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A BEIJER REF Company

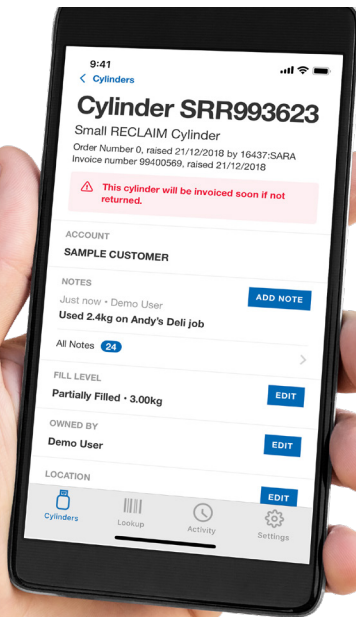
Compressors, Parts and Refrigerants

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Compressors

Compressors

HERMETIC COMPRESSORS - RECIPROCATING

KIRBY HERMETIC COMPRESSORS - R134a

Part Number	Nominal HP	Displ. cm ³ /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

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.

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

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



KIRBY HERMETIC COMPRESSORS - R12 RETROFIT TO R134a

Part Number	Nominal HP	Displ. cc/rev	Nominal Capacity: R134a (watts)							Rating Point R12	
			Evaporating Temperature: °C							-23.3	-6.7
			-40	-30	-25	-20	-15	-10	-5		
Domestic Replacement LBP Compressors with Mineral Oil **											
AE1411A-7KS**	1/4	14.14	200	425	570	735				338	

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 - R12 RETROFIT TO R134a

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
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 = 380/420 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 preferred
- Crankcase Heaters available, please order separately

Application of HFC refrigerant alternatives should be verified with your local Kirby HVAC&R Representative.



KIRBY HERMETIC COMPRESSORS - R404A / R507

Part Number	Nominal HP	Displ. cm ³ /rev	Nominal Capacity: R404A (watts)								Motor Type
			Evaporating Temperature: °C								
			-35	-30	-25	-20	-15	-10	-5	0	

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

BA5MHG-1KS	1/5	4.50						235	285	350	430	018-0096-00 (40W-240V)
BA6MHG-1KS	1/4	5.5						295	355	440	540	018-0096-00 (40W-240V)
BA8MG-1KS	1/4	7.6						370	480	605	750	018-0096-00 (40W-240V)
BA9MG-1KS	1/3	8.9						475	585	735	895	018-0096-00 (40W-240V)
BA12MG-1KS	3/8	12.0						655	810	1005	1205	018-0096-00 (40W-240V)
BA14MG-1KS	1/2	14.1						745	945	1170	1415	018-0096-00 (40W-240V)
BA16MG-4KS	3/4	16.1						870	1110	1380	1685	018-0096-00 (40W-240V)
BA18MG-1KS	7/8	18.0						970	1220	1520	1860	018-0096-00 (40W-240V)
BA12LMY-1KS	1/3	12.04	190	310	440	585	745					018-0096-00 (40W-240V)
BA16LMY-1KS	3/8	16.08	330	465	620	810	1025					018-0096-00 (40W-240V)
BA16LZ-1KS	3/8	16.08	335	475	635	830	1050					018-0096-00 (40W-240V)
BA18LZ-1KS	1/2	18.00	400	550	720	930	1180					018-0096-00 (40W-240V)



KIRBY HERMETIC COMPRESSORS - R404A / R507

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

BA5MHG-1KS	018-0096-00 (40W-240V)	1.70	FC	417	193	10.1	5/16 ST	1/4 ST
BA6MHG-1KS	018-0096-00 (40W-240V)	2.20	FC	417	193	10.7	5/16 ST	1/4 ST
BA8MG-1KS	018-0096-00 (40W-240V)	2.50	FC	417	193	10.7	1/4 ST	3/16 ST
BA9MG-1KS	018-0096-00 (40W-240V)	2.90	FC	417	205	11.8	3/8 ST	1/4 ST
BA12MG-1KS	018-0096-00 (40W-240V)	2.50	FC	417	215	12.5	3/8 ST	1/4 ST
BA14MG-1KS	018-0096-00 (40W-240V)	2.90	FC	417	215	13.1	3/8 ST	1/4 ST
BA16MG-4KS	018-0096-00 (40W-240V)	3.50	FC	417	215	13.1	3/8 ST	1/4 ST
BA18MG-1KS	018-0096-00 (40W-240V)	3.80	FC	417	215	13.8	3/8 ST	1/4 ST
BA12LMY-1KS	018-0096-00 (40W-240V)	2.50	FC	417	203	11.7	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.
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

KIRBY HERMETIC COMPRESSORS - R404A / R507

Part Number	Nominal HP	Displ. cm ³ /rev	Nominal Capacity: R404A (watts)							Motor Type
			Evaporating Temperature: °C							
			-35	-30	-25	-20	-15	-10	-5	

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

WJ22MHG-1C	1	21.5						1220	1590	1995	2485	CSIR 240V/50Hz
WJ26MHG-3C	1-1/4	26.8						1580	2025	2525	3080	CSIR 240V/50Hz
WJ31MHG-1C	1-1/2	30.5						1715	2215	2785	3430	CSIR 240V/50Hz
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

KIRBY HERMETIC COMPRESSORS - R404A / R507

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 L/MBP Compressors (POE Oil) 240V / 1 Phase

WJ22MHG-1C	018-0096-00 (40W-240V)	5.3	FC	950	275	23.5	1/2 SV	3/8 ST
WJ26MHG-3C	018-0096-00 (40W-240V)	6.7	FC	950	275	23.5	1/2 SV	3/8 ST
WJ31MHG-1C	018-0096-00 (40W-240V)	6.5	FC	950	275	24.0	5/8 SV	3/8 ST
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)	4.2	FC	850	266	24.0	1/2 ST	3/8 ST

KIRBY HERMETIC COMPRESSORS - R404A / R507

Part Number	Nominal HP	Displ. cm ³ /rev	Nominal Capacity: R404A (watts)							Motor Type
			Evaporating Temperature: °C							
			-35	-30	-25	-20	-15	-10	-5	

AW Commercial Series L/MBP Compressors (POE Oil) 240V / 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
AW38MG-1C	1-1/2	37.5						1750	2330	2975	3765	CSIR 240V/50Hz
AW43MHG-1C	2	43.1						2175	2910	3745	4650	CSIR 240V/50Hz
AW48MHG-1C	2-1/2	48.4						2450	3275	4140	5190	CSIR 240V/50Hz
AW54MHG-3C	2-1/2	53.5						2715	3680	4690	5940	CSIR 240V/50Hz





HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)

KIRBY HERMETIC COMPRESSORS - R404A / R507

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.
AW Commercial Series L/MBP 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
AW38MG-1C	018-0096-00 (40W-240V)	7.9	FC	950	310	28.2	5/8 SV	3/8 ST
AW43MHG-1C	018-0096-00 (40W-240V)	9.6	FC	950	340	28.2	5/8 SV	3/8 ST
AW48MHG-1C	018-0096-00 (40W-240V)	11.2	FC	950	340	29.8	5/8 SV	3/8 ST
AW54MHG-3C	018-0096-00 (40W-240V)	12.5	FC	950	340	29.8	5/8 SV	3/8 ST



KIRBY HERMETIC COMPRESSORS - R404A / R507

Part Number	Nominal HP	Displ. cm ³ /rev	Nominal Capacity: R404A (watts)								Motor Type	
			Evaporating Temperature: °C									
			-35	-30	-25	-20	-15	-10	-5	0		
AW Commercial Series M/HBP Compressors (POE Oil) 415V / 3 Phase												
AW43MHG-4C	2	43.1						2175	2910	3745	4650	3 PH 415V/50Hz
AW48MHG-4C	2-1/4	48.4						2450	3275	4140	5190	3 PH 415V/50Hz
AW54MHG-4C	2-1/2	53.5						2715	3680	4690	5940	3 PH 415V/50Hz

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.
AW Commercial Series M/HBP Compressors (POE Oil) 415V / 3 Phase								
AW43MHG-4C	018-0096-00 (40W-240V)	3.4/PH	FC	950	340	28.2	5/8 SV	3/8 ST
AW48MHG-4C	018-0096-00 (40W-240V)	4.2/PH	FC	950	340	29.8	5/8 SV	3/8 ST
AW54MHG-4C	018-0096-00 (40W-240V)	4.2/PH	FC	950	340	29.8	5/8 SV	3/8 ST

KIRBY HERMETIC COMPRESSORS - R448A

Part Number	Nominal HP	Displ. cm ³ /rev	Nominal Capacity: R448A (watts)						Motor Type
			Evaporating Temperature: °C						
			-20	-15	-10	-5	0	5	
BA Commercial Series MBP Compressors (POE Oil) 240V / 1 Phase									
BA5MHG-1KS	1/5	4.50		200	256	326	411	514	RSIR 240V/50Hz
BA6MHG-1KS	1/4	5.5		251	322	410	517	646	CSIR 240V/50Hz
BA8MG-1KS	1/4	7.6		351	450	570	715	887	CSIR 240V/50Hz
BA9MG-1KS	1/3	8.9		413	560	726	909	1111	CSIR 240V/50Hz
BA12MG-1KS	3/8	12.0		566	747	957	1189	1438	CSIR 240V/50Hz
BA14MG-1KS	1/2	14.1		669	898	1143	1395	1649	CSIR 240V/50Hz
BA16MG-4KS	3/4	16.1		851	1078	1327	1606	1925	CSIR 240V/50Hz
BA18MG-1KS	7/8	18.0		935	1176	1445	1746	2091	CSIR 240V/50Hz
WJ Commercial Series MBP Compressors (POE Oil) 240V / 1 Phase									
WJ22MHG-1C	1	21.5		1140	1523	1962	2460	3029	CSIR 240V/50Hz
WJ26MHG-3C	1-1/4	26.8		1465	1926	2440	3014	3654	CSIR 240V/50Hz
WJ31MHG-1C	1-1/2	30.5		1636	2106	2670	3328	4088	CSIR 240V/50Hz


KIRBY HERMETIC COMPRESSORS - R448A (CONT'D)

Part Number	Nominal HP	Displ. cm ³ /rev	Nominal Capacity: R448A (watts)						Motor Type
			Evaporating Temperature: °C						
			-20	-15	-10	-5	0	5	

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

AW38MG	1-1/2	37.5		1249	1823	2561	3477	4586	CSIR 240V/50Hz
AW43MHG	2	43.1		1650	2389	3288	4345	5568	CSIR 240V/50Hz
AW48MHG	2-1/2	48.4		1731	2519	3501	4692	6108	CSIR 240V/50Hz
AW54MHG	2-1/2	53.5		1949	2835	3941	5281	6874	CSIR 240V/50Hz

AW Commercial Series MBP Compressors (POE Oil) 415V / 3 Phase

AW43MHG	2	43.1		1650	2389	3288	4345	5568	3 PH 415V/50Hz
AW48MHG	2-1/2	48.4		1731	2519	3501	4692	6108	3 PH 415V/50Hz
AW54MHG	2-1/2	53.5		1949	2835	3941	5281	6874	3 PH 415V/50Hz

KIRBY HERMETIC COMPRESSORS - R448A (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 MBP Compressors (POE Oil) 240V / 1 Phase

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

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

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

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

AW38MG	018-0096-00 (40W-240V)	7.9	FC	950	310	28.2	5/8 SV	3/8 ST
AW43MHG	018-0096-00 (40W-240V)	9.6	FC	950	340	28.2	5/8 SV	3/8 ST
AW48MHG	018-0096-00 (40W-240V)	11.2	FC	950	340	29.8	5/8 SV	3/8 ST
AW54MHG	018-0096-00 (40W-240V)	12.5	FC	950	340	29.8	5/8 SV	3/8 ST

AW Commercial Series MBP Compressors (POE Oil) 415V / 3 Phase

AW38MG	018-0096-00 (40W-240V)	3.4/PH	FC	950	340	28.2	5/8 SV	3/8 ST
AW43MHG	018-0096-00 (40W-240V)	4.2/PH	FC	950	340	29.8	5/8 SV	3/8 ST
AW48MHG	018-0096-00 (40W-240V)	4.2/PH	FC	950	340	29.8	5/8 SV	3/8 ST
AW54MHG	018-0096-00 (40W-240V)	12.5	FC	950	340	29.8	5/8 SV	3/8 ST





HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)

KIRBY HERMETIC COMPRESSORS - R448A (CONT'D)

Part Number	Nominal HP	Displ. cm ³ /rev	Nominal Capacity: R448A (watts)						Motor Type
			Evaporating Temperature: °C						
			-20	-15	-10	-5	0	5	

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

BA12LMY-1KS	1/4	12.04	198	277	387	523	676	845	CSIR 240V/50Hz
BA14LMY-1KS	1/3	14.14	230	322	451	609	788	984	CSIR 240V/50Hz
BA16LMY-1KS	3/8	16.08	264	370	519	700	905	1131	CSIR 240V/50Hz
BA16LZ-1KS	3/8	16.08	271	379	531	717	928	1159	CSIR 240V/50Hz
BA18LZ-1KS	1/2	18	329	461	611	789	1015	1303	CSIR 240V/50Hz

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

WJ22LZ-1C	3/4	21.5	269	433	634	888	1648	1648	CSIR 240V/50Hz
WJ26LZ-3C	7/8	26.75	307	510	762	1083	2046	2046	CSIR 240V/50Hz
WJ31LZ-1C	1	30.5	397	637	926	1289	2353	2353	CSIR 240V/50Hz

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

AW40LZ-1C	1	39.6	178	502	920	1439	2086	2890	CSIR 240V/50Hz
AW43LZ-5C	1-1/4	43.1	420	725	1155	1711	2394	3213	CSIR 240V/50Hz
AW54LZ-1C	1-1/2	53.5	584	874	1389	2110	2999	4026	CSIR 240V/50Hz

KIRBY HERMETIC COMPRESSORS - R448A (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

BA12LMY-1KS	018-0096-00 (40W-240V)	2.5	FC	417	203	11.7	3/8 ST	1/4 ST
BA14LMY-1KS	018-0096-00 (40W-240V)	2.8	FC	417	215	12.7	3/8 ST	1/4 ST
BA16LMY-1KS	018-0096-00 (40W-240V)	2.5	FC	417	215	13.1	3/8 ST	1/4 ST
BA16LZ-1KS	018-0096-00 (40W-240V)	2.4	FC	417	214	13	3/8 ST	1/4 ST
BA18LZ-1KS	018-0096-00 (40W-240V)	2.9	FC	417	215	13.6	3/8 ST	1/4 ST

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

WJ22LZ-1C	02-5452-00 (40W-240V)	2.7	FC	850	266	22.6	1/2 ST	3/8 ST
WJ26LZ-3C	02-5452-00 (40W-240V)	4.2	FC	850	266	23.7	1/2 ST	3/8 ST
WJ31LZ-1C	02-5452-00 (40W-240V)	4.2	FC	850	266	24	1/2 ST	3/8 ST

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

AW40LZ-1C	02-5452-00 (40W-240V)	4.5	FC	946	305	32.6	5/8 SV	5/16 ST
AW43LZ-5C	02-5452-00 (40W-240V)	6.9	FC	946	305	32.6	5/8 SV	5/16 ST
AW54LZ-1C	02-5452-00 (40W-240V)	7.9	FC	946	340	29.8	5/8 SV	5/16 ST



KIRBY HERMETIC COMPRESSORS - R407C / R22 COMMERCIAL REFRIGERATION

Part Number	Nominal HP	Displ. cm ³ /rev	Nominal Capacity: R407C / R22 (Watts)							
			Evaporating Temperature: °C							
			-25	-20	-15	-10	-5	0	5	10



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

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	



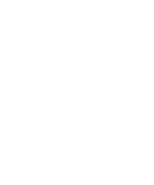
WJ Commercial Series M/HBP Compressors (POE Oil) 240V / 1 Phase

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 M/HBP Compressors (POE Oil) 240V / 1 Phase

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 M/HBP Compressors (POE Oil) 415V / 3 Phase

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

KIRBY HERMETIC COMPRESSORS - R407C / R22 COMMERCIAL REFRIGERATION (CONT'D)

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 M/HBP Compressors (POE Oil) 240V / 1 Phase

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 M/HBP Compressors (POE Oil) 240V / 1 Phase

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



HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)

KIRBY HERMETIC COMPRESSORS - R407C / R22 COMMERCIAL REFRIGERATION (CONT'D)

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.
AW Commercial Series M/HBP Compressors (POE Oil) 240V / 1 Phase									
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 M/HBP Compressors (POE Oil) 415V / 3 Phase									
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



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	
AV Series M/HBP (EXC = 240V / 1 PHASE, EXG = 415V / 3 PHASE) AB Oil										
AVA5542EXC	3-1/2	73.3	3505	3950	5370	7090	9270	11600	10380	PSC
AVA5546EXC	4	79	3830	4320	5880	7760	10150	12700	11360	PSC

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

Part Number	Motor Type	Optional External Crankcase Heater	Cooling	Oil Type	Oil Charge (cm ³)	O/A Height (mm)	Nett Weight (kg)	Service Connections (inches)	
								Suct.	Disch.
AV Series M/HBP (EXC = 240V / 1 PHASE, EXG = 415V / 3 PHASE) AB Oil (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

EXC Designates 1 Phase Motor = 220/240V / 50Hz.
EXG Designates 3 Phase Motor = 380/420V / 50Hz.

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 = 380/420V / 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 preferred.
- Crankcase Heaters available, please order separately

Application of HFC refrigerant alternatives should be verified with your local Kirby HVAC&R Representative.





COMPRESSOR CROSS REFERENCE TABLE (OBSOLETE TO CURRENT MODELS)

AIR CONDITIONING +7.2°C SST - R22/R407C

Obsolete Tecumseh Compressor	Capacity Watts	Copeland Hermetic Recip. Compressor	Capacity Watts	Maneurop Hermetic Recip. Compressor	Capacity Watts	Copeland Scroll Compressor*	Capacity Watts
AVA5535EXC	8590	CR33KQPFZ280-C	7735	MTZ36-5VI	9270	ZR36K3EPFJ522-C	8850
AVA5535EXG		CR33KQTFD265-C		MTZ36-4VI		ZR36K3ETFD522-C	
AVA5538EXC	9380	CR41KQPFZ280-C	10165	MTZ40-5VI	10480	ZR40K3EPFJ522-C	9260
AVA5538EXG		CR41KQTFD265-C		MTZ40-4VI		ZR40K3ETFD522-C	
AVA5542EXC	10380	CR41KQPFZ280-C	10165	MTZ44-5VI	10480	ZR42K3EPFJ522-C	10140
AVA5542EXG		CR41KQTFD265-C		MTZ44-4VI		ZR42K3ETFD522-C	
AVA5546EXC	11360	CR47KQPFZ280-C	11950	MTZ44-5VI	10520	ZR47K3EPFJ522-C	11500
AVA5546EXG		CR47KQTFD280-C		MTZ44-4VI		ZR47K3ETFD522-C	
AVA5555EXG	13430	CR53KQTFD267-C	12950	MTZ56-4VI	13750	ZR61K3ETFD522-C	14700
AVB5558EXG	13720	CR53KQTFD267-C	12950	MTZ56-4VI	13750	ZR61K3ETFD522-C	14700
AGA5561EXG	14880	CR53KQTFD267-C	12950	MTZ64-4VI	15730	ZR61K3ETFD522-C	14700
AGC5568EXG	16360	-	-	MTZ64-4VI	15730	ZR68K3ETFD522-C	16500
AGA5573EXG	17680	-	-	MTZ72-4VI	18190	ZR72K3ETFD522-C	17800

MEDIUM TEMPERATURE -5°C SST. R404A/R507



Obsolete Tecumseh Compressor	Capacity Watts	Copeland Hermetic Recip. Compressor	Capacity Watts	Maneurop Hermetic Recip. Compressor	Capacity Watts
AV91MHG-2C	7500	CS18K6ETFD523-C	5200	MTZ40-4VI	5490
AV73MHG-2C	5560	CS20K6ETFD523-C	5950	MTZ44-4VI	5840
AV91MHG-2C	7500	CS27K6ETFD523-C	7760	MTZ56-4VI	7880
AV92MHG-2C	7700	CS27K6ETFD523-C	7760	MTZ56-4VI	7880
AG125MHG-2C	8650	CS33K6ETFD523-C	9320	MTZ64-4VI	9130
AG135MHG-2C	9350	*ZF15K4ETFD551-C	10250	MTZ64-4VI	9130

LOW TEMP -25°C SST - R404A/R507

Obsolete Tecumseh Compressor	Capacity Watts	Copeland Hermetic Recip. Compressor	Capacity Watts	Maneurop Hermetic Recip. Compressor	Capacity Watts
AVA2490ZXG	2400	CS27K6ETFD523-C	2365	NTZ068-4RL1	2490
		CS33K6ETFD523-C	2950	NTZ096-4RL1	2900

Alternative selections should be verified by your local Kirby HVAC&R 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	KME684-2	92A040B330AD2X	40-48 µF 330 VAC.
AE1411A-7KS**	1	240V/50Hz	KME660-11	KME680-16		
AEV6LY-1KS	1	240V/50Hz	KME660-34	KME680-3		
AEV7LY-1KS	1	240V/50Hz	KME660-7	KME680-21		
AEV8LY-1KS	1	240V/50Hz	KME660-7	KME680-10		
AEV9LY-1KS	1	240V/50Hz	KME671-4	KME680-20		
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	KME692-1	92A120B330CE7X	120-144 µF 330 VAC.
AW40LZ-1C	1	240V/50Hz	Internal	KME692-1	92A120B330CE7X	120-144 µF 330 VAC.
AW43LZ-5C	1	240V/50Hz	Internal	RVA3H6D	92A120B330CE7X	120-144 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	92A108B250BD4X	108-130 µF 330 VAC.
AW48MHG-4C	3	415V/50Hz	Internal			
AW48MHY-3C	1	240V/50Hz	Internal	KGE681-4	92A120B330CE7X	120-140 µF 330 VAC.
AW54LZ-1C LBP	1	240V/50Hz	Internal	RVA3H6D	92A120B330CE7X	120-140 µF 330 VAC.
AW54LZ-1C M/HBP	1	240V/50Hz	Internal	RVA3H6D	92A120B330CE7X	120-140 µF 330 VAC.
AW54MHG-3C	1	240V/50Hz	Internal	KGE681-4	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	KME680-1		
AZ36LY-1KS	1	240V/50Hz	KME660-32	KME681-2		
AZ40LY-1KS	1	240V/50Hz	KME660-3	KME690-20		
AZ56LY-1KS	1	240V/50Hz	KME660-5	KME680-13		
BA12LMY-1KS	1	240V/50Hz	KME660-10	KME684-1	92A040B330AD2X	40-48 µF 330 VAC.
BA12MG-1KS	1	240V/50Hz	KME660-24	KME682-1	92A040B330AD2X	40-48 µF 330 VAC.
BA14LMY-1KS	1	240V/50Hz	KME660-8	KME684-1	92A040B330AD2X	40-48 µF 330 VAC.
BA14MG-1KS	1	240V/50Hz	KME660-24	KME682-1	92A040B330AD2X	40-48 µF 330 VAC.
BA16LMY-1KS	1	240V/50Hz	KME660-24	KME682-1	92A040B330AD2X	40-48 µF 330 VAC.
BA16LZ-1KS	1	240V/50Hz	KME660-41	RVA8R6D	92A040B330AD2X	40-48 µF 330 VAC.
BA16MG-4KS	1	240V/50Hz	KME671-4	RVA6M6D	92A040B330AD2X	40-48 µF 330 VAC.
BA18LZ-1KS	1	240V/50Hz	KME664-3	RVA8R6D	92A040B330AD2X	40-48 µF 330 VAC.
BA18MG-1KS	1	240V/50Hz	KME664-3	RVA8R6D	92A040B330AD2X	40-48 µF 330 VAC.
BA5MHG-1KS	1	240V/50Hz	KME660-6	KME680-4		
BA6MHG-1KS	1	240V/50Hz	KME660-10	KME684-1	92A040B330AD2X	40-48 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	
BA8LMY-1KS	1	240V/50Hz	KME660-6	KME680-4		
BA8MG-1KS	1	240V/50Hz	KME660-10	KME684-1	92A040B330AD2X	40-48 µF 330 VAC.
BA9MG-1KS	1	240V/50Hz	KME660-10	KME684-1	92A040B330AD2X	40-48 µF 330 VAC.
BA9MHY-1KS	1	240V/50Hz	KME660-9	KME684-2	92A040B330AD2X	40-48 µF 330 VAC.
WJ22LZ-1C	1	240V/50Hz	KME664-19	RVA3H6D	92A120B330CE7X	120-144 µF 330 VAC
WJ22MHG-1C	1	240V/50Hz	KME664-15	RVA3H6D	92A088B330BD4X	88-106 µF 330 VAC.
WJ26LZ-3C	1	240V/50Hz	KME664-18	RVA3H6D	92A161B330CE7X	161-193 µF 330 VAC.
WJ26MHG-3C	1	240V/50Hz	KME664-17	RVA3H6D	92A161B330CE7X	161-193 µF 330 VAC.
WJ31LZ-1C	1	240V/50Hz	KME664-15	RVA3H6D	92A161B330CE7X	161-193 µF 330 VAC.
WJ31MHG-1C	1	240V/50Hz	KME664-17	RVA3H6D	92A161B330CE7X	161-193 µF 330 VAC.

KIRBY HERMETIC COMPRESSOR - SPARE PARTS (CONT'D)

Compressor Model	Run Capacitor		Black Electrical Box	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					
AVA5535EXC	A17A400P9T	40 µF 450 VAC.	KWA099-3		
AVA5535EXG			KWA099-3		
AVA5538EXC	A17A350P9T	35 µF 450 VAC.	KWA099-3		
AVA5538EXG			KWA099-3		
AVA5542EXC	A17A400P9T	40 µF 450 VAC.	KWA099-3		
AVA5542EXG			KWA099-3		
AVA5546EXC	A17A400P9T	40 µF 450 VAC.	KWA099-3		
AVA5546EXG			KWA099-3		
AVA5555EXG					
AVB5558EXG					
AW38MG-1C	A17A200N7T	20 µF 450 VAC.	KWA099-3	2606-101620	
AW40LZ-1C	A17A200N7T	20 µF 450 VAC.	KWA099-3	2606-101620	
AW43LZ-5C	A17A300P7T	30 µF 450 VAC.	KWA099-3	2606-101620	
AW43MHG-1C	A17A350P9T	35 µF 450 VAC.	KWA099-3	2606-101620	
AW43MHG-4C			KWA099-3	2606-101620	
AW48MHG-1C	A17A350P9T	35 µF 450 VAC.	KWA099-3	2606-101620	
AW48MHG-4C			KWA099-3	2606-101620	
AW48MHY-3C	A17A200N7T	20 µF 450 VAC.	KWA099-3	2606-101620	
AW54LZ-1C LBP		Not required	KWA099-3	2606-101620	
AW54LZ-1C M/HBP	A17A200N7T	20 µF 450 VAC.	KWA099-3	2606-101620	
AW54MHG-3C	A17A450R9T	45 µF 450VAC.	KWA099-3	2606-101620	
AW54MHG-4C				2606-101620	
AW5522EK-3C					
AW5524EK-3C	A17A350P9T	35 µF 450 VAC.			
AW5528EK-3C	A17A350P9T	35 µF 450 VAC.			
AW5528EXG-4C					
AW5532EK-3C	A17A450R9T	45 µF 450 VAC.			
AZ33LY-1KS					



KIRBY HERMETIC COMPRESSOR - SPARE PARTS (CONT'D)

Compressor Model	Run Capacitor		Black Electrical Box	R/L Suct. P/No.	R/L Disch. P/No.
	P/No.	MFD			
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	2600-081620	
WJ22MHG-1C	AI7A200N7T	20 µF 450 VAC.	KWA099-3	2600-081620	
WJ26LZ-3C	AI7A250P7T	25 µF 450 VAC.	KWA099-3	2600-081620	
WJ26MHG-3C	AI7A250P7T	25 µF 450 VAC.	KWA099-3	2600-081620	
WJ31LZ-1C	AI7A250P7T	25 µF 450 VAC.	KWA099-3	2606-101620	
WJ31MHG-1C	AI7A250P7T	25 µF 450 VAC.	KWA099-3	2606-101621	



DANFOSS HERMETIC COMPRESSORS R404A, R507, R22, R134a

Part Number	Model Number	Nominal HP	Displ. cm ³ / rev	Nominal Capacity (watts)								Rating Point
				Evaporating Temperature: °C								
				-25	-20	-15	-10	-5	0	5	10	



R404A/R507/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
195B0391	SC15MLX	3/4	15.28		758	951	1183	1458	1780	2155		2338
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		-

R404A / R507 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				-



HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)

DANFOSS HERMETIC COMPRESSORS R404A, R507, R22, R134a



Part Number	Model Number	Nominal HP	Displ. cm ³ /rev	Nominal Capacity (watts)								Rating Point
				Evaporating Temperature: °C								
				-25	-20	-15	-10	-5	0	5	10	

R404A / R507 LBP Compressors (Cont'd)

104L2853SP	SC15CL	1/2	15.28	615	792	988	1206	1458					-
104L2123SP	SC18CL	5/8	17.69	715	918	1154	1425	1735					-
195B0640	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 To R134a

195B0606	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
195B0700	SC15S	1/2	16.30	390	495	615	755	905	1070	1250	1445	1200
195B0696	SC18B	1/2	17.70	445	565	705	860	1035	1220	1425	1640	1399
195B0697	SC21S	5/8	20.95	490	625	780	955	1155	1375	1610	1870	1589



DANFOSS HERMETIC COMPRESSORS R404A, R507, 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 (mm)	
			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




DANFOSS HERMETIC COMPRESSORS R404A, R507, 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 (mm)	
			LBP	HBP					Suct.	Disch.
195B0391	CSIR/HST	4.13	-	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
195B0640	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

R12 Replacement

195B0606	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
195B0700	CSIR/HST	2.90	-	F2	POE	550	210	13.1	10.2	6.2
195B0696	CSIR/HST	3.15	-	F2	MINERAL	550	219	13.7	10.2	6.2
195B0697	CSIR/HST	3.20	-	F2	POE	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.





HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)



			Nominal Capacity (watts) @SST	-25°C	-10°C	-5°C
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

0-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 HFC refrigerant alternatives should be verified with your local Kirby HVAC&R 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	

R404A/R507/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

R404A/R507 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

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



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 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	-

CS COPELAND HERMETIC COMPRESSORS - REFRIGERATION

Part Number	Nominal HP	Displ. cm ³ /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

CS10K6EPFJ507-C	1.75	38.1	650	3450	1755	CSR	Internal	12.1	POE 32
CS14K6EPFJ579-C	2.25	48.6	1300	4650	2435	CSR	Internal	17.5	POE 32
CS18K6E-PFJ-595**	2.75	61.4	1495	6000	3300	CSR	Internal	19.1	POE 32

Compressors 415V/3/50Hz

CS14K6ETFD523-C	2.25	48.6	1300	4650	2435	DOL	Internal	6.6	POE 32
CS18K6ETFD523-C	2.75	61.4	1495	6000	3450	DOL	Internal	6.6	POE 32
CS20K6ETFD523-C	3.00	74.3	1705	6800	3850	DOL	Internal	7.1	POE 32
CS27K6ETFD523-C	4.00	92.4	2365	8850	5050	DOL	Internal	10.8	POE 32
CS33K6ETFD523-C	5.00	106.2	2950	10600	5900	DOL	Internal	12.7	POE 32
CF06K6ETFD523-C	2.00	49.6	1640		2480	DOL	Internal	5.2	POE 32
CF09K6ETFD523-C	2.50	72.1	2440		3740	DOL	Internal	7.7	POE 32
CF12K6ETFD523-C	3.50	3.5	3200		4900	DOL	Internal	9.2	POE 32



CS COPELAND HERMETIC 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

HERMETIC COMPRESSORS - RECIPROCATING (CONT'D)

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CS COPELAND HERMETIC 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 415V/3/50Hz								
CS14K6ETFD523-C	1270	348	32.0	Yes	3/4	3/8	918-0031-05	240V/480V-70W
CS18K6ETFD523-C	1270	348	32.0	Yes	3/4	3/8	918-0031-05	240V/480V-70W
CS20K6ETFD523-C	1270	360	33.0	Yes	3/4	1/2	918-0031-05	240V/480V-70W
CS27K6ETFD523-C	1500	386	33.0	Yes	3/4	1/2	918-0031-05	240V/480V-70W
CS33K6ETFD523-C	1500	386	35.0	Yes	7/8	1/2	918-0031-05	240V/480V-70W
CF06K6ETFD523-C	1270	348	32.0	Yes	3/4	3/8	918-0031-05	240V-40W
CF09K6ETFD523-C	1270	348	32.0	Yes	3/4	3/8	918-0031-05	240V-40W
CF12K6ETFD523-C	1270	348	34.0	Yes	3/4	3/8	918-0031-05	240V-40W

*MCC(A) = Maximum Continuous Current .. RLA (Run Load Amps) = MCC ÷ 1.4
 ** Multipack compressor - requires request to pack into carton at point of order.

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

Part Number	Start Capacitor	Run Capacitor	Potential Rely
	Description	Description	Description
CS10K6E-PFJ-595	130 -156 µF 250 VAC.	30 µF 370 VAC.	RVA3AG6D-917
CS14K6E-PFJ-595	145-174 µF 220 VAC.	35 µF 370 VAC.	RVA4AG6D-921
CS18K6E-PFJ-595	216-259 µF 250 VAC.	45 µF 370 VAC.	RVA3AG6D-917

Note: For price and availability of single phase electrics to suit Copeland CR Series please contact your Kirby HVAC&R representative

COPELAND™

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
CS10K6EPFJ507-C	Suction	-	Discharge	-
CS14K6EPFJ579-C	Suction	-	Discharge	-
CS18K6E-PFJ-595**	Suction	-	Discharge	-
CS14K6ETFD523-C	Suction	-	Discharge	-
CS18K6ETFD523-C	Suction	-	Discharge	-
CS20K6ETFD523-C	Suction	-	-	Discharge
CS27K6ETFD523-C	Suction	-	-	Discharge
CS33K6ETFD523-C	-	Suction	-	Discharge
CF06K6ETFD523-C	Suction	-	Discharge	-
CF09K6ETFD523-C	Suction	-	-	Discharge
CF12K6ETFD523-C	Suction	-	-	Discharge
SEAL TEFLON	CTL264-2	CTL264-2	CTL264-1	CTL264-1

Features:

- All hermetic compressors are offered as service packs and include feet mounting kit, electrical components for Single Phase models only and Rotalock Service Valve to all (Model designated by "C").

- 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 Kirby HVC&R Representative.

MANEUROP HERMETIC COMPRESSORS R404A, R507, 407C

Part Number	Nominal HP	Cylinder Number	Displacment		Nominal Capacity: R404A, R507 (watts)				R407C / R22 Air Cond. +7.2 °C
					Evaporating Temperature: °C				
			cm ³ /rev	m ³ /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 HERMETIC COMPRESSORS R507, R404A (CONT'D)

Part Number	Electrical Supply Volts/Hz/Phase	Nominal MCC (A)	Motor Type	Oil Type (Pre-Charged)	Oil Charge cm ³	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

HERMETIC COMPRESSORS – RECIPROCATING (CONT'D)

MANEUROP HERMETIC COMPRESSORS R507, R404A (CONT'D)

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Part Number	Electrical Supply Volts/Hz/Phase	Nominal MCC (A)	Motor Type	Oil Type (Pre- Charged)	Oil Charge cm ³	O/A Height (mm)	Net Weight (kg)	Service Connections Size (Inches)	
								Suct. Solder Tube	Disch. Solder tube
R507/R404A M/HBP Compressors (POE Oil) (Cont'd)									
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.
*MOC(A) = Maximum Operating Current .. RLA (Run Load Amps) = MCC ÷ 1.4

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 fitment 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.

Application of R407F and other HFC refrigerant alternatives should be verified with your local Kirby HVAC&R Representative.

MANEUROP HERMETIC COMPRESSORS R507, R404A

Part Number	Nominal HP	Cylinder Number	Displacment		Nominal Capacity				
					Evaporating Temperature: °C				
			cm ³ /rev	m ³ /h @ 2900 rpm	-40	-35	-30	-25	-20
R404A / R507 LBP Compressors (POE Oil)									
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 cm ³	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.
 *MOC(A) = Maximum Operating Current . RLA = Run Load Amps MOC ÷ 1.4
 Compressor models listed are all suction cooled design

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 fitment 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.

