

TOTALINE



REFRIGERATION GUIDE 2017

Suppliers to the air-conditioning, heating and refrigeration trade.

www.totaline.com.au

ABOUT US

With over 700 stores worldwide, and 10 locations nationwide, Totaline has the solutions network to provide specialist products for the Airconditioning, Heating and Refrigeration trade.

With a total commitment approach, Totaline is providing customers with a choice of factory authorized parts or aftermarket solutions for the HVAC&R trade.

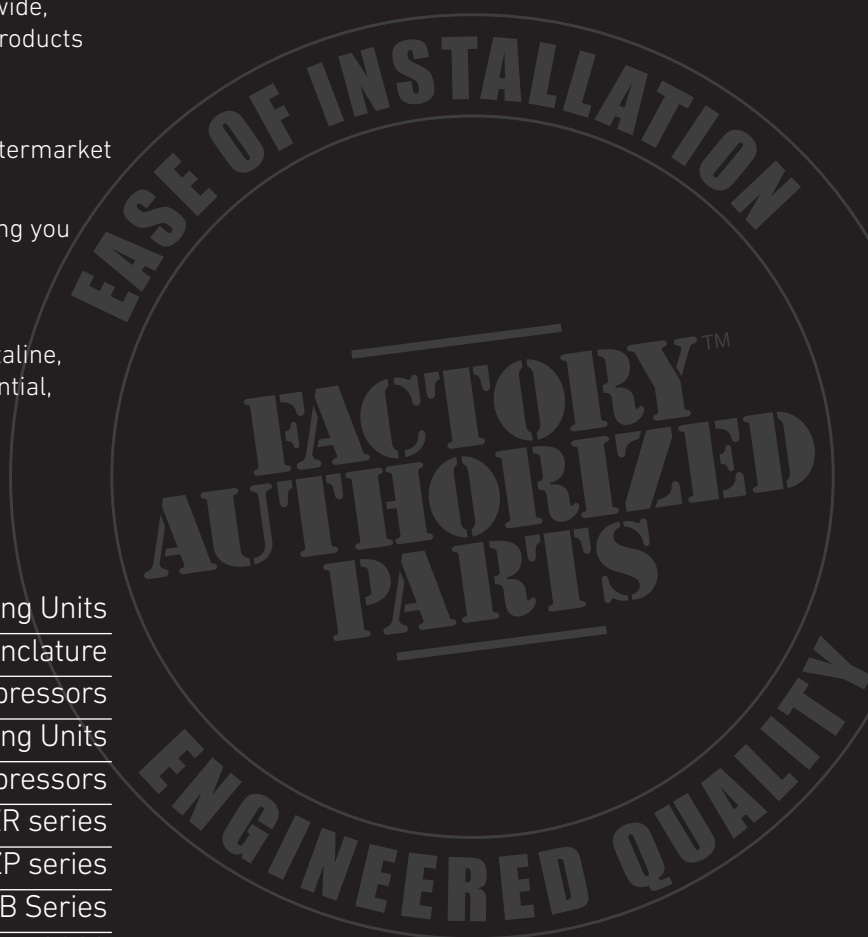
If solving challenging HVAC/R problems is your job, helping you get the parts, supplies and equipment you need is ours.

This is the Totaline commitment; we don't take it lightly.

Heating, ventilation, air conditioning, refrigeration... At Totaline, you'll find parts, supplies, equipment and tools for residential, commercial and industrial applications.

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TOTALINE



embraco POWER **IN.**
CHANGE **ON.**

COMPRESSORS + CONDENSING UNITS





embraco POWER IN.
CHANGE ON.

Embraco Compressors R404a Medium Temperature

New Model	Superseded Model	Superseded Model	Nominal HP	Nominal Capacity (watts)			
				-10	-5	0	5
EMT6144GK	EMBEMT6144GK		1/4	426	519	625	656
			1/3	426	519	625	655
		EMBN6144GK	1/3	362	448	545	655
EMT6165GK	EMBNEK6165GK		1/3	545	664	800	953
			1/3	611	734	883	1055
		EMBNB6165GK	1/4	507	623	756	906
NEK6181GK	EMBNEK6181GK		1/3	676	824	998	1198
			1/3	676	824	998	1198
		EMBNE6181GK	1/3	597	756	940	1149
NEK6210GK	EMBNEK6210GK		1/2	817	991	1197	1434
			1/2	817	991	1197	1434
		EMBNE6210GK	1/3	710	890	1093	1318
NEK6213GK	EMBNEK6213GK		3/8	1096	1323	1587	1889
			3/8	1096	1323	1587	1889
		EMBNE9213GK	3/8	1058	1312	1600	1918
NEK6217GK	EMBNEK6217GK		3/4	1315	1594	1912	2270
			3/4	1315	1594	1812	2270
		EMBT6217GK	3/4	1195	1499	1833	2198
NT6222GK	EMBNT6222GK		3/4	1540	1890	2300	2770
			3/4	1540	1890	2300	2770
		EMBT6220GK	5/8	1444	1800	2197	2630
NJ9226GK	EMBNJ9226GK		7/8	1648	2066	2536	3054
			7/8	1648	2066	2536	3054
		EMBJ9226GK	7/8	1922	2409	2968	3598
NJ9226GS			7/8	1922	2409	2968	3598
NJ9232GK			1 1/4	2360	2966	3664	4454
	EMBNJ9232GK		1 1/4	2360	2966	3664	4454
		EMBJ9232GK	1 1/4	2354	2960	3656	4444
NJ9232GS			1 1/4	2354	2959	3656	4444
NJ9238GK			1 1/2	2878	3554	4313	5155
	EMBNJ9238GK		1 1/2	2878	3554	4313	5155
		EMBJ9238GK	1 1/2	2878	3693	4481	5365
NJ9238GS			1 1/2	2990	3693	4481	5365

Tech Data

New Model	Disp (cc)	Motor Type	Oil Charge cm ³	Connections		Current FLA	Height mm
				Disch	Suction		
EMT6144GK	3.97	CSIR	180	3/16	1/4	2.40	187
EMT6165GK	5.19	CSIR	180	1/4	3/8	3	187
NEK6181GK	7.28	CSIR	350	1/4	3/8	3.5	187
NEK6210GK	8.78	CSIR	350	1/4	3/8	3.8	187
NEK6213GK	12.12	CSIR	350	1/4	3/8	3.9	206
NEK6217GK	14.3	CSR	350	1/4	3/8	5.1	206
NT6222GK	17.39	CSR	450	1/4	3/8	5.7	220
NJ9226GK	21.7	CSR	750	3/8	5/8RL	6.4	265
NJ9226GS	21.7	3PH	750	3/8	5/8RL	6.4	265
NJ9232GK	26.2	CSR	750	3/8	5/8RL	7.8	277
NJ9232GS	26.2	3PH	750	3/8	5/8RL	3	277
NJ9238GK	32.7	CSR	750	3/8	5/8RL	10.1	277
NJ9238GS	32.7	3PH	750	3/8	5/8LR	4.1	277

Embraco Compressors

R404a Low Temperature



embraco POWER IN.
CHANGE ON.

New Model	Superseded Model	Superseded Model	Nominal HP	Nominal Capacity (watts)			
				-30	-25	-20	-15
	EMBNEK2125GK		3/8	262	334	420	520
		EMBT2125GK		252	352	469	605
	EMBNEK2134GK		1/2	353	457	579	720
		EMBNE2134GK		366	511	672	851
NEK2150GK			5/8	473	628	763	947
	EMBNEK2150GK			473	628	763	947
		EMBT2155GK		420	583	789	1037
NEU2168GK			3/4	566	733	929	1152
	EMBNT2168GK			488	648	835	1050
		EMBT2168GK		558	753	988	1264
NEU2178GK			1	690	886	1115	1377
	EMBNT2178GK			600	792	1010	1258
		EMBT2178GK		678	897	1155	1450
NT2210GK			1 1/4	804	1052	1246	1565
	EMBNT2192GK			814	1066	1361	1701
		EMBT2180GK		737	969	1246	1565
NJ2212GK			1 1/2	1167	1554	1998	2498
	EMBNJ2212GK			1167	1554	1998	2498
		EMBJ2212GK		1085	1486	1957	2273

Tech Data

New Model	Disp (cc)	Motor Type	Oil Charge cm3	Connections		Current FLA	Height mm
				Disch	Suction		
EMBNEK2125GK	6.2	CSIR	350	1/4	3/8	2.04	187
EMBNEK2134GK	8.8	CSIR	350	1/4	3/8	2.35	200
NEK2150GK	12	CSIR	350	1/4	3/8	2.4	200
NEU2168GK	14.28	CSIR	350	1/4	3/8	2.63	220
NEU2178GK	16.8	CSCR	350	1/4	3/8	3.5	220
NT2210GK	26.21	CSCR	650	3/8	1/2RL	3.56	234
NJ2212GK	34.37	CSR	750	3/8	1/2RL	5.3	277



embraco POWER IN.
CHANGE ON.

Embraco Compressors R134a Medium Temperature

New Model	Superseded Model	Superseded Model	Nominal HP	Nominal Capacity (watts)			
				-10	-5	0	5
	EMBEMT6144Z		1/5	321	401	494	601
		EMBNB6144Z	1/5	300	374	461	560
NEK6160Z			1/4	388	490	611	752
	EMBNEK6160Z		1/4	388	490	611	752
		EMBNE6160Z	1/5	342	448	578	731
NEK6170Z			1/4	461	576	714	874
	EMBNEK6170Z		1/4	460	577	714	874
		EMBNE6170	1/4	412	533	678	846
NEK6187Z			1/3	521	656	817	1006
	EMBNEK6187Z		1/3	521	656	817	1006
		EMBNE6187Z	1/3	588	749	939	1157
NEK6210Z			1/3	632	794	984	1201
	EMBNEK6210Z		1/3	632	794	984	1201
		EMBNE6210Z	1/3	662	845	1062	1313
NEK6214Z			1/2	727	919	1144	1402
	EMBNEK6214Z		1/2	727	919	1144	1402
		EMBNEK6212Z	1/2	727	905	1118	1366
		EMBT6213Z	1/2	736	979	1252	1555
NT6217Z			3/4	1041	1287	1592	1954
	EMBNT6217Z		3/4	1041	1287	1592	1954
		EMBT6215Z	1/2	987	1169	1500	1891
NJ6220Z			1	1266	1642	2092	2616
	EMBNJ6220Z		1	1266	1642	2092	2616
		EMBJ6220Z	3/4	1263	1638	2083	2610
NJ6226Z			1 1/4	1778	2213	2714	3281
	EMBNJ6226Z		1 1/4	1778	2213	2714	3281
		EMBJ6226Z	1 1/4	1791	2229	2734	3306

Tech Data

New Model	Disp (cc)	Motor Type	Oil Charge cm3	Connections		Current FLA	Height mm
				Disch	Suction		
EMBEMT6144Z	5.19	CSIR	350	1/4	1/4	1.38	187
NEK6160Z	7.28	CSIR	350	1/4	1/4	2.07	187
NEK6170Z	8.4	CSIR	350	1/4	3/8	2.07	187
NEK6187Z	10	CSIR	350	1/4	3/8	2.61	200
NEK6210Z	12.12	CSIR	350	1/4	3/8	3.53	200
NEK6214Z	16.8	CSIR	350	1/4	1/2	4.3	206
NT6217Z	22.4	CSIR	550	1/4	1/2	3.92	220
NJ6220Z	22.4	CSIR	450	1/4	1/2	5.69	220
NJ6226Z	34.38	CSCR	750	1/4	5/8RL	5.92	220

Embraco Condensing Unit

R404a Medium Temperature



embraco POWER IN. CHANGE ON.

New Model	Superseded Model	Superseded Model	Amb	Nominal HP	Nominal Capacity (watts)				
					-15	-10	-5	0	5
UEMT6144GK	EMBUENT6144GK	EMBUND6144GK	32	1/5	298	359	423	490	564
			38		262	316	372	431	496
UEMT6165GK	EMBUENT6165GK	EMBUNB6165GK	32	1/4	429	504	588	660	771
			38		378	444	517	581	678
UNEK6181GK	EMBUNE6181GK	EMBUNE6181GK	32	1/2	530	644	767	900	1040
			38		466	567	675	792	915
	EMBUNE6210GK	EMBUNE6210GK	32	1/2	670	665	886	1032	1228
			38		590	585	780	908	1080
UNEK6213GK	EMBUNE6213GK	EMBUNE9213GK	32	1/2	904	1064	1213	1352	1468
			38		796	936	1067	1190	1292
	EMBUNEK6217GK	EMBUT6217GK	32	3/4	960	1180	1406	1640	1880
			38		845	1038	1237	1443	1654
UNT6222GK	EMBUNT6222GK	EMBUT6220GK	32	1	1370	1636	1899	2162	2424
			38		1205	1440	1671	1903	2133
UNT6226GK			32	1	1391	1706	2048	2414	2808
			38		1224	1501	1802	2124	2471
UNJ9226GK	EMBUNJ9226GK	EMBUJ9226GK	32	1	1370	1685	2035	2420	2815
			38		1206	1483	1791	2130	2477
UNJ9226GS			32	1	1351	1655	1951	2259	2565
			38		1189	1456	1717	1988	2337
UNJ9232GK	EMBUNJ9232GK	EMBUJ9232GK	32	1 1/4	1766	2115	2469	2830	3096
			38		1554	1861	2173	2490	2724
UNJ9232GS			32	1 1/4	1646	2015	2376	2751	3124
			38		1448	1773	2090	2421	2746
UNJ9238GK	EMBUNJ9238GK	EMBUJ9238GK	32	1 1/2	2300	2750	3155	3565	3950
			38		2024	2420	2776	3137	3476
UNJ9238GS			32	1 1/2	2012	2438	2920	3477	4012
			38		1771	2145	2570	3059	3530

Tech Data

New Model	Disp (cc)	Motor Type	Oil Charge cm3	Connections		Current FLA	Height mm
				Disch	Suction		
UEMT6144GK	3.97	CSIR	350	1/4	3/8	2.40	254
UEMT6165GK	5.19	CSIR	350	1/4	3/8	3.2	296
UNEK6181GK	7.58	CSIR	350	1/4	3/8	3.5	296
EMBUNE6210GK	8.77	CSIR	350	1/4	3/8	3.8	296
UNEK6213GK	12.11	CSIR	350	1/4	3/8	3.9	296
EMBUNEK6217GK	14.28	CSIR	550	3/8	1/2	5.1	324
UNT6222GK	17.39	CSR	550	3/8	1/2	5.7	324
UNT6226GK	20.37	CSR	750	3/8	1/2	8.17	390
UNJ9226GK	20.37	CSR	750	3/8	1/2	6.8	390
UNJ9226GS	20.71	3PH	750	3/8	5/8	3.9	379
UNJ9232GK	26.11	CSR	750	3/8	5/8	7.8	379
UNJ9232GS	26.11	3PH	750	1/2	5/8	4.4	379
UNJ9238GK	32.67	CSR	750	1/2	5/8	10.1	379
UNJ9238GS	32.67	3PH	750	1/2	5/8	4.49	379



Embraco Condensing Unit R404a Low Temperature

embraco POWER IN.
CHANGE ON.

New Model	Superseded Model	Superseded Model	Amb	Nominal HP	Nominal Capacity (watts)				
					-15	-10	-5	0	5
	EMBUNE2125GK	EMBUNE2125GK	32	1/2	285	375	405	470	580
			38		251	330	356	414	510
	EMBUNE2134GK	EMBUNE2134GK	32	1/2	335	455	500	595	735
			38		295	400	440	524	647
UNEK2150GK	EMBUNEK2150GK	EMBUT2155GK	32	3/4	390	480	546	589	725
			38		343	422	480	518	638
UNEU2168GK	EMBUNT2178GK	EMBUT2168GK	32	1 1/4	530	718	778	935	1182
			38		466	632	693	823	1040
	EMBUNJ2180GK	EMBUNJ2192GK	32	1 1/2	648	856	934	1184	1497
			38		570	753	823	1042	1317
UNT2210GK	EMBUNJ2192GK	EMBUJ2192GK	32	1 1/4	804	1052	1310	1670	2041
			38		708	926	1153	1470	1796
UNJ2212GK	EMBUJ2212GK	EMBUNJ2212GK	32	2	1165	1480	1600	1825	2200
			38		1025	1450	1408	1606	1936

Tech Data

New Model	Disp (cc)	Motor Type	Oil Charge cm3	Connections		Current FLA	Height mm
				Disch	Suction		
EMBUNE2125GK	5.96	CSIR	320	1/4	3/8	2.70	254
EMBUNE2134GK	8.77	CSIR	350	1/4	3/8	3.4	296
UNEK2150GK	12.11	CSIR	350	1/4	3/8	3.8	296
UNEU2168GK	17.39	CSIR	550	1/4	3/8	3.9	296
EMBUNJ2180GK	20.44	CSIR	750	1/4	3/8	5.8	324
UNT2210GK	26.21	CSCR	650	1/4	3/8	6.4	324
UNJ2212GK	34.38	CSR	750	3/8	5/8	8.1	324

Embraco Condensing Unit

R134a Medium Temperature



embraco POWER IN.
CHANGE ON.

New Model	Superseded Model	Superseded Model	Amb	Nominal HP	Nominal Capacity (watts)				
					-15	-10	-5	0	5
	EMBUENT6144Z	EMBUNB6144Z	32	1/5	269	330	403	479	560
			38		237	290	355	422	493
UNEK6160Z	EMBUNE6160Z	EMBUNE6160Z	32	1/3	320	392	480	570	669
			38		282	345	422	502	589
UNEK6170Z	EMBUNE6170Z	EMBUNET6170Z	32	1/4	335	440	535	640	755
			38		295	387	471	563	664
UNEK6187Z	EMBUNE6187Z	EMBUNE6187Z	32	3/8	441	536	679	804	969
			38		388	472	598	708	853
UNEK6210Z	EMBUNEK6212Z	EMBUNEK6210Z	32	1/3	430	584	789	929	1065
			38		378	514	694	818	937
UNEK6214Z	EMBUNEK6214Z	EMBUT6213Z	32	1/2	658	826	1004	1192	1395
			38		579	727	884	1050	1228
UNT6217Z	EMBUNT6217Z	EMBUT6215Z	32	3/4	701	899	1148	1400	1718
			38		617	791	1010	1232	1512
UNJ6220Z	EMBUNJ6220Z	EMBUJ6220Z	32	3/4	1011	1259	1537	1849	2193
			38		890	1108	1353	1627	1930
UNJ6226Z	EMBUJ6226Z	EMBUNJ6226Z	32	1	1372	1686	2035	2419	2814
			38		1207	1484	1791	2130	2476
UNJ6226ZX			32	1	1372	1686	2035	2419	2796
			38		1207	1484	1791	2129	2460

Tech Data

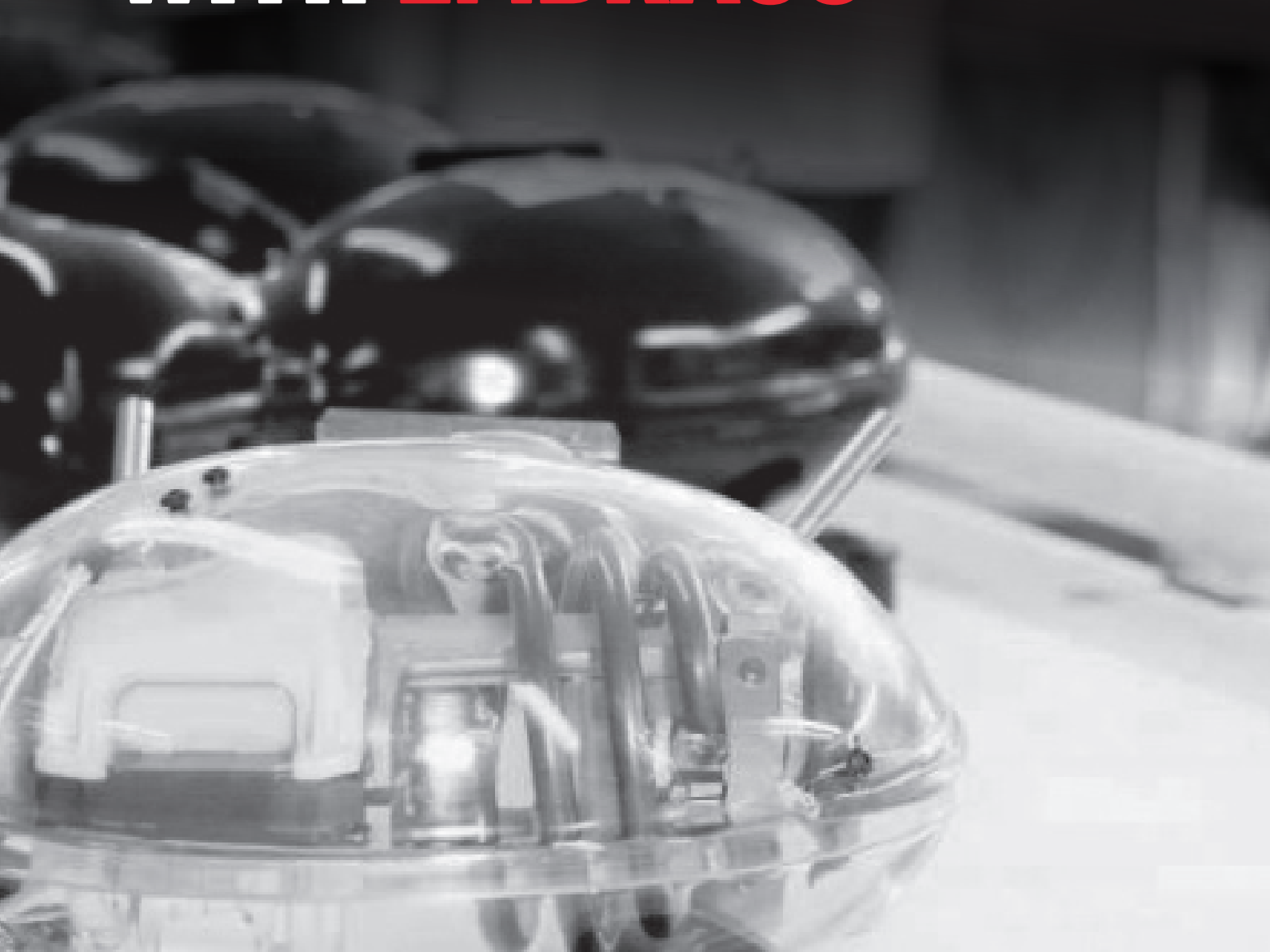
New Model	Disp (cc)	Motor Type	Oil Charge cm3	Connections		Current FLA	Height mm
				Disch	Suction		
EMBUENT6144Z	5.9	CSIR	350	1/4	3/8	1.70	254
UNEK6160Z	6.2	CSIR	350	1/4	3/8	1.9	296
UNEK6170Z	8	CSIR	350	1/4	3/8	2	296
UNEK6187Z	12.1	CSIR	350	1/4	3/8	3.2	296
UNEK6210Z	13.54	CSIR	550	3/8	1/2	4	324
UNEK6214Z	16.8	CSR	550	3/8	1/2	4.6	324
UNT6217Z	20.4	CSIR	750	3/8	1/2	5.1	390
UNJ6220Z	22.4	CSR	750	3/8	5/8	5.9	379
UNJ6226Z	34.37	CSR	750	3/8	5/8	6.3	379
UNJ6226ZX	34.37	3PH	750	3/8	5/8	2.3	379

TOTALINE



embraco POWER **IN.**
CHANGE **ON.**

APPLICATION GUIDE FOR HYDROCARBONS WITH **EMBRACO**



Application Guide for Hydrocarbons with Embraco

Beverage Coolers - 50Hz

GROSS CAPACITY		100 - 150l 3 - 5箱		150 - 200l 5 - 7.0箱		200 - 250l 7.0 - 9.0箱		250 - 300l 9.0 - 11箱		300 - 350l 11 - 13箱		350 - 450l 13 - 17箱		450 - 600l 17 - 21箱		600 - 750l 21 - 27箱		750 - 1000l 27 - 35箱		1000 - 1400l 35 - 49箱		1400 - 1700l 49 - 60箱		1700 - 2000l 60 - 71箱	
DOOR TYPE		SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS	SOLID	GLASS
R134a	PREMIUM EFFICIENCY	VM19GH ●●	VM19GH ●●	VM19GH ●●	VM19GH ●●	VM19GH ●●	VM19GH ●●	VM19GH ●●	VM19GH ●●	VE27GB ●●	VE27GB ●●	VE27GB ●●	VE27GB ●●												
	HIGH EFFICIENCY	EM30HER ●	EM30HER ●	EM30HER ●	EM30HER ●	EM30HER ●	EM30HER ●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	FFU109HK ●●	
R600a	HIGH EFFICIENCY	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	EM30CLC ●	
R290	PREMIUM EFFICIENCY	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	EM30L13U ●●●	
	HIGH EFFICIENCY																								
R404A	HIGH EFFICIENCY																								

- New Development
- High Starting Torque
- Fan Cooling Approved
- Static Cooling Approved

AVERAGE BOTTLE COOLER SPECIFICATION	
Starting Type	LST
Application	MBP
Cooling Type	Fan
Door Type	Solid or Glass
Temperature	0 to 6°C

Upright Freezers (Ice-Cream and Frozen Food) - 50Hz

GROSS VOLUME (L)		<100l	100-200l	200 - 300l	300 - 400l	400 - 500l	500 - 600l	600 - 700l	700-800l	800-1000l	1000<1
GROSS VOLUME (箱)		3 箱	3 - 7 箱	7 - 11 箱	11 - 14 箱	14 - 18 箱	18 - 21 箱	21 - 25 箱	25 - 29 箱	28 - 35 箱	35 < 箱
R290	PREMIUM EFFICIENCY		EMT2125U ●●	NEU2140U ●●	NEU2155U ●●	NEU2168U ●●	NT2180U ●●	NT2210U ●●	NT2210U ●●		
		EMT2121U ●●									
	STANDARD EFFICIENCY	EM190UEX ●●	FFU130UAX ●●	FFU160UAX ●●							
R404A	PREMIUM EFFICIENCY			VNEK206GK ●●	VNEK212GK ●●	VNEK212GK ●●					
	STANDARD EFFICIENCY			NEU2140GK ●●	NEU2155GK ●●	NEU2168GK ●●					
R134a	PREMIUM EFFICIENCY	VEG27H ●●	VEG27H ●●								
		FFU109H ●●	FFU109H ●●	FFU109H ●●							

AVERAGE ICE CREAM FREEZERS SPECIFICATION	
Starting Type	HST
Application	LBP
Cooling Type	Fan
Door Type	Glass/Solid
Food Temp.	<-4 °F

- New Development
- High Starting Torque
- Fan Cooling Approved
- Static Cooling Approved

Application Guide for Hydrocarbons with Embraco

Ice Makers (Cubers) - 50Hz

ICE/DAY		UP TO 25Kg 55Lb	25-40Kg 55-90Lb	40-60Kg 90-130Lb	60-90Kg 130-200Lb	90-120Kg 200-260Lb	120-150Kg 260-330Lb	150-170Kg 330-375Lb	170-210Kg 375-460Lb	210-250Kg 460-550Lb	250-280Kg 550-620Lb	280-320Kg 620-700Lb	320-360Kg 700-790Lb	360-400Kg 790-880Lb	400-450Kg 880-990Lb	450-550Kg 990-1200Lb	550 - 700Kg 1200-1540Lb
R290	HIGH EFFICIENCY	EMT6144U ●	EMT6144U ●	NEU6210U ● ●	NEU6214U ● ●	NEU6217U ● ●	NT6220U ● ●	NT6222U ● ●	NT6224U ● ●								
R404A		EMT6152GK ●	EMT6165GK ●	NEK6210GK ● ●	NEK6210GK ● ●	NEK6217GK ● ●	NT6220GKV ● ●	NT6222GKV ● ●	NT6224GK ● ●	NT6226GKV ● ●	NTU6232GK ● ●	NTU6234GKV ● ●	NTU6240GKV ● ●				
R134a		EM65HHR ● ●	FFU5100HAK ● ●	NEU6212Z ● ●	NEU6214Z ● ●	NT6217ZV ● ●	NT6220ZV ● ●	NTU6222ZV ● ●	NTU6224ZV ● ●								

AHRI STANDARD:
AMBIENT: 90°F
WATER INLET: 70°F

- New Development
- High Starting Torque
- Fan Cooling Approved
- Static Cooling Approved

AVERAGE ICE MAKER SPECIFICATION	
Starting Torque	HST
Application	MBP
Cooling Type	FAN

Ice Makers (Flaked) - 50Hz

ICE/DAY		60-90Kg 130-200Lb	90-120Kg 200-260Lb	120-150Kg 260-330Lb	150-170Kg 330-375Lb	170-210Kg 375-460Lb	210-250Kg 460-550Lb	250-280Kg 550-620Lb	280-320Kg 620-700Lb	320-360Kg 700-790Lb	360-400Kg 790-880Lb	400-450Kg 880-990Lb	450-500Kg 990-1100Lb
R290	HIGH EFFICIENCY	NEU6210U ● ●	NEU6214U ● ●	NEU6217U ● ●	NT6220U ● ●	NT6222U ● ●	NT6224U ● ●						
R404A		NEK6210GK ● ●	NEU6215GK ● ●	NT6217GKV ● ●	NT6220GKV ● ●	NT6222GKV ● ●	NT6224GK ● ●	NT6226GKV ● ●	NJ2212GK ● ●	NJ2212GK ● ●	NJ2212GK ● ●		
R134a		NEU6212Z ● ●	NEU6214Z ● ●	NT6217ZV ● ●	NT6220ZV ● ●	NTU6222ZV ● ●	NTU6224ZV ● ●						

AHRI STANDARD:
AMBIENT: 90°F
WATER INLET: 70°F

- New Development
- High Starting Torque
- Fan Cooling Approved
- Static Cooling Approved

AVERAGE ICE MAKER SPECIFICATION	
Starting Torque	HST
Application	MBP
Cooling Type	FAN

Water Fountains/Purifiers - 60Hz

ICE/DAY		60-90Kg 130-200Lb	90-120Kg 200-260Lb	120-150Kg 260-330Lb	150-170Kg 330-375Lb	170-210Kg 375-460Lb	210-250Kg 460-550Lb	250-280Kg 550-620Lb	280-320Kg 620-700Lb	320-360Kg 700-790Lb	360-400Kg 790-880Lb	400-450Kg 880-990Lb	450-500Kg 990-1100Lb
R290	HIGH EFFICIENCY	NEU6210U ● ●	NEU6214U ● ●	NEU6217U ● ●	NT6220U ● ●	NT6222U ● ●	NT6224U ● ●						
R404A		NEK6210GK ● ●	NEU6215GK ● ●	NT6217GKV ● ●	NT6220GKV ● ●	NT6222GKV ● ●	NT6224GK ● ●	NT6226GKV ● ●	NJ2212GK ● ●	NJ2212GK ● ●	NJ2212GK ● ●		
R134a		NEU6212Z ● ●	NEU6214Z ● ●	NT6217ZV ● ●	NT6220ZV ● ●	NTU6222ZV ● ●	NTU6224ZV ● ●						

AHRI STANDARD:
AMBIENT: 90°F
WATER INLET: 70°F

- New Development
- High Starting Torque
- Fan Cooling Approved
- Static Cooling Approved

AVERAGE ICE MAKER SPECIFICATION	
Starting Torque	HST
Application	MBP
Cooling Type	FAN

Commercial Kitchen Appliances - 50Hz LBP (Low temperature refrigerators)

GROSS VOLUME (RANGE OF SIZES)	REACH-IN FREEZER UNDERCOUNTER FREEZER WORKTOP FREEZER BLAST CHILLER										
		< 250L (9 FTB)	250 - 325 (9 - 15 FTB)	325 - 425 (12 - 15 FTB)	425 - 550 (15 - 19 FTB)	550 - 650 (19 - 23 FTB)	650 - 850 (23 - 30 FTB)	850 - 1150 (30 - 41 FTB)	1150 - 1500 (41 - 52 FTB)	1500 - 1700 (52 - 63 FTB)	1700 - 1900 (63 - 67 FTB)
		< 120L (5 FTB)	120 - 175 (5 - 7 FTB)	175 - 275 (9 - 11 FTB)	275 - 350 (11 - 13 FTB)	350 - 450 (13 - 17 FTB)	450 - 500 (17 - 19 FTB)	500 - 600 (19 - 23 FTB)	-	-	-
		-	-	-	-	-	-	10 KG (22LB)	15 KG (33LB)	20 KG (44LB)	25 KG (55LB)
R290	PREMIUM EFFICIENCY - FULLMOTION INVERTER (VARIABLE SPEED COMPRESSOR)	VEGT8U	VEGT8U	VEGT8U	VEGT8U	VNEU213U	VNEU213U	VNEU213U	VNEU217U	VNEU217U	
	PREMIUM EFFICIENCY	EMC3121U	EMC3125U	EMC3130U	NEU2140U	NEU2155U	NEU2168U				
		EM2X3121U	EM2X3125U								
	HIGH EFFICIENCY	NEK2121U	NEK2125U	NEK2125U	NEK2134U	NEK2150U	NEK2160U	NT2180U	NT2180U	NT2210U	NT2210U
		EMI90UEX	FFU130UAX	FFU160UAX							
R134a	PREMIUM EFFICIENCY - FULLMOTION INVERTER (VARIABLE SPEED COMPRESSOR)	VEGT8HB	VEGT11HB	VEGT11HB							
	HIGH EFFICIENCY	FFU130HAX	FFU130HAX	FFU160HAX	NEU2140Z						
R404A	STANDARD EFFICIENCY	NEK2121GK	NEK2125GK	NEK2125GK	NEK2134GK	NEK2150GK	NEK2168GK	NEK2178GK	NT2180GK	NT2192GK	NT2212GK

- New Development
- High Starting Torque
- Fan Cooling Approved
- Static Cooling Approved

AVERAGE PROF. KITCHEN REFRIGERATOR SPECIFICATION	
Evap. Temperature	-30 to -15°C
Application	LBP
Starting Type	LST
Cooling Type	Fan
Door Type	Solid

Commercial Kitchen Appliances - 50Hz MBP (Medium temperature refrigerators)

GROSS VOLUME (RANGE OF SIZES)	REACH-IN REFRIGERATOR FOOD PREPARATION TABLE REFRIGERATOR UNDERCOUNTER REFRIGERATOR WORKTOP REFRIGERATOR							
		200 - 275L (7 - 10 FTB)	275 - 375L (10 - 14 FTB)	375 - 500L (14 - 20 FTB)	550 - 700 L (20 - 26 FTB)	700 - 950L (26 - 34 FTB)	950 - 1200L (34 - 43 FTB)	1200 - 1500L (43 - 53 FTB)
		70 CM (30 IN)	115 CM (45 IN)	140 CM (55 IN)	165 CM (65 IN)	190 cm (75 in)	240 cm (95 in)	300 CM (120 IN)
		100 - 200L (4 - 7 FTB)	200 - 350L (7 - 13 FTB)	350 - 500L (13 - 18 FTB)	-500L (18 FTB)	-	-	-
R290	PREMIUM EFFICIENCY - FULLMOTION INVERTER (VARIABLE SPEED COMPRESSOR)			VEGT8U	VEGT8U	VEGT8U	VEGT8U	VEGT8U
	PREMIUM EFFICIENCY			EMC3115U	EMC3121U	EMC3125U	EMC3130U	
		EM2X3113U	EM2X3113U	EM2X3117U	EM2X3121U	EM2X3125U		
	HIGH EFFICIENCY	EMI50UER	EMI70UER	EMI90UEX	EMI90UEX	FFU130UAX	FFU160UAX	
			NEK6152U	NEK6165U	NEK6181U	NEU6212U	NEU6214U	
R134a	PREMIUM EFFICIENCY - FULLMOTION INVERTER (VARIABLE SPEED COMPRESSOR)	VEMY6HH	VEMY6HH	VEMY6HH	VEGT8HB	VEGT11HB	VEGT11HB	
	HIGH EFFICIENCY	EM45HHR	FFU70HAX	FFU580HAX	FFU130HAX	FFU160HAX		
					NEU6187Z	NEU6212Z	NEU6214Z	
R404A	STANDARD EFFICIENCY	NEK6144GK	NEK6152GK	NEK6165GK	NEK6181GK	NEK6210GK	NEK6213GK	NEK6213GK

- New Development
- High Starting Torque
- Fan Cooling Approved
- Static Cooling Approved

AVERAGE PROF. KITCHEN REFRIGERATOR SPECIFICATION	
Evap. Temperature	-15 to -5°C
Application	MBP
Starting Type	LST
Cooling Type	Fan
Door Type	Solid

Application Guide for Hydrocarbons with Embraco

Commercial Kitchen Appliances - 60Hz MBP (Medium temperature refrigerators)

GROSS VOLUME (RANGE OF SIZES)		REACH-INS TRADITIONAL REFRIGERATOR	260 - 320L (9 - 11 ft ³)	320 - 420L (11 - 15 ft ³)	420 - 620L (15 - 21 ft ³)	620 - 800L (21 - 29 ft ³)	800 - 1050L (29 - 37 ft ³)	1050 - 1300L (37 - 45 ft ³)	1300 - 1600L (45 - 55 ft ³)
		UNDERCOUNTERS / WORKTOPS REFRIGERATOR	135 - 230L (5 - 9 ft ³)	230 - 380L (9 - 13 ft ³)	380 - 550L (13 - 19 ft ³)	~550L (19 ft ³)	-	-	-
R290	PREMIUM EFFICIENCY				VEGT8U ●	VEGT8U ●	VEGT8U ●	VEGT8U ●	VEGT8U ●
					EMC3115U ● ● ●	EMC3121U ● ● ●	EMC3125U ● ● ●	EMC3130U ● ● ●	
		EM2X3113U ● ● ●	EM2X3113U ● ● ●	EM2X3117U ● ● ●	EM2X3121U ● ● ●	EM2X3125U ● ● ●			
	HIGH EFFICIENCY	EMISOUER ● ●	EMI70UER ● ●	EMI90UEX ● ●	EMI90UEX ● ●	FFU130UAX ● ●	FFU160UAX ● ●		
			NEK6152U ● ●	NEK6165U ● ●	NEK6181U ● ●	NEU6181U ● ●	NEU6212U ● ●	NEU6214U ● ●	
R134a	PREMIUM EFFICIENCY	VEMY6HH ●	VEMY6HH ●	VEMY6HH ●	VEGT8HB ●	VEGT11HB ●	VEGT11HB ●		
	HIGH EFFICIENCY	EM45SHR ● ●	EMI570HHR ● ●	FFU580HAK ● ●	FFU5100HAK ● ●	FFU130HAX ● ●	FFU160HAX ● ●		
						NEU6187Z ● ●	NEU6212Z ● ●	NEU6214Z ● ●	
R404A	STANDARD EFFICIENCY	NEK6144GK ● ●	NEK6152GK ● ●	NEK6165GK ● ●	NEK6181GK ● ●	NEK6210GK ● ●	NEK6213GK ● ●	NEK6213GK ● ●	

- New Development
- High Starting Torque
- Fan Cooling Approved
- Static Cooling Approved

AVERAGE BOTTLE COOLER SPECIFICATION	
Starting Type	L / HST
Application	L / M / HBP
Cooling Type	Static or Fan
Door Type	Solid or Glass
Temperature	0 to 6°C

Embraco Compressor/Condensing Unit

Technical Information

embraco POWER IN.
CHANGE ON.

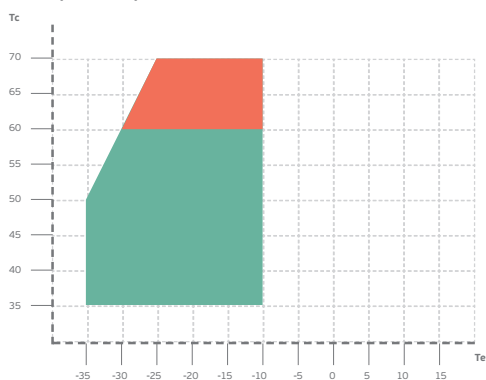
Range of Application

EM, EG, F, VEM, VEG, VES

Ambient temperature: 42,7 °C

Return temperature: 32,2 °C

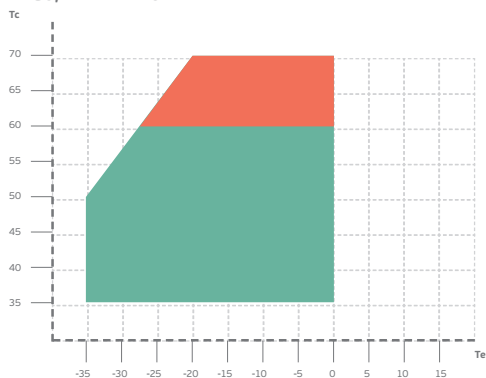
LBP R290 / R134a / R600a



L-MBP (STANDARD) R290/R134a

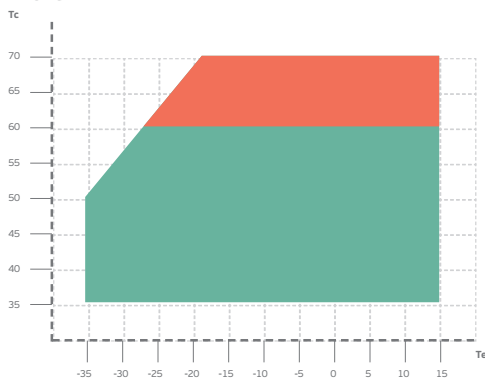


L-MBP EXTENDED RANGE FFUS, EM2 E EM3*

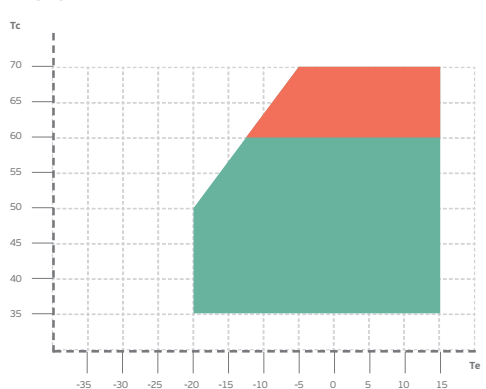


*New families with extended L-MBP range of application, up to 32 °F

L-M-HBP R134a



M-HBP R134a



■ Operation Condition
■ Transient Condition

Embraco Compressor/Condensing Unit

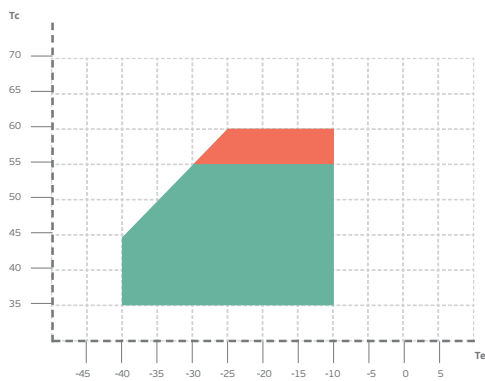
Technical Information

NE, NT, NJ

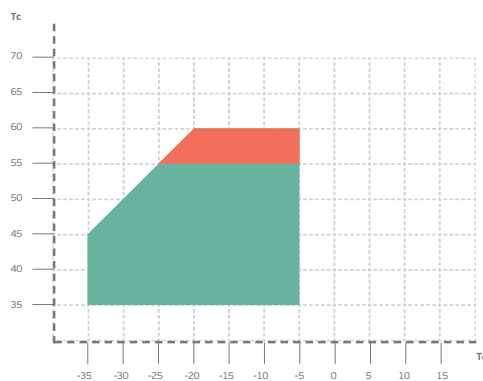
Ambient temperature: 32,2 °C

Return temperature: 20 °C

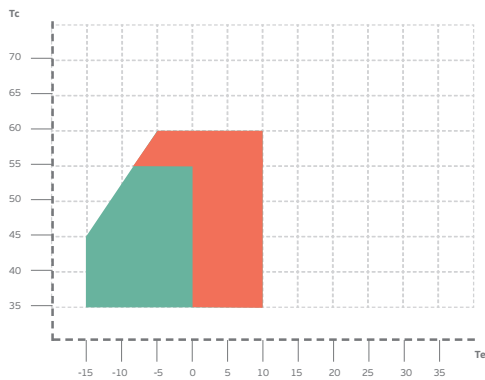
LBP
R290/R404A/R507



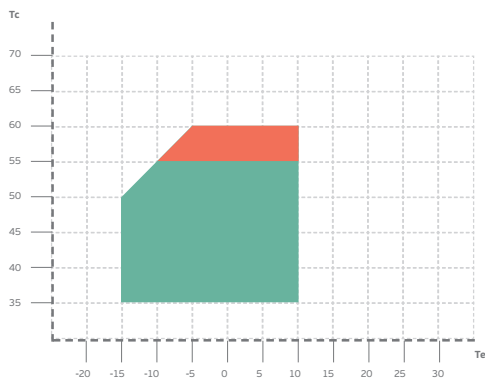
R600a/R134a



MBP
R290/R404A/R507



HBP
R600a/R134a



Operation Condition
Transient Condition

Applications

LBP	LOW BACK PRESSURE	APPLICATIONS:
	Evaporating temperature between -40 °C / -40 °F and -10 °C / 14 °F	refrigerators, island coolers, etc.
MBP	MEDIUM BACK PRESSURE	APPLICATIONS:
	Evaporating temperature between -15 °C / 5 °F and 0 °C / 32 °F	self-service coolers, beverage display, etc.
HBP	HIGH BACK PRESSURE	APPLICATIONS:
	Evaporating Temperature between 5 °C / 41 °F and 15 °C / 59 °F	self-service coolers, GDM, wine coolers, etc.

Test Conditions

TEST CONDITIONS	APPLICATION	EVAPORATING TEMPERATURE °C / °F	CONDENSING TEMPERATURE °C / °F	RETURN TEMPERATURE °C / °F	SUB-COOLING K	AMBIENT TEMPERATURE °C / °F
ASHRAE	LBP	-23.3 / 10	54.4 / 130	32.2 / 90	22.2	32.2 / 90
	M/HBP	7.2 / 45	54.4 / 130	35 / 95	8.3	35 / 95

Cooling Type

STATIC (S)	Compressors approved for static cooling are those that don't allow operation of a fan motor associated with the condenser.
FAN	Compressors approved for forced cooling are those that require the operation of a fan motor associated with the condenser.
STATIC/ FAN (S/F)	Compressors approved for static and forced cooling are those which may or may not be used with a fan motor associated with the condenser.

Embraco Compressor/Condensing Unit

Technical Information

Motor Torque

LST	(Low Starting Torque) Low starting torque: LBP/MBP/HBP/AC applications with RSIR/RSCR/PSC electric motors. Appropriate for systems with a capillary tube (C) expansion type device and equalized pressures on start up.
HST	(High Starting Torque) High starting torque: LBP/MBP/HBP applications with CSIR/CSR electric motors. Appropriate for systems with expansion valve (V) or capillary tube expansion type device with disequalized pressures on start up.

Electrical Motor Types

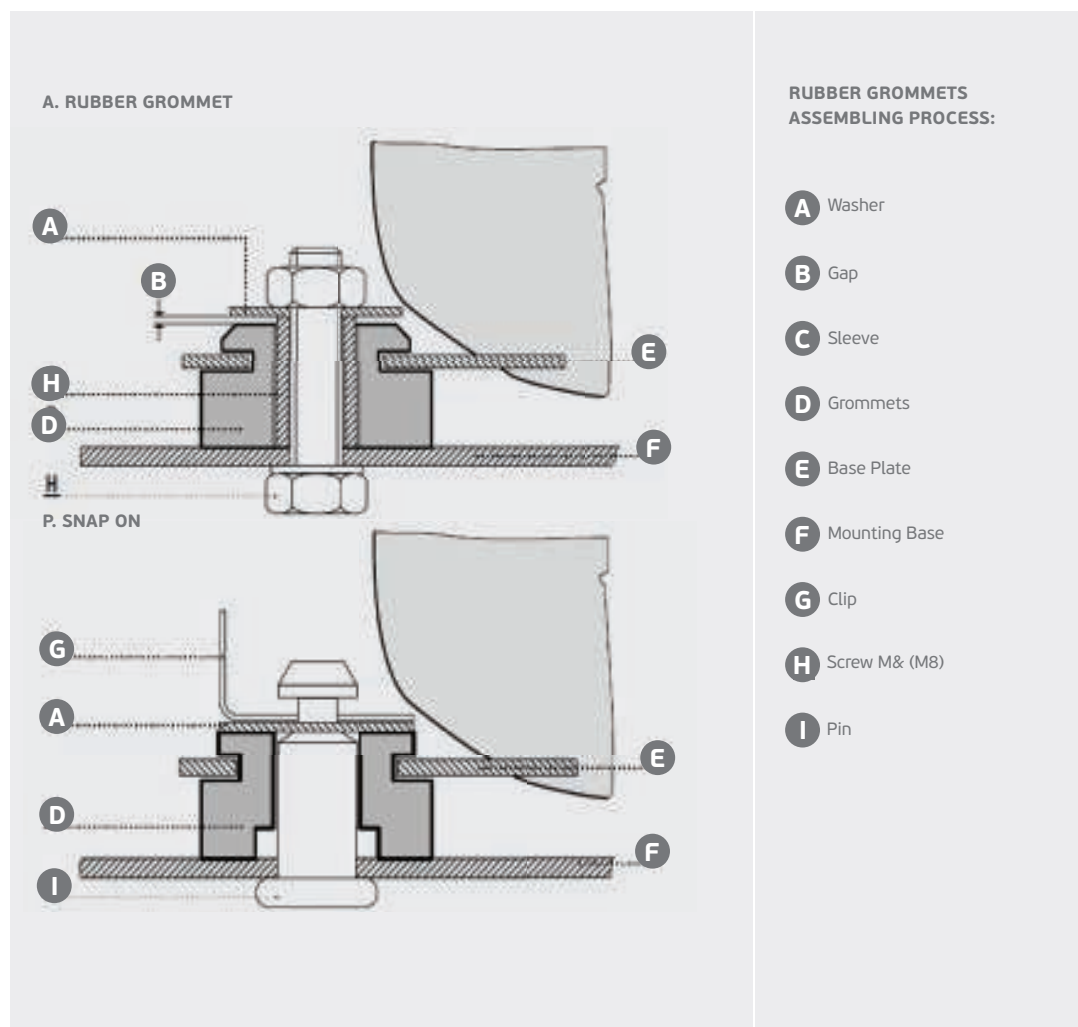
RSIR	Resistive Start- Inductive Run: no start capacitor; no run capacitor.
RSCR	Resistive start – Capacitive Run: no start capacitor; run capacitor is needed to improve the efficiency.
CSIR	Capacitive Start – Inductive Run: no run capacitor; start capacitor is needed to improve the torque.
CSR	Capacitive Start and Run – CSR version with capacitive run and start windings.
PSC	Permanent Split Capacitor - no starting device. Run capacitor is directly connected to the winding.

Electrical Components

TYPE OF MOTOR	STARTING DEVICE					CAPACITOR	
	Overload Protector	Current Relay	Voltage Relay	PTC	TSD	Start	Run
RSIR	✓	✓		✓			
CSIR	✓	✓				✓	
RSCR	✓			✓	✓		✓
PSC	✓						✓
CSR	✓		✓	*		✓	✓
3-Phases	✓						

* Optional

Accessories & Options

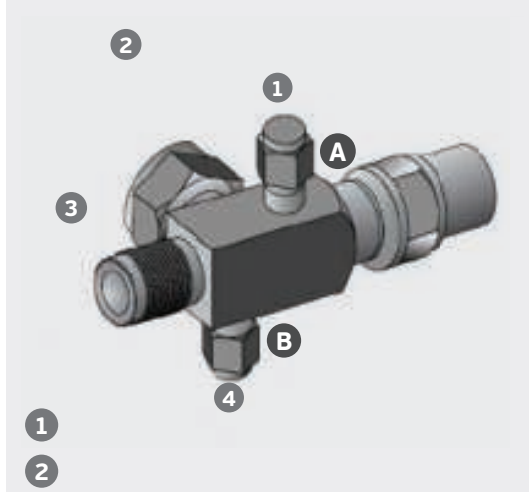


Embraco Compressor/Condensing Unit

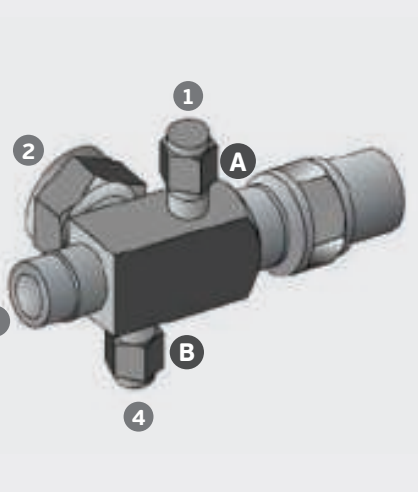
Technical Information

Rotolock Valve

V. MECHANICAL CONNECTION



Z. SOLDERED CONNECTION



Attachement for service or for a manometer

Connection to the receiver or to the compressor

3 Main port

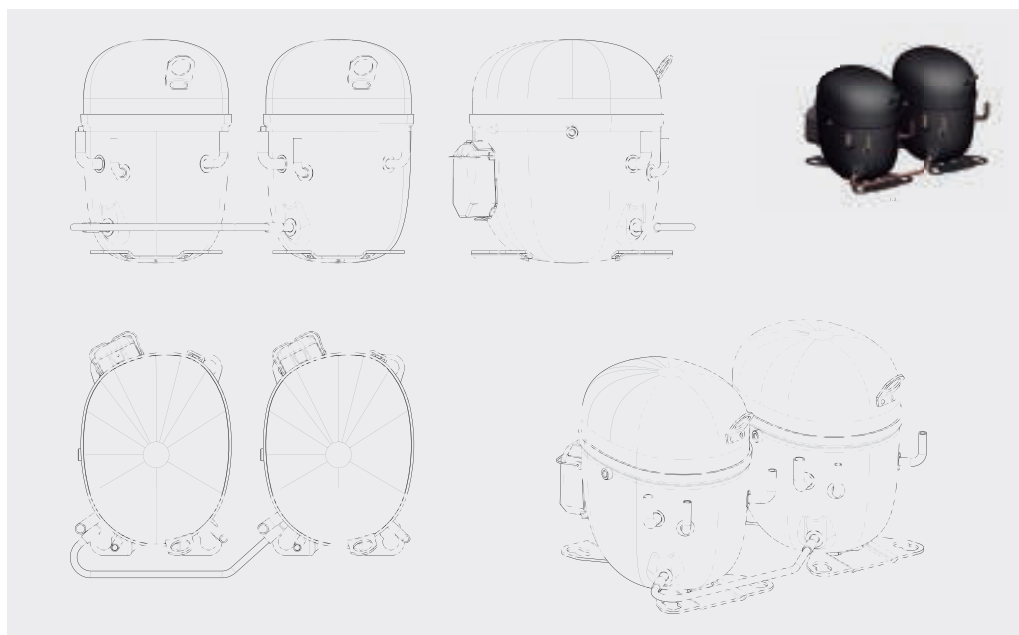
4 Connections for pressure-stat

A & B

Service caps (hexagonal nuts)

Gemini (Twin)

Gemini is a product line that matches low noise and short height for typical semi-hermetic solution. Through an especial shape Embraco designed an hermetic light commercial compressors which can be embedded in appliances, considering individual or dual mode, it means a modular cooling capacity when demanded. These products are available in condensing units and also only compressors.

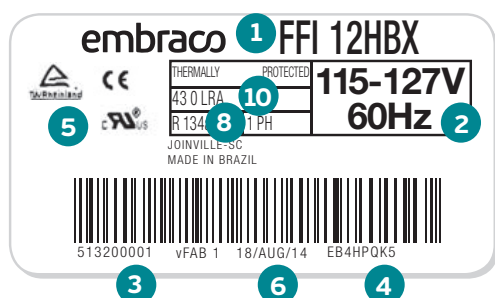


Identification Label

NE/NT/NJ/VNE



EM/EG/F/VEM/VEG

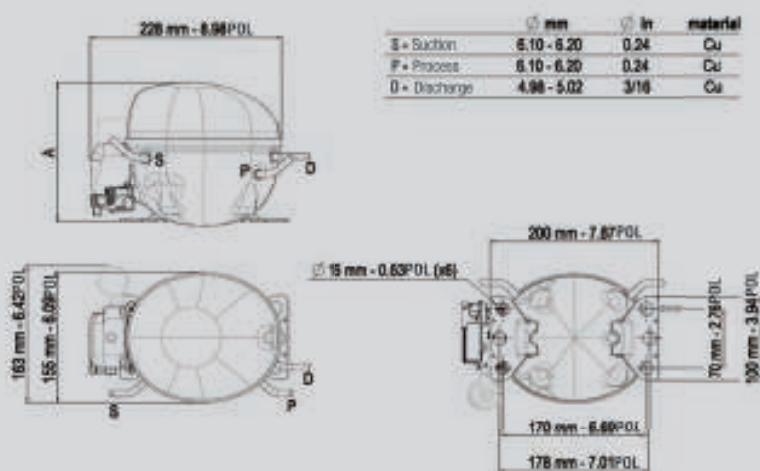


- 1 Compressor model
- 2 Supply Voltage
- 3 Bill of Materials code
- 4 Serial Number
- 5 Agency Approval Marks
- 6 Date code or Production date
- 7 Oil type and quantity
- 8 Refrigerant type
- 9 Current Consumption
(Rated Load Amperage, when applicable)
- 10 Locked Rotor Amperage
(when applicable)

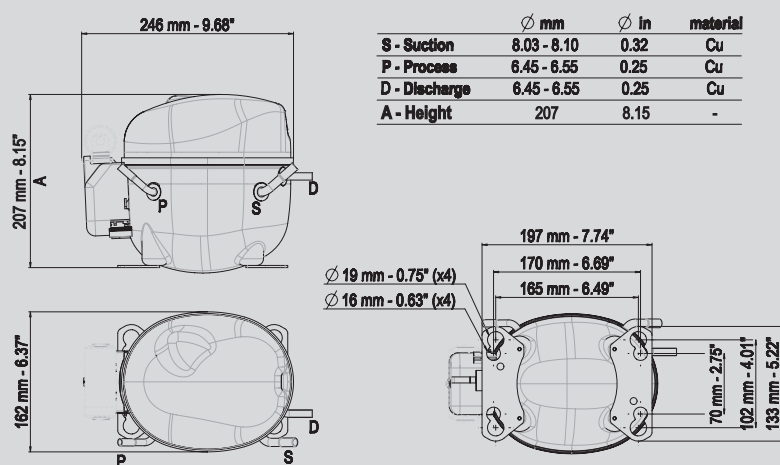
Embraco Compressor/Condensing Unit External Views and Wiring Diagrams

External Views

DWG02 – EMT Series

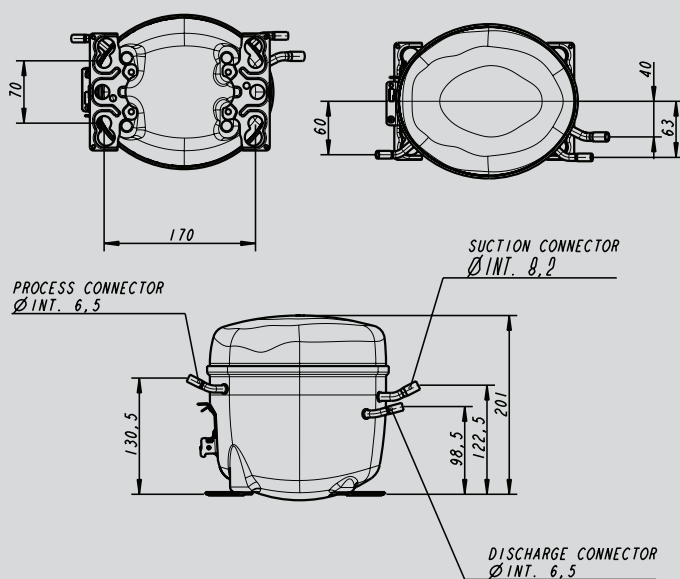


DWG04 - NE SERIES

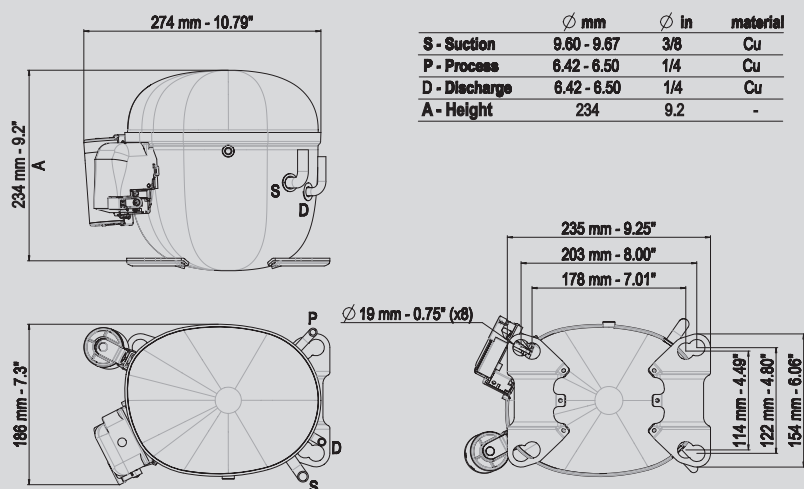


External Views

DWG09 - F, EG and VEG SERIES



DWG16 - NT SERIES

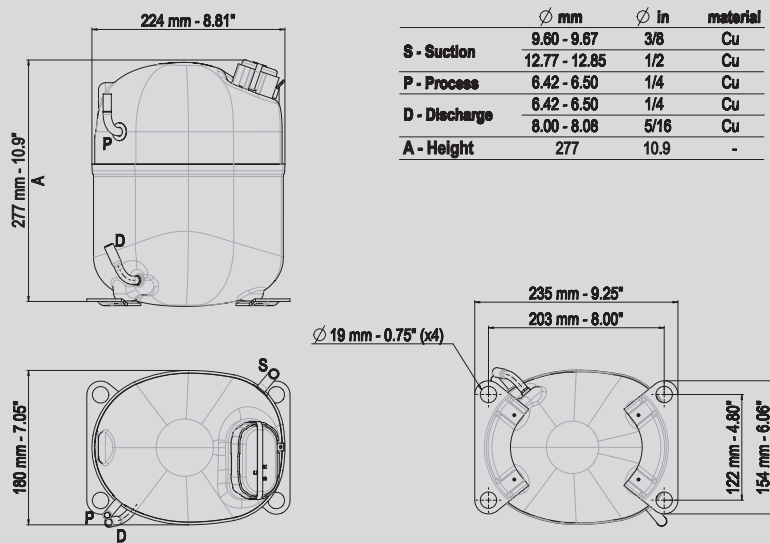


Embraco Compressor/Condensing Unit

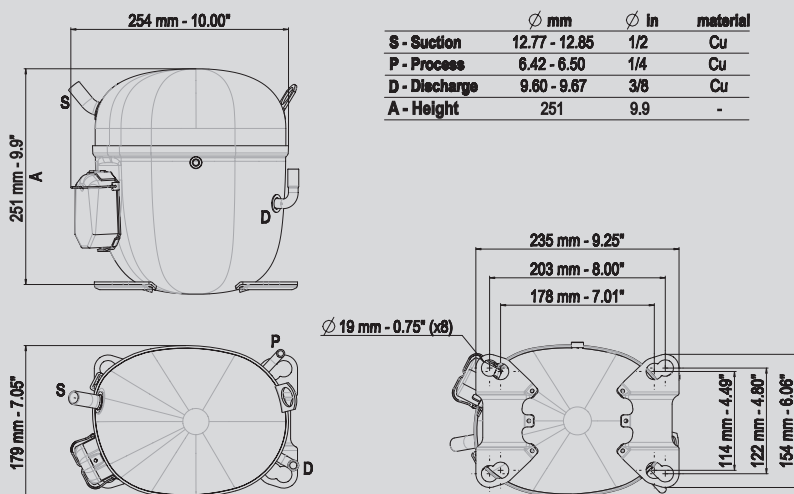
External Views and Wiring Diagrams

External Views

DWG18 - NJ SERIES

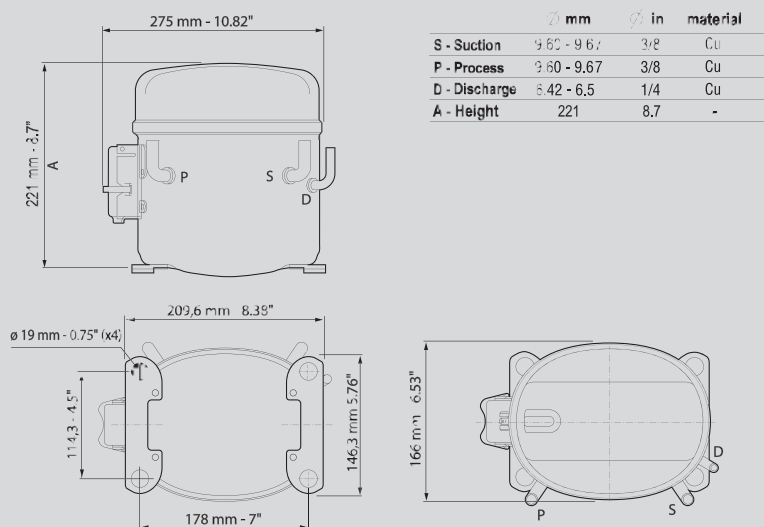


DWG19 - NTU SERIES

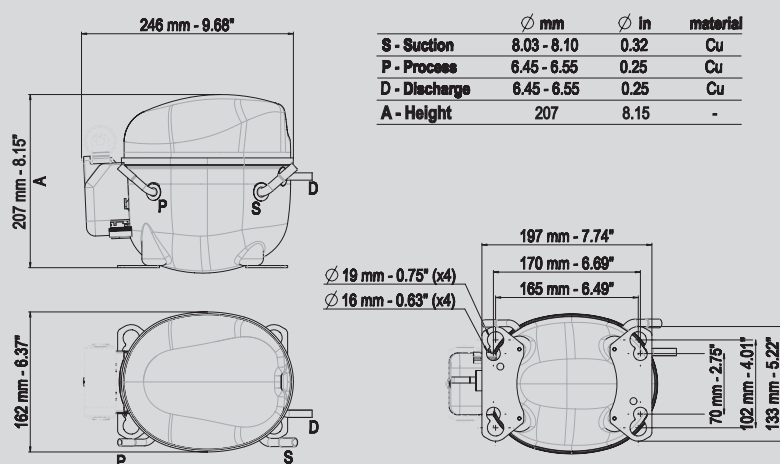


External Views

DWG21 - T SERIES



DWG22 - NEK / NEU / VNE SERIES



Embraco Compressor/Condensing Unit

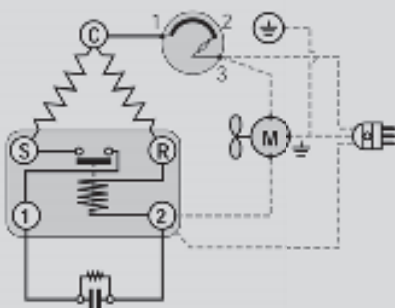
External Views and Wiring Diagrams

Wiring Diagrams Key

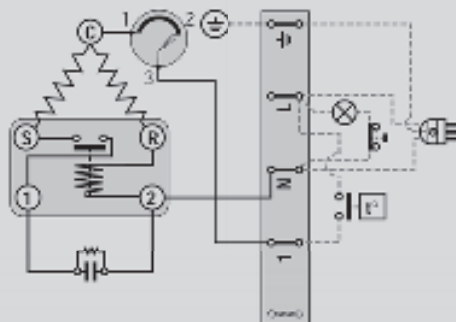
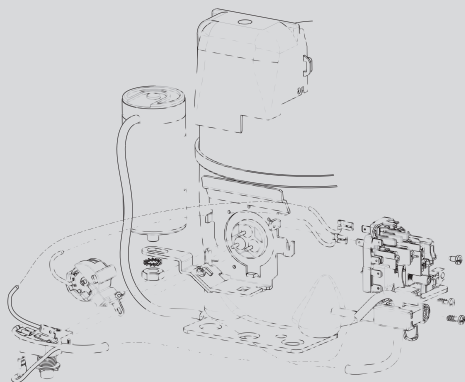
	OVERLOAD PROTECTOR		PTC START DEVICE ¹
	OVERLOAD PROTECTOR		INTEGRATED PTC DEVICE
	CURRENT START RELAY		CURRENT START RELAY WITH CAPACITOR CONNECTIONS
	3CR CURRENT START RELAY		3ARR3 START RELAY (VOLTAGE).
	RUN CAPACITOR		RUN CAPACITOR (MANDATORY - NOT SUPPLIED)
	OPTIONAL RUN CAPACITOR		START CAPACITOR
	FAN		PUSHBUTTON
	LAMP		SINGLE PHASE MOTOR
	3-PHASE MOTOR		THERMOSTAT
	LOW-HIGH PRESSURE SWITCH		PILOT CIRCUIT 24 OR 220 V
	EARTH CONNECTION		COMMON (INTERNAL OVERLOAD PROTECTOR)
	3-PHASE SUPPLY		START
	SINGLE PHASE SUPPLY		
	COMMON		
	RUN		
	TERMINAL BLOCK		BROWN CABLE
	WHITE CABLE		BLACK CABLE
	BLUE CABLE		RED CABLE
	YELLOW-GREEN CABLE		CONNECTIONS TO BE MADE BY THE CUSTOMER (NOT SUPPLIES)
	CONNECTIONS SUPPLIED		

