-1X-3	110	900 x 1167 x 330	R410A	3.0	3/8	3/8
LCS-17C-3X-2	108	940 x 1245 x 330	R410A	3.0	5/8	5/8

NOTES:

1. Data are nominal, based on HP Rate Simulation Software.




LENNOX CH33 SERIES STAND-ALONE CASED COILS

Part Number	Model Number	Nominal Capacity (kW)	No. of Rows	Tube Diameter (inches)	Net Face Area (sq.m.)	FPM
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Horizontal 'A' Framed Stand-Alone Cased Coils for Internal Heaters

76L04	CH33-36A-2F	10.6	3	3/8	0.33	305
76L07	CH33-36B-2F	10.6	2	3/8	0.43	457
76L09	CH33-44/48B-2F	12.3/14.1	3	3/8	0.54	305
76L11	CH33-48C-2F	14.1	3	3/8	0.54	305
76L12	CH33-50/60C-2F	14.1/17.6	3	3/8	0.67	305
76L14	CH33-62D-2F	17.6	3	3/8	0.74	305

Part Number	Model Number	Weight (kg)	RFCIV Metering Device Orifice Size (inches)	Dimensions (W x H x D) (mm)	Condensate Drain (fpt)	Pipe Sizes	
						Liquid (inches)	Gas (inches)

Horizontal 'A' Framed Stand-Alone Cased Coils for Internal Heaters (Cont'd)

76L04	CH33-36A-2F	24.5	0.076	546 x 368 x 673	3/4	3/8	7/8
76L07	CH33-36B-2F	20.0	0.076	546 x 444 x 673	3/4	3/8	7/8
76L09	CH33-44/48B-2F	32.7	0.082	546 x 444 x 800	3/4	3/8	7/8
76L11	CH33-48C-2F	34.5	0.091	546 x 533 x 673	3/4	3/8	7/8
76L12	CH33-50/60C-2F	39.0	0.091	546 x 533 x 800	3/4	3/8	7/8
76L14	CH33-62D-2F	44.0	0.099	546 x 622 x 800	3/4	3/8	7/8

NOTES:

1. Thermal data are in accordance with AHRI Standard 210/240 conditions and DOE test procedures.
2. Requires field installed Chatleff style Expansion Valve - see over page.

LENNOX CH23 SERIES STAND-ALONE CASED COILS

Part Number	Model Number	Nominal Capacity (kW)	No. of Rows	Tube Diameter (inches)	Net Face Area (sq.m.)	FPM
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Horizontal Stand-Alone Slab Coils for Internal Heaters

63J70	CH23-41	10.6	3	3/8	0.37	305
63J71	CH23-51	14.1	3	3/8	0.43	305
63J72	CH23-65	17.6	3	3/8	0.51	305
63K00	CH23-68	17.6 +	4	3/8	0.60	305

Part Number	Model Number	Weight (kg)	RFCIV Metering Device Orifice Size* (inches)	Dimensions (W x H x D) (mm)	Condensate Drain (fpt)	Pipe Sizes	
						Liquid (inches)	Gas (inches)

Horizontal Stand-Alone Slab Coils for Internal Heaters(Cont'd)

63J70	CH23-41	19.1	0.076	787 x 584 x 254	2 x 3/4	3/8	7/8
63J71	CH23-51	20.9	0.082	889 x 584 x 254	2 x 3/4	3/8	7/8
63J72	CH23-65	24.9	0.093	1041 x 584 x 254	2 x 3/4	3/8	7/8
63K00	CH23-68	34.0	0.093	1194 x 584 x 254	2 x 3/4	3/8	7/8

NOTES:

1. Thermal data are in accordance with AHRI Standard 210/240 conditions and DOE test procedures.
2. Requires field installed Chatleff style Expansion Valve - see over page.

Lennox Stand-Alone Outdoor Condensing Units & Stand-Alone Coils

LENNOX CR33 SERIES DOWNFLOW STAND-ALONE CASED COILS

Part Number	Model Number	Nominal Capacity (kW)	No. of Rows	Tube Diameter (in.)	Net Face Area (sq.m.)	FPM
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Downflow Stand-Alone Cased Coils for Internal Heaters

92M33	CR33-30/36A-F	8.8/10.6	3	3/8	0.38	305
92M36	CR33-48B-F	14.1	3	3/8	0.49	305
92M38	CR33-50/60C-F	14.1/17.6	3	3/8	0.60	305
92M39	CR33-60D-F	17.6	3	3/8	0.60	305

Part Number	Model Number	Weight (kg)	RFCIV Metering Device Orifice Size* (in.)	Dimensions (W x H x D) (mm)	Condensate Drain (fpt)	Pipe Sizes	
						Liquid (in.)	Gas (in.)

Downflow Stand-Alone Cased Coils for Internal Heaters (Cont'd)

92M33	CR33-30/36A-F	26.3	0.076	445 x 343 x 664	2 x 3/4	3/8	7/8
92M36	CR33-48B-F	32.3	0.082	533 x 419 x 664	2 x 3/4	3/8	7/8
92M38	CR33-50/60C-F	38.6	0.082	622 x 508 x 664	2 x 3/4	3/8	7/8
92M39	CR33-60D-F	38.1	0.093	622 x 597 x 664	2 x 3/4	3/8	7/8

NOTES:

1. Thermal data are in accordance with AHRI Standard 210/240 conditions and DOE test procedures.
2. Requires field installed Chatteff style Expansion Valve - see over page.



LENNOX C33 SERIES UPFLOW STAND-ALONE CASED COILS

Part Number	Model Number	Nominal Capacity (kW)	No. of Rows	Tube Diameter (in.)	Net Face Area (sq.m.)	FPM
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Upflow Stand-Alone Cased Coils for Internal Heaters

76L25	C33-48B-2F	14.1	3	3/8	0.45	305
76L28	C33-48C-2F	14.1	3	3/8	0.45	305
54M80	C33-50/60C-2F	14.1/17.6	3	3/8	0.54	305
54M81	C33-62D-2F	17.6	3	3/8	0.69	357

Part Number	Model Number	Weight Cased (kg)	RFCIV Metering Device Orifice Size (inches)	Dimensions (W x H x D) (mm)	Condensate Drain (fpt)	Pipe Sizes	
						Liquid (inches)	Gas (inches)

Upflow Stand-Alone Cased Coils for Internal Heaters (Cont'd)

76L25	C33-48B-2F	23.6	0.082	445 x 622 x 533	2 x 3/4	3/8	7/8
76L28	C33-48C-2F	25.0	0.082	533 x 622 x 533	2 x 3/4	3/8	7/8
54M80	C33-50/60C-2F	29.9	0.082	533 x 699 x 533	2 x 3/4	3/8	7/8
54M81	C33-62D-2F	34.9	0.093	622 x 749 x 533	2 x 3/4	3/8	7/8

NOTES:

1. Thermal data are in accordance with AHRI Standard 210/240 conditions and DOE test procedures.
2. Requires field installed Chatteff style Expansion Valve - see over page.

LENNOX C33 SERIES UPFLOW STAND-ALONE UNCASSED COILS

Part Number	Model Number	Nominal Capacity (kW)	No. of Rows	Tube Diameter (inches)	Net Face Area (sq.m.)	FPM
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Upflow Stand-Alone Uncased Coils for External Heaters

76L39	C33-36B-2	10.6	2	3/8	0.37	457
76L42	C33-48B-2	14.1	3	3/8	0.45	305
76L46	C33-50/60C-2	14.1/17.6	3	3/8	0.54	305

Part Number	Model Number	Weight (kg)	RFCIV Metering Device Orifice Size* (in.)	Dimensions (W x H x D) (mm)	Condensate Drain (fpt)	Pipe Sizes	
						Liquid (in.)	Gas (in.)

Upflow Stand-Alone Uncased Coils for External Heaters (Cont'd)

76L39	C33-36B-2	12.3	0.073	394 x 556 x 495	2 x 3/4	3/8	3/4
76L42	C33-48B-2	15	0.082	394 x 562 x 495	2 x 3/4	3/8	7/8
76L46	C33-50/60C-2	18.1	0.082	508 x 629 x 495	2 x 3/4	3/8	7/8

NOTES:

1. Thermal data are in accordance with AHRI Standard 210/240 conditions and DOE test procedures.
2. Requires field installed Chatleff style Expansion Valve - See below

EXPANSION VALVE KITS - CHATLEFF STYLE

Part Number	Description
37L51	Expansion valve kit to suit TSA024 to 036 stand-alone units and stand-alone C33, CR33, CH23, CH33 coils (Upto 10kW)
91M02	Expansion valve kit to suit TSA048 to 060 stand-alone units and stand-alone C33, CR33, CH23, CH33 coils (10–18 kW)

Ancillaries, Humidifiers & Accessories

TRANSITIONS, COIL ADAPTORS, END CAPS/PLATE, DRAIN TRAYS, HUMIDIFIERS & ACCESSORIES FOR LENNOX DUCTED-COOLING, COILS & FURNACES, (MUST BE ORDERED SEPARATELY)**RETURN AIR END CAPS TO FURNACE**

Part Number	Gas Furnace/Heaters	To Nominated Round
LECA-300	ML180UH070AP36A	300 mm
LECA-350	ML180UH070AP36A	350 mm
LECA-400	ML180UH070AP36A	400 mm
LECB-350	ML180UH090AP48B	350 mm
LECC-400	ML180UH110AP36C	400 mm
LECD-400	ML180UH135AP60D	450 mm
LEC44-350	G61MP-60C-090/110	350 mm
LECB-350	G61MPVT-36B-070	350 mm
LECB-400	G61MPVT-36B-070	400 mm
LECC-400	G61MPVT-60C-090/110	400 mm
LECC-450	G61MPVT-60C-090/110	450 mm
LECD-400	G61MPVT-60D-135	400 mm
LECD-450	G61MPVT-60D-135	450 mm

DRAIN TRAYS

Part Number	Gas Furnace/Heaters	To Nominated Round
LDTAC15-090	G61MP-60C-090/110	HEATER
LDTAC15-135	G61MPVT-60D-135	HEATER

TRANSITIONS, COIL ADAPTORS, END CAPS/PLATE, DRAIN TRAYS, HUMIDIFIERS & ACCESSORIES FOR LENNOX DUCTED-COOLING, COILS & FURNACES, (MUST BE ORDERED SEPARATELY)

SUPPLY AIR TRANSITION FROM FURNACE TO NOMINATED ROUND DUCT

Part Number	Gas Furnace/Heaters	To Nominated Round
LSATA-300	ML180UH070AP36A	300 mm
LSATA-350	ML180UH070AP36A	350 mm
LSATA-400	ML180UH070AP36A	400 mm
LSATB-350	ML180UH090AP48B	350 mm
LSATC-400	ML180UH110AP36C	400 mm
LSATD-400	ML180UH135AP60D	450 mm
LSATB-400	G61MP-36B-070	400 mm
LSATC-400	G61MP-60C-090/110	400 mm
LSATC-450	G61MP-60C-090/110	450 mm
LSATD-400	G61MP-60D-135	400 mm
LSATD-450	G61MP-60D-135	450 mm

END PLATE FOR CH33, C33 CASED COILS

Part Number	Gas Furnace/Heaters	To Nominated Round
LEPB-350	CH33-36/44/48-B	350 mm
LEPB-400	CH33-36/44/48-B	400 mm
LEPC-350	CH33-48/50/60-C	350 mm
LEPC-400	CH33-48/50/60-C	400 mm
LEPC-450	CH33-48/50/60-C	450 mm
LEPD-400	CH33-62D	400 mm
LEPD-450	CH33-62D	450 mm

TRANSITION FROM HORIZONTAL COIL TO NOMINATED ROUND DUCT

Part Number	Gas Furnace/Heaters	To Nominated Round
LSATB-300	CH33-36/44B	300 mm
LSATB-350	CH33-36/44B	350 mm
LSATB-400	CH33-36/44B	400 mm
LSATC-350	CH33-50/60C	350 mm
LSATC-400	CH33-50/60C	400 mm
LSATC-450	CH33-50/60C	450 mm
LSATD-400	CH33-62D	400 mm
LSATD-450	CH33-62D	450 mm
LTCC05-300	CH23-41	300 mm
LTCC05-350	CH23-41	350 mm
LTCC05-400	CH23-41	400 mm
LTCC07-350	CH23-51	350 mm
LTCC07-400	CH23-51	400 mm
LTCC08-350	CH23-65	350 mm
LTCC08-400	CH23-65	400 mm
LTCC08-450	CH23-65	450 mm
LTCC08-500	CH23-65	500 mm

TRANSITION FROM HORIZONTAL COIL TO NOMINATED ROUND DUCT

LTCC09-350	CH23-68	350 mm
LTCC09-400	CH23-68	400 mm
LTCC09-450	CH23-68	450 mm
LTCC09-500	CH23-68	500 mm

DRAIN TRAYS

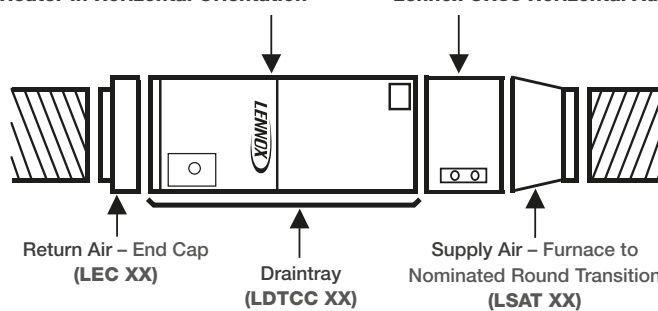
Part Number	Gas Furnace/Heaters	To Nominated Round
LDTAC03	CH23-41	Cased Coils
LDTAC04	CH23-51	Cased Coils
LDTAC05	CH23-65	Cased Coils
LDTAC06	CH23-68	Cased Coils
LDTCC	CH33	Cased Coils

Note: For drawings of typical installations (below)

LENNOX Furnace with Horizontal Cased Coil

G61 & ML180 Heater in Horizontal Orientation

Lennox CH33 Horizontal Add-on Coil

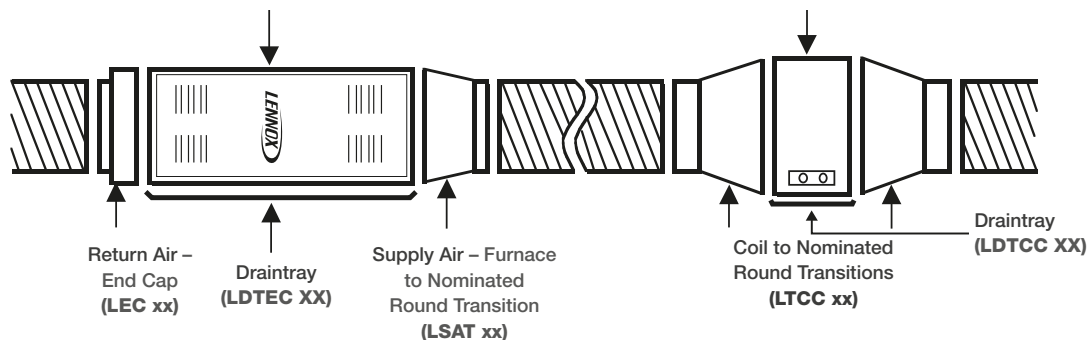


Note: If installing in attic or roof space, both G61 & Add-on Coil will require a drain tray

LENNOX Heater with Remote Add-On Coil

G61 & ML180 Heater in Horizontal Orientation

LENNOX CH23 or CH33 Horizontal Add-on Coil



Note: If installing in attic or roof space, both Add-on Coil & G61 Condensing Furnace will require a drain tray

TRANSITIONS FOR LED/LCD_V5 SERIES INVERTER DUCTED-SPLIT SYSTEM

Part Number	To Suit	To Nominated Round	No. of Outlets	UOM
LED735V5-RET	LED/LCD735V5 Return	1061 X 226MM	1	EA
LED735V5-SUP	LED/LCD735V5 Supply	1054 X 185MM	1	EA
LED104/135V5RET	LED/LCD104V5 & LED/LCD130V5 Return	1145 X 334MM	1	EA
LED104/135V5SUP	LED/LCD104V5 & LED/LCD135V5 Supply	1000 X 253MM	1	EA
LED168V5-RET	LED/LCD168V5 Return	1188 X 385MM	1	EA
LED168V5-SUP	LED/LCD168V5 Supply	1188 X 385MM	1	EA

HUMIDIFIER & ACCESSORIES (MUST BE ORDERED SEPARATELY)

Part Number	Description
Y2786	LENNOX BY-PASS HUMIDIFIER HCWB3-17 240/50/1 PHASE (transformer not included)
60J43	LENNOX 240x24 TRANSFORMER G24M/E
X8304	MERV 10 EXPANDABLE FILTER KIT for FURNACE (CONTAINS MERV 10 FILTERS WITH FRAMES - DIMS 508 X 635 X 127mm)
X6673	MERV 10 EXPANDABLE REPLACEMENT FILTERS TO MATCH WITH X8304
52P97	Current Sensing Relay - Required for Lennox Humidifier for use with third party gas furnaces without accessory terminal connections in unit wiring box.



THERMOSTATS (MUST BE ORDERED SEPARATELY)

Part Number	Model Number	Description	Used With
13H14	CS7500	Touchscreen - Programmable 4 Heat / 2 Cool	FURNACE/ADD ON//ROOFTOP PACKAGE
WIFI9000	THX9000	Comm1 Touchscreen TSTAT C0STAT02AE1L	
51M35	CS 3000	Programmable 2 Heat / 2 Cool	
SMT-110	Smart Temp 110	Programmable 1 Heat / 1 Cool	
51M33	L3021H	Manual 2 Heat / 1 Cool	
51M32	L3011C	Manual 1 Heat / 1 Cool	
TH6220D1028/U	FocusPRO6000	Programmable 2 Heat / 2 Cool	
TH8110U1003/U	FocusPRO8000	Touchscreen - Programmable 1 Heat / 1 Cool	
TB8220U1003	VisionPRO8000	Commercial Programmable Thermostat 2 Heat / 2Cool	To read outdoor ambient temp
X4148		Outdoor Sensor to suit Touchscreen Thermostat	
X2658		Outdoor Sensor to suit Comfortsense Thermostat	
DT90A1008	HAC00380	Digital Non-Prog, 1Heat or 1Cool, On/Off	Split-Ducted (TPA)
ULTRAPLUS	JAE00190	Universal A/C Remote Control (Blue Packaging)	For all split brands including Lennox
ESR		Universal Energy Saving Remote with Variable Temp Setting (Green Packaging)	For all split brands including Lennox (Hotel/Motel Applications)

Furnace and Ancillaries Checklist

CHECK LIST FOR FURNACES, STAND-ALONE OUTDOOR CONDENSING UNITS, STAND-ALONE INDOOR COOLING COILS & ANCILLARIES

Efficiency?

- High Efficiency: G61
- Mid Efficiency: ML180

Nominal Heating capacity?

- High Efficiency: G61-17.9, 23.7, 29.0 & 35.7 kW
- Standard Efficiency: ML180 - 15.0, 20.0, 25.0 & 31.0 kW

Is the furnace to be internal or external?

- ML180 & G61MPVT furnaces are internal.
- ML180E & G61E furnaces are for external use.

Nominal Cooling capacity?

- High Efficiency: G61-36 <12.2 kW (TSA), G61-60 <17.8 kW (TSA/LCS)
- Standard Efficiency: ML180 <10.0 kW (TSA), ML180 <13.1 kW (TSA), ML180 <17.4 kW (TSA/LCS)

Type	Requirements	Internal Application	External Application with Furnace Only Note: Furnace Model Numbers ending in E	Internal Application with Stand-Alone Coil	External Application with Stand-Alone Coil Note - Furnace Model Numbers ending in EC
	Furnace	✓	✓	✓	✓
	Transitions		Supplied with starting collars		Supplied with starting collars
High Efficiency	G61MPVT- return end caps to nominated round -				
	G61MPVT-36B-	LECB-350mm/400mm	N/A	LECB-350mm/400mm	N/A
	G61MPVT-60C-	LECC-400mm/450mm	N/A	LECC-400mm/450mm	N/A
	G61MPVT-60D-	LECD-400mm/450mm	N/A	LECD-400mm/450mm	N/A
	G61MPVT- supply end caps to nominated round -				
	G61MPVT-36B-	LSATB-350mm/400mm	N/A	LSATB-350mm/400mm	N/A
	G61MPVT-60C-	LSATC-400mm/450mm	N/A	LSATC-400mm/450mm	N/A
Standard Efficiency	G61MPVT-60D-	LSATD-400mm/450mm	N/A	LSATD-400mm/450mm	N/A
	ML180UH070AP36A - Return end caps to nominated round -				
	ML180UH070AP36A -	LECA-300mm	N/A	LECA-300mm	N/A
	ML180UH070AP36A -	LECA-350mm	N/A	LECA-350mm	N/A
	ML180UH070AP36A -	LECA-400mm	N/A	LECA-400mm	N/A
	ML180UH090AP48B -	LECB-350mm/400mm	N/A	LECB-350mm/400mm	N/A
	ML180UH110AP36C -	LECC-400mm/450mm	N/A	LECC-400mm/450mm	N/A
	ML180UH135AP60D -	LECD-400mm/450mm	N/A	LECD-400mm/450mm	N/A
	ML180UH070AP36A - Supply end caps to nominated round -				
	ML180UH070AP36A -	LSATA-300mm	N/A	LSATA-300mm	N/A
	ML180UH070AP36A -	LSATA-350mm	N/A	LSATA-350mm	N/A
	ML180UH070AP36A -	LSATA-400mm	N/A	LSATA-400mm	N/A
	ML180UH090AP48B -	LSATB-350mm/400mm	N/A	LSATB-350mm/400mm	N/A
	ML180UH110AP36C -	LSATC-400mm/450mm	N/A	LSATC-400mm/450mm	N/A
	ML180UH135AP60D -	LSATD-400mm/450mm	N/A	LSATD-400mm/450mm	N/A
Coils	Stand-Alone Cased coil for Internal Furnace and Stand-Alone Uncased coil for External Furnace	N/A	N/A	✓ Cased Coil	EC Furnaces are integral with coil

CHECK LIST FOR FURNACES, STAND-ALONE OUTDOOR CONDENSING UNITS, STAND-ALONE INDOOR COOLING COILS & ANCILLARIES

Type	Requirements	Internal Application	External Application with Furnace Only Note: Furnace Model Numbers ending in E	Internal Application with Add On	External Application with Stand-Alone Coil Note - Furnace Model Numbers ending in EC
Valves & Driers	TX Valve & Drier			✓ Note: Drier supplied as a kit with TSA. Needs to be ordered separately for LCS. Part Number LLD053S	✓ TX Valve - Supplied with TSA & LCS. Drier to be ordered separately for LCS. Part Number LLD053S
	Condenser - TSA or LCS			✓	✓
Thermostats/Controllers					
Thermostats/Controllers	Programmable		13H14, X4147, 51M35		
	Non-Programmable		51M33 (2 STAGE FOR G61) , 51M32 or DT90A1008		

NOTE: Stand-Alone cased/uncased coils can be ordered in accordance to cooling capacity requirements.

Guide Chart for G61 Series

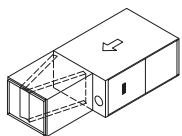


GUIDE CHART FOR G61MP & G61E SERIES

Use the guide charts below to reference Lennox stand-alone Outdoor Condensing Units &/or stand-alone Indoor Cooling Coils for Lennox or alternative brand furnaces.

Base units include outdoor condenser, indoor coil and TX valve. If transitions & other ancillaries/accessories are required please refer to the Transitions/Ancillaries/Accessories section.

Furnace models are on the left hand column and nominal capacities/power-supply/ancillaries of the stand-alone outdoor units/indoor coils are listed on the right hand side.



Furnace Model Number	Nominal Cooling Capacity	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coils	Coil Type	TX Valve & Drier
		Single Phase	Three Phase			
For Multi Positional Furnaces in Horizontal Mode						
G61 MPVT-36B-070	8	TSA030S4-1	N/A	76L07	CASED HORIZONTAL	37L51
	10	TSA036S4-1	TSA036S4-3	76L07	CASED HORIZONTAL	37L51
	12	TSA048S4-1	TSA048S4-3	76L09	CASED HORIZONTAL	91M02
G61MPVT-60C-090/110	12	TSA048S4-1	TSA048S4-3	76L11	CASED HORIZONTAL	91M02
	15/17	TSA060S4-1	N/A	76L12	CASED HORIZONTAL	91M02
		LCS-18C-1X-3	N/A	76L12	CASED HORIZONTAL	91M02
	17	N/A	TSA060S4-3	76L12	CASED HORIZONTAL	91M02
		N/A	LCS-17C-3X-2	76L12	CASED HORIZONTAL	91M02
G61MPVT-60D-135	15/17	TSA060S4-1	N/A	76L14	CASED HORIZONTAL	91M02
		LCS-18C-1X-3	N/A	76L14	CASED HORIZONTAL	91M02
	17	N/A	TSA060S4-3	76L14	CASED HORIZONTAL	91M02
		N/A	LCS-17C-3X-2	76L14	CASED HORIZONTAL	91M02

NOTE: All TSA stand-alone Outdoor Condensing units are vertical discharge and LCS stand-alone Outdoor Condensing units are side discharge.

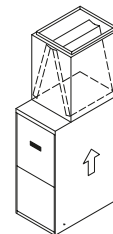
GUIDE CHART FOR G61MP & G61E SERIES



Furnace Model Number	Nominal Cooling Capacity	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Coil Type	TX Valve & Drier
		Single Phase	Three Phase			

For Multi Positional Furnaces in Upflow Mode

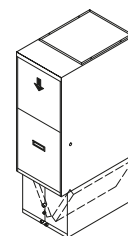
G61MPVT-36B-070	8	TSA030S4-1	N/A	76L25	CASED UPFLOW	37L51
	10	TSA036S4-1	TSA036S4-3	76L25	CASED UPFLOW	37L51
	12	TSA048S4-1	TSA048S4-3	76L25	CASED UPFLOW	91M02
G61MPVT-60C-090/110	12	TSA048S4-1	TSA048S4-3	76L28	CASED UPFLOW	91M02
	15/17	TSA060S4-1	N/A	54M80	CASED UPFLOW	91M02
		LCS-18C-1X-3	N/A	54M80	CASED UPFLOW	91M02
	17	N/A	TSA060S4-3	54M80	CASED UPFLOW	91M02
		N/A	LCS-17C-3X-2	54M80	CASED UPFLOW	91M02



Furnace Model Number	Nominal Cooling Capacity	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Coil Type	TX Valve & Drier
		Single Phase	Three Phase			

For Multi Positional Furnaces in Downflow Mode

G61MPVT-36B-070	8	TSA030S4-1	N/A	92M36	CASED DOWNFLOW	37L51
	10	TSA036S4-1	TSA036S4-3	92M36	CASED DOWNFLOW	37L51
	12	TSA048S4-1	TSA048S4-3	92M36	CASED DOWNFLOW	91M02
G61MPVT-60C-090/110	12	TSA048S4-1	TSA048S4-3	92M38	CASED DOWNFLOW	91M02
	15/17	TSA060S4-1	N/A	92M38	CASED DOWNFLOW	91M02
		LCS-18C-1X-3	N/A	92M38	CASED DOWNFLOW	91M02
	17	N/A	TSA060S4-3	92M38	CASED DOWNFLOW	91M02
		N/A	LCS-17C-3X-2	92M38	CASED DOWNFLOW	91M02
G61MPVT-60D-135	15/17	TSA060S4-1	N/A	92M39	CASED DOWNFLOW	91M02
		N/A	LCS-17C-3X-2	92M39	CASED DOWNFLOW	91M02
		N/A	TSA060S4-3	92M39	CASED DOWNFLOW	91M02



Note: Cased coil bolts directly onto heater as indicated.

NOTE: All TSA stand-alone Outdoor Condensing units are vertical discharge and LCS stand-alone Outdoor Condensing units are side discharge.

Furnace Model Number	Nominal Cooling Capacity	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Coil Type	TX Valve & Drier
		Single Phase	Three Phase			

For External Furnaces

G61EVT-36B-070	8	TSA030S4-1	N/A	76L39	INSIDE HEATER	37L51
	10	TSA036S4-1	TSA036S4-3	76L39	INSIDE HEATER	37L51
	12	TSA048S4-1	TSA048S4-3	76L46	INSIDE HEATER	91M02
G61E-60C-090/110	15/17	TSA060S4-1	N/A	76L46	INSIDE HEATER	91M02
		LCS-18C-1X-3	N/A	76L46	INSIDE HEATER	91M02
	17	N/A	LCS-17C-3X-2	76L46	INSIDE HEATER	91M02
		N/A	TSA060S4-3	76L46	INSIDE HEATER	91M02
G61E-60D-135	15/17	TSA060S4-1	N/A	76L46	INSIDE HEATER	91M02
		LCS-18C-1X-3	N/A	76L46	INSIDE HEATER	91M02
	17	N/A	TSA060S4-3	76L46	INSIDE HEATER	91M02
		N/A	LCS-17C-3X-2	76L46	INSIDE HEATER	91M02



NOTE: All TSA stand-alone Outdoor Condensing units are vertical discharge and LCS stand-alone Outdoor Condensing units are side discharge.

Guide Chart for Lennox Merit Series Furnaces



GUIDE CHART FOR LENNOX MERIT SERIES ML180 HEATERS

Furnace Model Number	Nominal Cooling Capacity	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Coil Type	TX Valve
		Single Phase	Three Phase			
For Multi Positional Internal Furnaces in Horizontal Mode						
ML180UH070AP36A	8	TSA030S4-1	N/A	76L04	Horizontal Cased 'A' Frame	37L51
	10	TSA036S4-1	TSA036S4-3	76L04	Horizontal Cased 'A' Frame	37L51
ML180UH090AP48B	8	TSA030S4-1	N/A	76L09	Horizontal Cased 'A' Frame	37L51
	10	TSA036S4-1	TSA036S4-3	76L09	Horizontal Cased 'A' Frame	37L51
ML180UH090AP48B	10	TSA036S4-1	TSA036S4-3	76L09	Horizontal Cased 'A' Frame	37L51
	12	TSA048S4-1	TSA048S4-3	76L09	Horizontal Cased 'A' Frame	91M02
ML180UH110AP60C & ML180UH135AP60D	12	TSA048S4-1	TSA048S4-3	76L14	Horizontal Cased 'A' Frame	91M02
	15/17	TSA060S4-1	N/A	76L14	Horizontal Cased 'A' Frame	91M02
		LCS-18C-1X-3	N/A	76L14	Horizontal Cased 'A' Frame	91M02
	17	N/A	TSA060S4-3	76L14	Horizontal Cased 'A' Frame	91M02
		N/A	LCS-17C-3X-2	76L14	Horizontal Cased 'A' Frame	91M02
	ML180UH135AP60D	21	N/A	TSA072S4-3	76L14	Horizontal Cased 'A' Frame

NOTE: All TSA stand-alone Outdoor Condensing units are vertical discharge and LCS stand-alone Outdoor Condensing units are side discharge.



Furnace Model Number	Nominal Cooling Capacity	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Coil Type	TX Valve
		Single Phase	Three Phase			
For Multi Positional Internal Furnaces in Upflow Mode						
ML180UH090AP48B	8	TSA030S4-1	N/A	76L25	Cased Upflow	37L51
	10	TSA036S4-1	TSA036S4-3	76L25	Cased Upflow	37L51
ML180UH090AP48B	10	TSA036S4-1	TSA036S4-3	76L25	Cased Upflow	37L51
	12	TSA048S4-1	TSA048S4-3	76L25	Cased Upflow	91M02
ML180UH110AP60C & ML180UH135AP60D	12	TSA048S4-1	TSA048S4-3	54M80	Cased Upflow	91M02
	15/17	TSA060S4-1	N/A	54M81	Cased Upflow	91M02
		LCS-18C-1X-3	N/A	54M81	Cased Upflow	91M02
	17	N/A	TSA060S4-3	54M81	Cased Upflow	91M02
		N/A	LCS-17C-3X-2	54M81	Cased Upflow	91M02
	ML180UH135AP60D	21	N/A	TSA072S4-3	54M81	Cased Upflow

NOTE: All TSA stand-alone Outdoor Condensing units are vertical discharge and LCS stand-alone Outdoor Condensing units are side discharge.

GUIDE CHART FOR LENNOX MERIT SERIES ML180 HEATERS (CONT'D)

Furnace Model Number	Nominal Cooling Capacity	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Coil Type	TX Valve
		Single Phase	Three Phase			
FOR EXTERNAL FURNACES						
ML18009048B-EC	10	TSA036S4-1	TSA036S4-3	76L42	INSIDE HEATER	37L51
	12	TSA048S4-1	TSA048S4-3	76L42	INSIDE HEATER	91M02
ML18011060C-EC & ML18013560D-EC	12	TSA048S4-1	TSA048S4-3	76L46	INSIDE HEATER	91M02
	15/17	TSA060S4-1	N/A	76L46	INSIDE HEATER	91M02
		LCS-18C-1X-3	N/A	76L46	INSIDE HEATER	91M02
	17	N/A	TSA060S4-3	76L46	INSIDE HEATER	91M02
		N/A	LCS-17C-3X-2	76L46	INSIDE HEATER	91M02

NOTE: All TSA stand-alone Outdoor Condensing units are vertical discharge and LCS stand-alone Outdoor Condensing units are side discharge.

GUIDE CHART FOR ALTERNATE BRAND GAS FURNACES

Use the guide charts below to reference Lennox stand-alone Outdoor Condensing Units &/or stand-alone Indoor Cooling Coils for alternative brand furnaces. Furnace models are on the left hand column and nominal capacities/power-supply/ancillaries of the stand-alone outdoor units/indoor coils are listed on the right hand side. Base units include outdoor condenser, indoor coil and TX valve.

Part Number	Nominal Air Qty		Nominal Cooling Capacity (kW)	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Exp. Valve
	Litres per Second	Static Pressure (Pa)		Single Phase	Three Phase		
For Brivis StarPro Heaters MX Series - Horizontal Mode							
MX21E	700	50	10	TSA036S4-1	TSA036S4-3	76L07	37L51
MX21EXA	740	50	12	TSA048S4-1	TSA048S4-3	76L09	91M02
MX21I	785	50	12	TSA048S4-1	TSA048S4-3	76L09	91M02
MX21IXA	830	50	12	TSA048S4-1	TSA048S4-3	76L09	91M02
BH28E (350mm)	710	125	12	TSA048S4-1	TSA048S4-3	76L09	91M02
BH28E (400mm)	760	125	12	TSA048S4-1	TSA048S4-3	76L09	91M02
MX30E	960	125	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
MX30I	1080	125	15/17	TSA060S4-1	N/A	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
MX30IXA	1140	125	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
MX35I	1160	125	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02

NOTE: All TSA stand-alone Outdoor Condensing units are vertical discharge and LCS stand-alone Outdoor Condensing units are side discharge.

GUIDE CHART FOR ALTERNATE BRAND GAS FURNACES

Part Number	Nominal Air Qty		Nominal Cooling Capacity (kW)	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Exp. Valve
	Litres per Second	Static Pressure (Pa)		Single Phase	Three Phase		

For Brivis Heaters MPS Series - Horizontal Mode

HX15I	695	50	10	TSA036S4-1	TSA036S4-3	76L07	37L51
HX23E	715	50	12	TSA048S4-1	TSA048S4-3	76L09	91M02
HX23I	765	50	12	TSA048S4-1	TSA048S4-3	76L09	91M02
HX23EXA	755	50	12	TSA048S4-1	TSA048S4-3	76L09	91M02
HX23IXA	795	50	12	TSA048S4-1	TSA048S4-3	76L09	91M02
HX30E	850	125	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
HX30EXA	985	125	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
HX30I	1065	125	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
HX30IXA	1095	125	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02

Part Number	Nominal Air Qty		Nominal Cooling Capacity (kW)	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Exp. Valve
	Litres per Second	Static Pressure (Pa)		Single Phase	Three Phase		

For Braemar Heaters TH Series - Horizontal Mode

THM623	640	50	10	TSA036S4-1	TSA036S4-3	76L07	37L51
THM6X23	695	100	12	TSA048S4-1	TSA048S4-3	76L09	91M02
THM632	960	50	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
THM6X32	1505	100	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
TH516	470	50	8	TSA030S4-1	N/A	76L07	37L51
TH520	630	50	10	TSA036S4-1	TSA036S4-3	76L07	37L51
TH523	640	50	10	TSA036S4-1	TSA036S4-3	76L07	37L51
TH5X23	740	50	12	TSA048S4-1	TSA048S4-3	76L09	91M02
TH5X23	755	100	12	TSA048S4-1	TSA048S4-3	76L09	91M02
TH532	935	50	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02

GUIDE CHART FOR ALTERNATE BRAND GAS FURNACES

Part Number	Nominal Air Qty		Nominal Cooling Capacity (kW)	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Exp. Valve
	Litres per Second	Static Pressure (Pa)		Single Phase	Three Phase		
TH5X32	1070	100	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
TH415/TH315	470/475	50	8	TSA030S4-1	N/A	76L07	37L51
TH420/TH320	630	50	10	TSA036S4-1	TSA036S4-3	76L07	37L51
TH3X20/TH4X20/THM5X20	695	100	12	TSA048S4-1	TSA048S4-3	76L09	91M02
TH425/TH325	755	50	12	TSA048S4-1	TSA048S4-3	76L09	91M02
TH4X25/TH3X25	810	100	12	TSA048S4-1	TSA048S4-3	76L09	91M02
TH330/TH430/THM530	960	50	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
TH4X30/TH3X30	1050	100	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02
TH435	1050	50	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02

NOTE: All TSA stand-alone Outdoor Condensing units are vertical discharge and LCS stand-alone Outdoor Condensing units are side discharge.

Part Number	Nominal Air Qty		Cooling Capacity (kW)	Stand-Alone Outdoor Condensing Unit		Stand-Alone Indoor Cooling Coil	Exp. Valve
	Litres per Second	Static Pressure (Pa)		Single Phase	Three Phase		
For Bonaire M Series Heaters							
MB4-14/MB515	480	100	8	TSA030S4-1	N/A	76L07	37L51
MB3-14/MB3-20/MB4-20/MB521	540	100	8	TSA030S4-1	N/A	76L07	37L51
MB3-30/MB4-20 XA/MB4-30/MB521 XA/MB530	830	100	12	TSA048S4-1	TSA048S4-3	76L09	91M02
MB3-30XA/MB4-30 XA/MB530 XA	1050	100	15/17	TSA060S4-1	N/A	76L12	91M02
				LCS-18C-1X-3	N/A	76L12	91M02
			17	N/A	TSA060S4-3	76L12	91M02
				N/A	LCS-17C-3X-2	76L12	91M02

Note: All TSA stand-alone Outdoor Condensing units are vertical discharge and LCS stand-alone Outdoor Condensing units are side discharge.

Note: The above information pertaining to non-Lennox branded items are compiled from publicly available information from the original manufacturers, the accuracy of which is not the responsibility of Lennox Heating and Air Conditioning. No guarantee is expressed or implied as to the compatibility or performance of Lennox stand-alone Outdoor Condensing Units &/or stand-alone Indoor Cooling Coils when used with other brands of furnaces.

Lennox Commercial DX & Chillers



ROOFTOP PACKAGED UNITS

LENNOX AIR-COOLED REVERSE-CYCLE ROOFTOP PACKAGED UNITS - LANDMARK® SERIES (R410A)

Part Number	Gross Capacities (kW)		Nett Capacities (kW)		EER Cooling	COP Heating	Air Flow - Evaporator (L/Sec.)		
	Cooling	Heating	Cooling	Heating			Max	Nom	Min

Landmark® Series

KHA036S4B	9.31	9.06	8.88	9.49	3.23	3.97	708	545	425
KHA048S4B	12.34	12.47	11.68	13.13	3.15	4.26	944	755	566
KHA060S4B	15.38	15.74	14.62	16.49	3.25	4.33	1133	935	755
KHA072S4B	17.93	17.75	17.20	18.48	3.26	3.80	1369	970	897
KHA092S4B	22.97	22.60	22.18	23.39	3.49	4.15	2831	1415	1062
KHA120S4B	31.12	30.02	29.99	31.13	3.41	4.12	2477	1700	1062
KHA150S4B	36.23	35.25	34.00	37.49	3.19	3.73	2477	2124	1062
KHA180S4B	45.28	43.35	43.80	44.83	3.17	3.76	4250	2830	2240
KHA240S4B	58.06	54.23	54.75	56.65	3.15	3.89	4250	3540	2240

Part Number	Static - Supply (Pa)		Sound Power Level dB(A)	Net Weight (kg)	Unit Dimensions L x W x H (mm)
	Min	Max			

Landmark® Series (Cont'd)

KHA036S4B	25	400	75	243	2165 x 1194 x 987
KHA048S4B	25	400	75	253	2165 x 1194 x 987
KHA060S4B	25	400	82	303	2165 x 1194 x 1191
KHA072S4B	25	400	83	340	2496 x 1194 x 1191
KHA092S4B	150	600	88	477	2572 x 1527 x 1191
KHA120S4B	50	650	88	522	2572 x 1527 x 1191
KHA150S4B	50	650	88	612	3159 x 1527 x 1191
KHA180S4B	100	650	93	885	3369 x 2315 x 1378
KHA240S4B	100	650	93	975	3369 x 2315 x 1378

LANDMARK SERIES - FIELD INFORMATION

Part Number	Refrigerant (R410A)		Drain Size/ Type	Duct Spigot Sizes (mm)		Power Supply (V/Hz/Φ)	Unit Clearances (mm)		Mass Dimensions	
	Circuit(s)	Charge (kg)		Supply	Return		Service	Min. Operation	Corner Weights	Centre of Gravity
KHA036S4B	1	5.67	1" NPT	508 x 457	737 x 279	380 - 420/50/3	Refer to Landmark Product Brochure/ Manuals			Refer to Landmark Product Brochure/ Manuals
KHA048S4B	1	5.95	1" NPT	508 x 495	737 x 279					
KHA060S4B	1	7.26	1" NPT	509 x 457	737 x 279					
KHA072S4B	1	9.30	1" NPT	509 x 495	737 x 279					
KHA092S4B	2	11.10	1" NPT	394 x 762	762 x 394					
KHA120S4B	2	13.60	1" NPT	394 x 762	762 x 394					
KHA150S4B	2	20.40	1" NPT	394 x 762	762 x 394					
KHA180S4B	2	19.06	1" FPT	508 x 711 (2)	381 x 1537					
KHA240S4B	3	23.58	1" FPT	508 x 711 (2)	381 x 1537					

NOTES:

1. Thermal data are in accordance with AS/NZS 3823.1.2 & AS/NZS 3823.2 Standards

2. Refer to the Landmark Product Brochure & Manuals for additional data & drawings

3. Consult your local Heatcraft Account Manager, Field Engineer or one of our friendly Branch Staff for further assistance with selections and pricing

LANDMARK SERIES - OPTIONAL ACCESSORIES

Part Number(s)	Roof Curbs	Drain Trap (PVC)	Coil Corrosion Protection	Low Ambient Kit	Coil Guards	Hail Guards	Enthalpy Control
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Optional Accessories

KHA036S4B	OX	X	0	X	X	X	X
KHA048S4B	OX	X	0	X	X	X	X
KHA060S4B	OX	X	0	X	X	X	X
KHA072S4B	OX	X	0	X	X	X	X
KHA092S4B	OX	X	0	X	X	X	X
KHA120S4B	OX	X	0	X	X	X	X
KHA150S4B	OX	X	0	X	X	X	X
KHA180S4B	OX	X	0	X	X	X	X
KHA240S4B	OX	X	0	X	X	X	X

Part Number(s)	OA Dampers (Manual)	OA Dampers (Motor)	Power Exhaust Fan	Barometric Relief	CO ₂ Sensor	Economizer with OA Hood	Smoke Detector (Supply or Return)	Controls & HLI (BACnet/ LonWorks)
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Optional Accessories (Cont'd)

KHA036S4B	OX	OX	X	X	X	OX	X	OX
KHA048S4B	OX	OX	X	X	X	OX	X	OX
KHA060S4B	OX	OX	X	X	X	OX	X	OX
KHA072S4B	OX	OX	X	X	X	OX	X	OX
KHA092S4B	OX	OX	X	X	X	OX	X	OX
KHA120S4B	OX	OX	X	X	X	OX	X	OX
KHA150S4B	OX	OX	X	X	X	OX	X	OX
KHA180S4B	OX	OX	X	X	X	OX	X	OX
KHA240S4B	OX	OX	X	X	X	OX	X	OX

NOTES:

1. X = Field Installed; 0 = Factory Option must be specified on order (variable lead-times apply); OX = Either Field Installed or Factory Option
2. Coil Guards & Hail Guards are NOT to be used together
3. Refer to the Landmark Product Brochure & Manuals for comprehensive details of available options



ROOFTOP PACKAGED UNITS

LENNOX AIR-COOLED GAS/ELECTRIC ROOFTOP PACKAGED UNITS - ENERGENCE® SERIES (R410A)

Part Number	Gross Capacities (kW)		Nett Capacities (kW)		EER Cooling	Thermal η (%)	Air Flow - Evaporator (L/Sec.)		
	Cooling	Heating	Cooling	Heating			Max	Nom	Min

Energence® Series

LGH036S4T	9.08	13.5 - 22.3	8.79	13.5 - 22.3	3.46	80	660	565	330
LGH048S4T	12.64	13.5 - 31.1	12.20	13.5 - 31.1	3.71	80	895	755	425
LGH060S4T	15.60	13.5 - 31.1	15.13	13.5 - 31.1	3.74	80	1135	825	520
LGH072H4B	18.84	13.5 - 31.1	18.01	13.5 - 31.1	3.37	80	1370	905	895
LGH092H4B	23.46	26.7 - 49.2	22.76	26.7 - 49.2	3.76	81	2830	1416	1060
LGH102H4B	26.02	26.7 - 49.2	25.12	26.7 - 49.2	3.70	81	2830	1605	1060
LGH120H4B	30.94	26.7 - 49.2	29.93	26.7 - 49.2	3.61	81	2830	1699	1060
LGH150S4B	35.91	26.7 - 49.2	34.24	26.7 - 49.2	3.24	81	2830	1935	1060
LGH156H4B	38.96	39.5 - 73.5	37.66	39.5 - 73.5	3.58	80	5190	2455	1890
LGH180H4B	45.08	39.5 - 98.4	43.76	39.5 - 98.4	3.64	80	5190	2475	1890
LGH210H4B	50.65	39.5 - 98.4	48.81	39.5 - 98.4	3.50	80	5190	2890	1890
LGH240H4B	58.07	54.8 - 98.4	55.89	54.8 - 98.4	3.44	80	5190	3020	1890
LGH300S4B	71.30	54.8 - 98.4	67.73	54.8 - 98.4	3.16	80	5190	3965	1890
LGH300H4B	77.54	54.8 - 98.4	75.19	54.8 - 98.4	3.43	80	7075	3825	1890
LGH360H4B	96.77	54.8 - 98.4	92.90	54.8 - 98.4	3.36	80	7075	4530	1890

Part Number	Static - Supply (Pa)		Sound Power Level dB(A)	Net Weight - Base Unit (kg)	Unit Dimensions L x W x H (mm)
	Min	Max			

Energence® Series (Cont'd)

LGH036S4T	25	500	75	249	2165 x 1194 x 987
LGH048S4T	25	500	75	256	2165 x 1194 x 987
LGH060S4T	25	500	82	292	2165 x 1194 x 1191
LGH072H4B	25	500	82	327	2165 x 1194 x 1191
LGH092H4B	50	650	88	494	2572 x 1527 x 1191
LGH102H4B	50	650	88	497	2572 x 1527 x 1191
LGH120H4B	50	650	88	513	2572 x 1527 x 1191
LGH150S4B	50	650	88	531	2572 x 1527 x 1191
LGH156H4B	100	650	86	878	2737 x 2315 x 1378
LGH180H4B	100	650	93	959	3369 x 2315 x 1378
LGH210H4B	100	650	94	1016	3369 x 2315 x 1378
LGH240H4B	100	650	94	1055	3369 x 2315 x 1378
LGH300S4B	100	650	94	1102	3369 x 2315 x 1378
LGH300H4B	100	650	95	1435	3683 x 2305 x 1651
LGH360H4B	100	650	95	1435	3683 x 2305 x 1651

NOTES:

1. Thermal data (cooling) are in accordance with AS/NZS 3823.1.2 & AS/NZS 3823.2 Standards
2. Refer to the Energence Product Brochure & Manuals for additional data & drawings
3. Consult your local Heatcraft Account Manager, Field Engineer or one of our friendly Branch Staff for further assistance with selections and pricing

ENERGENCE® SERIES - FIELD INFORMATION

Part Number	Refrigerant (R410A)		Drain Size/ Type	Duct Spigot Sizes (mm)		Power Supply (V/Hz/Φ)	Unit Clearances (mm)		Mass Dimensions	
	Circuit(s)	Charge (kg)		Supply	Return		Service	Min. Operation	Corner Weights	Centre of Gravity

Field Information

LGH036S4T	1	1.90	1" NPT	508 x 495	737 x 279	380- 420/50/3	Refer to Energence Product Brochure/ Manuals	Refer to Energence Product Brochure/ Manuals
LGH048S4T	1	2.38	1" NPT	508 x 495	737 x 279			
LGH060S4T	1	3.26	1" NPT	508 x 495	737 x 279			
LGH072H4B	1	3.40	1" NPT	508 x 495	737 x 279			
LGH092H4B	2	6.80	1" NPT	394 x 762	762 x 394			
LGH102H4B	2	6.80	1" NPT	394 x 762	762 x 394			
LGH120H4B	2	6.70	1" NPT	394 x 762	762 x 394			
LGH150S4B	2	7.26	1" NPT	394 x 762	762 x 394			
LGH156H4B	3	7.60	1" FPT	508 x 711 (2)	381 x 1537			
LGH180H4B	3	7.93	1" FPT	508 x 711 (2)	381 x 1537			
LGH210H4B	3	9.30	1" FPT	508 x 711 (2)	381 x 1537			
LGH240H4B	4	10.71	1" FPT	508 x 711 (2)	381 x 1537			
LGH300S4B	4	11.39	1" FPT	508 x 711 (2)	381 x 1537			
LGH300H4B	4	16.20	1" NPT	508 x 711 (2)	381 x 1994			
LGH360H4B	4	15.20	1" NPT	508 x 711 (2)	381 x 1994			

ENERGENCE® SERIES - OPTIONAL ACCESSORIES

Part Number	Roof Curbs	Drain Trap (PVC)	Coil Corrosion Protection	Low Ambient Kit	Coil Guards	Hail Guards	Enthalpy Control
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Optional Accessories

LGH036S4T	OX	X	0	X	X	X	X
LGH048S4T	OX	X	0	X	X	X	X
LGH060S4T	OX	X	0	X	X	X	X
LGH072H4B	OX	X	0	X	X	X	X
LGH092H4B	OX	X	0	X	X	X	X
LGH102H4B	OX	X	0	X	X	X	X
LGH120H4B	OX	X	0	X	X	X	X
LGH150S4B	OX	X	0	X	X	X	X
LGH156H4B	OX	X	0	X	X	X	X
LGH180H4B	OX	X	0	X	X	X	X
LGH210H4B	OX	X	0	X	X	X	X
LGH240H4B	OX	X	0	X	X	X	X
LGH300S4B	OX	X	0	X	X	X	X
LGH300H4B	OX	X	0	X	X	X	X
LGH360H4B	OX	X	0	X	X	X	X

ROOFTOP PACKAGED UNITS

ENERGENCE® SERIES - OPTIONAL ACCESSORIES (CONT'D)

Part Number	OA Dampers (Manual)	OA Dampers (Motor)	Power Exhaust Fan	Barometric Relief	CO2 Sensor	Economizer with OA Hood	Smoke Detector (Supply or Return)	Controls & BACnet/ ModBus/ LonWorks
Optional Accessories (Cont'd)								
LGH036S4T	OX	OX	X	X	X	OX	X	OX
LGH048S4T	OX	OX	X	X	X	OX	X	OX
LGH060S4T	OX	OX	X	X	X	OX	X	OX
LGH072H4B	OX	OX	X	X	X	OX	X	OX
LGH092H4B	OX	OX	X	X	X	OX	X	OX
LGH102H4B	OX	OX	X	X	X	OX	X	OX
LGH120H4B	OX	OX	X	X	X	OX	X	OX
LGH150S4B	OX	OX	X	X	X	OX	X	OX
LGH156H4B	OX	OX	X	X	X	OX	X	OX
LGH180H4B	OX	OX	X	X	X	OX	X	OX
LGH210H4B	OX	OX	X	X	X	OX	X	OX
LGH240H4B	OX	OX	X	X	X	OX	X	OX
LGH300S4B	OX	OX	X	X	X	OX	X	OX
LGH300H4B	OX	OX	X	X	X	OX	X	OX
LGH360H4B	OX	OX	X	X	X	OX	X	OX

NOTES:

1. X = Field Installed; O = Factory Option must be specified on order (variable lead-times apply); OX = Either Field Installed or Factory Option
2. Coil Guards & Hail Guards are NOT to be used together
3. Refer to the Energence Product Brochure & Manuals for comprehensive details of available options

LENNOX AIR-COOLED REVERSE-CYCLE ROOFTOP PACKAGED UNITS - BALTIC RFLEX SERIES (R410A)

Part Number	Net Capacities (kW)		EER Cooling	COP Heating	Air Flow - Supply (L/Sec.)			Available Supply ESP (Pa)
	Cooling	Heating			Max	Nom	Min	
Baltic Rflex Series								
RAH06SNM1M	22.4	21.1	3.11	3.64	1555	1166	1000	300
RAH07SNM1M	29.0	26.6	3.12	3.60	1888	1583	1277	300
RAH09SNM1M	37.9	36.0	3.11	3.46	2333	1750	1416	300
RAH10SNM1M	40.1	38.9	2.93	3.38	2333	1916	1527	300
RAH12DNM1M	48.9	47.5	2.95	3.28	3111	2305	1861	300
RAH13DNM1M	56.0	56.5	3.04	3.49	3638	2750	2194	300
RAH16DNM1M	64.1	64.6	2.89	3.28	3638	3083	2472	300
RAH19DNM1M	74.7	75.8	3.07	3.51	4722	3750	2916	300
RAH22DNM1M	79.0	80.1	2.91	3.23	4722	3750	2916	300



LENNOX AIR-COOLED REVERSE-CYCLE ROOFTOP PACKAGED UNITS - BALTIC RFLEX SERIES (R410A)

Part Number	Available Supply ESP (Pa)	Electric Auxiliary Heating - S/H (kW)		Sound Power Levels (dBA)		Base Unit Weight (kg)	Base Unit Dimensions L x W x H (mm)
		Heater	Pre-Heater	Outdoor (std)	Indoor (std)		
Baltic Rflex Series (Cont'd)							
RAH06SNM1M	300	18/36	18/36	80.3	75.2	580	2283 x 2250 x 1260
RAH07SNM1M	300	18/36	18/36	80.5	80.8	620	2283 x 2250 x 1260
RAH09SNM1M	300	18/36	18/36	81.0	82.6	680	2283 x 2250 x 1260
RAH10SNM1M	300	18/36	18/36	81.7	84.6	680	2283 x 2250 x 1260
RAH12DNM1M	300	27/54	24/48	83.3	77.6	840	2783 x 2250 x 1260
RAH13DNM1M	300	27/54	24/48	83.4	80.8	920	2783 x 2250 x 1260
RAH16DNM1M	300	27/54	24/48	84.3	87.0	940	2783 x 2250 x 1260
RAH19DNM1M	300	27/54	36/72	83.2	87.2	1150	3663 x 2250 x 1260
RAH22DNM1M	300	27/54	36/72	84.1	88.8	1150	3663 x 2250 x 1260

NOTES:

1. Thermal data are in accordance with AS/NZS 3823.1.2 & AS/NZS 3823.2 Standards - Acoustic data are at Eurovent conditions.
2. Base Unit Weight & Dimensional values are indicative of standard base unit without any options/accessories. For critical weight & dimensional data, please check the actual unit ordered for the job.
3. Refer to the Baltic Rflex Product Brochure & Manuals for additional data & drawings.
4. Consult your local Heatcraft Account Manager, Field Engineer or one of our friendly Branch Staff for further assistance with selections and pricing.

BALTIC RFLEX SERIES - FIELD INFORMATION

Part Number	Refrigerant (R410A)		Ambient Limits			Power Supply (V/Hz/Φ)	Duct Spigot Sizes (mm)		Unit Clearances (mm)	Mass Dimensions	
	Circuit(s)	Charge (kg)	Cooling Mode		Heating		Supply H x W (mm) ± 5	Return H x W (mm) ± 5	Service	Corner Weights	Centre of Gravity
			Max (°C)	Min (°C)	Min (°C)						
Field Information											
RAH06SNM1M	1	7.9	+50	-5	-12	400/50/3	946 x 318	640 x 944	Refer to Baltic RFLex Product Brochure/Manuals	Refer to Baltic RFLex Product Brochure/Manuals	
RAH07SNM1M	1	7.9					946 x 318	640 x 944			
RAH09SNM1M	1	10.2					946 x 318	640 x 944			
RAH10SNM1M	1	10.2					946 x3 18	640 x 944			
RAH12DNM1M	2	14.0					1446 x 318	815 x937			
RAH13DNM1M	2	18.1					1446 x 318	815 x 937			
RAH16DNM1M	2	18.1					1446 x 318	815 x 937			
RAH19DNM1M	2	23.9					1946 x 318	1315 x 937			
RAH22DNM1M	2	23.9					1946 x 318	1315 x 937			

Field Information

ROOFTOP PACKAGED UNITS

BALTIC RFLX SERIES - OPTIONAL ACCESSORIES

Part Number	Roof Curbs	Heat Recovery	Coil Corrosion Protection	Low Noise Kit	Refrigerant Leak Detection	EC Condenser Fan	Enthalpy Control
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Optional Accessories

RAH06SNM1M	OX	0	0	0	OX	0	OX
RAH07SNM1M	OX	0	0	0	OX	0	OX
RAH09SNM1M	OX	0	0	0	OX	0	OX
RAH10SNM1M	OX	0	0	0	OX	0	OX
RAH12DNM1M	OX	0	0	0	OX	0	OX
RAH13DNM1M	OX	0	0	0	OX	0	OX
RAH16DNM1M	OX	0	0	0	OX	0	OX
RAH19DNM1M	OX	0	0	0	OX	0	OX
RAH22DNM1M	OX	0	0	0	OX	0	OX

Part Number(s)	CO2 Sensor	Smoke Detector	Power Exhaust Fan	Gravity Exhaust Fan	Fire Thermostat	3 Phase Protection	Controls & BACnet/ModBus/LonWorks
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Optional Accessories (Cont'd)

RAH06SNM1M	X	OX	OX	OX	OX	OX	OX
RAH07SNM1M	X	OX	OX	OX	OX	OX	OX
RAH09SNM1M	X	OX	OX	OX	OX	OX	OX
RAH10SNM1M	X	OX	OX	OX	OX	OX	OX
RAH12DNM1M	X	OX	OX	OX	OX	OX	OX
RAH13DNM1M	X	OX	OX	OX	OX	OX	OX
RAH16DNM1M	X	OX	OX	OX	OX	OX	OX
RAH19DNM1M	X	OX	OX	OX	OX	OX	OX
RAH22DNM1M	X	OX	OX	OX	OX	OX	OX

NOTES:

1. X = Field Installed; 0 = Factory Option must be specified on order (variable lead-times apply); OX = Either Field Installed or Factory Option.
2. Refer to the Baltic Rflx Product Brochure & Manuals for comprehensive details of available options.


LENNOX AIR-COOLED REVERSE-CYCLE ROOFTOP PACKAGED UNITS - FLEXAIR® SERIES (R410A)

Part Number(s) Cooling Only/ Heat-Pump	Net Capacities (kW)		EER Cooling	COP Heating	Air Flow - Supply (L/Sec.)			Available Static - Supply (Pa)
	Cooling	Heating			Max	Nom	Min	

FlexAir® Series

FAC085/ FAH085	84.1	-	3.24	-	6388	4166	3333	500
FAC100/ FAH100	83.1	80.3	3.20	3.39	6388	4166	3333	500
FAC100/ FAH100	98.3	-	2.92	-	6388	5138	3888	500
FAC100/ FAH100	97.0	97.7	2.88	3.32	6388	5138	3888	500
FAC120/ FAH120	115.1	-	2.85	-	6388	5694	4166	500
FAC120/ FAH120	113.4	113.2	2.81	3.01	6388	5694	4166	500
FAC150/ FAH150	143.4	-	2.77	-	9722	7222	5000	500
FAC150/ FAH150	138.0	137.6	2.68	3.38	9722	7222	5000	500
FAC170/ FAH170	158.8	-	2.65	-	9722	8333	5833	500
FAC170/ FAH170	156.0	161.4	2.61	3.29	9722	8333	5833	500
FAC200/ FAH200	184.8	-	2.89	-	11944	9722	6666	500
FAC200/ FAH200	182.1	191.2	2.85	3.43	11944	9722	6666	500
FAC230/ FAH230	223.0	-	2.84	-	11944	10833	7500	500
FAC230/ FAH230	220.2	231.6	2.80	3.09	11944	10833	7500	500



Part Number(s) Cooling Only/ Heat-Pump	Available Static - Supply (Pa)	Auxiliary Heating - Electric Heater S/M/H (kW)	Sound Power Levels (dBA)		Base Unit Weight (kg)	Base Unit Dimensions L x W x H (mm)
			Outdoor (std)	Indoor (std)		

FlexAir® Series (Cont'd)

FAC085/ FAH085	500	30/54/72	80.1	86.5	966	3315 x 2245 x 1750
FAC085/ FAH085	500	30/54/72	80.1	86.5	981	3315 x 2245 x 1750
FAC100/ FAH100	500	30/54/72	91.8	90.2	1055	3315 x 2245 x 1750
FAC100/ FAH100	500	30/54/72	91.8	90.2	1070	3315 x 2245 x 1750
FAC120/ FAH120	500	30/54/72	88.8	89.2	1054	3315 x 2245 x 1750
FAC120/ FAH120	500	30/54/72	88.8	89.2	1069	3315 x 2245 x 1750
FAC150/ FAH150	500	45/72/108	87.2	93.1	1454	4360 x 2245 x 1885
FAC150/ FAH150	500	45/72/108	87.2	93.1	1484	4360 x 2245 x 1885
FAC170/ FAH170	500	45/72/108	85.9	95.2	1550	4360 x 2245 x 1885
FAC170/ FAH170	500	45/72/108	85.9	95.2	1580	4360 x 2245 x 1885
FAC200/ FAH200	500	72/108/162	84.9	91.3	2027	5166 x 2260 x 2235
FAC200/ FAH200	500	72/108/162	84.9	91.3	2057	5166 x 2260 x 2235
FAC230/ FAH230	500	72/108/162	85.2	92.0	2143	5166 x 2260 x 2235
FAC230/ FAH230	500	72/108/162	85.2	92.0	2173	5166 x 2260 x 2235

NOTES:

- Performance data are based on nominal & Eurovent conditions.
- Base Unit Weight & Dimensional values are indicative of standard base unit without any options/accessories. For critical weight & dimensional data, please check the actual unit ordered for the job.
- Please refer to FlexAir Product Brochure & Manuals for additional data & drawings
- Consult your local Heatcraft Account Manager, Field Engineer or one of our friendly Branch Staff for further assistance with selections and pricing..

ROOFTOP PACKAGED UNITS

FLEXAIR® SERIES - FIELD INFORMATION

Part Number(s) Cooling Only/ Heat-Pump	Refrigerant (R410A)		Duct Spigot Vertical Std (mm)		Power Supply (V/Hz/Φ)	Unit Clearances (mm)		Mass Dimensions	
	Circuit(s)	Charge (kg)	Supply H x W (mm) ± 5	Return H x W (mm) ± 5		Service	Min. Operation	Corner Weights	Centre of Gravity

Field Information

FAC085/ FAH085	2	18.0	1443 x 700	1723 x 420	400/50/3	Refer to FlexAir Product Brochure/Manuals	Refer to FlexAir Product Brochure/Manuals
FAC100/ FAH100	2	18.2	1443 x 700	1723 x 420			
FAC120/ FAH120	2	18.3	1443 x 700	1723 x 420			
FAC150/ FAH150	2	28.9	1540 x 700	1967 x 420			
FAC170/ FAH170	2	29.0	1540 x 700	1967 x 420			
FAC200/ FAH200	2	37.0	1827 x 840	1967 x 420			
FAC230/ FAH230	2	39.6	1827 x 840	1967 x 420			
FAC085/ FAH085	2	18.2	1443 x 700	1723 x 420			
FAC100/ FAH100	2	18.4	1443 x 700	1723 x 420			
FAC120/ FAH120	2	18.5	1443 x 700	1723 x 420			
FAC150/ FAH150	2	29.5	1540 x 700	1967 x 420			
FAC170/ FAH170	2	29.6	1540 x 700	1967 x 420			

FLEXAIR® SERIES - OPTIONAL ACCESSORIES

Part Number(s) Cooling Only/ Heat-Pump	Roof Curbs	Heat Recovery	Coil Corrosion Protection	Low Ambient Kit (Cooling Only Model)	Refrigerant Leak Detection	Low Noise Kit	Enthalpy Control
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Optional Accessories

FAC085/FAH085	OX	0	0	0	X	0	OX
FAC100/FAH100	OX	0	0	0	X	0	OX
FAC120/FAH120	OX	0	0	0	X	0	OX
FAC150/FAH150	OX	0	0	0	X	0	OX
FAC170/FAH170	OX	0	0	0	X	0	OX
FAC200/FAH200	OX	0	0	0	X	0	OX
FAC230/FAH230	OX	0	0	0	X	0	OX

Part Number(s) Cooling Only/ Heat-Pump	CO2 Sensor	Smoke Detector	Power Exhaust Fan	Gravity Exhaust Fan	Fire Thermostat	3 Phase Protection	Controls & BACnet/ModBus/LonWorks
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Optional Accessories (Cont'd)

FAC085/FAH085	X	OX	OX	OX	OX	OX	OX
FAC100/FAH100	X	OX	OX	OX	OX	OX	OX
FAC120/FAH120	X	OX	OX	OX	OX	OX	OX
FAC150/FAH150	X	OX	OX	OX	OX	OX	OX
FAC170/FAH170	X	OX	OX	OX	OX	OX	OX
FAC200/FAH200	X	OX	OX	OX	OX	OX	OX
FAC230/FAH230	X	OX	OX	OX	OX	OX	OX

NOTES:

1. X = Field Installed; 0 = Factory Option must be specified on order (variable lead-times apply); OX = Either Field Installed or Factory Option.
2. Refer to the FlexAir Product Brochure & Manuals for comprehensive details of available options.


LENNOX HIGH-EFFICIENCY MODULAR AIR-COOLED REVERSE-CYCLE ROOFTOP PACKAGED UNITS - ENERGY SERIES (R410A)

Part Number(s)	Net Capacities (kW)		EER Cooling	COP Heating	Air Flow - Supply (L/Sec.)			Available Static - Supply (Pa)
	Cooling	Heating			Max	Nom	Min	

Energy Series

E014AH065	66.0	65.3	3.14	3.42	6666	3750	2638	500
E014AH075	71.0	69.1	3.10	3.40	6666	3750	2638	500
E016AH085	82.1	83.7	3.07	3.41	6666	4305	2916	500
E016AH105	98.0	106.7	3.01	3.21	6666	4305	2916	500
E019AH066	70.6	67.8	3.09	3.51	6666	5250	3611	500
E019AH076	76.1	72.8	3.07	3.58	6666	5250	3611	500
E019AH086	88.1	86.2	3.13	3.42	6666	5250	3611	500
E019AH106	106.0	107.3	3.03	3.41	6666	5250	3611	500
E019AH124	114.2	119.4	3.03	3.41	6666	5250	3611	500
E022AH077	67.5	65.3	3.28	3.96	6666	6000	4166	500
E022AH087	87.2	86.0	3.18	3.64	6666	6000	4166	500
E022AH107	107.8	108.5	3.02	3.42	6666	6000	4166	500
E022AH140	131.8	140.7	3.01	3.21	6666	6000	4166	500
E024AH078	72.8	63.5	3.58	3.90	8888	6750	4722	500
E024AH088	91.9	87.1	3.30	3.75	8888	6750	4722	500
E024AH108	112.9	108.3	3.09	3.46	8888	6750	4722	500
E024AH126	119.9	117.0	3.10	3.50	8888	6750	4722	500
E024AH141	140.5	141.6	3.03	3.24	8888	6750	4722	500
E027AH160	154.6	158.5	3.01	3.22	8888	7500	5138	500
E027AH180	180.6	179.5	3.01	3.01	8888	7500	5138	500



Part Number(s)	Auxiliary Heating - Electric Heater S/M/H (kW)	Sound Power Levels (dBA)		Base Unit Weight (kg)	Base Unit Dimensions L x W x H (mm)
		Outdoor (std)	Indoor (std)		

Energy Series (Cont'd)

E014AH065	36/90/108	78.1	77.4	1492	4687 x 2270 x 2024
E014AH075	36/90/108	80.8	77.4	1552	4687 x 2270 x 2024
E016AH085	36/90/108	76.3	81.1	1579	4687 x 2270 x 2024
E016AH105	36/90/108	78.3	81.1	1644	4687 x 2270 x 2024
E019AH066	36/90/108	81.4	85.6	1509	4687 x 2270 x 2024
E019AH076	36/90/108	78.4	85.7	1565	4687 x 2270 x 2024
E019AH086	36/90/108	81.4	85.9	1593	4687 x 2270 x 2024
E019AH106	36/90/108	81.3	85.9	1658	4687 x 2270 x 2024
E019AH124	36/90/108	81.5	85.9	1662	4687 x 2270 x 2024
E022AH077	54/108/144	79.1	89.0	1601	4687 x 2270 x 2275
E022AH087	54/108/144	80.0	89.1	1682	4687 x 2270 x 2275
E022AH107	54/108/144	82.2	89.1	1761	4687 x 2270 x 2275
E022AH140	54/108/144	81.4	82.2	2049	4687 x 2270 x 2275
E024AH078	54/108/144	82.2	92.1	1653	4687 x 2270 x 2275
E024AH088	54/108/144	83.1	92.9	1734	4687 x 2270 x 2275
E024AH108	54/108/144	77.5	84.0	1812	4687 x 2270 x 2275
E024AH126	54/108/144	80.2	84.4	2022	5288 x 2270 x 2275
E024AH141	54/108/144	81.4	84.4	2118	5288 x 2270 x 2275
E027AH160	54/108/144	81.7	87.3	2163	5288 x 2270 x 2275
E027AH180	54/108/144	84.6	87.3	2197	5288 x 2270 x 2275

NOTES:

1. Performance data are based on nominal & Eurovent conditions. 2. Base Unit Weight & Dimensional values are indicative of standard base unit without any options/accessories. For critical weight & dimensional data, please check the actual unit ordered for the job. 3. Please refer to Energy Product Brochure & Manuals for additional data & drawings. Rooftop Packaged Units (cont'd)

ROOFTOP PACKAGED UNITS

ENERGY SERIES - FIELD INFORMATION

Part Number	Refrigerant (R410A)		Duct Spigot Vertical Std (mm)		Power Supply (V/Hz/Φ)	Unit Clearances (mm)		Mass Dimensions	
	Circuit(s)	Charge (kg)	Supply	Return		Service	Min. Operation	Corner Weights	Centre of Gravity
Filed Information									
E014AH065	2	18.6	1574 x 869	1810 x 562	4000/50/3	Refer to Energy Product Brochure/ Manuals	Refer to Energy Product Brochure/Manuals		
E014AH075	2	38.3	1574 x 869	1810 x 562					
E016AH085	2	38.3	1574 x 869	1810 x 562					
E016AH105	2	39.9	1574 x 869	1810 x 562					
E019AH066	2	19.1	1574 x 869	1810 x 562					
E019AH076	2	35.2	1574 x 869	1810 x 562					
E019AH086	2	35.2	1574 x 869	1810 x 562					
E019AH106	2	36.8	1574 x 869	1810 x 562					
E019AH124	2	36.8	1574 x 869	1810 x 562					
E022AH077	2	32.4	1574 x 869	1810 x 562					
E022AH087	2	32.5	1574 x 869	1810 x 562					
E022AH107	2	32.9	1574 x 869	1810 x 562					
E022AH140	2	47.0	1574 x 869	1810 x 562					
E024AH078	2	25.5	1574 x 869	1810 x 562					
E024AH088	2	25.7	1574 x 869	1810 x 562					
E024AH108	2	26.0	1574 x 869	1810 x 562					
E024AH126	2	45.8	1574 x 869	1810 x 562					
E024AH141	2	46.7	1574 x 869	1810 x 562					
E027AH160	2	47.9	1574 x 869	1810 x 562					
E027AH180	2	48.0	1574 x 869	1810 x 562					

ENERGY SERIES - OPTIONAL ACCESSORIES

Part Number	Roof Curbs	Heat Recovery	Coil Corrosion Protection	Low Noise Kit	Refrigerant Leak Detection	Variable Speed Compressor	Enthalpy Control
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Optional Accessories

E014AH065	OX	0	0	0	OX	0	OX
E014AH075	OX	0	0	0	OX	0	OX
E016AH085	OX	0	0	0	OX	0	OX
E016AH105	OX	0	0	0	OX	0	OX
E019AH066	OX	0	0	0	OX	0	OX
E019AH076	OX	0	0	0	OX	0	OX
E019AH086	OX	0	0	0	OX	0	OX
E019AH106	OX	0	0	0	OX	0	OX
E019AH124	OX	0	0	0	OX	0	OX
E022AH077	OX	0	0	0	OX	0	OX
E022AH087	OX	0	0	0	OX	0	OX
E022AH107	OX	0	0	0	OX	0	OX
E022AH140	OX	0	0	0	OX	0	OX
E024AH078	OX	0	0	0	OX	0	OX
E024AH088	OX	0	0	0	OX	0	OX
E024AH108	OX	0	0	0	OX	0	OX
E024AH126	OX	0	0	0	OX	0	OX
E024AH141	OX	0	0	0	OX	0	OX
E027AH160	OX	0	0	0	OX	0	OX
E027AH180	OX	0	0	0	OX	0	OX

Part Number	CO2 Sensor	Gravity Exhaust	Power Exhaust Axial/EC Fan	Smoke Detector	Fire Thermostat	3 Phase Protection	Controls & BACnet/ModBus/LonWorks
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Optional Accessories (Cont'd)

E014AH065	X	OX	0	OX	OX	OX	OX
E014AH075	X	OX	0	OX	OX	OX	OX
E016AH085	X	OX	0	OX	OX	OX	OX
E016AH105	X	OX	0	OX	OX	OX	OX
E019AH066	X	OX	0	OX	OX	OX	OX
E019AH076	X	OX	0	OX	OX	OX	OX
E019AH086	X	OX	0	OX	OX	OX	OX
E019AH106	X	OX	0	OX	OX	OX	OX
E019AH124	X	OX	0	OX	OX	OX	OX
E022AH077	X	OX	0	OX	OX	OX	OX
E022AH087	X	OX	0	OX	OX	OX	OX
E022AH107	X	OX	0	OX	OX	OX	OX
E022AH140	X	OX	0	OX	OX	OX	OX
E024AH078	X	OX	0	OX	OX	OX	OX
E024AH088	X	OX	0	OX	OX	OX	OX
E024AH108	X	OX	0	OX	OX	OX	OX
E024AH126	X	OX	0	OX	OX	OX	OX
E024AH141	X	OX	0	OX	OX	OX	OX
E027AH160	X	OX	0	OX	OX	OX	OX
E027AH180	X	OX	0	OX	OX	OX	OX

NOTES:

1. X = Field Installed; 0 = Factory Option must be specified on order (variable lead-times apply); OX = Either Field Installed or Factory Option.
2. Refer to the Energy Product Brochure & Manuals for comprehensive details of available options.
3. 1 x Variable Speed Compressor in total circuit.



WATER-COOLED PACKAGED UNITS

LENNOX WATER-COOLED REVERSE-CYCLE PACKAGED UNITS - AQUALEAN SERIES (R410A)

Part Number	Total Capacities (kW)		EER Cooling	COP Heating	Airside - Supply (L/Sec.)			Max Static (Pa)
	Cooling	Heating			Max	Nom	Min	

Aqualean Series

AWH002	2.0	2.6	4.3	4.4	135	122	79	90
AWH003	2.7	3.5	3.9	4.3	153	143	93	100
AWH007	6.8	8.0	4.3	3.8	397	347	281	150
AWH008	8.0	9.5	3.9	3.8	450	417	347	125
AWH010	10.2	12.2	4.1	4.0	583	528	431	150
AWH012	11.2	13.4	3.6	3.7	611	556	450	150
AWH015	14.5	16.9	4.0	3.7	725	681	514	150
AWH018	17.0	19.4	4.0	3.9	861	778	572	150
AWH020	19.0	21.8	4.0	3.6	972	861	681	150

Part Number	Waterside (L/Sec.)			Nom Water Pressure (kPa)	Sound Power Level dB(A) - Low/High	Net Weight (kg)	Unit Dimensions (L x W x H) (mm)
	Max	Nom	Min				

Aqualean Series (Cont'd)

AWH002	0.19	0.14	0.10	20	46/48	53	1000 x 500 x 230
AWH003	0.22	0.16	0.11	24	52/54	56	1000 x 500 x 230
AWH007	0.58	0.40	0.28	25	62/64	71	886 x 492 x 441
AWH008	0.69	0.48	0.34	30	66/69	72	886 x 492 x 441
AWH010	0.87	0.61	0.43	40	65/68	111	1180 x 623 x 491
AWH012	0.96	0.67	0.47	48	67/70	113	1180 x 623 x 491
AWH015	1.22	0.85	0.60	40	69/72	116	1180 x 623 x 491
AWH018	1.44	1.01	0.71	45	66/70	151	1600 x 703 x 531
AWH020	1.62	1.14	0.79	55	69/73	151	1600 x 703 x 531

NOTES:

1. Thermal data are in accordance with AS/NZS 3823.1.3 & AS/NZS 3823.2 Standards.
2. Please refer to Aqualean Product Brochure & Manuals for additional data & drawings.
3. Consult your local Heatcraft Account Manager, Field Manager or one of our friendly Branch Staff for further assistance with selections and pricing.



AQUALEAN SERIES - FIELD INFORMATION

Part Number	Refrigerant (R410A)		Hydraulic Connections		Duct Spigot (mm)		Power Supply (V/Hz/Φ)	Unit Clearances (mm)	Mass Dimensions	
	Circuit(s)	Charge (kg)	Size	Type	Supply H x W (mm)	Return H x W (mm)		Service	Corner Weights	Centre of Gravity

Field Information

AWH002	1	0.60	1/2"	G	142 x 300	Refer to Aqualean Product Brochure/ Manuals	230/1/50	Refer to Aqualean Product Brochure/ Manuals	Refer to Aqualean Product Brochure/ Manuals	
AWH003	1	0.65	1/2"	G	142 x 300		230/1/50			
AWH007	1	1.30	1"	G	215 x 240		230/1/50			
AWH008	1	1.30	1"	G	215 x 240		230/1/50			
AWH010	1	1.85	1"	G	295 x 271		230/1/50			
AWH012	1	1.95	1"	G	295 x 271		230/1/50 OR 400/3/50			
AWH015	1	2.40	1"	G	295 x 271		400/3/50			
AWH018	1	2.90	1"	G	295 x 339		400/3/50			
AWH020	1	2.90	1"	G	295 x 339		400/3/50			

AQUALEAN SERIES - OPTIONAL ACCESSORIES

Part Number	Electric Heater kW (L/M/H)	Electronic Expansion Valve	Low Water Temp.	Main Switch	EC Fan	Air Filter	Water Filter	Water DP Switch
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Optional Accessories

AWH002	~	X	0	~	X	X		
AWH003	~	X	0	~	X	X		
AWH007	2/5/~	X	0	0	~	X	0	0
AWH008	2/5/~	X	0	0	~	X	0	0
AWH010	3/5/~	X	0	0	~	X	0	0
AWH012	3/5/9	X	0	0	~	X	0	0
AWH015	3/5/9	X	0	0	~	X	0	0
AWH018	5/9/12	X	0	0	~	X	0	0
AWH020	5/9/12	X	0	0	~	X	0	0

Part Number	Flow Switch	DC60 Remote Control	DM60 Display	DS60 Service Display	BACnet/ModBus/Lonworks	Three Phase Protection	Compressor Acoustic Jacket
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Optional Accessories (Cont'd)

AWH002	~	0	0	0	0	~	~
AWH003	~	0	0	0	0	~	~
AWH007	0	X	0	0	0	~	0
AWH008	0	X	0	0	0	~	0
AWH010	0	X	0	0	0	~	0
AWH012	0	X	0	0	0	0	0
AWH015	0	X	0	0	0	0	0
AWH018	0	X	0	0	0	0	0
AWH020	0	X	0	0	0	0	0

NOTES:

1. X = Standard; 0 = Optional (must be specified on order - variable lead-times apply); ~ = Not Available (N/A).
2. Refer to the Aqualean Product Brochure & Manuals for comprehensive details of available options.



AIR-COOLED CHILLERS

LENNOX HIGH-EFFICIENCY AIR-COOLED REVERSE-CYCLE SCROLL CHILLERS - ECOLEAN™ SERIES (R410A)

Part Number(s) Cooling Only/ Heat-Pump	Capacities (kW)		EER Cooling	ESEER Cooling	IPLV Cooling	COP Heating	Waterside (Nominal)	
	Cooling	Heating					Flow (L/Sec.)	PD (kPa)
Ecolean™ Series								
EAC0251/EAR0251	22.1	~	2.9	3.27	3.94	~	1.06	31
	22.1	23.6	2.9	3.27	3.94	3.0		
EAC0291/EAR0291	25.9	~	2.85	3.26	4	~	1.25	27
	25.9	27.6	2.85	3.26	3.98	3.0		
EAC0351/EAR0351	32	~	2.86	3.26	3.85	~	1.53	35
	32	33.6	2.86	3.26	3.82	3.0		
EAC0431/EAR0431	37.6	~	2.81	3.18	3.75	~	1.81	32
	37.6	37.8	2.81	3.18	3.71	2.91		
EAC0472/EAR0472	44.1	~	2.9	3.91	4.8	~	2.11	30
	44.1	47.8	2.9	3.91	4.83	3.0		
EAC0552/EAR0552	50.7	~	2.79	3.87	4.77	~	2.42	34
	50.7	54.7	2.79	3.87	4.79	2.94		
EAC0672/EAR0672	63.4	~	2.83	3.86	4.6	~	3.03	45
	63.4	68	2.83	3.86	4.61	3.0		
EAC0812/EAR0812	75.4	~	2.82	3.96	4.58	~	3.61	47
	75.4	75.7	2.82	3.96	4.61	2.92		
EAC1003/EAR1003	88.2	~	2.83	4.19	4.8	~	4.22	32
	88.2	95	2.83	4.19	4.87	3.05		
EAC1103/EAR1103	102	~	2.9	3.97	4.52	~	4.89	32
	102	108	2.9	3.97	4.56	3.0		
EAC1203/EAR1203	112	~	2.79	3.83	4.34	~	5.33	36
	112	118	2.79	3.83	4.39	3.0		
EAC1303/EAR1303	126	~	2.86	3.87	4.34	~	6	43
	126	130	2.86	3.87	4.37	2.92		
EAC1403/EAR1403	139	~	2.87	3.98	4.46	~	6.64	51
	139	143	2.87	3.98	4.51	2.97		
EAC1604/EAR1604	149	~	2.76	4.02	4.5	~	7.14	45
	149	159	2.76	4.02	4.54	3.0		
EAC1804/EAR1804	174	~	2.9	3.98	4.73	~	8.31	46
	174	180	2.9	3.98	4.76	2.95		
EAC2104/EAR2104	199	~	2.8	3.76	4.42	~	9.5	60
	199	205	2.8	3.76	4.44	2.85		

LENNOX HIGH-EFFICIENCY AIR-COOLED REVERSE-CYCLE SCROLL CHILLERS - ECOLEAN™ SERIES (R410A) (CONT'D)

Part Number(s) Cooling Only/ Heat-Pump	Airside - Nominal (L/Sec.)			Sound Power Level dB(A)			STD Unit Weight (kg) (EAC/EAR)	STD Unit Dimensions (W x D x H) (mm)
	STD	LN	SLN	STD	LN	SLN		
Ecolean™ Series (Cont'd)								
EAC0251/EAR0251	2763	2291	~	76	71	~	238/243	1195 x 980 x 1635
EAC0291/EAR0291	3583	2916	~	76	70	~	246/251	1195 x 980 x 1635
EAC0351/EAR0351	3472	2847	~	77	71	~	263/271	1195 x 980 x 1635
EAC0431/EAR0431	3402	2777	~	78	72	~	292/300	1195 x 980 x 1635
EAC0472/EAR0472	5527	4583	~	79	74	~	470/480	1960 x 1195 x 1635
EAC0552/EAR0552	7166	5833	~	79	73	~	482/492	1960 x 1195 x 1635
EAC0672/EAR0672	6944	5694	~	80	74	~	518/534	1960 x 1195 x 1635
EAC0812/EAR0812	6805	5555	~	81	75	~	562/578	1960 x 1195 x 1635
EAC1003/EAR1003	9444	7500	7500	80	75	72	640/663	2250 x 1420 x 2155
EAC1103/EAR1103	10972	8611	8611	82	76	75	809/831	2250 x 1420 x 2155
EAC1203/EAR1203	10972	8611	8611	85	79	76	938/964	2250 x 1420 x 2155
EAC1303/EAR1303	12500	9722	9722	87	81	78	990/1016	2250 x 1420 x 2155
EAC1403/EAR1403	12361	9638	9638	87	81	78	1019/1045	2250 x 1420 x 2155
EAC1604/EAR1604	12777	10277	10277	85	78	76	1328/1347	2250 x 2300 x 2250
EAC1804/EAR1804	14444	10555	10555	87	81	77	1683/1703	2250 x 2300 x 2250
EAC2104/EAR2104	20000	15111	15111	90	83	81	1703/1723	2250 x 2300 x 2250

NOTES:

1. Performance data are based on nominal & Eurovent conditions as follows:

Cooling Mode: CHWT of 7°C LWT/12°C EWT @ 35°C dB Ambient

Heating Mode: HWT of 45°C LWT/40°C EWT @ 7°C dB/6°C dB Ambient

2. Thermal ratings are in accordance with Eurovent Standards EN14511 & EN14825.

3. IPLV ratings are based on simulation conditions of 6.7 °C Leaving CHWT @ 0.043L/Sec./kW

4. Acoustic ratings are in accordance with ISO3744 norm Standards.

5. Refer to Ecolean Product Brochures & Application/IOM Manuals for additional data & drawings.

6. Consult your local Heatcraft Field Engineer, Account Manager or one of our friendly Branch Staff for further assistance with chiller selections and quotations.

AIR-COOLED CHILLERS

ECOLEAN™ SERIES - FIELD INFORMATION

Part Number(s) Cooling Only/ Heat-Pump	Refrigerant (R410A)		Number of Compressor (Unit)	Hydraulic Connections		Water Flow Limits (L/Sec.)	
	Circuit(s)	Charge (kg) EAC/EAR		Type	Diameter (Inches)	Min	Max

Field Information

EAC0251/EAR0251	1	5.5/5.8	1	Threaded Female	1&1/2" G	0.88	1.38
EAC0291/EAR0291	1	6.1/6.5	1			1.03	1.61
EAC0351/EAR0351	1	7.6/8	1			1.22	1.91
EAC0431/EAR0431	1	9/9.5	1			1.47	2.04
EAC0472/EAR0472	1	11/12.5	2		2" G	1.68	2.63
EAC0552/EAR0552	1	12.2/13.5	2			1.96	3.07
EAC0672/EAR0672	1	15.5/16	2			2.39	3.73
EAC0812/EAR0812	1	19.5/19.3	2			2.89	4.01
EAC1003/EAR1003	2	23.5/23.3	3		2&1/2" G	3.44	5.38
EAC1103/EAR1103	2	26/28	3			3.86	6.03
EAC1203/EAR1203	2	27/29.5	3			4.38	6.84
EAC1303/EAR1303	2	30/32.2	3			4.86	7.59
EAC1403/EAR1403	2	33.7/35.5	3			5.24	8.19
EAC1604/EAR1604	2	36.2/40	4		3" G	5.85	9.14
EAC1804/EAR1804	2	45/52	4			6.86	10.75
EAC2104/EAR2104	2	47/54	4			7.86	12.28

Part Number(s) Cooling Only/ Heat-Pump	STD Unit ESP Capacity Rating Coefficient (Cool/Heat)			Optional Pump Static (kPa)	Optional Buffer Tank (L)	AVM Mount Positions	Service Clearances (mm)	Power Supply (V/Hz/Φ)
	@ 25Pa	@ 50Pa	@ 75Pa					

Field Information (Cont'd)

EAC0251/EAR0251	0.992/ 0.995	0.981/ 0.988	0.969/ 0.979	183	75	Refer to Ecolean Product Brochures & Application/ IOM Manuals	400/50/3
EAC0291/EAR0291				170	75		
EAC0351/EAR0351				248	75		
EAC0431/EAR0431				171	75		
EAC0472/EAR0472				234	100		
EAC0552/EAR0552				213	100		
EAC0672/EAR0672				161	100		
EAC0812/EAR0812				110	100		
EAC1003/EAR1003	0.995/ 0.996	0.985/ 0.989	0.966/ 0.977	186	240		
EAC1103/EAR1103				175	240		
EAC1203/EAR1203				161	240		
EAC1303/EAR1303				137	240		
EAC1403/EAR1403				117	240		
EAC1604/EAR1604				129	350		
EAC1804/EAR1804				153	350		
EAC2104/EAR2104				202	350		

Notes:

1. Refer to the Ecolean Product Brochure & Manuals for comprehensive details of available options.


ECOLEAN SERIES - STANDARD EQUIPMENT & OPTIONAL ACCESSORIES

Equipment	EAC (Cooling Only)	EAR (Heat-Pump)
Base unit with heavy-duty GI Steel frame & Painted GI steel sheet panels, Scroll compressor(s), TXV, R410A Refrigerant & Oil, 316SS brazed plate heat exchanger with 10mm foam insulation, copper/aluminium condenser coil with Epoxy-coated fins, two-speed axial condenser fans, independent refrigeration circuit(s), CLIMATIC DDC Controller with Display, IP54 rated electrical/control panels, Single-point power connection, Door interlocked main on/off switch, Paddle-type Water Flow Switch, Grooved-Pipe/Threaded pipe connection	Standard	

HYDRAULIC OPTIONS

Hydraulic module with integrated pump and expansion tank	HY Version	
Hydronic module with integrated pump, expansion tank and buffer tank	HN Version	
Integrated Twin-Pumps	Option	Option
Integrated e-Drive [®] VFD for variable water-flow	Option	Option
Electronic Water Flow Switch	Option	Option

ACOUSTIC OPTIONS

Low speed fans and compressor acoustic jacket	LN Version	
Low speed fans and high-performance compressor acoustic cabinet	SLN Version	
Compressor Acoustic Jacket	Option for STD Units	Option for STD Units

ELECTRICAL OPTIONS

Soft-Starter	Option	Option
Evaporator anti-freeze protection (heater)	Option	Option
Buffer tank anti-freeze protection (heater)	Option for HN Version Only	Option for HN Version Only
Water tank electrical heater		Option for HN Version Only

MECHANICAL OPTIONS

AVM's	Option	Option
Condenser coil mechanical protection guard	Option	Option
High-Static Condenser Fans (> 75 Pa)	Option	Option
Pallet Packaging	Option	Option

REFRIGERATION CIRCUIT OPTIONS

Low CHWT operation down to -10°C LWT (Glycol)	Option	Option
Low Ambient Operation down to -15°C dB ambient temperature	Option	

CONTROL OPTIONS

BACnet/ModBus/Lonworks HLI's	Option	Option
Web-base Supervision Controller - Adalink [®]	Option	Option
DS60 DDC Service Display Panel	Option	Option
BE60 DDC Expansion Module (additional I/O points)	Option	Option

OPERATING LIMITS

STANDARD FAN UNITS WITHOUT AIR DUCTS

COOLING MODE

MODELS EAC / EAR	0251SM ▶ 0431 SM		0472 SM ▶ 0812 SM		1003 SM ▶ 2104 SM	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
Outlet chilled water temperature	+5 °C	+14 °C	+5 °C	+14 °C	+5 °C	+14 °C
Inlet chilled water temperature	+10 °C	+22 °C	+9 °C	+22 °C	+8 °C	+22 °C
Air inlet temperature ⁽¹⁾	+6 °C	+ 48 °C	+6 °C	+ 48 °C	+6 °C	+ 48 °C

NOTE: With outdoor temperatures below +5°C, add glycol

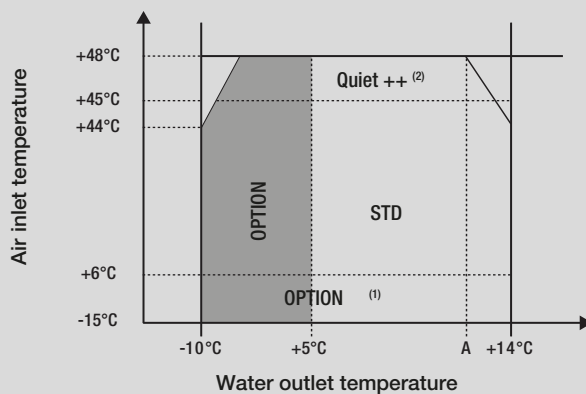
(1) : Minimum air inlet temperature is -15°C with "winter operation" option (EAC).

HEATING MODE

MODELS EAR	0251SM ▶ 2104SM	
	MINIMUM	MAXIMUM
Hot water outlet temperature (operation)	+25 °C	+50 °C
Hot water inlet temperature (start)	+10 °C	+43 °C
Difference hot water inlet / outlet	+3 °C	+8 °C
Air inlet temperature	-12 °C	+23 °C

OUTSIDE THESE VALUES, PLEASE CONSULT US

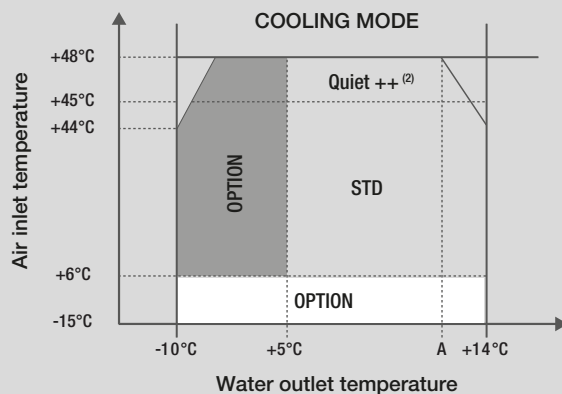
COOLING ONLY UNITS (EAC)



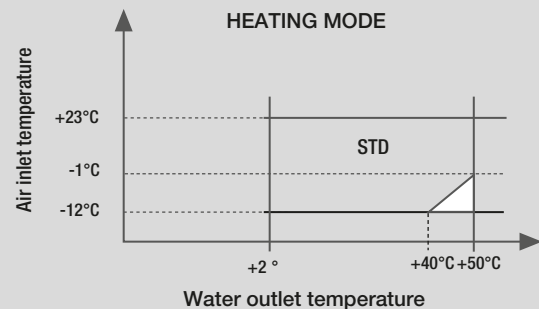
	0251 - ▶ 0351 0472 - ▶ 0812 1103-1303-1403-1804-2104	0431-812- 1003-1604	1203
A	+ 14°C	+ 11°C	+ 7°C

(1) : With -15°C winter operation option

HEAT PUMPS UNITS (EAR)



	0251 - ▶ 0351 0472 - ▶ 0812 1103-1303-1403-1804-2104	0431-812- 1003-1604	1203
A	+ 14°C	+ 11°C	+ 7°C



NOTES:

With outdoor temperatures below +5 °C, add glycol.

*Operating limits with 'PERFORMANCE' or 'QUIET' control configuration (possible with STD and LN versions).

With 'QUIET++' see capacity tables of LN and SLN versions.

SLN version not available for B and C boxes.

(2) Please refer to Lennox Ecolean Application Guide, for more information on Operating Limits.