Application of R407F and other HFC refrigerant alternatives should be verified with your local Kirby HVAC&R 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	-	-	-	-
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	-	-	-	-



HERMETIC COMPRESSORS – RECIPROCATING (CONT'D)

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

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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	-
SEAL TEFLON	CTL264-1	CTL264-2	CTL264-2	CTL264-2	CTL264-3	CTL264-3		




COPELAND™



HERMETIC COMPRESSORS – SCROLL

ZF COPELAND SCROLL COMPRESSORS - REFRIGERATION

Part Number	Nominal HP	Displ. cm ³ /rev	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

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

Note :

**MOC = Maximum Operating Current (A) .. RLA = Run Load Amps MOC ÷ 1.4

All hermetic compressors are offered as service packs and include feet mounting kit, 240V. wrap around crank case heater and rotalock service valves (Model designated by "C").

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

Application of HFC refrigerant alternatives should be verified with your local Kirby HVAC&R Representative.

ZR COPELAND SCROLL COMPRESSORS - AIR CONDITIONING

Part Number	Nominal HP	Displ. m ³ /hr	Nominal Watts Capacity @ +7.2 °C SST.		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)	
			R22 / R407C	R134a								Suct.	Disch.

R22 / R407C / R134a HBP Compressors 240V/Single Phase/50Hz (POE Oil)

ZR22K3EPFJ522-C	1.8	30.7	5240	3450	PSC	9.6	POE	1000	383	26.0	No	3/4	1/2
ZR28K3EPFJ522-C	2.3	39.2	6970	4550	PSC	12.9	POE	1000	383	27.3	No	3/4	1/2
ZR34K3EPFJ522-C	2.8	46.1	8260	5300	PSC	13.6	POE	1100	406	29.5	No	3/4	1/2
ZR36K3EPFJ522-C	3.0	49.5	8850	5670	PSC	16.4	POE	1100	406	29.5	No	3/4	1/2
ZR40K3EPFJ522-C	3.5	54.2	9260	5926	PSC	16.8	POE	1100	420	30.0	No	3/4	1/2
ZR42K3EPFJ522-C	3.8	56.8	10140	6200	PSC	17.1	POE	1100	420	30.0	No	3/4	1/2
ZR47K3EPFJ522-C	4.0	64.1	11500	7450	PSC	19.3	POE	1360	436	32.6	No	7/8	1/2
ZR61KCEPFZ522-C	5.0	84.7	14700	9408	PSC	21.3	POE	1420	430	30.0	No	3/4	1/2
ZR68KCEPFJ522-C	5.5	92.2	16500	10560	PSC	24.5	POE	1700	438	39.0	No	7/8	1/2

R22 / R407C / R134a HBP Compressors 415V/3 Phase/50Hz (POE Oil)

ZR28K3ETFD522-C	2.3	39.2	6970	4550	DOL	5.0	POE	1000	383	26.0	No	3/4	1/2
ZR36K3ETFD522-C	3.0	49.5	8850	5670	DOL	5.7	POE	1000	406	29.5	No	3/4	1/2
ZR40K3ETFD522-C	3.3	51.2	9260	5926	DOL	6.4	POE	1100	420	32.0	No	3/4	1/2
ZR47KCETFD522-C	3.9	63.2	10900	6976	DOL	7.2	POE	1200	436	32.6	No	7/8	1/2
ZR48KCETFD522-C	4.1	67.2	11500	7450	DOL	7.5	POE	1400	460	33.0	No	7/8	1/2

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

Part Number	Nominal HP	Displ. m ³ /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.
ZR54KCETFD522-C	4.5	73.2	13000	8320	DOL	8.2	POE	1800	460	35.5	No	7/8	1/2
ZR57KCETFD522-C	4.8	76.0	13660	8724	DOL	8.2	POE	1800	460	36.0	No	7/8	1/2
ZR61KCETFD522-C	5.0	82.4	14700	9408	DOL	10.0	POE	2000	460	35.9	No	7/8	1/2
ZR68KCETFD522-C	5.8	93.0	16500	10560	DOL	10.0	POE	1600	460	38.2	No	7/8	1/2
ZR72KCETFD522-C	6.0	98.0	17800	11392	DOL	13.0	POE	1800	460	38.2	No	7/8	1/2
ZR81KCETFD522-C	6.8	110.6	19800	12672	DOL	15.0	POE	1800	460	40.0	No	7/8	3/4
ZR94KCETFD522-C	8.0	127.2	23000	14720	DOL	16.2	POE	2500	496	59.0	No	1 1/8	7/8
ZR94KCETFD523-C	8.0	127.2	23000	14720	DOL	16.2	POE	2500	496	59.0	Yes	1 1/8	7/8
ZR108KCETFD522C	9.0	147.5	26670	17069	DOL	17.3	POE	3300	553	64.0	No	1 3/8	7/8
ZR108KCETFD523C	9.0	147.5	26670	17069	DOL	17.3	POE	3100	553	64.0	Yes	1 3/8	7/8
ZR125KCETFD522C	10.0	167.6	30660	19622	DOL	19.2	POE	3380	553	64.0	No	1 3/8	7/8
ZR125KCETFD523C	10.0	167.6	30660	19622	DOL	19.2	POE	3380	553	62.7	Yes	1 3/8	7/8
ZR144KCETFD522C	12.0	191.7	34700	22208	DOL	22.0	POE	3380	553	62.7	No	1 3/8	7/8
ZR144KCETFD523C	12.0	191.7	34700	22208	DOL	22.0	POE	3380	553	62.7	Yes	1 3/8	7/8
ZR160KCETFD523C	13.0	204.3	37700	24128	DOL	28.0	POE	3380	572	64.9	Yes	1 3/8	7/8
ZR190KCETFD523C	15.0	241.9	45900	29376	DOL	34.0	POE	3380	572	66.2	Yes	1 3/8	7/8
ZR250KCETWD523C	20.0	326.0	61210	39174	DOL	41.0	POE	4700	717	140.0	Yes	1 5/8	1 3/8
ZR310KCETWD523C	25.0	411.3	77400	49536	DOL	52.0	POE	6800	715	160.0	Yes	1 5/8	1 3/8
ZR380KCETWD523C	30.0	504.0	95100	60864	DOL	62.0	POE	6300	715	177.0	Yes	1 5/8	1 3/8



Note :

**MOC = Maximum Operating Current (A) . RLA = Run Load Amps MOC ÷ 1.4
 All hermetic compressors are offered as service packs and include feet mounting kit only (Model designated by "C") where 240V. wrap around crank case heater and rotalock service valves are optional extras (refer to selection chart).

Sales Note :

Tandem and Trio compressor combinations and single phase 240V/50HZ. motor models are available on request please contact your local Kirby HVAC&R Branch for assistance.

HERMETIC COMPRESSORS – SCROLL (CONT'D)

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

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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 INSTALLATIONS TIPS 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 HFC refrigerant alternatives should be verified with your local Kirby HVAC&R Representative.

ZF LIQUID INJECTION KIT R404A, R448A, R407A, R407F - PARTS LISTING (LESS THAN -25°C SST APPLICATION)

Compressor Model	Liquid Injection Kit 120°C	Discharge Temp Control (DTC)130°C, incl. clamp	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	8414403	8409496	8561105
ZF09K4ETFD550-C	8414403	8409496	8561105
ZF11K4ETFD550-C	8414403	8409496	8561105
ZF13K4ETFD551-C	8414403	8409496	8561105
ZF15K4ETFD551-C	8414403	8409496	8561105
ZF18K4ETFD551-C	8414403	8409496	8561105
ZF24K4ETWD551-C	854637	8615262	8561105
ZF33K4ETWD551-C	856415	8615262	8561105
ZF40K4ETWD551-C	856448	8615262	8561105
ZF48K4ETWD551-C	856448	8615262	8561105

Important note: Application of HFC refrigerant alternatives should be verified with your local Kirby HVAC&R Representative.

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.
ZR40K3EPFJ522-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.
ZR61KCEPFZ522-C	1 PH.	240V / 50Hz	Internal	040-0166-37	92A088B330BD4X	88-106 µF 330 VAC.
ZR68KCEPFJ522-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	-	-	-	-
ZR47K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR48K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR54K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR57K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR61K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR68K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR72K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR81K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR94K3ETFD522-C	3 PH.	415V / 50Hz	-	-	-	-
ZR94K3ETFD523-C	3 PH.	415V / 50Hz	-	-	-	-
ZR108K3ETFD522C	3 PH.	415V / 50Hz	-	-	-	-
ZR108K3ETFD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR125K3ETFD522C	3 PH.	415V / 50Hz	-	-	-	-
ZR125K3ETFD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR144K3ETFD522C	3 PH.	415V / 50Hz	-	-	-	-
ZR144K3ETFD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR160K3ETFD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR190K3ETFD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR250K3ETWD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR310K3ETWD523C	3 PH.	415V / 50Hz	-	-	-	-
ZR380K3ETWD523C	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
ZR40K3EPFJ522-C	A17A550R9T	55 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
ZR61KCEPFZ522-C	A17A600V9T	50 µF 440 VAC.	018-0095-00	240V 70W
ZR68KCEPFJ522-C	A17A600V9T	50 µF 440 VAC.	018-0095-00	240V 70W
ZR28K3ETFD522-C	-	-	018-0095-00	240V 70W



HERMETIC COMPRESSORS – SCROLL (CONT'D)

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ZR COMPRESSOR SPARE PARTS (CONT'D)



Compressor Model	Run Capacitor		Crankcase Heater	
	P/No.	MFD	P/No.	Type
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 93W
ZR94KCETFD523-C	-	-	018-0091-22	240V 93W
ZR108KCETFD522C	-	-	018-0091-22	240V 93W
ZR108KCETFD523C	-	-	018-0091-22	240V 93W
ZR125KCETFD522C	-	-	018-0091-22	240V 93W
ZR125KCETFD523C	-	-	018-0091-22	240V 93W
ZR144KCETFD522C	-	-	018-0091-22	240V 93W
ZR144KCETFD523C	-	-	018-0091-22	240V 93W
ZR160KCETFD523C	-	-	018-0091-22	240V 93W
ZR190KCETFD523C	-	-	018-0091-22	240V 93W
ZR250KCETWD523C	-	-	918-0056-04	240V 120W
ZR310KCETWD523C	-	-	918-0056-04	240V 120W
ZR380KCETWD523C	-	-	918-0056-04	240V 120W

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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
ZR40K3EPFJ522-C	Discharge	Suction	-	-	-	-	MR362-3	293-8016
ZR42K3EPFJ522-C	Discharge	Suction	-	-	-	-	MR362-3	293-8016
ZR47K3EPFJ522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
ZR61KCEPFZ522-C	Discharge	Suction	-	-	-	-	MR362-3	293-8016
ZR68KCEPFJ522-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

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
ZR68KCETFD522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
ZR72KCETFD522-C	Discharge	-	Suction	-	-	-	MRV362-5	293-8016
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	-	-	-
ZR250KCETWD523C	-	-	-	-	Discharge	Suction	-	-
ZR310KCETWD523C	-	-	-	-	Discharge	Suction	-	-
ZR380KCETWD523C	-	-	-	-	Discharge	Suction	-	-



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

Model	Nominal HP	Displ. m³/hr @ 2900 rpm	Displ. cm³/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 MHPB - 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

HERMETIC COMPRESSORS – SCROLL (CONT'D)

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

Model	Oil Type	Model	Oil Type	Nominal HP	Displ. m ³ /hr @ 2900rpm	Displ. cm ³ /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 R407C / R22 MHBP AIR CONDITIONING 415 V-50 Hz - 3 PHASE (CONT'D)

Model	Nominal Current *FLA	Auxillary 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
Nominal Current *FLA = 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 Kirby HVAC&R 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 & SZ COMPRESSOR SERVICE VALVE GUIDE (CONT'D)

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 / SZ125-4RI	Discharge	-	-	-	-	Yes
SM / SZ160-4RI	-	Discharge	-	-	Suction	Yes
SM / SZ175-4RI	-	Discharge	-	-	Suction	Yes
SM / SZ185-4RI	-	Discharge	-	-	Suction	Yes


ZP COPELAND SCROLL COMPRESSORS - AIR CONDITIONING

Part Number	Nominal HP / Displ. m ³ /hr	R410A Capacity (W) @+7.2°C SST	Motor Type	*Nominal Current MOC (A)	Oil Type	Oil Charge cc	O/A Height (mm)
R410A HBP Compressors 415V/3/50Hz							
ZP31K5TFD622-C	3.0 / 5.0	6995	DOL	6.0	POE	740	388
ZP50K3ETFD522-C	4.2 / 8.4	12400	DOL	9.0	POE	1120	418
ZP54KSETFM522-C	4.6 / 8.9	13150	DOL	10.0	POE	1240	418
ZP57K3E-TFD-522	4.8 / 9.5	13900	DOL	11.0	POE	1240	418
ZP61KCETFM522-C	5.0 / 10.0	14325	DOL	12.0	POE	1240	443
ZP67KCETFM522-C	5.6 / 10.9	16100	DOL	12.5	POE	1660	443
ZP72KCETFD522-C	6.0 / 11.7	17100	DOL	15.0	POE	1770	443
ZP83KCETFD593-C	6.9 / 13.4	19900	DOL	15.0	POE	1770	443
ZP90KCETFD522-C	7.5 / 14.7	21800	DOL	16.0	POE	1770	446
ZP103KCETFD522-C	8.6 / 16.8	25200	DOL	18.0	POE	2510	476
ZP120KCETFD522-C	10.0 / 19.5	29300	DOL	22.0	POE	2510	559
ZP137KCETFD522-C	11.4 /	32500	DOL	25.0	POE	2750	559
ZP154KCETFD522-C	12.8 / 24.8	37000	DOL	31.0	POE	3380	552
ZP182KCETFD455-C	15.2 / 29.1	44000	DOL	34.0	POE	3380	552
ZP182KCETFD522-C	15.2 / 29.1	44000	DOL	34.0	POE	3380	552
ZP235KCETWD524-C	19.6 / 37.8	57000	DOL/24V.INT CONT.	40.0	POE	4700	717
ZP295KCETWD524-C	24.6 / 46.7	71500	DOL/24V.INT CONT.	48.0	POE	6800	715
ZP385KCETWD524-C	32.1 / 60.8	92500	DOL/24V.INT CONT.	65.0	POE	6300	715
ZP485KCETWD524-C	40.0 / 77.3	108900	DOL/24V.INT CONT.	82.0	POE	6300	746



HERMETIC COMPRESSORS – SCROLL (CONT'D)

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

Part Number	Weight (kg)	Rotalock Service Valves	Service - Solder Stub Connections (inches)		Crankcase Heater 240V - 50 Hz
			Suct.	Disch.	
R410A HBP Compressors 415V/3/50Hz					
ZP31K5TFD622-C	22.0	No	3/4	1	018-0096-00 (40W)
ZP50K3ETFD522-C	34.4	No	7/8	1/2	018-0096-00 (40W)
ZP54KSETFM522-C	34.0	No	7/8	1/2	018-0096-00 (40W)
ZP57K3E-TFD-522	34.0	No	7/8	1/2	018-0095-00(70W)
ZP61KCETFM522-C	35.0	No	7/8	1/2	018-0095-00(70W)
ZP67KCETFM522-C	40.0	No	7/8	1/2	018-0095-00(70W)
ZP72KCETFD522-C	40.0	No	7/8	1/2	018-0095-00(70W)
ZP83KCETFD593-C	40.0	No	7/8	1/2	018-0095-00(70W)
ZP90KCETFD522-C	41.0	No	7/8	3/4	018-0095-00(70W)
ZP103KCETFD522-C	48.0	No	1 1/8	7/8	018-0091-22 (93W)
ZP120KCETFD522-C	49.0	No	1 1/8	7/8	018-0091-22 (93W)
ZP137KCETFD522-C	49.0	No	1 1/8	7/8	018-0091-22 (93W)
ZP154KCETFD522-C	65.0	No	1 3/8	7/8	018-0091-22 (93W)
ZP182KCETFD455-C	66.0	No	1 3/8	7/8	018-0091-22 (93W)
ZP182KCETFD522-C	66.0	No	1 3/8	7/8	018-0091-22 (93W)
ZP235KCETWD524-C	140.0	No	1 5/8	1 3/8	018-0091-22 (93W)
ZP295KCETWD524-C	160.0	No	1 5/8	1 3/8	018-0091-22 (93W)
ZP385KCETWD524-C	178.0	No	1 5/8	1 3/8	018-0091-22 (93W)
ZP485KCETWD524-C	190.0	No	1 5/8	1 3/8	018-0091-22 (93W)

*MOC(A) = Maximum Operating Current ., RLA (Run Load Amps) = MCC ÷ 1.4

Sales Note: Tandem, Trio, Digital compressor combinations and single phase 240V/50HZ. motor models are available on request please contact your local Kirby HVAC&R Branch for assistance.



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 INSTALLATIONS TIPS 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 are available please order separately

Application of R407F and other HFC refrigerant alternatives should be verified with your local Kirby HVC&R Representative.

COPELAND

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.

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™

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			

Sales Note: Other sound shell combinations and jackets are available on request please contact your local Kirby HVAC&R Branch or Sales Representative.

ZB COPELAND SCROLL COMPRESSORS - REFRIGERATION

Part Number	Nominal HP	Displ. m ³ /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)									
ZB15KQETFD551-C	2.0	5.9	3290	2270	DOL	Internal	8.6	POE 32	1180
ZB19KQETFD551-C	2.5	6.8	4320	2610	DOL	Internal	8.6	POE 32	1450
ZB21KQETFD551-C	3.0	8.9	5210	3300	DOL	Internal	10.7	POE 32	1450
ZB26KQETFD551-C	3.5	9.9	6070	3810	DOL	Internal	10.9	POE 32	1450
ZB30KQETFD551-C	4.0	11.5	7110	4470	DOL	Internal	11.8	POE 32	1890
ZB38KQETFD551-C	5.0	14.5	8860	5590	DOL	Internal	12.5	POE 32	1890
ZB45KQETFD551-C	6.0	17.5	10450	6570	DOL	Internal	13.6	POE 32	1660
ZB50KQETFD551-C	7.5	18.5	12500	7600	DOL	Internal	16.4	POE 32	2510
ZB58KQETFD551-C	8.0	22.1	13750	8500	DOL	Internal	18.6	POE 32	2510
ZB66KQETFD551-C	9.0	25.7	15600	9700	DOL	Internal	20.0	POE 32	3250
ZB76KQETFD551-C	10.0	28.8	18550	11100	DOL	Internal	20.7	POE 32	3250
ZB88KQETFD551-C	12.0	32.4	20660	12660	DOL	Internal	25.0	POE 32	3250
ZB95KQETFD551-C	13.0	36.4	22200	13650	DOL	Internal	25.0	POE 32	3250
ZB114KQETFD551-C	15.5	43.4	30300	16300	DOL	Internal	27.9	POE 32	3250
R404A / R134a M/HBP Compressors 240V/1/50Hz (Fixed Capacity)									
ZB15KQEPFJ558-C	2.0	5.9	3290	2270	CSR	Internal	12.8	POE 32	1180
ZB19KQEPFJ559-C	2.5	6.8	4320	2610	PSC	Internal	12.8	POE 32	1450
ZB21KQEPFJ558-C	3.0	8.9	5210	3300	PSC	Internal	16.4	POE 32	1450
ZB26KQEPFJ559-C	3.5	9.9	6070	3810	PSC	Internal	18.0	POE 32	1450

*MOC(A) = Maximum Operating Current .. RLA (Run Load Amps) = MOC ÷ 1.4

ZB COPELAND SCROLL COMPRESSORS - REFRIGERATION (CONT'D)

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

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

ZB15KQETFD551-C	436	23.0	Yes	3/4	1/2	018-0095-00	240V-70W
ZB19KQETFD551-C	436	25.0	Yes	3/4	1/2	018-0095-00	240V-70W
ZB21KQETFD551-C	436	25.0	Yes	3/4	1/2	018-0095-00	240V-70W
ZB26KQETFD551-C	436	28.0	Yes	3/4	1/2	018-0095-00	240V-70W
ZB30KQETFD551-C	420	38.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZB38KQETFD551-C	476	38.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZB45KQETFD551-C	462	59.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZB50KQETFD551-C	495	59.0	Yes	1 1/8	7/8	018-0091-22	240V-90W
ZB58KQETFD551-C	495	60.0	Yes	1 1/8	7/8	018-0091-22	240V-90W
ZB66KQETFD551-C	566	65.0	Yes	1 1/8	7/8	018-0091-22	240V-90W
ZB76KQETFD551-C	566	65.0	Yes	1 1/8	7/8	018-0091-22	240V-90W
ZB88KQETFD551-C	566	65.0	Yes	1 3/8	7/8	018-0091-22	240V-90W
ZB95KQETFD551-C	573	65.0	Yes	1 3/8	7/8	018-0091-22	240V-90W
ZB114KQETFD551-C	573	65.0	Yes	1 3/8	7/8	018-0091-22	240V-90W

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

ZB15KQEPFJ558-C	436	23.0	Solder Stub	3/4	1/2	018-0095-00	240V-70W
ZB19KQEPFJ559-C	436	25.0	Yes	3/4	1/2	018-0095-00	240V-70W
ZB21KQEPFJ558-C	436	25.0	Solder Stub	3/4	1/2	018-0095-00	240V-70W
ZB26KQEPFJ559-C	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	
ZB15KQEPFJ558-C	2.0	98-106 -330V	A17A400P9T	40 µF 450 VAC.	040-0166-37
ZB19KQEPFJ559-C	-	-	A17A450R9T	45 µF 450VAC.	-
ZB21KQEPFJ558-C	-	-	A17A600V9T	60 µF 450VAC.	-
ZB26KQEPFJ559-C	-	-	A17A600V9T	60 µF 450VAC.	-




HERMETIC COMPRESSORS – SCROLL (CONT'D)

COPELAND™

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, Liquid Injection Valve and Discharge Temperature sensor

For application and compressor model selection assistance please contact your local Kirby HVAC&R 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					
ZBD21KQETFD551-C	3	8.3	5460	3480	DOL	Internal	7.9	POE 32	1360
ZBD29KQETFD558-C	4	11.4	6210	4115	DOL	Internal	7.9	POE 32	1360
ZBD30KCETFD551-C	4.5	11.7	7270	4720	DOL	Internal	7.9	POE 32	1900
ZBD38KQETFD558-C	5	14.4	8970	5900	DOL	Internal	12.8	POE 32	1900
ZBD45KQETFD559-C	6	17.1	10750	6600	DOL	Internal	12.5	POE 32	1900
ZBD48KQETFD559-C	6.5	18.8	13900	8500	DOL	Internal	15.2	POE 32	1900
ZBD76KCETFD551-C	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	Field Solder Connections (inches)		Optional Crankcase Heater	
				Suct.	Disch.	Part No.	Spec.
ZBD21KQETFD551-C	480	33.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZBD29KQETFD558-C	480	33.0	Solder Stub	7/8	1/2	018-0095-00	240V-70W
ZBD30KCETFD551-C	480	37.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZBD38KQETFD558-C	495	38.0	Solder Stub	7/8	1/2	018-0095-00	240V-70W
ZBD45KQETFD559-C	495	40.0	Yes	7/8	1/2	018-0095-00	240V-70W
ZBD48KQETFD559-C	495	41.0	Yes	7/8	3/4	018-0095-00	240V-70W
ZBD76KCETFD551-C	533	62.0	Yes	1 1/8	7/8	018-0095-00	240V-70W

Each compressor is supplied with Digital Control, Liquid Injection Valve and Discharge Temperature sensor.

Recommended control Dixell XC645CX-1C11F Panel Mounted or XC645D-5C11F Din Rail Mounted versions, Sold separately

Each Compressors requires One only Liquid Injector 240V. Coil P/N. 023-0088-04, Sold separately

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 Kirby HVC&R 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
ZB15KQETFD551-C	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB15KQEPFJ558-C	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB19KQETFD551-C	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB19KQEPFJ559-C	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB21KQETFD551-C	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB21KQEPFJ558-C	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB26KQETFD551-C	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB30KQETFD551-C	Discharge	Suction	-	-	-	-	965-26XX-20S	MRV204-1
ZB38KQETFD551-C	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZB45KQETFD551-C	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZB50KQETFD551-C	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZB58KQETFD551-C	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZB66KQETFD551-C	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZB76KQETFD551-C	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZB88KQETFD551-C	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZB95KQETFD551-C	-	-	-	Discharge	-	Suction	NA	965-26XX-20S
ZB114KQETFD551-C	-	-	-	Discharge	-	Suction	NA	965-26XX-20S
ZBD21KQETFD551-C	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD21KQETFD551-C	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD29KQETFD558-C	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD30KCETFD551-C	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD38KQETFD558-C	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD45KQETFD559-C	Discharge	-	-	Suction	-	-	965-26XX-20S	MRV204-1
ZBD48KQETFD559-C	-	-	-	Discharge	Suction	-	965-26XX-28S	965-26XX-20S
ZBD76KCETFD551-C								



Compressor BOM / Features	Rotalock	Stub Tube	Oil Shrader valve	Oil Sight Glass	Anti-Vibration Mount Kit	Digital Control Assembly
558	-	Yes	-	Yes	Yes	"D" Designated Models
559	Yes	-	-	Yes	Yes	"D" Designated Models
551	Yes	-	Yes	Yes	Yes	"D" Designated Models

IMPORTANT INSTALLATIONS TIPS 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 are available please order separately

Application of R407F and other HFC refrigerant alternatives should be verified with your local Kirby HVC&R 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





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 Kirby 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

SEMI-HERMETIC COMPRESSORS

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



Part Number	Nominal HP	Displ. m ³ /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%



SEMI-HERMETIC COMPRESSORS (CONT'D)

COPELAND



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

Part Number	Nominal HP	Displ. m ³ /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%

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 (OPSC), 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

For other rating conditions, applications and how this product can be configured on a parallel multi-compressor system please contact your Kirby HVAC&R representative.

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

New Compressor models are part of Copeland streamline offering and range rationalisation; availability along with capacity, refrigerant and electrical connections, mounting and application should be verified with a Kirby HVAC&R engineer

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

COPELAND™



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				

or other rating conditions and for information on how this product can be configured on a parallel system please contact your Kirby HVAC&R representative



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

SEMI-HERMETIC COMPRESSORS (CONT'D)

COPELAND

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		
2948773	Heater Crankcase	DK
2834369	Heater Crankcase	DL
3210162	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 DWM REED SEMI-HERMETIC COMPRESSORS SPARE PARTS (CONT'D)
COPELAND™

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



SEMI-HERMETIC COMPRESSORS (CONT'D)

COPELAND™

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

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	-	-	-	-	-	-	-	-



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

SEMI-HERMETIC COMPRESSORS (CONT'D)

COPELAND™

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 Kirby HVAC&R 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
- Inactive capacity control to nominated number of compressor head(s) .. refer to notes section following

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. Need to 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. Need to order 2 Off Part Number 3006870

All 4 cylinder compressors with Digital Control Designation are ready to connect = 50% - 100% stepless capacity. Need to order 1 Off 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. Need to 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


STREAM COMPRESSOR APPLICATION LINE UP

Refrigerant	Stream		Stream Digital	
	MT	LT	MT	LT
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 - "D" Series Pre 2020 Build	4M & 6M
	5406738	NGCS ("N" Series) Coresense Transition Kit - Present Build	4M & 6M (Coresense + T-box + OPS3 + Temp Sensor + Current Sensor)
	5406772	Kit-Modbus Card (For Version -"N" Coresense)	4M & 6M
	3011241	Current Sensor -Motor	4M & 6M
	3168329	Kit OPS2 Oil Sensor & Switch (For Version -"D" Coresense)	4M & 6M
	3237132	Sensor: OPS3 (For Version -"N" Coresense)	4M & 6M
	3009766	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 Service Valve gasket	All 4M & 4MD
	2050772	Discharge Service Valve gasket	6MI/MM/D
	2880851	Discharge Service 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



SEMI-HERMETIC COMPRESSORS (CONT'D)

COPELAND™

COPELAND STREAM™ SEMI-HERMETIC COMPRESSORS SPARE PARTS

Service Part	Part Number	Part Description	Suits Compressor Model number
Valve Plates	3232933	Valve Plate Kit (Includes gaskets top & bottom)	6MI/6MJ/4MA/4MH/4MI/4MJ
	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
Electrical Terminal Plate	3005377	Terminal Plate c/w gasket	All 4M/6M & 4MD/6MD
Oil Sump Parts	3236877	Oil Pump Kit	All 4M/6M & 4MD/6MD
	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 (less coil)	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&Fan)	4M/D
	3011694	Head Cooling Fan Bracket Kit Only (less Motor&Fan)	4M Only
	3011718	Head Cooling Fan Bracket Kit Only (less Motor&Fan)	6M/6MD



DORIN SEMI HERMETIC COMPRESSORS R404A / R507 & R134a

Part Number	Dorin Range Series	Nom. HP	Displ. m ³ /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-C	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-C	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-C	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-C	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	2.00	9.16	380-420V/3/50Hz	1206	2559	3580	4394	5380	2479	3220	4090	5090
H221CC/HTCR	H11	2.20	9.88	380-420V/3/50Hz	1289	2363	3832	4748	5840	2770	3560	4490	5560
H281CC/HTCR	H11	2.80	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


Dorin 4 Cylinder L/M/HBP Compressors

H405CC	H33	4.5	19.29	380-420V/3/50Hz	2503	4578	7634	9606	11912	5454	7003	8832	10971
H505CC	H33	5.5	23.13	380-420V/3/50Hz	3014	5535	9198	11541	14273	6628	8519	10746	13337
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
H705CC	H33	7.0	27.33	380-420V/3/50Hz	3653	6628	10920	13658	16843	7643	9855	12480	15555
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
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

H2400EP	HEP6	24.0	127.52	380-420V/3/50Hz	-	-	-	-	-	38778	48885	60762	74614
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

SEMI-HERMETIC COMPRESSORS (CONT'D)



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

Part Number	Dorin Range Series	Nom. HP	Displ. m ³ /hr	Electrical Supply	Capacity (watts) 100% Load @ Evaporating Temperature °C								
					R404A / R507					R134a			
					-35	-25	-15	-10	-5	-10	-5	0	5
H4000CC	H6	40.0	127.52	380-420V/3/50Hz	18860	33260	52550	34570	78470	38690	49220	61630	76160
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-C	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-C	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-C	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-C	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

Dorin 4 Cylinder L/M/HBP Compressors

H405CC	Star (Y) / DOL	INT69	Yes	50%	7.1	14.5	63.1	POE32	1800	336	77	22	16
H505CC	Star (Y) / DOL	INT69	Yes	50%	7.9	14.5	63.1	POE32	1800	336	78	28	16

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.
H551CC	Star (Y) / DOL	INT69	Yes	50%	9.6	14.5	63.0	POE32	2000	336	91	28	18
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
H705CC	Star (Y) / DOL	INT69	Yes	50%	10.4	19.5	86.0	POE32	1800	336	78	28	18
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
H405CC	Star (Y) / DOL	INT69	Yes	50%	7.1	14.5	63.1	POE32	1800	336	77	22	16
H505CC	Star (Y) / DOL	INT69	Yes	50%	7.9	14.5	63.1	POE32	1800	336	78	28	16
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
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
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

H2400EP	PWS	INT69	Yes	50%	32.4	48.0	203.0	POE32	3500	475	220	54	35
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



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)



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 Kirby for further information.

For other rating conditions and for information on how this product can be configured on a parallel system please contact your Kirby HVAC&R representative .

DORIN H11 SERIES SEMI-HERMETIC COMPRESSORS PARTS

Models:

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



Part Number	Description	Compressor Model No.
Electrical Parts		
2CC3110	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		
2CC31100	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 H35 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		
2CC3110	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		
2CC3110	Thermister Module INT69TM -5 min timer version	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		
2CC3110	Thermister Module INT69TM -5 min timer version	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		
2CC3110	Thermister Module INT69TM -5 min timer version	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
2CC7070	Thermister Module INT69TM -5 min timer version	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

DORIN H6 SEMI-HERMETIC COMPRESSORS PARTS (CONT'D)

Mechanical Parts (Cont'd)

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 H7 SEMI-HERMETIC COMPRESSORS PARTS

Models:

H6000CC

Part Number	Description	Suits Model no
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Electrical Parts

2CC1070	Themister Module INT69TM	H6-H7
2CC7070	Thermister Module INT69TM -5 min timer version	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

SPECIALISTS IN MANUFACTURING COMPRESSORS FOR REFRIGERATION



OFFICINE MARIO DORIN SINCE 1918
DORIN
INNOVATION

DORIN is a historical Tuscan company operating in the refrigeration field. We offer a wide range of products, including over 250 compressor models of different sizes, powers, types of gas used and fields of application

The company's key driving forces are innovation, quality, modernity and sustainability



TOP PRODUCTS

Semi-hermetic CO₂ compressors (CD range)
ATEX semi-hermetic compressors (HEX range)

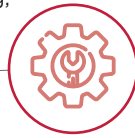


MAIN APPLICATIONS

Industrial, Commercial,
Logistics, Railway

SERVICES OFFERED

Compressor reconditioning,
repairs, after-sales
service



REFERENCE MARKETS

Italy, Europe, Middle
and Far East, Americas,
China, Russia, Oceania

STRENGTHS

- Extensive assortment
- Flexible production system
- Heterogeneous organisation
- Very high product quality and strength
- Extensive R&D experience that is advancing continuously
- Customised solutions
- Advanced technologies derived from the automotive industry
- Customer care

INTERNATIONALISATION



31%
Italy



26%
Europe



43%
Other
countries

90+
TOTAL
COUNTRIES

INNOVATION

New **CD 600 Range** with 6 cylinders up to 102.4 m³/h a 50 Hz (available from Q2 2021) featuring transcritical CO₂ compressors with the greatest powers currently available on the global market and the highest levels of efficiency and reliability

- Double the **cooling power** delivered by a single compressor
- Lower **manufacturing costs** compared to an ammonia-based solution
- Lower **delivery temperatures**
- Longer **compressor life** and higher COP
- Perfect **lubrication**
- Lower **oil carry-over**

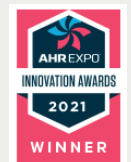
CERTIFICATIONS

ISO 9001

OHSAS 18000



AHR EXPO INNOVATION AWARDS 2021 in the Refrigeration category with the new CD600 range



SUSTAINABILITY

The range of **semi-hermetic CO₂ compressors** (CD range) can be supplied by natural gas, taking **pollution levels to zero**. Dorin is a pioneer and still a leader in this technology



FLORENCE
Headquarters



180
Employees



5
Direct sales
offices



4
Production
plants



75.000+
Compressors
built annually



55M+ €
Group turnover
in 2019

OUR HISTORY

- 1918
Officine Mario Dorin is founded
- 1952
Semi-hermetic compressor production starts
- 1970
The production plant is transferred to a 50,000 m² building
- 1983
The range expands to 6- and 8-cylinder compressors
- 1999
OMD's innovation is consolidated with the application of frequency modulation and CO₂ refrigerant
- 2016
OMD build the largest TC CO₂ compressor on the market
- 2018
Centenary

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FOLLOW US ON



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. **Kirby HVAC&R 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	Application 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	Application 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 Kirby HVAC &R 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

COPELAND™

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	Nom. 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%													
ZOD34K3E-TFDN551	2.0	4.07	5100	6400	7900	9700	5.5	26.0	Internal	15.88	12.7	30.0	30 / 52
ZOD58K3E-TFDN551	3.5	6.9	8900	11200	13900	17000	8.0	48.0	Internal	15.88	12.7	32.5	30 / 52
ZOD104KCE-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
023-0088-04	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 Kirby HVAC&R 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 - Rotalock 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
2CC3110	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 Kirby HVAC&R representative



Oil Management & Pressure Vessels

Kirby Compressors, Parts and Refrigerants Catalogue 2021

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 @ 32°C R134a / R404A
Horizontal				
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				
VR60-3	1-3/8 RL. **	273	1406	66 / 56
VR80-3	1-5/8 RL. **	356	1185	98 / 82
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
VR200-67FLG	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.

Optional Liquid Level Switch S-9420 240V, available on request (Open on low level liquid).

Pressure relief valve combinations available where single type is compulsory fitment.