Wiring Diagrams

SM04 - NE SERIES



SM05 - EMT / NE Series

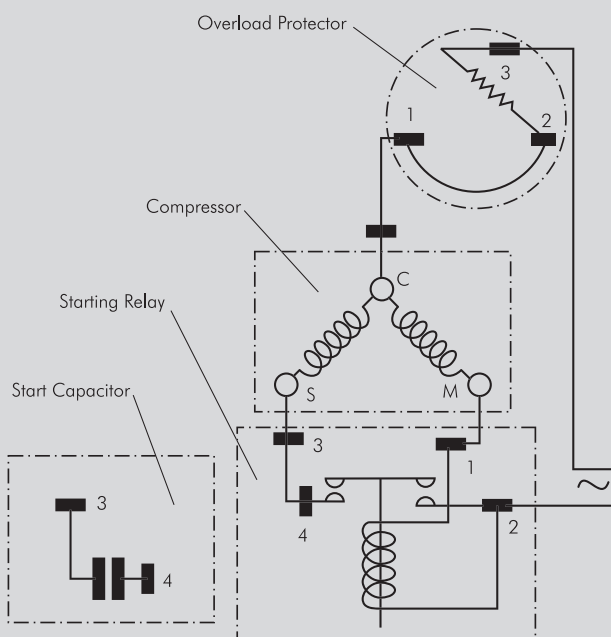


Embraco Compressor/Condensing Unit

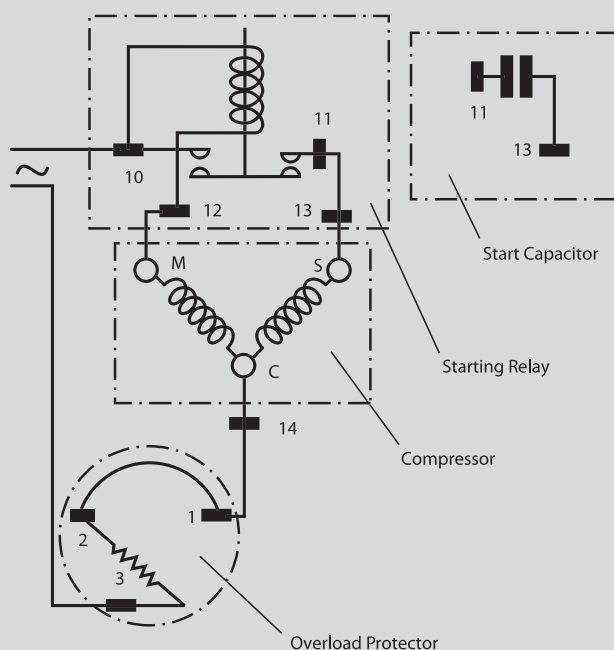
External Views and Wiring Diagrams

Wiring Diagrams

SM07 - EM COMPRESSORS

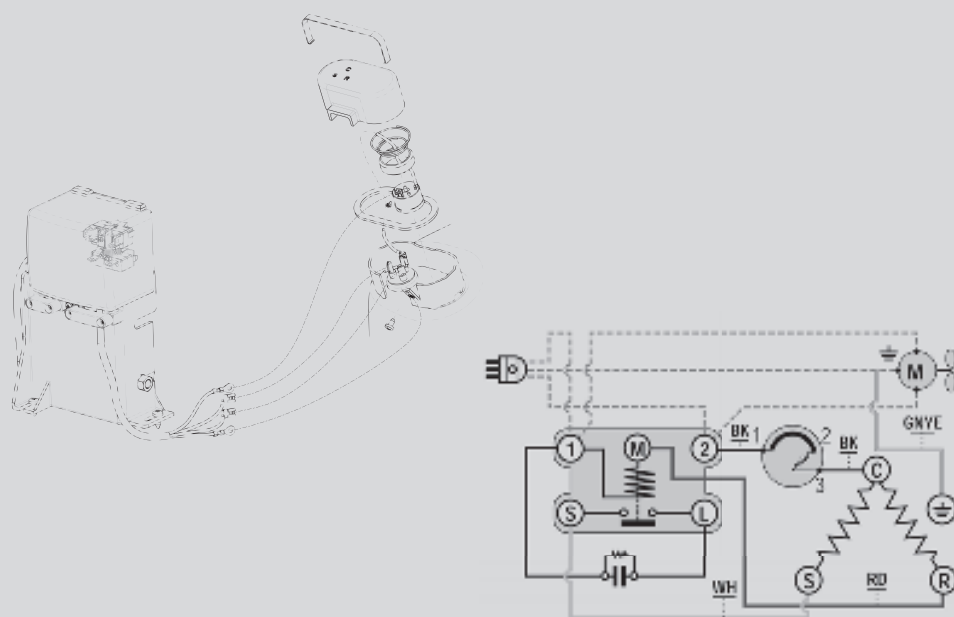


SM08 - F COMPRESSORS

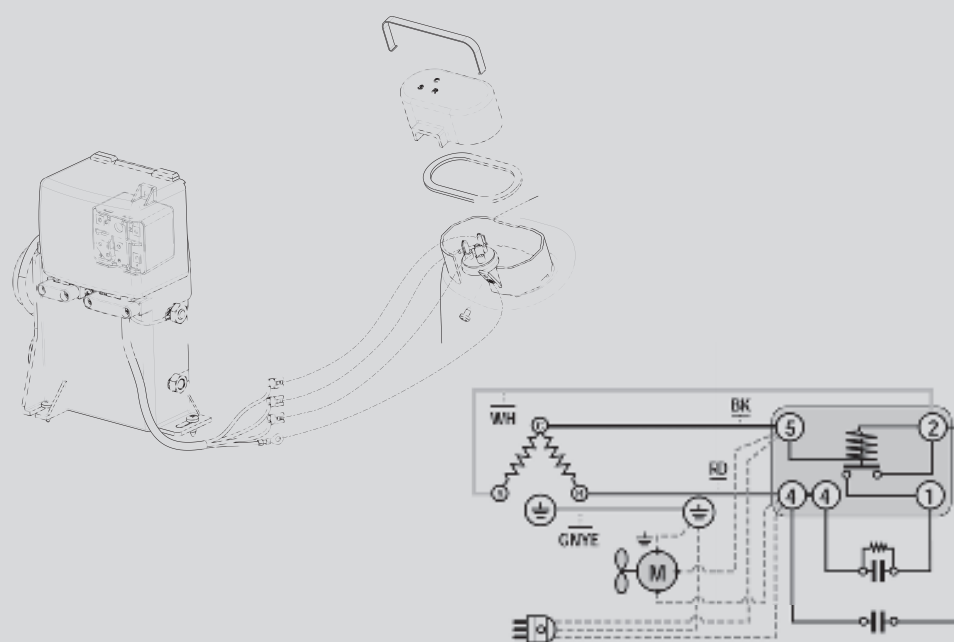


Wiring Diagrams

SM014 - NJ SERIES CSIR BOX



SM16 - NJ SERIES CSR BOX (Internal Overload Protector)

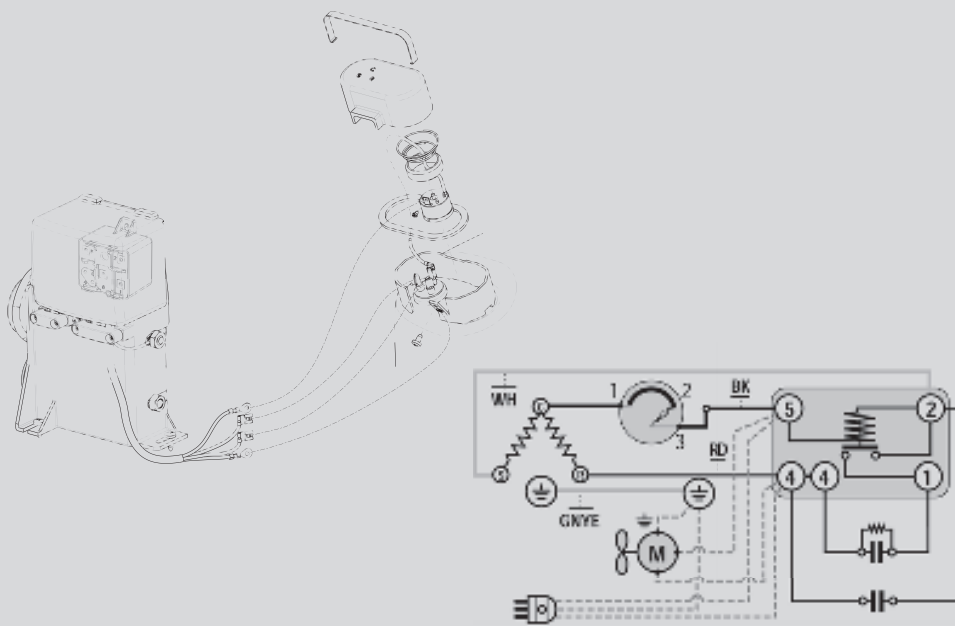


Embraco Compressor/Condensing Unit

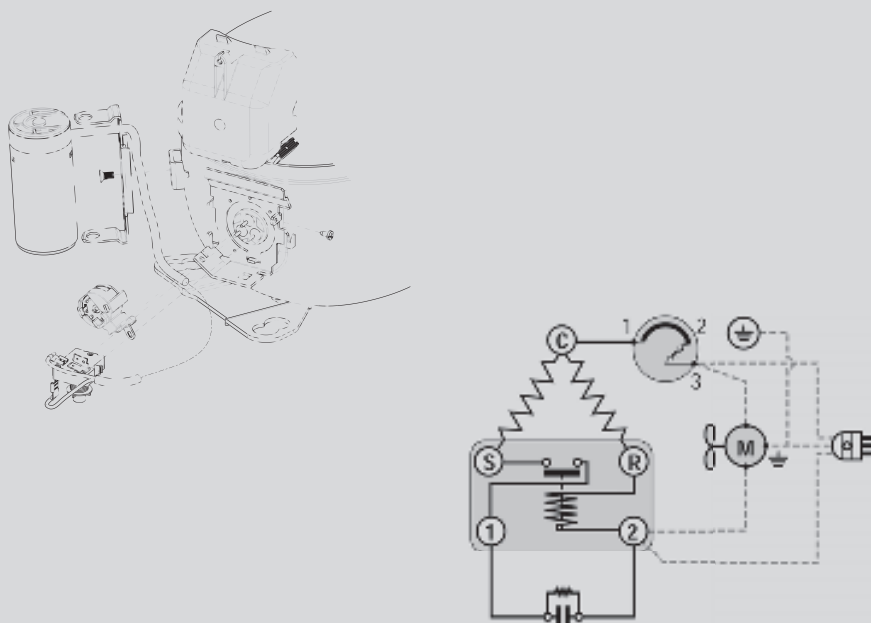
External Views and Wiring Diagrams

Wiring Diagrams

SM017 - NJ SERIES CSR BOX (External Overload Protector)

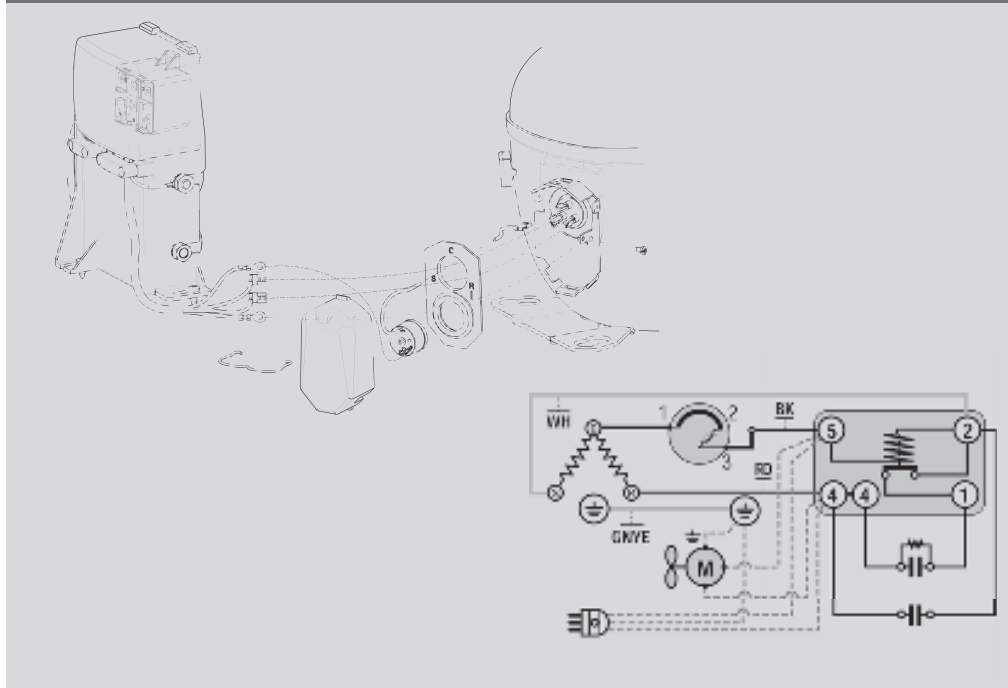


SM020 - NT SERIES CSIR

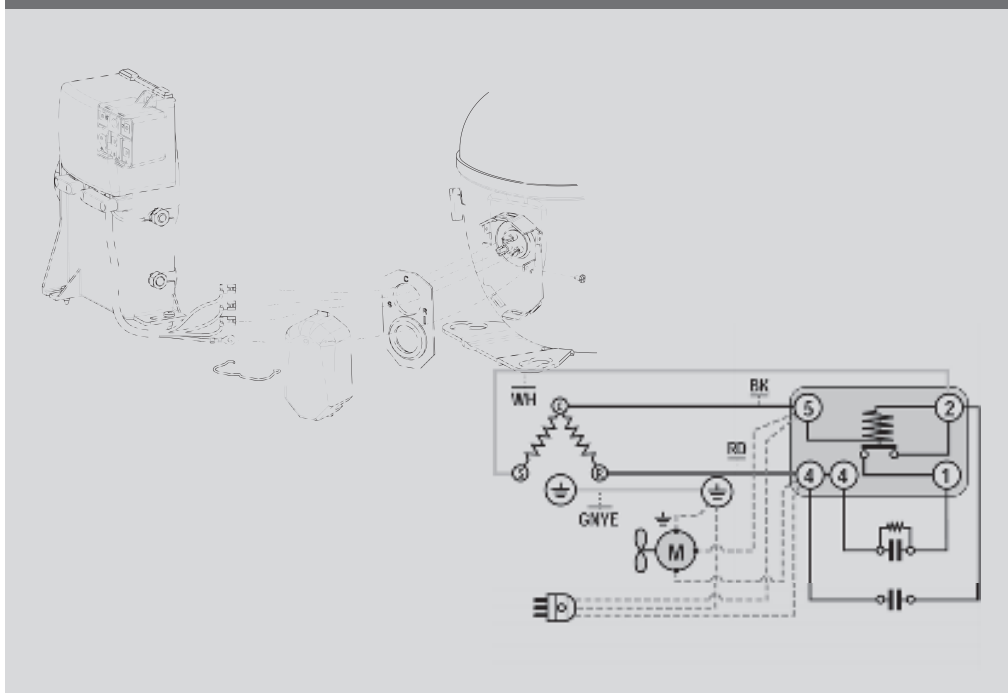


Wiring Diagrams

SM21 - NT SERIES CSR BOX



SM26 - NT SERIES CSR BOX (Internal Overload Protector)

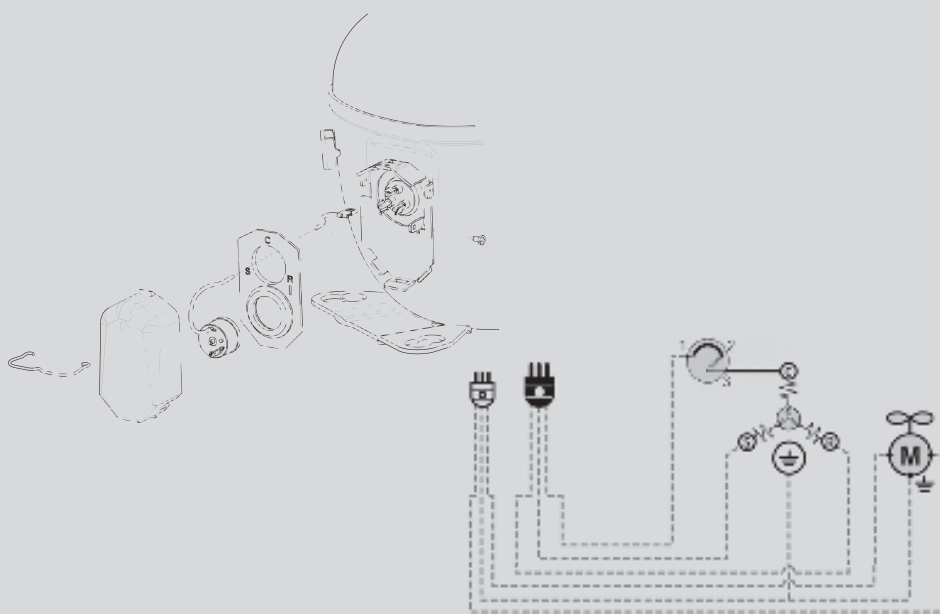


Embraco Compressor/Condensing Unit

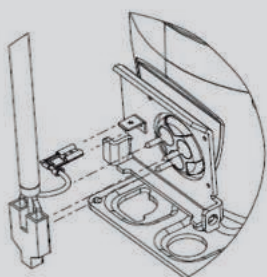
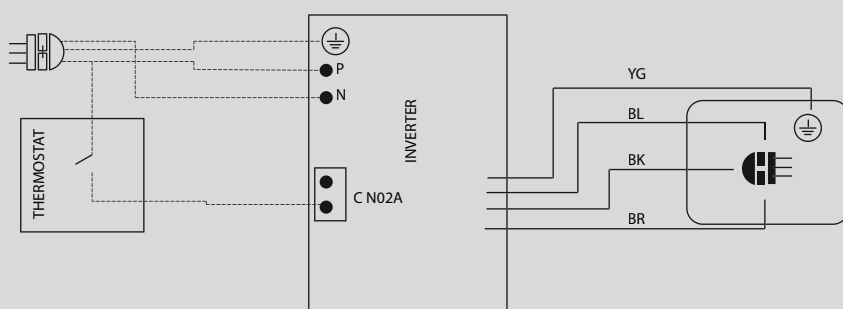
External Views and Wiring Diagrams

Wiring Diagrams

SM27 - NT SERIES 3-PHASE (Internal + External Overload Protector)



CON01 - VEMY6 / VEG (Drop-in)



Embraco Spare Parts

Relay/Overloads and Capacitors



	MODEL	Embraco SKU	Description	OLP - Overload Protector		Starting Device - Relay		Start Capacitor		Run Capacitor	
				Embraco (pn)	Totaline (Item Code)	Embraco (pn)	Totaline (Item Code)	Embraco (pn)	Totaline (Item Code)	Embraco (pn)	Totaline (Item Code)
R404 Medium Temp	EMT6144GK	912EA6764AA	EMT6144GK 220-240V/50Hz	2319103	EMB2319103	2278051	EMB2278051	2252293	EMB2252293	-	-
	EMT6165GK	912GA6764AA	EMT6165GK 220-240V/50Hz	2319113	EMB2319113	2334122	EMB2334122	2252346	EMB2252346	-	-
	NEK6181GK	957MA51M1AJ	NEK6181GK 220-240V 50HZ	2319093	EMB2319093	2334121	EMB2334121	2252347	EMB2252347	-	-
	NEK6210GK	958CA51M1AJ	NEK6210GK 220-240V 50Hz	2319095	EMB2319095	2334105	EMB2334105	2252346	EMB2252346	-	-
	NEK6213GK	959BA51M1AJ	NEK6213GK 220-240V 50Hz	2319080	EMB2319080	2334119	EMB2334119	2252346	EMB2252346	-	-
	NEK6217GK	959GA5190AF	NEK6217GK 220-240V 50Hz	2321112	EMB2321112	1253023	EMB1253023	2252270	EMB2252270	2253310	EMB2253310
	NT6222GK	922CA0904ZF	NT6222GK 220-240V 50Hz - Rotolock	2321123	EMB2321123	1253022	EMB1253022	2252269	EMB2252269	2253310	EMB2253310
	NJ9226GK	944LV1904ZF	NJ9226GK 230V 50HZ - Rotolock	2289020	EMB2289020	1253009	EMB1253009	2252269	EMB2252269	2253312	EMB2253312
	NJ9226GS	948LM1901ZF	NJ9226GS 380-420V 50HZ 3PH/440-480V 60H + Rotolock	INT		-		-	-	-	-
	NJ9232GK	943NA1904ZF	NJ9232GK 220-240V 50Hz - Rotolock	2289028	EMB2289028	1253007	EMB1253007	2252269	EMB2252269	2253314	EMB2253314
	NJ9232GS	947NM1901ZF	NJ9232GS 380-420V 50HZ 3PH/440-480V 60H + Rotolock	INT		-		-	-	-	-
	NJ9238GK	943RV1904ZF	NJ9238GK 230V 50Hz - Rotolock	2289029	EMB2289029	1253007	EMB1253007	2252274	EMB2252274	2253313	EMB2253313
R404 Low Temp	NEK2150GK	959AA51M1AJ	NEK2150GK 220-240V 50Hz	2319064	EMB2319064	2334112	EMB2334112	2252345	EMB2252345	-	-
	NEU2168GK	959MA51M1AJ	NEU2168GK 220-240V 50Hz	2319147	EMB2319147	2334148	EMB2334148	2252348	EMB2252348	-	-
	NEU2178GK	959OA5190AF	NEU2178GK 220-240V 50Hz	2321146	EMB2321146	1253014	EMB1253014	2252269	EMB2252269	2253310	EMB2253310
	NT2210GK	923KA0204AF	NT2210GK 220-240V 50Hz	INT		1253002	EMB1253002	2252269	EMB2252269	2253312	EMB2253312
	NJ2212GK	943DA1904ZF	NJ2212GK 220-240V 50Hz - Rotolock	INT		1253010	EMB1253010	2252269	EMB2252269	2253312	EMB2253312
R134 Medium Temp	NEK6160Z	267BA51M1AJ	NEK6160Z 220-240V 50Hz	2319069	EMB2319069	2334116	EMB2334116	2252347	EMB2252347	-	-
	NEK6170Z	267DA51B1AA	NEK6170Z 220-240V 50Hz	2319069	EMB2319069	2334117	EMB2334117	2252347	EMB2252347	-	-
	NEK6187Z	268AA51M1AJ	NEK6187Z 220-240V 50Hz	2319073	EMB2319073	2334105	EMB2334105	2252346	EMB2252346	-	-
	NEK6210Z	268BA51M1AJ	NEK6210Z 220-240V 50Hz	2319095	EMB2319095	2334105	EMB2334105	2252346	EMB2252346	-	-
	NEK6214Z	269JA51M1AJ	NEK6214Z 220-240V 50Hz	2319107	EMB2319107	2334139	EMB2334139	2252345	EMB2252345	-	-
	NT6217Z	212BA0913ZF	NT6217Z 220-240V 50Hz - Rotolock	2319086	EMB2319086	2334135	EMB2334135	2252364	EMB2252364	-	-
	NJ6220Z	144HA1904ZF	NJ6220Z 220-240V 50Hz - Rotolock	2289016	EMB2289016	1253023	EMB1253023	2252269	EMB2252269	-	-
	NJ6226Z	142HA1504ZF	NJ6226Z 220-240V 50Hz - Rotolock	2289022	EMB2289022	1253012	EMB1253012	2252270	EMB2252270	2253311	EMB2253311

Embraco Spare Parts

Condensing Units

	Model Carrier	Embraco CDU SKU	Description	Compressor (incl. Electrics) - Embraco		CONDENSING UNITS SPARE PARTS			
						Suction Valve		Discharge valve	
				Embraco	Totaline	Embraco	Totaline	Embraco	Totaline
R404A Medium Temp	UEMT6144GK	594EA5208AA	UEMT6144GK 220-240V/50Hz	912EA6764AA	EMT6144GK	2110024	EMB2110024	2110025	EMB2110025
	UEMT6165GK	592GA5212AA	UEMT6165GK 220-240V/50Hz	912GA6764AA	EMT6165GK	2110024	EMB2110024	2110025	EMB2110025
	UNEK6181GK	557MA8212AA	UNEK6181GK 220-240V 50HZ	957MA51M1AJ	NEK6181GK	2110085	EMB2110085		
	UNEK6213GK	659BA8212AA	UNEK6213GK 220-240V 50HZ	959BA51M1AJ	NEK6213GK	2110059	EMB2110059	2110085	EMB2110085
	UNT6222GK	602CA5204AA	UNT6222GK 220-240V 50Hz	922CA0904ZF	NT6222GK	2110057	EMB2110057		
	UNT6226GK	603BA5204AA	UNT6226GK 220-240V 50HZ	923BA0804ZF	NT6226GK	2110057	EMB2110057	2110056	EMB2110056
	UNJ9226GK	644LV5604AA	UNJ9226GK 230V 50HZ	944LV1904ZF	NJ9226GK	2110054	EMB2110054	2110049	EMB2110049
	UNJ9226GS	648LM5603AA	UNJ9226GS TRIFASE	948LM1901ZF	NJ9226GS	2110054	EMB2110054	2110049	EMB2110049
	UNJ9232GK	643NA5204AA	UNJ9232GK 220-240V 50HZ	943NA1904ZF	NJ9232GK	2110058	EMB2110058	2110057	EMB2110057
	UNJ9232GS	647NM5603AA	UNJ9232GS TRIFASE	947NM1901ZF	NJ9232GS	2110054	EMB2110054	2110050	EMB2110050
	UNJ9238GK	643RV5204AA	UNJ9238GK 230V 50HZ	943RV1904ZF	NJ9238GK	2110058	EMB2110058	2110057	EMB2110057
	UNJ9238GS	647RM5603AA	UNJ9238GS TRIFASE	947RM1901ZF	NJ9238GS	2110050	EMB2110050		
R404aA Low Temp	UNE2125GK	671TA5312AA	UNE2125GK 220-240V 50HZ	951IA51M2AJ	NE2125GK				
	UNE2134GK	673TA8212AA	UNE2134GK 220-240V 50HZ	953AA51M2AJ	NE2134GK	2110059	EMB2110059	2110085	EMB2110085
	UNEK2150GK	559AA5612AA	UNEK2150GK 220-240V 50HZ	959AA51M1AJ	NEK2150GK	2110046	EMB2110046	2110047	EMB2110047
	UNEU2168GK	569MAC312AA	UNEU2168GK 220-240V 50HZ	959MA51M1AJ	NEU2168GK				
	UNT2210GK	503KA5204AA	UNT2210GK 220-240V 50Hz, ROTOLock	923KA0204AF	NT2210GK	2110057	EMB2110057	2110056	EMB2110056
	UNJ2212GK	643TA5604AA	Condenser Unit UNJ2212GK 220-240V/50Hz	943DA1904ZF	NJ2212GK	2110054	EMB2110054	2110049	EMB2110049
R134A Medium Temp	UNEK6160Z	557BA5212AA	UNEK6160Z 220-240V 50HZ	267BA51M1AJ	NEK6160Z	2110024	EMB2110024	2110025	EMB2110025
	UNEK6170Z	573DA5212AA	UNEK6170Z 220-240V 50HZ	267DA51B1AA	NEK6170Z	2110024	EMB2110024	2110025	EMB2110025
	UNEK6187Z	557AA5212AA	UNEK6187Z 220-240V 50HZ	268AA51M1AJ	NEK6187Z	2110024	EMB2110024	2110025	EMB2110025
	UNEK6210Z	558BA8212AA	UNEK6210Z 220-240V 50HZ	268BA51M1AJ	NEK6210Z	2110059	EMB2110059		
	UNEK6214Z	559HA5212AA	Cond. Unit UNEK6214Z 220-240V 50HZ	269JA51M1AJ	NEK6214Z	2110024	EMB2110024	2110025	EMB2110025
	UNT6217Z	602DA5212AA	UNT6217Z 220-240V 50HZ ROTOLock	212BA0913ZF	NT6217Z	2110057	EMB2110057	2110056	EMB2110056
	UNJ6220Z	644HA5204AA	UNJ6220Z 220-240V 50HZ	144HA1904ZF	NJ6220Z	2110057	EMB2110057	2110056	EMB2110056
	UNJ6226Z	642HA5204AA	UNJ6226Z 220-240V 50Hz	142HA1504ZF	NJ6226Z	2110058	EMB2110058	2110056	EMB2110056
	UNJ6226ZX	546EM5203AA	UNJ6226ZX TRIFASE	148IM1901VA	NJ6226ZX	2110058	EMB2110058	2110056	EMB2110056

CONDENSING UNITS SPARE PARTS

Fan motor / complete fan (in case of no assembly)			Fan Blade			Receiver			Condenser		
Fan motor code	Fan motor description	Totaline	Fan blade code	Fan blade description	Totaline	Receiver code	Receiver description	Totaline	Condenser code	Condenser description	Totaline
1450102	MOTOR 10W 230V 50HZ (W)	EMB1450102	2455008	Fan Blade D.200/28°/5P	EMB2455008	2457041	RECEIVER PED (0,58 LITER)	EMB2457041	2451204	CONDENSER 3R8T (210X200X64,9 - 3,2)	EMB2451204
1450102	MOTOR 10W 230V 50HZ (W)	EMB1450102	2455009	Fan D.230/28°/5P	EMB2455009	2457039	RECEIVER PED (1,1 LITER)	EMB2457039	2451205	CONDENSER 3R9T (239X225X64,9 - 3,2)	EMB2451205
1450103	MOTOR 16W 230V 50HZ (W)	EMB1450103	2455003	Fan D.254/28°/5P	EMB2455003	2457039	RECEIVER PED (1,1 LITER)	EMB2457039	2451206	CONDENSER 3R11T (275X275X64,9 - 3,2)	EMB2451206
1450103	MOTOR 16W 230V 50HZ (W)	EMB1450103	2455003	Fan D.254/28°/5P	EMB2455003	2457039	RECEIVER PED (1,1 LITER)	EMB2457039	2451206	CONDENSER 3R11T (275X275X64,9 - 3,2)	EMB2451206
1450087	MOTOR 34W 230V 50HZ (EBM) (Z) fixed c.	EMB1450087	2455010	Fan D.275/31°/5P	EMB2455010	2457044	Receiver PED (2,3 Liters)	EMB2457044	2451140	CONDENSER 3R12T (347X300X86,6 - 2,8)	EMB2451140
1450087	MOTOR 34W 230V 50HZ (EBM) (Z) fixed c.	EMB1450087	2455011	Fan D.300/28°/5P	EMB2455011	2457044	Receiver PED (2,3 Liters)	EMB2457044	2451221	Condenser 3R14T(350x350x64,9-2,8) grooved	EMB2451221
1450087	MOTOR 34W 230V 50HZ (EBM) (Z) fixed c.	EMB1450087	2455011	Fan D.300/28°/5P	EMB2455011	2457044	Receiver PED (2,3 Liters)	EMB2457044	2451221	Condenser 3R14T(350x350x64,9-2,8) grooved	EMB2451221
1450080	MOTOR 34W 400V 50HZ (EBM)	EMB1450080	2455011	Fan D.300/28°/5P	EMB2455011	2457044	Receiver PED (2,3 Liters)	EMB2457044	2451221	Condenser 3R14T(350x350x64,9-2,8) grooved	EMB2451221
1996589	300 ML Caged Fan assembly single phase				EMB1996589	2457045	Receiver PED (3,9 Liters)	EMB2457045	2451198	CONDENSER 3R14T (380X350X64,9 - 3,2)	EMB2451198
1451088	'300 ML Caged Fan assembly Three phase				EMB1451088	2457045	Receiver PED (3,9 Liters)	EMB2457045	2451198	CONDENSER 3R14T (380X350X64,9 - 3,2)	EMB2451198
1996589	300 ML Caged Fan assembly single phase				EMB1996589	2457045	Receiver PED (3,9 Liters)	EMB2457045	2451199	CONDENSER 4R14T (380X350X86 - 3,2)	EMB2451199
1451088	'300 ML Caged Fan assembly Three phase				EMB1451088	2457045	Receiver PED (3,9 Liters)	EMB2457045	2451199	CONDENSER 4R14T (380X350X86 - 3,2)	EMB2451199
1450102	MOTOR 10W 230V 50HZ (W)	EMB1450102	2455009	Fan D.230/28°/5P	EMB2455009				2451205	CONDENSER 3R9T (239X225X64,9 - 3,2)	EMB2451205
1450103	MOTOR 16W 230V 50HZ (W)	EMB1450103	2455003	Fan D.254/28°/5P	EMB2455003	2457039	RECEIVER PED (1,1 LITER)	EMB2457039	2451206	CONDENSER 3R11T (275X275X64,9 - 3,2)	EMB2451206
1450103	MOTOR 16W 230V 50HZ (W)	EMB1450103	2455003	Fan D.254/28°/5P	EMB2455003	2457039	RECEIVER PED (1,1 LITER)	EMB2457039	2451206	CONDENSER 3R11T (275X275X64,9 - 3,2)	EMB2451206
1450103	MOTOR 16W 230V 50HZ (W)	EMB1450103	2455003	Fan D.254/28°/5P	EMB2455003				2451217	CONDENSER 4R11T (275X275X86,6 - 3,2)0722	EMB2451217
1450087	MOTOR 34W 230V 50HZ (EBM) (Z) fixed c.	EMB1450087	2455010	Fan D.275/31°/5P	EMB2455010	2457044	Receiver PED (2,3 Liters)	EMB2457044	2451140	CONDENSER 3R12T (347X300X86,6 - 2,8)	EMB2451140
1450087	MOTOR 34W 230V 50HZ (EBM) (Z) fixed c.	EMB1450087	2455010	Fan D.275/31°/5P	EMB2455010	2457044	Receiver PED (2,3 Liters)	EMB2457044	2451140	CONDENSER 3R12T (347X300X86,6 - 2,8)	EMB2451140
1450102	MOTOR 10W 230V 50HZ (W)	EMB1450102	2455009	Fan D.230/28°/5P	EMB2455009	2457041	RECEIVER PED (0,58 LITER)	EMB2457041	2451205	CONDENSER 3R9T (239X225X64,9 - 3,2)	EMB2451205
1450102	MOTOR 10W 230V 50HZ (W)	EMB1450102	2455009	Fan D.230/28°/5P	EMB2455009	2457039	RECEIVER PED (1,1 LITER)	EMB2457039	2451205	CONDENSER 3R9T (239X225X64,9 - 3,2)	EMB2451205
1450103	MOTOR 16W 230V 50HZ (W)	EMB1450103	2455003	Fan D.254/28°/5P	EMB2455003	2457039	RECEIVER PED (1,1 LITER)	EMB2457039	2451206	CONDENSER 3R11T (275X275X64,9 - 3,2)	EMB2451206
1450103	MOTOR 16W 230V 50HZ (W)	EMB1450103	2455003	Fan D.254/28°/5P	EMB2455003	2457039	RECEIVER PED (1,1 LITER)	EMB2457039	2451206	CONDENSER 3R11T (275X275X64,9 - 3,2)	EMB2451206
1450103	MOTOR 16W 230V 50HZ (W)	EMB1450103	2455003	Fan D.254/28°/5P	EMB2455003	2457039	RECEIVER PED (1,1 LITER)	EMB2457039	2451206	CONDENSER 3R11T (275X275X64,9 - 3,2)	EMB2451206
1450106	MOTOR 34W 230V 50-60HZ EBM (W)	EMB1450106	2455010	Fan D.275/31°/5P	EMB2455010	2457044	Receiver PED (2,3 Liters)	EMB2457044	2451218	CONDENSER 3R12T (327X300X64,9 - 2,5)0722	EMB2451218
1450087	MOTOR 34W 230V 50HZ (EBM) (Z) fixed c.	EMB1450087	2455010	Fan D.275/31°/5P	EMB2455010	2457044	Receiver PED (2,3 Liters)	EMB2457044	2451140	CONDENSER 3R12T (347X300X86,6 - 2,8)	EMB2451140
1450087	MOTOR 34W 230V 50HZ (EBM) (Z) fixed c.	EMB1450087	2455010	Fan D.275/31°/5P	EMB2455010	2457044	Receiver PED (2,3 Liters)	EMB2457044	2451140	CONDENSER 3R12T (347X300X86,6 - 2,8)	EMB2451140
1450080	MOTOR 34W 400V 50HZ (EBM)	EMB1450080	2455010	Fan D.275/31°/5P	EMB2455010	2457044	Receiver PED (2,3 Liters)	EMB2457044	2451140	CONDENSER 3R12T (347X300X86,6 - 2,8)	EMB2451140

Embraco Spare Parts

C-Unit Spares

R404 Medium Temp spare parts list

Condensing unit model	Volts & Hz	Compressor	Suction Valve	Discharge Valve
UEMT6144GK	220-240/50	EMT6144GK	EMB2110024	EMB2110025
UEMT6165GK	220-240/50	EMT6165GK	EMB2110024	EMB2110025
UNEK6181GK	220-240/50	NEK6181GK	EMB2110085	
UNEK6213GK	220-240/50	NEK6213GK	EMB2110059	EMB2110085
UNT6222GK	220-240/50	NT6222GK	EMB2110057	
UNT6226GK	220-240/50	NT6226GK	EMB2110057	EMB2110056
UNJ9226GK	230/50	NJ9226GK	EMB2110054	EMB2110049
UNJ9226GS	380-420/50	NJ9226GS	EMB2110054	EMB2110049
UNJ9232GK	220-240/50	NJ9232GK	EMB2110058	EMB2110057
UNJ9232GS	380-420/50	NJ9232GS	EMB2110054	EMB2110050
UNJ9238GK	230/50	NJ9238GK	EMB2110058	EMB2110057
UNJ9238GS	380-420/50	NJ9238GS	EMB2110050	

Condensing unit model	Volts & Hz	Fan Motor	Fan Blade	Receiver
UEMT6144GK	220-240/50	EMB1450102	EMB2455008	EMB2457041
UEMT6165GK	220-240/50	EMB1450102	EMB2455009	EMB2457039
UNEK6181GK	220-240/50	EMB1450103	EMB2455003	EMB2457039
UNEK6213GK	220-240/50	EMB1450103	EMB2455003	EMB2457039
UNT6222GK	220-240/50	EMB1450087	EMB2455010	EMB2457044
UNT6226GK	220-240/50	EMB1450087	EMB2455011	EMB2457044
UNJ9226GK	230/50	EMB1450087	EMB2455011	EMB2457044
UNJ9226GS	380-420/50	EMB1450080	EMB2455011	EMB2457044
UNJ9232GK	220-240/50		EMB1996589	EMB2457045
UNJ9232GS	380-420/50		EMB1451088	EMB2457045
UNJ9238GK	230/50		EMB1996589	EMB2457045
UNJ9238GS	380-420/50		EMB1451088	EMB2457045

Condensing unit model	Volts & Hz	Condenser
UEMT6144GK	220-240/50	EMB2451204
UEMT6165GK	220-240/50	EMB2451205
UNEK6181GK	220-240/50	EMB2451206
UNEK6213GK	220-240/50	EMB2451206
UNT6222GK	220-240/50	EMB2451140
UNT6226GK	220-240/50	EMB2451221
UNJ9226GK	230/50	EMB2451221
UNJ9226GS	380-420/50	EMB2451221
UNJ9232GK	220-240/50	EMB2451198
UNJ9232GS	380-420/50	EMB2451198
UNJ9238GK	230/50	EMB2451199
UNJ9238GS	380-420/50	EMB2451199

R404 Low Temp spare parts list

Condensing unit model	Volts & Hz	Compressor	Suction Valve	Discharge Valve
UNE2125GK	220-240/50	NE2125GK		
UNE2134GK	220-240/50	NE2134GK	EMB2110059	EMB2110085
UNEK2150GK	220-240/50	NEK2150GK	EMB2110046	EMB2110047
UNEU2168GK	220-240/50	NEU2168GK		
UNT2210GK	220-240/50	NT2210GK	EMB2110057	EMB2110056
UNJ2212GK	220-240/50	NJ2212GK	EMB2110054	EMB2110049

Compressor model	Volts & Hz	Fan Motor	Fan Blade	Receiver
UNE2125GK	220-240/50	EMB1450102	EMB2455009	
UNE2134GK	220-240/50	EMB1450103	EMB2455003	EMB2457039
UNEK2150GK	220-240/50	EMB1450103	EMB2455003	EMB2457039
UNEU2168GK	220-240/50	EMB1450103	EMB2455003	
UNT2210GK	220-240/50	EMB1450087	EMB2455010	EMB2457044
UNJ2212GK	220-240/50	EMB1450087	EMB2455010	EMB2457044

Compressor model	Volts & Hz	Fan Motor
UNE2125GK	220-240/50	EMB2451205
UNE2134GK	220-240/50	EMB2451206
UNEK2150GK	220-240/50	EMB2451206
UNEU2168GK	220-240/50	EMB2451217
UNT2210GK	220-240/50	EMB2451140
UNJ2212GK	220-240/50	EMB2451140

Embraco Spare Parts

C-unit Spares

R134a Medium Temp spare parts list

Condensing unit model	Volts & Hz	Compressor	Suction Valve	Discharge Valve
UNEK6160Z	220-240/50	NEK6160Z	EMB2110024	EMB2110025
UNEK6170Z	220-240/50	NEK6170Z	EMB2110024	EMB2110025
UNEK6187Z	220-240/50	NEK6187Z	EMB2110024	EMB2110025
UNEK6210Z	220-240/50	NEK6210Z	EMB2110059	
UNEK6214Z	220-240/50	NEK6214Z	EMB2110024	EMB2110025
UNT6217Z	220-240/50	NT6217Z	EMB2110057	EMB2110056
UNJ6220Z	220-240/50	NJ6220Z	EMB2110057	EMB2110056
UNJ6226Z	220-240/50	NJ6226Z	EMB2110058	EMB2110056
UNJ6226ZX	380-420/50	NJ6226ZX	EMB2110058	EMB2110056

Compressor model	Volts & Hz	Fan Motor	Fan Blade	Receiver
UNEK6160Z	220-240/50	EMB1450102	EMB2455009	EMB2457041
UNEK6170Z	220-240/50	EMB1450102	EMB2455009	EMB2457039
UNEK6187Z	220-240/50	EMB1450103	EMB2455003	EMB2457039
UNEK6210Z	220-240/50	EMB1450103	EMB2455003	EMB2457039
UNEK6214Z	220-240/50	EMB1450103	EMB2455003	EMB2457039
UNT6217Z	220-240/50	EMB1450106	EMB2455010	EMB2457044
UNJ6220Z	220-240/50	EMB1450087	EMB2455010	EMB2457044
UNJ6226Z	220-240/50	EMB1450087	EMB2455010	EMB2457044
UNJ6226ZX	380-420/50	EMB1450080	EMB2455010	EMB2457044

Compressor model	Volts & Hz	Condenser
UNEK6160Z	220-240/50	EMB2457041
UNEK6170Z	220-240/50	EMB2457039
UNEK6187Z	220-240/50	EMB2457039
UNEK6210Z	220-240/50	EMB2457039
UNEK6214Z	220-240/50	EMB2457039
UNT6217Z	220-240/50	EMB2457044
UNJ6220Z	220-240/50	EMB2457044
UNJ6226Z	220-240/50	EMB2457044
UNJ6226ZX	380-420/50	EMB2457044

Embraco Spare Parts

Compressor Spares



R404 Medium Temp spare parts list

Compressor model	Volts & Hz	Overload	Start Device (Relay)	Run Capacitor
EMT6144GK	220-240/50	EMB2319103	EMB2278051	-
EMT6165GK	220-240/50	EMB2319113	EMB2334122	-
NEK6181GK	220-240/50	EMB2319093	EMB2334121	-
NEK6210GK	220-240/50	EMB2319095	EMB2334105	-
NEK6213GK	220-240/50	EMB2319080	EMB2334119	-
NEK6217GK	220-240/50	EMB2321112	EMB1253023	EMB2253310
NT6222GK	220-240/50	EMB2321123	EMB1253022	EMB2253310
NJ9226GK	230/50	EMB2289020	EMB1253009	EMB2253312
NJ9226GS	380-420/50	INTERNAL	-	-
NJ9232GK	220-240/50	EMB2289028	EMB1253007	EMB2253314
NJ9232GS	380-420/50	INTERNAL	-	-
NJ9238GK	230/50	EMB2289029	EMB1253007	EMB2253313

Compressor model	Volts & Hz	Start Capacitor
EMT6144GK	220-240/50	EMB2252293
EMT6165GK	220-240/50	EMB2252346
NEK6181GK	220-240/50	EMB2252347
NEK6210GK	220-240/50	EMB2252346
NEK6213GK	220-240/50	EMB2252346
NEK6217GK	220-240/50	EMB2252270
NT6222GK	220-240/50	EMB2252269
NJ9226GK	230/50	EMB2252269
NJ9226GS	380-420/50	-
NJ9232GK	220-240/50	EMB2252269
NJ9232GS	380-420/50	-
NJ9238GK	230/50	EMB2252274

Embraco Spare Parts

Compressor Spares

R404 Low Temp spare parts list

Compressor model	Volts & Hz	Overload	Start Device (Relay)	Run Capacitor
NEK2150GK	220-240/50	EMB2319064	EMB2334112	-
NEU2168GK	220-240/50	EMB2319147	EMB2334148	-
NEU2178GK	220-240/50	EMB2321146	EMB1253014	EMB2253310
NT2210GK	220-240/50	INTERNAL	EMB1253002	EMB2253312
NJ2212GK	220-240/50	INTERNAL	EMB1253010	EMB2253312

Compressor model	Volts & Hz	Start Capacitor
NEK2150GK	220-240/50	EMB2252345
NEU2168GK	220-240/50	EMB2252348
NEU2178GK	220-240/50	EMB2252269
NT2210GK	220-240/50	EMB2252269
NJ2212GK	220-240/50	EMB2252269

R134a Medium Temp spare parts list

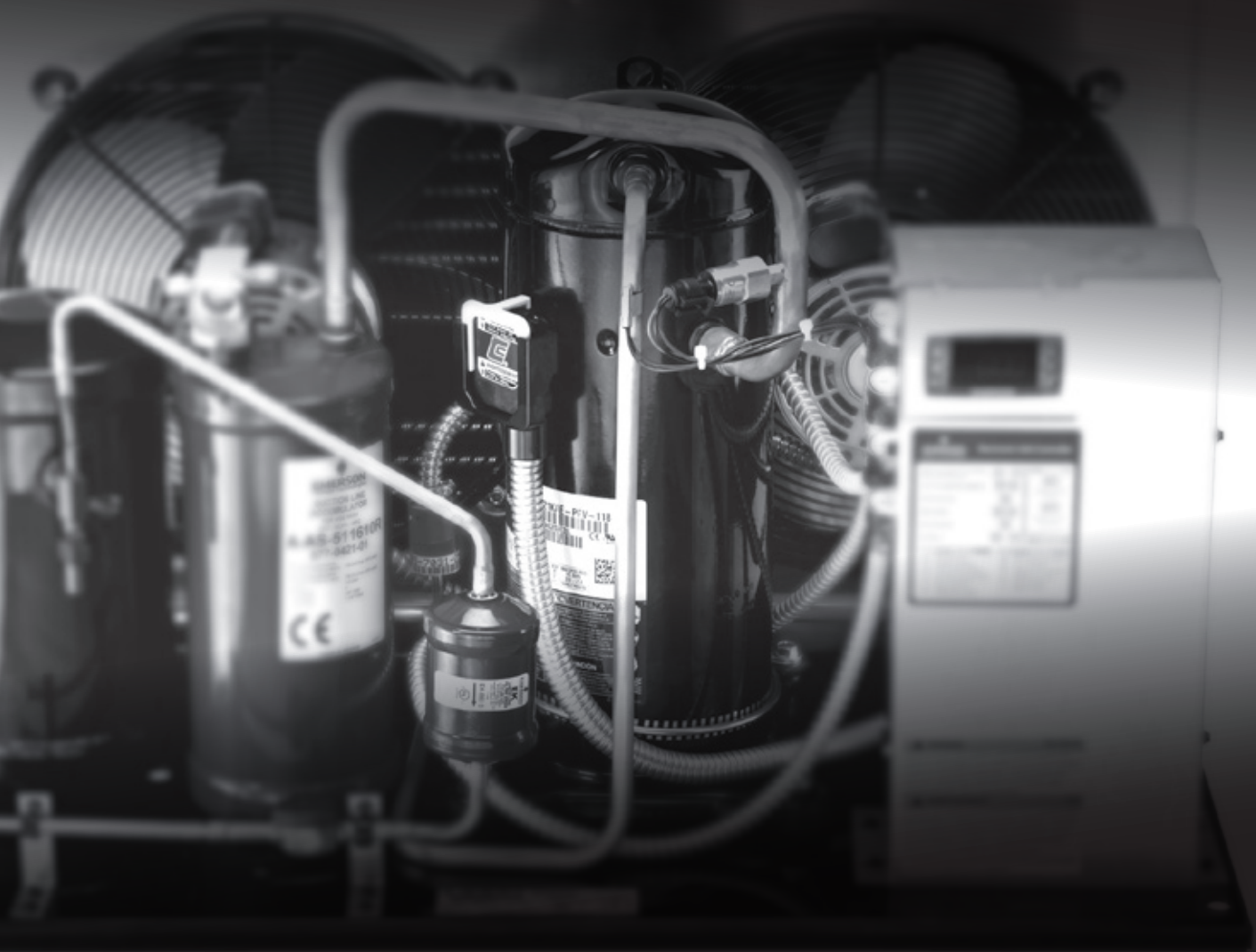
Compressor model	Volts & Hz	Overload	Start Device (Relay)	Run Capacitor
NEK6160Z	220-240/50	EMB2319069	EMB2334116	
NEK6170Z	220-240/50	EMB2319069	EMB2334117	
NEK6187Z	220-240/50	EMB2319073	EMB2334105	
NEK6210Z	220-240/50	EMB2319095	EMB2334105	
NEK6214Z	220-240/50	EMB2319107	EMB2334139	
NT6217Z	220-240/50	EMB2319086	EMB2334135	
NJ6220Z	220-240/50	EMB2289016	EMB1253023	
NJ6226Z	220-240/50	EMB2289022	EMB1253012	EMB2253311

Compressor model	Volts & Hz	Start Capacitor
NEK6160Z	220-240/50	EMB2252347
NEK6170Z	220-240/50	EMB2252347
NEK6187Z	220-240/50	EMB2252346
NEK6210Z	220-240/50	EMB2252346
NEK6214Z	220-240/50	EMB2252345
NT6217Z	220-240/50	EMB2252364
NJ6220Z	220-240/50	EMB2252269
NJ6226Z	220-240/50	EMB2252270

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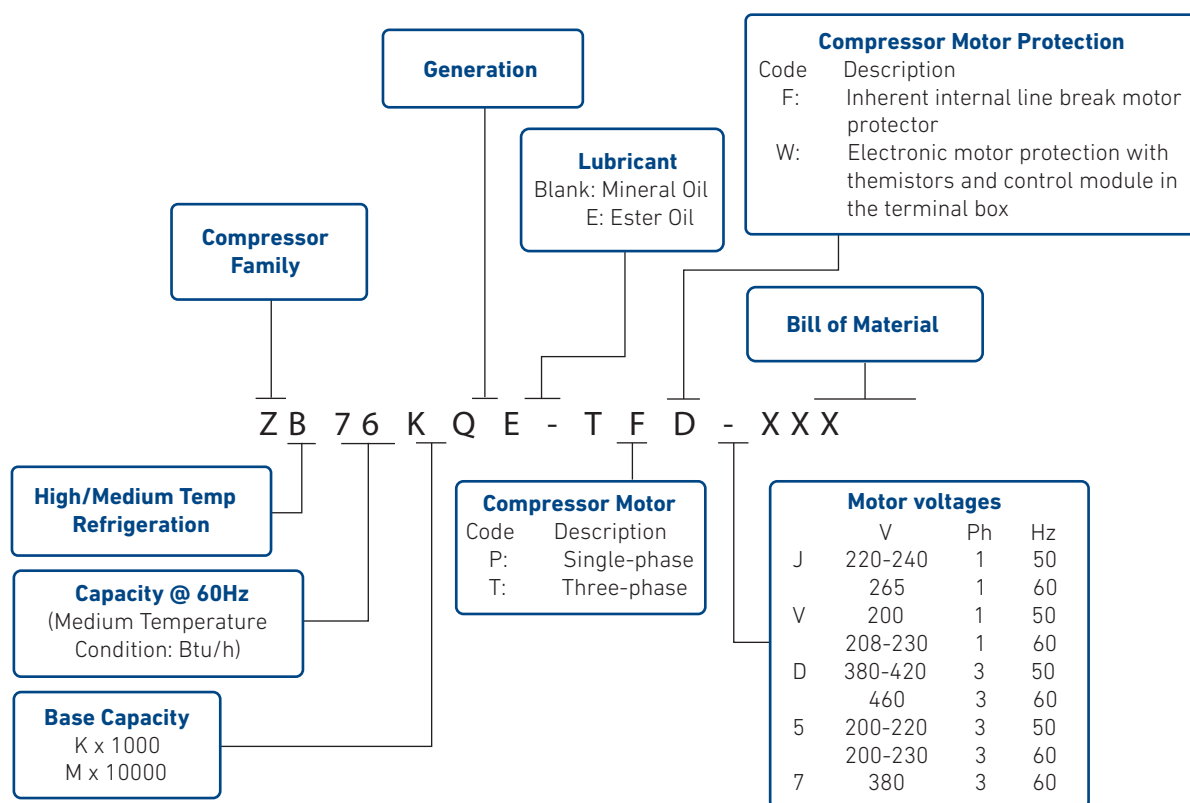


EMERSON SCROLL + RECIPROCATING COMPRESSORS



Emerson ZB Scroll Compressor

Nomenclature & BOM



Bill of Material (BOM)

Compressor Model	BOM Number	Suction & Discharge Brazing Connection	Suction & Discharge Rotolock Connection	Oil Sight Glass	Schrader Valve
ZB15-ZB48	523		X		
	524	X			
	558	X		X	
	559		X	X	
ZB58-ZB114	523*		X		
	524*	X			
	550	X		X	X
	551		X	X	X

*Not applicable for ZB95/114 models.