AIR-COOLED CHILLERS

LENNOX HIGH-EFFICIENCY AIR-COOLED REVERSE-CYCLE SCROLL CHILLERS - NEOSYS™ SERIES (R410A)



Part Number(s) Cooling Only/ Heat-Pump	Capacities (kW)		EER Cooling	ESEER Cooling	IPLV Cooling	COP Heating	Waterside (Nominal)		
	Cooling	Heating					Flow (L/Sec.)	Evaporator Volume (L)	Nominal PD (kPa)

Neosys™ Series

NAC200/	208.2	~	2.89	4.24	4.46	~	9.94	13	43
NAH200	191	219	2.6	3.99	4.48	3.05	9.14	20	36.7
NAC230/	235.7	~	2.75	4.03	4.29	~	11.27	13	54.1
NAH230	217	235	2.34	3.76	4.29	2.8	10.36	20	46.4
NAC270/	272.8	~	2.56	3.99	4.26	~	13.03	16	55.9
NAH270	266	291	2.54	3.98	4.36	2.78	12.94	23.2	55.2
NAC300/	307.6	~	2.88	4.04	4.37	~	14.69	24	48.1
NAH300	295	339	2.52	3.94	4.39	3.01	14.11	23.2	44.7
NAC340/	351.3	~	2.8	4.15	4.46	~	16.78	35	34.7
NAH340	324	363	2.46	4.01	4.48	3	15.47	34.6	29.8
NAC380/	387.3	~	2.6	3.9	4.41	~	18.5	35	41.6
NAH380	361	404	2.71	4.08	4.32	3.04	17.25	34.6	36.5
NAC420/	429.6	~	2.82	4.19	4.32	~	20.53	35	50.3
NAH420	398	452	2.5	3.86	4.32	2.98	19	34.6	43.6
NAC480/	489.9	~	2.81	4.01	4.39	~	23.42	43	48.8
NAH480	442	499	2.41	4.14	4.41	2.95	21.69	42.7	42.3
NAC540	530.9	~	2.63	4	4.27	~	25.36	43	56.7
NAC600	605	~	2.76	4.15	4.28	~	28.92	52	59
NAC640	627	~	2.77	4.17	4.31	~	29.97	56	58.4
NAC680	702.6	~	2.8	4.15	4.46	~	33.58	275	57
NAC760	774.7	~	2.6	3.91	4.41	~	37.03	290	51.3
NAC840	859.1	~	2.82	4.19	4.32	~	41.06	300	56
NAC960	979.8	~	2.81	4.01	4.39	~	46.83	335	66
NAC1080	1061.9	~	2.63	4	4.27	~	50.75	345	71



AIR-COOLED CHILLERS

LENNOX HIGH-EFFICIENCY AIR-COOLED REVERSE-CYCLE SCROLL CHILLERS - NEOSYS™ SERIES (R410A) (CONT'D)

Part Number(s) Cooling Only/ Heat-Pump	Airside		Sound Levels dB(A)		STD Unit Operating Weight (kg)	STD Unit Dimensions (L x W x H) (mm)
	Nominal (L/Sec.)	Number of Fans	Power (Global)	Pressure @ 10-meters		
Neosys™ Series (Cont'd)						
NAC200/	24222	4	89.2	57	1983	3590 x 2280 x 2025
NAH200	21111	4	89.2	57	2176	3590 x 2280 x 2025
NAC230/	24222	4	89.3	57	2011	3590 x 2280 x 2025
NAH230	21111	4	89.3	57	2175	3590 x 2280 x 2025
NAC270/	24222	4	89.7	58	2278	3590 x 2280 x 2025
NAH270	31666	6	91.1	59	2906	4620 x 2280 x 2025
NAC300/	36333	6	91.2	59	2676	4620 x 2280 x 2025
NAH300	31666	6	91.2	59	3380	4620 x 2280 x 2025
NAC340/	36333	6	91.3	59	3003	4620 x 2280 x 2025
NAH340	31666	6	91.3	59	3349	4620 x 2280 x 2025
NAC380/	36333	6	91.4	59	3045	4620 x 2280 x 2025
NAH380	42222	8	92.4	61	4020	5650 x 2280 x 2025
NAC420/	48444	8	92.5	61	3580	5650 x 2280 x 2025
NAH420	42222	8	91.5	61	4066	5650 x 2280 x 2025
NAC480/	48444	8	92.6	61	3661	5650 x 2280 x 2025
NAH480	42222	8	91.6	61	4148	5650 x 2280 x 2025
NAC540	48444	8	93	61	3712	5650 x 2280 x 2025
NAC600	60555	10	94	62	4152	6680 x 2280 x 2025
NAC640	60555	10	94	62	4175	6680 x 2280 x 2025
NAC680	72666	12	94.3	62	6770	9040 x 2280 x 1964
NAC760	72666	12	94.4	62	6854	9040 x 2280 x 1964
NAC840	96888	16	95.5	64	7981	11100 x 2280 x 1964
NAC960	96888	16	95.6	64	8141	11100 x 2280 x 1964
NAC1080	96888	16	96	64	8229	11100 x 2280 x 1964

NOTES:

- Performance data are based on nominal & Eurovent conditions as follows:
Cooling Mode: CHWT of 7°C LWT/12°C EWT @ 35°CDB Ambient
Heating Mode: HWT of 45°C LWT/40°C EWT @ 7°CDB/6°CWB Ambient
- Thermal ratings are in accordance with Eurovent Standards EN14511 & EN14825.
- IPLV ratings are based on simulation conditions of 6.7°C Leaving CHWT @ 0.043L/sec./kW
- Acoustic ratings are in accordance with ISO3744 norm Standards.
- The following models are intended for Glycol applications only and would therefore operate outside of the chiller MEPS compliance framework - please consult with your local Heatcraft Account Manager &/or Field Engineer for applicable Glycol Ratings Table for models: NAC380, NAC540, NAC760, NAC1080, NAH420 & NAH480
- Refer to Neosys Product Brochures & Application/IOM Manuals for additional data & drawings.
- Consult your local Heatcraft Field Engineer, Account Manager or one of our friendly Branch Staff for further assistance with chiller selections and quotations.

NEOSYS™ SERIES - FIELD INFORMATION

Part Number(s) Cooling Only/ Heat-Pump	Refrigerant (R410A)		Number of Compressor (Unit)	Oil Charge per Circuit (L)	Hydraulic Connections	
	Circuit(s)	Charge Per Circuit (kg)			Type	Inlet/Outlet (Inches)
Field Information						
NAC200/	2	12.4/13	4	10 + 10	Victaulic	4"
NAH200	2	28	4	10 + 10		
NAC230/	2	12.3/13	4	9.5 + 9.5		
NAH230	2	28	4	9.5 + 9.5		
NAC270/	2	14.1/15	4	13.1 + 13.1		
NAH270	2	40	4	13.1 + 13.1		
NAC300/	2	18.2/19.1	4	12.6 + 13.1		5"
NAH300	2	42	4	12.6 + 12.6		
NAC340/	2	22.4/19.3	5	20.4 + 12.6		
NAH340	2	42	5	20.4 + 12.6		
NAC380/	2	22.4/19.4	5	18.9 + 12.6		
NAH380	2	50	6	20.4 + 20.4		
NAC420/	2	34	6	18.9 + 20.4		
NAH420	2	52	6	18.9 + 20.4		
NAC480/	2	34	6	18.9 + 18.9		6"
NAH480	2	52	6	18.9 + 18.9		
NAC540	2	34	6	18.9 + 18.9		
NAC600	2	42.5	6	18.9 + 18.9		
NAC640	2	42.5	6	18.9 + 18.9		8"
NAC680	4	22.4/19.3/22.4/19.3	10	2 x (20.4 + 12.6)		
NAC760	4	22.4/19.4/22.4/19.4	10	2 x (18.9 + 12.6)		
NAC840	4	34	12	2 x (18.9 + 20.4)		
NAC960	4	34	12	2 x (18.9 + 18.9)		
NAC1080	4	34	12	2 x (18.9 + 18.9)		

AIR-COOLED CHILLERS

NEOSYS™ SERIES - FIELD INFORMATION (CONT'D)

Part Number(s) Cooling Only/ Heat-Pump	Waterflow Limits (L/Sec.)		Optional Pump Available Static (kPa)				Load Distribution & Points	Service Clearances (mm)	Power Supply (V/Hz/Φ)
			Single @ Nominal		Double @ Nominal				
	Min	Max	STD	HP	STD	HP			
Field Information (Cont'd)									
NAC200/	5.97	16.08	101	191	80	171	Refer to Neosys Product Brochures & Application/ IOM Manuals	400/50/3	
NAH200	5.97	16.08	101	191	80	171			
NAC230/	6.78	16.08	119	218	92	204			
NAH230	6.78	16.08	119	218	92	204			
NAC270/	7.81	16.08	89	201	82	203			
NAH270	7.81	16.08	89	201	82	203			
NAC300/	8.81	35.11	127	207	119	206			
NAH300	8.81	35.11	127	207	119	206			
NAC340/	10.06	35.11	125	215	116	213			
NAH340	10.06	35.11	125	215	116	213			
NAC380/	11.11	35.11	144	202	136	198			
NAH380	11.11	35.11	144	202	136	198			
NAC420/	12.31	35.11	125	214	115	202			
NAH420	12.31	35.11	125	214	115	202			
NAC480/	14.06	35.11	107	192	95	171			
NAH480	14.06	35.11	107	192	95	171			
NAC540	15.22	35.11	146	230	133	213			
NAC600	17.36	35.11	133	215	115	191			
NAC640	17.97	35.11	130	212	110	186			
NAC680	20.17	70.25	Not Available						
NAC760	22.25	70.25							
NAC840	24.67	70.25							
NAC960	28.14	70.25							
NAC1080	30.47	70.25							

1. Refer to the Neosys Product Brochure & Manuals for comprehensive details of available options.


NEOSYS™ SERIES STANDARD EQUIPMENT & OPTIONAL ACCESSORIES

Equipment	NAC (Cooling Only)	*NAH (Heat pump)
Base unit with heavy-duty GI Steel frame & Painted GI steel sheet panels, Scroll compressor(s), TXV, R410A Refrigerant & Oil, 316SS brazed plate heat exchanger with 13mm thermal foam insulation, copper/aluminium condenser coil with Epoxy-coated fins, OWLET variable speed condenser fans, independent refrigeration circuit(s), Climatic DDC Controller, IP54 rated electrical/control panels, main on/off switch on front panel, Paddle-type Water Flow Switch, Grooved-Pipe/Threaded pipe connections	Standard	

HYDRAULIC OPTIONS

Hydraulic module with single or twin low pressure pump	Option (NAC 200 - NAC 640)	Option (NAH 200 - NAH 480)
Hydraulic module with single or twin high pressure pump	Option (NAC 200 - NAC 640)	Option (NAH 200 - NAH 480)
Hydraulic module, e-Drive [®] single high pressure variable speed pump	Option (NAC 200 - NAC 640)	Option (NAH 200 - NAH 480)
Hydraulic module, double e-Drive [®] high pressure variable speed pump	Option (NAC 200 - NAC 640)	Option (NAH 200 - NAH 480)

ELECTRICAL OPTIONS

Anti-freeze heater for evaporator, hydraulic module and partial heat recovery	Option	Option (NAH 200 - NAH 480)
Anti-freeze heater for total heat recovery	Option (NAC 200 - NAC 640)	-
Soft Starter	Option	Option (NAH 200 - NAH 480)
Energy meter/Power factor correction	Option	Option (NAH 200 - NAH 480)
Single main power connection	Option (NAC 680 - NAC 1080)	-

MECHANICAL OPTIONS

Partial heat recovery	Option (NAC 200 - NAC 640)	Option (NAH 200 - NAH 300)
Total heat recovery	Option (NAC 200 - NAC 640)	-
"Free cooling" module (1x V coil or 2x V coil)	Option (NAC 200 - NAC 540)	-
AVM's	Option	Option (NAH 200 - NAH 480)
Condenser coil mechanical protection guard	Option (NAC 200 - NAC 640)	Option (NAH 200 - NAH 480)
Flange Connection/Water filter	Option	Option (NAH 200 - NAH 480)
Pallet Packaging	Option	Option (NAH 200 - NAH 480)

REFRIGERATION CIRCUIT OPTIONS

Winter operation down to -20°C ambient temperature (including electronic expansion valve)	Option (NAC 200 - NAC 480) (NAC 680 - NAC 960)	-
Operation for low temperature glycol down to -10°C (including electronic pressure reducing valve)	Option	-

CONTROL OPTIONS

BACnet/ModBus/Lonworks HLI's	Option	Option (NAH 200 - NAH 480)
Web-base Supervision Controller - Adalink [®]	Option	Option (NAH 200 - NAH 480)
DS60 DDC Service Display Panel	Option	Option (NAH 200 - NAH 480)
BE60 DDC Expansion Module (additional I/O points)	Option	Option (NAH 200 - NAH 480)

NOTES:

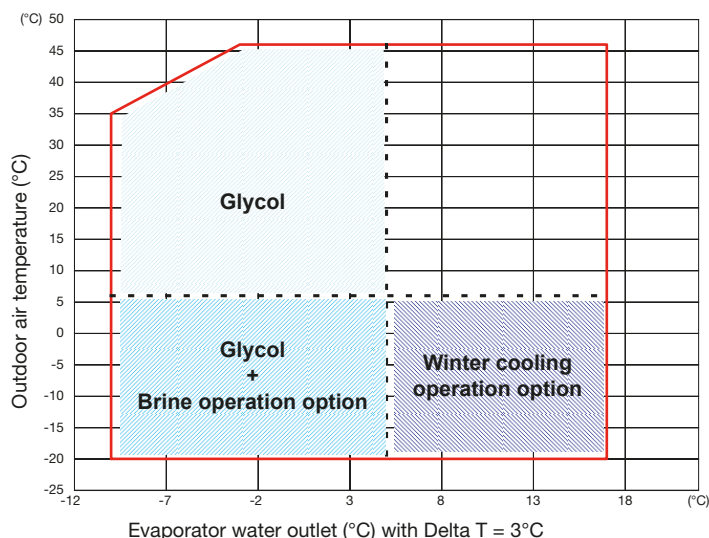
1. Refer to the Neosys Product Brochure & Manuals for comprehensive details of available options.

OPERATING LIMITS

		NAC							
NAC		200 > 340	380	420 - 480	540	600 > 680	760	840 - 960	1080
Min. outlet water temperature	°C	5							
Min. outlet water temperature: Brine operation option	°C	- 10							
Max. inlet water temperature	°C	20							
Min. difference water inlet/outlet	°C	3							
Max. difference water inlet/outlet	°C	8							
Min. outside air temperature	°C	6							
Min. outside air temperature: Winter operation option	°C	- 20							
Maximum outside air temperature: Full capacity operation	°C	46	43	46	43	46	43	46	43

NAC Operating envelope: Cooling mode

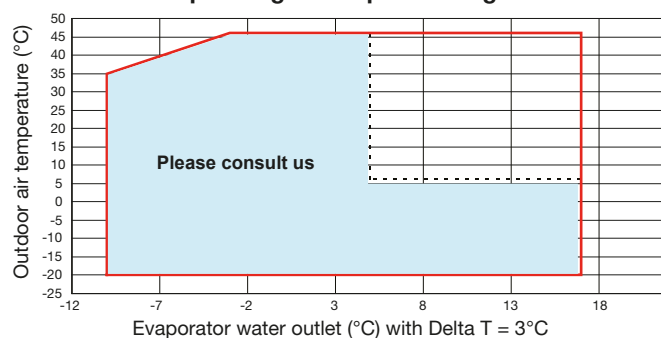
Maximum outdoor
air temperature =
43°C on NAC 380 /
NAC 540 and NAC 1080



NAH

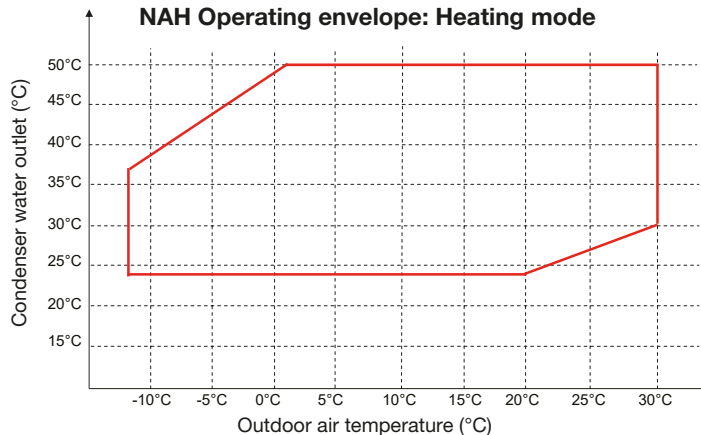
Cooling mode	NAH	200 > 480
Min. outlet water temperature	°C	5
Max. inlet water temperature	°C	20
Min. difference water inlet/outlet	°C	3
Max. difference water inlet/outlet	°C	8
Min. outside air temperature	°C	6
Maximum outside air temperature: Full capacity operation	°C	46

NAH Operating envelope: Cooling mode



Heating mode	NAH	200 > 480
Min. condenser outlet water temperature	°C	24
Max. condenser outlet water temperature	°C	50
Min. difference water inlet/outlet	°C	3
Max. difference water inlet/outlet	°C	8
Min. outside air temperature (Water outlet temp. : 37°C)	°C	- 12
Max. outside air temperature	°C	30

NAH Operating envelope: Heating mode



AIR-COOLED CHILLERS

LENNOX HIGH-EFFICIENCY AIR-COOLED REVERSE-CYCLE HEAT-RECOVERY SCROLL 4-PIPE CHILLERS - AQUA4 SERIES (R410A)



Part Number(s) Cooling & Heating	Multi-Mode Capacities (kW)			EER Cooling	ESEER Cooling	COP Heating	TER Cooling & Heating
	Cooling Only	Heating Only	Cooling & Heating				

Aqua⁴ Series

AAH04	49.7	51.9	48.9 & 63.3	3.13	4.13	3.2	7.43
AAH05	54.3	57.2	53.9 & 70	3.02	4.08	3.21	7.33
AAH06	65	67.9	63.6 & 81.9	3.19	4.24	3.26	7.54
AAH07	71.3	74.4	70.3 & 90.9	3.1	4.19	3.21	7.43
AAH08	81.4	84.6	82.3 & 105.5	3.06	4.09	3.24	7.7
AAH09	98.4	102.9	97.8 & 126.5	3.05	4.47	3.23	7.43
AAH10	107.5	112.8	107.9 & 140.1	2.95	4.55	3.2	7.32
AAH12	129.5	135.7	125.8 & 162.7	2.98	3.98	3.04	7.44
AAH14	142	150.3	139 & 180.4	2.93	4.07	3.03	7.34
AAH16	161.4	169.8	160.3 & 207	2.95	4.21	3.06	7.47
AAH19	180.2	195.6	184.2 & 239.1	2.72	4.32	3.07	7.32
AAH21	216.3	229.4	217.9 & 281.8	2.9	4.44	3.14	7.44
AAH24	236	254.6	242.9 & 312.8	2.83	4.24	3.24	7.55
AAH27	258.6	280.8	263.4 & 340.1	2.82	4.19	3.21	7.48
AAH29	295.8	316.6	302.2 & 388.3	2.9	4.33	3.25	7.62
AAH32	313.8	342.4	326.1 & 422.3	2.73	4.29	3.16	7.4

Part Number(s) Cooling & Heating	Waterflow - Cooling & Heating Mode (L/Sec.)		Airside		Sound Levels dB(A)		STD Unit Operating Weight (kg)	STD Unit Dimensions L x W x H (mm)
	Cooling	Heating	Nominal (L/Sec.)	Number of Fans	Power (Global)	Pressure @ 10-meters		

Aqua⁴ Series (Cont'd)

AAH04	2.33	3.05	5939	4	79	51	680	2510 x 1183 x 1735
AAH05	2.57	3.38	5939	4	79	51	690	2510 x 1183 x 1735
AAH06	3.03	3.95	8587	6	80	52	800	2862 x 1183 x 1735
AAH07	3.35	4.39	8587	6	80	52	810	2862 x 1183 x 1735
AAH08	3.93	5.09	8587	6	80	52	850	2862 x 1183 x 1735
AAH09	4.67	6.11	11483	8	81	53	1190	3610 x 1183 x 1679
AAH10	5.15	6.76	11483	8	81	53	1210	3610 x 1183 x 1679
AAH12	6	7.85	20194	6	81	53	1530	3610 x 1654 x 1846
AAH14	6.63	8.71	20194	6	82	54	1550	3610 x 1654 x 1846
AAH16	7.65	9.99	18797	6	83	55	1690	3610 x 1654 x 1846
AAH19	8.79	11.54	18797	6	86	58	1710	3610 x 1654 x 1846
AAH21	10.4	13.6	20966	6	86	58	1890	3610 x 1654 x 2330
AAH24	11.59	15.1	20966	6	86	58	1910	3610 x 1654 x 2330
AAH27	12.56	16.42	28753	8	87	59	2260	4276 x 1654 x 2330
AAH29	14.42	18.75	27195	8	87	59	2290	4276 x 1654 x 2330
AAH32	15.56	20.39	27195	8	87	59	2320	4276 x 1654 x 2330

NOTES:

1. Performance data are based on nominal & Eurovent conditions as follows:

Cooling Mode: CHWT of 7 °C LWT/12°C EWT @ 35 °C DB Ambient

Heating Mode: HWT of 45 °C LWT/40 °C EWT @ 7 °C DB/60 °C WB Ambient

2. Thermal ratings are in accordance with Eurovent Standards EN14511 & EN14825.

3. Refer to Aqua4 Product Brochures & Application/IOM Manuals for additional data & drawings.

4. Consult your local Heatcraft Field Engineer, Account Manager or one of our friendly Branch Staff for further assistance with chiller selections and quotations.



AQUA⁴ SERIES - FIELD INFORMATION

Part Number(s) Cooling Only/ Heat-Pump	Refrigerant (R410A)		Number of Compressor (Unit)	Hydraulic Connections		Waterflow Limits (L/Sec.) - Cold/Hot Circuits	
	Circuit(s) (Unit)	Charge Per Circuit (kg)		Type	Inlet/Outlet (Inches)	Min	Max

Field Information

AAH04	2	23	2	Victaulic	2"	1.49/2.2 2	3.80/5.02
AAH05	2	25				1.65/2.46	4.19/5.55
AAH06	2	30				1.94/2.87	4.94/6.5
AAH07	2	33				2.15/3.19	5.48/7.21
AAH08	2	35				2.52/3.7	6.40/8.37
AAH09	2	36	4		2.5"	2.99/4.44	7.62/10.05
AAH10	2	37				3.30/4.92	8.4/11.12
AAH12	2	60			3"	3.84/5.70	9.78/12.9
AAH14	2	62				4.26/6.33	10.82/14.32
AAH16	2	66				4.91/7.24	12.45/16.41
AAH19	2	69			4"	5.64/8.39	14.32/18.98
AAH21	2	76				6.69/9.90	16.98/22.4
AAH24	2	82				7.42/10.97	18.91/24.84
AAH27	2	86				8.06/11.04	20.50/26.98
AAH29	2	97				9.24/13.62	23.53/30.83
AAH32	2	105				9.98/14.81	25.34/33.49

Part Number(s) Cooling Only/ Heat-Pump	Optional Pump Available HP Static		Load Distribution & Points	Service Clearances (mm)	Power Supply (V/Hz/Φ)	Oil Charge per Circuit (L)
	Single @ Cold Circuit (Duty/Standby) (kPa)	Single @ Hot Circuit (Duty/Standby) (kPa)				

Field Information (Cont'd)

AAH04	191	162	Refer to Aqua4 Product Brochures & Application/IOM Manuals	400/50/3 (+N)		6.6
AAH05	183	147				6.6
AAH06	200	171				6.6
AAH07	191	156				6.6
AAH08	193	162				13.2
AAH09	183	145				13.2
AAH10	172	126				13.2
AAH12	186	137				13.2
AAH14	170	110				13.2
AAH16	163	100				26.8
AAH19	255	167				26.8
AAH21	218	106				26.8
AAH24	283	211				26.8
AAH27	292	212				26.8
AAH29	268	171				26.8
AAH32	236	132				26.8

1. Refer to the Aqua⁴ Product Brochure & Manuals for comprehensive details of available options.

AIR-COOLED CHILLERS**AQUA⁴ SERIES - STANDARD EQUIPMENT & OPTIONAL ACCESSORIES**

Equipment	AAH (4 pipes/2 pipes)
Scroll compressors, brazed plate water heat exchanger, copper tube & aluminium fins with hydrophilic coating, axial fans, R410A refrigerant, dual refrigeration circuits, main disconnect switch with lock, thermostatic expansion valves, paddle water flow switch, grooved/threaded pipe connections, 2 year guarantee on main parts	Standard

HYDRAULIC OPTIONS

Hydraulic module with single or twin low pressure pump	Option
Hydraulic module with single or twin high pressure pump	Option
Hydraulic module with twin high or low pressure pump (parallel operating)	Option
Water tank	Option

ELECTRICAL OPTIONS

Anti-freeze heater for evaporator	Option
Anti-freeze heater for hydraulic module	Option
Anti-freeze heater for hydraulic module and water tank	Option
Supply 400V/3 ph/50Hz with 230V transformer/circuit breakers/transformers & circuit breakers	Option
Soft starter/Power factor correction	Option
EC Condensing fan	Option

MECHANICAL OPTIONS

AVM's	Option
Pressure gauges LP/HP	Option
Condenser coil mechanical protection guard	Option
Flange Connection/Water filter	Option
Filter dryer maintenance kit	Option

CONTROL OPTIONS

BACnet/ModBus/Lonworks HLI's	Option
Remote display	Option

NOTES:

1. Refer to the Aqua4 Product Brochure & Manuals for comprehensive details of available options.

OPERATING LIMITS

This paragraph lists the limits of the AQUA⁴ M and AQUA⁴ P heat pumps, in relation to utility circuit water outlet temperature and air temperature.

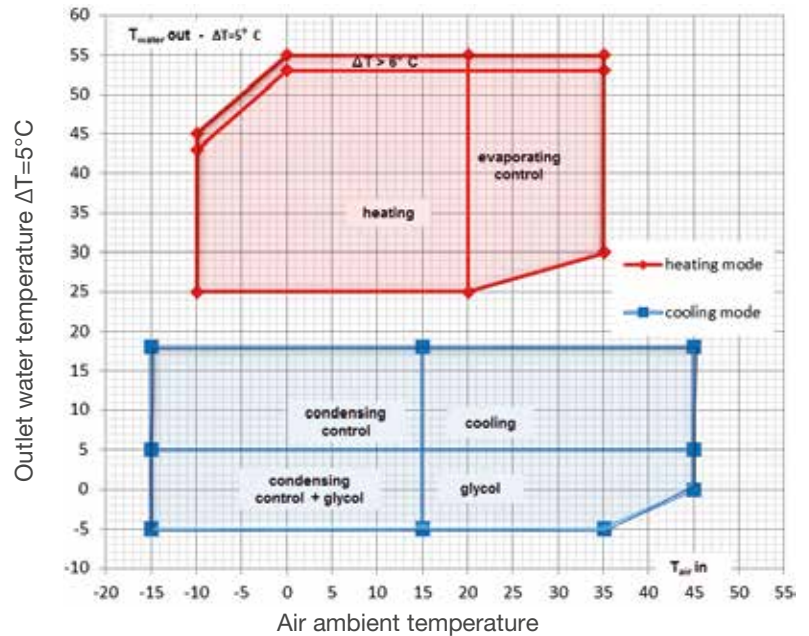
The nominal flow rate refers to a temperature differential of 5 °C between inlet and outlet water, in relation to the cooling capacity provided at nominal water temperatures. The maximum allowable flow rate is associated with a temperature differential of 3 °C. Higher flow rates cause unacceptable drops in pressure. The minimum allowable flow rate is achieved with a temperature differential of 8 °C. Lower flow rates may result in low evaporation temperatures, which could trigger the safety devices and stop the unit. They may also cause an incorrect distribution or heat transfer in a non-turbulent or not fully turbulent flow. For temperatures differentials outside these limits contact the company's technical department for advice. In cooling mode they are also in countercurrent on the heat exchanger (utility circuit).

The AQUA °C M unit can also generate heat on the utility circuit. In this case, select the supplied 'water circuit cycle inversion valve' accessory to achieve the countercurrent.



The use of AQUA⁴ series is possible within the operating limits shown in this document under penalty of discharge of the guarantee provided for in the terms and conditions of sale

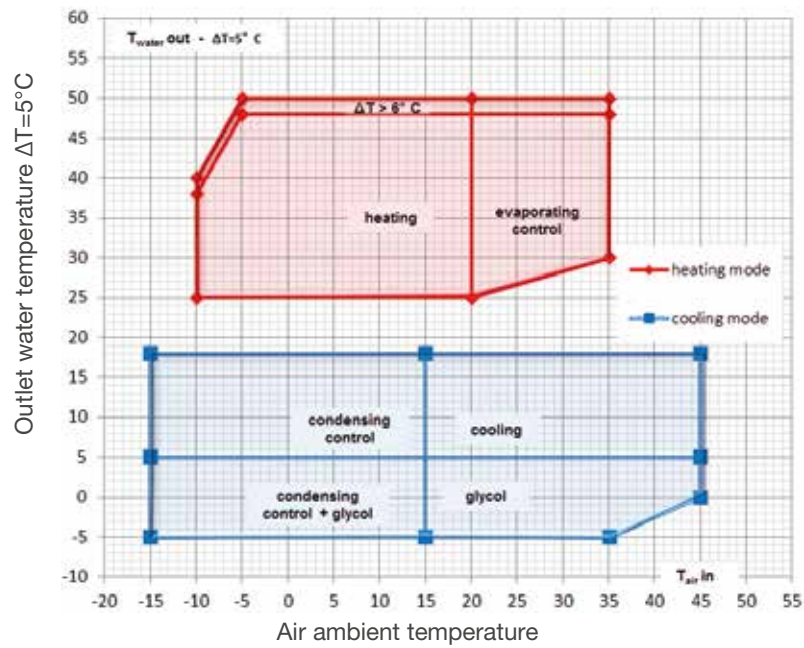
Operating range of the AQUA⁴ units in cooling mode and with heat pump in COUNTERCURRENT mode:



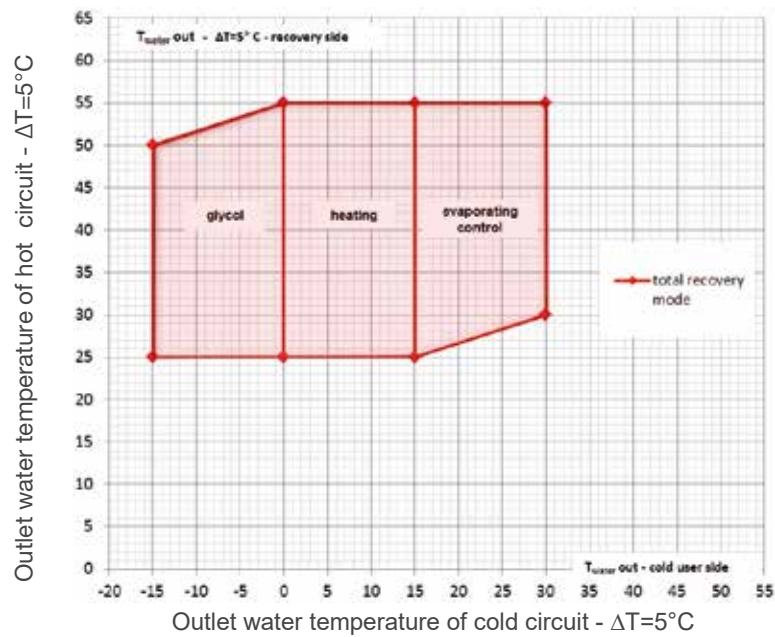
OPERATING LIMITS



Operating range of the AQUA⁴ units in cooling mode and with heat pump in CONCURRENT mode:



Operating range of the AQUA⁴ units in FULL RECOVERY mode:



NOTES:
1. Refer to the Aqua⁴ Product Brochure & Manuals for comprehensive details of available options.

Refrigerants & Lubricants



Refrigerants

THE GAS2GO® TOTAL GAS MANAGEMENT SYSTEM OFFERS:

- A wide range of refrigerants to cover all of your needs
- Quality assured products via AHRI 700 International refrigerant standards
- Fully leak tested, fully automated filling process
- Cylinders compliant to AS2030.1–1999, and 5.2MPa minimum pressure rating
- Clearly labelled cylinders that allow quick and easy recognition and processing
- Serial numbers on each cylinder for a total tracking solution
- Non-return check valves fitted to all refrigerant cylinders
- Shrink wrapped cylinder valves on all cylinders
- Guaranteed fill-weights
- Dedicated Reclaim and Pump Down cylinders to meet your refrigerant requirements
- ARClick compliance report for refrigerant purchasing and reclaim return reporting
- Comprehensive activity statements to manage your purchases
- Delivery to your front door or site, or the option to pick up from any Heatcraft branch



Gas2Go®

HEATCRAFT GAS2GO® CLUB

If you want flexibility in your cylinder usage without daily cylinder rental charges, then join the Heatcraft Gas2Go® Club.

As part of the Gas2Go® Club you can nominate the maximum number of cylinders that you would like to have available at any one time to meet your refrigerant usage requirements. For an annual membership fee, you can return empty cylinders and exchange them for full cylinders of any size (large, medium, small, pump down, reclaim) and only pay for the refrigerant. Transact as many times as you require without worrying about cylinder rental charges.

As a Heatcraft Gas2Go® Club member you also have access to Heatcraft Gas2Go® Gas Credit. Gas credit refers to the amount of money you are refunded for un-used refrigerant gas returned to Heatcraft as part of the Gas2Go® cylinder exchange program (subject to quantity, conditions and handling charges).

smart@ccess

The Heatcraft Online Customer Portal, smart@ccess is linked in with the Heatcraft Gas2Go® Gas Management System to help you run your business and support your ARClick reporting. All activity and reporting relating to your gas purchases (including the account details, cylinder number, date of issue and return, and the individual who picked it up) are updated daily and can be conveniently and reliably viewed.

- Track your Gas2Go® cylinders
- Print Gas2Go® statements
- Report lost cylinders

GAS2GO® RECLAIM ENSURES SAFE DISPOSAL OF UNUSED REFRIGERANT – EVERYTIME

To comply with legislation regarding gas disposal, it's important to make sure that refrigerant is disposed of in a legal and environmentally friendly manner.

- Cylinders clearly identified for Reclaim to avoid mixing with other cylinders
- Cylinders ex stock from any Heatcraft branch outlet, with the option of delivery to site
- Available in small (HSRR32F), medium (HMRR) and large (HLRR)
- All cylinders comply with AS2030.1-1999
- No monthly rental on all reclaim cylinders for all Gas2Go® Club members*
- Return of reclaimed refrigerant attracts a payment as directed by Refrigerants Reclaim Australia (RRA), a credit is raised via Recipient Created Tax Invoice (RCTI) and paid into your account monthly

GAS2GO® PUMP DOWN GIVES YOU ACCESS TO CYLINDERS WHEN YOU NEED TO PUMP A SYSTEM DOWN

Gas2Go® Pump Down cylinders are guaranteed to be 100% clean and reliable and are available in 22 kg (HMPD) and 65 kg (HLPD) sizes.

- Cylinders clearly identified for Pump Down to avoid mixing with other cylinders
- Cylinders ex stock from any Heatcraft branch outlet, with the option of delivery to site
- All cylinders comply with AS2030.1-1999
- No monthly rental on all Pump Down cylinders for all Gas2Go® Club members*
- A cylinder cleaning charge applies. This ensures 100% clean cylinders are available for your customer's refrigerant

** Reclaim and Pump Down cylinders with the customer are accounted for as part of the total available cylinder pool which is subject to the annual membership fee*

	Part Number	Description
HCFC	R22	
	H220012	R22, 12 kg Cylinder, UN1018
	H220022	R22, 22 kg Cylinder, UN1018
	H220065	R22, 65 kg Cylinder, UN1018
	H220450	R22, 450 kg Cylinder, UN1018
	R409A	
	H409012	R409A, 12 kg cylinder, UN3163
	R123	
	1230100	R123, Packed in 100 kg Drum
	1230200	R123, Packed in 200 kg Drum

HFC	R438A	
	H438012	R438A, 12 kg Cylinder, UN1078
	H438060	R438A, 60 kg Cylinder, UN1078
	R422D	
	H422D12	R422D, 12 kg Cylinder, UN1078
	H422D60	R422D, 60 kg Cylinder, UN1078
	R1234	
	H1234 ZE050	R1234e, 50 kg Cylinder, UN3163
	R404A	
	H404010	R404A, 10 kg Cylinder, UN3337
	H404018	R404A, 18 kg Cylinder, UN3337
	H404050	R404A, 50 kg Cylinder, UN3337
	H404400	R404A, 400 kg Cylinder, UN3337
	R507	
	H507010	R507, 10 kg Cylinder, UN3163
	H507055	R507, 55 kg Cylinder, UN3163
	H507400	R507, 400 kg Cylinder, UN3163
	R448A	
	H448010	R448A, 10 kg Cylinder, UN3161
	H448055	R448A, 55 kg Cylinder, UN3163
	R410A	
	H410010	R410A, 10 kg Cylinder, UN3163
	H410018	R410A, 18 kg Cylinder, UN3163
	H410060	R410A, 60 kg Cylinder, UN3163
	R32	
	H320009	R32, 9 kg Cylinder, UN3252

	Part Number	Description
HFC	R134A	
	H134012	R134a, 12 kg Cylinder, UN3159
	H134022	R134a, 22 kg Cylinder, UN3159
	H134065	R134a, 65 kg Cylinder, UN3159
	H134450	R134a, 450 kg Cylinder, UN3159
	R450A	
	H450060	R450A, 60 kg Cylinder, UN3163
	R407C	
	H407C11	R407C, 11 kg Cylinder, UN3340
	H407C18	R407C, 18 kg Cylinder, UN3340
	H407C60	R407C, 60 kg Cylinder, UN3340
	R407F	
	H407F10	R407F, 10 kg Cylinder, UN3163
	H407F50	R407F, 50 kg Cylinder, UN3163
	R23	
	2300009	R23, 9 kg Cylinder, UN1984
	H34	
	H340012	H34, 12 kg Cylinder, UN1956
AMMONIA	R717 (AMMONIA)	
	0717034	R717, Ammonia, 34 kg Cylinder
	0717056	R717, Ammonia, 56 kg Cylinder
	0717230	R717, Ammonia, 230 kg Cylinder
INDUSTRIAL GAS	R744 (CO2)	
	R744014	CO2 Refrigerant 13.5 kg NT
	R744030	CO2 Refrigerant 30 kg NT
	R744384	CO2 Refrigerant Manifold pack (12 x 32) 384 kg
	NITROGEN	
	H728015	Nitrogen - High Purity 1.5 M³ "D"
	H728035	Nitrogen - High Purity 3.5 M³ "E"
	H728091	Nitrogen - High Purity 9.1 MT³ "G"
	H728153	Nitrogen 99.9% Purity 12 PK "G"
GLYCOL	GLYCOL	
	MPC0020	Glycol Monopropylene CONC 20 kg
	G150216	Glycol Monopropylene -15 °C 216 kg

Lubricants

Part Number	Description
SUNISO	
3GS-4L	Oil Suniso 3GS 4 L
3GS-20L	Oil Suniso 3GS 20 L
3GS-205L	Oil Suniso 3GS 205 L
4GS-4L	Oil Suniso 4GS 4 L
4GS-20L	Oil Suniso 4GS 20 L
5GS-4L	Oil Suniso 5GS 4 L
4SA-20L	Oil Suniso 4SA 20 L



SOLEST	
S32-1	Oil Solest 32 1 L Drum
S32-5	Oil Solest 32 5 L Drum
S32-20	Oil Solest 32 20 L Drum
S46-5	Oil Solest 46 5 L Drum
S46-20	Oil Solest 46 20 L Drum
S68-1	Oil Solest 68 1 L
S68-5	Oil Solest 68 5 L Drum
S68-20	Oil Solest 68 20 L Drum

MANEUROP COMPRESSOR OIL	
120Z0571	Maneurop POE Oil 2.5 L 160SZ (SZ)
120Z0573	Maneurop POE Oil 2.5 L 160PZ (MTZ)

BITZER COMPRESSOR OIL	
AB5-4	Interlink AB5 Refrigeration Oil 4 L
I06-005	Bitzer Oil B5 20 L

CENTRIFUGAL COMPRESSOR OIL	
CLAVIS68	Oil Shell Clavis 68 18 L

VACUUM PUMP OIL	
VPOP	Premium Vacuum Pump Oil 470 ml
VPOQ	Premium Vacuum Pump Oil 946 ml
VPOG	Premium Vacuum Pump Oil 3.78 L

EMKARATE	
1529212	Emkarate Oil RL32H 1 L
1529245	Emkarate Oil RL32H 5 L
1529220	Emkarate Oil RL32H 20 L
RL68HB-0.9LTR	Scroll C02 Oil 0.9 L Pack
RL68HB -1 LTR	Scroll C02 Oil 1 L Pack
RL68HB-3.8LTR	Scroll C02 Oil 3.8 L Pack
RL170H-5LTR	Emkarate Oil 5 L
RL170H-20LTR	Emkarate Oil 20 L
2979212	Emkarate Oil RL32-3MAF - 1L
2979245	Emkarate Oil RL32-3MAF - 5L

Part Number	Description
ALKYL BENZENE	
CP-4700-32	Alkyl Benzene Oil 4 L 32
CP4700-46	Alkyl Benzene Oil 4 L 46

POLYALKYLENE GLYCOL (PAG)	
RFL46-EP-1LT	Breox Oil C02 RFL 46 EP L/T 1 L
RFL46-EP-5LT	Breox Oil C02 RFL 46 EP L/T 5 L
RFL68-EP-5LT	Breox Oil C02 RFL 68 EP L/T 5 L

OTHER	
981	Super Change R22 Retrofit
OilCHECKRA	Refrigerant Oil Test Kit
G1M	Bottlechock Bracket 2 x Single
G2M	Bottlechock Bracket 2 x Double
G1L	Bottlechock Bracket 2 x Single
G2L	Bottlechock Bracket 2 x Double
SJ-16692	Gas Bottle Safety Plug - Acetylene
SJ-16693	Gas Bottle Safety Plug - Oxygen

*Refer to consumables for solder, MappGas, oxy etc.

SUNISO APPLICATION GUIDE	
Suniso Oil Grade	Application

Always use viscosity grade recommended by manufacturer. If no recommendation is available, selection can usually be based on the following:

3GS	All new Compressors during the run-in period of less than 3.5 kW (1Ton) capacity. All low temperature applications with suction temperature of approx. -40 °C and below. For use with fluorinated refrigerants, ammonia and all other refrigerants. Also for use with screw compressors.
4GS	All fully run-in Compressors (other than ammonia) of 3.5 kW (1 Ton) capacity and over, and employed on normal applications with suction temperature of -40 °C and higher.
5GS	For Car Air Conditioning Compressors or when a heavy duty, higher viscosity oil is required for special purposes.
4SA	All Ammonia Compressors (run-in) of 3.5 kW (1 Ton) capacity and over and employed on normal applications with suction temperature of -40 °C and higher and including some Screw Compressors.

SOLEST APPLICATION GUIDE		
Oil Type	Refrigerants	Application
Solest 31-HE	HFC	Retrofitting and new installations with R134a Medium Temperature
Solest 32	HFC	Copeland approved oil for new systems or retrofitting using R404A, R507 & R134a refrigerants.
Solest 46	HFC	Retrofitting and new installations with R404A, R507 & R134a refrigerants. Medium and Low Temperature
Solest 68	HFC	Retrofitting and new installations with R134a High Temperature
Maneurop 160P	HFC	Approved for use in all Maneurop MT compressors using R22
Emkarate	HFC	New installations using all of the current new generation refrigerants, including R134a, R404A & R507.

OEM APPROVALS FOR EMKARATE RL PRODUCT LINE

Manufacturer	Compressor Type	Approved Product
BITZER	Reciprocating	RL32H & 68H
	Screw	RL170H
BLISSFIELD	Reciprocating	RL68H
BOCK	Reciprocating	RL22H, 32H, 46H, 68H & 100H
CARRIER	Centrifugal chillers (17DA & 17EA).	RL32H
	Externally geared centrifugal chillers (17EX, 17FA & 17MPS)	RL68H
CARRIER CARLYLE	Reciprocating	RL68H
CARRIER TRANSICOLD	Reciprocating (Marine Containers)	RL22H
DAIKIN MCQUAY	Centrifugal	RL32H
	Screw	RL68H, 68HB, 100H & 220H
DALIAN BINGSHAN	Reciprocating	RL32H
	Screw	RL170H
DANFOSS COMMERCIAL (MANEUROP)	Scroll (SZ, MFZ & LFZ) Reciprocating (LTZ & NTZ)	RL32H
	Reciprocating (LTZ & NTZ)	
DORIN	Reciprocating	RL22H, 32H, 46H & 68H
DUNHAM BUSH	Reciprocating	RL32H & 68H
	Screw	RL68H
EMERSON COPELAND	Reciprocating & Scroll	RL32-3MAF, 32CF & 22CF
	Scroll R744 ZO	RL68HB
FRASCOLD	Reciprocating	RL32H & 68H
	Screw	RL170H
FRIGOPOL	Reciprocating (60-DLB-13 to 80-DLB-30)	RL32H
GRASSO (GEA)	Reciprocating	RL68H & 100H
HARTFORD	Reciprocating	RL32H & 68H
HANBELL	Screw compressors (RA, RB & V Series)	RL170H & 220H
HISPACOLD	Reciprocating	RL68H
J & E HALL	Centrifugal	RL32H
	Screw	RL68H, 68HB, 100H & 220H
JIANGSU XUEMEI	Reciprocating	RL22H & 32H
LOCKHEED MARTIN Oil	Can be used to service Lockheed owned compressors	RL68H
	NSN6850P4314-H	RL32H
	NSN9150-99-870-1432	RL32HB
	NSN9150-01-443-9390 &	RL46H
	NSN9150-01-443-9396	RL68H
	NSN9150-01-435-1899,	
	NSN9150-01-410-8972 &	
NATO MILITARY NSN	NSN9150-01-387-4469	RL68H
PRESTCOLD	Reciprocating	RL32-3MAF
REFCOMP	Reciprocating (SRC-F, SRC-M, SRC-L & SRC-P)	RL32H & 68H
ROLTEC	Screw	RL46H & 170H
ROYCE	Reciprocating	RL32H
SABROE	Reciprocating	RL32H, 46H & 68H
	Screw	RL68H, 100H, 170H & 220H
TECUMSEH	Reciprocating	RL22H
THERMOKING	Reciprocating	RL32H
TRANE	Screw	RL68H
	Scroll	RL32HB
VATANU-COOL	Orbital Vane Rotary (OVR)	RL220H
YANTAI MOON	Reciprocating	RL32H

Industrial and Commercial Compressor Manufacturers - HFC/HCFC Systems - unless otherwise stated

The approvals list should be used as a guide only. CPI Engineering Services recommends that users confirm with the original equipment manufacturer (OEM) which EMKARATE RL grade is qualified for use with a particular combination of compressor model, refrigerant and application. OEM's advice should always be taken.

Only use approved lubricants.

PRESSURE TEMPERATURE CHART

PRESSURE kPa GAUGE (# Unless otherwise indicated, all pressures shown are saturated vapour pressures)

°C	H34	R134a	XP10 / R513A	N13 R450A		R1324yf	R1324ze	R22	M099 R438A		R422D		R407C	
				Dew	Bub-ble				Dew	Bub-ble	Dew	Bub-ble	Dew	Bub-ble
-44				-65	-66	-50	-72	-13	-33	-8	-4	-25	-32	-2
-42				-61	-62	-45	-68	-5	-26	1	6	-17	-25	8
-40	-52	-47	-41	-56	-57	-39	-65	5	-17	12	16	-8	-16	19
-38	-46	-41	-34	-51	-53	-33	-61	15	-9	22	27	2	-7	30
-36	-41	-35	-27	-46	-47	-26	-56	26	1	34	39	12	3	43
-34	-34	-28	-20	-40	-42	-19	-51	38	11	47	52	23	14	56
-32	-27	-21	-12	-34	-36	-11	-46	50	22	60	66	35	25	71
-30	-20	-14	-3	-27	-29	-2	-40	63	34	75	81	48	37	86
-28	-12	-5	6	-19	-22	7	-34	78	47	90	96	62	51	102
-26	-3	3	16	-11	-14	17	-27	93	60	106	113	77	65	119
-24	6	14	26	-3	-6	27	-20	109	75	124	130	93	80	138
-22	16	26	37	6	4	38	-13	126	91	142	149	110	96	158
-20	27	39	50	16	13	50	-4	145	107	162	169	128	113	179
-18	38	49	62	27	23	62	4	164	125	183	190	147	132	201
-16	50	59	76	38	34	76	14	185	144	205	213	168	152	224
-14	63	72	91	50	46	90	24	207	165	228	236	189	172	249
-12	77	86	106	63	59	105	35	230	186	253	261	212	195	276
-10	92	101	123	76	72	121	46	254	209	279	288	237	218	303
-8	108	118	140	91	86	137	58	280	233	307	315	262	244	333
-6	124	135	159	106	101	155	71	307	258	337	345	290	270	364
-4	142	153	178	123	117	174	85	336	285	366	376	318	298	396
-2	161	172	199	140	134	194	100	366	314	398	408	349	328	430
0	181	192	221	158	152	215	115	397	344	432	442	381	359	467
2	202	211	244	178	171	237	132	431	376	468	478	414	392	504
4	224	229	268	198	191	260	149	466	409	505	515	450	427	544
6	247	253	293	220	213	284	167	502	445	544	554	487	464	586
8	272	283	320	242	235	310	187	540	482	585	595	526	503	629
10	298	313	348	266	258	336	207	581	521	628	638	567	544	675
12	325	342	378	291	283	364	229	622	562	673	683	610	586	723
14	354	372	409	318	309	394	251	666	604	719	730	655	631	773
16	384	403	442	346	337	425	275	712	649	768	779	702	678	825
18	415	436	476	375	365	457	300	760	696	819	830	751	727	879
20	449	469	512	406	396	490	326	810	746	873	883	802	779	936
22	484	507	549	438	427	526	354	862	797	928	939	856	833	995
24	520	544	588	471	460	562	382	916	851	986	997	912	889	1057
26	558	584	629	507	495	601	413	972	907	1046	1057	971	949	1121
28	598	626	671	543	531	641	444	1031	966	1109	1120	1032	1010	1188
30	639	668	716	582	569	682	477	1092	1027	1174	1185	1095	1075	1258
32	683	715	762	622	609	726	512	1155	1091	1242	1252	1161	1142	1330
34	729	761	810	664	650	771	548	1221	1158	1312	1323	1230	1212	1405
36	776	811	861	708	693	818	585	1289	1227	1385	1396	1302	1285	1483
38	825	863	913	753	738	866	624	1360	1299	1461	1471	1376	1361	1564
40	877	915	967	800	785	917	665	1433	1374	1539	1550	1454	1440	1648
42	930	972	1024	850	834	970	708	1509	1452	1620	1631	1534	1522	1735
44	985	1029	1083	901	885	1024	752	1588	1534	1705	1716	1618	1608	1825
46	1043	1090	1144	955	938	1081	798	1670	1619	1792	1803	1705	1697	1918
48	1104	1153	1207	1010	993	1140	846	1754	1706	1883	1894	1795	1790	2015
50	1166	1217	1273	1068	1050	1201	896	1842	1798	1976	1988	1888	1886	2115
52	1233	1287	1341	1128	1109	1264	948	1932	1892	2073	2085	1985	1987	2218
54	1300	1356	1412	1190	1171	1330	1002	2026	1991	2174	2185	2086	2091	2325
56	1370	1429	1485	1254	1235	1398	1057	2123	2093	2277	2289	2190	2199	2436
58	1443	1505	1561	1321	1301	1468	1115	2223	2199	2384	2397	2298	2311	2550
60	1516	1581	1640	1390	1370	1541	1175	2326	2309	2495	2508	2411	2427	2668
62		1662	1721	1462	1441	1616	1238	2422	2424	2609	2623	2527	2548	2790
64		1746	1805	1537	1515	1694	1302	2532	2543	2727	2742	2648	2674	2916

CONVERSION FACTORS

Heat Flow

Btu/hr x 0.252 = kcal/hr
 Btu/hr x 0.293 = watts
 Watts x 0.86 = kcal/hr
 Watts x 3.4129 = Btu/hr
 Watts x 0.000284 = ton (refr)

Watts x 0.00133 = HP
 kcal/hr x 1.163 = watts
 kcal/hr x 3.97 = Btu/hr
 HP x 746 = watts
 ton (refr) x 3517 = watts

Pressure

kPa x 0.145 = PSI
 PSI x 6.89 = kPa
 Bar x 100 = kPa
 kPa x 0.01 = Bar

inch Hg x 3.39 = kPa
 inch H2O x 0.249 = kPa
 mm Hg (1 torr) x 0.133 = kPa

PRESSURE TEMPERATURE CHART

PRESSURE kPa GAUGE (# Unless otherwise indicated, all pressures shown are saturated vapour pressures)

°C	R407F		R410A	R32	R404A	R507	XP40 R449A		N40 R448A		CO2 / R744	Ammonia / R717
	Dew	Bub- ble					Dew	Bub- ble	Dew	Bub- ble		
-44	-20	11	46	46	4	17	-19	10	10	-19	764	-43
-42	-11	22	61	60	15	28	-10	21	21	-11	832	-38
-40	-2	34	76	76	26	40	0	33	33	-1	904	-29
-38	9	47	93	92	39	53	10	46	45	9	980	-20
-36	20	60	111	110	52	67	21	59	59	20	1060	-13
-34	32	75	130	129	66	82	33	74	73	32	1145	-2
-32	45	91	150	150	81	98	46	89	89	45	1234	7
-30	59	108	172	172	97	114	59	106	106	58	1327	19
-28	74	126	195	195	114	132	74	123	123	73	1426	32
-26	90	145	219	220	133	151	90	142	142	89	1529	43
-24	107	166	245	246	152	171	107	162	162	105	1637	59
-22	125	188	273	274	173	193	125	184	183	123	1750	71
-20	145	211	303	304	195	216	144	206	206	142	1869	89
-18	166	235	334	336	219	240	164	230	230	163	1993	109
-16	188	261	367	369	243	265	186	255	255	184	2123	124
-14	211	289	402	404	270	292	209	282	282	207	2259	147
-12	237	318	438	442	297	320	233	310	310	231	2401	164
-10	263	348	477	481	326	350	259	340	340	257	2548	190
-8	291	381	518	523	357	382	286	372	372	284	2702	217
-6	321	415	561	566	390	415	315	405	405	313	2862	239
-4	353	450	607	613	424	450	346	440	440	344	3029	269
-2	386	488	654	661	460	486	378	476	476	376	3203	294
0	421	528	704	712	498	525	412	515	515	410	3384	328
2	458	569	757	765	537	565	447	555	555	445	3572	365
4	497	613	812	821	579	608	485	597	597	483	3767	395
6	538	659	869	880	623	652	524	641	642	522	3970	435
8	581	706	930	942	669	698	566	688	688	564	4181	468
10	626	757	993	1006	716	747	609	736	736	607	4399	514
12	674	809	1059	1073	766	798	655	787	787	653	4627	562
14	723	864	1128	1144	819	851	703	840	840	700	4863	601
16	776	921	1200	1217	873	906	753	895	895	750	5107	655
18	830	980	1275	1294	929	964	805	953	953	803	5361	697
20	888	1043	1353	1374	989	1024	860	1013	1013	858	5625	756
22	947	1107	1435	1457	1049	1087	918	1075	1076	915	5899	819
24	1010	1175	1520	1544	1119	1152	977	1140	1141	975	6184	868
26	1075	1245	1608	1635	1179	1221	1040	1208	1208	1037	6479	937
28	1143	1318	1701	1729	1249	1291	1105	1278	1279	1103	6787	990
30	1215	1394	1797	1827	1329	1365	1173	1351	1352	1171	7106	1066
32	1289	1473	1896	1929	1399	1442	1244	1427	1428	1242		1144
34	1366	1555	2000	2035	1479	1521	1318	1506	1507	1316		1206
36	1447	1640	2108	2145	1559	1604	1395	1587	1589	1393		1292
38	1531	1729	2220	2259	1639	1689	1475	1672	1674	1473		1360
40	1618	1820	2336	2377	1729	1778	1558	1760	1762	1556		1453
42	1709	1915	2456	2500	1819	1870	1645	1851	1853	1643		1552
44	1803	2013	2581	2628	1909	1966	1735	1945	1947	1733		1628
46	1902	2115	2710	2760	2009	2064	1828	2043	2045	1827		1734
48	2004	2221	2844	2897	2109	2167	1926	2144	2146	1924		1817
50	2110	2330	2983	3040	2209	2273	2027	2248	2251	2026		1932
52	2220	2442	3126	3187	2319	2382	2132	2356	2359	2131		
54	2335	2559	3274	3340	2429	2496	2241	2467	2470	2240		
56	2454	2680	3428	3498	2549	2613	2354	2583	2586	2354		
58	2577	2804	3586	3661	2659	2734	2472	2701	2705	2472		
60	2706	2933	3749	3831	2789	2859	2594	2824	2828	2594		
62	2839	3066	3917	4007	2901	2978	2721	2951	2955	2722		
64	2977	3203	4090	4189	3032	3114	2854	3082	3086	2854		

CONVERSION FACTORS (CONT'D)

Temperature

°C = (°F - 32) ÷ 1.8

°F = (°C x 1.8) + 32

Dew Point

(Saturated vapour), used to determine superheat

Bubble Point

(Saturated liquid), used to determine subcooling

Gas2GO®

Minimise refrigerant losses with Gas2Find™

Gas2Find™ is a leak detection refrigerant that can help mitigate refrigerant losses by detecting small leaks in large commercial refrigeration systems.

Pressure decay tests identify if a leak is present but the point of a leak is often difficult to find. Bubble tests do not always effectively find the location of a leak and an extensive amount of time can be spent trying to **detect where the leak is located** within the system.

As a solution, **Gas2Find™** in conjunction with a leak detector is a **responsive** way to locate even the smallest leak, **saving costs** to you and your customer's business.

Gas2Find™ is part of the Heatcraft Gas2Go® Total Management System offer. For more information, contact your local Heatcraft branch on **13 23 50**.

- ✓ Detects smaller leaks
- ✓ Non-flammable, Non-toxic
- ✓ Available in E & G cylinder sizes



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your HVAC&R and GAS supplies**



**Our Heatcraft Plus stores
are located within select L&H
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convenient location for all your
HVAC, Gas and Electrical needs.**

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this book to find us.**



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PLUS⁺

Controls



HVAC

Schneider
Electric

5.5.0 Hz

↑
↓

LOC
REM

MODE

ENT

RUN

STOP
RESET

Altivar 212

HZ7

Quick	Parameter Name
RUF	Auto ramp
ACC	Acceleration time 1
DEC	Deceleration time 1
LFL	Low limit frequency
UL	Upper limit freq
UL	Motor thermal prot.
AO	AO scaling
MC	Motor rated freq.
VL	Motor rated voltage
IL	Motor rated current
F4	Motor rated speed
F4	Motor Current Limit
F4	Auto-tuning drive



DANGER
HAZARD OF ELECTRIC
SHOCK, EXPLOSION,
OR ARC FLASH.
Before servicing, remove all
power, wait 15 minutes.

HVAC

HZ1

Schneider
Electric

5.5.0 Hz

↑
↓

LOC
REM

MODE

ENT

RUN

STOP
RESET

HZ1

Quick	Parameter Name
RUF	Auto ramp
ACC	Acceleration time 1
DEC	Deceleration time 1
LFL	Low limit frequency
UL	Upper limit freq
UL	Motor thermal prot.
AO	AO scaling
MC	Motor rated freq.
VL	Motor rated voltage
IL	Motor rated current
F4	Motor rated speed
F4	Motor Current Limit
F4	Auto-tuning drive

TX Valves and Orifices: T2 & TE2

Danfoss



DANFOSS MODELS T2 & TE2 (WITH BRASS BODY INTERCHANGEABLE ORIFICE ASSEMBLY)

Thermostatic element with: bulb strap, without orifice, strainer cone, and nuts. Capillary tube length 1.5 m.

Part Number	Refrigerant	Model	Connections (inlet x outlet)	Equaliser Connection	Range
068Z3400	R404A/R507	TS2	3/8" x 1/2" Flare	-	N: -40° to +10°C, Without MOP
068Z3403	R404A/R507	TES2	3/8" x 1/2" Flare	1/4" Flare	N: -40° to +10°C, Without MOP
068Z3206	R22/R407C	TX2	3/8" x 1/2" Flare	-	N: -40° to +10°C, Without MOP
068Z3209	R22/R407C	TEX2	3/8" x 1/2" Flare	1/4" Flare	N: -40° to +10°C, Without MOP
068Z3346	R134a	TN2	3/8" x 1/2" Flare	-	N: -40° to +10°C, Without MOP
068Z3348	R134a	TEN2	3/8" x 1/2" Flare	1/4" Flare	N: -40° to +10°C, Without MOP
068Z3414	R404A/R507	TS2	3/8" flare x 1/2" ODF solder	-	N: -40° to +10°C, Without MOP
068Z3415	R404A/R507	TES2	3/8" flare x 1/2" ODF solder	1/4" Solder	N: -40° to +10°C, Without MOP
068Z3281	R22/R407C	TX2	3/8" flare x 1/2" ODF solder	-	N: -40° to +10°C, Without MOP
068Z3284	R22/R407C	TEX2	3/8" flare x 1/2" ODF solder	1/4" Solder	N: -40° to +10°C, Without MOP
068Z3383	R134a	TN2	3/8" flare x 1/2" ODF solder	-	N: -40° to +10°C, Without MOP
068Z3385	R134a	TEN2	3/8" flare x 1/2" ODF solder	1/4" Solder	N: -40° to +10°C, Without MOP
068Z3402	R404A/R507	TS2	3/8" x 1/2" Flare	-	N: -40° to +10°C, with MOP +15°C
068Z3405	R404A/R507	TES2	3/8" x 1/2" Flare	1/4" Flare	N: -40° to +10°C, with MOP +15°C
068Z3208	R22/R407C	TX2	3/8" x 1/2" Flare	-	N: -40° to +10°C, with MOP +15°C
068Z3211	R22/R407C	TEX2	3/8" x 1/2" Flare	1/4" Flare	N: -40° to +10°C, with MOP +15°C
068Z3347	R134a	TN2	3/8" x 1/2" Flare	-	N: -40° to +10°C, with MOP +15°C
068Z3349	R134a	TEN2	3/8" x 1/2" Flare	1/4" Flare	N: -40° to +10°C, with MOP +15°C
068Z3408	R404A/R507	TS2	3/8" x 1/2" Flare	INT	NL: -40° to -15°C, MOP -10°C
068Z3409	R404A/R507	TES2	3/8" x 1/2" Flare	1/4" Flare	NL: -40° to -15°C, MOP -10°C
068Z3227	R22/R407C	TEX2	3/8" x 1/2" Flare	1/4" Flare	NL: -40° to -15°C, MOP -10°C
068Z3430	R404A/R507	TES2	3/8" flare x 1/2" ODF solder	1/4" Solder	NL: -40° to -15°C, MOP -10°C
068Z3410	R404A/R507	TS2	3/8" x 1/2" Flare	-	B: -60° to -25°C, MOP -20°C
068Z3411	R404A/R507	TES2	3/8" x 1/2" Flare	1/4" Flare	B: -60° to -25°C, MOP -20°C
068Z3420	R404A/R507	TS2	3/8" flare x 1/2" ODF solder	-	B: -60° to -25°C, MOP -20°C
068Z3404	R404A/R507	TES2	3/8" x 1/2" Flare	1/4" Flare	B: -60° to -25°C, without MOP

T2 & TE2 - ORIFICE ASSEMBLY SELECTION

Quick Select Chart t2



Part Number	Model	Capacity (kW)*								Connection (Solder)		
		R22		R134a		R404A		R407C		Inlet (in)	Outlet (in)	Config (deg)
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T			
068-2002	OX	0.9	0.89	0.66	0.62	0.61	0.54	0.89	0.88	3/8	1/2	90°
068-2003	00	1.8	1.68	1.2	1.0	1.18	0.88	1.77	1.64	3/8	1/2	90°
068-2010	01	3.6	3.0	2.1	1.66	2.27	1.4	3.5	3.0	3/8	1/2	90°
068-2015	02	5.0	3.9	2.6	1.97	3.0	1.7	4.9	3.8	3/8	1/2	90°
068-2006	03	8.7	6.7	4.4	3.3	5.2	2.8	8.4	6.5	3/8	1/2	90°
068-2007	04	13.0	10.0	6.6	4.9	8.0	4.1	13.0	9.6	3/8	1/2	90°
068-2008	05	18.3	13.6	8.7	6.4	10.5	5.4	17.2	12.8	3/8	1/2	90°
068-2009	06	21.6	15.9	10.4	7.7	12.6	6.4	20.7	15.3	3/8	1/2	90°

* Capacity L/T -24°C SST, +42°C SCT, 3°K M/T -4°C SST, +45°C SCT, 3°K A/C +7°C SST, +50°C SCT, 3°K

TX Valves and Orifices: TUA & TUAE

DANFOSS MODEL TUA & TUAE, STAINLESS STEEL (WITH INTERCHANGEABLE ORIFICE ASSEMBLY)

Part Number	Refrigerant	Type	Connections – Inlet x Outlet	Equaliser Connection
Thermostatic element, without orifice or strainer, with bulb strap, range N: -40° to +10°C, without MOP				
068U2285	R404A/R507	TUA	3/8" x 1/2" ODF solder	INT
068U2287	R404A/R507	TUAE	3/8" x 1/2" ODF solder	EXT 1/4" FI
068U2235	R22	TUA	3/8" x 1/2" ODF solder	INT
068U2237	R22	TUAE	3/8" x 1/2" ODF solder	EXT 1/4" FI
068U2205	R134a	TUA	3/8" x 1/2" ODF solder	INT
068U2207	R134a	TUAE	3/8" x 1/2" ODF solder	EXT 1/4" FI
068U2325	R407C	TUA	3/8" x 1/2" ODF solder	INT
068U2327	R407C	TUAE	3/8" x 1/2" ODF solder	EXT 1/4" FI

Capillary tube length: 1.5 m. TUA: internally equalized, TUAE: externally equalized



Part Number	Refrigerant	Type	Connections Inlet x Outlet	Equaliser Connection
Thermostatic element, without orifice or strainer, with bulb strap, range N: -40° to +10°C, MOP +15°C				
068U2295	R404A/R507	TUAE	3/8" x 1/2" ODF solder	EXT 1/4" FI

Capillary tube length: 1.5 m. TUA: internally equalized, TUAE: externally equalized

Part Number	Refrigerant	Type	Connections Inlet x Outlet	Equaliser Connection
Thermostatic element, without orifice or strainer, with bulb strap, range N: -40° to +10°C, MOP 0°C				
068U2303	R404A/R507	TUAE	3/8" x 1/2" ODF solder	EXT 1/4" FI

Capillary tube length: 1.5 m. TUA: internally equalized, TUAE: externally equalized

ORIFICE ASSEMBLY WITH FILTER AND GASKET TO SUIT TUA / TUAE

Part Number	Model	Rated capacity (kW)										
		R22		R134a		R404A		R407C		Inlet	Outlet	Config
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T	(in)	(in)	(deg)
068U1030	00	0.66	0.54	0.42	0.33	0.39	0.24	0.67	0.54	3/8	1/2	90°
068U1031	01	0.97	0.79	0.62	0.48	0.58	0.35	0.95	0.77	3/8	1/2	90°
068U1032	02	1.17	0.93	0.73	0.55	0.69	0.39	1.14	0.90	3/8	1/2	90°
068U1033	03	1.51	1.2	0.96	0.74	0.9	0.53	1.47	1.19	3/8	1/2	90°
068U1034	04	2.68	2.0	1.64	1.2	1.5	0.86	2.59	2.00	3/8	1/2	90°
068U1035	05	3.57	2.7	2.2	1.6	2.0	1.16	3.45	2.68	3/8	1/2	90°
068U1036	06	5.59	4.3	3.4	2.5	3.2	1.80	5.4	4.1	3/8	1/2	90°
068U1037	07	7.37	5.7	4.5	3.3	4.3	2.37	7.1	5.5	3/8	1/2	90°
068U1038	08	10.70	8.3	6.6	4.9	6.2	3.48	10.3	8.0	3/8	1/2	90°
068U1039	09	14.78	11.3	9.1	6.7	8.5	4.66	14.1	10.8	3/8	1/2	90°

* Capacity L/T -24°C SST, +42°C SCT, 3°K M/T -4°C SST, +45°C SCT, 3°K A/C +7°C SST, +50°C SCT, 3°K



TX Valves Assemblies: TE5-55




DANFOSS TE5-55 POWER ELEMENTS SELECTION (WITH BULB STRAP)

Part Number	Valve Type	Refrigerant	Capillary tube length (m)	Rated range
067B3250	TEX 5	R22	3	Without MOP, Range N: -40 °C to +10 °C
067B3209	TEX 12	R22	5	Without MOP, Range N: -40 °C to +10 °C
067B3210	TEX 12	R22	3	Without MOP, Range N: -40 °C to +10 °C
067B3274	TEX 20	R22	3	Without MOP, Range N: -40 °C to +10 °C
067G3205	TEX 55	R22	3	Without MOP, Range N: -40 °C to +10 °C
067B3278	TEZ5	R407C	3	Without MOP, Range N: -40 °C to +10 °C
067B3297	TEN 5	R134a	3	Without MOP, Range N: -40 °C to +10 °C
067B3232	TEN 12	R134a	3	Without MOP, Range N: -40 °C to +10 °C
067B3342	TES 5	R404A/R507	3	Without MOP, Range N: -40 °C to +10 °C
067B3347	TES 12	R404A/R507	3	Without MOP, Range N: -40 °C to +10 °C
067B3352	TES 20	R404A/R507	3	Without MOP, Range N: -40 °C to +10 °C
067B3267	TEX5	R22/R407C	3	MOP 100 /+ 15 °C
067B3358	TES5	R404/R507	3	MOP 45 / - 10 °C

Capillary tube length: 1.5m. TUA: internally equalized, TUAE: externally equalized

DANFOSS TE5-55 ORIFICE ASSEMBLY SELECTION

Part Number	Model	Capacity (kW)							
		R22		R134a		R404A		R407C	
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T
067B2789	TE5-1	19.7	16.7	12.2	9.9	12.6	8.4	19.5	16.5
067B2790	TE5-2	27.3	23.4	17.0	13.9	17.5	11.8	27.2	23.1
067B2791	TE5-3	34.6	29.6	21.7	17.7	22.1	14.8	34.3	29.0
067B2792	TE5-4	47.3	40.4	29.6	24.0	30.2	19.9	47.1	39.6
067B2708	TE12-5	55.8	47.4	36.1	29.6	39.8	25.1	51.8	43.3
067B2709	TE12-6	74.6	62.7	48.0	38.9	49.8	30.6	68.9	56.6
067B2710	TE12-7	91.0	77.2	60.4	49.8	59.6	36.6	82.9	69.2
067B2771	TE20-8	114.3	108.6	75.0	61.2	69.8	44.1	112.0	94.2
067B2773	TE20-9	143.8	121.1	86.6	70.0	77.7	47.5	125.0	103.8
067G2701	TE55-10	165.1	136.6	105.0	83.5	97.0	57.6	151.0	123.8
067G2704	TE55-11	178.3	148.3	114.8	91.6	104.7	62.5	163.0	134.2
067G2707	TE55-12	193.8	160.4	125.0	99.5	112.7	66.5	175.7	144.2

* Capacity L/T -24°C SST, +42°C SCT, 3°K. M/T -4°C SST, +45°C SCT, 3°K. A/C +7°C SST, +50°C SCT, 3°K

DANFOSS TE5-55 VALVE BODY SELECTION

Part Number	Valve Type	Connections Inlet x Outlet		Body
067B4007	TE 5	1/2" x 5/8"	ODF x ODF	Solder straightway
067B4008	TE 5	1/2" x 7/8"	ODF x ODF	Solder straightway
067B4009	TE 5	1/2" x 5/8"	ODF x ODF	Solder angleway
067B4010	TE 5	1/2" x 7/8"	ODF x ODF	Solder angleway
067B4011	TE 5	5/8" x 7/8"	ODF x ODF	Solder angleway
067B4013	TE 5	1/2" x 5/8"	MSAE X MSAE	Flare angleway
067B4021	TE12	7/8" x 1-1/8"	ODF x ODM	Solder straightway
067B4023	TE12	7/8" x 1-1/8"	ODF x ODM	Solder angleway

ODF = Internal diameter. ODM = External diameter

TX Valves: TGE

DANFOSS TGE VALVES (FIXED ORIFICE)

Range N=-40°C to +10°C

Part Number	Refrigerant	Model	Nominal Capacity (kW) ¹	Connection Solder ODF x ODF ²
067N2152	R22	TGEX 4	14	1/2" x 7/8"
067N2154	R23	TGEX6	20	1/2" x 7/8"
067N2156	R24	TGEX 7.5	27	5/8" x 7/8"
067N2157	R25	TGEX 11	38	5/8" x 7/8"
067N2159	R26	TGEX 12	43	5/8" x 7/8"
067N2163	R27	TGEX 18	63	7/8" x 1-1/8"
067N2168	R28	TGEX 30	104	1-1/8" x 1-3/8"
067N3156	R410A	TGEN 9	32	5/8" x 7/8"
067N3157	R410A	TGEN 13	45	5/8" x 7/8"
067N4156	R407C	TGEZ 7	25	5/8" x 7/8"
067N4162	R407C	TGEZ 15	53	7/8" x 1-1/8"
067N4163	R407C	TGEZ 18	62	7/8" x 1-1/8"
067N4165	R407C	TGEZ 24	84	7/8" x 1-3/8"
067N5150	R134a	TGEN 1.5	6	3/8" x 5/8"
067N5151	R134a	TGEN 1.5	6	1/2" x 5/8"
067N5152	R134a	TGEN 2.5	8	1/2" x 7/8"
067N5153	R134a	TGEN 3.5	12	1/2" x 5/8"
067N5154	R134a	TGEN 3.5	12	1/2" x 7/8"
067N5156	R134a	TGEN 4.5	17	5/8" x 7/8"
067N5157	R134a	TGEN 7	24	5/8" x 7/8"
067N5159	R134a	TGEN8	29	5/8" x 7/8"
067N5160	R134a	TGEN 8	29	5/8" x 1-1/8"
067N5162	R134a	TGEN 10	37	7/8" x 1-1/8"
067N5163	R134a	TGEN 12	44	7/8" x 1-1/8"
067N5165	R134a	TGEN 17	61	7/8" x 1-3/8"
067N5167	R134a	TGEN 20	70	7/8" x 1-3/8"
067N5168	R134a	TGEN 20	70	1-1/8" x 1-3/8"
067N5169	R134a	TGEN 25	87	1-1/8" x 1-3/8"
067N6151	R404A/R507	TGES 4	14	1/2" x 7/8"
067N6150	R404A/R508	TGES 5	18	5/8" x 7/8"
067N6154	R404A/R509	TGES 7.5	26	5/8" x 7/8"
067N6155	R404A/R510	TGES11	39	7/8" x 1-1/8"

1: Nominal capacity is based on ARI standard: Evaporating temp T_e = 4.4°C Liquid temp T_l = 37°C Condensing temp T_c = 38°C Opening superheat OS = 4K

2: 1/4" External pressure equaliser

Danfoss





Electronic Expansion Valves: ETS

- Danfoss ETS valves can be applied in modular air cooled chillers, cold rooms, transport refrigeration and refrigeration, air conditioning systems
- Precision flow with high resolution and high efficiency
- Adaptive superheat or load defined superheat control algorithm
- Balanced design providing bi-flow operation (heat pumps), with the ability for solenoid tight shut-off function in both flow directions when installed with battery backup
- Compact and lightweight hermetic design with removable coil (ETS 6)
- Wide range of common refrigerants: R410A, R407C, R404A, R134a, R22
- ETS 50 to 400 are designed with built-in sight glass with moisture indicator

DANFOSS EEV: ETS6

Part Number	Model	Capacity (kW) @80% *									Connection		Config
		R22		R134a		R404A		R407C		R410A	Inlet	Outlet	
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T	A/C	mm	mm	
034G5005	ETS6-10	2.2	2.3	1.7	1.7	1.6	1.6	2.3	2.4	2.6	7.94	7.94	90°
034G5015	ETS6-14	5.0	5.1	3.8	3.7	3.5	3.5	5.2	5.3	5.9	7.94	7.94	90°
034G5026	ETS6-18	9.0	9.1	6.7	6.7	6.7	6.2	9.3	9.4	10.5	6.35	6.35	90°
034G5035	ETS6-25	17.1	17.3	12.8	12.7	11.9	11.9	17.8	17.9	19.9	7.94	7.94	90°
034G5055	ETS6-32	25.1	24.8	18.8	18.7	17.5	17.4	26.1	26.4	29.3	7.94	7.94	90°
034G5065	ETS6-40	33.5	34.0	25.2	24.9	23.4	23.3	34.9	35.2	39.1	7.94	7.94	90°

* Capacity at 80%. L/T -24°C SST, +42°C SCT, 3°K. M/T -4°C SST, +45°C SCT, 3°K. A/C +7°C SST, +50°C SCT, 3°K

DANFOSS EEV: ETS6 COIL

Part Number	Description
034G5135	Coil for ETS 6 valves

DANFOSS EEV: ETS12.5, ETS25, ETS50, ETS100, ETS250 & ETS400

Part Number	Model	Capacity (kW) @80% *									Connection (Solder)		Config
		R22		R134a		R404A		R407C		R410A	Inlet	Outlet	
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T	A/C	in.	in.	
034G4209	ETS12.5	50	50	37	37	35	34	52	52	58	1/2	1/2	180°
034G4210	ETS12.5	50	50	37	37	35	34	52	52	58	5/8	5/8	180°
034G4211	ETS12.5	50	50	37	37	35	34	52	52	58	7/8	7/8	180°
034G4202	ETS25	122	124	92	107	85	85	127	129	143	5/8	5/8	180°
034G4203	ETS25	122	124	92	107	85	85	127	129	143	7/8	7/8	180°
034G1708	ETS50	195	198	147	146	137	136	203	206	228	7/8	7/8	180°
034G1705	ETS50	195	198	147	146	137	136	203	206	228	7/8	1-1/8	180°
034G1706	ETS50	195	198	147	146	137	136	203	206	228	1-1/8	1-1/8	180°
034G1704	ETS50	195	198	147	146	137	136	203	206	228	1-1/8	1-3/8	180°
034G0507	ETS100	310	315	233	231	217	216	323	326	363	1-1/8	1-1/8	180°
034G0508	ETS100	310	315	233	231	217	216	323	326	363	1-3/8	1-3/8	180°
034G0505	ETS100	310	315	233	231	217	216	323	326	363	1-5/8	1-5/8	180°
034G2600	ETS250	980	994	736	730	686	681	1020	1030	1146	1-1/8	1-1/8	180°
034G2601	ETS250	980	994	736	730	686	681	1020	1030	1146	1-3/8	1-3/8	180°
034G3500	ETS400	1563	1586	1174	1164	1094	1086	2347	1644	1826	1-5/8	1-5/8	180°
034G3501	ETS400	1563	1586	1174	1164	1094	1086	2347	1644	1826	2-1/8	2-1/8	180°

* Capacity at 80%. L/T -24°C SST, +42°C SCT, 3°K. M/T -4°C SST, +45°C SCT, 3°K. A/C +7°C SST, +50°C SCT, 3°K

DANFOSS EEV: ETS ACCESSORIES

Part Number	Description
034G2323	Connector cable, 8m length, M12 female, (required for ETS 12.5 to ETS 400 valves, except ETS 6 valves).
084B8563	EKA164 Controller Display (required for setting, can be permanently located with installation)
034G2200	Connector cable 8m length (required for ETS12.5 to ETS400 valves)
LP-ETS-KIT	"Danfoss ETS controller kit Parts Included in the LP-ETS-KIT: 1. 084B8040 - EKD 316 Superheat Controller, 2. 060G0090 – AKS 32R Pressure Transmitter, 3. 060G0008 – PLUG for AKS Pressure Transmitter, 4. 084N0003 – AKS 11 Temperature Sensor, 5. 084B8563 – EKA 164A, Universal Display, 6. LP-RR0550 – 120 Ohm ½ Watt Terminating resistors "

Electronic Expansion Valves: AKV

DANFOSS AKV 10

Part Number	Valve Type	Connections Solder ODF In x Out	Rated Capacity				Kv value m ³ /hr
			R22	R134a	R404A/R507	R407C	
068F1161	AKV 10-1	3/8" x 1/2"	1.0	0.9	0.8	1.1	0.01
068F1164	AKV 10-2	3/8" x 1/2"	1.6	1.4	1.3	1.7	0.017
068F1167	AKV 10-3	3/8" x 1/2"	2.6	2.1	2.0	2.5	0.025
068F1170	AKV 10-4	3/8" x 1/2"	4.1	3.4	3.1	4.0	0.046
068F1173	AKV 10-5	3/8" x 1/2"	6.4	5.3	4.9	6.4	0.064
068F1176	AKV 10-6	3/8" x 1/2"	10.2	8.5	7.8	10.1	0.114
068F1179	AKV 10-7	1/2" x 5/8"	16.3	13.5	12.5	17.0	0.162

Note: All electronic expansion valves are less coil. Rated capacity are based on evaporating temperature of 5°C, condensing temperature of +32°C, and liquid temperature +28°C



ORIFICES

Part Number	Service Kit	Orifice No.	Content
068F5283	1	0	4 ORIFICES, 4 GASKETS
		1	4 ORIFICES, 4 GASKETS
		2	4 ORIFICES, 4 GASKETS
		3	4 ORIFICES, 4 GASKETS
068F5284	2	4	3 ORIFICES, 3 GASKETS
		5	3 ORIFICES, 3 GASKETS
		6	3 ORIFICES, 3 GASKETS

Full range of spare parts and accessories for AKV valve series are available, enquire to your local Heatcraft branch.

COILS FOR AKV VALVES

Part Number	Description
Coils for AKV Valves	
068F6851	Coil, 220 V DC, 20 W, with terminal box
018F6702	Coil, 240 V AC, 10 W, with terminal box and DIN plugs
018F6802	Coil, 240 V AC, 12 W, with terminal box
018F6903	Coil, 24 V AC, 20 W, 50 Hz with terminal box

Full range of spare parts and accessories for AKV valve series are available, enquire to your local Heatcraft branch.

Electronic Expansion Valves: EX3



QUICK SELECT CHART EX3

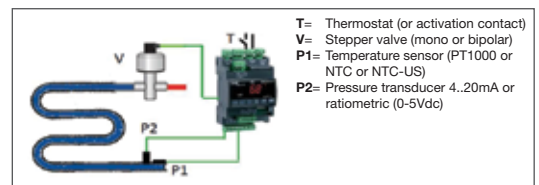
Part Number	Model	Capacity (kW) @ 80% *									Connection (Solder)		
		R22		R134a		R404A		R407C		R410A	Inlet	Outlet	Config
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T	A/C	mm	mm	
991-011-20	EX3-2000	1.3	1.3	1.0	1.0	0.9	0.9	1.4	1.4	1.6	3/8	1/2	90°
991-011-30	EX3-3000	2.7	2.8	2.0	2.0	1.8	1.8	3.0	3.0	3.3	3/8	1/2	90°
991-011-40	EX3-4000	4.4	4.5	3.3	3.3	3.0	2.9	4.8	4.9	5.3	3/8	1/2	90°
991-011-50	EX3-5000	7.1	7.2	5.3	5.3	4.0	4.8	7.8	7.9	8.6	3/8	1/2	90°
991-011-60	EX3-6000	11.5	11.7	8.6	8.5	7.8	7.7	12.5	12.8	14.0	3/8	1/2	90°
991-011-70	EX3-7000	14.6	14.9	10.9	10.8	9.8	9.8	15.9	16.2	17.7	3/8	1/2	90°
991-011-80	EX3-8000	16.3	16.6	12.1	12.1	11.0	10.9	17.7	18.1	19.7	3/8	1/2	90°
991-011-90	EX3-9000	20.8	21.1	15.5	15.4	14.0	13.9	22.6	23.1	25.2	3/8	1/2	90°

* Capacity at 80%
 L/T -24°C SST, +42°C SCT, 3°K
 M/T -4°C SST, +45°C SCT, 3°K
 A/C +7°C SST, +50°C SCT, 3°K

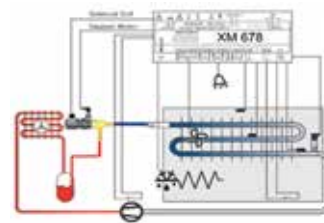
Drivers etc for EX3

XEV22D-1C1COB	Stepper Valve Driver+ Display 24 V
XM678D-2C3C2B	Multi-Controller 24 V (EEV Driver & Temp Control)
CX660-000N0	Keyboard 6 key to suit XM600
501-1125	Temperature Sensor 20' Blue coil out Temp-pipe
804283	CPC Probe, 20 FT, White
PP11F	Transducer
TF20D	24 V Transformer

XEV22D EEV Driver



XM600 EEV Driver & Cont



QUICK SELECT CHART EX4-8

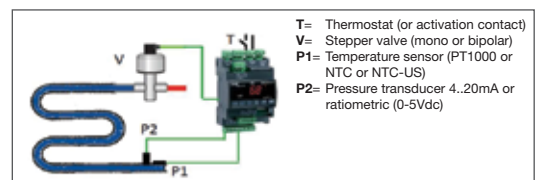
Part Number	Model	Capacity (kW) @ 80% *									Connection		
		R22		R134a		R404A		R407C		R410A	Inlet	Outlet	Config
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T	A/C	(in)	(in)	
991-0001-04	EX4-U31*	14	14	10	10	9	9	14	14	15	5/8	5/8	90°
991-0001-05	EX5-U31*	41	42	30	30	28	28	42	43	46	5/8	7/8	90°
991-0001-06	EX6-U31*	98	100	73	73	67	67	101	102	113	7/8	1-1/8	90°
991-0001-07	EX7-U31*	271	275	200	199	184	183	278	282	310	1-3/8	1-3/8	90°
991-0001-08	EX8-U31*	723	734	530	530	490	488	742	753	826	1-3/8	1-3/8	90°

* Capacity at 80%
 L/T -24°C SST, +42°C SCT, 3°K
 M/T -4°C SST, +45°C SCT, 3°K
 A/C +7°C SST, +50°C SCT, 3°K

Complete kit Contains

EX - EEV	Electronic valve EX-U31
804663	Lead Assy M15 EXV cable 1.5 m
804421	Transformer ECT-623 60VA
XEV22D-1C1COB	Stepper Valve Driver+ Display
BE00930207	Transducer PP11 3 MT PVC
501-1125	Temperature Sensor 20' Blue coil out Temp-pipe

XEV22D EEV Driver



TX Valves: A/C & Balanced Ports

PARKER TX VALVES

Part Number	Model No.	Refrigerant Type	External Equalised	Capacity Range (tons)	Nominal Capacity (tons)	Nominal Capacity (kW)	Inlet connections	Outlet connections
Parker Air Conditioning TX valves (Bi-Flow)								
040524-19	HAE-3VXNB100	R22/R407C	YES	1/2 - 3T	3T	10.5	1/2" ODF	1/2" ODF
040524-16	HAE-5VXB20	R22/R407C	YES	3-1/2 - 5T	5T	18	1/2" ODF	1/2" ODF
040524-17	HAE-8VXB20	R22/R407C	YES	5-1/2T - 8T	8T	28	5/8" ODF	5/8" ODF
040524-13	HAE-10VX100B20	R22/R407C	YES	8 - 10T	10T	35	5/8" ODF	7/8" ODF
040679-01	HAE3KX200	R410A	YES		3T		3/8" ODF	1/2" ODF
040680-01	HAE5KX200	R410A	YES		5T		1/2" ODF	5/8" ODF



SPORLAN TX VALVES BALANCED PORT

Part Number	Refrigerant Type	Nominal Capacity (kW)	Thermostatic Charge	Connections	Equaliser Connection
SBFSE-AAA-SC	R404A	0.44-0.70	10°C to -25°C	3/8" x 1/2"	1/4"
SBFSE-AA-SC	R404A	0.88-1.17	10°C to -25°C	3/8" x 1/2"	1/4"
SBFSE-A-SC	R404A	1.76-3.52	10°C to -25°C	3/8" x 1/2"	1/4"
SBFSE-B-SC	R404A	4.40-6.15	10°C to -25°C	3/8" x 1/2"	1/4"
SBFSE-C-SC	R404A	7.03-10.06	10°C to -25°C	3/8" x 1/2"	1/4"
SBFSE-AAA-SZ	R404A	0.44-0.70	-20°C to -40°C	3/8" x 1/2"	1/4"
SBFSE-AA-SZ	R404A	0.88-1.17	-20°C to -40°C	3/8" x 1/2"	1/4"
SBFSE-A-SZ	R404A	1.76-3.52	-20°C to -40°C	3/8" x 1/2"	1/4"
SBFSE-B-SZ	R404A	4.40-6.15	-20°C to -40°C	3/8" x 1/2"	1/4"
SBFSE-C-SZ	R404A	7.03-10.06	-20°C to -40°C	3/8" x 1/2"	1/4"
SBFJE-AAA-C	R134a	0.44-0.70	10°C to -25°C	3/8" x 1/2"	1/4"
SBFJE-AA-C	R134a	0.88-1.17	10°C to -25°C	3/8" x 1/2"	1/4"
SBFJE-A-C	R134a	1.76-3.52	10°C to -25°C	3/8" x 1/2"	1/4"
SBFJE-B-C	R134a	4.40-6.15	10°C to -25°C	3/8" x 1/2"	1/4"
SBFJE-C-C	R134a	7.03-10.06	10°C to -25°C	3/8" x 1/2"	1/4"

* Balanced Port Valves are typically used in applications where the head pressure of the system varies greatly. Balance Port allows the valve to be more stable in low loads.



Solenoid Valves and Coils: EVR & EVRH

Danfoss



DANFOSS SOLENOID VALVES

Part Number	Model Number	Connections Inches	Max Operating Pressure (kPa)	Required Coil Type
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Model EVR/EVRH Solenoid Valves, normally closed, without coils

032F8056	EVR 2	1/4" Flare	4520	AC
032F8107	EVR 3	1/4" Flare	4520	AC/DC
032F8116	EVR 3	3/8" Flare	4520	AC/DC
032F8072	EVR 6	3/8" Flare	4520	AC/DC
032F8079	EVR 6	1/2" Flare	4520	AC/DC
032F8095	EVR 10	1/2" Flare	3500	AC/DC
032F8098	EVR 10	5/8" Flare	3500	AC/DC
032F8101	EVR 15	5/8" Flare	3200	AC/DC
032F1201	EVR 2	1/4" ODS	4520	AC/DC
032F1206	EVR 3	1/4" ODS	4520	AC/DC
032F1204	EVR 3	3/8" ODS	4520	AC/DC
032F1212	EVR 6	3/8" ODS	4520	AC/DC
032F1209	EVR 6	1/2" ODS	4520	AC/DC
032F1217	EVR 10	1/2" ODS	3500	AC/DC
032F1214	EVR 10	5/8" ODS	3500	AC/DC
032F1228	EVR 15	5/8" ODS	3200	AC/DC
032F1225	EVR 15	7/8" ODS	3200	AC/DC
032F1240	EVR 20	7/8" ODS	3200	AC
032F1264	EVR 20	7/8" ODS	3200	DC
032F1244	EVR 20	1-1/8" ODS	3200	AC
032F2201 ⁽²⁾	EVR 25	1-1/8" ODS	3200	AC/DC
032F2207 ⁽¹⁾	EVR 25	1-3/8" ODS	3200	AC/DC
032F2208 ⁽²⁾	EVR 25	1-3/8" ODS	3200	AC/DC
042H1104 ⁽²⁾	EVR 32	1-5/8 ODS	3200	AC/DC
042H1111 ⁽¹⁾	EVR 40	2-1/8 ODS	3200	AC/DC
042H1112 ⁽²⁾	EVR 40	2-1/8 ODS	3200	AC/DC
032G1056	EVRH 15	5/8" ODS	4520	AC/DC
032G1057	EVRH 20	7/8" ODS	4520	AC
032G1058	EVRH 20	7/8" ODS	4520	DC

Flare connections are supplied without flare nuts. (1) With manual operation. (2) Without manual operation

EVR Solenoid Valves, Normally Open, without coils

032F1290	EVR 6	3/8" ODS	AC/DC
032F1291	EVR 10	1/2" ODS	AC/DC
032F1299	EVR 15	5/8" ODS	AC/DC
032F1260	EVR 20	7/8" ODS	AC/DC
032F1269	EVR 20	1-1/8" ODS	AC/DC

Note: Valves closed when coil is energised, open when coil is de-energised

032F8165	EVR 6, 8 Gasket kit
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EVR VALVE CAPACITY

Type	Rated Liquid Capacity (kW)			
	R22	R134a	R404A/R507	R407C
EVR 2	3.20	2.90	2.20	3.01
EVR 3	5.40	5.00	3.80	5.08
EVR 6	16.10	14.80	11.20	15.13
EVR 10	38.20	35.30	26.70	35.91
EVR 15	52.30	48.30	36.50	49.16
EVR 20	101.00	92.80	70.30	94.94
EVR 22	121.00	111.00	84.30	113.74
EVR 25	201.00	186.00	141.00	188.94
EVR 32	322.00	297.00	225.00	302.68
EVR 40	503.00	464.00	351.00	472.82

Rated Liquid Capacity is based on evaporating temperature $t_e = -10^{\circ}\text{C}$, liquid temperature ahead of valve $t_l = +25^{\circ}\text{C}$, pressure drop in valve $\Delta p = 0.15$ bar


**DANFOSS EVR COILS**

Part Number	Voltage (V)	Frequency (Hz)	Power (W)	IP Rating	Inclusions
018F6701	220-230	50 Hz	10 W	IP67	With terminal box
018F6702	240	50 Hz	10 W	IP67	With terminal box
018F6707	24	50 Hz	10 W	IP67	With terminal box
018F6710	115	60 Hz	10 W	IP67	With terminal box
018F6711	115	50 Hz	10 W	IP67	With terminal box
018F6730	110	50 / 60 Hz	10 W	IP67	With terminal box
018F6802	240	50 Hz	10 W	IP67	With terminal box
018F6704	420	50 Hz	10 W	IP67	With terminal box
018F6904	24	50Hz	20 W	IP67	With terminal box
018F6851	220 DC	DC	20 W	IP67	With terminal box
018F6856	12 DC	DC	20 W	IP67	With terminal box
018F6857	24 DC	DC	20 W	IP67	With terminal box
018F6252	240	50 Hz	10 W	IP 67	1 m 3 core cable
018F6177	240	50 Hz	10 W	IP 20	
018F0091	Danfoss Solenoid valve magnet				
042N0156	DIN socket				



Solenoid Valves



INTERLINK SOLENOID VALVES

Part Number	Connection	Capacity (kW)								
		Liquid			Vapour			Hot Gas		
		R22	R134a	R404A	R22	R134a	R404A	R22	R134a	R404A

Valve bodies, without coils

SVNC14FL*	1/4 Flare	3.2	3	2.1	-	-	-	2.1	1.6	1.8
SVNC38FL	3/8 Flare	14.5	13.5	9.5	2.2	1.8	1.85	9.5	6.9	8.2
SVNC12FL	1/2 Flare	39.6	37.1	26.2	6.0	4.8	5.0	26.0	18.9	22.4
SVNC58FL	5/8 Flare	47	44	31	7.0	5.7	6.0	30.8	22.9	26.5
SVNC14SOL*	1/4 ODS	3.2	3	2.1	-	-	-	2.1	1.6	1.8
SVNC38SOL	3/8 ODS	14.5	13.5	9.5	2.2	1.8	1.9	9.5	6.9	8.2
SVNC12SOL	1/2 ODS	39.6	37.1	26.2	6.0	4.8	5.0	26.0	18.9	22.4
SVNC58SOL	5/8 ODS	47	44	31	7.0	5.7	6.0	30.8	22.9	26.5
SVNC34SOL	3/4 ODS	87	80.5	58	13.2	10.5	11.0	56.8	41.5	48.5
SVNC78SOL	7/8 ODS	105	99	69	15.5	12.8	13.4	67.5	49.2	58.2

* Direct operated. All other sizes are Servo-operated

Capacities based on; Evaporating temperature: 4°C, Condensing temperature: 38°C, Pressure drop across valve 15 kPa

Hot Gas capacities based on; Suction temperature: 18 °C, Pressure drop: 100 kPa

COILS

Part Number	Description	Watts
SVCOIL240V	Solenoid valve coil, 220–240 V AC, 50/60Hz	9
SVCOIL24V	Solenoid valve coil, 24 V AC, 50/60Hz	9
SVMAGNET	Coil magnet only	

Pressure Regulating Valves

DANFOSS KVP

Part Number	Type	Regulating Range kPa (psig)	Connections	Rated Capacity (kW)			
				R22	R134a	R404A/R507	R407C

Evaporator Pressure Regulators

034L0021	KVP12	0 to 550 (0 to 80)	1/2" flare ⁽¹⁾	4.0	2.8	3.6	3.7
034L0023	KVP12	0 to 550 (0 to 80)	1/2" solder ODF	4.0	2.8	3.6	3.7
034L0029	KVP15	0 to 550 (0 to 80)	5/8" solder ODF	4.0	2.8	3.6	3.7
034L0025	KVP22	0 to 550 (0 to 80)	7/8" solder ODF	4.0	2.8	3.6	3.7
034L0026	KVP28	0 to 550 (0 to 80)	1-1/8" solder ODF	8.6	6.1	7.7	7.9
034L0032	KVP35	0 to 550 (0 to 80)	1-3/8" solder ODF	8.6	6.1	7.7	7.9

(1) Supplied without flare nuts.

Capacity is the capacity of the regulator at evaporating temperature of -10°C, condensing temperature of +25°C, pressure drop in the regulator Δp 20kPa, offset 60kPa
Solder ODF connection chosen must not be too small, since gas velocities in excess of 40m/s at the inlet of the regulator can give flow noise




DANFOSS KVL

Part Number	Type	Regulating Range kPa (psig)	Connections	Rated Capacity (kW)			
				R22	R134a	R404A/R507	R407C

Crankcase Pressure Regulator

034L0041	KVL12	20 to 600 (3 to 87)	1/2" flare ⁽¹⁾	7.1	5.3	6.3	6.5
034L0042	KVL15	20 to 600 (3 to 87)	5/8" flare ⁽¹⁾	7.1	5.3	6.3	6.5
034L0043	KVL12	20 to 600 (3 to 87)	1/2" solder ODF	7.1	5.3	6.3	6.5
034L0049	KVL15	20 to 600 (3 to 87)	5/8" solder ODF	7.1	5.3	6.3	6.5
034L0045	KVL22	20 to 600 (3 to 87)	7/8" solder ODF	7.1	5.3	6.3	6.5
034L0046	KVL28	20 to 600 (3 to 87)	1-1/8" solder ODF	17.8	13.2	15.9	16.4
034L0052	KVL35	20 to 600 (3 to 87)	1-3/8" solder ODF	17.8	13.2	15.9	16.4

(1) Supplied without flare nuts.