Vessels are painted with an enamel finish as standard.

Vessels conform to AS1210 Standards.

Contact your Kirby HVAC&R Representative for PRV selection recommendation and customised design-build options.

OIL SEPARATORS

HENRY TECHNOLOGIES - STANDARD

Part Number	Connection Size ODS (Inches)	Connection Tube Centres (mm)	Dimensions (mm)		Nominal Capacity (kW)	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 diameter.

Add Oil Charge as recommended 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 2610-041220-HEX 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	3.7
MRD476-2	1-3/8"	75	159	478	63.6	3500	1250	2000	4.2

Always select oil separator with connection size not less than actual compressor discharge line size diameter. Add Oil Charge as recommended 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		CO ₂ 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



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
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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 Rotalock Elbow Connection 3/8"IDX3/4"SS #263-0612)

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/All 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
Accessory - Henry Technologies Coalescent Oil Separator	
850-150D	Differential Pressure Gauge Switch (Visual & Alarm Circuit .. 1.5 Bar Differential)

HENRY TECHNOLOGIES COALESCENT RANGE

Features

- Multi wrap design for high efficiency filtration
- 5 Bar burst pressure
- Max Temp +120°C
- Chemical resistant Neoprene O-ring for reliable sealing

Part Number	To Suit Model	Line Size
3500-34000	HCOS-022R	5/8" ODS
	HCOS-023R	7/8" ODS
3500-37000	HCOS-024R	1-1/8" ODS
	HCOS-025R	1-3/8" ODS
3500-28000	HCOS-026R	1-5/8" ODS
	HCOS-027R	2-1/8" ODS
3500-51000	HCOS-028R	2-5/8" ODS

HENRY TECHNOLOGIES R744 (CO2) COALESCING RANGE

Features

- Max working pressure 130 Barg
- Allowable operating temperature -10°C to +150°C
- Face seal to ensure sealing integrity at high and low pressure
- Micro-borosilicate filter ensures efficient separation at wide range of flow rates

	Sizing Criteria	Evaporating Temperature						Volumetric Flow Rate m³/hr
		-25	-20	-10	0	10	20	
HOCS-37 Series	Mass Flow (kg/hr)	8647	9035	9892	10895	12111	13658	65
	Refrigeration (kW)	354	371	405	440	474	507	
HOCS-38 Series	Mass Flow (kg/hr)	11972	12510	13697	15085	16769	18911	90
	Refrigeration (kW)	490	513	561	609	656	701	

Data based on 35°C gas cooler outlet temperature, 90 Bar gas cooling, 8K evaporator superheat and 2K suction line superheat

OIL SEPARATORS (CONT'D)

HENRY TECHNOLOGIES R744 (C02) COALESCING RANGE (CONT'D)

Part Number	O/All Height	Connection	Top Plate Dia (mm)	Body Dia (mm)	Oil Return	Oil Sensor Port
HOCS-37-1MPT	702	1" MNPT	219	141	3/8" NPT	3/4" NPT
HOCS-37-1BW		1" BW				
HOCS-37-1-1/4MPT		1-1/4" MNPT				
HOCS-37-1-1/4BW		1-1/4" BW				
HOCS-37-1-1/8		1-1/8" ODS				
HOCS-37-1-3/8		1-3/8" ODS				
HOCS-38-1-1/2MPT	870	1-1/2" MNPT	219	141	3/8" NPT	3/4" NPT
HOCS-38-1-1/2BW		1-1/2" BW				
HOCS-38-1-5/8		1-5/8" ODS				

SERVICE REPLACEMENT COMPONENTS

Part Number	Description
7-043-5000	HCOS-37 Series filter c/w sealing washer
7-043-5001	HCOS-38 Series filter c/w sealing washer
2-023-5000	Face seal O-ring for HCOS 37/38 Series

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
3100-125024P	3/4	13.4	11.2	13.4	127	215	2.4	2500	2.2
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
3100-186055P	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
3100-266510	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

HENRY GROUP



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
3310-084724	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 Kirby HVAC&R 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:

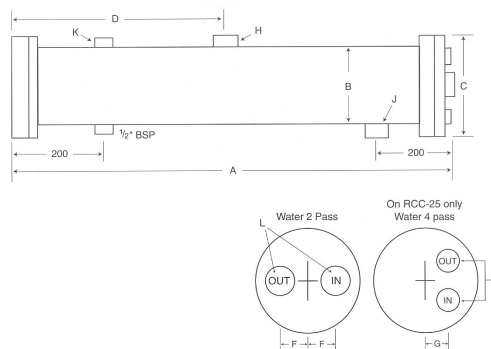
- Water In - 29.4 °C
- Water Out - 35 °C
- Condensing - 40.5 °C
- Fouling factor - 0.088

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 Kirby HVAC&R Representative.

ELECTRONIC OIL MANAGEMENT

HENRY TECHNOLOGIES - INTELIOIL - 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 (use for Dorin H33 compressor)
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 UNEF
1LCH0001	Use On Dorin H33 Compressors Ony	Special Lengthh Screw Adapter 1-1/8"-18 UNEF
805039	OM0-CCA Copeland Scroll	crew 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
991-0200-00	Full Kit Copeland & Dorin Semi Herm Recip	Flange adapter 3-/4-hole



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
1LCH0001	Use On Dorin H33 Compressors Ony	Special Length 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



Refrigerant and 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
- ARctick 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 Kirby branch



KIRBY GAS2GO® CLUB

If you want flexibility in your cylinder usage without daily cylinder rental charges, then join the Kirby 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 Kirby Gas2Go® Club member you also have access to Kirby Gas2Go® Gas Credit. Gas credit refers to the amount of money you are refunded for unused refrigerant gas returned to Kirby as part of the Gas2Go® cylinder exchange program (subject to quantity, conditions and handling charges).

smart@ccess

The Kirby Online Customer Portal, smart@ccess is linked in with the Kirby Gas2Go® Gas Management System to help you run your business and support your ARctick 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 Kirby branch outlet, with the option of delivery to site
- Available in small (HSRR), if reclaiming R32 you require a designated reclaim cylinder (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 Kirby 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 Pumpdown cylinders out with the customer is not covered as part of the Gas2Go membership, normal rental rates will be applicable.

	Part Number	Description
HCFC	R22	
	H220012	R22, 12KG CYL, UN1018
	H220022	R22, 22KG CYL, UN1018
	H220065	R22, 65KG CYL, UN1018
	H220490	R22, 490KG CYL, UN1018
	R123	
	1230100	R123, packed in 100kg drum
1230200	R123 packed in 200kg drum	

HFC/HFO's	R438A	
	H438012	R438A 12KG CYL UN1078
	H438022	R438A 22KG CYL UN1078
	H438060	R438A 60KG CYL UN1078
	R422D	
	H422D12	R422D 12KG CYL UN1078
	H422D60	R422D 60KG CYL UN1078
	R1234	
	H1234 ZE050	R1234e 50KG CYL UN3163
	R404A	
	H404010	R404A, 10KG CYL, UN3337
	H404018	R404A, 18KG CYL, UN3337
	H404050	R404A, 50KG CYL, UN3337
	H404400	R404A, 400KG CYL, UN3337
	R507	
	H507010	R507, 10KG CYL, UN3163
	H507055	R507, 55KG CYL, UN3163
	H507400	R507, 400KG CYL, UN3163
	R448A	
	H448055	R448A 55KG CYL, UN3163
	H448010	R448A 10KG CYL, UN3161
	R452A	
	H452010	R452A 10KG CYL UN1078
	R410A	
	H410010	R410A, 10KG CYL, UN3163
	H410018	R410A, 18KG CYL, UN3163
	H410060	R410A, 60KG CYL, UN3163

	Part Number	Description
HFC/HFO's	R32	
	H320005	R32 5KG CYL UN3252
	H320009	R32 9KG CYL UN3252
	R134a	
	H134012	R134a, 12KG CYL, UN3159
	H134022	R134a, 22KG CYL, UN3159
	H134065	R134a, 65KG CYL, UN3159
	H134450	R134a 450KG CYL UN3159
	134a UV	
	H134012UV	DETECTOR GAS R134A 12KG CYL
	R450A	
	H450012	R450A 12KG CYL UN3163
	H450060	R450A 60KG CYL, UN3163
	R1234ZE	
	H1234ZE050	R1234ZE 50KG CYL UN3163
	R407C	
	H407C11	R407C, 11KG CYL, UN3340
	H407C18	R407C 18KG CYL UN3340
	H407C60	R407C, 60KG CYL, UN3340
	R407F	
	H407F10	R407F, 10KG CYL, UN3163
	H407F50	R407F, 50KG CYL, UN3163
	R23	
2300009	R23, 9KG CYL UN1984	
R1233ZD		
H123312	R1233ZD 12KG CYL UN3163	
H123365	R1233ZD 65KG CYL UN3163	
H34		
H340012	H34 12KG CYL UN1956	
AMMONIA	R717 (AMMONIA)	
	0717034	R717, AMMONIA, 34KG CYL
	0717056	R717, AMMONIA, 56KG CYL

	Part Number	Description
INDUSTRIAL GAS	R744 (CO2)	
	R744014	CO2 Refrigerant 13.5KG NT
	R744030	CO2 Refrigerant 30KG NT
	R744030V	CO2 Refrigerant 30KG NT Vapour
	R744384	CO2 Refrigerant Manifold pack (12 x 32) 384KG
	NITROGEN	
	H728015	NITROGEN-HIGH PURITY 1.5M ³ "D"
	H728035	NITROGEN-HIGH PURITY 3.5M ³ "E"
H728091	NITROGEN - HIGH PURITY 9.1MT3 "G"	
H728153	NITROGEN 99.9% PURITY 12 PK "G"	
GLYCOL	Glycol	
	MPC0020	GLYCOL MONOPROPYLENE 20kg
	MCP2015	GLYCOL MONOPROPYLENE 216kg



Lubricants

Part Number	Description
SUNISO	
3GS-4L	OIL SUNISO 3GS (4 LITRE)
3GS-20L	OIL SUNISO 3GS (20 LITRE)
3GS-205L	OIL SUNISO 3GS (205 LITRE)
4GS-4L	OIL SUNISO 4GS (4 LITRE)
4GS-20L	OIL SUNISO 4GS (20 LITRE)
5GS-4L	OIL SUNISO 5GS (4 LITRE)
4SA-20L	OIL SUNISO 4SA (20 LITRE)
SOLEST	
S32-1	OIL SOLEST 32 1 LITRE DRUM
S32-5	OIL SOLEST 32 5 LITRE DRUM
S32-20	OIL SOLEST 32 20 LITRE DRUM
S46-5	OIL SOLEST 46 5 LITRE DRUM
S46-20	OIL SOLEST 46 20 LITRE DRUM
S68-1	OIL SOLEST 68 1 LITRE
S68-5	OIL SOLEST 68 5 LITRE DRUM
S68-20	OIL SOLEST 68 20 LITRE DRUM
MANEUROP COMPRESSOR OIL	
120Z0571	MANEUROP POE OIL 2.5L 160SZ (SZ)
120Z0573	MANEUROP POE OIL 2.5L 160PZ (MTZ)
BITZER COMPRESSOR OIL	
AB5-4CPI	CPI AB5 REFRIG OIL 4L
AB5-20CPI	CPI AB5 REFRIG OIL 20L
CENTRIFUGAL COMPRESSOR OIL	
CLAVIS68	OIL SHELL CLAVIS 68 18 LITRE
VACUUM PUMP OIL	
VPOP	PREMIUM VAC PUMP OIL 470ML
VPOQ	PREMIUM VAC PUMP OIL 946ML
VPOG	PREMIUM VAC PUMP OIL 3.78L
EMKARATE	
1529212	EMKARATE OIL RL32H 1 LITRE
1529245	EMKARATE OIL RL32H 5 LITRE
1529220	EMKARATE OIL RL32H 20 LITRE
RL68H-1LTR	POE HFC/HCFC REFRIGERANTS 1 LITRE
RL68H-5LTR	POE HFC/HCFC REFRIGERANTS 5 LITRE
RL68HB-5LTR	SCROLL CO2 OIL L/T 5 LITRE
RL170H-5L	EMKARATE OIL 5 LITRE
RL170H-20L	EMKARATE OIL 20 LITRE
RL32-3MAF 1LTR	EMKARATE OIL RL32-3MAF 1 LITRE
RL32-3MAF 5LTR	EMKARATE OIL RL32-3MAF 5 LITRE

Part Number	Description
ALKYL BENZENE	
CP-4700-32	ALKYL BENZENE OIL 32 4 LITRE
CP4700-46	ALKYL BENZENE OIL 46 4 LITRE
POLYALKYLENE OIL (PAG)	
RFL46-EP-1L	BREOX OIL CO2 RFL 46 EP L/T 1 LITRE
OTHER	
981	SUPER CHANGE R22 RETROFIT
OILCHECKRA	REFRIGERANT OIL TEST KIT
G1M	Bottlechock Bracket 2 X Single, Suit Cylinder D & E
G2M	Bottlechock Bracket 2 X Double, Suit Cylinder D & E
G1L	Bottlechock Bracket 2 X Single, Suit Refrigcyl S, M & L
G2L	Bottlechock Bracket 2 X Double, Suit Refrigcyl S, M & L
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 GS naphthenic-based mineral oils offer a highest commitment to quality that all the Suniso brand lubricants have been known for. This lubricant is excellent for use on CFC, HCFC and some non-fluorocarbon refrigerants including ammonia. Under low temperature applications, this lubricant retains much of its flow characteristics, and has an extremely low wax content to minimize separation. Suniso GS oil has a very low moisture content and will not contribute to the two major causes of compressor damage; sludge and acid. Suniso GS refrigeration oil is available in 3 different viscosities to meet virtually any system requirements. Always use viscosity grade recommended by manufacturer. If no recommendation is available, selection can usually be based on the following:

Suniso Oil Grade	Application
3GS	General use with CFC, and HCFC's but not limited to Low to Medium Temperature applications
4GS	General use with CFC, and HCFC's but not limited to Medium to Low Temperature applications
5GS	General use with CFC, and HCFC's but not limited to High to Medium Temperature applications, or when a heavy duty higher viscosity oil is required.
4SA	SUNISO 4SA is a specially selected naphthenic refrigeration oil formulated for use with R717(Ammonia) refrigeration systems

SOLEST APPLICATION GUIDE

Oil Type	Refrigerants	Application
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
NATO MILITARY NSN	NSN9150-01-443-9396	RL68H
	NSN9150-01-435-1899,	
	NSN9150-01-410-8972 &	
	NSN9150-01-387-4469	
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	M13 R450A		R1324yf	R1324ze	R22	M099 R438A		R422D		R407C	
				Bub-ble	Dew				Bub-ble	Dew	Bub-ble	Dew	Bub-ble	Dew
-44				-65	-66	-50	-72	-13	-8	-33	-4	-25	-2	-32
-42				-61	-62	-45	-68	-5	1	-26	6	-17	8	-25
-40	-52	-47	-41	-56	-57	-39	-65	5	12	-17	16	-8	19	-16
-38	-46	-41	-34	-51	-53	-33	-61	15	22	-9	27	2	30	-7
-36	-41	-35	-27	-46	-47	-26	-56	26	34	1	39	12	43	3
-34	-34	-28	-20	-40	-42	-19	-51	38	47	11	52	23	56	14
-32	-27	-21	-12	-34	-36	-11	-46	50	60	22	66	35	71	25
-30	-20	-14	-3	-27	-29	-2	-40	63	75	34	81	48	86	37
-28	-12	-5	6	-19	-22	7	-34	78	90	47	96	62	102	51
-26	-3	3	16	-11	-14	17	-27	93	106	60	113	77	119	65
-24	6	14	26	-3	-6	27	-20	109	124	75	130	93	138	80
-22	16	26	37	6	4	38	-13	126	142	91	149	110	158	96
-20	27	39	50	16	13	50	-4	145	162	107	169	128	179	113
-18	38	49	62	27	23	62	4	164	183	125	190	147	201	132
-16	50	59	76	38	34	76	14	185	205	144	213	168	224	152
-14	63	72	91	50	46	90	24	207	228	165	236	189	249	172
-12	77	86	106	63	59	105	35	230	253	186	261	212	276	195
-10	92	101	123	76	72	121	46	254	279	209	288	237	303	218
-8	108	118	140	91	86	137	58	280	307	233	315	262	333	244
-6	124	135	159	106	101	155	71	307	337	258	345	290	364	270
-4	142	153	178	123	117	174	85	336	366	285	376	318	396	298
-2	161	172	199	140	134	194	100	366	398	314	408	349	430	328
0	181	192	221	158	152	215	115	397	432	344	442	381	467	359
2	202	211	244	178	171	237	132	431	468	376	478	414	504	392
4	224	229	268	198	191	260	149	466	505	409	515	450	544	427
6	247	253	293	220	213	284	167	502	544	445	554	487	586	464
8	272	283	320	242	235	310	187	540	585	482	595	526	629	503
10	298	313	348	266	258	336	207	581	628	521	638	567	675	544
12	325	342	378	291	283	364	229	622	673	562	683	610	723	586
14	354	372	409	318	309	394	251	666	719	604	730	655	773	631
16	384	403	442	346	337	425	275	712	768	649	779	702	825	678
18	415	436	476	375	365	457	300	760	819	696	830	751	879	727
20	449	469	512	406	396	490	326	810	873	746	883	802	936	779
22	484	507	549	438	427	526	354	862	928	797	939	856	995	833
24	520	544	588	471	460	562	382	916	986	851	997	912	1057	889
26	558	584	629	507	495	601	413	972	1046	907	1057	971	1121	949
28	598	626	671	543	531	641	444	1031	1109	966	1120	1032	1188	1010
30	639	668	716	582	569	682	477	1092	1174	1027	1185	1095	1258	1075
32	683	715	762	622	609	726	512	1155	1242	1091	1252	1161	1330	1142
34	729	761	810	664	650	771	548	1221	1312	1158	1323	1230	1405	1212
36	776	811	861	708	693	818	585	1289	1385	1227	1396	1302	1483	1285
38	825	863	913	753	738	866	624	1360	1461	1299	1471	1376	1564	1361
40	877	915	967	800	785	917	665	1433	1539	1374	1550	1454	1648	1440
42	930	972	1024	850	834	970	708	1509	1620	1452	1631	1534	1735	1522
44	985	1029	1083	901	885	1024	752	1588	1705	1534	1716	1618	1825	1608
46	1043	1090	1144	955	938	1081	798	1670	1792	1619	1803	1705	1918	1697
48	1104	1153	1207	1010	993	1140	846	1754	1883	1706	1894	1795	2015	1790
50	1166	1217	1273	1068	1050	1201	896	1842	1976	1798	1988	1888	2115	1886
52	1233	1287	1341	1128	1109	1264	948	1932	2073	1892	2085	1985	2218	1987
54	1300	1356	1412	1190	1171	1330	1002	2026	2174	1991	2185	2086	2325	2091
56	1370	1429	1485	1254	1235	1398	1057	2123	2277	2093	2289	2190	2436	2199
58	1443	1505	1561	1321	1301	1468	1115	2223	2384	2199	2397	2298	2550	2311
60	1516	1581	1640	1390	1370	1541	1175	2326	2495	2309	2508	2411	2668	2427
62		1662	1721	1462	1441	1616	1238	2422	2609	2424	2623	2527	2790	2548
64		1746	1805	1537	1515	1694	1302	2532	2727	2543	2742	2648	2916	2674

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		M40 R448A		CO2 / R744	Ammonia / R717
	Bub- ble	Dew					Bub- ble	Dew	Bub- ble	Dew		
-44	11	-20	46	46	4	17	10	-19	10	-19	764	-43
-42	22	-11	61	60	15	28	21	-10	21	-11	832	-38
-40	34	-2	76	76	26	40	33	0	33	-1	904	-29
-38	47	9	93	92	39	53	46	10	45	9	980	-20
-36	60	20	111	110	52	67	59	21	59	20	1060	-13
-34	75	32	130	129	66	82	74	33	73	32	1145	-2
-32	91	45	150	150	81	98	89	46	89	45	1234	7
-30	108	59	172	172	97	114	106	59	106	58	1327	19
-28	126	74	195	195	114	132	123	74	123	73	1426	32
-26	145	90	219	220	133	151	142	90	142	89	1529	43
-24	166	107	245	246	152	171	162	107	162	105	1637	59
-22	188	125	273	274	173	193	184	125	183	123	1750	71
-20	211	145	303	304	195	216	206	144	206	142	1869	89
-18	235	166	334	336	219	240	230	164	230	163	1993	109
-16	261	188	367	369	243	265	255	186	255	184	2123	124
-14	289	211	402	404	270	292	282	209	282	207	2259	147
-12	318	237	438	442	297	320	310	233	310	231	2401	164
-10	348	263	477	481	326	350	340	259	340	257	2548	190
-8	381	291	518	523	357	382	372	286	372	284	2702	217
-6	415	321	561	566	390	415	405	315	405	313	2862	239
-4	450	353	607	613	424	450	440	346	440	344	3029	269
-2	488	386	654	661	460	486	476	378	476	376	3203	294
0	528	421	704	712	498	525	515	412	515	410	3384	328
2	569	458	757	765	537	565	555	447	555	445	3572	365
4	613	497	812	821	579	608	597	485	597	483	3767	395
6	659	538	869	880	623	652	641	524	642	522	3970	435
8	706	581	930	942	669	698	688	566	688	564	4181	468
10	757	626	993	1006	716	747	736	609	736	607	4399	514
12	809	674	1059	1073	766	798	787	655	787	653	4627	562
14	864	723	1128	1144	819	851	840	703	840	700	4863	603
16	921	776	1200	1217	873	906	895	753	895	750	5107	655
18	980	830	1275	1294	929	964	953	805	953	803	5361	697
20	1043	888	1353	1374	989	1024	1013	860	1013	858	5625	756
22	1107	947	1435	1457	1049	1087	1075	918	1076	915	5899	819
24	1175	1010	1520	1544	1119	1152	1140	977	1141	975	6184	868
26	1245	1075	1608	1635	1179	1221	1208	1040	1208	1037	6479	937
28	1318	1143	1701	1729	1249	1291	1278	1105	1279	1103	6787	990
30	1394	1215	1797	1827	1329	1365	1351	1173	1352	1171	7106	1066
32	1473	1289	1896	1929	1399	1442	1427	1244	1428	1242		1144
34	1555	1366	2000	2035	1479	1521	1506	1318	1507	1316		1206
36	1640	1447	2108	2145	1559	1604	1587	1395	1589	1393		1292
38	1729	1531	2220	2259	1639	1689	1672	1475	1674	1473		1360
40	1820	1618	2336	2377	1729	1778	1760	1558	1762	1556		1453
42	1915	1709	2456	2500	1819	1870	1851	1645	1853	1643		1552
44	2013	1803	2581	2628	1909	1966	1945	1735	1947	1733		1628
46	2115	1902	2710	2760	2009	2064	2043	1828	2045	1827		1734
48	2221	2004	2844	2897	2109	2167	2144	1926	2146	1924		1817
50	2330	2110	2983	3040	2209	2273	2248	2027	2251	2026		1932
52	2442	2220	3126	3187	2319	2382	2356	2132	2359	2131		
54	2559	2335	3274	3340	2429	2496	2467	2241	2470	2240		
56	2680	2454	3428	3498	2549	2613	2583	2354	2586	2354		
58	2804	2577	3586	3661	2659	2734	2701	2472	2705	2472		
60	2933	2706	3749	3831	2789	2859	2824	2594	2828	2594		
62	3066	2839	3917	4007	2901	2978	2951	2721	2955	2722		
64	3203	2977	4090	4189	3032	3114	3082	2854	3086	2854		

CONVERSION FACTORS (CONT'D)

Velocity

ft/sec (fps) x 0.3048 = m/s
ft/min (fpm) x 0.00508 = m/s

Volume Flow

L/s x 3.6 = m3/hr
CFM x 0.472 = L/s
PM (Imp) x 0.0757 = L/s
GPM (U.S) x 0.0631 = L/s

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



Flow Controls

Driers: Liquid Line

Danfoss



DANFOSS DML LIQUID LINE FILTER DRIERS

Part Number	Connection Size	Liquid Capacity in kW*				Type
		R404A / R507	R134a	R32	R22/ R407C/ R410A	
Flare Connection						
023Z503591	1/4"	5	7	11	7	DML032
023Z503691	3/8"	10	13	21	14	DML033
023Z503791	1/4"	6	8	12	8	DML052
023Z503891	3/8"	10	13	21	14	DML053
023Z503991	1/4"	5	8	12	8	DML082
023Z504091	3/8"	11	14	24	16	DML083
023Z504191	1/2"	21	29	46	32	DML084
023Z507391	5/8"	35	44	77	50	DML085
023Z504291	1/4"	5	8	12	8	DML162
023Z504391	3/8"	11	16	24	17	DML163
023Z504491	1/2"	24	32	51	35	DML164
023Z504591	5/8"	37	45	80	52	DML165
023Z504691	3/4"	37	46	81	53	DML166
023Z0049	3/8"	11	16	23	17	DML303
023Z0050	1/2"	25	33	54	37	DML304
023Z0051	5/8"	37	46	80	53	DML305
023Z0193	3/4"	40	44	87	53	DML306
023Z0109	1/2"	26	33	57	38	DML414
023Z0110	5/8"	42	56	91	62	DML415

Solder Connection

023Z504891	1/4"	5	7	11	7	DML032S
023Z505091	3/8"	10	13	21	14	DML033S
023Z505391	1/4"	6	8	12	8	DML052S
023Z505491	3/8"	10	13	21	14	DML053S
023Z505791	1/4"	5	8	12	8	DML082S
023Z505891	3/8"	11	14	24	16	DML083S
023Z506191	1/2"	21	29	46	32	DML084S
023Z507291	5/8"	35	44	77	50	DML085S
023Z506391	1/4"	5	8	12	8	DML162S
023Z506491	3/8"	11	16	24	17	DML163S
023Z506791	1/2"	24	32	51	35	DML164S
023Z506891	5/8"	37	45	80	52	DML165S
023Z507191	3/4"	37	46	81	53	DML166S
023Z0067	3/8"	11	16	23	17	DML303S
023Z0068	1/2"	25	33	54	37	DML304S
023Z0069	5/8"	37	46	80	53	DML305S
023Z0070	3/4"	40	44	87	53	DML306S
023Z0071	7/8"	43	65	98	62	DML307S
023Z0111	1/2"	26	33	57	38	DML414S
023Z0112	5/8"	42	56	91	62	DML415S

* Capacities given in accordance with ARI 710-86 for $t_e = -15^\circ\text{C}$, $t_c = +30^\circ\text{C}$ and $\Delta p = 0.07$ bar. 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)

DANFOSS HEATPUMP FILTER DRIERS (BI-FLOW). DMB						
Part Number	Type	Connection Size	Connection	Liquid Capacity (kW)*		
				R134a	R404A / R507	R22/R407C/R410A
023Z1412	DMB 082	1/4"	Flare	3.9	2.8	4.3
023Z1411	DMB 083	3/8"	Flare	7.4	5.3	8.2
023Z1410	DMB 084	1/2"	Flare	8.3	6	9.2
023Z1415	DBM 163	3/8"	Flare	18	13	20
023Z1414	DMB 164	1/2"	Flare	28	20	32
023Z1413	DMB 165	5/8"	Flare	37	29	40
023Z1417	DMB 305	5/8"	Flare	38	28	42
023Z1443	DMB 082s	1/4"	Solder. ODF	3.9	2.8	4.3
023Z1442	DMB 083s	3/8"	Solder. ODF	7.4	5.3	8.2
023Z1441	DMB 084s	1/2"	Solder. ODF	8.3	6	9.2
023Z1446	DMB 163S	3/8"	Solder. ODF	18	13	20
023Z1445	DMB 164S	1/2"	Solder. ODF	28	20	32
023Z1444	DMB 165S	5/8"	Solder. ODF	37	29	40
023Z1449	DMB 304S	1/2"	Solder. ODF	28	20	31
023Z1448	DMB 305S	5/8"	Solder. ODF	38	28	42
023Z1447	DMB 307S	7/8"	Solder. ODF	43	32	47



* Capacity is given in accordance with ARI 710-86 (te=-15oC. tc=+30oC) 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



Driers: Suction Burnout



DANFOSS SUCTION LINE BURNOUT DRIERS, DAS						
Part Number	Type	Connection	Size	Rated Capacity (kW)*		
				R22/R407C/ R410A	R134a	R404A/R507
023Z1001	DAS 083	Flare	3/8"	6	4	5
023Z1002	DAS 084	Flare	1/2"	10	6	8
023Z1007	DAS 164	Flare	1/2"	11	6	9
023Z1008	DAS 165	Flare	5/8"	15	10	13
023Z1003	DAS 083	Solder	3/8"	6	4	5
023Z1004	DAS 084	Solder	1/2"	10	6	8
023Z1005	DAS 085	Solder	5/8"	15	9	13
023Z1006	DAS 086	Solder	3/4"	19	12	17
023Z1009	DAS 164	Solder	1/2"	11	6	9
023Z1010	DAS 165	Solder	5/8"	15	10	13
023Z1011	DAS 166	Solder	3/4"	20	12	17
023Z1012	DAS 167	Solder	7/8"	22	14	19
023Z1013	DAS 305	Solder	5/8"	18	11	15
023Z1014	DAS 306	Solder	3/4"	22	14	19
023Z1015	DAS 307	Solder	7/8"	26	16	22
023Z1016	DAS 309	Solder	1 1/8"	31	20	27
023Z1017	DAS 417	Solder	7/8"	30	18	25
023Z1018	DAS 419	Solder	1 1/8"	35	22	30
023Z1019	DAS 607	Solder	7/8"	20	12	17
023Z1020	DAS 609	Solder	1 1/8"	20	12	17

Demountable Driers



DANFOSS DCR DRIER SHELL							
Part Number	Type	Number of Cores	Connection	Liquid Capacity (kW)*			
			Solder ODF, Copper	R22	R134a	R404A / R507	R407C / R410A
023U7251	DCR0487	1	7/8"	153	139	99	153
023U7253	DCR0489	1	1-1/8"	206	186	133	206
023U7254	DCR04811	1	1-3/8"	259	227	162	259
023U7255	DCR04813	1	1-5/8"	259	227	162	259
023U7276	DCR04821	1	2-5/8"	259	227	162	259
023U7459	DCR0969	2	1-1/8"	240	217	155	240
023U7461	DCR09611	2	1-3/8"	326	295	211	326
023U7464	DCR09617	2	2-1/8"	396	358	256	396

* Liquid capacity in accordance with ARI 710-2002, te=-15°C, tc=+30°C) at pressure drop Δp=0.07 bar.
Capacity shown are DCR shell with 48-DC core Maximum working pressure: 4600kPa Note Drier cores sold separately



DANFOSS DRIER CORE WITH GASKETS

Part Number	Application
023U1392	48-DM solid core, 100% molecular sieve. 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-Felt gasket(sock) 15µm. For use direct in DCR shells, compatible with all HCFC/HFC/HFO refrigerants and suitable in both suction or liquid line application.

* Followed by copper driers, strainers and accumulators

Copper Spun Filter Driers

H9 DESICCANT (SUITABLE FOR USE WITH ALL OLD AND NEW REFRIGERANTS AND MATCHING LUBRICANTS)

Part Number	Capacity (gms)	Size					Tails		Comments
		Inlet	Outlet	*Outlet Cut Size	Body Dia. (mm)	Body Length (mm)	Inlet	Outlet	
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
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
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.

HELDON STRAINERS

Part Number	Description
SH-9105	Strainer Oil 3/8" Flare
90-1096	Strainer Oil 5/8" Flare

High-efficiency refrigeration controls

Multi-purpose controller



- Predefined applications to give the user an easy and fast way to configure the controller to a specific application.
- Compressor protection against high condensing temperature, short cycling prevention, Voltage protection are the few key features.

- Complete management of 1/3 phase refrigeration systems, with off-cycle/ electrical defrosting and with direct/ pumpdown compressor stop.
- Emergency operation in the event of a faulty probe environment.
- Evaporator fan management, Smart defrost for energy savings, night set and air recirculation management are few key features.

Cold room controller



Evaporator/case controller



- One controller for several different refrigeration appliances.
- Quick set-up with predefined settings.
- Easy configuration and service using a mobile app with Bluetooth.
- Adaptive Minimum Stable Superheat (MSS) control is performed with lowest possible superheat.

- Detects, measures, and displays the level of refrigerant gas in the area being monitored.
- Measures all gases up to 10,000 ppm with a sensitivity of 1ppm.
- Automatically logs up to 200 gas readings that can be printed/plotted for analysis.

Portable gas monitor



Stand-alone gas detector



- DGS sensors can be used in stand-alone or integrated systems, where continuous real-time is required.
- Typical Refrigerant gas applications include, HFC's, HCFC's, CFCs, CO , HC.
- Sensing technology varies to make the best detection for a given gas-Infra-Red sensor technology/Semi-Conductor/ Pellistor.