ZB Series Performance Data

R22 50Hz



Copeland®

Q=Capacity (Watts) P=Power input (Watts) 1-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-12	-10	-5	0	5	10	12.5
ZB15KQ	Q	15	4000	4350	5250	6250		
		20	3850	4200	5050	6050		
		30	3550	3850	4700	5600	7900	8600
		40	3250	3500	4250	5150	7250	7900
		50	2650	2900	3850	4600	6550	7150
		55		2700	3400	4350	6200	6750
		60			3150	3900	5800	6350
		65				3600	5400	5900
ZB15KQ	P	15	870	870	870	890		
		20	960	950	960	970		
		30	1150	1150	1150	1160	1180	1180
		40	1400	1400	1390	1400	1410	1400
		50	1730	1720	1710	1710	1700	1700
		55		1910	1900	1890	1890	1880
		60			2120	2110	2090	2080
		65				2360	2340	2310
ZB19KQ	Q	15	4650	5000	6050	7250		
		20	4450	4800	5850	6950		
		30	4100	4450	5400	6450	9100	9900
		40	3700	4050	4900	5900	8350	9100
		50	3050	3350	4400	5300	7550	8250
		55		3100	3900	5000	7150	7800
		60			3600	4500	6700	7350
		65				4150	5200	6800
ZB19KQ	P	15	980	980	980	1000		
		20	1080	1070	1080	1090		
		30	1300	1290	1290	1300	1330	1330
		40	1580	1570	1570	1570	1580	1580
		50	1940	1930	1930	1920	1920	1910
		55		2150	2140	2140	2130	2110
		60			2390	2380	2370	2340
		65				2650	2640	2600
ZB21KQ	Q	15	5850	6300	7650	9100		
		20	5600	6100	7350	8800	10450	
		30	5150	5600	6800	8150	9700	12500
		40	4700	5100	6200	7450	8900	11500
		50	3850	4200	5550	6700	8000	10400
		55		3950	4900	6300	7550	9850
		60			4550	5650	7050	9250
		65				5200	6550	8600
ZB21KQ	P	15	1360	1360	1370	1390		
		20	1500	1490	1500	1520		
		30	1800	1800	1800	1810	1830	1850
		40	2200	2190	2180	2190	2200	2200
		50	2700	2690	2680	2680	2680	2660
		55		3000	2980	2970	2970	2940
		60			3320	3310	3300	3260
		65				3690	3670	3620

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R22 50Hz

Q=Capacity (Watts) P=Power input (Watts) 1-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-12	-10	-5	0	5	10	12.5
ZB26KQ	Q	15	6750	7300	8800	10500		
		20	6450	7000	8500	10150	12050	
		30	5950	6450	7850	9400	11200	13300
		40	5400	5900	7150	8600	10250	12200
		50	4400	4850	6400	7750	9250	11000
		55		4550	5700	7250	8700	10400
		60			5250	6550	8150	9750
		65				6000	7550	9050
ZB26KQ	P	15	1470	1460	1470	1500		
		20	1610	1600	1610	1630	1660	
		30	1940	1930	1930	1950	1970	1980
		40	2360	2350	2340	2350	2360	2360
		50	2900	2890	2880	2870	2870	2860
		55		3220	3200	3190	3190	3170
		60			3570	3550	3540	3520
		65				3960	3940	3910
ZB29KQ	Q	15	7850	8550	10250	12050		
		20	7600	8300	10000	11800	13800	
		30	7000	7650	9300	11100	13050	15350
		40	6400	6950	8500	10150	12050	14300
		50	5400	5900	7650	9150	10900	13000
		55		5650	6850	8600	10250	12250
		60			6500	7800	9600	11500
		65				7350	9000	10750
ZB29KQ	P	15	1640	1660	1710	1770		
		20	1790	1800	1850	1900	1940	
		30	2120	2130	2170	2210	2250	2270
		40	2530	2540	2580	2610	2650	2670
		50	3030	3050	3090	3130	3160	3180
		55		3340	3390	3430	3470	3490
		60			3720	3770	3810	3840
		65				4150	4200	4230

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R22 50Hz



Q=Capacity (Watts) P=Power input (Watts) 3-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-12	-10	-5	0	5	10	12.5
ZB15KQ	Q	15	4050	4400	5250	6200		
		20	3900	4250	5100	6050		
		30	3550	3900	4700	5650	7850	8500
		40	3200	3500	4250	5150	7250	7850
		50	2650	2900	3800	4550	6500	7100
		55		2700	3350	4250	6100	6650
		60			3100	3850	5700	6200
		65				3550	4400	5250
ZB15KQ	P	15	780	780	800	830		
		20	870	870	890	920		
		30	1090	1090	1100	1120	1150	1180
		40	1350	1350	1370	1390	1410	1420
		50	1680	1680	1700	1720	1740	1740
		55		1880	1890	1920	1940	1940
		60			2110	2140	2160	2160
		65				2380	2410	2410
ZB19KQ	Q	15	4650	5050	6050	7150		
		20	4500	4850	5850	7000		
		30	4100	4450	5450	6500	9050	9800
		40	3700	4050	4900	5900	8350	9050
		50	3050	3300	4350	5250	7500	8150
		55		3100	3850	4950	7050	7700
		60			3600	4400	6550	7150
		65				4100	5050	6050
ZB19KQ	P	15	880	880	900	940		
		20	990	990	1010	1040		
		30	1240	1240	1250	1280	1310	1340
		40	1540	1540	1550	1570	1600	1620
		50	1910	1910	1930	1950	1970	1980
		55		2130	2150	2180	2200	2200
		60			2400	2430	2450	2450
		65				2710	2730	2730
ZB21KQ	Q	15	5900	6350	7650	9050		
		20	5650	6150	7400	8800	10350	
		30	5200	5650	6850	8200	9700	11450
		40	4650	5100	6200	7450	8900	10500
		50	3800	4200	5500	6650	7950	9450
		55		3900	4850	6200	7450	8850
		60			4550	5550	6900	8250
		65				5150	6400	7650
ZB21KQ	P	15	1150	1150	1170	1220		
		20	1290	1290	1310	1350		
		30	1610	1610	1620	1660	1700	1730
		40	2000	1990	2010	2040	2080	2100
		50	2480	2480	2500	2530	2560	2570
		55		2760	2790	2820	2850	2860
		60			3110	3150	3180	3180
		65				3510	3550	3540

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R22 50Hz

Q=Capacity (Watts) P=Power input (Watts) 3-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-12	-10	-5	0	5	10	12.5
ZB26KQ	Q	15	6900	7500	8950	10650		
		20	6650	7200	8700	10350	12350	
		30	6100	6650	8050	9650	11550	13850
		40	5550	6050	7350	8800	10550	12700
		50	4600	5050	6600	7900	9450	11400
		55		4750	5850	7400	8850	10700
		60			5500	6650	8250	9950
		65				6200	7650	9200
ZB26KQ	P	15	1230	1200	1200	1220		
		20	1380	1360	1350	1380	1410	
		30	1740	1720	1710	1740	1770	1760
		40	2210	2180	2170	2190	2210	2200
		50	2840	2800	2770	2780	2790	2760
		55		3190	3140	3140	3140	3100
		60			3570	3550	3540	3490
		65				4030	4000	3930
ZB29KQ	Q	15	7900	8550	10250	12150		
		20	7600	8250	9900	11800	13900	
		30	6950	7550	9200	11000	13000	15350
		40	6250	6800	8300	10000	11900	14100
		50	5100	5600	7400	8900	10650	12700
		55		5250	6500	8350	9950	11900
		60			6050	7450	9250	11100
		65				6900	8550	10250
ZB29KQ	P	15	1460	1460	1490	1560		
		20	1640	1640	1670	1720	1790	
		30	2050	2040	2060	2110	2160	2210
		40	2540	2540	2560	2600	2640	2670
		50	3150	3160	3190	3230	3260	3280
		55		3520	3550	3600	3630	3650
		60			3960	4010	4050	4060
		65				4470	4510	4520
ZB38KQ	Q	15	9800	10600	12700	15050		
		20	9450	10200	12350	14650	17300	
		30	8650	9400	11400	13650	16150	19050
		40	7750	8450	10300	12400	14800	17550
		50	6350	6950	9200	11050	13250	15750
		55		6500	8100	10350	12400	14800
		60			7550	9250	11500	13800
		65				8550	10650	12750
ZB38KQ	P	15	1850	1850	1890	1970		
		20	2070	2070	2100	2180	2270	
		30	2580	2580	2610	2660	2730	2790
		40	3210	3210	3230	3290	3340	3370
		50	3980	3990	4020	4070	4120	4140
		55		4450	4490	4540	4590	4600
		60			5010	5070	5110	5130
		65				5650	5700	5710

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R22 50Hz



Q=Capacity (Watts) P=Power input (Watts) 3-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-12	-10	-5	0	5	10	12.5
ZB45KQ	Q	15	11800	12750	15350	18350		
		20	11350	12300	14800	17700		
		30	10450	11350	13700	16400	23100	25100
		40	9450	10300	12500	14950	17800	22950
		50	7650	8400	11100	13400	16000	20650
		55		7750	9750	12500	15000	17850
		60			8950	11150	13950	16650
		65				10200	12800	15350
ZB45KQ	P	15	2080	2100	2160	2230		
		20	2340	2360	2410	2470	2550	
		30	2950	2970	3010	3050	3100	3170
		40	3710	3730	3760	3790	3810	3850
		50	4650	4680	4710	4720	4730	4750
		55		5230	5270	5280	5280	5290
		60			5890	5900	5890	5890
		65				6590	6580	6570
ZB48KQ	Q	15	12950	14000	16900	20200		
		20	12500	13500	16300	19500	23200	
		30	11500	12450	15050	18050	21450	25400
		40	10400	11300	13700	16450	19600	23200
		50	8400	9250	12200	14700	17550	20850
		55		8550	10750	13750	16500	19600
		60			9850	12300	15350	18300
		65				11200	14100	16900
ZB48KQ	P	15	2290	2310	2380	2460		
		20	2570	2600	2660	2720	2810	
		30	3250	3270	3310	3350	3400	3490
		40	4080	4100	4140	4160	4190	4240
		50	5120	5140	5180	5200	5200	5220
		55		5750	5800	5810	5810	5810
		60			6480	6490	6480	6480
		65				7250	7240	7220
ZB58KQ	Q	15	15400	16650	20150	24200		
		20	14650	15900	19350	23300	27800	
		30	13300	14500	17750	21450	25700	30500
		40	11850	13000	16100	19600	23550	28050
		50	9250	10350	14150	17450	21150	25300
		55		9300	12250	16200	19800	23800
		60			11000	14250	18250	22150
		65				12750	16600	20300
ZB58KQ	P	15	2740	2760	2790	2860		
		20	3100	3110	3150	3210	3310	
		30	3900	3900	3930	3970	4050	4190
		40	4880	4880	4890	4910	4960	5060
		50	6140	6140	6120	6110	6120	6180
		55		6900	6870	6840	6830	6860
		60			7720	7670	7640	7650
		65				8620	8570	8540

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R22 50Hz

Q=Capacity (Watts) P=Power input (Watts) 3-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-12	-10	-5	0	5	10	12.5
ZB66KQ	Q	15	17200	18650	22600	27150		
		20	16550	17950	21750	26150		
		30	15300	16550	20100	24200	31200	
		40	13950	15150	18450	22200	28850	34200
		50	11400	12500	16550	20050	26500	31400
		55		11600	14650	18800	23950	28400
		60			13500	16850	22550	26800
		65				15450	21100	25100
ZB66KQ	P	15	2840	2850	2900	2970		
		20	3330	3350	3400	3480		
		30	4270	4300	4360	4430	3590	
		40	5340	5360	5410	5470	4540	4690
		50	6710	6720	6740	6770	5550	5680
		55		7560	7570	7580	6820	6890
		60			8540	8520	7600	7650
		65				9620	8510	8530
ZB76KQ	Q	15	20300	22000	26750	32250		
		20	19500	21150	25700	30950		
		30	18000	19500	23700	28550	36900	
		40	16400	17850	21750	26150	34000	40150
		50	13350	14700	19500	23600	31200	36850
		55		13600	17200	22200	28200	33350
		60			15800	19850	26600	31500
		65				18150	24850	29550
ZB76KQ	P	15	3020	3030	3060	3140		
		20	3700	3710	3750	3840		
		30	4950	4970	5030	5110	3990	
		40	6270	6300	6360	6430	5240	5470
		50	7930	7950	8000	8040	6530	6700
		55		8980	9020	9040	8100	8210
		60			10210	10210	9070	9150
		65				11580	10210	10240
ZB88KQ	Q	15	23550	25400	30500	36150		
		20	22700	24550	29600	35200		
		30	20850	22600	27500	32900	41300	
		40	18750	20400	24950	30100	38850	45350
		50	15100	16600	22050	26800	35800	42000
		55		15300	19300	24950	32100	37950
		60			17650	22150	30000	35650
		65				20100	27800	33150
ZB88KQ	P	15	3940	3980	4120	4350		
		20	4470	4500	4610	4800		
		30	5660	5690	5770	5890	5100	
		40	7120	7150	7220	7290	6080	6410
		50	8920	8960	9040	9090	7410	7610
		55		10030	10120	10160	9150	9260
		60			11320	11370	10210	10280
		65				12720	11400	11450

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R22 50Hz



Q=Capacity (Watts) P=Power input (Watts) 3-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-12	-10	-5	0	5	10	12.5
ZB95KQ	Q	15	25350	27400	33200	39950		
		20	24350	26350	31800	38200	45550	
		30	22350	24200	29350	35150	41800	49350
		40	19550	21450	26500	32050	38250	45200
		50			22450	28050	34100	40700
		55				25350	31450	38000
		60					28350	34900
		65					24600	31250
ZB95KQ	P	15	4660	4730	4990	5340		
		20	5170	5220	5410	5680	6040	
		30	6450	6490	6590	6740	6940	7200
		40	8040	8080	8180	8280	8380	8510
		50			10120	10230	10320	10380
		55				11350	11460	11520
		60					12690	12770
		65					14030	14140
ZB114KQ	Q	15	30500	32950	39700	47300		
		20	29400	31800	38400	45850	54250	
		30	26750	29050	35400	42500	50450	59350
		40	23200	25550	31700	38550	46100	54500
		50			27050	33700	41000	48950
		55				30900	38050	45850
		60					34850	42500
		65					31350	38850
ZB114KQ	P	15	5730	5790	5990	6250		
		20	6320	6380	6550	6780	7080	
		30	7760	7790	7920	8090	8330	8630
		40	9610	9630	9710	9830	9990	10220
		50			12030	12090	12190	12340
		55				13460	13520	13630
		60					15020	15100
		65					16710	16750

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R404A/R507 50Hz

Q=Capacity (Watts) P=Power input (Watts) 1-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-20	-15	-10	-5	0	5	10
ZB15KQE	Q	10	3700	4500	5450			
		20	3350	4050	4900	5900	7000	
		30	2950	3600	4350	5250	6200	7300
		40	2550	3150	3800	4550	5400	6350
		50	2150	2600	3150	3800	4500	5350
		60		2050	2500	3000	3600	4250
ZB15KQE	P	10	730	740	740			
		20	920	920	930	930		
		30	1150	1150	1160	1160	1150	1140
		40	1440	1450	1450	1450	1450	1440
		50	1800	1810	1810	1810	1810	1800
		60		2250	2260	2250	2250	2240
ZB19KQE	Q	10	4200	5100	6200			
		20	3850	4700	5700	6800	8150	
		30	3450	4200	5050	6100	7250	8600
		40	3000	3650	4400	5300	6300	7450
		50	2450	3000	3650	4400	5250	6200
		60		2350	2850	3400	4100	4900
ZB19KQE	P	10	900	900	910			
		20	1140	1140	1140	1140	1140	
		30	1430	1430	1430	1430	1420	1410
		40	1810	1810	1810	1800	1790	1780
		50	2290	2290	2290	2280	2260	2240
		60		2900	2890	2880	2860	2830
ZB21KQE	Q	10	5350	6550	7950			
		20	4900	6000	7250	8700	10400	
		30	4400	5350	6500	7750	9250	10950
		40	3800	4650	5600	6750	8050	9500
		50	3150	3850	4650	5600	6700	7950
		60		3000	3600	4350	5250	6250
ZB21KQE	P	10	1150	1150	1150			
		20	1450	1450	1450	1450	1450	
		30	1830	1830	1820	1820	1810	1800
		40	2310	2310	2300	2290	2280	2260
		50	2920	2920	2910	2900	2880	2860
		60		3690	3680	3660	3640	3610
ZB26KQE	Q	10	5950	7300	8900			
		20	5350	6600	8050	9800	11750	
		30	4700	5800	7100	8650	10400	12450
		40	3950	4900	6050	7400	8950	10750
		50	3100	3900	4900	6000	7350	8900
		60		2800	3600	4500	5650	6950
ZB26KQE	P	10	1490	1470	1440			
		20	1880	1850	1810	1770	1730	
		30	2380	2330	2280	2230	2160	2100
		40	3000	2950	2880	2810	2720	2630
		50	3800	3730	3640	3550	3440	3320
		60		4710	4600	4480	4350	4200
ZB29KQE	Q	10	7100	8700	10600			
		20	6450	7900	9600	11550	13800	
		30	5700	7050	8550	10300	12250	14500
		40	4900	6050	7400	8900	10650	12550
		50	4000	5000	6150	7400	8850	10500
		60		3800	4750	5800	7000	8300
ZB29KQE	P	10	1630	1660	1700			
		20	1930	1960	1990	2020	2070	
		30	2330	2350	2370	2400	2440	2480
		40	2830	2850	2870	2890	2910	2950
		50	3440	3470	3480	3500	3520	3550
		60		4210	4240	4260	4270	4290

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R404A/R507 50Hz



Q=Capacity (Watts) P=Power input (Watts) 3-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-20	-15	-10	-5	0	5	10
ZB15KQE	Q	10	3650	4450	5450			
		20	3300	4050	4950	5950	7150	
		30	2900	3550	4350	5250	6300	8800
		40	2400	3000	3700	4450	5350	7450
		50	1850	2400	2950	3600	4300	6100
		60		1650	2150	2650	3250	4600
ZB15KQE	P	10	780	750	700			
		20	1000	980	950	920	880	
		30	1270	1250	1230	1200	1170	1160
		40	1670	1630	1590	1550	1510	1490
		50	2260	2180	2100	2030	1970	1900
		60		2970	2840	2710	2610	2460
ZB19KQE	Q	10	4350	5350	6500			
		20	4000	4900	5900	7100	8500	
		30	3600	4350	5300	6350	7550	8950
		40	3100	3800	4600	5500	6550	7750
		50	2550	3150	3800	4600	5450	6500
		60		2450	2950	3550	4300	5100
ZB19KQE	P	10	930	930	930			
		20	1170	1170	1170	1170	1170	
		30	1480	1480	1480	1470	1470	1460
		40	1870	1870	1860	1860	1840	1830
		50	2360	2360	2360	2350	2330	2310
		60		2990	2980	2960	2940	2920
ZB21KQE	Q	10	5250	6400	7800			
		20	4800	5850	7100	8550	10200	
		30	4300	5250	6350	7600	9050	10750
		40	3700	4550	5500	6600	7850	9300
		50	3100	3750	4550	5500	6550	7750
		60		2900	3550	4300	5150	6100
ZB21KQE	P	10	1110	1110	1120			
		20	1400	1400	1400	1400	1400	
		30	1770	1770	1770	1760	1750	1750
		40	2240	2240	2230	2220	2210	2190
		50	2830	2830	2820	2810	2790	2770
		60		3580	3570	3550	3530	3490
ZB26KQE	Q	10	6100	7500	9100			
		20	5600	6850	8300	9950	11900	
		30	5000	6100	7400	8900	10600	12550
		40	4350	5300	6400	7700	9200	10900
		50	3600	4400	5350	6400	7650	9100
		60		3400	4150	5000	6000	7150
ZB26KQE	P	10	1300	1300	1310			
		20	1640	1640	1640	1640	1640	
		30	2070	2070	2070	2060	2050	2040
		40	2610	2610	2610	2600	2580	2560
		50	3310	3310	3300	3280	3260	3240
		60		4180	4170	4150	4120	4090
ZB29KQE	Q	10	7100	8700	10550			
		20	6500	7950	9600	11550	13800	
		30	5800	7100	8600	10300	12300	14550
		40	5050	6150	7450	8950	10650	12600
		50	4150	5100	6200	7450	8900	10550
		60		3950	4800	5800	6950	8300
ZB29KQE	P	10	1470	1480	1480			
		20	1860	1860	1860	1860	1860	
		30	2340	2350	2340	2340	2330	2310
		40	2960	2960	2960	2950	2930	2910
		50	3750	3750	3740	3730	3700	3670
		60		4750	4730	4710	4680	4630

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R404A/R507 50Hz

Q=Capacity (Watts) P=Power input (Watts) 3-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-20	-15	-10	-5	0	5	10
ZB38KQE	Q	10	8950	10950	13300			
		20	8200	10000	12150	14600	17400	
		30	7350	8950	10850	13000	15500	18350
		40	6350	7750	9400	11300	13450	15900
		50	5250	6450	7800	9400	11200	13300
		60		4950	6050	7300	8750	10450
ZB38KQE	P	10	1860	1870	1870			
		20	2350	2350	2350	2350		
		30	2960	2960	2960	2950	2940	2920
		40	3740	3740	3730	3720	3700	3670
		50	4740	4740	4720	4700	4670	4630
		60	0	5990	5970	5940	5900	5850
ZB45KQE	Q	10	10450	12800	15550			
		20	9600	11750	14200	17100	20400	
		30	8600	10500	12700	15250	18150	21500
		40	7450	9100	11000	13200	15750	18650
		50	6150	7550	9150	11000	13100	15550
		60		5800	7100	8550	10250	12200
ZB45KQE	P	10	2110	2110	2120			
		20	2660	2660	2660	2660	2660	
		30	3350	3350	3350	3340	3320	3310
		40	4240	4240	4230	4210	4190	4150
		50	5360	5360	5350	5320	5290	5240
		60		6780	6760	6730	6680	6620
ZB48KQE	Q	10	11500	14100	17100			
		20	10550	12900	15650	18800	22400	
		30	9450	11550	13950	16750	20000	23650
		40	8150	10000	12100	14500	17300	20500
		50	6750	8300	10050	12050	14400	17100
		60		6400	7800	9400	11300	13450
ZB48KQE	P	10	2320	2320	2330			
		20	2920	2930	2930	2930	2920	
		30	3690	3690	3680	3670	3660	3640
		40	4660	4660	4650	4630	4600	4570
		50	5900	5900	5880	5860	5820	5770
		60		7460	7440	7400	7350	7280
ZB58KQE	Q	10	13750	16750	20300			
		20	12450	15250	18500	22250	26600	
		30	11100	13650	16600	19950	23800	28200
		40	9450	11850	14500	17450	20800	24600
		50	7400	9650	12000	14600	17500	20700
		60		6850	9000	11250	13700	16350
ZB58KQE	P	10	3000	3080	3140			
		20	3640	3730	3820	3870	3870	
		30	4480	4540	4620	4690	4730	4710
		40	5630	5630	5670	5720	5770	5770
		50	7210	7120	7080	7090	7100	7100
		60		9130	8980	8900	8850	8800
ZB66KQE	Q	10	15700	19200	23350			
		20	14300	17450	21150	25450	30400	
		30	12750	15550	18800	22550	26900	31900
		40	11050	13500	16350	19550	23250	27500
		50	9100	11250	13650	16350	19450	22950
		60		8650	10650	12850	15350	18150
ZB66KQE	P	10	3370	3450	3550			
		20	4100	4170	4260	4370	4510	
		30	5030	5090	5160	5250	5350	5480
		40	6240	6290	6340	6390	6460	6540
		50	7830	7850	7880	7900	7920	7950
		60		9890	9870	9850	9830	9800

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R404A/R507 50Hz



Copeland®

Q=Capacity (Watts) P=Power input (Watts) 3-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-20	-15	-10	-5	0	5	10
ZB76KQE	Q	10	18400	22400	27150			
		20	16700	20350	24700	29700	35450	
		30	14900	18250	22150	26600	31700	37450
		40	12900	15900	19350	23250	27650	32650
		50	10600	13250	16200	19500	23250	27450
		60		10050	12550	15250	18300	21750
ZB76KQE	P	10	3930	4030	4110			
		20	4750	4870	4980	5070	5130	
		30	5820	5930	6030	6130	6220	6270
		40	7230	7310	7390	7480	7560	7620
		50	9100	9120	9160	9210	9260	9300
		60		11480	11440	11430	11430	11430
ZB95KQE	Q	10	22750	27700	33700			
		20	20800	25300	30500	36700	43900	
		30	18550	22700	27400	32750	38950	46150
		40	15600	19600	23850	28550	33900	40000
		50		15500	19500	23750	28350	33550
		60			13950	17850	21900	26300
ZB95KQE	P	10	4880	5050	5220			
		20	5980	6120	6290	6450	6590	
		30	7440	7540	7670	7810	7940	8040
		40	9400	9430	9500	9590	9690	9780
		50		11940	11920	11940	11980	12020
		60			15070	14990	14950	14920
ZB114KQE	Q	10	27350	33300	40300			
		20	24850	30350	36700	44050	52450	
		30	21900	27000	32750	39350	46800	55350
		40	18300	23050	28250	34100	40700	48200
		50		18250	23000	28200	33950	40450
		60			16750	21350	26350	31900
ZB114KQE	P	10	5930	6080	6240			
		20	7240	7390	7540	7710	7880	
		30	8940	9050	9170	9310	9450	9610
		40	11220	11260	11310	11380	11470	11570
		50		14200	14150	14120	14110	14130
		60			17870	17710	17570	17460

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R134A 50Hz

Q=Capacity (Watts) P=Power input (Watts) 1&3-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-15	-10	-5	0	5	10	15
ZB15KQE	Q	30	1900	2400	3000	3700	4500	5400
		35	1800	2300	2900	3500	4300	5200
		45	1600	2000	2600	3200	3900	4700
		55		1700	2200	2700	3400	4100
		65			1800	2300	2900	3500
		75				1900	2400	3000
ZB15KQE	P	30	800	800	800	800	800	800
		35	800	800	800	900	900	900
		45	1000	1000	1000	1100	1100	1100
		55		1300	1300	1300	1300	1300
		65			1600	1600	1600	1600
		75			2000	2000	2000	2000
ZB19KQE	Q	30	2200	2800	3500	4300	5200	6300
		35	2000	2700	3300	4100	5000	6000
		45	1800	2300	3000	3700	4500	5400
		55		2000	2500	3100	3900	4700
		65			2100	2700	3300	4100
		75				2200	2700	3400
ZB19KQE	P	30	900	900	900	900	900	900
		35	1000	1000	1000	1000	1000	1000
		45	1200	1200	1200	1200	1200	1200
		55		1500	1500	1500	1500	1500
		65			1800	1800	1900	1900
		75				2300	2300	2300
ZB21KQE	Q	30	2800	3500	4400	5400	6500	7900
		35	2700	3300	4200	5100	6200	7500
		45	2300	2900	3700	4600	5600	6800
		55		2500	3200	4000	4900	6000
		65			2700	3400	4200	5100
		75				2700	3500	4300
ZB21KQE	P	30	1100	1100	1100	1100	1100	1100
		35	1200	1200	1200	1200	1200	1200
		45	1500	1500	1500	1500	1500	1500
		55		1800	1800	1800	1900	1900
		65			2200	2300	2300	2300
		75				2800	2800	2800
ZB26KQE	Q	30	3200	4100	5100	6200	7600	9100
		35	3000	3900	4800	5900	7200	8700
		45	2600	3300	4300	5300	6500	7800
		55		2900	3700	4600	5700	6900
		65			3100	3900	4900	5900
		75				3200	4000	5000
ZB26KQE	P	30	1200	1200	1200	1200	1200	1300
		35	1300	1300	1400	1400	1400	1400
		45	1700	1700	1700	1700	1700	1700
		55		2100	2100	2100	2100	2100
		65			2600	2600	2600	2600
		75				3200	3200	3200
ZB29KQE	Q	30	3850	4750	5900	7200	8750	10500
		35	3500	4500	5600	6850	8300	10050
		45	3050	3900	5000	6100	7450	9000
		55		3300	4200	5250	6550	7950
		65			4000	4450	5550	6800
		75				3600	4550	5600
ZB29KQE	P	30	1370	1380	1390	1400	1410	1420
		35	1540	1550	1560	1570	1580	1590
		45	1940	1940	1950	1960	1970	1980
		55		2420	2430	2440	2440	2450
		65			3020	3020	3030	3040
		75				3750	3760	3770

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series Performance Data

R134A 50Hz



Copeland®

Q=Capacity (Watts) P=Power input (Watts) 1&3-Phase

MODEL	Condensing Temperature °C	Evaporating Temperature °C						
		-15	-10	-5	0	5	10	15
ZB38KQE	Q	30	4700	5900	7400	9100	11100	13300
		35	4300	5600	7000	8600	10500	12700
		45	3800	4900	6300	7800	9400	11400
		55		4200	5400	6700	8300	10100
		65			4600	5700	7100	8700
ZB38KQE	P	30	1700	1700	1700	1800	1800	1800
		35	1900	1900	1900	2000	2000	2000
		45	2300	2400	2400	2400	2500	2500
		55		3000	3000	3000	3000	3100
		65			3700	3700	3700	3800
ZB45KQE	Q	30	5700	7100	8900	10900	13300	15900
		35	5200	6800	8500	10400	12700	15200
		45	4500	5800	7500	9300	11400	13700
		55		5000	6300	8000	10000	12100
		65			5300	6700	8400	10300
ZB45KQE	P	30	2000	2000	2000	2000	2000	2000
		35	2200	2200	2200	2200	2300	2300
		45	2700	2700	2800	2800	2800	2800
		55		3400	3400	3500	3500	3500
		65			4300	4300	4300	4400
ZB48KQE	Q	30	6400	8050	9900	12150	14700	17600
		35	5900	7650	9450	11550	14000	16900
		45	5200	6600	8450	10350	12550	15100
		55		5700	7200	8950	11050	13350
		65			6050	7600	9450	11450
ZB48KQE	P	30	2280	2290	2300	2310	2330	2370
		35	2540	2560	2570	2590	2610	2650
		45	3170	3190	3210	3220	3250	3290
		55		4000	4010	4020	4040	4080
		65			5020	5030	5040	5050
ZB58KQE	Q	30	7450	9200	11200	13400	15850	18600
		35	6250	8700	10600	12700	15100	17650
		45	5400	6900	9350	11300	13500	15750
		55		5900	7450	9300	11650	13750
		65			6150	7750	9650	11600
ZB58KQE	P	30	2690	2710	2760	2820	2880	2910
		35	3010	3030	3070	3130	3180	3190
		45	3720	3750	3800	3850	3890	3880
		55		4590	4660	4720	4760	4750
		65			5640	5730	5790	5790
ZB66KQE	Q	30	8550	10500	12750	15300	18150	21200
		35	7150	9950	12100	14550	17250	20200
		45	6200	7900	10700	12900	15450	18050
		55		6700	8500	10600	13350	15700
		65			7000	8850	11000	13250
ZB66KQE	P	30	3000	3020	3080	3150	3210	3250
		35	3360	3380	3430	3490	3540	3560
		45	4150	4190	4250	4300	4340	4340
		55		5120	5210	5280	5320	5310
		65			6300	6410	6470	6470
ZB76KQE	Q	30	9800	12050	14650	17600	20850	24350
		35	8150	11400	13900	16700	19800	23150
		45	7100	9000	12250	14800	17700	20650
		55		7700	9700	12150	15250	17950
		65			8050	10100	12550	15150
ZB76KQE	P	30	3520	3550	3610	3700	3770	3800
		35	3940	3960	4020	4100	4150	4160
		45	4870	4900	4970	5040	5080	5070
		55		5990	6080	6160	6200	6190
		65			7350	7460	7540	7540
		75				8950	9070	9110

- Max return gas temperature of 18.3°C in non shaded region
- Max Suction superheat of 11K only in shaded region
- Sub cooling 0K

ZB Series

Technical Data

Model			ZB15KQ ZB15KQE	ZB19KQ ZB19KQE	ZB21KQ ZB21KQE	ZB26KQ ZB26KQE	ZB29KQ ZB29KQE	ZB38KQ ZB38KQE	ZB45KQ ZB45KQE		
Motor type			50Hz	PFJ	PFJ	PFJ	PFJ	PFJ			
				TF5	TF5	TF5	TF5	TF5	TF5	TF5	
				TFD	TFD	TFD	TFD	TFD	TFD	TFD	
			60Hz	PFV	PFV	PFV	PFV	PFV			
				TF5	TF5	TF5	TF5	TF5	TF5	TF5	
				TF7	TF7	TF7	TF7	TF7	TF7	TF7	
				TFD	TFD	TFD	TFD	TFD	TFD	TFD	
Displacement (M³/HR)			50Hz	5.9	6.8	8.6	9.9	11.4	14.4	17.1	
			60Hz	7.1	8.2	10.4	12.0	13.8	17.3	20.6	
LRA			50Hz	PFJ	58.0	61.0	82.0	97.0	114.0		
				TF5/TW5	56.0	70.0	83.0	95.0	98.0	139.0	172.0
				TFD	26.0	32.0	40.0	46.0	50.0	65.5	74.0
			60Hz	PFV	61.0	72.5	95.0	109.0	137.0		
				TF5/TW5	55.0	63.0	77.0	88.0	91.0	128.0	156.0
				TF7/TW7	27.0	30.0	39.0	41.0	54.0	64.0	70.0
				TFD	27.0	31.0	39.0	44.0	50.0	63.0	75.0
RLA			KQ	PFJ	11.4	12.9	16.4	17.1	19.3		
				PFV	13.6	15.0	18.4	20.4	22.1		
				TF5/TW5	8.9	10.0	11.4	13.9	16.4	20.7	20.7
				TF7/TW7	5.0	5.8	7.5	7.3	9.3	10.7	10.7
				TFD	4.3	4.3	5.7	7.1	7.9	10.0	11.5
			KQE	PFJ	13.2	14.6	15.4	18.9	20.0		
				PFV	15.7	17.1	20.7	23.6	25.0		
				TF5/TW5	8.9	10.0	12.1	13.2	17.1	24.0	26.0
				TF7/TW7	5.1	5.9	7.4	7.6	9.6	12.4	12.6
				TFD	5.0	5.0	7.4	6.4	7.9	9.6	10.1
				PFJ	16.0	18.0	23.0	24.0	27.0		
				PFV	19.0	21.0	25.8	28.6	31.0		
Max Continuous Current			KQ	TF5/TW5	12.5	14.0	16.0	19.4	23.0	29.0	29.0
				TF7/TW7	7.0	8.1	10.5	10.2	13.0	15.0	15.0
				TFD	6.0	6.0	8.0	10.0	11.0	13.5	16.1
				PFJ	18.5	20.5	21.5	26.5	28.0		
				PFV	22.0	24.0	29.0	33.0	35.0		
			KQE	TF5/TW5	12.5	14.0	17.0	18.5	24.0	33.6	32.4
				TF7/TW7	7.2	8.3	10.3	10.7	13.5	17.4	17.7
				TFD	7.0	7.0	10.3	9.0	11.0	14.0	14.2
Run Capacitor (1 phase)		50Hz	PFJ	40/440	45/370	60/370	60/370	60/370			
Run Capacitor (1 phase)		60Hz	PFV	40/370	45/370	50/370	60/370	60/440			
Nominal power(HP)			2	2.5	3	3.5	4	5	6		
Crankcase Heater(W)			70	70	70	70	70	70	70		
Connection Tube size(inch)											
Discharge Tube outer Diameter			1/2	1/2	1/2	1/2	1/2	1/2	1/2		
Suction Tube outer Diameter			3/4	3/4	3/4	3/4	7/8	7/8	7/8		
Dimension(mm)											
Length			242	242	243	243	242	242	242		
Width			242	242	244	244	242	242	242		
Height			383	389	412	425	430	457	457		
Mounting pants installation size (hole size)			190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)	190x190(8.5)		
Oil Recharge(L)											
PFJ/PFV			1.24	1.30	1.45	1.45/1.48	1.36				
TFD/TF5/TF7			1.24	1.36	1.45	1.48	1.36	2.07	1.89		
Weight(kg)											
Net			23	25	27	28	33	38	40		
Gross			26	29	30	31	37	41	44		

ZB Series

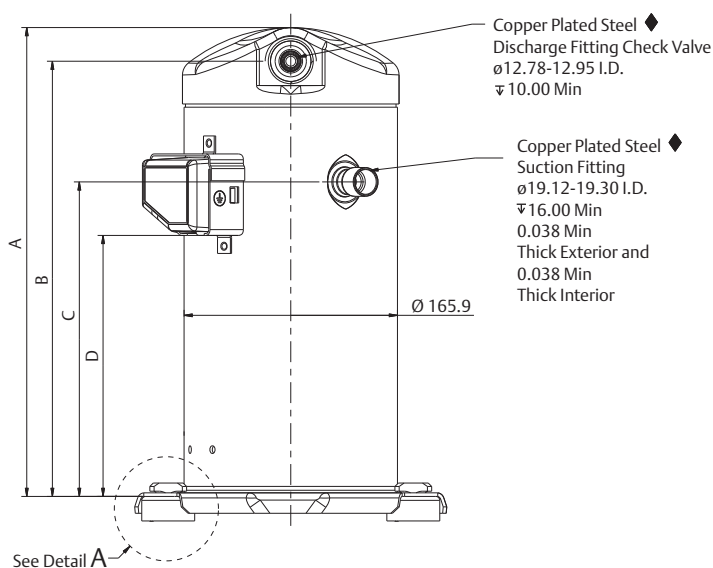
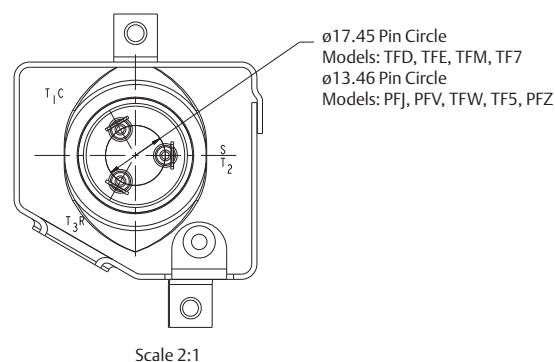
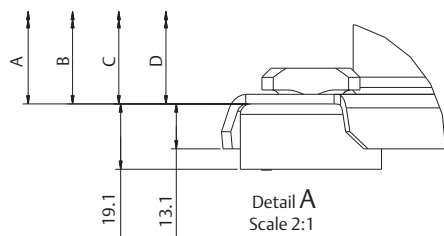
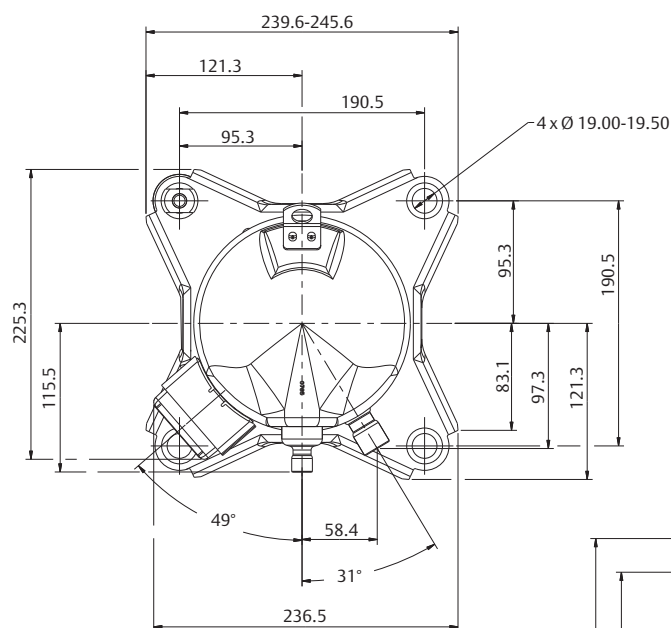
Technical Data



Model			ZB48KQ ZB48KQE	ZB58KQ ZB58KQE	ZB66KQ ZB66KQE	ZB76KQ ZB76KQE	ZB88KQ	ZB95KQ	ZB114KQ					
Motor type			50Hz	TF5	TF5	TF5	TF5	TF5						
				TFD	TFD	TFD	TFD	TFD	TFD	TFD	TFD			
										TW5	TW5			
			60Hz	TF5	TF5	TF5	TF5	TF5						
				TF7	TF7	TF7	TF7	TF7						
				TFD	TFD	TFD	TFD	TFD	TFD	TFD				
									TW5	TW5				
									TW7	TW7				
Displacement (M³/HR)			50Hz	18.8	22.1	25.7	28.8	33.2	36.4	43.3				
			60Hz	22.6	26.7	31.0	34.8	40.1	43.9	52.3				
LRA			50Hz	PFJ										
				TF5/TW5	179.0	203.0	231.0	239.0	273.0					
				TFD	101.0	95.0	111.0	118.0	118.0	140.0	174.0			
			60Hz	PFV										
				TF5/TW5	164.0	195.0	225.0	239.0	245.0	300.0	340.0			
				TF7/TW7	100.0	123.0	140.0	145.0	145.0	139.0	196.0			
				TFD	100.0	95.0	114.0	125.0	125.0	150.0	179.0			
RLA			KQ	PFJ										
				PFV										
				TF5/TW5	25.0	32.1	33.6	41.4	47.1	53.6	58.6			
				TF7/TW7	12.1	16.7	18.6	23.6	24.4	28.6	35.7			
				TFD	12.1	16.4	17.3	20.0	22.1	25.0	27.9			
			KQE	PFJ										
				PFV										
				TF5/TW5	26.0	32.1	33.6	41.4		61.4	65.0			
				TF7/TW7		17.1	18.6	23.6		35.0	42.9			
				TFD	13.6	16.4	17.3	20.0		26.4	28.6			
				Max Continuous Current			KQ	PFJ						
								PFV						
TF5/TW5	35.0	45.0	47.0					54.0	66.0	75.0	82.0			
TF7/TW7	17.0	23.4	26.0					33.1	34.2	40.0	50.0			
TFD	17.0	23.0	24.2					26.9	31.0	35.0	42.0			
KQE	PFJ													
	PFV													
	TF5/TW5	36.4	43.0				44.0	58.0		86.0	91.0			

ZB Series Dimensions Brazing Connection

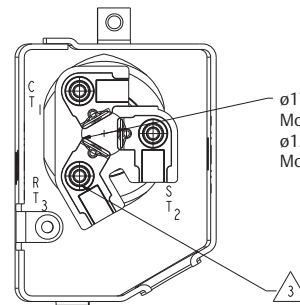
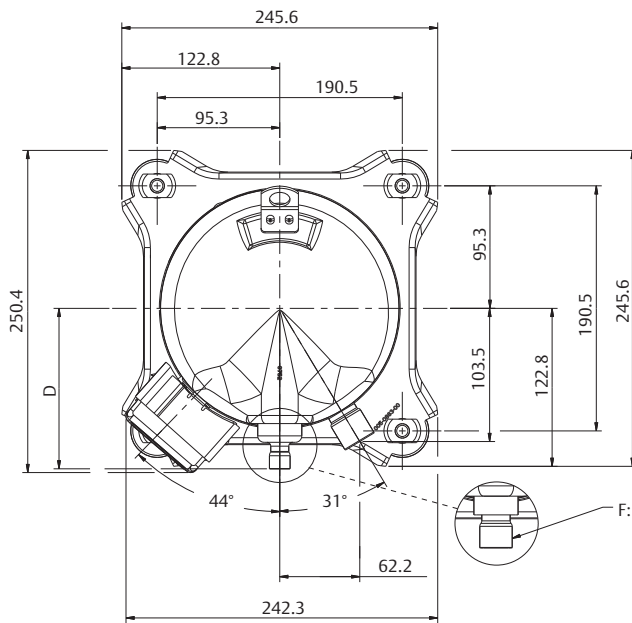
ZB15 - ZB29 (BOM 524)



Compressor model	A±3	B±3	C±3	D±3
ZB15KQ/ZB15KQE	363.8	338.3	244.5	202.9
ZB19KQ/ZB19KQE	386.4	360.9	264.4	222.8
ZB21KQ/ZB21KQE	400.2	374.6	277.1	235.5
ZB26KQ/ZB26KQE	417.8	389.9	294.1	252.5

ZB Series Dimensions Brazing Connection ZB38 - ZB48 (BOM 524)

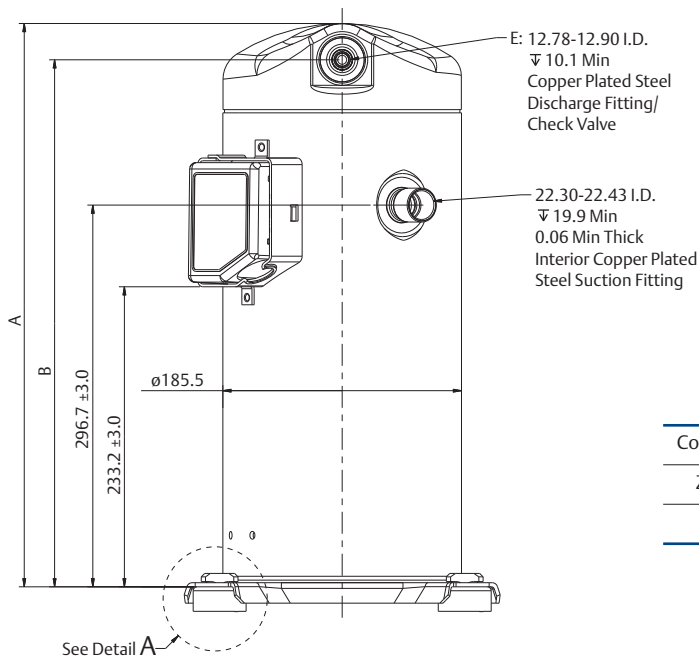
Copeland®



ø17.45 Pin Circle
Models: TFD, TFE, TFM, TF7
ø13.46 Pin Circle
Models: PFJ, PFV, TFW, TF5, PFZ

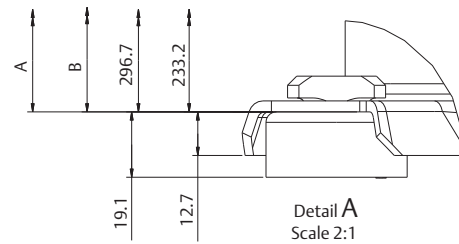
Scale 3:2

F: 19.10-19.25 I.D.
▽ 16.9 Min
Copper Discharge Fitting/
Steel Check Valve



E: 12.78-12.90 I.D.
▽ 10.1 Min
Copper Plated Steel
Discharge Fitting/
Check Valve

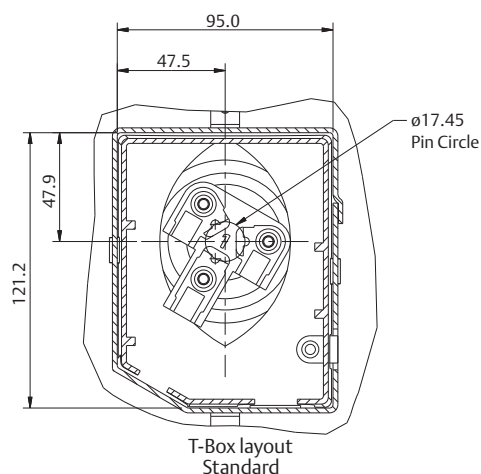
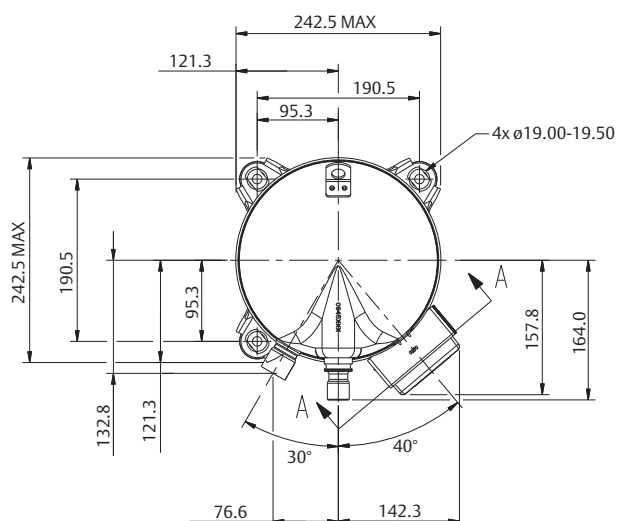
22.30-22.43 I.D.
▽ 19.9 Min
0.06 Min Thick
Interior Copper Plated
Steel Suction Fitting



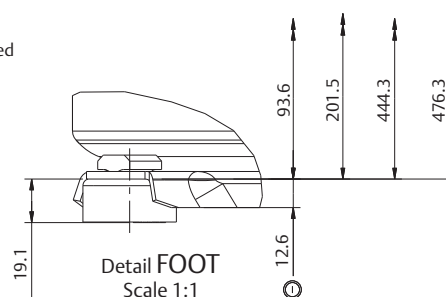
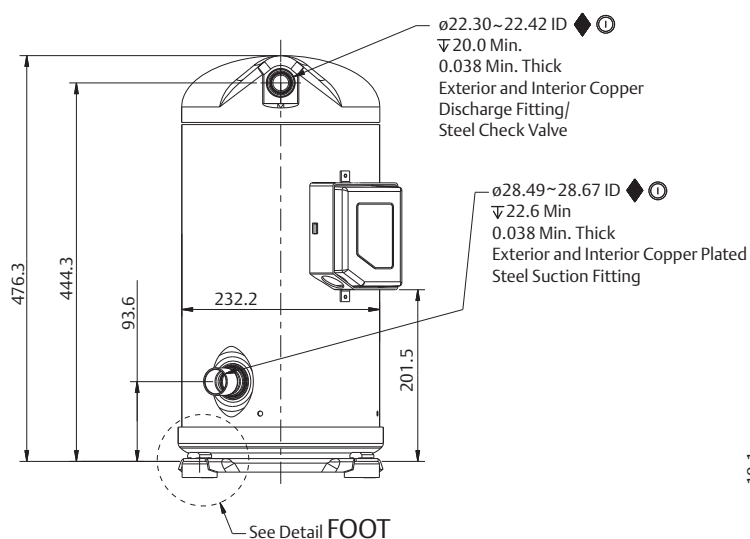
Detail A
Scale 2:1

Compressor model	A±3	B±3	D
ZB38/45KQ(E)	437.7	409.6	124.7
ZB48KQ(E)	443.4	413.7	128.7

ZB Series Dimensions Brazing Connection



Section A-A
Scale 1:1

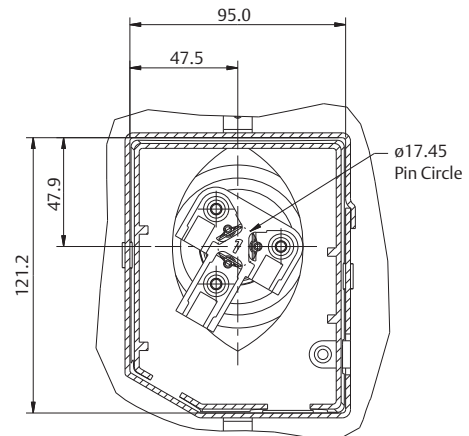
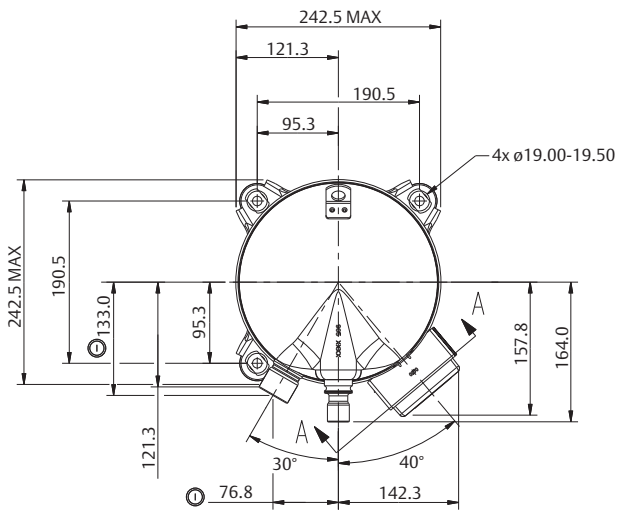


Detail FOOT
Scale 1:1

ZB Series Dimensions Brazing Connection

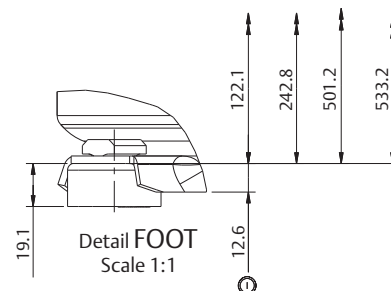
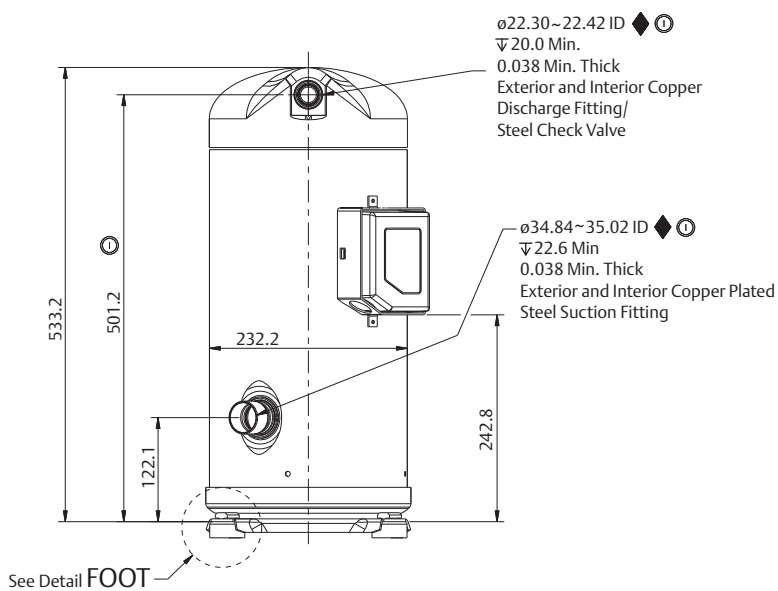
ZB66 - ZB88 (BOM 524)

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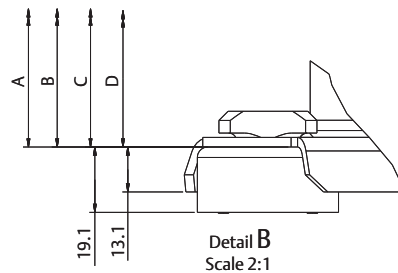
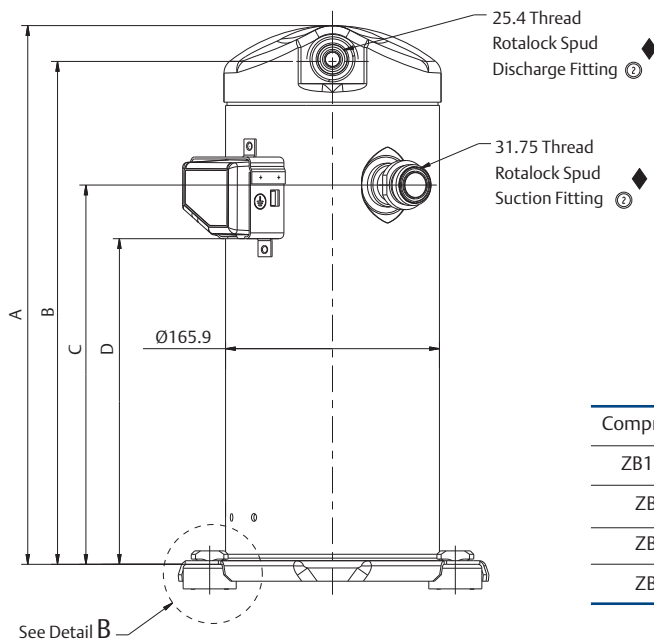
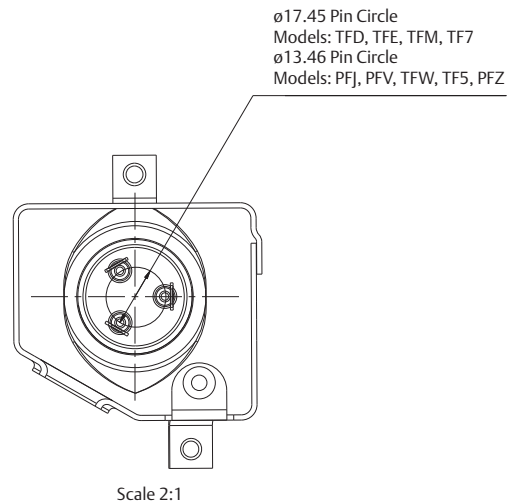
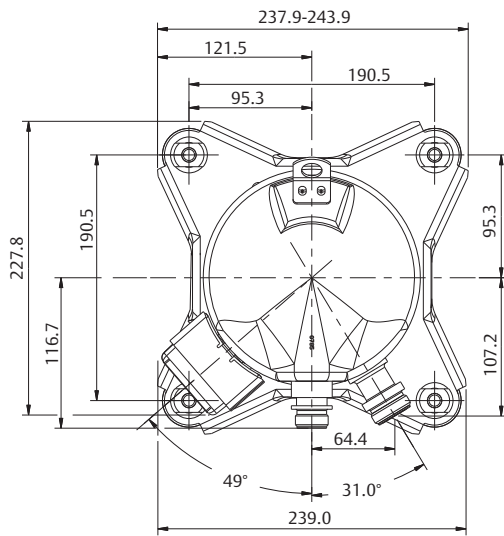
T-Box layout
Standard

Section A-A
Scale 1:1



ZB Series Dimensions Rotalock Connection

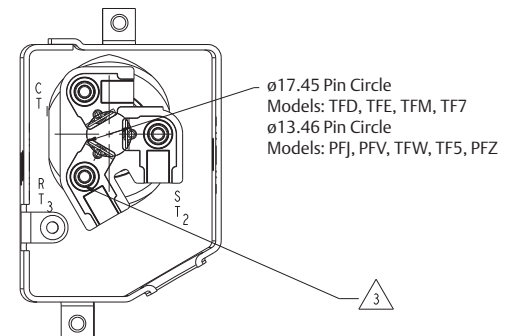
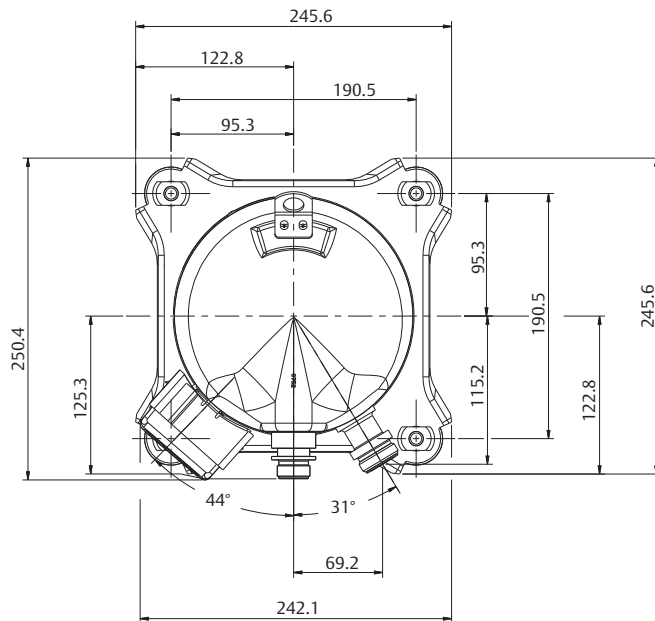
ZB15 - ZB29 (BOM 523)



Compressor model	A±3	B	C	D±3	
ZB15/19KQ(E)	363.8	338.3	244.5	202.9	①
ZB21KQ(E)	386.4	360.9	264.4	222.8	①
ZB26KQ(E)	400.8	372.9	277.1	235.5	① ②
ZB29KQ(E)	417.8	389.9	294.1	252.5	①

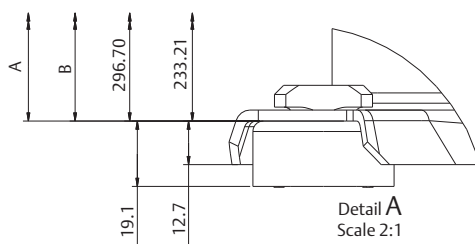
ZB Series Dimensions Rotalock Connection ZB38 - ZB48 (BOM 523)

Copeland®

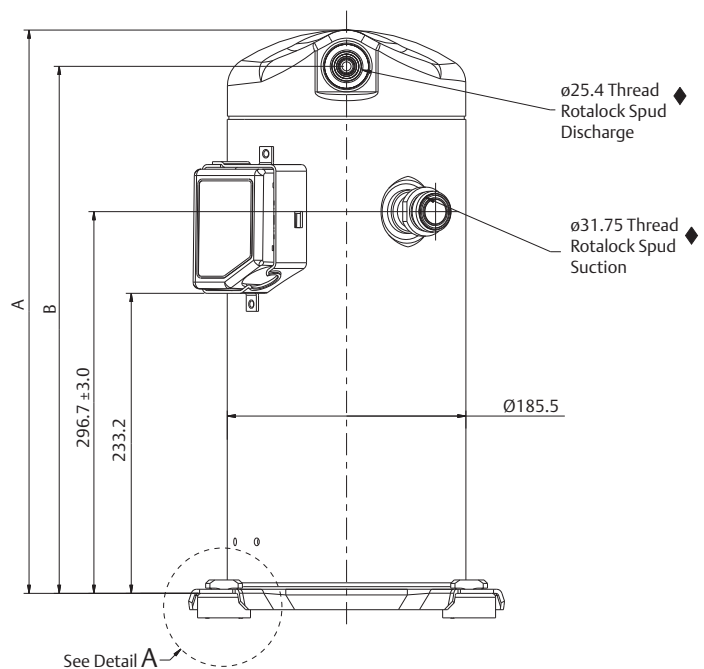


Terminal Box Layout Options
Terminal Box Cover Not Shown

View A-A
Scale 3:2

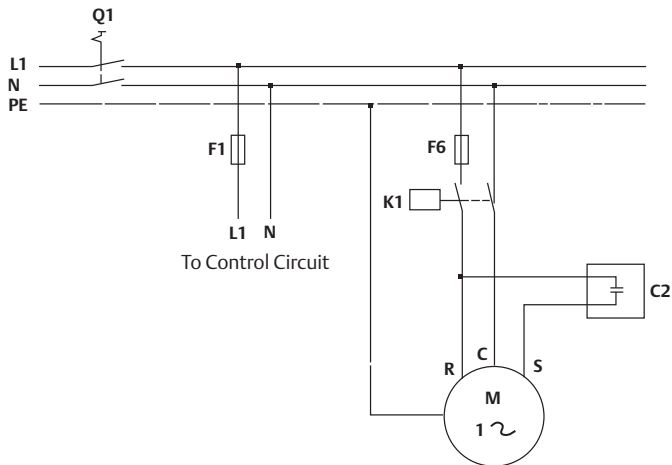


Compressor model	A ± 3	B ± 3
ZB38/45KQ(E)	437.7	409.6
ZB48KQ(E)	443.4	413.7



ZB Series Electrical Wiring Diagram

ZB15 - ZB114



Single Phase Circuit (ZB15-ZB29)

Electrical Schematics

L1/N/PE: Single Phase Lines (line/neutral/ground)

Q1: Manual Switch

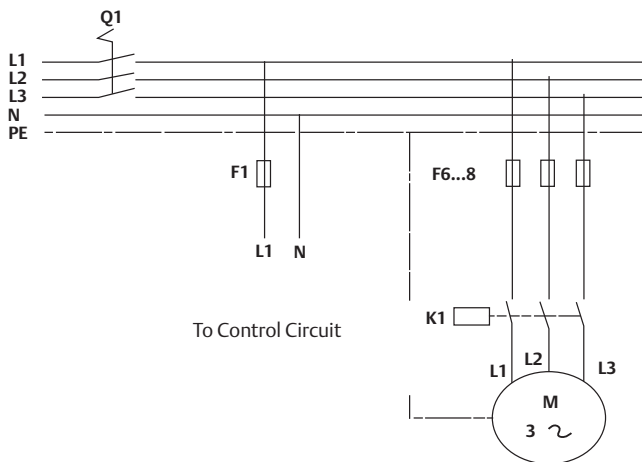
F1/F6: Fuse

K1: Compressor Contactor

C2: Run Capacitor

M: Compressor Motor

R/C/S: Compressor Terminal



3 Phase (ZB15-ZB114)

(with Motor Protection Code "F")

Electrical Schematics

L1/L2/L3/N/PE: 3 Phase Lines (line/neutral/ground)

Q1: Manual Switch

F1/F6..8: Fuse

K1: Compressor Contactor

M: Compressor Motor

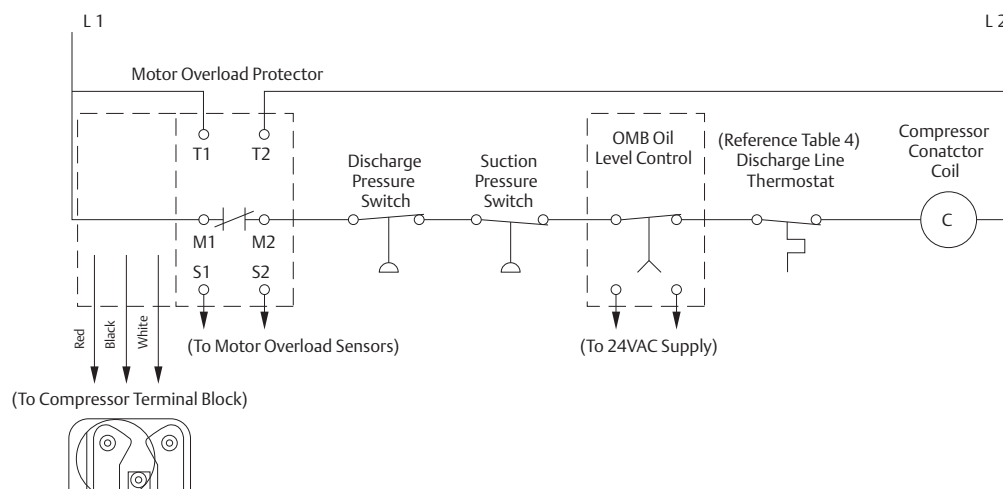
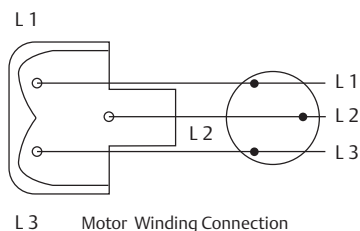
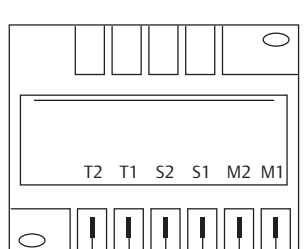
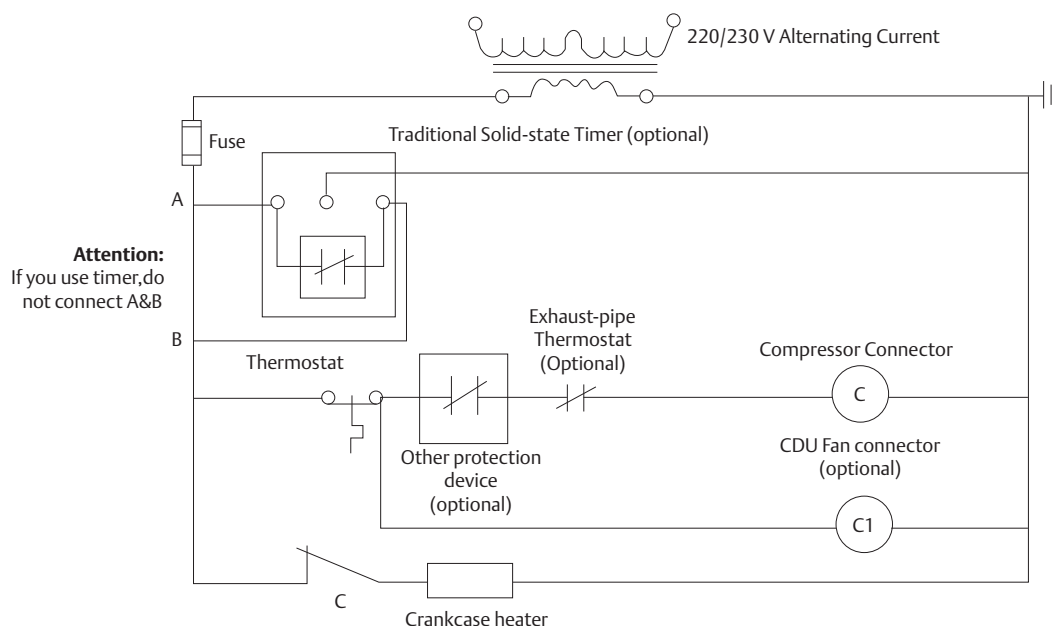
L1/L2/L3: Compressor Terminal



Copeland®

ZB Series Electrical Wiring Diagram

ZB15 - ZB114 Control Circuit



ZR Copeland Scroll™ Compressor Range for R407C and R134a

ZR Copeland Scroll compressors, for R407C and R134a, for comfort and process/precision cooling applications.

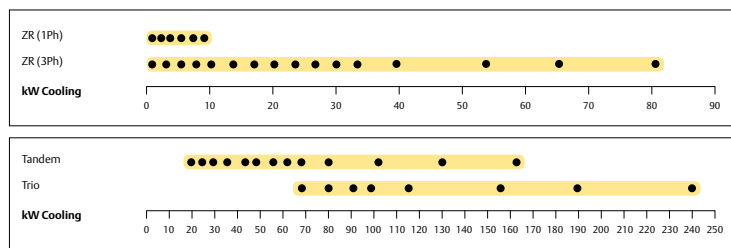
Applied in the air conditioning and comfort industry for water chillers, rooftops and close control unit applications, scroll compressors are now the most used compression technology replacing reciprocating and screw compressors due to its undeniable superiority. Several, fully Copeland™ qualified, multiple compressor assemblies (tandem and trio) are available to allow the use of Copeland Scroll compressors into large capacity systems (ex. up to 500kW air cooled chillers) able to deliver optimal comfort, low operating cost with higher seasonal efficiency (ESEER).