Rated Capacity is the capacity of the regulator at evaporating temperature of -10°C, condensing temperature of +25°C, pressure drop in the regulator Δp 20kPa
Solder ODF connection chosen must not be too small, since gas velocities in excess of 40m/s at the inlet of the regulator can give flow noise



DANFOSS KVC

Part Number	Type	Regulating Range kPa (psig)	Connections	Rated Capacity (kW)			
				R22	R134a	R404A/R507	R407C

Capacity Regulator (Hot Gas Bypass)

034L0143	KVC12	20 to 600 (3 to 87)	1/2" solder ODF	7.6	4.8	6.9	8.4
034L0147	KVC15	20 to 600 (3 to 87)	5/8" solder ODF	14.9	9.4	13.6	16.4

Rated Capacity is the capacity of the regulator at evaporating temperature of -10 °C, condensing temperature of +25 °C.

If the discharge temperature becomes too high in relation to the compressor specification, the installation of an injection valve in a bypass between liquid line and compressor suction line is recommended. Solder ODF connection chosen must not be too small, since gas velocities in excess of 40 m/s at the inlet of the regulator can give flow noise..



DANFOSS CPCE

Part Number	Type	Max Working Pressure kPa (psig)	Connections	Rated Capacity in kW's			
				R22	R134a	R404A	R407C

Capacity Regulator (Hot Gas Bypass)

034N0082	CPCE	2800 (406)	1/2" ODS	17.4	7.9	16.4	19
034N0083	CPCE	2800 (406)	5/8" ODS	25.6	11.6	24.2	27.9
034N0084	CPCE	2800 (406)	7/8" ODS	34	15.2	32	37.1

Rated Capacity is the capacity of the regulator at evaporating temperature of -10°C, condensing temperature of +30°C, reduction of suction temperature /pressure $\Delta t_s=4K$



Pressure Regulating Valves



SPORLAN ELECTRIC EVAP PRESSURE REGULATOR

Part Number	Connections (Solder)	Type	Cable Length	Max Rated Pressure
CDS758	5/8"	CDS7	3 m	700 psig
CDS978	7/8"	CDS9	3 m	680 psig
CDS9118	1 1/8"	CDS9	3 m	680 psig
CDS17138	1 3/8"	CDS17	3 m	
CDS17158	1 5/8"	CDS17	3 m	

*CDS-2, CDS-4, CDS-7, CDS-9 and CDS-17 are straight through valves. CDS-16 is the only angle valve.
For capacity reference and more technical info go to: http://www.parker.com/literature/Sporlan/Sporlan%20pdf%20files/Sporlan%20pdf%20100/100-40_052012.pdf

SPORLAN THREE WAY HEAT RECLAIM VALVES

Part Number	Connections (Solder)	Type	Coil Type	Max Rated Pressure
12D11B	1-3/8"	Standard	MKC-1E	450 psig
12D11B-SC	1-3/8"	Split Cond	MKC-1E	450 psig
12D13B	1-5/8"	Standard	MKC-1E	450 psig
12D13B-SC	1-5/8"	Split Cond	MKC-1E	450 psig
16D17B	2-1/8"	Standard	MKC-1E	450 psig
16D17B-SC	2-1/8"	Split Cond	MKC-1E	450 psig

SPORLAN SOLENOID COILS

Part Number	Voltage	Hz
MKC-1E	220 - 240 V	50 Hz
MKC-2E	220 - 240 V	50 Hz

*MKC-2CE Coil is required for 16D replacement part where date code is prior to 12-03

Water Regulating Valves

DANFOSS WVFX

003N1100 WVFX10

Part Number	Model No.	Connection		Range (refrigerant) (KPa)
		Water Side ISO228/1	Condenser side	
Pressure controlled water valves				
003N1100	WVFX10	G 3/8"	1/4"flare	350-1600
003N2100	WVFX15	G 1/2"	1/4"flare	350 to 1600
003N3100	WVFX20	G 3/4"	1/4"flare	350 to 1600
003N3105	WVFX20	G 3/4"	1/4"flare	400 to 2300
003N4100	WVFX25	G 1"	1/4"flare	350 to 1600
003N4105	WVFX25	G 1"	1/4"flare	400-2300
003F1232	WVFX32	G 1-1/4"	1/4"flare	400 to 1700
003F1240	WVFX40	G 1-1/2"	1/4"flare	400 to 1700

Note: WVFX 10 to 40 are direct actuated valves. Suitable for fresh water, neutral brine, sea water. Media Temperature Range: WVFX 10 to 25: -25°C to +130°C. WVFX 32 to 40: -25°C to +90°C. Opening differential pressure: WVFX 10 to 40: 0 to 1000KPa



DANFOSS AVTA

Part Number	Model No.	Water Side	Maximum Temp Sensor	Range Temperature	Capillary tube Length (M)
Thermostatic water regulating valves					
003N4162	AVTA25	G1"	90.C	25-65 °C	2

PENN V46

Part Number	Range KPa	Body type	Size	Capillary length (cm)
Pressure actuated water regulating valve				
V46AA-9600	500 to 1800	Angled	3/8" BSP, to ISO 228	75
V46AB-9600	500 to 1800	Angled	1/2" BSP, to ISO 228	75
V46AC-9600	500 to 1800	Angled	3/4" BSP, to ISO 228	75
V46AD-9600	500 to 1800	Straight	1" BSP, to ISO 7-Rc	75
V46AE-9600	500 to 1800	Straight	1-1/4" BSP, to ISO 7-Rc	75
V46AR-1	483 to 2068	Straight	1-1/2" Flange	76
V46AS-2	483 to 2068	Straight	2" Flange	1/4" male flare fitting



Ball Valves



HENRY BALL VALVES

Features:

- Bidirectional flow design.
- Allowable operating temperature range: -40°C to +150°C
- Allowable operating pressure range: 0 to 4800 KPag (0 to 700 psig)
- Suitable for use with HFC, HCFC, and R744 (CO2) applications.
- Double O-ring stem seal design
- Body is hermetically sealed.
- Ball cavity vented to prevent over-pressure.
- Fully opened or closed with a quarter turn of the valve stem.

Part Number	Solder, ODF/ODF connection	Access Port	Length (mm)	Series
937203	3/8"	1/4" Schrader access port	165	937
937204	1/2"	1/4" Schrader access port	165	937
937205	5/8"	1/4" Schrader access port	165	937
937306	3/4"	1/4" Schrader access port	184	937
937307	7/8"	1/4" Schrader access port	184	937
937409	1-1/8"	1/4" Schrader access port	216	937
937511	1-3/8"	1/4" Schrader access port	235	937
937613	1-5/8"	1/4" Schrader access port	254	937
937617	2-1/8"	1/4" Schrader access port	289	937
937721FP	2-5/8"	1/4" Schrader access port	365	937
937825FP	3-1/8"	1/4" Schrader access port	420	937
907203	3/8"	Without access port	165	907
907204	1/2"	Without access port	165	907
907205	5/8"	Without access port	165	907
907306	3/4"	Without access port	184	907
907307	7/8"	Without access port	184	907
907409	1-1/8"	Without access port	216	907
907511	1-3/8"	Without access port	235	907
907613	1-5/8"	Without access port	254	907
907617	2-1/8"	Without access port	289	907
907721FP	2-5/8"	Without access port	365	907
907725FP	3-1/8"	Without access port	420	907

DANFOSS BALL VALVES

Features

- Bidirectional flow design.
- Temperature range: -40°C to +150°C
- Burst proof spindle design prevents liquid from being trapped internally
- Laser welded construction
- Ball status indicator on spindle top indicating open or closed position.

Part Number	Solder, ODF/ODF connection	Access Port	Maximum working pressure Kpa	Type
GBC Series				
009G7020	1/4"	Without access port	4500	GBC 6s
009G7021	3/8"	Without access port	4500	GBC 10s
009G7022	1/2"	Without access port	4500	GBC 12s
009G7023	5/8"	Without access port	4500	GBC 16s
009G7024	3/4"	Without access port	4500	GBC 18s
009G7025	7/8"	Without access port	4500	GBC 22s
009G7026	1-1/8"	Without access port	4500	GBC 28s



DANFOSS BALL VALVES

Part Number	Solder, ODF/ODF connection	Access Port	Maximum working pressure Kpa	Type
GBC Series (cont'd)				
009G7027	1-3/8"	Without access port	4500	GBC 35s
009G7028	1-5/8"	Without access port	4500	GBC 42s
009G7029	2-1/8"	Without access port	4500	GBC 54s
009G7959	2-5/8"	Without access port	3500	GBC 67s
009G7980	3-1/8"	Without access port	3500	GBC 79s
009G7050	1/4"	1/4" Schrader access port	4500	GBC 6s
009G7051	3/8"	1/4" Schrader access port	4500	GBC 10s
009G7052	1/2"	1/4" Schrader access port	4500	GBC 12s
009G7053	5/8"	1/4" Schrader access port	4500	GBC 16s
009G7054	3/4"	1/4" Schrader access port	4500	GBC 18s
009G7055	7/8"	1/4" Schrader access port	4500	GBC 22s
009G7056	1-1/8"	1/4" Schrader access port	4500	GBC 28s
009G7057	1-3/8"	1/4" Schrader access port	4500	GBC 35s
009G7058	1-5/8"	1/4" Schrader access port	4500	GBC 42s
009G7059	2-1/8"	1/4" Schrader access port	3500	GBC 54s
009G7960	2-5/8"	1/4" Schrader access port	3500	GBC 67s
009G7981	3-1/8"	1/4" Schrader access port	3500	GBC 79s

DANFOSS BALL VALVES R744 (CO₂)

Features:

- Single-flow direction
- Temperature range: -40°C to +150°C
- Internal pressure equalization
- Burst proof spindle design prevents liquid from being trapped internally
- Laser welded construction
- Ball status indicator on spindle top indicating open or closed position.

Part Number	Solder, ODF/ODF connection	Access Port	Maximum working pressure Kpa	Type
GBC SERIES FOR REFRIGERANT R744 (CO₂)				
009G7520	1/4"	Without access port	4500	GBC 6s
009G7521	3/8"	Without access port	4500	GBC 10s
009G7522	1/2"	Without access port	4500	GBC 12s
009G7523	5/8"	Without access port	4500	GBC 16s
009G7524	3/4"	Without access port	4500	GBC 18s
009G7525	7/8"	Without access port	4500	GBC 22s
009G7526	1 1/8"	Without access port	4500	GBC 28s
009G7528	1-3/8"	Without access port	4500	GBC 35s
009G7529	1-5/8"	Without access port	4500	GBC 42s

Check Valves

PARKER CHECK VALVES

Part Number	Connection Size	Maximum working pressure (KPa)
CV4P-6FS-6FS	3/8" ODF	5200
CV5P-8FS-8FS	1/2" ODF	5200
CV7P-10FS-10FS	5/8" ODF	5200
CV9P-14FS-14FS	7/8" ODF	5200
CV11P-18FS-18FS	1 1/8" ODF	5200



Danfoss



DANFOSS CHECK VALVES

Part Number	Connection SIZE	Body shape
020-1040	1/4" Flare	Straight-way
020-1041	3/8" Flare	Straight-way
020-1042	1/2" Flare	Straight-way
020-1043	5/8" Flare	Straight-way
020-1010	1/4" ODF	Straight-way
020-1011	3/8" ODF	Straight-way
020-1012	1/2" ODF	Straight-way
020-1018	5/8" ODF	Straight-way
020-1019	3/4" ODF	Straight-way
020-1021	1 1/8" ODF	Angle-way

 **HENRY**
TECHNOLOGIES



HENRY MAGNETIC CHECK VALVES

Part Number	Connection Size	Maximum working pressure (KPa)
F6311	7/8" ODF	4100
F6312	1 1/8" ODF	4100
F6313	1 3/8" ODF	4000
F6314	1 5/8" ODF	3000
F6315	2 1/8" ODF	3200
F6316	2 5/8" ODF	3000

Line Valves and Fittings

 **HENRY**
TECHNOLOGIES



HENRY PACKLESS LINE VALVES (HAND VALVES)

Part Number	Connection Size	Maximum working pressure Kpa
Flare - Blue line, B series (plastic handle), Male SAE		
2100B-0404	1/4"	4200 KPa
2100B-0606	3/8"	4200 KPa
2100B-0808	1/2"	4200 KPa
2100B-1010	5/8"	4200 KPa
2100B-1212	3/4"	4200 KPa

2100 series, Male SAE

2100-0404	1/4"	4200 KPa
2100-0606	3/8"	4200 KPa
2100-1010	5/8"	4200 KPa
2100-1212	3/4"	4200 KPa

Blue line, 2111B series, solder/extension

2111B-0404	1/4" ODF	4200 KPa
2111B-0606	3/8" ODF	4200 KPa
2111B-0808	1/2" ODF	4200 KPa
2111B-1010	5/8" ODF	4200 KPa

PRESSURE RELIEF VALVES

Part Number	Description
AV-15501-400PSI	PRV 1/4MNPT x 3/8MF 2.76MPA
AV-15501-435PSI	PRV 1/4MNPT x 3/8MF 3.00MPA
AU-15503-300PSI	PRV 3/8MNPT x 1/2MF 2.07MPA
AV-15503-350PSI	PRV 3/8MNPT x 1/2MF 2.41MPA
AV-15503-400PSI	PRV 3/8MNPT x 1/2MF 2.76MPA
AV-15503-435PSI	PRV 3/8MNPT x 1/2MF 3.0MPA
AV-15504-350PSI	PRV 1/2MNPT x 5/8MF 2.41MPA
AV-15504-400PSI	PRV 1/2MNPT x 5/8MF 2.76MPA
AV-15504-425PSI	PRV 1/2MNPT x 5/8MF 2.93MPA
AV-15504-450PSI	PRV 1/2MNPT x 5/8MF 3.1MPA
AU-15506-300PSI	PRV 3/4MNPT x 3/4MF 2.07MPA
AU-15506-400PSI	PRV 3/4MNPT x 3/4FNPT 2.76 MPA
AV-15506-425PSI	PRV 3/4MNPT x 3/4MF 3.0 MPA

**HENRY SAFETY DEVICE KITS**

Part Number	Description
SDK2X-20.7BAR	Dual Safety Device Kit 300 Psi
SDK2X-24.8BAR	Dual Safety Device Kit 360 Psi
SDK2X-27.6BAR	Dual Safety Device Kit 400 Psi
SDK2X-31.0BAR	Dual Safety Device Kit 450 Psi
2740-SWITCH	Rupture Disc Spst-Alarm Switch

HENRY ROTA LOCK VALVES

Part Number	Description
8517357	Valve R/Lock 2-1/4"
24320-P	Valve R/Lock 1-3/8" Sx1-3/4" -12 Un
24602-P	Valve R/Lock 5/8" S X 1" - 14 Unf
266-1420	Rotalock 7/8.Id X 1 1/4.Nut+Ac
2600-081220	Valve R/Lock 1/2" Ods X 3/4" Nut
2600-263650	Valve R/Lock 1 5/8"Id X 2 1/4"
2606-142830	Valve R/Lock 1 3/4" X 7/8" Id
MRV238-1	Valve R/Lock 3/8" Mf X 3/4" - 16 Unf
MRV241-1	Valve R/Lock 1/2" Mf X 1" -14 Unf
MRV245-1	Valve R/Lock 5/8" Mf X 1" - 14 Unf
MRV248-1	Valve R/Lock 3/4" Sx 1 -1/4" -12 Unf
MRV133-2	Valve R/Lock 1/2" Ods X 1" - 14 Unf
MRV132-2	Valve R/Lock 7/8" S X 1-1/4" -12 Unf
MRV311-1	Valve R/Lock 1/4" Mf X 3/4" -16 Unf
MRV346-1	Valve R/Lock 3/8" Ods X3/4" -16 Unf
24320-P	Valve R/Lock 1-3/8" S X 1-3/4" -12 Un

**MANEUROP ROTA LOCK VALVES**

Part Number	Description
8168025	R/Lock Valve 2 1/4" X 1-3/8" V08
8168031	R/Lock Valve FI/FI 1" X 1/2" V06
8168032	R/Lock Valve FI/FI 1 3/4" X 7/8" V07
8168033	R/Lock Valve FI/FI 1 1/4" X 5/8" V09
8168052	R/Lock Valve Se/FI 1-3/4"X1-1/8"

ROTA LOCK ADAPTORS

Part Number	Description
293-0816	Adaptor R/Lock 1/2"Ods X 1" -14 UNF
7765005	Adaptor R/ Lock For Maneurop Sm90
7765006	Adaptor R/Lock For Maneurop Sm110
8153008	Adaptor 3/4" Dis/Suc Solder Sleeve
8153013	Adaptor 7/8" Dis/Suc Solder Sleeve
MRV204-1	Adaptor R/Lock 1/2" Od x 1" -14 UNF
MRV214-1	Adaptor R/Lock 7/8" Od x 1" -14 UNF
MRV362-2	Adaptor R/Lock 5/8" Od x 1" -14 UNF
MRV362-3	Adaptor R/Lock 3/4" Od x 1" -14 UNF
MRV362-5	Adaptor R/Lock 7/8" Od x 1" -14 UNF

ROTALOCK VALVE SEAL

Part Number	Description
CTL264-4	Teflon Seal 3/4"
CTL264-1	Teflon Seal 1"
CTL264-2	Teflon Seal 1-1/4"
CTL264-3	Teflon Seal 1-3/4"
293-0816	Teflon Seal 2 1/4"



HENRY CAPPED LINE VALVES

Part Number	Description
2220 series, In-line foot mount, Male SAE Flare	
2220-0404	1/4" MSAE
2220-0606	3/8" MSAE
2220-0808	1/2" MSAE
2220-1010	5/8" MSAE

2230 series, In-line foot mount, Female to Female solder

2230-0404	1/4" ID
2230-0606	3/8" ID
2230-0808	1/2" ID
2230-1212	3/4" ID

ANGLE, MALE SAE SIDE TO MALE BSP BOTTOM

Part Number	Description
2201-0404	1/4" MSAE X 1/4" MBSP
2201-0406	1/4" MSAE X 3/8" MBSP
2201-0604	3/8" MSAE X 1/4" MBSP
2201-0606	3/8" MSAE X 3/8" MBSP
2201-0608	3/8" MSAE X 1/2" MBSP
2201-0806	1/2" MSAE X 3/8" MBSP
2201-0808	1/2" MSAE X 1/2" MBSP
2201-1008	5/8" MSAE X 1/2" MBSP
2201-1012	5/8" MSAE X 3/4" MBSP



VIBRATION ELIMINATORS

Part Number	Description	Connection (in)
VAF3	Vibration Eliminators	3/8"
VAF4	Vibration Eliminators	1/2"
VAF5	Vibration Eliminators	5/8"
VAF7	Vibration Eliminators	3/4"
VAF8	Vibration Eliminators	7/8"
VAF9	Vibration Eliminators	1-1/8"
VAF10	Vibration Eliminators	1-3/8"
VAF11	Vibration Eliminators	1-5/8"
VAF82	Vibration Eliminators	2-1/8"
VAF83	Vibration Eliminators	2-5/8"



Driers: Liquid Line

INTERLINK LIQUID LINE FILTER DRIERS

Part Number	Conn. Size (inches)	Liquid Capacity (kW)		Drying Capacity (kg refrigerant)								Dimensions		Weight	
		R134a	R404A	R22		R134a, R507		R404A		R407C, R410A		Drops of Water	Length (mm)		Dia. (mm)
				24°C	52°C	24°C	52°C	24°C	52°C	24°C	52°C				

**Flare Connection**

LLD032	1/4	5.8	3.2	4.9	5	5	5	8	5	5	5	160	110	46	0.255
LLD033	3/8	17.7	10.3	4.9	5	5	5	8	5	5	5	160	120	46	0.310
LLD052	1/4	6.4	3.5	10	9	10.6	10	16	9.6	11	9.1	310	119	65	0.395
LLD053	3/8	17.2	10.2	10	9	10.6	10	16	9.6	11	9.1	310	129	65	0.435
LLD082	1/4	6.6	3.6	15.8	15	16.9	16	25	15.4	17	14.6	500	145	65	0.515
LLD083	3/8	18.7	10.5	15.8	15	16.9	16	25	15.4	17	14.6	500	155	65	0.550
LLD084	1/2	26.7	15.6	15.8	15	16.9	16	25	15.4	17	14.6	500	163	65	0.580
LLD162	1/4	7.2	3.9	25	23	26	25.2	39	24	27	23	780	159	78	0.750
LLD163	3/8	20.1	11.1	25	23	26	25.2	39	24	27	23	780	169	78	0.790
LLD164	1/2	30.3	16.9	25	23	26	25.2	39	24	27	23	780	177	78	0.825
LLD165	5/8	30.1	16.0	25	23	26	25.2	39	24	27	23	780	185	78	0.895
LLD303	3/8	20.2	11.0	51	47.4	55	52	81	50	55	47	1620	242	78	1.235
LLD304	1/2	31.1	16.8	51	47.4	55	52	81	50	55	47	1620	250	78	1.290
LLD305	5/8	38.2	21.3	51	47.4	55	52	81	50	55	47	1620	258	78	1.345

Solder Connection

LLD032S	1/4	5.8	3.2	4.9	5	5	5	8	5	5	5	160	110	46	0.225
LLD033S	3/8	17.7	10.3	4.9	5	5	5	8	5	5	5	160	120	46	0.260
LLD052S	1/4	6.4	3.5	10	9	10.6	10	16	9.6	11	9.1	310	119	65	0.360
LLD053S	3/8	17.2	10.2	10	9	10.6	10	16	9.6	11	9.1	310	129	65	0.380
LLD082S	1/4	6.6	3.6	15.8	15	16.9	16	25	15.4	17	14.6	500	145	65	0.480
LLD083S	3/8	18.7	10.5	15.8	15	16.9	16	25	15.4	17	14.6	500	155	65	0.485
LLD084S	1/2	26.7	15.6	15.8	15	16.9	16	25	15.4	17	14.6	500	163	65	0.495
LLD162S	1/4	7.2	3.9	25	23	26	25.2	39	24	27	23	780	159	78	0.755
LLD163S	3/8	20.1	11.1	25	23	26	25.2	39	24	27	23	780	169	78	0.805
LLD164S	1/2	30.3	16.9	25	23	26	25.2	39	24	27	23	780	177	78	0.820
LLD165S	5/8	30.1	16.0	25	23	26	25.2	39	24	27	23	780	185	78	0.895
LLD303S	3/8	20.2	11.0	51	47.4	55	52	81	50	55	47	1620	242	78	1.210
LLD304S	1/2	31.1	16.8	51	47.4	55	52	81	50	55	47	1620	250	78	1.250
LLD305S	5/8	38.2	21.3	51	47.4	55	52	81	50	55	47	1620	258	78	1.270
LLD306S	3/4	56.0	30.9	51	47.4	55	52	81	50	55	47	1620	209	78	1.290

Given in accordance with ARI 710-86 for; Evaporator temperature; te = -15°C, Condensing temperature; tc = 30°C, Pressure drop P = 7 kPa (1psi). *Drying capacity based on moisture content reduction requirements as follows; R22, R410A: down to 60ppm, R407C, R404A, R507: down to 30ppm, R134a: down to 75ppm. Manufactured in accordance with AS2971 or UL207. Safe working pressure: 4,200 kPa

Driers: Liquid Line

Danfoss



DANFOSS DML LIQUID LINE FILTER DRIERS

Part Number	Connection Size	Liquid Capacity in kW*			Overall Length (mm)	DIA. (mm)
		R404A / R507	R22/R407C/ R410A	R134a		
Flare Connection						
023Z5035	1/4"	5	7	7	110	54
023Z5036	3/8"	13	19	17	123	54
023Z5037	1/4"	5	8	7	119	54
023Z5038	3/8"	14	19	18	132	54
023Z5039	1/4"	5	8	7	145	54
023Z5040	3/8"	14	21	19	158	54
023Z5041	1/2"	20	29	26	166	54
023Z5042	1/4"	5	8	7	154	76
023Z5043	3/8"	16	24	22	167	76
023Z5044	1/2"	22	33	30	175	76
023Z5045	5/8"	30	47	43	184	76
023Z0049	3/8"	15	23	21	243	76
023Z0050	1/2"	22	34	31	251	76
023Z0051	5/8"	33	39	45	260	76
023Z0193	3/4"	45	68	62	258	80
023Z0109	1/2"	23	35	35	252	89
023Z0110	5/8"	37	58	58	261	89

Solder Connection

023Z5048	1/4"	5	7	7	98	54
023Z5050	3/8"	13	19	17	104	54
023Z5053	1/4"	5	8	7	107	54
023Z5054	3/8"	14	19	18	113	54
023Z5057	1/4"	5	8	7	133	54
023Z5058	3/8"	14	21	19	139	54
023Z5061	1/2"	20	29	26	143	54
023Z5063	1/4"	5	8	7	142	76
023Z5067	1/2"	22	33	30	152	76
023Z5068	5/8"	30	47	43	158	76
023Z0068	1/2"	22	34	31	228	76
023Z0071	7/8"	43	65	62	229	89

DML Liquid Line Driers have 100% 3A molecular sieve ensuring a high drying capacity which can protect the system from acid, moisture and solid particles. It is also optimised for HFC refrigerants with POE and POE oils. Compatible for HCFC's.

Driers: Heatpump (Bi-Flow)

INTERLINK HEATPUMP FILTER DRIERS



Part Number	Conn. Size (inches)	Capacity (kW)		Drying Capacity (kg) Refrigerant			Dimensions		Weight
		R22, R407C	R134a	R22	R407C, R410A	R134a	Length (mm)	Dia. (mm)	

Flare Connections

HPD082	1/4	4.1	3.7	11.5	11.5	12.5	145	65	0.515
HPD083	3/8	8	7.4	11.5	11.5	12.5	155	65	0.550
HPD084	1/2	8.9	8	11.5	11.5	12.5	163	65	0.580
HPD163	3/8	18.9	17	15.5	15.5	16.3	169	78	0.790
HPD164	1/2	30	27	15.5	15.5	16.3	177	78	0.825
HPD165	5/8	38.5	34.6	15.5	15.5	16.3	185	78	0.825

Solder Connections

HPD082S	1/4	4.1	3.7	11.5	11.5	12.5	116	65	0.480
HPD083S	3/8	8	7.4	11.5	11.5	12.5	120	65	0.485
HPD084S	1/2	8.9	8	11.5	11.5	12.5	122	65	0.495
HPD163S	3/8	18.9	17	15.5	15.5	16.3	134	78	0.805
HPD164S	1/2	30	27	15.5	15.5	16.3	136	78	0.820
HPD165S	5/8	38.5	34.6	15.5	15.5	16.3	134	78	0.895

Given in accordance with ARI 710-86 for; Evaporator temperature; te = -15°C

Condensing temperature; tc = 30°C Pressure drop P = 7kPa (1 psi)

*Drying capacity based on the following criteria; R22-down to 50ppm, R407C-down to 50ppm, R410A-down to 60ppm, R134a-down to 75ppm

Manufacturing Standards Manufactured in accordance with AS2971 or UL207. Safe working pressure: 4,200 kPa



DANFOSS HEATPUMP FILTER DRIERS (BI-FLOW), DMB



Part Number	Type	Conn. Size	Conn.	Capacity (kW)								Liquid Capacity (kW)*		
				R134a		R404A / R507		R407C / R410A		R22		R134a	R404A / R507	R22 / R407C / R410A
				24°C	52°C	24°C	52°C	24°C	52°C	24°C	52°C			

Flare Connection

023Z1412	DMB 082	1/4"	Flare	9.2	8.5	8.7	8.1	8.0	7.3	8.7	8.0	3.9	2.8	4.3
023Z1411	DMB 083	3/8"	Flare	9.2	8.5	8.7	8.1	8.0	7.3	8.7	8.0	7.4	5.3	8.2
023Z1410	DMB 084	1/2"	Flare	9.2	8.5	8.7	8.1	8.0	7.3	8.7	8.0	8.3	6	9.2
023Z1414	DMB 164	1/2"	Flare	17.8	16.5	16.8	15.7	15.4	14.1	16.8	15.6	28	20	32
023Z1413	DMB 165	5/8"	Flare	17.8	16.5	16.8	15.7	15.4	14.1	16.8	15.6	37	29	40
023Z1443	DMB 082s	1/4"	Solder, ODF	9.2	8.5	8.7	8.1	8.0	7.3	8.7	8.0	3.9	2.8	4.3
023Z1442	DMB 083s	3/8"	Solder, ODF	9.2	8.5	8.7	8.1	8.0	7.3	8.7	8.0	7.4	5.3	8.2
023Z1441	DMB 084s	1/2"	Solder, ODF	9.2	8.5	8.7	8.1	8.0	7.3	8.7	8.0	8.3	6	9.2

*Capacity is given in accordance with ARI 710-86 (te=-15°C, tc=+30°C) at Pressure drop Δp=0.07 bar.

Maximum working pressure 4600 Kpa



SPORLAN HEAT PUMP BI DIRECTIONAL FILTER DRIERS

Part No.	Conn. Type & Size	Selection Rec.	Dimensions		Specifications											
			Overall Length (mm)	DIA (mm)	Capacity kW's @ 7KPA ΔP			Water Capacity						Liquid Capacity Grams (wt) @ 38°C		
								R22 Grams @ 60 ppm		R407C Grams @ 50 ppm		R410A Grams @ 50 ppm				
					R22	R407C	R410A	24°C	52°C	24°C	52°C	24°C	52°C	R22	R407C	R410A
HPC-305-S	5/8 ODF Solder	28 - 70 kW	265	76	37	34	36	35	28	29	9	15	11	558	490	488
HPC-307-S	7/8 ODF Solder	28 - 70 kW	280	76	40	37	39	35	28	29	9	15	11	558	490	488

HPC-305-S	5/8 ODF Solder	28 - 70 kW	265	76	37	34	36	35	28	29	9	15	11	558	490	488
HPC-307-S	7/8 ODF Solder	28 - 70 kW	280	76	40	37	39	35	28	29	9	15	11	558	490	488

Driers: Suction Burnout



INTERLINK SUCTION BURNOUT FILTER DRIERS

Part Number	Conn. Size (inches)	Capacity (kW)			Dimensions		Weight
		R22, R407C	R134a	R404A	Length (mm)	Dia. (mm)	
Flare							
BOD083	3/8	6	3.5	4.5	156	65.5	0.600
BOD084	1/2	10	5.5	8	163	65.5	0.640
BOD164	1/2	15	6	8.5	177	78	0.880
BOD165	5/8	20	9.5	13	186	78	0.960
Solder							
BOD083S	3/8	6	3.5	4.5	120	66	0.600
BOD084S	1/2	10	5.5	8	122	66	0.640
BOD085S	5/8	14	6.5	12	120	66	0.640
BOD086S	3/4	18	8	15	134	66	0.645
BOD164S	1/2	15	6	8.5	136	78	0.880
BOD165S	5/8	20	9.5	13	134	78	0.960
BOD166S	3/4	21	11	17	136	78	0.965
BOD167S	7/8	24	13	20	142	78	0.965
BOD305S	5/8	18	12.5	15	216	78	1.460
BOD306S	3/4	22	14	19	209	78	1.440
BOD307S	7/8	26	16	22	215	78	1.500
BOD309S	1 1/8	31	20	27	215	78	1.550
BOD417S	7/8	30	18	25	222	92	2.200
BOD419S	1 1/8	35	22	30	222	92	2.250

Capacity ratings based on: 4°C evaporating temperature pressure drop $\Delta p = .21$ bar

Manufactured in accordance with AS2971. Safe working pressure: 4,200 kPa



DANFOSS SUCTION LINE BURNOUT DRIERS, DAS

Part Number	Type	Connection	Rated Capacity (kW)*			
			Size	R22/R407C/ R410A	R134a	R404A/R507
Flare Connection						
023Z1001	DAS 083	Flare	3/8"	6.0	3.5	4.5
023Z1002	DAS 084	Flare	1/2"	10.0	5.5	8.0
023Z1007	DAS 164	Flare	1/2"	10.5	6.0	8.5
023Z1008	DAS 165	Flare	5/8"	15.0	9.5	13.0
023Z1003	DAS 083	Solder	3/8"	6.0	3.5	4.5
023Z1004	DAS 084	Solder	1/2"	10.0	5.5	8.0
023Z1009	DAS 164	Solder	1/2"	10.5	6.0	8.5
023Z1010	DAS 165	Solder	5/8"	15.0	9.5	13.0
023Z1011	DAS 166	Solder	3/4"	20.0	12.0	17.0
023Z1012	DAS 167	Solder	7/8"	22.0	13.5	19.0
023Z1013	DAS 305	Solder	5/8"	18.0	11.0	15.0
023Z1014	DAS 306	Solder	3/4"	22.0	14.0	19.0
023Z1015	DAS 307	Solder	7/8"	26.0	16.0	22.0
023Z1016	DAS 309	Solder	1 1/8"	31.0	20.0	27.0
023Z1018	DAS 419	Solder	1 1/8"	35.0	22.0	30.0

* Rated capacity is at evaporating temperature $t_e = 4^\circ\text{C}$, Pressure drop $\Delta p = 0.21$ bar.

The Most **Effective,** **Energy Saving Solution**

GBC Shut-off Ball Valve



Features

- Slim body design – easy to install and service
- ¼ turn from fully open to fully closed
- Specifically designed for R744 (CO₂) refrigerant
- Precision laser welded construction
- Drilled and tapped for panel mounting

Benefits

- High KV value at the minimum pressure drop
- New designed PTFE guide ring and spindle for better sealing

SGP Sight Glass



Features

- Sight glass for high pressure applications
- Max. Working Pressure: 52 bar / 754 psig
- Available for HCFC, HFC, HC and R744 refrigerants

Benefits

- Optimal visibility for precise indication of refrigerant status
- Good reliability and lifetime

DCR Filter Drier



Features

- For refrigeration plants with fluorinated refrigerants or CO₂
- Highly efficient dirt retaining capabilities
- Available for HFO, HFC and HCFC refrigerants
- Shell is zinc-phosphated with corrosion-resistant
- The core holder requires minimum free space

Benefits

- High moisture & acid adsorption capacity

DMB Bi-Flow Filter Drier



Features

- 100% 3Å Molecular Sieve core
- High drying capacity minimizing the risk of acid formation (hydrolysis)
- Available for HFO, HC, HFC and HCFC refrigerants
- Optimum flow characteristics and dirt retention

Benefits

- Built-in check valve ensure moisture and acid removal in both flow directions

DAS Burn Out Filter Drier



Features

- Flow velocity is suitably low and minimum pressure drop
- Bonded solid core grains eliminate powder formation
- Available for HFO, HC, HFC and HCFC refrigerants
- Installation with any orientation provided the flow is in the arrow direction

Benefits

- High activated alumina helps refrigeration and A/C system clean up after a compressor motor burn-out
- Solid core ensure high adsorption and low attrition

Driers: Suction Burnout



EMERSON CSFD COMPACT SUCTION LINE FILTER DRIER

Part Number	Description	Connections	Flow Capacity (kW)*												
			R410A		R407A		R407C		R404, R507				R134a		
			Evaporator Temperature (°C)												
			4.4	-6.7	-6.7	-17.8	4.4	-6.7	-6.7	-17.8	-28.9	-40.0	4.4	-6.7	-17.8
0622031	CSFD 14S4-W	1/2" ODF	8.6	5.6	4.2	2.8	6.7	4.3	3.9	2.6	1.6	0.8	4.6	3.2	2.1
0622032	CSFD14S5-VV	5/8" ODF	15.4	10.3	7.7	5.0	12.1	7.9	7.1	4.6	2.7	1.4	8.1	5.3	3.2
0622033	CSFD 14S6-W	3/4" ODF	21.0	13.7	10.3	6.9	16.4	10.5	9.5	6.4	3.8	1.9	10.9	7.4	45.5
0622034	CSFD 14S7-W	7/8" ODF	22.3	14.6	10.9	7.2	17.4	11.1	10.1	6.7	4.1	2.2	11.6	7.7	4.9
0622035	CSFD 14S9-W	1-1/8"ODF	30.0	19.8	14.8	9.7	23.4	15.0	10.9	7.0	4.6	2.5	15.8	10.6	6.3

* Rated capacity is at evaporating temperature $t_e = 4^\circ\text{C}$, Pressure drop $\Delta p = 0.21$ bar.

Demountable Driers



INTERLINK DEMOUNTABLE DRIER SHELLS

Part Number	Core	Connection (inches)			Liquid Capacity (kW)*					Suction Line Refrigeration Capacity (kW) Evaporating Temperature te °C				Weight (kg)
		Dimensions (mm)			R134a	R404A	R507	R22, R407C	R410A	R134a, R507	R404A	R22	R407C, R410A	
		A	B	C						-20°C	-20°C	4.4°C	4.4°C	
DDS178	1	7/8 ID	142	269	124.2	89.7	86.9	128.6	132.7	9.6	12.5	36.7	36.7	4.6
DDS278	2	7/8 ID	282	409	116.0	83.1	80.5	119.5	122.8	9.6	12.5	37.0	37.0	6.0
DDS1118	1	1 1/8 ID	140	269	178.8	128.6	124.5	184.7	190.0	12.9	16.7	49.2	49.2	4.6
DDS2118	2	1 1/8 ID	280	409	178.1	128.2	124.0	183.9	189.1	14.1	18.5	54.8	54.8	6.0
DDS1138	1	1 3/8 ID	140	269	236.8	171.5	166.1	245.6	253.5	16.0	20.7	60.1	60.1	4.6
DDS2138	2	1 3/8 ID	280	409	241.5	174.1	168.7	249.8	257.3	19.0	24.9	73.7	73.7	6.0
DDS3138	3	1 3/8 ID	424	553	253.4	183.1	177.4	262.4	270.5	21.4	28.6	85.7	85.7	7.4
DDS1158	1	1 5/8 ID	140	269	273.7	199.8	193.6	285.4	295.7	15.1	19.6	57.0	57.0	4.6
DDS2158	2	1 5/8 ID	280	409	298.7	216.7	210.0	310.2	320.5	21.9	28.8	85.7	85.7	6.0
DDS1218	1	2 1/8 ID	140	269	399.6	298.2	289.2	422.6	442.2	15.5	20.1	58.2	58.2	4.6
DDS2218	2	2 1/8 ID	280	409	419.9	307.2	297.7	438.4	454.6	21.4	28.2	83.8	83.8	6.0
DDS3218	3	2 1/8 ID	424	553	367.1	268.1	259.8	382.9	396.7	19.1	25.5	76.5	76.5	7.4
DDS2258	2	2 5/8 ID	312	414	316.5	351.7	20.7	341.1	351.7	20.7	27.3	81.1	34	6.71

Liquid Capacity based on ARI 710-86 $t_e = -15^\circ\text{C}$, $t_c = 30^\circ\text{C}$, $p_d = 0.07$ bar Suction Capacity based on ARI 730-86 $t_c = 32.2^\circ\text{C}$ $t_e = +4.4^\circ\text{C}$

Note: 1. Filter cores or blocks are not included with the above shells

Manufactured in accordance with AS2971. Safe working pressure: 4200 kPa

INTERLINK DRIER CORE WITH GASKET

Part Number	Cores	Description	Suitability	Replaces/Interchangeable with
DC48HC	1	Hi-Capacity Drier Core High moisture absorption	HCFC, HFC, & CO ₂ Refrigerants	Z-48, VS-48XH, RCW-48 & UK-48
DC48STD	1	Standard Core Moisture and acid absorption	HCFC, HFC, & CO ₂ Refrigerants Not suitable for oils with additives	PCK-48, 48DN, VS48H, RC-4864 & D48
DC48BO	1	Burn-out Core Complete cleanup	Suitable for use after Compressor Burnout for HCFC, HFC, & CO ₂	PCK-48HH, 48DA, RC-4864- HH, W-48 & VS-48SC
FELT48		Felt Filter Element Low pressure drop	Use when moisture removal is not required	RPE48BD, F48R, VS48F, PFE-48BF, 48-

InterLINK



DANFOSS DCR DRIER SHELL

Part Number	Type	Number of Cores	Connection	Liquid Capacity (kW)*			
			Solder ODF, Copper	R22	R134a	R404A / R507	R407C / R410A
023U7251	DCR0487s	1	7/8"	153	139	99	153
023U7253	DCR0489s	1	1-1/8"	206	186	133	206
023U7254	DCR04811s	1	1-3/8"	259	227	162	259
023U7255	DCR04813s	1	1-5/8"	259	227	162	259

* Liquid capacity in accordance with ARI 710-2002, $t_e = -15^{\circ}\text{C}$, $t_c = +30^{\circ}\text{C}$ at pressure drop $\Delta p = 0.07$ bar.
Capacity shown are DCR shell with 48-DC core Maximum working pressure: 4600KPa Note Drier cores sold separately

Danfoss



DANFOSS DRIER CORE WITH GASKETS

Part Number	Application
023U1392	48-DM solid core, 100% molecular sieve, for liquid line application. Suitable for all HFC refrigerants including R410A, provides high moisture adsorption at low and high condensing temperatures, and effective against impurities.
023U4381	48-DC solid core, 80% molecular sieve and 20% activated alumina, for liquid line application. Suitable for CFC/HCFC/HFC refrigerants, absorbs moisture and acid in the system.
023U5381	48-DA solid core, 30% molecular sieve and 70% activated alumina, for suction line after a compressor burn-out. Suitable for HCFC/HFC refrigerants.
023U1921	48-F Strainer insert (or 'sock'). Compatible with all refrigerants. Retains dirt particles larger than 15µm. For use direct in DCR shells, and used in both suction or liquid line.



Copper Spun Filter Driers



Part Number	Capacity (gms)	Size					Tails		Comments
		Inlet	Outlet	*Outlet Cut Size	Body Dia. (mm)	Body Length (mm)	Inlet	Outlet	
XH9 Desiccant (Suitable for use with all old and new refrigerants and matching lubricants)									
120110XH9	10	1/4"ID	Capillary 2.5mm ID	—	17.5	105	—	—	Bi-directional
120110XH9TT	10	1/4"OD	1/4"ODx2	—	17.5	111	100	135	Bi-directional
120115XH9	15	1/4"ID	Capillary 2.5mm ID	—	17.5	135	—	—	Bi-directional
120115XH92	15	1/4"IDx2	1/4"ID	—	17.5	142	—	—	Bi-directional
120115XH9316	15	3/16"ID	Capillary 2.5mm ID	—	17.5	132	—	—	Bi-directional
120120XH9	20	1/4"ID	Capillary 2.5mm ID	—	24	115	—	—	Bi-directional
121025XH9R	25	3/8"ID	3/8"ID	—	24	142	—	—	Bi-directional
121415XH9	15	5/16"OD / 1/4"ID	3/16"ID	5/16"OD / 1/4"ID	17.5	134	40	55	Bi-directional
121420XH9	20	5/16"OD / 1/4"ID	5.5mm OD / 3.5mm ID	5/16"OD / 1/4"ID	24	118	45	50	Directional
121430XH9	30	5/16"ID / 1/4"ID	5.5mm OD / 3.5mm ID	5/16"OD / 1/4"ID	24	147	58	50	Directional

* Outlet cut size is the connection size after cutting the tail pipe to within 25mm of the drier body.

ACCUMULATORS

Part Number	Description
MRD181-5	Accumulator Copper 38 x L230 x 3/8

HENRY STRAINERS

Part Number	Description
90-0496	Strainer Henry 1/4" Flare
90-0680	Strainer Henry 3/8" Flare
SH-9105	Strainer Oil 3/8" Flare

Sight Glasses

INTERLINK SIGHT GLASSES

Part Number	Connection Size (inches)	Dimensions		Connection Type
		Length (mm)	Width (mm)	
SG14FL	1/4 MSAE x 1/4 MSAE	72	27	Male SAE to Male SAE
SG38FL	3/8 MSAE x 3/8 MSAE	76	27	Male SAE to Male SAE
SG12FL	1/2 MSAE x 1/2 MSAE	83	34	Male SAE to Male SAE
SG58FL	5/8 MSAE x 5/8 MSAE	88	34	Male SAE to Male SAE
SG14MFFL	1/4 MSAE x 1/4 FSAE	62	27	Male SAE to Female SAE
SG38MFFL	3/8 MSAE x 3/8 FSAE	76	34	Male SAE to Female SAE
SG12MFFL	1/2 MSAE x 1/2 FSAE	72	34	Male SAE to Female SAE
SG14SOL	1/4 ID x 1/4 ID – COPP EXT	132	27	Female Solder with Copper Extension
SG38SOL	3/8 ID x 3/8 ID – COPP EXT	130	27	Female Solder with Copper Extension
SG12SOL	1/2 ID x 1/2 ID – COPP EXT	129	27	Female Solder with Copper Extension
SG58SOL	5/8 ID x 5/8 ID – COPP EXT	130	33	Female Solder with Copper Extension
SG34SOL	3/4 ID x 3/4 ID – COPP EXT	146	33	Female Solder with Copper Extension




DANFOSS SGN SIGHT GLASSES

Part Number	Connection	Size
014L0161	MALE FLARE (EXT x EXT)	1/4" x 1/4"
014L0162	MALE FLARE (EXT x EXT)	3/8" x 3/8"
014L0163	MALE FLARE (EXT x EXT)	1/2" X 1/2"
014L0165	MALE FLARE (EXT x EXT)	3/4" X 3/4"
014L0166	MALE FLARE (EXT x EXT)	5/8" X 5/8"
014L0171	MALE FLARE (INT x EXT)	1/4" x 1/4"
014L0172	MALE FLARE (INT x EXT)	3/8" x 3/8"
014L0173	MALE FLARE (INT x EXT)	1/2" X 1/2"
014L0174	MALE FLARE (INT x EXT)	5/8" X 5/8"
014L0175	MALE FLARE (INT x EXT)	3/4" x 3/4"
014L0181	ODF x ODF (SOLDER)	1/4" x 1/4"
014L0182	ODF x ODF (SOLDER)	3/8" x 3/8"
014L0183	ODF x ODF (SOLDER)	1/2" X 1/2"
014L0184	ODF x ODF (SOLDER)	5/8" X 5/8"
014L0185	ODF x ODF (SOLDER)	3/4" x 3/4"
014L0186	ODF x ODF (SOLDER)	7/8" x 7/8"

Working temperature: -50 °C to +80 °C.

Suitable for CFC/HCFC/HFC; including R410A, R32, subcritical R744 (CO2)

Maximum working pressure 5200KPa (52 bar)

With HFC moisture indicator




HENRY SIGHT GLASSES

Part Number	Connection	Size	Overall length (mm)
Single Port			
670-1818	ODF SOLDER	1-1/8"	160
670-2222	ODF SOLDER	1-3/8"	200
Double Port			
675-1818	ODF SOLDER	1-1/8"	160
675-2222	ODF SOLDER	1-3/8"	200




Reversing Valves

RANCO

RANCO						
Part Number	Nominal Capacity	Nominal Capacity (kW)			Connections - ODF	
		R22	407C	410A	Disch.	Suction & Coils
V2-408064-2IL	6.3	7.03	7.8	7.74	3/8 "	1/2 "
V3-410084-7IL	9.5	9.85	10.9	10.09	1/2"	5/8"
V6-412084-1IL	19.3	19.34	21.46	23.56	1/2"	3/4"
V6-414084-1IL	19.3	19.34	21.46	23.56	1/2"	7/8"
V10-414084-2IL	34.8	34.82	38.65	41.85	1/2"	7/8"
V10-414124-2IL	34.8	34.82	38.65	41.85	3/4"	7/8"
V10-418144-2IL	39.4	39.39	43.7	47.48	7/8"	1-1/8"
V12-4220T4-2IL	46.8	49.24	54.65	59.09	1-1/8"	1-3/8"

*Supplied with 240 V coil

RANCO COILS

9220000	24 V LDK-11 Suit Series 4 valves V2,V3,V6,V10,V12
9220002	240 V LDK-41 Suit Series 4 valves V2,V3,V6,V10,V12

SAGINOMIYA

SAGINOMIYA						
STF-0101G	8	4.78	5.3	6.5	5/16	3/8
STF-0301G	11.5	11.04	12.29	15.08	1/2"	5/8"
STF-0401G	15.5	20.75	22.4	27.51	1/2"	3/4"
STF-0712G	20	34.5	38.05	46.74	3/4"	7/8"

SAGINOMIYA COILS – Order Separately

STF-01AB500B1	24 V 600 mm cable suits range STF-0101 - 2011
STF-01AJ509D1	240 V 600 mm cable suits range STF-0101 - 2011

Water Regulating Valves

TYPE V46 COMMERCIAL TYPE - PRESSURE ACTUATED / NON-CORROSIVE REFRIGERANTS

Part Number	Refrigerant	Range (Opening Point)	Pipe Size	Pressure Element
		kPa (psig)		



PENN Water Regulating Valves

V46AA-9600	All Range	500 to 1800 (70 to 260)	3/8" BSP	1/4" Fl. Nut 750 mm Cap.
V46AB-9600	All Range	500 to 1800 (70 to 260)	1/2" BSP	1/4" Fl. Nut 750 mm Cap.
V46AC-9600	All Range	500 to 1800 (70 to 260)	3/4" BSP	1/4" Fl. Nut 750 mm Cap.
V46AD-9600	All Range	500 to 1800 (70 to 260)	1" BSP	1/4" Fl. Nut 750 mm Cap.
V46AE-9600	All Range	500 to 1800 (70 to 260)	1-1/4" BSP	1/4" Fl. Nut 750 mm Cap.
V46AR-1	All Range	483 to 1793 (70 to 260)	1-1/2" Flange	1/4" Fl. Nut 30" Cap.
V46AS-2	R22	1103 to 1793 (160 to 260)	2" Flange	1/4" M.Fl.

Water Flow Switches

Part Number	Connection	Max Liquid Pressure (kPa)	Min Liquid Temperature (°C)	Max Liquid Temperature (°C)	Enclosure
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PENN

F261KAH-V01C	1" NPT	2000	-29	121	Type 3R Slashproof
F261MAH-V01C	1" NPT	2000	-29	121	Type 4 Vapour
F61SB-9100	1" MBSP	1034	4	120	IP43 Slashproof

Mechanical Controls: Temperature

Electrical Rating: 16 Amps
Single Pole Double Throw (Switch Action)
Volts: 240 AC
Full Load Amps: 16
Locked Rotor Amps: 72

COMMERCIAL THERMOSTATS

Part Number	Range (°C)	Diff. (°C)	Bulb & Capillary	Application
RANCO				
016-6930	-34 to 32	4 to 25	1.52 m with 9.5 mm Cross Ambient Bulb	Low/Med Temp refrig
016-6950	-35 to -7	1.7 to 12	2 m with 9.5 mm Coiled Bulb	Low Temp refrig
016-6951	-18 to 13	1.7 to 12	2 m with 9.5 mm Coiled Bulb	Med temp refrigeration
016-6954	-5 to 25	1.7 to 12	2 m with 9.5 mm Coiled Bulb	Med temp refrigeration
016-6980	-18 to 13	1.7 to 12	2 m with 14.5 mm Cross Ambient Bulb	Med temp refrigeration
016-6981	-5 to 25	1.7 to 12	2 m with 14.5 mm Cross Ambient Bulb	Med temp refrigeration
016-8900	-17.8 to 13	4 to 31	2 m with 4.5 mm bulb	Med temp refrigeration

PENN

A19ABC-5	10 to 55	1.8 to 8	3/8" x 5" 2 m Cap.	Heat/Vent/AC
A19ABC-27	38 TO 116	3 to 13	1/2" Npt 2.4 m Cap	Hot water
A19ABC-41C	-34 to 38	1.7 to 6.7	3/8" x 4" 1.8 m Cap.	Low/Med temp refrig.
A19ABC-67	-34 to 38	1.7 to 6.7	3/8" to 4" 6 m Cap.	Low/Med temp refrig.
A19ARC-9105	5 to 50	2.5 to 11	10.5 x 110 x 2 mt neoprene Coated	Cooling tower
A19BAC-3	-1 to 43	1.9	1-3/8" x 2-1/4" Coiled Bulb	Warm air/ Ventilation

PENN 2 Stage

A28AA-65	-34 to 38	2.8 each stage 1 to 4 Int stages	9.5 mm x 102 mm 2.4 mt Cap.	Heat/Vent/AC/Refrig
A28AA-74	0 TO 43	1.9 each stage 1.7 fixed Int stages	35 mm X 57 mm Coiled Bulb	Heat/Vent/AC

PENN Manual Reset

A19ACA-28	-34 to 38	Manual Reset	3/8" x 4" 1.8 m Cap.	Low/Med Temp refrig
A19ACA-31	-34 to 38	Manual Reset	3/8" x 4" 3 m Cap.	Low/Med Temp refrig
A19ADB-26	38 to 116	Manual Reset	3/8" x 3-1/2" 1.8 m Cap.	Heat/Vent/AC
A25CN-4	-4 to 102	High set limit of 52 deg	Fixed Flanged Centre	Heat/Vent/AC

SAGINOMIYA

ALS-C1050XL2	-10 / +50	2.5	3/8" x 4" 2 m Cap.	Med/High temp
TNS-C114QX8	-15 / +15	4.5 to 15	3 m Cap.	Med temp refrigeration
LWSC1030AGL2Q00	-35 / +30	2 to 7	3/8" x 4" 2 m Cap.	Low/Med temp refrig
LWSC1034AGL2Q00	-10 / +35	-1.4 to 5	3/8" x 5" 2 m Cap.	Med temp refrigeration

DANFOSS

060H1101	-30 to 30	2.3	6 mm x 144 mm 1.5 mt Copper	Low/Med temp refrig
060H1106	-30 to 30	2.3	6 mm x 144 mm 1.5 mt Stainless	Low/Med temp refrig

RANCO

Johnson Controls



SAGINOMIYA

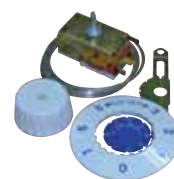


Danfoss

DOMESTIC REFRIGERATION THERMOSTATS



Part Number	Application	Cold Out (°C)	Cold in (°C)	Warm Out (°C)	Warm In (°C)	Defrost Termination (°C)	Const. Cut-in (°C)	Cap. Length (mm)
RANCO								
VX0	2 door cabinet	-15.0	-	-5.0.0	-	+3.5	+3.5	1500
VC1	Compressor fridge	-23.0	-14.4	-	+2.0.0		-	1200
VA2	Electric absorption fridge	-18.0	-14.4	-	+3.5		-	2000
VF3	Freezer	-34.0	-	-16.5	-12.0.0		-	2000
VS5	Freezer with std signal	-34.0	-	-16.5	-12.0.0		-	2000
VB7	Bottle cooler	-3.0	+2.0.0	-	+12.5		-	1200
VT9	Fridge/freezer 2 temperature cyclic defrost	-26.0	-	-11.0.0	-	+3.5	+3.5	1200
4000-08	Window RAC, cooling only	+15	-18		+34			1200



DANFOSS

077B7001	Kit 1 refrigerator	-25	-13.5	-5.5	2			1300
077B7002	Kit 2 refrig. with push button defrost	-21	-11	-7.5	0	6		1300
077B7003	Kit 3 refrigerator with auto defrost	-27.5	3.5	-11	3.5			1600
077B7004	Kit 4 absorption refrigerator	-11	-5	-1	3.5			1500
077B7005	Kit 5 freezer with out signal	-32.5	-21	-15	-7.5			2300
077B7006	Kit 6 freezer with active signal	-34.5	-24	-17	-10		-6	2300
077B7007	Kit 7 freezer with passive signal	-34.5	-24	-17	-10		-6	2300
077B7008	Kit 8 bottle and coolers	-8.5	-1	6	11.5			2000
077B0155	Danfoss OEM thermostat, 2 m capillary							
077B6043	Danfoss thermostat, suit Email, Westinghouse, Frigidaire							
077B6075	Danfoss thermostat, suit Kelvinator fridge							
077B6138SP	Danfoss thermostat, bottle cabinet	-12	5	-5.2	5			
077B2061	Danfoss thermostat, suit Westinghouse/Kelvinator frost free							
077B6042	Danfoss thermostat, suit Westinghouse/Electrolux cyclic defrost							
077B7661	Single knob to suit 077B6138SP							



DOMESTIC AIR-CONDITIONING THERMOSTATS: TWO STAGE CONTROL

Part Number	Range (°C)	Diff. (°C)	Bulb & Capillary	Electrical	Switch 'A'			Switch 'B'			Type	Application
					Terminals	Cut-Out (°C)	Cut-In (°C)	Terminals	Cut-Out (°C)	Cut-In (°C)		
C17-177	16.7 26" Cap.	2	3/8" x 9"	240 V AC, 20 FLA, 78 LRA	2 and 3	19.7	17.8	4 and 5	21.7	19.7	C17	Heat pump or two stage operation*

* The Series C17-100 is a standard cycling control with two electrically separate switches.

This control completes two electrical circuits in response to temperature changes for either automatic change-over on heat-cool cycling or on two-stage operations.

DOMESTIC AIR-CONDITIONING THERMOSTATS: DE-ICE

Part Number	Description	Cut in	Cut out	Contacts	Cap. Length
RANCO					
RCR-5052-2		3.9	-6.1	2-3 Close on temp Rise 2-1 Close on Temp Fall	1220
E15-2217-257	De-Ice Control Time Activated (Ranco) selectable Freq	-2.2	13		
018-100-080	Ice Bank Ranco Single Pack non adjustable				1830

Mechanical Controls: Pressure

SINGLE LOW PRESSURE

Part Number	Range (kPa)	Differential (kPa)	Connections	Reset
RANCO				
016-8706	-30 to 700	60 to 400	1/4" MF	Auto
016-8713	-30 to 700	60 to 400	900mm Cap w-1/4" fl nut	Auto
016-8705	-30 to 700	60 (FIXED)	1/4"MF	Manual
PENN				
P77AAA-9300	-50 to 700	50 to 300	1/4"MF	Auto
P77BCA-9300	-50 to 700	Manual Low	1/4"MF	Manual
DANFOSS				
060-1101*	-20 to 750	70 to 400	1/4"MF	Auto
060-110866	20 to 2100	70 to 400	1/4"MF	Auto
060-3100**	0 to 800	40 to 150	3/8 BSP	Auto
017-5237	-20 to 500	25 to 120	G3/8" Pressure Conn	Convertible
SAGINOMIYA				
SNSC103X	-65 to 294	34 to 196	1/4" MF	Auto
SNSC103XQ	-65 to 295	35 to 196	39" cap	Auto
SNSC106X	-65 to 588	59 to 392	1/4" MF	Auto
SNSC106XQ	-65 to 588	59 to 392	39" cap	Auto
SNS-C106XL1	-65 to 588	59 to 392	39" cap	Auto
SNSC110X	98 to 981	98 to 294	1/4" MF	Auto
SNSC110XQ	98 to 981	98 to 294	39" cap	Auto
SNSC106XM2	-65 to 588	auto	1/4" MF	Manual

* Enclosure IP44. ** SeaWater app / Gold Contacts

SINGLE HIGH PRESSURE

Part Number	Range (kPa)	Differential (kPa)	Connections	Reset
RANCO				
016-8750	700-3000	250 to 800	1/4" MF	Auto
016-8751	700-3000	320 (FIXED)	1/4" MF	Manual
PENN				
P77AAA-9350	300 to 3000	300 to 1200	1/4"MF	Auto
P77AAA-9351	350 to 2100	210 to 550	1/4"MF	Auto
P77BEA-9350	300 to 3000	Manual High	1/4"MF	Manual
DANFOSS				
060-1171*	800 to 3200	180 to 600	1/4"MF	Auto
060-1174**	600 to 1800	100 to 250	1/4"MF	Auto
060-5190***	800 to 4200	400 to 1000	1/4"MF	Auto
SAGINOMIYA				
SNSC130X	490 to 2940	294 to 981	1/4" MF	Auto
SNSC130XQ	490 to 2940	294 to 981	39" cap	Auto
HNSC130X	785 to 2940	fixed 400	1/4" MF	Auto
HNSC130XM1	785 to 2940	auto	1/4" MF	Manual

* Enclosure with IP44 rating. ** Cond fan. *** R744 (CO2) rated

RANCO

Johnson Controls

Danfoss

SAGINOMIYA

RANCO

Johnson Controls

Danfoss

SAGINOMIYA

DUAL PRESSURE

Part Number	Range (kPa)		Differential (kPa)		Connections	Reset	
	Low	High	Low	High		Low pressure LP	High Pressure HP
RANCO							
017-8701	-30 to 700	700 to 3000	60 to 400	350 (FIXED)	1/4" MF	Auto	Auto
017-8711	-30 to 700	700 to 3000	60 to 400 (FIXED)	350	900 mm Cap w-1/4" fl nut	Auto	Auto
017-8705	-30 to 700	700 to 3000	60 to 400	Manual High	1/4" MF	Auto	Manual
017-8703	-30 to 700	700 to 3000	Manual Low	Manual High	1/4" MF	Manual	Manual



PENN

P78LCA-9300	-50 to 700	300 to 3000	50 to 300	300 (FIXED)	1/4" MF	Auto	Auto
P78MCA-9300	-50 to 700	300 to 3000	50 to 300	Manual High	1/4" MF	Auto	Manual
P78PGA-9300	-50 to 700	300 to 3000	50 to 300	Manual High	1/4" MF	Auto	Auto



DANFOSS

060-1199	-20 to 750	800 to 3200	70 to 400	400	900 mm Cap w-1/4" fl nut	Auto	Auto
060-1241*	-20 to 750	800 to 3200	70 to 400	400	1/4" MF	Auto	Auto
060-1265*	-20 to 750	800 to 3200	70 to 400	400	1/4" MF LP/HP Signal	Auto	Auto
060-0007	-20 to 750	800 to 3200	70 to 400	400	1/4" MF	Auto	Manual
060-1243	-20 to 750	800 to 3200	70 to 400	400	1/4" MF LP Signal	Auto	Manual
060-1264	-20 to 750	800 to 3200	70 to 400	400	1/4" MF LP/HP Signal	Auto	Manual
060-1154*	-20 to 750	800 to 3200	70 to 400	400	1/4" MF	Convertible	Convertible
060-1294**	-20 to 750	800 to 3200	70 to 400	400	1 mt cap w- M10 x .75	Auto	Manual



SAGINOMIYA

DNSD306X	-65 to 588	785 to 2942	59 to 392	fixed 392 (approx)	1/4" MF	Auto	Auto
DNSD306XQ	-65 to 588	785 to 2942	59 to 392	fixed 392 (approx)	900 mm Cap w-1/4" fl nut	Auto	Auto
DNSD606X	-65 to 588	785 to 2942	59 to 392	fixed 392 (approx)	1/4" MF	Auto	Auto
DNSD606XQ	-65 to 588	785 to 2942	59 to 392	fixed 392 (approx)	900 mm Cap w-1/4" fl nut	Auto	Auto
DNSD306XM	-65 to 588	785 to 2942	59 to 392	auto	1/4" MF	Auto	Manual
DNSD306XMQ	-65 to 588	785 to 2942	59 to 392	auto	900 mm Cap w-1/4" fl nut	Auto	Manual
DNSD606XM	-65 to 588	785 to 2942	59 to 392	auto	1/4" MF	Auto	Manual
DNSD606XMM	-65 to 588	785 to 2942	59 to 392	auto	1/4" MF	Manual	Manual
DNSD606XMQ	-65 to 588	785 to 2942	59 to 392	auto	900 mm Cap w-1/4" fl nut	Manual	Manual



* Enclosure with IP44 Rating
 ** R717 (ammonia) Rated



SPARES

Part Number	Description	Brand
DANFOSS		
060-1055	Flat Bracket	Danfoss
060-1056	Angle Bracket	Danfoss
060-0086	KP Cover -Suit Single Press Control	Danfoss
060-0113	KP Cover -Suit Dual Press Control	Danfoss
060-109866	Top Cover to suit Dual Press Control	Danfoss



RANCO

31696-1	Angle Mounting Bracket	Ranco
48129-3	Flat Mounting Bracket	Ranco
016-COVER	Single Pressure Control Cover	Ranco
017-COVER	Double Pressure Control Cover	Ranco

CAPILLARY TUBE

Part Number	Description	Width I.D. (mm)	Length	Connection (in.)	Connection Type	Brand
CAP1000	Capillary Tube Assembly		1000	1/4FSAE	FSAE	P&M
CAP1500	Capillary Tube Assembly		1500	1/4FSAE	FSAE	P&M
HHC2	24" Capillary Hose	2	600	1/4FSAE	Straight / Straight	CPS
HHC2S	24" Capillary Hose	2	600	1/4FSAE	Straight / Elbow	CPS
HHC3	36" Capillary Hose	2	900	1/4FSAE	Straight / Straight	CPS
HHC3S	36" Capillary Hose	2	900	1/4FSAE	Straight / Elbow	CPS
HHC4	48" Capillary Hose	2	1200	1/4FSAE	Straight / Straight	CPS
HHC4S	48" Capillary Hose	2	1200	1/4FSAE	Straight / Elbow	CPS
DN2C300SE	12" Capillary Hose with Depressor	2	300	1/4FSAE	Straight / Elbow	InterLINK
DN2C600SE	24" Capillary Hose with Depressor	2	600	1/4FSAE	Straight / Elbow	InterLINK
DN2C900SE	36" Capillary Hose with Depressor	2	900	1/4FSAE	Straight / Elbow	InterLINK
DN2C1200SE	48" Capillary Hose with Depressor	2	1200	1/4FSAE	Straight / Elbow	InterLINK
DN6C300SE	12" Oil Pressure Hose	6	300	1/4FSAE	Straight / Elbow	InterLINK
DN6C600SE	24" Oil Pressure Hose	6	600	1/4FSAE	Straight / Elbow	InterLINK
DN6C900SE	36" Oil Pressure Hose	6	900	1/4FSAE	Straight / Elbow	InterLINK
DN6C1200SE	48" Oil Pressure Hose	6	1200	1/4FSAE	Straight / Elbow	InterLINK

OIL DIFFERENTIAL PRESSURE CONTROLS

Part Number	Time relay release time (sec)	Type	Connection	Media	Operating range	Reset	Diff ΔP (bar)	Switch differential max. ΔP (bar)
DANFOSS								
060B0168	90	MP 54	1/4" flare	HCFC/HFC	-100 to 1200	Auto	Fixed 0.65	0.2
060B0171	60	MP 55	1/4" flare	HCFC/HFC	-100 to 1200	Auto	0.3 to 4.5	0.2
060B0172	90	MP 55	1/4" flare	HCFC/HFC	-100 to 1200	Auto	0.3 to 4.5	0.2



PENN

P74EA-8	Nil	P74	36in. 1/4"	HCFC/HFC	14 to 207	Auto	3.5 fixed	3.5 fixed
P28AA-41	90 sec	P28	36" Cap w-1/4" flare	HCFC/HFC	55 to 483	manual		
P28AA-42	60 sec	P28	36" Cap w-1/4" flare	HCFC/HFC	56 to 483	manual		
P28AA-43	120 sec	P28	36" Cap w-1/4" flare	HCFC/HFC	57 to 483	manual		
P45NCA-12	120 sec	P45	36" Cap w-1/4" flare	HCFC/HFC	62 factory set	manual		



Part Number	Range	Sensitivity	Max Temp.
P32AC-2	.012 to 1.24	0.01	75

Mechanical Controls: Encapsulated Pressure Switch

HIGH PRESSURE

Part Number	Description	Cut Off (Open) KPA	Cut In (Close) KPA
P100HP-4100-L	Control Pressure Mini HP	2827	Manual
P100HP-3020-ST	HP Encap Press Switch, Spade	2070	1380
P100HP-4030-L	HP Lead Mini	2755	2070
P100HP-9070-L	HP Encap Press	620	482
ACB-LC03M	Micro HP MR Cont.		
ACBPB16	Micro High Press Cont.	2400	1910
ACBPB17	Micro High Press Cont.	2845	2355
ACBPC05	Micro High Press Cont.	1420	1815

LOW PRESSURE

Part Number	Description	Cut Off (Open) KPA	Cut In (Close) KPA
P100LP-1522-L	LP Encap Press	1035	1515
P100LP-1725L	LP Encap Press	1172	1723
P100LP-0525-L	Pressure Control LP Mini	34	172
P100LP-1032L	LP Encap Press	69	227
P100LP-3560-L	LP Encap Press	241	413
LCBPA08	Press Cont. Low Range 0.1–0.7 MPA	137	245
LCBMA32	Encapsulating Pressure Switch 1/8 MNPT	0 +/- 30	70+/-40

Mechanical Controls: Condenser Fan Speed

Keeping the pressure in the air cooled condenser constant under changing ambient conditions, provides stable operation.

Application: For Single Phase and Three Phase Motors

Features and Specifications

- Function of cut-off or minimum speed adjustment operation is selectable by a changeover switch.
- Exclusive, highly reliable pressure transducer is included.
- RGE Controllers conform to EC directives.
 - Electromagnetic compatibility – 89/336/EEC, 92/31/EEC & 93/68/EEC.
 - Safety low-voltage – 73/23/EEC & 93/68/EEC.
- Pressure Connection: 1/4" Female Flare with schrader depressor, 900 mm Capillary.
- Maximum Working Pressure: 4700 kPa.
- Ambient Temperature: Single phase: -20°C to 55°C.
- Enclosure: IP54 (DIN 40050).
- Not for Ammonia systems.

SAGINOMIYA

SAGINOMIYA									
Part Number	Phase	Factory Setting	Range (kPa) Adjustment		Proportional Band (kPa)	Refrigerant	Electrical		Cut-Off / Min. Speed
			Min	Max			Voltage	Current (Amp)	
RGE-Z1N2-5	1	1100	800	2800	400	R134a, R12	230/1/50	0.2 to 4	45% of Voltage
RGE-Z1N4-5	1	1900	800	2800	400	R22, R404A, R407C, R507	230/1/50	0.2 to 4	45% of Voltage
RGE-Z1Q2-5	1	1100	800	2800	400	R134a, R12, R22, R404A	230/1/50	0.2 to 8	45% of Voltage
RGE-Z1Q4-5	1	1900	800	2800	400	R407C, R507	230/1/50	0.2 to 8	45% of Voltage
RGE-X3R4-7	3	1600	800	2800	400	R22, R404A, R407C, R507	400/3/50	0.2 to 5	35% of Voltage
XGE-4CC-7	1	1900	1000	2500	600	R22, R404A, R407C, R507	230/1/50	0.2 to 3	cut off

Johnson Controls

PENN FAN SPEED CONTROLS									
Part Number	Phase	Factory Setting	Range (kPa) Adjustment		Proportional Band (kPa)	Refrigerant	Electrical		
			Min	Max			Voltage	Current (Amp)	
P215PR-9200	1	1900	1000	2500	450	R22, R404A, R407C, R507	230/1/50		3

PENN DUAL FAN CYCLING – FOR AIR COOLED CONDENSERS

Part Number	Type	Range (kPa)	Differential (kPa)	Connections	Max Bellows (kPa)
P78ALA-9351	HP	350 to 2100	180 (FIXED)	1/4"MF	3000

Refrigeration Controls

DIXELL PRIME CX SERIES, REFRIGERATION CONTROLS



Features

- Innovative digital controllers dedicated to medium and low temperature refrigeration
- Condenser temperature management to prevent critical plant situations
- Easy and intuitive programming mode
- Hot Key or Prog Tool Kit connector for quick and easy programming
- Energy saving cycles through digital input
- Fast freezing with dedicated set point
- Serial connection to monitoring systems (direct for XR35/75/77CX or via XJ485CX)
- Virtual probe management
- Connection for X-REP remote display (alternative to TTL output)
- Cycles for milk cooling and storage systems
- Heating options for Baime Marie and ovens

DIXELL CX PRIME RANGE

Part Number	Voltage	Probe	Probe included	3 Digit Display Colour	Hotkey Prog.	Compressor	Fans	Defrost	Alarm	Buzzer	Analog	Digital	
PRIME CX SERIES													
XR20CXB	240VAC	NTC	Yes (1 off)	Blue	Yes	Yes (20A)				yes	1	1	TTL
XR20CXB	12V AC/DC	NTC	Yes (1 off)	Blue	Yes	Yes (20A)				yes	1	1	TTL
XR20CXR	240VAC	NTC	Yes (1 off)	Red	Yes	Yes (20A)				yes	1	1	TTL
XR30CXB	240VAC	NTC	Yes (1 off)	Blue	Yes	Yes (20A)			Yes (8A)	yes	1	1	TTL
XR35CX - 5N7I3	240VAC		No	Red	Yes	Yes (16A)			Yes (8A)	yes	2	4	RS485
XR40CXB	240VAC	NTC	Yes (2 off)	Blue	Yes	Yes (20A)		Yes (8A)		yes	2	1	TTL
XR60CXB	240VAC	NTC	Yes (2 off)	Blue	Yes	Yes (20A)	Yes (5A)	Yes (8A)		yes	2	1	TTL
XR60CXB	12V AC/DC	NTC	Yes (2 off)	Blue	Yes	Yes (20A)	Yes (5A)	Yes (8A)		yes	2	1	TTL
XR70CXB	240VAC	NTC	Yes (2 off)	Blue	Yes	Yes (16A)	Yes (5A)	Yes (8A)	Yes (8A)	yes	2	1	TTL



DIXELL CX PRIME RANGE

Part Number	Application				
	Coolroom		Display Case		
	LT	MT	LT	MT	HT

PRIME CX SERIES

XR20CXB	-	•	-	•	•
XR20CXB-T	-	•	-	•	•
XR20CXR	-	•	-	•	•
XR30CXB	-	•	-	•	•
XR35CX -5N7I3	-	•	-	•	•
XR40CXB	•	•	•	•	-
XR60CXB	•	•	•	•	-
XR60CXB-T	•	•	•	•	-
XR70CXB	•	•	•	•	-

PRIME CX SERIES, BULK PACK OPTION

Part Number	Description
XR20CXB-BULK	Bulk = pack of 8 pcs
XR20CXB-BULK	Bulk = pack of 8 pcs
XR30CXB-BULK	Bulk = pack of 8 pcs
XR60CXB-BULK	Bulk = pack of 8 pcs
XR75CXB-BULK	Bulk = pack of 8 pcs

DIXELL UNIVERSAL-R

DUAL SUPPLY VOLTAGE CONTROLLER DESIGNED TO MAKE LIFE EASIER!

Key Features

- Replacement over 150 Models of Refrigeration and Heating Controllers
- UNIV-R4 REPLACES the majority of refrigeration/heating
- Industry standard 32 x 74 mm format controller
- Suitable for both a 12 V AC/DC and a 230 V AC supply
- 7 pre-configured applications
- Self detecting probe type PTC/NTC



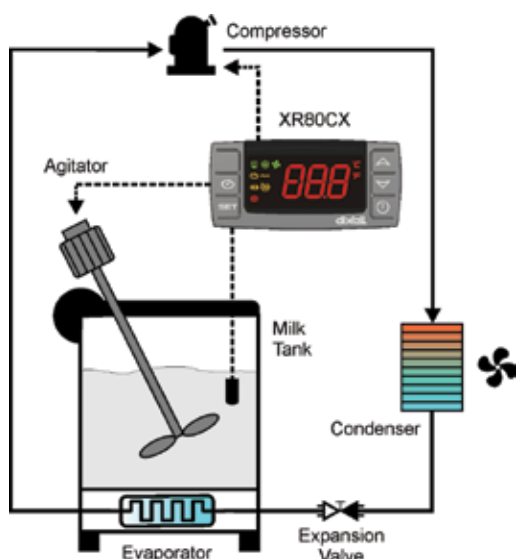
Part Number	Description
Universal-R	
UNIV-R4-6N0C0	UNIV-R4, NTC, 8A+10A, 230 V–12 V, probes not included

DIXELL DAIRY CONTROLLER

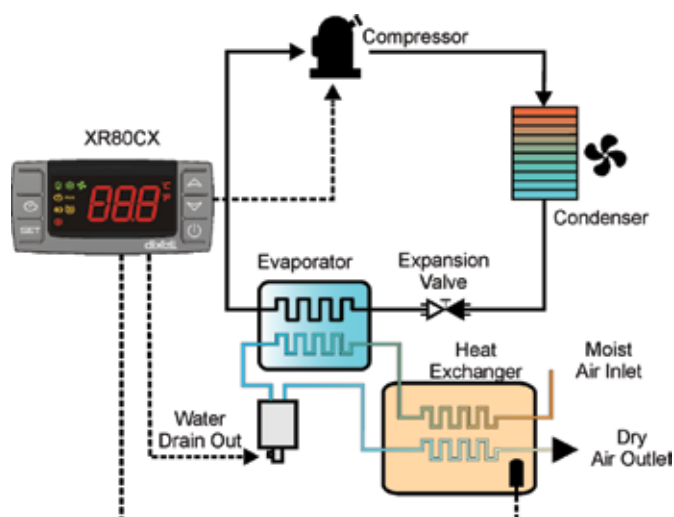


The new XR80CX is the best solution for milk cooling and storage systems and for refrigerated air

Milk cooling and storage systems



Refrigerated Air Dryers



Part Number	Description
Dairy Controller	
XR80CX-5N1C1	Dairy controller; 240 V, NTC, Buzzer, 20 A



DIXELL E-CLASS, BASIC REFRIGERATION CONTROLS

Features

- Reduced number of parameters, easy and intuitive programming mode
- Keyboard lock, alarm display
- Reduced mounting depth (only 50 mm)
- Built-in gasket (IP65)
- Compressor relay up to 1,2 HP (8 A or 20 A relay inside)
- Decimal resolution (-9.9 to 9.9), 2 digits

Part Number	Voltage	Probe	3 digit display colour	Hotkey Prog.	Relay outputs				Inputs		Serial Output
					Compressor	Fans	Defrost	Alarm	Analog	Digital	XWEB Conn
XR02CXR	240 V AC	NTC (not included)	Red	Yes	Yes (20 A)	-	-	-	1	1	Not available
XR03CXR	240 V AC	NTC (not included)	Red	Yes	Yes (20 A)	-	-	Yes (8 A)	1	1	Not available
XR06CXR	240 V AC	NTC (not included)	Red	Yes	Yes (20 A)	Yes (5 A)	Yes (8 A)	-	2	1	Not available

Part Number	Coolroom		Display Case		
	LT	MT	LT	MT	HT
XR02CXR		•		•	•
XR03CXR		•		•	•
XR06CXR	•	•	•	•	

Part Number		
Dixell E-Class, Bulk Pack Option		
XR03CXR-BULK	Bulk = pack of 8 pcs	NTC
XR06CXR-BULK	Bulk = pack of 8 pcs	NTC

XR100 SERIES, THERMOSTAT/CONTROLLER WITH RS485 OUTPUT

Part Number	Application Temp	Voltage	Probe	3 digit display colour	Relay outputs				Inputs		Serial Output
					Compressor	Fans	Defrost	Alarm	Analog	Digital	
XR130C-12VBLUE	Medium	12 V AC/DC	NTC	Blue	Yes (8A)	-	-	Yes (8A)	2	2	RS485
XR170D-240V	Low	240 V AC	NTC	Blue	Yes (8A)	Yes (8A)	Yes (8,5A)	Yes (16A)	3	2	RS485

Thermometer, Temperature display

XT11S-12V	12 V, Red LED, 1 min update delay, NTC input, 31 x 64 mm
XT11S-240V	240 V, Red LED, 1 min update delay, NTC input, 31 x 64 mm

Temperature & Humidity controller

XH260V-240V	Medium, low temperature and maturing room application. 240 V supply, vertical 100 x 64 mm, with buzzer.
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DIGITAL CONTROLLER WITH HACCP FUNCTION

Part Number	Application Temp.	Format (H x L)	Voltage	Probe	Relay Outputs				Buzzer	Real Time Clock	Serial Output
					Comp	Fans	Defrost	Alarm			
XR760C-240V	Low	32 mm x 74 mm	240 V AC	NTC	8A	8A	8A	-	Yes	Yes	RS485

WING SERIES CONTROLLERS

Part Number	Application Temp	Format (H x L)	Voltage	3 digit display colour	Probe
XW20L-OEM	Medium	38 mm x 185 mm	240 V AC	Red	NTC (included)
XW20L-OEMBLUE	Medium	38 mm x 185 mm	240 V AC	Blue	NTC (included)
XW20VS-OEM	Medium	100 mm x 64 mm	240 V AC	Red	NTC (included)
XW20VS-OEMBLUE	Medium	100 mm x 64 mm	240 V AC	Blue	NTC (included)
XW35L-OEM	Medium	38 mm x 185 mm	240 V AC	Red	NTC (included)
XW35L-OEMBLUE	Medium	38 mm x 185 mm	240 V AC	Blue	NTC (included)
XW35VS-OEMBLUE	Medium	100 mm x 64 mm	240 V AC	Blue	NTC (included)
XW60L-OEM	Low	38 mm x 185 mm	240 V AC	Red	NTC (included)
XW60L-OEMBLUE	Low	38 mm x 185 mm	240 V AC	Blue	NTC (included)
XW60VS-OEMBLUE	Low	100 mm x 64 mm	240 V AC	Blue	NTC (included)
XW270K-240V	Medium, Low	PC board	240 V AC	Use with V820 keyboard	NTC (not included)
V820	8 key keyboard, use with XW270K controller				

WING SERIES (INPUTS/OUTPUTS)

Part Number	Relay Outputs				Alarm	Spare	Inputs		Serial Output	Buzzer
	Comp. Relay	Light Relay	Fans	Defrost			Analog	Digital		
XW20L-OEM	20A	8A	-	-	-	-	3	2	TTL	No
XW20L-OEMBLUE	20A	8A	-	-	-	-	3	2	TTL	No
XW20VS-OEM	16A	16A	-	-	-	-	2	1	TTL	YES
XW20VS-OEMBLUE	16A	16A	-	-	-	-	2	1	TTL	YES
XW35L-OEM	20A	8A	-	-	-	-	1	1	TTL	No
XW35L-OEMBLUE	20A	8A	-	-	-	-	1	1	TTL	No
XW35VS-OEMBLUE	16A	8A	-	-	-	-	1	1	TTL	Yes
XW60L-OEM	20A	8A	8A	8A	-	-	4	1	TTL	No
XW60L-OEMBLUE	20A	8A	8A	8A	-	-	4	1	TTL	No
XW60VS-OEMBLUE	20A	8A	8A	8A	-	-	3	1	TTL	No
XW270K-240V	20A	16A	8A	8A	-	-	3	2	TTL	Yes



XM600 SERIES, MULTIFUNCTION CONTROLLERS WITH EEV MANAGEMENT FOR MULTIPLEXED CABINET (CASE) APPLICATIONS

Part Number	App. Temp	Voltage	Probe	Comp. Valve	Defrost	Fans	Light	Alarm	AUX	Analog	Digital	Serial Output
XM678D-2N3C2B	Medium, Low	24 V AC	NTC, Pt1000	5A	16A	8A	16A	8A	8A	6	3 x config	
XM679K-5C3C2B	Medium, Low	240 V AC	NTC, Pt1000	5A	16A	8A	16A	8A	8A	6	3 x config	RS485
CX660-000N0	Keyboard, 6 Key, Suit XM600 32 x 74 mm		-	-	-	-	-	-	-	-	-	RS485

REFRIGERATED TRANSPORT CONTROLLERS

Part Number	App. Temp	Format (H x L)	Voltage	Probe	Relay Outputs			Defrost	Inputs		Serial Output	Buzzer
					Comp.	Fans	Light		Analog	Digital		
XR20CXBDC	Medium	32 mm x 74 mm	9 to 40 V DC	NTC (included)	8A	-	-	-	3	1	TTL	Yes
XR60CX-3N0C0	Low	32 mm x 74 mm	10 to 40 V DC	NTC (included)	8A	8A	-	8A	3	1	TTL	No
XR20CXBDC-BULK	Bulk pack of 8 of XR20CXBDC											

XT100 SERIES, 2 TO 4 STAGE CONTROLLERS

Part Number	No. of stages	Format (H x L)	Voltage	Probe input	Relay Outputs						Inputs	
					Stage 1	Stage 2	Stage 3	Stage 4	Alarm	Buzzer	Analog	Digital Inputs
XT131C-240V	2 stage controller	32 mm x 74 mm	240 V AC	Configurable	8A	8A	-	-	8A	No	1	1

Rack Management Controllers

XC440C-0P00E	4 stage controller	32mm x 74mm	12/24 V AC/DC	4 to 20mA	8A	8A	8A	8A	8A	No	5	5
XC460D-5B02F	6 stage controller	DIN mounted	240 V AC	4 to 20mA	6 X 5A				-	No	2	6
XC645CX	4 stage controller	32mm x 74mm	12/24 V AC/DC	Suction PP11, Condenser PP30	4 X 5A				-	Yes	4	7
XC645D-5C11F	4 stage controller	DIN mounted	240 V AC	Suction PP11, Condenser PP30	4 X 5A				-	Yes	2	8
XC660D-5C11F	6 stage controller	DIN mounted	240 V AC	Suction PP11, Condenser PP30	6 X 5A				-	No	4	8
XC1015D-1C01F	15 stage controller	DIN mounted	24 V AC/DC	Suction PP11, Condenser PP30	15 X 7A (config)				-	No	8	19
VGC810-1P000	Visograph programmable display, wall mounting and with buzzer, use with XC1000 series rack controllers				-	-	-	-	-	Yes	-	-
IPRO V2	EMERSON IPRO Rack Cont	24 V AC/DC	4 to 20 mA	15 X 5A				-			10	20
IPROVISO V2	EMERSON IPRO VISO LCD Display	-	-	-	-	-	-	-				
IPX215D-1000	EMERSON IPX215 IPRO Expansion Module	24 V AC	4 to 20 mA	15 X 5A				-	-		10	20
X0JFSBBUF5N0S00	XEV02D-5N1B0B Digital Compressor Driver	240 V AC	1 x 4 to 20 mA	Dig	-	-	-	8A	Yes	1	2	

XV SERIES, SINGLE PHASE FAN SPEED CONTROLLERS

Part Number	Voltage	Format (H x L)	Control wattage	Regulation Input	Type of action
XV105D-50DN	240VAC	DIN mounted	Up to 500W (2A)	NTC	Direct and cut-out
XV110K-55DN	240VAC	139 mm X 158 mm, with enclosure IP55	Up to 1000W (4A)	NTC	Direct and cut-out

TEMPERATURE PROBES

Part Number	Type	Range	Length (m)	Description
Accessories				
NG6P	NTC Thermistor	-40 °C to 110 °C	1.5	General purpose, IP68
NG6P-3	NTC Thermistor	-40 °C to 110 °C	3.0	General purpose, IP69
NG6P-6	NTC Thermistor	-40 °C to 110 °C	6.0	General purpose, IP70
NG6K	NTC Thermistor	-40 °C to 110 °C	1.5	General purpose, IP68, hot key connector
S6SH	PTC Thermistor	-50 °C to 150 °C	1.5	Heating application, inox steel cap, silicone cable
S6S	PTC Thermistor	-50 °C to 120 °C	1.5	Water proof, Inox steel cap, silicone cable
SPC101A	PTC Thermistor	-50 °C to 120 °C	3.0	Insert probe for cooking oven or blast chiller

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Part Number	Type	Range	Length (m)	Description
Humidity probes				
XH20P	4 to 20 mA output	0% to 99% RH	-	Humidity probe, wall mounting, IP65

Part Number	Type	Range	Length (m)	Description
Pressure Transducers				
PP11	4 to 20 mA output	-0.5 to 11 Bar	2.0	2 wires, 7/16"-20 UNF male fitting, IP65
PP11F	4 to 20 mA output	-0.5 to 11 Bar	2.0	2 wires, 7/16"-20 UNF female fitting, IP65
PP30	4 to 20 mA output	0 to 30 Bar	2.0	2 wires, 7/16"-20 UNF male fitting, IP65
PP30F	4 to 20 mA output	1 to 30 Bar	2.0	2 wires, 7/16"-20 UNF female fitting, IP65
PP50	4 to 20 mA output	0 to 50 Bar	2.0	2 wires, 7/16"-20 UNF male fitting, IP65

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ENCLOSURES / MOUNTING BOXES

Part Number	Description
C-BOX	Mounting box for C & CX series controllers, IP55: 108 x 108 x 90 mm
C-BOX2	Mounting box for C & CX series controllers, IP55: 170 x 105 x 82 mm
VS-BOX	Mounting box for VS series controllers, IP55: 135 x 74 x 72 mm
VS-BOX2	Mounting box for VS series controllers, IP55: 170 x 105 x 82 mm
FA64	Frame adapter for smaller 31 x 64 mm models to fit 32 x 74 mm cutout
FA/CX	Frame adapter for L (wing controllers cutout) to fit CX type controllers



PROTECTOR COVER

Part Number	Description
PA-CX	Control protector cover, IP65



LIGHT SWITCHES

Part Number	Description
CXLS-G	Green light switch, 16 A/250 V AC for FA/CX
CXLS-R	Red light switch, 16 A/250 V AC for FA/CX
CXLS-Y	Yellow light switch, 16 A/250 V AC for FA/CX

PROGRAMMING KEYS

Part Number	Description
HOTKEY	key for Dixell controller programming
XJ485CX	Serial Interface module to convert TTL output into RS485 signal

TRANSFORMERS

Part Number	Description
77171-0002	Transformer 230/12 V, 3 VA
77171-1002	Transformer 230/12 V, 5 VA
TF20D	Transformer 230/24 V, 20 VA
XCH40101100I00	Transformer for IPRO 230/24 V 40 VA
804421	Transformer 230/24 V ECT-623 60 VA

RELAY

Part Number	Description
T92	Relay, 30A (3 HP/240 V AC)

DIXELL COOL MATE SERIES**COOL MATE XLR100 SERIES,
COLD ROOM MANAGEMENT CONTROLLERS, LOW AND MEDIUM TEMPERATURE APPLICATION**

Part Number	Application Temp	Voltage	Probe	LED display
XLR130R	Medium	240 V AC	NTC, included	Red
XLR130B-RTC	Medium	240 V AC	NTC, included	Blue
XLR170R	Low, or medium	240 V AC	NTC, included	Red
XLR170B-RTC	Low, or medium	240 V AC	NTC, included	Blue

RTC = Real Time Clock

**COOL MATE, XLR400 SERIES,
DUAL TEMPERATURE MANAGEMENT CONTROLLER, LOW AND MEDIUM TEMPERATURE APPLICATION**

Part Number	Application Temp	Voltage	Probe	LED display
XLR460-500C1	Low, medium	240 V AC	NTC, included	Red

**COOL MATE, XLR200 SERIES,
TEMPERATURE & HUMIDITY MANAGEMENT CONTROLLER, LOW AND MEDIUM TEMPERATURE APPLICATION**

Part Number	Application Temp	Voltage	Probe	LED display
XLH260-240V	Low, or medium with humidity control	240 V AC	NTC, not included	Red

COOL MATE (INPUTS/OUTPUTS)

Part Number	Relay outputs									Real Time Clock	Serial output
	Comp.	Comp. 2	Fans	Fans 2	Defrost	Defrost 2	Light	AUX	Alarm		
XLR130R	20A	-	-	Opt 20A	-	-	16A	20A	8A	No	RS485 option
XLR130B-RTC	20A	-	-	Opt 20A	-	-	16A	20A	8A	Yes	RS485 Built-in
XLR170R	20A	Opt 20A	8A	-	16A	-	16A	20A	8A	No	RS485 option
XLR170B-RTC	20A	Opt 20A	8A	-	16A	-	16A	20A	8A	Yes	RS485 Built-in
XLR460-500C1	20A	20A	8A	-	16A	-	16A	-	8A	No	RS485 Built-in

RTC = Real Time Clock

Relay outputs							
Part Number	Compressor	Defrost	Fans	Heater control	Humidifying	Dehumidifying Light	Serial output
XLH260-240V	20A	16A	8A	20A	8A	16A config	RS485 Built-in



XWEB, ALARM AND SYSTEM MANAGEMENT CONTROLLER

XWEB500, XWEB500D

- Well suited for medium installations up to 100 Dixell registered devices
- Application such as pubs, clubs, petrol stations, supermarkets or storage centers
- Food health, quality and HACCP reporting (automatic)
- Local or remote connection from a PC without the need of special software, only a standard web browser (Microsoft IE or Firefox®) software is needed; the information is displayed as Web pages.
- Possibility to see and modify the parameters of the connected devices remotely
- One year of stored data for 15 min sampling time
- Data export via USB
- Remote and on site commissioning support available
- Option of wireless connection to devices
- Power monitoring available
- Alarm sending via FAX, SMS or e-mail
- Standard communication protocol Modbus-RTU

Part Number	Description
XWEB300D-8F000	XWEB300, Din mounting, 18 Addresses, No modem, 230 V AC
XWEB500M	XWEB500, wall mounting, 100 addresses, analogue internal modem, 240 V AC
XWEB500D-8T00	XWEB500, DIN mounting, 100 addresses, GSM internal modem, 240 V AC

EMERSON CPC CONTROLS



Emerson E2 controller is a microprocessor-based control system that provide complete control of refrigeration (including compressor racks and condensers) and other components not directly related to refrigeration control, such as HVAC systems, anti-sweat heaters, and sensor control modules. The E2 is the controlling component of a three-network configuration (RS485 I/O, Echelon® Lonworks™ Networks, and Ethernet) that includes input and output communication boards, remote communication software, and a variety of sensors, probes, and transducers.

Part Number	Description
E2E Controls	
845-1300	RX300 E2E Controller, without Echelon
845-1400	RX400 E2E Controller, without Echelon
MultiFlex Boards	
810-3013	MultiFlex 16AI
810-3063	MultiFlex 88AO, 8 Inputs, 8 Outputs, 4 Analog Outputs
810-3064	MultiFlex 88, 8 Inputs & 8 Outputs
810-3065	MultiFlex 168AO, 16 Inputs, 8 Outputs, 4 Analog Outputs
810-3066	MultiFlex 168, 16 Inputs & 8 Outputs
810-3067	MultiFlex 168DO, 16 Inputs, 8 Outputs, 4 Digital Outputs
Accessories	
510-3132	CPC CC-100 2nd Valve Kit
638-4860	CPC E2E Echelon card
810-3006	8RO-C - Relay Output Board
810-3161	CPC CASE CONTROLLER (CC-100) WITH PROBES
814-3110	CPC HAND HELD TERMINAL
832-4830	E2 4-way Echelon Repeater
Transformers	
804421	ECT 623 60 VA Transformer for E2E control, MRLDS & CO2 Sensor
640-0042	50 VA 220 V CT with 24 V lead, class 2
640-0048	175 VA 115/230 V CT, not class 2
640-0080	80 VA 120/208/240 V CT, class 2
Temperature Sensors	
804283	CPC Probe, 20 FT, White
201-1191	CPC E2 high temp probe, white
501-1125	CPC Blue pipe probe
501-1126	CPC Red pipe probe
501-1129	CPC Green pipe probe
508-9101	CPC Product Simulator, Black
Pressure Transducers	
800-2200	0-200 PSI Transducer with 20-foot Lead, Requires 5 V DC Input
800-2500	0-500 PSI Transducer with 20-foot Lead, Requires 5 V DC Input
800-2650	0-650 PSI Transducer with 20-foot Lead, Requires 5 V DC Input
800-2720	0-1740 PSI Transducer with 20-foot Lead, Requires 5 V DC Input
Humidity Sensors	
203-5751	Wall Mount Relative Humidity Transmitter, 0-5 V DC, Analog Sig.
203-5754	Outdoor Relative Humidity Transmitter, 0-5 V DC, Analog Sig.
Refrigerant Gas Detectors	
809-1000	MRLDS, Modular Refrigerant Leak Detection Sensor, photo-acoustic
Anti-Condensate Controllers	
814-6115	ACC Dewpoint Sensor - For use with ICON ONLY
815-6101	ACC ICON Kit, UL Listed, 10 A with temperature sensor



INTERLINK EC SERIES CONTROLS

INTERLINK ECM20

ECM20 controller has 1 relay output, 1 temperature regulation sensor and 1 multifunctional digital/temperature input. Temperature control and compressor start/stop, plus natural defrost on compressor stop. ECM20 can also be used as a simple ON/OFF thermostat for heating application.

The Digital input (D.I.) can be used for:

- Defrost activation
- Energy saving
- Door switch
- Standby
- External alarm, HACCP alarms
- Pressure switch



INTERLINK ECL60

ECL60 controller has 3 relay outputs, 2 temperature sensors (regulation and evaporator), a multifunctional digital/temperature input and a digital input. The second probe can be used to control the defrost cycle and the evaporator fans.