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Sight Glasses

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"
014L0187	ODF x ODF (SOLDER)	1-1/8" x 1-1/8"

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)	SWP (BAR)
Single Port				
670-1414	ODF SOLDER	7/8"	160	42
670-1818	ODF SOLDER	1-1/8"	160	42
670-2222	ODF SOLDER	1-3/8"	200	42
670-2626	ODF SOLDER	1-5/8"	200	42
670-3434	ODF SOLDER	2-1/8"	200	42
Double Port				
675-1818	ODF SOLDER	1-1/8"	160	42
675-2222	ODF SOLDER	1-3/8"	200	42
675-2626	ODF SOLDER	1-5/8"	200	42
675-3434	ODF SOLDER	2-1/8"	200	42



TX Valves and Orifices: T2 & TE2



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
068Z3727	R448A/R449A	T2	3/8" x 1/2" Flare	-	N: -40° to +10°C, Without MOP
068Z3728	R448A/R449A	TE2	3/8" x 1/2" Flare	1/4" Flare	N: -40° to +10°C, Without MOP
068Z3729	R448A/R449A	T2	3/8" flare x 1/2" ODF solder	-	N: -40° to +10°C, Without MOP
068Z3730	R448A/R449A	TE2	3/8" flare x 1/2" ODF solder	1/4" Flare	N: -40° to +10°C, Without MOP
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)*											
		R22		R134a		R404A		R407C		R448A		R452A	
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T	M/T	L/T	M/T	L/T
068-2002	OX	0.9	0.89	0.66	0.62	0.61	0.54	0.89	0.88	0.91	0.83	0.68	0.60
068-2003	00	1.8	1.68	1.2	1.0	1.18	0.88	1.77	1.64	1.71	1.32	1.20	0.97
068-2010	01	3.6	3.0	2.1	1.66	2.27	1.4	3.5	3.0	3.1	2.1	2.4	1.6
068-2015	02	5.0	3.9	2.6	1.97	3.0	1.7	4.9	3.8	4.0	2.4	3.2	1.9

T2 & TE2 - ORIFICE ASSEMBLY SELECTION (CONT'D)

Quick Select Chart t2

Part Number	Model	Capacity (kW)*											
		R22		R134a		R404A		R407C		R448A		R452A	
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T	M/T	L/T	M/T	L/T
068-2006	03	8.7	6.7	4.4	3.3	5.2	2.8	8.4	6.5	6,8	4,1	5,4	3,1
068-2007	04	13.0	10.0	6.6	4.9	8.0	4.1	13.0	9.6	10,2	6,0	8,3	4,6
068-2008	05	18.3	13.6	8.7	6.4	10.5	5.4	17.2	12.8	13,4	7,8	10,5	5,9
068-2009	06	21.6	15.9	10.4	7.7	12.6	6.4	20.7	15.3	16,2	9,2	13,2	7,3

* Capacity L/T -25°C SST, +43°C SCT, 2°K M/T -5°C SST, +43°C SCT, 2°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 / R513A	TUA	3/8" x 1/2" ODF solder	INT
068U2207	R134a / R513A	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	Capacity (kW)								Connection		
		R22		R134a		R404A		R407C		Inlet	Outlet	Config
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T	mm	mm	
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



DANFOSS TE5-55 POWER ELEMENTS SELECTION (WITH BULB STRAP)

Part Number	Valve Type	Refrigerant	Capillary Tube Length (m)	Rated Range
067B3252	TE 5	R448/R449	3	Without MOP, Range : -40°C to +10°C
067B2512	TE 12	R448/R449	3	Without MOP, Range : -40°C to +10°C
067B3294	TE 20	R448/R449	3	Without MOP, Range : -40°C to +10°C
067G3219	TE 55	R448/R449	3	Without MOP, Range : -40°C to +10°C
067B3342	TE 5	R404A/R507	3	Without MOP, Range : -40°C to +10°C
067B3347	TE 12	R404A/R507	3	Without MOP, Range : -40°C to +10°C
067B3352	TE 20	R404A/R507	3	Without MOP, Range : -40°C to +10°C
067G3302	TE 55	R404A/R507	3	Without MOP, Range : -40°C to +10°C
067B3297	TE 5	R134a	3	Without MOP, Range : -40°C to +10°C
067B3232	TE 12	R134a	3	Without MOP, Range : -40°C to +10°C
067B3250	TE 5	R22	3	Without MOP, Range : -40°C to +10°C
067B3210	TE 12	R22	3	Without MOP, Range : -40°C to +10°C
067B3274	TE 20	R22	3	Without MOP, Range : -40°C to +10°C
067G3205	TE 55	R22	3	Without MOP, Range : -40°C to +10°C
067B3278	TE 5	R407C	3	Without MOP, Range : -40°C to +10°C
067B3366	TE 12	R407C	3	Without MOP, Range : -40°C to +10°C
067B3240	TE 55	R407C	3	Without MOP, Range : -40°C to +10°C

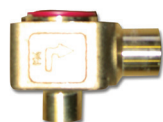
DANFOSS TE5-55 ORIFICE ASSEMBLY SELECTION



Part Number	Model	Capacity (kW)*									
		R22		R134a		R404A		R448A		R407C	
		A/C	M/T	A/C	M/T	M/T	L/T	M/T	L/T	A/C	M/T
067B2788	TE5- 0.5	9,8	9,8	8,8	6	7,4	4,8	9,3	6	19,5	9,5
067B2789	TE5-1	19,7	18,0	12,2	11,1	13,7	8,8	17,2	11,1	19,5	17,6
067B2790	TE5-2	27,3	25,2	17,0	15,5	19,0	12,4	24,1	15,7	27,2	24,7
067B2791	TE5-3	34,6	31,9	21,7	19,8	24,1	15,5	30,2	19,6	34,3	31,1
067B2792	TE5-4	47,3	43,5	29,6	27,0	33,0	20,9	41,4	26,2	47,1	42,4
067B2708	TE12-5	55,8	51,5	36,1	33,4	43,6	26,1	46,7	29,7	51,8	46,8
067B2709	TE12-6	74,6	68,1	48,0	43,9	54,6	31,8	61,4	37,8	68,9	61,1
067B2710	TE12-7	91,0	84,5	60,4	56,6	66,0	37,8	75,1	46,7	82,9	75,4
067B2771	TE20-8	114,3	117,8	75,0	69,0	76,8	46,0	107,4	66,8	112,0	101,6
067B2773	TE20-9	143,8	132,0	86,6	79,2	85,5	49,8	117,2	69,7	125,0	112,5
067G2701	TE55-10	165,1	148,1	105,0	94,3	106,5	59,6	129,3	75,1	151,0	133,6
067G2704	TE55-11	178,3	161,1	114,8	103,6	115,0	64,6	140,3	81,6	163,0	145,1
067G2707	TE55-12	195,9	174,4	125,0	112,7	124,0	68,6	150,7	86,5	175,7	156,1
067G2710	TE 55-13	236,0	210,9	150,0	138,5	148,3	81,3	181,0	102,7	195,0	187,7

* Capacity L/T -25°C SST, +43°C SCT, Superheat 8K Subcooling 4°K. M/T -5°C SST, +43°C SCT, 3°K Superheat 8K Subcooling 4°K.
A/C +7°C SST, +50°C SCT, Superheat 8K Subcooling 3°K

DANFOSS TE5-55 VALVE BODY SELECTION



Part Number	Valve Type	Connections Inlet x Outlet		Body
068B4007	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
068B4009	TE 5	1/2" x 5/8"	ODF x ODF	Solder angleway
068B4010	TE 5	1/2" x 7/8"	ODF x ODF	Solder angleway

DANFOSS TE5-55 VALVE BODY SELECTION (CONT'D)

Part Number	Valve Type	Connections Inlet x Outlet		Body
068B4011	TE 5	5/8" x 7/8"	ODF x ODF	Solder angleway
067B4034	TE 5	7/8" x 1-1/8"	ODF x ODF	Solder angleway
068B4013	TE 5	1/2" x 5/8"	MSAE X MSAE	Flare angleway
068B4021	TE12	7/8" x 1-1/8"	ODF x ODM	Solder straightway
068B4023	TE12/TE20	7/8" x 1-1/8"	ODF x ODM	Solder angleway
067G4003	TE 55	1-1/8" X 1-3/8"	ODM x ODM	Solder straightway
067G4004	TE 55	1-1/8" X 1-3/8"	ODM x ODM	Solder angleway

ODF = Internal diameter. ODM = External diameter

TX Valves: TGE

TX VALVES: TGE (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	R22	TGEX6	20	1/2"x 7/8"
067N2156	R22	TGEX 7.5	27	5/8" x 7/8"
067N2157	R22	TGEX 11	38	5/8" x 7/8"
067N2159	R22	TGEX 12	43	5/8" x 7/8"
067N2163	R22	TGEX 18	63	7/8" x 1-1/8"
067N2168	R22	TGEX 30	104	1-1/8" x 1-3/8"
067N3156	R410A	TGEL 9	32	5/8" x 7/8"
067N3157	R410A	TGEL 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/R507	TGES 5	18	5/8" x 7/8"
067N6154	R404A/R507	TGES 7.5	26	5/8" x 7/8"
067N6155	R404A/R507	TGES11	39	7/8" x 1-1/8"



1: Nominal capacity is based on ARI standard: Evaporating temp Te = 4.4°C Liquid temp Tl = 37°C Condensing temp Tc = 38°C Opening superheat OS = 4K

2: 1/4" External pressure equaliser



Electronic Expansion Valves: ETS

- Effective superheat control depends on a pair of components to continuously adapt to exact capacity demands: a responsive electronic expansion valve and an intelligent, accurate superheat controller.
- Using Danfoss ETS electronic expansion valve and the ETS controller kit co-engineered together you can be assured of maximum energy efficiency.
- Danfoss ETS valves can be applied in modular air cooled chillers, cold rooms, transport refrigeration, 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		Connection Solder ODF x ODF (in)	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	5/16 x 5/16	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	5/16 x 5/16	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	1/4 x 1/4	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	5/16 x 5/16	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	5/16 x 5/16	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	5/16 x 5/16	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		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	
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 ETS 12.5 to ETS 400 valves)
LP-ETS-KIT	Danfoss ETS controller kit Parts Included in the LP-ETS-KIT: 1. 080G5350 - EKE-1B Superheat Controller 2. 060G0090 – AKS 32R Pressure Transmitter 3. 060G0008 – PLUG for AKS Pressure Transmitter 4. 084N0003 – AKS 11 Temperature Sensor 5. 080G0294 – EKE-1B, Universal Display 6. LP-RR0550 – 120 Ohm ½ Watt Terminating resistors 7. 080G0076 - AK-MMI Display Cable 3M

Electronic Expansion Valves: AKV

DANFOSS AKV 10P

Part Number	Valve Type	Connections Solder ODF In x Out	Rated Capacity KW's							Kv value m ³ /hr
			R448	R134a	R404A/R507	R407C	R452A	R744*		
								Refrig	Freezing	
068F5210	AKV 10-0	3/8" x 1/2"	0.32	0.25	0.21	0.34	0.25	0.44	0.69	0.003
068F5211	AKV 10-1	3/8" x 1/2"	0.95	0.9	0.8	1.1	0.73	1.17	1.84	0.09
068F5212	AKV 10-2	3/8" x 1/2"	1.68	1.4	1.3	1.7	1.29	2.06	3.25	0.016
068F5213	AKV 10-3	3/8" x 1/2"	2.57	2.1	2	2.5	1.98	3.14	4.97	0.024
068F5214	AKV 10-4	3/8" x 1/2"	4.99	3.4	3.1	4	3.84	6.1	9.64	0.046
068F5215	AKV 10-5	3/8" x 1/2"	6.95	5.3	4.9	6.4	5.35	8.49	13.4	0.064
068F5216	AKV 10-6	3/8" x 1/2"	12.1	8.5	7.8	10.1	9.54	15.1	23.9	0.114
068F5217	AKV 10-7	3/8" x 1/2"	19.6	13.5	12.5	17.0	15.5	24.6	39.3	0.185



Note: All electronic expansion valves are less coil. Rated capacity are based on evaporating temperature of 4°C, condensing temperature of +38°C, and liquid temperature +37°C
* CO2 rated capacity are based on evaporating temperature refrigerant of -10°C, evaporating temperature Freezing of -30°C, condensing temperature of 0°C, subcooling of 1°C

ORIFICES

Part Number	Service Kit	Orifice No.	Content
068F5151	1	0	4 ORIFICES, 1 GASKET
		1	
		2	
		3	
068F5152	2	4	4 ORIFICES, 1 GASKET
		5	
		6	
		7	

Full range of spare parts and accessories for AKV valve series are available, enquire to your local Kirby branch.

COILS FOR AKV VALVES

Part Number	Description
Coils for AKV Valves	
018F6732	Coil, 230VAC, 17W, with terminal box
018F6701	Coil, 230VAC, 12W, with terminal box
018F6801	Coil, 230VAC, 115W, with terminal box

Full range of spare parts and accessories for AKV valve series are available, enquire to your local Kirby branch.

Electronic Expansion Valves: EX3



QUICK SELECT CHART RX1S REPLACING EX3 RANGE

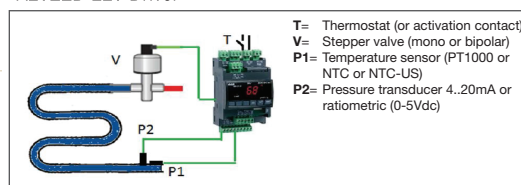
Part Number	Model	Capacity (kW) @ 80% *									Connection (Solder)		
		R22		R134a		R404A		R407C		R410A	Inlet mm	Outlet mm	Config
		A/C	M/T	A/C	M/T	M/T	L/T	A/C	M/T	A/C			
991-0100-21	RX1S-2000	1,3	1,3	1,0	1,0	0,9	0,9	1,4	1,4	1,6	3/8	1/2	90°
991-0100-31	RX1S-3000	2,7	2,8	2,0	2,0	1,8	1,8	3,0	3,0	3,3	3/8	1/2	90°
991-0100-41	RX1S-4000	4,4	4,5	3,3	3,3	3,0	2,9	4,8	4,9	5,3	3/8	1/2	90°
991-0100-51	RX1S-5000	7,1	7,2	5,3	5,3	4,0	4,8	7,8	7,9	8,6	3/8	1/2	90°
991-0100-61	RX1S-6000	11,5	11,7	8,6	8,5	7,8	7,7	12,5	12,8	14,0	3/8	1/2	90°
991-0100-71	RX1S-7000	14,6	14,9	10,9	10,8	9,8	9,8	15,9	16,2	17,7	3/8	1/2	90°
991-0100-81	RX1S-8000	16,3	16,6	12,1	12,1	11,0	10,9	17,7	18,1	19,7	3/8	1/2	90°
991-0100-91	RX1S-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

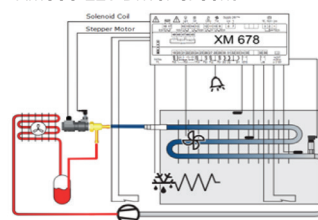
Drivers etc for RX1S / EX3

XEV22D-1C1C0B	Stepper Valve Driver+ Display 24v
XM678D-2C3C2B	Multi-Controller 24v (EEV Driver & Temp Control)
XM679K-5C3C2B	Multi-Controller 240v (EEV Driver & Temp Control)
CX660-000N0	Keyboard 6 key to suit XM600
501-1122	CPC Temperature Probe 20FT' Green
501-1125	CPC Temperature Probe 20FT' Blue
PP11F	Transducer
TF20D	24v Transformer (2 required for EX3)

XEV22D EEV Driver



XM600 EEV Driver & Cont



QUICK SELECT CHART EX4-8

Part Number	Model	Capacity (kW) @ 80% *											Connection			
		R22		R134a		R404A		R448/R449		R450A		R410A		A/C	M/T	A/C
		A/C	M/T	A/C	M/T	M/T	L/T	M/T	L/T	M/T	L/T	A/C	M/T			
991-0001-04	EX4-U31*	14	14	10	10	9	9	14.24	14.24	9.92	9.60	14	14	15		
991-0001-05	EX5-U31*	41	42	30	30	28	28	43.20	43.20	29.60	28.80	42	43	46		
991-0001-06	EX6-U31*	98	100	73	73	67	67	103.20	103.20	72.00	69.60	101	102	113		
991-0001-07	EX7-U31*	271	275	200	199	184	183	284.80	284.80	197.60	191.20	278	282	310		
991-0001-08	EX8-U31*	723	734	530	530	490	488	759.20	758.40	526.40	509.60	742	753	826		

QUICK SELECT CHART EX4-8 (CONT'D)

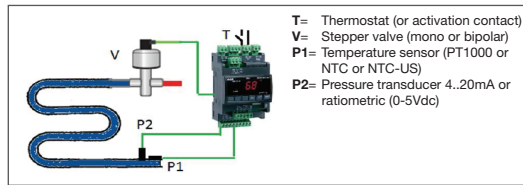
Part Number	Model	Connection		
		Inlet	Outlet	Config
		(in)	(in)	
991-0001-04	EX4-U31*	5/8	5/8	90°
991-0001-05	EX5-U31*	5/8	7/8	90°
991-0001-06	EX6-U31*	7/8	1-1/8	90°
991-0001-07	EX7-U31*	1-3/8	1-3/8	90°
991-0001-08	EX8-U31*	1-3/8	1-3/8	90°

* 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 1.5m
804421	Transformer ECT-623 60VA
XEV22D-1C1COB	Stepper Valve Driver+ Display
PP11F	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
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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	3/8"x1/2"	3T	10,5	3/8" ODF	1/2" ODF
040680-01	HAE5KX200	R410A	YES	1/2"x5/8"	5T	18	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"

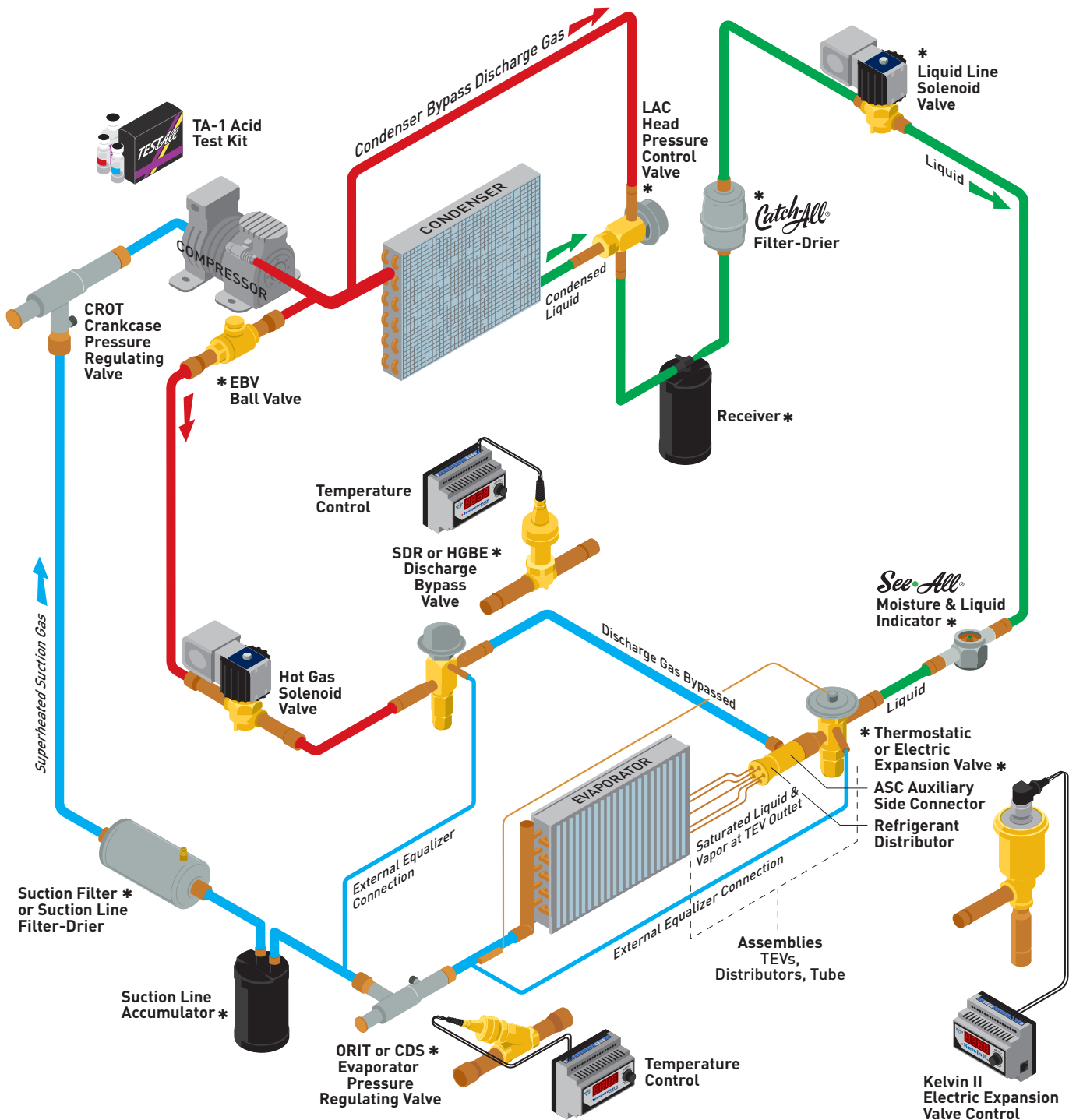
* Balanced Port Valves are typically used in applications where the head pressure of the system varies greatly. Balance Port allows the valve to be more stable in low loads.



SPORLAN

Typical Piping Diagram

This schematic is for component location only, not a typical piping recommendation.



sporlan.com

Use SPORLAN Right Down the Line.

Solenoid Valves and Coils: EVR & EVRH

DANFOSS SOLENOID VALVES

Part Number	Model Number	Connections Inches	Max Working Pressure (kPa)	Manual Operation	Required Coil Type
Model EVR/EVRH - Valve Bodies (Normally Closed, without Coils)					
032F8056	EVR 2	1/4" Flare	4520	NO	AC/DC
032F8107	EVR 3	1/4" Flare	4520	NO	AC/DC
032F8116	EVR 3	3/8" Flare	4520	NO	AC/DC
032L8072	EVR 6	3/8" Flare	4520	NO	AC/DC
032L8079	EVR 6	1/2" Flare	4520	NO	AC/DC
032L8095	EVR 10	1/2" Flare	4520	NO	AC/DC
032L8098	EVR 10	5/8" Flare	4520	NO	AC/DC
032L8101	EVR 15	5/8" Flare	4520	NO	AC/DC
032F1201	EVR 2	1/4" ODS	4520	NO	AC/DC
032F1206	EVR 3	1/4" ODS	4520	NO	AC/DC
032F1204	EVR 3	3/8" ODS	4520	NO	AC/DC
032L1212	EVR 6	3/8" ODS	4520	NO	AC/DC
032L1209	EVR 6	1/2" ODS	4520	NO	AC/DC
032L1217	EVR 10	1/2" ODS	4520	NO	AC/DC
032L1214	EVR 10	5/8" ODS	4520	NO	AC/DC
032L1228	EVR 15	5/8" ODS	4520	NO	AC/DC
032L1225	EVR 15	7/8" ODS	4520	NO	AC/DC
032L1240	EVR 20	7/8" ODS	4520	NO	AC/DC
032L1254	EVR 20	7/8" ODS	4520	YES	AC/DC
032L1244	EVR 20	1-1/8" ODS	4520	NO	AC/DC
032L7145	EVR 22	1-1/8" ODS	4520	NO	AC/DC
032L2201	EVR 25	1-1/8" ODS	4520	NO	AC/DC
032L2207	EVR 25	1-3/8" ODS	4520	YES	AC/DC
032L2208	EVR 25	1-3/8" ODS	4520	NO	AC/DC
042H1104	EVR 32	1-5/8" ODS	4520	NO	AC/DC
042H1111 ⁽¹⁾	EVR 40	2-1/8" ODS	4520	YES	AC/DC
042H1112 ⁽²⁾	EVR 40	2-1/8" ODS	4520	NO	AC/DC

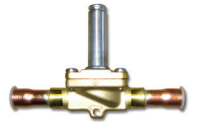
Flare connections are supplied without flare nuts.

EVR Solenoid Valves, Normally Open, without Coils

032L1290	EVR 6	3/8" ODS		AC/DC	AC/DC
032L1291	EVR 10	1/2" ODS		AC/DC	AC/DC
032L1299	EVR 15	5/8" ODS		AC/DC	AC/DC
032I1264	EVR 20	7/8" ODS		AC/DC	AC/DC
032F1269	EVR 20	1-1/8" ODS		AC/DC	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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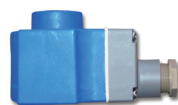
EVR VALVE CAPACITY

Type	Rated Liquid Capacity (kW)			
	R22	R134a	R404A/R507	R407C
EVR2	3.2	2.9	2.2	3.01
EVR3	5.4	5	3.8	5.08
EVR6	16.1	14.8	11.2	15.13
EVR10	38.2	35.3	26.7	35.91
EVR15	52.3	48.3	36.5	49.16
EVR20	101	92.8	70.3	94.94
EVR22	121	111	84.3	113.74
EVR25	201	186	141	188.94
EVR32	322	297	225	302.68
EVR40	503	464	351	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 $\Delta p = 0.15 \text{ bar}$

DANFOSS EVR COILS

Part Number	Voltage (V)	Frequency (Hz)	Power (W)	IP Rating	Inclusions
018Z6701	220-230	50 Hz	11W	IP67	With terminal box
018F6702	240	50 Hz	11W	IP67	With terminal box
018F6707	24	50 Hz	12W	IP67	With terminal box
018F6711	115	50 Hz	11W	IP67	With terminal box
018F6730	110	50 / 60 Hz	10W	IP67	With terminal box
018F6802	240	50 Hz	12W	IP67	With terminal box
018F6704	420	50 Hz	10W	IP67	With terminal box
018F6904	24	50Hz	20W	IP67	With terminal box
018Z6851	220 DC	DC	20W	IP67	With terminal box
018F6856	12 DC	DC	20W	IP67	With terminal box
018F6857	24 DC	DC	20W	IP67	With terminal box
018F6252	240	50 Hz	10W	IP 67	1m 3-core cable
018Z6177	240	50 Hz	10W	IP 20	
192L0999	Danfoss Solenoid valve magnet				
042N0156	DIN socket				



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.

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, 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 12	2800 (406)	1/2" ODS	17.4	7.9	16.4	19
034N0083	CPCE 15	2800 (406)	5/8" ODS	25.6	11.6	24.2	27.9
034N0084	CPCE 22	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.



SPORLAN ELECTRIC EVAP PRESSURE REGULATOR

Part Number	Connections (Solder)	Type	Cable Length	Max Rated Pressure
CDS758	5/8"	CDS7	3 mtrs	700 psig
CDS978	7/8"	CDS9	3 mtrs	680 psig
CDS9118	1 1/8"	CDS9	3 mtrs	680 psig
CDS17138	1 3/8"	CDS17	3 mtrs	
CDS17158	1 5/8"	CDS17	3 mtrs	

*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 TO SUIT THE HEAT RECLAIM VALVES

Part Number	Voltage	Hz
MKC-1E	220 - 240 V	50 Hz
MKC-2E	220 - 240 V	50 Hz

*MKC-2E Coil is required for 16D replacement part where date code is prior to 12-03

Ball Valves

HENRY BALL VALVES

Features:

- Bi-directional flow design.
- Allowable operating temperature range: -40°C to +150°C
- Allowable operating pressure range: 0 to 6000 KPag (0 to 870 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)	SWP (Bar)
937203	3/8"	1/4" Schrader access port	165	60
937204	1/2"	1/4" Schrader access port	165	60
937205	5/8"	1/4" Schrader access port	165	60
937306	3/4"	1/4" Schrader access port	184	60
937307	7/8"	1/4" Schrader access port	184	60
937409	1-1/8"	1/4" Schrader access port	216	60
938511	1-3/8"	1/4" Schrader access port	235	60
938613	1-5/8"	1/4" Schrader access port	254	60
938617	2-1/8"	1/4" Schrader access port	289	60
938721FP	2-5/8"	1/4" Schrader access port	365	60
937825FP	3-1/8"	1/4" Schrader access port	420	48
907203	3/8"	Without access port	165	60
907204	1/2"	Without access port	165	60
907205	5/8"	Without access port	165	60
907306	3/4"	Without access port	184	60
907307	7/8"	Without access port	184	60
907409	1-1/8"	Without access port	216	60
908511	1-3/8"	Without access port	235	60
908613	1-5/8"	Without access port	254	60
908617	2-1/8"	Without access port	289	60
908721FP	2-5/8"	Without access port	365	60
907725FP	3-1/8"	Without access port	420	48

HENRY BALL VALVES R744 (CO₂)

Features

- Allowable operating temperature range: -40°C to +120°C
- Maximum working pressure 130 Barg
- Helium leak tested
- Sealing materials optimised for CO₂

Part Number	Solder, ODF/ODF connection	Access Port	Length (mm)	SWP (Bar)
907202TH	1/4"	Without access port	165	130
907203TH	3/8"	Without access port	165	130
907204TH	1/2"	Without access port	165	130
907205TH	5/8"	Without access port	165	130
907306TH	3/4"	Without access port	184	130
907307TH	7/8"	Without access port	184	130
907409TH	1-1/8"	Without access port	216	130
907511TH	1-3/8"	Without access port	235	130
907613TH	1-5/8"	Without access port	254	130

BALL VALVES (CONT'D)

DANFOSS BALL VALVES

Features

- Bi-directional 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				
009L7020	1/4"	Without access port	4500	GBC 6s
009L7021	3/8"	Without access port	4500	GBC 10s
009L7022	1/2"	Without access port	4500	GBC 12s
009L7023	5/8"	Without access port	4500	GBC 16s
009L7024	3/4"	Without access port	4500	GBC 18s
009L7025	7/8"	Without access port	4500	GBC 22s
009L7026	1-1/8"	Without access port	4500	GBC 28s
009L7027	1-3/8"	Without access port	4500	GBC 35s
009L7028	1-5/8"	Without access port	4500	GBC 42s
009L7029	2-1/8"	Without access port	4500	GBC 54s
009L7036	2-5/8"	Without access port	3500	GBC 67s
009L7050	1/4"	1/4" Schrader access port	4500	GBC 6s
009L7051	3/8"	1/4" Schrader access port	4500	GBC 10s
009L7052	1/2"	1/4" Schrader access port	4500	GBC 12s
009L7053	5/8"	1/4" Schrader access port	4500	GBC 16s
009L7054	3/4"	1/4" Schrader access port	4500	GBC 18s
009L7055	7/8"	1/4" Schrader access port	4500	GBC 22s
009L7056	1-1/8"	1/4" Schrader access port	4500	GBC 28s
009L7057	1-3/8"	1/4" Schrader access port	4500	GBC 35s
009L7058	1-5/8"	1/4" Schrader access port	4500	GBC 42s
009L7059	2-1/8"	1/4" Schrader access port	3500	GBC 54s
009L7066	2-5/8"	1/4" Schrader access port	3500	GBC 67s



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

DANFOSS BALL VALVES R744 (CO₂) HIGH PRESSURE 140 BAR

Part Number	Solder, ODF/ODF Connection	Access Port	Maximum Working Pressure Bar	Type
GBC series for refrigerant R744 (CO₂)				
009L6415	1/4"	Without access port	140	GBC 6s
009L6416	3/8"	Without access port	140	GBC 10s
009L6417	1/2"	Without access port	140	GBC 12s
009L6418	5/8"	Without access port	140	GBC 16s
009L6419	3/4"	Without access port	140	GBC 18s
009L6420	7/8"	Without access port	140	GBC 22s
009L6406	1 1/8"	Without access port	140	GBC 28s
009L6410	1-3/8"	Without access port	140	GBC 35s
009L6411	1-5/8"	Without access port	140	GBC 42s
009L6412	2- 1/8"	Without access port	140	GBC 54S
009L6581	1/4"	Access port	140	GBC 6s
009L6582	3/8"	Access port	140	GBC 10s
009L6585	1/2"	Access port	140	GBC 12s
009L6586	5/8"	Access port	140	GBC 16s
009L6588	3/4"	Access port	140	GBC 18s
009L6589	7/8"	Access port	140	GBC 22s
009L6451	1 1/8"	Access port	140	GBC 28s
009L6453	1-3/8"	Access port	140	GBC 35s
009L6454	1-5/8"	Access port	140	GBC 42s
009L6456	2- 1/8"	Access port	140	GBC 54S

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 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
020B1010	1/4" ODF	Straight-way
020B1011	3/8" ODF	Straight-way
020B1012	1/2" ODF	Straight-way
020B1018	5/8" ODF	Straight-way
020B1019	3/4" ODF	Straight-way
020-1021	1 1/8" ODF	Angle-way



HENRY MAGNETIC CHECK VALVES		
Part Number	Connection Size	Safe working pressure KPa
F6307	3/8" ODF	5520
F6308	1/2" ODF	4830
F6309	5/8" ODF	4830
F6310	3/4" ODF	4830
F6311	7/8" ODF	4830
F6312	1 1/8" ODF	4830
F6314	1 5/8" ODF	4830
F6315	2 1/8" ODF	4830
F6316	2 5/8" ODF	4480



HENRY 205 CHECK VALVES		
Part Number	Connection Size	Kv
205-7/8	7/8" ODF	6.1
205-1-1/8	1 1/8" ODF	8.6
205-1-3/8	1 3/8" ODF	11.9
**205-1-3/8-15	1 3/8" ODF 15 PSI Differential	11.9
205-1-5/8	1 5/8" ODF	15.4
**205-1-5/8-15	1 5/8" ODF 15 PSI Differential	15.4
205-2-1/8	2 1/8" ODF	25.5
205-2-5/8	2 5/8" ODF	42.3

** Designed for Heat Reclaim Bypass

Line Valves and Fittings

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
2100-1212	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



Brass Handle EconomyRange Available On Request

PRESSURE RELIEF VALVES

Part Number	Description	Henry Part Number
AV-15501-400PSI	PRV 1/4MNPT x 3/8MF 2.76MPA	5230A-27.6 BAR-CE
AV-15501-435PSI	PRV 1/4MNPT x 3/8MF 3.00MPA	NON STANDARD - M.T.O
AU-15503-300PSI	PRV 3/8MNPT x 1/2MF 2.07MPA	5231A-20.7 BAR-CE
AV-15503-350PSI	PRV 3/8MNPT x 1/2MF 2.41MPA	5231A-24.1 BAR-CE
AV-15503-400PSI	PRV 3/8MNPT x 1/2MF 2.76MPA	5231A-27.6 BAR-CE
AV-15503-435PSI	PRV 3/8MNPT x 1/2MF 3.0MPA	NON STANDARD - M.T.O
AV-15504-350PSI	PRV 1/2MNPT x 5/8MF 2.41MPA	5231B-24.1 BAR-CE
AV-15504-400PSI	PRV 1/2MNPT x 5/8MF 2.76MPA	5231B-27.6 BAR-CE
AV-15504-425PSI	PRV 1/2MNPT x 5/8MF 2.93MPA	5231B-29.3 BAR-CE
AV-15504-450PSI	PRV 1/2MNPT x 5/8MF 3.1MPA	5231B-31.0 BAR-CE
AU-15506-300PSI	PRV 3/4MNPT x 3/4MF 2.07MPA	5242-20.7 BAR-CE
AU-15506-400PSI	PRV 3/4MNPT x 3/4FNPT 2.76 MPA	5242B-27.6 BAR-CE
AV-15506-425PSI	PRV 3/4MNPT x 3/4MF 3.0 MPA	5242-30.0 BAR-CE



ANGLE PRESSURE RELIEF VALVES

Part Number	Description
5700-60.0 BAR-CE	Angle PRV - 3/8" MNPTF inlet x 3/8" MNPTF outlet - 60.0 BAR
5700-80.0 BAR-CE	Angle PRV - 3/8" MNPTF inlet x 3/8" MNPTF outlet - 80.0 BAR
5700-120.0 BAR-CE	Angle PRV - 3/8" MNPTF inlet x 3/8" MNPTF outlet - 120.0 BAR
5701AX-60.0 BAR	Angle PRV - 1/2" MNPTF inlet x 3/4" MNPTF outlet - 60.0 BAR
5701AX-80.0 BAR	Angle PRV - 1/2" MNPTF inlet x 3/4" MNPTF outlet - 80.0 BAR
5701AX-120.0 BAR	Angle PRV - 1/2" MNPTF inlet x 3/4" MNPTF outlet - 120.0 BAR
5702-60.0 BAR-CE	Angle PRV - 1/2" MNPTF inlet x 1" MNPTF outlet - 60.0 BAR
5702-80.0 BAR-CE	Angle PRV - 1/2" MNPTF inlet x 1" MNPTF outlet - 80.0 BAR
5702-120.0 BAR-CE	Angle PRV - 1/2" MNPTF inlet x 1" MNPTF outlet - 120.0 BAR

THREE WAY DUAL SHUT OFF PRESSURE RELIEF VALVES

Part Number	Description
925	3-Way PRV Manifold - 1/2" FNPT Inlet x 1/2" FNPT x 1/2" FNPT 46.0 Bar
925M	3-Way PRV Manifold - 1/2" MNPT Inlet x 1/2" FNPT x 1/2" FNPT 46.0 Bar
8021TH	3-Way PRV Manifold - 1/2" FNPT Inlet x 1/2" FNPT x 1/2" FNPT 130 Bar
8024TH	3-Way PRV Manifold - 1" FNPT Inlet x 1" FNPT x 1" FNPT 130 Bar
8025TH	3-Way PRV Manifold - 1-1/4" FNPT Inlet x 1-1/4" FNPT x 1-1/4" FNPT 130 Bar
935M	3-Way Dual Shut Off Valve - 1/2" MNPT Rotalock Inlet x 1/2" FNPT Outlet 130 Bar
935MR	3-Way Dual Shut Off Valve - 1/2" MNPT Rotalock Inlet x 1/2" FNPT Rotalock Outlet 130 Bar

HENRY SAFETY DEVICE KITS

Part Number	Description
SDK2X-20.7BAR	Dual Safety Device Kit 300Psi
SDK2X-24.8BAR	Dual Safety Device Kit 360Psi
SDK2X-27.6BAR	Dual Safety Device Kit 400Psi
SDK2X-31.0BAR	Dual Safety Device Kit 450Psi
2740-SWITCH	Rupture Disc Spst-Alarm Switch
G15	Pressure Indicator Gauge 1/8" NPT (55 BAR)

HENRY ROTALOCK VALVES

Part Number	Description
2600-081220	Valve R/Lock 1/2" Ods x 3/4" Nut
2600-081620	Valve R/Lock 1/2" Ods x 1" Nut
2600-262835	Valve R/Lock 1-5/8" Ods x 3/4" - 12UN
2600-263650	Valve R/Lock 1-5/8" Id x 2-1/4"
2605-102030	Valve R/Lock 5/8" Id x 1-1/4" - 12 UNF
2605-081220	Valve R/Lock 1/2" Id x 3/4" - 16UNF
2605-061220-HEX	Valve R/Lock 3/8" Ods x 3/4" -16UNF
2606-061620	Valve R/Lock 3/8" x 1" -14UN
2606-081220	Valve R/Lock 1/2" x 3/4" - 16UNF
2606-081620	Valve R/Lock 1/2" x 1" - 14UN
2606-122030	Valve R/Lock 3/4" x 1 -1/4" -12UNF
2606-142030	Valve R/Lock 7/8" x 1-1/4" -12 UNF
2606-142830	Valve R/Lock 7/8" x 1 3/4" - 12UN
2606-182835	Valve R/Lock 1-1/8" x 1-3/4" -12UN
2606-222835	Valve R/Lock 1-3/8" x 1-3/4" -12UN
2616-101620	Valve R/Lock 5/8" MSAE

MANEUROP ROTALOCK 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" X 1-1/8"
8517357	Valve R/Lock 2-1/4"



ROTALOCK ADAPTORS

Part Number	Description
291-0612	Rotalock Elbow Connector - 3/8" ID x 3/4" R/L Nut
291-0816	Rotalock Elbow Connector - 1/2" ID x 1 R/L Nut
291-1016	Rotalock Elbow Connector - 5/8" ID x 1 R/L Nut
291-1020	Rotalock Elbow Connector - 5/8" ID x 1-1/4" R/L Nut
291-1416	Rotalock Elbow Connector - 7/8" ID x 1" R/L Nut
291-1820	Rotalock Elbow Connector - 1-1/8" ID x 1-1/4" R/L Nut
297-0616	Rotalock Male Elbow Connector - 3/8" ID x 1" Male R/L c/- access
297-0816	Rotalock Male Elbow Connector - 1/2" ID x 1" Male R/L c/- access (293-0816)
297-1220	Rotalock Male Elbow Connector - 3/4" ID x 1-1/4" Male R/L c/- access
297-1420	Rotalock Male Elbow Connector - 7/8" ID x 1-1/4" Male R/L c/- access
290-0816	Rotalock Straight Connector - 1/2" ID x 1" R/L Nut (MRV204-1)
290-1020	Rotalock Straight Connector - 5/8" ID x 1-1/4" R/L Nut
290-1420	Rotalock Straight Connector - 7/8" ID x 1-1/4" R/L Nut (MRV362-5)
290-2228	Rotalock Straight Connector - 1-3/8" ID x 1-3/4" R/L Nut
7765005	Adaptor R/ Lock For Maneurope Sm90
7765006	Adaptor R/Lock For Maneurope Sm110
8153008	Adaptor 3/4" Dis/Suc Solder Sleeve
8153013	Adaptor 7/8" Dis/Suc Solder Sleeve
MRV214-1	Adaptor R/Lock 7/8" Od X 1" -14 Unf
MRV362-2	Adaptor R/Lock 5/8" Ods X 1" -14Unf


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	SWP (BAR)
2220 series, In-line foot mount, Male SAE Flare		
2220-0404	1/4" MSAE	42
2220-0606	3/8" MSAE	42
2220-0808	1/2" MSAE	42
2230 series, In-line foot mount, Female to Female solder		
2230-0404	1/4" ID	42
2230-0606	3/8" ID	42
2230-0808	1/2" ID	42



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



VIBRATION ELIMINATORS

Part Number	Description	Henry Part #	SWP (MPa)
VAF3	3/8" Vibration Eliminators	V-3/8	3.45
VAF4	1/2" Vibration Eliminators	V-1/2	3.45
VAF5	5/8" Vibration Eliminators	V-5/8	3.45
VAF7	3/4" Vibration Eliminators	V-3/4	3.45
VAF8	7/8" Vibration Eliminators	V-7/8	4.40
VAF9	1-1/8" Vibration Eliminators	V-1-1/8	3.45
VAF10	1-3/8" Vibration Eliminators	V-1-3/8	3.45
VAF11	1-5/8" Vibration Eliminators	V-1-5/8	3.45
VAF82	2-1/8" Vibration Eliminators	V-2-1/8	2.69
VAF83	2-5/8" Vibration Eliminators	V-2-5/8	2.34
V-3-1/8	3-1/8" Vibration Eliminators	V-3-1/8	2.07

Stainless Steel Vibration Eliminators available on request

Reversing Valves



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

SANHUA							
Part Number	Nominal Capacity	Nominal Capacity (kW)			Connections - ODF		Equivalent to Ranco
		R22	407C	410A	Disch.	Suction & Coils	
SANSHF-19009	6.3	7.03	7.8	7.74	3/8 "	1/2 "	V2-408064-2IL
SANSHF-19014	9.5	9.85	10.9	10.09	1/2"	5/8"	V3-410084-7IL
SANSHF-50016	46.8	49.24	54.65	59.09	1-1/8"	1-3/8"	V12-4220T4-2IL
SANSHF-50022	19.3	19.34	21.46	23.56	1/2"	3/4"	V6-412084-1IL
SANSHF-50027	34.8	34.82	38.65	41.85	3/4"	7/8"	V10-414124-2IL
SANSHF-50041	34.8	34.82	38.65	41.85	1/2"	7/8"	V6-414084-1IL
SANSHF-50048	39.4	39.39	43.7	47.48	7/8"	1-1/8"	V10-418144-2IL



SANHUA COIL		
SANSHF-56001 - 240V	240 V Coil to suit Sanhua 19/50 series valve	9220002
SANSHF-56005 - 24V	24 V Coil to suit Sanhua 19/50 series valve	9220000

SAGINOMIYA						
Part Number	Nominal Capacity	Nominal Capacity (kW)			Connections - ODF	
		R22	407C	410A	Disch.	Suction & Coils
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 600mm cable SUITS RANGE STF-0101 - 2011
STF-01AJ509D1	240 V 600mm 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.
V46AC9600	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.