The range of products goes from the ZR18 (1.5hp) to the ZR380 (30hp)



ZR Scroll Compressor

ZR Scroll Compressor Line-up R407C



Copeland ZR List

Totaline Part no	Model	Type of Oil	Power, 1PH/3PH	BOM/Type of Connection
P0212223	ZR22K3E-PFJ-522	POE	1 ph	Stub
P0212823	ZR28K3E-PFJ-522		1 ph	Stub
P0212873	ZR28K3E-TFD-522		3 ph	Stub
P0213423	ZR34K3E-PFJ-522		1 ph	Stub
P0214023	ZR40K3E-PFJ-522		1 ph	Stub
P0214073	ZR40K3E-TFD-522		1 ph	Stub
P0214723	ZR47K3E-PFJ-522		3 ph	Stub
P0214873	ZR48KCE-TFD-522		1 ph	Stub
P0215773	ZR57KCE-TFD-522		3 ph	Stub
P0216123	ZR61KCE-PFZ-522		1 ph	Stub
P0216173	ZR61KCE-TFD-522		1 ph	Stub
P0216174	ZR61KCE-TFD-523		3 ph	Rotalock
P0216823	ZR68KCE-PFJ-522		1 ph	Stub
P0216873	ZR68KCE-TFD-522		1 ph	Stub
P0216874	ZR68KCE-TFD-523		3 ph	Rotalock
P0217273	ZR72KCE-TFD-522		1 ph	Stub
P0217274	ZR72KCE-TFD-523		3 ph	Rotalock
P0218173	ZR81KCE-TFD-522		3 ph	Stub
P0218174	ZR81KCE-TFD-523		3 ph	Rotalock
P0219473	ZR94KCE-TFD-522		3 ph	Stub
P0219474	ZR94KCE-TFD-523		3 ph	Rotalock
P02110873	ZR108KCE-TFD-522		3 ph	Stub
P02110874	ZR108KCE-TFD-523		3 ph	Rotalock
P02112573	ZR125KCE-TFD-522		3 ph	Stub
P02112574	ZR125KCE-TFD-523		3 ph	Rotalock
P02114473	ZR144KCE-TFD-522		3 ph	Stub
P02114474	ZR144KCE-TFD-523		3 ph	Rotalock
P02116071	ZR160KCE-TFD-523		3 ph	Rotalock
P02116074	ZR160KCE-TFD-522		3 ph	Stub
COPZR16M3ETWD961	ZR16M3E-TWD-961		3 ph	Rotalock/Service
COPZR28K3PFJ522	ZR28K3-PFJ-522	Mineral Oil	1 ph	Stub
P0213621	ZR36K3-PFJ-522		1 ph	Stub
P0214221	ZR42K3-PFJ-522		1 ph	Stub
P0214723	ZR47K3-PFJ-522		1 ph	Stub
P0215421	ZR54KCE-PFZ-522		1 ph	Stub
P0216121	ZR61KCE-PFZ-522		1 ph	Stub
P0216821	ZR68KCE-PFJ-522		1 ph	Stub
COPZR28R22	ZR28K3-TFD-522		3 ph	Stub
P0214273	ZR42K3-TFD-522		3 ph	Stub
COPZR47R22	ZR47KCE-TFD-522		3 ph	Stub
P0216172	ZR61KCE-TFD-522		3 ph	Stub
P0216871	ZR68KCE-TFD-522		3 ph	Stub
P0217271	ZR72KCE-TFD-522		3 ph	Stub
P0218171	ZR81KCE-TFD-522		3 ph	Stub
P0219471	ZR94KCE-TFD-522		3 ph	Stub
P02110871	ZR108KCE-TFD-522		3 ph	Stub
P02114471	ZR144KCE-TFD-522		3 ph	Stub
P0219978	ZR125KCE-TFD-523		3 ph	Rotalock
P05025071	ZR250-KC-TWD-523		3 ph	Rotalock
CS10K6E-PFJ-595	CS10K6E-PFJ-595	POE Oil	1 ph	Rotalock
CS14K6E-PFJ-595	CS14K6E-PFJ-595		1 ph	Rotalock
CS18K6E-PFJ-595	CS18K6E-PFJ-595		1 ph	Rotalock
CS18K6E-TFD-595	CS18K6E-TFD-595		3 ph	Rotalock
CS20K6E-TFD-595	CS20K6E-TFD-595		3 ph	Rotalock
CS33K6E-TFD-595	CS33K6E-TFD-595		3 ph	Rotalock

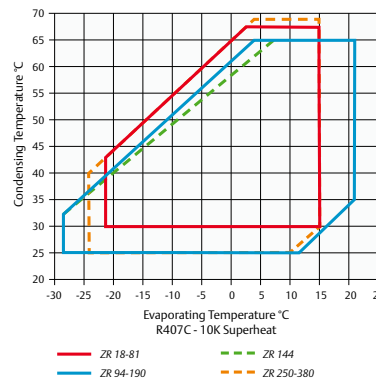
Features and Benefits

- Copeland Scroll axial and radial compliance for superior reliability and efficiency
- Wide scroll line-up for R407C and R134a
- Low TEWI (Total Equivalent Warming Impact)
- Low sound and vibration level
- Low oil circulation rate
- Copeland qualified tandem and trio configurations for superior seasonal efficiency (ESEER)

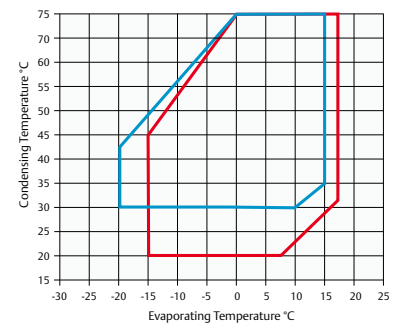
Maximum Allowable Pressure (PS)

- ZR18 to ZR81:
Low Side PS 20 bar(g) / High Side PS 29.5 bar(g)
- ZR94 to ZR380:
Low Side PS 20 bar(g) / High Side PS 32 bar(g)

Operating Envelope R407C



Operating Envelope R134a



Technical Overview

Models	Nominal hp	R407C Capacity (kW)	COP	Displacement (m³/h)	Stub Suction (inch)	Stub Discharge (inch)	Oil Quantity (l)	Length/Width/Height (mm)	Net Weight (kg)	Motor Version/Code		Maximum Operating Current (A)		Locked Rotor Current (A)		Sound Pressure @1 m - dB(A) ***
										1 Ph*	3 Ph**	1 Ph*	3 Ph**	1 Ph*	3 Ph**	
ZR18K5E	1.5	3.7	3.0	4.4	¾	½	0.74	242/242/383	20	PFJ		10		35		54
ZR22K3E	2.0	4.5	2.9	5.3	¾	½	1.00	242/242/363	22	PFJ	TFD	11	4	47	24	54
ZR28K3E	2.5	5.9	2.9	6.8	¾	½	1.00	242/242/363	25	PFJ	TFD	15	5	61	32	54
ZR34K3E	2.8	7.0	3.0	8.0	¾	½	1.10	242/242/386	26	PFJ	TFD	17	6	76	40	57
ZR40K3E	3.5	8.2	3.0	9.4	¾	½	1.10	242/242/400	27	PFJ	TFD	23	7	100	46	57
ZR48K3E	4.0	10.1	3.1	11.4	¾	½	1.36	242/242/417	31	PFJ	TFD	23	10	114	50	57
ZR61KCE	5.0	12.5	3.1	14.4	¾	½	1.66	241/247/438	43	PFJ	TFD	30	11	150	65	60
ZR61KSE	5.0	12.8	3.2	14.4	¾	½	1.42	242/242/430	30	PFZ	TFM		11		59	61
ZR72KCE	6.0	14.8	3.2	17.1	¾	½	1.77	242/242/438	39		TFD		13		74	61
ZR81KCE	6.8	16.7	3.2	18.7	¾	¾	1.77	242/242/443	39		TFD		15		101	61
ZR94KCE	8.0	20.6	3.3	22.1	1 ¼	¾	2.65	264/285/476	57		TFD		16		95	63
ZR108KCE	9.0	23.0	3.4	24.9	1 ¾	¾	3.38	264/285/533	60		TFD		17		111	63
ZR125KCE	10.0	27.0	3.4	29.1	1 ¾	¾	3.38	264/285/533	61		TFD		19		118	63
ZR144KCE	12.0	30.9	3.4	33.2	1 ¾	¾	3.38	264/285/533	61		TFD		22		118	64
ZR160KCE	13.0	33.4	3.2	36.4	1 ¾	¾	3.38	264/285/552	65		TFD		28		140	67
ZR190KCE	15.0	39.3	3.2	43.3	1 ¾	¾	3.38	264/285/552	66		TFD		34		174	69
ZR250KCE	20.0	52.2	3.2	56.6	1 ¾	1 ¾	4.70	432/376/717	140		TWD		41		225	72
ZR310KCE	25.0	65.0	3.2	71.4	1 ¾	1 ¾	6.80	448/392/715	160		TWD		52		272	74
ZR380KCE	30.0	81.7	3.4	87.4	1 ¾	1 ¾	6.30	447/427/715	177		TWD		62		310	76

Conditions EN12900 : Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K

* 1 Ph: 230V/ 50Hz

** 3 Ph: 380-420V/ 50Hz

*** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

ZR Copeland Scroll™ Compressor Range for R407C and R134a

Capacity Data

Condensing Temperature +40°C															
R134a	Cooling Capacity (kW)							R134a	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	Model	-15	-10	-5	0	+5	+10		+15	Model	-15	-10	-5	0	+5
ZR22K3E	1.4	1.8	2.3	2.9	3.6	4.4	5.3	ZR22K3E	0.9	0.9	0.9	0.9	0.9	0.8	0.8
ZR28K3E	1.8	2.3	3.0	3.8	4.7	5.7	6.9	ZR28K3E	1.1	1.2	1.1	1.1	1.1	1.1	1.1
ZR34K3E	2.2	2.9	3.6	4.5	5.5	6.7	8.1	ZR34K3E	1.4	1.4	1.4	1.3	1.3	1.3	1.3
ZR40K3E	2.5	3.3	4.2	5.2	6.4	7.8	9.3	ZR40K3E	1.6	1.5	1.5	1.5	1.5	1.5	1.5
ZR48K3E	3.1	4.0	5.1	6.3	7.8	9.5	11.5	ZR48K3E	1.8	1.8	1.8	1.8	1.8	1.8	1.8
ZR61KCE	4.0	5.2	6.5	8.1	9.9	12.1	14.6	ZR61KCE	2.1	2.1	2.2	2.2	2.2	2.2	2.3
ZR72KCE	4.8	6.2	7.8	9.7	11.9	14.5	17.4	ZR72KCE	2.6	2.6	2.6	2.6	2.6	2.6	2.7
ZR81KCE	5.5	7.0	8.8	10.8	13.2	16.0	19.2	ZR81KCE	2.8	2.9	2.9	2.9	2.9	3.0	3.0
ZR94KCE	5.3	7.5	10.5	13.0	15.9	19.2	23.0	ZR94KCE	3.4	3.4	3.4	3.4	3.4	3.4	3.5
ZR108KCE	7.3	9.3	11.7	14.3	17.5	21.3	25.7	ZR108KCE	3.7	3.8	3.8	3.8	3.8	3.9	3.9
ZR125KCE	8.3	10.7	13.5	16.7	20.5	24.9	30.1	ZR125KCE	4.3	4.4	4.4	4.4	4.4	4.5	4.5
ZR144KCE	10.4	13.3	16.5	20.0	23.7	27.8	32.4	ZR144KCE	4.7	4.9	4.9	5.0	5.0	5.2	5.5
ZR160KCE	10.1	13.3	16.9	21.0	25.7	31.2	37.5	ZR160KCE	5.5	5.5	5.5	5.6	5.7	5.8	5.9
ZR190KCE	12.3	16.0	20.2	25.0	30.7	37.2	44.7	ZR190KCE	6.8	6.9	6.9	7.0	7.0	7.1	7.3
ZR250KCE	16.1	20.5	25.6	31.8	39.0	47.4	57.2	ZR250KCE	8.6	8.7	8.9	9.0	9.1	9.2	9.4
ZR310KCE	20.0	25.6	32.1	39.7	48.6	59.0	71.1	ZR310KCE	10.6	10.8	10.9	10.0	11.2	11.5	11.7
ZR380KCE	25.5	32.2	40.1	49.4	60.3	73.0	87.8	ZR380KCE	12.6	12.9	13.1	13.4	13.6	14.0	14.4

Conditions: Suction Superheat 10K / Subcooling 0K

Condensing Temperature +40℃															
R407C	Cooling Capacity (kW)							R407C	Power Input (kW)						
	Evaporating Temperature (℃)								Evaporating Temperature (℃)						
Model	-15	-10	-5	0	+5	+10	+15	Model	-15	-10	-5	0	+5	+10	+15
ZR18K5E	1.8	2.3	2.8	3.5	4.2	5.1	6.1	ZR18K5E	1.0	1.0	1.0	1.0	1.0	1.0	1.0
ZR22K3E	2.1	2.7	3.4	4.2	5.2	6.3	7.5	ZR22K3E	1.2	1.2	1.2	1.2	1.2	1.2	1.1
ZR28K3E	2.7	3.5	4.4	5.5	6.7	8.1	9.6	ZR28K3E	1.6	1.6	1.6	1.5	1.5	1.5	1.5
ZR34K3E	3.2	4.1	5.2	6.5	7.9	9.6	11.5	ZR34K3E	1.8	1.8	1.8	1.8	1.8	1.8	1.7
ZR40K3E	3.8	4.9	6.1	7.6	9.4	11.3	13.5	ZR40K3E	2.2	2.2	2.2	2.1	2.1	2.1	2.0
ZR48K3E	4.8	6.1	7.6	9.4	11.5	13.8	16.6	ZR48K3E	2.6	2.6	2.6	2.6	2.6	2.5	2.5
ZR61K5E	6.5	8.1	9.9	11.9	14.4	17.2	20.6	ZR61KsE	3.0	3.0	3.1	3.2	3.2	3.1	2.9
ZR72KCE	7.0	9.0	11.3	13.9	16.9	20.3	24.2	ZR72KCE	3.6	3.7	3.7	3.7	3.7	3.7	3.8
ZR81KCE	7.8	10.1	12.7	15.6	19.1	23.0	27.7	ZR81KCE	4.1	4.1	4.1	4.1	4.2	4.2	4.3
ZR94KCE	9.8	12.6	15.8	19.3	23.3	27.9	33.1	ZR94KCE	4.9	5.0	5.0	5.0	5.0	4.9	4.9
ZR108KCE	11.3	14.2	17.6	21.5	26.2	31.5	37.6	ZR108KCE	5.4	5.4	5.5	5.5	5.5	5.6	5.7
ZR125KCE	13.1	16.6	20.5	25.2	30.5	36.7	43.7	ZR125KCE	6.3	6.3	6.4	6.4	6.4	6.5	6.6
ZR144KCE	14.5	18.7	23.4	28.9	35.0	42.0	50.1	ZR144KCE	7.1	7.1	7.2	7.2	7.3	7.3	7.4
ZR160KCE	14.9	19.5	24.9	31.3	38.7	47.3	57.1	ZR160KCE	8.0	8.1	8.2	8.2	8.3	8.4	8.5
ZR190KCE	18.5	23.8	29.8	36.7	44.7	53.8	64.2	ZR190KCE	9.7	9.7	9.8	9.8	9.9	10.1	10.4
ZR250KCE	25.7	32.2	39.9	48.9	59.3	71.3	85.0	ZR250KCE	12.5	12.6	12.7	12.9	13.0	13.0	13.0
ZR310KCE	31.2	39.7	49.7	61.4	75.0	90.7	108.5	ZR310KCE	15.6	15.7	15.9	16.1	16.3	16.6	17.0
ZR380KCE	38.1	49.1	61.7	76.2	93.1	113.0	136.5	ZR380KCE	18.6	18.8	19.0	19.2	19.4	19.8	20.3

Conditions: Suction Superheat 10K / Subcooling 0K



Copeland®

Tandem and Trio Overview

Model	Nominal hp	Cooling Capacity R407C (kW)	Cooling Capacity R134a (kW)	Even Tandem	Uneven Tandem	Trio
Tandem ZRT - Tandem Uneven ZRU - Trio ZRY						
ZRT 96 K3E	2 x 4	20	14	•		
ZRT 122 KSE	2 x 5	25	18	•		
ZRT 144 KCE	2 x 6	30	21	•		
ZRT 162 KCE	2 x 6.5	33	24	•		
ZRT 188 KCE	2 x 8	41	28	•		
ZRT 216 KCE	2 x 9	46	31	•		
ZRT 250 KCE	2 x 10	52	37	•		
ZRT 288 KCE	2 x 12	59	42	•		
ZRU 315 KCE*	10 + 15	66	45		•	
ZRT 320 KCE	2 x 13	67	46	•		
ZRU 350 KCE*	13 + 15	73	50		•	
ZRT 380 KCE	2 x 15	78	54	•		
ZRU 440 KCE*	15 + 20	92	63		•	
ZRY 480 KCE*	3 x 13	99	67			•
ZRT 500 KCE*	2 x 20	104	71	•		
ZRU 500 KCE*	15 + 25	104	71		•	
ZRU 560 KCE*	20 + 25	117	79		•	
ZRY 570 KCE*	3 x 15	116	80			•
ZRT 620 KCE*	2 x 25	130	88	•		
ZRU 690 KCE*	25 + 30	147	99		•	
ZRY 750 KCE*	3 x 20	154	105			•
ZRT 760 KCE*	2 x 30	163	111	•		
ZRY 930 KCE*	3 x 25	192	129			•
ZRY 114 KCE*	3 x 30	241	164			•

Conditions EN 12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K

* Tandem / Trio assemblies by system manufacturers. Emerson Climate Technologies can provide full technical support.

ZP Copeland Scroll™ Compressor Range for R410A

ZP Copeland Scroll compressors, for R410A, for comfort and process/precision cooling applications. Emerson Climate Technologies has been the pioneer in launching the first complete line-up of R410A commercial scroll compressors.

ZP Copeland Scroll compressors are perfectly suitable for aircooled chiller systems up to 900kW (1100 kW if water-cooled) featuring high comfort and superior seasonal efficiency (ESEER).

Whether used in stand-alone, tandem or trio configurations, the broad ZP Copeland Scroll line-up meets today's market requirements with unmatched flexibility, efficiency and proven reliability.

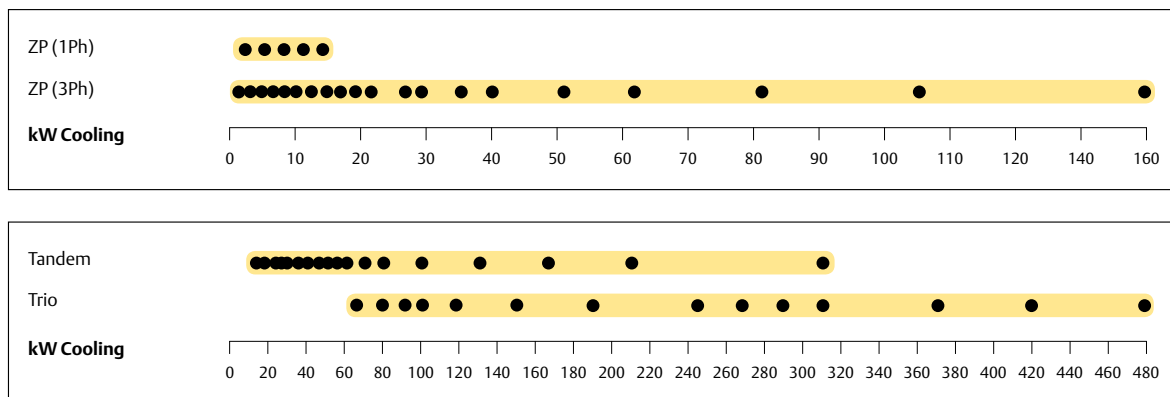
The new ZP232 and ZP292KCE for large chillers feature advanced monitoring capabilities, improved part load information and optimized seasonal performance.

ZP104, ZP122 and ZP143KCE compressors for light commercial systems have a reduced footprint and weight for more compact systems. Their high efficiency helps to reduce operating costs.



ZP Scroll Compressor

ZP Scroll Compressor Line-up



Conditions EN12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K

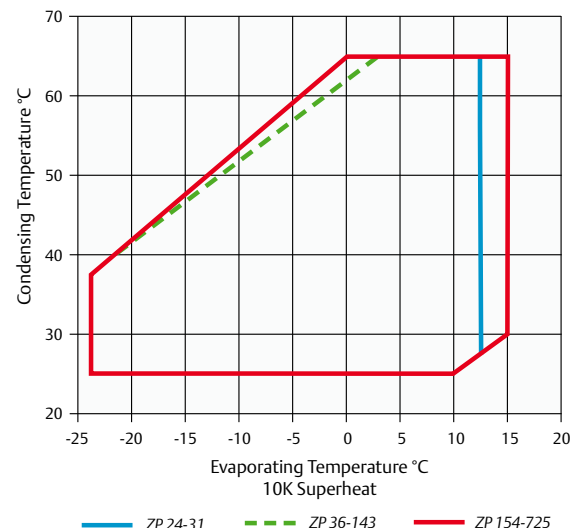
Features and Benefits

- Copeland qualified tandem and trio (now also uneven) configurations for superior seasonal efficiency (ESEER and EN14825: SEER and SCOP)
- Copeland Scroll axial and radial compliance for superior reliability and efficiency
- Extended 5K operating envelope suitable for heat pump applications
- Low TEWI (Total Equivalent Warming Impact)
- Wide scroll line-up for R410A
- Low sound and vibration level
- Low oil circulation rate

Maximum Allowable Pressure (PS)

- ZP24 to ZP91:
Low Side PS 28 bar(g) / High Side PS 43 bar(g)
- ZP104 to ZP725:
Low Side PS 29.5 bar(g) / High Side PS 45 bar(g)

Operating Envelope R410A



Technical Overview

Models	Nominal hp	Capacity (kW)	COP	Displacement (m³/h)	Stub Suction (inch)	Stub Discharge (inch)	Oil Quantity (l)	Length/Width/Height (mm)	Net Weight (kg)	Motor Version/Code		Maximum Operating Current (A)		Locked Rotor Current (A)		Sound Pressure @ 1 m - dB(A)***
										1 Ph*	3 Ph**	1 Ph*	3 Ph**	1 Ph*	3 Ph**	
2P24K5E	1.9	5.1	2.8	3.9	¾	½	0.74	242/242/387	22	PFJ	TFD	13	5	60	28	55
2P29K5E	2.2	6.1	2.9	4.8	¾	½	0.74	242/242/387	23	PFJ	TFD	16	6	67	38	55
2P31K5E	3.0	6.5	2.8	5.0	¾	½	0.74	242/242/388	23	PFJ	TFD	17	6	67	38	55
2P36K5E	2.6	7.9	3.0	6.0	¾	½	1.25	242/242/418	30	PFJ	TFD	22	7	98	46	57
2P42K5E	3.4	9.0	2.9	6.9	¾	½	1.25	242/242/418	31	PFJ	TFD	26	8	128	43	57
2P54K5E	4.6	11.6	3.0	8.9	¾	½	1.24	242/242/418	34	PFJ	TFD	31	10	115	51	59
2P61K5E	5.0	13.3	3.0	10.0	¾	½	1.24	246/246/443	35		TFD		12		64	60
2P72KCE	6.0	15.3	3.0	11.7	¾	½	1.77	246/246/443	40		TFD		15		75	64
2P83KCE	6.5	17.7	3.1	13.4	¾	½	1.77	246/246/443	40		TFD		15		101	61
2P91KCE	7.5	19.3	3.1	14.7	¾	¾	1.77	246/248/446	41		TFD		16		101	61
2P104KCE	9.0	22.7	3.2	16.8	1 ¼	¾	2.51	264/284/476	48		TFD		18		128	63
2P122KCE	10.0	26.5	3.2	19.5	1 ¼	¾	2.51	293/258/559	49		TFD		22		139	63
2P143KCE	12.0	31.6	3.2	23.1	1 1/8	¾	2.75	297/262/559	49		TFD		25		145	64
2P154KCE	13.0	33.5	3.2	24.8	1 ¾	¾	3.38	329/298/552	65		TFD		31		140	65
2P182KCE	15.0	39.6	3.2	29.1	1 ¾	¾	3.38	264/284/552	66		TFD		34		174	66
2P232KCE	20.0	50.6	3.3	37.8	1 ¾	1 ¼	4.60	344/292/661	91		TED		40		225	72
2P235KCE	20.0	50.6	3.2	37.8	1 ¾	1 ¾	4.70	427/376/717	140		TWD		40		225	71
2P292KCE	25.0	63.0	3.3	45.7	1 ¾	1 ¼	4.60	344/292/661	91		TED		48		272	73
2P295KCE	25.0	63.5	3.2	46.7	1 ¾	1 ¾	6.80	448/392/715	160		TWD		48		272	74
2P385KCE	30.0	82.4	3.2	60.8	1 ¾	1 ¾	6.30	448/392/715	178		TWD		65		310	74
2P485KCE	40.0	105.0	3.2	77.3	1 ¾	1 ¾	6.30	391/447/746	190		TWD		82		408	78
2P725KCE	60.0	160.0	3.2	115	2 ¼	1 ¾	6.30	459/483/863	250		FED		124		567	78

Conditions EN12900 : Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K

* 1 Ph: 230V/ 50Hz

** 3 Ph: 380-420V/ 50Hz

*** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Preliminary data

ZP Copeland Scroll™ Compressor Range for R410A

Capacity Data

Condensing Temperature +40°C															
R410A	Cooling Capacity (kW)							R410A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-15	-10	-5	0	+5	+10	+15	Model	-15	-10	-5	0	+5	+10	+15
ZP24K5E	2.2	3.0	3.9	4.9	5.9	7.1		ZP24K5E	1.5	1.5	1.4	1.4	1.4	1.3	
ZP29K5E	2.9	3.9	4.9	6.0	7.3	8.6		ZP29K5E	1.8	1.8	1.7	1.7	1.7	1.6	
ZP31K5E	3.2	4.1	5.2	6.3	7.6	9.1		ZP31K5E	1.9	1.9	1.9	1.8	1.8	1.8	
ZP36K5E	4.1	5.1	6.3	7.7	9.2	11.0		ZP36K5E	2.2	2.1	2.1	2.1	2.1	2.1	
ZP42K5E	4.4	5.7	7.1	8.7	10.5	12.5		ZP42K5E	2.4	2.4	2.4	2.4	2.3	2.3	
ZP54K5E	6.0	7.5	9.3	11.3	13.5	16.0		ZP54K5E	3.1	3.1	3.0	3.0	2.9	2.9	
ZP61K5E	6.9	8.6	10.6	12.9	15.5	18.4	21.4	ZP61K5E	3.5	3.5	3.4	3.4	3.4	3.4	3.4
ZP72KCE	8.2	10.1	12.3	14.8	17.7	20.9		ZP72KCE	4.0	4.0	4.0	4.0	4.1	4.1	
ZP83KCE	9.4	11.6	14.2	17.1	20.4	24.2		ZP83KCE	4.5	4.5	4.5	4.6	4.6	4.7	
ZP91KCE	10.2	12.6	15.4	18.6	22.2	26.3	31.0	ZP91KCE	4.9	4.9	4.9	5.0	5.0	5.0	5.3
ZP104KCE	12.0	14.9	18.1	21.9	26.1	31.0	36.5	ZP104KCE	5.7	5.7	5.7	5.7	5.8	5.8	5.9
ZP122KCE	14.1	17.4	21.2	25.5	30.4	36.1	42.4	ZP122KCE	6.6	6.6	6.7	6.7	6.7	6.8	6.9
ZP143KCE	15.9	20.3	25.2	30.5	36.1	41.9	47.8	ZP143KCE	7.5	7.7	7.8	7.9	8.1	8.4	8.8
ZP154KCE	18.2	22.3	27.1	32.6	38.9	46.1	54.3	ZP154KCE	8.1	8.2	8.2	8.3	8.3	8.5	8.8
ZP182KCE	21.4	26.3	32.0	38.4	45.6	53.9	63.3	ZP182KCE	9.5	9.7	9.9	10.0	10.1	10.1	10.0
ZP232KCE	26.5	32.9	40.3	48.8	58.6	69.7	82.3	ZP232KCE	12.4	15.5	12.7	12.8	13.0	13.2	13.4
ZP235KCE	26.5	32.9	40.3	48.8	58.6	69.7	82.3	ZP235KCE	12.5	12.6	12.7	12.8	13.0	13.2	13.5
ZP292KCE	34.5	42.0	50.6	60.6	71.9	84.9	99.7	ZP292KCE	15.2	15.4	15.5	15.6	15.6	15.6	15.6
ZP295KCE	34.2	41.9	50.9	61.3	73.3	86.9	102.5	ZP295KCE	15.8	16.0	16.1	16.2	16.4	16.6	16.8
ZP385KCE	43.7	53.9	65.8	79.5	95.2	113.0	133.5	ZP385KCE	20.3	20.4	20.5	20.7	20.9	21.3	21.7
ZP485KCE	57.5	70.0	84.7	101.6	121.0	143.0	168.0	ZP485KCE	24.9	25.3	25.8	26.3	27.0	27.8	28.8
ZP725KCE	88.0	107.0	129.0	154.0	182.0	215.0	252.0	ZP725KCE	39.0	39.6	40.0	40.0	40.7	41.3	41.1

Conditions: Suction Superheat 10K / Subcooling 0K
Preliminary data



Copeland®

Tandem and Trio Overview

Model	Nominal hp	Cooling Capacity (kW)	Even Tandem	Uneven Tandem	Even Trio	Uneven Trio
Tandem ZPT - Tandem Uneven ZPU - Trio ZPY - Uneven Trio ZPM						
ZPT 72 K5E*	2 x 3	16	•			
ZPT 84 K5E*	2 x 3.5	18	•			
ZPT 108 K5E*	2 x 4	23	•			
ZPT 122 K5E*	2 x 5	26	•			
ZPT 144 KCE*	2 x 6	31	•			
ZPT 166 KCE*	2 x 6.5	35	•			
ZPT 182 KCE*	2 x 8	39	•			
ZPT 208 KCE*	2 x 9	45	•			
ZPT 244 KCE*	2 x 10	53	•			
ZPT286KCE	2 x 12	63	•			
ZPT 308KCE*	2 x 13	67	•			
ZPU 336 KCE*	13 + 15	73		•		
ZPT 364 KCE*	2 x 15	79	•			
ZPU 417 KCE*	15 + 20	90		•		
ZPU418KCE*	20 + 15	90		•		
ZPY 462 KCE*	3 x 13	99			•	
ZPT 470 KCE*	2 x 20	101	•			
ZPT472KCE*	2 x 20	101	•			
ZPU 532KCE*	20 + 25	101	•			
ZPU 477 KCE*	15 + 25	103		•		
ZPU 530 KCE*	20 + 25	114		•		
ZPY 546 KCE*	3 x 15	117			•	
ZPT 592KCE*	2 x 25	125	•			
ZPT 590 KCE*	2 x 25	127	•			
ZPU 681KCE*	30 + 25	144		•		
ZPU 680 KCE*	25 + 30	146		•		
ZPY 705 KCE*	3 x 20	150			•	
ZPY 708KCE*	3 x 20	150			•	
ZPT 770 KCE*	2 x 30	165	•			
ZPU 870 KCE*	30 + 40	187		•		
ZPY 885 KCE*	3 x 25	188			•	
ZPT 970 KCE*	2 x 40	209	•			
ZPU 111 MCE*	30 + 60	240		•		
ZPY 115 MCE*	3 x 30	243			•	
ZPU 121 MCE*	40 + 60	262		•		
ZPM 125 MCE*	30 + 30 + 40	265				•
ZPM 135 MCE*	30 + 40 + 40	287				•
ZPY 145 MCE*	40 + 40 + 40	309			•	
ZPT 145 MCE*	60 + 60	317	•			
ZPM 169 MCE*	40 + 40 + 60	362				•
ZPM 194 MCE*	40 + 60 + 60	416				•
ZPY 218 MCE*	60 + 60 + 60	470			•	

Conditions EN 12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K

Tandem / Trio assemblies by system manufacturers. Emerson Climate Technologies can provide full technical support.

Suppliers to the air-conditioning, heating and refrigeration trade.

www.totaline.com.au

ZPD & ZRD Copeland Scroll Digital™ Compressor Range for R410A and R407C

Stepless capacity modulation in air conditioning applications: Flexible solution for R407C and R410A.

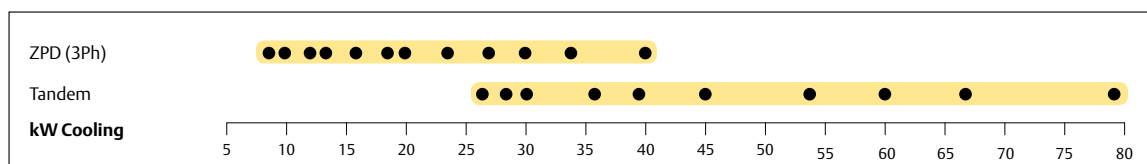
In many cooling and heating systems, the load and the operating conditions vary over a wide range thus requiring the use of capacity modulation. Digital Scroll assures stepless modulation down to 10% of the nominal capacity, enabling precise temperature control, superior comfort and energy saving.

Digital Scroll compressors are the preferred choice for process cooling, refrigeration racks, refrigeration units, VRF, rooftop and air handling unit systems.

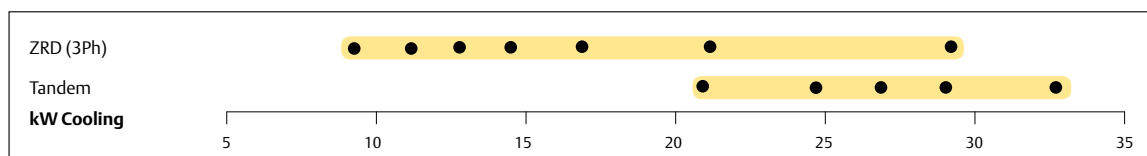


ZPD & ZRD Copeland Scroll Digital Compressor

ZPD & ZRD Digital Scroll Compressor Line-up R410A



ZPD & ZRD Digital Scroll Compressor Line-up R407C



Conditions EN12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K

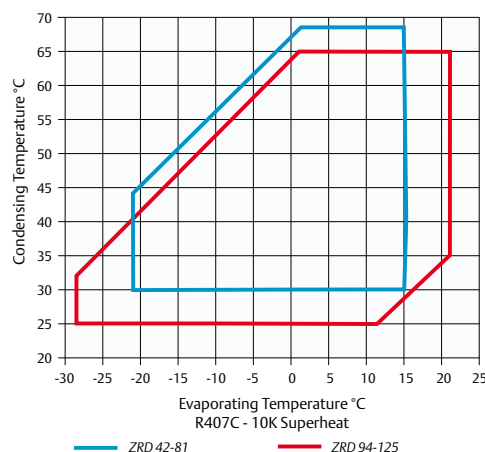
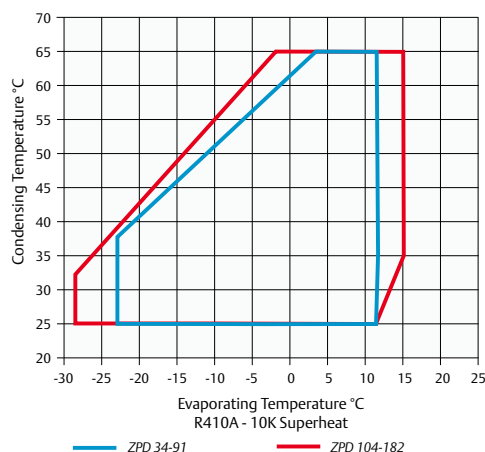
Features and Benefits

- Wide modulation range from 10% to 100% for immediate load adjustment, close temperature comfort, optimal comfort
- No complex electronics, a quasi-drop-in solution for fast time to market, no EMI/EMC problems, easy installation and maintenance
- No impact on system mechanical balance: no vibration and resonance phenomenon, no frame/piping redesign necessary

Maximum Allowable Pressure (PS)

- Digital ZRD42 to ZRD81:
Low Side PS 20bar(g) / High Side PS 29.5 bar(g)
- Digital ZRD94 to ZRD125:
Low Side PS 20bar(g) / High Side PS 32 bar(g)
- Digital ZPD34 to ZPD91:
Low Side PS 28 bar(g) / High Side PS 43 bar(g)
- Digital ZPD103 to ZPD182:
Low Side PS 29.5 bar(g) / High Side PS 45 bar(g)

Operating Envelope R410A/R407C



Technical Overview

Models	Nominal hp	Capacity (kW)	COP	Displacement (m³/h)	Stub Suction (inch)	Stub Discharge (inch)	Oil Quantity (l)	Length/ Width/Height (mm)	Net Weight (kg)	Motor Version/ Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @1 m - dB(A) **
										3 Ph*	3 Ph*	3 Ph*	
ZPD34KSE	3.0	7.3	2.8	5.7	¾	½	1.24	243/243/448	31	TFM	12	64	66
ZPD42KSE	3.5	9.1	3.0	6.9	¾	½	1.24	243/243/464	31	TFM	8	52	66
ZPD54KSE	4.5	11.5	3.0	8.9	¾	½	1.24	236/236/479	35	TFM	10	62	67
ZPD61KCE	5.0	13.2	2.9	10.1	¾	½	1.89	241/246/484	41	TFD	12	64	63
ZPD72KCE	5.0	15.2	2.9	11.6	¾	½	1.89	241/246/484	40	TFD	15	75	67
ZPD83KCE	6.0	17.7	3.0	13.4	¾	½	1.77	246/253/481	40	TFD	16	101	64
ZPD91KCE	7.5	19.2	3.1	14.7	¾	¾	1.80	246/253/481	40	TFD	16	101	69
ZPD104KCE	9.0	22.7	3.1	16.7	1 ¼	¾	3.25	270/262/605	61	TFD	18	128	63
ZPD122KCE	10.0	26.3	3.1	19.7	1 ¼	¾	3.25	270/262/605	62	TFD	21	139	63
ZPD137KCE	12.0	29.5	3.1	22.1	1 ¾	¾	3.25	293/285/533	62	TFD	25	118	63
ZPD154KCE	13.0	33.1	3.1	24.8	1 ¾	¾	3.25	314/285/552	65	TFD	27	140	66
ZPD182KCE	15.0	39.0	3.1	29.0	1 ¾	¾	3.25	314/285/552	67	TFD	34	173	68

Conditions EN12900 R410A: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Models	Nominal hp	Capacity (kW)	COP	Displacement (m³/h)	Stub Suction (inch)	Stub Discharge (inch)	Oil Quantity (l)	Length/ Width/Height (mm)	Net Weight (kg)	Motor Version/ Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @ 1 m - dB(A)* **
										3 Ph*	3 Ph*	3 Ph*	
ZRD42KCE	3.5	8.9	2.9	9.9	¾	½	1.24	241/241/462	31	TFD	7	46	60
ZRD48KCE	4.0	10.5	3.0	11.4	¾	½	1.36	241/241/465	32	TFD	10	48	64
ZRD61KCE	5.0	12.5	3.0	14.3	¾	½	1.89	241/246/481	38	TFD	9.6	64	65
ZRD72KCE	6.0	14.3	2.9	17.0	¾	¾	1.89	241/246/481	40	TFD	13	74	63
ZRD81KCE	6.0	17.0	3.1	18.7	¾	¾	1.89	241/246/481	41	TFD	15	100	67
ZRD94KCE	7.5	21.0	3.3	22.1	1 ¼	¾	2.51	293/285/476	58	TFD	16	95	64
ZRD125KCE	10.0	27.7	3.3	28.8	1 ¼	¾	3.25	293/285/533	61	TFD	20	118	64

Conditions EN12900 R407C: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

ZPD & ZRD Copeland Scroll Digital™ Compressor Range for R410A and R407C



Capacity Data

Condensing Temperature +40°C																
R410A	Cooling Capacity (kW)							R410A	Power Input (kW)							
	Evaporating Temperature (°C)								Evaporating Temperature (°C)							
	Model	-15	-10	-5	0	+5	+10		+15	Model	-15	-10	-5	0	+5	+10
ZPD34KSE	3.9	5.0	6.2	7.6	9.2	11.0		ZPD34KSE	2.1	2.1	2.1	2.0	2.0	2.0		
ZPD42KSE	4.8	5.9	7.3	8.8	10.6	12.6		ZPD42KSE	2.3	2.3	2.4	2.4	2.4	2.3		
ZPD54KSE	6.5	7.9	9.5	11.4	13.5	16.0		ZPD54KSE	3.1	3.1	3.1	3.0	3.0	3.0		
ZPD61KCE	6.9	8.6	10.5	12.7	15.3	18.2		ZPD61KCE	3.3	3.4	3.5	3.5	3.6	3.6		
ZPD72KCE	8.2	10.1	12.3	14.8	17.6	20.9		ZPD72KCE	3.9	4.0	4.1	4.1	4.2	4.2		
ZPD83KCE	9.7	11.9	14.4	17.2	20.5	24.1		ZPD83KCE	4.5	4.6	4.7	4.7	4.8	4.9		
ZPD91KCE	10.1	12.6	15.3	18.5	22.1	26.2	30.9	ZPD91KCE	4.9	5.0	5.0	5.0	5.1	5.0	5.0	
ZPD104KCE	12.3	15.1	18.3	21.9	26.1	30.8	36.2	ZPD104KCE	5.6	5.7	5.7	5.9	6.0	6.1	6.2	
ZPD122KCE	14.2	17.5	21.2	25.4	30.3	35.8	42.0	ZPD122KCE	6.4	6.5	6.6	6.7	6.8	6.9	7.0	
ZPD137KCE	15.5	19.4	23.7	28.7	34.2	40.3	47.2	ZPD137KCE	7.5	7.5	7.5	7.4	7.4	7.5	7.6	
ZPD154KCE	17.8	22.0	26.6	31.9	38.0	45.0	53.0	ZPD154KCE	8.2	8.3	8.4	8.5	8.6	8.7	8.9	
ZPD182KCE	22.3	26.8	32.0	37.9	44.6	52.5	61.6	ZPD182KCE	9.8	9.9	10.0	10.1	10.2	10.4	10.5	

Conditions: Suction Superheat 10K / Subcooling 0K

Condensing Temperature +40°C															
R407C	Cooling Capacity (kW)							R407C	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-15	-10	-5	0	+5	+10	+15	Model	-15	-10	-5	0	+5	+10	+15
ZRD42KCE	4.3	5.4	6.7	8.3	10.1	12.2	14.6	ZRD42KCE	2.0	2.1	2.1	2.2	2.2	2.3	2.3
ZRD48KCE	4.9	6.4	8.0	10.0	12.3	15.0	18.1	ZRD48KCE	2.5	2.6	2.6	2.7	2.7	2.8	2.9
ZRD61KCE	6.1	7.7	9.5	11.7	14.2	17.3	21.0	ZRD61KCE	3.0	3.1	3.2	3.4	3.4	3.4	3.3
ZRD72KCE	3.5	6.0	8.9	12.3	16.2	20.6	25.6	ZRD72KCE	3.5	3.6	3.7	3.8	4.0	4.1	4.3
ZRD81KCE	8.0	10.2	12.8	15.8	19.2	23.2	27.7	ZRD81KCE	4.3	4.4	4.4	4.5	4.6	4.7	4.8
ZRD94KCE	10.0	12.7	16.0	19.8	24.1	28.9	34.5	ZRD94KCE	5.0	5.1	5.1	5.1	5.1	5.2	5.3
ZRD125KCE	13.2	16.9	21.3	26.3	31.7	37.6	43.7	ZRD125KCE	6.5	6.6	6.6	6.7	6.8	6.9	7.1

Conditions: Suction Superheat 10K / Subcooling 0K

Copeland Compressors Range

Standard Bill of Materials



Standard Bills of Material for Copeland Compressors

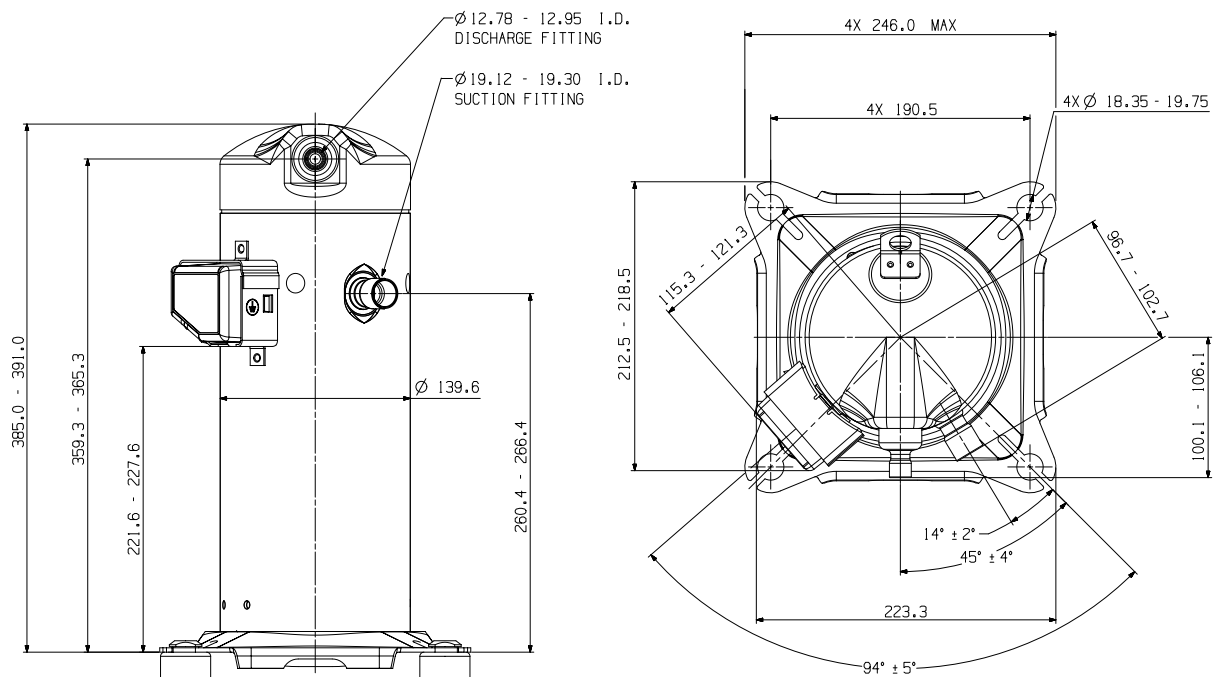
The bill of material number shown includes items shown by the ✓.

BOM	Application		Connections		Oil Sight Glass	Mounting Kit	Digital Components		Molded Plug
	Single	Tandem Ready	Stub	Rotalock			Solenoid Valve	Coil	
420		✓	✓						
421		✓	✓						
422		✓	✓			✓			
425		✓	✓		✓	✓			
432		✓	✓			✓	✓	✓	
455		✓	✓		✓				
465		✓		✓	✓				
522	✓		✓			✓			
523	✓			✓		✓			
524	✓		✓			✓			
532	✓		✓			✓	✓	✓	
550	✓		✓		✓	✓			
551	✓			✓	✓	✓			
558	✓		✓		✓	✓			
559	✓			✓	✓	✓			
600	✓		✓			✓			✓
622	✓		✓			✓			
632		✓	✓			✓	✓	✓	
692	✓		✓						

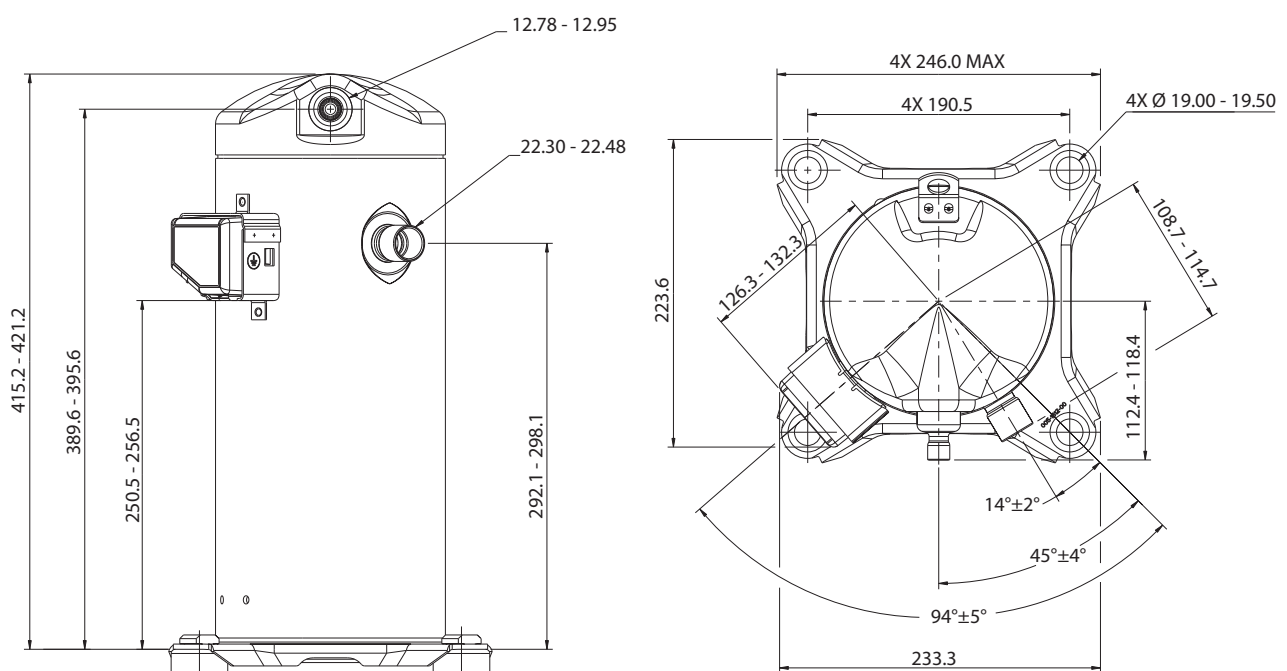
ZP & ZR Copeland Scroll Digital™ Compressor Range

Dimensions

ZP24, 29, 31K5E



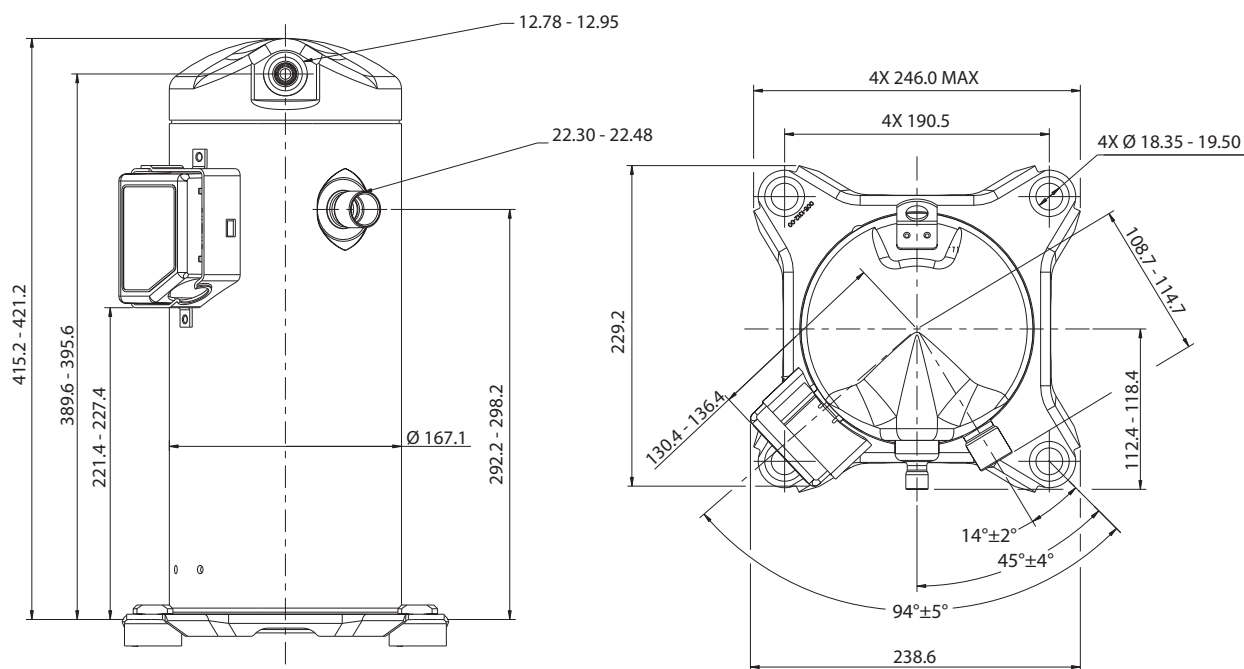
ZP36, 42K5E



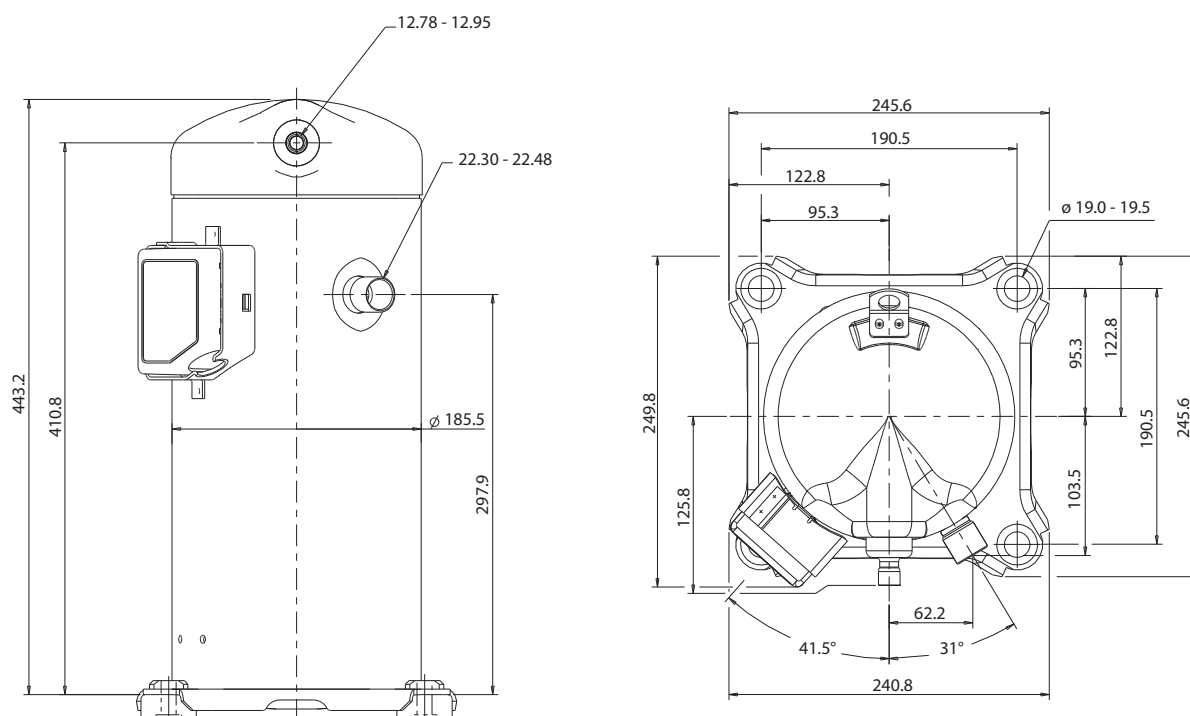


Copeland®

ZP54K5E



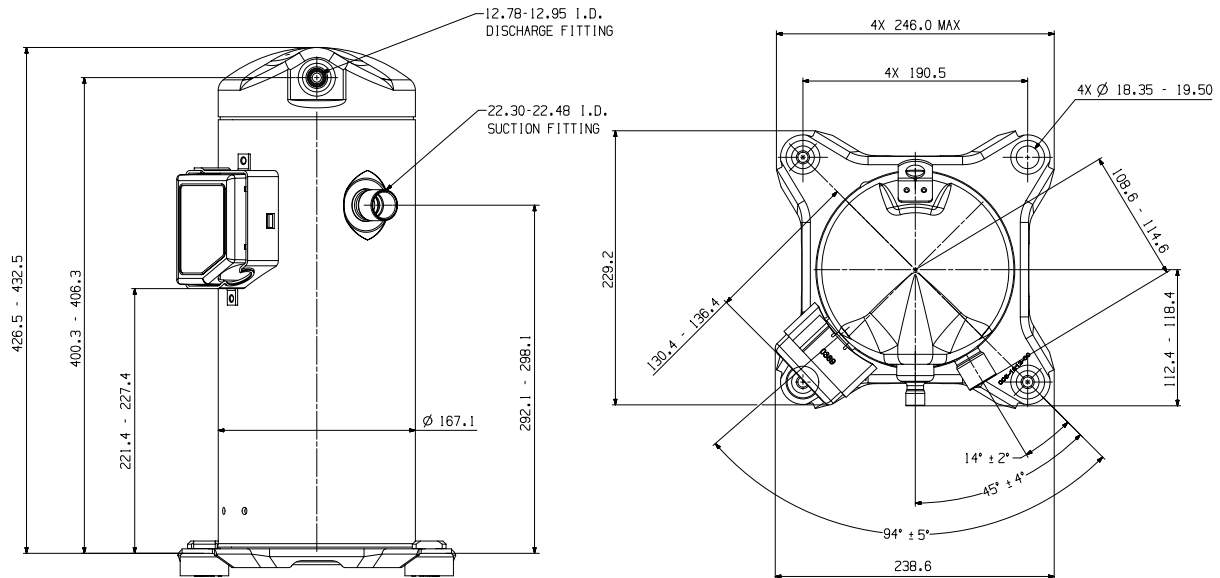
ZP61KCE, ZP72KCE, ZP83KCE



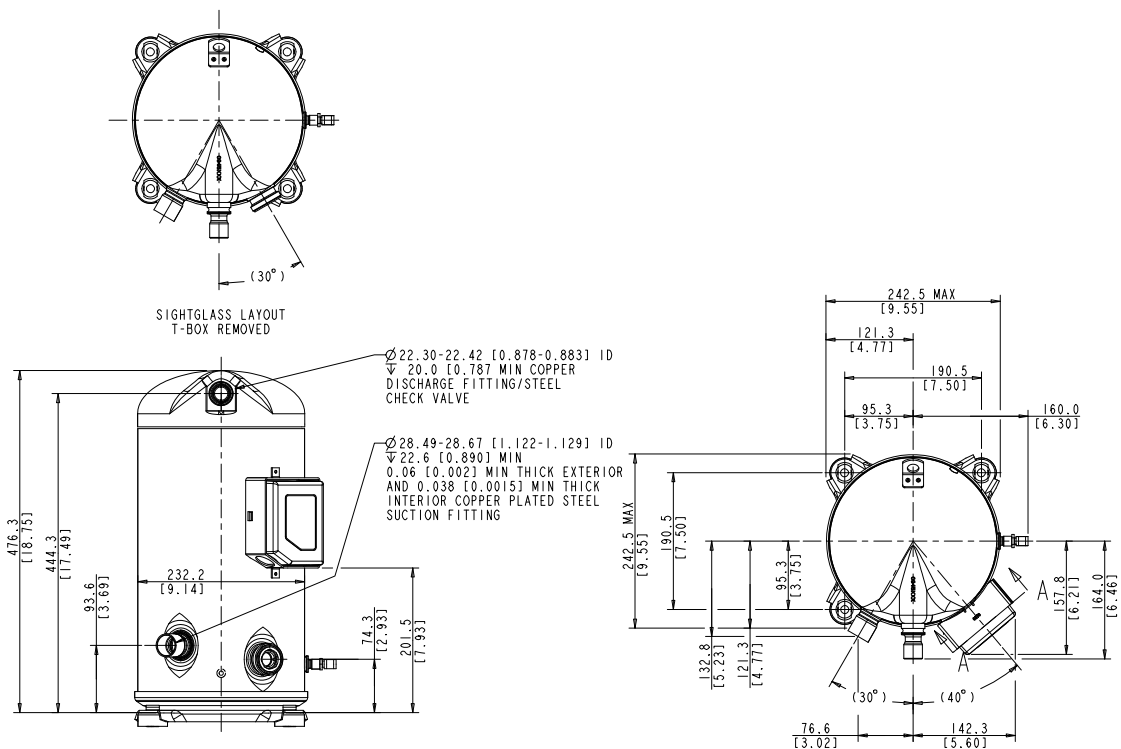
ZP & ZR Copeland Scroll Digital™ Compressor Range

Dimensions

ZP61K5E



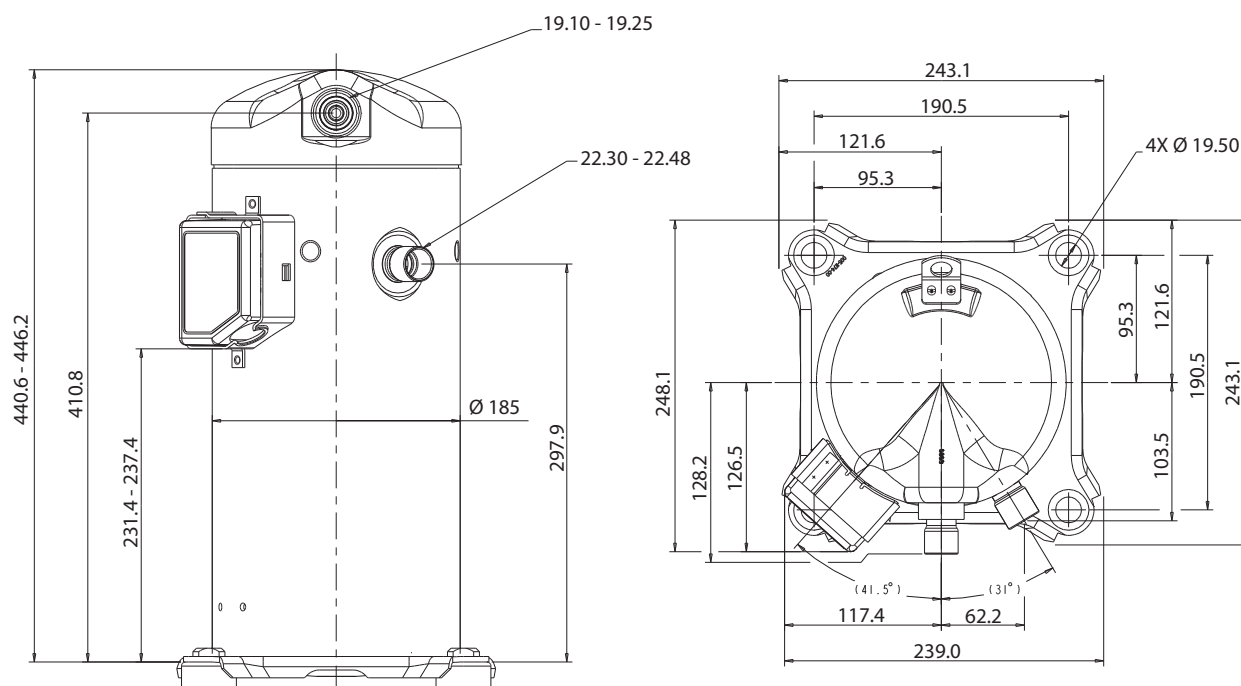
ZR94KCE, ZP90KCE, ZH40KCE



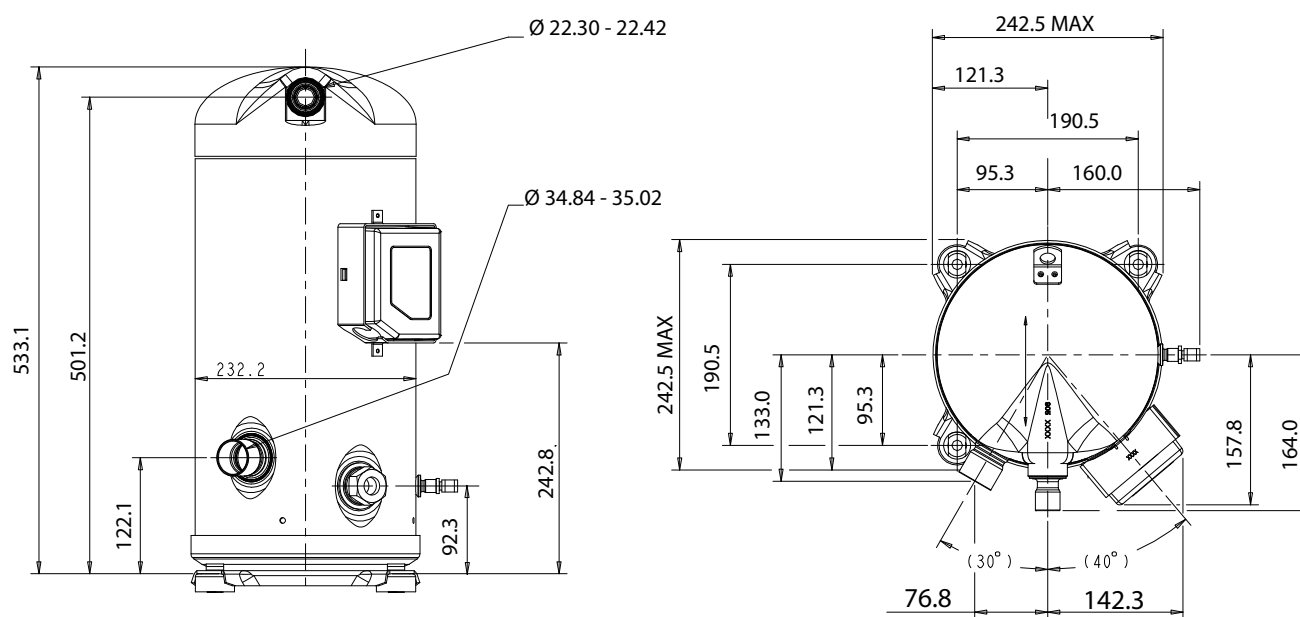


Copeland®

ZP91KCE



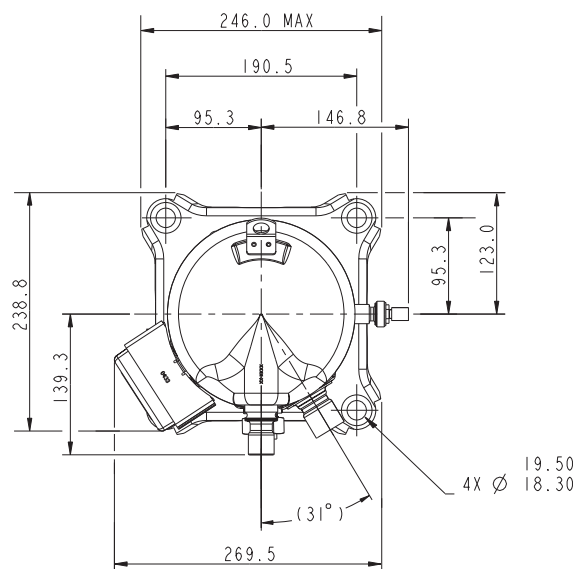
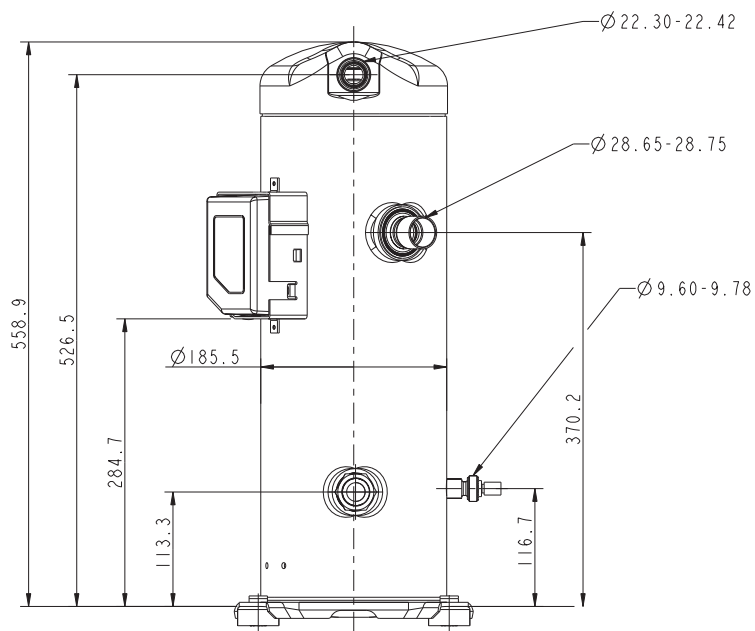
ZR108...144KCE, ZP103...137KCE, ZH 45, 50 KCE



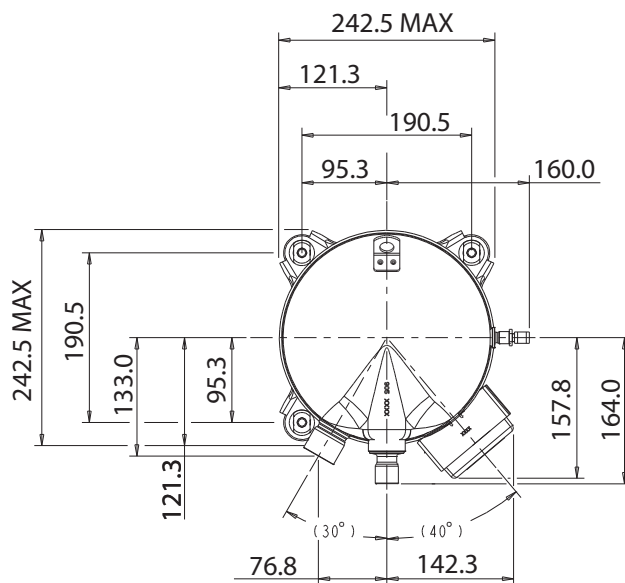
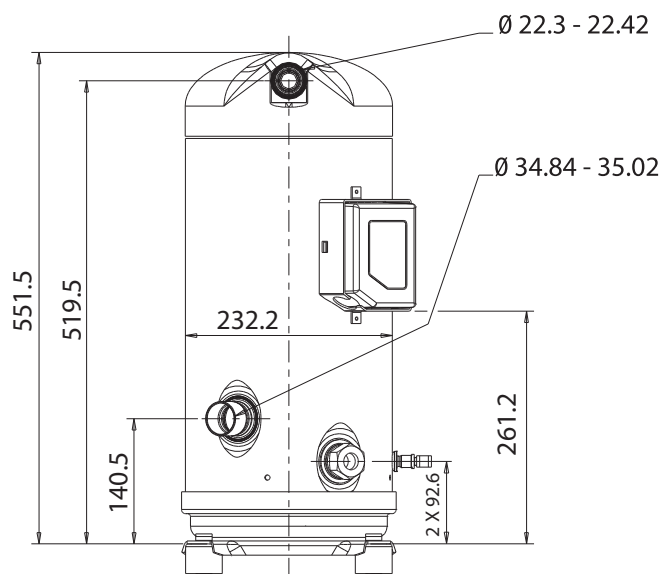
ZP & ZR Copeland Scroll Digital™ Compressor Range