Relay outputs 2 and 3 can be used to control:

- Compressor
- Defrost heating elements
- Evaporator fans
- AUX output
- Alarm
- Standby

The Digital inputs (D.I.1 and D.I.2) can be used for:

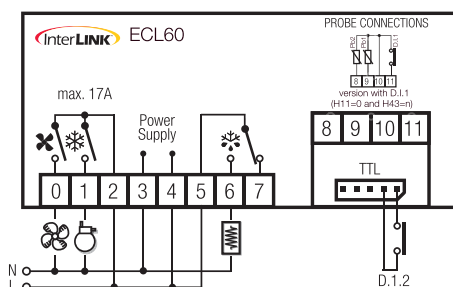
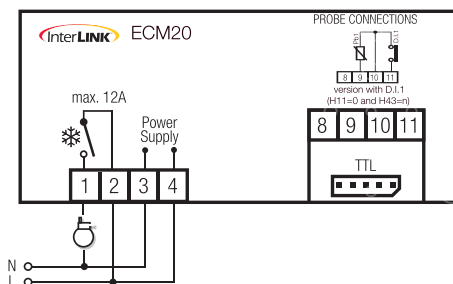
- Defrost activation
- Energy saving
- Door switch
- Standby
- External alarm, HACCP alarms
- Pressure switch

Technical Data

SPECIFICATION	DESCRIPTION
Front Panel	IP65
Dimensions	Front Panel 74 x 32 mm, Depth 59 mm
Mounting	Panel 71 x 29 mm Hole
Power Supply	230 V~ +/- 10% 50/60 Hz
Power Consumption	3 W Max
Display	3 Digits + Symbols
Icons	8 Colour Icons
Connections	TTL Port for programming
Display Range	NTC Probe; -50.0 to 110.0 °C PTC Probe; -55.0 to 140.0 °C PT1000 Probe; -55.0 to 150.0 °C
Analogue Input	ECM20: 1 NTC (default), programmable to PTC ECL60: 2 NTC (default), programmable to PTC
Digital Input	1 voltage free digital input
Digital Output	
ECM20:	1 compressor relay: 1Hp (8FLA) 240 VA
ECL60:	1 Defrost relay: N.O. 8(3)A - N.C. 6(3)A max 250 VA 1 Compressor relay: 1/2 Hp (5FLA - 29LRA) max 240 VA 1 Fan relay: 5(2)A max 250 VA

CROSS REFERENCE CHART

Model	Carel	° LAE	Every Control	Eliwell
ECM20	Easy Cool	LDU151	FK150-151 FK200	ID961
ECL60	Easy Freeze	LDU152	FK202 FK203	ID974



Part Number	Description
ECM20	Medium temp controller, 240 V, with 1 NTC PROBE
ECL60	Low temp. controller, 240 V, with 2 NTC PROBE



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Danfoss Electronic Controls

DANFOSS EKC THERMOSTAT SELECTION TABLE

CODE NO	TYPE	Relays	Comp. / Valve (SPDT)	Defrost	Fan	Alarm / Light / Aux.	Analog Inputs	Digital Inputs	Pt-1000 / PTC1000 or NTC5000 sensor	Copy key option	LON module option	Real Time Clock	HACCP compliance via central network	HACCP function
ERC211	ERC211	1	16A	-	-	-	2	0	NTC 10k	•	•	-	•	-
ERC213	ERC213	3	16A	8A	3A	-	2	2	NTC 10k	•	•	-	•	-
084B8521	EKC 202A	2	16A	8A	-	-	2	1	•	•	•	•	•	-
084B8522	EKC 202B	3	16A	16A	8A	-	2	1	•	•	•	•	•	-
084B8523	EKC 202C	4	16A	16A	8A	8A	2	1	•	•	•	•	•	-

TEMPERATURE / REFRIGERATION CONTROLLERS

Part Number	Description
ERC211	ERC211 KIT, 240 V, 1 RELAY MT
ERC213	ERC213 KIT, 240 V, 3 RELAY LT
084B8521	EKC 202A Refrigeration controller, PT1000 sensor not included
084B8522	EKC 202B Refrigeration controller with fan function, PT1000 sensor not included
084B8523	EKC 202C Refrigeration controller for electric defrost, PT1000 sensor not included

Accessories

084B8565	EKA 179A, RS485 LON module
084N0003	SENSOR SURFACE, S/H, PT1000, -50 °C to 100°C, 3.5 m
084N0008	SENSOR SURFACE, S/H, PT1000, -50 °C to 100°C, 8.5 m
084N0036	SENSOR, PT1000, -40°C to 80°C, 1.5 m
084N0039	SENSOR, PT1000, -40°C to 80°C, 3.5 m
084N2007	SENSOR, PT1000, surface type with clip, -70°C to 180°C, 2.5 m
084N3210	SENSOR ERC, NTC 10k -40°C to 105°C, 1.5 m

AK System Controllers & Accessories, AK-SC255 & AK-355 CS Series

080Z4001	AK-SM 850 Refrigeration System Manager
080Z4004	AK-SM 820 Refrigeration HVAC System Manager
080Z4008	AK-SM 880 Full Version Refrigeration HVAC System Manager
084B7088	EKC316A Superheat controller, 24 V AC, for electronic valves
084B8020	AK-CC550 Case controller
080Z0020	AK-XM 107A,Control, Pulse Counter Module
080Z0032	AK-XM 103A,Control,Extension Module 4AI/4AO
080Z0061	AK-CM 101A, Control, Communication Module TP78
080Z0267	Serial - USB Adapter
080Z0007	AK-XM 101A, 8 analogue input card
080Z0017	AK-XM 205B, 8 analogue inputs, 8 outputs

PRESSURE TRANSMITTERS

Part Number	Type	Signal	Measure range (KPa)	Max. working pressure (KPa)	Connection
060G2049	AKS 33	4 to 20mA	-100 to 1200	3300	7/16"-20 UNF flare
060G2069	AKS 32	1 to 5V	-100 to 1200	3300	7/16"-20 UNF flare
060G2071	AKS 32	1 to 5V	-100 to 3400	5500	7/16"-20 UNF flare
060G1323	AKS 3000	4 to 20mA	-100 to 1200	3300	7/16"-20 UNF flare
Cable with plug for AKS32R pressure transmitter, 5 m					

REFRIGERANT GAS DETECTORS

DANFOSS DGS

Part number	Refrigerant Type	Sensor Type	IP Rating	Range PPM	Freezer Room	Visual Alarm	Audible Alarm
080Z2942	R134a	Semiconductor	IP 42	0-1000	-	•	•
080Z2998	R404A/R507	Semiconductor	IP 43	0-1000	-	•	•
080Z2988	R410A	Semiconductor	IP 44	0-1000	-	•	•
080Z2995	CO2	Infrared	IP 45	0-10,000	-	•	•
080Z2989	R134a	Semiconductor	IP 67	0-1000	•	•	•
080Z2999	R404A/R507	Semiconductor	IP 68	0-1000	•	•	•
080Z2987	R410A	Semiconductor	IP 69	0-1000	•	•	•
080Z2995	CO2	Infrared	IP 70	0-10,000	•	•	•
080Z2997*	CO2	Infrared	IP 71	0-10,000	•	•	•
080Z2095	CO2	Infrared		0-10,000	•	•	•
080Z2097*	CO2			0-10,000	•	•	•

Analogue Outputs: 0-5 V, 1-5 V, 0-10 V, 2-10 V, 4-20 mA

Digital Outputs: 1 Relay: 1 Amp/24 V DC/120 V AC Selectable delay: 0, 1, 5, 10 min

* with 3 m length lead

Danfoss



PHASEFALE RAMIV9

Part Number	Description
RAMIV9	RAMiv Refrigerant Air Monitor
RAMIV/4	RAMiv - 4 Channel Expansion board
RAMIV/P308	RAMiv Sensor (R22, R11, R12)
RAMIV/P328	RAMiv Sensor (R404a, R410a, R134a)





PHASEFALE REFRIGERATION CONTROLS

Part Number	Description
TACMV2	Cool room/freezer temperature and defrost controller
TACM/FRZR	TACMV2 with TACM/MPROBE and TACM/PCB
JOULETEMP	Control with 2 stages of cooling (with defrost), 2 stages of heating plus humidity control
JOULEALARM	Multi-channel alarm and monitoring controller, 8 channels; temperature, pressure, humidity inputs
VATPAC	Milk Vat temperature controller
AD3	Alarm dialler with voice message (of up to 16 seconds & 8 Numbers)

Accessories

TACM/PCB	Defrost board has 1HP fan and heater outputs for freezer application
TACM/MPROB	Temperature sensor, -40 °C to +60 °C, 6 m
PR/MPRH	TACM Metal cap probe high temp 6 m
TACM/B12V	12 V Buzzer kit
TACM/L240V	240 V Alarm light with domed lens
TA1	Pre-set alarm thermostat, 50 mA transistor output

Phasefale Motor Protector, MP15

MP15	Motor protector with fault memory and adjustable start delay (1 to 60 sec), octal base mounting
MP15P	MP15 with pluggable connectors & internal fuse, start delay, fault memory, DIN mounting
8PIN	DIN mount 8 pin base to suit MP15



MP-15P

The industry standard for industrial motor protection.
3 Phase or single phase




TACm

Powerful coolroom and freezer controller
WiFi Option now available
USB Datalogging



JouleTemp

 Ethernet as standard
Remote access and monitoring
Email alarms

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Defrost timers

PARAGON DEFROST TIMERS

Part Number	Description
632-21	Paragon timer Defrost time/tim
8245-21	Paragon timer defrost time/pre
A1400-21	Paragon timer 6 hr/21 min 4 PIN
A769-21	Paragon defrost timer 6 hr/21 min
D769-21	Paragon defrost timer 8 hr/30 min
E1111-21	Paragon timer 6 hr/21 min
N769-21	Paragon defrost timer 4 hr/21 min

 **PARAGON®**


Part Number	Mechanical Type	Voltage	Contact Amps	Initiation	Termination	Trippers	Mounting
8245-21	Synchronous	AC 240	30	Time	Pressure	X3596K	Wall

PERFECT TIMING



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PARAGON®



PARAGON® 9045-00 AND 9145-00 UNIVERSAL DEFROST TIMERS

- Input: 240 V AC 50Hz
- Easy programming, easy set-up, set time, set defrost start and defrost end
- No pins or trippers to lose
- Certified UL873: designed specifically for use with refrigeration equipment, tested at 30,000 cycles
- Manual defrost option (15 min)
- 100 hours of power loss protection for both time and defrost schedule
- Display shows defrost start time and duration
- Real-time clock
- Display with back light, and LED system status indicator
- Fits into existing enclosures

Part Number	Description
9045-00	Time Initiate/Time Terminate Defrost Timer with metal enclosure
9145-00	Time Initiate/Temperature, Pressure Terminate Defrost Timer with metal enclosure

Part Number	Mechanical Type	Voltage	Contact Amps	Initiation	Termination	Trippers	Mounting	Replaces
9045-00	Electronic	AC 100-240	30	Time	Time	None	Wall	All 8045
9145-00	Electronic	AC 100-240	30	Time	Temperature/Pressure	None	Wall	All 8145
632-21	Synchronous	AC 240	10	Time	Time	X3596K	Wall	-

THEBEN TIME SWITCHES

Part Number	Type of contact	Contact Amps	Shortest switching times	Program, every	Switching capacity at 230V AC	Trippers	Mounting
THE64B	1 changeover contact	10	30 min	7.5 min	16 (2) A	THE-0086/118AUK	Wall
THE64C	1 changeover contact	10	20 min/2 hr	5 min/30 min	16 (2) A	THE-0085/121AUK	Wall
FRI77G	2 two way changeover contacts	10	2 min, 1 hr	1 min, 1 hr	16 (2.5) A	None	Din Rail
TR610TOP2	1 channel	10	1 min	weekly program, holiday program	16 (10) A	THE-0087/115AUK	Din Rail

MJB SOLID STATE CUBE TIMERS

Part Number	Description	Input
LTA240X480	Solid state Anticycle Cube Timer, 10 sec to 8 min	19-288 V AC, 1 A max
LT240X180	Solid state Anticycle Cube Timer, 3 min fixed	19-288 V AC, 1 A max
LT240X300T	Solid state Anticycle Cube Timer, 5 min fixed. Direct replacement to 4 pin cube timer found in Temperzone units.	
ODT240X480	Solid state on delay cube timer, 10 sec to 8 min Compressor staging or stagger-starting.	

MJB DEFROST CONTROL

Part Number	Description	Input
EDF-02A	Defrost control with Fuzzy Logic, 10 min, 2 m probe	240 V, 16 A
EDF-02A/24	Defrost control with Fuzzy Logic, 10 min, 2 m probe	24 V
EDF-02A-SEN	Replacement sensor, 2 m probe	-

OTHER TIMERS

Part Number	Description	Input
PFR-03	MJB 3 Phase failure and sequence monitoring relay	
AH3M	Electronic delay timer	
UNI45TA	GRASSLIN UNI45TA Surface Mount 24 hr (3 sets of pins, switching time 45 min, minimum)	
TAC111.0	GRASSLIN 24 hr 240 V day timer (switching time 15 min, minimum)	
TM-619-2	Digital timer panel 240 V, 7 day, 8 functions/day	



HLP REMOTE MONITORING – EMAIL & SMS

Part Number	Description	Voltage	Temp Humidity Range	Temp Input	Humidity Input	Digital Inputs	Analog Inputs	Relay Outputs
S270	3G SMS Alarm with inbuilt temp & RH input – small unit (c/w sensors)	9–36 V DC	-40 to +80 °C 0-99 RH	1	1	2	2	2
S271	3G SMS Alarm with inbuilt temp & RH input – medium sized (c/w sensors)	9–36 V DC	-40 to +80 °C 0-99 RH	1	1	4	4	4
S272	3G SMS Alarm with inbuilt temp & RH input – large sized (c/w sensors)	9–36 V DC	-40 to +80 °C 0-99 RH	1	1	8	6	4

G7	Base Monitoring System (c/w 1 x Base station & 2 x Temp sensors)	100-230/5 V DC Power Adaptor. Operating Voltage 5–20 V DC	-	Up To 64 Sensors per Base Station	-	-	-	-
G7-TM	Wireless Internal Temperature	Batt 2.6–3.6 V DC	-55 to +125 °C	-	-	-	-	-
G7-T2	Wireless Sensor 2 m Cable	Batt 2.6–3.6 V DC	-55 to +125 °C	-	-	-	-	-
G7-TX	Wireless Sensor 100 mm Steel	Batt 2.6–3.6 V DC	-55 to +125 °C	-	-	-	-	-
G7-TH	Wireless Internal Temperature & Humidity Combo Sensor	Batt 2.6–3.6 V DC	-50 to +125 °C 0-100% RH	-	-	-	-	-

Part Number	Battery Backp	Phone to SMS	GSM Connect.	Alarm Type	Cloud Monitor
HLP Remote monitoring - email & sms (cont'd)					
S270	Y	8	Y	SMS	-
S271	Y	8	Y	SMS	-
S272	Y	8	Y	SMS	-

G7	-	-	-	Screen Alarm, Audio Buzzer, Email Alarm Opt SMS	Y
G7-TM	-	Opt	-	-	-
G7-T2	-	Opt	-	-	-
G7-TX	-	Opt	-	-	-
G7-TH	-	Opt	-	-	-

FRIGBOT

Your Dixell®, Carel® and Eliwell® configuration parameters are uploaded automatically to the cloud. You can view, change and remotely deploy configuration settings.



Features

CLOUD

With Frigbot there is no software to download, no backups and no configuration issues with your PC or Mac. Why? Because it's all in the cloud.

Some people might say we are the Facebook™ of fridges. Open up your Internet browser and BAM it's all working. Our Frigbot servers have been optimised for low bandwidth content delivery that means the web pages load fast. We do all the backups and take care of all the other tricky stuff like security and updates. Super easy. Always on. It's the new way to do business.

REPORTS

Do you have a crystal ball? With Frigbot you don't need one!

Frigbot collects the operational data from your equipment and presents it in a easy to read graph. This can not only tell you the current status of your equipment but the Frigbot report* can tell you what was happening yesterday, or last week, or however long you want to go back. It's your very own crystal ball that provides compliance documentation and is an essential tool for fault finding and troubleshooting equipment malfunctions. The Frigbot reports can also be used as a tool to predict equipment faults (maybe before they happen).

CONFIGURATION

Have you ever talked someone through changing a controller setpoint over the telephone? Your success (and your frustration) depends on who is on the other end of the telephone and sometimes you still have to drive out to the equipnet to make that 5 second configuration change because you cant explain it over the telephone.

Well not any more because with Frigbot you can log in and update your configuration anytime you like and from anywhere you have internet access. But the magic doesn't stop there because Frigbot also has an incredible and unique backup feature that saves all your settings – so when you need to replace a faulty controller you can download and restore your last known working configuration.

This is unique to Frigbot and a genuine labor saving efficiency.

ALERTS

When refrigeration equipment breaks it can be a disaster: spoiled food and loss of trade sales (plus the emotional and financial stress of the whole event) and the only person who can solve the problem is usually the very LAST person to get involved. That's the old way of doing business!

The NEW way alerts the fridge mechanic FIRST. This simple alert triggers faster response and quicker repairs that mean less down-time. When there's a breakdown the focus is all about turning the situation around as fast as possible and keeping any disruptions to a minimum.



Part Number	Description
705632162057	Frigbot V9 for Dixell - Suitable for Dixell XRxx WRxx with Modbus
705632162064	Frigbot V9 for Eliwell - Suitable for Eliwell IDPLus 971 and EWPlus 961
705632162071	Frigbot V9 for EVCO - Suitable for EVCO EV32xx
705632162088	0 dbi Antenna is the Frigbot standard antenna, all Frigbot models
705632162095	3 dbi Antenna Frigbot is a remote antenna with a magnetic base, all frigbot models
705632162101	Bulkhead Antenna Adaptor - can be used to extend the antenna port when Frigbot is installed in a sealed box, all frigbot models
705632162118	Carel Adaptor Cable - connect your Frigbot to any compatible Carel controller, all Version 9 Frigbots
705632162125	Dixell Adaptor Cable - connect your Frigbot to any compatible Dixell controller, all Version 9 Frigbots
705632162132	Eliwell Adaptor Cable - connect your Frigbot to any compatible Eliwell controller, all Version 9 Frigbots
705632162149	Evco Adaptor Cable - connect your Frigbot to any compatible Evco controller, all Version 9 Frigbots
705632162156	Replacement Battery Frigbot Replacement Battery , 3.6 V Lithium battery for use with Fribot only.

Note: CT optional

Electronic HVAC Controls

HVAC CONTROL SOLUTIONS

ACTRON/LEASAM CONTROLS

Part Number	Description	Control Applications
BM7-4Z	<ul style="list-style-type: none"> * Wall controller with wide LCD * 7 Day programmable * 3 fan speed selection, remote on / off * 24 hr countdown timer, * 4 zone switching * Dual wall control option and Dual sensor control option 	<ul style="list-style-type: none"> *1 Stage heat pump + aux. heat. *2 Stage cool + 1 stage heat. *1 Stage cool + 2 stage heat. *2 Stage heat pump. *3 Stage heat or 3 stage cool. *add on cooling
BM2-24H-GP	<ul style="list-style-type: none"> * General purpose wall controller * 24 hour countdown timer * Cool, heat, auto modes & 3 fan speed selection * Dual wall control option and Dual sensor control option 	<ul style="list-style-type: none"> *1 Stage heat pump + aux. heat *2 Stage cool + 1 stage heat *1 Stage Cool + 2 stage heat *2 Stage heat pump *3 Stage heat or 3 stage cool
BM2RS-1	Wall mount temperature sensor	* Wall mount temperature sensor
LE-75	<ul style="list-style-type: none"> * General purpose wall controller (apartment) * 24 hour countdown timer * Cool, heat, auto modes & 3 fan speed selection 	<ul style="list-style-type: none"> *1 Stage heat pump *1 Stage cool/heat *2 Stages of cooling *2 Stages of heating
B512GZ	Commercial Zone Controller	*Auto/heat/cool

HANWEST CONTROLS

Part Number	Description	Control Applications
HAN-L62	2 Stage Heat Pump control kit - Consists of wall controller, PCB, and 10 m connecting cable - 7 day programmable - Zone control function available with zone board	2 Stage - heat pump
HAN-L62EH	2 Stage, cool only with element heat control kit - 7 day programmable - Zone control function available with zone board	2 Stage - cool only with 2 stage element heat
HAN-L62WC	Wall controller only	Wall controller only
HAN-L62DCK	Wall control with 10 m cable	Wall control with 10 m cable
PCB-086E	Relay board with enclosure for HAN-L6 controller	6 Zone relay board
L5L62KIT	Conversion kit, from HAN-L5 to HAN-L62 controller	Conversion kit
HDC-203	<ul style="list-style-type: none"> * Defrost cycle test button * Fan speed control for heat pump * LED indicators for cool/heat & defrost operation 	Multi function condenser defrost and fan speed control for heat pump
RES-05	Duct sensor, 5 m	Duct sensor, 5 m
RSP100-05	Wall sensor, 5 m	Wall sensor, 5 m
RSP100-10	Wall sensor, 10 m	Wall sensor, 10 m
RSP100-20	Wall sensor, 20 m	Wall sensor, 20 m
CTS-1.8	Indoor coil sensor	Indoor coil sensor
EHU	Chip, element heat	Chip, element heat



Electronic HVAC Controls

HEVAC CONTROLS		
Part Number	Description	Control Applications
HTC-2	*Analogue controller, 1H+1C, 24 V or 240 V	1 Stage Cool + 1 Stage Heat
HTC-4	*Analogue controller, 2H+2C, 24 V or 240 V	2 Stage Cool + 2 Stage Heat
HTC-5	*Analogue controller, 2H+2C, 24 V or 240 V with temperature display	2 Stage Cool + 2 Stage Heat
HTC-DIGITAL-TC	*Combined temperature & time switch functions *5 fully programmable 2 A (resistive) relays *2 x 365 day programmable time switches *Large LED temperature display *Selectable pre-set in built programs	Multistage temperature control
SRT-H	Wall mounted room sensor for HTC-2, HTC-4	Non-adjustable wall mounted room sensor for HTC-2 & HTC-4
SRT-HSP	Wall mounted room sensor for HTC-2, HTC-4, with convertible setpoint adjuster	Adjustable wall mounted room sensor for HTC-2 & HTC-5
SDT-H	Return air duct sensor for HTC-2, HTC-4	Duct sensor for all analogue HTC series controllers
RTC30	Electronic room T/Stat auto change over	1 Heat + 1 Cool

REGULATOR SYSTEM CONTROLS		
Part Number	Description	Control Applications
TC5044-MK4	Universal controller - Control of temperature, humidity, pressure, flow, CO or CO2 - 2 heat / 2 cool - LCD display with white backlighting - w 70 x h 88 x d 62 mm, DIN mounting	2 Stage Cool + 2 Stage Heat
ET46	Temperature controller - 240 or 24 V AC/DC - 4 off relay outputs with status LED's; 2 heat + 2 cool, or 2 stage. - w 70 x h 88 x d 62 mm, DIN mounting	2 Stage Cool + 2 Stage Heat
TR2100W	Tamper-proof wall mounted temperature sensor, 2k NTC thermistor	Concealed setpoint room sensor
TR3840W	* Temperature sensor to operate with TC5044 universal controller * LCD display * 4 push buttons to turn on/off/adjust temperature.	Smart sensor
TR2500W	* Tamper-proof wall mounted temperature sensor * 10k NTC thermistor	Concealed setpoint room sensor
TR4100W	* Wall mounted averaging temperature sensor * 4k NTC thermistor	Averaging sensor
TR2104W	Wall mounted temperature sensor with concealed set point, set point range is 18 to 28 °C	Concealed setpoint room sensor
TR2114W	Wall mounted temperature sensor with exposed set point, set point range is 18 to 28 °C	Exposed setpoint room sensor
TP2000	* Temperature probe used in air conditioning / duct work * Pipework with WEL101 Thermowell to control water temperature	Temperature sensor
TP2500	* Duct mounted temperature sensor * 10k NTC thermistor	Temperature sensor

HONEYWELL CONTROLS		
Part Number	Description	Control Applications
TH5110D1022/U	24 V/battery, digital, non-programmable, touch-pad	1 Stage Cool + 1 Stage Heat
TH5220D1029/U	24 V/battery, digital, non-programmable, touch-pad	2 Stage Cool + 2 Stage Heat 1 Stage Cool + 2 Stage Heat
TH6110D1021/U	24 V/battery, digital, 5+1+1 time schedule programmable, touch pad thermostat	1 Stage Cool + 1 Stage Heat
TH6220D1028/U	24 V/battery, digital, 5+1+1 time schedule programmable, touch pad thermostat	2 Stage Cool + 2 Stage Heat 1 Stage Cool + 2 Stage Heat
TB8220U1003/U	VisionPro touchscreen, 24 V/battery, 7 day time schedule	2 Stage Cool + 2 Stage Heat 2 Stage Cool + 3 Stage Heat
T6360B1002	* Heating / Cooling * SPDT switching * 230 V AC - 10 A (resistive load) or 3 A (inductive load)	Line voltage dial thermostat
T631C1160	* Heating / Cooling * SPDT switching * 240V AC - 5A (resistive load) or 3.7A (inductive load) * Setpoint range 20 to 60°C	Line voltage dial thermostat
T6376B1004	* Slide switches to control operation * 3 fan speed * 230 V AC * SPDT switching	Heat pump dial set point thermostat
T6360D1008	* Cool only thermostat with on/off Switch * Indicator light * 240 V AC * Vertical/horizontal mounting	1 Stage cool
T6861H2WB	* 2 pipe fan coil control * Floating output - large LCD * 230 V AC	Cool only/Heat only
CMT907A1041	* CM907 programmable thermostat - 7 days with 6 periods per day * 230 V AC or 24 V AC/DC * Upper/lower temperature limit	Heat pump / Air conditioner
TP970B2010	* Pneumatic thermostat without cover * Reverse acting * 15 to 30 °C setpoint range	Cooling system
TP970A2020	* Pneumatic thermostat without cover * Direct acting * 15 to 30 °C set point range	Heating system
14003192-001	Adapts HP970 or TP970 series stats to HP900 and TP900	
WiFi9000	WiFi Thermostat	
TH8110U1003/U	*Touch screen + battery back up Heating: 4.5 to 32 °C, cooling 10 to 37 °C	*1 Heat/1 Cool programable *Fan On/Auto/Circ
DT90A1008	Digital non programable, 1 heat or cool, manual change over. 5–35 °C range. 90 x 92 x 27 mm	Heating - gas & oil boilers, Thermal actuator & zone valve. Air conditioning - Heat pump/fan coil unit
T4360G1006	Heat only thermostat, 16 A 10–30 °C	On / Off, Heat only 220–240 V
T822K1026	Non programable 24 V	Heat only



Electronic HVAC Controls

Honeywell

HONEYWELL CONTROLS		
Part Number	Description	Control Applications
T675A1284	Temp controller remote bulb 1.5 mtr capillary, 0.6 °C differential	Setpoint -15 to +35 °C
T991E1018	Temp cont 1350 hm & 1 SPDT switch	Range 71 to 127 °C
Y6042E3168	T/Stat and base 240 V 2 heat and 2 cool	
T63060C1018	T/Stat heat/cool on/off 240 V	
T6360E1005	Heat pump thermostat, 240 V, 10 A (R) 3AI	Heat/off/cool switch
T6377B1011	Heat pump thermostat plus fan control	Heat/off/cool switch
C7189U1005/U	Room sensor for Visionpro	
T6374C1004	Fan coil T/Stat, 4 pipe heat/cool and valve control	
TP975A1009	Pneumatic diffuser T/Stat, 67–83 °F, direct acting	
TP974A2000	Pneumatic room temp sensor 10–38 °C, used with RP908/RP920 CTRL	1 or 2 pipe direct acting
FB00772	T/Cont rem bulb 5' cap 75–125 °C	
FB00812	T/Cont rem bulb 20' cap 15–75 °C	
FB00862	T/Cont dual switch 20' 15–35 °C	
FB00872	T/Cont dual switch 5' 75–125 °C	
FB01372	Temp cont refig 35–30 °C 8' cap	
FB01416	T/stat heat only 16 A R 240 V	
FB00582	T/stat refig 30+30 °C 6M cap	



THERMOSTAT GUARD BOX		
Part Number	Description	Control Applications
PG3	Thermostat guard, clear cover, solid base, inside 100L x 100W x 64D mm	Thermostat guard
PG6	Thermostat guard, clear cover, solid base, inside 146L x 127W x 71D mm	Thermostat guard
PG9	Thermostat guard, clear cover, solid base, inside 168L x 105W x 70D mm	Thermostat guard
PG12	Thermostat guard, clear cover, solid base, inside 220L x 127W x 98D mm	Thermostat guard
TG510A1001	Thermostat guard, clear cover, solid base, inside 113L x 113W x outside 64D mm	Thermostat guard
TG511A1000	Thermostat guard, clear cover, solid base, inside 129L x 154W x outside 75D mm	Thermostat guard
TG512A1009	Thermostat guard, clear cover, solid base, inside 149L x 213W x outside 86D mm	Thermostat guard

UNIVERSAL CONTROLLERS		
Part Number	Description	Control Applications
ULTRAPLUS	Universal Remote Control	Universal Remote Control
ICONTROL	All split brands	Universal Remote Control
ESR	Universal Energy Saving Remote With Variable Temperature Setting	Universal Energy Saving Remote With Variable Temperature Setting
KT-208	Universal A/C Remote Control	Universal Remote Control

EBERLE CONTROLS

Part Number	Description	Control Applications
111170290100K	<ul style="list-style-type: none"> * Tamper proof room thermostat * SPDT switching * Temperature range: 5 to 30 °C * Voltage: 230 V AC / 24 V AC * Housing: IP30 * Dimensions: 75 x 75 x 25.5 mm 	Switching Current: Heating 1 to 10 (4) and Cooling 1 to 5 (2) Amps. RTR-E 6747
111170291100K	<ul style="list-style-type: none"> * Room thermostat * SPDT switching * Temperature range: 5 to 30 °C * Voltage: 230 V AC / 24 V AC * Housing: IP30 * Dimensions: 75 x 75 x 25.5 mm 	Switching Current: Heating 1 to 10 (4) and Cooling 1 to 5 (2) Amps RTR-E 6722
111170351100K	<ul style="list-style-type: none"> * Room Thermostat On /Off switch * SPDT switching * Temperature Range: 5 to 30 °C * Voltage: 230 V AC * Housing: IP30 * Dimensions: 75 x 75 x 25.5 mm 	Switching Current: Heating 1 to 10 (4) and Cooling 1 to 5 (2) Amps RTR-E 6763
111170951100K	<ul style="list-style-type: none"> * SPDT switching * Outputs: Heat / Cool * Temperature Range: 10 to 60 °C * Voltage: 230 V AC * Housing: IP30 	Room thermostat RTR-E 6705
111-7019-51-100	<ul style="list-style-type: none"> * Room Thermostat * SPDT switching * Outputs: cool only; ON/OFF; 3 speed fan * Temperature range: 5 to 30 °C * Voltage: 230 V AC * Housing: IP30 	Cool only KLR-E 7019
111770791100K	<ul style="list-style-type: none"> * SPDT switching 6(3) amps * Outputs: 1 Heat / 1 Cool (4 pipe), cool + elec. heat or heat pump * Temperature Range: 5 to 30 °C * Voltage: 230 V AC / 24 V AC * Housing: IP30 	Heat pump or cooling with elec. heating KLR-E 7007
111771251100K	<ul style="list-style-type: none"> * SPDT switching 6(3) amps * Outputs: 1 Heat / 1 Cool (4 pipe) or cool + elec heat * Temperature Range: 5 to 30 °C * Voltage: 230 V AC * Housing: IP30 	Heat, Cool, 4 pipe, cooling plus elec. heating KLR-E 7012

EBERLE



Electronic HVAC Controls

EBERLE



EBERLE CONTROLS		
Part Number	Description	Control Applications
517720151100K	<ul style="list-style-type: none"> * SPDT switching with neutral zone * Outputs: heat/cool * Temperature range: 5 to 30 °C * Voltage: 230 V AC * Housing: IP30 * Sensor: NTC Internal 	Heat/cool/auto change over, 4 pipe, KLR-E 7201
517720251100K	<ul style="list-style-type: none"> * SPDT switching with neutral zone 10(4)Amps Heat/Cool * Outputs: auto change heat/cool with on/off * Temperature range: 5 to 30 °C * Voltage: 230 V AC * Housing: IP30 * Sensor: NTC Internal 	Heat/cool/auto change over with on/off. 4 pipe KLR-E 7202
517720351100K	<ul style="list-style-type: none"> * SPDT switching with neutral zone 10(4) amps Heat/Cool, 6(3) Amps fan * Outputs: 1 heat / 1 cool 4 pipe, auto changeover with on/off & 3 speed fan * Temperature range: 5 to 30 °C * Voltage: 230 V AC * Housing: IP30 * Sensor: NTC Internal 	Heat/cool/auto change over with on/off and 3 speed fan, 4 pipe & ventilation. KLR-E 7203
517724051100	<ul style="list-style-type: none"> * SPDT switching with neutral zone * Outputs: compressor, reversing valve (heating on) * Temperature range: 5 to 30 °C * Voltage: 230 V AC * Housing: IP30 * Sensor: NTC internal 	Heat/cool/auto change over with on/off and 3 speed fan. 4 pipe & ventilation. KLR-E 7204
517724151100K	<ul style="list-style-type: none"> * SPDT switching with neutral zone 10(4) amps * Outputs: compressor & reversing valve (heating on) * Temperature range: 5 to 30 °C * Voltage: 230 V AC * Housing: IP30 * Sensor: NTC Internal 	Heat pump. Heat/cool/auto change over. KLR-E 7603.
517724351100K	<ul style="list-style-type: none"> * SPDT switching with neutral zone 10(4) amps * Outputs: heat pump - compressor, reversing valve (heating on) * Temperature range: 5 to 30 °C * Voltage: 230 V AC * Housing: IP30 * Sensor: NTC Internal 	Heatpump. Heat/cool/auto change over with on/off. KLR-E 7611.

THERMOSTATS - OTHERS

SHC-7	7 Day Program & Lockable access cover (Enerstat)	1 Heat / 1 Cool / Auto change over
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MISCELLANEOUS ACCESSORIES

Part Number	Description	Control Applications
10MTRCABLE	Zone damper cable, 10 m QAE	
4ZONETOUCH	4 Zone touch pad, dip switch for spill zone.	
OMT40-240/24V	240 V to 24 V 40 V A transformer	
SMARTPAK	Smart temp interface 240-24 V	
TRANSFORMER	Transformer 240 V/24 V	
T11	Micro air time switch, single channel	
T22	Micro air time switch, two channel	
RP913A1008	Honeywell pneumatic load analyser relay, 7 input	
RP920A1017	Honeywell pneumatic controller single/dual input	Used in conjunction with remote sensors. Proportional &/or Integral control
RP920B1023	Honeywell pneumatic controller single/dual input	Supplied with remote sensor. Proportional &/or Integral control
14004406-300	Cover to suit HP970 and HP972 humidistat, brushed aluminium	
14004458-001	Stand off ring to suit TP97# series	

GAUGES & ACCESSORIES

Part Number	Description	Control Applications
2000-250PA	Gauge magnehelic for air	
2000-500PA	Gauge magnehelic for air	
A-605	Air filter kit for magnehelics	Adapts any standard Magnehelic® gauge for use as an air filter gauge
F7-SS2	Vertical level switch	Float valve
AK3070D	Honeywell polytube 1/4 x 250' yellow (pneumatic spares)	
CCT1606B	Honeywell union 1/4 barb x 5/32 barb	
CCT1607B	Honeywell union 1/4 barb x 1/4 barb	
CCT1612B	Honeywell tee 1/4 barb x 1/4 barb x 1/4 barb	
CCT1642	Honeywell 90° brass elbow 1/4	
CCT729 STABS	Honeywell gauge adaptor for LP916A	
FA00052	Honeywell polytube 3/8 x 250' red	
FA00092	Honeywell nut compr 1/4	
FA00322	Honeywell union 1/2 barb x 1/4 barb	
14003124-002	Honeywell repair kit for MP953B/D/F pneumatic valve actuators	
14004138-001	Honeywell rev act, pos position retrofit kit - MP953B/F actuators	

Electronic HVAC Controls

VALVE & DAMPER ACTUATORS

Part Number	Description
AXT111F502	Suater thermal valve actuator, 24 V AC, on/off OR PWM
GBB161.1E	Siemens rotary damper actuator, 20 nm, non spring return, 24 V
GLB331.1A	Siemens rotary damper actuator, 10 nm, non spring return, 240 V
SFA71/18	Siemens electromotoric actuator 24 V to suit VW/VXI valves
FA01022	Honeywell damper motor 8-13 PSI 2-3/8 DIA
FA01082	Honeywell damper motor 166 mm 10 PSI SPAN W/POS
FA01112	Honeywell damper motor 166 mm 8-15 PSI W/O POS
FA01152	Honeywell valve act 8 inch 2-7 PSI D/ACT
FC00152	Motor single stroke 24 V 60SEC
FD00142	V5011R VLV 2" 2 way 40CV
FD00162	V5011S VLV 1/2" 2-170C CV1
FD00362	Valve 1.25 2 way CV19 C/I FL
FD00372	Valve 1.5 2 way CV29 C/I FL
FD00382	Valve 2IN 2 way CV47 C/I FL
FD00392	Valve 2.5 2 way CV74 C/I FL
FD00412	Valve 3IN 3 way CV117 C/I FL
FD00422	Valve 2.5 3 way CV74 C/I FL
FE00072	Minivalve act. 24 V for V5812/3
FF00452	Push rod 5/16 18
ML6161B2024B	Actuator valve, 24 V, floating non-spring return
ML7984A4009	Actuator valve, 24 V AC / 28 V DC, modulating
MP953C1075	Pneumatic valve actuator 8 inch 8-12 PSI direct acting
MP953D1107	Pneumatic valve actuator 7 inch 9-13 PSI reverse acting
M10S	Honeywell clip M10 spring suit BC450/780
Q5001A1006	Valve linkage 80 LB force
V5011R1042	Honeywell int thread linear valve, suit water, DN15
V5011R1075	Honeywell int thread linear valve, suit water DN32
QZD10240V	Motorised zone damper, 250 DIA, 240 V
QZD1024V	Motorised zone damper,, 250 DIA, 24 V
QZD12240V	Motorised zone damper,, 300 DIA, 240 V
QZD1224V	Motorised zone damper,, 300 DIA, 24 V
QZD14240V	Motorised zone damper, 350 DIA, 240 V
QZD1424V	Motorised zone damper, 350 DIA, 24 V
QZD16240V	Motorised zone damper, 400 DIA, 240 V
QZD1624V	Motorised zone damper, 400 DIA, 24 V
QZD8240V	Motorised zone damper,, 200 DIA, 240 V
QZD824V	Motorised zone damper,, 200 DIA, 24 V
221455A	Honeywell crank arm for modutrol IV motors

SWITCHES

Part Number	Description
SFS1	Water pressure switch, non adjustable differential
FP5248	Air pressure switch OEM
PPS10132-2772	Switch air pressure special

BRACKETS

Part Number	Description
BC450	Bracket A/C Gal. 450 mm braced

SENSORS

Part Number	Description
QBM81.3	Differential pressure monitor, flow switch/filter monitor
MIG-2WM	Micro Air 2 way averaging master sensor
MIG-3WM	Micro Air 3 way averaging master sensor
MIG-3WS	Micro Air 3 way averaging master sensor
MIG-4WM	Micro Air 4 way averaging master sensor
MIG-4WS	Micro Air 4 way Averaging master sensor
FA00512	Honeywell humidistat 2 pipe RA
FA00832	Honeywell temperature sensor 40–70degC 15 in.
FA00842	Honeywell temperature SENSOR 40–70degC 6 in.
FA00862	Honeywell temperature SENSOR 40–70degC
FA00912	Honeywell thermostat ret. air 2 pipe R/A
FA00932	Honeywell temperature CONT D/A rem. bulb 3 in.
FA01362	Honeywell static PRES SENSOR 0-6IN WG
FA01402	Honeywell pressure controller 10–300 PSI
FA01482	Honeywell controller, single input W/CPA
FA01542	Honeywell relay ratio 5 PSI, in 3–13 PSI out
FA01852	Honeywell air head 2 pipe, no tubing
FA01872	Honeywell sleeve assy.
FA01902	Honeywell duct sampling chamber TP970-73
FA01932	Honeywell repair kit for RP908A-B
LP914A1052	Honeywell pneumatic temperature sensor, use with RP920 CTRL

HVAC Field Devices

ERIE K453 DAMPER ACTUATOR

- Erie K453H are spring return two position damper actuators, suitable for up to 250 in2 (1613 cm2) damper area, and uses a two-wire thermostat.
- Erie K453R are two position, motor open and motor close actuators, suitable for up to 500 in2 (3225 cm2) damper area, and uses a three-wire thermostat control.

Part Number	Description / Specification
K453H0077BU00	0.34 Nm; Two-position spring return; 240 V AC

FORTA ACTUATOR, ACCESSORIES

- Electro-mechanical actuators for control of two-way and three-way plug valves in heating systems and air handling systems
- Actuator is either controlled by an increase/decrease signal or by a modulating 0–10 V control signal
- Suitable for DN15 to DN150 valve bodies

Part Number	Description / Specification
880-0230-030	<ul style="list-style-type: none"> - M400 actuator: 400N - 3 Position or Modulating 24 V AC - Suitable for DN15 to DN32 valves, require linkages for mounting to other valve bodies
880-0231-030	<ul style="list-style-type: none"> - M400-S2 actuator: 400N - 3 Position or Modulating 24 V AC - Suitable for DN15 to DN32 valves, require linkages for mounting to other valve bodies
880-0620-000	<ul style="list-style-type: none"> - M400+L2SV actuator: 400N - 3 Position or Modulating 24 V AC - Suitable for DN15 to DN32 valves, includes linkage for mounting to Satchwell valves
M400A-VB	<ul style="list-style-type: none"> - M400 actuator, 400N - 3 Position or Modulating 24 V AC - Suitable for DN15 to DN32 VB7000 valves
880-0310-030	<ul style="list-style-type: none"> - M800 actuator: 800N - 3 Position or Modulating 24 V AC - Suitable for DN40, DN50 valves, require linkages for mounting to other valve bodies
880-0650-000	<ul style="list-style-type: none"> - M800+L2SV actuator: 800N - 3 Position or Modulating 24 V AC - Suitable for DN40, DN50 valves, includes linkage for mounting to Satchwell valves
880-0651-000	<ul style="list-style-type: none"> - M800-S2+L2SV actuator: 800N - 3 Position or Modulating 24 V AC - Suitable for DN40, DN50 valves, includes linkage for mounting to Satchwell valves
M800A-VB	<ul style="list-style-type: none"> - M800 actuator, 800N - 3 Position or Modulating 24 V AC - Suitable for DN40, DN50 VB7000 valves
30-118-U	240 V Replacement motor for ERIE valves and damper actuators

FORTA ACCESSORIES

- AV-8XX and 880-xxxx-xxx adapter kits enables linkage with Forta actuators

Part Number	Description
AV-821	Valve adaptor for VB-7xxx valves to Forta M400/800/1500 actuators



ERIE ZONE VALVES

- Model VT (on-off)
- Use for control of hot and/or chilled water fan coil units, small reheaters/recoolers in electronic temperature control systems

Part Number	Description / Specification
VT2231	VT Series 15mm, 0.8Kv, 2-way, use with AG or AH actuator, 2-Position
VT2232	VT Series 15mm, 2.2Kv, 2-way, use with AG or AH actuator, 2-Position
VT2233	VT Series 15mm, 3.0Kv, 2-way, use with AG or AH actuator, 2-Position
VT2332	VT Series 20mm, 2.2Kv, 3-way, use with AG or AH actuator, 2-Position
VT2333	VT Series 20mm, 3.0Kv, 3-way, use with AG or AH actuator, 2-Position
VT2335	VT Series 20mm, 4.3Kv, 3-way, use with AG or AH actuator, 2 Position
VT2437	VT Series 25mm, 6.9Kv, 3-way, use with AG or AH actuator, 2 Position
VT3231	VT Series 15mm, 1.3Kv, 3-way, use with AG or AH actuator, 2 Position
VT3232	VT Series 15mm, 2.6Kv, 3-way, use with AG or AH actuator, 2 Position
VT3233	VT Series 15mm, 3.5Kv, 3-way, use with AG or AH actuator, 2 Position
VT3332	VT Series 20mm, 2.6Kv, 3-way, use with AG or AH actuator, 2 Position
VT3333	VT Series 20mm, 3.5Kv, 3-way, use with AG or AH actuator, 2 Position
VM3231	VM Series 15mm, 1.3Kv, 3-way, use with AT or AP actuator, modulating

ERIE POP-TOP ACTUATOR

- AHxxxx: spring return, 2 position, mount directly onto valve without the need for linkage or calibration
- APxxxx: modulating, 0–10 V DC signal

Part Number	Description / Specification
AH13U000	2 position, 240 V AC, NC, spring return, 6" lead

SCHNEIDER VALVES

- Rp Internal thread or flange connection
- Suited for Forta M400 and M800 actuators

Part Number	Description / Specification
MB1502	25 mm valve, 3 way rotary shoe, 8.3 Kv
MB1602	40 mm valve, 3 way rotary shoe, 21 Kv
MB1652	50 mm valve, 3 way rotary shoe, 33 Kv
VB-7215-0-4-03	15 mm valve, 2 way stem up open, 1.9 Kv
VB-7215-0-4-07	25 mm valve, 2 way stem up open, 8.7 Kv
VB-7215-0-4-08	25 mm valve, 2 way stem up open, 12 Kv
VB-7215-0-4-10	40 mm valve, 2 way stem up open, 24.0 Kv
VB-7225-0-4-01	15 mm valve, 2 way stem up closed, 0.3 Kv
VB-7225-0-4-02	15 mm valve, 2 way stem up closed, 1.1 Kv
VB-7225-0-4-03	15 mm valve, 2 way stem up closed, 1.9 Kv
VB-7225-0-4-04	15 mm valve, 2 way stem up closed, 3.8 Kv
VB-7225-0-4-05	20 mm valve, 2 way stem up closed, 4.8 Kv
VB-7225-0-4-06	20 mm valve, 2 way stem up closed, 6.5 Kv
VB-7225-0-4-07	25 mm valve, 2 way stem up closed, 8.7 Kv
VB-7225-0-4-08	25 mm valve, 2 way stem up closed, 12.0 Kv
VB-7225-0-4-09	32 mm valve, 2 way stem up closed, 17.0 Kv
VB-7225-0-4-10	40 mm valve, 2 way stem up closed, 24.0 Kv
VB-7225-0-4-11	50 mm valve, 2 way stem up closed, 35.0 Kv

SCHNEIDER VALVES (CONT'D)

Part Number	Description / Specification
VB-7263-0-4-04	15 mm valve, 2 way, 3.8 Kv stem up closed, precision globe valve
VB-7315-0-4-02	15 mm valve, 3 way mixing, 1.9 Kv
VB-7315-0-4-04	15 mm valve, 3 way mixing, 3.8 Kv
VB-7315-0-4-06	20 mm valve, 3 way mixing, 6.5 Kv
VB-7315-0-4-08	25 mm valve, 3 way mixing, 12.0 Kv
VB-7315-0-4-09	32 mm valve, 3 way mixing, 17.0 Kv
VB-7315-0-4-10	40 mm valve, 3 way mixing, 24.0 Kv
VB-7315-0-4-11	50 mm valve, 3 way mixing, 35.0 Kv
VB-7323-0-4-06	20 mm valve, 3 way diverting, 6.5 Kv
VB-7323-0-4-09	32 mm valve, 3 way diverting, 17 Kv
VB-8213-0-5-14	4" flange valve, 2 way Stem up open, 125 Kv
VB-8223-0-5-13	3" flange valve, 2 way stem up closed, 74 Kv
VB-8223-0-5-14	4" flange valve, 2 way Stem up closed, 125 Kv
VZ208E-15BP05	15 mm valve, 2 way, 1.6 Kv
VZ2651	50 mm valve, 2 way 32 Kv
VZ319e-15BP06	15 mm valve, 3 way 2.0 Kv

SCHNEIDER ZONE VALVES - FOR USE WITH MZ10, MZ95 & MZ18 ACTUATORS

Part Number	Description / Specification
721-0702-000	VZ22 2 way zone valve; 15DN; 0.16Kvs
721-0722-000	VZ22 2 way zone valve; 15DN; 1.6Kvs
721-0726-000	VZ22 2 way zone valve; 20DN; 2.5Kvs
731-0710-000	VZ32 2 way zone valve; 15DN (check Kpa / Kvs requirement)
731-0718-000	VZ32 2 way zone valve; 15DN (check Kpa / Kvs requirement)
731-0722-000	VZ32 2 way zone valve; 15DN (check Kpa / Kvs requirement)
731-0730-000	VZ32 2 way zone valve; 20DN (check Kpa / Kvs requirement)

VALVE ACCESSORIES

Part Number	Description / Specification
YBA-622-2	Valve packing kit
YBA-652-2	Valve packing gland assembly
0626-9-311	Gland kit Satchwell MZF VZF
080-4629-005	Stem packing V354 V355
914-1070-000	Linkage kit suit MBF4742, 4782 & 4857 (MD20)
914-1071-000	Linkage kit suit MB1/2" to 2" (MD10/20)

MISCELLANEOUS VALVES

Part Number	Description / Specification
721-2258-000	V222 flanged balanced plug valve; 3"; 80DN
731-0536-000	VZ39 3 way valve 15 mm
731-1721-000	V311T 3 way plug valve DN15 internal thread
731-1745-000	V311T 3 way plug valve DN50 internal thread
731-4129-000	V341 3 way plug valve DN15; bronze

HVAC Field Devices

ACTUATORS	
Part Number	Description / Specification
845-5001-000	MZ20B 24 V AC (use with VZ29/VZ39/VZ49 valves)
845-5051-000	MZ20A (use with VZ219E/VZ319E/VZ419E valves)
845-5100-000	MZ18A 24 V AC (use with VZ22/VZ32/VZ42 valves)
845-5101-000	MZ18B 24 V AC 3 point valve actuator (use with VZ22/VZ32/VZ42 valves)
853-2221-010	MC52A 24 V AC modulating (use with V354 valves)
875-1001-000	MD5B 230 V AC 3 point damper actuator
AVU2201	AVU Mk2 24 V AC (use with Satchwell zone valves)
AVUE5304	Direct acting 24 V Actuator
AVUE5305	24V V AC Actuator, 0-10 V, 4 VU, DA
MA40-7041	Spring return DuraDrive 2 position 230 V AC
MD10SR-24M	Spring return damper actuator 10 Nm
MD20SR-24M	Spring return damper actuator 20 Nm
MD20SR-24T	Spring return damper actuator 20 Nm
MF20-24M	Butterfly valve actuator (suits VF208W series valves)
MF-22303	Floating valve actuator (suitable for chilled / hot water & steam)
MK-2690	Pneumatic valve actuator (suits VB-111 & VB9### series valves)
MK-4621	Pneumatic valve actuator (suits VB-111, VB131, VB314, VB7### & VB9### series valves)
MP-481-129	Reversible and proportional electric actuator
MP-5213	Electronic hydraulic actuator
MP-5213-503	Electronic hydraulic actuator
MP5-4651	Electronic damper actuator drive
MP-9750	Electronic damper, globe valve actuator 120 V
MS41-6043	Non-spring return direct coupled modulating 24 V AC
MS41-6083	Non-spring return direct coupled modulating 24 V AC
MS41-6153	Non-spring return rotary electronic damper 24V V AC Modulating
MS41-7153	Spring return proportional (suit damper and valve control) 24 V AC
MS51-7103-150	Linear spring return (suit VB-7### and VB-9### series Valves)
MS61-7203	DuraDrive spring return proportional (suit VB-8###, VB-931# & VB-92## series Valves)
MZ140-24T	Thermoelectric 2 position On/Off control (suit VZ#08# zone valves) 24 V AC

ACTUATOR ACCESSORIES	
Part Number	Description / Specification
AK-42309-500	Positive positioning pneumatic relay
AM-734	Linkage kit (mount electric Duradrive & use with MX61-720x actuator)
AV-400	Linkage kit suit MK-2690 pneumatic actuators
AV-401	Linkage kit suit MK-46## pneumatic actuators
CP-8301-240	Electronic Actuator Drive 240 V
CP-8551	Electronic to pneumatic transducer (4 to 20 mA)
CP-8552	Electronic to pneumatic transducer (4 to 20 mA, 6 to 9 V & 0 to 10 V)
CP-9302	Electronic actuator drive 240 V
LNKCT55	Adaptor V354 valve to MZ20A
M574-1520	Pneumatic Damper Actuator with positive positioning
N800-0555-BOX	Positive positioning relay - positioner only
N800-0555-P	Positive positioning relay - positioner kit
N800-9422	Diaphragm for M572 actuators

STR300 ROOM SENSOR

Part Number	Description / Specification
0-069-2200-0	STR300 room temperature transmitter 0 to 40 °C
0-046-0300-0	STR200 room temperature sensor

ST#600 ROOM SENSOR

- Designed for Satchwell range of controllers

Part Number	Description / Specification
0-046-0410-0	STR600 room sensor
512-6060-000	ST0600 Outdoor temperature sensor

HAWKEYE 700/900 SERIES CURRENT SWITCHES, ADJUSTABLE

- Solid and split-core adjustable current sensors
- Can detect belt loss and motor failure and provide accurate, reliable and maintenance-free fan and pump status indication
- Can also be used to monitor critical motors and verify lighting circuit loads

Part Number	Description / Specification
H708	Solid-Core, adjustable set point, digital output, 1–135 A; 1.0 A @ 30 V AC/DC

HAWKEYE 600/800 SERIES CURRENT SWITCHES, FIXED

The Hawkeye 600/800 Series current switches provide a cost-effective solution for monitoring the on/off status of unit vents, exhaust fans, recirculation pumps and other fixed loads where belt loss is not a concern and for verifying lighting run times.

Part Number	Description / Specification
H600	Split-core, fixed set point, digital output, 0.75–200 A, 1.0 A @ 30 V AC/DC
H800	Solid-core, fixed set point, digital output, 0.5–200 A, 1.0 A @ 30 V AC/DC



SPD910, AIR DIFFERENTIAL PRESSURE SWITCH

- Intended for use in air handling systems, monitoring of air ducts, filters and fans.
- Mounting bracket and tubing are included
- For air and non-aggressive gas application
- Plastic enclosure with IP54 rating

Part Number	Description / Specification
0-047-0106-0	SPD910 Air differential pressure switch with a differential pressure range of 20-300 Pa, 250 V AC
0-047-0107-0	SPD910 Air differential pressure switch with a differential pressure range of 40-500 Pa, 250 V AC
SPP920-060	Air differential pressure switch, range 15–60 MBAR
SPP929-200	Air differential pressure switch, range 40–200 MBAR

SPU UNIVERSAL DIFFERENTIAL PRESSURE SWITCH

- Used to signal when the pressure difference is too high due to a blocked filter; too low due to flow failure or for level control in a pressurised vessel, not suitable for vacuum.
- IP65 enclosure protection
- Suitable for air, nitrogen, inert gas, water, steam or mineral Oils



Part Number	Description / Specification
SPU1201	Range 20–400 kpa; 10 kpa reset differential; 1600 kpa max differential pressure overload
SPU1301	Universal pressure switch

SFS WATER DIFFERENTIAL PRESSURE SWITCHES

- Used as a safety cut-out for detection of water flow. Mounted across condenser vessel to detect water flow.

Part Number	Description / Specification
SFS1	Water differential pressure switch 1000 kpa 240 V AC
SFS-1-1600	Water differential pressure switch 1600 kpa 240 V AC

SATCHWELL SFW, WATER FLOW SWITCH

Part Number	Description / Specification
-------------	-----------------------------

- Used to monitor water flow in pipe diameters from 1" up to a maximum of 6"
- The switching value can be increased as required
- The water flow switch can be mounted in a short necked welding socket or in a tee with a short branch. It is not possible to use a swept tee as this will interfere with paddle movement
- The water flow switches are SPDT type

**PX SERIES - DRY MEDIA DIFFERENTIAL PRESSURE TRANSDUCER**

- Monitor static pressure in duct or room application; variable air volume system control, filter status monitoring in commercial buildings, and with 0–10 V DC output

Part Number	Description / Specification
PXPXX01S	Selectable range of 0-250 Pa, panel mounted
PXPXX02S	Selectable range of 0-2500 Pa, panel mounted

PW SERIES - WET MEDIA DIFFERENTIAL PRESSURE TRANSDUCER

- Monitor pump differential pressure; chiller/boiler differential pressure drop; CH/HW system differential pressure, and with 0–10 V DC output

Part Number	Description / Specification
PWLX07C	Pressure transducer DP Wet
PXPLX01S	Veris pressure transducer

**CO₂ (CARBON DIOXIDE) SENSOR**

- Non-dispersive infrared (NDIR) sensors
- Use to measure CO₂ concentration in ventilation systems and indoor living spaces
- Range of 0-2000 ppm

Part Number	Description / Specification
CDE	CO ₂ sensor, duct mounting, no LCD display
DCS-310E-D	Airsense CO ₂ Monitor with duct kit

**CO (CARBON MONOXIDE) SENSOR**

- Detects fluctuations in CO levels, and it signals air systems to provide an inlet of fresh air optimal for the space at any given time
- Energy saving by optimising fan operation

THERMOSTATS / CONTROLLERS

Part Number	Description / Specification
TA-155-10	Erie thermostat heat/cool manual change over three speed fan
B512 W/C	Leasom Room controller, heat/cool/auto, 3 speed fan adjustment

**PNEUMATIC ROOM THERMOSTAT**

Part Number	Description / Specification
TK-1101-116	Reverse acting on cooling, 13–29 °C

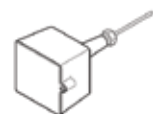


SENSORS & ACCESSORIES

Part Number	Description / Specification
0-069-2004-1	STC300 Strap-on pipe contact temperature transmitter 0–100 °C and 4–20 mA
512-3104-010	STP100-100 immersion temperature sensor
0-069-2022-1	STP300 Immersion temperature transmitter -50 to +50 °C
0-069-2026-1	STP300 Immersion temperature transmitter 0 to +160 °C
0-069-2200-1	STR300 room temperature transmitter 0 to 40 °C
512-6070-000	STC600 pipe surface mount (strap on) temperature sensor
912-1052-000	STP300 150 mm stainless steel pocket
ACI-592-10K-W	Linitemp temperature sensor
AT-225	Stainless steel bulb well suit TS-6721-851 and TS-6722-851
DCQC-150-500	I/A Series sensor cover
HD3XMCX	RH duct sensor
HD3XVSX	RH duct sensor
HWX2XSTA	RH / temperature room sensor 2%
MN-S1	S-Link temperature sensor
MN-S1HT	S-Link temperature and humidity sensor
MN-S2	S-Link temperature sensor with override
MN-S3	S-Link temperature sensor with setpoint adjustable and override
MN-S4-FCS	S-Link Temperature sensor with setpoint, on/off and fan speed functions
PC-301	Differential pressure switch
TS-5751	Outdoor sensor, 10K, 15 mm conduit
TS-6721-850	Duct/immersion sensor, 10K with mounting flange, 6 mm dia. x 203 mm long
TS-6721-851	Immersion sensor, 10K with 1/4 NTP mounting nut, 6 mm dia. x 102 mm long
TS-6721-853	Immersion sensor 10K with 1/4 NTP mounting nut, 6 mm dia. x 102 mm long with bulb well
TS-8201-110	Strap-on sensor 10K, 6 mm dia. x 57 mm long
TS-9201-106	Immersion sensor 10K with 1/4 NTP mounting nut, 6 mm dia. x 102 mm long
TS-8101	Sensor Balco 1KΩ @ 21°C, 4-60°C
TSMN-57011	Low profile room sensor, 10K
TSMN-57011-850	Low profile room sensor, 10K with 11K shunt resistor
TTS100WJ	Room sensor, 10K continuum

THERMOSTATS - PNEUMATIC VALVES & DAMPER ACTUATORS

Part Number	Description / Specification
2211-012	Single temperature, 1 pipe, D.A. dial range 13 °C to 29 °C
2211-013	Single temperature, 1 pipe, R.A. dial range 13 °C to 29 °C
2212-118	Single temperature, 2 pipe, D.A., throttling range adjustable 2 °C to 12 °C. dial range 13 °C to 29 °C
2341-501	Direct acting receiver controller only
2360-501	Pneumatic reversing relay
EP-311-020	Electropneumatic transducer



ACCESSORIES & MAINTENANCE PARTS: THERMOSTATS

Part Number	Description / Specification
20-717	Tygothane tubing assembly
21-930	European White Cover

SOLENOIDS

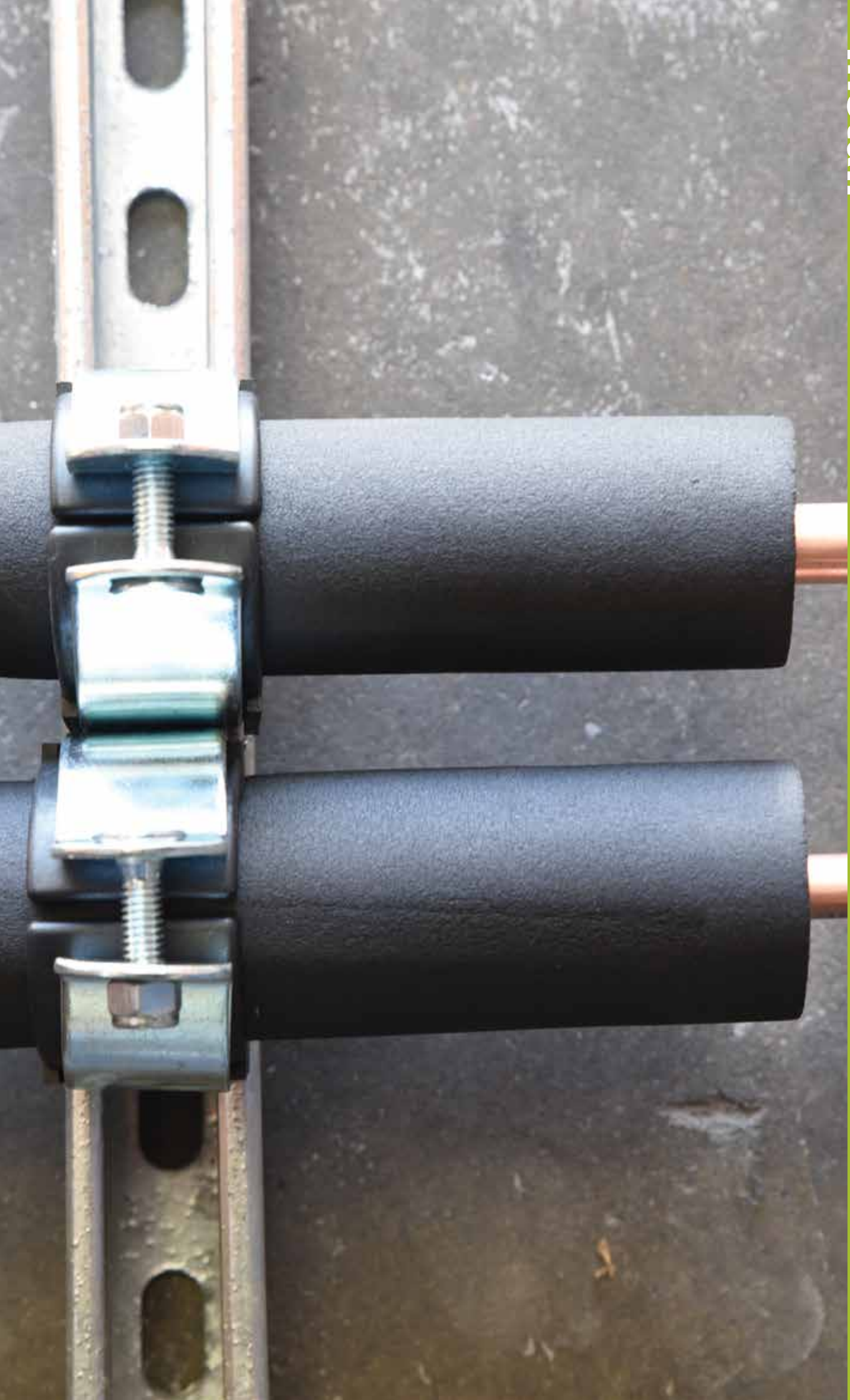
Part Number	Description / Specification
AL-180	Solenoid Air Valve 24 V J-BOX type
AL-183	Solenoid Air Valve 240 V J-BOX type

MISCELLANEOUS PARTS

Part Number	Description / Specification
ALF15	Brass Coupling 20 mm
B-263	1/4 x 1/4 barbed brass coupling
B-391	1/4 barbed brass plug
DUI-5R	Active digital input expander



Install



Mini Condensate Pumps



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Application (A/C Units kW)	Series
FP1200	Piston	Mini Condensate Pump	Aspen	14.5	6	10	2	≤ 19.3 kW	Micro-V



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Application (A/C Units kW)	Series
FP2212	Piston	Mini Condensate Pump	Aspen	12	6	10	2	≤ 16 kW	Mini Orange
FP2210	Piston	Mini Condensate Pump	Aspen	35	10	15	2	≤ 46 kW	Maxi Orange



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Application (A/C Units kW)	Series
FP3312	Piston	Mini Condensate Pump	Aspen	12	6	10	N/A	≤ 16 kW	Mini Lime
FP2213	Piston	Mini Condensate Pump	Aspen	35	10	15	N/A	≤ 46 kW	Maxi Lime



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Application (A/C Units kW)	Series
FP2406	Piston	Mini Condensate Pump	Aspen	12	6	10	2	≤ 16 kW	Mini Aqua



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Tank Capacity (L)	Application (A/C Units kW)	Series
FP1080	Piston	Under Unit Mini Condensate Pump- Gloss White Finish	Aspen	12	4	10	0.24	≤ 16 kW	Mini Blanc

≤ = less than or equal to



MAX
HI-FLOW

THE SAFEST, QUIETEST CONDENSATE TANK PUMP

"A great successor to the MK3 Hi-Flow pump"

- ✓ Best flow rate - 550L/h
- ✓ Splash proof - IP24 rated
- ✓ Quietest - 44dB(A)

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reliable | silent | simple

Mini Condensate Pumps

sauermann



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Application (A/C Units kW)
DELTAPACK	Piston	Mini Condensate Pump & Duct Kit (inc SI10 Pump)	Sauermann	20	4	10	N/A	≤ 20 kW
SI10	Piston	Mini Condensate Pump	Sauermann	20	4	10	N/A	≤ 20 kW



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Application (A/C Units)
OMEGAPACK	Piston	Mini Condensate Pump Kit- Under Unit, Matt White Finish (inc SI20 Pump)	Sauermann	20	4	10	3	≤ 20 kW
SI20	Piston	Mini Condensate Pump	Sauermann	20	4	10	3	≤ 20 kW



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Application (A/C Units kW)
SI30	Piston	Mini Condensate Pump	Sauermann	20	4	10	3	≤ 20 kW
SI33	Piston	Mini Condensate Pump	Sauermann	30	8	13	4	20 to 30 kW



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 200ml Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Application (A/C Units kW)
SI2052	Centrifugal	Cassette Lift Pump	Sauermann	100	24	0.9	-	≤ 20 kW

≤ = less than or equal to

BlueDiamond
condensate removal pumps



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Series
X87-504	Rotary Diaphragm	Mini Condensate Pump	Blue Diamond	8	5.5	8	5	Mini Blue
X87-701	Rotary Diaphragm	Mini Condensate Pump	Blue Diamond	14	8	8	8	Maxi Blue
X87-813	Rotary Diaphragm	Mini Condensate Pump	Blue Diamond	50	18	20	7	Mega Blue



MINI PUMPS

TANK



HIGH CAPACITY



IN-TRAY



MEMBRANE



PERISTALTIC



Peristaltic Pumps

Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Application (A/C Units kW)
PE5100	Rotary Diaphragm	Condensate Pump Temp Differential Sensor	Sauermann	6	6	12	2	≤ 8 kW
PE5200	Rotary Diaphragm	Condensate Pump Remote Sensor	Sauermann	6	6	12	2	≤ 8 kW
PE5002	Rotary Diaphragm	Peristaltic Replacement Tube	Sauermann					



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Max. Suction Head (m)	Application (A/C Units kW)
FP2081	Rotary Diaphragm	Hard Wired Condensate Pump - Cooling Signal	Aspen	6.5	6.5	12	3	≤ 8.5 kW
FP2082	Rotary Diaphragm	Condensate Pump - Temperature Sensor	Aspen	6.5	6.5	12	3	≤ 8.5 kW
FP2079	Rotary Diaphragm	Condensate Pump - Remote Reservoir (Float Switch)	Aspen	6.25	6.5	12	3	≤ 8.5 kW
FP1282	Rotary Diaphragm	Peristaltic Replacement Tube Kit	Aspen					



≤ = less than or equal to

Tank Pumps

sauermann



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Tank Capacity (L)	Application (A/C Units kW)
SI60	Piston	Condensate Pump	Sauermann	20	4	10	0.37	≤ 20 kW
SI1805	Centrifugal	Condensate Pump	Sauermann	500	30	5.4	0.5	
SI82	Centrifugal	Condensate Pump	Sauermann	500	30	5	2	
SI1830	Centrifugal	Centrifugal Tank Pump	Sauermann	400	50	3.7	0.5	

ASPEN
PUMPS



Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Tank Capacity (L)	Application (A/C Units kW)
FP3349	Centrifugal	MAX Hi-Flow (Low Profile) Condensate Pump	Aspen	550	55	5	1.7	≤ 733 kW
FP2071	Rotary Diaphragm Type	Hi-Lift Peristaltic Condensate Pump	Aspen	11	11	12	2	≤ 14 kW
FP2099	Rotary Diaphragm Type	Hi-Lift Peristaltic Condensate Pump	Aspen	11	11	12	1	≤ 14 kW

≤ = less than or equal to

ASPEN
PUMPS



SUPERMARKET PUMPS

Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Tank Capacity (L)
FP2318	Economical Retail Refrigeration Pump	Condensate Pump Top Inlet	Aspen	225	10	35	11
FP2597	Economical Retail Refrigeration Pump	Condensate Pump Top Inlet Low Profile	Aspen	190	10	21	3.5
FP2805	Economical Retail Refrigeration Pump	Condensate Pump Side Inlet Low Profile	Aspen	190	10	21	3.5

sauermann



SUPERMARKET PUMPS

Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Tank Capacity (L)
SI93	Membrane	Pump Condensate Membrane Up To 4 Cabinets	Sauermann	360	145	20	4.5

Evaporative Cooler Pumps

Part Number	Description	Brand	Nominal Litres / min @ 1m Head	Max. Discharge Head (m)	Outlet (mm)
E/P19/S	Evaporative Cooler Pump	JRM	14	1.6	20
E/P28/S	Evaporative Cooler Pump	Fasco	21	1.6	20
E/P38/S	Evaporative Cooler Pump	Fasco	27	1.6	20
E/P50/S	Evaporative Cooler Pump	Fasco	34	1.6	20
J-BASKET	Basket & Strainer	Fasco			




Part Number	Description	Brand	Nominal Litres / Hr @ 600mm Head	Max. Discharge Head (m)	Outlet (mm)
EBM40JB	Evaporative Cooler Pump	ebm-papst	35	1.5	15



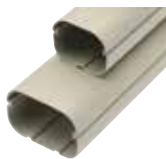

Ice Maker Pumps

Part Number	Type	Description	Brand	Nominal Litres / Min @ 310mm Head	Bar
518477	Submersible	Ice Maker Pump 18L/Min	Little Giant	18	0.26



PVC Pipe Ducting and Fittings

INABA DENKO



PIPE DUCT - COMPATIBLE WITH VARIOUS DUCT FITTING BRANDS

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
REF77	PVC	77 Series	75	63	2000	Slimduct	Ivory
REF100	PVC	100 Series	100	70	2000	Slimduct	Ivory

SLIM DUCT

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SD77	PVC	77 Series	75	63	2000	Slimduct	Ivory
SD100	PVC	100 Series	100	70	2000	Slimduct	Ivory

WALL INLETS / OULETS

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SW77	PVC	77 Series	83	77	205	Wall Inlet / Outlet	Ivory
SW100	PVC	100 Series	110	86	223	Wall Inlet / Outlet	Ivory

CEILING PLATES

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SP77	PVC	77 Series	81	70	130	Ceiling Plate	Ivory
SP100	PVC	100 Series	106	70	137	Ceiling Plate	Ivory

90° FLAT ELBOWS - LONG RADIUS

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SK77	PVC	77 Series	83	66	128	90° Flat Elbow - Long Radius	Ivory
SK100	PVC	100 Series	109	74	151	90° Flat Elbow - Long Radius	Ivory

90° FLAT ELBOW - SHORT RADIUS

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SKM77	PVC	77 Series	82	68	97	90° Flat Elbow - Short Radius	Ivory

90° CORNER ELBOWS - LONG RADIUS

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SC77	PVC	77 Series	81	67	100	90° Corner Elbows - Long Radius	Ivory
SC100	PVC	100 Series	106	75	117	90° Corner Elbows - Long Radius	Ivory

**90° CORNER ELBOWS - SHORT RADIUS**

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SCM77	PVC	77 Series	82	68	82	90° Corner Elbows - Short Radius	Ivory

**45° FLAT ELBOWS - SHORT RADIUS**

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SKF77	PVC	77 Series	82	68	65	45° Elbows - Flat Surface	Ivory
SKF100	PVC	100 Series	107	75	75	45° Elbows - Flat Surface	Ivory

**45° ELBOWS**

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SCF77	PVC	77 Series	82	68	61	45° Elbows	Ivory
SCF100	PVC	100 Series	107	75	64	45° Elbows	Ivory

**FLEXIBLE JOINTS**

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SF77500	PVC	77 Series	74	62	495	Flexible Joints	Ivory
SF771000	PVC	77 Series	74	62	1033	Flexible Joints	Ivory
SF100800	PVC	100 Series	100	70	800	Flexible Joints	Ivory

**END COVERS**

Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SEN77	PVC	77 Series	53	67	95	End Fitting	Ivory
SEN100	PVC	100 Series	56	76	112	End Fitting	Ivory



PVC Pipe Ducting and Fittings



WALL FLANGE							
Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SWC77	PVC	77 Series	127	40	115	Wall Flange	Ivory
SWC100	PVC	100 Series	174	40	144	Wall Flange	Ivory



JOINERS							
Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SJ77	PVC	77 Series	85	67	50	Joiners	Ivory
SJ100	PVC	100 Series	109	75	66	Joiners	Ivory



TEES							
Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
ST77	PVC	77 Series	85	68	124	Tee	Ivory
ST100	PVC	100 Series	109	78	154	Tee	Ivory



REDUCER							
Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SDR10077	PVC	100 / 77 Series	107	75	66	Reducers	Ivory



STRAP KIT							
Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
SL300	PVC		17	2	300	Strap Kit PE(SL band), POM (SL saddle) (10 Pack)	White

Sheetmetal Capping



Part Number	Material	Series	Dimensions			Description	Colour
			Width (mm)	Depth (mm)	Length (mm)		
TOPHAT	Sheetmetal				3000	Tophat Sheetmetal Capping	
BOXLID	Sheetmetal				3000	Boxlid Sheetmetal	

Drain Hose

CORRUGATED FLEXIBLE CONDENSATE DRAIN HOSE

Part Number	Material	Dimensions		Description	Colour
		Length (m)	Diameter (mm)		
DRH016	Polyethylene	50	16	Corrugated flexible condensate drain hose	Ivory



INSULATED DRAIN PIPE: PREMIUM QUALITY

Application: Air conditioning drain pipe where sweating is a problem. i.e. Tropical zones, High Humidity zones

Part Number	Material	Dimensions		Description	Colour
		Length (m)	Diameter (mm)		
FDP119	Insulated	20	19	Insulated Drain Pipe: Premium Quality	Ivory



ACCESSORIES

Part Number	Material	Description	Colour
DY1416	PE	Branching Joint 14/16M : Vented Drain WYE used to join 2 drain hoses with Integral air vent that promotes drainage flow	Clear



PVC Drainage Systems

CLEAR TUBE

Part Number	Material	Dimensions		Description	Colour
		Length (m)	Diameter (mm)		
4MMTUBE	PVC	30	4	Tube	Clear
6MMTUBE	PVC	30	6	Tube	Clear
8MMTUBE	PVC	30	8	Tube	Clear
10MMTUBE	PVC	30	10	Tube	Clear
19MMTUBE	PVC	30	19	Tube	Clear
25MMTUBE	PVC	30	25	Tube	Clear



HOSE CLAMPS

Part Number	Size (mm)	Description	Pk Qty
HS012C	14–32	Tridon Hose Clamp	2
HS016C	17–38	Tridon Hose Clamp	2

Dektites

Part Number	Description	Size
SPFRTMINI	Pipe Flashing Square mini	0 to 35 mm
SPFRT1	Pipe Flashing Square No.1	0 to 55 mm
SPFRT2	Pipe Flashing Square No.2	3 to 100 mm
SPFRT3	Pipe Flashing Square No.3	80 to 175 mm
SPF660	Pipe Flashing Round No.1	6 to 60 mm
SPF5080	Pipe Flashing Round No.2	50 to 80 mm
SPF60110	Pipe Flashing Round No.3	60 to 110 mm
SPF75150	Pipe Flashing Round No.4	75 to 150 mm
SPFZ2070	Zipseal Pipe Flashing No.1 C/W 4 Clips	20 to 70 mm
SPFZ50190	Zipseal Pipe Flashing No.2 C/W 6 Clips	50 to 190 mm



PVC Pressure Pipe and Fittings

PRO PIPE SUPPLIES
PTY LTD



PRESSURE PIPE

Part Number	Material	Dimensions		Description	Colour
		Diameter (mm)	Length (m)		
15XCE	PVC	15	3.9	PVC Drain Pipe	White
20XCE	PVC	20	3.9	PVC Drain Pipe	White
25XCE	PVC	25	3.9	PVC Drain Pipe	White
32XCE	PVC	32	3.9	PVC Drain Pipe	White



90° ELBOW

Part Number	Material	Dimensions	Description	Colour
		Diameter (mm)		
2103015	PVC	15	90° Pressure Pipe Elbow	White
2103020	PVC	20	90° Pressure Pipe Elbow	White
2103025	PVC	25	90° Pressure Pipe Elbow	White



45° ELBOW

Part Number	Material	Dimensions	Description	Colour
		Diameter (mm)		
2117015	PVC	15	45° Pressure Pipe Elbow	White
2117020	PVC	20	45° Pressure Pipe Elbow	White
2117025	PVC	25	45° Pressure Pipe Elbow	White



TEES

Part Number	Material	Dimensions	Description	Colour
		Diameter (mm)		
2106015	PVC	15	Pressure Pipe Tee	White
2106020	PVC	20	Pressure Pipe Tee	White
2106025	PVC	25	Pressure Pipe Tee	White



DOUBLE END SOCKET

Part Number	Material	Dimensions	Description	Colour
		Diameter (mm)		
2108015	PVC	15	Pressure Pipe Double End Socket	White
2108020	PVC	20	Pressure Pipe Double End Socket	White
2108025	PVC	25	Pressure Pipe Double End Socket	White



REDUCING BUSH

Part Number	Material	Dimensions	Description	Colour
		Diameter (mm)		
2110020015	PVC	15 x 20	Pressure Pipe Reducing Bush	White
2110025015	PVC	15 x 25	Pressure Pipe Reducing Bush	White
2110025020	PVC	20 x 25	Pressure Pipe Reducing Bush	White

MALE VALVE SOCKET

Part Number	Material	Dimensions Diameter (mm)	Description	Colour
2112015	PVC	15	Pressure Pipe Male Valve Socket	White
2112020	PVC	20	Pressure Pipe Male Valve Socket	White
2112025	PVC	25	Pressure Pipe Male Valve Socket	White

**FEMALE FAUCET SOCKET**

Part Number	Material	Dimensions Diameter (mm)	Description	Colour
2111015	PVC	15	Pressure Pipe Female Faucet Socket	White
2111020	PVC	20	Pressure Pipe Female Faucet Socket	White
2111025	PVC	25	Pressure Pipe Female Faucet Socket	White

**BARREL UNION**

Part Number	Material	Dimensions Diameter (mm)	Description	Colour
2122015	PVC	15	Barrel Union	White
2122020	PVC	20	Barrel Union	White
2122025	PVC	25	Barrel Union	White

**PIPE SADDLE (FULL)**

Part Number	Material	Dimensions Diameter (mm)	Description	Colour
PPS084	PVC	15	Pipe Saddle (Full)	White
PPS106	PVC	20	Pipe Saddle (Full)	White
PPS143	PVC	25	Pipe Saddle (Full)	White

PIPE SADDLE SINGLE SIDED

Part Number	Material	Dimensions Diameter (mm)	Description	Colour
ZPC075	Zinc	15	Single Side Pipe Saddle	Grey
ZPC100	Zinc	20	Single Side Pipe Saddle	Grey

**STAND OFF BRACKET**

Part Number	Material	Dimensions Diameter (mm)	Description	Colour
PPSB075	PVC	15	Stand off Bracket	White
PPSB100	PVC	20	Stand off Bracket	White
PPSB125	PVC	25	Stand off Bracket	White

**REDUCING SOCKET**

Part Number	Material	Dimensions Diameter (mm)	Description	Colour
2109020015	PVC	15 x 20	Pressure Pipe Reducing Socket	White
2109025015	PVC	15 x 25	Pressure Pipe Reducing Socket	White
2109025020	PVC	20 x 25	Pressure Pipe Reducing Socket	White



Sewer Waste Vent Pipe and Fittings



Part Number	Material	Dimensions		Description	Colour
		Diameter (mm)	Length (m)		
40XSWV	PVC	40	4	Sewer Waste Vent Pipe	White
2201040	PVC	40		Sewer Waste Vent Pipe Equal 90° Elbow	White
2210040	PVC	40		Sewer Waste Vent Pipe Equal 45° Elbow	White
2211040	PVC	40		Sewer Waste Vent Pipe Equal Tee	White
2225040	PVC	40		Sewer Waste Vent Pipe Double End Socket	White

PVC Solvent Cement



Part Number	Volume (g)	Description	Colour
N070100	100	PVC Solvent Cement for Rigid PVC Pipes and Fittings	Clear
N070500	500	PVC Solvent Cement for Rigid PVC Pipes and Fittings	Clear

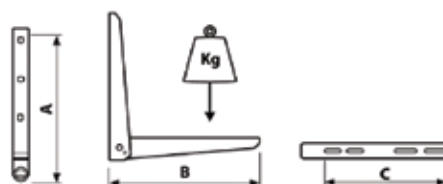
Condensate Traps



Part Number	Diameter (mm)	Description
EZT113	20	Transparent Cleanable Condensate Trap
EZT150	20	Waterless Condensate Trap
EZT180	14 & 16	Mini Trap To Suit Flexible Drain Pipe (Fits both 14 & 16 mm Flexible drain pipe)
JTRAP	20	Clear J Trap
REDCAP	20	Redcap suits 20 mm PVC Drain Fittings
EZT406		Flexible Cleaning Brush to suit EZ Traps

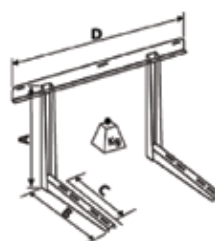
Mounting Brackets

WALL MOUNTING BRACKETS SPLIT SYSTEM OUTDOOR UNIT



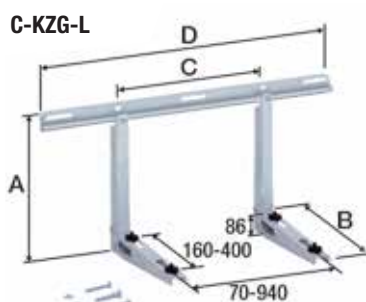
Part Number	Material	Dimensions (mm)			Capacity (kg)
		A	B	C	
L450K	Galvanised Steel with Ivory Powder Coat	350	450	340	150
L550K	Galvanised Steel with Ivory Powder Coat	450	550	430	200
L450STSTK	Stainless Steel	350	450	340	150
L550STSTK	Stainless Steel	450	550	430	200

WALL MOUNTING BRACKETS SPLIT SYSTEM OUTDOOR UNIT - ADJUSTABLE BAR



Part Number	Material	Dimensions (mm)				Capacity (kg)
		A	B	C	D	
L450ADJBARK	Galvanised Steel with Ivory Powder Coat	350	450	340	700	150
L550ADJBARK	Galvanised Steel with Ivory Powder Coat	450	550	430	1000	200
L450ADJBARSTSTK	Stainless Steel	350	450	340	700	150
L550ADJBARSTSTK	Stainless Steel	450	550	430	850	200

WALL MOUNTING BRACKETS SPLIT SYSTEM OUTDOOR UNIT - ADJUSTABLE BAR



Part Number	Material	Dimensions (mm)				Capacity (kg)
		A	B	C	D	
C-KG-L	Galvanised Steel with Ivory Powder Coat	513	481	500	1000	60
C-KZG-L	Hot Dip Galvanised	513	481	500	1000	80

Mounting Brackets

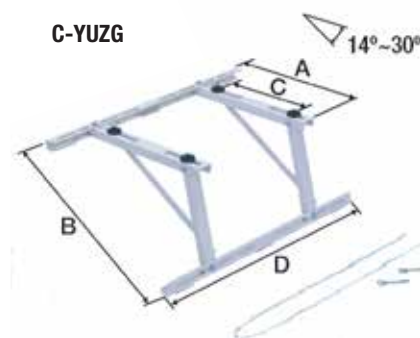
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WALL MOUNTING BRACKETS SPLIT SYSTEM OUTDOOR UNIT - FIXED ARM

Part Number	Material	Dimensions (mm)				Capacity (kg)
		A	B	C	D	
SH01517	2 Piece - Fixed Arm HD Galvanised	345	560		100	

INABA DENKO

ROOF MOUNTING BRACKETS SPLIT SYSTEM OUTDOOR UNIT - ADJUSTABLE BAR



Part Number	Material	Dimensions (mm)				Capacity (kg)
		A	B	C	D	
C-YUG	Galvanised Steel with Ivory Powder Coat	434	555-660	340	760	60
C-YUG-L	Galvanised Steel with Ivory Powder Coat	479	555-660	400	760	80
C-YUZG-L	Galvanised	479	555-660	400	760	80
PC-YG30	Galvanised	522	546-594	380	1015	100
PC-YG60	Galvanised	572	600-662	430	1100	150
RB560	Galvanised Steel with Ivory Powder Coat					150

CANTILEVER BRACKETS

Part Number	Material
J2701	Cantilever Bracket 450 mm
J2702	Cantilever Bracket 600 mm
J2703	Cantilever Bracket 750 mm
JCFK	Cantilever Bracket Mount Kit

Mounting Blocks and Feet

MOUNTING BLOCKS

Part Number	Description	Dimensions (mm)			CAPACITY (kg)
		A	B	C	
PR351NI	Setting Block 350 mm Ivory	360	100	95	140
PR351NM	Setting Block 450 mm Ivory	450	100	95	180
PR351NL	Inaba Denko Plarock 1 m Ivory	1000	100	95	400
PR350N	Inaba Denko Plarock 350 mm Black	360	100	95	140
PR350NM	Inaba Denko Plarock 450 mm Black	450	100	95	180
PR350NL	Inaba Denko Plarock 1m Black	1000	100	95	400
EVOACB	Evo-Crete Ac Mounting Block Kit	485	110	90	
IMB420	Euro Mounting Block Set Pk.2	420	72	90	240
CB450	A/C Setting Block Ivory With End Caps.Pk.2	450	100	95	180
VF50X100X500	Recycled Rubber Mount with 2 Mount Screws	500	100	50	
VF75X100X1000	Recycled Rubber Mount	1000	100	75	



RUBBER MOUNTING FEET

Part Number	Description	Dimensions (mm)			CAPACITY
		A	B	C	
VM3	Vibration rubber mounts 4pc pkt.	110	50	75	400
CP35X100X140	Condensor pads pk.4	140	100	35	
ACS	Round Adjust height - Mount Stand - Stainless Pk.4	63	63	27	
NR2-WHITE	Neoprene Mount with M10 screws & washers	98	60	32	70
NR-2-RED	Neoprene Mount with M10 screws & washers	98	60	32	100
NR-3-RED	Neoprene Mount with M12 screws & washers	140	85	44	200
NMA-WHITE	Neoprene Mount with M8 screws & washers	76	76	41	20
NMA-RED	Neoprene Mount with M8 screws & washers	76	76	41	40
NMA-GREEN	Neoprene Mount with M8 screws & washers	76	76	41	60
NMA-BLUE	Neoprene Mount with M8 screws & washers	76	76	41	100
NMB-RED	Neoprene Mount with M10 screws & washers	76	76	50	70
NMB-GREEN	Neoprene Mount with M10 screws & washers	76	76	50	100
NMB-BLUE	Neoprene Mount with M10 screws & washers	76	76	50	160
WMB-RED	Neoprene Mount with M8 screws & washers	88	45	37	30
WMB-GREEN	Neoprene Mount with M8 screws & washers	88	45	37	50
WMB-BLUE	Neoprene Mount with M8 screws & washers	88	45	37	80



EVAPORATOR MOUNTING

Part Number	Description
PS	Perf Strap 15 m x 23 mm wide (roll)

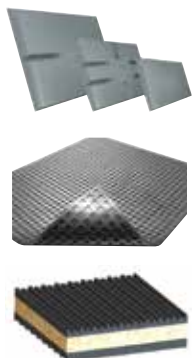
Mounting Blocks and Feet

INABA DENKO



ACCESSORIES

Part Number	Description	Size	Colour	Pack Size
PRC351N	Plarock End Cover Set		Ivory	2
PRC350N	Plarock End Cover Set		Black	2
PRBZ	Plarock Mounting Bolt Pack			
BT250	Big Tie	250 mm		20
BT300	Big Tie	300 mm		20
BT350	Big Tie	350 mm		
BHC1	Big Tie Holder	Small		
BHC2	Big Tie Holder	Medium		



FLOOR MOUNT - SLABS & RUBBER MOUNTS

Part Number	Description	Dimensions (mm)			CAPACITY (kg)
		A	B	C	
PSAC0	Polyslab small 339 x 639 - 120 kg	640	340	51	120
PSAC1	Polyslab medium 885 x 465 x 51 - 114 kg	885	465	51	160
PSAC3	Polyslab large 1130 x 650 - 160 kg	1130	650	51	160
EVO-900	Evocrete slab 450 x 900 x 50 mm	900	600	50	500

Part Number	Description	Dimensions (mm)			CAPACITY (kg)
		A	B	C	
T49M164	Vibration Waffle Pad - Black	457	457	8	
GP10010	Vibration Pad Strip - Black	1000	10	8	
TV611-42	Vibration Waffle Pad - Red	450	450	10.5	
CRP-100	Pad Vibration 100 mm ²	100	100	25	

Condenser Security and Safety



CONDENSER CAGES

Part Number	Description	Dimensions				Material
		Height (mm)	Width (mm)	Depth (mm)	Mesh Size (mm)	
ICAGE109	Condenser Cage	900	1000	600	25	Galvanised Coating
ICAGE1210	Condenser Cage	1000	1200	600	25	Galvanised Coating
ICAGE1214	Condenser Cage	1400	1200	600	25	Galvanised Coating

Pipe Support System

STRUT PIPING (CHANNEL)

Part Number	Dimensions			Description	Material
	Width (mm)	Depth (mm)	Length (m)		
J1000H	41	41	6	Standard Channel	Hot Dip Galvanised
J1000SH	41	41	6	Slotted Channel	Hot Dip Galvanised
J2000SG	41	41	6	Slotted Channel	Galvabond
J3300H	41	21	6	Standard Channel	Hot Dip Galvanised
J4000GB	41	21	6	Standard Channel	Galvabond
J4000SG	41	21	6	Slotted Channel	Galvabond



STRUT PIPING (SUPER CHANNEL)

Part Number	Dimensions			Description	Material
	Width (mm)	Depth (mm)	Length (m)		
CH1Y	40	20	2.5	Superchannel - Slotted Channel with holes	Aluminium

THREADED ROD

Part Number	Description		Description	Material
	Diameter	Length (mm)		
J20238X3BRS	Threaded Rod Brass 3/8" X 3'	915	Threaded Rod	Brass
J202M10Z	10mm	3000	Threaded Rod	Zinc

SUPERLOCK CLIPS

Part Number	Description	Insulation Thickness (mm)	Copper Pipe Size
SRV24N	Superlock Oneside Body & Clip	10 x 10	6.35 x 9.52 to 6.35 x 12.70
SRV35N	Superlock Oneside Body & Clip	10 x 10	6.35 x 15.88 to 9.52 x 15.88
SRV46N	Superlock Main Body & Clip	10 x 10	9.52 x 19.05 to 12.70 x 19.05
SRV58N	Superlock Main Body & Clip	10 x 10	12.70 x 22.22 to 15.88 x 25.40
SRV69N	Superlock Main Body & Clip	10 x 10	19.05 x 25.40 to 19.05 x 28.58
SRV710N	Superlock Oneside Body & Clip	10 x 10	22.22 x 28.58 to 22.22 x 31.75



CHANNEL PIPE CLAMPS

Part Number	Description	Size
J2025Z	Channel Pipe Clamp	11 mm
J2027Z	Channel Pipe Clamp	17 mm
J2028Z	Channel Pipe Clamp	19 mm
J2029Z	Channel Pipe Clamp	22 mm
J2030Z	Channel Pipe Clamp	25 mm
J2031Z	Channel Pipe Clamp	29 mm
J2032Z	Channel Pipe Clamp	32 mm
J2033Z	Channel Pipe Clamp	35 mm
J2034Z	Channel Pipe Clamp	38 mm
J2035Z	Channel Pipe Clamp	43 mm
J2037Z	Channel Pipe Clamp	49 mm
J2038Z	Channel Pipe Clamp	51 mm
J2039Z	Channel Pipe Clamp	54 mm



Pipe Support System

CHANNEL PIPE CLAMPS

Part Number	Description	Size
J2040Z	Channel Pipe Clamp	57 mm
J2042Z	Channel Pipe Clamp	64 mm
J2043Z	Channel Pipe Clamp	67 mm
J2044Z	Channel Pipe Clamp	70 mm
J1118Z	Channel Pipe Clamp	73 mm
J2048Z	Channel Pipe Clamp	83 mm
J2049Z	Channel Pipe Clamp	86 mm
J1119Z	Channel Pipe Clamp	90 mm
J2051Z	Channel Pipe Clamp	92 mm
J2052Z	Channel Pipe Clamp	95 mm
J2053Z	Channel Pipe Clamp	98 mm
J1120Z	Channel Pipe Clamp	102 mm
J2055Z	Channel Pipe Clamp	105 mm
J2057Z	Channel Pipe Clamp	111 mm
J2058Z	Channel Pipe Clamp	114 mm
J2060Z	Channel Pipe Clamp	121 mm
J2068Z	Channel Pipe Clamp	146 mm
J2070Z	Channel Pipe Clamp	152 mm
J2070-62Z	Channel Pipe Clamp	160 mm



INSULCLIPS

Part Number	Description	Size
B6268	Insulclip	1/4
B6267	Insulclip	1/2
B6278	Insulclip	1"
B6264	Insulclip	1-1/8
B6265	Insulclip	1-3/8
B6266	Insulclip	1-5/8
B6269	Insulclip	2-1/8
B6270	Insulclip	2-5/8
B6273	Insulclip	3/4
B6274	Insulclip	3/8
B6276	Insulclip	5/8
B6277	Insulclip	7/8
B6263	Insulclip	1 1/4
B6271	Insulclip	3-1/8



RAPID POSITIONING CLIPS - 40MM CHANNEL

Part Number	Description	Size
B6447	Rapid Positioning Clip	3/8
B6444	Rapid Positioning Clip	1/2
B6448	Rapid Positioning Clip	5/8
B6446	Rapid Positioning Clip	3/4
B6449	Rapid Positioning Clip	7/8

RAPID POSITIONING CLIPS - 40 MM CHANNEL (CONT'D)

Part Number	Description	Size
B6442	Rapid Positioning Clip	1 1/8
B6443	Rapid Positioning Clip	1 3/8
B6538	Rapid Positioning Clip	1 5/8

**RAPID CHANNEL CLIPS - 40 MM CHANNEL**

Part Number	Description	Size
B6845	Rapid Channel Clips - 40 mm Channel	5/8
B6846	Rapid Channel Clips - 40 mm Channel	3/4
B6847	Rapid Channel Clips - 40 mm Channel	7/8
B6848	Rapid Channel Clips - 40 mm Channel	1
B6849	Rapid Channel Clips - 40 mm Channel	1-1/8
B6850	Rapid Channel Clips - 40 mm Channel	1-1/4
B6851	Rapid Channel Clips - 40 mm Channel	1-3/8
B6852	Rapid Channel Clips - 40 mm Channel	1-1/2
B6853	Rapid Channel Clips - 40 mm Channel	1-5/8
B6854	Rapid Channel Clips - 40 mm Channel	2"
B6855	Rapid Channel Clips - 40 mm Channel	2 1/8

**RAPID STUDDING CLIPS - M10 THREADED ROD**

Part Number	Description	Size
B6818	Rapid Stud Clip for M10 Threaded Rod	3/4
B6819	Rapid Stud Clip for M10 Threaded Rod	7/8
B6820	Rapid Stud Clip for M10 Threaded Rod	1
B6821	Rapid Stud Clip for M10 Threaded Rod	1-1/8
B6822	Rapid Stud Clip for M10 Threaded Rod	1-1/4
B6823	Rapid Stud Clip for M10 Threaded Rod	1-3/8
B6824	Rapid Stud Clip for M10 Threaded Rod	1-1/2
B6825	Rapid Stud Clip for M10 Threaded Rod	1-5/8
B6826	Rapid Stud Clip for M10 Threaded Rod	2"
B6827	Rapid Stud Clip for M10 Threaded Rod	2 1/8

**NUTS, BOLTS AND WASHERS**

Part Number	Description
J206M10Z	Threaded Rod Coupler 10 mm
J206M12Z	Threaded Rod Coupler 12 mm
JN38BRS	Brass Nuts 3/8
JW38BRS	Brass Washer 3/8
JNM10Z	Hex Nut Zinc Plate 10 mm
JNM08Z	Hex Nut Zinc Plate 8 mm
JWM08Z	Washer Zinc Plate 8 mm
JSS08X25Z	Hex Bolt Zp 8 mm X 25 mm
JSS10X25Z	Hex Bolt Zp 10 mm X 25 mm
JSS10X40Z	Hex Bolt Zp 10 mm X 40 mm
JSS12X30Z	Hex Bolt Zp 12 mm X 30 mm
J1007Z	Channel Spring Nut 8 mm
J1008Z	Channel Spring Nut 10 mm
J1010Z	Channel Spring Nut 12 mm