DANFOSS WVFX, PRESSURE CONTROLLED WATER VALVES

Part Number	Model Number	Connections - ODF		
		Water Side ISO228/1	Condenser side	Range (refrigerant), KPa
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 - THERMOSTATIC WATER REGULATING VALVES

Part Number	Model Number	Water Side	Max. Temperature Sensor	Range Temperature	Capillary Tube Length (M)
003N4162	AVTA25	G1"	90.C	25 - 65.C	2

PENN V46, PRESSURE ACTUATED WATER REGULATING VALVE

Part Number	Range KPa	Body type	Size	Capillary length (cm)
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

Water Flow Switches

Part Number	Connection	Max Liquid Pressure (kPa)	Min Liquid Temperature (°C)	Max Liquid Temperature (°C)	Enclosure
PENN					
F261KAH-V01C	1" NPT	2000	-29 °C	121 °C	Type 3R Slashproof
F261MAH-V01C	1" NPT	2000	-29 °C	121 °C	Type 4 Vapour
F61SB-9100	1" MBSP	1034	4 °C	120 °C	IP43 Slashproof



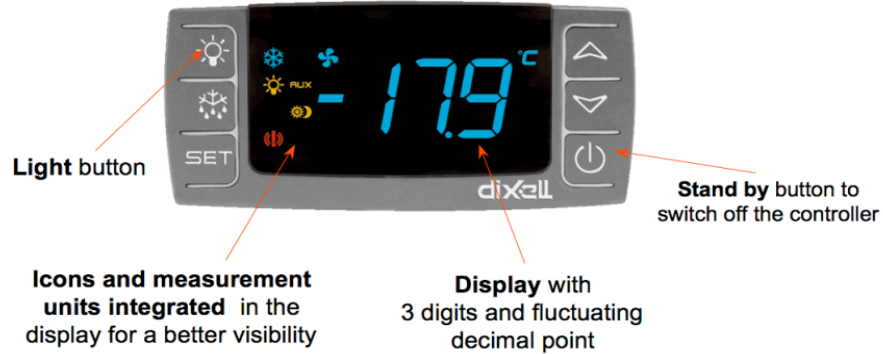


Electronic / Mechanical Controls

Refrigeration Controls

DIXELL™

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
PRIME CX SERIES		
XR20CX-1N1C0	24V AC/DC	NTC
XR20CXB	240VAC	NTC
XR20CXBT	12V AC/DC	NTC
XR20CXR	240VAC	NTC
XR30CXB	240VAC	NTC
XR35CX-5C713U	240VAC	NTC
XR40CXB	240VAC	NTC
XR60CX-1N1C0	24V AC/DC	NTC
XR60CXB	240VAC	NTC
XR60CXBT	12V AC/DC	NTC
XR70CXB	240VAC	NTC
XR75CX-5N713	240VAC	NTC
XR80CX-5N1C1	240VAC	NTC



DIXELL CX PRIME RANGE (CONT'D)

Part Number	Application	
	Coolroom	
	LT	MT
PRIME CX SERIES		
XR20CX-1N1C0		•
XR20CXB		•
XR20CXBT		•
XR20CXR		•
XR30CXB		•
XR35CX-5C7I3U		•
XR40CXB	•	•
XR60CX-1N1C0	•	
XR60CXB	•	•
XR60CXBT	•	•
XR70CXB	•	•
XR75CX-5N7I3	•	•
XR80CX-5N1C1	•	•

PRIME CX SERIES, BULK PACK OPTION

Part Number	Description
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



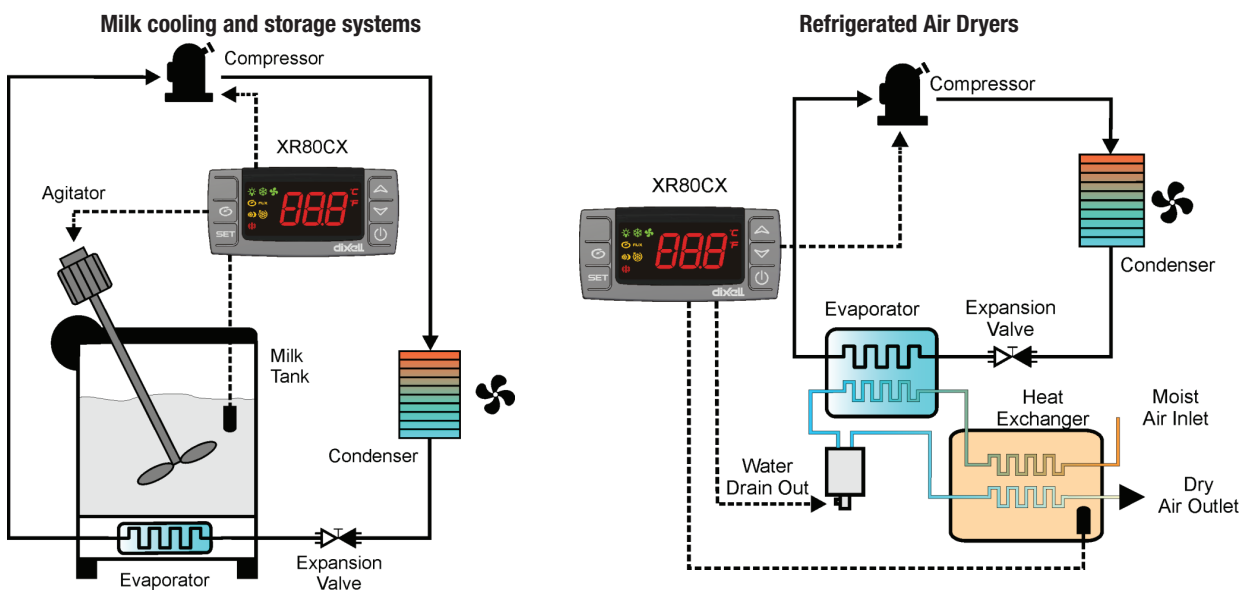
Part Number	Description
Universal-R	
UNIV-R4-6N0C0	UNIV-R4, NTC, 8A+10A, 230 V-12 V, probes not included

BLUETOOTH TEMPERATURE CONTROLLER

Part Number	Description
CHC Series	
XR60CHC-5R1B33BLE BLUE	Bluetooth Temperature Controller 230V Blue Display
XR70CHC-5R1B13BLE BLUE	Bluetooth Temperature Controller 230V Blue Display
XR30CHC-5W1B13BLE WHITE	Bluetooth Temperature Controller 230V White Display
XR70CHC-5W1B13BLE WHITE	Bluetooth Temperature Controller 230V White Display

DIXELL DAIRY CONTROLLER

The new XR80CX is the best solution for milk cooling and storage systems and for refrigerated air



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	
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-3NOCO	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		Digital Inputs	
					Stage 1	Stage 2	Stage 3	Stage 4	Alarm	Buzzer		Analog
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	-	-
X0K6KJAJA3N0	EMERSON IPRO Rack Cont								-		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	XEVO2D-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

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

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

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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
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

DIXELL™



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

Part Number	Relay outputs						Dehumidifying Light	Serial output
	Compressor	Defrost	Fans	Heater control	Humidifying			
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
XWEB500D-8T00	XWEB500, DIN mounting, 100 addresses, GSM internal modem, 240 V AC

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	•	•	•	•	•	-




OPTYMA TEMPERATURE / REFRIGERATION CONTROLLERS

Part Number	Description
080Z3200	Optyma Control, single-phase
080Z3201	Optyma Control, three-phase (3kW) 4.5-6.3 A
080Z3202	Optyma Control, three-phase (3kW) 7-10 A
080Z3206	Optyma Control, three-phase (3kW) 11-16 A
080Z3207	Optyma Control, three-phase (3kW) 14-20 A



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

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





TEMPERATURE / REFRIGERATION CONTROLLERS (CONT'D)

Part Number	Description
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	-	•	•
080Z2811	R404A/R507		IP 65	0-1000	-	•	•
080Z2988	R410A	Semiconductor	IP 44	0-1000	-	•	•
080Z2807	CO2	Infrared	IP 61	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	•	•	•
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



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

PHASEFALE™
 control, monitor, protect

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

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
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-TM	Wireless Internal Temperature	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
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HLP Remote monitoring - email & sms (cont'd)

S270	Y	8	Y	SMS	-
S272	Y	8	Y	SMS	-

G7-TM	-	Opt	-	-	-
G7-TX	-	Opt	-	-	-
G7-TH	-	Opt	-	-	-

Part Number	Description	Range Mtrs	Temp. Humidity Range	Temp Input	Humidity Input
Tempzone1	Wireless reciever for Temps - Internet	200			
Tempzone2	Wireless Temperature sender 2 meter probe	200	-40.C to 125.C	1	
Tempzone3	Wireless Temp and Rh sensor Self contained	200	-40 to +100°C 0-99 RH	1	1

Part Number	Description	Range Mtrs	Temp. Humidity Range	Temp Input	Humidity Input
Enless 200-19	Internet connected Temp and Rh sensor	Sigfox	-40 to +100°C 0-99 RH	1	1
Enless 300-032	Internet connected Temp sensor 2 meter probe	Sigfox	-30.C to 100.C	1	

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
705632162040	Frigbot V9 For Carel - Suitable for Carel, ir33, ir33+, PJEZ, and Cella range.
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.
FRIGBOT-12MTHPP	Prepaid Frigbot 12 Months
FRIGBOT-1MTHPP	Prepaid Frigbot 01 Month
FRIGBOT-3MTHPP	Prepaid Frigbot 03 Months
FRIGBOT-V10-CAR	V10 Frigbot For Carel
FRIGBOT-V10-DIX	V10 Frigbot For Dixell

Note: CT optional

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




Part Number	Mechanical Type	Voltage	Contact Amps	Initiation	Termination	Trippers	Mounting
8245-21	Synchronous	AC 240	30	Time	Pressure	X3596K	Wall

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	Description	Voltage	Contact Amps	Initiation	Termination	Trippers	Mounting	Replaces
9045-00	Electronic. Time Initiate/Time Terminate Defrost Timer with metal enclosure	AC 100-240	30	Time	Time	None	Wall	All 8045
9145-00	Electronic. Time Initiate/Temperature, Pressure Terminate Defrost Timer with metal enclosure	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



DEFROST TIMERS (CONT'D)
MJB SOLID STATE CUBE TIMERS

Part Number	Description	Input
LTA240X480	Solid state Anticyclone Cube Timer, 10 sec to 8 min	19-288 V AC, 1 A max
LT240X180	Solid state Anticyclone Cube Timer, 3 min fixed	19-288 V AC, 1 A max
LT240X300T	Solid state Anticyclone 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	-
DFT-880	Smart Temp Defrost Controller 240V	240V

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	

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	1.52m with 9.5mm Cross Ambient Bulb	Low/Med Temp refrig
016-6950	-35 to -7	1.7 to 12	2m with 9.5mm Coiled Bulb	Low Temp refrig
016-6951	-18 to 13	1.7 to 12	2m with 9.5mm Coiled Bulb	Med temp refrigeration
016-6954	-5 to 25	1.7 to 12	2m with 9.5mm Coiled Bulb	Med temp refrigeration
016-6980	-18 to 13	1.7 to 12	2m with 14.5mm Cross Ambient Bulb	Med temp refrigeration
016-6981	-5 to 25	1.7 to 12	2m with 14.5mm Cross Ambient Bulb	Med temp refrigeration
016-8900	-17.8 to 13	4 to 31	2m with 4.5mm bulb	Med temp refrigeration



PENN

A19ABC-5	10 to 55	1.8 to 8	3/8" x 5" 2m Cap.	Heat/vent/AC
A19ABC-27	38 TO 116	3 to 13	1/2" Npt 2.4m Cap	Hot Water
A19ABC-41C	-34 to 38	1.7 to 6.7	3/8" x 4" 1.8m Cap.	Low/med Temp refrig
A19ARC-9105	5 to 50	2.5 to 11	10.5 x 110 x 2mt 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
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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" 2m Cap.	Med/High temp
LWSC1030AGL2Q00	-35 / +30	2 to 7	3/8" x 4" 2m Cap.	Low/Med Temp refrig
LWSC1034AGL2Q00	-10 / +35	-1.4 to 5	3/8" x 5" 2m Cap.	Med temp refrigeration



DANFOSS

060H1506	-30 to 30	2,3	6mm x1.25mm 2mt Copper	Low/Med Temp refrig
060H1701	-30 to 30	2,3	6mm x1.25mm 2mt Copper	Low/Med Temp refrig
060L112166	20 to 60	10	9.5mm x 85mm 2mt Cap.	A/C



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 temp cyclic defrost	-26.0	-	-11.0.0	-	+3.5	+3.5	1200
4000-08	Window RAC -Cooling Only	+15	-18		+34	-		1200



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)
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 w/o- 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, 2m capillary							
077B6043	Danfoss Thermostat, suit Email, Westinghouse, Frigidaire							
077B6075	Danfoss thermostat, suit Kelvinator fridge							
077B6138SP	Danfoss thermostat, bottle cabinet	-12	5	-5,2	5			
077B6042	Danfoss thermostat, suit Westinghouse/Electrolux Cyclic Defrost							
077B7661	Single Knob to suit 077B6138SP							

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
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
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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
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
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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

* Enclosure with IP44 rating. ** Cond fan. *** R744 (CO2) rated

MECHANICAL CONTROLS: PRESSURE (CONT'D)

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	900mm 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	900mm 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	1mt 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)	900mm 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
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	900mm Cap w-1/4" fl nut	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	900mm 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
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	Kirby
DN2C600SE	24" Capillary Hose with Depressor	2	600	1/4FSAE	Straight / Elbow	Kirby
DN2C900SE	36" Capillary Hose with Depressor	2	900	1/4FSAE	Straight / Elbow	Kirby
DN2C1200SE	48" Capillary Hose with Depressor	2	1200	1/4FSAE	Straight / Elbow	Kirby
DN6C300SE	12" Oil Pressure Hose	6	300	1/4FSAE	Straight / Elbow	Kirby
DN6C600SE	24" Oil Pressure Hose	6	600	1/4FSAE	Straight / Elbow	Kirby
DN6C900SE	36" Oil Pressure Hose	6	900	1/4FSAE	Straight / Elbow	Kirby
DN6C1200SE	48" Oil Pressure Hose	6	1200	1/4FSAE	Straight / Elbow	Kirby

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)
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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 Switches

HIGH PRESSURE			
Part Number	Description	Cut Off (Open) KPA	Cut In (Close) KPA
P100HP-4100-L	Control Pressure Mini HP	2827	Manual
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
P100CP-85C	ENCAPSULTING PRESSURE CONTROL, HP 1/4	665	565
LCBPA08	PRESS CONT LOW RANGE0.1-0.7MPA	137	245

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

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



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
P216EEA-1K	-	-	-	-	-	HFC, HFOs	0-10	12



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

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	- 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	- 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	- 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	- M400 actuator, 400N - 3 Position or Modulating 24 V AC - Suitable for DN15 to DN32 VB7000 valves
880-0310-030	- 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	- 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	- 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	- 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

HVAC FIELD DEVICES (CONT'D)

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

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)
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
MD10SR-24M	Spring return damper actuator 10 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
MS51-7103-150	Linear spring return (suit VB-7### and VB-9### series Valves)
MS61-7203	DuraDrive spring return proportional (suit VB-8###3, VB-931# & VB-92## series Valves)

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
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

HVAC FIELD DEVICES (CONT'D)

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	STO600 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

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

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
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
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

- 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

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

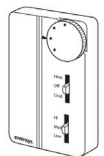


CO (CARBON MONOXIDE) SENSOR

- 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



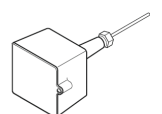
PNEUMATIC ROOM THERMOSTAT

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
TS-5751	Outdoor sensor, 10K, 15 mm conduit



HVAC FIELD DEVICES (CONT'D)

SENSORS & ACCESSORIES

Part Number	Description / Specification
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

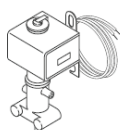
Part Number	Description / Specification
20-717	Tygothane tubing assembly
21-930	European White Cover

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



HVAC Field Devices - Siemens

SIEMENS

SIEMENS DAMPER ACTUATOR - SPRING RETURN

- Siemens GQD series, suitable for areas up to 0.3m² (2NM), IP40 Enclosure
- Siemens GMA series, suitable for areas up to 1.5m² (7NM), IP54 Enclosure
- Siemens GCA series, Suitable for areas up to 3m² (18NM), IP54 Enclosure

Part Number	Description / Specification
GQD121.1A	2 position, AC/DC 24V
GQD321.1A	2 position, AC240V
GQD121.6A	2 position, AC/DC 24V c/w domestic mount spigot
GQD321.6A	2 position, AC 240V c/w domestic mount spigot
GMA121.1E	2 position, AC/DC 24V
GMA161.1E	0-10vDC, AC/DC 24V
GMA321.1E	2 position, AC240V
GCA121.1E	2 position, AC/DC 24V
GCA161.1E	0-10vDC, AC/DC 24V



SIEMENS DAMPER ACTUATOR - NON SPRING RETURN

- Siemens GSD series, suitable for areas up to 0.3m² (2NM), IP40 Enclosure
- Siemens GDB series, suitable for areas up to 0.8m² (5NM), IP54 Enclosure
- Siemens GLB series, Suitable for areas up to 1.6m² (10NM), IP54 Enclosure
- Siemens GEB series, suitable for areas up to 3m² (15NM), IP54 Enclosure

Part Number	Description / Specification
GSD141.1A	2/3 position, AC/DC 24V
GSD321.1A	2/3 position, AC240V
GDB141.1E	3 position, AC/DC 24V
GDB161.1E	0-10vDC, AC/DC 24V
GDB341.1E	3 position, AC240V
GLB161.1E	0-10vDC, AC/DC 24V
GEB161.1E	0-10vDC, AC/DC 24V

SIEMENS ZONE VALVES - 2PORT

- Siemens MVI / MXI 2/3-Port valves, for ventilation and air conditioning systems for control in closed circuits, e.g. induction units, fan coil units, small re-heaters and small recoolers

Part Number	Description / Specification
MVI421.15	2way DN15
MVI421.20	2way DN20
MVI421.25	2way DN25
MXI421.15	3way DN15
MXI421.20	3way DN20
MXI421.25	3way DN25



HVAC FIELD DEVICES - SIEMENS (CONT'D)

SIEMENS

SIEMENS COMBI VALVES (PICV)

- Siemens PIC valves, for ventilation and air conditioning plants for control on and automatic hydraulic balancing of terminal units, such as fan coils, induction units, and in heat exchangers for heating or cooling
- Internal threaded connections



Part Number	Description / Specification
VPI46.15L0.2QF-53-1362	DN15
VPI46.20F1.4QF-53-1368	DN20
STA63	Actuator to suit above DN15/20 valves
VPI46.25F3.6QF-53-1373	DN25
VPI46.32F4QF-53-1374	DN32
SSA61EP	Actuator to suit above DN25/32 valves
VPI46.40F9.5QF-53-1578C	DN40
SAY61P03	Actuator to suit above DN40 valve

SIEMENS DIFFERENTIAL PRESSURE SENSOR - AIR

- Adjustable differential pressure switch for monitoring overpressure, vacuum and differential pressure of air or non-combustible, non-aggressive gases
- Includes tubing and probes
- IP54 enclosure



Part Number	Description / Specification
930.80B222234	Range: 20-300pa

SIEMENS DIFFERENTIAL PRESSURE SENSOR - WATER

- Water flow control switch used in water / air cooled chillers
- Voltage free contact output
- Fixed single set point differential pressure



Part Number	Description / Specification
PPE2.AA	10kPa Setpoint

SIEMENS TEMPERATURE WALL THERMOSTAT

- Simple analog temperature thermostat for Heating Only or Cooling Only applications
- Switching capacity: AC 24 - 250V



Part Number	Description / Specification
RAA11	Internal Setpoint adjust
RAA21	External Setpoint adjust

SIEMENS TIME SWITCH

- Digital time switch used to switch plant on and off, or for the control of setback periods at night or at weekends.
- Switching capacity: AC 24 - 250V



Part Number	Description / Specification
SEH62.1	



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Fan coil units (FCUs) are flexible, economical and efficient – if you choose the right HVAC devices.

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HVAC Installation

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
FP2212	Piston	Mini Condensate Pump	Aspen	12	6	10	2	≤ 16 kW	Mini Orange
FP3313	Piston	Mini Condensate Pump	Aspen	12	6	10	2	≤ 16kW	Silent 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
FP3326	Piston	Mini Condensate Pump	Aspen	12	10	10	2	≤ 16kW	Mini Aqua Silent



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



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)	Sauer mann	20	4	10	N/A	≤ 20 kW
Si10	Piston	Mini Condensate Pump	Sauer mann	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)	Sauer mann	20	4	10	3	≤ 20 kW
Si20	Piston	Mini Condensate Pump	Sauer mann	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	Sauer mann	20	4	10	3	≤ 20 kW
Si33	Piston	Mini Condensate Pump	Sauer mann	30	8	13	4	20 to 30 kW



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MINI CONDENSATE PUMPS (CONT'D)

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

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

≤ = less than or equal to

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	Replacement tube for Sauermann 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)
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	Replacement tube for Aspen Peristaltic pumps				

≤ = less than or equal to

sauermann



BlueDiamond
condensate removal pumps



sauermann



ASPEN
PUMPS





AIR CONDITIONING / REFRIGERATION PUMPS



MEASURING INSTRUMENTS



Tank 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)
Si60	Piston	Condensate Pump	Sauermann	20	4	10	0.37	≤ 20 kW
Si83	Centrifugal	Condensate Pump	Sauermann	700	30	5.4	2	
Si1830	Centrifugal	Centrifugal Tank Pump	Sauermann	400	50	3.7	0.5	



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
FP1056	Piston	Mini Tank Condensate Pump	Aspen	35	10	15	0.24	≤ 46 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



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	



SUPERMARKET PUMPS								
Part Number	Type	Description	Brand	Nominal Litres / Hr @ 0 Head	Litres / Hr @ Max Head	Max. Discharge Head (m)	Tank Capacity (L)	
Si1931	Centrifugal	Pump Condensate Membrane Up To 4 Cabinets	Sauermann	700	35	24.6	6.5	

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			

sauerermann



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

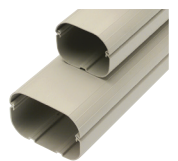
ebmpapst



PVC Pipe Ducting and Fittings

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
NSD77	PVC	77 Series	75	63	2000	Slimduct	Ivory
NSD100	PVC	100 Series	100	70	2000	Slimduct	Ivory
SD77W	PVC	77 Series	75	63	2000	Slimduct	White(PTO)
SD100W	PVC	100 Series	100	70	2000	Slimduct	White(PTO)
SD77B	PVC	77 Series	75	63	2000	Slimduct	Brown(PTO)
SD100B	PVC	100 Series	100	70	2000	Slimduct	Brown(PTO)
SD77G	PVC	77 Series	75	63	2000	Slimduct	Grey(PTO)
SD100G	PVC	100 Series	100	70	2000	Slimduct	Grey(PTO)
SD77K	PVC	77 Series	75	63	2000	Slimduct	Black(PTO)
SD100K	PVC	100 Series	100	70	2000	Slimduct	Black(PTO)

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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
SW77W	PVC	77 Series	83	77	205	Wall Inlet / Outlet	White(PTO)
SW100W	PVC	100 Series	110	86	223	Wall Inlet / Outlet	White(PTO)
SW77B	PVC	77 Series	83	77	205	Wall Inlet / Outlet	Brown(PTO)
SW100B	PVC	100 Series	110	86	223	Wall Inlet / Outlet	Brown(PTO)
SW77G	PVC	77 Series	83	77	205	Wall Inlet / Outlet	Grey(PTO)
SW100G	PVC	100 Series	110	86	223	Wall Inlet / Outlet	Grey(PTO)
SW77K	PVC	77 Series	83	77	205	Wall Inlet / Outlet	Black(PTO)
SW100K	PVC	100 Series	110	86	223	Wall Inlet / Outlet	Black(PTO)



PVC PIPE DUCTING AND FITTINGS (CONT'D)

CEILING PLATES

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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
SP77W	PVC	77 Series	81	70	130	Ceiling Plate	White(PTO)
SP100W	PVC	100 Series	106	70	137	Ceiling Plate	White(PTO)
SP77B	PVC	77 Series	81	70	130	Ceiling Plate	Brown(PTO)
SP100B	PVC	100 Series	106	70	137	Ceiling Plate	Brown(PTO)
SP77G	PVC	77 Series	81	70	130	Ceiling Plate	Grey(PTO)
SP100G	PVC	100 Series	106	70	137	Ceiling Plate	Grey(PTO)
SP77K	PVC	77 Series	81	70	130	Ceiling Plate	Black(PTO)
SP100K	PVC	100 Series	106	70	137	Ceiling Plate	Black(PTO)

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
SK77W	PVC	77 Series	83	66	128	90° Flat Elbow - Long Radius	White(PTO)
SK100W	PVC	100 Series	109	74	151	90° Flat Elbow - Long Radius	White(PTO)
SK77B	PVC	77 Series	83	66	128	90° Flat Elbow - Long Radius	Brown(PTO)
SK100B	PVC	100 Series	109	74	151	90° Flat Elbow - Long Radius	Brown(PTO)
SK77G	PVC	77 Series	83	66	128	90° Flat Elbow - Long Radius	Grey(PTO)
SK100G	PVC	100 Series	109	74	151	90° Flat Elbow - Long Radius	Grey(PTO)
SK77K	PVC	77 Series	83	66	128	90° Flat Elbow - Long Radius	Black(PTO)
SK100K	PVC	100 Series	109	74	151	90° Flat Elbow - Long Radius	Black(PTO)

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
SC77W	PVC	77 Series	81	67	100	90° Corner Elbows - Long Radius	White(PTO)
SC100W	PVC	100 Series	106	75	117	90° Corner Elbows - Long Radius	White(PTO)
SC77B	PVC	77 Series	81	67	100	90° Corner Elbows - Long Radius	Brown(PTO)
SC100B	PVC	100 Series	106	75	117	90° Corner Elbows - Long Radius	Brown(PTO)
SC77G	PVC	77 Series	81	67	100	90° Corner Elbows - Long Radius	Grey(PTO)
SC100G	PVC	100 Series	106	75	117	90° Corner Elbows - Long Radius	Grey(PTO)
SC77K	PVC	77 Series	81	67	100	90° Corner Elbows - Long Radius	Black(PTO)
SC100K	PVC	100 Series	106	75	117	90° Corner Elbows - Long Radius	Black(PTO)



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



PVC PIPE DUCTING AND FITTINGS (CONT'D)
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
SF77500W	PVC	77 Series	74	62	495	Flexible Joints	White(PTO)
SF771000W	PVC	77 Series	74	62	1033	Flexible Joints	White(PTO)
SF100800W	PVC	100 Series	100	70	800	Flexible Joints	White(PTO)
SF77500B	PVC	77 Series	74	62	495	Flexible Joints	Brown(PTO)
SF771000B	PVC	77 Series	74	62	1033	Flexible Joints	Brown(PTO)
SF100800B	PVC	100 Series	100	70	800	Flexible Joints	Brown(PTO)
SF77500G	PVC	77 Series	74	62	495	Flexible Joints	Grey(PTO)
SF771000G	PVC	77 Series	74	62	1033	Flexible Joints	Grey(PTO)
SF100800G	PVC	100 Series	100	70	800	Flexible Joints	Grey(PTO)
SF77500K	PVC	77 Series	74	62	495	Flexible Joints	Black(PTO)
SF771000K	PVC	77 Series	74	62	1033	Flexible Joints	Black(PTO)
SF100800K	PVC	100 Series	100	70	800	Flexible Joints	Black(PTO)

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
SE77W	PVC	77 Series	53	67	95	End Fitting	White(PTO)
SEN100W	PVC	100 Series	56	76	112	End Fitting	White(PTO)
SE77B	PVC	77 Series	53	67	95	End Fitting	Brown(PTO)
SEN100B	PVC	100 Series	56	76	112	End Fitting	Brown(PTO)
SE77G	PVC	77 Series	53	67	95	End Fitting	Grey(PTO)
SEN100G	PVC	100 Series	56	76	112	End Fitting	Grey(PTO)
SE77K	PVC	77 Series	53	67	95	End Fitting	Black(PTO)
SEN100K	PVC	100 Series	56	76	112	End Fitting	Black(PTO)

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
SJ77W	PVC	77 Series	85	67	50	Joiners	White(PTO)
SJ100W	PVC	100 Series	109	75	66	Joiners	White(PTO)
SJ77B	PVC	77 Series	85	67	50	Joiners	Brown(PTO)
SJ100B	PVC	100 Series	109	75	66	Joiners	Brown(PTO)
SJ77G	PVC	77 Series	85	67	50	Joiners	Grey(PTO)
SJ100G	PVC	100 Series	109	75	66	Joiners	Grey(PTO)
SJ77K	PVC	77 Series	85	67	50	Joiners	Black(PTO)
SJ100K	PVC	100 Series	109	75	66	Joiners	Black(PTO)

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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	
TOPHAT2.4	Sheetmetal				2400	Tophat Sheetmetal Capping	
BOXLID2.4	Sheetmetal				2400	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



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



PVC DRAINAGE SYSTEMS (CONT'D)
CLEAR TUBE (CONT'D)

Part Number	Material	Dimensions		Description	Colour
		Length (m)	Diameter (mm)		
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

PR PIPE

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

PVC PRESSURE PIPE AND FITTINGS (CONT'D)

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
EZT113B	20	Cleanable Condensate Trap with brush
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-2	Galvanised Steel with Ivory Powder Coat	350	450	335	120
L550K-2	Galvanised Steel with Ivory Powder Coat	450	550	390	150
L450STSTK-2	Stainless Steel SUS 304	350	450	335	120
L550STSTK-2	Stainless Steel SUS 304	450	550	390	150



WALL MOUNTING BRACKETS SPLIT SYSTEM OUTDOOR UNIT - ADJUSTABLE BAR

Part Number	Material	Dimensions (mm)				Capacity (kg)
		A	B	C	D	
L450ADJBARK-2	Galvanised Steel with Ivory Powder Coat	350	450	335	700	120
L550ADJBARK-2	Galvanised Steel with Ivory Powder Coat	450	550	390	1000	150
L450ADJBARSTSTK-2	Stainless Steel SUS 304	350	450	335	700	120
L550ADJBARSTSTK-2	Stainless Steel SUS 304	450	550	390	850	150



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



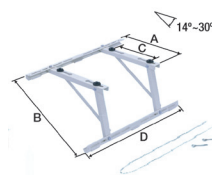
WALL MOUNTING BRACKETS SPLIT SYSTEM OUTDOOR UNIT - FIXED ARM

Part Number	Material	Dimensions (mm)				Capacity (kg)
		A	B	C	D	
SH01517	2 Piece - Fixed Arm HD Galvanised	345	560		100	



ROOF MOUNTING BRACKETS SPLIT SYSTEM OUTDOOR UNIT - ADJUSTABLE BAR

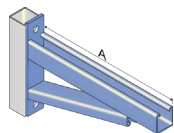
Part Number	Material	Dimensions (mm)				Capacity (kg)
		A	B	C	D	
C-YUG	Galvanised Steel with Ivory Powder Coat	434	555-660	340	760	60
C-YUG-L	Galvanised Steel with Ivory Powder Coat	479	555-660	400	760	80
C-YUZG-L	Galvanised	479	555-660	400	760	80
PC-YG30	Galvanised	522	546-594	380	1015	100
PC-YG60	Galvanised	572	600-662	430	1100	150
RB560	Galvanised Steel with Ivory Powder Coat					150