Dimensions

ZP104KCE, ZP122KCE, ZP143KCE



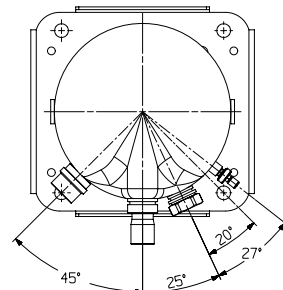
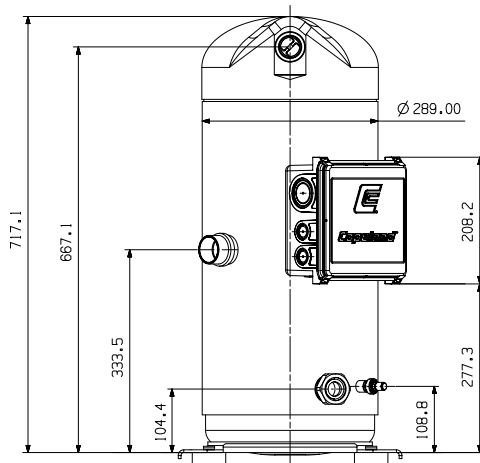
ZR160, 190 KCE, ZP154, 182 KCE, ZH 64, 75 KCE



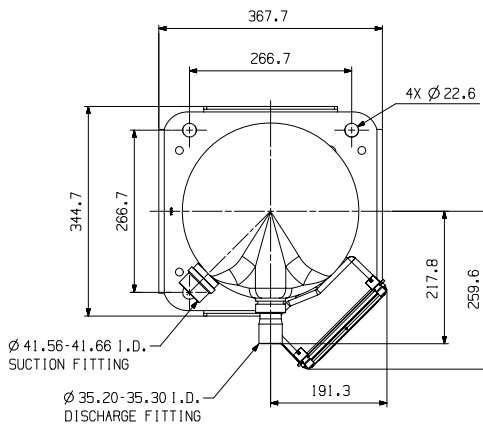


Copeland®

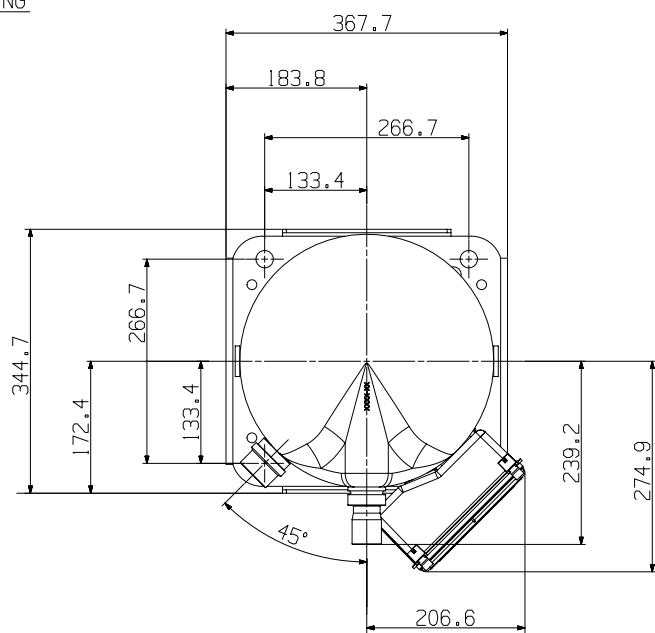
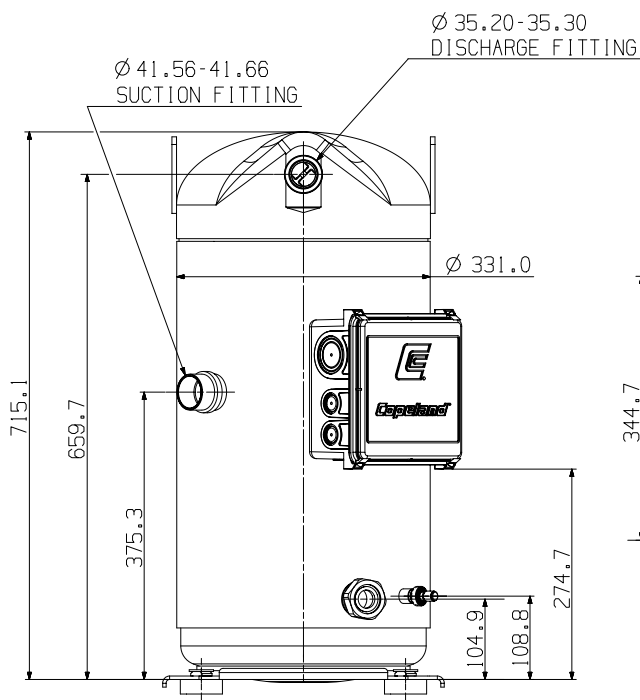
ZH 100 KCE, ZP 235 KCE, ZR 250 KCE



(VIEW W/O TERMINAL BOX)



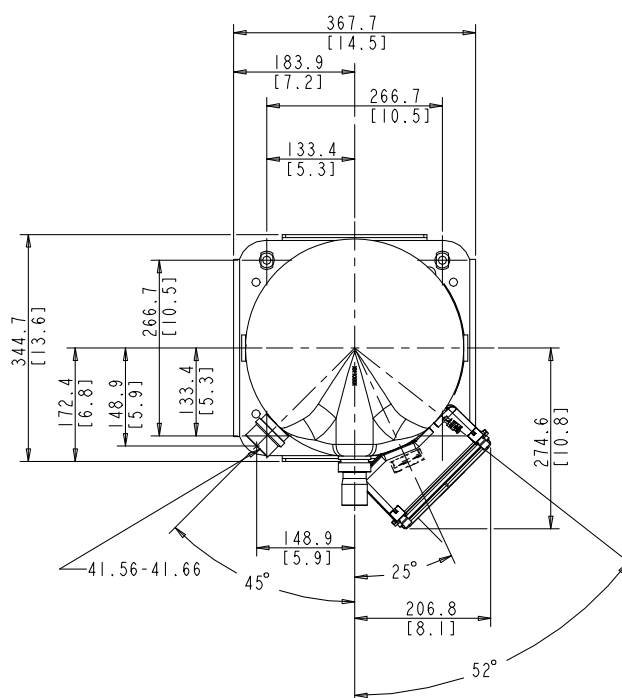
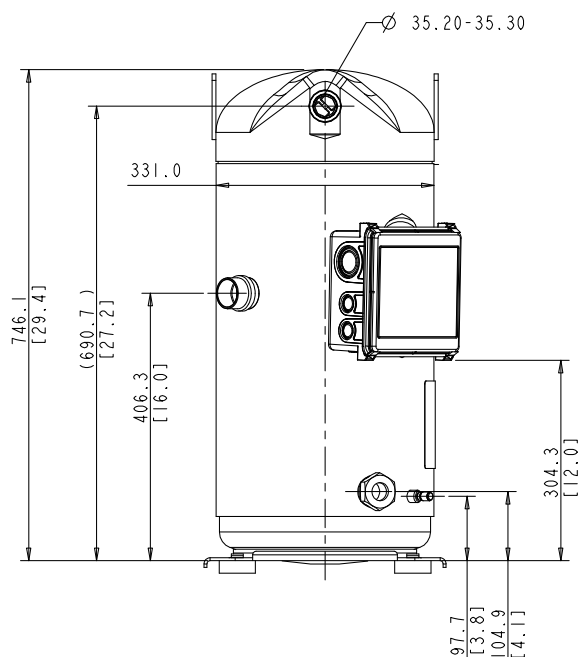
ZH125,150KCE, ZP295, 385KCE, ZR310, 380KCE



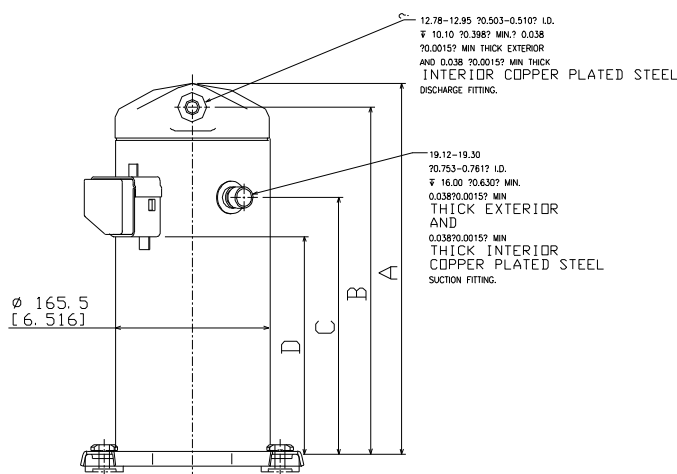
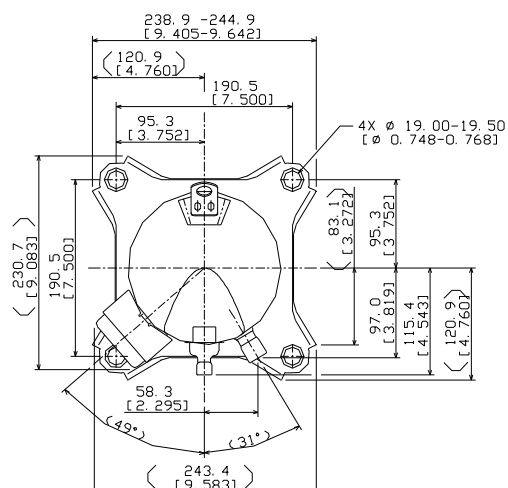
ZP & ZR Copeland Scroll Digital™ Compressor Range

Dimensions

ZP104KCE, ZP122KCE, ZP143KCE



ZR22K3 to ZR40K3

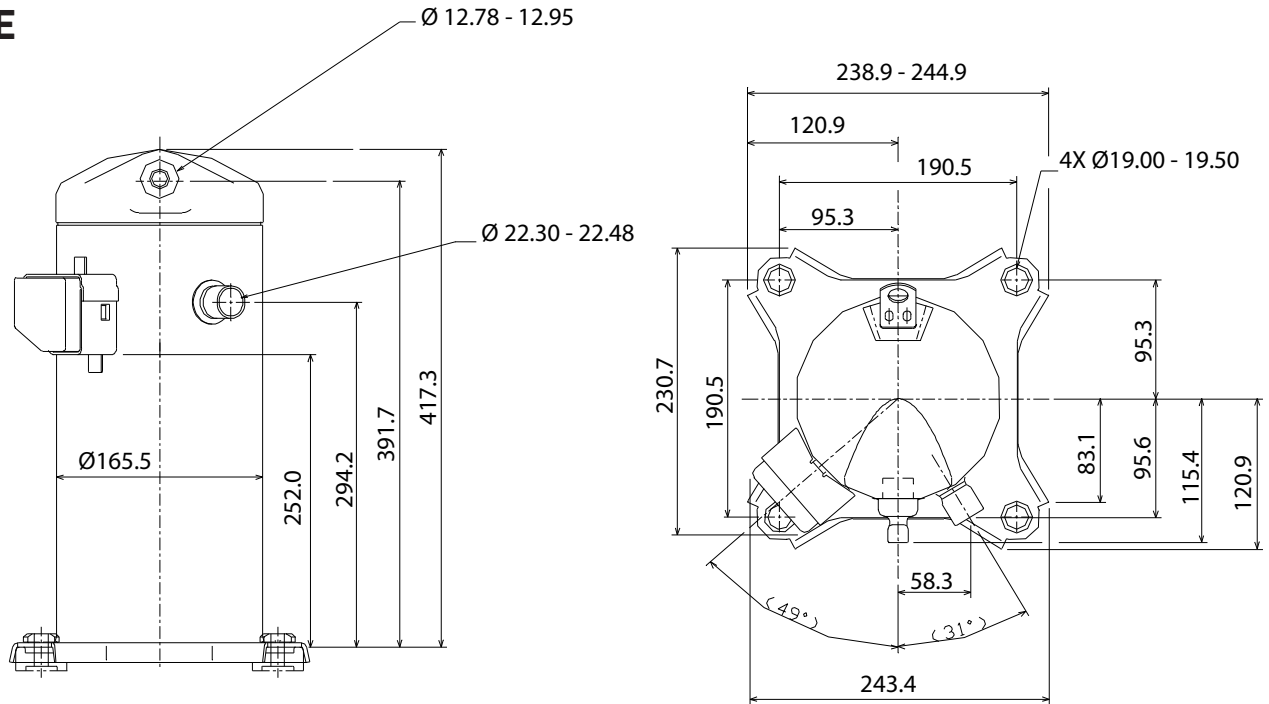


Model	A ±3,0	B	C ±3,0	D ±3,0
ZR22 K3 / K3E, ZR28 K3 / K3E	363	338,4	244,6	202,4
ZR34 K3 / K3E	386,5	361,0	264,5	222,3
ZR40 K3 / K3E	400,3	374,8	277,3	235,1

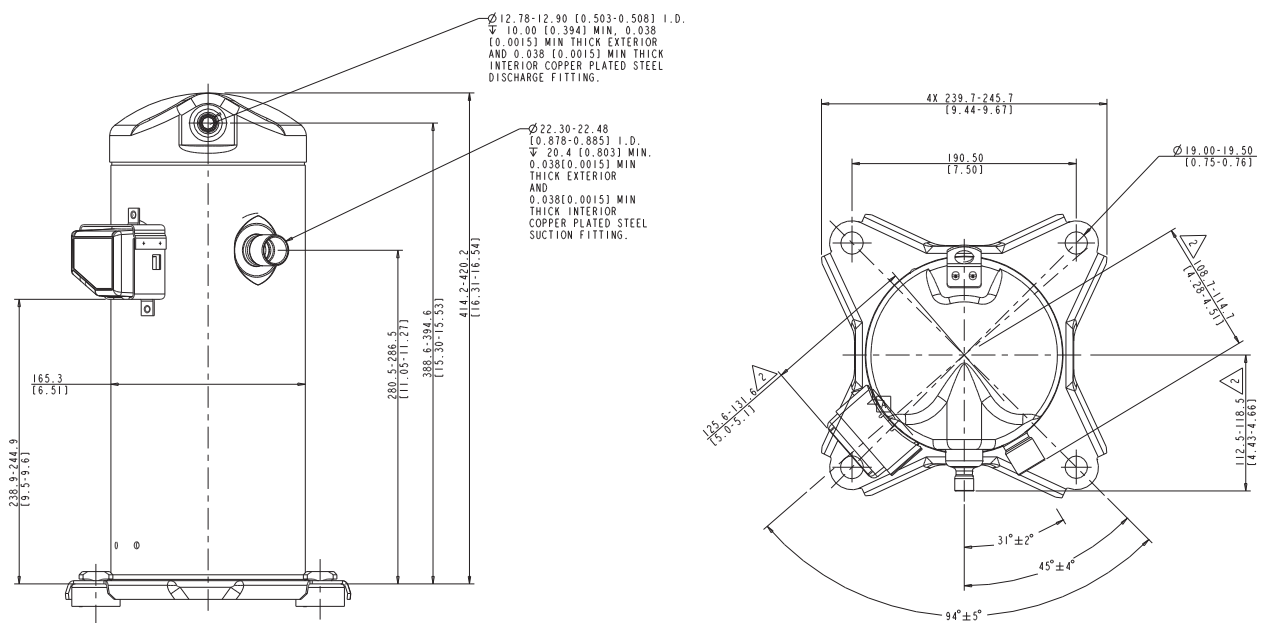


Copeland®

ZR48K3E



ZR 54 / 57 / 61 KSE



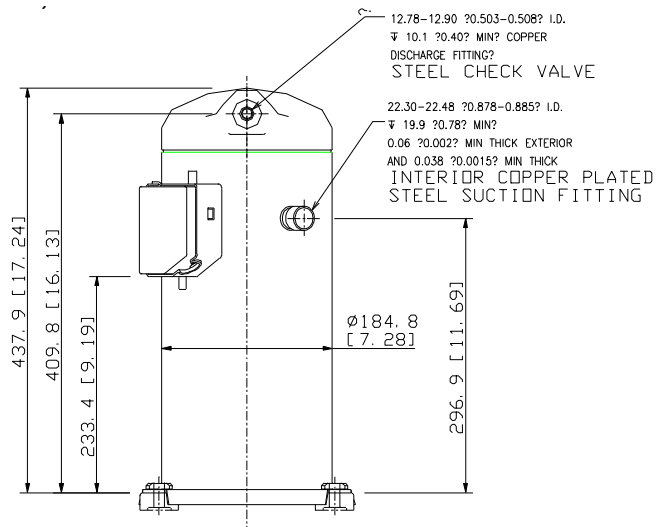
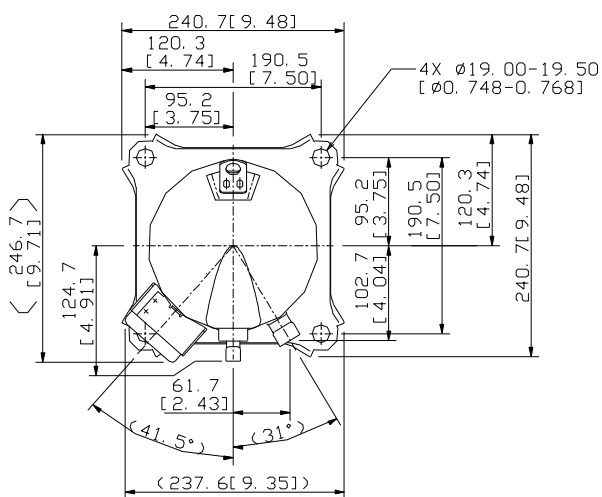


Copeland®

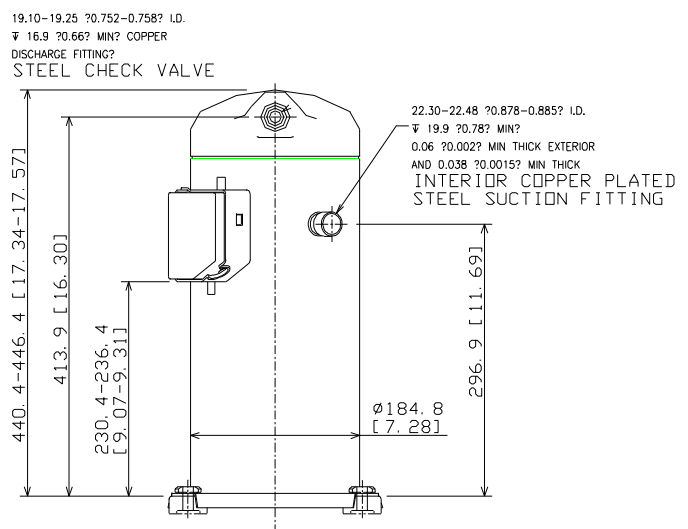
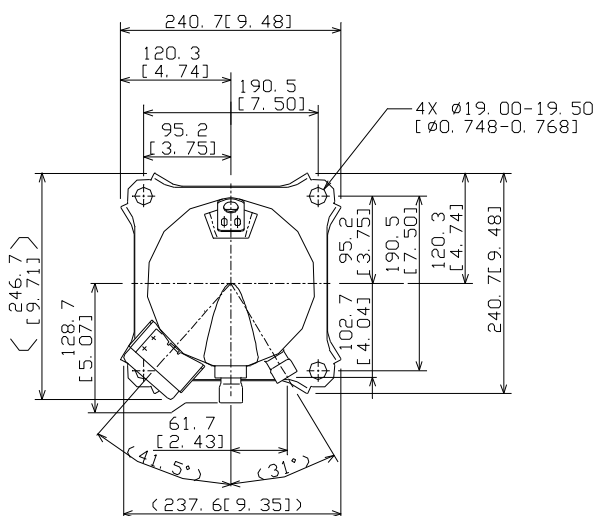
ZP & ZR Copeland Scroll Digital™ Compressor Range

Dimensions

ZR61 KC, ZR72 KC

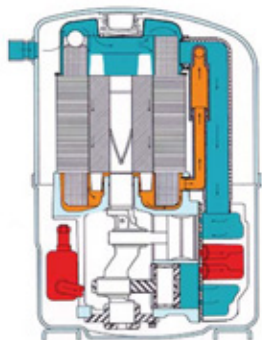


ZR81KC, KCE



Copelaweld®

CF/CS COMPRESSORS



The CF/CS compressor line was built with greater reliability and higher efficiency levels in mind.

50 HERTZ

PERFORMANCE NOMINALS

R404A

50 HERTZ PERFORMANCE NOMINALS R404A									
SINGLE PHASE					200-1-50 (PFV) TEST VOLTAGE				
MODEL	RATING CONDITION	CAPACITY			MOTOR WATTS	AMPERES	ENERGY EFFICIENCY RATING		
		BTU HOUR	KCAL HOUR	WATTS			BTUH MOTOR WATTS	KCALH MOTOR WATTS	WATTS MOTOR WATTS
CF04K6E-PFV	B	3090	780	910	931	5.6	3.3	0.8	1.0
	C	2360	590	690	679	4.4	3.5	0.9	1.0
CF06K6E-PFV	B	5430	1370	1590	1460	8.3	3.7	0.9	1.1
	C	3900	980	1140	1080	6.3	3.6	0.9	1.1
CF09K6E-PFV	B	8230	2080	2410	2080	11.6	4.0	1.0	1.2
	C	5920	1490	1730	1560	9.0	3.8	1.0	1.1
CF12K6E-PFV	B	11000	2770	3220	3120	18.6	3.5	0.9	1.0
	C	8290	2090	2430	2330	15.3	3.6	0.9	1.0

RATING CONDITION	RATING STANDARD	EVAPORATING TEMPERATURE °F/°C	CONDENSING TEMPERATURE °F/°C	AMBIENT TEMPERATURE °F/°C	LIQUID TEMPERATURE °F/°C	RETURN GAS TEMPERATURE °F/°C
B	ARI	-10	120	95	120	40
		-23.3	48.9	35.0	48.9	4.4
C	LOW TEMPERATURE	-25	105	95	105	40
		-31.7	40.6	35.0	40.6	4.4

See expanded performance data on pages 30 to 33.

See full operating range on page 73.

Production compressors to meet above nominal performance values within ±5 percent.

Copelaweld CF/CS Compressors

50 HERTZ					PERFORMANCE NOMINALS		R134a		
SINGLE PHASE					220-1-50 (PFJ) 220-1-50 (PFZ)		TEST VOLTAGE		
MODEL	RATING CONDITION	CAPACITY			MOTOR WATTS	AMPERES	ENERGY EFFICIENCY RATING		
		BTU HOUR	KCAL HOUR	WATTS			BTUH MOTOR WATTS	KCALH MOTOR WATTS	WATTS MOTOR WATTS
CS10K6E-PFJ	B	9470	2390	2770	1070	5.8	8.9	2.2	2.6
	C	4640	1170	1360	762	4.7	6.1	1.5	1.8
CS12K6E-PFJ	B	11100	2800	3250	1200	7.1	9.3	2.3	2.7
	C	5580	1410	1630	865	6.1	6.5	1.6	1.9
CS14K6E-PFJ	B	12800	3230	3750	1400	8.4	9.1	2.3	2.7
	C	6470	1630	1900	1010	7.1	6.4	1.6	1.9
CS18K6E-PFJ	B	17200	4330	5040	1880	11.3	9.1	2.3	2.7
	C	8690	2190	2550	1360	9.6	6.4	1.6	1.9
CS20K6E-PFZ	B	19600	4940	5740	2000	10.0	9.8	2.5	2.9
	C	9950	2510	2920	1390	7.5	7.2	1.8	2.1
CS24K6E-PFZ	B C	DATA BEING DEVELOPED							
CS27K6E-PFZ	B C	DATA BEING DEVELOPED							

SINGLE PHASE					200-1-50 (PFV)		TEST VOLTAGE		
MODEL	RATING CONDITION	CAPACITY			MOTOR WATTS	AMPERES	ENERGY EFFICIENCY RATING		
		BTU HOUR	KCAL HOUR	WATTS			BTUH MOTOR WATTS	KCALH MOTOR WATTS	WATTS MOTOR WATTS
CS10K6E-PFV	B	9690	2440	2840	1090	6.9	8.9	2.2	2.6
	C	4880	1230	1430	789	5.9	6.2	1.6	1.8
CS12K6E-PFV	B	11300	2850	3310	1210	7.2	9.3	2.4	2.7
	C	5690	1430	1670	872	6.1	6.5	1.6	1.9
CS14K6E-PFV	B	13100	3300	3840	1420	8.6	9.2	2.3	2.7
	C	6600	1660	1930	1020	7.3	6.5	1.6	1.9
CS18K6E-PFV	B	17500	4410	5130	1890	11.3	9.3	2.3	2.7
	C	8800	2220	2580	1360	9.6	6.5	1.6	1.9
CS20K6E-PFV	B	20000	5040	5860	2100	13.8	9.5	2.4	2.8
	C	10100	2550	2960	1520	11.7	6.6	1.7	1.9
CS27K6E-PFV	B	26300	6630	7710	2940	17.8	8.9	2.3	2.6
	C	13900	3500	4070	2090	13.9	6.7	1.7	1.9

RATING CONDITION	RATING STANDARD	EVAPORATING TEMPERATURE °F/°C	CONDENSING TEMPERATURE °F/°C	AMBIENT TEMPERATURE °F/°C	LIQUID TEMPERATURE °F/°C	RETURN GAS TEMPERATURE °F/°C
B	ARI	45 7.2	130 54.4	95 35.0	130 54.4	65 18.3
C	HIGH TEMPERATURE	20 -6.7	120 48.9	95 35.0	120 48.9	65 18.3

See expanded performance data on pages 34 to 71.

See full operating range on page 73 and 74.

Production compressors to meet above nominal performance values within ±5 percent.

50 HERTZ			PERFORMANCE NOMINALS				R134a		
THREE PHASE					220-3-50 (TF5) 380-3-50 (TFD)		TEST VOLTAGE		
MODEL	RATING CONDITION	CAPACITY			MOTOR WATTS	AMPERES*	ENERGY EFFICIENCY RATING		
		BTU HOUR	KCAL HOUR	WATTS			BTUH MOTOR WATTS	KCALH MOTOR WATTS	WATTS MOTOR WATTS
CS10K6E-TF5/D	B	9410	2370	2760	990	2.1/1.1	9.5	2.4	2.8
	C	5060	1280	1480	686	1.9/1.0	7.4	1.9	2.2
CS12K6E-TF5	B	9950	2510	2920	1070	2.2/—	9.3	2.3	2.7
	C	5330	1340	1560	740	1.9/—	7.2	1.8	2.1
CS14K6E-TF5/D	B	11700	2950	3430	1260	2.7/1.4	9.3	2.3	2.7
	C	6270	1580	1840	868	2.5/1.3	7.2	1.8	2.1
CS18K6E-TF5/D	B	17400	4380	5100	1820	4.0/2.1	9.6	2.4	2.8
	C	9340	2350	2740	1250	3.4/1.8	7.5	1.9	2.2
CS20K6E-TF5/D	B	19600	4940	5740	2020	4.4/2.3	9.7	2.4	2.8
	C	10500	2650	3080	1390	3.8/2.0	7.6	1.9	2.2
CS27K6E-TF5/D	B	25700	6480	7530	2830	12.5/6.6	9.1	2.3	2.7
	C	14000	3530	4100	1990	10.1/5.3	7.0	1.8	2.1

* Ampere values shown are at 220 volts/380 volts.

RATING CONDITION	RATING STANDARD	EVAPORATING TEMPERATURE °F/°C	CONDENSING TEMPERATURE °F/°C	AMBIENT TEMPERATURE °F/°C	LIQUID TEMPERATURE °F/°C	RETURN GAS TEMPERATURE °F/°C
B	ARI	45 7.2	130 54.4	95 35.0	130 54.4	65 18.3
C	HIGH TEMPERATURE	20 -6.7	120 48.9	95 35.0	120 48.9	65 18.3

See expanded performance data on pages 34 to 71.

See full operating range on page 73 and 74.

Production compressors to meet above nominal performance values within ±5 percent.

Copelaweld CF/CS Compressors

50 HERTZ										PERFORMANCE NOMINALS				R404A			
SINGLE PHASE					220-1-50 (PFJ) 220-1-50 (PFZ)		TEST VOLTAGE										
MODEL	RATING CONDITION	CAPACITY			MOTOR WATTS	AMPERES	ENERGY EFFICIENCY RATING										
		BTU HOUR	KCAL HOUR	WATTS			BTUH MOTOR WATTS	KCALH MOTOR WATTS	WATTS MOTOR WATT								
CS08KQE-PFZ	B C	DATA BEING DEVELOPED															
CS10K6E-PFJ	B	8160	2060	2390	1380	7.1	5.9	1.5	1.7								
	C	2320	580	680	785	5.0	3.0	0.7	0.9								
CS12K6E-PFJ	B	9590	2420	2810	1570	7.7	6.1	1.5	1.8								
	C	2970	750	870	884	4.9	3.4	0.8	1.0								
CS14K6E-PFJ	B	11800	2970	3460	1870	10.3	6.3	1.6	1.9								
	C	4550	1150	1330	1160	6.6	3.9	1.0	1.1								
CS18K6E-PFJ	B	15000	3780	4400	2340	11.2	6.4	1.6	1.9								
	C	5270	1330	1540	1410	7.2	3.7	0.9	1.1								
CS20K6E-PFZ	B	16700	4210	4890	2640	12.9	6.3	1.6	1.9								
	C	5410	1360	1590	1470	7.8	3.7	0.9	1.1								
CS24K6E-PFZ	B	19200	4840	5630	3080	16.1	6.2	1.6	1.8								
	C	6930	1750	2030	1940	11.9	3.6	0.9	1.0								
CS27K6E-PFZ	B	23000	5800	6740	3590	18.3	6.4	1.6	1.9								
	C	8630	2170	2530	2250	12.9	3.8	1.0	1.1								

RATING CONDITION	RATING STANDARD	EVAPORATING TEMPERATURE °F/°C	CONDENSING TEMPERATURE °F/°C	AMBIENT TEMPERATURE °F/°C	LIQUID TEMPERATURE °F/°C	RETURN GAS TEMPERATURE °F/°C
B	ARI	20 -6.7	120 48.9	95 35.0	120 48.9	40 4.4
C	EXTENDED MEDIUM TEMPERATURE	-10 -23.3	120 48.9	95 35.0	120 48.9	40 4.4

See expanded performance data on pages 34 to 71.

See full operating range on page 73 and 74.

Production compressors to meet above nominal performance values within ±5 percent.

50 HERTZ			PERFORMANCE NOMINALS				R404A		
THREE PHASE					220-3-50 (TF5) 380-3-50 (TFD)		TEST VOLTAGE		
MODEL	RATING CONDITION	CAPACITY			MOTOR WATTS	AMPERES*	ENERGY EFFICIENCY RATING		
		BTU HOUR	KCAL HOUR	WATTS			BTUH MOTOR WATTS	KCALH MOTOR WATTS	WATTS MOTOR WATTS
CS10K6E-TF5/D	B	8210	2070	2410	1330	5.1/3.0	6.2	1.6	1.8
	C	2350	590	690	761	3.2/1.8	3.1	0.8	0.9
CS12K6E-TF5	B	9810	2470	2870	1530	6.1/—	6.4	1.6	1.9
	C	3200	810	940	891	3.8/—	3.6	0.9	1.1
CS14K6E-TF5/D	B	11600	2920	3400	1810	7.2/4.2	6.4	1.6	1.9
	C	4450	1120	1300	1130	4.7/2.7	3.9	1.0	1.2
CS18K6E-TF5/D	B	14800	3730	4340	2210	9.1/5.3	6.7	1.7	2.0
	C	5160	1300	1510	1320	5.9/3.4	3.9	1.0	1.1
CS20K6E-TF5/D	B	16400	4130	4810	2480	10.5/6.1	6.6	1.7	1.9
	C	5770	1450	1690	1470	7.0/4.0	3.9	1.0	1.1
CS24K6E-TF5	B	19100	4810	5600	3020	12.6/—	6.3	1.6	1.9
	C	6880	1730	2020	1860	10.8/—	3.7	0.9	1.1
CS27K6E-TF5/D	B	22300	5620	6530	3590	16.7/8.8	6.2	1.6	1.8
	C	8840	2230	2590	2210	11.0/5.8	4.0	1.0	1.2
CS33K6E-TF5/D	B	25700	6480	7530	4100	20.5/10.8	6.3	1.6	1.8
	C	10100	2550	2960	2520	12.5/6.6	4.0	1.0	1.2

* Ampere values shown are at 220 volts/380 volts.

RATING CONDITION	RATING STANDARD	EVAPORATING TEMPERATURE °F/°C	CONDENSING TEMPERATURE °F/°C	AMBIENT TEMPERATURE °F/°C	LIQUID TEMPERATURE °F/°C	RETURN GAS TEMPERATURE °F/°C
B	ARI	20 -6.7	120 48.9	95 35.0	120 48.9	40 4.4
C	EXTENDED MEDIUM TEMPERATURE	-10 -23.3	120 48.9	95 35.0	120 48.9	40 4.4

See expanded performance data on pages 34 to 71.

See full operating range on page 73 and 74.

Production compressors to meet above nominal performance values within ±5 percent.

Copelaweld CF/CS Compressors

50 HERTZ

ELECTRICAL COMPONENTS FOR AIR CONDITIONING AND HEAT PUMP SINGLE PHASE COMPRESSORS (PFJ, PFV, AND PFZ)

PFJ MODELS	RUN CAPACITOR				
	STANDARD			MAXIMUM	
	MFD	VOLTS	PART NUMBER	MFD	VOLTS
CS10K6E	30	370	014-0037-10	35	370
CS12K6E	30	370	014-0037-10	35	370
CS14K6E	35	370	014-0037-28	40	440
CS18K6E	35	370	014-0037-36	45	370

PFV MODELS	RUN CAPACITOR				
	STANDARD			MAXIMUM	
	MFD	VOLTS	PART NUMBER	MFD	VOLTS
CF04K6E	30	370	014-0037-10	35	370
CF06K6E	30	370	014-0037-10	35	370
CF09K6E	40	370	014-0037-12	45	370
CF12K6E	40	440	014-0037-18	45	440
CS08KQE	30	370	014-0037-10	30	370
CS10K6E	30	370	014-0037-10	35	370
CS12K6E	30	370	014-0037-10	35	370
CS14K6E	35	370	014-0037-11	40	370
CS17K6E	35	440	014-0037-17	45	440
CS18K6E	35	370	014-0037-11	40	370
CS20K6E	40	370	014-0037-12	45	370
CS24K6E	40	440	014-0037-18	45	440
CS27K6E	40	440	014-0037-18	45	440
CS33K6E	55	440	014-0037-21	60	440

PFZ MODELS	RUN CAPACITOR				
	STANDARD			MAXIMUM	
	MFD	VOLTS	PART NUMBER	MFD	VOLTS
CS08KQE	30	440	014-0037-16	30	440
CS20K6E	40	370	014-0037-12	40	370
CS24K6E	60	370	014-0037-37	65	370
CS27K6E	60	370	014-0037-37	65	370

50 HERTZ

ELECTRICAL COMPONENTS FOR AIR CONDITIONING AND HEAT PUMP SINGLE PHASE COMPRESSORS (PFJ, PFV, AND PFZ)

HIGH STARTING TORQUE COMPONENTS				LOW STARTING TORQUE COMPONENTS			
START CAPACITOR			START RELAY PART NUMBER	START CAPACITOR			START RELAY PART NUMBER
MFD	VOLTS	PART NUMBER		MFD	VOLTS	PART NUMBER	
130-156	250	014-0036-18	040-0166-14	43-52	330	014-0061-16	040-0166-15
130-156	250	014-0036-18	040-0166-14	43-52	330	014-0061-16	040-0166-15
145-174	220	014-0061-04	040-0166-19				
145-174	250	014-0036-20	040-0166-15	43-52	330	014-0061-16	040-0166-15

HIGH STARTING TORQUE COMPONENTS				LOW STARTING TORQUE COMPONENTS			
START CAPACITOR			START RELAY PART NUMBER	START CAPACITOR			START RELAY PART NUMBER
MFD	VOLTS	PART NUMBER		MFD	VOLTS	PART NUMBER	
145-174	220	014-0061-04	040-0166-15				
145-174	220	014-0061-04	040-0166-15				
145-174	250	014-0036-20	040-0166-15				
189-227	330	014-0006-13	040-0166-19				
145-174	250	014-0036-20	040-0166-15	43-52	220	014-0061-12	040-0166-15
145-174	220	014-0061-04	040-0166-19	43-52	330	014-0061-16	040-0166-19
145-174	220	014-0061-04	040-0166-19	43-52	330	014-0061-16	040-0166-19
145-174	250	014-0036-20	040-0166-15	43-52	330	014-0061-16	040-0166-15
189-227	330	014-0006-13	040-0166-14	43-52	330	014-0061-16	040-0166-14
145-174	250	014-0036-20	040-0166-15	43-52	330	014-0061-16	040-0166-15
189-227	330	014-0006-13	040-0166-15	64-77	330	014-0061-13	040-0166-15
189-227	330	014-0006-13	040-0166-23				
189-227	330	014-0006-13	040-0166-23				
270-324	330	014-0006-15	040-0166-27				

HIGH STARTING TORQUE COMPONENTS				LOW STARTING TORQUE COMPONENTS			
START CAPACITOR			START RELAY PART NUMBER	START CAPACITOR			START RELAY PART NUMBER
MFD	VOLTS	PART NUMBER		MFD	VOLTS	PART NUMBER	
145-174	330	014-0006-16	040-0166-15	72-86	330	014-0061-20	040-0166-15
216-259	330	014-0006-14	040-0166-14	64-77	330	014-0061-13	040-0166-14
189-227	330	014-0006-13	040-0166-19				
189-227	330	014-0006-13	040-0166-19				

Copelaweld CF/CS Compressors

“STANDARD” BILLS OF MATERIAL

The bill of material number shown includes items shown by the X.

MODEL	BILL OF MATERIAL NUMBER	STUB TUBE CONNECTIONS STRAIGHT SUCTION AND ELBOW-UP DISCHARGE AND PROCESS	STUB TUBE CONNECTIONS ALL ELBOW-UP	ROTALOCK CONNECTIONS WITH GAGE PORTS AND GAGE PORT BRASS CAPS	CRANKCASE HEATER, HEATER WELL, AND RETAINER	RUN CAPACITOR, HIGH TORQUE START CAPACITOR, AND START RELAY	RUN CAPACITOR, HIGH TORQUE START CAPACITOR AND START RELAY ASSEMBLY	OIL SIGHT GLASS	SERVICE VALVE KIT 510-0331-04	GROUNDING SCREW AND WASHER	PUSH-ON ELECTRICAL TERMINAL CONNECTIONS	CONDUIT-READY TERMINAL COVER
CF04 TO CF12 AND CS08 TO CS27	501	X									X	
	502		X								X	
	503		X		X						X	X
	505			X							X	
	506	X			X						X	
	507			X	X						X	
	509			X	X				X		X	
	518			X			X		X	X	X	
	522	X			X					X	X	
	523			X	X					X	X	
	525		X		X					X	X	
	546	X			X	X					X	
	549			X	X	X			X		X	
	550	X			X			X		X	X	
	551			X	X			X		X	X	
	552			X	X			X	X	X	X	
	553			X	X	X		X	X	X	X	
	579			X	X		X		X		X	

“STANDARD” BILLS OF MATERIAL

The bill of material number shown includes items shown by the X.

MODEL	BILL OF MATERIAL NUMBER	STUB TUBE CONNECTIONS STRAIGHT SUCTION AND ELBOW-UP DISCHARGE AND PROCESS	STUB TUBE CONNECTIONS ALL ELBOW-UP	ROTALOCK CONNECTIONS WITH GAGE PORTS AND GAGE PORT BRASS CAPS	CRANKCASE HEATER, HEATER WELL, AND RETAINER	RUN CAPACITOR, HIGH TORQUE START CAPACITOR, AND START RELAY	RUN CAPACITOR, HIGH TORQUE START CAPACITOR AND START RELAY ASSEMBLY	OIL SIGHT GLASS	SERVICE VALVE KIT 510-0331-07	GROUNDING SCREW AND WASHER	PUSH-ON ELECTRICAL TERMINAL CONNECTIONS	TERMINAL CONNECTOR BLOCK WITH SCREWS	CONDUIT-READY TERMINAL COVER
CS33	501	X										X	
	502		X									X	
	503		X		X							X	X
	505			X								X	
	506	X			X							X	
	507			X	X							X	
	509			X	X				X			X	
	518			X			X		X	X		X	
	522	X			X					X		X	
	523			X	X					X		X	
	525		X		X					X		X	
	546	X			X	X						X	
	549			X	X	X			X			X	
	550	X			X			X		X		X	
	551			X	X			X		X		X	
	552			X	X			X	X	X		X	
	553			X	X	X		X	X	X		X	
	579			X	X		X		X			X	
	597	X			X					X	X		

Copelaweld

CF/CS Compressors

NOTES:

1. ALL TOLERANCES ± 0.125 [3.18] UNLESS OTHERWISE SPECIFIED.

2. STUB TUBE CONNECTIONS ARE SHOWN.

3. LINEAR MEASUREMENTS IN [] ARE MILLIMETER CONVERSIONS.

MOUNTING INFORMATION

4 FOOT "A" MOUNTING ARRANGEMENT

4 FOOT "E" MOUNTING ARRANGEMENT

3 FOOT "G" MOUNTING ARRANGEMENT
ALL EXCEPT CS33

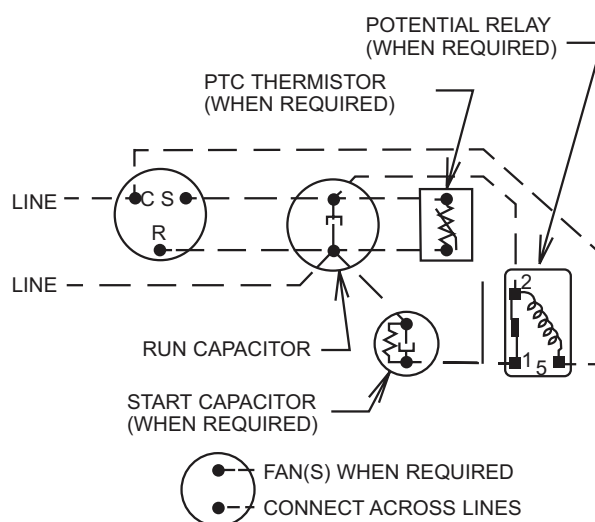
FOR THE INTERNATIONAL MARKET

CF/CS

COMPRESSOR MOUNTING OPTIONS

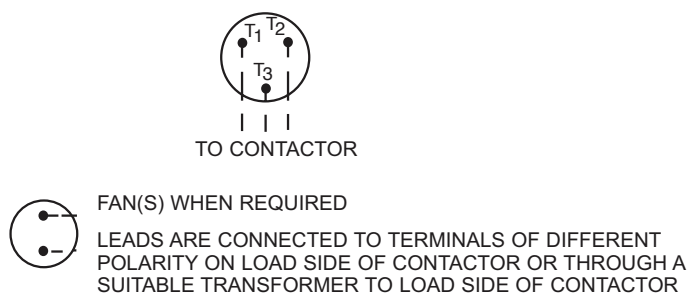
COMPRESSOR WIRING DIAGRAMS

SINGLE PHASE MOTOR



CRANKCASE HEATER, WHEN PROVIDED, MUST BE
FIELD CONNECTED TO SEPARATE VOLTAGE SOURCE
USE THIS EQUIPMENT ON A GROUND SYSTEM ONLY
USE COPPER CONDUCTORS ONLY

THREE PHASE MOTOR



CRANKCASE HEATER, WHEN PROVIDED, MUST BE
FIELD CONNECTED TO SEPARATE VOLTAGE SOURCE
USE THIS EQUIPMENT ON A GROUND SYSTEM ONLY
USE COPPER CONDUCTORS ONLY

Copelaweld CF/CS Compressors

50 HERTZ		PERFORMANCE DATA		R404A	
40 °F (4.4 °C) Return Gas		0 °F (0 °K) Subcooling		95° F (35° C) Ambient (Air Over)	
200-1-50 (PFV) Rated Voltage			200-1-50 (PFV) Test Voltage		

CF04K6E-PFV

CAPACITY (BTU/HOUR)

CONDENSING TEMPERATURE °F/°C	EVAPORATING TEMPERATURE °F/°C								
	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	3000	3770	4570	5450	6420	7520	8770	10200	11900
100 (37.8)	2010	2670	3350	4090	4910	5850	6930	8180	9640
120 (48.9)	1020	1490	1970	2500	3090	3790	4630	5620	6810

CAPACITY (KCAL/HOUR)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	760	950	1150	1370	1620	1900	2210	2570	3000
100 (37.8)	510	670	840	1030	1240	1470	1750	2060	2430
120 (48.9)	260	380	500	630	780	960	1170	1420	1720

CAPACITY (WATTS)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	880	1100	1340	1600	1880	2200	2570	2990	3490
100 (37.8)	590	780	980	1200	1440	1710	2030	2400	2820
120 (48.9)	300	440	580	730	910	1110	1360	1650	2000

POWER (MOTOR WATTS)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	614	687	756	819	878	931	979	1020	1060
100 (37.8)	599	683	767	851	933	1020	1100	1180	1250
120 (48.9)	559	646	737	832	931	1030	1140	1250	1360

CF04K6E-TF5/D

CAPACITY (BTU/HOUR)

CONDENSING TEMPERATURE °F/°C	EVAPORATING TEMPERATURE °F/°C								
	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	2810	3470	4220	5060	6000	7060	8250	9580	11100
100 (37.8)	1990	2550	3170	3870	4670	5580	6590	7740	9020
120 (48.9)	1180	1560	2000	2520	3110	3800	4590	5490	6520

CAPACITY (KCAL/HOUR)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	710	870	1060	1280	1510	1780	2080	2410	2800
100 (37.8)	500	640	800	980	1180	1410	1660	1950	2270
120 (48.9)	300	390	500	640	780	960	1160	1380	1640

CAPACITY (WATTS)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	820	1020	1240	1480	1760	2070	2420	2810	3250
100 (37.8)	580	750	930	1130	1370	1630	1930	2270	2640
120 (48.9)	350	460	590	740	910	1110	1340	1610	1910

POWER (MOTOR WATTS)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	585	651	712	771	826	877	925	970	1010
100 (37.8)	570	648	726	804	882	959	1040	1120	1200
120 (48.9)	531	615	702	793	888	986	1090	1190	1300

Production compressors to meet above nominal performance values within ± 5%.

200/240-3-50 (TF5) 380/420-3-50 (TFD)	Rated Voltage	220-3-50 (TF5) 380-3-50 (TFD)	Test Voltage
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50 HERTZ		PERFORMANCE DATA		R404A	
40 °F (4.4 °C) Return Gas		0 °F (0 °K) Subcooling		95° F (35° C) Ambient (Air Over)	
200-1-50 (PFV) Rated Voltage			200-1-50 (PFV) Test Voltage		

CF06K6E-PFV

CAPACITY (BTU/HOUR)

CONDENSING TEMPERATURE °F/°C	EVAPORATING TEMPERATURE °F/°C								
	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	4940	6000	7180	8460	9810	11200	12700	14200	15800
100 (37.8)	3390	4290	5300	6410	7610	8880	10200	11600	13000
120 (48.9)	2200	2840	3600	4470	5430	6460	7560	8700	9880

CAPACITY (KCAL/HOUR)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	1240	1510	1810	2130	2470	2820	3200	3580	3980
100 (37.8)	850	1080	1340	1620	1920	2240	2570	2920	3280
120 (48.9)	550	720	910	1130	1370	1630	1910	2190	2490

CAPACITY (WATTS)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	2090	2580	3110	3690	4340	4980	5680	6420	7180
100 (37.8)	1500	1890	2330	2810	3340	3900	4480	5100	5770
120 (48.9)	1010	1300	1630	2000	2410	2860	3340	3840	4370

POWER (MOTOR WATTS)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	1030	1130	1230	1320	1410	1490	1540	1570	1570
100 (37.8)	980	1100	1220	1350	1480	1590	1700	1790	1850
120 (60.0)	910	1030	1170	1310	1460	1610	1750	1880	2000

CF06K6E-TF5/D

CAPACITY (BTU/HOUR)

CONDENSING TEMPERATURE °F/°C	EVAPORATING TEMPERATURE °F/°C								
	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	5160	6200	7380	8690	10100	11700	13400	15100	17000
100 (37.8)	3510	4390	5390	6520	7760	9100	10500	12100	13700
120 (48.9)	2200	2840	3600	4470	5440	6500	7650	8880	10200

CAPACITY (KCAL/HOUR)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	1300	1560	1860	2190	2550	2950	3380	3810	4280
100 (37.8)	880	1110	1360	1640	1960	2290	2650	3050	3450
120 (60.0)	550	720	910	1130	1370	1640	1930	2240	2570

CAPACITY (WATTS)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	1510	1820	2160	2550	2960	3430	3930	4420	4980
100 (37.8)	1030	1290	1580	1910	2270	2670	3080	3550	4010
120 (60.0)	640	830	1050	1310	1590	1900	2240	2600	2990

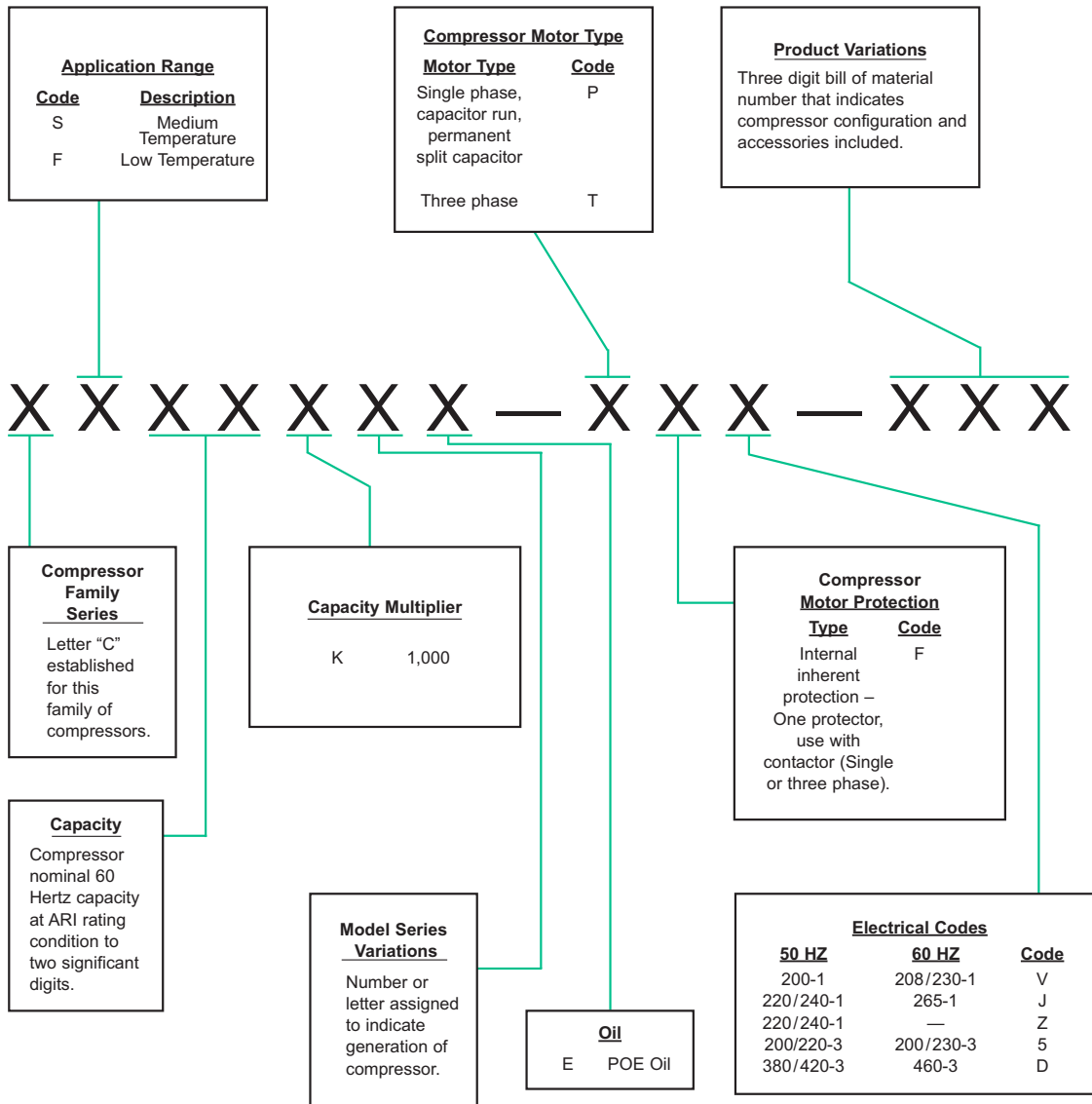
POWER (MOTOR WATTS)

°F/°C	-30 -34.4	-25 -31.7	-20 -28.9	-15 -26.1	-10 -23.3	-5 -20.6	0 -17.8	5 -15.0	10 -12.2
80 (26.7)	1010	1120	1230	1330	1430	1520	1600	1660	1690
100 (37.8)	944	1060	1190	1330	1460	1590	1710	1820	1910
120 (60.0)	854	979	1120	1270	1420	1580	1730	1880	2010

Production compressors to meet above nominal performance values within ± 5%.

Copelaweld CF/CS Compressors

MODEL NUMBER NOMENCLATURE



Standard Bills of Material

The bill of material number shown includes items shown by the X.

Model	Bill material number	Stub tube Connections Straight Suction and Elbow-up Discharge And process	Stub tube Connections All elbow-up	Rotalock Connections With gage Ports and Gage port Brass caps	Crankcase Heater, Heater Well, and Retainer	Run Capacitor, High Torque Start Capacitor, And start Relay	Run Capacitor, High Torque Start Capacitor And start Relay Assembly	Oil Sight Glass	Service Valve kit 510-0331-07	Grounding Screw and Washer	Push-on Electrical Terminal Connection	Terminal Connector Block with Screws	Conduit-ready Terminal Cover
CS33	501	X										X	
	502		X									X	
	503		X		X							X	X
	505			X								X	
	506	X			X							X	
	507			X	X							X	
	509			X	X				X			X	
	518			X			X		X	X		X	
	522	X			X					X		X	
	523			X	X					X		X	
	525		X		X					X		X	
	546	X			X	X						X	
	549			X	X	X			X			X	
	550	X			X			X		X		X	
	551			X	X			X		X		X	
	552			X	X			X	X	X		X	
	553			X	X	X		X	X	X		X	
	579			X	X		X		X			X	
	597	X			X					X	X		

TOTALINE



EMERSON LOW & MEDIUM TEMPERATURE **CONDENSING** UNITS





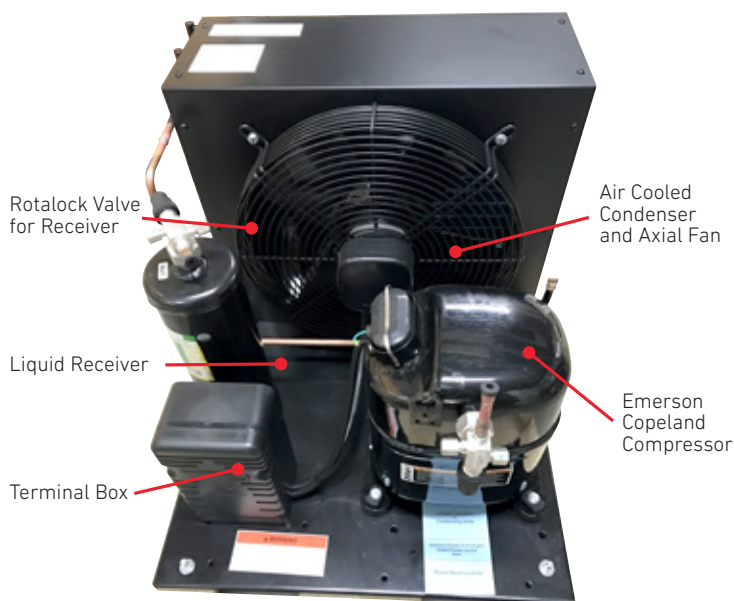
Emerson Copeland Condensing Unit

Medium Temp R404a & R507c Extended Ratings in Watts **Copeland®**

SINGLE PHASE MODELS										
Cond Unit Model	Comp Model	Nom HP	Power Supply	Amb Deg C	Saturated Suction Temperature					
					-15	-10	-5	0	5	7
EMEICKMN061AE	KCJ461CAL	3/4	230/1/50HZ	32	1307	1608	1923	2280	2709	2925
				38	1146	1417	1703	2034	2437	2644
				43	979	1224	1486	1794	2170	2365
EMEICKMN084AE	KCJ484CAL	1		32	1864	2281	2713	3206	3828	4132
				38	1656	2039	2446	2912	3505	3810
				43	1442	1801	2182	2636		
EMEICKMN084BE	KCJ484CAL	1		32	2010	2485	2988	3558	4250	4601
				38	1794	2229	2694	3236	3892	4220
				43	1571	1974	2407	2917	3540	3869
EMEICKMN110BE	KCM511CAL	1 3/8		32	2145	2793	3611	4560	5562	6008
				38	1879	2455	3194	4068	5000	5422
				43	1615	2118	2796	3587	4431	4806
EMEICKMN140BE	KCM514CAL	1 3/4		32	2813	3652	4677	5867	7086	7508
				38	2535	3278	4220	5316	6494	7090
				43	2251	2882	3775	4789		

Tech Data

Cond Unit Model	Comp Model	Disp (cc)	Motor Type	Oil Charge cm3	Connections		Current FLA	Height mm	Length mm	Width mm
					Disch	Suction				
EMEICKMN061AE	KCJ461CAL	18.27	CSCR	890	3/8	3/8	4.1	387.40	449	514.69
EMEICKMN084aE	KCJ484CAL	25.91	CSCR	890	3/8	3/8	6.2	387.40	449	514.69
EMEICKMN084BE	KCJ484CAL	25.91	CSCR	890	3/8	3/8	6.2	442	519	623.6
EMEICKMN110BE	KCM511CAL	40.8	CSCR	1330	3/8	5/8	6.3	442	519	623.6
EMEICKMN140BE	KCM514CAL	51.47	CSCR	1330	3/8	5/8	8.7	442	519	623.6



Emerson Climate Technologies offer a reliable engineered condensing unit. Leveraging the latest in compressor technology that meet your application requirements.

Cut your operating costs with an expertly designed and tested unit.

Features

- Versatile condensing unit applications from -15°C + 10°C*
- All models fitted with liquid receiver
- Rotalocks suction and liquid line with copper stub.
- Charged with nitrogen and polyester oil (POE)

Advanced Features

- Coefficient of Performance improved vs competition
- Better temperature difference across the coil for refrigeration effect
- Blue Fin Condenser

Copeland IZSI Condensing Unit

R404a Medium & Low Temp Condensing Units

Part No.	Voltage	HP Rating	Ambient Temp	Capacity (watts)								
				-30	-25	23	-20	-15	-10	-5	0	5
IZSI06AE-PFZ-500	240V	2HP	32	1.9	2.3	2.4	2.7	3.3	3.9	4.5	5.3	6.1
			38	1.7	2.0	2.2	2.5	3.0	3.5	4.1	4.8	5.5
			43	1.5	1.9	2.0	2.3	2.7	3.2	3.8	4.4	5.1
IZSI08AE-PFZ-500	240V	2.5HP	32	2.1	2.6	2.8	3.1	3.8	4.4	5.2	6.0	6.9
			38	1.9	2.4	2.5	2.9	3.4	4.0	4.7	5.5	6.3
			43	1.7	2.2	2.3	2.6	3.1	3.7	4.3	5.0	5.8
IZSI09BE-TFM-500	415V	3HP	32	2.5	3.1	3.3	3.7	4.4	5.2	6.0	7.0	8.0
			38	2.2	2.7	2.9	3.3	3.9	4.6	5.4	6.3	7.2
			43	1.9	2.4	2.6	3.0	3.6	5.8	4.2	5.0	6.6
IZSI011BE-TFM-501	415V	3.5HP	32	2.9	3.7	3.9	4.5	5.3	6.3	7.4	8.6	9.9
			38	2.7	3.4	3.6	4.1	4.9	5.8	6.7	7.8	9.1
			43	2.5	3.1	3.4	3.8	4.5	5.3	6.2	7.2	8.3
IZSI14CE-TFM-500	415V	4HP	32	3.7	4.6	4.9	5.6	6.7	7.9	9.2	10.7	12.3
			38	3.4	4.2	4.5	5.1	6.1	7.2	8.4	9.7	11.5
			43	3.1	3.9	4.1	4.7	5.6	6.6	7.7	8.9	10.2
IZSI15CE-TFM-500	415V	5HP	32	4.1	5.2	5.5	6.2	7.4	8.7	10.1	11.7	13.4
			38	3.8	4.8	5.1	5.8	6.8	7.9	9.2	10.5	12.1
			43	3.6	4.5	4.8	5.3	6.2	7.2	8.3	9.4	10.8
IZSI18DE-TFM-500	415V	6HP	32	5.5	6.6	7.1	8.0	9.4	11.1	12.9	14.8	16.9
			38	5.0	6.1	6.5	7.3	8.7	10.0	11.8	13.5	15.4
			43	4.6	5.6	6.0	6.7	7.9	9.3	10.8	12.5	14.3

Includes site glass, drier, hp/lp contactor and wiring.

R134a Medium Temperature Condensing Units

Part No.	Voltage	HP Rating	Ambient Temp	Capacity (watts)					
				-15	-10	-5	0	5	10
IZSI06AE-PFZ-500	240V	2HP	32	1.9	2.3	2.8	3.3	4.0	4.6
			38	1.8	2.2	2.6	3.1	3.7	4.5
			43	1.7	2.0	2.5	2.9	3.5	4.1
IZSI08AE-PFZ-500	240V	2.5HP	32	2.1	2.6	3.1	3.7	4.4	5.2
			38	2.0	2.4	2.9	3.5	4.1	4.8
			43	1.9	2.3	2.8	3.3	3.9	4.6
IZSI09BE-TFM-500	415V	3HP	32	2.6	3.2	3.9	4.8	5.7	6.8
			38	2.4	3.0	3.7	4.5	5.3	6.3
			43	2.3	2.8	3.5	4.2	5.0	6.0
IZSI011BE-TFM-501	415V	3.5HP	32	3.1	3.8	4.6	5.5	6.5	7.7
			38	2.9	3.6	4.3	5.2	6.1	7.2
			43	2.8	3.4	4.1	4.9	5.8	6.7
IZSI14CE-TFM-500	415V	4HP	32	3.8	4.7	5.7	6.8	7.8	9.3
			38	3.6	4.4	5.3	6.3	7.4	8.7
			43	3.4	4.1	5.0	5.9	7.0	8.1
IZSI15CE-TFM-500	415V	5HP	32	4.2	5.2	6.4	7.6	9.1	10.6
			38	3.9	4.9	5.9	7.1	8.4	9.9
			43	3.6	4.6	5.6	6.7	7.9	9.2
IZSI18DE-TFM-500	415V	6HP	32	5.2	6.4	7.9	9.6	11.5	13.5
			38	4.8	6.0	7.4	8.9	10.7	12.6
			43	4.6	5.6	6.9	8.4	10.0	11.9



Copeland IZSI Condensing Unit R404a & R134 Condensing Units

Copeland®

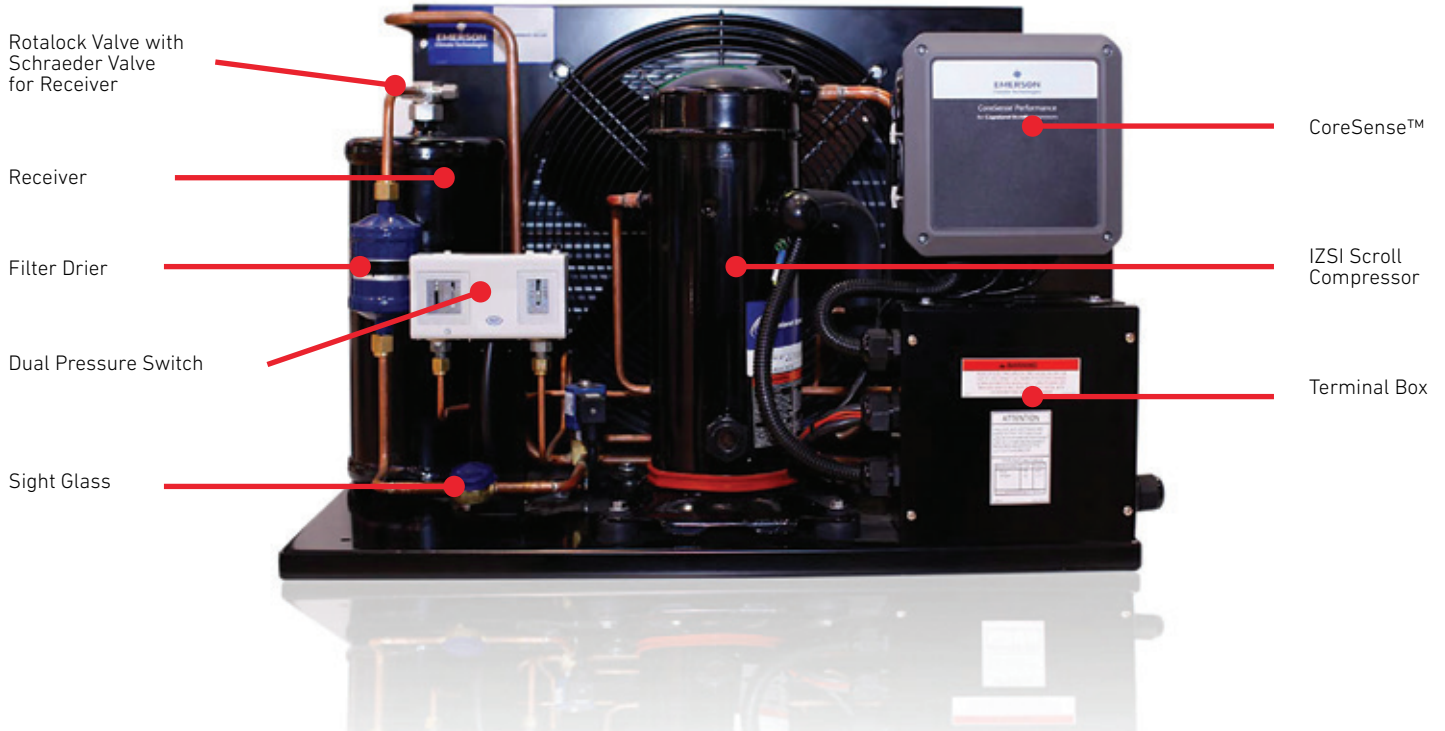
Part No.	COP	RLA	LRA	Oil Type	Oil Charge mltrs	No of Fans	Diameter	Fan Speed rpm	Air Flow m3/h
IZSI08AE-PFZ-500	1.18	13	72	POE	562	1	350	1400	1144
IZSI09BE-TFM-500	1.37	6	40	POE	562	1	420	1400	1737
IZSI011BE-TFM-501	1.42	8	52	POE	1242	1	420	1400	1737
IZSI14CE-TFM-500	1.43	9	52	POE	1242	1	420	1400	2034
IZSI15CE-TFM-500	1.43	10	52	POE	1242	1	420	1400	2034
IZSI18DE-TFM-500	1.52	11	74	POE	1774	2	420	1400	3199

Part No.	Oil Separator Litres	Receiver Volume Litres	Pipe Sizes		Weight	Dimensions	Sound Pressure Db(A)
			Suction	Liquid			
IZSI06AE-PFZ-500	0.56	2.5	15.87	9.52	65	710 x 570 x 476	73
IZSI08AE-PFZ-500	0.56	2.5	15.87	9.52	65	710 x 570 x 476	73
IZSI09BE-TFM-500	0.56	5	15.87	12.7	70	735 x 570 x 533	73
IZSI011BE-TFM-501	1.24	5	22.22	12.7	78	735 x 570 x 533	79
IZSI14CE-TFM-500	1.24	5	22.22	12.7	80	735 x 570 x 533	81
IZSI15CE-TFM-500	1.24	5	22.22	12.7	80	735 x 570 x 533	81
IZSI18DE-TFM-500	1.77	7	22.22	12.7	85	1020 x 680 x 560	83

Standard unit (STD) with Coresense, Electrical box, CC heater, Filter Drier, Sight Glass, service valve suction, Dual Pressure Switch, Receiver with Valve, Fan Motor, Heat Exchanger, Scroll Compressor with stub tube.