Pipe Support System

NUTS, BOLTS AND WASHERS

Part Number	Description
J1026H	Channel 90 Degree Angle Fitting
J2601	Isolation Barrier Black Rubber
J2600	Isolation Barrier Red Rubber H
J228N	Purling Clamp 10 mm Zp
J228NM10	Z Beam Clamp m10
J228SM10	M10 Purlin Clip
J229AM10	Type A M10 Mounting Plate
J229BM10	Type B M10 Mounting Plate
J2407	Plastic End Caps For Brackets
J3380	Channel End Caps Suit J3300



INSULATION PIPE SUPPORTS

Part Number	Pipe O.D. (mm)	Insulation Diameter (mm)
KPHT13010	10	13
KPHT13012	12	13
KPHT13015	15	13
KPHT13020	19	13
KPHT13022	22	13
KPHT13028	28	13
KPHT13035	35	13
KPHT13042	42	13
KPHT13048	48	13
KPTH13054	54	13
KPHT19010	10	19
KPHT19012	12	19
KPHT19015	15	19
KPHT19020	19	19
KPHT19022	22	19
KPHT19028	28	19
KPHT19035	35	19
KPHT19042	42	19
KPHT19048	48	19
KPHT19054	54	19
KPHT25010	10	25
KPHT25012	12	25
KPHT25015	15	25
KPHT25020	19	25
KPHT25022	22	25
KPHT25028	28	25
KPHT25035	35	25
KPHT25042	42	25
KPHT25048	48	25
KPHT25054	54	25



Wire Support Systems

Part Number	Description
21RQLLP24010	Wire Support 2.4 mm X 1.0 m loop
21RQLLP24020	Wire Support 2.4 mm X 2.0 m loop
21RQLLP24040	Wire Support 2.4 mm X 4.0 m loop

Fasteners

TEK SCREW

Part Number	Description	Pk Qty
FT281820LW	Button Head Tek Screw	50
FT3101616H	Hex Head Tek Screw	50
FT3101616W	Wafer Head Tek Screw	50
FT3121430H	Hex Head Tek Screw	50
R-467553	Hex Head Tek Screw	100
R-467959	Wafer Tek Screw 10-16 x 30	100
R-467973	Wafer Tek Screw 10-16 x 16	100

DYNA BOLTS

Part Number	Description
DP10050	Dynabolt 50 mm
DP10055H	Flush Head Dynabolt
DP10075	Dynabolt 75 mm
DP10080H	Flush Head Dynabolt
DP12070	Dynabolt Hex Nut 12 x 70 mm
DP12100	Dynabolt Hex Nut 12 x 100 mm
DSM10	Dynaset Anchor 10 mm
DYNAH10-40	Hex Head Dynabolt 10 x 40 mm
DYNAH10-50	Hex Head Dynabolt 10 x 50 mm
DYNAH10-75	Hex Head Dynabolt 10 x 75 mm
DYNAH8-65	Hex Head Dynabolt 8 x 65 mm

WALL ANCHORS

Part Number	Description
TNM450	Nylon Anchor-Mush HD M6.5 x 50 mm
TNR325	Nylon Anchor Round HD M5 x 25 mm
WP25G	Green wall plug PK 100
DUP10080H	U/Long Ramplug 10 x 80 mm
DUP10100H	U/Long Ramplug 10 x 100 mm
ED05033	Easy Drive Anchor
ED05050	Easy Drive Anchor
ED06042	Easy Drive Anchor
HW13M4	Hollow wall anchor
WM	Wall mates steel per ea
WMNY	Wall mate nylon

GRAB KITS

Part Number	Description
GKA380	Grab kit - Metric O-Rings
GKA460	Grab kit - Self-drilling screws
GKA470	Grab kit - Metric screws and nuts
GKA605	Grab kit - Aluminium rivets
GKA740	Grab kit - Flat washers

Ducting & Install Parts

FLEX DUCT	
Part Number	Description
ABCD6F50200	PREMIUMFLEX Poly R1 6M x 200 mm
ABCD6F50350	PREMIUMFLEX Poly R1 6M x 350 mm
ABCD6F50400	PREMIUMFLEX Poly R1 6M x 400 mm
ABCD6F50300	PREMIUMFLEX Poly R1 6M x 300 mm
ABCD6F50250	PREMIUMFLEX Poly R1 6M x 250 mm
ABCD6F40250	PREMIUMFLEX G/WOOL R1 6M x 250 mm
ABCD6F40300	PREMIUMFLEX G/WOOL R1 6M x 300 mm
ABCD6F40350	PREMIUMFLEX G/WOOL R1 6M x 350 mm
ABCD6F40450	PREMIUMFLEX G/WOOL R1 6M x 450 mm
ABCD6F40500	PREMIUMFLEX G/WOOL R1 6M x 500 mm
ABCG6BULK04	Silver/Black Core PI 100 * 6 mm
ABCG6BULK06	Silver/Black Core PI 150 * 6 mm
ABCG6BULK08	Silver/Black Core PI 200 * 6 mm
ABCG6BULK10	Silver/Black Core PI 250 * 6 mm
ABCG6BULK12	Silver/Black Core PI 300 * 6 mm
ABCG6BULK14	Silver/Black Core PI 350 * 6 mm
ABCG6BULK16	Silver/Black Core PI 400 * 6 mm
ABCG6BULK18	Silver/Black Core PI 450 * 6 mm
APDFR6F50450	SUPERFLEX Poly 450 mm 50 6 MT
APDFR6F40150	SUPERFLEX 3Z G/WOOL R1 6 M X 150
APDFR6F40200	SUPERFLEX 3Z G/WOOL R1 6 M X 200
APDFR6F40250	SUPERFLEX 3Z G/WOOL R1 6 M X 250
APDFR6F40400	SUPERFLEX 3Z G/WOOL R1 6 M X 400
APDFR6F40450	SUPERFLEX 3Z G/WOOL R1 6 M X 450
APDFR6F50150	SUPERFLEX Poly 150 mm 50 6 MT
APDFR6F50200	SUPERFLEX Poly 200 mm 50 6 MT
APDFR6F50250	SUPERFLEX Poly 250 mm 50 6 MT
APDFR6F50300	SUPERFLEX Poly 300 mm 50 6 MT
APDFR6F50350	SUPERFLEX Poly 350 mm 50 6 MT
APDFR6F50400	SUPERFLEX Poly 400 mm 50 6 MT
AIL6S4012	ACOUSTIFLEX R1.0 INS. 6 m x 300 mm
AIL6S4014	ACOUSTIFLEX R1.0 INS. 6 m x 350 mm

FLEX DUCT - FIRE RATED	
Part Number	Description
AAL3F0006	ALUDEC Fire Rated 150 x 3 m Nude
AAL3F0010	ALUDEC Fire Rated 250 x 3 m Nude
AAL3F0012	ALUDEC Fire Rated
AAL6F0005	ALUDEC 4Z Nude Core 6 m x 125 mm
AAL6F0006	ALUDEC 4Z Nude Core 6 m x 150 mm
AAL6F0010	ALUDEC 4Z Nude Core 6 m x 250 mm
AAL6F0012	ALUDEC 4Z Nude Core 6 m x 300 mm
AAL6F0014	ALUDEC 4Z Nude Core 6 m x 350 mm

BRANCH TAKE-OFFS

Part Number	Description
ABTO060606	Branch Take Off 150 x 150 x 150
ABTO080806	Branch Take Off 200 x 200 x 150
ABTO080808	Branch Take Off 200 x 200 x 200
ABTO100808	Branch Take Off 250 x 200 x 200
ABTO101008	Branch Take Off 250 x 250 x 200
ABTO101010	Branch Take Off 250 x 250 x 250
ABTO120808	Branch Take Off 300 x 200 x 200
ABTO121008	Branch Take Off 300 x 250 x 200
ABTO121010	Branch Take Off 300 x 250 x 250
ABTO121206	Branch Take Off 300 x 300 x 150
ABTO121208	Branch Take Off 300 x 300 x 200
ABTO121210	Branch Take Off 300 x 300 x 250
ABTO140808	Branch Take Off 350 x 200 x 200
ABTO141208	Branch Take Off 350 x 300 x 200
ABTO141408	Branch Take Off 350 x 350 x 200
ABTO141410	Branch Take Off 350 x 350 x 250
ABTO141412	Branch Take Off 350 x 350 x 300
ABTO161010	Branch Take Off 400 x 250 x 250
ABTO161208	Branch Take Off 400 x 300 x 200
ABTO161210	Branch Take Off 400 x 300 x 250
ABTO161408	Branch Take Off 400 x 350 x 200
ABTO161412	Branch Take Off 400 x 350 x 300
ABTO161608	Branch Take Off 400 x 400 x 200
ABTO161610	Branch Take Off 400 x 400 x 250
ABTO161612	Branch Take Off 400 x 400 x 300
ABTO161614	Branch Take Off 400 x 400 x 350
ABTO161616	Branch Take Off 400 x 400 x 400

BRANCH TAKE-OFFS - PLASTIC INSULATED

Part Number	Description
APIBT0080606	Plastic Insulation BTO 200 x 150 x 150
APIBT0100808	Plastic Insulation BTO 250 x 200 x 200
APIBT0101006	Plastic Insulation BTO 250 x 250 x 150
APIBT0101008	Plastic Insulation BTO 250 x 250 x 200
APIBT0121006	Plastic Insulation BTO 300 x 250 x 150
APIBT0121008	Plastic Insulation BTO 300 x 250 x 200
APIBT0121010	Plastic Insulation BTO 300 x 250 x 250
APIBT0121206	Plastic Insulation BTO 300 x 300 x 150
APIBT0121208	Plastic Insulation BTO 300 x 300 x 200
APIBT0121210	Plastic Insulation BTO 300 x 300 x 250
APIBT0141010	Branch Take Off 350 x 250 x 250
APIBT0141206	Plastic Insulation BTO 350 x 300 x 150
APIBT0141210	Plastic Insulation BTO 350 x 300 x 250
APIBT0141212	Plastic Insulation BTO 350 x 300 x 300
APIBT0141406	Plastic Insulation BTO 350 x 350 x 150
APIBT0141410	Plastic Insulation BTO 350 x 350 x 250
APIBT0141412	Plastic Insulation BTO 350 x 350 x 300
APIBTY080606	Plastic Insulation BTY 200 x 150 x 150

BRANCH TAKE-OFFS - PLASTIC INSULATED

Part Number	Description
APIBTY100808	Plastic Insulation BTY 250 x 200 x 200
APIBTY121010	Plastic Insulation BTY 300 x 250 x 250
APIBTY121212	Plastic Insulation BTY 300 x 300 x 300
APIBTY141010	Plastic Insulation BTY 350 x 250 x 250
APIBTY141212	Plastic Insulation BTY 350 x 300 x 300
APIBTY141414	Plastic Insulation BTY 350 x 350 x 350
APIBTY161212	Plastic Insulation BTY 400 x 300 x 300
APIBTY161412	Plastic Insulation BTY 400 x 350 x 300
APIBTY161414	Plastic Insulation BTY 400 x 350 x 350
APIBTY161612	Plastic Insulation BTY 400 x 400 x 300
APIBTY161614	Plastic Insulation BTY 400 x 400 x 350
APIBTY161616	Plastic Insulation BTY 400 x 400 x 400
APIBTY181412	Plastic Insulation BTY 450 x 350 x 300
APIBTY181414	Plastic Insulation BTY 450 x 350 x 350
APIBTY181612	Plastic Insulation BTY 450 x 400 x 300
APIBTY181614	Plastic Insulation BTY 450 x 400 x 350
APIBTY181616	Plastic Insulation BTY 450 x 400 x 400

DOUBLE BRANCH TAKE-OFFS

Part Number	Description
AB10060606	Double BTO 250 x 150 x 150 x 150
AB12080808	Double BTO 300 x 200 x 200 x 200
AB14120808	Double BTO 350 x 300 x 200 x 200
AB14121008	Double BTO 350 x 300 x 250 x 200
AB14121212	Double BTO 350 x 300 x 300 x 300
AB14140808	Double BTO 350 x 350 x 200 x 200
AB14141212	Double BTO 350 x 350 x 300 x 300
AB16140808	Double BTO 400 x 350 x 200 x 200
AB16141414	Double BTO 400 x 350 x 350 x 350
AB16161010	Double BTO 400 x 400 x 250 x 250
AB16161414	Double BTO 400 x 400 x 350 x 350

DOUBLE BRANCH TAKE-OFFS - PLASTIC INSULATED

Part Number	Description
APIDB08060606	Plastic Insulation DBTO 200 x 150 x 150 x 150
APIDB08080606	Plastic Insulation DBTO 200 x 200 x 200 x 150
APIDB10100808	Plastic Insulation DBTO 250 x 250 x 200 x 200
APIDB12100606	Plastic Insulation DBTO 300 x 250 x 150 x 150
APIDB12100806	Plastic Insulation DBTO 300 x 250 x 200 x 150
APIDB12101010	Plastic Insulation DBTO 300 x 250 x 250 x 250
APIDB12120606	Plastic Insulation DBTO 300 x 300 x 150 x 150
APIDB12120806	Plastic Insulation DBTO 300 x 300 x 200 x 150
APIDB14101010	Plastic Insulation DBTO 350 x 250 x 250 x 250
APIDB14120606	Plastic Insulation DBTO 350 x 300 x 150 x 150
APIDB14120808	Plastic Insulation DBTO 350 x 300 x 200 x 200
APIDB14140606	Plastic Insulation DBTO 350 x 350 x 150 x 150
APIDB14140808	Plastic Insulation DBTO 350 x 350 x 200 x 200

Y-BRANCH TAKE OFFS

Part Number	Description
ABTY060606	Y-Branch Take Off 150 x 150 x 150
ABTY080606	Y-Branch Take Off 200 x 150 x 150
ABTY080808	Y-Branch Take Off 200 x 200 x 200
ABTY100606	Y-Branch Take Off 250 x 150 x 150
ABTY100808	Y-Branch Take Off 250 x 200 x 200
ABTY101010	Y-Branch Take Off 250 x 250 x 250
ABTY120808	Y-Branch Take Off 300 x 200 x 200
ABTY121212	Y-Branch Take Off 300 x 300 x 300
ABTY141010	Y-Branch Take Off 350 x 250 x 250
ABTY141212	Y-Branch Take Off 350 x 300 x 300
ABTY141414	Y-Branch Take Off 350 x 350 x 350
ABTY161010	Y-Branch Take Off 400 x 250 x 250
ABTY161414	Y-Branch Take Off 400 x 350 x 350
ABTY161616	Y-Branch Take Off 400 x 400 x 400

MULTI FIT PLASTIC Y PIECE

Part Number	Description
NAP5031	N0.2 - Plastic Y Piece Multi Fit
NAP5034	N0.5 - Plastic Y Piece Multi Fit

MANUAL DAMPERS

Part Number	Description
AMD150	Manual Damper 150 mm
AMD250	Manual Damper 250 mm
AMD350	Manual Damper 350 mm

BARREL DAMPERS

Part Number	Description
ABMD200	Barrel motor damper 200 diameter
NAP5102	Plastic barrel and motor 200 mm
NAP5103	Plastic barrel and motor 250 mm
NAP5104	Plastic barrel and motor 300 mm
NAP5105	Plastic barrel and motor 350 mm
PB08060606	Double branch 200 x 150 x 150 x 150
PBT060606	Plastic branch 150 x 150 x 150
PCMAP3	Access panel 300 x 150

DAMPER BLADES

Part Number	Description
ADBK08	Damper blade & RAPIT kit 200
ADBK10	Damper blade & RAPIT kit 250
ADBK08	Damper blade suit plastic 200 mm fitting
ADBK10	Damper blade suit plastic 250 mm fitting
ADBK12	Damper blade suit plastic 300 mm fitting
ADBK14	Damper blade suit plastic 350 mm fitting
ADBK20	Damper blade suit plastic 500 mm fitting

DIFFUSERS

Part Number	Description
Neck Adaptors	
ANAD101010	Neck Adaptor Diff. 250 x 250 x 250
ANAD121212	Neck Adaptor Diff. 300 x 300 x 300
ANAD181810	Neck Adaptor Diff. 450 x 450 x 250
ANAD181812	Neck Adaptor Diff. 450 x 450 x 300
ANAD181814	Neck Adaptor Diff. 450 x 450 x 350
ANAG080806	Neck Adaptor 200 x 200 x 150
ANAG222210	Neck Adaptor 550 x 550 x 250
Plastic Downjet	
NAP2021	Plastic Downjet 200 mm
NAP2022	Plastic Downjet 250 mm
NAP2023	Plastic Downjet 300 mm
Square	
ACTL4W1818	Square Diffuser Layin Frame 450 x 450 mm
Other	
PPDCD06	PALTECH Downjet 150 mm
PPDCD08	PALTECH Downjet 200 mm
PPDCD10	PALTECH Downjet 250 mm
PPMD0300	PLASTIC MDO 300 x 300 Adjustable
PPMD0350	PLASTIC MDO 350 x 350 Adjustable
PPMD0400	PLASTIC MDO 400 x 400 Adjustable
PPN1210	Neck Adapt. 300 x 300 - 250 SPIG
PPN1212	Neck Adapt. 300 x 300 - 300 SPIG
PPN1412	Neck Adapt. 350 x 350 - 300 SPIG
PPRCD06	PAL Plastic Round Ceiling Diffuser 150
PPRCD08	PAL Plastic Round Ceiling Diffuser 200
PPRCD10	PAL Plastic Round Ceiling Diffuser 250
PPRCD12	PAL Plastic Round Ceiling Diffuser 300

JOINERS

Part Number	Description
AJN06	Joiner 150 mm
AJN08	Joiner 200 mm
AJN10	Joiner 250 mm
AJN12	Joiner 300 mm
AJN14	Joiner 350 mm
AJN16	Joiner 400 mm
AJN18	Joiner 450 mm

REDUCERS

Part Number	Description
AR0604	Reducer 200 x 150
AR0806	Reducer 200 x 150
AR1006	Reducer 250 x 150
AR1008	Reducer 250 x 200
AR1208	Reducer 300 x 200
AR1410	Reducer 350 x 250
AR1612	Reducer 400 x 300
AR1614	Reducer 400 x 350

STARTERS

Part Number	Description
ASC12	Starting Collar
ASC16	Starting Collar
ASCD06	Starting Collar & Damper 150
ASCD08	Starting Collar & Damper 200
ASCD10	Starting Collar & Damper 250
ASCD12	Starting Collar & Damper 300
ASCD14	Starting Collar & Damper 350
ASCD16	Starting Collar & Damper 400
ASCD18	Starting Collar & Damper 450
ASCRF06	Starting Collar Round Flange 150
ASCRF08	Starting Collar Round Flange 200
ASCRF10	Starting Collar Round Flange 250

GRILLES

Part Number	Description
AADR2406P	Door Grille 600 x 150 NAT ANOD
AADR2408P	Door Grille 600 x 200 NAT ANOD
AADR2410P	Door Grille 600 x 250 NAT ANOD
AADR2412P	Door Grille 600 x 300 NAT ANOD
AADR2416	Door Grille 600 x 400 NAT ANOD
AADR2418P	Door Grille 600 x 450 NAT ANOD
AADR2424P	Door Grille 600 x 600 NAT ANOD
AAECLNA0606	Eggcrate L and Neck Adaptor
AAECLNA0806	Eggcrate L and Neck Adaptor
AECLRC0606	Eggcrate L Loose Core 150 x 150
AECLRC0808	Eggcrate L Loose Core 200 x 200
AECLRC1212	Eggcrate L Loose Core 300 x 300
AECLRC1414	Eggcrate L Loose Core 350 x 350
AECLRC1616	Eggcrate L Loose Core 400 x 400
AECLRC1624	Eggcrate L Loose Core 400 x 600
AECLRC1636	Eggcrate L Loose Core 400 x 900
AECLRCMTBF	Eggcrate L Loose Core 595 x 1195
AECLRCMTBH	Eggcrate L Loose Core 595 x 595F
AELHF1616	Eggcrate L Hinged and Filter 400 x 400
AELHF1624	Eggcrate L Hinged and Filter 400 x 600
AELHF1630	Eggcrate L Hinged and Filter 400 x 750
AELHF1636	Eggcrate L Hinged and Filter 400 x 900
AELHF2230	Eggcrate L Hinged and Filter 550 x 750
AELHF2236	Eggcrate L Hinged and Filter 550 x 900
AELHF2436	Eggcrate L Hinged and Filter 600 x 900
AELHFMTBF	Eggcrate L Hinged and Filter 595 x 1195
AELHFMTBH	Eggcrate L Hinged and Filter 595 x 595
AUR1008	Universal Register 250 x 200
AUR1204	Universal Register 300 x 100
AUR1206	Universal Register 300 x 150
AUR1406	Universal Register 350 x 150
NAP2001	200 mm ABS Plastic Round
NAP2002	250 mm ABS Plastic Round

GRILLES

Part Number	Description
NAP2003	300 mm ABS Plastic Round
ECO-A-250	ECO-A 250 mm Ceiling Outlet
NAP3251	Eggcrate w/ Filter 400 x 600 mm
NAP3252	Eggcrate w/ Filter 400 x 750 mm
NAP3253	Eggcrate w/ Filter 400 x 900 mm
NAP3254	Eggcrate w/ Filter 400 x 1000 mm
NAP3257	Eggcrate w/ Filter 500 x 900 mm
NAP3258	Eggcrate w/ Filter 550 x 750 mm

RETURN AIR & SUPPLY AIR BOXES

Part Number	Description
ARA1624114	Return Air Box 400 x 600 x 1 x 350
ASCRF12	Starting Collar Rnd. Flange 300
ASCRF14	Starting Collar Rnd. Flange 350
ASCRF16	Starting Collar Rnd. Flange 400
ASCRF20	Starting Collar Rnd. Flange 500
NAP4134	Return Air Box 400 x 600 - 1 x 350
NAP4135	Return Air Box 400 x 600 - 1 x 400
NAP4136	Return Air Box 400 x 750 - 1 x 350
NAP4137	Return Air Box 400 x 750 - 1 x 400
NAP4138	Return Air Box 400 x 750 - 2 x 350
NAP4140	Return Air Box 400 x 900 - 1 x 400
NAP4143	Return Air Box 500 x 600 - 1 x 350
NAP4147	Return Air Box 500 x 900 - 2 x 350
NAP4148	Return Air Box 500 x 900 - 2 x 400
NAP4149	Return Air Box 500 x 900 - 2 x 450
NAP4152	Return Air Box 550 x 750 - 2 x 350
NAP4153	Return Air Box 550 x 750 - 2 x 400
NAP4156	Return Air Box 550 x 900 - 2 x 400
NAP4157	Return Air Box 600 x 900 - 2 x 350
NAP4158	Return Air Box 600 x 900 - 2 x 400
NAP4160	Half Tile Return Air Box - 1 x 400
NAP4162	Full Tile Return Air Box - 2 x 350
NAP4163	Full Tile Return Air Box - 2 x 400
NAP4182.1	Supply Vee Box - 2 Spigot
NAP4182.2	Supply Vee Box - 2 Spigot
NAP4182.3	Supply Vee Box - 2 Spigot
NAP4183.1	Supply Vee Box - 3 Spigot
NAP4183.2	Supply Vee Box - 3 Spigot
NAP4183.3	Supply Vee Box - 3 Spigot

IN-LINE FANS

Part Number	Description
PIDF110	Inline Duct Fan 200 mm 110L/SEC
PIDF220	Inline Duct Fan 250 mm 220L/SEC
PIDF250	Inline Duct Fan 200 mm 250L/SEC
PIDF2E12	Mini Duct Fan [2E] SAB 300
PIDF2E8	Mini Duct Fan [2E] SAB 200
PIDF4E10	Mini Duct Fan [4E] SAB 250
PIDF4E12	Mini Duct Fan [4E] SAB 300
PIDF4E8	Mini Duct Fan [4E] SAB 200

REDUCERS

Part Number	Description
PR0806	Plastic Reducer 200 x 150
PR1008	Plastic Reducer 250 x 200
PR1210	Plastic Reducer 300 x 250
PR1412	Plastic Reducer 350 x 300
PR1614	Plastic Reducer 400 x 350
PZMTDI250	Plastic Motorised Damper 10"
PZMTDI300	Plastic Motorised Damper 12"
PZMTDI350	Plastic Motorised Damper 14"
PZMTDI400	Plastic Motorised Damper 16"
APIR0806	Plastic Insul. Reducer 200x150
APIR1008	Plastic Insul. Reducer 250x200
APIR1210	Plastic Insul. Reducer 300x250
APIR1412	Plastic Insul. Reducer 350x300

DOMESTIC DAMPER ACTUATORS

Part Number	Description
GXD331.1A	1.5 NM Non Spring Return
D050E	Damper Actuator Hi-Torque .5 NM
K453H0077BU00	Damper Actuator DOSC Hi-Torque

ERIE MOTORTROL VALVE MOTORS

Part Number	Description
30-118-U	240 V Repl. Motor X ERIE Valves

ACCESSORIES

Part Number	Description
PHANG	Woven Hanging Tape 18 mm x 50 m
PHANG24	Woven Hanging Strap 24 mm x 50 m
ACLPB4	Fixing Clip to Suit
ACLPC4	Fixing Clips to Suit
FR410B	FLEXI Duct Strap 100 mm x 250 mm (PK10)

MISCELLANEOUS

Part Number	Description
HCM-150N	S&P Window/Wall Mounted Fans
HCM-180N	S&P Window/Wall Mounted Fans
HV-300AE	S&P Window/Wall Fan 1 Phase
TD-250/100	S&P Mixed Flow Inline 1 Phase
TD-500/150	S&P Mixed Flow Inline 1 Phase
MRV1	Minivent Cowl Only
MRV2	Minivent Cowl Only
RP254	Ring Plate Axial

Air Filtration

FILTER MEDIA

Washable & Disposable filter media with low air flow resistance and high dust, dirt and lint retaining ability. Suitable for use in air conditioning and ventilation systems. Available per meter, per sq. meter or in rolls.

Part Number	Description
AP110-5	Filter media G2 5 mm white
220300	Filter media F5 18 mm white
220240	Filter media G4 15 mm white
220150	Filter media G3 12 mm black-grey
220100	Filter media G2 10 mm white
233240	Filter media G4 20 mm blue/white

AIREPURE CARDBOARD FILTERS

Cardboard disposable filters from Airepure feature a filtering medium that is more efficient and ecologically friendly. Made entirely from recycled materials, this medium achieves MERV 8 (G4) efficiency with low resistance to airflow. The overall design of this product makes these filters the accepted choice in applications requiring high performance and extended service.

Part Number (HC)	Description	Dimensions (mm)	Dimensions (in.)
25 mm			
DF25-254508	Disposable Cardboard Filter	254 x 508 x 25 mm	01 x 10 x 20
DF25-305610	Disposable Cardboard Filter	305 x 610 x 25 mm	01 x 12 x 24
DF25-406508	Disposable Cardboard Filter	406 x 508 x 25 mm	01 x 16 x 20
DF25-406635	Disposable Cardboard Filter	406 x 635 x 25 mm	01 x 16 x 25
DF25-508508	Disposable Cardboard Filter	508 x 508 x 25 mm	01 x 20 x 20
DF25-508635	Disposable Cardboard Filter	508 x 635 x 25 mm	01 x 20 x 25
DF25-610610	Disposable Cardboard Filter	610 x 610 x 25 mm	01 x 24 x 24
50 mm			
DF50-254508	Disposable Cardboard Filter	254 x 508 x 50 mm	02 x 10 x 20
DF50-305305	Disposable Cardboard Filter	305 x 305 x 50 mm	02 x 12 x 12
DF50-305508	Disposable Cardboard Filter	305 x 508 x 50 mm	02 x 12 x 20
DF50-305610	Disposable Cardboard Filter	305 x 610 x 50 mm	02 x 12 x 24
DF50-355508	Disposable Cardboard Filter	355 x 508 x 50 mm	02 x 14 x 20
DF50-355610	Disposable Cardboard Filter	355 x 610 x 50 mm	02 x 14 x 24
DF50-355635	Disposable Cardboard Filter	355 x 635 x 50 mm	02 x 14 x 25
DF50-381508	Disposable Cardboard Filter	381 x 508 x 50 mm	02 x 15 x 20
DF50-406406	Disposable Cardboard Filter	406 x 406 x 50 mm	02 x 16 x 16
DF50-406508	Disposable Cardboard Filter	406 x 508 x 50 mm	02 x 16 x 20
DF50-406610	Disposable Cardboard Filter	406 x 610 x 50 mm	02 x 16 x 24
DF50-406635	Disposable Cardboard Filter	406 x 635 x 50 mm	02 x 16 x 25
DF50-457508	Disposable Cardboard Filter	457 x 508 x 50 mm	02 x 18 x 20
DF50-457610	Disposable Cardboard Filter	457 x 610 x 50 mm	02 x 18 x 24
DF50-457635	Disposable Cardboard Filter	457 x 635 x 50 mm	02 x 18 x 25
DF50-508508	Disposable Cardboard Filter	508 x 508 x 50 mm	02 x 20 x 20
DF50-508610	Disposable Cardboard Filter	508 x 610 x 50 mm	02 x 20 x 24
DF50-508635	Disposable Cardboard Filter	508 x 635 x 50 mm	02 x 20 x 25
DF50-508762	Disposable Cardboard Filter	508 x 762 x 50 mm	02 x 20 x 30
DF50-610610	Disposable Cardboard Filter	610 x 610 x 50 mm	02 x 24 x 24
DF50-635635	Disposable Cardboard Filter	635 x 635 x 50 mm	02 x 25 x 25



Part Number (HC)	Description	Dimensions (mm)	Dimensions (in.)
100 mm			
DF100-305305	Disposable Cardboard Filter	305 x 305 x 100 mm	04 x 12 x 12
DF100-305610	Disposable Cardboard Filter	305 x 610 x 100 mm	04 x 12 x 24
DF100-406508	Disposable Cardboard Filter	406 x 508 x 100 mm	04 x 16 x 20
DF100-406610	Disposable Cardboard Filter	406 x 610 x 100 mm	04 x 16 x 24
DF100-406635	Disposable Cardboard Filter	406 x 635 x 100 mm	04 x 16 x 25
DF100-457610	Disposable Cardboard Filter	457 x 610 x 100 mm	04 x 18 x 24
DF100-508508	Disposable Cardboard Filter	508 x 508 x 100 mm	04 x 20 x 20
DF100-508610	Disposable Cardboard Filter	508 x 610 x 100 mm	04 x 20 x 24
DF100-508635	Disposable Cardboard Filter	508 x 635 x 100 mm	04 x 20 x 25
DF100-610610	Disposable Cardboard Filter	610 x 610 x 100 mm	04 x 24 x 24
DF100-635737	Disposable Cardboard Filter	635 x 737 x 100 mm	04 x 25 x 29

PLEATED SERVICE FILTERS

Part Number	Description
SPF4.021620	Filter serv. pleat EU5 16 x 20 x 2"
SPF4.022020	Filter serv. pleat EU5 20 x 20 x 2"
SPF4.021224	Filter serv. pleat EU5 12 x 24 x 2"
SPF4.022424	Filter serv. pleat EU5 24 x 24 x 2"
SPF4.021625	Filter serv. pleat EU5 16 x 25 x 2"
SPF4.022024	Filter serv. pleat EU5 20 x 24 x 2"
SPF4.021520	Filter serv. pleat EU5 15 x 20 x 2"
SPF4.021616	Filter serv. pleat EU5 16 x 16 x 2"
SPF4.021624	Filter serv. pleat EU5 16 x 24 x 2"
SPF4.022016	Filter serv. pleat EU5 20 x 16 x 2"
SPF4.022025	Filter serv. pleat EU5 20 x 25 x 2"
SPF4.022416	Filter serv. pleat EU5 24 x 16 x 2"
SPF4.022420	Filter serv. pleat EU5 24 x 20 x 2"
SPF4.022425	Filter serv. pleat EU5 24 x 25 x 2"
SPF4.022516	Filter serv. pleat EU5 25 x 16 x 2"

FLAT WASHABLE PANEL FILTERS

Panel filters are used in light commercial applications. They are available in 22 mm thickness and are usually installed in a slide track in the return air plenum. Panel filters are manufactured to specific size - please advise dimensions when ordering.

Part Number	Description
PAN404022NS	Filter panel 22 mm up to 0.16 m ²
PAN505022NS	Filter panel 22 mm up to 0.25 m ²
PAN606022NS	Filter panel 22 mm up to 0.36 m ²
PAN707022NS	Filter panel 22 mm up to 0.49 m ²
PAN808022NS	Filter panel 22 mm up to 0.64 m ²
PAN909022NS	Filter panel 22 mm up to 0.81 m ²
PAN1001002NS	Filter panel 22 mm up to 1.0 m ²




PERIFRAME FILTERS

Periframe filters are used in domestic and light commercial applications. They are available in either 8 mm or 11 mm thickness and are suitable for eggcrate return air grills. Periframes are manufactured to specific size - please advise dimensions when ordering.

Part Number	Description
PF404011NS	Filter Periframe up to .16 SQM
PF505011NS	Filter Periframe up to .25 SQM
PF606011NS	Filter Periframe up to .36 SQM
PF707011NS	Filter Periframe up to .49 SQM
PF808011NS	Filter Periframe up to .64 SQM
PF909011NS	Filter Periframe up to .81 SQM

VEE MESH FILTERS

Vee Mesh filters are used in commercial applications. They are available in either 50 mm or 100 mm and are usually installed in a slide track in the duct work or return air plenum. Vee Mesh filters are manufactured to specific size - please advise dimensions when ordering



Part Number	Description
VM404005NS	Filter V mesh 47 mm up to .16 M ²
VM505005NS	Filter V mesh 47 mm up to .25 M ²
VM606005NS	Filter V mesh 47 mm up to .36 M ²
VM707005NS	Filter V mesh 47 mm up to .49 M ²
VM808005NS	Filter V mesh 47 mm up to .64 M ²
VM909005NS	Filter V mesh 47 mm up to .81 M ²
VM10010005NS	Filter V mesh 47 mm up to 1.0 M ²
VM404010NS	Filter V mesh 97 mm up to .16 M ²
VM505010NS	Filter V mesh 97 mm up to .25 M ²
VM606010NS	Filter V mesh 97 mm up to .36 M ²
VM707010NS	Filter V mesh 97 mm up to .49 M ²
VM808010NS	Filter V mesh 97 mm up to .64 M ²
VM909010NS	Filter V mesh 97 mm up to .81 M ²
VM10010010NS	Filter V mesh 97 mm up to 1.0 M ²

PURE V FILTERS

Pure V filters are used in commercial applications as an alternative to Vee Mesh. They are available in either 50 mm or 100 mm and are usually installed in a slide track in the duct work or return air plenum. Pure V filters have a solid aluminium frame, rigid self supporting media with a 100% hot melt seal to eliminate air and contaminate bypass.



Part Number	Description
43311212	Filter Pure V 305 x 305 x 50
43311224	Filter Pure V 305 x 610 x 50
43311620	Filter Pure V 406 x 508 x 50
43311624	Filter Pure V 406 x 610 x 50
43311625	Filter Pure V 406 x 635 x 50
43311820	Filter Pure V 457 x 508 x 50
43311824	Filter Pure V 457 x 610 x 50
43312020	Filter Pure V 508 x 508 x 50
43312024	Filter Pure V 508 x 610 x 50
43312025	Filter Pure V 508 x 635 x 50
43312030	Filter Pure V 508 x 762 x 50

PURE V FILTERS

Part Number	Description
43312424	Filter Pure V 610 x 610 x 50
42311224	Filter Pure V 305 x 610 x 100
42311620	Filter Pure V 406 x 508 x 100
42311624	Filter Pure V 406 x 610 x 100
42311625	Filter Pure V 406 x 635 x 100
42311820	Filter Pure V 457 x 508 x 100
42311824	Filter Pure V 457 x 610 x 100
42312020	Filter Pure V 508 x 508 x 100
42312024	Filter Pure V 508 x 610 x 100
42312025	Filter Pure V 508 x 635 x 100
42312030	Filter Pure V 508 x 762 x 100
42312424	Filter Pure V 610 x 610 x 100

POCKET FILTERS

Pocket Filters are designed for use in most commercial applications where high efficiency filtration is required, such as hospitals, food processing and pharmaceutical. Scandfilter pocket bags, exclusive to Heatcraft Australia, are made from non woven synthetic media. They come in both Carmpac media with efficiency ranging from EU3-EU6 , and Synsafe media (Electrostatically charged) with efficiency ranging from EU6-EU8

Part Number	Description
PAP665S4415	Filter 6 pocket EU6 610 x 160 x 380 mm
PAP385S2422	Filter 3 pocket EU6 305 x 610 x 560 mm
PAP685S4422	Filter 6 pocket EU8 610 x 610 x 560 mm



QUALITY AIR FILTERS

COMPREHENSIVE RANGE

STOCKED AND SUPPORTED NATIONALLY





BAG FILTERS

Bag Filters and Extended Surface Filters are designed for use in most commercial or industrial HVAC systems where medium to high efficiency filtration is required. The most common bag filters are Multi-Peak, Pyracone, Pyracube, Duovee & Wedge Filters.

Part Number	Description
4 Peak Type Replacements	
60053061	4 Peak bag only half size
60056161	4 Peak bag only
Multi Peak Replacements	
70056161	3 Peak bag only
70053061	2 Peak bag only half size
Pyracube Type Replacements	
20056161	Filter Pyracone bag only
20053061	Filter Pyracone half bag only
30056161	Filter Pyracone bag only
30053061	Filter Pyracone half bag only
Duovee Type Replacements	
90576161	Duovee EU4 610 x 610 x 380 mm
90596161	Duovee EU4 610 x 610 x 570 mm
Mini-Maxi Wedge Type Replacement	
40056161	Filter MAX/WDG EU4 610 x 610 x 600
40053061	Filter MAX/WDG EU4 305 x 610 x 600
80053061	Filter MAX/WDG EU4 305 x 610 x 380

GREASE FILTERS

Honeycomb grease filters offer a simple, low cost filter ideal for the hospitality industry. Commonly used in kitchen exhaust canopies, they are extremely durable and fully washable, which provides a long service life.

Part Number	Description
BF01	Grease Filter 495 x 394 x 50 mm
BF02	Grease Filter 495 x 495 x 50 mm
BF05	Grease Filter 749 x 495 x 50 mm

FILTER TURN CLIPS

Part Number	Description
PCA-2	Filter Turn 'P' Clip 2

MISC AIR FILTRATION PRODUCTS

Part Number	Description
AGDTS5	Small Drip Tray Tablets 5 Pack
AGDTL5	Large Drip Tray Tablets 5 Pack
AGDTX10	Drip Tray Tablets
STA400GM	Safe-T-Air 400 gram
STA1KG	Safe-T-Air 1 KG
STA2KG	Safe-T-Air 2 KG

MAGNEHELIC DIFFERENTIAL PRESSURE GAUGES & KITS

Part Number	Description
2000-250PA	Gauge Magnehelic® for Air
2000-500PA	Gauge Magnehelic® for Air



Coldroom & Cabinet Hardware & Accessories

EVAPORATOR MOUNTING KIT

Part Number	Description	Material	Weight Capacity (kg)	Pack Inclusions	Application
IEMK	Evaporator Mounting Kit	6.6 Nylon	320 (80 kg ea)	4 x Mushroom Bolts 8 x Nuts 4 x Washers	<ul style="list-style-type: none"> Suitable mounting solution with low thermal conductivity to minimise heat transfer from inside to outside. Suited for 50 mm to 200 mm cool room panel



CABINET HINGES

Part Number	Type	Description	Finish	Offset	Pack Size
CRH40X	Medium Duty	Cabinet Hinge	Chrome Plated	19 to 25 mm	
P11ZLHMSPINK	Self Closing - Left Hand	Cabinet Hinge	Chrome Plated		2
P11ZRHMSPIK	Self Closing - Right Hand	Cabinet Hinge	Chrome Plated		2
HP		Hinge Packer			
R1080		Hinge Coolroom Rota Cam			



LOCKS, LATCHES & STRIKES

Part Number	Description
R5622CP	Strike Efco Adjustable
CRH1961X	Latch And Strike Spring Loaded
CRH5710X	Latch Standard Suit Cabinet
CRH5722X	Strike 19-25 mm 60 Degree
CRH5723X	Strike 19-25 mm 90 Degree
CRH6188NX	Latch & Strike Edge mount
AH-1178	Latch Set Lockable Offset 44-60
AH-1178C	Inside Release Nylon
K481	Inside Release Kason 56
AH-838	Door Safety Latch
H&S	Hasp And Staple
RC01	Latch Roller Catch Coolroom
L02	Magnet Assy.
K109304	Door Closer Hydraulic Kason

ROLLER ASSEMBLIES & GUIDES

Part Number	Description
A113X	Wheel Delrin 55 mm
A127X	Wheel Derlin 75 mm
A129	Wheel Derlin 75 mm & Axle Assy
SC4-050	Roller Door Hanging Assy
SC4-051	Roller Wheel 50 mm Axle & Nut
A242A	Door Stop Rubber
A240	Door Stop Large
A250-2	Door Stop Set Small
A220LH	Door Stop Track Mounted Lh
A220RH	Door Stop Track Mounted Rh
A260	Door guide Square
A280	Door guide H Type
G04	Door guide Nylon - Small

SHELVING STRIPS

Part Number	Description
SS4	Shelving Strip S/Steel 1220 mm
SS5	Shelving Strip S/Steel 1525 mm
SCL	Shelving Clips Large C/W Lug
SS6	Shelving Strip S/Steel 1830 mm
SC	Clip Stainless Steel (1615)

DOOR GASKET MATERIAL

Part Number	Description
NXB604	Door Gasket Black Innerseal
CRS13B25	Cool Room Gasket, 25 m Per Roll

THERMOMETERS

Part Number	Description
CPF83-50MM-1.5M	Dial Therm 50 mm -40/+40 °C 1.5 m
F84-60-FP	Dial Therm 60 mm -40/+40 °C 1.5 m
F84-80-FP	Dial Therm 80 mm -40/+40 °C 1.5 m
F84-100-FP	Dial Therm 100 mm -40/+40 °C 1.5 m
FP8760	Arthermo Dial T/Meter 60 mm
FP8780	Arthermo Dial T/Meter 80 mm
FP87100	Arthermo Dial T/Meter 100 mm
DT1001C	Thermometer S/Power -40 To 70 °C
RTM3030	Therm Sst Hang/Stand -30 To +30°

MISCELLANEOUS

Part Number	Description
ANM-001	Coolroom Door Bell 95 Db Rated
CRH-500	Pressure Relief Vent
D03	Door Bell Recess
A210	Coolroom Door Locator
RH251	Pull Handle Suit Cabinet

NIGHTBLINDS

Part Number	Description
CAU1200B	Nightblind 1.2 m wide X 2 m drop
CAU1800B	Nightblind 1.8 m wide X 2 m drop
CAUC-A	Cassette Canopy - Alum 3.75 m
CAUC-B	Cassette Canopy - Black 3.75 m
CAUCEC	Cassette End Caps
CAUCMB	Cassette Mounting Bracket
CAUC-W	Cassette Canopy - White 3.75 m
CAUGC-pk	Gazzelle Clip (10 pack)
CAUH&H	Handle & Hold Down Anchor
CAUHMT	Loop Handle For Magnetic Rail
CAUPB	Plastic Block
CAS1.4	Nightblind Retraction Spring

Gauges



FLOYD GAUGES: SERIES SBSR - SURFACE MOUNT - REAR FLANGE

Part Number	Description	Scale kPa
Compound		
SM60L	Gauge Floyd 60 mm All Gas Comp	-100 to 1600
SM60R22L	Pressure Gauge 60 mm R22 Low	-100 to 1600
SM60R404AL	Pressure Gauge 60 mm R404A Low	-100 to 1600
SM60R134AL	Pressure Gauge 60 mm R134A Low	-100 to 1000
SM100L	Gauge Floyd 100 mm All Gas Comp	-100 to 1600
SM100R22L	Pressure Gauge 100 mm R22 Low	-100 to 1600
SM100R404AL	Pressure Gauge 100 mm R404A Low	-100 to 1600
SM100R134AL	Pressure Gauge 100 mm R134A Low	-100 to 1000
Pressure		
SM60H	Gauge Floyd 60 mm All Gas Pres	0 to 3000
SM60R22H	Pressure Gauge 60 mm R22 High	0 to 3000
SM60R404AH	Pressure Gauge 60 mm R404A High	0 to 3000
SM60R134AH	Pressure Gauge 60 mm R134A High	0 to 2000
SM100H	Gauge Floyd 100 mm All Gas Pres	0 to 3000
SM100R22H	Pressure Gauge 100 mm R22 High	0 to 3000
SM100R404AH	Pressure Gauge 100 mm R404A High	0 to 3000
SM100R134AH	Pressure Gauge 100 mm R134A High	0 to 2000
Oil Pressure		
SM60-OIL	Gauge Floyd 60 mm Oil	0 to 1600
SM100-OIL	Gauge Floyd 100 mm Oil	0 to 1600



SERIES FRR - FLUSH MOUNT - FRONT FLANGE

Part Number	Description	Scale kPa
Compound		
FM60L	Gauge Floyd 60 mm All Gas Comp	-100 to 1600
FM60R22L	Pressure Gauge 60 mm R22 Low	-100 to 1600
FM60R404AL	Pressure Gauge 60 mm R404A Low	-100 to 1600
FM60R134AL	Pressure Gauge 60 mm R134A Low	-100 to 1000
FM100L	Gauge Floyd 100 mm All Gas Comp	-100 to 1600
FM100R22L	Pressure Gauge 100 mm R22 Low	-100 to 1600
FM100R404AL	Pressure Gauge 100 mm R404A Low	-100 to 1600
FM100R134AL	Pressure Gauge 100 mm R134A Low	-100 to 1000
Pressure		
FM60H	Gauge Floyd 60 mm All Gas Pres	0 to 3000
FM60R22H	Pressure Gauge 60 mm R22 High	0 to 2500
FM60R404AH	Pressure Gauge 60 mm R404A High	0 to 3000
FM60R134AH	Pressure Gauge 60 mm R134A High	0 to 2000
FM100H	Gauge Floyd 100 mm All Gas Pres	0 to 3000
FM100R22H	Pressure Gauge 100 mm R22 High	0 to 2500
FM100R404AH	Pressure Gauge 100 mm R404A High	0 to 3000
FM100R134AH	Pressure Gauge 100 mm R134A High	0 to 2000
Oil Pressure		
FM60-OIL	Gauge Floyd 60 mm Oil	0 to 1600
FM100-OIL	Gauge Floyd 100 mm Oil	0 to 1600

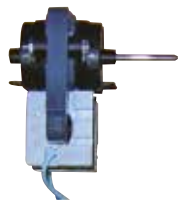


Tailored configurations including glycerine filled and refrigerant temp. scale are available on request.

Motors, Blades & Fan Decks



Open Frame Motors



ROTATION - CLOCKWISE

Part Number	Watts	Amps	Body Size(stack)	Description
J03RF03	1.5	0.14	3/8	Motor JRM F/Free Cw.
J04RF02	4.4	0.3	1/2	Motor JRM Cw
J06RF04		0.2	3/4	Motor JRM Sb Cw
J06RF24	4	0.34	3/4	Motor 240/50 1Sp Cw

ROTATION - ANTI CLOCKWISE

Part Number	Watts	Amps	Body Sizes (stack)	Description
J04RF01	4.5	0.3	1/2	Motor JRM Acw
J04RF03	4.5	0.3	1/2	Motor W- 3/16" Sleeve
J05KR02	6.5	0.26	5/8	Motor Fan 240V 50Hz Acw
J05OR01S	3	0.25	5/8	Motor Suit Orford
J05RF10	6.5	0.26	5/8	Motor JRM Bearing Acw
J06BM15	4	0.34	3/4	Motor JRM Reversible
J06BM19	6	0.3	3/4	Motor JRM Reversible
J06E8GM	6	0.3	3/4	Motor Threaded Shaft
J06FM02	8.1	0.32	3/4	Motor JRM Acw Knurled Shaft
J06KR10	6.8	0.26	3/4	Motor Fan
J06RF08	4.3	0.34	3/4	Motor JRM Bearing CW
J06RF17	4.3	0.34	3/4	Motor JRM
J09BM05	7	0.25	1-1/8	Motor JRM Reversible
J09KR11J	10.6	0.34	1-1/8	Motor Fan 240V 50Hz Ccw
J09OR05S	12	0.45	1-1/8	Motor JRM Suit Orford Cabinets
J12BM07	10	0.43	1-1/2	Motor Fan 10W Reversible

GEMLINE MOTOR KIT

Part Number	Watts	Amps	Description
SM672	6	0.21	Open Frame Motor Fan Kit -Supco Motor 5/8 stack & 2 x Blades (132mm & 104mm)

Notes

*Cw = Clockwise

*Acw = Anti Clockwise

Kulthorn K-Line

DOUBLE SHAFT - SHADED POLE 240V/1300RPM/BALL BEARING

Part Number	Watts	Rotation	Description
KJB2M4701	10	Bi-Directional	Kulthorn Fan Motor 10W D/Shaft
KJB2P4700	20	Bi-Directional	Kulthorn Fan Motor 20W D/Shaft
KJF2F4700	40	Bi-Directional	Kulthorn Fan Motor 40W D/Shaft



HUB DRIVE - SHADED POLE 240V/1300RPM/SLEEVE BEARING/3 STUD REAR MOUNTING

Part Number	Watts	Rotation	Description
KJA2C4704	7	ACW	Kulthorn Fan Motor Hub-Drive
KJA2M4701	10	ACW	Kulthorn Fan Motor Hub-Drive (Also used for Zip)
KJB2M4702	13	ACW	Kulthorn Fan Motor Hub-Drive
KJA2R4701	20	ACW	Kulthorn Fan Motor Hub-Drive
KJB2S4701	28	ACW	Kulthorn Fan Motor Hub-Drive

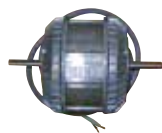


SPECIFIC MOTOR APPLICATIONS - SHADED POLE 240V/1300RPM/SLEEVE BEARING

Part Number	Watts	Rotation	Description
KJF4Y701A	16	ACW	Kulthorn Fan Motor to Suit Coke Cabinets
JF2E4700K	11	ACW	Kulthorn Fan Motor HTR Blower Req 1Mfd Capacitor
KJE2E4703	20	ACW	Kulthorn Fan Motor Suits Orford - Reversible (c/w-1.5mfd cap)
KJF2E4701	20	ACW	Kulthorn Fan Motor Suits Orford - Ball Bearings/Reversible
KJB2M4001	9	ACW	Kulthorn Fan Motor Hub-Drive Vented
KJE2F4003	40	ACW	Kulthorn Fan Motor Hub-Drive Req 3MFD CAP

Fasco 50D Series

FASCO



DOUBLE SHAFT - SHADED POLE 240V/1300RPM/BALL BEARING

Part Number	Watts	Rotation	Description	Volts
50D501-80A	10	Bi-Directional	Max. Fan Dia/Pitch: 225 mm / 40°	240V
50D502-80A	20	Bi-Directional	Max. Fan Dia/Pitch: 250 mm / 40°	240V
50D503-80A	40	Bi-Directional	Max. Fan Dia/Pitch: 275 mm / 40°	240V
50D505-80A	60	Bi-Directional	Max. Fan Dia/Pitch: 350 mm / 40°	240V

HUB DRIVE - SHADED POLE 240V/1300RPM/SLEEVE BEARING/3 & 4 STUD REAR MOUNTING

Part Number	Watts	Rotation	Description	Volts
50D520-82A	8	ACW	50D series Fan Motor	240V
50D501-81A	13	ACW	50D series Fan Motor	240V
50D551-02A	20	ACW	50D series Fan motor Suits Kysor Warren	240V
50D543-01A	35	ACW	50D series Fan Motor	240V
50D543-03A	35	ACW	50D series Fan Motor	240V
50D509-11A	40	ACW	415 Volt Heavy Duty	415V

SPECIFIC MOTOR APPLICATIONS - SHADED POLE 1300RPM/SLEEVE BEARING/3 & 4 STUD REAR MOUNTING

Part Number	Watts	Rotation	Description	Volts
50D552-01A/S	13	ACW	50D series Fan Motor Suits Kysor Warren	240V
50D521-76A	15	ACW	50D series Fan Motor 140mm long shaft	240V
50D521-77A	15	ACW	50D series Fan Motor 190mm long shaft	240V
50D551-01A	20	ACW	50D series Fan Motor 32mm long shaft	240V
50D509-22A	40	ACW	50D series Fan Motor 415 Volt	415V
50D505-71C	60	CW	50D series Fan Motor Suits Muller	240V
50D505-61C	60	CW	50D series Fan Motor	240V

Interlink AC Motors

HUB DRIVE - SHADED POLE 240V/1300RPM/SLEEVE BEARING/3 & 4 STUD REAR MOUNTING

Part Number	Watts	Rotation	Description
ISP-5	5	ACW	Square body - Hub Drive Fan Motor - Dual Mount
ISP-7	7	ACW	Square body - Hub Drive Fan Motor - Dual Mount
ISP-10	10	ACW	Square body - Hub Drive Fan Motor - Dual Mount
ISP-16	16	ACW	Square body - Hub Drive Fan Motor - Dual Mount
ISP-25	25	ACW	Square body - Hub Drive Fan Motor - Dual Mount
ISP-34	34	ACW	Square body - Hub Drive Fan Motor - Dual Mount



INTERLINK DOUBLE SHAFT - SHADED POLE 240V/1300RPM

Part Number	Watts	Rotation	Description
ISP-10D	10	BI-DIRECTIONAL	Round body Motor - Maximum Fan Diameter/Pitch: 225 mm / 40°
ISP-20D	20	BI-DIRECTIONAL	Round body Motor - Maximum Fan Diameter/Pitch: 250 mm / 40°
ISP-40D	40	BI-DIRECTIONAL	Round body Motor - Maximum Fan Diameter/Pitch: 275 mm / 40°

INTERLINK EC MOTOR 240V

Part Number	Watts	Rotation	Description	Lead Length
IEC-10	14	ACW	Energy Efficient EC Motor - Round Body	2000 mm
IEC-10SL	14	ACW	Energy Efficient EC Motor - Round Body	540 mm
IEC-20	22	ACW	Energy Efficient EC Motor - Round Body	2000 mm
IEC-20SL	22	ACW	Energy Efficient EC Motor - Round Body	540 mm

Henry EC Motors

Henry Hub Drive Motor 240V

Part Number	Watts	Rotation	Description
EQ1-12	12	ACW	Energy Efficient EC Motor - Square Body
EQ1-20	20	ACW	Energy Efficient EC Motor - Square Body



Hub Drive Motors

Part Number	Watts	Rotation	Description
5-D564	9	ACW	Fasco Bearing Motor - Threaded Shaft
LT0009	9	ACW	Tesonac Bearing Motor - Threaded Shaft



EBM Motors

ebmpapst



Q MOTORS HUB DRIVE/ SQUARE BODY- SHADED POLE 240V/1300RPM/DUAL MOUNTING

Part Number	Watts	Rotation	Description
M4Q045BD01-38SK	5	ACW	Hub Drive Square Motor - Max. Fan Dia:200 mm / Pitch 28°
M4Q045-CA01-72	7	ACW	Hub Drive Square Motor - Max. Fan Dia:230 mm / Pitch 22° - Low temp 2 m Lead
M4Q045-CA01-72L	7	ACW	Hub Drive Square Motor - 3 prong Lyall plug
M4Q045-CA03-75	10	ACW	Hub Drive Square - Motor Max. Fan Dia:254 mm / Pitch 22°
M4Q045-CF01-75	16	ACW	Hub Drive Square - Motor Max. Fan Dia:254 mm / Pitch 28°
M4Q045-DA05-75	23	ACW	Hub Drive Square - Motor Max. Fan Dia:300 mm / Pitch 28°
M4Q045-EF01-75	34	ACW	Hub Drive Square - Motor Max. Fan Dia:300 mm / Pitch 34°

Spares

Part Number	Description
52544-2-4037	200 mm Wall Ring to Suit M4Q motor
Q-MOTORSCREW	"Q" Motor Mounting Screw Kit



EBM PAPST - IQ MOTOR EC - ENERGY EFFICIENT

Part Number	Watts	Rotation	Description
IQ3612	Rated up to 23	ACW	EC Hub Drive Square Motor
IQ3620	Rated up to 32	ACW	EC Hub Drive Square Motor
IQ3612-L	Rated up to 23	ACW	EC Hub Drive Square Motor -With LYALL Plug/Frigrite Cabinets



EBM PAPST - COMPACT AXIAL FAN MOTOR

Part Number	Watts	Rotation	Description
ACI4420HHR-CTO	3.3	CW	EC Compact Axial Fan 119 mm SQ X 38 mm
ACI4400HHU	4.4	CW	EC Compact Axial Fan 119 mm SQ X 38 mm - IP65 with 1 m Lead
8556N	12	CW	Compact Axial Fan 80 mm SQ x 38 mm
W2S130-AA03-63	47	ACW	Compact Axial Fan 150 mm Round x 55 mm

Spares

Part Number	Description
LZ126	Lead to Suit EBM Compact Axials
LZ30-4	Fan Guard to Suit EBM ACI4420

ebmpapst



COMPACT AXIAL FAN MOTOR

Part Number	Watts	Rotation	Description
4E230B21			Compact Axial Fan 119 mm SQ X 38 mm Assy 240 V With Fan Cowl. Rated to 80 °C

EBM PAPST - PROGRAMMABLE ESM MOTOR & FAN ASSEMBLY

Part Number	Watts	Rotation	Description
W1G200EC9110CTN	31	ACW	EC Axial Fan 200 mm x 78.5 mm Programmable truncated Mount
W1G200EC9145CTN	31	CW	EC Axial Fan 200 mm x 78.5 mm Programmable Ring mount

Spares

Part Number	Description
10637-4-1040	Cable to Suit W1G200 ESM Motor
35138-2-4039	Finger guard to suit WIG200

EBM PAPST - ESM PROGRAMMER

Part Number	Description
CBC000-AF08-01	Handheld Programmer For ESM 2 Speed Fan Assy

Kulthorn Motors



42 "D" FRAME - 5" BODY DIAMETER

Part Number	Watts	Volts	Description
KDF2F4702	75	415 V	1 Speed, Reversible Suits bracket 52KP2A-1
KDF2F4701	95	240 V	2 Speed, Reversible Suits bracket 52KP2A-1
DF2J4701K	186	240 V	3 Speed, Reversible Suits bracket 52KP2A-1

48 "H" FRAME - SINGLE SHAFT - 5-5/8" BODY DIAMETER

Part Number	Watts	Volts	Description
HF3W4700K	125/370	240 V	2 Speed, 6 Pole
KHF2D4701	130	240 V	3 Speed, 4 Pole
HF3G4701K	150	240 V	3 Speed, 6 Pole
KHF2F4702	180	240 V	1 Speed, Reversible
KHF2H4701	250	240 V	4 Speed With Data Plug Connector
KHF3J4702	250/300	240 V	1 Speed, 6 Pole, Reversible
KHF3J4704	300	240 V	1 Speed, 6 Pole
KHF2K4704	315	240 V	2 Speed, 4 Pole (Fridgebox)
HF2J4701K	315	240 V	3 Speed
HF3Q4700K	410	240 V	3 Speed, 6 Pole
KHF3Q4701	410	240 V	3 Speed, 6 Pole
KHF2T4703	600	240 V	3 Speed



48 "H" FRAME - DOUBLE SHAFT - 5-5/8" BODY DIAMETER

Part Number	Watts	Volts	Description
KHF2F4701	250	240 V	3 Speed, 4 Pole
KHF2J4703	315	240 V	4 Speed
HF2J4702K	315	240 V	3 Speed
KHF2Q4700	600	240 V	4 Speed
HF2T4702K	600	240 V	3 Speed
KHF2T4704	750	240 V	3 Speed



Fasco S Series “H” Frame

FASCO



SINGLE SHAFT - VENTED

Part Number	Watts	Description
8061S122-08	130	3 Speed, 240 V
808557NVB-B11	450	2 Speed, 240 V, Lug Mount (Emailair)
8061S109-03	315	3 Speed, 240 V, Resilient Mount
808555NVA-A13	315	3 Speed, 240 V
8061S128-06	750	3 Speed, 240 V

SINGLE SHAFT - TOTALLY ENCLOSED

Part Number	Watts	Description
8061S077-02RY	85	1 Speed, 240 V
808554LTB-A80	180	1 Speed, 240 V
808534LTB-A12	180	1 Speed, 415 V
8061S009-06	250	1 Speed, 240 V
8061S137-80	250	1 Speed, 240 V
808536MTB-A11	250	1 Speed, 415 V
8061S118-02	300	3 Speed, 240 V
8061S120-80	370	1 Speed, 240 V
8061S121-80	370	1 Speed, 415 V, Resilient Mount
808557NTA-A11	370	3 Speed, 240 V
809436NTB-B11	375	3 Speed, 240 V, Lug Mount
8061S148-01	410	3 Speed, 240 V
8061S082-03	600	1 Speed, 240 V

DOUBLE SHAFT - VENTED

Part Number	Watts	Description
8061S083-80	100	2 Speed, 240 V, Resilient Cradle
8061S130-80	130	3 Speed, 240 V, Resilient Cradle
8061S122-02	130	3 Speed, 240 V, Resilient Cradle
8061S122-80	130	3 Speed, 240 V, Resilient Cradle
8061S109-01	425	3 Speed, 240 V, Resilient Cradle
8061S082-80	600	3 Speed, 240 V, Resilient Cradle
8061S128-80	750	3 Speed, 240 V, Resilient Cradle
9434QVB-B12	850	3 Speed, 415 V, Resilient Cradle
809455SVA-B12	1100	3 Speed, 240 V, Resilient Cradle
809455STB-B12	1350	3 Speed, 240 V, Resilient Cradle

DOUBLE SHAFT - TOTALLY ENCLOSED

Part Number	Watts	Description
8061S004-80	200	3 Speed, 240 V, Resilient Cradle

FASCO 56 FRAME SINGLE SHAFT - VENTED

Part Number	Watts	Description
809455PVB-B13S	600	1 Speed, 240 V, Resilient Cradle
809455QVB-B13S	750	1 Speed, 240 V, Resilient Cradle
80945BQVB-B11	750	Variable Speed, 240 V, Resilient Cradle With Capacitor
809455SVB-B14	1100	1 Speed, 240 V, Resilient Cradle
809455XVB-B14	1500/500	2 Speed, 240 V, Resilient Cradle

Motor Brackets & Accessories

ACCESSORIES	
Part Number	Description
391-074-01	Bearing Service kit to Suit Fasco 30/50D series Motors
52KP2A-1	Bracket Kit 126 mm Diameter With 2 Welded Studs & 3 x 3/8" Studs to Suit Kulthorn KDF series
391-127-A	Bracket Kit - 4 Bolt Band with 4 x 3/8" Studs to suit Fasco S & 808 series Motors
391-127-B	Bracket Kit - 4 Bolt Band with 4 x 3/8" Studs to suit Fasco S & 808 series Motors
391-127-K	Bracket Kit - 3 or 4 Bolt Band with 4 x 3/8" Studs to suit Fasco S & 808 series Motors
391-127-L	Bracket Kit - 3 or 4 Bolt Band with 4 x 3/8" Studs to suit Fasco S & 808 series Motors
391-127-M	Bracket Kit - 3 or 4 Bolt Band with 4 x 3/8" Studs to suit Fasco S & 808 series Motors
391-127-U	Bracket Kit - 3 or 4 Bolt Band with 4 x 3/8" Studs to suit Fasco S & 808 series Motors
391-127-V	Bracket Kit - 3 or 4 Bolt Band with 4 x 3/8" Studs to suit Fasco S & 808 series Motors
ES52KP1	2 Bolt Mounting Bracket to Suit Kulthorn KJ KB Motors
AFB19	Adjustable Height Mounting Bracket to Suit Round motor to 4" Kulthorn & Fasco
5-8725-6021	Rainsheild Plastic "Slinger"Guard to Suit 1/2" Shaft
152KT2H-33	Resilient Motor mounts to Suit HF2T4702K & KHF2T4704
MR1325-1	Evaporator Fan Guard 200 mm to Suit KC/KF to 1001/1000
83812V	Evaporator Fan Guard 220 mm to Suit KC/KF onwards 1201/1380
MR1525-1	Condensor Fan Guard 200 mm to Suit Nullabor Units
MR1395-3	Condensor Fan Guard 230 mm to Suit Nullabor Units
MR1420-1	Condensor Fan Guard 300 mm to Suit Nullabor Units
MR1672-1	Condensor Fan Guard 450 mm to suit Lovelocks Fridgebox

Ziehl Axial Motor/Fan Assemblies

ZIEHL-ABEGG 

ZIEHL-ABEGG AXIAL PART NUMBER

1	2	3	4	5	6	7	8	9	10	11	12
F	E	0	5	0	4	E	K	4	1	V	7
1	2	3	4	5	6	7	8	9	10	11	12
F	E	0	5	0	4	E	K	4	1	V	7
Axial (F=fixed pitch, V=variable pitch)				Mounting pattern (A = bare fan, K = basket grille, Q = wall plate)				Motor frame size			
Fan type (B = sheet metal, C = die cast, E = die cast sickle L = sheet sickle, N = FE20wlet)				Motor stack length				Air flow direction (A = forced draft, V = induced draft)			
Fan size (cm)				Number of blades							
number of poles (1 phase; 2, 4, 6, 8. 3 phase; V = 4, S = 6, A = 8, N = 12)											
motor type (D = 3 phase, E = 1 phase, H = FREvent, I = ETAvvent EC)											

ZIEHL-ABEGG 



MOTOR/FAN BASKET GRILLE ASSEMBLY

Part Number	Fan Diameter (mm)	Voltage/ Phase	No. of Poles	Fan Speed	Air Volume (m3/Hr)
FB050-4EK.4IV4P	500	230/1	4	1240	7100
FB050-4EK.4FV4L	500	230/1	4	1240	7100
FB050-6EK.4FV4S	500	230/1	6	910	5500
FB050-VDK.4IV4P	500	400/3	4	1330	8300
FB050-VDK.4FV4L	500	400/3	4	1370	7100
FB050-SDK.4F4VS	500	400/3	6	880	5800
FN050-4EK.4IV7	500	230/1	4	1250	9800
FN050-6EK.4FV7	500	230/1	6	970	7500
FB056-6EK.4IV4P	560	230/1	6	930	8300
FB056-SDK.4FV4P	560	400/3	6	860	7900
FB063-6EK.4IV4P	630	230/1	6	830	11200
FB063-SDK.4IV4P	630	400/3	6	870	8300
FN071-SDK.6FV7	710	400/3	6	900	14500



MOTOR/FAN/SQUARE PLATE ASSEMBLY

Part Number	Fan Diameter (mm)	Voltage/ Phase	No. of Poles	Fan Speed	Air Volume (m3/Hr)
FN045-VDQ.4FV7	450	400/3	4	1360	5700
FC050-VDQ.4FV7	500	400/3	4	1340	7200
FN050-4EQ.4IV7	500	230/1	4	1250	9800
FN050-VDQ.4IV7	500	400/3	4	1480	11000
FC063-VDQ.6KV7L	630	400/3	4	1340	15000
FN063-VDQ.6NV7	630	400/3	4	1030	13000
FN080-SDQ.6NV7	800	400/3	6	880	20000
FN080-ADQ.6NV7	800	400/3	8	770	20900
FN080-ZIQ.GL.V7	800	380-480	EC	1100	16570

MOTOR/FAN/ROUND PLATE ASSEMBLY

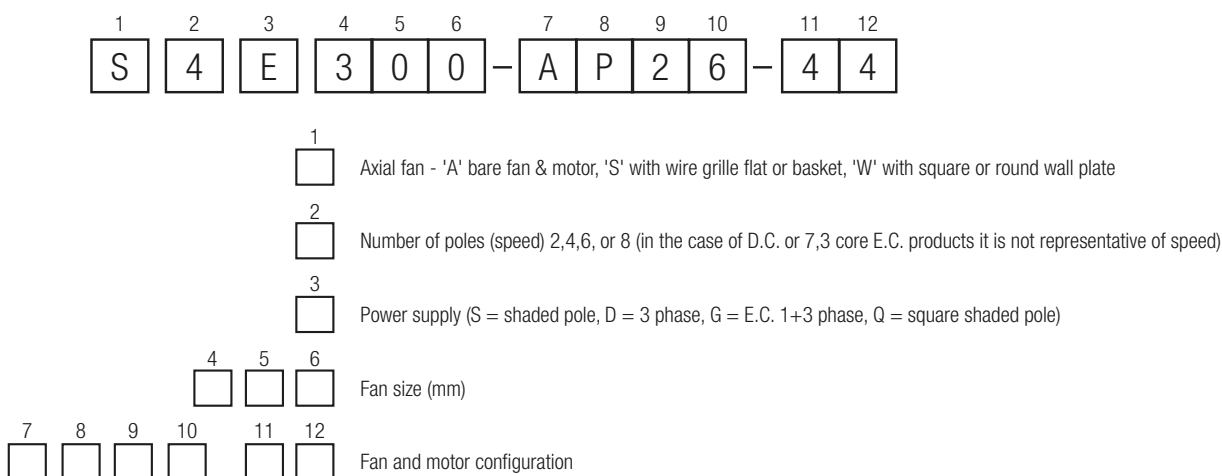
Part Number	Fan Diameter (mm)	Voltage/ Phase	No. of Poles	Fan Speed	Air Volume (m3/Hr)
FC045-VDL.4CV7	450	400/3	4	1390	5000

MOTOR/BARE FAN ASSEMBLY

Part Number	Fan Diameter (mm)	Voltage/ Phase	No. of Poles	Fan Speed	Air Volume (m3/Hr)
FB045-4EA.4FA4P	450	240/1	4	1325	4300
FN050-VDA.4IV7	500	400/3	4	1480	10500

EBM Papst Axial Motor/Fan Assemblies

EBM-PAPST AXIAL PART NO.



MOTOR/FAN BASKET GRILLE ASSEMBLY - INDUCED AIR

Part Number	Fan Diameter (mm)	Voltage	No. of Poles	Fan Speed	Air Volume (m3/Hr)
S4E300AS7244CTN	300	230/1	4	1380	1800
S4E300-AP26-38	300	240/1	4	1380	1935
S4E300-FJ08-05 *	300	240/1	4	1390	1350
S3G300AK1358CTN	300	240	EC	1425	2075
S4E350AN0260CTN	350	230/1	4	1400	3110
S3G350AK6214CTN	350	200-240	EC	1675	3925
S4E400-AP02-44	400	230/1	4	1430	3990
S4E450AU0337CTN	450	230/1	4	1300	5700
S3G500AM5623CTN	500	200-277	EC	1420	9000
S6E630-AN01-01	630	230	6	860	11000
S6D630-AN01-01	630	400	6	890	11270
S3G630AQ3723CTN	630	200-277	EC	1000	12000
W6D800-GD01-01	800	400/3	6	880	24110
W3G800-GV05-75	800	380-480	EC	1090	28415

* Double cage assembly for head cooling application

** Sealed Electrical for Outdoor Use

ebmpapst



MOTOR/FAN BASKET GRILLE ASSEMBLY - FORCED AIR

Part Number	Fan Diameter (mm)	Voltage	No. of Poles	Fan Speed	Air Volume (m3/Hr)
S4E300-AB03-43	300	240/1	4	1220	1660

MOTOR/BARE FAN ASSEMBLY - INDUCED AIR

Part Number	Fan Diameter (mm)	Voltage	No. of Poles	Fan Speed	Air Volume (m3/Hr)
A6E450AJ0811CTN	450	230/1	6	850	4445
A4E300AS7201	300	230/1	4	1320	1800

MOTOR/BARE FAN ASSEMBLY - FORCED AIR

Part Number	Fan Diameter (mm)	Voltage	No. of Poles	Fan Speed	Air Volume (m3/Hr)
A4E300-AB03-23	300	240/1	4	1250	1510

MOTOR/FAN/SQUARE PLATE ASSEMBLY

Part Number	Fan Diameter (mm)	Voltage	No. of Poles	Fan Speed	Air Volume (m3/Hr)
W3G630-GU23-01	630	380-480	EC	680	17695
W8D800-GD01-01	800	400 *	8	870	23030
W6D800-GJ01-01	800	400 *	6	1080	29510
W3G800-GV01-01	800	380-480	EC	1090	27500
W3G800-GV05-75	800	380-480	EC	1090	28415
W6D800-GD01-01	800	400/3	6	880	24110
W3G630-GU23-01	630	380-480	EC	1510	21190
W3E800-GU05-75		380-480	EC	1090	28415

* Denotes DELTA connection for high speed

EBM-PAPST RADIAL/CENTRIFUGAL PART NUMBER

1	2	3	4	5	6	7	8	9	10	11	12
R	4	E	2	8	0	A	D	0	8	0	5

1 'R' bare fan & motor, 'G' forward curved (SWSI) with housing, 'D' forward curved (DWDI) with housing

2 Number of poles (speed) 2,4,6, or 8 (in the case of D.C. or 1,3 core E.C. products it is not representative of speed)

3 Power supply (S = shaded pole, D = 3 phase, E = 1 phase, G = D.C and E.C 1+3 phase, Q = square shaded pole)

4 5 6 Fan size (mm)

7 8 9 10 11 12 Fan & motor configuration

BACKWARD CURVED RADIAL

Part Number	Fan Diameter (mm)	Voltage	No. of Poles	Fan Speed	Air Volume (m3/Hr)
R2S133-AE17-05	133	230	2	2780	280
R1G175-AB63-59	175	24	EC	3100	555
R2E180-CB28-09	180	230	2	2550	440
R2E190RA2651CTO	190	230	2	2400	540
R3G190-RB01-01	190	230	EC	2710	640
R2E220-AA52-72	220	230	2	2100	885
R2E225-BD92-09	225	230	2	2500	1175

SPARES TO SUIT RADIAL MOTORS

Part Number	Description
BRACKET	Bracket to Suit R2E 180/190 EBM Radial Motor Assy
INLETCONE190	Inlet Cone to Suit R2E 180/190 EBM Radial Motor Assy



EBM PAPST AXITOP DIFFUSER

Part Number	Description
ATK800EC-CTO	Axitop Diffuser Field Retrofit Kit

SPARES TO SUIT CAGE MOTORS

Part Number	Description
C003/1.5	1.5 MFD Capacitor With lead to Suit EBM Axial Motor Assembly
C061/2.0	2.0 MFD Capacitor With lead to Suit EBM Axial Motor Assembly
C007/2.5	2.5 MFD Capacitor With lead to Suit EBM Axial Motor Assembly
64122-2-4039	Fan Guard 300 mm, 4 Bolt to Suit EBM Axial Motor Assembly
66583-2-4039	Fan Guard 350 mm, 4 Bolt to Suit EBM Axial Motor Assembly
MR1792-1	EBM Air Straightener to Suit 350 mm Axial Motor Assembly - 29601-1-2955

Fan Blades

HOW TO ORDER PROPELLER FAN BLADES

1. When ordering, specify complete part number.

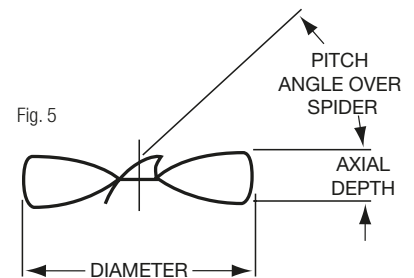
2. Ordering Information

MOTOR ROTATION & RELATIONSHIP TO FAN	CORRECT BLADE & PART NUMBER	MOTOR ROTATION & RELATIONSHIP TO FAN	MOTOR ROTATION & RELATIONSHIP TO FAN	CORRECT BLADE & PART NUMBER	MOTOR ROTATION & RELATIONSHIP TO FAN
Fig. 1 			Fig. 3 		
CLOCKWISE	P. - ...A..R....	COUNTER-CLOCKWISE	CLOCKWISE	P. - ...N..R....	COUNTER-CLOCKWISE
Fig. 2 			Fig. 4 		
COUNTER-CLOCKWISE	P. - ...A..L....	CLOCKWISE	COUNTER-CLOCKWISE	P. - ...N..L....	CLOCKWISE

Typical Part No.:

P	H	4	508	A	25	R	05	M	K	SPECIAL*
PROPELLER FAN BLADE	TYPE	NO. OF BLADES	DIAMETER - mm	BOSS POSITION: N = Near. A = Away	PITCH ANGLE - Degrees	ROTATION: R = CW. L = CCW	BORE (In 1/16")	EXTRAS*		

* Special Extras:
Monel Rivets, Keyways, extra grub screw and special finishes.



3. Rotation and Boss Position

Both the fan rotation and boss position are determined when facing the blade from its discharge side, irrespective of its relationship to the drive motor. Clockwise is shown as R (Right hand) and Counter-Clockwise as L (Left hand). Boss is either N (Near side) or A (Away side). Table has been provided as an aid in determining the correct rotation and boss position.

Note: Drive motor rotation is determined facing its shaft end.

4. Pitch Angle (Measured over spider)

Where the pitch angle (Ref: FIG. 5) is not available, leave this section of the part number blank and state separately the axial depth (Ref: FIG. 5).

Note: If the axial depth is important, include both dimensions.

5. New Applications

Where exact blade specifications are not known, specify as much of the part number as possible, plus the following data:

- Motor;
 - Type: If shaded pole, capacitor run, split or three phase.
 - Speed in RPM.
 - Power in watts output or horsepower (HP).
- Airflow required in CFM or L/s.
- Static air pressure in inches water gauge or Pascals.
- State whether pitch and/or axial depth important.

FAN BLADES PLASTIC

Part Number	Diameter (mm)	Rotation	Bore Size
5-S4-4-CCW125F	100	ACW	1/8"
5-S4-5-CCW0187	100	ACW	3/16"
5-R5-56-5AC187	150	ACW	3/16"
FBP1782NY	178	CW	3/16"
5-S7-3-CW0187	180	CW	3/16"
PF-16FAE	406	CW	14mm
PF-18AE	457	CW	1/2"

**UNIVERSAL FAN BLADES**

Part Number	Diameter (mm)	Rotation	Bore Size
VFU6-12	150-300	Multi	5/16" or HUB
VFU16-26	405-660	Multi	1/2" or 5/8"

**ALUMINIUM FAN BLADES - 4 PIN-HUB DRIVE (ONE PIECE PRESSING IN ALUMINIUM)**

Part Number	No. of Blades	Blade Diameter (mm)	Boss Position	Pitch Degrees	Rotation	Mount / Info
PU5-178W30L00AA	5	178	No Boss	30	CCW	Hub Mount
PU5-178W40R00AA	5	178	No Boss	40	CW	Hub Mount
73808-2-3634	5	200	No Boss	28	ACW	Hub Mount - Induced EBM
PU5-203W35R00AA	5	203	No Boss	35	CW	Hub Mount
849600	3	220	No Boss	40	ACW	Suits Frigrite Cabinets
PU5-229W25R00AA	5	229	No Boss	25	CW	Hub Mount
PU5-229W30L00AA	5	229	No Boss	30	CCW	Hub Mount
250S	5	250	No Boss	34	ACW	Hub Mount - Induced Air
MF187-1	5	254	No Boss	34	CW	Hub Mount - Forced Air
PU5-254W30R00AA	5	254	No Boss	30	ACW	Hub Mount
MF189-1	5	300	No Boss	23	CW	Hub Mount - Induced Air
MF189-2	5	300	No Boss	35	CW	Hub Mount - Induced Air
300S	5	300	No Boss	30	ACW	Hub Mount - Induced Air
73768-2-3634	5	200	No Boss	28	ACW	Hub Mount - Forced Air EBM

**METAL FAN BLADES - BOSS TYPE DESIGNED FOR "D" SHAFT MOTORS**

Part Number	No. of Blades	Blade Diameter (mm)	Boss Position	Pitch Degrees	Rotation	Bore Size
PU4-178N15R56AA	4	178	NEAR	15	CW	5/16"
PU4-178N20R56AA	4	178	NEAR	20	CW	5/16"
PU4-178N25R56AA	4	178	NEAR	25	CW	5/16"
PU5-178N40R05AA	5	178	NEAR	40	CW	5/16"
PU5-178A30R05AA	5	178	AWAY	30	CW	5/16"
PU5-203N30R05AA	5	203	NEAR	30	CW	5/16"
PU5-203N40R05AA	5	203	NEAR	40	CW	5/16"
PS3-203N30L05AA	3	203	NEAR	30	CCW	5/16"
PU5-229A25R05AA	5	229	AWAY	25	CW	5/16"
PU5-229N40L05AA	5	229	NEAR	40	CCW	5/16"
PU5-229N40R05AA	5	229	NEAR	40	CW	5/16"
PS4-244N20L05AA	4	244	NEAR	20	CCW	5/16"

METAL FAN BLADES - BOSS TYPE DESIGNED FOR "D" SHAFT MOTORS (CONT'D)

Part Number	No. of Blades	Blade Diameter (mm)	Boss Position	Pitch Degrees	Rotation	Bore Size
PS3-254N30L05AA	3	254	NEAR	30	CCW	5/16"
PS3-254N30R05AA	3	254	NEAR	30	CW	5/16"
PS4-244N25R05AA	4	254	NEAR	25	CW	5/16"
PS4-254A35L05AA	4	254	AWAY	35	CCW	5/16"
PS4-254N30R05	4	254	NEAR	30	CW	5/16"
PS4-254N40L05AA	4	254	NEAR	40	CCW	5/16"
PU5-254A30R05AA	5	254	AWAY	30	CW	5/16"
PU5-254A40L05AA	5	254	AWAY	40	CCW	5/16"
PU5-254N30R05AA	5	254	NEAR	35	CW	5/16"
PU5-254N40R05AA	5	254	NEAR	40	CW	5/16"
MF161-1	3	305	AWAY	25	CCW	5/16"
PS3-305A20R05AA	3	305	AWAY	20	CW	5/16"
PS3-305N20R05AA	3	305	NEAR	20	CW	5/16"
PS3-305N25R05AA	3	305	NEAR	25	CW	5/16"
PS3-305A30L05AA	3	305	AWAY	30	CCW	5/16"
PS3-305N30R05AA	3	305	NEAR	30	CW	5/16"
PX3-305N30R05AA	3	305	NEAR	30	CW	5/16"
MF170-1	3	356	NEAR	20	CW	5/16"
PM3-356N20R05AA	3	356	NEAR	20	CW	5/16"
PM3-356A20L05AA	3	356	AWAY	20	CCW	5/16"
PM4-381N35R08AA	4	381	NEAR	35	CW	1/2"
PM3-406N15L	3	406	NEAR	15	CCW	5/16"
PM4-406N30L08AA	4	406	NEAR	30	CCW	1/2"
PX4-406A35R64AA	4	406	AWAY	35	CW	14 mm
PM5-406N40R08AA	5	406	NEAR	40	CW	1/2"
PM5-406N40R64AA	5	406	NEAR	40	CW	5/8"
PH3-457N24R08AA	3	457	NEAR	24	CW	1/2"
PA5-457A29R088	5	457	AWAY	29	CW	1/2"
PM5-508A30R8AA	5	508	AWAY	30	CW	1/2"
PM5-508A31R10AA	5	508	AWAY	31	CW	5/8"
PM5-508N39R08AA	5	508	NEAR	39	CW	1/2"
PH4-508A30R08AA	4	508	AWAY	30	CW	1/2"
PH4-559A30R08AA	4	559	AWAY	30	CW	1/2"
PH4-559A40R010AA	4	559	AWAY	40	CW	5/8"
PH4-610A30R08AA	4	610	AWAY	30	CW	1/2"
PB4-660A25R08AA	4	660	AWAY	25	CW	1/2"
PB4-660A30R08AA	4	660	AWAY	30	CW	1/2"

MULTI-WING IMPELLERS

Part Number	No. of Blades	Blade Diameter (mm)	Pitch Degrees	Bore Size
460/4-4/35/PPG	4	460	35	1/2"
MR8D40040442559	4	559	40	3/4"
MR8D35040442610	4	610	35	3/4"
MR8D40040442610	4	610	40	3/4"
MR8D40040442655	4	655	40	3/4"

BLOWER WHEEL

Part Number	Description
8X8WHEEL	Blower Wheel 203X203 1/2" bore




Fan Blowers



FAN NOMENCLATURE

<u>FB</u>	-	<u>9 X 7</u>	<u>T</u>	-	<u>315</u>
<u>FAN TYPE</u>		<u>WHEEL SIZE</u>	<u>HOUSING TYPE</u>		<u>MOTOR OUTPUT</u>
FB = Fan Blower		9 = 9" Diameter	T = Tight		315 = 315 Watts
FD = Fan Deck		7 = 7" Width	Blank = Standard		

Example: FB-9x7T-315 = Fan Blower 9" x 7" with Tight Housing fitted with 315W motor

SINGLE BARREL ASSY - 240VLT

Part Number	Watts	Description
FB10X10-600W	600	Fan Blower Assy 3 Speed - 600W 10-10
FB10X10T-600W	600	Fan Blower Assy 3 Speed - 600W 10-10T
FB10X10-750W	750	Fan Blower Assy 3 Speed - 750W 10-10
FB10X10T-750W	750	Fan Blower Assy 3 Speed - 750W 10-10T
FB9X7-315W	315	Fan Blower Assy 3 Speed - 315W 9-7
FB9X7-410W	410	Fan Blower Assy 3 Speed - 410W 9-7
FB9X7T-315W	315	Fan Blower Assy 3 Speed - 315W 9-7T
FB9X7T-410W	410	Fan Blower Assy 3 Speed - 410W 9-7T
FB9X9-315W	315	Fan Blower Assy 3 Speed - 315W 9-9
FB9X9-410W	410	Fan Blower Assy 3 Speed - 410W 9-9
FB9X9-600W	600	Fan Blower Assy 3 Speed - 600W 9-9
FB9X9T-315W	315	Fan Blower Assy 3 Speed - 315W 9-9T
FB9X9T-600W	600	Fan Blower Assy 3 Speed - 600W 9-9T
FB9X9-750W	750	Fan Blower Assy 3 Speed - 750W 9-9
FB9X9T-750W	750	Fan Blower Assy 3 Speed - 750W 9-9T
FB9X9T-410W	410	Fan Blower Assy 3 Speed - 410W 9-9T
DDC270-270-360	750	Fan Blower Assy 3 Speed - 750W 11-11
DDG203-203-060	315	Fan Blower Assy 3 Speed - 315W 8-8

afmc



Fan Decks

afmc



DOUBLE BARREL ASSY - 240VLT		
Part Number	Watts	Description
FD610-130W	130	Fan Deck Assy
FD8X8-315W	315	Fan Deck Assy 3 Speed - 315 W 8-8
FD8X8-410W	410	Fan Deck Assy 3 Speed - 410 W 8-8
FD8X8T-410W	410	Fan Deck Assy 3 Speed - 410 W 8-8T
FD8X8-600W	600	Fan Deck Assy 3 Speed - 600 W 8-8
FD8X8T-600W	600	Fan Deck Assy 3 Speed - 600 W 8-8T
FD9X7-600W	600	Fan Deck Assy 3 Speed - 600 W 9-7
FD9X7-750W	750	Fan Deck Assy 3 Speed - 750 W 9-7
FD9X7T-315W	315	Fan Deck Assy 3 Speed - 315 W 9-7T
FD9X7T-410W	410	Fan Deck Assy 3 Speed - 410 W 9-7T
FD9X7T-600W	600	Fan Deck Assy 3 Speed - 600 W 9-7T
FD9X7T-750W	750	Fan Deck Assy 3 Speed - 750 W 9-7T
FD9X9-750W	750	Fan Deck Assy 3 Speed - 750 W 9-9
FD9X9T-750W	750	Fan Deck Assy 3 Speed - 750 W 9-9T
FD9X9-1100W	1100	Fan Deck Assy 3 Speed - 1100 W 9-9
DXC241-241-523	750	Fan Deck Assy 3 Speed - 750 W 9-9
DXC241-241-541	1100	Fan Deck Assy 3 Speed - 1100 W 9-9
DXG203-203-401	315	Fan Deck Assy 3 Speed - 315 W 8-8
DXG203-203-441	600	Fan Deck Assy 3 Speed - 600 W 8-8

TORIN CROSSFLOW FAN ASSY (60 MM DIAMETER)		
Part Number	Watts	Description
FTR180-21-01	18	180 mm Wheel Diameter - Dual Speed Crossflow Assembly
FZR180-93-02	18	180 mm Wheel Diameter - Dual Speed Crossflow Assembly
FZR300-93-02	28	300 mm Wheel Diameter - Dual Speed Crossflow Assembly
FZR360-93-02	40	360 mm Wheel Diameter - Dual Speed Crossflow Assembly

Notes:

Copper Tube, Fittings & Insulation



Soft Drawn Copper Tube Dehydrated & Sealed

KEMBLA



KEMBLA - COPPER TUBE DEHYDRATED & SEALED

Part Number	Copper Tube Dimensions					Safe Working Pressure (kPa) at Service Temperatures			R410A Compatible
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Wall Thickness (SWG)	Coil Length (m)	55 °C	60 °C	65 °C	
T32263	3/16	4.76	0.71	22	30	12280	11845	11410	•
T74634	1/4	6.35	0.81	21	30	10270	9910	9545	•
T32522	5/16	7.94	0.81	21	30	8005	7725	7440	•
T55743	3/8	9.52	0.81	21	18	6570	6335	6105	•
T54133	1/2	12.7	0.81	21	18	4825	4655	4480	•
T16850	5/8	15.88	1.02	19	18	4860	4690	4515	•
T16857	3/4	19.05	1.14	18.5	18	4510	4350	4190	•

Manufactured to AS/NZS 1571 - Copper-Seamless Tubes for Air Conditioning & Refrigeration
* SWG = Standard Wire Gauge

InterLINK



INTERLINK - COPPER TUBE DEHYDRATED & SEALED

Part Number	Copper Tube Dimensions					Safe Working Pressure (kPa) at Service Temperatures			R410A Compatible
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Wall Thickness (SWG)	Coil Length (m)	55 °C	60 °C	65 °C	
CTSD06-071	1/4	6.35	0.71	22	30	8862	8548	8235	•
CTSD10-071	3/8	9.52	0.71	22	18	5699	5497	5296	•
CTSD12-081	1/2	12.7	0.81	21	18	4823	4653	4482	•
CTSD15-102	5/8	15.88	1.02	19	18	4859	4688	4516	•
CTSD20-114	3/4	19.05	1.14	18.5	18	4508	4349	4190	•

Manufactured to AS/NZS 1571 - Copper-Seamless Tubes for Air Conditioning & Refrigeration
* SWG = Standard Wire Gauge

Pair Coil

Features and Benefits

- Easy to feed through the wall cavity and install with a film coating on the insulation
- Tough and durable three layered insulation providing enhanced vapour seal and easy installation
- Suitable for all refrigerants including R410A and R32



InterLINK

INTERLINK PRE-INSULATED PAIR COIL COPPER TUBE

Part Number	Copper Tube Dimensions					Insulation Thickness (mm)	R410A Compatible
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Wall Thickness (SWG)	Coil Length (metres)		
PCI635952	1/4 - 3/8	6.35 - 9.52	0.71 - 0.81	22 - 21	20	8 x 8	•
PCI6351270	1/4 - 1/2	6.35 - 12.70	0.71 - 0.81	22 - 21	20	8 x 10	•
PCI6351588	1/4 - 5/8	6.35 - 15.88	0.71 - 1.02	22 - 19	20	8 x 10	•
PCI9521588	3/8 - 5/8	9.52 - 15.88	0.81 - 1.02	21 - 19	20	8 x 10	•
PCI9521905	3/8 - 3/4	9.52 - 19.05	0.81 - 1.14	21 - 18	20	8 x 10	•

Manufactured to AS/NZS 1571 - Copper-Seamless Tubes for Air Conditioning & Refrigeration

Fire Retardant Pair Coil

COPPER TUBE SAFE WORKING PRESSURE TABLE

Copper Tube Dimensions Metric (mm)	Safe Working Pressure (kPa)		
	@ 50 °C	@ 65 °C	@ 75 °C
6.35 x 0.81	10,635	9,545	8,820
9.52 x 0.81	6,800	6,105	5,640
12.70 x 0.81	4,995	4,480	4,140
15.88 x 1.02	5,030	4,515	4,170
19.05 x 1.14	4,697	4,181	3,895

Features and Benefits

- Meets specifications of Australian fire safety regulations
- Tough and durable insulation
- Designed to meet the stringent requirements of the HVAC&R industry with BCA compliance
- Suitable for all refrigerants including R410A and R32
- Tested to ISO5660.1-2002 and AS/NZS 1530.3:1999
- Manufactured to AS/NZS 1571 - Copper-Seamless Tubes for Air Conditioning and Refrigeration



INTERLINK FIRE RETARDANT PAIR COIL

Part Number	Copper Tube Dimensions				Insulation Thickness (mm)	Coil Length (metres)	R- Values (W/m.K)	R410A Compatible
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Wall Thickness (SWG)				
PCFR635952-13	1/4 - 3/8	6.35 - 9.52	0.81 - 0.81	21 - 21	13	18	0.7	•
PCFR6351270-13	1/4 - 1/2	6.35 - 12.70	0.81 - 0.81	21 - 21	13	18	0.6	•
PCFR6351588-13	1/4 - 5/8	6.35 - 15.88	0.81 - 1.02	21 - 19	13	18	0.6	•
PCFR9521588-13	3/8 - 5/8	9.52 - 15.88	0.81 - 1.02	21 - 19	13	18	0.6	•
PCFR9521905-13	3/8 - 3/4	9.52 - 19.05	0.81 - 1.14	21 - 18	13	18	0.6	•
PCFR635952-19	1/4 - 3/8	6.35 - 9.52	0.81 - 0.81	21 - 21	19	18	1.1	•
PCFR6351270-19	1/4 - 1/2	6.35 - 12.70	0.81 - 0.81	21 - 21	19	18	1	•
PCFR6351588-19	1/4 - 5/8	6.35 - 15.88	0.81 - 1.02	21 - 19	19	18	1	•
PCFR9521588-19	3/8 - 5/8	9.52 - 15.88	0.81 - 1.02	21 - 19	19	18	1	•
PCFR9521905-19	3/8 - 3/4	9.52 - 19.05	0.81 - 1.14	21 - 18	19	15	0.9	•
PCFR635952-25	1/4 - 3/8	6.35 12.70	0.81 - 1.02	21 - 19	25	15		•
PCFR6351270-25	1/4 - 1/2	6.35 12.70	0.81 - 1.02	21 - 19	25	15		•
PCFR9521588-25	3/8 - 5/8	9.52 - 15.88	0.81 - 1.02	21 - 19	25	15	1.4	•

R-values are commonly specified for the selection of insulation material and thickness.

R-values are specified in the BCA, the above table provides material R-values for InterLINK FR Pair Coil.

Note: The BCA 2011 requires only total material R-Values to be used. For R-Values greater than R1.1 contact your nearest Heatcraft branch to discuss your specific project requirements. A/C Manufacturer's operating and installation instructions should be consulted.

Hard Drawn Copper Tube

 KEMBLA



KEMBLA - DEHYDRATED & SEALED									
Part Number	Copper Tube Dimensions					Safe Working Pressure (kPa) at Service Temperatures			
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Wall Thickness (SWG)	Length (m)	55 °C	60 °C	65 °C	R410A Compatible
T51435	1/4	6.35	0.81	21	6.0	10270	9910	9545	•
T77112	3/8	9.52	0.81	21	6.0	6570	6335	6105	•
T10287	1/2	12.70	0.81	21	6.0	4825	4655	4480	•
T22527	1/2	12.70	0.91	20	6.0	5460	5270	5075	•
T16870	5/8	15.88	1.02	19	6.0	4860	4690	4515	•
T24937	5/8	15.88	0.91	20	6.0	4310	4155	4000	
T16855	3/4	19.05	1.14	18	6.0	4510	4350	4190	•
T88072	3/4	19.05	0.91	20	6.0	3475	3355	3230	
T24813	3/4	19.05	1.02	19	6.0	4010	3870	3725	
T13862	7/8	22.22	0.91	20	6.0	3030	2925	2815	
T64173	7/8	22.22	1.22	18	6.0	4120	3970	3830	
T16860	7/8	22.22	1.40	17	6.0	4760	4595	4425	•
T60658	1	25.40	0.91	20	6.0	2640	2545	2450	
T91952	1	25.40	1.22	18	6.0	3580	3450	3325	
T79850	1	25.40	1.63	16	6.0	4855	4685	4510	•
T73971	1-1/8	28.58	0.91	20	6.0	2335	2255	2170	
T91961	1-1/8	28.58	1.22	18	6.0	3165	3050	2940	
T14559	1-1/8	28.58	1.63	16	6.0	4285	4135	3980	
T14569	1-1/8	28.58	1.63	16	6.0	4845	4670	4500	•
T22039	1-1/4	31.75	0.91	20	6.0	2095	2025	1950	
T91979	1-1/4	31.75	1.22	18	6.0	2835	2735	2635	
T21820	1-1/4	31.75	2.03	14	6.0	4835	4665	4495	•
T15237	1-3/8	34.92	0.91	20	6.0	1900	1835	1770	
T91987	1-3/8	34.92	1.22	18	6.0	2570	2480	2390	
T75980	1-3/8	34.92	2.03	14	6.0	4370	4220	4065	•
T91995	1-1/2	38.10	1.22	18	6.0	2350	2265	2185	
T32921	1-5/8	41.28	0.91	20	6.0	1605	1545	1490	
T91791	1-5/8	41.28	1.22	18	6.0	2165	2090	2010	
T16865	1-5/8	41.28	2.41	12	6.0	4390	4235	4080	•
T83062	1-5/8	41.28	1.63	16	6.0				
T94943	2	50.80	1.22	18	6.0	1750	1690	1625	
T78166	2-1/8	54.00	0.91	20	6.0	1220	1175	1135	
T94960	2-1/8	54.00	1.22	18	6.0	1645	1585	1530	
T94951	2-1/8	54.00	1.63	16	6.0	2215	2135	2055	
T31976	2-5/8	66.70	1.22	18	6.0	1325	1280	1230	
T75566	2-5/8	66.70	1.63	16	6.0	1780	1720	1655	
T88013	3	76.20	1.63	16	6.0	1555	1500	1445	
T20923	4	101.60	1.63	16	6.0	1160	1120	1080	

Manufactured to AS/NZS 1571 - Copper - Seamless Tubes for Air Conditioning & Refrigeration



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FIRE RETARDANT.
ENERGY SAVING.