MOUNTING BRACKETS (CONT'D)

CANTILEVER BRACKETS

Part Number	Material
FM158-500	Cantilever Bracket 500mm
FM158-650	Cantilever Bracket 650mm
FM158-780	Cantilever Bracket 780mm
FM158SP-450	Cantilever Bracket 450mm heavy duty
FM158SP-600	Cantilever Bracket 600mm
FM158SP-780	Cantilever Bracket 780mm
CDBK	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
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 (kg)
		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



MOUNTS

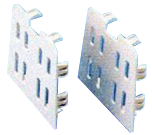
Part Number	Description	Dimensions (mm)			Capacity (kg)
		A	B	C	
AUS1	Adjustable Support Mounts	120	180	10	150
VM400A	Adjustable Unit Mounts		100	10	120
VM400HDG	Adjustable Unit Mounts HD Gal		100	10	120
B9368SET	Big Foot Fix It	500 L	130 W	50 H	134
RHDE-1	Rubber Mount Isolation Hanger	45 L	25 W	34 H	17-1300

EVAPORATOR MOUNTING

Part Number	Description
PS	Perf Strap 15 m x 23 mm wide (roll)

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		

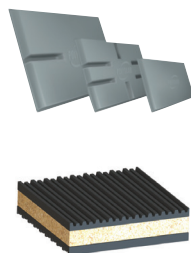


FLOOR MOUNT - SLABS & RUBBER MOUNTS

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
LITECON945	Lightweight concrete slab	900	450	50	250
ECRETE-900	Ecrete slab 450 X 900 X 50mm	900	450	50	250



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)	
ACG9	Condenser Cage	900	1000	600	25	Hot dipped galvanised
ACG10	Condenser Cage	1000	1200	600	25	Hot dipped galvanised
ACG12	Condenser Cage	1200	1200	600	25	Hot dipped galvanised
ACG14	Condenser Cage	1400	1200	600	25	Hot dipped galvanised
ACG16	Condenser Cage	1600	1200	600	25	Hot dipped galvanised
ACG20	Condenser Cage	2000	1400	900	25	Hot dipped galvanised

Pipe Support System



STRUT PIPING (CHANNEL)



Part Number	Dimensions			Description	Material
	Width (mm)	Depth (mm)	Length (m)		
FM1000HDG-3M	41	41	3	Standard Channel	Hot Dip Galvanised
FM1000HDG	41	41	6	Standard Channel	Hot Dip Galvanised
FM1000THDG-3M	41	41	3	Slotted Channel	Hot Dip Galvanised
FM1000THDG	41	41	6	Slotted Channel	Hot Dip Galvanised
FM2000TGBD-3M	41	41	3	Slotted Channel	Galvabond
FM2000TGBD	41	41	6	Slotted Channel	Galvabond
FM3300HDG-3M	41	21	3	Standard Channel	Hot Dip Galvanised
EM3300HDG	41	21	6	Standard Channel	Hot Dip Galvanised
FM4000GBD-3M	41	21	3	Standard Channel	Galvabond
FM4000GBD	41	21	6	Standard Channel	Galvabond
FM4000TGBD-3M	41	21	3	Slotted Channel	Galvabond
FM4000TGBD	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)		
FM150-38BRS	Threaded Rod Brass 3/8" X 3'	900	Threaded Rod	Brass
FM150-M10	Threaded Rod ZP 10mm X 3mt	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
FM132-21	Channel Pipe Clamp	22mm
FM132-25	Channel Pipe Clamp	25mm
FM132-32	Channel Pipe Clamp	32mm
FM132-34	Channel Pipe Clamp	35mm
FM132-38	Channel Pipe Clamp	38mm
FM132-043	Channel Pipe Clamp	43mm
FM132-48	Channel Pipe Clamp	49mm
FM132-51	Channel Pipe Clamp	51mm
FM132-54	Channel Pipe Clamp	54mm
FM132-57	Channel Pipe Clamp	57mm
FM132-060	Channel Pipe Clamp	60mm
FM132-64	Channel Pipe Clamp	64mm
FM132-67	Channel Pipe Clamp	67mm
FM132-70	Channel Pipe Clamp	70mm
FM132-073	Channel Pipe Clamp	73mm
FM132-076	Channel Pipe Clamp	76mm
FM132-79	Channel Pipe Clamp	79mm
FM132-83	Channel Pipe Clamp	83mm
FM132-86	Channel Pipe Clamp	86mm
FM132-089	Channel Pipe Clamp	90mm
FM132-92	Channel Pipe Clamp	92mm
FM132-95	Channel Pipe Clamp	95mm
FM132-98	Channel Pipe Clamp	98mm
FM132-102	Channel Pipe Clamp	102mm
FM132-105	Channel Pipe Clamp	105mm
FM132-110	Channel Pipe Clamp	111mm
FM132-115	Channel Pipe Clamp	114mm
FM132-117	Channel Pipe Clamp	117mm
FM132-121	Channel Pipe Clamp	121mm
FM132-127	Channel Pipe Clamp	127mm
FM132-146	Channel Pipe Clamp	146mm
FM132-152	Channel Pipe Clamp	152mm
FM132-160	Channel Pipe Clamp	160mm
FM132-165	Channel Pipe Clamp	165mm



PIPE SUPPORT SYSTEM (CONT'D)

UNICLAMPS



Part Number	Description	Size
Vastclamp	Vast Clamp	3/8" - 5 "
V-Bat	V-Bat	3/8" - 5 "
Wallbracket		

INSULCLIPS



Part Number	Description	Size
B6268	Insulclip	1/4
B6274	Insulclip	3/8
B6267	Insulclip	1/2
B6276	Insulclip	5/8
B6273	Insulclip	3/4
B6277	Insulclip	7/8
B6278	Insulclip	1"
B6264	Insulclip	1-1/8
B6263	Insulclip	1 1/4
B6265	Insulclip	1-3/8
B6266	Insulclip	1-5/8
B6269	Insulclip	2-1/8
B6270	Insulclip	2-5/8
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
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
RC-M10	Threaded Rod Coupler 10mm
HN38BRS	Brass Nuts 3/8
FW38BRS	Brass Washer 3/8
HEXNUT-M10	Hex Nut Zinc Plate 10mm
HEXNUT-M08	Hex Nut Zinc Plate 8mm
FW-M08	Washer Zinc Plate 8mm
FW-M10	Washer Zinc Plate 10mm
HHSSM08X25	Hex Bolt Zp 8mm X 25mm
HHSSM10X25	Hex Bolt Zp 10mm X 25mm
HHSSM10X40	Hex Bolt Zp 10mm X 40mm
HHSSM12X30	Hex Bolt Zp 12mm X 30mm
FM1007	Channel Spring Nut 8mm
FM1008	Channel Spring Nut 10mm
FM1010	Channel Spring Nut 12mm
FM1026	Channel 90Deg Angle Fitting
FM2600B	Isolation Barrier Black Rubber
EF1200A-M10	Type A M10 Mounting Plate
EF1200B-M10	Type B M10 Mounting Plate
EF1600-M10	M1 Beam Clamp
EF2000-M10	Purling Clamp 10mm Zp
EF1200A-M10	Type A M10 Mounting Plate
EF1200B-M10	Type B M10 Mounting Plate
FM2240	Plastic End Caps For Brackets
FM4240	Channel End Caps



BRONCO SADDLES

Part Number	Description
HZSB225	Bronco Saddle 12X2-1/4 (57) ID
HZSB325	Bronco Saddle 12X3-1/4 (82) ID
HZSB425	Bronco Saddle 12X4-1/4 (108)ID
HZSB525	Bronco Saddle 12X5-1/4 (133)ID
HZSB625	Bronco Saddle 12X6-1/4 (159)ID
HZSB825	Bronco Saddle 12X8-1/4 (209)ID



PIPE SUPPORT SYSTEM (CONT'D)

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
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

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 blk-grey
220100	Filter media G2 10 mm white
233240	Filter media G4 20 mm blue/white

CARDBOARD FILTERS

The Cardboard disposable filters feature a media 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



AIR FILTRATION (CONT'D)

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

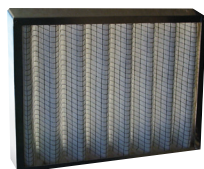
Vee Mesh filters are used in commercial applications. They are available in either 50 mm or 100 mm and are usually installed in a slide track in the duct work or return air plenum. Vee Mesh filters are manufactured to specific size - please advise dimensions when ordering

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. They come in both Carmpac media with efficiency ranging from EU3-EU6 , and Synsafe media (Electrostatically charged) with efficiency ranging from EU6-EU8

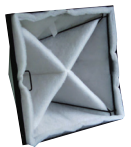
Part Number	Description
PAP665S4415	Filter 6 pocket EU6 610 x 160 x 380 mm
PAP385S2422	Filter 3 pocket EU6 305 x 610 x 560 mm
PAP685S4422	Filter 6 pocket EU8 610 x 610 x 560 mm



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.

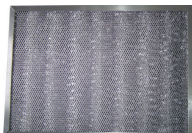
Part Number	Description
4 Peak Type Replacements	
60053061	4 Peak bag only half size
60056161	4 Peak bag only
Multi Peak Replacements	
70056161	3 Peak bag only
70053061	2 Peak bag only half size
Pyracube Type Replacements	
20056161	Filter Pyracone bag only
20053061	Filter Pyracone half bag only
30056161	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



AIR FILTRATION (CONT'D)

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
P11ZRHMSPINK	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



COLDROOM & CABINET HARDWARE & ACCESSORIES (CONT'D)
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
F2220TN	Pressure Relief Vent 220V, 75 -150mm
D03	Door Bell Recess
A210	Coolroom Door Locator

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-M	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
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
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.



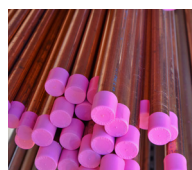
Copper

Kirby Compressors, Parts and Refrigerants Catalogue 2021

Hard Drawn Copper Tube



KEMBLA - DEHYDRATED & SEALED



Part Number	Copper Tube Dimensions					Safe Working Pressure (kPa) at Service Temperatures			R410A, R32 Compatible
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Wall Thickness (SWG)	Length (m)	55 °C	60 °C	65 °C	
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



IN AUSTRALIA. WE DO PROPER COPPER.

CHOOSE KEMBLA COPPER TUBE.

1. KEMBLA IS A FOUNDING PIECE OF AUSTRALIA'S PROUD HISTORY

Established in 1916 for one reason. To ensure Australia could convert its rich copper resources to finished product – with no reliance on offshore supply.

2. KEMBLA IS AUSTRALIA'S ONLY COPPER TUBE MANUFACTURER

Ask for the Kembla brand and you are supporting Australian manufacturing and the many industries big and small that service it. Kembla also supports industry associations that support, educate and train you.

3. KEMBLA COPPER IS SOURCED FROM AUSTRALIAN MINES

87% of copper tube sold by Kembla is still made in Port Kembla, NSW Australia using LME A Grade copper cathode from Australian mines.

4. KEMBLA HAS OVER 100 YEARS OF INDUSTRY KNOWLEDGE

Generational knowledge and long serving employees – over 100 years of material knowledge and a love affair with Australia's renowned plumbing industry, practices and Australian plumbers.

5. PARTNERS TO AUSTRALIA'S FAVOURITE PLUMBING & HVAC-R MERCHANTS

Stocked and supplied by Australia's most respected Plumbing and HVAC-R distributors, renowned for the highest quality products.

AUSTRALIA'S ONLY COPPER TUBE MANUFACTURER. ESTABLISHED IN 1916.

To find out more go to: <https://www.kembla.com/proper-copper/>

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WE DO
**Proper
Copper.**

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



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	$\lambda=0.034W/(m.k)$ @ + 20 °C $\lambda=0.032W/(m.k)$ @ 0 °C $\lambda=0.028W/(m.k)$ @ + 20 °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
K09067	67	2 5/8	9	3/8	20

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

FR NITRILE RUBBER THERMAL PIPE INSULATION - 13MM (CONT'D)

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K13054	54	2-1/8	13	1/2	17
K13060	60	2-3/8	13	1/2	16
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



FR NITRILE RUBBER THERMAL PIPE INSULATION - 25MM (CONT'D)

Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K25050	50	2	25	1	9
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

FR NITRILE RUBBER THERMAL PIPE INSULATION - 38 MM (CONT'D)


Part Number	Insulation ID		Wall Thickness		Carton Quantity
	(mm)	(inches)	(mm)	(inches)	
K38076	76	3	38	1-1/2	4
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

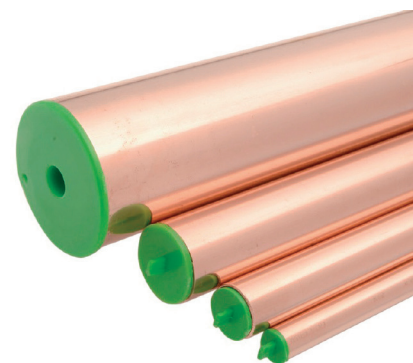
Hard Drawn Copper Tube 60 bar

KEMBLA XS 60 BAR						
Part Number	Copper Tube Dimensions				Temper	Safe Working Pressure (kPa @50°C)
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Weight (kg/6m length)		
T62300	3/8	9.52	0.81	1.19	Hard Drawn	6800
T62301	1/2	12.7	0.97	1.92	Half Hard	6053
T62302	5/8	15.88	1.21	2.97	Half Hard	6037
T62303	3/4	19.05	1.45	4.30	Half Hard	6030
T62304	7/8	22.22	1.69	5.85	Hard Drawn	6026

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)
K65HD10-065	3/8	9.52	0.65	5
K65HD12-085	1/2	12.7	0.85	5
K65HD15-105	5/8	15.86	1.05	5
K65HD20-130	3/4	19.05	1.3	5
K65HD22-150	7/8	22.23	1.5	5
K65HD22-190	1 1/8"	28	1.9	5
K65HD22-230	1 3/8"	35	2.3	5
K65HD22-270	1 5/8"	42	2.7	5
K65HD22-335	2 1/8"	54	3.55	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

90° K65 COPPER ELBOWS - FEMALE TO FEMALE



Part Number	Size (inches)	Description	Connection Type
1024-0606-K65	3/8"	Elbow 90 Deg	Female to Female
1024-0808-K65	1/2"	Elbow 90 Deg	Female to Female
1024-1010-K65	5/8"	Elbow 90 Deg	Female to Female
1024-1212-K65	3/4"	Elbow 90 Deg	Female to Female
1024-1414-K65	7/8"	Elbow 90 Deg	Female to Female
1024-1818-K65	1-1/8"	Elbow 90 Deg	Female to Female
1024-2222-K65	1-3/8"	Elbow 90 Deg	Female to Female
1024-2626-K65	1-5/8"	Elbow 90 Deg	Female to Female
1024-3434-K65	2-1/8"	Elbow 90 Deg	Female to Female



®

HENRY GROUP

Components for Transcritical CO₂ Systems

OIL MANAGEMENT CONTROLS

LINE PRODUCTS

SAFETY DEVICES

COALESCENT OIL SEPARATOR



OIL SEPARATOR-RESERVOIR

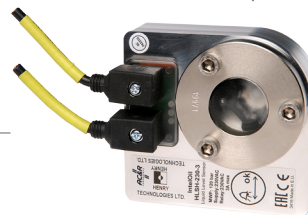


OIL RESERVOIR



OIL SEPARATION EFFICIENCY UP TO 97%

INTELOIL CONTROLLER



INTELOIL LIQUID LEVEL SENSOR

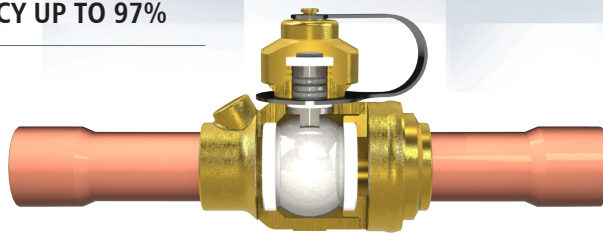


HIGH PRESSURE RELIEF VALVE



EN ISO 4126 COMPLIANT

BALL VALVE



'INNOVATION OF THE YEAR' WINNER

THREE-WAY VALVE



K65 FITTINGS

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INTELLIGENT MANUFACTURING. INTELLIGENT PRODUCTS.

90° K65 COPPER ELBOWS - MALE TO FEMALE

Part Number	Size (inches)	Description	Connection Type
1022-0606-K65	3/8"	Elbow 90 Deg	Male to Female
1022-0808-K65	1/2"	Elbow 90 Deg	Male to Female
1022-1010-K65	5/8"	Elbow 90 Deg	Male to Female
1022-1212-K65	3/4"	Elbow 90 Deg	Male to Female
1022-1414-K65	7/8"	Elbow 90 Deg	Male to Female
1022-1818-K65	1-1/8"	Elbow 90 Deg	Male to Female
1022-2222-K65	1-3/8"	Elbow 90 Deg	Male to Female
1022-2626-K65	1-5/8"	Elbow 90 Deg	Male to Female
1022-3434-K65	2-1/8"	Elbow 90 Deg	Male to Female

Other sizes are available upon request from 1-1/8" to 1-5/8"


K65 EQUAL TEES - FEMALE

Part Number	Size	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
1049-181818-K65	1 1/8"	Tee Equal Sweat	Female to Female
1049-222222-K65	1 3/8"	Tee Equal Sweat	Female to Female
1049-262626-K65	1 5/8"	Tee Equal Sweat	Female to Female

K65 REDUCING TEES - FEMALE

Part Number	Size	Description	Connection Type
1049-080806-K65	1/2" X 1/2" X 3/8"	Tee Reducing Sweat	Female to Female
1049-100808-K65	5/8" X 1/2" X 1/2"	Tee Reducing Sweat	Female to Female
1049-101006-K65	5/8" X 5/8" X 3/8"	Tee Reducing Sweat	Female to Female
1049-101008-K66	5/8" X 5/8" X 1/2"	Tee Reducing Sweat	Female to Female
1049-121210-K65	3/4" X 3/4" X 5/8"	Tee Reducing Sweat	Female to Female
1049-141412-K65	7/8" X 7/8" X 3/4"	Tee Reducing Sweat	Female to Female
1049-181814-K65	1-1/8" X 1-1/8" X 7/8"	Tee Reducing Sweat	Female to Female
1049-222212-K65	1-3/8" X 1-3/8" X 3/4"	Tee Reducing Sweat	Female to Female
1049-222214-K65	1-3/8" X 1-3/8" X 7/8"	Tee Reducing Sweat	Female to Female
1049-222218-K65	1-3/8" X 1-3/8" X 1-1/8"	Tee Reducing Sweat	Female to Female
1049-262622-K65	1-5/8" X 1-5/8" X 1-3/8"	Tee Reducing Sweat	Female to Female


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
1009-1818-K65	1-1/8"	Connector Sweat	Female to Female
1009-2222-K65	1-3/8"	Connector Sweat	Female to Female
1009-2626-K65	1-5/8"	Connector Sweat	Female to Female
1009-3434-K65	2-1/8"	Connector Sweat	Female to Female

K65 COPPER UNIONS - REDUCING COUPLINGS

Part Number	Size	Description	Connection Type
1009-0806-K65	1/2" X 3/8"	Connector Sweat	Female to Female
1009-1008-K65	5/8" X 1/2"	Connector Sweat	Female to Female
1009-1210-K65	3/4" X 5/8"	Connector Sweat	Female to Female
1009-1412-K65	7/8" X 3/4"	Connector Sweat	Female to Female
1009-1814-K65	1-1/8" X 7/8"	Connector Sweat	Female to Female
1009-2208-K65	1-3/8" X 1/2"	Connector Sweat	Female to Female
1009-2210-K65	1-3/8" X 5/8"	Connector Sweat	Female to Female
1009-2212-K65	1-3/8" X 3/4"	Connector Sweat	Female to Female
1009-2214-K65	1-3/8" X 7/8"	Connector Sweat	Female to Female
1009-2218-K65	1-3/8" X 1-1/8"	Connector Sweat	Female to Female
1009-2612-K65	1-5/8" X 3/4"	Connector Sweat	Female to Female
1009-2614-K65	1-5/8" X 7/8"	Connector Sweat	Female to Female
1009-2618-K65	1-5/8" X 1-1/8"	Connector Sweat	Female to Female
1009-2622-K65	1-5/8" X 1-3/8"	Connector Sweat	Female to Female
1009-3426-K65	2-1/8" X 1-5/8"	Connector Sweat	Female to Female

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
1004-1412-K65	7/8" OD X 3/4" ID	Reducing Bush	Male X Female
1004-1808-K65	1-1/8" OD X 1/2" ID	Reducing Bush	Male X Female
1004-1810-K65	1-1/8" OD X 5/8" ID	Reducing Bush	Male X Female
1004-1812-K65	1-1/8" OD X 3/4" ID	Reducing Bush	Male X Female
1004-1814-K65	1-1/8" OD X 7/8" ID	Reducing Bush	Male X Female
1004-2218-K65	1-3/8" OD X 1-1/8" ID	Reducing Bush	Male X Female
1004-2614-K65	1-5/8" OD X 7/8" ID	Reducing Bush	Male X Female
1004-2622-K65	1-5/8" OD X 1-3/8" ID	Reducing Bush	Male X Female
1004-3426-K65	2-1/8"OD X 1-5/8" ID	Reducing Bush	Male X Female

Soft Drawn Copper Tube Dehydrated & Sealed



KEMBLA - COPPER TUBE DEHYDRATED & SEALED									
Part Number	Copper Tube Dimensions					Safe Working Pressure (kPa) at Service Temperatures			R410A, R32 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



FREDDOX - COPPER TUBE DEHYDRATED & SEALED									
Part Number	Copper Tube Dimensions					Safe Working Pressure (kPa) at Service Temperatures			R410A, R32 Compatible
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Wall Thickness (SWG)	Coil Length (m)	55 °C	60 °C	65 °C	
CTSD0635-080	1/4	6.35	0.8	21	30	10447	10078	9708	•
CTSD0952-080	3/8	9.52	0.8	21	18	6675	6439	6203	•
CTSD1270-100	1/2	12.7	1	19	18	6185	5967	5748	•
CTSD1588-100	5/8	15.88	1	19	18	4927	4753	4578	•
CTSD1905-114	3/4	19.05	1.14	17	18	4620	4457	4293	•
CTSD2223-140	7/8	22.23	1.4	16	18	4881	4709	4536	•

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



FREDDOX PRE-INSULATED PAIR COIL COPPER TUBE								
Part Number	Copper Tube Dimensions					Insulation Thickness (mm)	R410A, R32 Compatible	R-Value
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Wall Thickness (SWG)	Coil Length (metres)			
PC0635952	1/4 - 3/8	6.35 - 9.52	0.71 - 0.81	22 - 21	20	8 x 8	•	0.41 - 0.37
PC06351270	1/4 - 1/2	6.35 - 12.70	0.71 - 0.81	22 - 21	20	8 x 10	•	0.41 - 0.45
PC06351588	1/4 - 5/8	6.35 - 15.88	0.71 - 1.02	22 - 19	20	8 x 10	•	0.41 - 0.43
PC09521588	3/8 - 5/8	9.52 - 15.88	0.81 - 1.02	21 - 19	20	8 x 10	•	0.37 - 0.43
PC09521905	3/8 - 3/4	9.52 - 19.05	0.81 - 1.14	21 - 18	20	8 x 10	•	0.37 - 0.41

Manufactured to AS/NZS 1571 - Copper-Seamless Tubes for Air Conditioning & Refrigeration



Exclusive to Beijer Ref

For value, convenience and confidence, choose Freddox. Freddox is exclusive to Beijer Ref and exclusively distributed throughout all Beijer Ref businesses, including all Kirby stores across Australia.

Freddox is designed and manufactured to meet the stringent requirements of the HVAC&R industry. Our range includes split system wall mounting brackets, pre-insulated pair coil and fire retardant pair coil.

Freddox fire rated pair coil is;

- Tough and durable insulation
- Meets specifications of Australian fire safety regulations
- Suitable for all refrigerants including R410A and R32
- Tested to ISO5660.1-2002 and AS/NZS 1530.3:1999 for BCA Class 2-9
- Manufactured to AS/NZS 1571 - Copper-Seamless Tubes for Air Conditioning and Refrigeration

Freddox pre-insulated pair coil is;

- 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
- Manufactured to AS/NZS 1571 - Copper-Seamless Tubes for Air Conditioning and Refrigeration

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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



FREDDOX FIRE RETARDANT PAIR COIL								
Part Number	Copper Tube Dimensions				Insulation Thickness (mm)	Coil Length (metres)	R- Values (W/m.K)	R410A, R32 Compatible
	O.D (inches)	O.D (mm)	Wall Thickness (mm)	Wall Thickness (SWG)				
FRPC0635952-13	1/4 - 3/8	6.35 - 9.52	0.81 - 0.81	21 - 21	13	18	0.7	•
FRPC06351270-13	1/4 - 1/2	6.35 - 12.70	0.81 - 0.81	21 - 21	13	18	0.6	•
FRPC06351588-13	1/4 - 5/8	6.35 - 15.88	0.81 - 1.02	21 - 19	13	18	0.6	•
FRPC09521588-13	3/8 - 5/8	9.52 - 15.88	0.81 - 1.02	21 - 19	13	18	0.6	•
FRPC09521905-13	3/8 - 3/4	9.52 - 19.05	0.81 - 1.14	21 - 18	13	18	0.6	•
FRPC0635952-19	1/4 - 3/8	6.35 - 9.52	0.81 - 0.81	21 - 21	19	18	1.1	•
FRPC06351270-19	1/4 - 1/2	6.35 - 12.70	0.81 - 0.81	21 - 21	19	18	1	•
FRPC06351588-19	1/4 - 5/8	6.35 - 15.88	0.81 - 1.02	21 - 19	19	18	1	•
FRPC09521588-19	3/8 - 5/8	9.52 - 15.88	0.81 - 1.02	21 - 19	19	18	1	•
FRPC09521905-19	3/8 - 3/4	9.52 - 19.05	0.81 - 1.14	21 - 18	19	15	0.9	•
FRPC0635952-25	1/4 - 3/8	6.35 12.70	0.81 - 1.02	21 - 19	25	15		•
FRPC06351270-25	1/4 - 1/2	6.35 12.70	0.81 - 1.02	21 - 19	25	15		•
FRPC09521588-25	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 Freddox 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 Kirby branch to discuss your specific project requirements. A/C Manufacturer's operating and installation instructions should be consulted.

Capillary Tubing & Service Packs



CAPILLARY TUBE					
Part Number	Inside Diameter		Outside Diameter		Tube Length (mm)
	(mm)	(inches)	(mm)	(Inches)	
30CAPO.66X1.72A	0.66	0.026	1.72	0.068	3000
30CAPO.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

CAPILLARY TUBING & SERVICE PACKS (CONT'D)

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

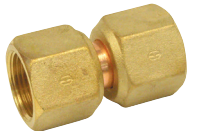


Brass Fittings

FLARE NUTS

BRASS SWIVEL CONNECTORS - FEMALE SAE X FEMALE SAE

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 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, R32 Compatible
501-0404	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	Brass Flare Nut - Short Barrel	Female Flare	•
501-0606	3/8	Brass Flare Nut - Short Barrel	Female Flare	•
501-0808	1/2	Brass Flare Nut - Short Barrel	Female Flare	•
501-1010	5/8	Brass Flare Nut - Short Barrel	Female Flare	•
501-1212	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, R32 Compatible
502-0404	1/4	Brass Flare Nuts Frost Proof	Female Flare	•
502-0505	5/16	Brass Flare Nuts Frost Proof	Female Flare	•
502-0606	3/8	Brass Flare Nuts Frost Proof	Female Flare	•
502-0808	1/2	Brass Flare Nuts Frost Proof	Female Flare	•



FLARE NUTS (CONT'D)

FORGED BRASS FLARE NUTS FROST PROOF - STANDARD & REDUCING LONG BARRELL FEMALE SAE (CONT'D)

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible
502-1008	5/8	Brass Flare Nuts Frost Proof	Female Flare	•
502-1212	3/4	Brass Flare Nuts Frost Proof	Female Flare	•
502-0604	3/8	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	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, R32 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, R32 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, R32 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, R32 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, R32 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, R32 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, R32 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, R32 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, R32 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	•



UNIONS (CONT'D)

BRASS UNIONS - MALE FLARE X MALE BSP



Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 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, R32 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, R32 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, R32 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, R32 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, R32 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, R32 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, R32 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, R32 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, R32 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, R32 Compatible
216-1208	3/4 x 1/2	Brass Union	Male BSP x Female BSP	•

HENRY GROUP

UNIONS (CONT'D)

BRASS SOCKET UNIONS - FEMALE SAE FLARE X FEMALE SAE FLARE



Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 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, R32 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, R32 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, R32 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, R32 Compatible
234-0606	3/8 x 3/8	Brass Union	Female Taper NPT to Solder	•

HENRY GROUP

FORGED ELBOWS

BRASS ELBOWS - MALE FLARE



Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 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, R32 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	•

FORGED ELBOWS (CONT'D)

BRASS ELBOWS - MALE SAE FLARE TO FEMALE SAE FLARE

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 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

HENRY GROUP

COPPER ELBOWS

90° ELBOWS - SHORT RADIUS - FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1024S-0404	1/4	90° Elbows - Short Radius	Female to Female	•	5200	69
1024S-0606	3/8	90° Elbows - Short Radius	Female to Female	•	5200	69
1024S-0808	1/2	90° Elbows - Short Radius	Female to Female	•	5200	69
1024S-1010	5/8	90° Elbows - Short Radius	Female to Female	•	5200	69
1024S-1212	3/4	90° Elbows - Short Radius	Female to Female	•	5200	69
1024S-1414	7/8	90° Elbows - Short Radius	Female to Female	•	5200	69
1024S-1616	1	90° Elbows - Short Radius	Female to Female	•	4200	56
1024S-1818	1-1/8	90° Elbows - Short Radius	Female to Female	•	4200	56
1024S-2020	1-1/4	90° Elbows - Short Radius	Female to Female		3600	48
1024S-2222	1-3/8	90° Elbows - Short Radius	Female to Female		3600	48
1024S-2424	1-1/2	90° Elbows - Short Radius	Female to Female		3600	48
1024S-2626	1-5/8	90° Elbows - Short Radius	Female to Female		3600	48
1024S-3434	2-1/8	90° Elbows - Short Radius	Female to Female		2900	39
1024S-4242	2-5/8	90° Elbows - Short Radius	Female to Female		2900	39
1024S-4848	3	90° Elbows - Short Radius	Female to Female		2200	29
1024S-5050	3-1/8	90° Elbows - Short Radius	Female to Female		2200	29



90° ELBOWS - LONG RADIUS - FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1024-0404	1/4	90° Elbows - Long Radius	Female to Female	•	5200	69
1024-0505	5/16	90° Elbows - Long Radius	Female to Female	•	5200	69
1024-0606	3/8	90° Elbows - Long Radius	Female to Female	•	5200	69
1024-0808	1/2	90° Elbows - Long Radius	Female to Female	•	5200	69
1024-1010	5/8	90° Elbows - Long Radius	Female to Female	•	5200	69
1024-1212	3/4	90° Elbows - Long Radius	Female to Female	•	5200	69
1024-1414	7/8	90° Elbows - Long Radius	Female to Female	•	4200	56
1024-1616	1	90° Elbows - Long Radius	Female to Female	•	4200	56
1024-1818	1-1/8	90° Elbows - Long Radius	Female to Female		3500	47
1024-1818-410A	1-1/8	90° Elbows - Long Radius	Female to Female	•	4200	56
1024-2020	1-1/4"	90° Elbows - Long Radius	Female to Female		3600	48
1024-2020-410A	1-1/4	90° Elbows - Long Radius	Female to Female	•	4200	56
1024-2222	1-3/8	90° Elbows - Long Radius	Female to Female		3200	43
1024-2222-410A	1-3/8	90° Elbows - Long Radius	Female to Female	•	4200	56
1024-2424	1-1/2	90° Elbows - Long Radius	Female to Female		3600	48
1024-2626	1-5/8	90° Elbows - Long Radius	Female to Female		3200	43
1024-2626-410A	1-5/8	90° Elbows - Long Radius	Female to Female	•	4200	56
1024-3232	2	90° Elbows - Long Radius	Female to Female		3200	43
1024-3434	2-1/8	90° Elbows - Long Radius	Female to Female		2400	32
1024-3434-R410A	2-1/8	90° Elbows - Long Radius	Female to Female	•	4200	56
1024-4242	2-5/8	90° Elbows - Long Radius	Female to Female		2500	33
1024-4242-HP	2-5/8	90° Elbows - Long Radius	Female to Female		3200	43



90° ELBOWS - LONG RADIUS - FEMALE TO FEMALE (CONT'D)

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1024-4848	3	90° Elbows - Long Radius	Female to Female		2200	29
1024-5050-HP	3-1/8	90° Elbows - Long Radius	Female to Female		3200	43
1024-6464	4	90° Elbows - Long Radius	Female to Female		2200	29

HP = High Pressure Copper Fittings

90° ELBOWS - LONG RADII - FEMALE TO MALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1022-0404	1/4	Elbow 90°	Female to Male	•	5200	69
1022-0606	3/8	Elbow 90°	Female to Male	•	5200	69
1022-0808	1/2	Elbow 90°	Female to Male	•	5200	69
1022-1010	5/8	Elbow 90°	Female to Male	•	5200	69
1022-1212	3/4	Elbow 90°	Female to Male	•	5200	69
1022-1414	7/8	Elbow 90°	Female to Male	•	5200	69
1022-1616	1	Elbow 90°	Female to Male	•	5200	69
1022-1818	1-1/8	Elbow 90°	Female to Male		3200	43
1022-2020	1-1/4	Elbow 90°	Female to Male		3600	48
1022-2222	1-3/8	Elbow 90°	Female to Male		3200	43
1022-2424	1-1/2	Elbow 90°	Female to Male		3600	48
1022-2626	1-5/8	Elbow 90°	Female to Male		3200	43
1022-3434	2-1/8	Elbow 90°	Female to Male		2900	39
1022-4242	2-5/8	Elbow 90°	Female to Male		3200	43



45° ELBOWS - FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1025-0606	3/8	Elbow 45°	Female to Female	•	5200	69
1025-0808	1/2	Elbow 45°	Female to Female	•	5200	69
1025-1010	5/8	Elbow 45°	Female to Female	•	5200	69
1025-1212	3/4	Elbow 45°	Female to Female	•	5200	69
1025-1414	7/8	Elbow 45°	Female to Female	•	5200	69
1025-1616	1	Elbow 45°	Female to Female	•	5200	69
1025-1818	1-1/8	Elbow 45°	Female to Female		3200	43
1025-1818-410A	1-1/8	Elbow 45°	Female to Female	•	5200	69
1025-2020	1-1/4	Elbow 45°	Female to Female		3600	48
1025-2222	1-3/8	Elbow 45°	Female to Female		3200	43
1025-2222-410A	1-3/8	Elbow 45°	Female to Female	•	4200	56
1025-2424	1-1/2	Elbow 45°	Female to Female		3600	48
1025-2626	1-5/8	Elbow 45°	Female to Female		3200	43
1025-2626-410A	1-5/8	Elbow 45°	Female to Female	•	4200	56
1025-3434	2-1/8	Elbow 45°	Female to Female		2900	39
1025-4242	2-5/8	Elbow 45°	Female to Female		2900	39



RETURN BENDS

HENRY GROUP



RETURN BENDS - FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type
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, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1049-040404	1/4	Tee Equal Sweat	Female	•	5200	69
1049-060606	3/8	Tee Equal Sweat	Female	•	5200	69
1049-080808	1/2	Tee Equal Sweat	Female	•	5200	69
1049-101010	5/8	Tee Equal Sweat	Female	•	5200	69
1049-121212	3/4	Tee Equal Sweat	Female	•	5200	69
1049-141414	7/8	Tee Equal Sweat	Female	•	5200	69
1049-161616	1	Tee Equal Sweat	Female	•	5200	69
1049-181818	1-1/8	Tee Equal Sweat	Female	•	4200	56
1049-202020	1-1/4	Tee Equal Sweat	Female		3600	48
1049-222222	1-3/8	Tee Equal Sweat	Female		4200	56
1049-242424	1-1/2	Tee Equal Sweat	Female		3600	48
1049-262626	1-5/8	Tee Equal Sweat	Female		3600	48
1049-343434	2-1/8	Tee Equal Sweat	Female		2900	39
1049-424242	2-5/8	Tee Equal Sweat	Female		2900	39
1049-484848	3	Tee Equal Sweat	Female		2500	33