Copeland IZSI Condensing Unit

IZSI Indoor Scroll CDU Key Product Advantages

Copeland®


Save on Applied Costs and Assembly time

- IZSI comes with accessories (e.g. filter drier, sight glass & moisture indicator, pump down solenoid, electrical contractor thus simplifying component sourcing
- Consistent quality achieved through factory built CDU

Wide Range Operating Envelope

- LT to MT from -30°C to 5°C evaporating temperature
- Low temperature operation reliability due to liquid injection technology controlled by CoreSense
- Reduced inventory levels due to wide range application

Qualified for R404A, R134a, R407

- Multi refrigerant capability enables HCFC phase out
- One unit works with multiple refrigerants thus reducing inventory
- **The IZSI Medium Temperature system is also a customisable condensing unit to most new refrigerants, please enquire ***

Scroll Efficiency and Reliability

- COP improvement leads to annual electrical savings of 10–30% per year as compared with reciprocating systems depending on model.
- 70% fewer moving parts than reciprocating
- Superior liquid handling

Smooth Scroll Movement

- Low sound and vibration leading to reliable operation
- No complex internal suction and discharge valves for quieter operation

CoreSense Technology Liquid Injection Regulation

- Low temperature operation reliability due to Liquid Injection Technology
- Onboard control for Liquid Injection by sensing Discharge Line Temperature (DLT)
- LED Display Alerts User of DLT Sensor Status and EXV Operation

Copeland IZSI Condensing Unit CoreSense™ Controller



Copeland®

Function Description

The board will be used to turn the compressor on/off based on the demand signal from low pressure switch and thermostat. The board will control Liquid Injection through an EXV based on a temperature sensor placed on the discharge line.

Dipswitch Setting:

- SW1 is used to control the liquid injection setpoint and cut out. Do not change settings and ensure that a replacement board is set correctly.
- SW2 and SW3 are not functional in IZSI units.

DIPSWITCH	FACTORY SETTING
SW1 bit1	OFF
SW1 bit2	OFF
SW2 and SW3	Not Used



Board Power Supply
Input Terminals
(From 12VAC Transformer)

1 Phase Supply
Input Terminals

Reserved

Dry Contact Output
Terminals

DLT Protection
& Target Value
Setting Dip-Switch

Reserved
Dip-Switch

Programming
Ports

Comp. Size
Setting Dip-Switch

Communication
Ports

EXV Driver
Output Ports

DLT Sensor
Input Ports

Temp. Sensors
Input Ports
(Reserved)

EXV Manual
Operation Buttons

The IZSI Medium Temperature system is also a customisable condensing unit to most new refrigerants, please enquire*

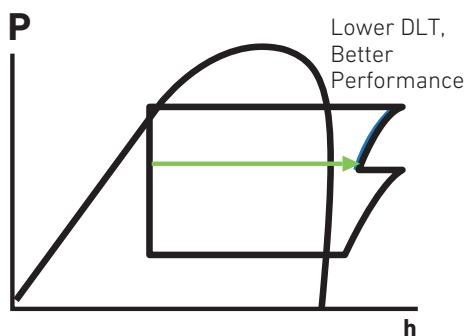
Copeland IZSI Condensing Unit

Liquid Injection Technology for Efficient Operation

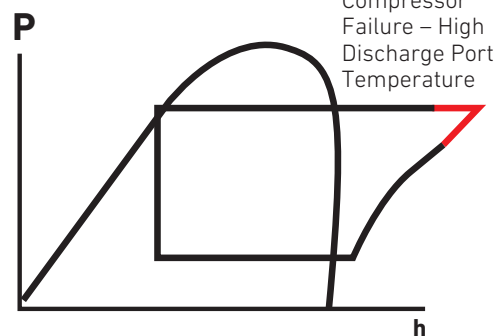
Copeland®

IZSI indoor condensing unit powered by Copeland Scroll comes with Liquid Injection technology for improved performance and reliability. High discharge temperature is often a cause of compressor failure. To prevent this, refrigerant is injected mid-pocket of the scroll. The compressor then works similarly as a two-stage compressor thereby lowering discharge line temperature and improving performance.

With Liquid Injection

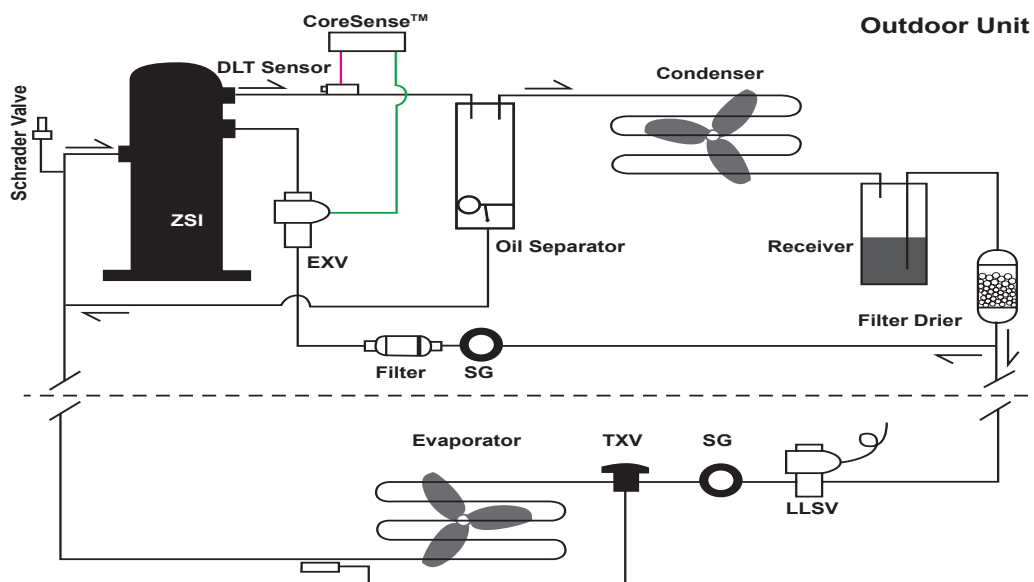


Without Liquid Injection



Liquid Injection Protects Compressor From Failure by Preventing Too High Discharge Temperature
Liquid Injection Helps Provide Wide Range Operating Envelope

Schematic Diagram



- Similar to 2-stage Cycle but Accomplished with Single Scroll Compressor
- Liquid Injection Controlled by CoreSense™ Module
- DLT Sensor Signals EXV to Control the Flow Depending on Discharge Line Temperature

Totaline

Coolroom Quick Selection Guide

Outside Dimensions	Coolroom +2 Deg.C SST/ 38 Deg.C Ambient				Equipment							
L X W X 2.4m Height	Int Vol M³	Product Load Kg /24hrs	Room Usage	16 /24 hrs Watts	Condensing Unit	Evaporator	TX Valve	Orifice	Controller	Drier	Sight Glass	
1.8 X 1.2	5.1	80-550	Medium	1200	EMBUT6217GK	TEM16	SPORJ8EF-SW	SPORJ8C-01	ELIID961/230V	C-053	700078P	
			Heavy	1600	EMBNT6222GK	TEM17	SPORJ8EF-SW	SPORJ8C-01	ELIID961/230V	C-053	700078P	
1.8 x 1.8	7.7	140	Medium	1450	EMBNT6222GK	TEM16	SPORJ8EF-SW	SPORJ8C-01	ELIID961/230V	C-053	700078P	
			Heavy	2000	EMBNJ9226GK	TEM23	SPORJ8EF-SW	SPORJ8C-02	ELIID961/230V	C-083	700078P	
2.4 x 1.8	10.36	180	Medium	1650	EMBNJ9226GK	TEM17	SPORJ8EF-SW	SPORJ8C-02	ELIID961/230V	C-083	700078P	
			Heavy	2250	EMBNJ9232GK	TEM23	SPORJ8EF-SW	SPORJ8C-02	ELIID961/230V	C-083	700078P	
2.4 x 2.4	13.8	250	Medium	2100	EMBNJ9232GK	TEM23	SPORJ8EF-SW	SPORJ8C-02	ELIID961/230V	C-083	700078P	
			Heavy	2750	EMBNJ9238GK	TEM26	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P	
3.0 x 2.4	17.2	320	Medium	2400	EMBNJ9238GK	TEM23	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P	
			Heavy	3150	EMEICMN110BE	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P	
3.0 x 3.0	21.6	400	Medium	2750	EMBNJ9238GK	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P	
			Heavy	3550	EMEICMN110BE	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P	
3.6 x 2.4	20.7	380	Medium	2700	EMBNJ9238GK	TEM26	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P	
			Heavy	3500	EMEICMN140BE	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P	
3.6 x 3.0	25.9	480	Medium	3050	EMEICMN110BE	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P	
			Heavy	4000	EMEICMN140BE	TEM40	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P	
3.6 x 3.6	31.1	580	Medium	3400	EMEICMN110BE	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P	
			Heavy	4600	EMEICMN140BE	TEM51	SPORJ8EF-SW	SPORJ8C-04	ELIID961/230V	C-162	700078P	
4.8 x 3.6	41.4	780	Medium	4150	EMEICMN140BE	TEM40	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-162	700078P	
			Heavy	5350	EMEIZSI09BE-TFM-500	TEM53	SPORJ8EF-SW	SPORJ8C-04	ELIID961/230V	C-162	700078P	
4.8 x 4.8	55.2	1050	Medium	5150	EMEIZSI09BE-TFM-500	TEM51	SPORJ8EF-SW	SPORJ8C-04	ELIID961/230V	C-162	700078P	
			Heavy	6500	EMEIZSI011BE-TFM-500	TFM62	SPORJ8EF-SW	SPORJ8C-05	ELIID961/230V	C-162	700078P	

Allow extra 550W per glass door insert

Capacity based on the following

Coolroom 75mm Styrene insulation, Pull down time: 16/24 hrs
Product entering 8 Deg above Cool Room temperature,

Totaline

Freezer Quick Selection Guide

Outside Dimensions	Coolroom -18 Deg.C SST/ 38 Deg.C Ambient				Equipment						
L X W X 2.4m Height	Int Vol M³	Product Load Kg /24hrs	Room Usage	16 /24 hrs Watts	Condensing Unit	Evaporator	TX Valve	Orifice	Controller	Drier	Sight Glass
1.8 X 1.2	5.1	60	Medium	1100	EMBUNJ2212GK	TEL15	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-053	700078P
			Heavy	1350	EMBUNJ2212GK	TEL15	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-053	700078P
1.8 x 1.8	7.7	100	Medium	1150	EMBUNJ2212GK	TEL15	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-053	700078P
			Heavy	1650	EMEIZSI06AE-PFZ-500	TEL22	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-083	700078P
2.4 x 1.8	10.36	140	Medium	1300	EMBUNJ2212GK	TEL15	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-083	700078P
			Heavy	1850	EMEIZSI06AE-PFZ-500	TEL22	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
2.4 x 2.4	13.8	190	Medium	1450	EMBUNJ2212GK	TEL15	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-083	700078P
			Heavy	2350	EMEIZSI08AE-PFZ-500	TEL25	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
3.0 x 2.4	17.2	250	Medium	1900	EMEIZSI06AE-PFZ-500	TEL22	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
			Heavy	2600	EMEIZSI09BE-TFM-500	TEL25	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
3.0 x 3.0	21.6	320	Medium	2100	EMEIZSI06AE-PFZ-500	TEL22	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
			Heavy	2950	EMEIZSI09BE-TFM-500	TEL31	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
3.6 x 2.4	20.7	310	Medium	2050	EMEIZSI06AE-PFZ-500	TEL22	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
			Heavy	2850	EMEIZSI09BE-TFM-500	TEL28	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
3.6 x 3.0	25.9	390	Medium	2350	EMEIZSI08AEPFZ-500	TEL25	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
			Heavy	3300	EMEIZSI011BE-TFM-500	TEL38	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
3.6 x 3.6	31.1	480	Medium	2550	EMEIZSI08AE-PFZ-500	TEL28	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
			Heavy	3550	EMEIZSI011BE-TFM-500	TEL38	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
4.8 x 3.6	41.4	660	Medium	3350	EMEIZSI011BE-TFM-500	TEL38	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
			Heavy	4500	EMEIZSI14CE-TFM-500	TFL48	SPORJ8ES-SW	SPORJ8C-04	EL11974/230	C-083	700078P
4.8 x 4.8	55.2	890	Medium	3550	EMEIZSI011BE-TFM-500	TEL38	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
			Heavy	5050	EMEIZSI18DE-TFM-500	TFL54	SPORJ8ES-SW	SPORJ8C-04	EL11974/230	C-163	700247P

Allow extra 600W per glass door insert

Capacity based on the following

Freezer Room 150mm Styrene insulation with 150mm floor insulation

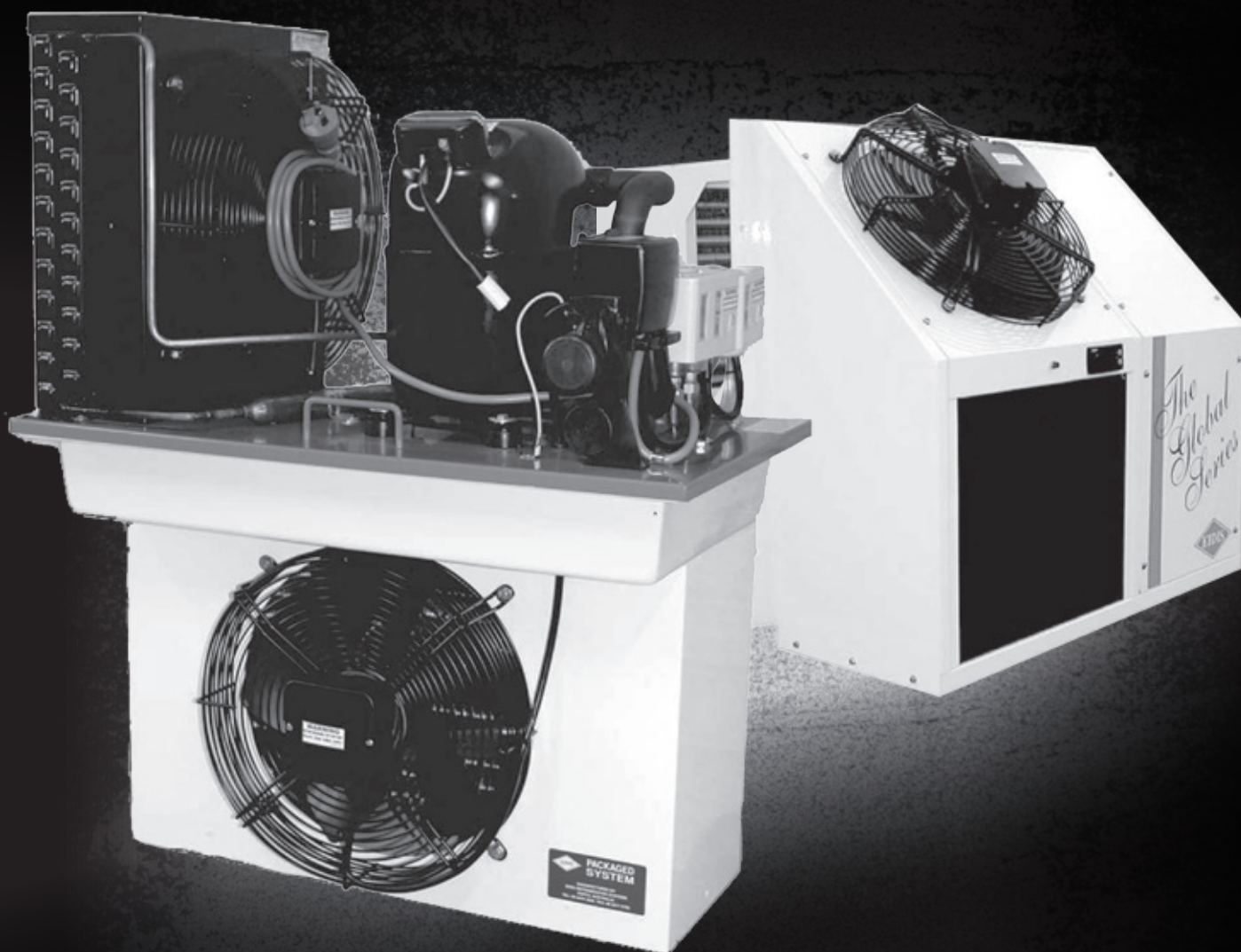
Product entering pre frozen only, pull down time: 16/24 hrs

TOTALINE



EIDIS
REFRIGERATION

DROP-IN + PLUG-IN UNITS



EIDIS Refrigeration

Drop-in Packaged Refrigeration Units

Drop-In Units



Slide-In Units



Low-Profile Units



Push-In Units



Features and Benefits

Outstanding Quality and Reliability.

Built in Australia to perform in Australian conditions.

- Both heat exchange coils use rifle bore tubing
- Accurate metal processing by C.N.C Turret
- Compact construction minimising freight costs
- Bench tested before packaging
- Each system has an installation instruction sheet, a unit to coldroom sealing strip, electronic componentry usage instructions where required and a drawing showing cut out dimensions and positioning
- Constant improvement in construction and efficiency
- Use of proven componentry and controls from the world's leading manufacturers – readily available off the shelf components
- Easy installation
- No skilled personnel needed on site
- Just place in a prepared hole
- Covers available for all models on request
- Special units to customer requirements
- Standard power requirement 220/240 volt 50/HZ
- Units are provided with 3m electrical cable and 3 pin plug
- Reliable, safe operation
- Controls of convenient design, unaffected by voltage spikes
- Drop-in and Slide-in models have cross ambient temperature controls factory set 2°C room temperature
- Dual pressure control with auto reset on high cut out to protect against condenser airflow restriction
- Optional electronic digital controls can be supplied
- Vibration free balanced external rotor fans
- Baseplate powder coated
- Moulded white a.b.s insulated inner panel
- Evaporator casing, white powder coated aluminium

Medium/Low Temperature Packaged Refrigeration Units

Medium Temperature

EIDIS Drop-In & Slide-In Packaged Units

Model No.	Compressor		Watts Capacity @ +2°C Room Temp.	Evap. KTD	Grams R404a Charge
	Model	Nominal HP			
66/4	6215GK	1/2	1300	5	700
68/4	6226GK	1+	1940	6.8	700
88/4	9232GK	1-1/4	2280	7	800
1212/4	9238GK	1-1/2	3220	6	1550
2012/4	MTZ28	2-1/4	4200	5	3000

EIDIS Low-Profile Packaged Units

Model No.	Compressor		Watts Capacity @ +2°C Room Temp.	Evap. KTD	Grams R404a Charge
	Model	Nominal HP			
64/4	6210GK	3/8	975	6.5	445
66/4	6215GK	1/2	1300	5	700
67/4	6222GK	1	1600	6	850
68/4	6226GK	1+	1940	6.8	700
88/4	9232GK	1-1/4	2280	7	800

EIDIS Push-In Packaged Units

Model No.	Compressor		Watts Capacity @ +2°C Room Temp.	Evap. KTD	Grams R404a Charge
	Model	Nominal HP			
66/4	6215GK	1/2	1300	5	700
68/4	6226GK	1+	1940	6.8	700
88/4	9232GK	1-1/4	2280	7	800

Notes – applies to Medium Temperature ONLY

- The Manufacturer reserves the right to change specifications as necessary without notice.
- The M/T range packaged units are designed to operate within an ambient temperature range of +10°C to +45°C and a room temperature range of 0°C to +15°C.

Low Temperature

Model No.	Compressor		Watts Capacity @ -18°C Room Temp.	Evap. KTD	Grams R404a Charge
	Model	Nominal HP			
1300/4 LT	2192GK	1-1/4	1250	8	900
2500/4 LT	NTZ068-5VI	2-1/2	2500	8	1500

Notes – applies to Low Temperature ONLY

- The Manufacturer reserves the right to change specifications as necessary without notice.
- The L/T range packaged units are designed to operate within an ambient temperature range of +10°C to +45°C and a room temperature range of -20°C to -5°C.

Ice Box Refrigeration

Model No.	Compressor		Watts Capacity @ -18°C Room Temp.	Evap. KTD	Grams R404a Charge
	Model	Nominal HP			
1500 IBU	2192GK	1-1/4	1500	6	1200
1900 IBU	2212GK	1-1/2	1900	6	1200

Notes – applies to Ice Box Refrigeration ONLY

- The Manufacturer reserves the right to change specifications as necessary without notice.
- The L/T range packaged units are designed to operate within an ambient temperature range of +10°C to +40°C and a room temperature range of -12°C to -5°C.

Medium/Low Temperature Packaged Refrigeration Units

Technical Data

Model No.	Compressor			Condenser Fan	Evaporator Fan		Standard Evap Unit	
	Model	Amps		Qty x Fan Dia	Standard Qty x Fan Dia	Low-Profile Qty x Fan Dia	Amps	
		RLA*	LRA				RLA*	MRA*
64/4	6210GK	3.23	19.00	1 x 254mm	N/A	2 x 178	3.95	4.11
66/4	6215GK	3.78	22.00	1 x 275mm	1 x 300mm		4.65	4.94
67/4	6222GK	4.95	37.00	1 x 300mm	N/A	3 x 178	6.02	6.33
68/4	6226GK	5.09	27.50	1 x 300mm	N/A		5.95	6.44
88/4	9232GK	5.12	43.00	1 x 300mm	1 x 300mm		6.00	7.84
1212/4	9238GK	8.10	43.00	1 x 350mm	1 x 350mm	N/A	9.50	10.76
2012/4	MTZ28	10.69	58.00	1 x 350mm	2 x 300mm	N/A	12.25	13.45

Notes

- The Manufacturer reserves the right to change specifications as necessary without notice.
- * – Unit and Compressor RLA data are taken at +2°C room temp +32°C ambient condition. (+/-5%)
- * – Unit MRA data are based on compressor MRA + fan RLA. (+/-5%)

Model No.	Compressor			Condenser Fan	Evaporator Fan	Defrost		Unit	
	Model	Amps		Qty x Fan Dia	Qty x Fan Dia	Type	Amps	Amps	
		RLA*	LRA					RLA*	MRA*
1300/4 LT	2192GK	3.71	26	1 x 300mm	1 x 300mm	Hot Gas	N/A	4.14	4.60
2500/4 LT	NTZ068	10.30	53	1 x 350mm	1 x 300mm	Electric	11.0	11.43	14.00
1300/4 LT LP	2192GK	3.71	26	1 x 300mm	3 x 178mm	Electric	3.3	4.78	5.40
1500 IBU	2192GK	4.27	26	1 x 300mm	3 x 178mm	Electric	8.0	4.49	4.95
1900 IBU	2212GK	7.10	36	1 x 300mm	1 x 200mm	Electric	8.0	7.77	8.20

Notes

- The Manufacturer reserves the right to change specifications as necessary without notice.
- * – Unit and Compressor RLA data are taken at -18°C room temp +32°C ambient condition. (+/-5%)
- * – Unit MRA data are based on compressor MRA + fan RLA. (+/-5%)

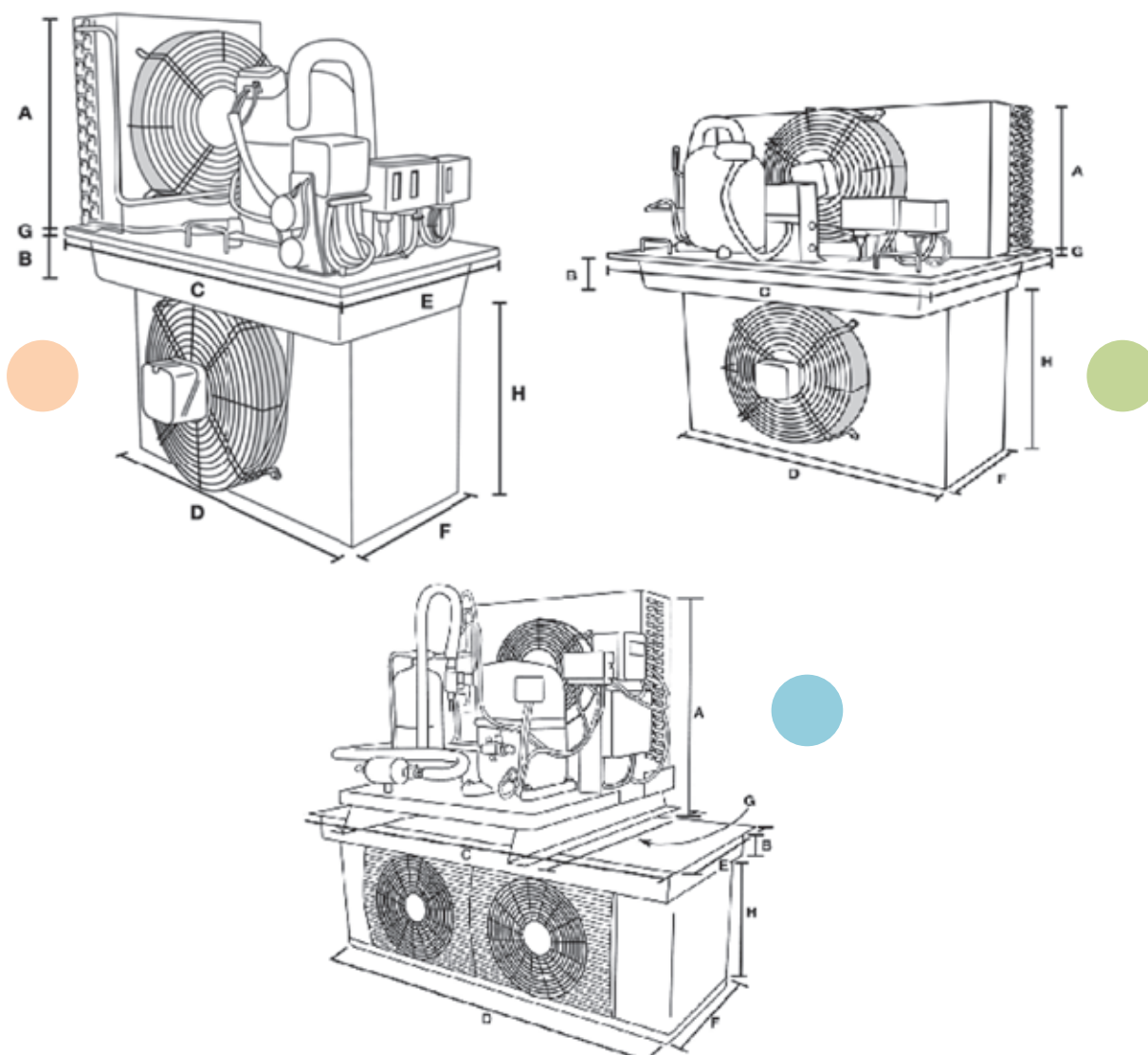
Physical Dimensions

Medium Temperature & Low Temperature EIDIS Drop-In Packaged Refrigeration Units

Model No.	Packaged Dimensions			Weight Kg	Unit Dimension							
	L	W	H		A	B	C	D	E	F	G	H
66/4	720	460	990	52	310	80	685	605	400	230	16	370
68/4	720	460	1060	6.61	380	80	685	605	400	230	16	370
88/4	720	460	1060	67	380	80	685	605	400	230	16	370
1300 LT	720	460	1150	67	380	170	685	605	400	230	16	370
1212/4	970	680	1120	120	375	80	890	762	590	298	16	450
2500 LT	970	680	1210	120	375	170	890	762	590	298	16	450
2012/4	1440	920	1370	180	670	80	1285	1215	545	450	820	435

Notes

- The Manufacturer reserves the right to change specifications as necessary without notice.
- LT = Low Temperature



Physical Dimensions

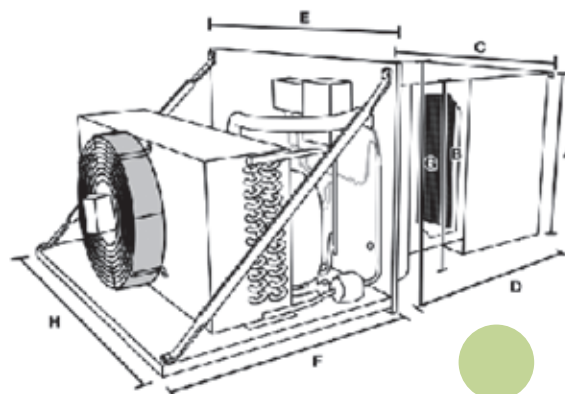
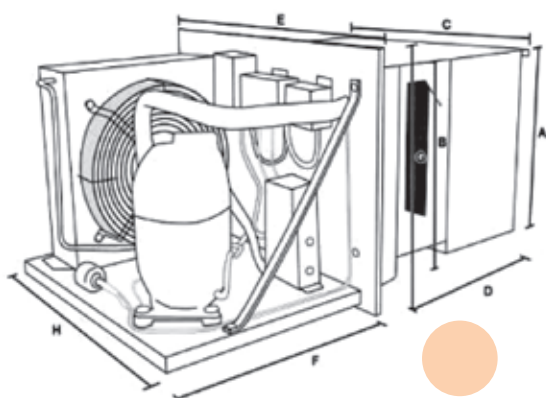
Medium Temperature & Low Temperature

EIDIS Push-In Packaged Refrigeration Units

Model No.	Packaged Dimensions			Weight Kg	Unit Dimension							
	L	W	H		A	B	C	D	E	F	G	H
66/4	1070	700	510	58	370	390	605	385	690	430	460	600
68/4	1070	700	510	67	370	390	605	385	690	430	460	600
88/4	1070	700	510	71	370	390	605	385	690	430	460	600
1300 LT	1070	700	510	71	370	390	605	475	690	430	460	600
1212/4	1320	900	600	120	450	480	760	493	890	590	590	890
2500 LT	1410	900	600	120	450	480	760	810	890	590	590	890

Notes

- The Manufacturer reserves the right to change specifications as necessary without notice.
- LT = Low Temperature



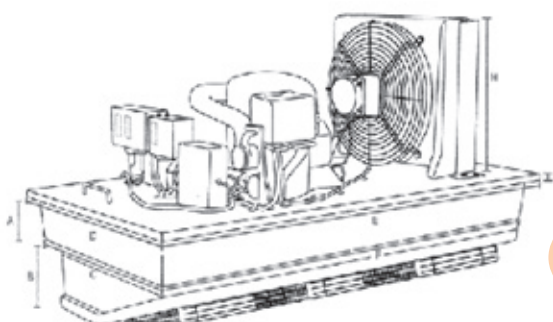
Medium Temperature & Low Temperature

EIDIS Low-Profile Packaged Refrigeration Units

Model No.	Packaged Dimensions			Weight Kg	Unit Dimension							
	L	W	H		A	B	C	D	E	F	G	H
66/4	900	500	800	40	75	140	395	470	770	705	16	280
66/4	900	500	800	46	80	140	395	500	875	840	16	310
68/4	900	500	800	47	80	140	395	500	875	840	16	310
88/4	900	500	800	49	80	140	395	500	875	840	16	310
1300 LT	900	500	800	49	80	140	395	500	875	840	16	310

Notes

- The Manufacturer reserves the right to change specifications as necessary without notice.
- LT = Low Temperature



EVAPORATORS & AIR-COOLED CONDENSERS

Totaline Evaporators

E2 Series Medium Temp

Model	R404A	R22	R134A	R404A	R22	R134A	FANS	Air Flow (L/s)	Air Throw (m)	Fan Motor		Sound Pressure Level dB(A)/m
	Cap. -4°C @ 6kTD			Cap. sst -10°C @ 6kTD						Watts	Amps	
TEM16	1.60	1.56	1.51	1.54	1.47	1.40	1 x 300	1139	8	80	0.42	54
TEM20	2.00	1.90	1.85	1.88	1.79	1.71	2 x 300	2619	9	160	0.84	55
TEM25	2.50	2.39	2.32	2.37	2.25	2.15	2 x 300	2489	9	160	0.84	55
TEM33	3.30	3.17	3.08	2.14	2.99	2.85	2 x 300	2396	9	160	0.84	55
TEM35	3.50	3.37	3.28	3.34	3.18	3.04	2 x 300	2278	9	160	0.84	55
TEM37	3.70	3.59	3.49	3.56	3.39	3.23	3 x 300	3733	10	240	1.26	56
TEM49	4.90	4.76	4.62	4.71	4.49	4.28	3 x 300	3596	10	240	1.26	56
TEM55	5.50	5.29	5.14	5.24	4.99	4.77	3 x 300	3417	10	240	1.26	56
TFM45	4.50	4.40	4.27	4.35	4.15	3.96	2 x 350	4892	13	340	1.7	56
TFM61	6.10	5.92	5.76	5.87	5.59	5.33	2 x 350	4725	13	340	1.7	56
TFM69	6.90	6.69	6.50	6.62	6.31	6.02	2 x 350	4492	13	340	1.7	56
TFM77	7.70	7.52	7.31	7.45	7.09	6.77	3 x 350	7336	14	510	2.55	57
TFM90	9.00	8.75	8.50	8.66	8.25	7.88	3 x 350	7077	14	510	2.55	57
TFM94	9.40	9.15	8.89	9.06	8.63	8.23	3 x 350	6739	14	510	2.55	57
TFM107	10.70	10.35	10.06	10.25	9.76	9.32	4 x 350	9359	14	680	3.4	58
TFM120	12.00	11.61	11.28	11.50	10.95	10.45	4 x 350	8984	14	680	3.4	58

Specifications

Model	Dimension				Connections				Weight
	L	H	D	Mounting Centres	Inlet (mm)	Outlet (mm)	Ext Equaliser (mm)	Drain Outlet (mm)	Kg
TEM16	733	452.8	447.3	350×358	12.70	15.88	6.35	25.4	21
TEM20	1133	452.8	447.3	350×(355+401)	12.70	15.88	6.35	25.4	22
TEM25	1133	452.8	447.3	350×(355+401)	12.70	15.88	6.35	25.4	26
TEM33	1133	452.8	447.3	350×(355+401)	12.70	15.88	6.35	25.4	30
TEM35	1133	452.8	447.3	350×(355+401)	12.70	22.22	6.35	25.4	32
TEM37	1533	452.8	447.3	350×(400+400+357)	15.88	22.22	6.35	25.4	34
TEM49	1533	452.8	447.3	350×(400+400+357)	15.88	22.22	6.35	25.4	38
TEM55	1533	452.8	447.3	350×(400+400+357)	15.88	22.22	6.35	25.4	43
TFM45	1533	516.3	447.2	350×(600+557)	15.88	22.22	6.35	25.4	38
TFM61	1533	516.3	447.2	350×(600+557)	15.88	22.22	6.35	25.4	44
TFM69	1533	516.3	447.2	350×(600+557)	15.88	28.58	6.35	25.4	50
TFM77	2133	516.3	447.2	350×(557+600+600)	15.88	28.58	6.35	25.4	54
TFM90	2133	516.3	447.2	350×(557+600+600)	15.88	28.58	6.35	25.4	62
TFM94	2133	516.3	447.2	350×(557+600+600)	15.88	34.92	6.35	25.4	70
TFM107	2733	516.3	447.2	350×(557+600+600+600)	15.88	34.92	6.35	25.4	79
TFM120	2733	516.3	447.2	350×(557+600+600+600)	15.88	34.92	6.35	25.4	88



Totaline Evaporators E2 Series Low Temp

TOTALINE

Model	R404A	R22	R134A	R404A	R22	R134A	FANS	Air Flow (L/s)	Air Throw (m)	Fan Motor		Sound Pressure Level dB(A)/m	Heater Defrost (W)
	Cap. -24°C @ 6kTD			Cap. sst -4°C @ 6kTD						Watts	Amps		1 Phase/ 220V/50HZ
TEL16	1.60	1.58	1.46	1.68	1.63	1.58	2 x 300	2528	9	160	0.84	55	1440
TEL20	2.00	1.96	1.80	2.15	2.09	2.03	2 x 300	2420	9	160	0.84	55	1440
TEL28	2.80	2.71	2.50	2.98	2.89	2.81	2 x 300	2242	9	160	0.84	55	3360
TEL31	3.10	2.96	2.72	3.22	3.13	3.04	3 x 300	3630	10	240	1.26	56	2880
TEL38	3.80	3.68	3.38	4.18	4.06	3.94	3 x 300	3488	10	240	1.26	56	4320
TEL43	4.30	4.14	3.81	4.72	4.58	4.45	3 x 300	3363	10	240	1.26	56	5320
TFL25	2.50	2.41	2.21	2.66	2.58	2.51	1 x 350	2206	12	240	1.26	56	2520
TFL38	3.80	3.67	3.37	3.95	3.83	3.73	2 x 350	4750	13	340	1.7	56	2880
TFL47	4.70	4.52	4.16	5.22	5.07	4.92	2 x 350	4568	13	340	1.7	56	4320
TFL53	5.30	5.12	4.71	5.99	5.82	5.65	2 x 350	4412	13	340	1.7	56	5040
TFL60	6.00	5.83	5.36	6.45	6.26	6.08	3 x 350	7112	14	510	2.55	57	4320
TFL71	7.10	6.86	6.31	7.62	7.40	7.19	3 x 350	6852	14	510	2.55	57	6480
TFL78	7.80	7.53	6.93	8.01	7.78	7.56	3 x 350	6618	14	510	2.55	57	7560
TFL90	9.00	8.72	8.02	9.40	9.13	8.87	4 x 350	9138	14	680	3.4	58	8640
TFL97	9.70	9.46	8.70	10.60	10.33	10.04	4 x 350	8824	14	680	3.4	58	10800

Specifications

Model	Dimension				Connections				Weight
	L	H	D	Mounting Centres	Inlet (mm)	Outlet (mm)	Ext Equaliser (mm)	Drain Outlet (mm)	Kg
TEL16	1133	452.8	447.3	350×(355+401)	12.7	15.88	6.35	25.4	22
TEL20	1133	452.8	447.3	350×(355+401)	12.7	19.05	6.35	25.4	26
TEL28	1133	452.8	447.3	350×(355+401)	12.7	22.22	6.35	25.4	33
TEL31	1533	452.8	447.3	350×(355+401)	15.88	22.22	6.35	25.4	35
TEL38	1533	452.8	447.3	350×(400+400+357)	15.88	22.22	6.35	25.4	40
TEL43	1533	452.8	447.3	350×(400+400+357)	15.88	28.60	6.35	25.4	44
TFL25	933	516.3	447.2	350×558	12.7	22.22	6.35	25.4	30
TFL38	1533	516.3	447.2	350×(600+557)	15.88	28.60	6.35	25.4	38
TFL47	1533	516.3	447.2	350×(600+557)	15.88	28.60	6.35	25.4	40
TFL53	1533	516.3	447.2	350×(600+557)	15.88	28.60	6.35	25.4	50
TFL60	2133	516.3	447.2	350×(557+600+600)	15.88	34.93	6.35	25.4	54
TFL71	2133	516.3	447.2	350×(557+600+600)	15.88	34.93	6.35	25.4	62
TFL78	2133	516.3	447.2	350×(557+600+600)	15.88	34.93	6.35	25.4	70
TFL90	2733	516.3	447.2	350×(557+600+600+600)	15.88	34.93	6.35	25.4	79
TFL97	2733	516.3	447.2	350×(557+600+600+600)	22.22	41.28	6.35	25.4	88

Parker Sporlan

Expansion Valves for Medium Temp Evaporators

Model	R404A				R22				R134A			
			-4°C	-10°C			-4°C	-10°C			-4°C	-10°C
TEM16	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-01	C-01	600016	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-01	C-01	600014	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-02	C-02
TEM20	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-02	C-02	600017	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-01	C-01	600015	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-02	C-02
TEM25	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-02	C-02	600018	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-02	C-01	600016	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-03	C-03
TEM33	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-03	C-03	600019	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-02	C-02	600017	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-03	C-03
TEM35	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-03	C-03	600020	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-02	C-02	600018	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-03	C-03
TEM37	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-03	C-03	600021	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-02	C-02	600019	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-04	C-03
TEM49	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-04	C-04	600022	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-03	C-03	600020	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-04	C-04
TEM55	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-04	C-04	600023	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-03	C-03	600021	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-04	C-04
TFM45	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-04	C-04	600024	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-03	C-03	600022	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-04	C-04
TFM61	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-04	C-04	600025	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-03	C-03	600023	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-05	C-05
TFM69	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-04	C-04	600026	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-04	C-04	600024	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-05	C-05
TFM77	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-05	C-05	600027	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-04	C-04	600025	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	108551P	C-06
TFM90	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-06	C-05	600028	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-04	C-04	108551P	SBFJE-B-C 3X4 ODF 30 IN.	108551P	108551P
TFM94	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-06	C-06	600029	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-04	C-04	108552P	SBFJE-C-C 3X4 ODF 30 IN.	108552P	108552P
TFM107	108628P	SBFSE-C-C 3/8 X 1/2 ODF 30	108628P	108628P	600030	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-05	C-04	108552P	SBFJE-C-C 3X4 ODF 30 IN.	108552P	108552P
TFM120	108628P	SBFSE-C-C 3/8 X 1/2 ODF 30	108628P	108628P	600031	SPORLAN J8ES-NW 3SAE X 4 X 2ODF 60IN.	C-05	C-05	108552P	SBFJE-C-C 3X4 ODF 30 IN.	108552P	108552P



Parker Sporlan Expansion Valves for Low Temp Evaporators



Model	R404A				R22				R134A			
			-24°C	-10°C			-4°C	-10°C			-4°C	-10°C
TEL16	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-01	C-01	600016	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-01	C-01	600014	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-02	C-02
TEL20	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-02	C-02	600017	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-01	C-01	600015	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-02	C-02
TEL25	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-02	C-02	600018	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-02	C-01	600016	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-03	C-03
TEL33	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-03	C-03	600019	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-02	C-02	600017	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-03	C-03
TEL35	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-03	C-03	600020	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-02	C-02	600018	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-03	C-03
TEL37	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-03	C-03	600021	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-02	C-02	600019	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-04	C-03
TEL49	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-04	C-04	600022	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-03	C-03	600020	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-04	C-04
TEL55	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-04	C-04	600023	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-03	C-03	600021	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-04	C-04
TFL45	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-04	C-04	600024	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-03	C-03	600022	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-04	C-04
TFL61	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-04	C-04	600025	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-03	C-03	600023	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-05	C-05
TFL69	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-04	C-04	600026	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-04	C-04	600024	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	C-05	C-05
TFL77	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-05	C-05	600027	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-04	C-04	600025	SPORLAN J8ES-JW 3X4X2 ODF 60 IN.	108551P	C-06
TFL90	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-06	C-05	600028	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-04	C-04	108551P	SBFJE-B-C 3X4 ODF 30	108551P	108551P
TFL94	600018	SPORLAN J8ES-SW 3X4X2 ODF 60 IN.	C-06	C-06	600029	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-04	C-04	108552P	SBFJE-C-C 3X4 ODF 30 IN.	108552P	108552P
TFL107	108628P	SBFSE-C-C 3/8 X 1/2 ODF 30	108628P	108628P	600030	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-05	C-04	108552P	SBFJE-C-C 3X4 ODF 30 IN.	108552P	108552P
TFL120	108628P	SBFSE-C-C 3/8 X 1/2 ODF 30	108628P	108628P	600031	SPORLAN J8ES-NW 3SAE X 4 X 20DF 60IN.	C-05	C-05	108552P	SBFJE-C-C 3X4 ODF 30 IN.	108552P	108552P

Model Nomenclature – TE & TF Series Evaporators

Example: TEM16

Nomenclature

T	TOTALINE
E	E SERIES: 300MM FANS; F SERIES: 350MM FANS; I SERIES: 500MM FANS
M	MEDIUM TEMP or L = LOW TEMP
16	CAPACITY (WATTS) X 100

Performance Correction Factors

Table F1 - For capacity calculating at varying evaporator saturated suction temperature (SST)

MEDIUM TEMPERATURE - TEM, TFM						
SST	-10°C	-8°C	-5°C	-4°C	-0°C	+5°C
FACTOR (F.1)	0.957	0.98	0.99	1.0	1.021	1.04

LOW TEMPERATURE - TEL, TFL						
SST	-35°C	-30°C	-28°C	-24°C	-20°C	-15°C
FACTOR (F.1)	0.95	0.978	0.98	1.0	1.023	1.06

Corrected Evaporator Capacity

EVAPORATOR CAPACITY
R404A in Watts

X

F.1

CATALOGUE RATING CONDITION

MEDIUM TEMPERATURE

- Air Inlet Temperature 2°C
- Evaporating temperature -4°C
- Superheat 5K

LOW TEMPERATURE (SC3)

- Air Inlet Temperature -18°C
- Evaporating temperature -24°C
- Superheat 5K

Greenhalgh Remote Air Cooled Condenser C1 Series



Application Benefits/Features

HIGH EFFICIENCY HEAT EXCHANGER COIL

- Optimised 'fin to fan' ratio
- Large heat exchange surface area and seamless inner grooved tube
- Reduction of internal refrigerant circuit volume
- All coils are degreased and Leak Tested at 3100 Kpa pressure
- Floating coil technology eliminates tube contact with the condenser frame
- Suspended coil protected against damage in transit, installation and vibration when in operation
- Epoxy Aluminium Gold Fins
- 2.2 mm fin spacing
- Protective enclosure for both manifolds and U-bends
- Designed for low pressure drop through coil.

FANS



- Ziehl Abegg brand motors as standard
- AC motors as standard – low motor power input
- High Speed as standard (Delta connection)
- Low Speed for low noise by changing motor connections from Delta to Star
- High Efficiency Fan nozzle/ shroud designed for maximum air flow, air throw, fan efficiency and noise reduction
- Motor: IP 54 protection class
- F-Class motor windings
- Motors:
 - Extremely quiet motors
 - Life-lubricated
 - High performance - low energy consumption
 - Thermally protected
- Motors and fans are statically and dynamically balanced
- Fan motors wired to the electrical junction box
- Fan guards conform to most stringent European standards
- Separate chamber for each fan ensures more uniform air distribution and minimises decrease in performance if one fan fails

STRUCTURE

- Units designed for outdoor installation
- Durable, rigid materials in Galvanised steel
- Hard gloss, Epoxy-Polyester powder coated finish – corrosion resistant
- Reduced unit weight

CAPACITY RATINGS

- Based on 25°C Ambient/ 40°C Saturated Condensing Temperature on R404A at Sea Level

CAPACITY RANGE – STANDARD C1 SERIES

- High Fan Speed: 9kW to 1135kW
- Low Fan Speed: 16kW to 818kW

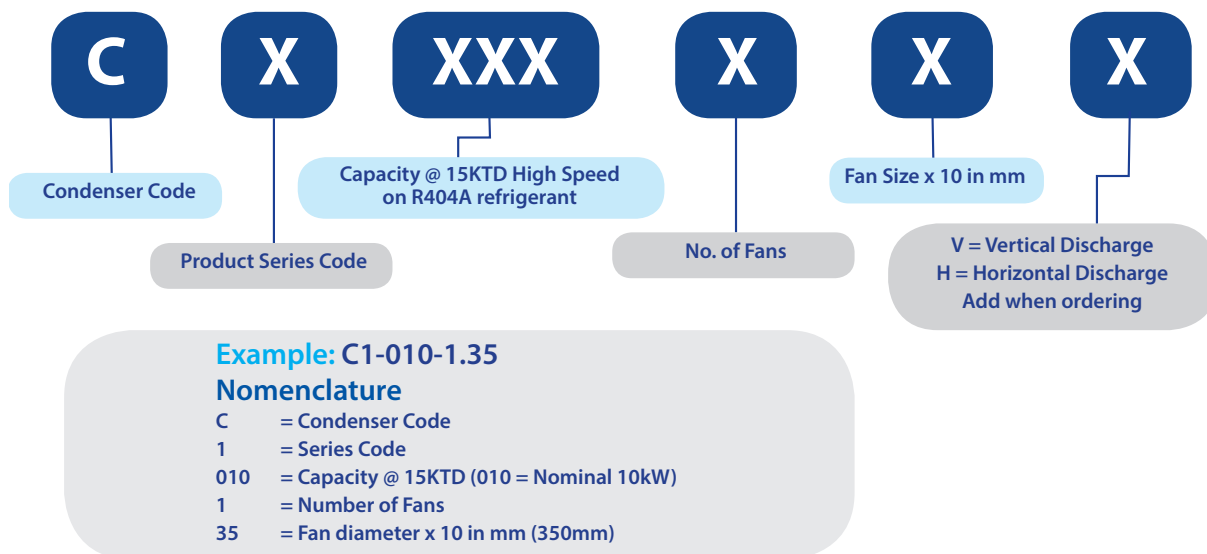
STATE OF THE ART DESIGN SOFTWARE

OPTIONS

- EC Motors
- Customised solutions with fan selection
- Stainless Steel Casing
- Copper/Copper coils
- Special anti-corrosive coatings
- Multiple circuits & special circuiting for various applications and fluids
- Sub-Cooling circuits
- Special Applications on request:
 - Dry Coolers
 - Oil Coolers
 - Hydro-Spray
 - Pre-Cooler modules

Greenhalgh Remote Air Cooled Condenser C1 Series

Nomenclature Greenhalgh C1 Condensers



DEW POINT

Popular refrigerants used today have significant glide and do not have a definite saturated pressure/temperature relationship, meaning that although the pressure remains constant the saturated gas and saturated liquid temperatures are not the same.

The 100% saturated gas condition is known as the dew point, whilst the 100% saturated liquid condition is known as the bubble point.

The capacities specified in this catalogue have been calculated using the refrigerants dew point condition.

The dew point is the pressure/temperature condition at which a refrigerant gas begins condensing.

The calculation of condenser capacities on this basis will result in slightly conservative but advantageous ratings.





Model	CAPACITY IN KW @ 15KTD								AIRFLOW		Power Supply	FANS
	R404A		R134A		R407C		R22		U/s			Fan Qty x Ømm
	Low Speed	High Speed	Low Speed	High Speed	Low Speed	High Speed	Low Speed	High Speed	Low Speed	High Speed		
C1 SERIES												
C1-010-1.35		9.6		9.2		8.1		9.34		748	240/1/50	1x350
C1-011-1.35		11.0		10.6		9.3		10.65		705		1x350
C1-012-1.35		12.3		11.7		10.2		11.7		637		1x350
C1-017-1.45	15.5	17.1		16.8		14.8	15.2	16.89	1354	1588		1x450
C1-020-1.45	18.0	20.0		19.6		17.1	17.5	19.58	1287	1481		1x450
C1-023-1.45	20.7	23.1		20.0		19.3	19.7	22.15	1172	1311		1x450
C1-025-1.50	22.7	25.4		24.6		21.6	22.1	24.87	1809	2139		1x500
C1-029-1.50	26.1	29.4		28.9		25.2	25.4	28.71	1774	2057		1x500
C1-035-1.50	30.8	34.7		33.4		29.0	29.4	33.14	1696	1899		1x500
C1-049-1.63	38.3	49.0	37.5	47.9	32.8	42.3	37.6	48.52	3208	4947		1x630
C1-059-1.63	44.5	58.6	43.4	57.2	37.8	50.3	43.3	57.6	3080	4707	1x630	
C1-070-1.63	50.5	70.1	48.2	66.4	41.9	58.7	48.2	67.53	2804	4287	1x630	
C1-095-2.63	74.7	95.0	73.4	93.4	64.1	82.3	73.6	94.46	6411	9895	2x630	
C1-114-2.63	87.1	113.9	85.2	111.8	74.2	98.0	85.0	112.48	6155	9414	2x630	
C1-137-2.63	99.6	137.4	95.3	130.8	82.7	115.4	95.3	132.9	5604	8576	2x630	
C1-172-3.63	131.8	172.3	124.3	158.9	109.3	142.5	126.0	164.26	9235	14121	415/3/50	3x630
C1-207-3.63	149.2	207.1	141.9	194.2	123.1	171.1	141.8	197.14	8406	12863	3x630	
C1-228-4.63	174.3	227.9	170.4	223.6	148.3	196.1	170.0	224.96	12309	18828	4x630	
C1-275-4.63	199.2	274.7	190.6	261.7	165.5	230.8	190.6	265.81	11208	17151	4x630	
C1-345-6.63	263.6	344.6	248.6	317.8	218.6	284.9	252.1	328.51	18469	28242	6x630	
C1-414-6.63	298.4	414.2	283.7	388.4	246.2	342.1	283.6	394.27	16811	25726	6x630	
C1-471-8.63	355.7	471.5	333.5	434.9	290.6	384.9	333.2	441.41	24635	37652	8x630	
C1-550-8.63	399.7	550.0	366.3	486.4	322.4	441.0	372.2	508.34	22419	34302	8x630	
C1-599-10.63	451.9	598.7	413.0	536.7	367.8	486.6	423.0	559.66	30810	47063	10x630	
C1-711-10.63	506.3	710.8	469.7	647.1	410.6	576.8	471.9	662.9	28038	42869	10x630	
C1-858-12.63	612.3	858.4	563.0	773.4	495.0	694.2	570.0	799.16	33655	51440	12x630	
C1-1000-14.63	716.3	1000.4	653.8	888.3	577.7	806.7	666.0	929.13	39268	60014	14x630	
C1-1135-16.63	817.7	1134.7	738.9	989.0	658.0	912.2	759.0	1050.55	44876	68591	16x630	

Greenhalgh Remote Air Cooled Condenser C1 Series

Model	FAN MOTOR DATA				SOUND PRESSURE LEVEL		REFRIGERANT CONNS		WEIGHT	DIMENSIONS (MM)		
	Watts		Amps		DB (A) at 10m		Inlet	Outlet		Length	Width	Height
	Low Speed	High Speed	Low Speed	High Speed	Low Speed	High Speed	Ømm	Ømm	U/s	mm	mm	mm
C1 SERIES												
C1-010-1.35		175		0.77		31	15.88	15.88	32	878	522	752
C1-011-1.35		175		0.77		31	15.88	15.88	35	878	522	752
C1-012-1.35		175		0.77		31	15.88	15.88	40	878	522	752
C1-017-1.45	380	540	0.68	1.05	38	43	22.22	15.88	46	1028	625	796
C1-020-1.45	380	540	0.68	1.05	38	43	22.22	19.05	50	1028	625	796
C1-23-1.45	380	540	0.68	1.05	38	43	22.22	19.05	56	1028	625	796
C1-025-1.50	490	790	0.89	1.45	43	49	22.22	22.22	63	1228	828	876
C1-029-1.50	490	790	0.89	1.45	43	49	28.58	22.22	69	1228	828	876
C1-035-1.50	490	790	0.89	1.45	43	49	28.58	22.22	76	1228	828	876
C1-049-1.63	1600	2600	2.7	4.8	52	59	34.92	28.58	110	1528	1032	920
C1-059-1.63	1600	2600	2.7	4.8	52	59	34.92	28.58	115	1528	1032	920
C1-070-1.63	1600	2600	2.7	4.8	52	59	41.28	34.92	130	1528	1032	920
C1-095-2.63	3200	5200	5.4	9.6	54	61	41.28	34.92	198	2828	1032	920
C1-114-2.63	3200	5200	5.4	9.6	54	61	53.98	41.28	218	2828	1032	920
C1-137-2.63	3200	5200	5.4	9.6	54	61	53.98	41.28	253	2828	1032	920
C1-172-3.63	4800	7800	8.1	14.4	56	63	63.5	53.98	316	4128	1032	920
C1-207-3.63	4800	7800	8.1	14.4	56	63	63.5	53.98	370	4128	1032	920
C1-228-4.63	6400	10400	10.8	19.2	57	64	63.5	53.98	450	2828	2100	920
C1-275-4.63	6400	10400	10.8	19.2	57	64	76.2	63.5	590	2828	2100	920
C1-345-6.63	9600	15600	16.2	28.8	59	66	76.2	63.5	625	4128	2100	920
C1-414-6.63	9600	15600	16.2	28.8	59	66	88.9	76.2	735	4128	2100	920
C1-471-8.63	12800	20800	21.6	38.4	60	67	88.9	76.2	923	5480	2100	920
C1-550-8.63	12800	20800	21.6	38.4	60	67	104.7	88.9	992	5480	2100	920
C1-599-10.63	16000	26000	27	48	61	68	104.7	88.9	1132	6780	2100	920
C1-711-10.63	16000	26000	27	48	61	68	114.3	88.9	1208	6780	2100	920
C1-858-12.63	19200	31200	32.4	57.6	62	69	2x88.9	2x76.2	1420	8080	2100	920
C1-1000-14.63	22400	31200	37.8	67.2	63	70	2x104.7	2x76.2	1625	9380	2100	920
C1-1135-16.63	25600	41600	43.2	76.8	64	71	2x104.7	2x88.9	1832	10680	2100	920



Method to re-rate capacity at other TD's

TD is the difference between the refrigerant saturation temperature and the air ambient temperature.

The condensers are rated at 15KTD. To determine condenser capacity for applications at other temperature differences multiply the rated capacity by the temperature difference correction factor shown in the table below.

TEMPERATURE DIFFERENCE ~ TD					
8K	10k	12k	15k	17k	20k
0.53	0.67	0.80	1.00	1.13	1.33

Example: Condenser model C1-137.2.63 has a rated capacity of 137.4kW at 15KTD, on high fan speed, on R404A refrigerant. At a temperature difference of 10K the condenser is re-rated as follows: $137.4\text{kW} \times 0.67$ (factor for 10K) = 96.06kW.

GREENHALGH CONDENSER SOUND PRESSURE LEVELS ARE RATED AT 10M:

Method to determine sound pressure levels at other distances other than 10m

TABLE 3 SOUND PRESSURE LEVELS - CORRECTION FOR DISTANCE					
Distance from Unit (m)	5	10	20	40	60
Change in dB(A)	+6	0	-6	-12	-15

For approximate Sound Pressure Levels at distances other than the rating add or subtract the values shown in the table.

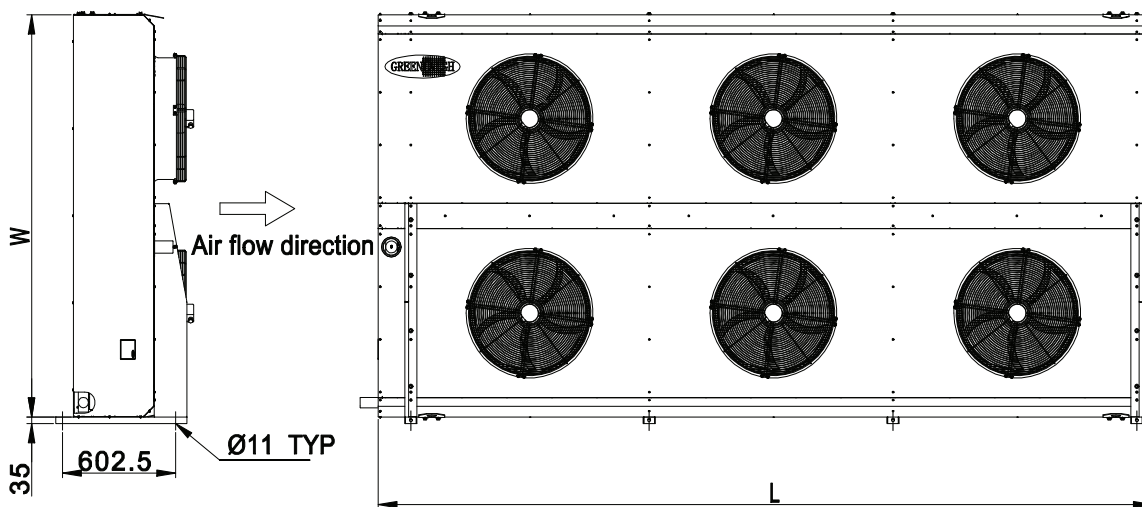
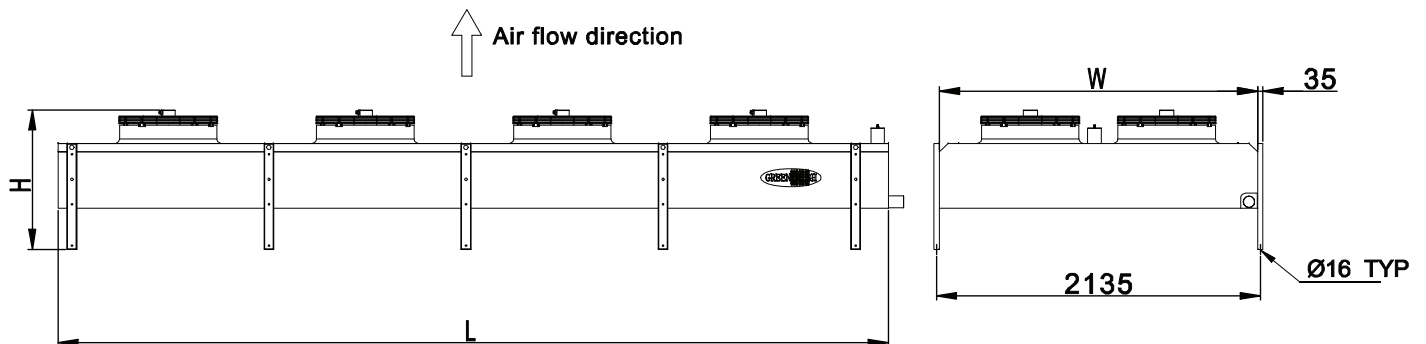
Method to determine noise level at other distances

Greenhalgh Condenser Sound Pressure Levels Ratings are measured at 10m from the source.

For approximate Sound Pressure Levels at distances other than the rating – add or subtract the values in Table 3.

Greenhalgh Remote Air Cooled Condenser C2 Series

Dimensions Diagrams



Greenhalgh Remote Air Cooled Condenser C2 Series



Application Benefits/Features

HIGH EFFICIENCY HEAT EXCHANGER COIL

- Optimised 'fin to fan' ratio
- Large heat exchange surface area and seamless inner grooved tube
- Reduction of internal refrigerant circuit volume
- All coils are degreased and Leak Tested at 3100 kPa pressure
- Floating coil technology eliminates tube contact with the condenser frame
- Suspended coil protected against damage in transit, installation and vibration when in operation
- Epoxy Aluminium Gold Fins
- 2.2 mm fin spacing
- Protective enclosure for both manifolds and U-bends
- Designed for low pressure drop through coil.

FANS

- 415V/3/50 Hz Ziehl Abegg motors, with 630 mm dia impeller fitted as standard on all models
- All motors are wired for delta connected for high speed operation as standard
- Low speed, low noise operation is obtainable by changing the motor connections from Delta to Star
- High Efficiency Fan nozzle / shroud is designed for maximum air flow, air throw, fan efficiency and noise reduction
- Motor: IP 54 protection class
- F-Class motor windings
- High performance – low energy consumption
- Life-lubricated
- Thermally protected
- Both motors and fans are statically and dynamically balanced
- Fan motors are pre-wired to the electrical junction box
- Fan guards conform to most stringent Australian standards
- Separate chamber for each fan ensures uniform air distribution and minimises the decrease in performance should one fan fail.