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INTERLINK - DEHYDRATED & SEALED

Part Number	Copper Tube Dimensions					Safe Working Pressure (kPa) at Service Temperatures			R410A Compatible
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Wall Thickness (SWG)	Length (m)	55 °C	60 °C	65 °C	
CTHD06-071	1/4	6.35	0.71	22	5.8	8860	8550	8235	•
CTHD10-071	3/8	9.52	0.71	22	5.8	5701	5491	5290	•
CTHD12-081 *	1/2	12.7	0.81	21	5.8	4825	4655	4480	•
CTHD15-091 *	5/8	15.88	0.91	20	5.8	4307	4155	4000	
CTHD15-102 *	5/8	15.88	1.02	19	5.8	4859	4688	4515	•
CTHD20-091 *	3/4	19.05	0.91	20	5.8	3558	3432	3230	
CTHD20-114	3/4	19.05	1.14	18	5.8	4508	4349	4190	•
CTHD22-091 *	7/8	22.22	0.91	20	5.8	3030	2922	2815	
CTHD22-122	7/8	22.22	1.22	18	5.8	4115	3970	3830	
CTHD22-140	7/8	22.22	1.4	17	5.8	4831	4660	4425	•
CTHD25-091	1	25.4	0.91	20	5.8	2639	2546	2450	
CTHD25-163	1	25.4	1.63	16	5.8	4855	4683	4510	•
CTHD28-091	1-1/8	28.58	0.91	20	5.8	2337	2255	2170	
CTHD28-122	1-1/8	28.58	1.22	18	5.8	3165	3054	2940	
CTHD28-183	1-1/8	28.58	1.83	14	5.8	4845	4674	4500	•
CTHD32-091	1-1/4	31.75	0.91	20	5.8	2097	2023	1950	
CTHD32-203	1 1/4	31.75	2.03	14	5.8	4836	4665	4495	•
CTHD35-091	1-3/8	34.92	0.91	20	5.8	1902	1835	1770	
CTHD35-122	1-3/8	34.92	1.22	18	5.8	2571	2480	2390	
CTHD35-203	1-3/8	34.92	2.03	14	5.8	4372	4218	4065	•
CTHD38-122	1-1/2	38.1	1.22	18	5.8	2350	2267	2185	
CTHD42-091	1-5/8	41.28	0.91	20	5.8	1604	1547	1490	
CTHD42-122	1-5/8	41.28	1.22	18	5.8	2165	2088	2010	
CTHD42-241	1-5/8	41.28	2.41	12	5.8	4393	4238	4080	•
CTHD50-122	2	50.8	1.22	18	5.8	1750	1688	1625	
CTHD54-091	2-1/8	53.98	0.91	20	5.8	1220	1177	1135	
CTHD54-122	2-1/8	53.98	1.22	18	5.8	1645	1587	1530	
CTHD54-163	2-1/8	53.98	1.63	16	5.8	2213	2135	2055	
CTHD67-122	2-5/8	66.68	1.22	18	5.8	1326	1279	1230	
CTHD67-163	2-5/8	66.68	1.63	16	5.8	1782	1719	1655	
CTHD75-163	3	76.2	1.63	16	5.8	1555	1500	1445	
CTHD100-163	4	101.6	1.63	16	5.8	1160	1119	1080	

* Half hard temper tube, can be bent using bending tools without applying additional heat.

• Rated for use with R410A, however requires safety shut off limit of 3800 kPa

Disclaimer: All information provided is to be used as a guide only and was correct at the time of printing, it is also subject to change without notice.

Hard Drawn Copper Tube K65

Feature and Benefits

- Excellent heat transfer characteristics
- Known and user friendly processing technologies (e.g.brazing)
- Existing processes and equipment can be used
- Clear identification of the K65 system components
- TÜV-certified



COPPER ALLOY TUBE (FOR CO₂ TRANSCRITICAL APPLICATIONS)

Part Number	Copper Tube Dimensions			
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Length (m)
433009520	3/8	9.52	0.65	5
433012700	1/2	12.7	0.85	5
433015870	5/8	15.86	1.05	5
433019060	3/4	19.05	1.3	5
433022230	7/8	22.23	1.5	5

K65 is a high strength copper alloy, allowing a safe installation of refrigerant systems with operating pressures of up to 120 Bar at 150 °C
 E.g. Suitable for CO₂ Transcritical Systems
 Other sizes are available upon request from 1-1/8" to 2-1/8"

90° K65 COPPER ELBOWS - FEMALE TO FEMALE

Part Number	Size (inches)	Description	Connection Type
1024-0606-K65	3/8	Elbow 90°	Female to Female
1024-0808-K65	1/2	Elbow 90°	Female to Female
1024-1010-K65	5/8	Elbow 90°	Female to Female
1024-1212-K65	3/4	Elbow 90°	Female to Female
1024-1414-K65	7/8	Elbow 90°	Female to Female

Other sizes are available upon request from 1-1/8" to 1-5/8"



K65 EQUAL TEES - FEMALE

Part Number	Size (inches)	Description	Connection Type
1049-060606-K65	3/8	Tee Equal Sweat	Female to Female
1049-080808-K65	1/2	Tee Equal Sweat	Female to Female
1049-101010-K65	5/8	Tee Equal Sweat	Female to Female
1049-121212-K65	3/4	Tee Equal Sweat	Female to Female
1049-141414-K65	7/8	Tee Equal Sweat	Female to Female

Other sizes are available upon request from 1-1/8" to 1-5/8"



K65 COPPER UNIONS - STRAIGHT COUPLINGS

Part Number	Size (inches)	Description	Connection Type
1009-0606-K65	3/8	Connector Sweat	Female to Female
1009-0808-K65	1/2	Connector Sweat	Female to Female
1009-1010-K65	5/8	Connector Sweat	Female to Female
1009-1212-K65	3/4	Connector Sweat	Female to Female
1009-1414-K65	7/8	Connector Sweat	Female to Female

Other sizes are available upon request from 1-1/8" to 1-5/8"



K65 COPPER UNIONS - REDUCING BUSH

Part Number	Size (inches)	Description	Connection Type
1004-0806-K65	1/2 OD X 3/8 ID	Reducing Bush	Male x Female
1004-1006-K65	5/8 OD X 3/8 ID	Reducing Bush	Male x Female
1004-1008-K65	5/8 OD X 1/2 ID	Reducing Bush	Male x Female
1004-1206-K65	3/4 OD X 3/8 ID	Reducing Bush	Male x Female
1004-1208-K65	3/4 OD X 1/2 ID	Reducing Bush	Male x Female
1004-1210-K65	3/4 OD X 5/8 ID	Reducing Bush	Male x Female
1004-1410-K65	7/8 OD X 5/8 ID	Reducing Bush	Male x Female

Other sizes are available upon request

Capillary Tubing & Service Packs

 KEMBLA



CAPILLARY TUBE

Part Number	Inside Diameter		Outside Diameter		Tube Length (mm)
	(mm)	(inches)	(mm)	(Inches)	
30CAP0.66X1.72A	0.66	0.026	1.72	0.068	3000
30CAP0.80	0.8	0.032	2.06	0.081	3000
30CAP1.30X2.58A	1.3	0.051	2.58	0.102	3000
30CAP2.04X3.44A	2.04	0.080	3.44	0.135	3000

 KEY



SERVICE PACKS

Part Number	Inside Diameter		Usable Tube Length (mm)
	(mm)	(inches)	
SP1	0.66	0.03	3660
SP2	0.8	0.03	3660
SP3	0.9	0.03	3660
SP4	1.1	0.04	4270
SP4.5	1.2	0.05	4270
SP5	1.3	0.05	4270
SP6	1.4	0.06	3660
SP6.5	1.5	0.06	3660
SP7	1.62	0.06	3050
SP8	1.78	0.07	3660
SP9	1.9	0.08	2750
SP10	2.04	0.08	3050
SP11	2.24	0.09	3660

Brass Fittings

FLARE NUTS

BRASS SWIVEL CONNECTORS - FEMALE SAE X FEMALE SAE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
95-04	1/4 x 1/4	Brass Swivel Connector	Female SAE x Female SAE	•
95-06	3/8 x 3/8	Brass Swivel Connector	Female SAE x Female SAE	•
95-08	1/2 x 1/2	Brass Swivel Connector	Female SAE x Female SAE	•
95-10	5/8 x 5/8	Brass Swivel Connector	Female SAE x Female SAE	•



FORGED BRASS NUTS - SHORT BARREL FEMALE SAE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
501-0404	1/4 x 1/4	Brass Flare Nut - Short Barrel	Female Flare	•
501-0504-410A	5/16 x 1/4	Brass Flare Nut - Short Barrel	Female Flare	•
501-0505	5/16 x 5/16	Brass Flare Nut - Short Barrel	Female Flare	•
501-0606	5/16 x 5/16	Brass Flare Nut - Short Barrel	Female Flare	•
501-0808	1/2 x 1/2	Brass Flare Nut - Short Barrel	Female Flare	•
501-1010	5/8 x 5/8	Brass Flare Nut - Short Barrel	Female Flare	•
501-1212	3/4 x 3/4	Brass Flare Nut - Short Barrel	Female Flare	•



FORGED BRASS FLARE NUTS FROST PROOF - STANDARD & REDUCING LONG BARRELL FEMALE SAE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
502-0404	1/4 x 1/4	Brass Flare Nuts Frost Proof	Female Flare	•
502-0505	5/16 x 5/16	Brass Flare Nuts Frost Proof	Female Flare	•
502-0606	5/16 x 5/16	Brass Flare Nuts Frost Proof	Female Flare	•
502-0808	1/2 x 1/2	Brass Flare Nuts Frost Proof	Female Flare	•
502-1008	5/8 x 1/2	Brass Flare Nuts Frost Proof	Female Flare	•
502-1212	3/4 x 3/4	Brass Flare Nuts Frost Proof	Female Flare	•
502-0604	3/8 x 1/4	Brass Flare Nuts Frost Proof	Female Flare	•
502-0806	1/2 x 3/8	Brass Flare Nuts Frost Proof	Female Flare	•
502-1008	5/8 x 1/2	Brass Flare Nuts Frost Proof	Female Flare	•
502-1010	5/8 x 5/8	Brass Flare Nuts Frost Proof	Female Flare	•





ADAPTERS

CYLINDER ADAPTERS - MALE SAE FLARE X FEMALE PARALLEL BSP

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
20-0412S	1/4 x 3/4	Cylinder Adapter	Male SAE Flare x Female Parallel BSP	•
20-0512-410A	5/16 x 3/4	Cylinder Adapter	Male SAE Flare x Female Parallel BSP	•
20-0612	3/8 x 3/4	Cylinder Adapter	Male SAE Flare x Female Parallel BSP	•

CYLINDER CAPS - SUIT MALE PARALLEL BSP

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
26-12	3/4	Cylinder Caps	Suit Male Parallel BSP	•
977-1507		Fibre Washer For Cylinder Adaptor suits 3/4 FBSP Adapter		•

SCHRADER FITTINGS

CYLINDER CAPS - SUIT MALE PARALLEL BSP

Part Number	Description	R410A Compatible
55-2-410A	Schrader Cap & O-Ring R410A	•



SCHRADER SWIVEL TEES (SWIVEL NUT ON BRANCH)

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
64-040404	1/4 x 1/4 x 1/4	Schrader Swivel Tee	Swivel Nut on branch	•

SCHRADER TEE (SCHRADER ON RUN LINES TO FEMALE SAE BRANCH)

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
67-040404	1/4 x 1/4 x 1/4	Schrader Tee (Inc. Cap & Core)	Schrader on run lines to Female SAE branch	•



SEAL AND PIPE PLUGS

BRASS SEAL PLUGS - MALE SAE FLARE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
70-04	1/4	Brass Seal Plug	Male SAE Flare	•
70-06	3/8	Brass Seal Plug	Male SAE Flare	•
70-08	1/2	Brass Seal Plug	Male SAE Flare	•
70-10	5/8	Brass Seal Plug	Male SAE Flare	•
70-12	3/4	Brass Seal Plug	Male SAE Flare	•



BRASS SEAL CAPS - FEMALE SAE FLARE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
75-04	1/4	Brass Seal Cap	Female SAE Flare	•
75-05	5/16	Brass Seal Cap	Female SAE Flare	•
75-06	3/8	Brass Seal Cap	Female SAE Flare	•
75-08	1/2	Brass Seal Cap	Female SAE Flare	•
75-10	5/8	Brass Seal Cap	Female SAE Flare	•
75-12	3/4	Brass Seal Cap	Female SAE Flare	•



BRASS PIPE PLUGS - MALE TAPER BSP

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
80-02	1/8	Brass Pipe Plug	Male Taper BSP	•
80-04	1/4	Brass Pipe Plug	Male Taper BSP	•
80-06	3/8	Brass Pipe Plug	Male Taper BSP	•

**UNIONS****BRASS UNIONS - MALE SAE FLARE X MALE SAE FLARE**

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
200-0404	1/4 x 1/4	Brass Union	Male SAE Flare x Male SAE Flare	•
200-0504	5/16 x 1/4	Brass Union	Male SAE Flare x Male SAE Flare	•
200-0505	5/16 x 5/16	Brass Union	Male SAE Flare x Male SAE Flare	•
200-0604	3/8 x 1/4	Brass Union	Male SAE Flare x Male SAE Flare	•
200-0606	3/8 x 3/8	Brass Union	Male SAE Flare x Male SAE Flare	•
200-0804	1/2 x 1/4	Brass Union	Male SAE Flare x Male SAE Flare	•
200-0806	1/2 x 3/8	Brass Union	Male SAE Flare x Male SAE Flare	•
200-0808	1/2 x 1/2	Brass Union	Male SAE Flare x Male SAE Flare	•
200-1004	5/8 x 1/4	Brass Union	Male SAE Flare x Male SAE Flare	•
200-1006	5/8 x 3/8	Brass Union	Male SAE Flare x Male SAE Flare	•
200-1008	5/8 x 1/2	Brass Union	Male SAE Flare x Male SAE Flare	•
200-1010	5/8 x 5/8	Brass Union	Male SAE Flare x Male SAE Flare	•
200-1210	5/8 x 3/4	Brass Union	Male SAE Flare x Male SAE Flare	•
200-1212	3/4 x 3/4	Brass Union	Male SAE Flare x Male SAE Flare	•

**BRASS UNIONS - MALE FLARE X MALE BSP**

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
201-0402	1/4 x 1/8	Brass Union	Male Flare x Male BSP	•
201-0404	1/4 x 1/4	Brass Union	Male Flare x Male BSP	•
201-0406	1/4 x 3/8	Brass Union	Male Flare x Male BSP	•
201-0408	1/4 x 1/2	Brass Union	Male Flare x Male BSP	•
201-0602	3/8 x 1/8	Brass Union	Male Flare x Male BSP	•
201-0604	3/8 x 1/4	Brass Union	Male Flare x Male BSP	•
201-0606	3/8 x 3/8	Brass Union	Male Flare x Male BSP	•
201-0608	3/8 x 1/2	Brass Union	Male Flare x Male BSP	•
201-0806	1/2 x 3/8	Brass Union	Male Flare x Male BSP	•
201-0808	1/2 x 1/2	Brass Union	Male Flare x Male BSP	•
201-0812	1/2 x 3/4	Brass Union	Male Flare x Male BSP	•
201-1008	5/8 x 1/2	Brass Union	Male Flare x Male BSP	•
201-1012	5/8 x 3/4	Brass Union	Male Flare x Male BSP	•
201-1212	3/4 x 3/4	Brass Union	Male Flare x Male BSP	•

**BRASS UNIONS - MALE SAE FLARE X MALE BSP**

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
203-0402	1/4 x 1/8	Brass Union	Male SAE Flare x Male BSP	•
203-0404	1/4 x 1/4	Brass Union	Male SAE Flare x Male BSP	•




BRASS UNIONS - MALE SAE FLARE X MALE TAPER NPT

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
204-0402	1/4 X 1/8	Brass Union	Male SAE Flare x Male Taper NPT	•
204-0404	1/4 X 1/4	Brass Union	Male SAE Flare x Male Taper NPT	•
204-0606	3/8 x 3/8	Brass Union	Male SAE Flare x Male Taper NPT	•


BRASS UNIONS - MALE FLARE X FEMALE FLARE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
205-0404	1/4 x 1/4	Brass Union	Male Flare x Female Flare	•
205-0406	1/4 x 3/8	Brass Union	Male Flare x Female Flare	•
205-0408	1/4 x 1/2	Brass Union	Male Flare x Female Flare	•
205-0410	1/4 x 5/8	Brass Union	Male Flare x Female Flare	•
205-0504	5/16 x 1/4	Brass Union	Male Flare x Female Flare	•
205-0604	3/8 x 1/4	Brass Union	Male Flare x Female Flare	•
205-0608	3/8 x 1/2	Brass Union	Male Flare x Female Flare	•
205-0610	3/8 x 5/8	Brass Union	Male Flare x Female Flare	•
205-0810	1/2 x 5/8	Brass Union	Male Flare x Female Flare	•
205-0812	1/2 x 3/4	Brass Union	Male Flare x Female Flare	•
205-1006	5/8 x 3/8	Brass Union	Male Flare x Female Flare	•
205-1008	5/8 x 1/2	Brass Union	Male Flare x Female Flare	•
205-0806	1/2 x 3/8	Brass Union	Male Flare x Female Flare	•
205-1210	3/4 x 5/8	Brass Union	Male Flare x Female Flare	•


BRASS UNIONS - MALE FLARE X FEMALE TAPER BSP

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
206-0402	1/4 X 1/8	Brass Union	Male Flare x Female Taper BSP	•
206-0404	1/4 x 1/4	Brass Union	Male Flare x Female Taper BSP	•
206-0406	1/4 x 3/8	Brass Union	Male Flare x Female Taper BSP	•
206-0606	3/8 x 3/8	Brass Union	Male Flare x Female Taper BSP	•
206-0608	3/8 x 1/2	Brass Union	Male Flare x Female Taper BSP	•


BRASS UNIONS - MALE SAE FLARE TO FEMALE TAPER NPT

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
207-0402	1/4 x 1/8	Brass Union	Male SAE Flare to Female Taper NPT	•
207-0404	1/4 X 1/4	Brass Union	Male SAE Flare to Female Taper NPT	•


BRASS UNIONS - MALE FLARE X FEMALE SOLDER

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
208-0404	1/4 x 1/4	Brass Union	Male Flare x Female Solder	•
208-0406	1/4 x 3/8	Brass Union	Male Flare x Female Solder	•
208-0606	3/8 x 3/8	Brass Union	Male Flare x Female Solder	•
208-0608	3/8 x 1/2	Brass Union	Male Flare x Female Solder	•
208-0806	1/2 x 3/8	Brass Union	Male Flare x Female Solder	•
208-0808	1/2 x 1/2	Brass Union	Male Flare x Female Solder	•
208-0810	1/2 x 5/8	Brass Union	Male Flare x Female Solder	•
208-1008	5/8 x 1/2	Brass Union	Male Flare x Female Solder	•
208-1010	5/8 x 5/8	Brass Union	Male Flare x Female Solder	•

BRASS UNIONS - MALE FLARE X FEMALE SOLDER (CONT'D)

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
208-1012	5/8 x 3/4	Brass Union	Male Flare x Female Solder	•
208-1212	3/4 x 3/4	Brass Union	Male Flare x Female Solder	•

BRASS THREAD CONVERTER - MALE BSP TO FEMALE NPT

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
210-0404	1/4 x 1/4	Brass Thread Converter	Male BSP to Female NPT	•

BRASS NIPPLES - MALE TAPER BSP TO MALE TAPER BSP

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
211-0404	1/4 x 1/4	Brass Nipple	Male Taper BSP to Male Taper BSP	•
211-0808	1/2 x 1/2	Brass Nipple	Male Taper BSP to Male Taper BSP	•

**BRASS UNIONS - MALE BSP X FEMALE BSP**

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
216-1208	3/4 x 1/2	Brass Union	Male BSP x Female BSP	•

**BRASS SOCKET UNIONS - FEMALE SAE FLARE X FEMALE SAE FLARE**

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
226-0404	1/4	Brass Socket Union	Female SAE Flare x Female SAE Flare	•
226-0606	3/8	Brass Socket Union	Female SAE Flare x Female SAE Flare	•
226-0808	1/2	Brass Socket Union	Female SAE Flare x Female SAE Flare	•

**BRASS SOCKET UNIONS - FEMALE SAE FLARE TO FEMALE TAPER BSP**

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
227-0404	1/4 X 1/4	Brass Socket Union	Female SAE Flare to Female Taper BSP	•

**BRASS SOCKET UNIONS - FEMALE BSP X FEMALE BSP**

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
231-0404	1/4 x 1/4	Brass Union	Female BSP x Female BSP	•

BRASS SOCKET UNIONS - FEMALE TAPER BSP TO SOLDER

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
233-0606	3/8 x 3/8	Brass Union	Female BSP x Female BSP	•

**BRASS SOCKET UNIONS - FEMALE TAPER NPT TO SOLDER**

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
234-0606	3/8 x 3/8	Brass Union	Female Taper NPT to Solder	•



FORGED ELBOWS

BRASS ELBOWS - MALE FLARE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
300-0404	1/4 x 1/4	Brass Elbow	Male Flare	•
300-0606	3/8 x 3/8	Brass Elbow	Male Flare	•
300-0808	1/2 x 1/2	Brass Elbow	Male Flare	•
300-1010	5/8 x 5/8	Brass Elbow	Male Flare	•



BRASS ELBOWS - MALE FLARE X MALE BSP

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
302-0402	1/4 x 1/8	Brass Elbow	Male Flare x Male BSP	•
302-0404	1/4 x 1/4	Brass Elbow	Male Flare x Male BSP	•
302-0406	1/4 x 3/8	Brass Elbow	Male Flare x Male BSP	•
302-0606	3/8 x 3/8	Brass Elbow	Male Flare x Male BSP	•
302-0608	3/8 x 1/2	Brass Elbow	Male Flare x Male BSP	•
302-1212	3/4 x 3/4	Brass Elbow	Male Flare x Male BSP	•



BRASS ELBOWS - MALE SAE FLARE TO FEMALE SAE FLARE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
306-0404	1/4 x 1/4	Brass Elbow	Male SAE Flare to Female SAE Flare	•
306-0606	3/8 x 3/8	Brass Elbow	Male SAE Flare to Female SAE Flare	•

FORGED TEES



BRASS FORGED TEES - MALE SAE LINE TO MALE SAE BRANCH

Part Number	Connection Size Line x Line x Branch (inches)	Description	Connection Type	R410A Compatible
400-040404	1/4 x 1/4 x 1/4	Brass Forged Tee	Male SAE Line to Male SAE Branch	•
400-050505	5/16 x 5/16 x 5/16	Brass Forged Tee	Male SAE Line to Male SAE Branch	•
400-060604	3/8 x 3/8 x 1/4	Brass Forged Tee	Male SAE Line to Male SAE Branch	•
400-060606	3/8 x 3/8 x 3/8	Brass Forged Tee	Male SAE Line to Male SAE Branch	•
400-060608	3/8 x 3/8 x 1/2	Brass Forged Tee	Male SAE Line to Male SAE Branch	•
400-080808	1/2 x 1/2 x 1/2	Brass Forged Tee	Male SAE Line to Male SAE Branch	•
400-101010	5/8 x 5/8 x 5/8	Brass Forged Tee	Male SAE Line to Male SAE Branch	•
400-121210	3/4 x 3/4 x 3/4	Brass Forged Tee	Male SAE Line to Male SAE Branch	•
400-121212	3/4 x 3/4 x 5/8	Brass Forged Tee	Male SAE Line to Male SAE Branch	•



BRASS FORGED TEES - MALE SAE LINE TO MALE TAPER BSP BRANCH

Part Number	Connection Size Line x Line x Branch (inches)	Description	Connection Type	R410A Compatible
401-040402	1/4 x 1/4 x 1/8	Brass Forged Tee	Male SAE Line to Male Taper BSP Branch	•
401-040404	1/4 x 1/4 x 1/8	Brass Forged Tee	Male SAE Line to Male Taper BSP Branch	•



BRASS FORGED TEE - MALE SAE LINE TO FEMALE SAE BRANCH

Part Number	Connection Size Line x Line x Branch (inches)	Description	Connection Type	R410A Compatible
408-040404	1/4 x 1/4 x 1/4	Brass Forged Tee	Male SAE Line to Female SAE Branch	•



BRASS FORGED TEES - MALE SAE LINE TO FEMALE TAPER BSP BRANCH

Part Number	Connection Size Line x Line x Branch (inches)	Description	Connection Type	R410A Compatible
409-040402	1/4 x 1/4 x 1/8	Brass Forged Tee	Male SAE Line to Female Taper BSP Branch	•



BRASS FORGED SWIVEL TEES - MALE SAE LINE TO FEMALE SWIVEL BRANCH

Part Number	Connection Size Line x Line x Branch (inches)	Description	Connection Type	R410A Compatible
466-040404	1/4 x 1/4 x 1/4	Brass Forged Swivel Tees	Male SAE Line to Female Swivel Branch	•



Copper Fittings



COPPER ELBOWS

90° ELBOWS - SHORT RADIUS - FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1024S-0404	1/4	90° Elbows - Short Radius	Female to Female	•
1024S-0606	3/8	90° Elbows - Short Radius	Female to Female	•
1024S-0808	1/2	90° Elbows - Short Radius	Female to Female	•
1024S-1010	5/8	90° Elbows - Short Radius	Female to Female	•
1024S-1212	3/4	90° Elbows - Short Radius	Female to Female	•
1024S-1414	7/8	90° Elbows - Short Radius	Female to Female	•
1024S-1616	1	90° Elbows - Short Radius	Female to Female	•
1024S-1818	1-1/8	90° Elbows - Short Radius	Female to Female	
1024S-2020	1-1/4	90° Elbows - Short Radius	Female to Female	
1024S-2222	1-3/8	90° Elbows - Short Radius	Female to Female	
1024S-2424	1-1/2	90° Elbows - Short Radius	Female to Female	
1024S-2626	1-5/8	90° Elbows - Short Radius	Female to Female	
1024S-3434	2-1/8	90° Elbows - Short Radius	Female to Female	
1024S-4242	2-5/8	90° Elbows - Short Radius	Female to Female	
1024S-4848	3	90° Elbows - Short Radius	Female to Female	
1024S-5050	3-1/8	90° Elbows - Short Radius	Female to Female	



90° ELBOWS - LONG RADIUS - FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1024-0404	1/4	90° Elbows - Long Radius	Female to Female	•
1024-0505	5/16	90° Elbows - Long Radius	Female to Female	•
1024-0606	3/8	90° Elbows - Long Radius	Female to Female	•
1024-0808	1/2	90° Elbows - Long Radius	Female to Female	•
1024-1010	5/8	90° Elbows - Long Radius	Female to Female	•
1024-1212	3/4	90° Elbows - Long Radius	Female to Female	•
1024-1414	7/8	90° Elbows - Long Radius	Female to Female	•
1024-1616	1	90° Elbows - Long Radius	Female to Female	•
1024-1818	1-1/8	90° Elbows - Long Radius	Female to Female	
1024-1818-410A	1-1/8	90° Elbows - Long Radius	Female to Female	•
CFE90032	1-1/4	90° Elbows - Long Radius	Female to Female	
1024-2020-410A	1-1/4	90° Elbows - Long Radius	Female to Female	•
1024-2222	1-3/8	90° Elbows - Long Radius	Female to Female	
1024-2222-410A	1-3/8	90° Elbows - Long Radius	Female to Female	•
1024-2424	1-1/2	90° Elbows - Long Radius	Female to Female	
1024-2626	1-5/8	90° Elbows - Long Radius	Female to Female	
1024-2626-410A	1-5/8	90° Elbows - Long Radius	Female to Female	•
1024-3232	2	90° Elbows - Long Radius	Female to Female	
1024-3434	2-1/8	90° Elbows - Long Radius	Female to Female	
1024-3434-R410A	2-1/8	90° Elbows - Long Radius	Female to Female	•
1024-4242	2-5/8	90° Elbows - Long Radius	Female to Female	
1024-4242-HP	2-5/8	90° Elbows - Long Radius	Female to Female	
1024-4848	3	90° Elbows - Long Radius	Female to Female	
1024-5050-HP	3-1/8	90° Elbows - Long Radius	Female to Female	
1024-6464	4	90° Elbows - Long Radius	Female to Female	

HP = High Pressure Copper Fittings



Heldon branded copper fittings by Henry Technologies are engineered and manufactured to meet or exceed Australian and International Standards.

Tested to exceed 4 x Safe Working Pressure, Heldon branded copper fittings easily comply to the new standard AS/NZS 5149.2:2016.

A large range of refrigeration fittings are available to suit all popular and new refrigerants, including R410A, HFO's and CO₂ (sub-critical) applications.

Don't risk it - Shop with confidence
Always ask for Heldon copper fittings

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90° ELBOWS - LONG RADII - FEMALE TO MALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1022-0404	1/4	Elbow 90°	Female to Male	•
1022-0606	3/8	Elbow 90°	Female to Male	•
1022-0808	1/2	Elbow 90°	Female to Male	•
1022-1010	5/8	Elbow 90°	Female to Male	•
1022-1212	3/4	Elbow 90°	Female to Male	•
1022-1414	7/8	Elbow 90°	Female to Male	•
1022-1616	1	Elbow 90°	Female to Male	
1022-1818	1-1/8	Elbow 90°	Female to Male	
1022-2020	1-1/4	Elbow 90°	Female to Male	
1022-2222	1-3/8	Elbow 90°	Female to Male	
1022-2424	1-1/2	Elbow 90°	Female to Male	
1022-2626	1-5/8	Elbow 90°	Female to Male	
1022-3434	2-1/8	Elbow 90°	Female to Male	
1022-4242	2-5/8	Elbow 90°	Female to Male	



45° ELBOWS - FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1025-0606	3/8	Elbow 45°	Female to Female	•
1025-0808	1/2	Elbow 45°	Female to Female	•
1025-1010	5/8	Elbow 45°	Female to Female	•
1025-1212	3/4	Elbow 45°	Female to Female	•
1025-1414	7/8	Elbow 45°	Female to Female	•
1025-1616	1	Elbow 45°	Female to Female	•
1025-1818	1-1/8	Elbow 45°	Female to Female	
1025-1818-410A	1-1/8	Elbow 45°	Female to Female	•
1025-2020	1-1/4	Elbow 45°	Female to Female	
1025-2222	1-3/8	Elbow 45°	Female to Female	
1025-2222-410A	1-3/8	Elbow 45°	Female to Female	•
1025-2424	1-1/2	Elbow 45°	Female to Female	
1025-2626	1-5/8	Elbow 45°	Female to Female	
1025-2626-410A	1-5/8	Elbow 45°	Female to Female	•
1025-3434	2-1/8	Elbow 45°	Female to Female	
1025-4242	2-5/8	Elbow 45°	Female to Female	

RETURN BENDS

RETURN BENDS - FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1062-1032	5/8 x 2	180° Bend	Female to Female	
1062-1236	3/4 x 2-1/4	180° Bend	Female to Female	
1062-1436	7/8 x 2-1/2	180° Bend	Female to Female	



COPPER TEES



TEES - FEMALE - EQUAL

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1049-040404	1/4	Tee Equal Sweat	Female	•
1049-060606	3/8	Tee Equal Sweat	Female	•
1049-080808	1/2	Tee Equal Sweat	Female	•
1049-101010	5/8	Tee Equal Sweat	Female	•
1049-121212	3/4	Tee Equal Sweat	Female	
1049-141414	7/8	Tee Equal Sweat	Female	
1049-161616	1	Tee Equal Sweat	Female	
1049-181818	1-1/8	Tee Equal Sweat	Female	•
1049181818-410A	1-1/8	Tee Equal Sweat	Female	•
1049-202020	1-1/4	Tee Equal Sweat	Female	
1049-222222	1-3/8	Tee Equal Sweat	Female	
1049-242424	1-1/2	Tee Equal Sweat	Female	
1049-262626	1-5/8	Tee Equal Sweat	Female	
1049-343434	2-1/8	Tee Equal Sweat	Female	
1049-424242	2-5/8	Tee Equal Sweat	Female	
1049-484848	3	Tee Equal Sweat	Female	



TEES - FEMALE - REDUCER

Part Number	Connection Size (inches)	Description	Connection Type
1049-050504	5/16 x 5/16 x 1/4	Tee Reducer	Female
1049-060604	3/8 x 3/8 x 1/4	Tee Reducer	Female
1049-080804	1/2 x 1/2 x 1/4	Tee Reducer	Female
1049-080806	1/2 x 1/2 x 3/8	Tee Reducer	Female
1049-080810	1/2 x 1/2 x 5/8	Tee Reducer	Female
1049-101006	5/8 x 5/8 x 3/8	Tee Reducer	Female
1049-101008	5/8 x 5/8 x 1/2	Tee Reducer	Female
1049-121206	3/4 x 3/4 x 3/8	Tee Reducer	Female
1049-121208	3/4 x 3/4 x 1/2	Tee Reducer	Female
1049-121210	3/4 x 3/4 x 5/8	Tee Reducer	Female
1049-161612	1 x 1 x 3/4	Tee Reducer	Female





COPPER COUPLINGS

UNIONS - FEMALE TO FEMALE - EQUAL R410A RATED

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1009-0303	3/16	Copper Coupling	Female to Female	•
1009-0404	1/4	Copper Coupling	Female to Female	•
1009-0606	3/8	Copper Coupling	Female to Female	•
1009-0808	1/2	Copper Coupling	Female to Female	•
1009-1010	5/8	Copper Coupling	Female to Female	•
1009-1212	3/4	Copper Coupling	Female to Female	•
1009-1414	7/8	Copper Coupling	Female to Female	•
1009-1616	1	Copper Coupling	Female to Female	
1009-1818	1- 1/8	Copper Coupling	Female to Female	
1009-1818-410A	1- 1/8	Copper Coupling	Female to Female	•
1009-2020	1- 1/4	Copper Coupling	Female to Female	
1009-2222	1- 3/8	Copper Coupling	Female to Female	
1009-2222-410A	1- 3/8	Copper Coupling	Female to Female	•
1009-2626	1- 5/8	Copper Coupling	Female to Female	
1009-2626-410A	1- 5/8	Copper Coupling	Female to Female	•
1009-3232	2	Copper Coupling	Female to Female	
1009-3434	2-1/8	Copper Coupling	Female to Female	
1009-4242	2-5/8	Copper Coupling	Female to Female	
1009-4848	3	Copper Coupling	Female to Female	

REDUCER - FEMALE TO FEMALE - ID TO ID

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1009-0604	3/8 x 1/4	Reducer Sweat	Female to Female	•
1009-0804	1/2 x 1/4	Reducer Sweat	Female to Female	•
1009-0806	1/2 x 3/8	Reducer Sweat	Female to Female	•
1009-1006	5/8 x 3/8	Reducer Sweat	Female to Female	•
1009-1008	5/8 x 1/2	Reducer Sweat	Female to Female	•
1009-1206	3/4 x 3/8	Reducer Sweat	Female to Female	•
1009-1208	3/4 x 1/2	Reducer Sweat	Female to Female	•
1009-1210	3/4 x 5/8	Reducer Sweat	Female to Female	•
1009-1408	7/8 x 1/2	Reducer Sweat	Female to Female	•
1009-1410	7/8 x 5/8	Reducer Sweat	Female to Female	•
1009-1412	7/8 x 3/4	Reducer Sweat	Female to Female	•
1009-1612	1 x 3/4	Reducer Sweat	Female to Female	•
1009-1808	1-1/8 x 1/2	Reducer Sweat	Female to Female	•
1009-1810	1-1/8 x 5/8	Reducer Sweat	Female to Female	•
1009-1812	1-1/8 x 3/4	Reducer Sweat	Female to Female	•
1009-1814	1-1/8 x 7/8	Reducer Sweat	Female to Female	
1009-1814-410A	1-1/8 x 7/8	Reducer Sweat	Female to Female	•
1009-1816	1-1/8 x 1	Reducer Sweat	Female to Female	
1009-2012	1-1/4 x 3/4	Reducer Sweat	Female to Female	
1009-2018	1-1/4 x 1-1/8	Reducer Sweat	Female to Female	
1009-2210	1-3/8 x 5/8	Reducer Sweat	Female to Female	
1009-2212	1-3/8 x 3/4	Reducer Sweat	Female to Female	
1009-2214	1-3/8 x 7/8	Reducer Sweat	Female to Female	

REDUCER - FEMALE TO FEMALE - ID TO ID (CONT'D)

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1009-2218	1-3/8 x 1-1/8	Reducer Sweat	Female to Female	
1009-2218-410A	1-3/8 x 1-1/8	Reducer Sweat	Female to Female	•
1009-2614	1-5/8 x 7/8	Reducer Sweat	Female to Female	
1009-2618	1-5/8 x 1-1/8	Reducer Sweat	Female to Female	
1009-2622	1-5/8 x 1-3/8	Reducer Sweat	Female to Female	
1009-3418	2-1/8 x 1-1/8	Reducer Sweat	Female to Female	
1009-3422	2-1/8 x 1 3/8	Reducer Sweat	Female to Female	
1009-3426	2-1/8 x 1 5/8	Reducer Sweat	Female to Female	
1009-4222	2-5/8 x 1 3/8	Reducer Sweat	Female to Female	
1009-4226	2-5/8 x 1 5/8	Reducer Sweat	Female to Female	
1009-4234	2-5/8 x 2-1/8	Reducer Sweat	Female to Female	
1009-4832	3 x 2	Reducer Sweat	Female to Female	
1009-4834	3 x 2-1/8	Reducer Sweat	Female to Female	
1009-4842	3 x 2-5/8	Reducer Sweat	Female to Female	

• Rated for use with R410A, however requires safety shut off limit of 3800 kPa

COPPER BUSHES**BUSHES - MALE TO FEMALE**

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1004-0604	3/8 OD x 1/4 ID	Reducing Bush	Male to Female	•
1004-0804	1/2 OD x 1/4 ID	Reducing Bush	Male to Female	•
1004-0806	1/2 OD x 3/8 ID	Reducing Bush	Male to Female	•
1004-1006	5/8 OD x 3/8 ID	Reducing Bush	Male to Female	•
1004-1008	5/8 OD x 1/2 ID	Reducing Bush	Male to Female	•
1004-1208	3/4 OD x 1/2 ID	Reducing Bush	Male to Female	•
1004-1210	3/4 OD x 5/8 ID	Reducing Bush	Male to Female	•
1004-1408	7/8 OD x 1/2 ID	Reducing Bush	Male to Female	•
1004-1410	7/8 OD x 5/8 ID	Reducing Bush	Male to Female	•
1004-1612	1 OD x 3/4 ID	Reducing Bush	Male to Female	•
1004-1412	7/8 OD x 3/4 ID	Reducing Bush	Male to Female	•
1004-1418	7/8 OD x 1-1/8 ID	Reducing Bush	Male to Female	•
1004-1808	1-1/8 OD x 1/2 ID	Reducing Bush	Male to Female	•
1004-1810	1-1/8 OD x 5/8 ID	Reducing Bush	Male to Female	•
1004-1812	1-1/8 OD x 3/4 ID	Reducing Bush	Male to Female	
1004-1814	1-1/8 OD x 7/8 ID	Reducing Bush	Male to Female	
1004-1814-410A	1 1/8 OD x 7/8 ID	Reducing Bush	Male to Female	•
1004-2210	1-3/8 OD x 5/8 ID	Reducing Bush	Male to Female	
1004-2214	1-3/8 OD x 7/8 ID	Reducing Bush	Male to Female	
1004-2214-410A	1-3/8 OD x 7/8 ID	Reducing Bush	Male to Female	•
1004-2218	1-3/8 OD x 1-1/8 ID	Reducing Bush	Male to Female	
1004-2218-410A	1-3/8 OD x 1-1/8 ID	Reducing Bush	Male to Female	•
1004-2614	1-5/8 OD x 7/8 ID	Reducing Bush	Male to Female	
1004-2618	1-5/8 OD x 1-1/8 ID	Reducing Bush	Male to Female	
1004-2620	1-5/8 OD x 1-1/4 ID	Reducing Bush	Male to Female	
1004-2622	1-5/8 OD x 1-3/8 ID	Reducing Bush	Male to Female	
1004-3418	2-1/8 OD x 1-1/8 ID	Reducing Bush	Male to Female	
1004-3422	2-1/8 OD x 1-3/8 ID	Reducing Bush	Male to Female	

BUSHES - MALE TO FEMALE (CONT'D)

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1004-3426	2-1/8 OD x 1-5/8 ID	Reducing Bush	Male to Female	
1004-4032	2-1/2 OD x 2 ID	Reducing Bush	Male to Female	
1004-4226	2-5/8 OD x 1-5/8 ID	Reducing Bush	Male to Female	
1004-4234	2-5/8 OD x 2-1/8 ID	Reducing Bush	Male to Female	
1004-5042	3-1/8 x 2-5/8 ID	Reducing Bush	Male to Female	

COPPER STOPS ENDS & WASHERS

COPPER CAPS - FEMALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1120-06	3/8	Copper Caps	Female	
1120-08	1/2	Copper Caps	Female	
1120-10	5/8	Copper Caps	Female	
1120-12	3/4	Copper Caps	Female	
1120-14	7/8	Copper Caps	Female	
1120-16	1	Copper Caps	Female	
1120-18	1-1/8	Copper Caps	Female	
1120-22	1-3/8	Copper Caps	Female	
1120-24	1-1/2	Copper Caps	Female	
1120-26	1-5/8	Copper Caps	Female	
1120-34	2-1/8	Copper Caps	Female	
1120-34-R410A	2 1/8	Copper Caps	Female	•
1120-42	2-5/8	Copper Caps	Female	
1120-64	4	Copper Caps	Female	

Y-PIECE 3 WAY CONNECTORS - FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A Compatible
1130-080606	1/2 x 3/8 x 3/8	Y-Piece 3 Way Connectors	Female to Female	•
1130-080808	1/2 x 1/2 x 1/2	Y-Piece 3 Way Connectors	Female to Female	•
1130-100808	5/8 x 1/2 x 1/2	Y-Piece 3 Way Connectors	Female to Female	•
1130-101010	5/8 x 5/8 x 5/8	Y-Piece 3 Way Connectors	Female to Female	•
1130-121010	3/4 x 5/8 x 5/8	Y-Piece 3 Way Connectors	Female to Female	•
1130-141010	7/8 x 5/8 x 5/8	Y-Piece 3 Way Connectors	Female to Female	•
1130-141414	7/8 x 7/8 x 7/8	Y-Piece 3 Way Connectors	Female to Female	•
1130-161212	1-3/4 x 3/4	Y-Piece 3 Way Connectors	Female to Female	•
1130-181414	1-1/8 x 7/8 x 7/8	Y-Piece 3 Way Connectors	Female to Female	

P TRAPS - SUCTION LINE FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type
1080-10	5/8	P Traps - Suction Line	Female to Female
1080-12	3/4	P Traps - Suction Line	Female to Female
1080-14	7/8	P Traps - Suction Line	Female to Female
1080-18	1-1/8	P Traps - Suction Line	Female to Female
1080-22	1-3/8	P Traps - Suction Line	Female to Female
1080-26	1-5/8	P Traps - Suction Line	Female to Female
1080-34	2-1/8	P Traps - Suction Line	Female to Female

COPPER SADDLES, BONNETS & WASHERS

COPPER SADDLES

Part Number	Connection Size (inches)	Description
CSL025	1/4	Copper Saddles
CSL037	3/8	Copper Saddles
CSH50	1/2	Copper Saddles
CSH062	5/8	Copper Saddles
CSH075	3/4	Copper Saddles
CSH100	1	Copper Saddles
CSH162	1-5/8	Copper Saddles
CSH200	2	Copper Saddles
CSH212	2.125	Copper Saddles



COPPER FLARE BONNETS

Part Number	Connection Size (inches)	Description
1105-04	1/4	Flare Bonnets Copper
1105-05	5/16	Flare Bonnets Copper
1105-06	3/8	Flare Bonnets Copper
1105-08	1/2	Flare Bonnets Copper
1105-10	5/8	Flare Bonnets Copper
1105-12	3/4	Flare Bonnets Copper



COPPER FLARE WASHERS

Part Number	Connection Size (inches)	Description
1110-04	1/4	Copper Flare Washers
1110-06	3/8	Copper Flare Washers
1110-08	1/2	Copper Flare Washers
1110-10	5/8	Copper Flare Washers
1110-12	3/4	Copper Flare Washers



Insulation

K-FLEX Insulation is a fire rated, multi-purpose flexible elastomeric thermal insulation with a built in vapour barrier and a closed cell structure. This makes K-FLEX Insulation highly resistant to water vapour transmission and enables the product to maintain a high level of energy conservation efficiency.

- ISO 9001:2000 Registered with over a thousand additional domestic and international certificates
- A wide range of tube and sheet with self adhesive and aluminium foil available
- Light weight and flexible for easy and speedy installation with low maintenance resulting in time and cost savings
- CFC and HCFC free with ozone depletion potential of zero
- Non-corrosive, smoke and fire rated material
- Low thermal conductivity and high μ factor for effective control of condensation and insulating against heat loss and heat gain
- FM Approved



K-FLEX



Temperature Range:

Suitable for applications ranging from - 200 °C to + 116 °C. Independently tested by NATA accredited laboratories. Our insulation is compliant to the Australian Building Code Boards (ABCB) National Construction Code (NCC) 2015 edition.

TECHNICAL SPECIFICATION FOR MM KEMBLA INSULATION ST

Construction	Closed Cell	
Density	45-70 kg/m ³	
Temperature Range	- 200 °C to + 116 °C	
Thermal Conductivity	$\lambda=0.034\text{W}/(\text{m.k}) @ + 20\text{ }^{\circ}\text{C}$ $\lambda=0.032\text{W}/(\text{m.k}) @ 0\text{ }^{\circ}\text{C}$ $\lambda=0.028\text{W}/(\text{m.k}) @ + 20\text{ }^{\circ}\text{C}$	AS4859.1 EN12667 DIN 52612
Water Vapour Diffusion Resistance Factor	$\mu \geq 10,000$	EN12086 DIN52612
Fire Performance	Class 1 – Complies with the fire hazard requirements of the Building Code of Australia	AS1530.3
Reaction to Fire	Self Extinguishing	
Environmental	Zero Ozone Depleting Potential (ODP), Low VOC	
Fungal/Mold Resistance	Resistant	ASTM G21 Anti Microbial Greenguard Approved
Manufacturer	K-Flex	

MM KEMBLA INSULATION ST - R-VALUES

Nominal Pipe Size		Insulation Thickness (mm)						
(inches)	(mm)	9mm	13mm	19mm	25mm	32mm	38mm	50mm
1/4	6	0.50	0.81	1.33	1.90	2.39	3.18	4.23
3/8	10	0.44	0.70	1.14	1.63	2.06	2.75	3.66
1/2	12	0.41	0.65	1.06	1.51	1.90	2.54	3.39
5/8	15	0.39	0.61	1.00	1.42	1.79	2.39	3.19
3/4	20	0.37	0.59	0.95	1.35	1.70	2.27	3.03
7/8	22	0.36	0.57	0.91	1.29	1.63	2.17	2.90
1	25	0.35	0.55	0.88	1.25	1.57	2.09	2.79
1-1/8	28	0.35	0.54	0.86	1.21	1.52	2.02	2.70
1-1/4	32	0.34	0.52	0.83	1.17	1.46	1.95	2.60
1-3/8	35	0.33	0.51	0.81	1.14	1.43	1.90	2.53
1-1/2	40	0.32	0.50	0.78	1.09	1.36	1.81	2.40
1-5/8	42	0.32	0.50	0.78	1.09	1.36	1.81	2.40
2	50	0.32	0.48	0.76	1.06	1.32	1.74	2.31
2-1/8	54	0.31	0.48	0.74	1.03	1.28	1.69	2.24

MM KEMBLA INSULATION ST - R-VALUES (CONT'D)

Nominal Pipe Size		Insulation Thickness (mm)						
(inches)	(mm)	9 mm	13 mm	19 mm	25 mm	32 mm	38 mm	50 mm
2-3/8	60	0.31	0.47	0.73	1.01	1.25	1.65	2.18
2-5/8	67	0.31	0.46	0.71	0.99	1.22	1.60	2.12
3	76	0.30	0.45	0.70	0.97	1.19	1.56	2.05
3-1/8	80	0.30	0.45	0.70	0.96	1.18	1.54	2.03
3-1/2	89	0.30	0.45	0.68	0.94	1.15	1.51	1.98
4	101	0.30	0.44	0.68	0.94	1.15	1.51	1.98
4-1/2	114	0.30	0.44	0.66	0.90	1.10	1.43	1.87

**FR NITRILE RUBBER THERMAL PIPE INSULATION - 9MM**

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K09006	6	1/4	9	3/8	144
K09010	10	3/8	9	3/8	120
K09012	13	1/2	9	3/8	90
K09015	15	5/8	9	3/8	84
K09020	20	3/4	9	3/8	68
K09022	22	7/8	9	3/8	64
K09025	25	1	9	3/8	54
K09028	28	1-1/8	9	3/8	49
K09032	32	1-1/4	9	3/8	38
K09035	35	1-3/8	9	3/8	38
K09040	40	1-1/2	9	3/8	30
K09042	42	1-5/8	9	3/8	30
K09048	48	1-7/8	9	3/8	
K09050	50	2	9	3/8	24
K09054	54	2-1/8	9	3/8	23
K09060	60	2-3/8	9	3/8	23

FR NITRILE RUBBER THERMAL PIPE INSULATION - 13MM

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K13006	6	1/4	13	1/2	80
K13010	10	3/8	13	1/2	76
K13012	13	1/2	13	1/2	64
K13015	15	5/8	13	1/2	56
K13020	20	3/4	13	1/2	52
K13022	22	7/8	13	1/2	49
K13025	25	1	13	1/2	40
K13028	28	1-1/8	13	1/2	39
K13032	32	1-1/4	13	1/2	29
K13035	35	1-3/8	13	1/2	29
K13040	40	1-1/2	13	1/2	24
K13042	42	1-5/8	13	1/2	24
K13048	48	1-7/8	13	1/2	
K13050	50	2	13	1/2	19
K13054	54	2-1/8	13	1/2	17
K13060	60	2-3/8	13	1/2	16



FR NITRILE RUBBER THERMAL PIPE INSULATION - 13MM (CONT'D)

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K13067	67	2-5/8	13	1/2	13
K13076	76	3	13	1/2	13
K13079	79	3-1/8	13	1/2	
K13089	89	3-1/2	13	1/2	
K13100	100	4	13	1/2	
K13114	114	4-1/2	13	1/2	

FR NITRILE RUBBER THERMAL PIPE INSULATION - 19MM

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K19006	6	1/4	19	3/4	50
K19010	10	3/8	19	3/4	40
K19012	13	1/2	19	3/4	36
K19015	15	5/8	19	3/4	30
K19020	20	3/4	19	3/4	30
K19022	22	7/8	19	3/4	30
K19025	25	1	19	3/4	25
K19028	28	1-1/8	19	3/4	24
K19032	32	1-1/4	19	3/4	20
K19035	35	1-3/8	19	3/4	18
K19040	40	1-1/2	19	3/4	16
K19042	42	1-5/8	19	3/4	16
K19048	48	1-7/8	19	3/4	
K19050	50	2	19	3/4	12
K19054	54	2-1/8	19	3/4	12
K19060	60	2-3/8	19	3/4	11
K19067	67	2-5/8	19	3/4	9
K19076	76	3	19	3/4	
K19079	79	3-1/8	19	3/4	
K19089	89	3-1/2	19	3/4	
K19100	100	4	19	3/4	
K19114	114	4-1/2	19	3/4	

FR NITRILE RUBBER THERMAL PIPE INSULATION - 25MM

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K25010	10	3/8	25	1	30
K25012	13	1/2	25	1	25
K25015	15	5/8	25	1	25
K25020	20	3/4	25	1	20
K25022	22	7/8	25	1	19
K25025	25	1	25	1	20
K25028	28	1-1/8	25	1	16
K25032	32	1-1/4	25	1	12
K25035	35	1-3/8	25	1	12
K25040	40	1-1/2	25	1	
K25042	42	1-5/8	25	1	11
K25050	50	2	25	1	9

FR NITRILE RUBBER THERMAL PIPE INSULATION - 25MM

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K25054	54	2-1/8	25	1	9
K25060	60	2-3/8	25	1	9
K25067	67	2-5/8	25	1	6
K25076	76	3	25	1	5
K25079	79	3-1/8	25	1	
K25089	89	3-1/2	25	1	
K25100	100	4	25	1	
K25114	114	4-1/2	25	1	

**FR NITRILE RUBBER THERMAL PIPE INSULATION - 32MM**

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K32020	20	3/4	32	1 1/4	16
K32022	22	7/8	32	1 1/4	12
K32025	25	1	32	1 1/4	12
K32028	28	1-1/8	32	1 1/4	12
K32032	32	1-1/4	32	1 1/4	9
K32035	35	1-3/8	32	1 1/4	9
K32040	40	1-1/2	32	1 1/4	8
K32042	42	1-5/8	32	1 1/4	8
K32048	48	1-7/8	32	1 1/4	
K32050	50	2	32	1 1/4	7
K32054	54	2-1/8	32	1 1/4	
K32060	60	2-3/8	32	1 1/4	5
K32067	67	2-5/8	32	1 1/4	4
K32076	76	3	32	1 1/4	4
K32079	79	3-1/8	32	1 1/4	
K32089	89	3-1/2	32	1 1/4	4
K32100	100	4	32	1 1/4	
K32114	114	4-1/2	32	1 1/4	3

FR NITRILE RUBBER THERMAL PIPE INSULATION - 38MM

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K38020	20	3/4	38	1-1/2	9
K38022	22	7/8	38	1-1/2	9
K38025	25	1	38	1-1/2	8
K38028	28	1-1/8	38	1-1/2	8
K38032	32	1-1/4	38	1-1/2	8
K38035	35	1-3/8	38	1-1/2	8
K38040	40	1-1/2	38	1-1/2	
K38042	42	1-5/8	38	1-1/2	6
K38050	50	2	38	1-1/2	
K38054	54	2-1/8	38	1-1/2	5
K38060	60	2-3/8	38	1-1/2	4
K38067	67	2-5/8	38	1-1/2	4
K38076	76	3	38	1-1/2	4



FR NITRILE RUBBER THERMAL PIPE INSULATION - 38 MM

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K38079	79	3-1/8	38	1-1/2	
K38089	89	3-1/2	38	1-1/2	4
K38100	100	4	38	1-1/2	
K38114	114	4-1/2	38	1-1/2	3



FR PRE-CUT INSULATION SHEETS

Part Number	Insulation Thickness		Dimensions		Carton Quantity
	(mm)	(inches)	Width (m)	Length (m)	
KSHEET10	10	3/8	1	1.22	26
KSHEET13	13	1/2	1	1.22	20
KSHEET20	20	3/4	1	1.22	14
KSHEET25	25	7/8	1	1.22	10



KEMBLA FR CONTI COIL 9MM (3/8") WALL THICKNESS

Part Number	Insulation ID		Wall Thickness		Carton (m)
	(mm)	(inches)	(mm)	(inches)	
KCC0906	6	1/4	9	3/8	80
KCC0910	10	3/8	9	3/8	60
KCC0913	13	1/2	9	3/8	50
KCC0915	15	5/8	9	3/8	40
KCC0920	20	3/4	9	3/8	40
KCC0922	22	7/8	9	3/8	30
KCC0928	28	1-1/8	9	3/8	20

KEMBLA FR CONTI COIL 13MM (1/2") WALL THICKNESS

Part Number	Insulation ID		Wall Thickness		Carton (m)
	(mm)	(in)	(mm)	(inches)	
KCC1310	10	3/8	13	1/2	40
KCC1313	13	1/2	13	1/2	40
KCC1315	15	5/8	13	1/2	30
KCC1320	20	3/4	13	1/2	30
KCC1328	28	1-1/8	13	1/2	15

FR NITRILE RUBBER THERMAL PIPE INSULATION (SELF SEAL) - 9 MM

Part Number	Insulation ID		Wall Thickness		Carton Mtrs
	(mm)	(inches)	(mm)	(inches)	
KSS09012	13	1/2	9	3/8	90
KSS09015	15	5/8	9	3/8	84
KSS09020	20	3/4	9	3/8	68
KSS09022	22	7/8	9	3/8	64
KSS09025	25	1	9	3/8	54
KSS09029	28	1-1/8	9	3/8	49
KSS09032	32	1-1/4	9	3/8	38
KSS09035	35	1-3/8	9	3/8	38



FR NITRILE RUBBER THERMAL PIPE INSULATION (SELF SEAL) - 13 MM

Part Number	Insulation ID		Wall Thickness		Carton Mtrs
	(mm)	(in)	(mm)	(in)	
KSS13012	13	1/2	13	1/2	64
KSS13015	15	5/8	13	1/2	56
KSS13020	20	3/4	13	1/2	52
KSS13022	22	7/8	13	1/2	49
KSS13025	25	1	13	1/2	40
KSS13029	28	1 1/8	13	1/2	39
KSS13032	32	1 1/4	13	1/2	29
KSS13035	35	1 3/8	13	1/2	29

Insulation Accessories

INSULATION FOAM TAPE

Part Number	Dimensions		
	Length (m)	Width (mm)	Depth (mm)
KINSTAPE	9.14	48	3

ADHESIVE

Part Number	Volume (ml)	Description
KADH1L	1000	Insulation Adhesive w/ Brush
KADH500ML	500	Insulation Adhesive w/ Brush



Notes:



Manifold and Gauge Sets

cps®



MANIFOLD SETS (NO HOSES)

CPS

Part Number	Refrigerant	Gauge Size (mm)	Manifold Type	Hoses (mm)	Description
MBT	R134a, R22, R404A	68	2 Valve	No	Manifold Blackmax
MCB	R410A/R32	68	2 Valve	No	Manifold Blackmax

Imperial

IMPERIAL

Part Number	Refrigerant	Gauge Size (mm)	Manifold Type	Hoses (mm)	Description
481-CKPC	R134a, R22, R404A	63	2 Valve	No	Manifold Imperial

MANIFOLD SETS (WITH HOSES)

CPS

Part Number	Refrigerant	Gauge Size (mm)	Manifold Type	Hoses (mm)	Description
MBTP3	R134a, R22, R404A	68	2 Valve	3 x 900	Manifold Blackmax
MT2TP75	R134a, R22, R404A	80	2 Valve	3 x 1500	Manifold Workingman's
MV2TP3	R134a, R22, R404A	68	2 Valve	3 x 900	Manifold Vortech
MV4TP3	R134a, R22, R404A	68	4 Valve	3 x 900	Manifold Vortech
MCBJ3	R410A/R32	68	2 Valve	3 x 1500	Manifold Blackmax
MT11B7J5	R410A	80	2 Valve	3 x 1500	Manifold Workingman's
MATA6Q	R134a	68	2 Valve	3 x 1800	Manifold Blackmax Auto Air includes Ball Valves
MT2C02P5E	R744	80	2 Valve	3 x 1500	Manifold Workingman's
MBHCP3	R290, R600	68	2 Valve	3 x 900	Manifold Blackmax
CPS4312	R744 (CO2) Transcritical	80	2 Valve	3 x 900	Transcritical Manifold

IMPERIAL

Part Number	Refrigerant	Gauge Size (mm)	Manifold Type	Hoses (mm)	Description
482-CKPC	R134a, R22, R404A	63	2 Valve	3 x 1500	Manifold Imperial
582-CKPC	R22, R410A, R407C	63	2 Valve	3 x 900	Manifold Imperial
514-CC	R22/R32	63	2 Valve	3 x 900	Manifold Imperial
841-CKPSC	R410A	63	4 Valve	3 x 1500	Manifold Imperial c/w 3/8 Vacuum Hose
681-CKPSC					Manifold Imperial 4 Way C/W Hose

HENRY

Part Number	Refrigerant	Gauge Size (mm)	Manifold Type	Hoses (mm)	Description
HCH-744-SC	R744 (CO2) Sub Critical		2 Valve	1 x 5000	Liquid Charging Manifold Kit (No Regulator Required)

DIGITAL MANIFOLD SETS (WITH HOSES)

CPS

Part Number	Refrigerant	Gauge Size (mm)	Manifold Type	Hoses (mm)	Description
MD100WVHE	All Refrigerants & R744 (CO2) Sub Critical	LCD	4 Valve	3 x 1500	Wireless manifold c/w vac gauge and 3/8 Vacuum Hose
MD100HVE	All Refrigerants & R744 (CO2) Sub Critical	LCD	4 Valve	3 x 1500	Digital manifold c/w vac gauge and 3/8 Vacuum Hose



FIELDPIECE

Part Number	Refrigerant	Gauge Size (mm)	Manifold Type	Hoses (mm)	Description
SMAN360	All (excl CO2)	LCD	3 Way	No	Superheat, Subcool, Vacuum, 2 Thermocouples
SMAN460	All (excl CO2)	LCD	4 Way	No	Wireless, Superheat, Subcool, Vacuum, 2 Thermocouples



Gauges

CPS

Part Number	Refrigerant	Type	Size (mm)	Size (mm)	Description
RGTH	R134a, R22, R404A	Pressure	68	68	High Side - Flutter Free
RGLT	R134a, R22, R404A	Compound	68	68	Low Side - Flutter Free
RGBH	R410A/R32	Pressure	68	68	High Side - Flutter Free
RGLB	R410A/R32	Compound	68	68	Low Side - Flutter Free
RGT7H	R134a, R22, R404A	Pressure	80	80	High Side, Class 1 suite Workingmans
RGT7L	R134a, R22, R404A	Compound	80	80	Low Side, Class 1 suite Workingmans
RGB7H	R410A, R32	Pressure	80	80	High Side, Class 1 suite Workingmans
RGB7L	R410A, R32	Compound	80	80	Low Side, Class 1 suite Workingmans



IMPERIAL

Part Number	Refrigerant	Type	Size (mm)	Size (mm)	Description
453-CR	R32, R410A	Pressure	68	68	High Side
453-CB	R32, R410A	Compound	69	69	Low Side
429-CKP	R22, R407C, R410A	Pressure	68	68	High Side
428-CKP	R22, R407C, R410A	Compound	68	68	Low Side
452CR	R410A	Pressure	63	63	High Side - Flutter Free
452CB	R410A	Compound	63	63	Low Side - Flutter Free
420-RCKP	R134a, R22, R404A	Pressure	63	63	High Side - Flutter Free
420-BCKP	R134a, R22, R404A	Compound	63	63	Low Side - Flutter Free

Hoses and Hose Sets



CPS				
Part Number	Length (mm)	Colour	Connection	Description
HP3	3 x 900	Red, Blue & Yellow	1/4 FF	Hose Set
HP3E	3 x 900	Red, Blue & Yellow	1/4 FF	Hose Set c/w Ball Valves
HP6Y	1 x 1800	Yellow	1/4 FF	Single Hose
HP6R	1 x 1800	Red	1/4 FF	Single Hose
HP6B	1 x 1800	Blue	1/4 FF	Single Hose
HP6	3 x 1800	Red, Blue & Yellow	1/4 FF	Hose Set
HP6E	3 x 1800	Red, Blue & Yellow	1/4 FF	Hose Set c/w Ball Valves
HJ3	3 x 900	Red, Blue & Yellow	5/16 FF	Hose Set R410A/R32
HJ5	3 x 1500	Red, Blue & Yellow	5/16 FF	Hose Set R410A/R32
HV6	1 x 1800	Black	3/8 FF	Vacuum Hose



IMPERIAL				
Part Number	Length (mm)	Colour	Connection	Description
203MRS	3 x 900	Red, Blue & Yellow	5/16 FF	Hose Set
853-MRS	3 x 900	Red, Blue & Yellow	1/4" - 5/16" FF	Hose Set
205-MRS	3 x 1500	Red, Blue & Yellow	5/16 FF	Hose Set
856-MRS	3 x 1800	Red, Blue & Yellow	1/4" - 5/16" FF	Hose Set
800-MBY	1 x 1800	Yellow	1/4 FF	Single Hose c/w Ball Valves

Manifold, Gauge and Hose Spares and Accessories

cps®



CPS	
Part Number	Description
MXK	CPS M/Fold Knob & Hi/Lo Label
MXPK	Blackmax Valve Handle
MPV	Blackmax Piston Valve Assembly
MPVO	Blackmax Piston Valve O-Ring Kit
MVXK	Vortech Valve Handle
MV2XRK	Vortech Valve Repair Kit (2 valves)
MV4XRK	Vortexh Valve Repair Kit (4 valves)
HXG	1/4" Hose Gasket - Packet of 10
HX38G	3/8" Hose Gasket - Packet of 10
HXD	1/4" Hose Core Depressor - Packet of 10
HXG2	1/2"-20 UNF R410A/1/2" Acme Hose Gaskets - (10 Pk)
HXTG2	1/2"-20 UNF Teflon Hose Gaskets - (10 Pk)
RGX68L	Replacement Gauge Lens 68mm
RGX68BB	Protective Gauge Boot Blue 68mm
RGX68RB	Protective Gauge Boot Red 68mm
RGX80BB	Protective Gauge Boot Blue 80mm
RGX80RB	Protective Gauge Boot Red 80mm

MANIFOLD, GAUGES AND HOSE SPARES AND ACCESSORIES (CONT'D)

IMPERIAL

Part Number	Description
Spare Parts	
405RH	High Side Repair Kit for 496-CKP
602R	Replacement HI & LO Handles for 600 Series
500-RH	High Side Repair Kit for 513C R410A
500-RL	Low Side Repair Kit for 513C R410A

CPS

Part Number	Male Connection	Female Connection	Connection Type	Description
Service Ball Valve and Blowback Valves				
BV	1/4"	1/4"	Straight Flare	Service Ball Valve
BV3	1/4"	1/4"	Straight Flare	Service Ball Valve (3 Pk)
BV45	1/4"	1/4"	45° Flare	Service Ball Valve
BV453	1/4"	1/4"	45° Flare	Service Ball Valve (3 Pk)
BV90	1/4"	1/4"	90° Flare	Service Ball Valve
BV410	5/16"	5/16"	Straight Flare	Service Ball Valve
BV38	3/8"	3/8"	Straight Flare	Service Ball Valve
AB	1/4"	1/4"	Straight Flare	Anti Blowback Valve
AB410	5/16"	5/16"	Straight Flare	Anti Blowback Valve

cps



IMPERIAL

Part Number	Male Connection	Female Connection	Connection Type	Description
Kwik-Coupler®				
16-C	1/4"	1/4"	Straight Flare	Kwik-Coupler®
17-C	1/4"	1/4"	90° Flare	Kwik-Coupler®
26-C	5/16"	5/16"	Straight Flare	Kwik-Coupler®
27-C	5/16"	5/16"	90° Flare	Kwik-Coupler®



Leak Detectors

cps



ELECTRONIC REFRIGERANT LEAK DETECTORS

CPS										
Part Number	Sensor Type	Sensitivity to CFC's, HCFC's & HFC's	Visual Display	Audible Alarm	Calibration	Operating Temp. (oC)	Power	Auto Off (mins)	Weight (g)	Warranty (years)
LS1	E_Mos	3g / year 35 PPM	6 x LED + Bar Graph	Variable Intensity	Manual	-18°C to 60°C	2 x C Alkaline Batteries	10 min	500	1
LS2	E_Mos	3g / year 35 PPM	6 x LED, 42 Sensitivity Levels	Variable Intensity	Automatic	-18°C to 60°C	3 x C Alkaline Batteries	10 min	500	2

FIELDPIECE

Part Number	Sensor Type	Sensitivity to CFC's, HCFC's & HFC's	Visual Display	Audible Alarm	Calibration	Operating Temp. (oC)	Power	Auto Off (mins)	Weight (g)	Warranty (years)
SRL8	Heated Diode	3g / year	8 x LED Bar Graph	Variable Intensity	Automatic	0°C to 40°C	Rechargeable Lithium Ion Polymer (Li-ion Poly)	10 min	400	1
SRL2K7	Infrared	3g / year	8 x LED Bar Graph	Variable Intensity	Automatic	0°C to 40°C	Rechargeable Lithium Ion Polymer (Li-ion Poly)	10 min	500	1

JAVAC

Part Number	Sensor Type	Sensitivity to CFC's, HCFC's & HFC's	Visual Display	Audible Alarm	Calibration	Operating Temp. (oC)	Power	Auto Off (mins)	Weight (g)	Warranty (years)
TEKMATE	heated diode	11g / year	LED	Variable Intensity	Automatic	-27°C to 50°C	2 x D Alkaline Batteries	N/A	700	2
D-TEK	Infrared	3g / year	8 x LED Bar Graph	Variable Intensity	Automatic	0°C to 50°C	Rechargeable Nickel Metal Hydride (NiMH)	N/A	540	2

DANFOSS

Part Number	Sensor Type	Gas Suitability	Visual Display	Audible Alarm	Calibration	Operating Temp. (oC)	Power	Auto Off (mins)	Weight (g)	Warranty (years)
080Z2148	Infrared	Co2	LED	YES	12 Months	0°C to 50°C	DC Power Pack 8 -12 Hours	N/A	4000	1
080Z2149	Infrared	Halogen Gas	LED	YES	12 Months	0°C to 50°C	DC Power Pack 8 -12 Hours		4000	1

ELECTRONIC LEAK DETECTOR ACCESSORIES

Part Number	Suits	Description
EMOS2	LS1 & LS2	Replacement Sensor (CPS)
LSXS	L780a,L790a	Replacement Sensor (CPS)
LSXS3	LS3000	Replacement Sensor (CPS)
LSXBMK	LS790B	Sensor Housing (CPS)
LSXSF	LS790B	Sensor Housing (CPS)
LS2XVF	LS1 & LS3	Vapor Filter Sensing Tip (CPS)
RHD1	SRL9	Sensor Fieldpiece
703-020-G1	TEKMATE	Sensor Javac
705-600-G1	TEKMATE	Filter Tip (Pack 20) Javac
712-700-G1	D-TEK	Battery Javac
712-701-G1	D-TEK	Infrared Sensor Javac
712-707-G1	D-TEK	Filter Tip Javac

UV LEAK DETECTORS**UV LEAK DETECTORS - FLASHLIGHT**

Part Number	Description
UV152E	Uv Torch Kit 240 V
UV55	Uv Pro Kit C/W Squeeze Injector
UVPRO	Uv Portable Torch & Glasses

cps[®]**UV LEAK DETECTORS - DYE INJECTOR**

Part Number	Description
UVNJ134	CPS Dye Injector 1/2A In-Line
UVNJ2	CPS Dye Injector 1/4F Hand-turn
UVNJ	CPS Dye Injector 1/4F In-Line

*Refer to Consumables for Cartridges



Refrigerant Testing Tools

REFRIGERANT IDENTIFIERS

Part Number	Description
RI-2004HVP	Refrigerant Identifier Ultima Id C/W Printer
RI-700H	Refrigerant Identifier Ultima Id Pro C/W Printer

Tube Tools

cps



TUBE CUTTERS

CPS

Part Number	Cutting Range	Description
TC127	1/8" - 5/8"	Tube Cutter
TCT127	1/8" - 5/8"	Tube Cutter Heavy Duty
TCT174	1/8" - 1-1/8"	Tube Cutter Heavy Duty
TC274	1/8" - 1-1/8"	Tube Cutter
TCT274	1/8" - 1-3/8"	Tube Cutter Heavy Duty
TC312	1/4" - 1-5/8"	Tube Cutter
TCT312	1/8" - 1-3/4"	Tube Cutter Heavy Duty
TCT206	1/4" - 2-5/8"	Tube Cutter Heavy Duty
BTC200	1/8" - 7/8"	Tube Cutter Blackmax Set N Cut
BTC200R	1/8" - 7/8"	Ratchet Tube Cutter Blackmax Set N Cut
BTC300	3/16" - 1 1/4"	Tube Cutter Blackmax Set N Cut
BTC500	3/8" - 2 5/8"	Tube Cutter Blackmax Set N Cut
TCAP	All Capillaries	Capillary Tube Cutter

Imperial



IMPERIAL

Part Number	Cutting Range	Description
TC1050	1/8" - 5/8"	Tube Cutter
TC1050RH	1/8" - 5/8"	Ratchet Tube Cutter
TC1000	1/8" - 1-1/8"	Tube Cutter
TC3050RH	1/8" - 1-1/8"	Ratchet Tube Cutter
174-F	3/8" - 1-1/8"	Tube Cutter
312FC	1/4" - 1-5/8"	Tube Cutter
206-FB	3/8" - 2-5/8"	Ratchet Tube Cutter

TUBE CUTTER SPARES

Part Number	Brand	Suits	Description
TCX7C	CPS	TC127	Cutting Wheel
TCX7S	CPS	TC127	Screw for Cutting Wheel
TCX4C	CPS	TC274 & TC312	Cutting Wheel (10 Pack)
TCX4S	CPS	TC274 & TC312	Screw for Cutting Wheel (10 Pack)
TCXT127C	CPS	TCT127	Cutting Wheel & Screw
TCXT174C	CPS	TCT174	Cutting Wheel & Screw
TCXT206C	CPS	TCT206	Cutting Wheel & Screw
TCXT274C	CPS	TCT274	Cutting Wheel & Screw
32633	Imperial	TC1050	Cutting Wheel
26883	Imperial	TC1050	Screw for Cutting Wheel
74761	Imperial	206FB	Cutting Wheel
TC1A	Imperial	TC100, 174-F, 312FC	Service Kit GP, Incl 3 Wheels & Screw
TC1B	Imperial	TC100, 174-F, 312FC	Service Kit GP, Incl 3 Wheels & Screw
TC1C	Imperial	TC1050	Service Kit, Incl 2 Wheels & Screw

DEBURRING & REAMING

CPS

Part Number	Description
TLDB	Rotary Deburring Tool
TLDB2	Pencil Deburring Tool
TLDBX	Replacement Blade For Rotary Deburrer
TLDB2X	Replacement Blade For Pencil Deburrer
TLRM	Reamer Tool
BTLDDB3	Blackmax Heavy Duty Deburring Tool

cps



IMPERIAL

Part Number	Description
208-F	Reamer Inner Outer
210-F	Rotary Deburring Tool

Imperial

FLARING & SWAGING

CPS

Part Number	Flare Range	Description
FT500	3/16" - 5/8"	Flaring & Burnishing Tool
FS275	1/8" - 3/4"	Flaring & Swaging Kit
BFT850FN	3/16" - 3/4"	Blackmax R410A Flaring Tool
BFT850D	3/16" - 3/4"	Blackmax R410A Flaring Tool With Drill Option



BBK

Part Number	Flare Range	Description
FN800	1/4" - 3/4"	Flaring Tool
900FN	1/4" - 3/4"	Ratchet Flaring Tool



IMPERIAL

Part Number	Flare Range	Description
195-FC	3/16" - 5/8"	45° Flaring Tool
500-FA	3/16" - 5/8"	Flare Tool Rolair
275-FS	1/8" - 3/4"	Flaring + Swaging Kit
500-FCP	5/16" - 5/8"	Flaring Tool

Imperial



P&M

Part Number	Flare Range	Description
FT275	1/8" - 3/4"	Flaring & Swaging Kit
808A	1/4" - 3/4"	Eccentric Flaring Tool
95	1/4" - 5/8"	Swaging Punch

PM

Tube Tools

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PM

TUBE BENDERS

CPS

Part Number	Flare Range	Description
TB04	1/4"	Mechanical Tube Bender
TB06	3/8"	Mechanical Tube Bender
TB08	1/2"	Mechanical Tube Bender
TB10	5/8"	Mechanical Tube Bender
TB12	3/4"	Mechanical Tube Bender
TB368	1/4" - 5/16" - 3/8"	Universal Tube Bender 3-In-1
TB250	1/4" - 7/8"	Universal Ratchet Tube Bender Set
BTB300	1/4" - 7/8"	Blackmax Premium Ratchet Tube Bender

IMPERIAL

Part Number	Flare Range	Description
364FHB-06	3/8"	Mechanical Tube Bender
364FHB-08	1/2"	Mechanical Tube Bender
364FHA-10	5/8"	Mechanical Tube Bender
364FHA-12	3/4"	Mechanical Tube Bender
368FH	1/4" - 5/16" - 3/8"	Universal Tube Bender 3-In-1
370FH	1/4" - 3/8" - 1/2"	Universal Tube Bender 3-In-1

P&M

Part Number	Flare Range	Description
404L	3/8" - 7/8"	Multi-Size Tube Bender

BENDING SPRINGS

CPS

Part Number	Size	Description
TBS04	1/4"	Tube Bending Spring
TBS06	3/8"	Tube Bending Spring
TBS08	1/2"	Tube Bending Spring
TBS10	5/8"	Tube Bending Spring
TBS12	3/4"	Tube Bending Spring

IMPERIAL

Part Number	Size	Description
102-04	1/4"	Tube Bending Spring
102-06	3/8"	Tube Bending Spring
102-08	1/2"	Tube Bending Spring
102-10	5/8"	Tube Bending Spring

INTERNAL BENDERS

EVOLVE

Part Number	Size	Description
IB38	3/8"	Internal Tube Bender 3 m
IB12	1/2"	Internal Tube Bender 3 m
IB58	5/8"	Internal Tube Bender 3 m

RIVETED TUBE EXPANDERS

CPS

Part Number	Size	Description
BTLE9	1/4" TO 1-1/8"	Blackmax Expander Kit With 9 Heads
BTLEX14	1/4"	Expander Head
TLH06	3/8"	Expander Head Riveted
TLH08	1/2"	Expander Head Riveted
TLH10	5/8"	Expander Head Riveted
TLH12	3/4"	Expander Head Riveted
TLH14	7/8"	Expander Head Riveted
TLH16	1"	Expander Head Riveted
TLH18	1-1/8"	Expander Head Riveted
TLH22	1-3/8"	Expander Head Riveted
TLH26	1-5/8"	Expander Head Riveted

P&M

Part Number	Size	Description
I100	3/8" - 1-1/8"	Expander Kit With 7 Heads & Reamer

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PM



Vacuum Pumps & Accessories

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VACUUM PUMPS

CPS

Part Number	Free Air Disp. (L/Min)	Ultimate Vacuum (Microns)	Motor Size HP (RPM)		Solenoid safety protection (Y/N)	Approx. Weight (kg)	Description
VPC2DE	45	15	1/4 (2880)		N	5.5	2 Stage 240 V 50 Hz
VP2DE	42	10	1/3 (1440)		N	8	2 Stage 240 V 50 Hz
VP4DE	84	10	1/2 (2880)		N	10	2 Stage 240 V 50 Hz
VP6DEV	144	10	1/2 (2880)		Y	10.2	2 Stage 240 V 50 Hz
VPS6DAV	144	10	1/2 (2880)		N	10.2	2 Stage 240 V 50 Hz Spark Proof Switch For R32
VP8DE	186	25	2/3 (2880)		N	13.5	2 Stage 240 V 50 Hz
VP10DE	240	25	3/4 (2880)		N	13.7	2 Stage 240 V 50 Hz
VPS6DA	144	10	1/2 (2880)		N	10.2	2 Stage 240 V 50 Hz
VPS12DAV	288	25	1 (2880)		Y	14	2 Stage 240 V 50 Hz Spark Proof Switch For R32
VPC2S-18VDC	48	100	6.0 Ah Battery 90 min Run Time		Y	4.8	Single Stage 18 V Cordless

JAVAC

JAVAC

Part Number	Free Air Disp. (L/Min)	Ultimate Vacuum (Microns)	Motor Size HP (RPM)		Dimensions (L x W x H) (mm)	Approx. Weight (kg)	Description
CC45	45	15	240/1	1/4"-3/8" (1/2")	330x135x255	11	Single Stage 18 V Cordless
CC81	76	25	240/1	1/4"-3/8" (1/2")	350x143x265	11.5	Single Stage 18 V Cordless
CC141	141	25	240/1	1/4"-3/8" (1/2")	350x143x265	12	Single Stage 18 V Cordless



Smart.Connected.Tools™

CPS offers a growing range of innovative wireless products that work in tandem with our free **CPS Link™** app on your smartphone or tablet. CPS wireless products quickly and easily record airflow, temperature, humidity, pressure and other job-site conditions pertinent to servicing or installing HVAC/R equipment.



VPS6DA
Premium Sparkless
(Ignition Proof)
Vacuum Pump



BTLE9
Tube Expander



TR700E
2 Cylinder Oil-Less
Recovery Machine



BFT850
Flaring Tool

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VACUUM GAUGES & ACCESSORIES

CPS

Part Number	Description
VG200	Digital Vacuum Gauge - Atmospheric To 0 Microns
VG200W	Wireless Digital Vacuum Gauge
AVT45	Adaptor 1/4" X 1/4" X 1/4" Female Swivel Tee
AVCVAC	Brass Cap Kit Suit Vacuum Pump
AVT87	R410A Vacuum Gauge Adaptor
VPCXB18	CPS 18 V 6.0Ah Clone Battery
VPCXBCAU	CPS 3.0 A Clone Battery Charger

FIELDPIECE

Part Number	Description
SVG3	Digital Vacuum Gauge - Atmospheric To 50 Microns

Part Number Description

Anti-Syphon Kits

VPAS4	Kit Comprises Anti-Siphon Valve and 1/4" MF Fitting
VPAS8	Kit Comprises Anti-Siphon Valve and 3/8" MF Fitting
VPASU	Kit Comprises Anti-Siphon Valve and 1/4" MF Fitting, 3/8" MF and 1/2" ACME Fittings

Part Number Description

Vacuum Pump Oil

VPOP	Premium Vacuum Pump Oil 470 ml
VPOQ	Premium Vacuum Pump Oil 946 ml
VPOG	Premium Vacuum Pump Oil 3.78 L

CONVERSION FACTORS PRESSURE UNITS

1000 mbar = 750 Torr	0.1 mbar = 133 micron
1.0 mbar = 1330 micron	0.05 mbar = 67 micron
0.7 mbar = 931 micron	0.01 mbar = 13.3 micron
0.3 mbar = 400 micron	0.001 mbar = 1.33 micron

Refrigerant Recovery

CPS

Part Number	Suitable Application	Compressor	Direct Liquid Capacity	Liquid & Vapour Recovery	Refrigerant	Auto HP Cut Off Switch	Weight (kg)
TR700E	Residential A/C, Commercial	2 Cylinder Oil-less	276 kg / Hr	Yes	All CFC/HCFC & HFC, incl R410A	3800 kPa	14.5kg
TRS21A	Residential A/C, Commercial	2 Cylinder Oil-less	276 kg / Hr	Yes	R32, R1234 series, HFO & mainstream refrigerants	3800 kPa	11kg
TRS600E	Residential A/C, Commercial	2 Cylinder Oil-less	276 kg / Hr	Yes	R32, R1234 series, HFO & mainstream refrigerants	3800 kPa	12.7kg



Refrigerant Recovery

JVAC

Part Number	Suitable Application	Compressor	Direct Liquid Capacity	Liquid & Vapour Recovery	Refrigerant	Auto HP Cut Off Switch	Voltage	Weight (kg)
XTR-ALTIMA	Residential A/C, Commercial	1/2 HP Oil-Less	16Kg/Hr	Yes	All CFC/HCFC & HFC, incl R410A	3200 kPa	240V/50Hz	11.5
JVCP1	JAVAC Compliance Pack - Consisting of: <ul style="list-style-type: none"> • 1 x TEKIMATE Leak Detector • 1 x XTR-PRO Recovery Machine • 1 x CC141 Vacuum Pump 				Exclusive to Heatcraft See individual Listings for Specifications			



RECOVERY MACHINE ACCESSORIES

Part Number	Description
SC410A	CPS Submersible sub-cooler
Improves reclaim capacity of all makes of recovery machines	

CHARGING SCALES

CPS

Part Number	Type	Capacity (kg)	Platform Dimensions (cm)	Carry Case	Transmission Range (m)	Auto Shut OFF	Batteries	Unit Weight (kg)
CC220	Corded LCD Display	100	22.3 x 22.3	Yes - Hard	N/A	YES (10min)	2 x 9V (Handle)	2.72
CC800A	Corded LCD Display	100	22.3 x 22.3	Yes - Hard	N/A	YES (10min)	2 x 9V (Handle)	3.9
CC220W	Wireless to Mobile App	100	22.3 x 22.3	Yes - Soft	9.1	YES (10min)	4 x AA (Platform)	2.4
CC240W	Wireless to Mobile APP	108	25.4 x 25.4	Yes - Hard	9.1	YES (10min)	4 x AA (Platform)	4



FIELDPIECE

Part Number	Type	Capacity (kg)	Platform Dimensions (cm)	Carry Case	Transmission Range (m)	Auto Shut OFF	Batteries	Unit Weight (kg)
SRS2C	Wireless to Mobile App	100	26.0 x 26.0	Yes - Soft	10	YES (15min)	6 x AA (Platform), 9V (Remote)	3.2



Electrical Test Equipment

cps



CLAMP METERS

CPS

Part Number	Description
AC750	CPS Digital Clamp Meter 1000A, 1000V CAT III Features <ul style="list-style-type: none"> • True RMS AC Measurement • Inrush Current Measurement • Min/Max Value Measurement • Clamp light & LCD backlight • Audible Continuity & Diode tester • Auto/Manual Range, auto power off • Soft carry case, test leads and battery
ICM100	CPS Universal Clamp Meter

Fieldpiece



FIELDPIECE

Part Number	Description
SC240	Fieldpiece Digital Clamp Meter 600V, 400A CAT III Features <ul style="list-style-type: none"> • Auto Ranging • Volts A/C - D/C • Non Contact Voltage LED & Audio to 24VAC • Temperature Measurement via Thermocouple (included) • Continuity & Capacitance Measurement • Soft carry case, test leads and battery
SC420	Fieldpiece Digital Clamp Meter 600V, 400A CAT III Features <ul style="list-style-type: none"> • Auto Ranging • Volts A/C - D/C • Non Contact Voltage LED & Audio to 24VAC • Temperature Measurement via Thermocouple (included) • Continuity & Capacitance Measurement • Soft carry case, test leads and battery
SC640	Fieldpiece Digital Clamp Meter 600V, 400A CAT III Features <ul style="list-style-type: none"> • 180° Swivel Head & Clamp Flashlight • Auto Ranging • Volts A/C - D/C • True RMS & Inrush Current • Non Contact Voltage LED & Audio to 24VAC • Temperature Measurement via Thermocouple (included) • Continuity & Capacitance Measurement • Soft carry case, test leads and battery



MULTI METERS

FIELDPIECE

Part Number	Description
LT17AW	Fieldpiece Digital Multimeter 600V Features: <ul style="list-style-type: none"> • Wireless Measurement • Temperature Measurement via Thermocouple (included) • ACC Accessory Clamp • Continuity & Capacitance Measurement • LCD Backlight • Magnetic Hanger • Soft carry case, test lead and battery
LT83A	Fieldpiece Digital Multimeter 600V Features: <ul style="list-style-type: none"> • Continuity & Diode tester • Battery Checker • Min/Max Value Measurement • LCD Backlight • Magnetic Hanger • Soft carry case, test lead and battery



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MR45

Recovery Machine



JL3KH6

Charge and Air Kit



SMAN460

Digital Manifold



JL2

Transmitter



CPS	
Part Number	Description
DM350	CPS Digital Multimeter 600V Features: <ul style="list-style-type: none"> • Data Hold • Max Value Measurement • LCD backlight • Audible Continuity & Diode tester • Auto Range, auto power off • Thermocouple, test leads and battery



ANEMOMETERS & ACCESSORIES	
CPS	
Part Number	Description
ABM-100	Smartphone Airflow Meter/Anemometer Features: <ul style="list-style-type: none"> • Plugs into 3.5mm jack on smartphones using the CPS Link app. • Automatically generates and emails detailed reports. • Portable tool fits in your pocket.
ABM-200	Smartphone Anemometer/Environmental Meter Features: <ul style="list-style-type: none"> • Pairs via Bluetooth to smartphones or tablets using the CPS Link app. • Automatically generates and emails detailed reports. • Attaches to the EXP-64 extension pole to take readings without the need of a ladder. • Portable tool fits in your pocket.
EXP-64	Telescopic Extension Pole Features: <ul style="list-style-type: none"> • Take accurate airflow readings without using a ladder. • Use with ABM-100 & ABM-200. • Adjusts from 45–162 cm to most all ceiling heights.
ABM-HOOD-200	Airflow Capture Hood with Smartphone Airflow Meter/Anemometer Features: <ul style="list-style-type: none"> • Includes ABM-200, Airflow capture hood with expansion hood, Integrated vortex air straightener, low Airflow adapter plate, Protective storage case. • Captures air speed values from air supply or return/exhaust grilles • Test and Balance reports • Measures temperature, wet bulb, dew point and relative humidity
AM50	CPS Air Velocity Meter
SNCV1	Volt Stick Non Contact



HLP	
Part Number	Description
AV8919-KIT	Multifunction Airflow Meter with Hood Kit Features: <ul style="list-style-type: none"> • 2 Hood Attachments - 210 mm Ø Round & 350 mm Square • Selectable windspeed - Metric or Imperial • Multifunction display • Auto-Off function

MANOMETERS

CPS

Part Number	Description
SPM-K1	Smartphone Manometer & Prob Kit
	Features: <ul style="list-style-type: none"> • A small, dual port manometer accessory that, when connected and paired with a mobile device running the latest CPS Link app, can measure, record and e-mail 5 different pressure measurements. • Complete with magnetic air probes and 6' tubing • Easily emails professional, detailed reports • Rugged, weather resistant housing with hands-free magnetic holder

cps



INSULATION TESTER

FIELDPIECE

Part Number	Description
SMG5	Fieldpiece Digital Insulation Tester 1000VDC, 2000 MegOhms
	Features: <ul style="list-style-type: none"> • Provides 1000 V DC voltage source • Monitors current • Displays resistance between test points & ground • Backlit display • Auto-Off function • Complete with case, alligator clip and leads with removable tips



TES

Part Number	Description
T3663	TES Auto Ranging Insulation Tester
	Features: <ul style="list-style-type: none"> • Large Digital LCD with analogue bar graph • 250V, 500V, 1000V Insulation Testing • Safety IEC61010 - Cat III 1000V • Auto Discharge of capacitive voltage charge • Audible Continuity < 40 Ω



Electrical Test Equipment

cps



DATA LOGGERS

CPS

Part Number	Description
TS-100	Temperature and Humidity Data Logger Features: <ul style="list-style-type: none"> • Easy to use and accurate, produces readings for: dry & wet bulb temperatures, relative humidity, feels like temperature, dew point • Includes a metal D-ring connector, key chain split-ring and alligator clip for mounting in various configurations • Emails professional personalized reports • Rugged, weather resistant housing
TS-100-6PK	Temperature and Humidity Data Logger (6pk)



T-TEC 6 SERIES (NO DISPLAY/AUDIBLE ALARM)

Part Number	Range (°C)	Sensor	Accuracy	No. of Logs
One Channel				
TTEC61E	-40 TO 85	Internal temperature sensor	-40/+0 °C ± 0.3 °C 0/+85°C ± 0.2 °C	12,000+
TTEC62E		Fixed external temperature sensor		
TTEC63E		Connector for remote sensor (T-1)		
Two Channel				
TTEC62F		Fixed external temperature sensor		
TTEC63F		Connector for remote sensors (2)		
Temperature & Humidity Models (No Display/Audible Alarm for Temperature only)				
TTEC62C	0-100% RH	Fixed external temperature & humidity sensors	-40/+0 °C ± 0.3 °C 0/+85 °C ± 0.2 °C 0–100% RH ±3% RH	

T-TEC 7 SERIES (DISPLAY & ALARM INDICATOR)

Part Number	Range (°C)	Sensor	Accuracy	No. of Logs
Two Channel				
TTEC71F	-40 TO 85	Int temp sensor and connector for remote sensor	-40/+0 °C ± 0.3 °C 0/+85 °C ± 0.2 °C	10,500 Each channel
TTEC72F		Fixed ext temp sensor & connector for remote sensor		
TTEC73F		Connector for remote sensor/s (2)		
Accessories				
TTECSW	Software for Windows®, all versions			
TTECUSB2	Interface Cable for USB Port			
TTECT1	Sensor -40 to 85°C - 1.5 m			
TTECT1/3	Sensor -40 to 85°C - 3.0 m			

DIGITAL STICK METER

FIELDPIECE

Part Number	Description
HS36	Digital Stick Meter complete with 300 A Clamp Features: <ul style="list-style-type: none"> • True RMS • Hi-Voltage indicators to indicate potentially dangerous voltage • Continuity indicated by LED & beeper, holds maximum voltage recorded after disconnection • Low Ohms range for motor windings • Auto Power-Off function • Includes carry case, silicone leads and thermocouple



SYSTEM ANALYSER

FIELDPIECE

Part Number	Description
HG3	Wireless HVAC Guide System Analyser Features: <ul style="list-style-type: none"> • Receives 12 Wireless Measurements • Check-Me Function • Leads technicians step-by-step through critical HVAC tests • Enter Data manually or automatically using Accessory Heads • Sophisticated HVAC analysis program • Download test data to a PC • Wireless transmitter • Dot Matrix display with backlight • Includes dual temp head, thermocouples, USB cable, software & padded case



ACCESSORY HEADS - USE WITH HG ANALYSER, MULTIMETERS & ACCESSORY HANDLES

Part Number	Description
ACH	AC Clamp Head 400A Features: <ul style="list-style-type: none"> • Current Range: 1 A to 400 A • Max Conductor Size: 23 mm
ATIR3	Infrared Surface Temperature with Laser Features: <ul style="list-style-type: none"> • 8:1 Field of view • Measures °C & °F • Operating Ambient: 0°C to 50 °C • Range: -15 °C to 400°C • Laser Sight included
AAV3	Air Velocity & Temperature Meter Features: <ul style="list-style-type: none"> • Measures: Ft/Min, meters/second, MPH, Km/Hour • Range: 80 to 5900 Ft/Min • Accuracy: +/-3 % plus 1 Digit • Range: -20 °C to 60 °C • Accuracy: +/-1 °C from 0 °C to 45 °C • Resolution: 0.5 °C





ARH5	Digital Psychrometer Features: <ul style="list-style-type: none"> • Measure Air Temperature and RH% • Displays Wet Bulb • Accuracy: +/- 0.5°C from 0°C to 45°C • Telescopic 1.0m wand for in-duct measurement • Auto-Off function can be disabled (for data logging)
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ATH4	Dual Temperature Meter Features: <ul style="list-style-type: none"> • Two K-Type thermocouples • Display T1, T2 or T1-T2 • Range: -45°C to 980°C • Accuracy: +/- 1°C with simple field calibration • Includes two "Wrap Tab" Velcro thermocouples
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AVG2	Vacuum Gauge Features: <ul style="list-style-type: none"> • Displays pressure in steps of 1 micron • Pump-Down indication • Range: 50 to 2000 microns of mercury • Resolution: 1 micron of mercury • Auto-Off can be disabled for data logging
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ACCESSORIES

Part Number	Description
EHD1	Electronic Handle (Converts any accessory into stand-alone instrument) Features: <ul style="list-style-type: none"> • MIN/MAX function to record highest & lowest reading • Ranges: 200mVAC, 2000mVAC, 200mVDC & 2000mVDC • Resolution: 0.1mV
EH4W	Wireless Accessory Handle Features: <ul style="list-style-type: none"> • Sends and receives wireless measurements • Turns any accessory head into a standalone meter
ET2W	Wireless Transmitter Features: <ul style="list-style-type: none"> • Snaps onto any accessory head • Sends any measurement wirelessly to Fieldpiece wireless instruments
ATA1	Thermocouple with Alligator Clip Features: <ul style="list-style-type: none"> • Maximum Temperature 400°C • Fits all Fieldpiece meters
ADK7	Test Leads Features: <ul style="list-style-type: none"> • Silicone test leads with removable probe tips • Alligator Clips for grounding
ADLS2	Test Leads Features: <ul style="list-style-type: none"> • Complete with Probe Tips • Removable probe Tips also included



ACCESSORIES (CONT'D)

Part Number	Description
ANC1	Soft Sided Carry Case Features: <ul style="list-style-type: none"> • Holds 1 x meter and 2 x heads • Measures 250 x 160 x 40 mm • Has 4 x Pockets
ANC3	Briefcase Style Carry Case Features: <ul style="list-style-type: none"> • Holds 3 x meters and 10 x heads • Measures 340 x 315 x 75 mm • Has 14 x Pockets
ANC5	Padded Pouch Case Features: <ul style="list-style-type: none"> • Holds 1 x meter and 1 x heads • Measures 280 x 190 x 13 mm • Has 2 x Pockets
ANC8	Meter Carry Case Features: <ul style="list-style-type: none"> • Holds 2 x meter and 4 x heads • Measures 355 x 178 x 77 mm • Has 4 x Pockets



SERVICE THERMOMETERS

Part Number	Description
TMAPC	CPS Dial 1" Pckt T/Met -40/+80 °C
TMDP	Digi Pocket Thermo -50/+150 °C
TM50	CPS Digital T/Meter -50/+260 °C
TMINI12	Mini Infrared T/Eter 12:1 View
TMX2C	CPS Clamp On Surface Probe
TMX2G	CPS General Purpose Probe 15 Ft
TMX2S	CPS Velco-Strap Surface Probe
13/544/2	Sling Psychrometer Brannen
532-139442	Brannen Sling Refill -5/50 °C
RAFT	Digital Thermometer -50 To 260 °C
RED-I-TEMP	Digital Thermometer -50 To 200 °C
SPK1	Digi T/Meter - 50 To 200 °C
SPK2	Digital Pocket Thermometer
ST4	2 Temp Thermometer
SIP3	Pocket Size Infrared Thermometer
SPK3	Two Way Digi Thermometer
SIP2	Pocket Size Ir Thermometer
SWT2	Water Resistant Thermo -50°
SIL2	Pocket Thermo With Torch
SRH3	Diagnostic Psychrometer
PRH2	Pocket Psychrometer Fieldpiece
15519	Thermometer With Hook
EZYLOG	Data Logger -40 To +70° C HACCP Compliant
SCB	Split Cleaning Bag
CCB	Cassette Cleaning Bag

Hand Tools

PLIERS

Part Number	Description
TLPO	Proset Pinch Off Pliers
TLPP	Proset Piercing Pliers
101003	Lockjaw Pliers 10" Curved Jaw

WRENCHES

Part Number	Description	Size (in)	Brand
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CPS Proset Hex Key Wrench Set

TLSWB	Hex Key Wrench Set Ball End AF		CPS Proset
TLSWH	Hex Key Wrench Set AF		CPS Proset
TLSWHB	Hex Key Wrench Set Combo (TLSWH & TLSWB)		CPS Proset
TLSWHM	Hex Key Wrench Set Metric		CPS Proset

Adjustable Wrenches

TLAW06	Adjustable Wrench	6"	CPS Proset
TLAW08	Adjustable Wrench	8"	CPS Proset
TLAW10	Adjustable Wrench	10"	CPS Proset
TLAW12	Adjustable Wrench	12"	CPS Proset
40001	Adjustable Wrench	4"	Teng
40004	Adjustable Wrench Teng 10"	10"	Teng
40005	Adjustable Wrench Teng 12"	12"	Teng
40006	Adjustable Wrench Teng 15"	15"	Teng
40006	Adjustable Wrench Teng 18"	18"	Teng

Torque Wrenches

BTQ180	Torque Wrench 18N.M	1/4"	CPS
BTQ420	Torque Wrench 42N.M	3/8"	CPS
BTQ550	Torque Wrench 55N.M	1/2"	CPS
BTQ650	Torque Wrench 65N.M	5/8"	CPS
TLTWSM	Torque Wrench Set Metric, 17, 22, 24, 26, 27, 29		CPS
ATQS41	Torque Wrench Set Cps Sae		CPS

Digital Torque Wrenches

BTLDTW	Blackmax Digital Torque Wrench		CPS Blackmax
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DRILL BITS

Part Number	Description	Size (piece)	Brand
BBX28	Teng 28Pce Bits Set	28 piece	Teng
BBX29	Teng 29Pce Bits Set	29 piece	Teng
BBX20	Teng 20Pce 1/4Dr Skt & Bit Set	20 piece	Teng

GENERAL HAND TOOLS

Part Number	Description	Brand
1479MM	Teng 9Pce Ball End Hex Key Set	Teng
MBV451-8	Teng Pliers Combination 8"	Teng
PT-109	Imperial Piercing Pliers	Imperial
HVSDK5	Cabac 8Pc 1000V Screwdriver Set	Cabac
TTV440	Teng 4Pc 1000V Plier Set	Teng
TT1435	Teng 35Pce Metric 1/4 Drive Socket Set	Teng
K-42	PVC Pipe Cutter 6-42mm OD	



Service and Support Tools

PORTABLE LIFTERS

Part Number	Description
CM340	Portable Lifter 3.3M
CM520	Portable Lifter 4.9M



MIGHTY TOOLS

Part Number	Description
MIGHTYBRACKET	Mighty Bracket Tool
MIGHTYPUMP	Mighty Pump Tool



PRESSURE WASHERS

Part Number	Description	Features
GFS-CT	Hydrocell Pressure Washer 20L	"Robust Fittings Thick casting Alloy connectors Heavy duty metal nozzle"



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Tool Bags



VETO PRO PAC		
Part Number	Description	Brand
MB	Veto Pro Diagnostic Toolbag	Veto Pro Pak
TP3	Veto Pro 3 Pocket Toolbag	Veto Pro Pak
TEHLC	Veto Pro Toolbag	Veto Pro Pak
OTLC	Veto Pro Lrg Open Toolbag	Veto Pro Pak
TECHMCT	Veto Pro Pac Compact	Veto Pro Pak
TEHPAC1	Veto Pro Backpack Toolbag	Veto Pro Pak

CPS		
Part Number	Description	Features
TLBAG1	Square Tool Tote	CPS
TLBAG2	Tool Organiser C/W 16" Rubber Base	CPS

Service Tools and Accessories

REGULATORS	
Part Number	Description
BRRN2A	NITRO REGULATOR 4300 KPA
RC1BX10	OXYGEN REGULATOR TESUCO

SERVICE WRENCHES	
Part Number	Description
TLSWS	CPS Service Ratchet Wrench Small 3/16, 1/4, 5/16, 3/8
TLSWL	CPS Service Ratchet Wrench Large 3/16, 1/4, 1/2, 9/16
TLSWO	CPS Offset Service Ratchet Wrench Small 3/16, 1/4, 5/16, 3/8
127C	Imperial Service Ratchet Wrench

FIN COMBS	
Part Number	Description
TLFC1	CPS Universal Metal Fin Comb
TLFC6	CPS 6 Sided Fin Comb Straightening Tool
FCHS-6	Watsco Fin Comb Set
P-8	Watsco Fin Comb 8-10 FPI Orange
P-11	Watsco Fin Comb 11-13 FPI Blue
P-12	Watsco Fin Comb 12-14 FPI Green
P-18	Watsco Fin Comb 18-20 FPI Red

FASTENING STRAPS	
Part Number	Description
MRS350	Flexible Strap 350mm
MRS480	Flexible Strap 480mm
MRS600	Flexible Strap 600mm
MRS710	Flexible Strap 710mm
MRS890	Flexible Strap 890mm



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Service Tools and Accessories



TORCHES	
Part Number	Description
TLWL53AA	CPS Rechargeable Led Worklight
EIMFL360	Extendable Magnetic Flashlight
24-458	Magnetic Pivot LED Light
108MK4YE	Eveready Dolphin Torch



STYRUP PUMPS	
Part Number	Description
TLOP	Oil Pump to suit 4 - 20 Lt Drums



GENERAL SERVICE TOOLS & ACCESSORIES	
Part Number	Description
AD1478	Nitro Purge Tool 1/4"-7/8"
AD1118	Nitro Purge Tool 1"-1-1/8"
IDPT	InterLINK Drain Purger
IDPC	InterLINK Co2 Cartridge For Drain Purger 12 Pack
TLVC1	CPS Valve Core Tool With 3 Cores
TLVC2	CPS Dual Valve Core Tool
TLXVC	Tip For Vlv Core Remover TLVC
TLMIR1	Proset Circular Mirror 1-1/4"
TLMIR2	Proset Circular Mirror 2-1/4"
TLMIR3	Proset Rectangle Mirror 2-1/8 X 3-1/2
TLMIR4	Proset Oval Mirror 1"X 2"
TLDB2	CPS Pocket Deburring Tool
PLM2	Pocket Extension Mirror
SPP	Starter Kit PSC 250% Torque Increase Solid State Relay
SPP5	Hard Start Pow-R-Pak PSC 240 V 1/2 - 10 HP 300% Torque Increase
SPP6	Hard Start Pow-R-Pak PSC 240 V 1/2 - 10 HP 500% Torque Increase.
AD71	Cylinder Adaptor For R410A
TLVCS410	CPS Valve Core Remover & Installer
TLVCS	CPS Valve Core Remover + Installer
EXACTAPAK	Exactapak Storage Case
A10971	J/B Capillary Tube Gauge
E5	Tube Cleaner Expando 5/16-3/8'
E6	Tube Cleaner Expando 3/8-1/2'
E8	Tube Cleaner Expando 1/2-5/8'
E10	Tube Cleaner Expando 5/8 - 1'
EE48	Wagner Expando Rod 48'
MR664	Charging Tool
MR716-1	Charging Tool Bush 1/4 FL
BS113/NL8512	O-Ring to suit Kirby Tool
GM-0.4	Gasket Material 300 mm Sq 0.4 mm Thick
GM-0.8	Gasket Material 300 mm Sq 0.8 mm Thick
GM-1.6	Gasket Material 300 mm Sq 1.5 mm Thick



GENERAL SERVICE TOOLS & ACCESSORIES (CONT'D)

Part Number	Description
HS30	Wagner Hang N Strap
HS60	Wagner Hang N Strap
KUS4	Cable End Stripper
RFL2	Filter & O-Ring Kit (10 Pack)
ATB1	K-Thermocouple, Bead Type
ATC1	Clamp Thermo Coupler For Pipe
TLMKC18	Magnet Solenoid Cps
TLPPX	CPS Replacement Tip
TLVCT	CPS Valve Core Torque Tool
AD41	Cylinder Adaptor 3/4Fbspx1/4FI
AVC410	Proset Brass Cap 5/16 Pkt 10
MAGJUMPER	Low Voltage Magnetic Tester
KUSA	Cable End Stripper

SERVICE ACCESS VALVES

Part Number	Description
31003	Access Valve 1/4"MF X 3/16" X 2" Tail Std Cap (Ea)
AV3R	Access Valve 1/4"MF X 3/16" X 2" Tail Wrench Cap (6 Pk)
A31004-101	Access Valve 1/4"MF X 1/4" X 2" Tail Std Cap (Ea)
AV4RE	Access Valve 1/4"MF X 1/4" X 2" Tail Wrench Cap (Ea)
AV4R	Access Valve 1/4"MF X 1/4" X 2" Tail Wrench Cap (6 Pk)
AV4RB	Access Valve 1/4"MF X 1/4" X 2" Tail Wrench Cap (100 Pk)
316A	Access Valve 1/4"MF X 1/4" X 4" Tail Wrench Cap (Ea)
V70008	Access Valve 1/4"MF X 3/8" X 2" Tail Wrench Cap (Ea)
AV4410	Access Valve 5/16"MF X 1/4" X 2" Tail Std Cap (6 Pk)
A31720-320	Access Valve 1/4"MF X 3/8" 1 Step Solder (Ea)
AVU-24	Access Valve 1/4"MF X 1/8"Npt (Ea)
AVC4	Access Valve 1/4" Brass Std Cap Only (10 Pk)
AVC4R	Access Valve 1/4" Brass Wrench Cap Only (6 Pk)
A31134-100	Access Valve 1/4"MF X 1/4" Solder Tee
AVT44	Access Valve 1/4"MF X 1/4"MF X 1/4"Ff Tee
AD149C	Access Valve 1/4"MF X 1/4"FF 90°
AVS1	Access Valve Cores (10 Pk)
AVS1E	Access Valve Cores (100 Pk)
AVS1V	Access Valve Cores (6 Pk) & Wrench Cap
AD84	Brass Adaptor 1/4"MF X 1/2"F Acme (3 Pk)
AD78	Brass Adaptor 5/16"MF X 1/4"FF Suit R410A (Ea)
AD87	Brass Adaptor 1/4"MF X 5/16"FF Suit R410A (Ea)
A44000	Service Control Valve 5/16" Suit R410A
A33000S	Service Control Valve 1/4" FL
BPV-21	Bullet Piercing Valve 1/2 & 5/8"
BPV-31	Bullet Piercing Valve 1/4", 5/16", 3/8"



WELDING & BRAZING EQUIPMENT

Part Number	Description
BRHT1	CPS Brazing Torch
BRM1	CPS Brazing Mat
308160	Turbo Torch Extreme
OTS200	Turboset 200 Brazing Torch Kit
RI1SNI60	Nitrogen Regulator High Press Tesuco
308157	Air/Acet Kit
308693	Oxy/Acet Hose Kit 5M
308624	Oxy/Acet Hose Kit 15M
308889	Flashback Arrestor Oxy/Acet
308890	Flashback Arrestor Oxy/Acet
308832	Flint Lighter

CYLINDER STORAGE

Part Number	Description
G1M	Bottlechock Bracket 2 X Single
G2M	Bottlechock Bracket 2 X Double
G1L	Bottlechock Bracket 2 X Single
G2L	Bottlechock Bracket 2 X Double
SJ-16692	Gas Bottle Safety Plug - Acetylene
SJ-16693	Gas Bottle Safety Plug - Oxygen

*Refer to consumables for Solder, MappGas, Oxy etc.