TEES - FEMALE - REDUCER

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1049-050504	5/16" X 5/16" X 1/4"	Tee Reducer	Female	•	5200	69
1049-060604	3/8" X 3/8" X 1/4"	Tee Reducer	Female	•	5200	69
1049-080804	1/2" X 1/2" X 1/4"	Tee Reducer	Female	•	5200	69
1049-080806	1/2" X 1/2" X 3/8"	Tee Reducer	Female	•	5200	69
1049-080810	1/2" X 1/2" X 5/8"	Tee Reducer	Female	•	5200	69
1049-101006	5/8" X 5/8" X 3/8"	Tee Reducer	Female	•	5200	69
1049-101008	5/8" X 5/8" X 1/2"	Tee Reducer	Female	•	5200	69
1049-121206	3/4" X 3/4" X 3/8"	Tee Reducer	Female	•	5200	69
1049-121208	3/4" X 3/4" X 1/2"	Tee Reducer	Female	•	5200	69
1049-121210	3/4" X 3/4" X 5/8"	Tee Reducer	Female	•	5200	69
1049-161612	1" X 1" X 3/4"	Tee Reducer	Female	•	5200	69

COPPER COUPLINGS

UNIONS - FEMALE TO FEMALE - EQUAL R410A RATED

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1009-0303	3/16	Copper Coupling	Female to Female	•	5200	69
1009-0404	1/4	Copper Coupling	Female to Female	•	5200	69
1009-0606	3/8	Copper Coupling	Female to Female	•	5200	69
1009-0808	1/2	Copper Coupling	Female to Female	•	5200	69
1009-1010	5/8	Copper Coupling	Female to Female	•	5200	69
1009-1212	3/4	Copper Coupling	Female to Female	•	5200	69
1009-1414	7/8	Copper Coupling	Female to Female	•	5200	69
1009-1616	1	Copper Coupling	Female to Female	•	5200	69
1009-1818	1- 1/8	Copper Coupling	Female to Female		4200	56
1009-1818-410A	1- 1/8	Copper Coupling	Female to Female	•	5200	69
1009-2020	1- 1/4	Copper Coupling	Female to Female		3600	48
1009-2222	1- 3/8	Copper Coupling	Female to Female		3600	48
1009-2222-410A	1- 3/8	Copper Coupling	Female to Female	•	5200	69
1009-2626	1- 5/8	Copper Coupling	Female to Female		3600	48
1009-2626-410A	1- 5/8	Copper Coupling	Female to Female	•	5200	69
1009-3232	2	Copper Coupling	Female to Female		3200	43
1009-3434	2-1/8	Copper Coupling	Female to Female		2900	39
1009-4242	2-5/8	Copper Coupling	Female to Female		2900	39
1009-4848	3	Copper Coupling	Female to Female		2200	29



REDUCER - FEMALE TO FEMALE - ID TO ID

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
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	•		
1009-1614	1" X 7/8"	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			



HENRY GROUP



REDUCER - FEMALE TO FEMALE - ID TO ID (CONT'D)					ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1009-2210	1-3/8 x 5/8	Reducer Sweat	Female to Female		3600	48
1009-2212	1-3/8 x 3/4	Reducer Sweat	Female to Female		3600	48
1009-2214	1-3/8 x 7/8	Reducer Sweat	Female to Female		3200	43
1009-2218	1-3/8 x 1-1/8	Reducer Sweat	Female to Female		3200	43
1009-2218-410A	1-3/8 x 1-1/8	Reducer Sweat	Female to Female	•	5200	69
1009-2614	1-5/8 x 7/8	Reducer Sweat	Female to Female		3600	48
1009-2618	1-5/8 x 1-1/8	Reducer Sweat	Female to Female		3600	48
1009-2622	1-5/8 x 1-3/8	Reducer Sweat	Female to Female		3600	48
1009-3418	2-1/8 x 1-1/8	Reducer Sweat	Female to Female		2500	33
1009-3422	2-1/8 x 1 3/8	Reducer Sweat	Female to Female		2900	39
1009-3426	2-1/8 x 1 5/8	Reducer Sweat	Female to Female		2900	39
1009-4222	2-5/8 x 1 3/8	Reducer Sweat	Female to Female		2500	33
1009-4226	2-5/8 x 1 5/8	Reducer Sweat	Female to Female		2900	39
1009-4234	2-5/8 x 2-1/8	Reducer Sweat	Female to Female		2500	33
1009-4832	3 x 2	Reducer Sweat	Female to Female		2500	33
1009-4834	3 x 2-1/8	Reducer Sweat	Female to Female		2500	33
1009-4842	3 x 2-5/8	Reducer Sweat	Female to Female		2500	33

• 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, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1004-0604	3/8 OD x 1/4 ID	Reducing Bush	Male to Female	•	5200	69
1004-0804	1/2 OD x 1/4 ID	Reducing Bush	Male to Female	•	5200	69
1004-0806	1/2 OD x 3/8 ID	Reducing Bush	Male to Female	•	5200	69
1004-1006	5/8 OD x 3/8 ID	Reducing Bush	Male to Female	•	5200	69
1004-1008	5/8 OD x 1/2 ID	Reducing Bush	Male to Female	•	5200	69
1004-1208	3/4 OD x 1/2 ID	Reducing Bush	Male to Female	•	5200	69
1004-1210	3/4 OD x 5/8 ID	Reducing Bush	Male to Female	•	5200	69
1004-1408	7/8 OD x 1/2 ID	Reducing Bush	Male to Female	•	5200	69
1004-1410	7/8 OD x 5/8 ID	Reducing Bush	Male to Female	•	5200	69
1004-1612	1 OD x 3/4 ID	Reducing Bush	Male to Female	•	5200	69
1004-1412	7/8 OD x 3/4 ID	Reducing Bush	Male to Female	•	5200	69
1004-1418	7/8 OD x 1-1/8 ID	Reducing Bush	Male to Female	•	5200	69
1004-1808	1-1/8 OD x 1/2 ID	Reducing Bush	Male to Female	•	5200	69
1004-1810	1-1/8 OD x 5/8 ID	Reducing Bush	Male to Female	•	5200	69
1004-1812	1-1/8 OD x 3/4 ID	Reducing Bush	Male to Female		5200	69
1004-1814	1-1/8 OD x 7/8 ID	Reducing Bush	Male to Female		4200	56
1004-1814-410A	1 1/8 OD x 7/8 ID	Reducing Bush	Male to Female	•	5200	69
1004-2210	1-3/8 OD x 5/8 ID	Reducing Bush	Male to Female		3600	48
1004-2214	1-3/8 OD x 7/8 ID	Reducing Bush	Male to Female		3600	48
1004-2214-410A	1-3/8 OD x 7/8 ID	Reducing Bush	Male to Female	•	5200	69
1004-2218	1-3/8 OD x 1-1/8 ID	Reducing Bush	Male to Female		3600	48

BUSHES - MALE TO FEMALE					ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1004-2218-410A	1-3/8 OD x 1-1/8 ID	Reducing Bush	Male to Female	•	5200	69
1004-2614	1-5/8 OD x 7/8 ID	Reducing Bush	Male to Female		3600	48
1004-2618	1-5/8 OD x 1-1/8 ID	Reducing Bush	Male to Female		3600	48
1004-2620	1-5/8 OD x 1-1/4 ID	Reducing Bush	Male to Female		3600	48
1004-2622	1-5/8 OD x 1-3/8 ID	Reducing Bush	Male to Female		3600	48
1004-3418	2-1/8 OD x 1-1/8 ID	Reducing Bush	Male to Female		2900	39
1004-3422	2-1/8 OD x 1-3/8 ID	Reducing Bush	Male to Female		2900	39
1004-3426	2-1/8 OD x 1-5/8 ID	Reducing Bush	Male to Female		2500	33
1004-4032	2-1/2 OD x 2 ID	Reducing Bush	Male to Female		2700	36
1004-4226	2-5/8 OD x 1-5/8 ID	Reducing Bush	Male to Female		2900	39
1004-4234	2-5/8 OD x 2-1/8 ID	Reducing Bush	Male to Female		2500	33
1004-5042	3-1/8 x 2-5/8 ID	Reducing Bush	Male to Female		2200	29

COPPER STOPS ENDS & WASHERS

COPPER CAPS - FEMALE					ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1120-06	3/8	Copper Caps	Female		5200	69
1120-08	1/2	Copper Caps	Female		5200	69
1120-10	5/8	Copper Caps	Female		5200	69
1120-12	3/4	Copper Caps	Female		5200	69
1120-14	7/8	Copper Caps	Female		5200	69
1120-16	1	Copper Caps	Female		5200	69
1120-18	1-1/8	Copper Caps	Female		5200	69
1120-22	1-3/8	Copper Caps	Female		5200	69
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	•		



Y-PIECE 3 WAY CONNECTORS - FEMALE TO FEMALE

Part Number	Connection Size (inches)	Description	Connection Type	R410A, R32 Compatible	ANSI B16.22 Design Pressure (kPa)	ANSI B16.22 Design Pressure (kPa)
1130-080606	1/2 x 3/8 x 3/8	Y-Piece 3 Way Connectors	Female to Female	•	5200	69
1130-080808	1/2 x 1/2 x 1/2	Y-Piece 3 Way Connectors	Female to Female	•	5200	69
1130-100808	5/8 x 1/2 x 1/2	Y-Piece 3 Way Connectors	Female to Female	•	5200	69
1130-101010	5/8 x 5/8 x 5/8	Y-Piece 3 Way Connectors	Female to Female	•	5200	69
1130-121010	3/4 x 5/8 x 5/8	Y-Piece 3 Way Connectors	Female to Female	•	5200	69
1130-141010	7/8 x 5/8 x 5/8	Y-Piece 3 Way Connectors	Female to Female	•	5200	69
1130-141414	7/8 x 7/8 x 7/8	Y-Piece 3 Way Connectors	Female to Female	•	5200	69
1130-161212	1-3/4 x 3/4	Y-Piece 3 Way Connectors	Female to Female	•	5200	69
1130-181414	1-1/8 x 7/8 x 7/8	Y-Piece 3 Way Connectors	Female to Female			



HENRY GROUP

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



Pressfit Fittings / Tools

COPPER ELBOWS

90° ELBOWS - FEMALE TO FEMALE

Part Number	Connection Size	Description	Connection Type
3031040400111	1/4"	Elbow	Female to Female
3031050500111	5/16"	Elbow	Female to Female
3031060600111	3/8"	Elbow	Female to Female
3031080800111	1/2"	Elbow	Female to Female
3031101000111	5/8"	Elbow	Female to Female
3031121200111	3/4"	Elbow	Female to Female
3031141400111	7/8"	Elbow	Female to Female
3031161600111	1"	Elbow	Female to Female
3031181800111	1 1/8"	Elbow	Female to Female
3031202000111	1 1/4"	Elbow	Female to Female
3031222200111	1 3/8"	Elbow	Female to Female
3031262600111	1 5/8"	Elbow	Female to Female
3031343400111	2 1/8"	Elbow	Female to Female



45° ELBOWS - FEMALE TO FEMALE

Part Number	Connection Size	Description	Connection Type
3081060600111	3/8"	Elbow	Female to Female
3081080800111	1/2"	Elbow	Female to Female
3081101000111	5/8"	Elbow	Female to Female
3081121200111	3/4"	Elbow	Female to Female
3081141400111	7/8"	Elbow	Female to Female
3081181800111	1 1/8"	Elbow	Female to Female
3081222200111	1 3/8"	Elbow	Female to Female
3081262600111	1 5/8"	Elbow	Female to Female
3081343400111	2 1/8"	Elbow	Female to Female



TEES - FEMALE - EQUAL

Part Number	Connection Size	Description	Connection Type
3091060606111	3/8"	Tee	Female
3091080808111	1/2"	Tee	Female
3091101010111	5/8"	Tee	Female
3091121212111	3/4"	Tee	Female
3091141414111	7/8"	Tee	Female
3091161616111	1"	Tee	Female
3091181818111	1 1/8"	Tee	Female
3091202020111	1 1/4"	Tee	Female
3091222222111	1 3/8"	Tee	Female
3091262626111	1 5/8"	Tee	Female
3091343434111	2 1/8"	Tee	Female





UNIONS - FEMALE TO FEMALE - EQUAL			
Part Number	Connection Size	Description	Connection Type
3011040400111	1/4"	Coupling	Female to Female
3011050500111	5/16"	Coupling	Female to Female
3011060600111	3/8"	Coupling	Female to Female
3011080800111	1/2"	Coupling	Female to Female
3011101000111	5/8"	Coupling	Female to Female
3011121200111	3/4"	Coupling	Female to Female
3011141400111	7/8"	Coupling	Female to Female
3011161600111	1"	Coupling	Female to Female
3011181800111	1 1/8"	Coupling	Female to Female
3011202000111	1 1/4"	Coupling	Female to Female
3011222200111	1 3/8"	Coupling	Female to Female
3011262600111	1 5/8"	Coupling	Female to Female
3011343400111	2 1/8"	Coupling	Female to Female



REDUCER - FEMALE TO FEMALE - ID TO ID			
Part Number	Connection Size	Description	Connection Type
3051060400111	3/8 to 1/4"	Reducer	Female to Female
3051080400111	1/2 to 1/4"	Reducer	Female to Female
3051080600111	1/2 to 3/8"	Reducer	Female to Female
3051100400111	5/8 to 1/4"	Reducer	Female to Female
3051100600111	5/8 to 3/8"	Reducer	Female to Female
3051100800111	5/8 to 1/2"	Reducer	Female to Female
3051120800111	3/4 to 1/2"	Reducer	Female to Female
3051121000111	3/4 to 5/8"	Reducer	Female to Female
3051140800111	7/8 to 1/2"	Reducer	Female to Female
3051141000111	7/8 to 5/8"	Reducer	Female to Female
3051141200111	7/8 to 3/4"	Reducer	Female to Female
3051161400111	1 to 7/8"	Reducer	Female to Female
3051180800111	1 1/8 to 1/2"	Reducer	Female to Female
3051181000111	1 1/8 to 5/8"	Reducer	Female to Female
3051181200111	1 1/8 to 3/4"	Reducer	Female to Female
3051181400111	1 1/8 to 7/8"	Reducer	Female to Female
3051221400111	1-3/8 to 7/8"	Reducer	Female to Female
3051221800111	1-3/8 to 1-1/8"	Reducer	Female to Female
3051261800111	1 5/8 to 1 1/8"	Reducer	Female to Female
3051262200111	1 5/8 to 1 3/8"	Reducer	Female to Female
3051342200111	2 1/8 to 1 3/8"	Reducer	Female to Female
3051342600111	2 1/8 to 1 5/8"	Reducer	Female to Female

CAP - FEMALE

Part Number	Connection Size	Description	Connection Type
3071040000111	1/4"	Cap	Female
3071050000111	5/16"	Cap	Female
3071060000111	3/8"	Cap	Female
3071080000111	1/2"	Cap	Female
3071100000111	5/8"	Cap	Female
3071120000111	3/4"	Cap	Female
3071140000111	7/8"	Cap	Female
3071160000111	1"	Cap	Female
3071180000111	1 1/8"	Cap	Female
3071200000111	1 1/4"	Cap	Female
3071220000111	1 3/8"	Cap	Female



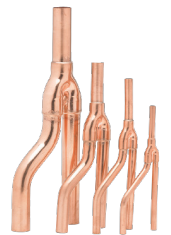
SAE - FLARES

Part Number	Connection Size	Description	Connection Type
3291040000111	1/4"	SAE Flare	Female to Female
3291060000111	3/8"	SAE Flare	Female to Female
3291080000111	1/2"	SAE Flare	Female to Female
3291100000111	5/8"	SAE Flare	Female to Female
3291120000111	3/4"	SAE Flare	Female to Female



REFNETS - Y - JOINTS

Part Number	Connection Size	Description	Connection Type
3771060606111	3/8"	Y-Joints	Female
3771080808111	1/2"	Y-Joints	Female
3771101010111	5/8"	Y-Joints	Female
3771121212111	3/4"	Y-Joints	Female
3771141414111	7/8"	Y-Joints	Female
3771181818111	1 1/8"	Y-Joints	Female
3771222222111	1 3/8"	Y-Joints	Female



*All fittings are suitable to use with the Klauke Pressfitting tool Part No. 399011190501





Towards a more sustainable future through digital technology.

When we were asked what the ultimate benefit of GreenIntelligence was, we initially thought of our powerful EC technology combined with intelligent control, integrated sensors and monitoring functions, which enable efficient, needs-based operation and a high level of system performance. But in reality it means much more. GreenIntelligence is the interconnection of fans and intelligent controls making applications more powerful, processes more efficient, making you more successful, and pioneering a sustainable future together – **engineering a better life.**

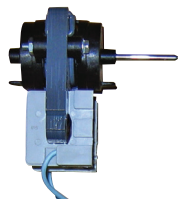
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the engineer's choice

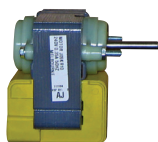


Motors

Open Frame Motors



ROTATION - CLOCKWISE				
Part Number	Watts	Amps	Body Size(stack)	Description
J03RF03	1.5	0.14	3/8	JRM MOTOR F/FREE 3/8"STK. CW.
J04RF02	4.4	0.3	1/2	JRM MOTOR 1/2" STACK CW
J06RF04		0.2	3/4	JRM MOTOR 3/4 STACK 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
J05OR02SJ	6.5	0.23	5/8	Motor Suit Orford
J06BM15	4	0.34	3/4	Motor JRM Reversible
J06BM19	6	0.3	3/4	Motor JRM Reversible
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

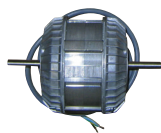
Part Number	Watts	Rotation	Description
KJA2C4704	7	ACW	Kulthorn Fan Motor Hub-Drive
KJA2M4701	10	ACW	Kulthorn Fan Motor Hub-Drive (Also used for Zip)
KJB2M4702	13	ACW	Kulthorn Fan Motor Hub-Drive
KJA2R4701	20	ACW	Kulthorn Fan Motor Hub-Drive
KJB2S4701	28	ACW	Kulthorn Fan Motor Hub-Drive



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
KJE2F4003	40	ACW	Kulthorn Fan Motor Hub-Drive Req 3MFD CAP (Capacitor Part No.R3440)

Fasco 50D Series



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

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

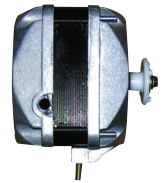


Part Number	Watts	Rotation	Description
5-D564	9	ACW	Fasco Bearing Motor - Threaded Shaft
LT0009	9	ACW	Tesonic Bearing Motor - Threaded Shaft

EBM Motors

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 supermarket cabinets
M4Q045CA0375B01	10	ACW	Hub Drive Square - Motor Max. Fan Dia:254mm / 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°

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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-CT1	3.3	CW	EC Compact Axial Fan 119MM SQ X 38mm fitted with lead
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

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

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EBM PAPST - PROGRAMMABLE ESM MOTOR & FAN ASSEMBLY

Part Number	Watts	Rotation	Description
W1G200EC9110CT0	31	V (Induced)	EC Axial Fan 200MM x 78.5mm Programmable truncated Mount
W1G200EC9145CT0	31	V (Induced)	EC Axial Fan 200MM x 78.5mm Programmable Ring mount
W1G230EB9122CT2	32	V (Induced)	EC Axial Fan 230MM x 78.5mm 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

SINGLE SHAFT - VENTED

Part Number	Watts	Description
808557NVB-B11	450	2 Speed, 240 V, Lug Mount (Emailair)
808555NVA-A13	315	3 Speed, 240V
8061S109-03	315	3 Speed, 240 V, Resilient Mount
808555NVA-A13	315	3 Speed, 240 V
8061S128-06	750	3 Speed, 240 V

FASCO


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
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
9434QVB-B12	850	3 Speed, 415 V, Resilient Cradle
809455SVA-B12	1100	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
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
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 AXIAL PART NUMBER

ZIEHL-ABEGG


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	Axial (F=fixed pitch, V=variable pitch)			8	Mounting pattern (A = bare fan, K = basket grille, Q = wall plate)						
2	Fan type (B = sheet metal, C = die cast, E = die cast sickle L = sheet sickle, N = FE20wlet)			9	Motor frame size						
3	4	5	Fan size (cm)			10	Motor stack length				
0	5	0	number of poles (1 phase; 2, 4, 6, 8. 3 phase; V = 4, S = 6, A = 8, N = 12)			11	Air flow direction (A = forced draft, V = induced draft)				
			motor type (D = 3 phase, E = I phase, H = FREvent, I = ETAvent EC)			12	Number of blades				

MOTOR/FAN BASKET GRILLE ASSEMBLY

ZIEHL-ABEGG


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)
FN0304EKWAV7CTN	300	230/1	4		
FN0354EKOFV7CTN	350	230/1	4		
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

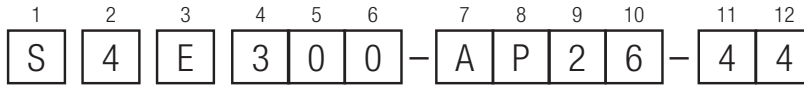
FB045-4EA.4FA4P	450	240/1	4	1325	4300
FN050-VDA.4IV7	500	400/3	4	1480	10500

EBM Papst Axial Motor/Fan Assemblies

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EBM-PAPST AXIAL PART NO.



- 1 Axial fan - 'A' bare fan & motor, 'S' with wire grille flat or basket, 'W' with square or round wall plate
- 2 Number of poles (speed) 2,4,6, or 8 (in the case of D.C. or 7,3 core E.C. products it is not representative of speed)
- 3 Power supply (S = shaded pole, D = 3 phase, G = E.C. 1+3 phase, Q = square shaded pole)
- 4 5 6 Fan size (mm)
- 7 8 9 10 11 12 Fan and motor configuration

MOTOR/FAN BASKET GRILLE ASSEMBLY - INDUCED AIR

Part Number	Fan Diameter (mm)	Voltage	No. of Poles	Fan Speed	Air Volume (m3/Hr)
S4E300AS72CT001	300	230/1	4	1330	1800
S4E300AR26CT002	300	240/1	4	1380	1935
S4E300-FJ08-05 *	300	240/1	4	1390	1350
S3G300AK1358CTN	300	240	EC	1425	2075
S4E350AN02CT060	350	230/1	4	1340	3305
S3G350AK6214CTN	350	200-240	EC	1675	3925
S4E400-AP02-44	400	230/1	4	1430	3990
S4E450AU0337CTO	450	230/1	4	1300	5770
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
W3G800KU2105	800	380-480	EC	1080	29510
W3G910-GS39-75	910	380-480	EC	885	22220

* Double cage assembly for head cooling application
** Sealed Electrical for Outdoor Use

MOTOR/FAN BASKET GRILLE ASSEMBLY - FORCED AIR

Part Number	Fan Diameter (mm)	Voltage	No. of Poles	Fan Speed	Air Volume (m3/Hr)
S4E300AS72A2CTO	300	240/1	4	1320	1800

MOTOR/FAN BASKET GRILLE ASSEMBLY - INDUCED AIR

Part Number	Fan Diameter (mm)	Voltage	No. of Poles	Fan Speed	Air Volume (m3/Hr)
S1G300F00111CTO	300	240/1	EC	1250	1550
S3G350AP0160CTO	350	240/1	EC	1475	3925
S4E450BU0335CTO	450	240/1	4	1300	5770
S6E560AN0101	560	240/1	6	920	8105
S6E710AR0301	710	240/1	6	900	11700

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
A4E300AS7202CTO	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)
A4E300AS7202CTO	300	240/1	4	1320	1800
A6E500AJ0305CTO	500	240/1	6	915	6100

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	1510	21190
W3E800-GU05-75	800	380-480	EC	1090	28415
W3G800KS3903	800	380-480	EC	940	25740
W3G800-GV01-01	800	380-480	EC	1090	27500
W3G800-GV05-75	800	380-480	EC	1090	28415
W6D800-GJ01-01	800	400 *	6	1080	29510
W6D800KG1301	800	400 *	EC	650 / 870	19070 / 23030
W8D800KG0101	800	400 *	8	870	23030

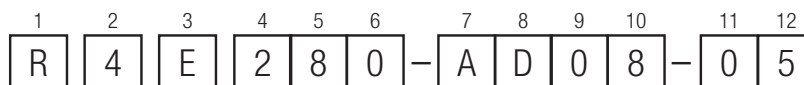
* Denotes DELTA connection for high speed

HENRY MOTOR/FAN BASKET GRILLE ASSEMBLY - INDUCED AIR

Part Number	Fan Diameter (mm)	Voltage	No. of Poles	Fan Speed	Air Volume (m3/Hr)
FAN-300MM-HENRY	300	240/1	4	1320	1800
FAN-350MM-HENRY	350	240/1	4	1340	3305

EBM PAPST AXIAL MOTOR/FAN ASSEMBLIES (CONT'D)

EBM-PAPST RADIAL/CENTRIFUGAL PART NUMBER



- 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)
K1G200AA7302	200	230	EC	1500	2000
K3G450-RPA-2809	450	380-480	EC	1735	6100
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
R3G175RB0111	175	230	EC	2710	540
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

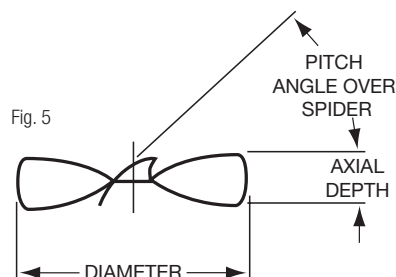
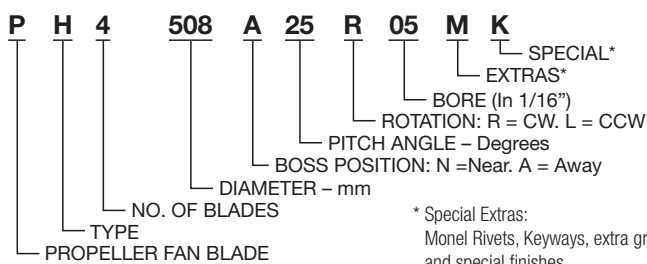
Fan Blades

HOW TO ORDER PROPELLER FAN BLADES

- When ordering, specify complete part number.
- 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.:



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 (CONT'D)
FAN BLADES PLASTIC


Part Number	Diameter (mm)	Rotation	Bore Size
5-R5-56-5AC187	150	ACW	3/16"
FBP1782NY	178	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"
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"

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
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"
PU5-254N30R05AA	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"
PS3-305N20R05AA	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"
PM3-356A20L05AA	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"



DON'T COMPROMISE
**BLOWER WHEEL**

Part Number	Description
8X8WHEEL	Blower Wheel 203X203 1/2" bore

Fan Blowers



FAN NOMENCLATURE

FB - **9 X 7** **T** - **315**

FAN TYPE

FB = Fan Blower
FD = Fan Deck

WHEEL SIZE

9 = 9" Diameter
7 = 7" Width

HOUSING TYPE

T = Tight
Blank = Standard

MOTOR OUTPUT

315 = 315 Watts

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
FB9X9-600W	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

Fan Decks

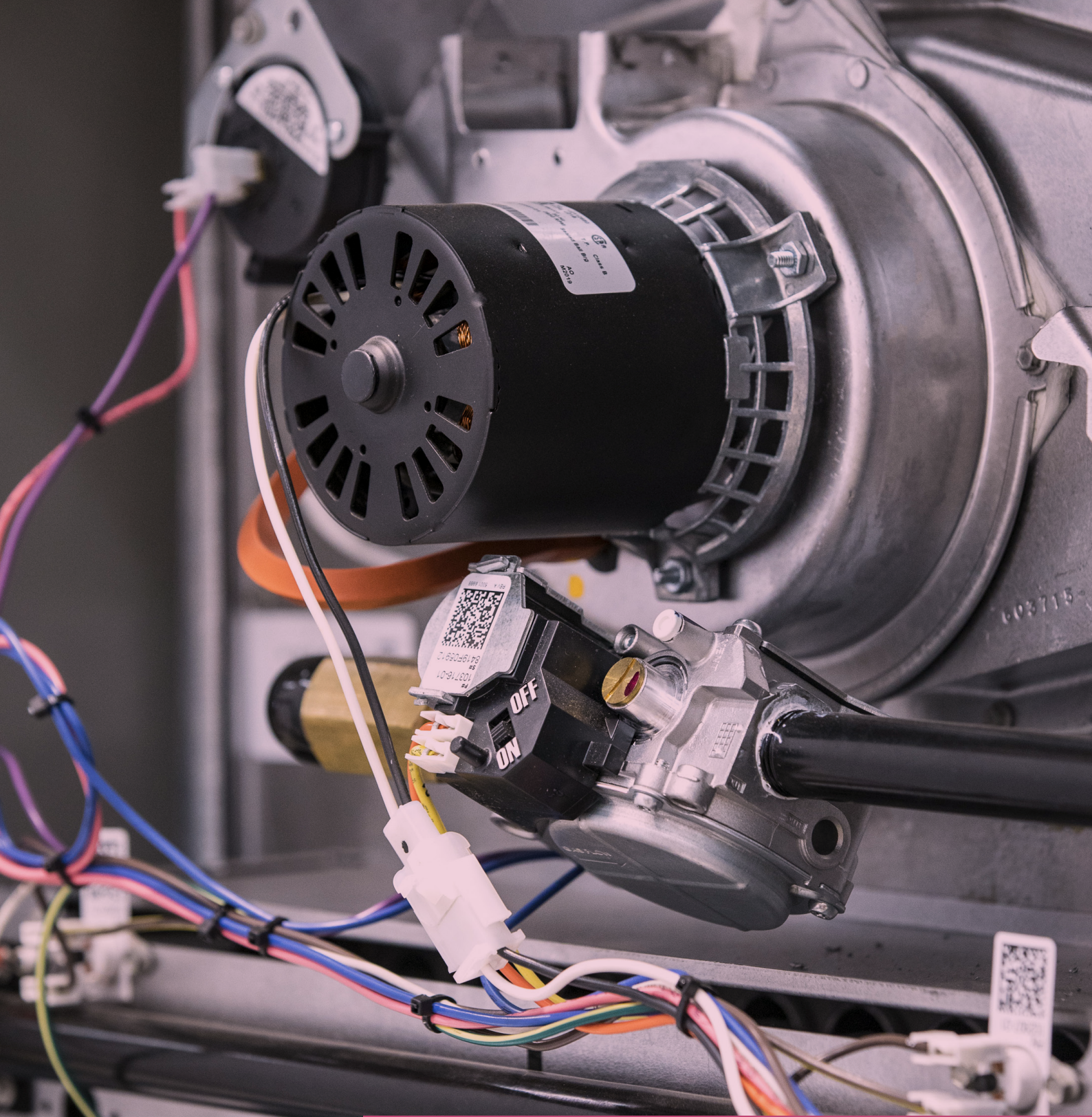
DOUBLE BARREL ASSY - 240VLT

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



Electrical

Contactors, Overloads & Auxilliaries

Schneider
Electric



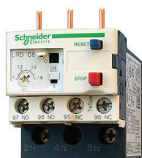
SCHNEIDER					
Part Number	Description	kW	Amps	Control Circuit	Auxillary Contacts
LC1D09U7	Contactator	4	9	240 V AC	1 NO + 1 NC
LC1D12U7	Contactator	5.5	12	240 V AC	1 NO + 1 NC
LC1D18U7	Contactator	9	18	240 V AC	1 NO + 1 NC
LC1D25U7	Contactator	11	25	240V AC	1 NO + 1 NC
LC1D32U7	Contactator	15	32	240 V AC	1 NO + 1 NC
LC1D38U7	Contactator	18.5	38	240 V AC	1 NO + 1 NC
LC1D40AU7	Contactator	22	40	240 V AC	1 NO + 1 NC
LC1D50AU7	Contactator	22	50	240 V AC	1 NO + 1 NC
LC1D65AU7	Contactator	37	65	240 V AC	1 NO + 1 NC
LC1D80U7	Contactator	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



sprecher+schuh



SPRECHER & SCHUH

Part Number	Description	kW	Amps	Control Circuit	Auxiliary Contacts
CA7-9-10-240	Contactator	4	9	240 V AC	1 NO + 0 NC
CA7-12-10-240	Contactator	5.5	12	240 V AC	1 NO + 0 NC
CA7-16-10-240	Contactator	7.5	16	240 V AC	1 NO + 0 NC
CA7-23-10-240	Contactator	11	23	240 V AC	1 NO + 0 NC
CA7-30-00-240	Contactator	15	30	240 V AC	1 NO + 0 NC
CA7-37-00-240	Contactator	18.5	37	240 V AC	1 NO + 0 NC
CA7-43-00-240	Contactator	22	43	240 V AC	1 NO + 0 NC
CA7-60-00-240	Contactator	32	60	240 V AC	1 NO + 0 NC
CA7-85-00-240	Contactator	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
RO62	Relay/Overload	1/6–1/5
RO82	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
RO42	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
S201C20	Circuit Breaker C-Curve 6 KA	20
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
UKF4220	Isolation Switch 20A double 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
RT5.5-6	Ring Terminal 6MM Stud Kit Yellow	25
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 (CONT'D)
TERMINALS & CONNECTORS (CONT'D)

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
CLI439	Clipsal 3 Pin Plug 10 A
KUS4	Cable End Stripper
OXLENCPO5BL00BF	Cable Flat Olex BLU 3C+E 1.5MM
CDT500-20-4	20mm PVC Conduit
245/20-GY	90 Deg 20mm PVC Elbow



Locations, Terms and Conditions

Locations

Head Office

Beijer Ref Support Centre
2 Kirby Place, Bankstown Aerodrome NSW 2200
Locked Bag 63, Wetherill Park NSW 1851
P: 02 9774 7155 E: info@kirbyhvacr.com.au

NSW METROPOLITAN

Artarmon 02 9906 7674
2/22 Waltham Street, Artarmon NSW 2064

Bankstown Flagship Store 02 9774 7380
2 Kirby Place, Bankstown Aerodrome NSW 2200

Brookvale 02 9939 5153
8A/42-46 Wattle Road, Brookvale NSW 2100

Caringbah 02 9567 7011
33 Cawarra Road, Caringbah NSW 2229

Castle Hill 02 8850 3055
1/8 Gladstone Road, Castle Hill NSW 2154

Narellan 02 4648 1533
3/14-16 Exchange Parade, Narellan NSW 2567

Padstow 02 9709 4822
36 Gibson Avenue, Padstow NSW 2211

Penrith 02 4722 3780
5/12 Robertson Place, Jamisontown NSW 2750

Pemulwuy 02 9896 2700
26/2-4 Picrite Close, Pemulwuy NSW 2145

Silverwater 02 8737 7400
1/106-110 Beaconsfield St, Silverwater NSW 2128

Waterloo 02 9667 4711
6/207-229 Young Street, Waterloo NSW 2017

NSW REGIONAL

Albury 02 6040 0143
2/23A Catherine Crescent, Lavington NSW 2641

Canberra 02 6239 1570
6/19 Tennant Street, Fyshwick ACT 2609

Coffs Harbour 02 6651 3390
5/84-90 Industrial Drive, North Boambee, NSW 2450

Dubbo 02 6837 1150
2/5 Douglas Mawson Road, Dubbo NSW 2830

Lismore 02 6622 2272
2/36-38 Wyrallah Road, Lismore NSW 2480

Newcastle 02 4956 2722
14 Kings Road, New Lambton NSW 2305

Orange 02 6362 8849
2-3/243 McLachlan Street, Orange NSW 2800

Port Macquarie 02 6581 4040
1/50 Jindalee Road, Port Macquarie NSW 2444

Tamworth 02 6765 2566
1 Avro Street, Tamworth NSW 2340

Tuggerah 02 4353 3218
4/22 Reliance Drive, Tuggerah NSW 2259

Wagga Wagga 02 6921 1259
3/91 Copland St, East Wagga Wagga NSW 2650

Wollongong 02 4229 1313
4/103-107 Auburn Street, Wollongong NSW 2500

QLD METRO, GOLD COAST & SUNSHINE COAST

Bowen Hills 07 3256 2120
2/276 Abbotsford Road, Bowen Hills QLD 4006

Brendale 07 3881 0070
118/193 South Pine Road, Brendale QLD 4500

Burleigh Heads 07 5593 6027
1/22 Hutchinson Street, Burleigh Heads QLD 4220

Gold Coast 07 5591 8188
1/2 Olympic Circuit, Southport Qld 4215

Maroochydore 07 5479 4599
10A Kelly Court, Maroochydore QLD 4558

Moorooka 07 3848 0641
11/115 Muriel Avenue, Moorooka QLD 4105

Morningside 07 3902 9400
373 Thynne Road, Morningside QLD 4170

North Lakes 07 3480 5367
2-3/4 Wills Street, North Lakes QLD 4509

Underwood 07 3808 0300
3/74 Perrin Drive, Underwood QLD 4119

QLD REGIONAL

Bundaberg 07 4335 6680
4 Mary Street, Bundaberg QLD 4670

Cairns 07 4035 4300
88-90 Buchan Street, Cairns QLD 4870

Emerald 07 4910 7710
2/13 Cottonview Road, Emerald QLD 4720

Mackay 07 4957 7772
2/Lawson Street, Mackay QLD 4740

Rockhampton 07 4922 9066
147 Kent Street, Rockhampton QLD 4700

Toowoomba 07 4639 7900
3/2 Prescott Street, Toowoomba QLD 4350

Townsville 07 4775 1800
7/25 Keane Street, Currajong QLD 4812

NT

Alice Springs (A) 08 8953 4277
1/8 Fogarty Street, Alice Springs NT 0870

Darwin 08 8984 3840
19 Albatross Street, Winnellie NT 0820

TAS

Hobart 03 6272 0055
2 Linear Court, Derwent Park TAS 7009

Launceston 03 6334 6969
2/225 Wellington Street, Launceston TAS 7250

VIC METROPOLITAN

Bayswater 03 9720 1906
21/49 Corporate Boulevard, Bayswater VIC 3153

Dandenong 03 9799 5900
2/355-365 South Gippsland Highway,
Dandenong South VIC 3175

Keilor Park 03 9336 1205
7/1-9 Thomsons Road, Keilor Park VIC 3042

Moorabbin 03 9532 2284
24 Kilpa Road, Moorabbin VIC 3189

Preston 03 9480 0321
18 Ovando Street, Preston VIC 3072

Sunshine West 03 8353 2140
573 Somerville Road, Sunshine West, VIC 3020

West Melbourne 03 9328 3044
60-80 Adderley Street, West Melbourne VIC 3003

VIC REGIONAL

Geelong West 03 5248 4533
2&3, 38 Autumn Street, Geelong West VIC 3218

Mildura (A) 03 5021 1855
337 Ettiwanda Avenue, Mildura VIC 3500

Shepparton (A) 03 5821 3669
15 Campbell Street, Shepparton VIC 3630

Traralgon 03 5174 6403
4/13 Standing Drive, Traralgon VIC 3844

SA

Brompton 08 8354 0100
23 Chief Street, Brompton SA 5007

Lonsdale 08 8326 4726
2/41-47 O'Sullivan Beach Road, Lonsdale SA 5160

Mt. Gambier (A) 08 8723 0922
5 Scott Court, Mt Gambier SA 5290

Port Lincoln (A) 08 8683 0707
1 Thomas Court, Port Lincoln SA 5606

Wingfield 08 8260 2255
159-161 Cormack Road, Wingfield SA 5013

WA

Gnangara 08 6401 6331
4/28 Supreme Loop, Gnangara WA 6077

Jandakot 08 9478 5033
1/45 Biscayne Way, Jandakot WA 6164

Osborne Park 08 9244 5033
19 Howe Street, Osborne Park WA 6017

KIRBY – TERMS AND CONDITIONS OF SALE

Thank you for choosing Kirby. These Conditions set out the terms applying to your purchases of goods and services from Kirby, and credit terms where applicable.