STRUCTURE

- Units designed for outdoor installation
- Durable, rigid materials in Galvanised steel
- Hard gloss, Epoxy-Polyester powder coated finish – corrosion resistant
- Reduced unit weight

CAPACITY RATINGS

- Based on 25°C Ambient/ 40°C Saturated Condensing Temperature on R404A

CAPACITY RANGE – STANDARD C1 SERIES

- High Fan Speed: 236kW to 1740kW
- Low Fan Speed: 180kW to 1257kW

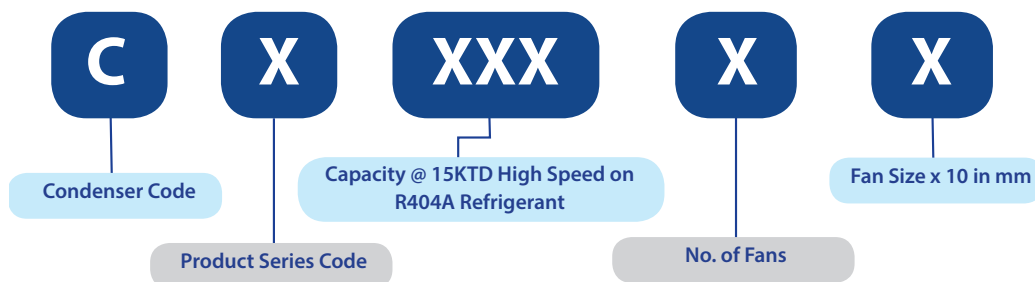
ACCESS TO STATE OF THE ART SELECTION DESIGN SOFTWARE

OPTIONS

- EC Motors
- Customised solutions with fan selection
- Stainless Steel Casing
- Copper/Copper coils
- Special anti-corrosive coatings
- Multiple circuits & special circuiting for various applications and fluids
- Sub-Cooling circuits
- Special Applications on request:
 - Dry Coolers
 - Oil Coolers
 - Hydro-Spray
 - Pre-Cooler modules

Greenhalgh Remote Air Cooled Condenser C2 Series

Nomenclature Greenhalgh C2 Condensers



Example: C2-236-4.63

Nomenclature

- C** = Condenser Code
- 2** = Series Code
- 236** = Capacity @ 15KTD in Kilowatts
- 4** = Number of Fans
- 63** = Fan diameter x 10 in mm (630mm)

DEW POINT

Popular refrigerants used today have significant glide and do not have a definite saturated pressure/temperature relationship, meaning that although the pressure remains constant the saturated gas and saturated liquid temperatures are not the same.

The 100% saturated gas condition is known as the dew point, whilst the 100% saturated liquid condition is known as the bubble point.

The capacities specified in this catalogue have been calculated using the refrigerants dew point condition.

The dew point is the pressure /temperature condition at which a refrigerant gas begins condensing.

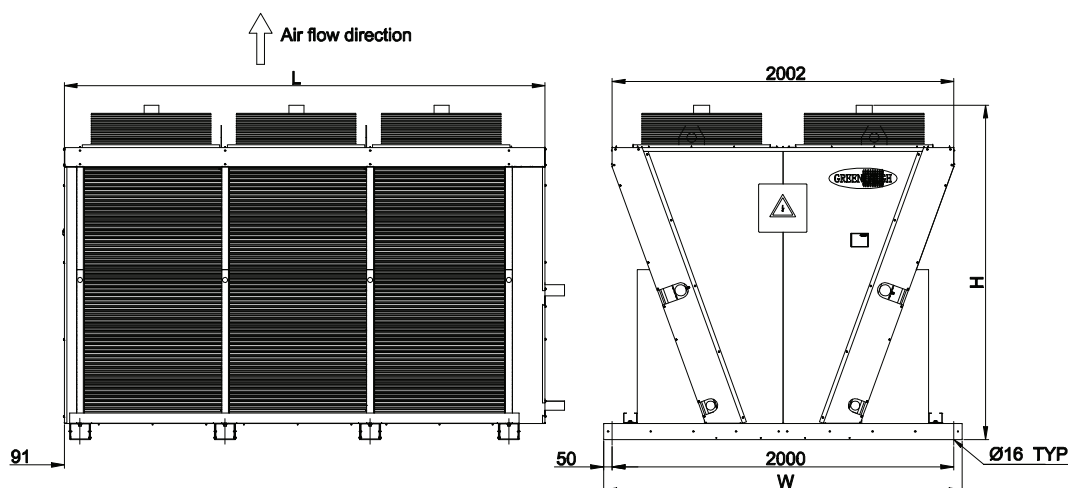
The calculation of condenser capacities on this basis will result in slightly conservative but advantageous ratings.





Model	CAPACITY IN KW @ 15KTD								AIRFLOW		Power Supply	FANS Fan Qty x Ømm
	R404A		R134A		R407C		R22		U/s			
	Low Speed	High Speed	Low Speed	High Speed	Low Speed	High Speed	Low Speed	High Speed	Low Speed	High Speed		
C2 SERIES												
C2-236-4.63	180	236	174	226	152	201	175	231	45116	71234	415/3/50	4x630
C2-285-4.63	206	285	198	273	171	239	197	275	43250	65922		4x630
C2-348-6.63	266	348	260	341	226	299	260	344	67639	106807		6x630
C2-421-6.63	306	421	293	402	254	354	293	408	62219	98832		6x630
C2-465-8.63	355	465	342	442	299	392	344	451	90180	142410		8x630
C2-560-8.63	405	560	390	537	338	470	389	541	82933	131767		8x630
C2-589-10.63	445	589	426	558	371	488	424	559	112738	178077		10x630
C2-706-10.63	511	706	481	651	419	577	483	666	103702	164753		10x630
C2-859-12.63	615	859	581	802	502	698	574	801	124456	197800		12x630
C2-1013-14.63	724	1013	676	928	587	821	674	944	145251	230853		14x630
C2-1163-16.63	832	1164	768	1057	674	943	775	1085	166033	263885		16x630
C2-1314-18.63	940	1314	865	1185	760	1063	876	1224	186822	296909		18x630
C2-1460-20.63	1048	1461	959	1306	846	1179	975	1358	207600	329907		20x630
C2-1460-20.63	1153	1603	1050	1418	930	1292	1072	1488	228366	362866		22x630
C2-1740-24.63	1257	1740	1137	1520	1012	1399	1167	1611	249118	395781		24x630

Dimensions Diagram



Greenhalgh Remote Air Cooled Condenser C2 Series

GREENHALGH CONDENSER CAPACITIES ARE RATED AT 15KTD

Method to re-rate capacity at other TD's

TD is the difference between the refrigerant saturation temperature and the air ambient temperature.

The condensers are rated at 15KTD. To determine condenser capacity for applications at other temperature differences multiply the rated capacity by the temperature difference correction factor shown in the table below..

TEMPERATURE DIFFERENCE ~ TD					
8K	10k	12k	15k	17k	20k
0.53	0.67	0.80	1.00	1.13	1.33

Example: Condenser model C1-137.2.63 has a rated capacity of 137.4kW at 15KTD, on high fan speed, on R404A refrigerant. At a temperature difference of 10K the condenser is re-rated as follows: $137.4\text{kW} \times 0.67$ (factor for 10K) = 96.06kW

Method to determine sound pressure levels at other distances other than 10m

TABLE 3 SOUND PRESSURE LEVELS - CORRECTION FOR DISTANCE					
Distance from Unit (m)	5	10	20	40	60
Change in dB(A)	+6	0	-6	-12	-15

For approximate Sound Pressure Levels at distances other than the rating add or subtract the values shown in the table.





Greenhalgh Model		C2-236-4.63	C2-285-4.63	C2-348-6.63	C2-421-6.63	C2-465-8.63	C2-560-8.63	C2-589-10.63	C2-706-10.63
Fan Motor Brand	ZIEHL-ABEGG								
No of Fans	Qty.	4	4	6	6	8	8	10	10
Fan Impeller Diameter	mm	630	630	630	630	630	630	630	630
HIGH SPEED FAN DATA (DELTA MOTOR CONNECTION)									
Capacity at 15KTD	kW	235.86	284.84	348.49	421.00	464.84	560.17	588.54	705.62
Fan Motor Model		FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS
Fan Motor No of Poles	No.	4	4	4	4	4	4	4	4
Air Flow total	l/sec	19790	18310	29670	27450	39560	36600	49470	45760
Fan Power Supply	V/Ø/Hz	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50
Fan Power Input Total	W	10400	10400	15600	15600	20800	20800	26000	26000
Fan Motor Amperage Total	Amp	19.20	19.20	28.80	28.80	38.40	38.40	48.00	48.00
Sound Pressure at 10m	dBA	64	64	66	66	67	67	68	68
LOW SPEED FAN DATA (STAR MOTOR CONNECTION)									
Capacity at 15KTD - Sea Level	kW	180.44	206.01	266.46	306.19	354.61	405.00	444.83	510.93
Fan Motor Model		FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS
Fan Motor No of Poles	No.	4	4	4	4	4	4	4	4
Air Flow total	l/sec	45116	67639	67639	62219	90180	82933	112738	103702
Fan Power Supply	V/Ø/Hz	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50
Fan Power Input Total	W	6400	6400	9600	9600	12800	12800	16000	16000
Fan Motor Amperage Total	Amp	10.80	10.80	16.20	16.20	21.60	21.60	27.00	27.00
Sound Pressure at 10m	dBA	57	57	59	59	60	60	61	61
GENERAL SPECIFICATION									
Gas Inlet Connection	mm	53.90 x 2	53.90 x 2	63.50 x 2	63.50 x 2	63.50 x 2	76.20 x 2	76.20 x 2	88.90 x 2
Liquid Outlet Connection	mm	41.28 x 2	41.28 x 2	53.90 x 2	53.90 x 2	53.90 x 2	63.50 x 2	63.50	76.20 x 2
Heat Exchange Surface Area	m2	396	594	594	891	792	1189	990	1486
Tube Diameter	mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52
No of Rows High	No.	124	124	124	124	124	124	124	124
No of Rows Deep	No.	4	6	4	6	4	6	4	6
Fin Material	Type	Epoxy fin	Epoxy fin	Epoxy fin	Epoxy fin	Epoxy fin	Epoxy fin	Epoxy fin	Epoxy fin
Fin Spacing	mm	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Length - excludes pipe connections (Add 105mm)	mm	1966	1966	2816	2816	3666	3666	4516	4516
Height - from base to top of condenser fan	mm	1977	1977	1977	1977	1977	1977	1977	1977
Width - widest point on base	mm	2100	2100	2100	2100	2100	2100	2100	2100
Net Weight.	kg	533	641	765	873	1025	1133	1275	1385



Greenhalgh Remote Air Cooled Condenser C2 Series

Greenhalgh Model		C2-859-12.63	C2-1013-14.63	C2-1163-16.63	C2-1314-18.63	C2-1460-20.63	C2-1603-22.63	C2-1740-24.63
Fan Motor Brand		ZIEHL-ABEGG						
No of Fans	Qty.	12	14	16	18	20	22	24
Fan Impeller Diameter	mm	630	630	630	630	630	630	630
HIGH SPEED FAN DATA (DELTA MOTOR CONNECTION)								
Capacity at 15KTD	kW	858.66	1012.53	1163.63	1314.00	1460.81	1603.05	1739.81
Fan Motor Model		FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS
Fan Motor No of Poles	No.	4	4	4	4	4	4	4
Air Flow total	l/sec	54940	64130	73300	82470	91640	100800	109940
Fan Power Supply	V/Ø/Hz	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50
Fan Power Input Total	W	31200	36400	41600	46800	52000	57200	62400
Fan Motor Amperage Total	Amp	57.60	67.20	76.80	86.40	96.00	105.60	115.20
Sound Pressure at 10m	dBA	69	70	71	72	73	74	75
LOW SPEED FAN DATA (STAR MOTOR CONNECTION)								
Capacity at 15KTD - Sea Level	kW	614.87	724.34	831.93	940.38	1047.64	1153.32	1257.03
Fan Motor Model		FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS	FE063-VDS
Fan Motor No of Poles	No.	4	4	4	4	4	4	4
Air Flow total	l/sec	124456	145251	166033	186822	207600	228366	249118
Fan Power Supply	V/Ø/Hz	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50
Fan Power Input Total	W	19200	22400	25600	28800	32000	35200	38400
Fan Motor Amperage Total	Amp	32.40	37.80	43.20	48.60	54.00	59.40	64.80
Sound Pressure at 10m	dBA	62	63	64	65	66	67	68
GENERAL SPECIFICATION								
Gas Inlet Connection	mm	88.90 x 2	76.2 x 4	76.2 x 4	76.2 x 4	88.90 x 4	88.90 x 4	88.90 x 4
Liquid Outlet Connection	mm	76.20 x 2	63.5 x 4	63.5 x 4	63.5 x 4	76.20 x 4	76.20 x 4	76.20 x 4
Heat Exchange Surface Area	m ²	1783	2080	2377	2674	2971	3269	3566
Tube Diameter	mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52
No of Rows High	No.	124	124	124	124	124	124	124
No of Rows Deep	No.	6	6	6	6	6	6	6
Fin Material	Type	Epoxy fin	Epoxy fin	Epoxy fin	Epoxy fin	Epoxy fin	Epoxy fin	Epoxy fin
Fin Spacing	mm	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Length - excludes pipe connections (Add 105mm)	mm	5366	6216	7066	7916	8766	9616	10466
Height - from base to top of condenser fan	mm	1977	1977	1977	1977	1977	1977	1977
Width - widest point on base	mm	2100	2100	2100	2100	2100	2100	2100
Net Weight.	kg	1636	1883	2135	2385	2633	2885	3135



LU-VE Evaporators

Medium Temp Cabinet Evaporators



Capacities @ 6KTD (2°C Room / - 4°C Evaporating)
4.3mm Fin Spacing, **N** = Air Defrost

Model	Fans 154mm	Capacity - Watts		
		R404A	R22	R134A
SHP 6 N	1	282	270	260
SHP 9 N	1	350	335	325
SHP 11 N	2	564	541	524
SHP 19 N	2	695	668	646

Low Temp Cabinet Evaporators

Capacities @ 6KTD (-18°C Room / -42°C Evaporating)
4.3mm Fin Spacing, **E** = Electric Defrost

Model	Fans 154mm	Capacity - Watts		
		R404A	R22	R134A
SHP 6 E	1	188	180	174
SHP 9 E	1	232	222	215
SHP 11 E	2	376	360	349
SHP 19 E	2	464	445	431

Accessories / Spare Parts

Model	Fan Motor	Fans Blade (154mm)	Defrost Heater Part No.	Casing
SHP 6	W5/2	154-25-5A	RCE 051 (270w)	234110001
SHP 9			RCE 061 (455w)	
SHP 11				
SHP 19				

Specifications and Dimensions

Cond Unit Model	Fans			Fan Motors		Unit				Dimensions		
	No.	Flow l/s	Flow (m³/h)	Watts	Amps	Sound Level	Inlet mm	Outlet mm	Weight kg	A	B	C
SHP 6	1	61	220	34	0.26	35	8	6	2.7	390	315	187
SHP 9	1	56	200						2.9			
SHP 11	2	122	440	68	0.52	38			4.1			
SHP 19	2	111	400						4.8			



LU-VE Evaporators

Medium Temp Cabinet Evaporators



Capacities @ 6KTD (2°C Room / - 4°C Evaporating), 5mm Fin Spacing, **N** = Air Defrost

Model	Fans 154mm	Capacity - Watts		
		R404A	R22	R134A
SHS 8 N	1	413	393	378
SHS 12 N	1	460	438	421
SHS 13 N	1	560	534	513
SHS 15 N	1	614	584	562
SHS 18 N	2	844	804	772
SHS 22 N	2	926	882	848
SHS 26 N	2	1209	1152	1107
SHS 32 N	3	1351	1287	1237

Low Temp Cabinet Evaporators

Capacities @ 6KTD (-18°C Room / -24°C Evaporating), 5mm Fin Spacing, **E** = Electric Defrost

Model	Fans 154mm	Capacity - Watts		
		R404A	R22	R134A
SHS 8 E	1	313	299	266
SHS 12 E	1	348	333	296
SHS 13 E	1	424	406	361
SHS 15 E	1	464	445	395
SHS 18 E	2	938	611	543
SHS 22 E	2	701	671	597
SHS 26 E	2	915	876	779
SHS 32 E	3	1022	979	870

Note: Fan delay / Heater safety supplied loose and free of charge.

Accessories / Spare Parts

Model	Fan Motor	Fans Blade (154mm)	Defrost Heater Part No.	Drain Kit
SHS 8	W8	230-26-5A	RCE 021 (335w)	089001342
SHS 12			RCE 022 (460w)	089001343
SHS 13			RCE 023 (585w)	089001344
SHS 15			RCE 024 (825w)	089001349
SHS 18				089001345
SHS 22				
SHS 26				
SHS 32				

Specifications and Dimensions

SHS Model	Fans			Fan Motors		Unit				Dimensions		
	No.	Flow l/s	Flow (m³/h)	Watts	Amps	Sound Level	Inlet mm	Outlet mm	Weight kg	A	B	C
SHS 8	1	122	220	35	0.22	38	9.5	9.5	5.1	493	374	224
SHS 12	1								5.2			
SHS 13	1								6.1			
SHS 15	1	139		70	0.44	38			6.2	647	524	299
SHS 18	2								8.6			
SHS 22	2	236	200			41			8.7	803	674	374
SHS 26	2		440						10.8			
SHS 32	3		400	105	0.66	43			12.3			

LU-VE Evaporators

Coolroom Evaporators



Low Temperature Capacities @ 6KTD (-18°C Room / - 24°C Evaporating)

F27HC Model

Model	Fans 275mm	Medium Temperature N = Air Defrost			Low Temperature E = Electric Defrost
		R404A watts	R22 watts	R134A watts	R404A watts
4.5MM FIN SPACING					
F27HC 25 - 4	1	1110	1050	1010	910
F27HC 36 - 4	1	1400	1330	1280	1160
F27HC 49 - 4	2	2300	2190	2100	1900
F27HC 71 - 4	2	2840	2700	2590	2350
F27HC 107 - 4	3	4300	4090	3930	3560
F27HC 142 - 4	4	5600	5300	5100	4640
6MM FIN SPACING					
F27HC 19 - 6	1	960	910	870	790
F27HC 28 - 6	1	1220	1160	1120	1010
F27HC 38 - 6	2	1970	1870	1800	1630
F27HC 55 - 6	2	2480	2360	2260	2050
F27HC 85 - 6	3	3760	3580	3440	3110
F27HC 110 - 6	4	5000	4710	4530	4100
7.5MM FIN SPACING					
F27HC 16 - 7	1	870	820	790	720
F27HC 23 - 7	1	1110	1050	1010	910
F27HC 31 - 7	2	1790	1700	1640	1480
F27HC 46 - 7	2	2210	2100	2020	1830
F27HC 70 - 7	3	3410	3240	3110	2820
F27HC 92 - 7	4	4540	4310	4150	3750

F27HC Model Specifications

Model	Fans			Motor Consumption		Sound Levels @3m dB(A)	Unit Connections		Weight Kg
	Flow l/s	Flow m³/h	Throw m	Watts	Amps		Inlet mm	Outlet mm	
4.5MM FIN SPACING									
F27HC 25 - 4	250		10.5	85	0.6	37	10	10	12
F27HC 36 - 4						37	12	22	13
F27HC 49 - 4	500		12.5	170	1.2	40		28	
F27HC 71 - 4						40	21		
F27HC 107 - 4	750		14.0	255	1.8	42	28		28
F27HC 142 - 4	1000		15.5	340	2.4	43			36
6MM FIN SPACING									
F27HC 19 - 6	264		11.0	85	0.6	37	10	10	11
F27HC 28 - 6						37	12	22	12
F27HC 38 - 6	528		13.0	170	1.2	40			18
F27HC 55 - 6						40		28	20
F27HC 85 - 6	792		14.5	255	1.8	42			27
F27HC 110 - 6	1056		16.0	340	2.4	43			34
7.5MM FIN SPACING									
F27HC 16 - 7	278		11.5	85	0.6	37	10	10	10
F27HC 23 - 7						37	12	22	11
F27HC 31 - 7	556		13.5	170	1.2	40			17
F27HC 46 - 7						40		28	19
F27HC 70 - 7	834		15.5	255	1.8	42			26
F27HC 92 - 7	1111		17.0	340	2.4	43			32

LU-VE Evaporators

Coolroom Evaporators

Medium Temperature Capacities @ 6KTD (2°C Room / - 4°C Evaporating), Low Temp Capacities @ 6KTD (-18°C Room / - 24°C Evaporating)

F30HC Model

Model	Fans 300mm	Medium Temperature N = Air Defrost			Low Temperature E = Electric Defrost
		R404A watts	R22 watts	R134A watts	R404A watts
4.5MM FIN SPACING					
F30HC 411 - 4	1	1970	1870	1800	1630
F30HC 412 - 4	1	2420	2300	2210	2000
F30HC 421 - 4	2	4000	3800	3650	3310
F30HC 422 - 4	2	4810	4570	4390	3980
F30HC 431 - 4	3	5900	5600	5400	4890
F30HC 432 - 4	3	7400	7000	6700	6100
F30HC 442 - 4	4	9700	9300	8900	8100
6MM FIN SPACING					
F30HC 511 - 6	1	1670	1590	1530	1380
F30HC 512 - 6	1	2150	2040	1960	1780
F30HC 521 - 6	2	3410	3240	3110	2820
F30HC 522 - 6	2	4330	4120	3950	3580
F30HC 531 - 6	3	5100	4850	4660	4220
F30HC 532 - 6	3	6600	6200	6000	5400
F30HC 542 - 6	4	8800	8300	8000	7300
7.5MM FIN SPACING					
F30HC 611 - 7	1	1520	1450	1390	1260
F30HC 612 - 7	1	2000	1900	1830	1650
F30HC 621 - 7	2	3080	2920	2810	2540
F30HC 622 - 7	2	4000	3800	3650	3310
F30HC 631 - 7	3	4600	4370	4200	3800
F30HC 632 - 7	3	6000	5700	5500	5000
F30HC 642 - 7	4	8100	7700	7400	6700

F30HC Model Specifications

Model	Fans			Motor Consumption		Sound Levels @3m dB(A)	Unit Connections		Weight Kg
	Flow l/s	Flow m³/h	Throw m	Watts	Amps		Inlet mm	Outlet mm	
4.5MM FIN SPACING									
F30HC 411 - 4	403		16	80	0.35	41	12	16	23
F30HC 412 - 4	361		14			41		18	25
F30HC 421 - 4	806		19	160	0.70	44		22	39
F30HC 422 - 4	722		17			44			44
F30HC 431 - 4	1208		22	240	1.05	46	16	35	56
F30HC 432 - 4	1083		20			46			63
F30HC 442 - 4	1445		21	320	1.40	47			82
6MM FIN SPACING									
F30HC 511 - 6	417		17	80	0.35	41	12	16	22
F30HC 512 - 6	389		15			41		18	24
F30HC 521 - 6	833		20	160	0.70	44		22	38
F30HC 522 - 6	778		18			44			42
F30HC 531 - 6	1250		23	240	1.05	46	16	35	54
F30HC 532 - 6	1167		21			46			60
F30HC 542 - 6	1556		22	320	1.40	47			78
7.5MM FIN SPACING									
F30HC 611 - 7	431		18	80	0.35	41	12	16	21
F30HC 612 - 7	403		16			41		18	23
F30HC 621 - 7	861		21	160	0.70	44		22	37
F30HC 622 - 7	806		19			44			41
F30HC 631 - 7	1292		24	240	1.05	46	16	35	53
F30HC 632 - 7	1208		22			46			58
F30HC 642 - 7	1611		23	320	1.40	47			76

LU-VE Evaporators

Coolroom Evaporators



Medium Temperature Capacities @ 6KTD (2°C Room / - 4°C Evaporating), Low Temp Capacities @ 6KTD (-18°C Room / - 24°C Evaporating)

F35HC Model

Model	Fans 350mm	Medium Temperature N = Air Defrost			Low Temperature E = Electric Defrost
		R404A watts	R22 watts	R134A watts	R404A watts
4.5MM FIN SPACING					
F35HC 73 - 4	1	3230	3070	2950	2670
F35HC 106 - 4		4060	3860	3710	3360
F35HC 145 - 4	2	6500	6200	5900	5400
F35HC 215 - 4		8100	7700	7400	6700
F35HC 272 - 4	3	11200	10600	10200	9200
F35HC 323 - 4		12200	11600	11100	10100
F35HC 362 - 4	4	15000	14200	13700	12400
F35HC 430 - 4		16400	15600	15000	13600
6MM FIN SPACING					
F35HC 59 - 6	1	2690	2550	2450	2220
F35HC 84 - 6		3530	3350	3220	2910
F35HC 117 - 6	2	5500	5200	5000	4540
F35HC 174 - 6		7200	6800	6500	5900
F35HC 218 - 6	3	9600	9100	8800	8000
F35HC 261 - 6		10800	10200	9800	8900
F35HC 290 - 6	4	12800	12200	11700	10600
F35HC 348 - 6		14300	13600	13100	11900
7.5MM FIN SPACING					
F35HC 47 - 7	1	2390	2270	2180	1980
F35HC 69 - 7		3230	3070	2950	2670
F35HC 94 - 7	2	4900	4650	4470	4050
F35HC 143 - 7		6600	6200	6000	5400
F35HC 179 - 7	3	8700	8300	8000	7200
F35HC 213 - 7		9900	9400	9000	8200
F35HC 238 - 7	4	11600	11000	10600	9600
F35HC 284 - 7		13100	12500	12000	10900

F35HC Model Specifications

Model	Fans			Motor Consumption		Sound Levels @3m dB(A)	Unit Connections		Weight Kg
	Flow l/s	Flow m³/h	Throw m	Watts	Amps		Inlet mm	Outlet mm	
4.5MM FIN SPACING									
F35HC 73 - 4	722		19.5	135		48	12	28	27
F35HC 106 - 4	667		18			48			32
F35HC 145 - 4	1445		23	270		51			44
F35HC 215 - 4	1333		22			51	51		
F35HC 272 - 4	2070		26	405		53	16	35	65
F35HC 323 - 4	2000		25			53			71
F35HC 362 - 4	2764		30	540		54			22
F35HC 430 - 4	2667		29			54	93		
6MM FIN SPACING									
F35HC 59 - 6	736		20	135		48	12	28	26
F35HC 84 - 6	695		18.5			48			31
F35HC 117 - 6	1472		23.5	270		51			42
F35HC 174 - 6	1389		22.5			51	49		
F35HC 218 - 6	2139		26.5	405		53	16	35	62
F35HC 261 - 6	2084		25.5			53			67
F35HC 290 - 6	2861		30.5	540		54			22
F35HC 348 - 6	2778		29.5			54	88		
7.5MM FIN SPACING									
F35HC 47 - 7	750		20.5	135		48	12	28	25
F35HC 69 - 7	722		19			48			30
F35HC 94 - 7	1500		24	270		51			41
F35HC 143 - 7	1445		23			51	47		
F35HC 179 - 7	2209		27	405		53	16	35	60
F35HC 213 - 7	2167		26			53			65
F35HC 238 - 7	2945		31	540		54			22
F35HC 284 - 7	2889		30			54	85		



LU-VE Evaporators Air Cooled Condensators

Capacities @ 15KTD (35°C Ambient / 50°C Condensing)

SAVN Model

Model	Fans 500mm	Capacity (kw @ 15ktd) Δ High Speed, 415v - 3ph - 50Hz		
		R404A watts	R22 watts	R134A watts
4.5MM FIN SPACING				
SAV5N 4311	1	28.03	26.15	26.68
SAV5N 4312	1	30.77	28.71	29.29
SAV5N 4321	2	56.07	52.30	53.36
SAV5N 4322	2	61.55	57.41	58.58
SAV5N 4331	3	84.10	78.45	80.04
SAV5N 4332	3	92.32	86.12	87.86
SAV5N 4346	4	112.14	100.46	106.72
SAV5N 4347	4	123.10	114.83	117.15
SAV5N 4366	6	168.20	156.91	160.08
SAV5N 4367	6	184.65	172.24	175.73

SAVN Model Specifications

Model	Fans	Motor Consumption		Sound Levels @3m dB(A)	Unit Connections		Weight Kg
	Air Flow l/s	Watts	Amps		Inlet mm	Outlet mm	
SAV5N 4311	1888	690	1.4	57	22	18	56
SAV5N 4312	1777				28	22	60
SAV5N 4321	3777	1380	2.8	59	35	28	94
SAV5N 4322	3555						102
SAV5N 4331	5666	2070	4.2	61	42	35	132
SAV5N 4332	5333						144
SAV5N 4346	7555	2760	5.6	63	54	42	174
SAV5N 4347	7111						190
SAV5N 4366	11333	4140	8.4	64			250
SAV5N 4367	10666						274

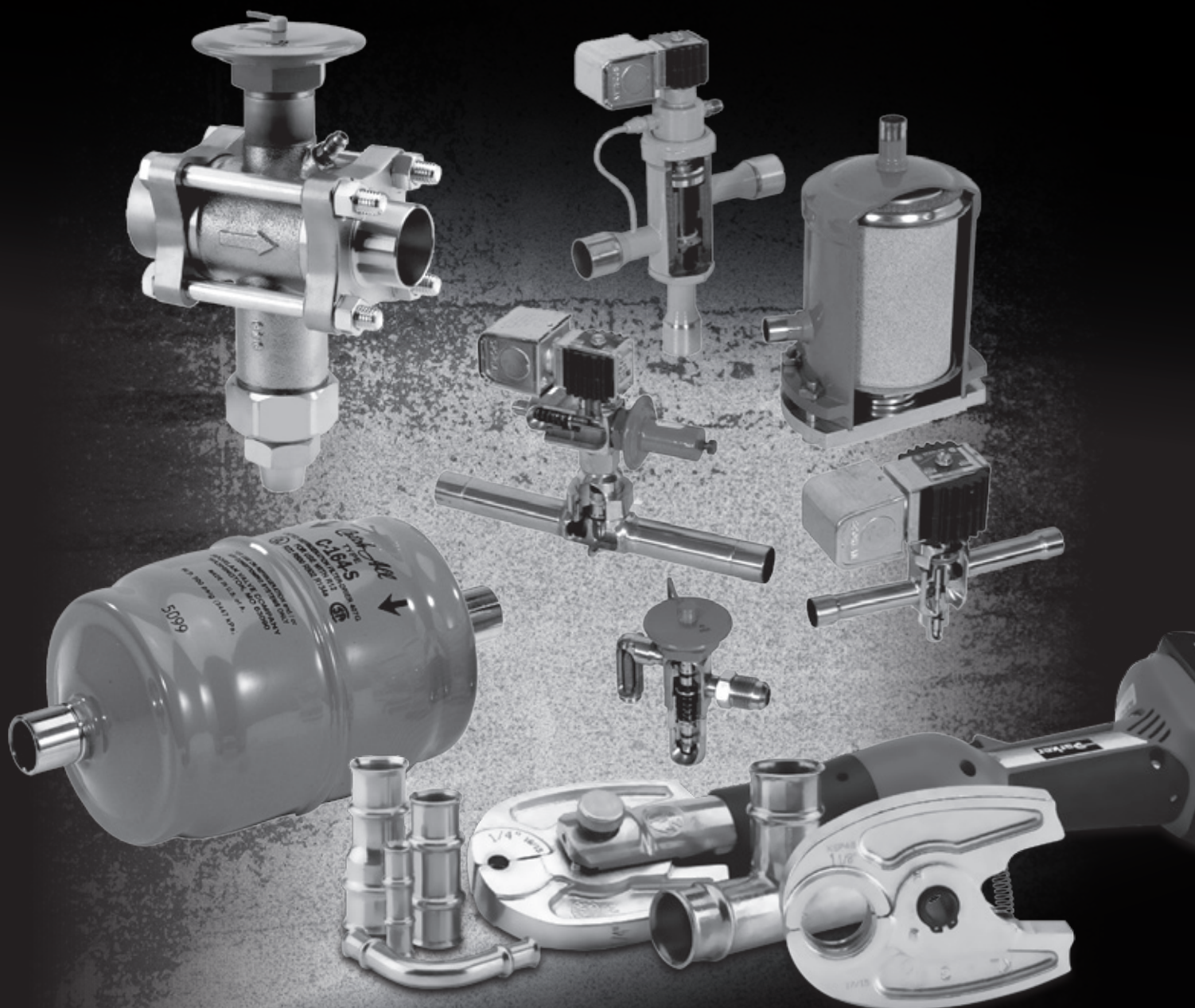
Spare Part/Accessory

Spare Part / Accessory	Code
500mm Motor & Fan Assy	FE050-VDA.41.2
Horizontal version kit (Legs)	Feet Kit (500mm)
Each additional circuit	-

TOTALINE



LINE COMPONENTS



Sporlan

Electronic TX valves

Electronic TX Valves

Part No.	Other info	Body Type	Nominal Capacity kW @ 5 to / 40 tc DED C / 10 bar			
			R404A	R134A	R410A	R22
805217P	SER-AA 3/8 X 1/2 ODF-10FT.-S	right angle	1.69	2.38	2.54	2.55
805232P	SER-A 3/8 X 3/8 ODF-10FT.-S	right angle	3.65	5.15	5.48	5.52
805145P	SER-B 3/8" X 1/2" ODF-10FT.-S	right angle	6.89	9.93	10.4	10.6
805155P	SER-C 3/8 X 5/8 ODF-10FT.-S	right angle	18.7	26.9	28.3	28.8
805160P	SER-D 5/8" X 7/8" ODF-10'-S	straight(offset)	38	54.8	57.5	58.6
805089P	SERI-G 7/8" X 1-1/8" ODF 10ft.-S	right angle	74.4	105	112	112
805090P	SERI-J 7/8" X 1-1/8" ODF 10 FT.	straight(offset)	134	189	201	202
805092P	SERI-K BF 1-1/8" X 1-3/8" ODF 10 FT	right angle	242	342	364	367
805132P	SERI-LS 1-3/8" X 1-5/8" ODF 10FT-S	straight(offset)	324	466	490	499

Accessories

Part No.	Other info
952567P	KELVIN II W/DISPLAY
952572P	PSPT0150SVSP-S 0-150 psis transducer
953192P	PSPT000000CP50 transducer 5m cable
952551P	SENSOR - TEMP - KELVIN/RCS 2M
940033P	CDS-9-10-S 7/8
940034P	CDS-9 1 1/8 ODF - 10 -S
940039P	CDS-17 1 3/8 - 10 -S
953474P	KELVIN II PRESSURE CONTROLLER
952572P	PSPT0150SVSP-S 0-150 psis transducer
953192P	PSPT000000CP50 transducer 5m cable

Bi-Flow TX Valves

Part No.	Other info	Tons	Connection Size	Flare/ Solder	Nominal Capacity kW			
					R404A	R134A	R410A	R22
040606-01	HAE3VX100B20	3	1/2" x 1/2"	ODF				11
040524-16	HAE5VX100B20 1/2 X 1/2	5	1/2" x 1/2"	ODF				18
040623-01	HAE7.5VX100B20 7 1/2 TON TXV	7.5	3/8" X 5/8"	ODF				26
040524-17	HAE8VX100B20 5/8 X 5/8	8	5/8" x 5/8"	ODF				28
040524-13	HAE10VX100B20 5/8 X 7/8	10	5/8" x 7/8"	ODF				35
040679-01	3 TON R410A ETERNAL TXV	3	3/8" x 1/2"	ODF			10	
040680-01	5 TON R410A TXV EXTERNAL	5	1/2" x 5/8"	ODF			16	
040681-01	7.5 TON R410A TXV EXTERNAL	7.5	1/2" X 5/8"	ODF			24	
040682-01	10 TON R410A TXV EXTERNAL	10	5/8" X 7/8"	ODF			32	

Sporlan Electronic TX valves



Bi-Flow TX Valves

Part No.	Other info	Internal/ external	Flare/ solder	Connection Size	Bi-Flow?	Balanced port Y/N	Straight/ bent
168000P	Q-BODY 3/8 X 1/2 SAE8						
168007P	EQ BODY 3/8 X 1/2 ODF BENT	internal	Solder	3/8 X 1/2	NO	NO	straight
168010P	SQ BODY 3/8 X 1/2 ODF FORGED	internal	Solder	3/8 X 1/2	NO	NO	bent
168015P	SQE BODY 3/8 X 1/2 X 1/4 ODF	External	Solder	3/8 X 1/2	NO	NO	bent
168016P	QE-SAE 1/4 X 1/2 SAE	External	Flare	1/4 X 1/2	NO	NO	bent
168018P	EQE BODY 3/8 elbow x 1/2	External	Solder	3/8 X 1/2	NO	NO	straight
168104P	EQE BODY 3/8 straight through	External	Solder	3/8 X 1/2	NO	NO	straight
168183P	BQE-SAE 3/8 X 1/2 SAE BODY	External	Flare	3/8 X 1/2	NO	YES	bent
168193P	SBQ BODY 3/8 X 1/2 ODF	internal	Solder	3/8 X 1/2	NO	YES	bent
168194P	EBQ BODY 3/8 V x 1/2 ODF	internal	Solder	3/8 X 1/2	NO	YES	straight
168198P	SBQE BODY 3/8 X 1/2 X 1/4	External	Solder	3/8 X 1/2	NO	YES	bent
168509P	EBQE BODY 3X4X2 ODF	External	Solder	3/8 X 1/2	NO	YES	straight

Part No.	Other info	To suit body	Nominal Capacity Tons			
			R404A	R134A	R410A	R22
168070P	QC-0 (RED) Q CARTRIDGE/ID TAG	Q, QE, EQ, EQE, SQ, SQE	1/8	1/8	N/A	1/4
168072P	QC-1 (YELLOW) Q CARTRIDGE/ID	Q, QE, EQ, EQE, SQ, SQE	1/4	1/4	N/A	1/2
168074P	QC-2 (GREEN) Q CARTRIDGE/ID	Q, QE, EQ, EQE, SQ, SQE	1/2	1/2	N/A	1
168076P	QC-3 (BLUE) Q CARTRIDGE/ID TAG	Q, QE, EQ, EQE, SQ, SQE	1	1	N/A	1 1/2
168078P	QC-4 (PINK) Q CARTRIDGE/ID TAG	Q, QE, EQ, EQE, SQ, SQE	1 1/2	1 1/2	N/A	2 1/2
168080P	QC-5 (BLACK) Q CARTRIDGE/ID	Q, QE, EQ, EQE, SQ, SQE	2	2	N/A	3
168082P	QC-6 (WHITE) Q CARTRIDGE/ID	Q, QE, EQ, EQE, SQ, SQE	3	3	N/A	4
168303P	BQC-AAA RED CARTRIDGE & TAG	BQ, BQE, EBQ, EBQE, SBQ, SBQE	1/8	1/8	1/4	1/8
168304P	BQC-AA YELLOW CARTRIDGE & TAG	BQ, BQE, EBQ, EBQE, SBQ, SBQE	1/4	1/4	1/2	1/2
168306P	BQC-A BLUE CARTRIDGE & TAG	BQ, BQE, EBQ, EBQE, SBQ, SBQE	1/2	1/2	1	3/4
168307P	BQC-B PINK CARTRIDGE & TAG	BQ, BQE, EBQ, EBQE, SBQ, SBQE	1 1/4	1 1/4	2	1 3/4
168308P	BQC-C WHITE CARTRIDGE & TAG	BQ, BQE, EBQ, EBQE, SBQ, SBQE	2 1/4	2	4	3 1/4

Part No.	Other info	To suit body	Gas type	Capillary Length
180060P	KT-43-SZP 5	SBF	R404A	5 ft (1.5m)
180204P	KT-43-SC 5	SBF	R404A	
180310P	KT-43-JC 5	SBF	R134a	
180318P	KT-43-SZ 5	SBF	R404A	
180856P	KT-63-JCP60 5 FT.	M, V, W	R134a	
181030P	KT-83-SC 5 ELEMENT	O, S, EBS	R404A	
181088P	KT-83-PC 5	O, S, EBS	R507	
181126P	KT-83-JC 5	O, S, EBS	R134a	
180028P	KT-33-JC 5 FT.	large O	R134a	
180051P	KT-33-JCP60 5	large O	R134a	
180053P	KT-83-JCP60 5	O, S, EBS	R134a	
180062P	KT-83-SZ 5	O, S, EBS	R404A	
180086P	KT-33-SC 5	large O	R404A	

Sporlan Electronic TX valves

Bi-Flow TX Valves

Part No.	Other info	Gas type	Internal/ External		Connec- tion Size	Bi- Flow	Bal- anced port Y/N	Straight/ bent	Nominal Capacity kW			
									R404A	R134A	R410A	R22
108549P	SBFJE-A-C 3X4 ODF 30	R134A	External	SOLDER	3/8 x 1/2	NO	YES	BENT		1.76 thru 3.52		
108551P	SBFJE-B-C 3X4 ODF 30	R134A	External		3/8 x 1/2	NO	YES	BENT		4.40 thru 6.15		
108552P	SBFJE-C-C 3X4 ODF 30 IN	R134A	External		3/8 x 1/2	NO	YES	BENT		7.03 thru 10.6		
108617P	SBFSE-A-C 3/8x1/2ODF30	R404A	External		3/8 x 1/2	NO	YES	BENT	1.76 thru 3.52			
108618P	SBFSE-A-Z 3/8 X 1/2 ODF 30	R404A	External		3/8 x 1/2	NO	YES	BENT	1.76 thru 3.52			
108621P	SBFSE-AA-C 3/8 X 1/2 IN. ODF	R404A	External		3/8 x 1/2	NO	YES	BENT	0.88 thru 1.17			
108624P	SBFSE-B-C 3/8 X 1/2 ODF 30	R404A	External		3/8 x 1/2	NO	YES	BENT	4.40 thru 7.03			
108625P	SBFSE-B-Z 3/8 X 1/2 ODF 30	R404A	External		3/8 x 1/2	NO	YES	BENT	4.40 thru 7.03			
108628P	SBFSE-C-C 3/8 X 1/2 ODF 30	R404A	External		3/8 x 1/2	NO	YES	BENT	7.91 thru 10.6			
108817P	SBFJE-AAA-C 3X4 ODF 30 IN.	R134A	External		3/8 x 1/2	NO	YES	BENT		0.44 thru 0.70		
108822P	SBFSE-AAA-Z 3/8 X 1/2 ODF	R404A	External		3/8 x 1/2	NO	YES	BENT	0.44 thru 0.70			
108928P	SBFSE-C-Z 3/8 X 1/2 ODF 30	R404A	External		3/8 x 1/2	NO	YES	BENT	7.91 thru 10.6			
108958P	SBFJE-AA-C 3/8 X 1/2 ODF 30	R134A	External		3/8 x 1/2	NO	YES	BENT		0.88 thru 1.17		
108979P	SBFSE-AA-Z 3/8 X 1/2 ODF5	R404A	External		3/8 x 1/2	NO	YES	BENT	0.88 thru 1.17			
109002P	SBFSE-AA-Z 3X4 ODF 30	R404A	External		3/8 x 1/2	NO	YES	BENT	0.88 thru 1.17			
111576P	SBFSE-A-CP 3/8 X 1/2 ODF30	R404A	External		3/8 x 1/2	NO	YES	BENT	1.76 thru 3.52			
128934P	SSE-3-C 1/2 X 7/8 ODF 5	R404A	External		1/2 x 7/8	NO	NO	STRAIGHT	10.5			
128936P	SSE-4-C 1/2 X 7/8 ODF 5	R404A	External		1/2 x 7/8	NO	NO	STRAIGHT	14.1			
128937P	SSE-6-C 5/8 X 7/8 ODF 5	R404A	External		5/8 x 7/8	NO	NO	STRAIGHT	21.1			
128953P	SSE-3-ZP 1/2 X 7/8 ODF 5	R404A	External		1/2 x 7/8	NO	NO	STRAIGHT	10.5			
128954P	SSE-4-ZP 1/2 X 7/8 ODF 5	R404A	External		1/2 x 7/8	NO	NO	STRAIGHT	14.1			
128955P	SSE-6-ZP 5/8 X 7/8 ODF 5	R404A	External		5/8 x 7/8	NO	NO	STRAIGHT	21.1			
128917P	SJE-3-C 1/2 X 7/8 ODF 5	R134A	External		1/2 x 7/8	NO	NO	STRAIGHT		10.5		
128917P	SJE-3-C 1/2 X 7/8 ODF 5	R134A	External		1/2 x 7/8	NO	NO	STRAIGHT		10.5		
128918P	SJE-5-C 5/8 X 7/8 ODF 5	R134A	External		5/8 x 7/8	NO	NO	STRAIGHT		17.6		
128927P	SJE-5-CP60 5/8 X 7/8 ODF 5	R134A	External		5/8 x 7/8	NO	NO	STRAIGHT		17.6		
128919P	SJE-6-C 5/8 X 7/8 ODF 5	R134A	External		5/8 x 7/8	NO	NO	STRAIGHT		21.1		

Bi-Flow TX Valves

Part No.	Other info	Gas type	Internal/ External		Connection Size	Bi-Flow	Bal-anced port Y/N	Straight/ bent	Nominal Capacity kW			
									R404A	R134A	R410A	R22
124209P	OJE-16-C 1 1/8 X 1 3/8 ODF 5	R134A	External	SOLDER	1 1/8 x 1 3/8	NO	YES	STRAIGHT		56.3		
124213P	OSE-9-C 7/8 X 1 1/8 ODF 5	R404A	External		7/8 x 1 1/8	NO	YES	STRAIGHT	31.6			
124214P	OSE-12-C 7/8 X 1 3/8 ODF 5	R404A	External		7/8 1 3/8	NO	YES	STRAIGHT	42.2			
124215P	OSE-21-C 9X11 ODF 5	R404A	External		1 1/8 x 1 3/8	NO	YES	STRAIGHT	73.8			
124216P	OSE-9-Z 7/8 X 1 1/8 ODF 5	R404A	External		7/8 x 1 1/8	NO	YES	STRAIGHT	31.6			
124217P	OSE-12-Z 7/8 X 1 3/8 ODF 5	R404A	External		7/8 x 1 3/8	NO	YES	STRAIGHT	42.2			
124218P	OSE-21-Z 9X11 ODF 5	R404A	External		1 1/8 x 1 3/8	NO	YES	STRAIGHT	73.8			
124351P	OSE-35-Z 9X11 ODF 5	R404A	External		1 1/8 x 1 3/8	NO	YES	STRAIGHT	123			
124647P	OJE-23-CP60 9X11 ODF 5	R134A	External		1 1/8 x 1 3/8	NO	YES	STRAIGHT		80.9		
124819P	OSE-30-C 1 1/8 X 1 3/8 ODF	R404A	External		1 1/8 x 1 3/8	NO	YES	STRAIGHT	105.5			
125394P	OSE-6-Z 7X11 ODF 5	R404A	External		7/8 x 1 3/8	NO	YES	STRAIGHT	21.1			
125519P	OJE-12-C 7/8 x 1 3/8 ODF 5	R134A	External		7/8 x 1 3/8	NO	YES	STRAIGHT		42.2		
125527P	OJE-16-CP60 9X11 ODF 5	R134A	External		1 1/8 x 1 3/8	NO	YES	STRAIGHT		56.3		
125527P	OJE-16-CP60 9X11 ODF 5	R134A	External		1 1/8 x 1 3/8	NO	YES	STRAIGHT		56.3		
163417P	EBSSE-10-Z 7X9 ODF 10 FT	R404A	External		7/8 x 1 1/8	NO	YES	STRAIGHT	35.2			
163507P	EBSSE 7-1/2 C 5/8 X 7/8 IN. ODF	R404A	External		5/8 x 7/8	NO	YES	STRAIGHT	26.4			
163508P	EBSSE-7-1/2-Z 5X7 ODF 5FT.	R404A	External		5/8 x 7/8	NO	YES	STRAIGHT	26.4			
163509P	EBSSE-7-1/2-ZP 5X7 ODF 5FT	R404A	External		5/8 x 7/8	NO	YES	STRAIGHT	26.4			
163575P	EBSSE-6-ZP 5X7 ODF 5	R404A	External		5/8 x 7/8	NO	YES	STRAIGHT	21.1			
163587P	EBSSE-6-Z 5X7 ODF 5	R404A	External		5/8 x 7/8	NO	YES	STRAIGHT	21.1			
163708P	EBSSE-6-C 5X7 ODF 5	R404A	External		5/8 x 7/8	NO	YES	STRAIGHT	21.1			
163749P	EBSSE-13-ZP 7X11 ODF 5FT	R404A	External		7/8 x 1 3/8	NO	YES	STRAIGHT	45.7			
163752P	EBSSE-10-ZP 7X9 ODF 5FT	R404A	External		7/8 x 1 1/8	NO	YES	STRAIGHT	35.2			
163783P	EBSSE-13-C 7X11 ODF 5	R404A	External		7/8 x 1 3/8	NO	YES	STRAIGHT	45.7			
163797P	EBSSE-13-Z 7X11 ODF 5FT.	R404A	External		7/8 x 1 3/8	NO	YES	STRAIGHT	45.7			
163877P	EBSSE-10-C 7X9 ODF 5	R404A	External		7/8 x 1 1/8	NO	YES	STRAIGHT	35.2			

The J8 Thermostatic Expansion Valve

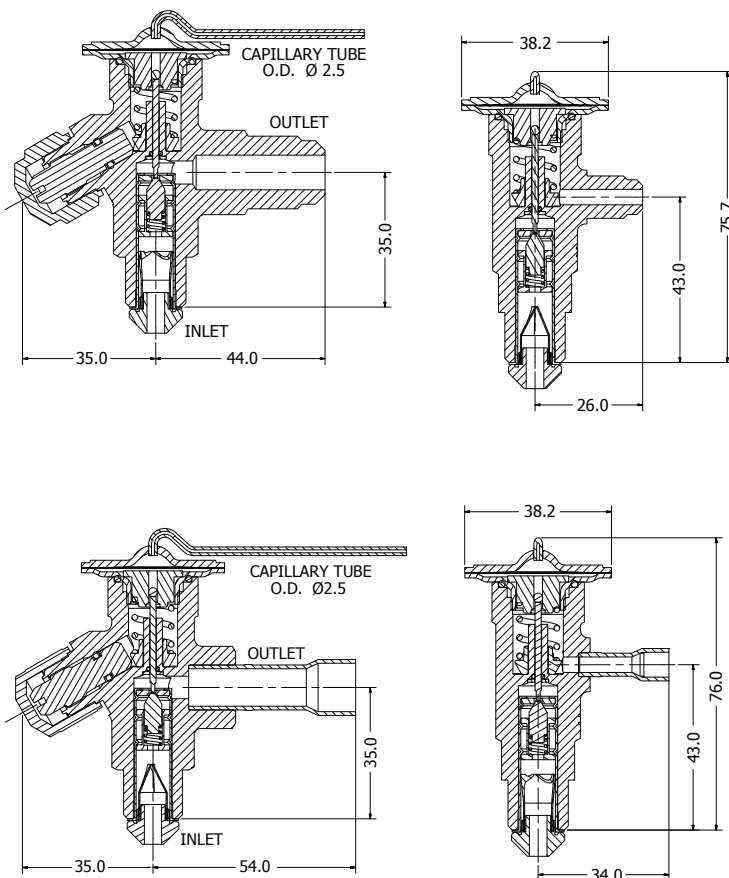
INTRODUCTION

The J8 Thermostatic Expansion Valves are designed to regulate refrigerant flow into evaporators as a response to sensed superheat value. They can be used in a wide range of AC and refrigeration applications

FEATURES

- Adjustable superheat
- 8 Replaceable orifice assemblies
- Temperature range from -40°C to +15°C
- Thermostatic charges with or without MOP (Maximum Operating Pressure)
- Solder ODF (with inlet connector) or Flare SAE fittings
- Stainless steel thermostatic element
- Copper sensing bulb
- EC compliant (PED & RoHS Compliant)

J8 Assembly



All dimensions in millimeters (mm).

TECHNICAL SPECIFICATIONS

- Maximum bulb temperature: 100°C
- Maximum valve body temperature: 121°C
- Short-lived peak: 149°C
- Maximum working pressure MWP: 34 bar
- Maximum test pressure: 38 bar

J8 VALVES ARE SUPPLIED AS THREE INDIVIDUAL COMPONENT PARTS THAT NEED TO BE ORDERED SEPARATELY:

- Valve body & Thermostatic element assembly
- Cartridge & Filter assembly
- Inlet ODF adaptor (not mandatory)

Valve Nomenclature / Ordering Instructions EXAMPLE

J8	E	F
Valve Type	"E" specifies external equalizer. Omission of letter "E" indicates valve with internal equalizer. e.g. J8F-NW	Connection Type: (Inlet always supplied as 3/8" Flare, SAE) F = Flare, SAE M = Metric, ODF S = Standard, ODF (US Customary Units)

N	W
Sporlan Code – Refrigerant Element Label Color Code: J = R134a Blue R401A Pink S = R404A Orange R402A Sand R402B Olive R502 Purple R507 Teal N = R407C Lt. Brown	Thermostatic Charge

Valve Body & Thermostatic Element Assembly



Refrigerant	Connections			Capillary Tube Length cm	Evaporator Temperature Range °C	MOP bar / °C	Valve Type	Item Number
	Inlet	Outlet	Equalizer					
R407C	3/8" SAE	1/2" SAE	1/4" SAE	150	-40°C to +15°C	—	J8EF-NW	600002-000
			Internally Equalized	150	-40°C to +15°C	6.9 bar / +17°C	J8EF-NX100	600003-000
		12mm ODF	6mm ODF	150	-40°C to +15°C	—	J8F-NW	600023-000
						6.9 bar / +17°C	J8F-NX100	600024-000
			Internally Equalized	150	-40°C to +15°C	—	J8EM-NW	600009-000
						6.9 bar / +17°C	J8EM-NX100	600010-000
		1/2" ODF	1/4" ODF	150	-40°C to +15°C	—	J8M-NW	600030-000
						6.9 bar / +17°C	J8M-NX100	600031-000
			Internally Equalized	150	-40°C to +15°C	—	J8ES-NW	600016-000
						6.9 bar / +17°C	J8ES-NX100	600017-000
						—	J8S-NW	600037-000
						6.9 bar / +17°C	J8S-NX100	600038-000
R134a R401A	3/8" SAE	1/2" SAE	1/4" SAE	150	-40°C to +15°C	—	J8EF-JW	600000-000
			Internally Equalized	150	-40°C to +15°C	4.1 bar / +17°C	J8EF-JX60	600001-000
		12mm ODF	6mm ODF	150	-40°C to +15°C	—	J8F-JW	600021-000
						4.1 bar / +17°C	J8F-JX60	600022-000
			Internally Equalized	150	-40°C to +15°C	—	J8EM-JW	600007-000
						4.1 bar / +17°C	J8EM-JX60	600008-000
		1/2" ODF	1/4" ODF	150	-40°C to +15°C	—	J8M-JW	600028-000
						4.1 bar / +17°C	J8M-JX60	600029-000
			Internally Equalized	150	-40°C to +15°C	—	J8ES-JW	600014-000
						4.1 bar / +17°C	J8ES-JX60	600015-000
						—	J8S-JW	600035-000
						4.1 bar / +17°C	J8S-JX60	600036-000
R404A R402A R402B R502 R507	3/8" SAE	1/2" SAE	1/4" SAE	150	-40°C to +10°C	—	J8EF-SW	600004-000
					-40°C to -18°C	7.6 bar / +12°C	J8EF-SX110	600005-000
			Internally Equalized	150	-40°C to +10°C	2.4 bar / -17°C	J8EF-SX35	600006-000
					-40°C to -18°C	—	J8F-SW	600025-000
		12mm ODF	6mm ODF	150	-40°C to +10°C	7.6 bar / +12°C	J8F-SX110	600026-000
					-40°C to -18°C	2.4 bar / -17°C	J8F-SX35	600027-000
			Internally Equalized	150	-40°C to +10°C	—	J8EM-SW	600011-000
					-40°C to -18°C	7.6 bar / +12°C	J8EM-SX110	600012-000
					-40°C to +10°C	2.4 bar / -17°C	J8EM-SX35	600013-000
					-40°C to -18°C	—	J8M-SW	600032-000
		1/2" ODF	1/4" ODF	150	-40°C to +10°C	7.6 bar / +12°C	J8M-SX110	600033-000
					-40°C to -18°C	2.4 bar / -17°C	J8M-SX35	600034-000
					-40°C to +10°C	—	J8ES-SW	600018-000
			Internally Equalized	150	-40°C to +10°C	7.6 bar / +12°C	J8ES-SX110	600019-000
					-40°C to -18°C	2.4 bar / -17°C	J8ES-SX35	600020-000
					-40°C to +10°C	—	J8S-SW	600039-000
						7.6 bar / +12°C	J8S-SX110	600040-000
						2.4 bar / -17°C	J8S-SX35	600041-000

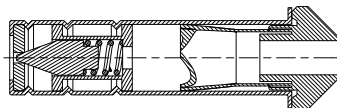
Valve Body & Thermostatic Element Assembly

J8 Cartridge & Filter Assembly

Cartridge and Filter Assembly
Rated Capacities, kW¹

Item Number	Cartridge Type	Rated Capacities, kW ¹			
		R407C	R134a	R404A	R22
506032	C-0X	0.55	0.44	0.42	0.55
506033	C-00	1.2	1.0	0.77	1.1
506034	C-01	2.4	1.6	1.4	2.3
506035	C-02	3.8	2.6	2.1	3.5
506036	C-03	5.2	4.3	3.9	4.9
506037	C-04	9.0	7.0	6.3	8.4
506038	C-05	11.3	8.6	7.7	10.5
506039	C-06	15.0	9.5	8.2	14.0

¹ The rated capacity is based on the following conditions:
Evaporating temperature, $T_e = +5^\circ\text{C}$
Condensing temperature, $T_c = +32^\circ\text{C}$
Refrigerant temperature ahead of valve, $T_1 = +28^\circ\text{C}$



- The cartridge orifice is stamped with the orifice size, ex. C-0X



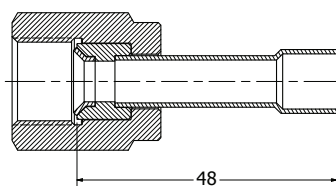
- A metallic tag is provided with each individual cartridge and should be fixed on the cap tube as the orifice is installed in the valve body.

Inlet ODF Adaptor

All J8 Thermostatic Expansion Valves feature 3/8" SAE inlet fitting. Solder inlet adaptors are available from Parker/Sporlan distributors.

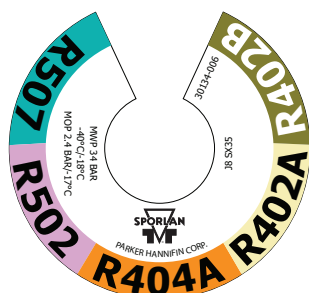
Solder inlet adaptors allow the installation of the J8 TEV and easy access of cartridge orifice & filter assembly. Parker/Sporlan Solder Inlet Adaptors have been designed to be used with flare orifice filter.

Item	Description
A-6M	Solder Inlet Adaptor 3/8" SAE to 6mm ODF
A-10M	Solder Inlet Adaptor 3/8" SAE to 10mm ODF
A-2	Solder Inlet Adaptor 3/8" SAE to 1/4" ODF
A-3	Solder Inlet Adaptor 3/8" SAE to 3/8" ODF



All dimensions in millimeters (mm).

Identification



The main information about the valve is provided on the element label:

- Element J8 SX35
- Refrigerant
- Maximum Working Pressure (MWP) = 34 bar
- Evaporating temperature range in $^\circ\text{C} = -40^\circ\text{C}/-18^\circ\text{C}$
- Maximum Operating Pressure (MOP) point in bar & $^\circ\text{C} = \text{MOP } 2.4 \text{ bar}/-17^\circ\text{C}$

Selection Tables

R407C (kW)



Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating Temperature +10°C								
C-0X	0.44	0.55	0.62	0.67	0.69	0.70	0.69	0.70
C-00	1.0	1.2	1.3	1.4	1.5	1.5	1.5	1.5
C-01	2.1	2.6	3.0	3.1	3.2	3.2	3.3	3.2
C-02	3.1	4.1	4.8	5.2	5.4	5.5	5.6	5.6
C-03	5.2	6.9	8.0	8.6	9.1	9.2	9.3	9.3
C-04	8.8	11.6	13.4	14.6	15.2	15.4	15.6	15.6
C-05	10.6	14.0	16.0	17.4	18.3	18.5	18.7	18.7
C-06	11.8	15.5	17.7	19.1	20.1	20.3	20.5	20.5

Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating Temperature -10°C								
C-0X	0.42	0.53	0.59	0.63	0.66	0.68	0.68	0.67
C-00	0.90	1.1	1.2	1.3	1.3	1.4	1.4	1.3
C-01	1.5	1.8	2.1	2.3	2.3	2.3	2.4	2.4
C-02	2.3	3.0	3.3	3.6	3.8	3.9	4.0	3.9
C-03	3.8	4.9	5.6	6.0	6.4	6.6	6.7	6.5
C-04	6.3	8.2	9.2	10.0	10.6	10.8	11.0	10.9
C-05	7.7	9.8	11.1	12.0	12.8	13.0	13.2	13.1
C-06	8.6	10.8	12.2	13.2	14.0	14.3	14.5	14.4

Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating Temperature -30°C								
C-0X	—	0.45	0.50	0.54	0.56	0.58	0.58	0.58
C-00	—	0.89	1.0	1.1	1.1	1.2	1.1	1.1
C-01	—	1.3	1.4	1.5	1.6	1.5	1.6	1.6
C-02	—	1.9	2.2	2.7	2.5	2.5	2.5	2.5
C-03	—	3.3	3.7	3.9	4.0	4.1	4.2	4.2
C-04	—	5.3	6.1	6.4	6.7	6.8	7.0	6.9
C-05	—	6.5	7.3	7.7	8.1	8.3	8.4	8.4
C-06	—	7.2	8.0	8.6	8.9	9.1	9.3	9.2

Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating Temperature 0°C								
C-0X	0.44	0.55	0.62	0.66	0.69	0.70	0.70	0.69
C-00	0.96	1.1	1.3	1.4	1.4	1.5	1.5	1.4
C-01	1.8	2.3	2.5	2.7	2.8	2.8	2.9	2.9
C-02	2.7	3.5	4.1	4.3	4.6	4.7	4.8	4.8
C-03	4.5	5.9	6.7	7.4	7.7	7.8	7.9	7.9
C-04	7.5	9.9	11.2	12.2	12.8	13.0	13.2	13.3
C-05	9.2	11.9	13.6	14.7	15.5	15.8	15.9	15.9
C-06	10.1	13.1	14.9	16.2	17.0	17.3	17.5	17.5

Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating Temperature -20°C								
C-0X	—	0.50	0.56	0.59	0.62	0.63	0.65	0.63
C-00	—	1.0	1.1	1.2	1.2	1.3	1.3	1.2
C-01	—	1.5	1.7	1.8	2.0	2.0	2.0	2.0
C-02	—	2.4	2.7	2.9	3.1	3.1	3.2	3.1
C-03	—	4.0	4.5	4.9	5.1	5.2	5.3	5.2
C-04	—	6.6	7.5	8.1	8.5	8.6	8.8	8.7
C-05	—	8.1	9.1	9.8	10.2	10.5	10.6	10.5
C-06	—	8.8	10.0	10.7	11.3	11.4	11.7	11.6

Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating Temperature -40°C								
C-0X	—	—	0.46	0.48	0.51	0.53	0.53	0.54
C-00	—	—	0.88	0.92	1.0	1.0	1.0	1.0
C-01	—	—	1.2	1.3	1.2	1.3	1.3	1.4
C-02	—	—	1.7	1.9	1.9	1.9	2.0	1.9
C-03	—	—	2.9	3.1	3.2	3.3	3.3	3.3
C-04	—	—	4.8	5.0	5.2	5.3	5.4	5.4
C-05	—	—	5.8	6.2	6.3	6.6	6.6	6.6
C-06	—	—	6.4	6.8	7.0	7.2	7.3	7.3

Correction Factor, (CF) Liquid Temperature

TEV corrected capacity = Required Evaporator Capacity / Correction Factor, (CF), for Subcooling.

Subcooling	4K	10K	15K	20K	25K	30K	35K	40K	45K	50K
Correction Factor	1.00	1.08	1.14	1.21	1.27	1.33	1.39	1.45	1.51	1.57

Selection Tables

R134a/R401A (kW)

Orifice Number	Pressure Drop Across the Valve (bar)				
	2	4	6	8	10
Evaporating Temperature +10°C					
C-0X	0.37	0.47	0.52	0.55	0.56
C-00	0.78	0.95	1.0	1.1	1.1
C-01	1.4	1.7	1.9	2.0	2.0
C-02	2.0	2.6	3.0	3.1	3.2
C-03	3.4	4.4	5.0	5.2	5.4
C-04	5.7	7.3	8.2	8.7	9.0
C-05	6.9	8.9	9.9	10.8	10.9
C-06	7.6	9.7	10.9	11.5	11.9

Orifice Number	Pressure Drop Across the Valve (bar)				
	2	4	6	8	10
Evaporating Temperature 0°C					
C-0X	0.36	0.46	0.51	0.52	0.54
C-00	0.72	0.86	0.95	1.0	1.0
C-01	1.2	1.4	1.5	1.6	1.6
C-02	1.7	2.2	2.4	2.6	2.6
C-03	2.8	3.7	4.1	4.3	4.4
C-04	4.7	6.0	6.7	7.1	7.3
C-05	5.7	7.3	8.1	8.6	8.8
C-06	6.3	8.0	9.0	9.5	9.7

Orifice Number	Pressure Drop Across the Valve (bar)				
	2	4	6	8	10
Evaporating Temperature -10°C					
C-0X	0.33	0.42	0.47	0.48	0.48
C-00	0.65	0.77	0.85	0.89	0.90
C-01	0.90	1.2	1.3	1.4	1.4
C-02	1.4	1.8	2.0	2.1	2.1
C-03	2.3	2.9	3.3	3.5	3.6
C-04	3.8	4.8	5.3	5.7	5.9
C-05	4.6	5.8	6.5	6.9	7.1
C-06	5.1	6.4	7.2	7.6	7.7

Orifice Number	Pressure Drop Across the Valve (bar)				
	2	4	6	8	10
Evaporating Temperature -20°C					
C-0X	0.31	0.39	0.43	0.45	0.46
C-00	0.58	0.68	0.76	0.79	0.80
C-01	0.73	0.90	1.0	1.1	1.1
C-02	1.1	1.4	1.5	1.6	1.7
C-03	1.9	2.3	2.6	2.7	2.8
C-04	3.0	3.8	4.2	4.5	4.6
C-05	3.7	4.6	5.1	5.4	5.5
C-06	4.1	5.0	5.6	5.9	6.1

Orifice Number	Pressure Drop Across the Valve (bar)				
	2	4	6	8	10
Evaporating Temperature -30°C					
C-0X	0.28	0.35	0.39	0.41	0.42
C-00	0.53	0.61	0.67	0.70	0.70
C-01	0.59	0.72	0.79	0.84	0.86
C-02	0.90	1.1	1.2	1.3	1.3
C-03	1.5	1.9	2.1	2.2	2.2
C-04	2.4	3.0	3.4	3.5	3.6
C-05	3.0	3.6	4.0	4.2	4.3
C-06	3.2	4.0	4.4	4.7	4.8

Orifice Number	Pressure Drop Across the Valve (bar)				
	2	4	6	8	10
Evaporating Temperature -40°C					
C-0X	0.25	0.31	0.35	0.36	0.37
C-00	0.48	0.55	0.59	0.62	0.63
C-01	0.49	0.59	0.65	0.68	0.69
C-02	0.74	0.89	1.0	1.0	1.0
C-03	1.2	1.5	1.7	1.8	1.8
C-04	2.0	2.4	2.7	2.8	2.8
C-05	2.4	2.9	3.2	3.5	3.5
C-06	2.7	3.2	3.6	3.8	3.9

Correction Factor, (CF) Liquid Temperature

TEV corrected capacity = Required Evaporator Capacity / Correction Factor, (CF), for Subcooling.