CORE CUTTERS

Part Number	Core Sizes	Description
PWCCSET-AN	60 & 85 mm	Core Cutter Set TCT
PWCCSET-AG	61 & 85 mm	Core Cutter Set TC Grit
PWCCSET-AD	62 & 85 mm	Core Cutter Set Diamond Tip

Mixed block and pad sizes available.



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Polyslab® One piece, durable high impact polymer.
Evo-Crete® Three times lighter than concrete.



EZ TRAP®

CLEAR, CLEANABLE CONDENSATE TRAPS & OVERFLOW SWITCHES



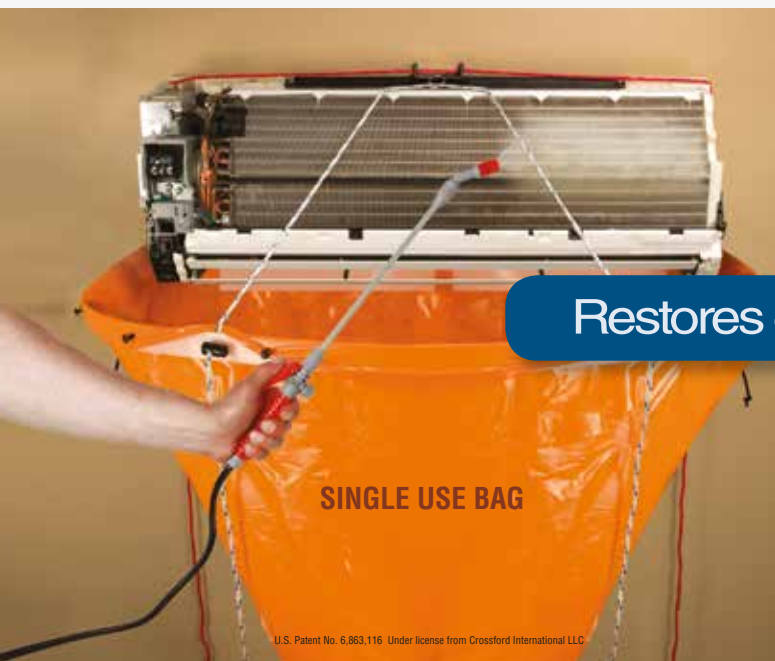
Promotes cleaning. Prevents backup.



Clear Trap™
Transparent trap with cleaning brush.

Smart Trap™
Transparent trap, cleaning brush and overflow switch.

Ultra Trap™
Transparent trap with cleaning brush.
Eliminates standing water and freezing problems.



SINGLE USE BAG

U.S. Patent No. 6,863,116 Under license from Crossford International LLC

Desolv™

MINI-SPLIT EVAPORATOR COIL/BLOWER FAN CLEANER KIT



Restores efficiency. Protects walls & floors.



Desolv™ Cleaning Kit - Deep clean indoor evaporators of mini-split A/C units that are located in areas where wall and floor protection are necessary. Kit is reusable. Desolv Solution and single use Funnels Bags are sold separately.

Consumables



Welding & Brazing Consumables



SLIVER SOLDER & FLUX

Part Number	Description
W10001	Solder Silver 2% Yellow Tip
W10003	Solder Silver 5% Silver Tip
W10005	Solder Silver 15% Brown Tip
W10007	Solder Silver 45% Blue Tip
W11001	Flux Easiflow 250G

WELDING & BRAZING

Part Number	Description
MAPPGAS	Mapp/Pro Gas 16 Oz Cylinder
OX9	Oxygen 2.1 Oz Cylinder
TX9	Propane 14 Oz Cylinder
O0B	Oxygen Cylinder Suit OTS200

Oil & Acid Test Kits

ACID DETECTION

Field Testing kit for measuring acid and moisture levels of refrigerant

Part Number	Description	Container Size
RT700K	Checkmate Contamination Kit c/w- Brass Body & ext hose ,3pack of each Test Tubes	-
RT750A	Checkmate Acid Detection Tube for Acid levels	3 Pack
RT751M	Checkmate Moisture Detection Tube for Purity	3 Pack
RT752C	Checkmate Oil Detection Tube for Contaminants	3 pack

ACID TESTING

Part Number	Description	Container Size
TK0	Acid Test Kit For Mineral Oil	Each
ETK	Acid Test Kit For POE Oil	Each
16001	Highside Acid Test Kit	Each

ACID NEUTRALIZER

To circulate throughout the system and chemically neutralize acids that are left in a system after a burnout

Part Number	Description	Container Size
45004	Acid Away for Mineral Oil	118 ml
45009	Acid Away For POE Oil	118 ml

MOISTURE DEHYDRANT

Liquid dehydrant for the control of moisture in refrigeration systems

Part Number	Description	Container Size
17001	Highside Thawzone	285 ml
17004	Highside Thawzone	115 ml
973KIT	Cliplight Dry-R - Up to 17 kW	30 ml

OIL TESTING

Part Number	Description
OILCHECKRA	Refrigerant Oil Test Kit

Oil Conversion

SUPER CHANGE - SYSTEM RETROFIT SOLUTION

Part Number	Description	Container Size
SUPER CHANGE™ allows for a fast & easy conversion from R22, or any mineral/alkylbenzene oil system, to all HFC refrigerants, including POE-based R407C & R410A.		
981	Super Change R22 Retro	60 ml

Safe, Secure, Silbraz.

Heatcraft's Trusted Brand of Choice for Silver Solder.

SilBRAZE™ brazing products are a family of high quality Cadmium-free brazing and metal joining solders designed to meet the exacting needs of the plumbing, engineering and HVAC&R industries.

The Key to SilBRAZE's success:

- > Solders are manufactured and certified to the AS1167.1 standard
- > Low-silver alloys are Watermark™ certified, ensuring the highest quality and absolute conformance to industry regulations.
- > The diverse product range includes phosphorus copper, silver phosphorus copper, high-silver brazing solders, and engineering bronzes
- > The range is available in a variety of bare and flux-coated rods, strip, wire, shim, disc and trifoil.



Low Silver Rods				High Silver Rods				Flux-Coated Rods			
								Silbraz 45 Fluxcoat	1.6 x 500	0.5kg	67404
Silbraz P	2.5 x 750	5kg	67179	Silbraz 30	1.5 x 750	0.5kg	67394	Silbraz 56 Fluxcoat	1.6 x 500	0.5kg	67415
Silbraz P	3.0 x 750	5kg	67180	Silbraz 30	2.5 x 750	0.5kg	67396	Fluxes			
Silbraz P	5.0 x 750	5kg	67422	Silbraz 34	1.5 x 750	0.5kg	67397	Easyflo	Paste	250gm	00567
				Silbraz 34	2.5 x 750	0.5kg	67399	Easyflo	Paste	5kg	00565
Silbraz 2P	2.5 x 750	1kg	67390	Silbraz 39	1.5 x 750	0.5kg	67402	Tenacity 4A	Paste	250gm	00571
Silbraz 2P	3.0 x 750	1kg	67391	Silbraz 40	1.5 x 750	0.5kg	67570	Tenacity 4A	Paste	5kg	00570
				Silbraz 45	1.5 x 750	0.5kg	67537	Tenacity 6	Paste	250gm	00577
Silbraz 5P	2.0 x 750	1kg	67417	Silbraz 45	2.5 x 750	0.5kg	67571	Tenacity 6	Paste	5kg	00576
Silbraz 5P	2.5 x 750	1kg	67419	Silbraz 45	3.0 x 750	0.5kg	67572	Tenacity 20	Powder	250gm	48805
Silbraz 5P	3.0 x 750	1kg	67567	Silbraz 49	1.5 x 750	0.5kg	67573	Bronzes		Other Brazing	
				Silbraz 55	1.5 x 750	0.5kg	67574	Silbraz Mang Bronze		Wire	
Silbraz 15P	1.5 x 750	1kg	67568	Silbraz 56	1.5 x 750	0.5kg	67412	Silbraz Mang Coat		Strip / Shim	
Silbraz 15P	2.0 x 750	1kg	67384	Silbraz 56	2.5 x 750	0.5kg	67575	Silbraz Nickel Bronze		Trifoil	
Silbraz 15P	2.4 x 750	1kg	67639					Silbraz Nickel Coat		Binder Granules	
Silbraz 15P	3.0 x 750	1kg	67388					Silbraz Tobin Bronze		Discs	

Cleaners



COIL CLEANER

Part Number	Description	Container Size
RT300G	Viper Brite Coil Cleaner - Foaming - Must be Rinsed	4 Litre
RT350G	Viper Evap+ Coil Cleaner - Foaming - Self Rinse via Condensation	4 Litre
RT375A	Viper Coil Cleaner Foaming Aerosol - Food Grade for Cond/Evap	510 ml
RT390G	Viper Heavy Duty Coil Cleaner - Food Grade - Biodegradable - Self Rinse via Condensation	4 Litre
AGECC1000	Enzyme Coil Cleaner - Removes Biofilm & Organic Material	1 Litre
AGECC200	Enzyme Coil Cleaner - Removes Biofilm & Organic Material	200 ml
AGOCC1000	Outdoor Coil Cleaner - Grease & Scale	1 Litre
AGOCC5000	Outdoor Coil Cleaner - Grease & Scale	5 Litre
59128	Green Stuff (Alk): Non Foaming Heavy Duty Coil Cleaner	3.78 Litre
4x	Coil Cleaner 'Concentrate' - Foaming - Heavy Duty Cleaning, must be rinsed	1 Litre

* All coil cleaners can be applied with RT500K Viper Gun or Spray Bottles

SPRAY BOTTLES AND ACCESSORIES

Part Number	Description	Container Size
SPRB001	Pump Spray bottle	4 Litre
TS-1	Trigger Spray	1 Litre
RT300S	Viper Foam Gun	
RT350S	Hand Spray Gun Remote Suits Most 4Lt Containers	
RT301X	Carbonex Wand	
RT302F	Carbonex Foam Funnel	
RT500k	Viper Gun and Accessory Kit	

CLEANING KITS AND BAGS

Part Number	Description
82560	Desolv. Cleaning Kit
82562	Desolv. Replacement Bag
SCB	Split Cleaning Bag
CCB	Cassette Cleaning Bag

SURFACE CLEANERS

Part Number	Description	Container Size
AGSC1000	Surface Cleaner Spray	1 Litre
AGSC5000	Surface Cleaner	5 Litre

ICE MACHINE CLEANERS

Part Number	Description	Container Size
IMC-1	Ice Machine Cleaner	1 Litre
IMC-4	Ice Machine Cleaner	4 Litre
CLEAN-ICE	Hydrochem Ice Machine Cleaner - Nickel Safe	1 Litre
AGIMC1000	Aeris Enzyme Ice Cream Machine Cleaner /Sanitiser	1 Litre
RT500G	Viper Ice machine Cleaner - Nickel Safe	3.78 Litre
RT500N	Viper Ice machine Cleaner - Nickel Safe	473 ml

DEGREASERS

Part Number	Description	Container Size
RT380G	Viper Ecosolv Degreaser - Food grade	3.8 Litre
COILOX	Neutral Coil Cleaning Detergent - Light Cleaning - No Rinse Required	5 Litre
COILOX15L	Neutral Coil Cleaning Detergent	15 Litre
GA-4	Grease Away	3.78 Litre

INDUSTRY LEADERS ON PERFORMANCE AND SAFETY



www.supercool.com.au
Technical Help: 1800 628 133



REFRIGERATION
TECHNOLOGIES

Treatments



COIL TREATMENT

Part Number	Description	Container Size
AGCT200	Bioactive Coil Treatment	200 ml
AGCT5000	Bioactive Coil Treatment	5 Litre

FILTER TREATMENT

Part Number	Description	Container Size
AGSC5003	Bioactive Filter Treatment	5 Litre

SURFACE TREATMENT

Part Number	Description	Container Size
AGST400	Bioactive Surface Treatment (Aerosol)	400 grams
AGST5000	Bioactive Surface Treatment	5 Litre

WATER TREATMENT

Part Number	Description	Container Size
EDC-M	Easy Dose Cartridge - Mini	1
EDC-L	Easy Dose Cartridge - Large	1
AGDTSLIM10	Slimline Drip Tray Tablets	10 pack
AGDTS5	Small Drip Tray Tablets	5 Pack
AGDTL5	Large Drip Tray Tablets	5 Pack
STA-STRIP	Condensate pan Strips Lge 100 x 30 up to 20 kW	1
RT800S	Clean & Clear Condensate Treatment	

DEODOURISING

Part Number	Description	Container Size
61031	Clean-Air Unsented Deodoriser	3.8 Litre

Indoor Air Quality

Part Number	Description	Container Size
STA300AERO	Safe-T-Air Aerosol	300 grams
STA500GM	Safe-T-Air	500 grams
STA1KG	Safe-T-Air	1 kg
STA2KG	Safe-T-Air	2 kg
FAS-1	Sterile Care Fresh Air Sponge	500 ml
FAS-4	Sterile Care Fresh Air Sponge	2 Litre
CA	Clean Air Aerosol	250 grams

Protectants



Part Number	Description	Container Size
KK400	Koil Kote Spray Can	400 grams
K111-20L*	Koil Kote	20 litre
CRC2085	CRC Zinc it (Aerosol)	350 grams
AGCP5000	Aeris Corrosion Protect Blue	5 Litre
01-09-00024	Aeris Corrosion Protect Clear	5 Litre
AGCP350	Aeris Maintenance Corrosion Protection (Aerosol) Blue	350 grams
AGCP350C	Aeris Maintenance Corrosion Protection (Aerosol) Clear	350 grams
AGRH15	Aeris Range Hood Coating	15 kg
AGDS15	Aeris Duct Sealant Bucket	15 kg

Please contact your nearest Heatcraft Location for Lead Time and Pricing.

Flushing Solvents

Part Number	Description	Container Size
PRO FLUSH 5 LT	Flushing Solvent	5 Litre
PRO FLUSH 20 LT	Flushing Solvent	20 Litre

Filler Foam

Part Number	Description	Container Size
023KLD125	Two Part Polyurethane Pouring Foam	1.25 kg
023KLD25	Two Part Polyurethane Pouring Foam	2 kg
023KLD5	Two Part Polyurethane Pouring Foam	5 kg
023KLD10	Two Part Polyurethane Pouring Foam	10 kg
30804545	Bostik Expander Foam (Aerosol)	500 ml
267864	Bostik Expander Foam (Aerosol)	750 ml
30840484	Bostik Expander Foam Fire Rated (Aerosol)	750 ml



Leak Detectors

LIQUID LEAK DETECTORS

Part Number	Description	Container Size
65432	Better Bubbles Leak Detector - Trigger Spray	1 Litre
BIG-BLUE-1LT	Big Blue Leak Detector - Trigger Spray	1 Litre
BIG-BLUE-4LT	Big Blue Leak Detector - Bottle	4 Litre
RT175B	Big Blue Leak Detector - Brush On	225 ml
ATW	ATW Gas leak Detecta Spray	400 ml



UV LEAK DETECTORS

Part Number	Description	Container Size
UVUD	Cps Moonshine Universal Dye	237 ml
481032	Glo-Away Dye Cleaner	900 ml
UV101	UV Dye-Stick Cartridge - Up To 1.3 kg Of Refrigerant	Each
UV1	UV Dye-Stick Cartridge - 1.4 to 2.2 kg Of Refrigerant	Each
UV2	UV Dye-Stick Cartridge - 2.3Kg To 4.5 kg Of Refrigerant	Each
UV3	UV Dye-Stick Cartridge - 4.6Kg To 11.4 kg Of Refrigerant	Each
UVS101 **	UV Dye Squeeze Cartridge - Up To 1.3 kg Of Refrigerant	6 Pack
UVS1 **	UV Dye Squeeze Cartridge - 1.4 to 2.2 kg Of Refrigerant	6 Pack
UVS2 **	UV Dye Squeeze Cartridge - 2.3Kg To 4.5 kg Of Refrigerant	6 Pack
UVS3 **	UV Dye Squeeze Cartridge - 4.6Kg To 11.4 kg Of Refrigerant	6 Pack
980	Flash High Resolution Uv Dye	



**Squeeze cartridges are for use with UV55 Squeeze Gun Injector
All products for use with UVPRO

Tapes, Sealants and Adhesives



DUCT TAPE

Part Number	Description	Colour	Width	Length
204E-BLACK	Nitto Duct Tape	Black	48	30
204E-SILVER	Nitto Duct Tape	Grey	48	30
204E-WHITE	Nitto Duct Tape	White	48	30



ELECTRICAL TAPE

Part Number	Description	Colour	Width	Length
203E-BLACK	Pvc Tape Electrical Tape	Black	19	20
203E-BLUE	Pvc Tape Electrical Tape	Blue	19	20
203E-GRN/YELLOW	Pvc Tape Electrical Tape	Green / Yellow	19	20
203E-RED	Pvc Tape Electrical Tape	Red	19	20
203E-WHITE	Pvc Tape Electrical Tape	White	19	20



ALUMINUM FOIL TAPE

Part Number	Description	Colour	Width	Length
915290025	Aluminium Foil Tape - Fibreglass Reinforced - Flame Retardent	Silver	25	50
915290050	Aluminium Foil Tape - Fibreglass Reinforced - Flame Retardent	Silver	48	50
915290075	Aluminium Foil Tape - Fibreglass Reinforced - Flame Retardent	Silver	72	50
915210048	Aluminium Foil Tape - PaperBack	Silver	48	50



CORK TAPE

Part Number	Description	Colour	Width	Length
VCT1	Tape Pt-1 Prestite	Black	50	10 m
SS-101	Cork Tape	Black	50	8.5 m

EMERYTAPE

Part Number	Description	Colour	Width	Length
A22016	Emery Tape - Grit P120 (sold per metre)	Maroon	25mm	50 m



THREAD TAPE

Part Number	Description	Colour	Width	Length
L600031	Teflon PTFE Gas Seal Tape - Suit Refrigerants & Gases	Yellow	12mm	10 m
4605000012	Teflon Thread Seal Tape - General Purpose	White	12mm	10 m



THREADSEALERS

Part Number	Description	Container Size
10001	Leak Lock Flex Sealer	39 ml
RT200R	Nylog Red - use with Mineral Oil - CFC or HCFC Systems	30 ml
RT201B	Nylog Blue - Use with POE/PVE Oil - HFO and CO2 Systems	30 ml
27750	Loctite 277 Threadlock - High strength for permanent locking	50 ml
51531	Loctite 515 Gasket Seal Eliminator - General purpose	50 ml
56747	Loctite 567 Thread Seal Low Cure up to 76mm thread	50 ml
21302	Loctite 243 ThreadLocker medium strength up to M20thread size	10 ml
26220	Loctite 262 ThreadLocker medium strength up to M27thread size	10 ml

LEAK SEAL

Part Number	Description	Size
944KIT	Superseal Hvac Sealant Kit Med systems 5 kW to 17 kW	89 ml
946KIT	Super Seal Pro Mobile Systems R12/R134a/R1234yf	45 ml
947KIT	Superseal Acr Sealant Kit sml systems up to 5 kW	30 ml
948KIT	Superseal Commercial Sealant Lge Systems 17 kW+	89 ml
OPV2013C1	CPS Optima Leak Stop	42 ml
20122	HVACR Injection Hose	-

**SEALANT**

Part Number	Description	Size
30601510	Duct Sealant	280 ml
30840066	Fire Caulk Fire Rated Sealant	280 ml

**SILICONE**

Part Number	Description	Colour	Size
266434	Bostik Silicone Cartridge	Neutral / Clear	300 grams
267716	Bostik Silicone Cartridge	Black	300 grams
269131	Bostik Silicone Cartridge	White	300 grams
269158	Bostik Silicone Cartridge	Grey	300 grams
BOS-138525	Caulking Gun - Uses 300ml Cartridges	-	

HEAT TRANSFER

Part Number	Description	Colour	Size
042951	Bostik Heat Transfer Sealer	Grey	460 grams



HVAC Solutions

**ADHESIVES, SEALANTS & FILLERS
FOR HVAC AND ELECTRICAL
REQUIREMENTS**

bostik.com.au

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Product Guide

HEAT SEAL

Part Number	Description	Colour	Size
For repairs of pinhole and hairline cracks. Heat-Seal Stik was specifically made to seal these small holes for an immediate fix			
11575	Laco Heat-Seal Stik (13 mm x 10 m Roll)	Green	11 grams

MASTIC

Part Number	Description	Colour	Size
170526	Bostik Coolroom Mastic Cartridge	White	450 gram

PERMAGUM

Part Number	Description	Colour	Size
A heavy duty sealing compound to protect openings and seams, copper tube and hose entries against air, moisture and loss of insulating efficiency.			
PP-22	Permagem Sealing Compound (Slug)	Off White	910 grams

PUTTY

Part Number	Description	Colour	Size
5505	Plastic Putty		5 kg

ADHESIVES

Part Number	Description	Size
KADH500ML	Insulation Adhesive c/w - Brush	500 ml
KADH1L	Insulation Adhesive	1 Litre
SUPAGLUE	Bostik Supa-Glue 3ml (2 pk)	Neutral / Clear

General Consumables

MIXED CONSUMABLES

Part Number	Description	Size
BRUSH	Varnish Brush	1"
BRUSHV212	Paint Brush	2-1/2"
CV1500B-25	Nylon Tie	150 mm
CV1500B-25	Nylon Tie	250 mm
CV1500B-25	Nylon Tie	300 mm
SAM19BK/K	Cable Tie Mounts Stick On	10 Pack
SAM25BK/K	Cable Tie Mounts Stick On	10 Pack
CTB5BK	Cable Tie Mounts Stick On	100 Pack
RAGS	Bag Of Rags	1.2 kg
390C	Hand Cleaner Lightning Citragell	500 grams
RT600S	VIPER Dyna Wipes (Hand Wipes)	80 Wipes

SERVICE LUBRICANTS

Part Number	Description	Size
OG6012	Oil Spray - Mineral Oil (Aerosol)	200 grams
WD40	Lubricant	300 grams
INOX	Lubricant Inox	300 grams
MO98	Supco Telespout Oiler	115 ml
RT910T	Dilicone Grease Tube - Food Grade	85 grams

BELT GRIP

Part Number	Description	Container Size
Full Pull is a rubber conditioning compound that does not contain solvent and vastly improves belt traction and flexibility without swelling.		
RT610A	Full Pull Belt Dressing Aerosol	480 grams

**COMPONENT HEAT TRANSFER PROTECTION**

Part Number	Description	Container Size
To be used to protect components from heat damage		
11509	Heat Dissipating Cool-Gel	947 ml
11513	Heat Dissapating Gel Small	473 ml
RT400P	Wet Rag Putty	340 grams

**ANTI-SEIZE**

Part Number	Description	Container Size
Black Jack is an extreme duty multi-purpose Anti-Seize compound & assembly lubricant.		
RT900B	Black Jack Anti-Seize	230 grams

**TORCHES AND BATTERIES**

Part Number	Description	Pack Size
908	Battery Mallory 6V Lantern	1
MN1300B2	Battery Duracell Alk D Size	2
MN1400B2	Battery Duracell Alk C Size	2
MN1500B4	Battery Duracell Alk AA	4
MN1604B	Battery Duracell Alk 9V	1
MN2400B4	Battery Duracell Alk AAA	4
TLW53AA	CPS Rechargeable LED Worklight	
EIMFL360	Extendable Magnetic Flashlight	
24-458	Magnetic Pivot LED light	
108MK4YE	Eveready Dolphon Torch	



For Material Safety Data Sheets visit www.heatcraft.com.au and follow the links

Electrical



Contactors, Overloads & Auxilliaries

Schneider
Electric



SCHNEIDER					
Part Number	Description	kW	Amps	Control Circuit	Auxiliary Contacts
LC1D09U7	Contactor	4	9	240 V AC	1 NO + 1 NC
LC1D12U7	Contactor	5.5	12	240 V AC	1 NO + 1 NC
LC1D18U7	Contactor	9	18	240 V AC	1 NO + 1 NC
LC1D25U7	Contactor	11	25	240V AC	1 NO + 1 NC
LC1D32U7	Contactor	15	32	240 V AC	1 NO + 1 NC
LC1D38U7	Contactor	18.5	38	240 V AC	1 NO + 1 NC
LC1D40AU7	Contactor	22	40	240 V AC	1 NO + 1 NC
LC1D50AU7	Contactor	22	50	240 V AC	1 NO + 1 NC
LC1D65AU7	Contactor	37	65	240 V AC	1 NO + 1 NC
LC1D80U7	Contactor	45	80	240 V AC	1 NO + 1 NC

Schneider
Electric



SCHNEIDER	
Part Number	Description
LADN11	Auxiliary Contact 1-N/O 1-N/C
LADN22	Auxiliary Contact 2-N/O 2-N/C

Schneider
Electric



SCHNEIDER		
Part Number	Description	Amps
LRD08	Overload Relay	2.5–4.0
LRD10	Overload Relay	4.0–6.0
LRD12	Overload Relay	5.5–8.0
LRD14	Overload Relay	7.0–10.0
LRD16	Overload Relay	9.0–13.0
LRD21	Overload Relay	12.0–18.0
LRD22	Overload Relay	16.0–24.0
LRD32	Overload Relay	23.0–32.0
LRD340	Overload Relay	25.0–40.0
LRD35	Overload Relay	30.0–38.0
LRD350	Overload Relay	37.0–50.0

DANFOSS

Part Number	Description	kW	Amps	Control Circuit	Auxiliary Contacts
037H001533	Contactactor CI 6	2.2	6	240 V AC	1 to 4
037H002133	Contactactor CI 9	4	9	240 V AC	1 to 4
037H002138	Contactactor CI 9	4	9	415 V AC	1 to 4
037H003133	Contactactor CI 12	5.5	12	240 V AC	1 to 4
037H003138	Contactactor CI 12	5.5	12	415 V AC	1 to 4
037H004933	Contactactor CI 15	7.5	15	240 V AC	1 to 4
037H004531	Contactactor CI 20	10	20	240 V AC	1 to 4
037H005116	Contactactor CI 25	11	25	24 V AC	1 to 4
037H005133	Contactactor CI 25	11	25	240 V AC	1 to 4
037H005533	Contactactor CI 30	15	30	240 V AC	1 to 4
037H005633	Contactactor CI 37	18.5	37	240 V AC	1 to 4

Danfoss**DANFOSS**

Part Number	Description	Amps
037H011000	Auxiliary Contact Start	6
037H011100	Auxiliary Contact Normally Opened	6
037H0112	Contact Auxiliary Normally Closed	6
037H6484	Auxiliary Contact Coil 24 V 50 Hz	N/A
037H647200	Auxiliary Contact Coil 240 V AC Suit C16-30	N/A
037H647900	Auxiliary Contact Coil 415 V 50 Hz Ci 6-30	N/A

Danfoss**DANFOSS**

Part Number	Description	Amps
047H0206	Overload TI 16C	1.2-1.9
047H0207	Overload TI 16C	1.8-2.8
047H0208	Overload TI 16C	2.7-4.2
047H0209	Overload TI 16C	4.0-6.2
047H0210	Overload TI 16C	6.0-9.2
047H0211	Overload TI 16C	8.0-12.0
047H0212	Overload TI 16C	11.0-16.0
047H0213	Overload TI 25C	15.0-20.0
047H0214	Overload TI 25C	19.0-25.0
047H0215	Overload TI 30C	24.0-32.0

Danfoss

Contactors, Overloads & Auxilliaries

SPRECHER+SCHUH



SPRECHER & SCHUH					
Part Number	Description	kW	Amps	Control Circuit	Auxiliary Contacts
CA7-9-10-240	Contactor	4	9	240 V AC	1 NO + 0 NC
CA7-12-10-240	Contactor	5.5	12	240 V AC	1 NO + 0 NC
CA7-16-10-240	Contactor	7.5	16	240 V AC	1 NO + 0 NC
CA7-23-10-240	Contactor	11	23	240 V AC	1 NO + 0 NC
CA7-30-00-240	Contactor	15	30	240 V AC	1 NO + 0 NC
CA7-37-00-240	Contactor	18.5	37	240 V AC	1 NO + 0 NC
CA7-43-00-240	Contactor	22	43	240 V AC	1 NO + 0 NC
CA7-60-00-240	Contactor	32	60	240 V AC	1 NO + 0 NC
CA7-85-00-240	Contactor	45	85	240 V AC	1 NO + 0 NC

SPRECHER+SCHUH



SPRECHER & SCHUH		
Part Number	Description	Mounting Configuration
CA7-PV-11	Auxiliary Contact Block 1-N/O 1-N/C	Top Mount
CA7-PV-S22	Auxiliary Contact Block 2-N/O 2-N/C	Top Mount
CA7-PA-01	Auxiliary Contact Block 1-N/C	Side Mount
CA7-PA-02	Auxiliary Contact Block 2-N/C	Side Mount
CA7-PA-10	Auxiliary Contact Block 1-N/O	Side Mount
CA7-PA-11	Auxiliary Contact Block 1-N/O 1-N/C	Side Mount
CA7-PA-20	Auxiliary Contact Block 2-N/O	Side Mount
CS7-VP-22	Auxiliary Contact Block 2-N/O 2-N/C	Side Mount

SPRECHER+SCHUH

SPRECHER & SCHUH		
Part Number	Description	Amps
CT7N-23-B63	Overload Relay	4.5–6.3
CT7N-23-C10	Overload Relay	7.2–10.0
CT7N-23-C16	Overload Relay	11.3–16.0
CT7N-23-C21	Overload Relay	17.5–21.5
CT7N-23-C25	Overload Relay	21.0–25.0
CT7N-37-C21	Overload Relay	17.5–21.5
CT7N-37-C25	Overload Relay	21.0–25.0
CT7N-37-C30	Overload Relay	24.5–30.0
CT7N-37-C36	Overload Relay	29.0–36.0
CT7N-37-C38	Overload Relay	33.0–38.0
CT7N-43-C47	Overload Relay	35.0–47.0

Compressors Universal Relays & Overloads



UNIVERSAL RELAYS AND OVERLOADS		
Part Number	Description	HP
R062	Relay/Overload	1/6–1/5
R082	Relay/Overload	1/12, 1/10 & 1/8
P0230	Push-On Relay	1/12–1/2
ICG220	Supco Relay	1/12–1/2
ICM-UMSR50	Universal Motor Start Relay	1/12–1/2
RSC20	Big Relay	1/12–1/2
R042	Relay/Overload	1/4–1/3

Electrical Ancillaries

HRC FUSES

Part Number	Description	Amps
NS10	Fuse Link Clip In Offset	10.0
NS16	Fuse Link Clip In Offset	16.0
NS20	Fuse Link Clip In Offset	20.0
NS25	Fuse Link Clip In Offset	25.0
NS32	Fuse Link Clip In Offset	32.0



MOTOR PROTECTION

Part Number	Description	Amps
MS325-2.5	Manual Motor Starter ABB	2.5
MS325-4	Manual Motor Starter ABB	4.0
MS325-6.3	Manual Motor Starter ABB	6.3
KTA7-25S-2.5A	Motor Protection Breaker	2.5
KTA7-25S-4A	Motor Protection Breaker	4.0



CIRCUIT BREAKERS

Part Number	Description	Amps
S201C10	Circuit Breaker C-Curve 6 KA	10
S201C16	Circuit Breaker C-Curve 6 KA	16
S201C32	Circuit Breaker C-Curve 6 KA	32
S201C40	Circuit Breaker C-Curve 6 KA	40



ELECTRICAL SWITCHES AND PLUGS

Part Number	Description
CLIWS226	Clipsal Weatherproof Switch
CLIWHS20	Clipsal Single Pole Switch
UKF4120	Isolation Switch 20 A single pole
UKF4135	Isolation Switch 35 A single pole



JUNCTION BOXES

Part Number	Description
5593	Clipsal Mini Junction Box
554J4	Clipsal Large Junction Boxes

TERMINALS & CONNECTORS

Part Number	Description	Pkt Size
RT1.25-5	Ring Terminal 5 mm Stud Red	100
RT2-5	Ring Terminal 5 mm Stud Blue	100
RT2-6	Ring Terminal 6 mm Stud Blue	50
RT5.5-5/K	Ring Terminal 5 mm Stud Kit Yellow	20
RT5.5-6K	Ring Terminal 6 mm Stud Kit Yellow	20
QC1.25-6.4DG	Quick Connector Terminal 6.4 x 0.8 mm Red DG	100
QC2-6.4DG	Quick Connector Terminal 6.4 x 0.8 mm Blue DG	50
QC5.5-6DG/K	Quick Connector 6.4 X 0.8 mm Tab DG Kit Yellow	10
MT1.25-6.4DG	Quick Connector Terminal 6.4 x 0.8 mm Red DG	100
FIFQC2-6.4	Blue Insulated Flag Terminal 6.4 mm	25



Electrical Ancillaries

TERMINALS & CONNECTORS

Part Number	Description	Pkt Size
FIQC1.25-6.4/K	Red Insulated Quick Connector	15
FIQC2-6.4/K	Blue Insulated Quick Connector	15
PC2	Pin Connector Blue	100
MT2-6.4DG	Male Terminal 6.4 x 0.8 mm Blue Q/C DG	100
PB2-6.4DG	Piggy Back Terminal 6.4 x 0.8 mm Blue Q/C DG	50
ILS1.25/K	In Line Splice Kit Red	20
ILS2/K	In Line Splice Kit Blue	20
ILS5.5/K	In Line Splice Kit Yellow	10
FIQC1.25-6.4DG	Quick Connector Terminal 6.4 x 0.8 mm Red DG	50
FIQC2-6.4DG	Fully Insulated Terminal 6.8 x 0.8 mm Blue Q/C DG	50
FBC2DG/K	Male Bullet DG Kit Blue	15
MBC2DG/K	Male Bullet DG Kit Blue	15
BLP050/500	Bootlace Pin 0.5 mm ² White	500
BLP150/500	Bootlace Pin 1.5 mm ² Black	500
BLP400	Bootlace Pin 4 mm ² Orange	100
373MUY2-C	Telecom Splice Connector Yellow 2 Way	100
FS2-4	Forked Spade 4 mm Blue	15
C32A1	Insulated Screw Connector 32 Amp	100
C32A2	Insulated Double Screw Connector 32 Amp	50

HEAT SHRINK TUBING

Part Number	Description	Diameter (mm)	Length (mm)
XDW5BK	Heatshrink	5	1200
XDW7BK	Heatshrink	7	1200
XDW10BK	Heatshrink	10	1200
XDW13BK	Heatshrink	13	1200
XDW20BK	Heatshrink	20	1200

CABLE TIES

Part Number	Description	Width (mm)	Length (mm)
CT98BK/100	Black Cable Tie	2.3	98
CT140BK/100	Black Cable Tie	3.4	140
CT200BK/100	Black Cable Tie	4.8	200
CT290BK	Black Cable Tie	4.8	290
CT365BK-HD	Black Cable Tie	7.8	365
KTT	Cable Tie Tensioner Tool		

CONDENSATE EVAPORATIVE PAN HEATERS

Part Number	Description	Volume (ml)	Evaporation Rate
CRH-660	Aluminium Heater Pan	1479	157 ml/hr
CRH-WCR65	Aluminium Heater Pan	6500	550 ml/hr

Heating Cable

Self Regulating Heating Cable provides safe, reliable heat tracing to eliminate ice build-ups and freeze-ups at freezer doors, drain lines and equipment. Constructed of industrial grade quality material to ensure years of reliability, it is available in various watts per metre using a 240 V power supply.

Features:

- Temperature range: -40 °C to 65 °C
- Minimum bend radius: 13 mm

CDH: CONDENSATE DRAIN HEATER CABLE

Part Number	Description	Voltage	Watts	Length (m)	Application
CDH-2-1-OJ	Terminated Condensate Drain Heater Cable	240 V AC	16 Watts/Meter (5 W/ft)	1	Condensate Drain Heater
CDH-2-2-OJ	Terminated Condensate Drain Heater Cable	240 V AC	16 Watts/Meter (5 W/ft)	2	Condensate Drain Heater

FLX: HEATER CABLES

Part Number	Description	Voltage	Watts	Length*	Application
FLX-5-2-BC	Thermon Heater Cable	240 V AC	16 Watts/Meter (5 W/ft)	Cut to Length	Freeze Protection
FLX-10-2-BC	Thermon Heater Cable	240 V AC	33 Watts/Meter (10 W/ft)	Cut to Length	Freeze Protection
FLX-15-2-BC	Thermon Heater Cable	240 V AC	49 Watts/Meter (15 W/ft)	Cut to Length	Freeze Protection

CONNECTION KITS

Part Number	Description	Kit Inclusions
SX-TERM-1-BC	Termination Kit - Braided Cable	Transfer Paste, 1 Power Connection Boot, 1 End Cap, 1 Compression Lug, Termination Caution Label, 1 Ground Sleeve

HEATER WIRE

Part Number	Description
SRG10	Heater Wire 10 Ohm Per Meter
SRG15B	Heater Wire 15 Ohm Per Meter
SRG25	Heater Wire 25 Ohm Per Meter
SRG45	Heater Wire 45 Ohm Per Meter
SRG50B	Heater Wire 50 Ohm Per Meter
SRG60	Heater Wire 60 Ohm Per Meter
SRG75	Heater Wire 75 Ohm Per Meter
SRG100	Heater Wire 100 Ohm Per Meter
SRG150	Heater Wire 150 Ohm Per Meter
SRG200	Heater Wire 200 Ohm Per Meter

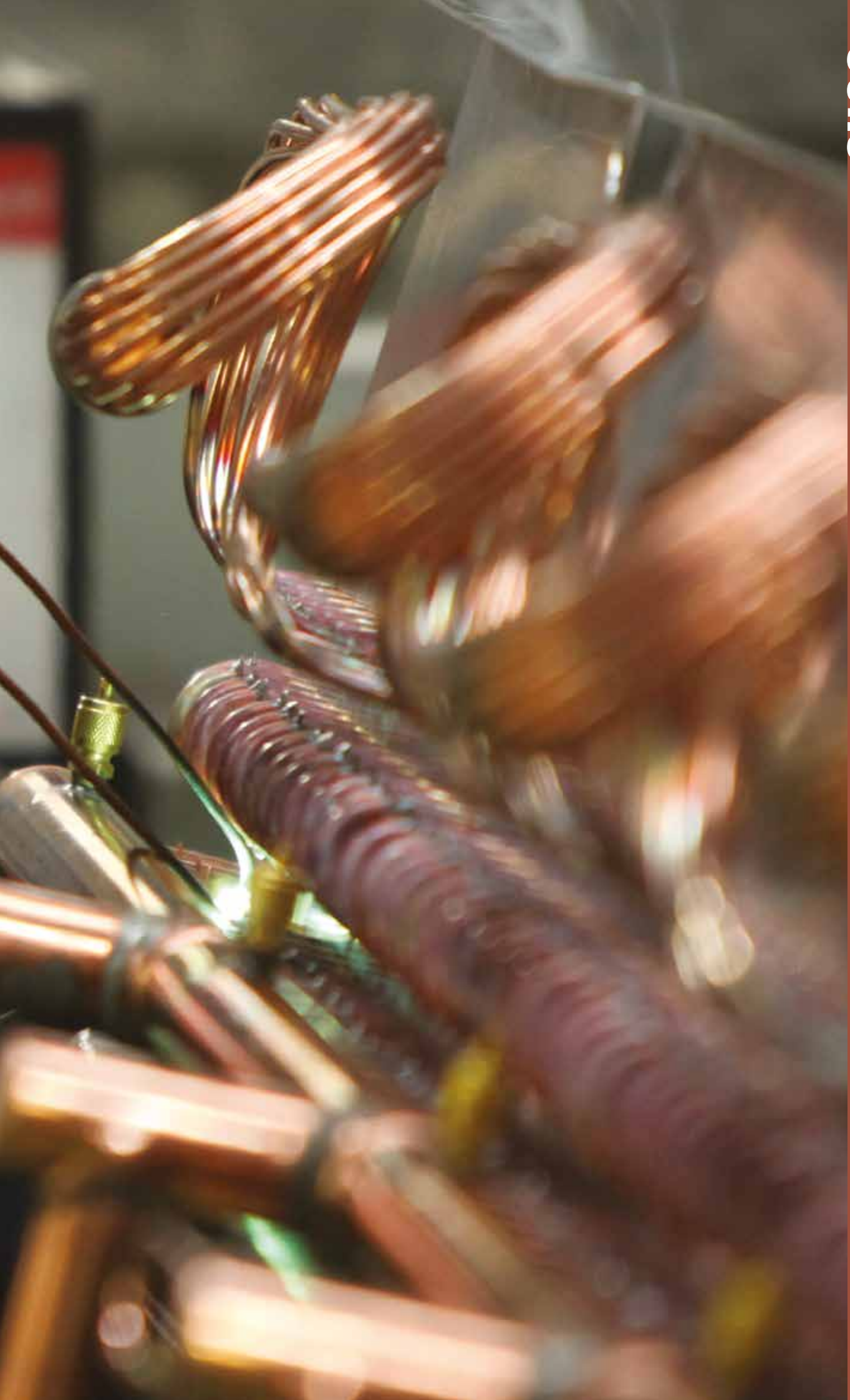
*Sold by the metre

Electrical Cable & Plugs

Part Number	Description
320203	3 Core Grey Flex 10 A Per Meter
320204	3 Core Grey Flex 15 A Per Meter
MMCXDB04PLPEA30	4 Core 1.5 mm Grey Flex Per Meter
70672E	Olex Cable 2.5 mm T & E 2 Core
CL1439	Clipsal 3 Pin Plug 10 A
KUS4	Cable End Stripper
OLXPDGP07AA003E	Cable Pyro 2.5 mm 3 Core + Earth



Coils



Coils

INTRODUCTION

Heatcraft supply fin tube and microchannel heat exchangers to suit individual requirements for refrigeration, air conditioning and process applications.

SPECIALISED SUPPORT

With a strong history in Heat Transfer, we are able to offer technical support, flexibility and responsiveness.

Our specialised staff have access to global manufacturers and will help you engineer product to match your design requirements by utilising a large variety of high efficiency fin surfaces, tube sizes, tube wall thicknesses and drainable circuiting options to construct a coil

of virtually any size. These truly 'made to fit' heat exchangers can be sourced and supplied.

For more information on our products and services please contact your local Heatcraft representative on 13 23 50.



COIL TYPES

FLUID COILS

Cooling coils are most commonly used in chilled fluid systems for comfort conditioning of a forced air stream and in process systems for dehumidification purposes. A large variety of drainable circuiting options makes them a good choice for most general heat transfer applications. For use with water, glycols, brines or thermal oils.



HEATING COILS

Fluid heating coils are most commonly used in hot water systems for comfort conditioning of a forced air stream and in process systems for drying purposes. The collector header design with internal baffles provides circuiting flexibility while eliminating the need for return bends. Fluid heating coils are provided with a variety of casing configurations including fully flanged, slip and drive (upon request) or end plates only.



STEAM COILS

Standard construction is available for high and low pressure applications. Standard steam type is the basic 5/8" tube steam coil, known as the single tube design. The steam supply and condensate return headers and connections are normally at the opposite ends of the coil. Uniform steam distribution to each of the coil core tubes is accomplished by proper header assembly design. The steam supply connection should be located in the centre of the header, with a perforated plate type baffle located directly behind this connection. Properly sized orifices are located in each of the core tube entrances into the header.



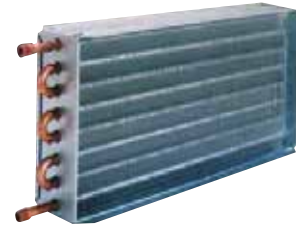
REFRIGERANT COILS

Single, or multiple compressor circuits allow precise capacity control. Unique interlaced circuiting options assure uniform refrigerant distribution over the entire face area of the coil. Wide fin spacing availability reduces the affect of frost build up on low temperature applications. For use in central systems or duct applications.

COIL NOMENCLATURE - EXAMPLE

This template should be used when ordering a coil

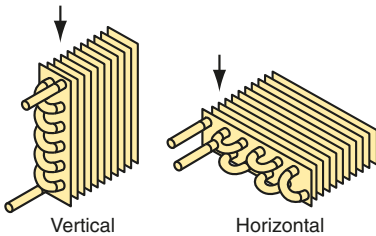
Example only for ordering **standard** cross fin coil



3 **H** **8** **4** **k** **0** **4** **0** **0** **A** (xxx)

3 TUBE DIAMETER (O.D.)
3 = 9.5mm (3/8")
4 = 12.7 mm (1/ ")
5 = 15.8 mm (5/ ")

H Mounting Position:
H = Horizontal
V = Vertical



8 Number of tubes: wide/high:
2 to 8 inclusive

4 Number of rows:
1,2,3 or 4

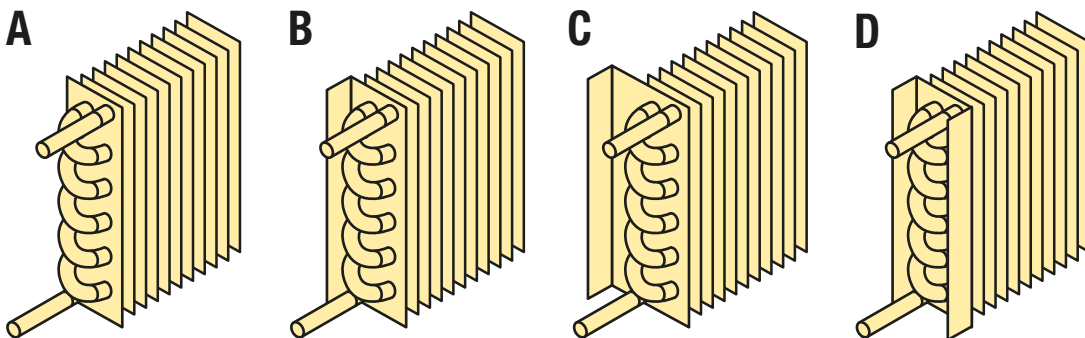
K Fin pitch (F.P):
K = 12.5 mm FP (equivalent to 2 FPI)
L = 8.33 mm FP (equivalent to 3 FPI)
M = 6.25 mm FP (equivalent to 4 FPI)

0 **4** **0** **0**

Overall length including "U" Bends (excluding tails) in increments of (20mm from 400 to 4100mm)

A End plate options A, B, C, or D as indicated below

END PLATE OPTIONS





KIRBY REFRIGERATION

Notes

CONVERSION FACTORS

COMMON CONVERSION FACTORS

Multiply Column A by Factor to obtain Column B • Divide Column B by Factor to obtain Column A.

A	B	Factor
Length		
inches	mm	25.4
Area		
inch ²	mm ²	645.16
ft ²	m ²	0.0929
Volume		
inch ³	mm ³	16 387
ft ³	m ³	0.028 32
Volume - Liquid		
Gal (Imp.)	Gal (US)	1.200 95
Gal (Imp.)	Ltr	4.5461
Gal (US)	Ltr	3.7854
Volume Flow Rate - Liquid		
Gal/hr (Imp.)	Ltr/h	4.5456
Gal/hr (US)	Ltr/h	3.785
m ³ /hr	Gal/min (Imp.)	3.6662

A	B	Factor
Volume Flow Rate - Air		
CFM	Ltr/s	0.4719
CFM	m ³ /hr	1.699
Ltr/s	m ³ /s	0.001
Velocity		
m/s	fpm	196.85
km/hr	mile/hr	0.6214
Power - Heat Flow - Capacity		
HP	Watts	746
HP (Metric)	Watts	735.5
BTU/hr	Watts	0.2931
BTU/hr	Tons (Refrig)	0.000 083
Tons (Refrig)	BTU/hr	12 000
Tons (Refrig)	Watts	3517
kcal/hr	Watts	1.163
kcal/hr	Tons (Refrig)	0.000 331

A	B	Factor
Pressure		
psi	kPa	6.8948
psi	bar	0.068 95
in.WG	kPa	0.2486
in.Hg	kPa	3.3864
in.Hg	bar	0.033 86
kg/cm ²	psi	14.2233
kg/cm ²	kPa	98.07
Density		
kg/m ³	lb/ft ³	0.062 43
Fouling Factor		
ft ² hr.°F/BTU	m ² K/kW	176.1
m ² hr.°C/kcal	m ² K/kW	0.204 815
Weight (Mass)		
oz	g	28.3495
lb	kg	0.4536

Using the following Conversion Tables:

The degree of rounding of the conversion factors has been adjusted to an extent considered to be of value to a practical engineer.

Note: Where space does not permit the use of zeros before or after the decimal point,

subscript numerals indicate the number of zeros.

e.g. 0.₄8333 = 0.000 083 33

Length							
mm	cm	m	inch	feet	yard	km	mile
1	0.1	0.001	0.0394	0.0033	0.0011	0.000 001	0.000006214
10	1	0.01	0.3937	0.0328	0.0109	0.000 01	0.00006214
1000	100	1	39.3701	3.2808	1.0936	0.001	0.0006214
25.4	2.54	0.0254	1	0.0833	0.0278	0.0000254	0.00001578
304.8	30.48	0.3048	12	1	0.3333	0.000305	0.0001893
914.4	9644	0.9144	36	3	1	0.000914	0.0005682
1 000 000	100 000	1000	39 370	3280.8	1093.6	1	0.6214
1 609 350	160 935	1609.35	63 360	5280	1760	1.6094	1

AREA					
mm ²	cm ²	m ²	in ²	ft ²	yard ²
1	0.01	0.000 001	00.001 55	0.00001076	0.000001196
100	1	0.0001	0.155	0.001076	0.0001196
1 000 000	10 000	1	1549.91	10.7639	1.196
645.16	6.4516	0.000 645	1	0.006944	0.0007716
92 903	929.03	0.0929	144	1	0.1111
836 127	8361.27	0.8361	1296	9	1

VELOCITY					
m/s	m/min	ft/s	ft/min	km/hr	mile/hr
1	60	3.2808	196.85	3.6	2.2369
0.1667	1	0.054 68	3.2808	0.06	0.037 28
0.3048	18.288	1	60	1.0973	0.6818
0.005 08	0.3048	0.016 67	1	0.018 29	0.011 36
0.2778	16.6667	0.9113	54.6807	1	0.6214
0.4470	26.8224	1.4667	88	1.6093	1

AREA			
km ²	mile ²	acre	hectare
1	0.3861	247.105	100
2.5899	1	640	259
0.004047	0.001562	1	0.4047
0.01	0.003861	2.471	1

TRANSPORT FACTORS		
mile/gall to km/100L	$\frac{282.480\ 94}{\text{mile/gall}}$	= km/100L
km/100L to mile/gall	$\frac{282.480\ 94}{\text{km/100L}}$	= mile/gall
mile/gall x 0.354 006 19 = km/L		
km/L x 2.824 809 4 = mile/gall		
gall/mile x 2.824 809 4 = L/km		
L/km x 0.354 006 19 = gall/mile		

CONVERSION FACTORS (cont'd)

VOLUME					
mm ³	cm ³	m ³	in ³	ft ³	yard ³
1	0.001	0.000 00001	0.00006102	0.0000003531	0.00000001308
1000	1	0.000 01	0.061 02	0.00003531	0.000001308
1 000 000 000	1 000 000	1	61 023.74	35.3147	1.308
16 387.06	16.3871	0.00001639	1	0.0005787	0.00002143
28 316 846.6	28 316.85	0.028 32	1728	1	0.037 04
764 554 858	764 554.9	0.7646	46 656	27	1

VOLUME – FLOW RATE										
L/s	L/min	L/hr	m ³ /s	m ³ /min	m ³ /hr	ft ³ /s	ft ³ /min	ft ³ /h	Gall/min. Imp	Gall/min. US
1	60	3600	0.001	0.06	3.6	0.03 531	2.1189	127.133	13.1982	15.8502
0.016 67	1	60	0.00001667	0.001	0.06	0.0005886	0.03 531	2.1189	0.2200	0.2642
0.0002778	0.016 67	1	0.0000002778	0.00001677	0.001	0.000009809	0.0005885	0.03 531	0.23666	0.24403
1000	60 000	3 600 000	1	60	3600	35.3147	2118.88	127.132.9	13 198.2	15 850.2
16.6667	1000	60 000	0.01 667	1	60	0.5886	35.3147	2118.88	219.969	264.170
0.2778	16.6667	1000	0.0002778	0.016 67	1	0.009810	0.5886	35.3147	2.6662	4.4028
28.3168	1699.01	101 940.6	0.028 32	1.6990	101.941	1	60	3600	373.730	448.827
0.4719	28.3168	1699.01	0.0004719	0.028 32	1.6990	0.016 67	1	60	6.2288	7.4805
0.007866	0.4719	28.3168	0.000007865	0.0004719	0.028 31	0.0002778	0.016 67	1	0.1038	0.1247
0.075 77	4.5461	272.765	0.00007556	0.004533	0.2720	0.002676	0.1605	9.6326	1	1.2009
0.063 27	3.7960	227.762	0.00006309	0.003786	0.2271	0.002228	0.1337	8.0208	0.8327	1

VOLUME – CAPACITY									
L	m ³	ml	ft ³	fl. oz Imp.	fl. oz US	Pint Imp.	Pint US	Gall Imp.	Gall US
1	0.0001	1000	0.035 31	35.1951	33.814	1.7598	2.1134	0.22	0.2642
1000	1	1 000 000	35.3147	35 195.1	33 814	1759.75	2113.38	219.97	264.17
0.001	0.000 001	1	0.00003531	0.0352	0.033 81	0.00176	0.002113	0.00022	0.0002642
28.3168	0.028 32	28 316.85	1	996.633	957.525	49.8317	59.8448	6.229	7.4807
0.028 41	0.00002841	28.4131	0.001003	1	0.9608	0.05	0.060 05	0.00625	0.007506
0.029 57	0.00002957	29.5735	0.001044	1.040 84	1	0.052 04	0.0625	0.006505	0.007813
0.5683	0.0005683	568.261	0.020 07	20	19.2152	1	1.201	0.125	0.1501
0.4732	0.0004732	473.176	0.016 71	16.6534	16	0.8327	1	0.1041	0.125
4.5461	0.004546	4546.1	0.1605	160	153.721	8	9.6075	1	1.201
3.7854	0.003785	3785.4	0.1337	133.228	128	6.6614	8	0.8327	1

MASS (WEIGHT)							
g	kg	oz	lb	cwt	tonne	ton	sh. ton
1	0.001	0.352 74	0.0022	0.00001968	0.000001	0.0000009842	0.000001102
1000	1	35.273 92	2.204 62	0.019 684	0.001	0.0009842	0.001102
28.3495	0.028 35	1	0.0625	0.0005580	0.00002835	0.0000279	0.00003125
453.5924	0.453 59	16	1	0.008929	0.0004536	0.0004464	0.0005
50 802.345	50.8023	1792	112	1	0.0508	0.05	0.056
1 000 000	1000	35 273.92	2204.62	19.6841	1	0.984 21	1.102 31
1 016 050	1016.047	35.840	2240	20	1.016 05	1	1.12
907 186	907.1857	32 000	2000	17.8571	0.907 18	0.892 85	1

MISCELLANEOUS		
Compressor Displacement	kilogram-force is also called the kilopond (kp)	Thermal Conductivity
L/s x 3.6 = m ³ /hr	1 Watt = 1 joule/sec = 1 newton metre/sec	Btu.in/ft ² hr°F x 0.1442 = W/m.K
m ³ /hr x 0.278 = L/s	1mm Hg is also known by the name "Torr".	W/m.K x 6.933 = Btu.in/ft ² hr°F

CONVERSION FACTORS (cont'd)

Pressure													
Pa	kPa	MPa	mbar	bar	kg/cm ²	psi	mm Water	m Water	in Water	ft Water	mm Hg	in Hg	Atmos.
1	0.001	0.000001	0.01	0.0001	0.0000102	0.000145	0.1022	0.0001022	0.004022	0.0003352	0.007501	0.000293	0.000001
1000	1	0.001	10	0.01	0.010	0.145 04	102.155	0.102 16	4.0218	0.3352	7.5006	0.2953	0.00001
1 000 000	1000	1	10 000	10	10.1972	145.0377	102 155.1	102.1551	4021.85	335.154	7500.63	295.3	0.0001
100	0.1	0.0001	1	0.001	0.00102	0.0145	10.2155	0.010 22	0.4022	0.0335	0.7501	0.0295	0.000001
100 000	100	0.01	1000	1	1.0197	14.5038	10 215.51	10.2155	402.185	33.5154	750.063	29.53	0.00001
98 006.5	98.0665	0.0981	980.665	0.9807	1	14.2233	10 017.99	10.018	394.409	32.8674	735.56	28.959	0.0001
6894.76	6.8948	0.006895	68.9476	0.068 95	0.070 31	1	704.334	0.7043	27.7297	2.3108	51.715	2.036	0.00001
9.789	0.009789	0.000009789	0.0979	0.00009789	0.00009982	0.00142	1	0.001	0.0394	0.003281	0.0734	0.002891	0.000001
9789.04	9.789	0.009789	97.8904	0.097 89	0.0998	1.4198	1000	1	39.37	3.2808	73.4239	2.8907	0.00001
248.642	0.2486	0.0002486	2.4864	0.002486	0.002535	0.036 06	25.4	0.0254	1	0.0833	1.864 97	0.0734	0.00001
2983.7	2.9837	0.009837	29.837	0.029 84	0.030 43	0.4327	304.8	0.3048	12	1	22.3796	0.8811	0.00001
133.322	0.1333	0.0001333	1.3332	0.001333	0.001359	0.019 34	13.6195	0.013 62	0.5362	0.0447	1	0.0394	0.00001
3386.38	3.3864	0.003386	33.8638	0.33 86	0.034 53	0.4912	345.936	0.3459	13.6195	1.134 96	25.4	1	0.00001
101 325	101.325	0.1013	1013.25	1.013 25	1.033 25	14.6963	10 351.1	10.3511	407.524	33.9603	760	29.922	1

POWER – HEAT FLOW – CAPACITY									
W	kW	BTU/min	BTU/hr	Ton Refrig.	kcal/hr	kgm/s	HP	HP Metric	ft.lb/s
1	0.001	0.056 87	3.4121	0.0002843	0.8598	0.102	0.001341	0.00136	0.7376
1000	1	56.869	3412.14	0.2843	859.845	101.972	1.341	1.3596	737.563
17.5843	0.017 58	1	60	0.005	15.1197	1.7931	0.023 58	0.023 91	12.9695
0.2931	0.0002931	0.016 67	1	0.00008333	0.252	0.022 88	0.000393	0.0003985	0.2162
3516.86	3.3517	200	12 000	1	3023.95	358.619	4.7162	4.7816	2593.9
1.163	0.001163	0.066 14	3.9683	0.0003307	1	0.1186	0.00156	0.001581	0.8578
9.807	0.009807	0.5577	33.4617	0.002788	8.4322	1	0.013 15	0.013 33	7.233
745.7	0.7457	42.407	2544.43	0.212	641.187	76.0402	1	1.013 87	550
735.5	0.7355	41.827	2509.63	0.2091	632.416	75	0.9863	1	542.477
1.3558	0.001356	0.0771	4.6262	0.0003855	1.1658	0.1383	0.001818	0.001843	1

ENERGY – WORK – HEAT									
J	kJ	MJ	m.kgf.	kcal	BTU	therm	kWhr	HP hr	ft.lb
1	0.001	0.000 005	0.102	0.0002388	0.0009478	0.0000009478	0.0002778	0.0003724	0.7375
1000	1	0.001	101.968	0.2388	0.9478	0.000009478	0.0002778	0.0003724	737.463
1 000 000	1000	1	101 967.9	238.846	947.817	0.009478	0.2778	0.3724	737 463.1
9.807	0.009807	0.000009807	1	0.002342	0.009295	0.0000009295	0.002724	0.003652	7.2323
4186.8	4.1868	0.004187	426.919	1	3.9683	0.00003968	0.001163	0.001559	3087.61
1055.06	1.0551	0.001055	107.582	0.252	1	0.00001	0.0002931	0.0003929	778.064
105 505 585	105 505.6	105.506	10 758 192	25 199.6	100 000	1	29.3071	39.2944	77 806 480
3 600 000	3600	3.6	367 084.7	859.845	3412.14	0.034 12	1	0.3408	2 654 867
2.685 000	2.685	2.685	273 784	641.301	2544.89	0.025 45	0.7458	1	1 980 088
1.3558	0.001356	0.000001356	0.1383	0.0003239	0.001285	0.000001285	0.003766	0.00505	1

SPECIFIC ENTHALPY (AND SPECIFIC ENERGY)						
J/kg	kJ/kg	kcal/kg	BTU/lb	kgf.m/kg	ft.lbf/lb	kWh/kg
1	0.001	0.0002388	0.0004299	0.102	0.3346	0.0000002777
1000	1	0.2388	0.4299	101.972	334.553	0.0002777
4186.8	4.1868	1	1.8	426.935	1400.71	0.001163
2326	2.326	0.5556	1	237.186	778.17	0.0006459
9.8067	0.009807	0.002342	0.004216	1	3.2808	0.000002723
2.9891	0.002989	0.0007139	0.001285	0.3048	1	0.00000083
3 600 000	3600	859.845	1547.72	367 098.4	1 204 391	1

CONVERSION FACTORS (cont'd)

"SI" - denotes the INTERNATIONAL SYSTEM of Metric Units adopted in Australia

THIS TABLE MAY BE USED IN TWO WAYS:

MULTIPLY COLUMN "A" BY COLUMN "B" TO OBTAIN COLUMN "C"

ALTERNATIVELY

DIVIDE COLUMN "C" BY COLUMN "B" TO OBTAIN COLUMN "A"

REMARKS	A MULTIPLY	B BY	C TO OBTAIN	REMARKS	A MULTIPLY	B BY	C TO OBTAIN
AREA: Symbol m² The SI unit of AREA is the SQUARE METRE	square inches square feet square yards acre hectare (ha)	645.16 0.929 0.836 4047 10,000	mm ² m ² m ² m ² m ²	VELOCITY: Symbol m/s The SI unit of VELOCITY is the METRE PER SECOND	ft. per second (ft/s) ft. per minute (ft/min) miles per hour miles per hour	0.3048 0.00508 0.4470 1.609	m/s m/s m/s km/h
LENGTH: Symbol m The SI unit of LENGTH is the METRE	inches feet yards mile mile	25.4 0.3048 0.9144 1609 1.609	millimetres (mm) metres (m) metres (m) metres (m) kilometres (km)	POWER: Symbol W The SI unit of POWER is the WATT	Btu per hour (Btu/hr) horsepower (hp) ton of refrigeration	0.2931 0.7457 3.517	W kW kW
MASS: Symbol kg The SI unit of MASS is the KILOGRAM	ounce pound ton (2240 lb) short ton (2000 lb) ton (2240 lb)	28.35 0.436 1016.05 907.2 1.016	grams (g) kilograms (kg) kg kg tonne (t)	ENERGY: Symbol J The SI unit of ENERGY is the JOULE 1 J = 1 N.m A joule is the energy expended or the work done when a force of one newton moves the point of application a distance of one metre in the direction of that force.	1. ELECTRICAL ENERGY kilowatt hour (kW.h) 2. HEAT ENERGY British thermal unit (Btu) Btu/ft ³ 3. MECHANICAL ENERGY foot poundal (ft.pdl) inch pound-force (in.lbf) foot pound-force (ft.lbf) foot ton force (ft.tonf) metre kilogram force (m.kgf)	3.6 1.055 37.26 0.4214 0.1130 1.356 3.037 9.807	MJ kJ kJ/m ³ J J J kJ J
VOLUME: CAPACITY: Symbol m³ The SI unit of VOLUME is the CUBIC METRE	DRY: cubic inch (in ³) cubic foot (ft ³) cubic yard (yd ³) litre (L) litre (L) gallons (Imp)	16.387 0.02832 0.7646 1,000,000 0.001 0.004546	mm ³ m ³ m ³ mm ³ m ³ m ³	FORCE: Symbol N (NEWTON) The SI unit of FORCE (kg.m/s ²) has been given the special name - NEWTON. The newton is the force which when applied to a body having a mass of one kilogram, causes an acceleration of one metre per second per second in the direction of application of the force.	Poundal (pdl) Pound-force (lbf) ton-force (tonf) *kilogram-force (kgf)	0.1383 4.448 9.964 9.807	N N kN N
VOLUME: RATE OF FLOW. Symbol m³/s The SI unit of VOLUME RATE OF FLOW is the CUBIC METRE PER SECOND	Imp. gal. per min (gal/min) Imp. gal. per min Imp. gal. per min cubic ft. per min cubic ft. per min	0.000758 0.272765 0.758 0.000472 0.472	m ³ /s m ³ /hr. litre per second (L/s) m ³ /s litre per second (L/s) 1m ³ = 1kL	FORCE PER UNIT LENGTH: The SI unit is NEWTON/ PER METRE Symbol N/m	pounds-force per inch (lbf/in) pounds-force per foot (lbf/ft) ton-force per foot (ton/ft)	175.1 14.59 32.69	N/m N/m kN/m
PRESSURE: Symbol Pa The SI unit of PRESSURE or stress is the NEWTON PER SQUARE METRE which has been given the name PASCAL. 1 N/m ² = 1 Pa = 0.000145 lbf/in ² A pascal is the pressure or stress which arises when a force of one newton is applied uniformly over an area of one square metre.	lbf/in ² kip/in ² (1000 psi) lbf/ft ² kgf/cm ² bar Vertical column (head) of water. (H ₂ O at 20°C) metres of water feet of water torr (vacuum) 1mm Hg. (mercury) 1mm Hg. (mercury) atmosphere (atm) microns	6.895 6.895 47.88 98.07 100 9.79 2.984 0.133 0.133 3.386 101.325 0.133	kPa MPa Pa kPa kPa kPa kPa kPa kPa Pa	TORQUE: Symbol N.m (Moment of force) The SI unit of TORQUE is the NEWTON METRE. The NEWTON METRE is the work done when a force of one newton moves the point of application a distance of one metre in the direction of that force. 1 N.m = 1 J	Poundal-foot (pdl.ft) pound-force inch (lbf.inch) (lbf.inch) pound-force feet (lbf.ft.) (lbf.ft.) ton-force feet (tonf.ft) kilogram-force (kgf.m) (kgf.cm)	0.04214 0.113 1.152 1.356 13.83 3.037 9.807 0.09807	N.m N.m kgf.cm N.m kgf.cm kN.m N.m N.m
DENSITY: Symbol kg/m³ The SI unit of DENSITY is the KILOGRAM PER CUBIC METRE	lb/in ³ lb/ft ³ lb/yd ³	27.68 16.02 0.5933	t/m ³ kg/m ³ kg/m ³				

TEMPERATURE - CONVERSION TABLES

DEGREES FAHRENHEIT TO DEGREES CELSIUS AND VICE VERSA

-459.4 to -68			-67 to -1			0 to 69			70 to 139			140 to 209			210 to 279		
°C	↔	°F	°C	↔	°F	°C	↔	°F	°C	↔	°F	°C	↔	°F	°C	↔	°F
-273	-459.4	—	-55.0	-67	-88.6	-17.8	0	32.0	21.1	70	158.0	60.0	140	284.0	98.9	210	410.0
-268	-450	—	-54.4	-66	-86.8	-17.2	1	33.8	21.7	71	159.8	60.6	141	285.8	99.1	211	411.8
-262	-440	—	-53.9	-65	-85.0	-16.7	2	35.6	22.2	72	161.6	61.1	142	287.6	100.0	212	413.6
-257	-430	—	-53.3	-64	-83.2	-16.1	3	37.4	22.8	73	163.4	61.7	143	289.4	100.6	213	415.4
-251	-420	—	-52.8	-63	-81.4	-15.6	4	39.2	23.3	74	165.2	62.2	144	291.2	101.1	214	417.2
-246	-410	—	-52.2	-62	-79.6	-15.0	5	41.0	23.9	75	167.0	62.8	145	293.0	101.7	215	419.0
-240	-400	—	-51.7	-61	-77.8	-14.4	6	42.8	24.4	76	168.8	63.3	146	294.8	102.2	216	420.8
-234	-390	—	-51.1	-60	-76.0	-13.9	7	44.6	25.0	77	170.6	63.9	147	296.6	102.8	217	422.6
-229	-380	—	-50.6	-59	-74.2	-13.3	8	46.4	25.6	78	172.4	64.4	148	298.4	103.3	218	424.4
-223	-370	—	-50.0	-58	-72.4	-12.8	9	48.2	26.1	79	174.2	65.0	149	300.2	103.9	219	426.2
-218	-360	—	-49.4	-57	-70.6	-12.2	10	50.0	26.7	80	176.0	65.6	150	302.0	104.4	220	428.0
-212	-350	—	-48.9	-56	-68.8	-11.7	11	51.8	27.2	81	177.8	66.1	151	303.8	105.0	221	429.8
-207	-340	—	-48.3	-55	-67.0	-11.1	12	53.6	27.8	82	179.6	66.7	152	305.6	105.6	222	431.6
-201	-330	—	-47.8	-54	-65.2	-10.6	13	55.4	28.3	83	181.4	67.2	153	307.4	106.1	223	433.4
-196	-320	—	-47.2	-53	-63.4	-10.0	14	57.2	28.9	84	183.2	67.8	154	309.2	106.7	224	435.2
-190	-310	—	-46.7	-52	-61.6	-9.4	15	59.0	29.4	85	185.0	68.3	155	311.0	107.2	225	437.0
-184	-300	—	-46.1	-51	-59.8	-8.9	16	60.8	30.0	86	186.8	68.9	156	312.8	107.8	226	438.8
-179	-290	—	-45.6	-50	-58.0	-8.3	17	62.6	30.6	87	188.6	69.4	157	314.6	108.3	227	440.6
-173	-280	—	-45.0	-49	-56.2	-7.8	18	64.4	31.1	88	190.4	70.0	158	316.4	108.9	228	442.4
-169	-273	-459.4	-44.4	-48	-54.4	-7.2	19	66.2	31.7	89	192.2	70.6	159	318.2	109.4	229	444.2
-168	-270	-454	-43.9	-47	-52.6	-6.7	20	68.0	32.2	90	194.0	71.1	160	320.0	110.0	230	446.0
-162	-260	-436	-43.3	-46	-50.8	-6.1	21	69.8	32.8	91	195.8	71.7	161	321.8	110.6	231	447.8
-157	-250	-418	-42.8	-45	-49.0	-5.6	22	71.6	33.3	92	197.6	72.2	162	323.6	111.1	232	449.6
-151	-240	-400	-42.2	-44	-47.2	-5.0	23	73.4	33.9	93	199.4	72.8	163	325.4	111.7	233	451.4
-146	-230	-382	-41.7	-43	-45.4	-4.4	24	75.2	34.4	94	201.2	73.3	164	327.2	112.2	234	453.2
-140	-220	-364	-41.1	-42	-43.6	-3.9	25	77.0	35.0	95	203.0	73.9	165	329.0	112.8	235	445.0
-134	-210	-346	-40.6	-41	-41.8	-3.3	26	78.8	35.6	96	204.8	74.4	166	330.8	113.3	236	456.8
-129	-200	-328	-40.0	-40	-40.0	-2.8	27	80.6	36.1	97	206.6	75.0	167	332.6	113.9	237	458.6
-123	-190	-310	-39.4	-39	-38.2	-2.2	28	82.4	36.7	98	208.4	75.6	168	334.4	114.4	238	460.4
-118	-180	-292	-38.9	-38	-36.4	-1.7	29	84.2	37.2	99	210.2	76.1	169	336.2	115.0	239	462.2
-112	-170	-274	-38.3	-37	-34.6	-1.1	30	86.0	37.8	100	212.0	76.7	170	338.0	115.6	240	464.0
-107	-160	-256	-37.8	-36	-32.8	-0.6	31	87.8	38.3	101	213.8	77.2	171	339.8	116.1	241	465.8
-101	-150	-238	-37.2	-35	-31.0	0.0	32	89.6	38.9	102	215.6	77.8	172	341.6	116.7	242	467.6
-96	-140	-220	-36.7	-34	-29.2	0.6	33	91.4	39.4	103	217.4	78.3	173	343.4	117.2	243	469.4
-90	-130	-202	-36.1	-33	-27.4	1.1	34	93.2	40.0	104	219.2	78.9	174	345.2	117.8	244	471.2
-84	-120	-184	-35.6	-32	-25.6	1.7	35	95.0	40.6	105	221.0	79.4	175	347.0	118.3	245	473.0
-79	-110	-166	-35.0	-31	-23.8	2.2	36	96.8	41.4	106	222.8	80.0	176	348.8	118.9	246	474.8
-73.3	-100	-148	-34.4	-30	-22.0	2.8	37	98.6	41.7	107	224.6	80.6	177	350.6	119.4	247	476.6
-72.8	-99	-146.2	-33.9	-29	-20.2	3.3	38	100.4	42.2	108	226.4	81.1	178	352.4	120.0	248	478.4
-72.2	-98	-144.4	-33.3	-28	-18.4	3.9	39	102.2	42.8	109	228.2	81.7	179	354.2	120.6	249	480.2
-71.7	-97	-142.6	-32.8	-27	-16.6	4.4	40	104.0	43.3	110	230.0	82.2	180	356.0	121.1	250	482.0
-71.1	-96	-140.8	-32.2	-26	-14.8	5.0	41	105.8	43.9	111	231.8	82.9	181	357.8	121.7	251	483.8
-70.6	-95	-139.0	-31.7	-25	-13.0	5.6	42	107.6	44.4	112	233.6	83.3	182	359.6	122.2	252	485.6
-70	-94	-137.2	-31.1	-24	-11.2	6.1	43	109.4	45.0	113	235.4	83.9	183	361.4	122.8	253	487.4
-69.4	-93	-135.4	-30.6	-23	-9.4	6.7	44	111.2	45.6	114	237.2	84.4	184	363.2	123.3	254	489.2
-68.9	-92	-133.6	-30.0	-22	-7.6	7.2	45	113.0	46.1	115	239.0	85.0	185	365.0	123.9	255	491.0
-68.3	-91	-131.8	-29.4	-21	-5.8	7.8	46	114.8	46.7	116	240.8	85.6	186	366.8	124.4	256	492.8
-67.8	-90	-130.0	-28.9	-20	-4.0	8.3	47	116.6	47.2	117	242.6	86.1	187	368.6	125.0	257	494.6
-67.2	-89	-128.2	-28.3	-19	-2.2	8.9	48	118.4	47.8	118	244.4	86.7	188	370.4	125.6	258	496.4
-66.7	-88	-126.4	-27.8	-18	-0.4	9.4	49	120.2	48.3	119	246.2	87.2	189	372.2	126.1	259	498.2
-66.1	-87	-124.6	-27.2	-17	10.4	10.0	50	122.0	48.9	120	248.0	87.8	190	374.0	126.7	260	500.0
-65.6	-86	-122.8	-26.7	-16	3.2	10.6	51	123.8	49.4	121	249.8	88.3	191	375.8	127.2	261	501.8
-65	-85	-121.0	-26.1	-15	5.0	11.1	52	125.6	50.0	122	251.6	88.9	192	377.6	127.8	262	503.6
-64.4	-84	-119.2	-25.6	-14	6.8	11.7	53	127.4	50.6	123	253.4	89.4	193	379.4	128.3	263	505.4
-63.9	-83	-117.4	-25.0	-13	8.6	12.2	54	129.2	51.1	124	255.2	90.0	194	381.2	128.9	264	507.2
-63.3	-82	-115.6	-24.4	-12	10.4	12.8	55	131.0	51.7	125	257.0	90.6	195	383.0	129.4	265	509.0
-62.8	-81	-113.8	-23.9	-11	12.2	13.3	56	132.8	52.2	126	258.8	91.1	196	384.8	130.0	266	510.8
-62.2	-80	-112.0	-23.3	-10	14.0	13.9	57	134.6	52.8	127	260.6	91.7	197	386.6	130.6	267	512.6
-61.7	-79	-110.2	-22.8	-9	15.8	14.4	58	136.4	53.3	128	262.4	92.2	198	388.4	131.1	268	514.4
-61.1	-78	-108.4	-22.2	-8	17.6	15.0	59	138.2	53.9	129	264.2	92.8	199	390.2	131.7	269	516.2
-60.6	-77	-106.6	-21.7	-7	19.4	15.6	60	140.0	54.5	130	266.0	93.3	200	392.0	132.2	270	518.0
-60	-76	-104.8	-21.1	-6	21.2	16.1	61	141.8	55.0	131	267.8	93.9	201	393.8	132.8	271	519.8
-59.4	-75	-103.0	-20.6	-5	23.0	16.7	62	143.6	55.6	132	269.6	94.4	202	395.6	133.3	272	521.6
-58.9	-74	-101.2	-20.0	-4	24.8	17.2	63	145.4	56.1	133	271.4	95.0	203	397.4	133.9	273	523.4
-58.3	-73	-99.4	-19.4	-3	26.6	17.8	64	147.2	56.7	134	273.2	95.6	204	399.2	134.4	274	525.2
-57.8	-72	-97.6	-18.9	-2	28.4	18.3	65	149.0	57.2	135	275.0	96.1	205	401.0	135.0	275	527.0
-57.2	-71	-95.8	-18.3	-1	30.2	18.9	66	150.8	57.8	136	276.8	96.7	206	402.8	135.6	276	528.8
-56.7	-70	-94.0				19.4	67	152.6	58.3	137	278.6	97.2	207	404.6	136.1	277	530.6
-56.1	-69	-92.2				20.0	68	154.4	58.9	138	280.4	97.8	208	406.4	136.7	278	532.4
-55.6	-68	-90.4				20.6	69	156.2	59.4	139	282.2	98.3	209	408.2	137.2	279	534.2

TO USE: Locate central value to be converted. Read left column for equivalent temperature in °C.