1 Application of these Conditions of Sale

- 1.1 These Conditions form a binding contract for the sale and/or hire of goods and associated services by Kirby HVAC&R Pty Ltd (ABN 42 624 910 041) (Kirby, us) or another Kirby group company to you as the Customer.
- 1.2 The Conditions incorporate other documents we provide or make available on our website, such as warranties, order forms, quotes, brochures, product descriptions and price lists.
- 1.3 Kirby may amend or vary these Conditions and any other part of the Agreement by updating them on the Kirby website. If you reasonably believe, and we reasonably accept, that a variation has a material adverse effect on you, you may cancel any current or prospective orders or services, without penalty.
- 1.4 These Conditions apply to all goods and services ordered by you and provided by Kirby whether through a printed or online order, a quotation, oral acceptance by Kirby of repeat or future orders, or another format made available by Kirby.

2 Price & Payment

- 2.1 The price payable by you for goods and services and associated items such as freight, delivery and installation shall be as notified from time to time by Kirby, including (without limitation) on our website, in our price lists or as quoted or advised by Kirby upon receipt of an order for goods or services from the Customer. In the absence of specific prices, the prices published on the Kirby Smart@ccess Website at the time of delivery shall apply.
- 2.2 Quotations are usually valid for 30 days unless stated otherwise, after which they may be subject to change without notice. Kirby may at any time alter its price in respect of future orders.
- 2.3 Kirby can change pricing without further notification (excluding quotes). We will endeavour to notify our customers of pricing changes. Notification may occur after prices have changed.
- 2.4 If during a validity period or between the date of the Order from the Customer and delivery of the Goods, there is an increase in the cost of supplying the goods due to reasons beyond Kirby's control, then Kirby will be entitled to increase the price of the goods accordingly.
- 2.5 You must pay the full price (plus GST) for goods and services, without deduction, set-off or counterclaim immediately on receipt of a valid tax invoice at the time of delivery of the goods and services, except when you complete and Kirby has approved the Commercial Credit Application section of the Kirby Customer Application Form, in which case you shall have 30 days from the invoice date to pay.
- 2.6 If you do not use your Kirby credit account for more than 12 months, or Kirby reviews your credit status for any reason, the credit account may be deactivated.
- 2.7 In the event that the Customer fails to pay amounts owing in full by the due date:
 - (a) Kirby may at its option require cash on delivery and/or stop the supply of any further goods or services to the Customer, for a period or ongoing; and
 - (b) the Customer shall pay to Kirby interest calculated daily at a rate 3% higher than the National Australia Bank's overdraft rate for amounts exceeding \$100,000, from time to time, from the date the payment is due until such monies are paid in full.
- 2.8 The Customer agrees that a tax invoice from Kirby is binding and conclusive, except in the event of manifest error.
- 2.9 Kirby makes discounts and rebates available from time to time. Kirby may cancel or suspend credit availability, discounts or rebates, in the event that the Customer fails to comply with any of these Conditions.

3 Application for Credit

- 3.1 In the process of becoming a Customer of Kirby or at any time thereafter, you may apply to have Kirby supply goods and services to you on credit, by completing the Commercial Credit Application section of the application form, or otherwise as advised by Kirby.
- 3.2 Kirby may accept or reject the credit application, for the amount applied for or a different amount, in its absolute discretion and will advise you of its decision.
- 3.3 Kirby may approve the credit application, or at any time the continuing availability of credit, subject to conditions advised to the Customer, which may include the provision of a guarantee in favour of Kirby from a third party on terms acceptable to Kirby. A supply by Kirby of goods or services on credit is not a representation that such conditions do not apply or will not apply at a later date.
- 3.4 You acknowledge and agree that Kirby may exchange information about you (including personal information) that relates to credit provision or these Conditions, with credit reporting agencies such as Equifax or Creditor Watch, which have their own privacy policies.

4 Orders

- 4.1 Kirby shall have no obligation to accept any order that you submit.
- 4.2 Each order is a representation that you are solvent and able to pay for the order when payment is due;
- 4.3 Orders are binding on the Customer. From the time of placing the order, you are obliged to accept and pay for the goods and services ordered, and cancellation of an order is not effective unless with Kirby's express consent;
- 4.4 Kirby shall use its reasonable endeavours to ensure that advertised goods and services are available and provided to you when requested, but shall not be liable for any loss or damage caused by any unavailability or delay. You are not entitled to reject the goods or services due to any delay.
- 4.5 The Customer shall indemnify Kirby for any loss, damage, or expense incurred by Kirby should the Customer cancel or refuse to accept or pay for any order or part of any order.
- 4.6 The Customer acknowledges that if the Customer places an order for goods or services that are not offered by Kirby as standard, Kirby may require the Customer to pay a non-refundable deposit of up to 50%.

5 Delivery

- 5.1 If Kirby accepts an order including delivery of goods, it will arrange delivery at its discretion, at the Customer's cost and risk in all things, and use reasonable endeavours to meet any target delivery date, but has no liability for any delay, failure, or inability to deliver, or for any direct or consequential loss, claim, cost or damage to any property of the Customer or third parties including in particular any food or product loss.
- 5.2 Where Kirby is unable to complete a delivery due to an act or omission of the Customer, Kirby may impose an additional charge for frustrated delivery to cover Kirby's reasonable additional costs.
- 5.3 Kirby may make part deliveries of any order, and this shall not invalidate or vary the Customer's order. If Kirby only delivers part of the goods which are ordered by the Customer, Kirby may invoice the Customer for those goods delivered.
- 5.4 The Customer shall notify Kirby in writing of any defect or shortages in quantity of any goods within seven (7) days of delivery or taking possession, and after that time the Customer will not be entitled to make any claim on Kirby relating to defects or shortages.
- 5.5 If the Customer requests Proof of Delivery ("POD") in writing to Kirby:
 - (a) within 120 days of the despatch date of the goods, the POD will be supplied by Kirby free of charge; and
 - (b) beyond 120 days of the despatch date of the goods, Kirby will charge a reasonable administration fee.
- 5.6 In the event that Kirby agrees to accept return of any goods for credit, other than where the return is due to Kirby's breach of these Conditions or of an applicable warranty, Kirby will not be responsible for transport costs and will at its discretion, charge a re-stocking fee not greater than 25% of the price.

6 Retention Of Title and Security

- 6.1 Title and risk in the goods shall pass to the Customer on the Customer taking possession or delivery but the equitable title in the goods shall not pass to the Customer until full payment is received by Kirby for the goods and any associated services.
- 6.2 The Customer shall in all cases be responsible for the payment of any insurance in respect of the goods from the time of taking possession or delivery. In the event that Kirby contracts for any such insurance the Customer shall reimburse the associated costs to Kirby.
- 6.3 Whilst Kirby retains the equitable title in the goods:
 - (a) the Customer may sell or deal in the ordinary course of business with the goods and with the interest of Kirby in the goods and may for those purposes part with possession of the goods, but always subject to the equitable title (and in the case of goods not purchased by the Customer, the full legal title) of Kirby. The proceeds of any such sale or dealing must be held by the Customer separately on trust for Kirby and appropriated solely for the payment of all sums owing to Kirby;
 - (b) the Customer shall ensure that the goods are clearly identifiable as the property of Kirby wherever the goods are located; and
 - (c) other than as permitted by clause (a), the Customer must not charge the goods in any way nor grant nor otherwise give any interest in the goods.
- 6.4 The Customer hereby irrevocably gives to Kirby, its agents and servants, leave and licence without the necessity of giving any notice, to enter on and into any premises occupied by the Customer to search for and remove any of the goods to exercise Kirby's rights and title under these Conditions and at law, without in any way being liable to the Customer or any person or company claiming through the Customer, and if the goods or any of them are wholly or partially attached to or incorporated in premises or any other goods, Kirby may sever the attachment in any way whatsoever as may be necessary to remove the goods. If the Customer parts with possession of the goods as permitted by clause 6.3(a), the Customer must procure the same rights for Kirby in respect of the premises at which the goods are located.
- 6.5 The Customer will be responsible for Kirby's costs and expenses in exercising its rights under clause 6.4.
- 6.6 The Customer agrees that where the goods have been retaken into the possession of Kirby, Kirby has the absolute right to sell or deal with the goods, and if necessary sell the goods with the trademark or name of the Customer on those goods, and the Customer grants an irrevocable licence to Kirby to do so and do all things necessary to sell the goods bearing the name of trademark of the Customer.

- 6.7 Kirby may suspend or terminate the availability of credit in the event of any breach of these Conditions by Customer. Until full payment is received by Kirby the Customer shall be deemed to be a bailee of the goods for and on behalf of Kirby and Kirby shall be entitled to all the rights and remedies of a bailor.

7 Interaction With Gas2Go Club Membership Conditions

- 7.1 Kirby may offer a Customer membership of its Gas2Go Club, which entitles members to participate in Kirby's Gas2Go gas management system. Where the Customer is a member of the Gas2Go Club the Customer acknowledges that it is also bound by the Gas2Go Membership Conditions. To the extent of any inconsistency between the Gas2Go Membership Conditions and these Conditions, the Gas2Go Membership Conditions shall prevail.

8 PPSA

- 8.1 In this clause, PPSA means the Personal Property Securities Act 2009 (Cth); PPSR means the Personal Property Securities Register established pursuant to the PPSA; and Security Interest means an interest in personal property, and includes any interest of Kirby which the PPSA treats as a security interest whether or not the transaction concerned, in substance, secures payment or performance of an obligation.
- 8.2 The Customer grants to Kirby a Security Interest in goods supplied by Kirby to the Customer in which Kirby has a legal or equitable interest under these Conditions, and the proceeds of sale of such goods, for the purposes of the PPSA. If the Customer parts with possession of the goods as permitted by clause 5.3(a), the Customer must procure for Kirby the same rights in respect of the goods.
- 8.3 The Customer consents to Kirby registering any Security Interest on the PPSR and agrees to provide all assistance required by Kirby to facilitate this.
- 8.4 The Customer agrees that in relation to goods that are inventory, the Customer will not allow any Security Interest other than Kirby's to arise unless Kirby has perfected its Security Interest prior to the Customer's possession of the goods.
- 8.5 If Chapter 4 of the PPSA applies to the enforcement of the Security Interest arising under or in connection with these Conditions, the Customer agrees:
- (a) 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 Kirby 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
 - (b) 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.
- 8.6 If the Customer makes payment to Kirby at any time whether in connection with these Conditions or otherwise, Kirby may, at its absolute discretion, apply that payment in any manner it sees fit.
- 8.7 The Customer agrees to immediately notify Kirby of any changes to its name or address (as specified in these Conditions).
- 8.8 The Customer agrees to do anything Kirby requests the Customer to do (such as obtaining consents, signing and producing documents, producing receipts and getting documents completed and signed):
- (a) to provide more effective security over the Secured Property;
 - (b) to register in respect of a Security Interest constituted by these Conditions at anytime;
 - (c) to enable Kirby to exercise its rights in connection with the Secured Property; and
 - (d) to show Kirby whether the Customer has complied with these Conditions.
- 8.9 The Customer shall pay on demand by Kirby any losses arising from, and any costs and expenses incurred in connection with, any action taken by Kirby 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.
- 8.10 The Customer 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.
- 8.11 Other than as required by law, 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 Customer agrees that it will only authorise the disclosure of information under section 275(7)(c) or request information under section 275(7)(d), if Kirby approves.

9 Customer's Warranty

- 9.1 The Customer warrants and agrees that the Customer is acquiring the goods for other than personal, domestic, household use or consumption and is therefore not a "consumer" for the purposes of the Competition and Consumer Act 2010(Cth).
- 9.2 The Customer warrants and agrees that in deciding to purchase goods or services from Kirby, it has not relied on any representation from Kirby, as to their fitness for the Customer's purpose or otherwise, nor on any description or illustration or specification contained in any document produced by Kirby.

10 Exclusion Of Liability, Indemnity And Warranty

- 10.1 Except as provided by the Competition and Consumer Act 2010 (Cth) or as expressly set out in these Conditions, Kirby makes no warranties or other representations concerning goods or services supplied.
- 10.2 To the extent Kirby incurs liability under the Competition and Consumer Act 2010 (Cth) that cannot be excluded, the liability is limited to, as the Customer's exclusive remedy, at Kirby's discretion:
- (a) the replacement of the goods or the supply of equivalent goods; or
 - (b) the repair of the goods; or
 - (c) the payment of the cost of replacing the goods or of acquiring equivalent goods; or
 - (d) the payment of the cost of having the goods repaired.
- 10.3 Subject to this clause 10 and to the extent permitted by law, Kirby shall not be liable for any loss or damage to the Customer (including any consequential loss or damage, third party claims, loss of profits and loss of revenue) of any kind whatsoever even if due to the negligence of Kirby, its employees and/or agents.
- 10.4 The Customer shall indemnify Kirby against any action, suit, demand, proceeding, loss, damage, cost and/or expense directly or indirectly incurred or suffered by Kirby that is caused by or contributed to by any of the following:
- (a) any defect, malfunction or stoppage of the goods caused or contributed to by the Customer;
 - (b) Kirby complying with any instruction of the Customer about the goods;
 - (c) any act or omission of the Customer or a third party occurring after the goods have left the control of Kirby;
 - (d) failure by the Customer, or any third party associated with the Customer, to:
 - (i) adequately provide or display safety markings or safety information on or with the goods;
 - (ii) comply with any law about the goods or their use (for example, their sale, marketing, labelling or marking);
 - (iii) take any reasonable precaution to bring to the attention of any potential users of the goods any dangers associated with goods;
 - (iv) take any reasonable precaution to detect any matters in relation to which Kirby may become liable in any way (for example, under the CCA);
 - (v) provide correct information to Kirby; or
 - (vi) immediately advise Kirby (in writing) of any changes to the information provided to Kirby.
 - (e) the Customer making any statement about the goods (for example, about their performance or characteristics) without Kirby's approval;
 - (f) the use (or misuse) or operation of the goods by the Customer or any third party; and
 - (g) any negligence or breach of duty by the Customer or any third party or any breach by the Customer of these Conditions.
- 10.5 If during a period of 12 months from the date of invoice of goods any goods manufactured or supplied by Kirby are found upon inspection by Kirby to be defective in design, material or workmanship under normal use and service and when properly installed, connected and commissioned, Kirby will supply exchange replacement goods or part(s) free of charge to the Customer.
- 10.6 Any warranty given by Kirby in these Conditions may vary depending on the goods supplied, with such variation to be notified in writing by Kirby, on the relevant brochure, or in Kirby's general warranty conditions available on the website www.kirbyhvacr.com.au.

11 Cylinder Hire

- 11.1 In this clause, Cylinder means the gas cylinder which may be supplied to the Customer upon purchase of any Gas2Go® or other goods and includes Stillages and other cylinder transportation devices; and Stillage means the stillage or metal pallet which may be supplied to the Customer upon purchase of any Gas2Go® or other goods.
- 11.2 Unless otherwise agreed in writing, the Customer must pay a periodic charge and associated charges, including for refill protection devices or cylinder valve cap replacement, for the hire of a Cylinder as set out in the Cylinder Service Rate Charge Schedule, available upon request from any Kirby branch or by contacting Kirby via its website.
- 11.3 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 Kirby.
- 11.4 The Cylinder service charge covers the provision by Kirby of services 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).
- 11.5 The Customer must, at its own cost, return all Cylinders to Kirby or its authorised agent at their premises as soon as they are empty. Cylinders are not deemed 'returned' until received by Kirby (or its authorised agent) and Kirby provides to the Customer a written receipt in Kirby's printed format, acknowledging the Cylinder's return.
- 11.6 On receipt of each invoice including Cylinder charges, the Customer 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 Kirby within 14 days of receipt of the invoice, failing which the

number of Cylinders stated as being held by the Customer on the invoice shall be conclusive and the Customer will be liable to Kirby for the amount shown on the invoice.

- 11.7 Kirby may charge a deposit upon supply of the Cylinder to the Customer on terms satisfactory to Kirby having regard to the nature of the transaction with the Customer. Once the Cylinder(s) are returned to Kirby in a clean, safe and serviceable condition, Kirby will refund the deposit (or appropriate part thereof) to the Customer.
- 11.8 The Customer may hire out or deal in the ordinary course of business with a Cylinder and may part with possession of the Cylinder, but always subject to the full title of Kirby. Kirby will have the right to charge reasonable fees for transport and administration associated with the collection of any Cylinders from the Customer.
- 11.9 Cylinders remain the property of Kirby (or its supplier) and the Customer 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.
- 11.10 The Customer shall not repair, modify, tamper with, or contaminate Cylinders and shall not permit the Cylinders to be filled by anyone other than Kirby or Kirby's representatives or agents.
- 11.11 Customer 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 Kirby.
- 11.12 The Customer shall be responsible for any loss or damage to the Cylinder.
Compensation shall be at Kirby's current replacement cost for a Cylinder as set out in the Cylinder Service Rate Charge Schedule and as varied from time to time by Kirby to reflect the current Cylinder replacement value with such revision notified on an invoice.
- 11.13 A Cylinder will be deemed lost if the Customer reports that a Cylinder is lost to Kirby or the Cylinder has not been returned within 12 months after the Cylinder was supplied to the Customer, whichever is earlier.
- 11.14 Kirby will invoice the Customer for the replacement cost of a lost Cylinder. If the cylinder is returned in good order within 6 months after the loss, the replacement cost amount paid by the Customer will be refunded less the applicable charges for the Cylinder for the extended period. If the Cylinder is returned 6 months or more after the date of the loss no refund of the replacement cost charged will be issued.

12 Proper Law And Compliance

- 12.1 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.
- 12.2 The Customer shall comply with all applicable laws and regulations, 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 Kirby, its directors, officers, servants and agents from any liability arising from the Customer's failure to comply with such laws. The Customer must obtain and maintain all applicable licenses during the term of these Conditions.

13 Additional Costs, Taxes, Etc.

- 13.1 If any duties, taxes, rates or other impost shall be levied in respect of any purchase of goods or hire of the Cylinders, the Customer shall pay such amount in addition to the price (plus GST).
- 13.2 In the event that the Customer shall specifically order Kirby to acquire goods or components from any foreign source the price (plus GST) payable by the Customer may be increased by Kirby at any time whether before or after delivery and despite any quotation that may have been given by Kirby to the Customer to compensate Kirby 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.

14 Default

- 14.1 The Customer shall be in default under these Conditions, where:
- (a) the Customer fails for any reason to pay any moneys due to Kirby as and when they fall due; or
 - (b) the Customer fails to perform or observe any of its obligations under these Conditions; or
 - (c) the Customer exceeds the limit of any credit account with Kirby; or
 - (d) the Customer 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.
- 14.2 In the event of default by the Customer, the Customer must indemnify Kirby's legal costs, fees, charges, expenses and outgoings on a solicitor and own client basis flowing from the default.

15 Capacity

- 15.1 If the Customer enters into these Conditions as the trustee of a trust, the Customer must inform Kirby of this and provide any further information on request, and the Customer warrants to Kirby that the Customer:
- (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 Kirby.
- 15.2 If the Customer consists of more than one legal person, including if the Customer enters into these Conditions as a partner, the Customer warrants that each Customer agrees to the entry into these Conditions and that all Customers are jointly and severally bound by these Conditions, and remain so until the Customer requests that a Customer be no longer bound, and Kirby so agrees, such agreement not to be unreasonably withheld.
- 15.3 If the Customer enters into these Conditions as a corporation, the Customer warrants that it is duly registered as an Australian corporate entity, it is compliant and up to date with its notification obligations under the Corporations Act 2001, and there is nothing in its documents of incorporation or otherwise that prevents it entering into and carrying out its obligations under these Conditions.

16 Privacy

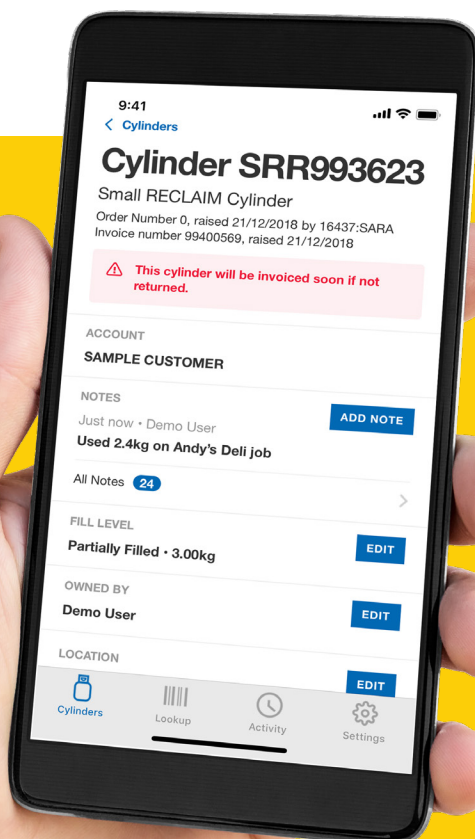
- 16.1 The Customer agrees to Kirby collecting, using and disclosing personal information of the Customer and persons associated with the Customer for the purposes set out in these Conditions and in Kirby's Privacy Policy and Privacy Collection Notice, available on the Kirby website. Kirby agrees to comply with the Privacy Act 1988 (Cth) and our Privacy Policy and Privacy Collection Notice.

17 General Provisions

- 17.1 Customer restructure - The Customer must notify Kirby in writing of any change in its structure or management including any change in director(s), shareholder, or change of management within 4 business days of the date of such change.
- 17.2 Severability - Any part of these Conditions being a whole or part of a clause shall be capable of severance without affecting any other part of these Conditions.
- 17.3 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.
- 17.4 SmartAccess Service – Kirby offers the Customer access to the Kirby Smart@ccess Website, on the basis of the information you provided in the completed Application Form, and subject to compliance with the Kirby Online Customer Service Facility Terms of Use available on the Kirby website as amended from time to time, which form part of these Conditions.
- 17.5 Intellectual Property - No right or licence is granted to the Customer under any patent, copyright, register design, know-how or other intellectual property rights except the right to use or resell the goods. If the goods incorporate any design or specification of the Customer, Kirby shall not be liable for any infringement of any intellectual property rights caused by the goods or their use or sale by the Customer.
- 17.6 Unless otherwise agreed in writing, Kirby shall manufacture and/or supply the goods in accordance with its own specification and standards and using parts and manufacturing processes and techniques solely at its own discretion.

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- Heat load calculator
- Project quoting tools
- View and access your invoices
- View and access your statements
- Make secure payments online

**KIRBY ONLINE CUSTOMER SERVICE FACILITY
TERMS OF USE****1. Your agreement with us**

1.1 By using or accessing the Kirby Online Customer Service Facility, including ordering goods ("Service") provided on the website www.kirbyhvacr.com.au ("Website"), you agree to be bound by the terms and conditions set out below ("Terms of Use").

1.2 In these Terms of Use, a reference to "we", "us", "our" and "Kirby" means Kirby HVAC&R Pty Ltd. (ABN 42 624 910 041).

1.3 In these Terms of Use, supply of the Service to:

(a) Australian customers will be described as the "Australian Service".

1.4 A reference to "you" or "your" in these Terms of Use is a reference to Kirby customers who have been provided with secure login details (in the form of an account number and password) to access, review or use the Service.

1.5 Except to the extent that these Terms of Use apply or as required by law, your use of this Service and receipt of any information from us does not create any legal relationship between you and us.

2. What the Service does

2.1 The purpose of our Service is to provide an online customer self-service portal, enabling you, as a Kirby customer, to login to the Service and:

(a) place an order for goods offered by Kirby ("Product") for collection by you from the selected branch;

(b) view your net pricing of Products;

(c) check Product availability;

(d) view the Kirby online Product catalogue;

(e) produce heatload calculations and Product selections;

(f) view your account information;

(g) view your invoices (for up to 120 days);

(h) view your statements (for up to 12 months);

(i) view your gas statements (for up to 12 months);

(j) pay your invoices online;

(k) track and manage your refrigerant cylinders;

(l) access pricing; and

(m) as the Primary Account Holder, to create multiple user accounts (User Accounts), by adding additional users to your account with their own unique password and defined level of access.

For further information regarding the Primary Account Holder please refer to clause 4.

3. Use of this Website and Access

3.1 You may access our Website and our Service at any time, unless we have restricted access in order to perform necessary maintenance, updates or upgrades. Your ability to access our Website and our Service will otherwise depend on factors out of our control and we do not take or share any responsibility for those factors such as the quality of your internet connection and the state of your hardware.

3.2 Through our Website, you may view, cache, browse, display, print or download a copy of any content featured on our Website to your computer, provided that you:

(a) use it for personal use only and not for any purposes that are commercial, unlawful or may prejudice the reputation or interests of Kirby;

(b) keep your account username and password secure. You must not share your password with any person. You may only use your own account, and must not use or access any other person's account, except where you have been authorised by the initial account holder as an additional user;

(c) do not hide, deface, alter or delete any copyright symbol, trade mark or other proprietary rights notice;

(d) do not use or access our Website in a manner or for a purpose contrary to the law;

(e) do not hack into, change or otherwise knowingly transmit a virus or otherwise damage our Website or any information contained within it;

(f) do not link it to another website; and

(g) do not breach any other terms of these Terms of Use, or our terms and conditions of sale and hire ("Sale Terms", a copy of which is available at <http://www.kirbyhvacr.com.au/terms-and-conditions>, or our Privacy Policy which both appear on our Website.

4. Placing an Order

a. You may place an order for a Product through the Website. Each order placed by you and accepted by Kirby is a binding agreement between you and Kirby for the supply of the Products specified in that order on these terms of use and the Sale Terms.

b. To the extent that there is any inconsistency existing between:

i. the Sale Terms; and

ii. these Terms of Use, then the document listed earlier in this clause 4(b) prevails to the extent of the inconsistency. Your placing of an order for Products constitutes an acceptance by you of the supply by Kirby of such Products solely on these Terms of Use and the Sale Terms.

c. The Terms of Use that apply at the time you place an order will apply to an existing order that has been accepted by us. Kirby may vary these Terms of Use for future orders.

d. Except as set out in these Terms of Use, you will be required to pay Kirby for the Products ordered in accordance with the Sale Terms.

5. Cancellation of Orders

a. Kirby may cancel an order (including any orders that Kirby has accepted) or any part of an order without any liability to you for that cancellation at any time if:

i. the Products that you order are not available;

ii. there is an error in the price or Product description posted on the Website for that Product in that order; or

iii. Kirby reasonably believes your order has been placed in breach of these Terms of Use, the Sale Terms or the Agreement.

c. If an order has been canceled pursuant to clauses 5(a)(i) or 5(a)(ii), Kirby will not charge you any fees and charges for the canceled order.

6. Responsibilities of the Primary Account Holder

6.1 The Primary Account Holder must apply manually for use of our Service and will be the signatory on all applications. The Primary Account Holder is a person authorised by their company to grant access to other staff members within their company to their account information. The Primary Account Holder may create multiple User Accounts for these staff members with separate login details and restricted access to only some areas of the portal.

6.2 The Primary Account Holder is responsible for the deletion of any User Accounts created, and must delete the User Account if the staff member leaves the company. Kirby takes no responsibility for the level of access granted to the staff members, or for the deletion of these User Accounts.

6.3 a. You must ensure that your login identification details and password that are used to access the Website and the details of your account are kept in a safe and secure manner.

b. You must notify Kirby if you are or become aware that there is or has been an unauthorised use of your login identification details and password or account, or any other security breach relating to your account.

c. You must promptly advise Kirby of any changes to your information provided to Kirby as part of the customer registration process.

d. You are responsible for any costs associated with your access to or use of the Website, including internet access fees.

e. You are responsible and liable for any person that uses your login identification details and password or account including without limitation to order Product(s) through the Website.

f. You agree that, subject to clause 6.3(b), Kirby may charge you for all Products that Kirby agrees to supply to you that have been ordered using your login identification details or account and password through the Website.

7. Technical Information and Security

7.1 The transmission of data over the internet is not always secure. Although we endeavour to secure our Website, we are not liable for any breaches of security and you use our Website entirely at your own risk.

7.2 We do not warrant that the functions available on our Website will be uninterrupted or error free, or free of viruses or programming bugs or interferences due to factors outside our control.

7.3 Your ability to access our Website will depend on factors out of our control and we do not take any responsibility or provide any warranties that this Website will be accessible through all web browsers or that it will be accessible at all times.

7.4 You acknowledge that it is your responsibility to implement sufficient procedures and virus checks (including anti-virus and other security checks) to satisfy your particular requirements for the accuracy of data input and output.

8. Payment

8.1 The accepted methods of payment on our Website are Visa and MasterCard only. Payment made by either of these methods will incur a surcharge to the customer of 1.65% plus GST.

8.2 For further details regarding payment or our refunds policies, please refer to our Sale Terms which may be accessed from the following link: <http://www.kirbyhvacr.com.au/terms-and-conditions>.

9. Intellectual Property

9.1 Our Website contains intellectual property including trademarks, confidential information and copyright, together with any goodwill or reputation and intellectual property rights subsisting in those things.

9.2 You should assume that all intellectual property on our Website is owned by Kirby or third parties and unless permitted by law, you must not copy, reproduce, transmit, display or otherwise distribute any of that intellectual property in whole or in part without our prior written consent.

10. Suspension or Termination of Access

10.1 We reserve the right to suspend or terminate your account or access to our Website or our Service at our sole discretion if we believe that you have breached any of these Terms of Use.

10.2 When that happens, we will endeavour to notify you of the breach and ways in which you can remedy it.

11. Disclaimers

11.1 While we endeavour to ensure the accuracy and completeness of the information contained on our Website, that information may contain errors and omissions and is liable to change. We make no warranties and accept no responsibility for any loss or damage you may suffer as a result of your reliance on any of the material on our Website (including any as to the quality, accuracy, completeness or fitness for any particular purpose of such material).

11.2 Except to the extent required by law, the contents of our Website are provided without any express or implied representations or warranties. We exclude all implied conditions and warranties relating to the content of our Website to the extent permitted by law.

11.3 In the case of the Australian Service, where liability cannot be excluded any liability incurred by us in relation to the use of our Website or its contents is limited as provided under the Competition and Consumer Act 2010 (Cth).

11.4 To the maximum extent permitted by law:

(a) you agree that Kirby and its committee of management, officers, employees, agents, contractors, service providers, successors or assigns will not be liable for any direct or indirect loss or damage, whatsoever (including through negligence) arising out of, or in any way related to, the use of our Website;

(b) subject to clause 11.1, under no circumstances will we be liable for any incidental, direct, indirect, consequential, special, punitive or other losses, damages, liabilities, claims or expenses you or others may suffer including damages for loss of profits, loss of opportunity, business interruption or loss or corruption of data or information from the use of our Website;

(c) we are not responsible to you or anyone else for any loss suffered in connection with the use of our Website, any of its contents, for any loss incurred as a result of damage to your or another person's computer system or the transmission of any computer viruses; and

(d) you indemnify and agree to keep us indemnified against any loss or damage or costs incurred by us in connection with your breach of these Terms of Use or of any other legal obligation by you or your use of or conduct on our Website or our Service.

12. Privacy Policy

12.1 Our compliance with privacy legislation is set out in our separate Privacy Policy which may be accessed from the following link:

<http://www.kirbyhvacr.com.au/kirby-privacy-policy>

13. General

13.1 These Terms of Use are in addition to, and not in derogation of, any other terms or conditions that appear elsewhere on our Website, including our Sale Terms which may be accessed from the following link:

<http://www.kirbyhvacr.com.au/kirby-privacy-policy> and must be interpreted accordingly.

13.2 These Terms of Use may be varied from time to time, and this may occur without notice to you. When these Terms of Use are updated, we will endeavour to provide notice to you on our Website, prior to you logging in to access our Service. Please ensure that you review these Terms of Use regularly as you will be deemed to have accepted a variation if you continue to use our Website or our Service after a variation to the Terms of Use has been posted.

13.3 If any part of these Terms of Use is determined to be illegal, invalid or otherwise unenforceable or void, that part shall be severed to the extent necessary and the remainder of these Terms of Use shall continue in full force and effect.

13.4 No waiver of any breach of these Terms of Use will be construed as a waiver of any other breach of these Terms of Use.

13.5 In the case of the Australian Service:

(a) the information on this Website is provided for Australian users (accessing the Website both in Australia and outside of Australia) and visitors to Australia (foreign person's accessing the Website whilst within Australia but only to the extent that they remain in Australia) only; and **(b)** the Terms of Use 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.



Customer Satisfaction is Our Priority

Kirby has a dedicated team in place to deliver results for our customers in every region of Australia.

Our access to global brands is unrivalled, being supported by our parent company Beijer Ref AB. From our Australian support centre and global manufacturing facilities to our local distribution centres and wholesale branch network, every employee is committed to the long-term success of Kirby.

Customer satisfaction is what drives us.

Our employees operate in a cohesive team environment with a sense of integrity, pride and accountability. Our organisation takes pride in honouring our commitments and delivering on the promises we make to our customers delivered in line with our company values.

Committed, Engaged, Straightforward, United



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