Read right column for equivalent temperature in °F. Basis: °C = (°F - 32) x 5/9 °F = (°C x 9/5) + 32

PRESSURE - VACUUM CONVERSION TABLES

VACUUM "Hg : -bar : -kPa						PRESSURE psi : bar : kPa								
"Hg to -bar to -kPa			-bar to "Hg to -kPa			psi to bar & kPa			bar to psi & kPa			kPa to bar & psi		
"Hg	-bar	-kPa	-bar	"Hg	-kPa	psi	bar	kPa	bar	psi	kPa	kPa	bar	psi
0.0	0.000	0.00	0.000	0.000	0.0	0.0	0.00	0.00	0.0	0.0	0	0	0.00	0.00
1.0	-0.034	-3.39	-0.01	0.295	-1.0	1.0	0.07	6.89	0.1	1.5	10	1	0.01	0.15
1.5	-0.051	-5.08	-0.02	0.591	-2.0	1.5	0.10	10.34	0.2	2.9	20	2	0.02	0.29
2.0	-0.068	-6.77	-0.03	0.886	-3.0	2.0	0.14	13.79	0.3	4.4	30	3	0.03	0.44
2.5	-0.085	-8.47	-0.04	1.18	-4.0	2.5	0.17	17.24	0.4	5.8	40	4	0.04	0.58
3.0	-0.102	-10.16	-0.05	1.48	-5.0	3.0	0.21	20.68	0.5	7.3	50	5	0.05	0.73
3.5	-0.119	-11.85	-0.06	1.77	-6.0	3.5	0.24	24.13	0.6	8.7	60	6	0.06	0.87
4.0	-0.135	-13.55	-0.07	2.07	-7.0	4.0	0.28	27.58	0.7	10.2	70	7	0.07	1.02
4.5	-0.152	-15.24	-0.08	2.36	-8.0	4.5	0.31	31.03	0.8	11.6	80	8	0.08	1.16
5.0	-0.169	-16.93	-0.09	2.66	-9.0	5.0	0.35	34.47	0.9	13.1	90	9	0.09	1.31
5.5	-0.186	-18.63	-0.10	2.95	-10.0	5.5	0.38	37.92	1.0	14.5	100	10	0.10	1.45
6.0	-0.203	-20.32	-0.12	3.54	-12.0	6.0	0.41	41.37	1.1	16.0	110	15	0.15	2.18
6.5	-0.220	-22.01	-0.14	4.13	-14.0	6.5	0.45	44.82	1.2	17.4	120	20	0.20	2.90
7.0	-0.237	-23.70	-0.16	4.72	-16.0	7.0	0.48	48.26	1.3	18.9	130	25	0.25	3.63
7.5	-0.254	-25.40	-0.18	5.32	-18.0	7.5	0.52	51.71	1.4	20.3	140	30	0.30	4.35
8.0	-0.271	-27.09	-0.20	5.91	-20.0	8.0	0.55	55.16	1.5	21.8	150	35	0.35	5.08
8.5	-0.288	-28.78	-0.22	6.50	-22.0	8.5	0.59	58.61	1.6	23.2	160	40	0.40	5.80
9.0	-0.305	-30.48	-0.24	7.09	-24.0	9.0	0.62	62.05	1.7	24.7	170	45	0.45	6.53
9.5	-0.322	-32.17	-0.26	7.68	-26.0	9.5	0.66	65.50	1.8	26.1	180	50	0.50	7.25
10.0	-0.339	-33.86	-0.28	8.27	-28.0	10.0	0.69	68.95	1.9	27.6	190	55	0.55	7.98
10.5	-0.356	-35.56	-0.30	8.86	-30.0	14.5	1.00	100.0	2.0	29.0	200	60	0.60	8.70
11.0	-0.373	-37.25	-0.32	9.45	-32.0	15.0	1.03	103.4	2.1	30.5	210	65	0.65	9.43
11.5	-0.389	-38.94	-0.34	10.04	-34.0	20.0	1.38	137.9	2.2	31.9	220	70	0.70	10.15
12.0	-0.406	-40.64	-0.36	10.63	-36.0	25.0	1.72	172.4	2.3	33.4	230	75	0.75	10.88
12.5	-0.423	-42.33	-0.38	11.22	-38.0	30.0	2.07	206.8	2.4	34.8	240	80	0.80	11.60
13.0	-0.440	-44.02	-0.400	11.81	-40.0	35.0	2.41	241.3	2.5	36.3	250	85	0.85	12.33
13.5	-0.457	-45.72	-0.425	12.55	-42.5	40.0	2.76	275.8	2.6	37.7	260	90	0.90	13.05
14.0	-0.474	-47.41	-0.450	13.29	-45.0	45.0	3.10	310.3	2.7	39.2	270	95	0.95	13.78
14.5	-0.491	-49.10	-0.475	14.03	-47.5	50.0	3.45	344.7	2.8	40.6	280	100	1.00	14.50
15.0	-0.508	-50.80	-0.500	14.77	-50.0	55.0	3.79	379.2	2.9	42.1	290	125	1.25	18.13
15.5	-0.525	-52.49	-0.525	15.50	-52.5	60.0	4.14	413.7	3.0	43.5	300	150	1.50	21.76
16.0	-0.542	-54.18	-0.550	16.24	-55.0	65.0	4.48	448.2	3.5	50.8	350	175	1.75	25.38
16.5	-0.559	-55.88	-0.575	16.98	-57.5	70.0	4.83	482.6	4.0	58.0	400	200	2.00	29.00
17.0	-0.576	-57.57	-0.600	17.72	-60.0	75.0	5.17	517.1	4.5	65.3	450	225	2.25	32.63
17.5	-0.593	-59.26	-0.625	18.46	-62.5	80.0	5.52	551.6	5.0	72.5	500	250	2.50	36.26
18.0	-0.610	-60.95	-0.650	19.19	-65.0	85.0	5.86	586.1	5.5	79.8	550	275	2.75	39.89
18.5	-0.626	-62.65	-0.675	19.93	-67.5	90.0	6.21	620.5	6.0	87.0	600	300	3.0	43.51
19.0	-0.643	-64.34	-0.700	20.67	-70.0	95.0	6.55	655.0	7.0	101.5	700	350	3.5	50.76
19.5	-0.660	-66.03	-0.725	21.41	-72.5	100.0	6.89	689.5	8.0	116.0	800	400	4.0	58.02
20.0	-0.677	-67.73	-0.750	22.15	-75.0	110.0	7.58	758.4	9.0	130.5	900	450	4.5	65.27
20.5	-0.694	-69.42	-0.775	22.89	-77.5	120.0	8.27	827.4	10.0	145.0	1000	500	5.0	72.52
21.0	-0.711	-71.11	-0.800	23.62	-80.0	130.0	8.96	896.3	11.0	159.5	1100	550	5.5	79.77
21.5	-0.728	-72.81	-0.825	24.36	-82.5	140.0	9.65	965.3	12.0	174.0	1200	600	6.0	87.02
22.0	-0.745	-74.50	-0.850	25.10	-85.0	150.0	10.34	1034.2	13.0	185.5	1300	650	6.5	94.27
22.5	-0.762	-76.19	-0.875	25.84	-87.5	160.0	11.03	1103.2	14.0	203.1	1400	700	7.0	101.5
23.0	-0.779	-77.89	-0.900	26.58	-90.0	170.0	11.72	1172.1	15.0	217.6	1500	750	7.5	108.8
23.5	-0.796	-79.58	-0.925	27.32	-92.5	180.0	12.41	1241.1	16.0	232.1	1600	800	8.0	116.0
24.0	-0.813	-81.27	-0.950	28.05	-95.0	190.0	13.10	1310.0	17.0	246.6	1700	850	8.5	123.3
24.5	-0.83	-82.97	-0.975	28.79	-97.5	200.0	13.79	1379.0	18.0	261.1	1800	990	9.0	130.5
25.0	-0.947	-84.66	-1.000	29.53	-100.0	225.0	15.51	1551.3	19.0	275.6	1900	950	9.5	137.8
25.5	-0.864	-86.35	Vacuum Conversions based on the following Formulae 1" Hg = 3.386,383,7 kPa 1" Hg = 0.33,863,837 bar 1 bar = 100 kPa 1 bar = 29,530,026,38" Hg 1 kPa = .01 bar 1 kPa = 0.295,300,263,8 " Hg			250.0	17.24	1723.7	20.0	290.1	2000	1000	10.0	145.0
26.0	-0.880	-88.05				275.0	18.96	1896.1	21.0	304.6	2100	1250	12.5	181.3
26.5	-0.897	-89.74				300.0	20.68	2068.4	22.0	319.1	2200	1500	15.0	217.6
27.0	-0.914	-91.43				325.0	22.41	2240.8	23.0	333.6	2300	1750	17.5	253.8
27.5	-0.931	-93.13				350.0	24.13	2413.2	24.0	348.1	2400	2000	20.0	290.1
28.0	-0.948	-94.82				375.0	25.85	2585.5	25.0	362.6	2500	2250	22.5	326.3
28.5	-0.965	-96.51				400.0	27.58	2757.9	26.0	377.1	2600	2500	25.0	362.6
29.0	-0.982	-98.21				425.0	29.30	2930.3	27.0	391.6	2700	2750	27.5	398.8
29.5	-0.999	-99.90				450.0	31.03	3102.6	28.0	406.1	2800	3000	30.0	435.1
29.53	-1.000	-100.00				475.0	32.75	3275.0	29.0	420.6	2900	3250	32.5	471.4
						500.0	34.47	3447.4	30.0	435.1	3000	3500	35.0	507.6
						1 psi = .06895 1 psi = 6.8948kPa			1 bar = 14.5038 psi 1 bar = 100kPa			1 kPa = .14504 psi 1 kPa = .01 bar		

HEAT FLOW CAPACITY TABLES

WATTS : BTU/HR : TONS (REFRIG.) : KCAL/HR

Watts to: BTU/hr, Tons, kcal/hr				BTU/hr to: Watts, Tons, kcal/hr				Tons to: Watts, BTU/hr, kcal/hr				kcal/hr to: Watts, BTU/hr, Tons			
Watts	BTU/hr	Tons	kcal/hr	BTU/hr	Watts	Tons	kcal/hr	Tons	Watts	BTU/hr	kcal/hr	kcal/hr	Watts	BTU/hr	Tons
300	1024	0.085	258	1000	293	0.083	252	0.10	352	1200	302	300	349	1190	0.099
400	1365	0.114	344	2000	586	0.167	504	0.20	703	2400	605	400	465	1587	0.132
500	1706	0.142	430	3000	879	0.250	756	0.25	879	3000	756	500	582	1984	0.165
600	2047	0.171	516	4000	1172	0.333	1008	0.30	1055	3600	907	600	698	2381	0.198
700	2388	0.199	602	5000	1465	0.417	1260	0.40	1407	4800	1210	700	814	2778	0.231
800	2730	0.227	688	6000	1758	0.500	1512	0.50	1758	6000	1512	800	930	3175	0.265
900	3071	0.256	774	7000	2051	0.583	1764	0.60	2110	7200	1814	900	1047	3571	0.298
1000	3412	0.284	860	8000	2345	0.667	2016	0.70	2462	8400	2117	1000	1163	3968	0.331
1500	5118	0.427	1290	9000	2638	0.750	2268	0.75	2638	9000	2268	1500	1745	5952	0.496
2000	6824	0.569	1720	10000	2931	0.833	2520	0.80	2813	9600	2417	2000	2326	7937	0.661
2500	8530	0.711	2150	11000	3224	0.917	2772	0.90	3165	10800	2722	2500	2908	9921	0.830
3000	10236	0.853	2580	12000	3517	1.00	3024	1.00	3517	12000	3024	3000	3489	11905	0.992
3500	11942	0.995	3009	13000	3810	1.08	3276	1.25	4396	15000	3780	3500	4071	13889	1.16
4000	13649	1.14	3439	14000	4103	1.17	3528	1.50	5275	18000	4536	4000	4652	15873	1.32
4500	15355	1.28	3869	15000	4396	1.25	3780	1.75	6154	21000	5292	4500	5234	17857	1.49
5000	17061	1.42	4299	16000	4689	1.33	4032	2.0	7034	24000	6048	5000	5815	19842	1.65
5500	18767	1.56	4729	17000	4982	1.42	4284	2.5	8792	30000	7560	5500	6397	21826	1.82
6000	20473	1.71	5159	18000	5275	1.50	4536	3	10551	36000	9072	6000	6978	23810	1.98
6500	22179	1.85	5589	19000	5568	1.58	4788	4	14067	48000	12096	6500	7560	25794	2.15
7000	23885	1.99	6019	20000	5861	1.67	5040	5	17584	60000	15120	7000	8141	27778	2.31
7500	25591	2.13	6449	30000	8792	2.50	7560	6	21101	72000	18144	7500	8723	29762	2.48
8000	27297	2.27	6879	40000	11723	3.33	10080	7	24618	84000	21168	8000	9304	31747	2.65
8500	29003	2.42	7309	50000	14654	4.17	12600	8	28135	96000	24192	8500	9886	33731	2.81
9000	30709	2.56	7739	60000	17584	5.00	15120	9	31652	108000	27216	9000	10467	35715	2.98
9500	32415	2.7	8169	70000	20515	5.83	17640	10	35169	120000	30239	9500	11049	37699	3.14
10000	34121	2.84	8598	80000	23446	6.67	20160	11	38685	132000	33263	10000	11630	39683	3.31
15000	51182	4.27	12898	90000	26376	7.50	22680	12	42202	144000	36287	15000	17445	59525	4.96
20000	68243	5.69	17197	100000	29307	8.33	25200	13	45719	156000	39311	20000	23260	79366	6.61
25000	85304	7.11	21496	110000	32238	9.17	27720	14	49236	168000	42335	25000	29075	99207	8.27
30000	102364	8.53	25795	120000	35169	10.0	30239	15	52752	180000	45359	30000	34890	119050	9.92
35000	119425	9.95	30095	130000	38099	10.8	32759	16	56270	192000	48383	35000	40705	138891	11.6
40000	136486	11.4	34394	140000	41030	11.7	35279	17	59786	204000	51407	40000	46520	158733	13.2
45000	153546	12.8	38693	150000	43961	12.5	37799	18	63303	216000	54431	45000	52335	178574	14.9
50000	170607	14.2	42992	160000	46891	13.3	40319	19	66820	228000	57455	50000	58150	198416	16.5
55000	187668	15.6	47291	170000	49822	14.2	42839	20	70337	240000	60479	55000	63965	218258	18.2
60000	204728	17.1	51591	180000	52753	15.0	45359	21	73854	252000	63503	60000	69780	238099	19.8
65000	221789	18.5	55890	190000	55684	15.8	47879	22	77371	264000	66527	65000	75595	257941	21.5
70000	238850	19.9	60189	200000	58614	16.7	50399	23	80888	276000	69551	70000	81410	277782	23.1
75000	255911	21.3	64488	210000	61545	17.5	52919	24	84404	288000	72575	75000	87225	297624	24.8
80000	272971	22.7	68788	220000	64476	18.3	55439	25	87921	300000	75599	80000	93040	317466	26.5
85000	290032	24.2	73087	230000	67406	19.2	57959	26	91438	312000	78623	85000	98855	337307	28.1
90000	307093	25.6	77386	240000	70337	20.0	60479	27	94955	324000	81647	90000	104670	357149	29.8
95000	324153	27	81685	250000	73268	20.8	62999	28	98472	336000	84671	95000	110485	376990	31.4
100000	341214	28.4	85985	260000	76198	21.7	65519	29	101989	348000	87695	100000	116300	396832	33.1
105000	358275	29.9	90284	270000	79129	22.5	68039	30	105506	360000	90718	105000	122115	416674	34.7
110000	375336	31.3	94583	280000	82060	23.3	70559	31	109022	372000	93742	110000	127930	436515	36.4
115000	392396	32.7	98882	290000	84991	24.2	73079	32	112539	384000	96766	115000	133745	456357	38.0
120000	409457	34.1	103181	300000	87921	25.0	75599	33	116056	396000	99790	120000	139560	476198	39.7
125000	426518	35.5	107481	325000	95248	27.1	81899	34	119573	408000	102814	125000	145375	496040	41.3
130000	443578	37	111780	350000	102575	29.2	88199	35	123090	420000	105838	130000	151190	515882	43.0
135000	460639	38.4	116079	375000	109902	31.2	94498	36	126607	432000	108862	135000	157005	535723	44.6
140000	477700	39.8	120378	400000	117228	33.3	100798	37	130124	444000	111886	140000	162820	555565	46.3
145000	494761	41.2	124678	425000	124555	35.4	107098	38	133640	456000	114910	145000	168635	575406	48.0
150000	511821	42.7	128977	450000	131882	37.5	113398	39	137157	468000	117934	150000	174450	595248	49.6
155000	528882	44.1	133276	475000	139209	39.6	119698	40	140674	480000	120958	155000	180265	615090	51.3
160000	545943	45.5	137575	500000	146536	41.7	125998	41	144191	492000	123982	160000	186080	634931	52.9
165000	563003	46.9	141874	525000	153862	43.7	132298	42	147708	504000	127006	165000	191895	654773	54.6
170000	580064	48.3	146174	550000	161189	45.8	138598	43	151225	516000	130030	170000	197710	674615	56.2
175000	597125	49.8	150473	575000	168516	47.9	144898	44	154742	528000	133054	175000	203525	694456	57.9
180000	614185	51.2	154772	600000	175843	50.0	151197	45	158258	540000	136078	180000	209340	714298	59.5
185000	631246	52.6	159071	650000	190496	54.2	163797	46	161775	552000	139102	185000	215155	734139	61.2
190000	648307	54	163371	700000	205150	58.3	176397	47	165292	564000	142126	190000	220970	753981	62.8
195000	665368	55.4	167670	750000	219803	62.5	188997	48	168809	576000	145150	195000	226785	773823	64.5
200000															

PRODUCT STORAGE DATA

SI UNITS

Product Load

The product load is composed of any heat gain occurring due to the product in the refrigerated space. The load may arise from a product placed in the refrigerated space at a temperature higher than the storage temperature, from a chilling or freezing process, or from the heat of respiration of perishable products. The total product load is the sum of the various types of product load which may apply to the particular application.

Types of Product Load

Specific Heat (kJ/kg°C)

Specific Heat of any substance is the quantity of energy in kilojoules required to change the temperature of a 1 kg mass 1°C.

Latent Heat of Fusion (kJ/kg)

Latent Heat of Fusion is the amount of heat removal required to freeze (i.e. change its state) 1 kg of product.

Heat of Respiration (W/kg)

Fruits and vegetables, even though they have been removed from the vine or tree on which they grew, are still living organisms. Their life processes continue for some time after being harvested, and as a result they give off heat. Certain other food products also undergo continuing chemical reactions which produce heat. Meats and fish have no further life processes and do not generate any further heat. The amount of heat given off is dependent on the specific product and its storage temperature. Note that the heat of respiration varies with the storage temperature.

The following Table lists various food products with pertinent Heat of Respiration rates.

HEAT OF RESPIRATION - Watts/kg									
PRODUCT	STORAGE TEMPERATURE				PRODUCT	STORAGE TEMPERATURE			
	0°C	5°C	10°C	15°C		0°C	5°C	10°C	15°C
APPLES	0.012	0.28	0.46	0.64	LEMONS	0.009	0.015	32	0.047
APRICOTS	.016/.017	.019/.027	.033/.056	.063/.102	LETTUCE	.027/.050	.040/.059	.081/.119	.114/.121
ARTICHOKES - Globe	.067/.133	.095/.178	.162/.292	.229/.430	MELONS	—	.026/.030	.046/.060	.100/.114
ASPARAGUS	.081/.238	.162/.405	.318/.904	.472/.971	MUSHROOMS	0.13	0.211	0.297	0.4
AVOCADOS	—	—	.120/.380	.183/.466	ONIONS	0.009	0.01	0.021	0.033
BANANAS	—	—	0.095	0.165	ORANGES	0.009	0.019	0.036	0.062
BEANS - Green	—	.101/.104	.162/.173	.252/.276	PARSLEY	.098/.137	.196/.252	.389/.487	.427/.662
BEANS - Lima	.052/.104	.086/.181	.250/.320	.420/.530	PARSNIPS	.034/.046	.042/.052	.061/.078	.096/.127
BEETROOT	.016/.021	.027/.028	.035/.040	.050/.069	PEACHES	0.011	0.019	0.047	0.102
BLACKBERRIES	.047/.068	.085/.136	.155/.281	.209/.432	PEARS	0.014	0.031	0.048	0.103
BROCCOLI	.055/.064	.102/.475	.300/.705	.515/1.01	PEAS - Fresh	.090/.139	.163/.227	.330/.400	.530/.600
BRUSSEL SPROUTS	.047/.071	.096/.144	.187/.251	.283/.317	PINEAPPLES - Ripe	—	—	0.022	0.054
CABBAGE	.028/.040	.052/.064	.086/.098	.159/.170	PLUMS	.006/.009	.012/.027	.027/.034	.035/.037
CANTALOUPE	—	.026/.030	.046/.060	.100/.114	POTATOES	—	.018/.020	.020/.030	.020/.035
CARROTS	0.046	0.058	0.093	0.117	POTATOES - Sweet	—	—	0.065	0.1
CAULIFLOWER	0.053	0.061	0.100	0.137	PUMPKIN	—	0.045	0.106	0.237
CELERY	0.021	0.033	0.06	0.111	QUINCES	0.012	0.019	0.04	0.07
CHEESE	—	0.035	—	—	RADISH	.043/.051	.057/.062	.092/.109	.208/.231
CHERRIES	.012/.016	.028/.042	.051/.085	.074/.133	RASPBERRIES	0.06	0.1	0.14	0.281
CORN - Sweet	0.126	0.23	0.332	0.483	RHUBARB	.024/.039	.033/.054	.060/.095	.092/.135
CUCUMBERS	—	—	.060/.086	.071/.098	SPINACH-SILVERBEET	—	0.136	0.328	0.531
GRAPES	0.008	0.016	0.027	0.047	STRAWBERRIES	.036/.052	.049/.098	.146/.281	.211/.274
HONEY	—	0.012	—	—	TOMATOES - Ripe	—	—	0.055	0.079

Where two values are shown -

Use lower value for products already at or near the storage temperature. Use higher value for fruits subject to ripening at storage temperatures of 10°C or higher, and for other products where cooling down to storage temperature is required.

Product Load Calculations - SI Units

- (1) Sensible Heat Removed Above Freezing Point =
Product Mass (kg) x Specific Heat Above Freezing Point (kJ/kg°C) x
Temperature Reduction Above Freezing Point (°C) = kJ
- (2) Heat of Respiration =
Product Mass (kg) x Respiration Rate (Watts/kg) = Watts
- (3) Latent Heat of Freezing =
Product Mass (kg) x Latent Heat of Product (kJ/kg) = kJ
- (4) Sensible Heat Removed Below Freezing Point =
Product Mass (kg) x Specific Heat Below Freezing Point (kJ/kg°C) x
Temperature Reduction Below Freezing Point (°C) = kJ

(5) Total Product Load (Watts)

- (a) To Cool (i.e. Above Freezing Point)

$$(1) = \frac{\text{kJ} \times 1000}{\text{Hrs} \times 3600 \text{ (secs)}} + (2) = \text{Watts}$$

- (b) To Freeze

$$(1) + (3) + (4) = \frac{\text{kJ} \times 1000}{\text{Hrs} \times 3600 \text{ (secs)}} = \text{Watts}$$

PRODUCT STORAGE DATA (cont'd)

PRODUCT	Recommended Storage Temperature °C	Average Storage Period	Relative Humidity %	Specific Heat kJ/kg°C		Latent Heat kJ/kg	Maximum Air Velocity m/s	Average Freezing Temp. °C	Water Content %
				Above Freezing	Below Freezing				
APPLES – Fresh	-1 to 0	2 to 6 Mths.	85 to 88	3.78	1.9	281	0.45	-1.5	84
APRICOTS	-5 to +1.5	1 to 2 Wks.	80 to 85	3.8	1.91	285	0.45	-1.5	85
ARTICHOKES – Globe	-5 to +1	1 to 2 Wks.	90 to 95	3.78	1.9	281	0.45	-1.4	84
– Jerusalem	-5 to +1	2 to 5 Mths.	90 to 95	3.68	1.85	268	0.45	-2.6	80
ASPARAGUS	0 to +2	2 to 3 Wks.	85 to 90	4	2.01	312	0.45	-1.2	93
AVOCADOS	+8 to +10	2 to 4 Wks.	85 to 90	3.3	1.66	218	0.45	-1.2	65
BACON – Fresh	-1 to -2	1 to 2 Wks.	80 to 90	2.15	1.08	64	0.45	-3.1	19
– Frozen	-23 to -15	4 to 6 Mths.	90 to 95	2.15	1.08	64	0.45	-1.7	19
BANANAS	+13 to +15.5	1 to 2 Wks.	85 to 95	3.55	1.79	251	0.45	-1.5	75
BEANS – Green	+4 to +7	7 to 10 Days	85 to 90	3.9	1.96	298	0.45	-1	67
– Lima	+1 to +7	7 Days	85 to 90	3.35	1.68	224	0.45	-1	67
BEEF – Fresh Cut	-1 to 0	1 to 6 Wks.	85 to 90	3.14	1.67	228	0.3	-1.8	72
– Fresh Sides	-1 to 0	1 to 6 Wks.	85 to 88	3.14	1.67	228	0.5	-1.7	72
– Frozen	-23 to -18	9 to 12 Mths.	90 to 95	3.14	1.67	228	0.35	-1.7	72
BEER	0 to +5	Up to 6 Mths.	65 to 70	3.8	1.9	300	0.75	-2	91
BEETROOT – Bunched	0 to +2	10 to 14 Days	85 to 95	3.88	1.95	295	0.45	-0.7	88
BLACKBERRIES	-6 to 0	7 Days	85 to 90	3.8	1.91	285	0.45	-0.8	85
BREAD – Frozen Packaged	-20 to -10	Up to 3 Mths.	85	2.93	1.43	114	0.45	-6	32 to 37
BROCCOLI	0 to 1.75	7 to 10 Days	90 to 95	3.93	1.97	302	0.35	-1.2	90
BRUSSELS SPROUTS	0 to 1.75	3 to 4 Wks.	90 to 95	3.8	1.91	285	0.4	-0.9	85
BUTTER	+1 to +4	1 to 2 Wks.	75 to 85	2.07	1.04	54	0.75	-1.2	16
CABBAGE	0 to +3	Up to 6 Wks.	90 to 95	3.98	2	308	0.4	-0.6	92
CANTALOUPE	+4 to +10	2 to 4 Wks.	85 to 90	3.98	2	308	0.75	-1.2	92
CARROTS – Bunched	0 to +4	1 to 2 Wks.	85 to 90	3.6	1.88	293	0.4	-1.1	88
CAULIFLOWER	0 to +3	Up to 3 Wks.	85 to 90	3.98	2	308	0.35	-0.9	92
CELERY	-5 to 0	2 to 4 Mths.	90 to 95	4.03	2.02	315	0.45	-1.1	94
CHEESE – Cheddar	0 to +4.5	Up to 4 Mths.	75 to 85	2.7	1.5	184	0.45	-8	65
– Cream	0 to +5	Up to 2 Wks.	80 to 85	2.7	1.6	265	0.45	-8.5	79
– Swiss	0 to +5	Up to 10 Wks.	75 to 80	2.7	1.6	265	0.45	-8.5	79
CHERRIES	-5 to 0	10 to 14 Days	80 to 85	3.68	1.85	268	0.45	-3.3	80
CORN – Sweet	0	4 to 8 Days	85 to 90	3.53	1.77	248	0.4	-1	74
CREAM	+4 to +10	2 to 4 Wks.	85 to 90	3.98	2	308	0.75	-1.4	93
CUCUMBER	+7 to +10	10 to 14 Days	80 to 85	4.08	2.05	322	0.45	-0.5	96
EGGS – Fresh	0 to +3	Up to 6 Wks.	80 to 85	3.53	1.77	247	0.4	-2	74
– Frozen	-20 to -18	1 Year +	60 to 70	3.18	1.88	232	1.25	-2.2	74
EGG PLANTS	+5 to +10	Up to 10 Days	85 to 90	3.8	2	308	0.45	-1.1	93
FISH – Fresh	-4 to -1	5 to 15 Days	90 to 95	3.3	1.8	245	0.45	-1.8	62 to 85
– Frozen	-29 to -15	6 to 12 Mths.	90 to 95	3.3	1.8	245	1.25	-2.1	62 to 85
FLOWERS – General	+5 to +4.5	3 to 14 Days	85 to 90	3.85	–	–	0.3	0	–
GRAPES	0 to +5	Up to 4 Wks.	85 to 90	3.73	1.87	275	0.45	-3	82
HAM – Fresh	0 to +4	Up to 12 Days	85 to 90	2.51	1.46	167	0.4	-2.2	50
– Smoked	+5 to +15	Up to 12 Mths.	55 to 65	2.26	1.38	134	0.45	–	40
– Frozen	-23 to -15	6 to 8 Mths.	90 to 95	2.51	1.46	167	0.45	-2.2	50
HONEY	+1 to +5	Up to 6 Mths.	75	2.1	1.68	57	0.45	–	17
ICE CREAM	-30 to -20	2 to 10 Wks.	85	3.25	1.88	224	0.45	–	67
LAMB – Fresh	0 to -3	5 to 10 Days	85 to 90	3.2	1.61	218	0.4	-2	60 to 65
– Frozen	-23 to -15	Up to 10 Mths.	80 to 90	3.2	1.61	218	0.45	-2	60 to 65
LEMONS	0	1 to 6 Mths.	85 to 90	3.9	1.96	298	0.45	-2	89
LETTUCE	0 to 1.1	2 to 3 Wks.	90 to 95	4.06	2.04	318	0.4	-0.3	95
LOBSTER – Fresh	0 to +2	Up to 6 Days	90 to 95	3.65	1.84	265	0.4	-2.2	85
MARGARINE – Vegetable	+5 to +10	Up to 3 Mths.	75 to 80	2.01	1.1	50	0.75	–	15
MELONS	+4 to +10	2 to 4 Wks.	80 to 90	4	2.01	312	0.45	-1.4	93
MILK – Pasteurised	0 to +4	Up to 7 Days	80 to 85	3.77	2.05	288	1.25	-1	87
– Condensed	+2 to +10	Up to 6 Mths.	–	2.35	1.18	90	–	-15	27
– Powdered	+5 to +15	Up to 6 Mths.	60 to 65	1.75	0.88	10	–	–	3
MUSHROOMS	0	3 to 4 Days	85 to 90	3.95	1.99	305	0.4	-1	91
ONIONS	0 to +2.25	Up to 6 Mths.	65 to 75	3.88	1.95	295	0.5	-1	89
ORANGES	0 to +1	8 to 10 Wks.	85 to 90	3.85	1.94	292	0.45	-2	87
OYSTERS – Shell	0 to +2	Up to 2 Wks.	90 to 95	3.68	1.85	268	0.4	-2.8	80
PARSLEY	+2 to +5	Up to 2 Wks.	80 to 85	3.8	1.91	285	0.4	-0.9	85
PARSNIPS	0 to 2.25	2 to 4 Mths.	90 to 95	3.65	1.84	265	0.35	-1.4	79
PEACHES – Fresh	-5 to 0	2 to 4 Wks.	80 to 85	3.9	1.96	298	0.4	-1	89
PEARS – Fresh	+1 to +4	Up to 3 Mths.	85 to 90	3.75	1.89	278	0.4	-2	84
PEAS – Fresh	0	1 to 3 Wks.	85 to 90	3.53	1.77	248	0.45	-1.1	74
– Frozen Packaged	-25 to -15	Up to 6 Mths.	90	3.53	1.77	248	0.45	-1.1	74
PINEAPPLES – Ripe	+5 to +7	2 to 4 Wks.	85 to 90	3.8	1.91	285	0.5	-1	85
PLUMS	-5 to +1	3 to 6 Wks.	80 to 85	3.83	1.92	288	0.45	-1.75	86
PORK – Fresh	0 to +4	Up to 10 Days	85 to 90	2.6	1.31	124	0.45	-2.2	37
– Frozen	-23 to -15	Up to 4 Mths.	85 to 95	2.6	1.31	124	0.45	-2.2	37
POTATOES	+2 to +10	Up to 6 Mths.	85 to 90	3.83	1.82	261	0.5	-1.4	78

(cont'd)

PRODUCT STORAGE DATA (cont'd)

PRODUCT	Recommended Storage Temperature °C	Average Storage Period	Relative Humidity %	Specific Heat kJ/kg°C		Latent Heat kJ/kg	Maximum Air Velocity m/s	Average Freezing Temp. °C	Water Content %
				Above Freezing	Below Freezing				
POTATOES – Sweet	+10 to +15	4 to 6 Mths.	80 to 85	3.4	1.71	231	0.5	-1.7	69
POULTRY – Fresh Dressed	0	1 Week	85 to 90	3.53	1.77	248	0.4	-2.5	74
– Frozen Dressed	-30 to -10	Up to 10 Mths.	80 to 90	3.53	1.88	248	0.45	-2.5	74
PUMPKINS	+1 to +6	Up to 6 Mths.	80 to 85	3.95	1.99	305	0.45	-0.9	91
QUINCES	-5 to 0	2 to 3 Mths.	80 to 85	3.8	1.91	285	0.45	-2	85
RADISHES	0	3 to 4 Wks.	95	4.06	2.04	318	0.45	-1.1	95
RASPBERRIES	-5 to 0	1 Week	85 to 90	3.7	1.86	271	0.45	-1	82
RHUBARB	0	2 to 4 Wks.	95	4.06	2.04	318	0.45	-1.5	95
SAUSAGE – Fresh	0 to +3	1 Week	85 to 90	3.3	2.3	242	0.45	-2	72
SPINACH-SILVERBEET	0	10 to 14 Days	90 to 95	4	2.01	312	0.45	-1	90
STRAWBERRIES	-5 to +2	5 to 7 Days	75 to 85	3.93	1.97	302	0.45	-1.1	90
TOMATOES – Ripe	+4 to +10	7 to 10 Days	85 to 90	4.03	2.02	315	0.45	-0.8	94
TURKEY – Fresh Dressed	-2 to -1	10 Days	85 to 90	3.28	1.68	214	0.4	-2.5	74
– Frozen Dressed	-25 to -15	Up to 6 Mths.	90 to 95	3.28	1.65	214	0.5	-2.5	74
VEAL – Fresh	0 to 1.1	Up to 10 Days	85 to 90	3.33	1.67	221	0.40	-1.7	66

REFRIGERANT - PIPING SELECTION

LINE PRESSURE DROP CHARTS FOR REFRIGERANTS R404A, R22, R134a & R410A

LINE VELOCITY CHARTS FOR REFRIGERANTS R404A & R134a

INTRODUCTION

Refrigeration piping involves extremely complex relationships in the flow of refrigerant and oil. The flow of any fluid, whether it be gas or liquid involves inter-relationship of velocity, pressure, temperature, friction, density, viscosity and the work required to cause the flow.

Because of its changing nature, such flow is just too complex to be governed by a single mathematical equation, and practically the entire working knowledge of refrigeration piping is based on practical experience and test data. In general, pressure drop in refrigerant lines tends to decrease capacity and increase power requirements, and excessive pressure drops should be avoided. It should be realised that pressure drop is not the only criterion that must be considered in sizing refrigerant lines, and that often refrigerant velocities for oil return and noise suppression, rather than pressure drop are the determining factor in system design.

A small amount of oil is always circulating with the refrigerant. Refrigeration oils are soluble in liquid refrigerant but oil and refrigerant vapour, however, DO NOT mix readily and the oil can only be circulated properly if the mass velocity of the refrigerant vapour is great enough to sweep the oil along.

PRESSURE DROP CHARTS

Figures 1, 2, 3 and 4 detail Pressure Drops for refrigerants R404A, R22, R134a and R410A. Pressure Drops in the discharge line, suction line and liquid line can be determined for a range of condensing temperatures.

VELOCITY CHARTS

Figures 5 and 6 detail Line Velocities for refrigerants R404A and R134a.

EQUIVALENT LENGTH OF PIPE – Table 1

Each valve, fitting and bend in a refrigerant line contributes to the friction pressure drop because of its interruption or restriction to smooth flow.

Normal practice is to establish an equivalent length of straight tubing for each fitting. This allows the consideration of the entire length, including fittings, as an equivalent length of straight pipe. Table 1 provides equivalent length in metres of straight pipe for valves and fittings.

Items such as solenoid valves and pressure regulating valves, where the pressure drop is relatively large, should be considered independently, using manufacturers' data.

Table 1. EQUIVALENT LENGTH OF STRAIGHT PIPE FOR VALVES AND FITTINGS - METRES

O.D. LINE SIZE	GLOBE VALVE	ANGLE VALVE	90° ELBOW	45° ELBOW	TEE LINE	TEE BRANCH
1/2"	2.7	1.5	0.3	0.1	0.2	0.6
5/8"	3.7	1.8	0.3	0.2	0.2	0.8
7/8"	4.6	2.4	0.5	0.2	0.3	1.1
1-1/8"	6.7	3.7	0.6	0.3	0.5	1.4
1-3/8"	8.5	4.6	0.7	0.4	0.6	1.8
1-5/8"	10.7	5.2	0.9	0.4	0.6	2.1
2-1/8"	13.7	6.7	1.2	0.6	0.9	3.0
2-5/8"	15.5	7.9	1.4	0.7	1.1	3.7
3-1/8"	19.8	10.4	1.7	0.8	1.4	4.6
3-5/8"	24.4	12.2	2.0	0.9	1.5	5.2

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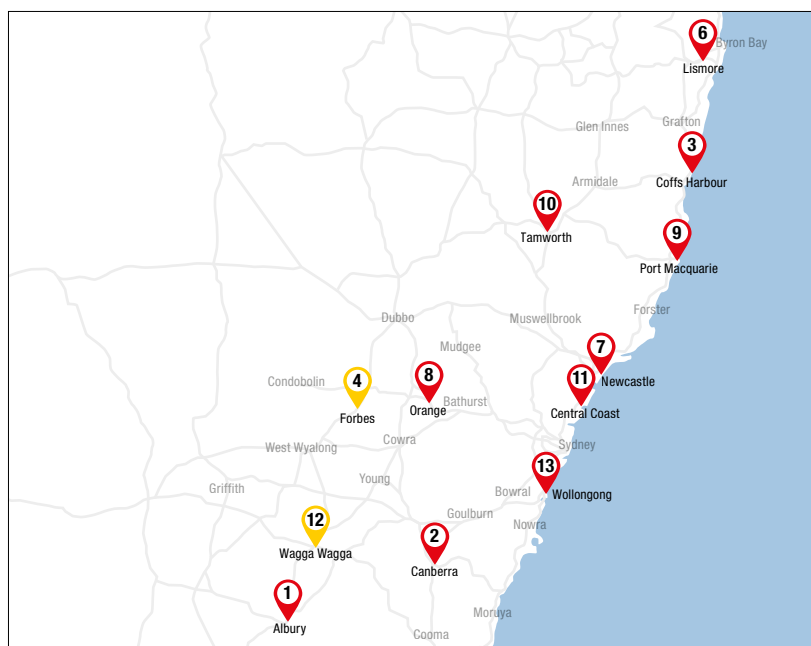
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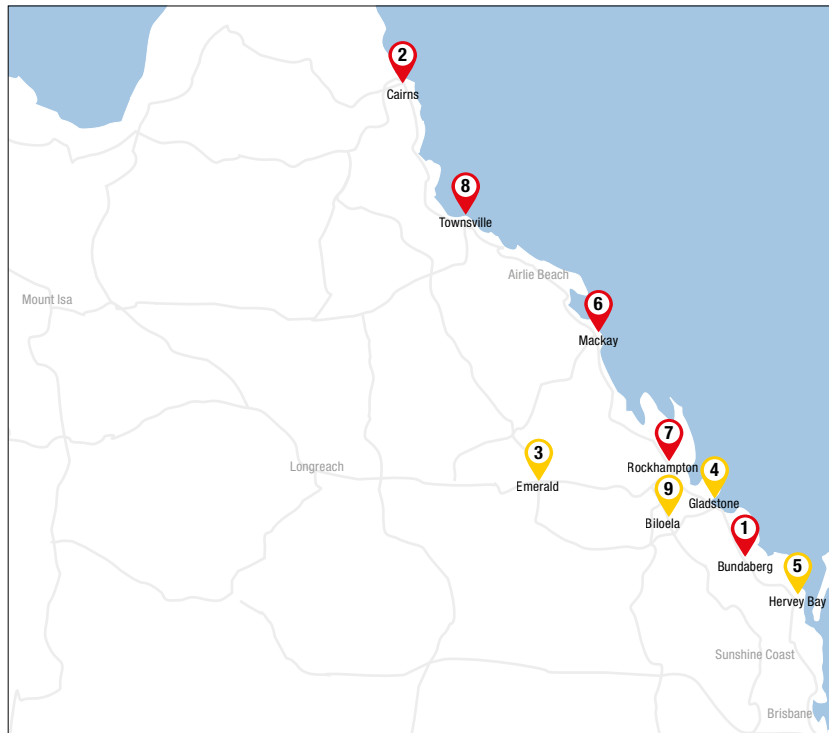
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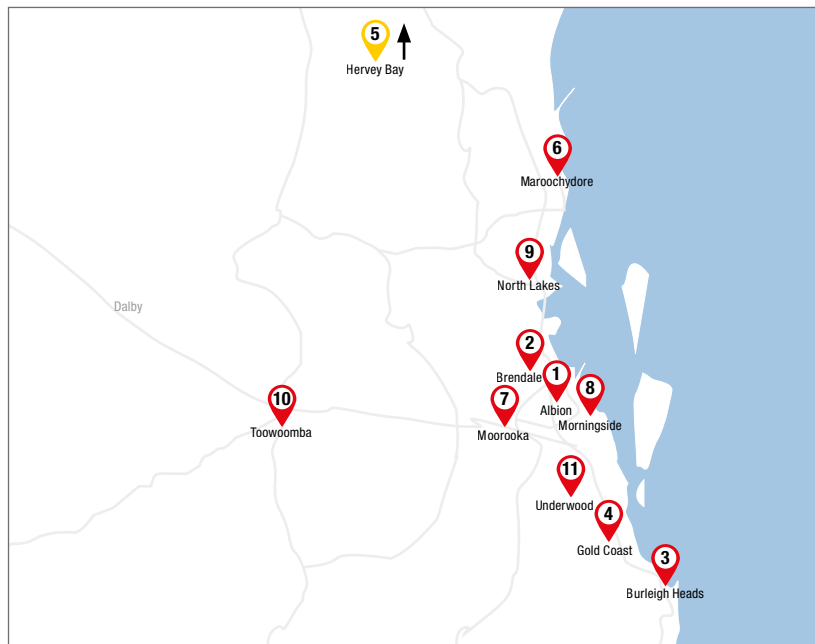
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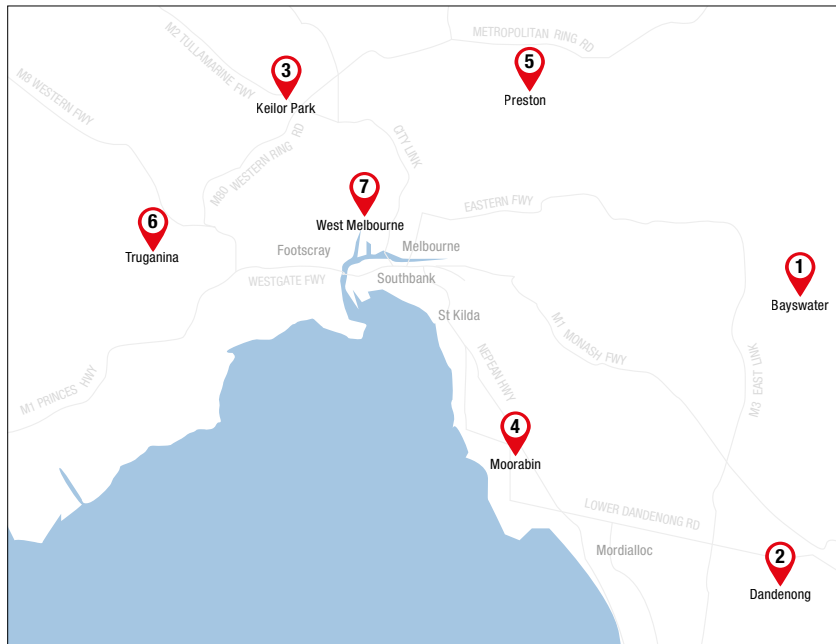
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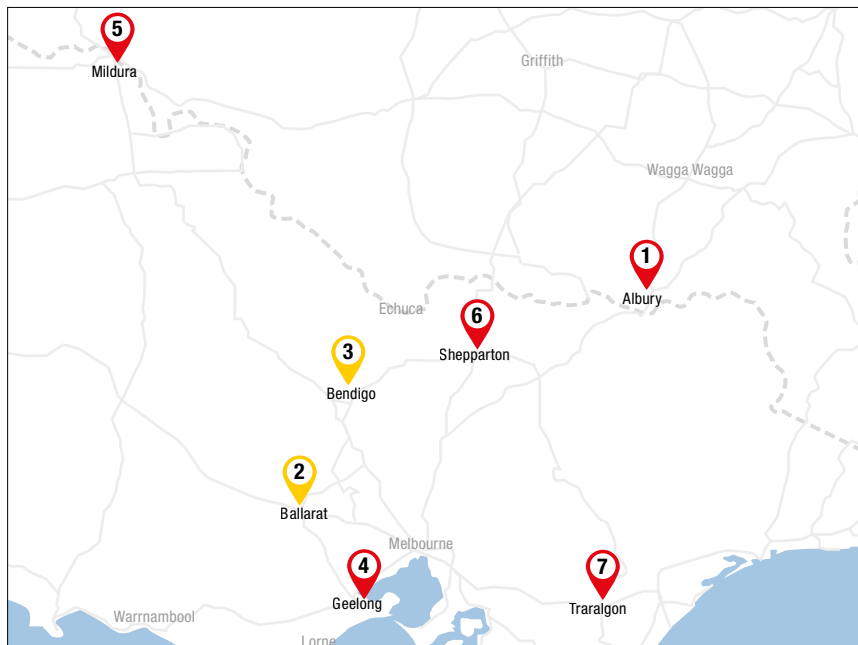
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(Heatcraft Plus)
228 Woodward Road,
Golden Square,
Bendigo VIC 3555
P: 03 5443 1611
E: bendigo@heatcraft.com.au

4 Geelong West

2-3/38 Autumn Street,
Geelong West VIC 3218
P: 03 5248 4533
E: geelong@heatcraft.com.au



5 Mildura (A)

337 Ettiwanda Avenue,
Mildura VIC 3500
P: 03 5021 1855
E: mildura@heatcraft.com.au

6 Shepparton (A)

15 Campbell Street,
Shepparton VIC 3630
P: 03 5821 3669
E: shepparton@heatcraft.com.au

7 Traralgon

4/13-15 Standing Drive,
Traralgon VIC 3844
P: 03 5174 6403
E: traralgon@heatcraft.com.au

LEGEND:  – Heatcraft Branch  – Heatcraft Plus Branch **(A)** – Agent **(JV)** – Joint Venture

South Australia, Tasmania

SA Branches

1 Adelaide

19-21 James Congdon Drive,
Mile End SA 5031
P: 08 8354 0100
E: adelaide@heatcraft.com.au

2 Lonsdale

2/41-47 O'Sullivan Beach Road,
Lonsdale SA 5160
P: 08 8326 4726
E: lonsdale@heatcraft.com.au

3 Mt. Gambier (A)

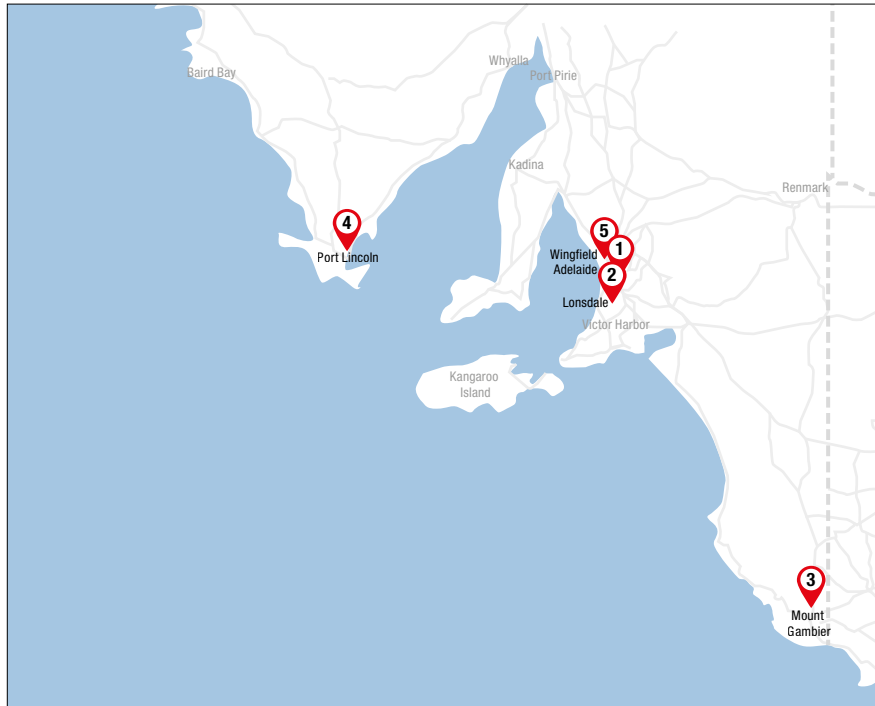
5 Scott Court,
Mt Gambier SA 5290
P: 08 8723 0922
E: mtgambier@heatcraft.com.au

4 Port Lincoln (A)

1 Thomas Court,
Port Lincoln SA 5606
P: 08 8683 0707
E: portlincoln@heatcraft.com.au

5 Wingfield

159-161 Cormack Road,
Wingfield SA 5013
P: 08 8260 2255
E: wingfield@heatcraft.com.au



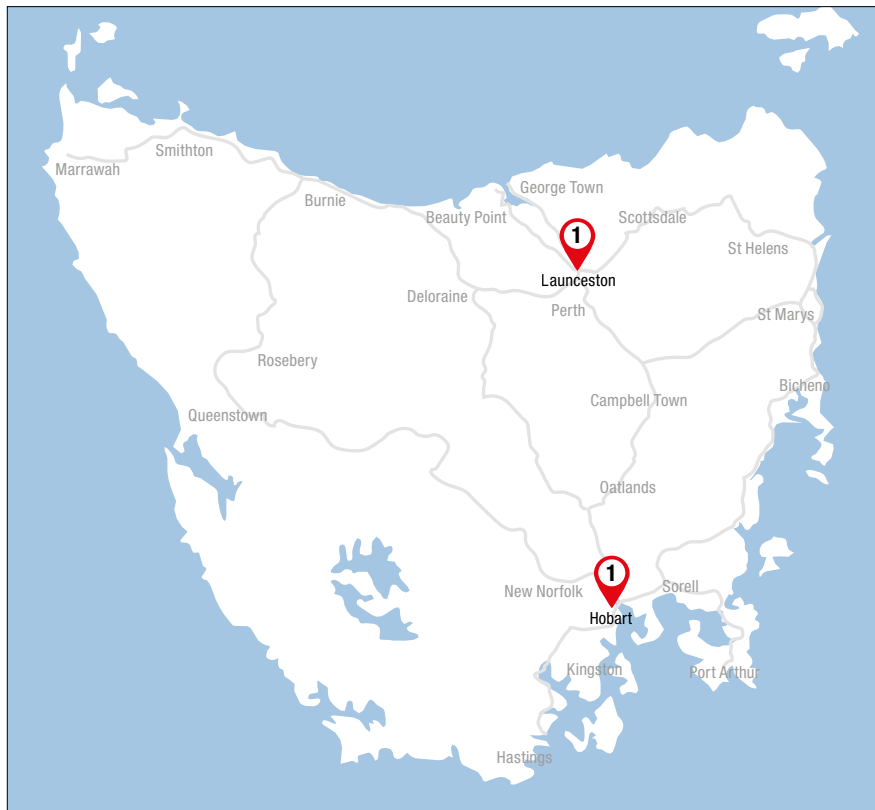
TAS Branches

1 Hobart (JV)

2 Linear Court,
Derwent Park TAS 7009
P: 03 6272 0055
E: hobart@heatcraft.com.au

2 Launceston (JV)

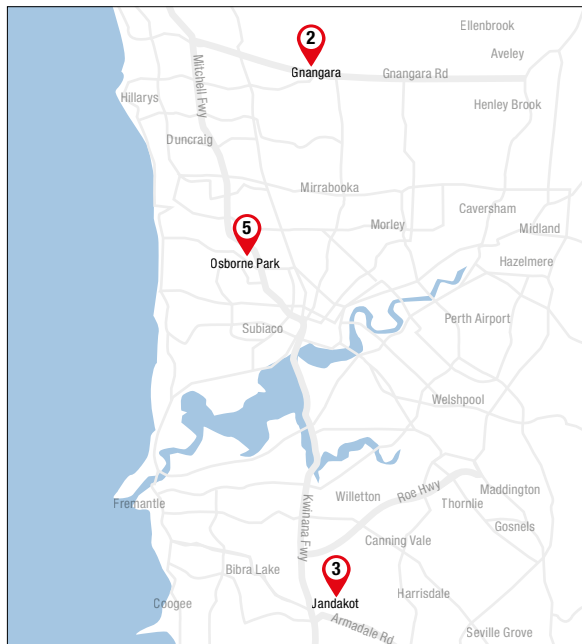
2/225 Wellington Street,
Launceston TAS 7250
P: 03 6334 6969
E: launceston@heatcraft.com.au



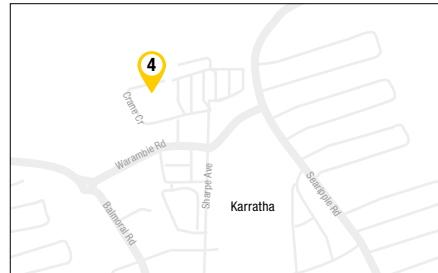
LEGEND: –Heatcraft Branch –Heatcraft Plus Branch **(A)** –Agent **(JV)** – Joint Venture

West Australia, Northern Territory

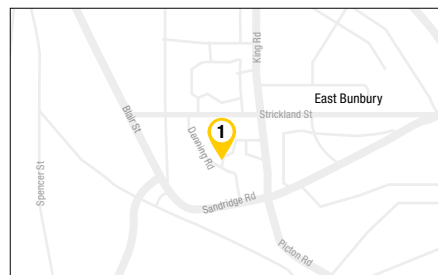
Perth Metro



Karratha



Bunbury



1 Bunbury

(Heatcraft Plus Auslec)
2/17 Denning Road,
Bunbury WA 6230
P: 08 9791 2944
E: bunbury@heatcraft.com.au

2 Gnangara

4/28 Supreme Loop,
Gnangara WA 6077
P: 08 6401 6331
E: gnangara@heatcraft.com.au

3 Jandakot

1/45 Biscayne Way,
Jandakot WA 6164
P: 08 9478 5033
E: jandakot@heatcraft.com.au

4 Karratha

(Heatcraft Plus L&H)
1415 Crane Circle,
Karratha WA 6714
P: 08 9185 1922
E: karratha@heatcraft.com.au

5 Osborne Park

19 Howe Street,
Osborne Park WA 6017
P: 08 9244 5033
E: osborne@heatcraft.com.au

Northern Territory



1 Darwin

68 Raphael Road,
Darwin NT 0820
P: 08 8984 3840
E: darwin@heatcraft.com.au

2 Alice Springs (A)

1/8 Fogarty Street,
Alice Springs NT 0870
P: 08 8953 4277
E: alicesprings@heatcraft.com.au

LEGEND: **H** – Heatcraft Branch **H+** – Heatcraft Plus Branch **(A)** – Agent **(JV)** – Joint Venture

HEATCRAFT AUSTRALIA PTY LTD - TERMS AND CONDITIONS OF SALE AND HIRE

1. INTERPRETATION

- 1.1 The following terms shall have the following meanings unless the context shall require otherwise:-
- "ACL" means the Australian Consumer Law as set out in the CCA;
- "CCA" means the Competition and Consumer Act 2010 (Cth).
- "Consumer" means a Buyer that is a consumer (as that term is defined in the ACL) in respect of the particular supply of Goods;
- "Consumer Guarantees" means the guarantees relating to the supply of goods and services to consumers provided by Division 1 of Part 3-2 of the ACL;
- "Buyer" means the purchaser of any Goods and/or hirer of the Cylinder(s) or Stillages and in the case of a company shall include its successors, agents and permitted assigns and in the case of an individual shall include that individual's administrators and executors;
- "Conditions" means these terms and conditions of sale and hire, the general warranty conditions of Heatcraft, any other conditions provided on Heatcraft's website and any agreed written variations. If there is any conflict, then in the absence of an express written variation from Heatcraft, the warranty provided on the Heatcraft website from time to time shall apply;
- "Cylinder" means the gas cylinder which may be supplied to the Buyer upon purchase of any Gas2Go® or other Goods and includes Stillages and other cylinder transportation devices;
- "Cylinder Service Charge" has the meaning set out in clause 14.1(a);
- "Cylinder Service Rate Charge Schedule" means the schedule of fees for the Cylinder service which are available upon request from any Heatcraft branch or by contacting Heatcraft on [Phone 13 23 50];
- "Default" means a default under clause 17 of these Conditions;
- "Gas2Go Club" means membership based club which entitles Gas2Go Members to participate in Heatcraft's Gas2Go gas management system under through which Heatcraft provides the Gas2Go Goods to Gas2Go Members.
- "Gas2Go Goods" means the goods provided to Gas2Go Members.
- "Gas2Go Members" means a Buyer who is accepted by Heatcraft as a current member of the Gas2Go Club pursuant to Heatcraft's Gas2Go Club Conditions.
- "Gas2Go Club Membership Conditions" means the terms and conditions of membership of the Gas2Go Club.
- "Goods" means any goods purchased by the Buyer from Heatcraft from time to time and includes any Non Standard Goods;
- "GST" means any tax including any additional tax imposed on the supply of or payment for Goods which is imposed or assessed under A New Tax System (Goods and Services Tax) Act 1999 (Cth), and all other related and ancillary legislation, which is excluded from the Price;
- "Heatcraft" means Heatcraft Australia Pty Ltd (ABN 67 000 056 717) and its successors and assigns;
- "Non Standard Goods" means any goods that are purchased by the Buyer through a Non Standard Goods Order;
- "Non Standard Goods Order" means Goods made or acquired by Heatcraft, at the specific request of the Buyer, and which are not standard goods of Heatcraft;
- "Order" means an invitation to treat by the Buyer for the supply of Goods;
- "PPSA" means the Personal Property Securities Act 2009 (Cth);
- "PPSR" means the Personal Property Securities Register established pursuant to the PPSA;
- "Price" is the amount payable by the Buyer for the Goods exclusive of any other sum payable by the Buyer;
- "Secured Property" means all Goods that are supplied to the Customer by Heatcraft (whether now or in the future);
- "Security Interest" means an interest in personal property provided for by a transaction that, in substance, secures payment of money or performance of an obligation (without regard to the form of the transaction or the identity of the person who has title to the property), and also includes a transaction which the PPSA treats as a security interest whether or not the transaction concerned, in substance, secures payment or performance of an obligation.
- "Specified Period" means the period of thirty (30) days calculated from:
- for the purposes of clause 3.2, the quotation date; and
 - for the purposes of clauses 3.4 and 3.5, the sales invoice date, or such other further period as Heatcraft may from time to time agree in writing.
- "Stillage" means the stillage or metal pallet which may be supplied to the Buyer upon purchase of any Gas2Go® or other Goods;
- 1.2 If there shall be more than one (1) Buyer these Conditions shall bind each of them jointly and severally.

2. APPLICATION OF THE TERMS & CONDITIONS

- 2.1 Entire Agreement. The entire agreement between Heatcraft and the Buyer for the purchase of the Goods by the Buyer from Heatcraft is:
- these Conditions; and
 - any other terms and conditions which are imposed by law and cannot be excluded.
- 2.2 Variation. Heatcraft may amend or vary these terms and conditions by giving the Buyer 14 day's written notice.
- 2.3 Acceptance. Heatcraft's Acceptance of an Order from a Buyer constitutes acceptance of these Conditions (as amended from time to time) by the Buyer, and (without limitation) these Conditions apply to all goods and services provided by Heatcraft whether arising from an Order received from the Buyer, or resulting from a quotation by Heatcraft, arising from oral acceptance by Heatcraft of repeat or future orders for the same and/or similar Goods and shall terminate, cancel and supersede any previous written or oral agreements and understandings entered into between the Buyer and Heatcraft.

3. PRICE & PAYMENT

- 3.1 The Price payable by the Buyer for the Goods shall be that as published from time to time by Heatcraft, including (without limitation) on its website, in its price lists or as quoted or advised by Heatcraft upon receipt of an Order for Goods from the Buyer. For the avoidance of doubt, in the absence of specific prices of any Goods as provided by Heatcraft, the prices of the Goods in Heatcraft's published price list at the time of delivery shall apply.

- 3.2 Subject to clause 3.3, quotations are valid for the Specified Period, after which they may be subject to change without notice. Heatcraft may at any time alter its price in respect of future orders.
- 3.3 If, between the date of the Order from the Buyer and delivery of the Goods, there is an increase in the cost of the supply of the Goods by Heatcraft which are due to reasons beyond Heatcraft's control, then Heatcraft will be entitled to increase the Price of the Goods and/or Cylinder Service Charge to compensate Heatcraft for the increase, such increase to be paid by the Buyer.
- 3.4 The Buyer shall pay the full Price (plus GST) and all other sums owing (including the Cylinder Service Charge) immediately on delivery of the Goods provided except when the Buyer has completed an "Application for Credit" approved in writing by Heatcraft, in which case the Buyer shall have until the end of the Specified Period to pay.
- 3.5 If the Buyer has not used their Heatcraft credit account for more than 24 months, the credit account will be automatically deactivated and the Buyer may re-apply to Heatcraft for a Heatcraft credit account. The Buyer agrees that Heatcraft will not be responsible for any loss or damage that may be suffered by the Buyer as a result of such deactivation.
- 3.6 In the event that the Buyer fails to pay the Price (plus GST) or any other sum payable (including the Cylinder Service Charge) within the Specified Period:
- Heatcraft may at its option require cash on delivery and/or stop the supply of any further Goods or Cylinders to the Buyer; and
 - the Buyer shall pay to Heatcraft interest on the Price (plus GST) and all other sums (including the Cylinder Service Charge) calculated daily at a rate 3% higher than the National Australia Bank's overdraft rate, for amounts exceeding \$100,000, from time to time, on any monies then due to Heatcraft from the date the Price is due to be paid to Heatcraft until such monies are paid in full.
- 3.7 The Buyer agrees that a statement of indebtedness from Heatcraft to them is binding and conclusive,
- 4. DISCOUNTS AND REBATES**
- 4.1 Heatcraft reserves the right to cancel, or at its option, suspend all trade discounts or rebates given to the Buyer, in the event that the Buyer fails to comply with any of these Conditions.
- 5. ORDERS**
- 5.1 Heatcraft shall have no obligation to accept any Order from the Buyer.
- 5.2 The Buyer also agrees that:
- each Order it places shall be deemed to include a representation that it is solvent and able to pay off its debts as and when they fall due;
 - when any Order is placed, the Buyer shall inform Heatcraft of any facts which might reasonably affect any decision to accept the Order and/or grant credit. Any failure to do so shall be deemed to create an inequality of bargaining position, the taking of an unfair advantage of Heatcraft and to be unconscionable, misleading and deceptive;
 - from the time of placing the Order, the Buyer is obliged to accept and pay for the Goods in accordance with these Conditions and a cancellation of the Order or change on the part of the Buyer as to shall not discharge this obligation to accept the Goods and make payment;
 - Heatcraft shall use its reasonable endeavours to ensure that the Goods are available and provided to the Buyer within the time frame requested by the Buyer, but shall not be liable for any loss or damage caused by any delay. The Buyer shall not be entitled to reject the Goods due to any such delay; and
 - without prejudice to any other rights that Heatcraft may have in these Conditions, the Buyer shall indemnify Heatcraft for any loss, damage, or expense incurred by Heatcraft should the Buyer cancel or refuse to accept any Order or part of any Order.
- 5.3 The Buyer acknowledges that if the Buyer places a Non Standard Goods Order with Heatcraft, the Buyer, at Heatcraft's discretion, must pay up to a 50% deposit at the time of the Non-Standard Goods Order, which (for the avoidance of doubt) is a non-refundable deposit.
- 5.4 The Buyer further acknowledges that any Non Standard Goods Order(s) cannot be cancelled once the Non Standard Goods Order(s) has been placed with Heatcraft and to the fullest extent permitted by law the Non Standard Goods cannot be returned to Heatcraft at any stage.
- 6. DELIVERY**
- 6.1 Heatcraft accepts no responsibility or duty to deliver but may elect to arrange delivery at its discretion without liability, at the Buyer's cost and risk in all things.
- 6.2 All delivery dates referred to by Heatcraft are given in good faith. Heatcraft shall use its reasonable endeavours to deliver the Goods to the Buyer on or before such delivery date. However, such delivery dates shall not be binding upon Heatcraft.
- 6.3 Heatcraft shall not be liable for any delay, failure, or inability to deliver, or for any consequential loss or cost of any property of the Buyer including in particular any food or product loss to the extent permitted by law.
- 6.4 Heatcraft may impose a charge for frustrated delivery calculated to cover Heatcraft's cost of attempts.
- 6.5 The Buyer may not reject Goods on the basis of partial or late delivery.
- 6.6 Unless agreed in writing to the contrary, Heatcraft reserves the right to make part deliveries of any Order. A failure by Heatcraft to make delivery of the entire Order shall not invalidate or vary the Buyer's Order. If Heatcraft only delivers part of the Goods which are ordered by the Buyer, Heatcraft is still be entitled to invoice the Buyer for those Goods delivered.
- 6.7 The Buyer shall notify Heatcraft in writing of any shortages in quantity of any Goods delivered or of any defect in any such Goods within seven (7) days of delivery and after that time the Buyer will not be entitled to make any claim on Heatcraft relating to
- 6.8 If the Buyer requests Proof of Delivery ("POD") in writing to Heatcraft:
- within 120 days of the despatch date of the Goods, the POD will be supplied by Heatcraft free of charge; and
 - beyond 120 days of the despatch date of the Goods, Heatcraft will charge a reasonable administration fee which must be paid by the Buyer upon delivery of the proof of delivery.

7. RETURNS

- 7.1 Subject to clause 7.2, in the event that Heatcraft agrees in writing to accept return of any Goods for credit, Heatcraft will not be responsible for transport costs (except where due to error of supply) and will at its discretion, charge a re-stocking fee not greater than 20% of the Price.
- 7.2 Notwithstanding any other term in these Conditions, Heatcraft will honour all of its obligations under the ACL and nothing in these Conditions restricts, limits or modifies the Buyer's rights or remedies against Heatcraft for failure of a Consumer Guarantee under the ACL.

8. RETENTION OF TITLE AND RISK AND SECURITY/CHARGES

- 8.1 Title and risk in the Goods shall pass to the Buyer on delivery but the equitable title in the Goods shall not pass to the Buyer until full payment is received by Heatcraft for the Goods and any other goods sold to the Buyer by Heatcraft and until all cheques and other instruments are honoured or met in full.
- 8.2 The risk in the Goods shall pass to the Buyer immediately upon the Buyer or Buyer's agent taking possession of the Goods. The Buyer shall in all cases be responsible for the payment of any insurance in respect of the Goods and in the event that Heatcraft shall contract for any such insurance the Buyer shall reimburse the cost of the relevant insurance premium to Heatcraft.
- 8.3 The Buyer may sell or deal in the ordinary course of business with the Goods and with the interest of Heatcraft in the Goods and may for those purposes part with possession of the Goods but the proceeds of any such sale or dealing must be held by the Buyer separately on trust for Heatcraft and appropriated solely for the payment of all sums owing to Heatcraft.
- 8.4 Whilst Heatcraft retains the legal and equitable title in the Goods the Buyer shall ensure that the Goods are clearly identifiable as the exclusive property of Heatcraft wherever the Goods are stored.
- 8.5 The Buyer must not charge the Goods in any way nor grant nor otherwise give any interest in the Goods while they remain the property of Heatcraft.
- 8.6 The Buyer hereby irrevocably gives to Heatcraft, its agents and servants, leave and licence without the necessity of giving any notice to enter on and into any premises occupied by the Buyer to search for and remove any of the Goods supplied to or in which Heatcraft has property as aforesaid without in any way being liable to the Buyer or any person or company claiming through the Buyer, and if the Goods or any of them are wholly or partially attached to or incorporated in any other goods, Heatcraft may sever the attachment in any way whatsoever as may be necessary to remove the Goods.
- 8.7 The Buyer will be responsible for Heatcraft's costs and expenses in exercising its rights under clause 8.6.
- 8.8 The Buyer agrees that where the Goods have been retaken into the possession of Heatcraft, Heatcraft has the absolute right to sell or deal with the Goods, and if necessary sell the Goods with the trademark or name of the Buyer on those Goods, and the Buyer grants an irrevocable licence to Heatcraft to do so and do all things necessary to sell the Goods bearing the name of trademark of the Buyer.
- 8.9 Heatcraft may issue proceedings to recover all outstanding indebtedness to Heatcraft in respect of the Goods or any other amounts owing to Heatcraft notwithstanding that ownership may have passed to the Buyer.
- 8.10 Heatcraft and the Buyer agree that any credit contract between them shall be terminated immediately on the happening of any Default. Until full payment is received by Heatcraft the Buyer shall be deemed to be a bailee of the Goods for and on behalf of Heatcraft and Heatcraft shall be entitled to all the rights and remedies of a bailor.

9. INTERACTION WITH GAS2GO CLUB MEMBERSHIP CONDITIONS

- 9.1 Where the Buyer is a member of the Gas2Go Club the Buyer acknowledges that it is also bound by the Gas2Go Membership Conditions.
- 9.2 To the extent of any inconsistency between the Gas2Go Membership Conditions and these Conditions, the terms of the Gas2Go Membership Conditions shall prevail.

10. PPSA

- 10.1 The Buyer acknowledges that pursuant to these Conditions they grant to Heatcraft a Security Interest in the Secured Property and, for avoidance of doubt, the proceeds of sale of the Secured Property for the purposes of the PPSA.
- 10.2 The Buyer consents to Heatcraft effecting a registration on the PPSR (in any manner Heatcraft considers appropriate) in relation to the Security Interest arising under or in connection with these Conditions and the Buyer agrees to provide all assistance required by Heatcraft to facilitate this.
- 10.3 The Buyer acknowledges and agrees that in relation to the part of the Secured Property that is inventory, the Buyer will not allow any Security Interest to arise in respect of that Secured Property unless Heatcraft has perfected its Security Interest in the Secured Property prior to the Customer's possession of the Secured Property.
- 10.4 If Chapter 4 of the PPSA applies to the enforcement of the Security Interest arising under or in connection with these Conditions, the Buyer agrees:
- to the extent that section 115(1) of the PPSA allows this, the following provisions of the PPSA will not apply to the enforcement of that Security Interest: section 95 to the extent that it requires Heatcraft to give a notice to the Customer, section 96, section 121(4), section 125 (obligation to dispose of or retain collateral), section 130 to the extent that it requires the Secured Party to give notice to the Customer, paragraph 132(3)(d), subsection 132(4), section 142 and section 143 (reinstatement of security agreement); and
 - to the extent that section 115(7) of the PPSA allows this, the following provisions of the PPSA will not apply to the enforcement of that Security Interest: section 127, section 129(2) and (3), section 132, section 134(2), section 135, section 136(3), (4) and (5) and section 137.
- 10.5 If the Buyer makes payment to Heatcraft at any time whether in connection with these Conditions or otherwise, Heatcraft may, at its absolute discretion, apply that payment in any manner it sees fit.
- 10.6 The Buyer agrees to immediately notify Heatcraft of any changes to its name or address (as specified in these Conditions).
- 10.7 The Buyer agrees to do anything Heatcraft requests the Buyer to do (such as obtaining consents, signing and producing documents, producing receipts and getting documents completed and signed):

- to provide more effective security over the Secured Property;
 - to register in respect of a Security Interest constituted by these Conditions at any time;
 - to enable Heatcraft to exercise its rights in connection with the Secured Property; and
 - to show Heatcraft whether the Buyer has complied with these Conditions.
- 10.8 The Buyer shall pay on demand by Heatcraft any losses arising from, and any costs and expenses incurred in connection with, any action taken by Heatcraft under or in relation to the PPSA, including any registration, or any response to an amendment, demand or a request under section 275 of the PPSA.
- 10.9 Any notices or documents which are required or permitted to be given to Heatcraft for the purposes of the PPSA must be given in accordance with the PPSA.
- 10.10 The Buyer waives the right to receive any notice under the PPSA (including notice of a verification statement) unless the notice is required by the PPSA and cannot be excluded.

11. DISCLOSURE

- 11.1 Each party agrees not to disclose information of the kind mentioned in section 275(1) of the PPSA, except in the circumstances required by sections 275(7)(b) to (e) of the PPSA. The Buyer agrees that it will only authorise the disclosure of information under section 275(7)(c) or request information under section 275(7)(d), if Heatcraft approves.
- 11.2 Nothing in clause 11.1 will prevent any disclosure by Heatcraft that it believes is necessary to comply with its other obligations under the PPSA or under any other applicable law.
- 11.3 To the extent that it is not inconsistent with clauses 11.1 or 11.2 above constituting a "confidentiality agreement" for the purposes of section 275(6)(a) of the PPSA, the Buyer agrees that Heatcraft may disclose information of the kind mentioned in section 275(1) of the PPSA to the extent that Heatcraft is not doing so in response to a request by an "interested person" (as defined in section 275(9) of the PPSA) pursuant to section 275(1) of the PPSA.

12. BUYER'S WARRANTY

- 12.1 The Buyer warrants and agrees that the Buyer is acquiring the Goods for other than personal, domestic, household use or consumption and the purpose of: re-supply or using them up or transforming them in trade or commerce in the course of:
- a process of production or manufacture; or
 - repairing or treating other goods or fixtures on land; and is therefore not a "consumer" as defined by the CCA. This clause 12.1 does not apply if clause 13.9 of these Conditions applies.
- 12.2 The Buyer warrants and acknowledges that this is not a supply by description.
- 12.3 The Buyer warrants and acknowledges that:
- it has not relied on any representation made by Heatcraft or any of its employees which has not been stated in these Conditions or on any description or illustration or specification contained in any document produced by Heatcraft or supplied directly or indirectly to the Buyer; and
 - it does not rely upon and it is unreasonable for it to rely upon Heatcraft's skill or judgment as to whether the goods supplied are reasonably fit for any purpose for which they are being acquired.

13. EXCLUSION OF LIABILITY AND INDEMNITY

- (A) Implied Terms
- 13.1 Heatcraft acknowledges that under applicable State, Territory and Commonwealth law(s) (including, without limitation, the CCA), certain statutory guarantees and warranties (including, without limitation, the statutory guarantees under the CCA) may be implied into these Conditions and cannot be excluded by law ("Non-Excluded Guarantees").
- 13.2 Heatcraft acknowledges that nothing in these Conditions purports to modify or exclude the Non-Excluded Guarantees.
- 13.3 Except as expressly set out in these Conditions or in respect of the Non-Excluded Guarantees, Heatcraft makes no other warranties or other representations under any contract with the Buyer or these Conditions. Heatcraft's liability in respect of these warranties is limited to the fullest extent permitted by law.
- (B) Remedies
- 13.4 Subject to this clause 13 and so far as may be permitted by law the liability of Heatcraft and its employees and/or agents for a breach of a Non-Excluded Guarantee in relation to the supply of goods other than goods of a kind ordinarily acquired for personal, domestic or household use or consumption shall, at Heatcraft's discretion, be limited to, as the Buyer's exclusive remedy:
- the replacement of the goods or the supply of equivalent goods; or
 - the repair of the goods; or
 - the payment of the cost of replacing the goods or of acquiring equivalent goods; or
 - the payment of the cost of having the goods repaired.
- (C) Exclusion of Liability
- 13.5 Subject to this clause 13 and to the extent permitted by law, Heatcraft, its employees and/or agents, shall not be liable for any loss or damage, to the Buyer (including any consequential loss or damage, which includes, without limitation, loss of profits and loss of revenue) of any kind whatsoever even if due to the negligence of Heatcraft, its employees and/or agents. The exclusion of liability set out in this clause 13.5 also extends to the loss or damage that was not reasonably foreseeable that the Buyer would suffer as a result of Heatcraft's failure to comply with the Non-Excluded Guarantees.
- (D) Indemnity
- 13.6 Subject to clauses 13.1 - 13.3, in respect of Goods or performance of the contract, the Buyer shall indemnify Heatcraft against any action suit demand and proceeding in relation to any loss damage, cost and/or expense directly or indirectly incurred or suffered by Heatcraft caused by or contributed to by any of the following:
- as a result of any defect, malfunction or stoppage of the Goods;
 - Heatcraft complying with any instruction of the Buyer about the Goods;
 - any act or omission occurring after the Goods have left the control of Heatcraft;
 - the Buyer's, or any third party associated with the Buyer, failure to:
 - adequately provide or display safety markings or safety information on or with the Goods;
 - comply with any law about the Goods or their use (for example, their sale, marketing, labelling or marking);
 - take any reasonable precaution to bring to the attention of any potential users of the Goods any dangers associated with goods;
 - take any reasonable precaution to detect any matters in relation to which Heatcraft may become liable in any way (for example, under the CCA);

- (vii) provide correct information to Heatcraft; or
 - (viii) immediately advise Heatcraft (in writing) of any changes to the information provided to Heatcraft.
 - (e) the Buyer making any statement about the Goods (for example, about their performance or characteristics) without Heatcraft's approval;
 - (f) the use (or misuse) or operation of the Goods by the Buyer or any third party; and
 - (g) any negligence or breach of duty by the Buyer or any third party or any breach by the Buyer of these Conditions.
- 13.7 Subject to these Conditions and specifically clauses 13.1 - 13.3, the Buyer shall indemnify Heatcraft for any loss, damage or expense incurred by Heatcraft, to the maximum extent permitted by law, for any breach of these Conditions by the Buyer.
- 13.8 For the avoidance of doubt, any warranty given by Heatcraft in the Conditions may be varied depending on the Goods supplied, with such variation to be notified in writing by Heatcraft. Any warranty provided in the Conditions, may only be varied and/or modified by Heatcraft in writing.
- 13.9 Notwithstanding any of the above, Goods sold to consumers as defined under section 3(2) of the Australian Consumer Law (as contained in the CCA) come with guarantees that cannot be excluded under the Australian Consumer Law. If the Buyer is such a consumer:
- (a) it is entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable damage; and
 - (b) it is also permitted to have the Goods repaired or replaced if the Goods fail to be of an acceptable quality and the failure does not amount to a major failure. This warranty against defects is given in addition to other rights and remedies of the Buyer under law.
- 13.10 The warranties given under these Conditions are given by Heatcraft Australia Pty Ltd (ABN 67 000 056 717), of 286 Horsley Road, Milperra NSW 2214 Australia Phone +61 2 9774 7155.

14. CYLINDER HIRE

- 14.1 Notwithstanding any other terms of these Conditions, if the Buyer is supplied a Cylinder (which definition includes Stillages) by Heatcraft then the Buyer agrees to be bound by the following terms and conditions:
- (a) Unless otherwise agreed in writing, the Buyer must pay a periodic charge and any other associated charges, including refill protection devices or cylinder valve cap replacement charges ("Cylinder Service Charge") for the hire of the Cylinder(s) by the Buyer at Heatcraft's standard rates (as set out in the Cylinder Service Rate Charge Schedule) in accordance with clause 3.
 - (b) The period of hire shall commence on the date of delivery or collection and cease on the date upon which the Cylinder(s) are returned to Heatcraft.
 - (c) The Cylinder Service Charge covers Heatcraft's reasonable costs associated with the Cylinders, including but not limited to, cost of tracking, inspecting the Cylinder prior to filling, periodic testing and routine maintenance of the Cylinder (painting and labelling).
 - (d) The Buyer must, at its own cost, return all Cylinders to Heatcraft as soon as they are empty. Cylinders are not deemed 'returned' until received by Heatcraft (or its authorised agent) at their premises and Heatcraft provides to the Buyer a written receipt, acknowledging the Cylinder's return. For purposes of clarity and to avoid disputes regarding whether and when Cylinders were returned, no document purporting to be a receipt for any Cylinders shall be valid unless it is on a Heatcraft printed form of receipt.
 - (e) On receipt of each Cylinder Service Fee invoice, the Buyer is required to verify the total number of Cylinders held that is shown on the face of the invoice. Where there is any discrepancy written notification must be forwarded to Heatcraft within 14 days of receipt of the invoice, failing which the number of Cylinders stated as being held by the Buyer on the cylinder fee invoice shall be conclusive and the Buyer will be liable to Heatcraft for the amount shown on the invoice.
 - (f) Heatcraft may charge a deposit upon supply of the Cylinder to the Buyer on terms satisfactory to Heatcraft having regard to the nature of the transaction with the Buyer. Once the Cylinder(s) are returned to Heatcraft in a clean, safe and serviceable condition, Heatcraft will refund the deposit (or appropriate part thereof) to the Buyer.
 - (g) Heatcraft will have the right to charge a reasonable administrative fee for the collection of any Cylinders from the Buyer.
 - (h) Cylinders remain the property of Heatcraft (or its supplier) and the Buyer shall be a bailee of any Cylinders and shall not sell, offer for sale, mortgage, charge, or create any lien or encumbrance over the Cylinders.
 - (i) The Buyer shall not repair, modify, tamper with, or contaminate Cylinders and shall not permit the Cylinders to be filled by anyone other than Heatcraft or Heatcraft's representatives or agents.
 - (j) Buyer shall be responsible for the safe use and storage of all Cylinders and Stillages and shall not use the Cylinders and Stillages for any other purpose other than as a container for gas sold or transportation of a container for gas sold by Heatcraft.
 - (k) The provisions of clause 14 apply to the hire of the Cylinders by the Buyer.
 - (l) Buyer shall be responsible for any loss or damage to the Cylinder. Compensation shall be at Heatcraft's current replacement cost of those Cylinders as set out in Cylinder Service Charge Schedule and as varied from time to time by Heatcraft to reflect the current Cylinder replacement value with such revision published on the monthly cylinder fee invoice.
 - (m) Customer shall indemnify, and hold harmless Heatcraft and its agents, affiliates and employees from any and all claims arising out of or related to Customer's use and or possession of the Cylinders.
 - (n) A Cylinder will be deemed lost if the Buyer reports that a Cylinder is lost to Heatcraft or the Cylinder has not been returned and 12 months (1 year) has elapsed since the Cylinder was supplied to the Buyer, whichever is the earlier.
 - (o) Heatcraft will issue an invoice for the replacement cost at the beginning of the month after the Cylinder is deemed lost and the amount of the invoice must be paid in accordance with clause 3. If the cylinder is returned in good order within 6 months after this date, the amount paid by the Buyer will be refunded less the appropriate Cylinder Service Charge for the extended period that the Cylinder was in the Buyer's possession. If the Cylinder is returned 6 months after the date of being deemed lost no refund of the replacement cost charged will be issued.
 - (p) Title to the Cylinder(s) remains with Heatcraft (or its supplier) until payment in full is received, the risk in the lost or sold Cylinder(s) will pass to the Buyer upon Heatcraft issuing an invoice for the replacement cost for any lost Cylinders.

15. PROPER LAW AND COMPLIANCE

- 15.1 These Conditions shall be governed by the laws of the State of New South Wales and the

parties submit to the non-exclusive jurisdiction of the Courts of that State.

- 15.2 The Buyer shall comply with all applicable laws and regulations, and obtain and maintain all applicable licenses during the term of these Conditions, such as the US Foreign Corrupt Practices Act, the Criminal Code Act 1995 (Cth) and Criminal Code Amendment (Theft, Fraud, Bribery and related Offences) Act 200 (Cth) and all export control laws of Australia, New Zealand, the United States and any other applicable destination and hereby indemnifies and hold harmless Heatcraft, its directors, officers, servants and agents from any liability arising from the Buyer's failure to comply with such laws.

16. ADDITIONAL COSTS, TAXES, ETC.

- 16.1 If any duties, taxes, rates or other impost shall be levied in respect of any purchase of Goods or hire of the Cylinders, the Buyer shall pay such amount in addition to the Price (plus GST).
- 16.2 In the event that the Buyer shall specifically order Heatcraft to acquire Goods or components from any foreign source the Price (plus GST) payable by the Buyer may be increased by Heatcraft at any time whether before or after delivery and despite any quotation that may have been given by Heatcraft to the Buyer to compensate Heatcraft for any exchange loss which may have occurred as a result of the fall in value of Australian currency as against the relevant foreign currency during the period from the date of the order to the date of the payment.

17. DEFAULT

- 17.1 The Buyer shall be in default under these Conditions, where:
- (a) the Buyer fails for any reason to pay any moneys due to Heatcraft as and when they fall due; or
 - (b) the Buyer fails to perform or observe any of its obligations under these Conditions; or
 - (c) the Buyer exceeds the limit of any credit account with Heatcraft; or
 - (d) any of the assets or property of the Buyer are subject to a warrant of execution or similar for more than seven days after its levy or issue; or
 - (e) the Buyer suspends payment of its debts or is presumed to be insolvent within the meaning of the Corporations Act 2001 (Cth) or enters or proposes to enter into any arrangement scheme or composition with its creditors or ceases or threatens to cease carrying on business or is wound up or suffers the appointment of any external administration.
- 17.2 In the event of Default by the Buyer, the Buyer must indemnify Heatcraft's legal costs, fees, charges, expenses and outgoings on a solicitor and own client basis flowing from a Default.

18. TRUSTEE CAPACITY

- 18.1 If the Buyer is the trustee of a trust (whether disclosed to Heatcraft or not) the Buyer warrants to Heatcraft that the Buyer:
- (a) enters into this agreement in both its capacity as trustee and in its personal capacity;
 - (b) has the right to be indemnified out of trust assets; and
 - (c) will not retire as trustee of the trust or appoint any new or additional trustee without advising Heatcraft.

19. PRIVACY

- 19.1 The Buyer agrees to Heatcraft collecting, using and disclosing personal information of the Buyer for various purposes, including to:
- (a) assess creditworthiness in the "Credit Assessment";
 - (b) supply the Goods to the Customer and the management of the Customer's account;
 - (c) communicate to the Customer about the Goods which the Company or its partners or affiliates may provide to the Customer; and
 - (d) implement these Conditions.
- 19.2 Heatcraft will deal with personal information in relation to the Customer in accordance with the Privacy Act 1988 (Cth) as amended from time to time and the Heatcraft privacy policy which is available on the Heatcraft website.
- 19.3 Credit reporting bodies which Heatcraft may provide information to and receive information from include:
- (a) Veda Advantage Ltd, whose contact details and policies about management of credit related information can be found at <https://www.veda.com.au/contactus>
 - (b) Dun and Bradstreet, Inc, whose contact details and policies about management of credit related information can be found at <http://dnb.com.au/contact>
- 19.4 Information about the Buyer may be included in reports that a credit reporting body provides to Heatcraft to assist Heatcraft to assess the credit worthiness of the Buyer.
- 19.5 If the Buyer fails to meet payment obligations, Heatcraft may be entitled to disclose this to a credit reporting body.
- 19.6 The Buyer has the rights to access information from Heatcraft, to request Heatcraft to correct the information, to make a complaint to Heatcraft, to request Heatcraft not to use information for prescreening of direct marketing, and to request Heatcraft not to use or disclose information if the Buyer believes they have been or are likely to be a victim of fraud."

20. PARTNERSHIP

- 20.1 If the Buyer enters into these Conditions as a partner, the Buyer warrants that all the partners agree to the entry into these Conditions and that all the partners are bound by these Conditions.
- 20.2 If the Buyer is a partnership, it must not vary its partnership without first obtaining Heatcraft's written consent.

21. BUYER RESTRUCTURE

The Buyer must notify Heatcraft in writing of any change in its structure or management including any change in director(s), shareholder, or change of management within 4 days of the date of such change.

22. FORCE MAJEURE

Heatcraft will not be or deemed in default or breach of any contract as a result of the effects of force majeure. Force majeure will include any cause beyond the reasonable control of Heatcraft.

23. SEVERABILITY

Any part hereof being a whole part of a clause shall be capable of severance without affecting any other part of these Conditions.

24. WAIVER

A single or partial exercise or waiver of a right relating to these Conditions will not prevent any other exercise of that right or any other right.

HEATCRAFT AUSTRALIA PTY LTD - WARRANTY POLICY

GENERAL WARRANTY CONDITIONS

Heatcraft Australia Pty Ltd ("Heatcraft") monitors the quality of the refrigeration, air conditioning products and components it sells to stringent standards and is pleased to provide comprehensive warranties to deliver customer satisfaction and confidence.

- The warranties given under these General Warranty Conditions are given in favour of a purchaser ("Buyer") of a new Heatcraft product ("Goods") in Australia or New Zealand only, by Heatcraft Australia Pty Ltd (ABN 67 000 056 717), of Locked Bag 63, Wetherill Park, NSW 1851 Ph: 02 9774 7155. Email: warranty@heatcraft.com.au.
 - Goods sold to consumers as defined under section 3 of the Australian Consumer Law ("ACL") come with ACL guarantees that cannot be excluded.** If the Buyer is such a consumer:
 - it is entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable damage; and
 - it is entitled to have the Goods repaired or replaced if the Goods fail to be of an acceptable quality and the failure does not amount to a major failure. This warranty against defects is given in addition to other rights and remedies of the Buyer under law.
 - Buyers acquiring the Goods for the purpose of:
 - re-supply or using them up or transforming them in trade or commerce in the course of:
 - a process of production or manufacture; or
 - repairing or treating other goods or fixtures on land; or
 - non personal, domestic, household use or consumption; are not "consumers" under the ACL, and clause 2 does not apply to them.
 - Heatcraft warrants to the Buyer that Goods will be free from manufacturing defects due to faulty manufacture or materials, for a minimum of twelve (12) months from the original date of sale (invoice date), subject to this Policy and Heatcraft's terms and conditions of sale and hire, which are provided on Heatcraft's website www.heatcraft.com.au or www.heatcraft.co.nz (which prevail in the event of conflict), catalogues and any agreed written variations.
- The warranties and remedies in this Policy are exclusive and in lieu of all other conditions and warranties which might otherwise apply, which are expressly excluded to the extent permitted by law.
- The express warranty in Clause 4 is subject to the following conditions:
 - Heatcraft's obligations shall be limited to making good by repair or replacement, at our discretion, any such defects as may prove to our satisfaction to have resulted from faulty manufacture or materials within the warranty period. The repair or replacement shall be performed during normal business hours by Heatcraft at our manufacturing facility or at the Buyer's site by a repair agent authorised by Heatcraft.
 - In no event shall Heatcraft be liable for consequential damage or for any amount greater than the price paid by the Buyer for the Goods. Heatcraft is not liable for any food or product loss, refrigerant loss or any other consequential losses (including cost of labour and/or material) that may occur because of, or associated with, any failure or stoppage of Heatcraft Goods, nor for any repairs or replacements that may be effected by the Buyer or a third party, except where specific approval has first been obtained.
 - It is incumbent upon the Buyer to apply and use the Goods strictly in accordance with the manufacturer's application, installation and operation instructions, applicable standards and industry practice. Any defect or failure resulting from misapplication, alteration, misuse or abuse or due to any other contributing factor beyond Heatcraft's control, automatically voids this warranty.
 - This warranty is conditional upon any defective Goods being returned to Heatcraft's manufacturing or distribution facilities with all freight and associated forwarding charges prepaid. Such returns will remain the customer's property until repaired, replaced or otherwise dealt with under this Policy.
 - No responsibility is accepted for damage in transit, and customers should therefore arrange their own "In Transit" insurance cover.
 - For Compressors, a claim lodged by the Buyer under this warranty requires assessment, inspection and testing by Heatcraft as follows:
 - Hermetic Compressors will be cut open and destroyed in the assessment process and Semi hermetic compressors disassembled to determine if a fault exists,
 - An assessment report will be provided within 28 days. If the claim is approved a credit will issued. If the claim is rejected Heatcraft reserves the right to charge a fee to cover cost of assessing the claim, and
 - Compressors will be sent for salvage unless Buyer has nominated for it to be returned on the compressor assessment form and provided the necessary return shipping details, at Buyer's cost.
 - Heatcraft may review this Policy from time to time and reserves the right to change it.

7. ADDITIONAL SPECIFIC WARRANTY PERIODS AND CONDITIONS RELATING TO INSTALLED EQUIPMENT

NOTWITHSTANDING THE WARRANTY PERIOD STATED IN CLAUSE 4 OF THIS POLICY THE FOLLOWING WARRANTY PERIODS AND CONDITIONS APPLY FOR COMMERCIAL REFRIGERATION AND AIR-CONDITIONING EQUIPMENT;

Commercial Refrigeration Products Group

"KIRBY" or "BOHN" branded compressorised products such as Condensing Units, Single Compressor, Basic Units, Multiple Compressor Racks and Packaged Units or heat transfer products such as Remote Condensers and Evaporators conditional Parts and Labour based on the applicable Heatcraft's standard rate schedule, which is updated from time to time to reflect current industry rates, at Heatcraft's sole discretion.	Parts; 24 months Labour; Warrantable faults on commissioning (start-up) of equipment only.
Other non "KIRBY" or "BOHN" branded commercial refrigeration equipment conditional Parts Only or as provided by the supplier/manufacturer.	12 months
Compressors; replacement of Compressor/Parts only or as provided by the supplier/manufacturer.	12 months

Commercial and Residential Air-conditioning Products Group

"LENNOX" branded air-conditioning equipment; Gas Furnaces, Add-on Cooling, Window units, High Wall Split units, Split Ducted and Multi Head units, as per Warranty details supplied with the units the following apply:-

• Residential Applications; conditional Parts and Labour based on the applicable Heatcraft/Lennox standard rate schedule, which may be updated from time to time to reflect current industry rates, at Heatcraft sole discretion.	5 Years
• Additionally for the gas exchanger in a LENNOX Gas furnace a further 5 years Parts Only is offered.	10 Years (cumulatively)
• Commercial Application; conditional Parts and Labour based on the applicable Heatcraft/Lennox standard rate schedule, which may be updated from time to time to reflect current industry rates, at Heatcraft sole discretion.	2 Years
• Industrial Applications; conditional Parts Only	12 Months
Other non "LENNOX" branded equipment; as provided by the supplier/manufacturer.	N/A

The following general references must also have been appropriately actioned:

- Heatcraft or equipment manufacturer's product installation instructions, including where so requested, to complete and return of the commissioning record cards to Heatcraft Warranty Administration warranty@heatcraft.com.au within 30 days of installation,
- HB40 Refrigeration & Air conditioning Code of Good Practice, and
- Any applicable Australia/New Zealand Standard.

Failure to ensure this may render this warranty null and void.

8. THE WARRANTIES IN THIS WARRANTY POLICY DO NOT COVER (subject to applicable laws):

- Damage or problems or unsatisfactory performance caused to the Goods by faulty or incorrect external electrical wiring, incorrect power supply, voltage fluctuations, over transients or electromagnetic interference not originating within the Goods including solar power supply fluctuations and inadequacies;
- Damage or problems or unsatisfactory performance resulting from incorrect installation or commissioning;
- Damage or problems or unsatisfactory performance caused by the use of an accessory, component or product not supplied as part of the Goods e.g. Condensate Pumps or non-approved controllers.
- Damage or problems or unsatisfactory performance caused by storm, fire, flood, hail, atmospheric fallout, vandalism, misuse, negligence, acts of God, earthquake, war, vermin, foreign matter entering the Goods (e.g. dirt and moisture) or any outside agency.
- Damage or deterioration to the external surfaces or refrigeration coils caused by normal weathering or corrosive atmospheric conditions such as but not limited to industrial pollution, corrosive chemicals or sea air;
- Any costs associated with gaining acceptable service access to Goods installed in restricted or unsafe (e.g. high) locations;
- Travelling cost and freight charges for repairs performed outside the area normally serviced by Heatcraft authorized repair agents, nominally a 40 km radius from a Heatcraft location;
- Goods which have been installed in a transportable or mobile application (e.g. caravan, portable/transportable homes or boats);
- Goods which have been reinstalled at a location other than the original location;
- Any consumable item (e.g. batteries, filters, belts, remote controls) supplied with the Goods unless the item is shown to be defective at the time of purchase;
- Damage or problems or unsatisfactory performance caused directly or indirectly by the operation of the equipment in an environment where;
 - Operating at conditions outside the operating conditions specified in applicable product technical literature; or
 - Misapplication of the Goods; or
 - Incorrect use or installation of any consumable; or
 - In the case of Air-conditioning equipment, failure to check and clear obstructions in both the indoor and outdoor sections of the Goods, including the air filters, vents, coils and drainage pipes.

LENNOX - 5 YEAR RESIDENTIAL AND 2 YEARS COMMERCIAL WARRANTY TERMS

EFFECTIVE MARCH 2017

1. This Warranty covers your Lennox Product when installed, operated and serviced in accordance with the relevant Lennox Engineering Handbook, Installation Instructions and Heatcraft Australia Pty Ltd / Heatcraft New Zealand Limited Terms and Conditions of Sale against defects in design, materials and workmanship for a period not more than 5 years for Residential application (relating to or consisting of private housing rather than offices or factories) and 2 years for Commercial applications (nonresidential properties such as but not limited to building intended to generate profit, hotels, restaurants, cafes, sports facilities retail, offices, schools, factories, warehouses and distribution centers), the warranty period starts from the purchase (invoice) date from Heatcraft.
2. Notwithstanding the above Heatcraft offer an additional extended "Parts Only" warranty for the gas heat exchanger inside the Lennox residential gas furnace Product range. The warranty period is extended to the original owner beyond the standard 5 years by an additional 5 years being a total 10 year period.
3. Product defects covered by this warranty will be repaired or replaced at the discretion of Heatcraft without cost to the owner (including labour) for the replacement parts or product. The repair or replacement shall be performed during normal business hours. Heatcraft reserve the right to allocate the work to a third party being an Authorized Lennox Service Agent of its choosing.
4. Any part or product replaced under this warranty will be warranted in accordance with the provisions of this warranty for the remainder of the original warranty period or 12 months from the completion of the repair, whichever is the greater.
5. Except where inconsistent with the owners statutory rights given by this warranty, all other warranties and all liability of Heatcraft for any loss or damage direct and consequential (including loss of profits) is expressly excluded.
6. Our goods come with guarantees that cannot exclude under Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonable foreseeable loss or damage. You are entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and failure does not amount to a major failure.
7. Please note that the rights under Australian Consumer law are limited in circumstances, where the purchaser of a Heatcraft Product is not a 'Consumer'. You are a Consumer only if the price of the goods is below \$40,000 or the goods are of a kind ordinarily acquired for personal, domestic household use or consumption.
8. **THE WARRANTY DOES NOT COVER:**
 - (a) Damage or problems or unsatisfactory performance caused to the Product by faulty or incorrect external electrical wiring, incorrect power supply, voltage fluctuations, over transients or electromagnetic interference not originating within the Product including solar power supply fluctuations and inadequacies;
 - (b) Damage or problems or unsatisfactory performance resulting from incorrect installation or commissioning;
 - (c) Damage or problems or unsatisfactory performance caused by the use of an accessory, component or product not supplied as part of the Product e.g. Condensate Pumps or none Lennox approved controllers.
 - (d) Damage or problems or unsatisfactory performance caused by storm, fire, flood, hail, atmospheric fallout, vandalism, misuse, negligence, acts of God, earthquake, war, vermin, foreign matter entering the Product (e.g. dirt and moisture) or any outside agency.
 - (e) Damage or deterioration to the external surfaces or refrigeration coils caused by normal weathering or corrosive atmospheric conditions such as but not limited to industrial pollution, corrosive chemicals or sea air;
- (f) Any costs associated with gaining acceptable service access to Product installed in restricted or unsafe (e.g. high) locations;
- (g) Freight charges including insurance or travelling cost for repairs performed outside the area normally serviced by Heatcraft Authorized Service Agents;
- (h) Products which have been installed in a transportable or mobile application (e.g. caravan, portable/transportable homes or boats);
- (i) Products which have been reinstalled at a location other than the original location;
- (j) Any consumable item (e.g. batteries, filters, belts, remote controls) supplied with the Product unless the item is shown to be defective at the time of purchase;
- (k) Damage or problems or unsatisfactory performance caused directly or indirectly by the operation of the equipment in an environment where;
 - (i) Operation in an environment where climate comfort of humans is not the primary function of the Product; or
 - (ii) Operation at conditions outside the operating conditions specified in Lennox technical literature applicable to the Product; or
 - (iii) Misapplication of the Product; or
 - (iv) Incorrect use or installation of any consumable; or
 - (v) Failure to check and clear obstructions in both the indoor and outdoor sections of the Product, including the air filters, vents, coils and drainage pipes; or
 - (vi) Exhausted, leaking or used batteries.
9. **THE PURCHASER IS RESPONSIBLE FOR:**
 - (a) The correct operation and regular maintenance of the Product as noted below. The correction of any non-Product fault or problem is not covered by this warranty;
 - (b) Operation of the Product is in accordance with the operating instructions;
 - (c) Carrying out periodic maintenance of the Product, in the case of residential once every 6 months and in the case of commercial once every 3 months;
 - (d) Regular cleaning of the air filter (s) and the replacement where necessary;
 - (e) Ensuring that the air inlet and the outlet on the outdoor units is kept clear of any obstructions (e.g. dirt, leaves, plants);
 - (f) Ensuring that the condensate drain is kept clean;
 - (g) Replacement of exhausted batteries.
10. In respect of any goods supplied under the contract where the price is more than \$40,000 or the goods are not of a kind ordinarily acquired for the personal domestic household use or consumption, unless the owner establishes the following limitation of liability would not be fair and reasonable, the liability of Heatcraft for any defect of design, materials or workmanship will be limited to any of the following as determined by Heatcraft.
 - (a) Replacing the Product or supplying equivalent Product;
 - (b) Repairing the Product;
 - (c) Paying the cost of replacement of the Product or acquiring equivalent Product or;
 - (d) Paying the cost of having Product repaired.

To register your Lennox Product warranty, please complete the section below and return a copy to:-

Lennox Heating & Air Conditioning c/o Heatcraft Australia Pty Ltd, Locked Bag 63, Wetherill Park, NSW 1851. Alternatively, you can register online at www.lennoxus.com.au or www.lennoxnz.co.nz

PLEASE PRINT AND COMPLETE ALL SECTIONS BELOW:

CUSTOMER NAME:	<input type="text"/>		
ADDRESS:	<input type="text"/>		
SUBURB:	<input type="text"/>	STATE: <input type="text"/>	POSTCODE: <input type="text"/>
COMPANY NAME (INSTALLER):	<input type="text"/>		
TECHNICIAN NAME:	<input type="text"/>		
PHONE/CONTACT NO.	<input type="text"/>		
DATE OF INSTALLATION:	<input type="text"/>	Model No.:	<input type="text"/>
OUTDOOR UNITS SERIAL NO.:	<input type="text"/>	Outdoor Units Serial No.:	<input type="text"/>
APPLICATION:	<input type="checkbox"/> Residential Application	<input type="checkbox"/> Commercial Application	
TECHNICIAN SIGNATURE:	<input type="text"/>		

To get your unit repaired under this warranty, contact your Installer or your nearest Lennox/Heatcraft office by calling 13 23 50 in Australia or 0800 653 330 in New Zealand. Both this document and your proof of purchase must be presented.

If your unit will not operate – complete the following checklist before you call for service;

- Check operation of the remote control and that the batteries are in charged condition
 - Is the fuel/power turned on and available?
 - Clean the filter
 - Some products are equipped with manual lockout or manual reset devices. Reset if necessary. Check with your installer or operating instructions.
- CAUTION: Do not reset more than once. If the unit continues to malfunction, call your service agent.

When calling your local service agent be prepared to supply them with the complete model number of the equipment, along with the serial number and installation date. Also be prepared to give them an accurate description (as best you can) of the problem. In order to maintain high efficiency in operation and conserve energy use, we recommend an annual maintenance program. Such programs are available from your Lennox Dealer and will help increase the serviceable life of the Product and your investment. Talk to your Dealer/Installer for more information and to explain the benefits of an annual PLANNED SERVICE AGREEMENT.



Customer Satisfaction is Our Priority

Heatcraft Worldwide Refrigeration has a dedicated team in place to deliver results for our customers in every region of the world. From our product development team in Europe, to our warehouse despatch team in the Regional Distribution Centres and counter staff across our wholesale network – every employee contributes to the wealth of experience and knowledge behind the Heatcraft name.

Every employee is committed to the long-term success of Heatcraft. All employees operate in a cohesive team environment with a sense of integrity, pride and accountability. The Heatcraft organisation takes pride in honouring our commitments and delivering on the promises we make to our customers and each other.

Delighting our customers - that's what drives us.



13 23 50

heatcraft.com.au