Subcooling	4K	10K	15K	20K	25K	30K	35K	40K	45K	50K
Correction Factor	1.00	1.08	1.13	1.19	1.25	1.31	1.37	1.42	1.48	1.54

Selection Tables

R404A/R507 (kW)



Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating temperature +10°C								
C-0X	0.31	0.39	0.44	0.46	0.47	0.47	0.46	0.45
C-00	0.74	0.90	1.0	1.0	1.1	1.1	1.0	1.0
C-01	1.5	1.9	2.1	2.2	2.3	2.3	2.2	2.1
C-02	2.3	3.0	3.4	3.6	3.7	3.7	3.7	3.6
C-03	3.9	5.1	5.6	6.0	6.2	6.3	6.2	6.0
C-04	6.5	8.5	9.5	10.2	10.5	10.5	10.3	10.1
C-05	7.9	10.2	11.4	12.2	12.5	12.6	12.3	12.0
C-06	8.7	11.3	12.6	13.4	13.8	13.8	13.6	13.2

Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating temperature +10°C								
C-0X	0.33	0.41	0.44	0.46	0.46	0.46	0.45	0.45
C-00	0.72	0.84	0.90	0.92	1.0	1.0	0.94	0.91
C-01	1.2	1.4	1.5	1.6	1.6	1.7	1.6	1.6
C-02	1.8	2.2	2.5	2.6	2.7	2.7	2.7	2.6
C-03	2.9	3.7	4.2	4.4	4.5	4.5	4.5	4.4
C-04	4.9	6.3	6.9	7.3	7.4	7.5	7.4	7.2
C-05	5.9	7.6	8.4	8.8	9.0	9.1	9.0	8.7
C-06	6.6	8.4	9.3	9.7	9.9	10.0	9.9	9.6

Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating Temperature -30°C								
C-0X	—	—	0.39	0.41	0.40	0.41	0.40	0.39
C-00	—	—	0.74	0.77	0.77	0.77	0.76	0.74
C-01	—	—	1.1	1.1	1.1	1.1	1.1	1.1
C-02	—	—	1.6	1.7	1.7	1.7	1.7	1.6
C-03	—	—	2.7	2.8	2.9	2.9	2.8	2.7
C-04	—	—	4.5	4.7	4.7	4.7	4.7	4.6
C-05	—	—	5.5	5.7	5.7	5.7	5.7	5.5
C-06	—	—	6.0	6.2	6.3	6.3	6.2	6.1

Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating temperature 0°C								
C-0X	0.33	0.41	0.45	0.46	0.47	0.47	0.47	0.45
C-00	0.75	0.88	1.0	1.0	1.0	1.0	1.0	1.0
C-01	1.4	1.7	1.8	1.9	2.0	2.0	2.0	1.9
C-02	2.1	2.6	3.0	3.1	3.2	3.3	3.2	3.1
C-03	3.5	4.4	5.0	5.2	5.4	5.4	5.3	5.2
C-04	5.8	7.4	8.3	8.7	9.0	9.0	8.9	8.7
C-05	7.0	8.9	10.0	10.5	10.8	10.9	10.8	10.4
C-06	7.7	9.8	11.0	11.6	11.9	12.0	11.8	11.4

Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating Temperature -20°C								
C-0X	—	0.39	0.42	0.44	0.43	0.44	0.43	0.42
C-00	—	0.77	0.83	0.85	0.87	0.87	0.87	0.84
C-01	—	1.2	1.4	1.4	1.4	1.4	1.4	1.4
C-02	—	1.9	2.0	2.1	2.2	2.2	2.2	2.1
C-03	—	3.1	3.5	3.6	3.7	3.7	3.7	3.6
C-04	—	5.1	5.7	5.9	6.1	6.1	6.0	5.9
C-05	—	6.2	6.9	7.2	7.3	7.3	7.2	7.1
C-06	—	6.8	7.6	7.9	8.0	8.0	7.9	7.7

Orifice Number	Pressure Drop Across the Valve (bar)							
	2	4	6	8	10	12	14	16
Evaporating Temperature -40°C								
C-0X	—	—	0.35	0.36	0.36	0.36	0.35	0.35
C-00	—	—	0.66	0.67	0.68	0.67	0.66	0.65
C-01	—	—	0.83	0.86	0.87	0.86	0.85	0.82
C-02	—	—	1.3	1.3	1.3	1.3	1.3	1.2
C-03	—	—	2.2	2.2	2.2	2.2	2.2	2.1
C-04	—	—	3.5	3.7	3.7	3.7	3.6	3.5
C-05	—	—	4.3	4.4	4.5	4.4	4.4	4.2
C-06	—	—	4.7	4.9	5.0	4.9	4.8	4.7

Correction Factor, (CF) Liquid Temperature

TEV corrected capacity = Required Evaporator Capacity / Correction Factor, (CF), for Subcooling.

Subcooling	4K	10K	15K	20K	25K	30K	35K	40K	45K	50K
Correction Factor	1.00	1.10	1.20	1.29	1.37	1.46	1.54	1.63	1.70	1.78

Catch-All® Filter Driers

22, 134a, 404A, 407C, 410A, 507

The universal acceptance of the **Catch-All® Filter-Drier** is due to its unique moulded porous core, consisting of a blend of highly effective desiccants. The quality features built into it assure years of service on any refrigeration system.

MOISTURE

The **Catch-All® Filter-Drier** removes moisture from the refrigerant by adsorbing and retaining it deep within the desiccant granules. The blend of desiccants used in the **Catch-All® Filter-Drier** are specially formulated for exceptional water removal.

FOREIGN MATTER

The **Catch-All® Filter-Drier** will filter out scale, solder particles, carbon, sludge, dirt or any other foreign matter with negligible pressure drop. Fine particles that would go through an ordinary strainer are removed down to a minimum size in one pass filtration. The large filtering area of the **Catch-All® Filter-Drier** core permits it to collect a large amount of dirt without plug up.

ACID

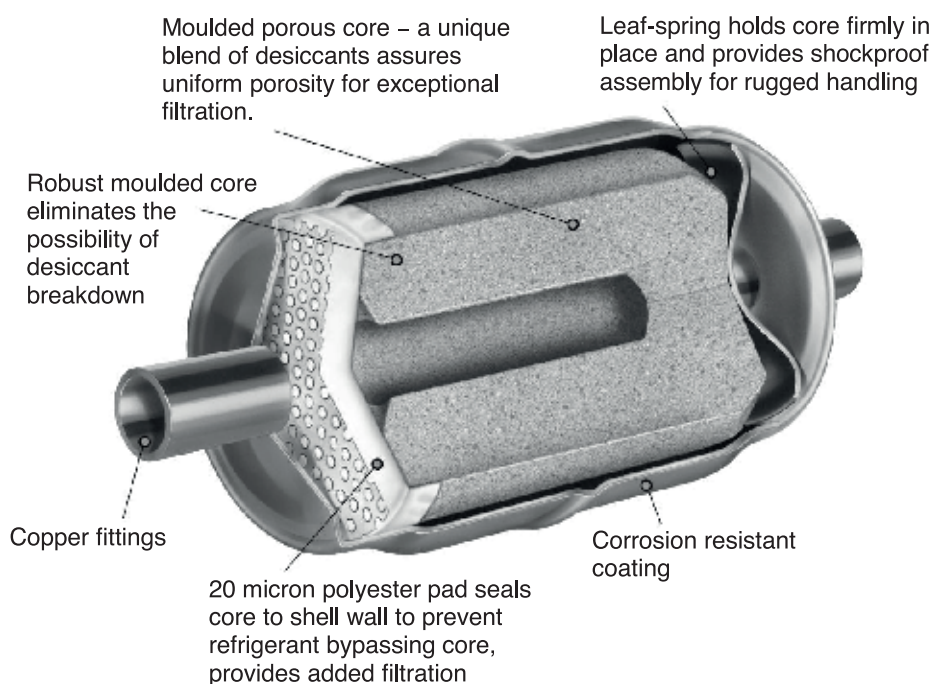
The **Catch-All® Filter-Drier** is unexcelled in acid removal ability. The hydrochloric, hydrofluoric, and various organic acids are adsorbed and held by the desiccant in a manner similar to the adsorption of moisture. Tests have demonstrated that the **Catch-All® Filter-Drier** has superior acid removal ability when compared to competitive driers. This ability, along with its excellent ability to clean up the oil, is responsible for the excellent field performance in cleaning up severely contaminated systems.

OIL SLUDGE AND VARNISH

Even the best refrigeration oils break down to produce varnish, sludge and organic acids. Only the **Catch-All® Filter-Drier** is capable of removing these products of oil decomposition.

SPECIAL APPLICATIONS

A special "HH" core **Catch-All® Filter-Drier** is available to remove wax which frequently causes difficulty on low temperature refrigeration systems.



Liquid Line Filter Driers

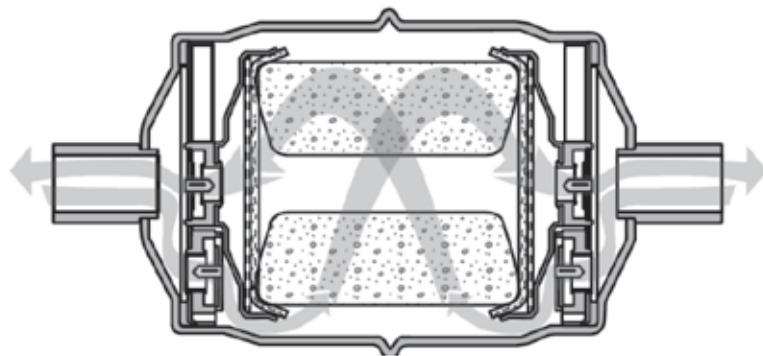
Part No.	Connection Type & Size	Des-iccant Volume cm ³	**Water Capacity - Grams					Selection Recommends KW					Overall Length mm	Dia mm
			R22 60PPM	R134A 50PPM	R404A & R507 50PPM	R407C 50PPM	R410A 50PPM	Refrigeration			Air Cond.			
			25°C & 50°C	25°C & 50°C	25°C & 50°C	25°C & 50°C	25°C & 50°C	R134a	R22	R404A & R507	R134a	R22, 407C, R410A		
C032	1/4MF	49	3.1 & 2.5	3.4 & 2.4	3.6 & 2.9	2.6 & 0.9	1.4 & 1.0	0.88	0.88	0.88	1.8	1.76	106	44
C032F	1/4MF/FF												97	
C032S	1/4ODS												106	
C033	3/8MF												119	
C033S	3/8ODS												99	
C052	1/4MF	82	7.3 & 6.0	7.9 & 5.7	8.5 & 6.9	6.2 & 2.0	3.2 & 2.4	1.17	1.17	1.17	2.64 thru 3.52	2.64 thru 3.52	121	62
C052S	1/4ODS												106	
C053	3/8MF												132	
C053S	3/8ODS												109	
C082	1/4MF	147	12.0 & 9.8	13.1 & 9.4	14.0 & 11.4	10.1 & 3.3	5.2 & 3.9	1.76 thru 5.28	1.76 thru 5.28	1.76 thru 5.28	2.64 thru 7.03	3.52 thru 7.03	143	67
C082S	1/4ODS												130	
C083	3/8MF												154	
C083S	3/8ODS												133	
C084	1/2MF												160	
C084S	1/2ODS												138	
C162	1/4MF	262	17.3 & 14.9	19.8 & 14.3	21.2 & 17.3	15.4 & 5.0	7.9 & 6.0	3.52 thru 7.03	5.28 thru 10.6	2.64 thru 7.03	3.52 thru 17.6	5.28 thru 17.6	159	76
C163	3/8MF												171	
C163S	3/8ODS												149	
C164	1/2MF												176	
C164S	1/2ODS												152	
C165	5/8MF												184	
C165S	5/8ODS	160												
C303	3/8MF	492	34.8 & 28.4	37.8 & 27.3	40.5 & 32.9	29.3 & 9.5	15.1 & 11.4	10.6 thru 17.6	10.6 thru 17.6	7.03 thru 17.6	10.6 thru 26.4	14.1 thru 35.2	246	76
C303S	3/8ODS												226	
C304	1/2MF												251	
C304S	1/2ODS												229	
C305	5/8MF												259	
C305S	5/8ODS												235	
C306	3/4MF												259	
C306S	3/4ODS	245												
C414	1/2MF	672	46.8 & 35.7	50.9 & 36.7	54.4 & 44.3	39.4 & 12.7	20.4 & 15.3	17.6 thru 35.2	17.6 thru 42.2	17.6 thru 35.2	17.6 thru 42.2	26.4 thru 52.8	252	89
C415	5/8MF												260	
C415S	5/8ODS												237	
C416	3/4MF												260	
C416S	3/4ODS												249	
C417S	7/8ODS												249	

** 20 Drops = 1 gram = 1cc. (Ratings at ARI standard conditions)

Sporlan Reversible Heat Pump Driers

Design Benefits

- Short overall length for easy installation.
- Drier operates in either flow direction with low pressure drop.
- Proven metal check valves used in construction – no synthetic materials.
- The Sporlan dependable moulded core used for maximum filtration ability.
- When the flow direction reverses, dirt already collected remains in the filter-drier.
- Carefully engineered blend of desiccants for maximum water capacity & acid removal ability.
- The HPC-160-HH Series also has the HH style core with activated charcoal which offers maximum ability to remove oleoresin and other reactive chemical constituents in the lubricant.
- Same rugged construction as used in the Catch-All®.



Heat Pump Driers – Reversible (New Installations)

Part No.	Connection Type & Size	Desiccant Volume cm ³	**Water Capacity - Grams						Selection Recommends KW	Overall Length mm	Dia mm
			R22 at 60PPM		R407C at 50PPM		R410A at 50PPM				
			24°C	52°C	24°C	52°C	24°C	52°C			
HPC103	3/8MF	164	10.8	8.8	9.1	3.0	4.7	3.5	3.5 thru 17.5	171	76
HPC103S	3/8ODS									149	
HPC104	1/2MF									176	
HPC104S	1/2ODS									152	
HPC105S	5/8ODS									152	

** 20 Drops = 1 gram = 1cc. (Ratings at ARI standard conditions)

Heat Pump Driers – Reversible (For Clean-up after Burnout)

Part No.	Connection Type & Size	Desiccant Volume cm ³	**Water Capacity - Grams						Selection Recommends KW	Overall Length mm	Dia mm
			R22 at 60PPM		R407C at 50PPM		R410A at 50PPM				
			24°C	52°C	24°C	52°C	24°C	52°C			
HPC163HH	3/8MF	229	4.7	4.1	4.5	4.4	3.5	5.0	3.5 thru 17.5	198	76
HPC163SHH	3/8ODS									176	
HPC164HH	1/2MF									202	
HPC164SHH	1/2ODS									180	
HPC165HH	5/8MF									210	
HPC165SHH	5/8ODS									187	
HPC307SHH	7/8 ODS	492	8.4	6.0	8.1	4.4	6.2	5.5	14 thru 42	280	76

** 20 Drops = 1 gram = 1cc. (Ratings at ARI standard conditions)

HH Signifies suitable for Burn Out Applications

Suction Line Filter Driers

(Clean up after Burn Out and New System)

The flow capacities are rated at the maximum recommended pressure drop for permanent installation.

To ensure the suction line filter-drier has ample contaminant removal ability, selection must be based on flow capacity and the amount of desiccant required for system clean-up.

The suction line filter-drier must be large enough to adequately remove acid, moisture and solid contaminants without causing nuisance plug-ups.

Standard Suction Line Driers – Not Reversible

Part No.	Connection Type & Size	Des-iccant Volume cm³	R22			R134A			R404A			R410	Overall Length mm	Dia mm
			Evaporator Temperature °C											
			+5°C	-5°C	-15°C	+5°C	-5°C	-15°C	-5°C	-15°C	-30°C	+5°C		
			Pressure Drop (bar)											
			0.21	0.14	0.10	0.14	0.10	0.07	0.14	0.10	0.07	0.21		
C084STHH	1/2 ODS	147	7.4	4.6	3.2	4.9	3.2	2.1	4.6	2.8	1.8	9.5	138	76
C164STHH	1/2 ODS	262	9.5	6.0	3.9	6.0	3.9	2.5	5.6	3.5	2.1	12.7	152	
C165STHH	5/8 ODS		11.3	7.0	4.6	7.0	4.6	2.8	6.7	4.2	2.5	14.8	176	
C166STHH	3/4 ODS		14.1	8.8	5.6	9.1	6.0	3.5	8.4	5.6	3.2	18.3	184	
C305STHH	5/8 ODS	492	12.0	7.4	4.9	7.7	4.9	2.8	7.0	4.6	2.8	15.5	235	
C307STHH	7/8 ODS		18.6	11.6	7.7	12.0	7.7	4.6	11.3	7.0	4.2	24.6	248	
C419STHH	1 1/8 ODS	672	21.8	13.7	8.8	14.1	9.1	5.6	13.0	8.4	5.3	28.1		89
C4311STHH	1 3/8 ODS	787	39.0	24.3	16.2	25.0	16.2	9.9	23.6	15.1	9.1	50.7	278	121
C4313STHH	1 5/8 ODS		42.9	26.7	17.6	27.4	17.9	10.9	25.7	16.5	10.2	55.9		

Compact Suction Line Driers – Not Reversible

Part No.	Connection Type & Size	Des-iccant Volume cm³	R22			R134A			R404A			R410	Overall Length mm	Dia mm		
			Evaporator Temperature °C													
			+5°C	-5°C	-15°C	+5°C	-5°C	-15°C	-5°C	-15°C	-30°C	+5°C				
			Pressure Drop (bar)													
			0.21	0.14	0.10	0.14	0.10	0.07	0.14	0.10	0.07	0.21				
C144STHH	1/2ODS	229	7.4	4.6	3.2	4.6	2.8	1.8	3.2	2.1	1.1	9.5	105	112		
C145STHH	5/8ODS		12.0	7.7	4.9	7.4	4.6	2.8	5.6	3.5	2.1	16.2	111			
C146STHH	3/4ODS		16.9	10.6	7.0	10.2	6.3	3.9	7.4	4.9	3.2	21.8	123			
C147STHH	7/8ODS		18.6	11.6	7.7	11.3	7.4	4.6	8.5	5.6	3.2	23.9	126			
C149STHH	1 1/8ODS		24.6	15.5	10.2	14.8	9.5	5.6	11.3	7.4	4.2	31.7	125			

T Signifies fitted with 1 Access Valve / TT Signifies fitted with 2 Access Valves / HH Signifies suitable for Burn Out Applications



Standard Bobby Type



Compact Bobby Type

Sporlan Suction Filter - Sealed Type

Design Benefits

- Protects the compressor from dirt
- Relief device opens if the filter plugs
- Suitable for use with all brazing alloys
- Maximum corrosion resistance
- Full flow design for low pressure drop
- Complete line of sizes

Sporlan offers an exclusive concept in Suction Filter design – a filter with an optional relief feature. When flow is in one direction, the bypass relief feature is active.

If the pressure drop across the element becomes excessive the bypass relief will open slightly to maintain sufficient gas flow and assure proper cooling of the hermetic motor.

When the Suction Filter is installed with flow in the opposite direction, the bypass relief feature is inactive and will never open regardless of the increase in pressure drop.

The “-T” in the type number indicates these models are equipped with an access valve to permit pressure drop readings.

The access valve will be operational provided the Suction Filters are installed with the bypass feature inactive.



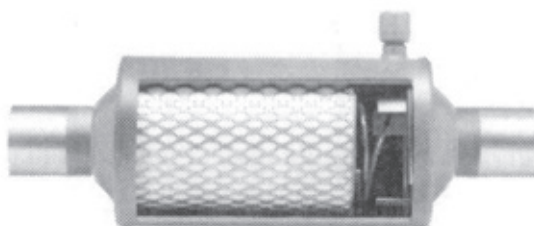
Bi-directional Flow – With Bypass Relief Feature

Part No.	Connection Type & Size	Filter Area cm²	Flow Capacity in KW Evaporator Temperature									Nominal System HP		Overall Length mm	Dia mm
			+5°C			+5°C			-20°C		-30°C				
			Pressure Drop - bar												
			0.20	0.14	0.20	0.14	0.10	0.14	0.07	0.10	0.07				
			Refrigerant									R22 407C	404A 507 134A		
			22	134A	407C	22	134A	404A, 507	134A	404A, 507	404A, 507				
SF283F	3/8 FL	181	7.4	4.2	7.0	4.6	2.8	4.2	1.8	2.8	1.8	1.0	1/2	223	76
SF285T	5/8 ODS		22.5	14.1	21.8	14.1	9.5	13.7	6.0	9.5	6.0	4.0	1-1/2	212	
SF285FT	5/8 FL		22.5	14.1	21.8	14.1	9.5	13.7	6.0	9.5	6.0	4.0	1-1/2	223	
SF286T	3/4 ODS		30.2	17.9	28.5	17.6	12.0	17.9	7.4	12.0	7.4	5.0	1-1/2	223	
SF287T	7/8 ODS		39.0	24.6	39.7	25.3	16.2	24.6	9.8	16.2	10.2	7-1/2	3.0	227	
SF289T	1 1/8 ODS		52.1	32.4	51.3	33.1	21.1	32.4	13.0	21.5	13.4	7-1/2	5.0	242	
SF489T	1 1/8 ODS	310	56.3	34.8	55.2	35.2	22.9	34.5	13.7	22.9	14.4	10.0	5.0	315	76
SF4811T	1 3/8 ODS		64.7	39.4	63.3	40.1	25.7	39.4	15.5	26.0	16.2	12.0	5.0	333	

Bi-directional Flow – With Bypass Relief Feature

SF1153F	5/8 FL	71	13.0	8.1	13.0	8.4	5.3	8.1	3.2	5.3	3.2	2	1	141	51
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Suffix T signifies with Access Valve



Sporlan Drier Cores/Shells



Replaceable Drier Cores & Pleated Elements

Part No.	Description – Application
RC4864	Activated Core The standard core suitable for most installations for liquid or suction line.
RC4864HH	Activated Charcoal Core This core should be used for wax removal on low temperature systems, and for clean up after burn-out on all types of systems
RCW48	High Water Capacity Core This core should be used on system that a ruptured condenser or that have been exposed to the atmosphere, or for some reason are expected to have a high amount of water in the system. Designed especially for polyolester oils.
RPE48BD	Pleated Filter Element This should be installed in the suction line to obtain the lowest possible pressure drop. In cleaning up a system after a motor burn out, cores should be used first. Then after the system is thoroughly clean, then the felt element can be installed.



Enthalpy Drier Shells

Part No.	Cores	Connection Sizes Inches	Dessicant Volume cm³	Filter Surface Area cm²
NFDS485	1	5/8"	786	413
NFDS487	1	7/8"		
NFDS489	1	1 1/8"		
NFDS4811	1	1 3/8"		
NFDS4813	1	1 5/8"		
NFDS4817	1	2 1/8"	1572	826
NFDS967	2	7/8"		
NFDS969	2	1 1/8"		
NFDS9611	2	1 3/8"		
NFDS9613	2	1 5/8"		
NFDS9617	2	2 1/8"	2358	1239
NFDS1449	3	1 1/8"		
NFDS14411	3	1 3/8"		
NFDS14413	3	1 5/8"		
NFDS14417	3	2 1/8"		
NFDS19211	4	1 3/8"	3144	1652
NFDS19213	4	1 5/8"		
NFDS19217	4	2 1/8"		
NRC081852	Gasket Kit to suit NFDS drier shells			



Note: The NFDS Enthalpy drier shells have a maximum working pressure of 500psi.

Sporlan OF Series Oil Filters

- Virtually eliminates the need for oil changes due to suspended particulate in circulation.
- Unsurpassed filtering efficiency:
- 99% removal of 3 micron sized particles
- 98% removal of 2 micron sized particles
- Element utilizes a pleated design for maximum surface area.
- Unsurpassed filtration capacities.
- High flow capacities with low pressure drop.
- Filter element utilizes an O-ring seal.
- Inert microglass filter material ensures lubricant compatibility.
- Dimensions allow for easy replacement of current filter.



With the use of POE oils system chemistry changed, unlike mineral and alkylbenzene oils POE oil has solvent-like tendencies.

POE oil has the ability to suspend and recirculate small, solid contaminants left from system installation or retrofit.

POE oil samples taken from actual systems have shown the oil to suspend and recirculate a high concentration of 2-20 micron sized particles, with the largest percentage between 2-10 microns.

Although some particles are smaller than bearing tolerances, studies have shown bearing life can still be affected.

Bearing wear depends upon the size, hardness, and concentration of particles in circulation.

To effectively remove these small particles, Sporlan developed a new type of oil filter.

The OF Series Oil Filters are designed to be 99% efficient in removing 3 micron sized particles and yet have sufficient flow capacity at a low pressure drop, the unsurpassed filtration ability of the oil filters will assure clean POE, mineral or alkylbenzene oil is returned to the compressors.

Clean oil ensures proper operation of the oil level control and minimizes compressor wear.

Sporlan OF Oil Filters

Part No.	Description	Filter Area	Overall Length mm	Shell Diameter mm
OF303	Sealed Model 3/8 Flare	2097 cm ²	246mm	76mm
ROF413	Replaceable Oil Filter Shell		206mm	89mm
OFE1	Element with Gasket – suit ROF413			
A1751	Mounting Bracket – suit ROF413			

Oil Level System Externally Adjustable

Part No.	Description
OL60XH	Oil Level Control c/w Equaliser Fitting (Max Δ P 6.2 bar)
OCV10	Oil Diff Check Valve 10 Psi
OCV20	Oil Diff Check Valve 20 Psi
POR2	Oil Reservoir 6 Litre



Sporlan

Liquid Moisture Indicators



Liquid & Moisture Indicators

Part No.	Description
SA12	1/4 Male Flare
SA12FM	1/4 Male Flare – Female Flare
SA12S	1/4 Solder
SA13	3/8 Male Flare
SA13FM	3/8 Male Flare – Female Flare
SA13S	3/8 Solder
SA13U	3/8 Male Flare – 3/8 Swivel
SA14	1/2 Male Flare
SA14FM	1/2 Male Flare – Female Flare
SA14S	1/2 Solder
SA14U	1/2 Male Flare – 1/2 Swivel
SA15	5/8 Male Flare
SA15S	5/8 Solder
SA15U	5/8 Male Flare – 5/8 Swivel
SA16	3/4 Male Flare
SA16S	3/4 Solder
SA17S	7/8 Solder
SA19S	1 1/8 Solder
SA211	1 3/8 Solder
SA213	1 5/8 Solder
AC20	Replacement Glass suit SA211, SA213 & SA217



Essen Liquid & Moisture Indicators

Part No.	Description
ESM6	1/4 Solder
ESM10	3/8 Solder
ESM12	1/2 Solder
ESM16	5/8 Solder
ESM18	3/4 Solder
ESM22	7/8 Solder
ESM28	1 1/8 Solder



Heldon Double Port Sight Glasses

Part No.	Description
6751818	Double Port Sight Glass 11/8
6752222	Double Port Sight Glass 13/8
6752626	Double Port Sight Glass 15/8
6753434	Double Port Sight Glass 21/8
ESM18	3/4 Solder
ESM22	7/8 Solder
ESM28	1 1/8 Solder



ZoomLock™

FLAME-FREE REFRIGERANT FITTINGS

Increase productivity and profitability

ZoomLock™ flame-free refrigerant fittings are specially designed to work without brazing, which automatically makes your job simpler and faster when joining copper tubes.

Professionals who have tried ZoomLock flame-free refrigerant fittings report their time and labor costs on tube connections are typically reduced 60% on average by eliminating the need for brazing. The biggest benefits are **more productivity and increased profit**, but there are also many other exciting advantages to flame-free tube connecting.

ODM X ODM

ZoomLock

COMPATIBLE
COMPONENTS

The ZoomLock Advantage

- For HVAC/R up to 700 psi
- Huge labor and time savings
- Less equipment required
- Safer conditions, no fire hazards
- No hot-work permit
- No need to nitrogen-purge
- More flexible access to job sites



Parker

ZoomLock Flame-Free Refrigerant Fittings



Applications

- High Pressure HVAC/R
- Glycol
- Non-Potable Water

Product Parameters

- **Continuous Operating Temperature:**
250°F / 121°C
- **O-Ring Temperature Rating:**
-40°F to +300°F
-40°C to +149°C
- **Maximum Rated Pressure (MRP):**
700 psi / 48 bar
- **Minimum Burst Pressure (UL 207):**
2,100 psi / 145 bar
- **Vacuum Pressure Capability:**
20 Microns
- **External Leak Rate:**
<0.1 Ounces of Helium per Year at Operating Pressure Range
- **Vibration Resistance:**
Conforms to UL109
- **Size Availability (Inches):**
1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8, 1-1/8, 1-3/8

Fitting Materials

- **Fitting Body:**
Refrigerant Grade Copper, per ASTM-B75 or ASTM-B743
- **O-Ring:**
HNBR

Fitting Warranty

- 5 years from date of install. Read page 26 for more details.

Compatibility

- **Approved Oils:**
Mineral Oil, POE, PVE, PAG
- **Approved Tubing Materials:**
Copper to Copper Connections
- **Approved Tubing Tolerance:**
Meets ASTM B280
- **Approved Copper Tubing Types for Use with Klauke® 15 kN Compatible Jaws:**
Hard Copper (Drawn)
- 1/4" – 1-1/8" Type ACR, M, L
- Type K only up to 7/8"
Soft Copper (Annealed)
- 1/4" – 1-1/8" Type ACR, L
- Type K only up to 7/8"
- **Approved Copper Tubing Types for Use with Klauke® 19 kN and RIDGID® Compatible Jaws:**
Hard Copper (Drawn)
- 1/4" – 1-3/8" Type ACR, M, L, K
Soft Copper (Annealed)
- 1/4" – 1-3/8" Type ACR, L, K

Approved Refrigerants

- | | |
|----------|---------|
| ■ 1234yf | ■ 449A |
| ■ 1234ze | ■ 450A |
| ■ 125 | ■ 452A |
| ■ 134a | ■ 452B |
| ■ 143a | ■ 507 |
| ■ 404A | ■ 513A |
| ■ 407A | ■ 718 |
| ■ 407C | ■ 32* |
| ■ 407F | ■ 290* |
| ■ 410A | ■ 600* |
| ■ 447A | ■ 600a* |
| ■ 448A | |

*Flammable refrigerants. Check with Local Building or Mechanical Code Officials.

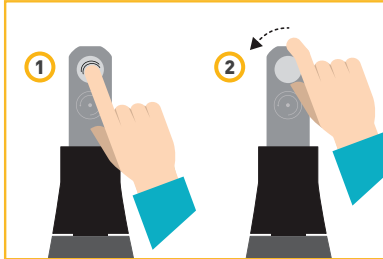
Agency Approvals and Certifications

- UL 207, SA#33958, SDTW(7) (Except where noted)
- ASHRAE-15
- ICC-ES, PMG-1296
 - 2015 IMC (International Mechanical Code)
 - 2015 IRC (International Residential Code)
 - 2015 UMC (Uniform Mechanical Code)
- CRN
 - Approved for couplings and 90 degree elbows
 - More fittings coming soon

RIDGID is a registered trademark of RIDGID, Inc.

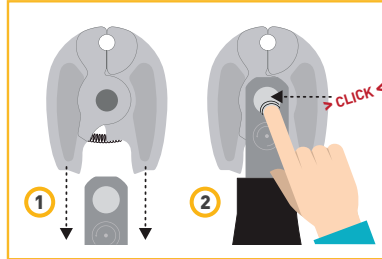


Installation Instructions



STEP 1

Press the ZoomLock Crimping Tool locking pin, then rotate 45° to release.



STEP 2

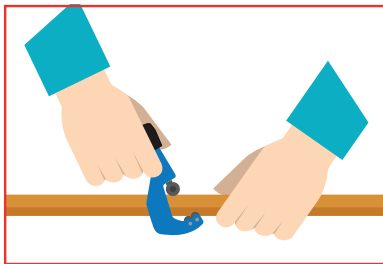
Slide jaws over Crimping Tool head, then depress locking pin until it clicks.



STEP 3

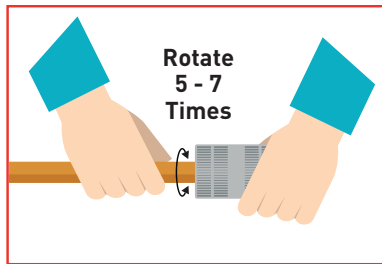
Slide charged battery into base of Crimping Tool. Press and hold the trigger on Crimping Tool to calibrate. **Calibration is recommended daily, prior to use.**

WARNING COPPER TUBE ENDS SHOULD BE INSPECTED AND ANY SHARP EDGES SHOULD BE ADDRESSED. SHARP EDGES MAY CAUSE DAMAGE TO THE O-RING.



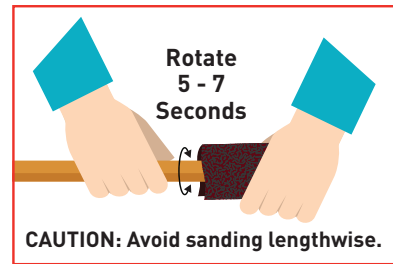
STEP 4 - CUT

Cut copper tube using the **supplied** or similar commercially available tube cutter. Verify tube cutter is properly maintained and wheel is sharp. **DO NOT** use any type of saw as this creates a sharp surface that will cut the o-ring.



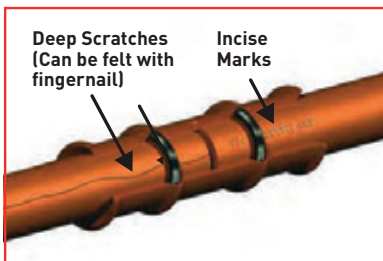
STEP 5 - DEBURR

Use supplied deburring tool. **ALL tubing MUST** have its outer diameter **deburred** prior to ZoomLock fitting installation. Rotate tool back-and-forth 5 - 7 times to remove sharp edges and burrs. **Perform this step BEFORE sanding.**



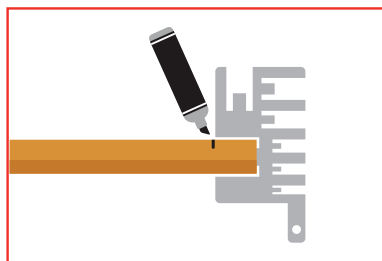
STEP 6 - SAND & CLEAN

ALL tubing must be SANDED and CLEANED. Use provided heavy duty abrasive pad, nylon mesh abrasive pad (maroon color) or 180 grit sandpaper. **SAND tube in RADIAL DIRECTION** as shown with arrows for 5 - 7 seconds or 10 - 14 times back-and-forth. Remove residual debris from tube end.



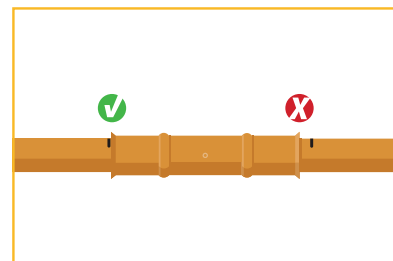
STEP 7 - INSPECT

INSPECT copper tube **AFTER** sanding. Surfaces need to appear clean and shiny. Inspect for any **VISIBLE SCRATCHES, INCISE MARKS OR OTHER TUBE DEFECTS.** Area of importance is within 1.5 inches from tube end. If scratches are present, cut off affected area and repeat Steps 4 - 7 or sand thoroughly to remove.



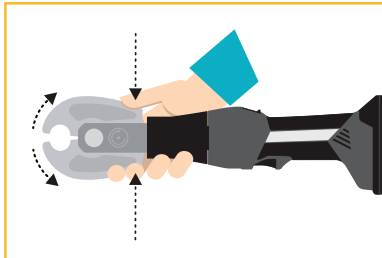
STEP 8 - MARK

Using the depth gauge provided or the chart on page 17 to determine the minimum insertion depth. Mark the tubing with a permanent marker to indicate proper insertion depth on every tube.



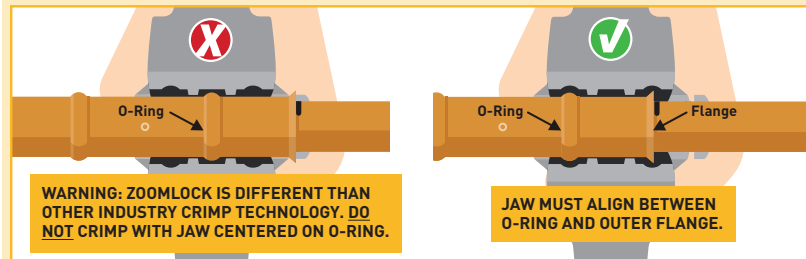
STEP 9

Push the fitting onto the tube. Use the mark to assure insertion depth and secure fit.



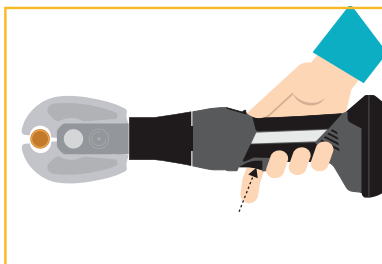
STEP 10

Open the jaws of the ZoomLock Crimping Tool.



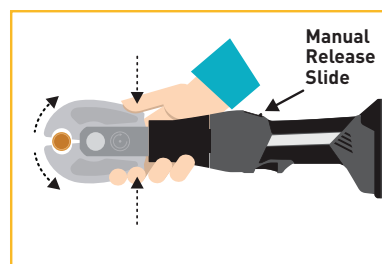
STEP 11

Properly place the crimping jaws onto the fitting. Grooves in the jaws make it easy to align. See illustration at above right for proper crimping alignment.



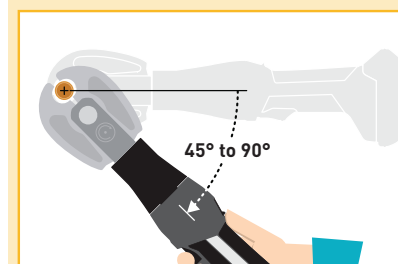
STEP 12

Press and hold the trigger on the ZoomLock Crimping Tool to begin the crimping process. Continue to hold the trigger until the ZoomLock Crimping Tool completes its cycle.



STEP 13

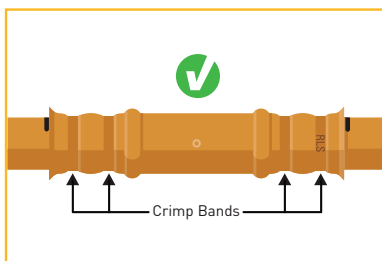
Open the jaws and remove from the fitting. If the jaws do not open, crimping cycle was not completed. For manual override, slide the manual release button down to open the jaw in case of emergency.



STEP 14

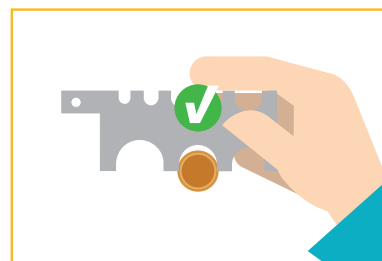
APPLIES TO 1-3/8" FITTINGS ONLY

Crimp 1-3/8" fitting twice, rotate crimping tool 45 to 90 degrees after first crimp and repeat crimp.



STEP 15

A special "RLS" mark will be displayed on the tube to let you know the connection is crimped properly.



STEP 16

The supplied RLS Crimp Gauge will confirm the measurement of the finished crimp band diameter. See crimp band locations noted in Step 15. It may be necessary to rotate the gauge in order to not interfere with the copper tube flashing left from the crimping process.

Temp °C	Temp °F	REFRIGERANT													
		R-22 (V)		134A(J)		410A (Z)		507 (P)		R-717 (A)		R-744		401A (X)	
		psig	barg	psig	barg	psig	barg	psig	barg	psig	barg	psig	barg	psig	barg
-50	-58.0	10.9	276	21.2	539	1.1	0.08	4.4	112	17.9	454	84.3	5.81	20.6	523
-48	-54.4	8.8	224	20.2	512	2.8	0.19	1.8	45	16.4	416	92.6	6.38	19.5	494
-46	-50.8	6.6	168	19.0	482	4.5	0.31	0.5	0.04	14.7	374	101.4	6.99	18.2	463
-44	-47.2	4.2	107	17.7	450	6.5	0.45	2.0	0.14	12.9	328	110.7	7.63	16.9	429
-42	-43.6	1.6	41	16.3	415	8.5	0.59	3.7	0.25	10.9	277	120.6	8.31	15.4	392
-40	-40.0	0.6	0.04	14.8	376	10.8	0.74	5.4	0.37	8.8	222	131.0	9.03	13.8	351
-38	-36.4	2.0	0.14	13.1	334	13.1	0.91	7.3	0.50	6.4	162	142.0	9.79	12.1	307
-36	-32.8	3.6	0.25	11.3	288	15.7	1.08	9.3	0.64	3.8	97	153.7	10.6	10.2	260
-34	-29.2	5.3	0.37	9.4	239	18.5	1.27	11.4	0.79	1.0	25	165.9	11.4	8.2	208
-32	-25.6	7.1	0.49	7.3	185	21.4	1.47	13.7	0.95	1.0	0.07	178.8	12.3	6.0	152
-30	-22.0	9.1	0.63	5.0	127	24.5	1.69	16.2	1.12	2.6	0.18	192.4	13.3	3.6	92
-28	-18.4	11.1	0.77	2.5	65	27.8	1.92	18.8	1.30	4.4	0.30	206.6	14.2	1.1	28
-26	-14.8	13.4	0.92	0.0	0.00	31.4	2.16	21.6	1.49	6.3	0.43	221.6	15.3	0.8	0.06
-24	-11.2	15.7	1.08	1.4	0.10	35.2	2.42	24.5	1.69	8.3	0.57	237.3	16.4	2.3	0.16
-22	-7.6	18.2	1.26	2.9	0.20	39.2	2.70	27.6	1.90	10.5	0.72	253.8	17.5	3.8	0.26
-20	-4.0	20.9	1.44	4.6	0.31	43.4	2.99	30.9	2.13	12.9	0.89	271.0	18.7	5.5	0.38
-19	-2.2	22.3	1.54	5.4	0.37	45.6	3.15	32.6	2.25	14.1	0.97	279.9	19.3	6.3	0.44
-18	-0.4	23.7	1.63	6.3	0.43	47.9	3.30	34.4	2.37	15.4	1.06	289.0	19.9	7.2	0.50
-17	1.4	25.2	1.74	7.2	0.50	50.3	3.47	36.2	2.50	16.7	1.15	298.3	20.6	8.1	0.56
-16	3.2	26.7	1.84	8.1	0.56	52.7	3.63	38.1	2.63	18.1	1.25	307.8	21.2	9.1	0.63
-15	5.0	28.3	1.95	9.1	0.63	55.2	3.80	40.1	2.76	19.6	1.35	317.6	21.9	10.1	0.70
-14	6.8	29.9	2.06	10.1	0.69	57.7	3.98	42.0	2.90	21.0	1.45	327.5	22.6	11.1	0.77
-13	8.6	31.5	2.17	11.1	0.77	60.3	4.16	44.1	3.04	22.6	1.56	337.7	23.3	12.2	0.84
-12	10.4	33.2	2.29	12.2	0.84	63.0	4.35	46.2	3.18	24.1	1.66	348.0	24.0	13.3	0.91
-11	12.2	35.0	2.41	13.3	0.91	65.8	4.54	48.3	3.33	25.8	1.78	358.6	24.7	14.4	0.99
-10	14.0	36.8	2.53	14.4	0.99	68.6	4.73	50.5	3.48	27.5	1.89	369.5	25.5	15.5	1.07
-9	15.8	38.6	2.66	15.6	1.07	71.6	4.93	52.8	3.64	29.2	2.01	380.5	26.2	16.7	1.15
-8	17.6	40.5	2.79	16.8	1.16	74.6	5.14	55.1	3.80	31.0	2.14	391.8	27.0	17.9	1.24
-7	19.4	42.4	2.93	18.0	1.24	77.6	5.35	57.5	3.96	32.9	2.27	403.3	27.8	19.2	1.32
-6	21.2	44.4	3.06	19.3	1.33	80.8	5.57	59.9	4.13	34.8	2.40	415.1	28.6	20.5	1.41
-5	23.0	46.5	3.20	20.6	1.42	84.0	5.79	62.4	4.30	36.8	2.53	427.1	29.4	21.8	1.51
-4	24.8	48.6	3.35	22.0	1.51	87.3	6.02	65.0	4.48	38.8	2.67	439.3	30.3	23.2	1.60
-3	26.6	50.7	3.50	23.3	1.61	90.7	6.26	67.6	4.66	40.9	2.82	451.8	31.2	24.6	1.70
-2	28.4	52.9	3.65	24.8	1.71	94.2	6.50	70.3	4.85	43.1	2.97	464.5	32.0	26.1	1.80
-1	30.2	55.2	3.81	26.3	1.81	97.8	6.74	73.0	5.04	45.3	3.12	477.5	32.9	27.6	1.90
0	32.0	57.5	3.97	27.8	1.91	101.4	6.99	75.9	5.23	47.6	3.28	490.8	33.8	29.1	2.01
1	33.8	59.9	4.13	29.3	2.02	105.2	7.25	78.8	5.43	49.9	3.44	504.3	34.8	30.7	2.12
2	35.6	62.3	4.30	30.9	2.13	109.0	7.52	81.7	5.63	52.4	3.61	518.1	35.7	32.3	2.23
3	37.4	64.8	4.47	32.6	2.25	113.0	7.79	84.7	5.84	54.9	3.78	532.1	36.7	34.0	2.34
4	39.2	67.4	4.65	34.3	2.36	117.0	8.07	87.8	6.06	57.5	3.96	546.4	37.7	35.7	2.46
5	41.0	70.0	4.83	36.0	2.48	121.1	8.35	91.0	6.28	60.1	4.14	561.0	38.7	37.5	2.58
6	42.8	72.7	5.01	37.8	2.61	125.3	8.64	94.3	6.50	62.8	4.33	575.9	39.7	39.3	2.71
7	44.6	75.4	5.20	39.6	2.73	129.6	8.94	97.6	6.73	65.6	4.53	591.1	40.8	41.1	2.84
8	46.4	78.3	5.40	41.5	2.86	134.0	9.24	101.0	6.96	68.5	4.72	606.5	41.8	43.0	2.97
9	48.2	81.1	5.59	43.5	3.00	138.5	9.55	104.5	7.20	71.5	4.93	622.3	42.9	45.0	3.10
10	50.0	84.1	5.80	45.4	3.13	143.2	9.87	108.0	7.45	74.5	5.14	638.3	44.0	57.9	3.99
11	51.8	87.1	6.00	47.5	3.27	147.9	10.2	111.6	7.70	77.6	5.35	654.6	45.1	60.2	4.15
12	53.6	90.1	6.22	49.6	3.42	152.7	10.5	115.3	7.95	80.8	5.57	671.3	46.3	62.5	4.31
13	55.4	93.3	6.43	51.7	3.56	157.6	10.9	119.1	8.21	84.1	5.80	688.3	47.5	64.9	4.47
14	57.2	96.5	6.65	53.9	3.72	162.7	11.2	123.0	8.48	87.5	6.03	705.5	48.6	67.3	4.64
15	59.0	99.8	6.88	56.1	3.87	167.8	11.6	127.0	8.75	91.0	6.27	723.1	49.9	69.8	4.81
16	60.8	103.1	7.11	58.4	4.03	173.1	11.9	131.0	9.03	94.5	6.52	741.1	51.1	72.3	4.99
17	62.6	106.6	7.35	60.8	4.19	178.5	12.3	135.1	9.32	98.2	6.77	759.3	52.4	75.0	5.17
18	64.4	110.1	7.59	63.2	4.36	183.9	12.7	139.3	9.61	101.9	7.03	778.0	53.6	77.6	5.35
19	66.2	113.6	7.84	65.7	4.53	189.5	13.1	143.6	9.90	105.7	7.29	796.9	54.9	80.3	5.54
20	68.0	117.3	8.09	68.2	4.70	195.3	13.5	148.0	10.2	109.7	7.56	816.2	56.3	83.1	5.73
21	69.8	121.0	8.34	70.8	4.88	201.1	13.9	152.5	10.5	113.7	7.84	835.9	57.6	86.0	5.93
22	71.6	124.8	8.61	73.5	5.07	207.1	14.3	157.1	10.8	117.8	8.12	856.0	59.0	88.9	6.13
23	73.4	128.7	8.87	76.2	5.25	213.2	14.7	161.7	11.1	122.1	8.42	876.4	60.4	91.8	6.33
24	75.2	132.7	9.15	79.0	5.44	219.4	15.1	166.5	11.5	126.4	8.71	897.3	61.9	94.8	6.54
25	77.0	136.7	9.43	81.8	5.64	225.7	15.6	171.3	11.8	130.8	9.02	918.5	63.3	97.9	6.75
26	78.8	140.8	9.71	84.7	5.84	232.2	16.0	176.3	12.2	135.4	9.33	940.2	64.8	101.1	6.97
27	80.6	145.0	10.0	87.7	6.05	238.8	16.5	181.3	12.5	140.0	9.65	962.3	66.3	104.3	7.19
28	82.4	149.3	10.3	90.7	6.26	245.5	16.9	186.5	12.9	144.8	10.0	984.9	67.9	107.6	7.42
29	84.2	153.7	10.6	93.8	6.47	252.3	17.4	191.7	13.2	149.6	10.3	1007.9	69.5	110.9	7.65
30	86.0	158.2	10.9	97.0	6.69	259.3	17.9	197.1	13.6	154.6	10.7	1031.6	71.1	114.4	7.88
31	87.8	162.7	11.2	100.3	6.91	266.5	18.4	202.5	14.0	159.7	11.0	1055.3	72.8	117.8	8.12
32	89.6	167.4	11.5	103.6	7.14	273.7	18.9	208.1	14.3	164.9	11.4	**	**	121.	

REFRIGERANT										Temp °F	Temp °C
404A (S)		407C (N)		408A (S)		409A (J)		R-438A (V)			
psig	barg	psig	barg	psig	barg	psig	barg	psig	barg		
6.0	152	15.1	383	7.5	189	21.2	538	15.4	391	-58.0	-50
3.5	88	13.3	339	5.1	130	20.1	511	13.7	348	-54.4	-48
0.8	19	11.4	290	2.6	65	19.0	481	11.8	300	-50.8	-46
1.1	0.07	9.4	238	0.1	0.01	17.7	449	9.8	249	-47.2	-44
2.6	0.18	7.1	180	1.5	0.11	16.3	414	7.6	193	-43.6	-42
4.3	0.30	4.6	117	3.1	0.21	14.8	376	5.2	132	-40.0	-40
6.1	0.42	2.0	50	4.8	0.33	13.1	334	2.6	66	-36.4	-38
8.0	0.55	0.5	0.03	6.6	0.45	11.4	289	0.1	0.01	-32.8	-36
10.1	0.70	2.0	0.14	8.5	0.58	9.4	240	1.6	0.11	-29.2	-34
12.3	0.85	3.6	0.25	10.5	0.73	7.3	187	3.2	0.22	-25.6	-32
14.6	1.01	5.4	0.37	12.7	0.88	5.1	129	4.9	0.34	-22.0	-30
17.1	1.18	7.3	0.51	15.1	1.04	-1.3	68	6.8	0.47	-18.4	-28
19.8	1.37	9.4	0.65	17.5	1.21	0.1	1.5	8.7	0.60	-14.8	-26
22.6	1.56	11.6	0.80	20.2	1.39	1.3	0.09	10.9	0.75	-11.2	-24
25.7	1.77	13.9	0.96	23.0	1.59	2.8	0.19	13.1	0.91	-7.6	-22
28.8	1.99	16.4	1.13	26.0	1.79	4.4	0.30	15.6	1.07	-4.0	-20
30.5	2.10	17.8	1.22	27.5	1.90	5.2	0.36	16.9	1.16	-2.2	-19
32.2	2.22	19.1	1.32	29.1	2.01	6.1	0.42	18.2	1.25	-0.4	-18
34.0	2.34	20.5	1.42	30.8	2.12	7.0	0.48	19.5	1.35	1.4	-17
35.8	2.47	22.0	1.52	32.5	2.24	7.9	0.54	20.9	1.44	3.2	-16
37.7	2.60	23.5	1.62	34.2	2.36	8.8	0.61	22.4	1.54	5.0	-15
39.6	2.73	25.0	1.73	36.0	2.48	9.8	0.68	23.9	1.64	6.8	-14
41.5	2.86	26.6	1.83	37.8	2.61	10.8	0.75	25.4	1.75	8.6	-13
43.6	3.00	28.3	1.95	39.7	2.74	11.9	0.82	27.0	1.86	10.4	-12
45.6	3.15	29.9	2.06	41.6	2.87	12.9	0.89	28.6	1.97	12.2	-11
47.8	3.29	31.7	2.18	43.6	3.01	14.1	0.97	30.3	2.09	14.0	-10
50.0	3.45	33.5	2.31	45.7	3.15	15.2	1.05	32.0	2.21	15.8	-9
52.2	3.60	35.3	2.44	47.8	3.29	16.4	1.13	33.8	2.33	17.6	-8
54.5	3.76	37.2	2.57	49.9	3.44	17.6	1.21	35.6	2.45	19.4	-7
56.9	3.92	39.2	2.70	52.1	3.59	18.8	1.30	37.5	2.58	21.2	-6
59.3	4.09	41.2	2.84	54.4	3.75	20.1	1.39	39.4	2.72	23.0	-5
61.8	4.26	43.3	2.98	56.7	3.91	21.4	1.48	41.4	2.85	24.8	-4
64.3	4.44	45.4	3.13	59.1	4.07	22.8	1.57	43.5	3.00	26.6	-3
67.0	4.62	47.6	3.28	61.5	4.24	24.2	1.67	45.6	3.14	28.4	-2
69.6	4.80	49.8	3.43	64.0	4.41	25.6	1.77	47.7	3.29	30.2	-1
72.4	4.99	52.1	3.59	66.6	4.59	27.1	1.87	49.9	3.44	32.0	0
75.2	5.18	54.5	3.76	69.2	4.77	28.6	1.97	52.2	3.60	33.8	1
78.1	5.38	56.9	3.93	71.9	4.96	30.2	2.08	54.5	3.76	35.6	2
81.0	5.58	59.4	4.10	74.6	5.15	31.8	2.19	56.9	3.93	37.4	3
84.0	5.79	62.0	4.27	77.4	5.34	33.4	2.31	59.4	4.09	39.2	4
87.1	6.01	64.6	4.46	80.3	5.54	35.1	2.42	61.9	4.27	41.0	5
90.3	6.22	67.3	4.64	83.3	5.74	36.9	2.54	64.5	4.45	42.8	6
93.5	6.45	70.1	4.83	86.3	5.95	38.6	2.66	67.2	4.63	44.6	7
96.8	6.67	72.9	5.03	89.4	6.16	40.5	2.79	69.9	4.82	46.4	8
100.2	6.91	75.9	5.23	92.5	6.38	42.4	2.92	72.7	5.01	48.2	9
▲ DEW POINT ▲		▲ BUBBLE POINT ▼									
105.3	7.26	97.9	6.75	96.8	6.67	60.9	4.20	91.1	6.28	50.0	10
108.8	7.50	101.3	6.99	100.1	6.90	63.2	4.36	94.3	6.50	51.8	11
112.5	7.75	104.8	7.23	103.5	7.14	65.6	4.52	97.6	6.73	53.6	12
116.2	8.01	108.4	7.48	106.9	7.37	68.0	4.69	100.9	6.96	55.4	13
119.9	8.27	112.1	7.73	110.5	7.62	70.5	4.86	104.4	7.19	57.2	14
123.8	8.54	115.8	7.99	114.1	7.87	73.0	5.03	107.9	7.44	59.0	15
127.8	8.81	119.7	8.25	117.8	8.12	75.6	5.21	111.4	7.68	60.8	16
131.8	9.09	123.6	8.52	121.5	8.38	78.3	5.40	115.1	7.94	62.6	17
135.9	9.37	127.6	8.79	125.4	8.64	81.0	5.58	118.8	8.19	64.4	18
140.1	9.66	131.6	9.08	129.3	8.91	83.8	5.77	122.7	8.46	66.2	19
144.4	9.96	135.8	9.36	133.3	9.19	86.6	5.97	126.6	8.73	68.0	20
148.8	10.3	140.1	9.66	137.4	9.47	89.5	6.17	130.6	9.00	69.8	21
153.3	10.6	144.4	9.95	141.5	9.76	92.4	6.37	134.6	9.28	71.6	22
157.9	10.9	148.8	10.26	145.8	10.1	95.4	6.58	138.8	9.57	73.4	23
162.5	11.2	153.3	10.57	150.1	10.4	98.5	6.79	143.0	9.86	75.2	24
167.3	11.5	158.0	10.89	154.5	10.7	101.6	7.01	147.3	10.2	77.0	25
172.1	11.9	162.7	11.21	159.1	11.0	104.8	7.23	151.7	10.5	78.8	26
177.1	12.2	167.5	11.55	163.7	11.3	108.1	7.45	156.2	10.8	80.6	27
182.1	12.6	172.4	11.88	168.3	11.6	111.4	7.68	160.8	11.1	82.4	28
187.2	12.9	177.3	12.23	173.1	11.9	114.8	7.92	165.5	11.4	84.2	29
192.5	13.3	182.4	12.58	178.0	12.3	118.3	8.16	170.3	11.7	86.0	30
197.8	13.6	187.6	12.94	183.0	12.6	121.8	8.40	175.1	12.1	87.8	31
203.3	14.0	192.9	13.30	188.0	13.0	125.4	8.65	180.1	12.4	89.6	32
208.8	14.4	198.3	13.67	193.2	13.3	129.1	8.90	185.1	12.8	91.4	33
214.4	14.8	203.8	14.05	198.4	13.7	132.8	9.16	190.3	13.1	93.2	34
220.2	15.2	209.4	14.44	203.8	14.0	136.6	9.42	195.5	13.5	95.0	35
226.1	15.6	215.1	14.83	209.2	14.4	140.5	9.69	200.9	13.8	96.8	36
232.0	16.0	220.9	15.23	214.8	14.8	144.4	9.96	206.3	14.2	98.6	37
238.1	16.4	226.8	15.64	220.4	15.2	148.5	10.2	211.8	14.6	100.4	38
244.3	16.8	232.8	16.05	226.2	15.6	152.6	10.5	217.5	15.0	102.2	39
250.6	17.3	239.0	16.48	232.0	16.0	156.7	10.8	223.2	15.4	104.0	40
257.1	17.7	245.2	16.91	238.0	16.4	161.0	11.1	229.1	15.8	105.8	41
263.6	18.2	251.6	17.35	244.1	16.8	165.3	11.4	235.0	16.2	107.6	42
270.3	18.6	258.1	17.79	250.3	17.3	169.7	11.7	241.1	16.6	109.4	43
277.1	19.1	264.7	18.25	256.6	17.7	174.2	12.0	247.3	17.0	111.2	44
284.0	19.6	271.4	18.71	263.0	18.1	178.7	12.3	253.6	17.5	113.0	45
291.0	20.1	278.2	19.18	269.5	18.6	183.3	12.6	260.0	17.9	114.8	46
298.2	20.6	285.1	19.66	276.1	19.0	188.1	13.0	266.5	18.4	116.6	47
305.5	21.1	292.2	20.15	282.8	19.5	192.8	13.3	273.1	18.8	118.4	48
312.9	21.6	299.4	20.64	289.7	20.0	197.7	13.6	279.8	19.3	120.2	49
320.4	22.1	306.7	21.15	296.7	20.5	202.7	14.0	286.7	19.8	122.0	50
335.9	23.2	321.7	22.18	311.0	21.4	212.8	14.7	300.7	20.7	125.6	52
352.0	24.3	337.2	23.25	325.8	22.5	223.4	15.4	315.3	21.7	129.2	54
368.6	25.4	353.3	24.36	341.1	23.5	234.2	16.1	330.3	22.8	132.8	56
385.9	26.6	369.8	25.50	356.9	24.6	245.4	16.9	345.8	23.8	136.4	58
403.7	27.8	387.0	26.68	373.3	25.7	257.0	17.7	361.9	24.9	140.0	60
422.2	29.1	404.6	27.90	390.2	26.9	268.9	18.5	378.4	26.1	143.6	62
441.4	30.4	422.9	29.16	407.7	28.1	281.2	19.4	395.5	27.3	147.2	64
461.3	31.8	441.7	30.45	425.8	29.4	293.9	20.3	413.2	28.5	150.8	66
482.0	33.2	461.1	31.79	444.4	30.6	307.0	21.2	431.4	29.7	154.4	68
503.5	34.7	481.2	33.18	463.7	32.0	320.5	22.1	450.3	31.0	158.0	70
525.8	36.3	501.8	34.60	483.7	33.3	334.4	23.1	469.7	32.4	161.6	72
**	**	523.1	36.07	504.3	34.8	348.7	24.0	489.6	33.8	165.2	74

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 = Bru/hr
 HP x 746 = watts
 ton (refr) x 3517 = watts

Temperature

°C = (°F - 32) ÷ 1.8
 °F = (°C x 1.8) + 32

Pressure

kPa ÷ 6.89 = psi
 inch Hg x 3.39 = kPa
 inch H₂O x 0.249 = kPa
 mm Hg (1 torr) x 0.133 = kPa

Volume

ft³ x 0.02832 = m³

Volume Flow

cfm x 0.472 = l/s
 fpm x 0.00508 = m/s
 imp. gal/min x

PRESSURE TEMPERATURE CHART

Temp °C	Pressure kPa (gauge)												
	R134A	R407F		R404A		R409A		R407C		R410A		R32	R22
		Bubble	Dew	Bubble	Dew	Bubble	Dew	Bubble	Dew	Bubble	Dew		
-50	-71.874	-18.069	-42.428	-17.089	-20.32	-53.478	-71.716	-27.494	-51.104	7.657	7.2268	8.8179	-36.795
-48	-68.274	-9.2509	-35.602	-8.3529	-11.787	-48.276	-68.125	-19.602	-45.186	19.021	18.554	20.304	-29.877
-46	-64.322	0.29296	-28.155	1.082	-2.5618	-42.632	-64.189	-11.051	-38.719	31.304	30.797	32.721	-22.382
-44	-59.996	10.604	-20.048	11.253	7.3932	-36.519	-59.884	-1.8048	-31.667	44.555	44.005	46.121	-14.276
-42	-55.27	21.725	-11.241	22.2	18.117	-29.91	-55.186	8.1763	-23.992	58.827	58.231	60.558	-5.5252
-40	-50.116	33.699	-1.6906	33.963	29.65	-22.779	-50.069	18.932	-15.657	74.172	73.528	76.086	3.9063
-38	-44.508	46.571	8.646	46.581	42.033	-15.095	-44.506	30.504	-6.6211	90.647	89.95	92.762	14.054
-36	-38.417	60.386	19.814	60.096	55.307	-6.8303	-38.471	42.933	3.1562	108.31	107.55	110.64	24.956
-34	-31.813	75.191	31.858	74.551	69.515	2.0452	-31.935	56.264	13.717	127.21	126.39	129.79	36.648
-32	-24.667	91.033	44.827	89.989	84.7	11.562	-24.869	70.539	25.105	147.41	146.53	150.26	49.171
-30	-16.947	107.96	58.768	106.45	100.91	21.751	-17.244	85.804	37.365	168.97	168.02	172.12	62.563
-28	-8.6217	126.02	73.731	123.99	118.18	32.645	-9.0283	102.1	50.541	191.95	190.93	195.42	76.863
-26	0.34267	145.27	89.767	142.64	136.57	44.275	-0.19145	119.49	64.681	216.42	215.32	220.24	92.114
-24	9.9795	165.76	106.93	162.46	156.11	56.675	9.299	138	79.833	242.43	241.24	246.64	108.36
-22	20.323	187.53	125.26	183.49	176.86	69.878	19.476	157.69	96.045	270.04	268.77	274.68	125.63
-20	31.41	210.64	144.83	205.78	198.87	83.919	30.373	178.61	113.37	299.33	297.97	304.43	143.99
-18	43.275	235.15	165.69	229.37	222.18	98.831	42.025	200.8	131.85	330.37	328.9	335.96	163.46
-16	55.957	261.11	187.88	254.32	246.84	114.65	54.467	224.32	151.55	363.21	361.64	369.34	184.1
-14	69.492	288.57	211.48	280.67	272.9	131.41	67.734	249.22	172.51	397.92	396.24	404.65	205.95
-12	83.919	317.6	236.54	308.48	300.42	149.15	81.864	275.54	194.8	434.58	432.78	441.94	229.06
-10	99.278	348.24	263.11	337.8	329.44	167.91	96.892	303.35	218.46	473.25	471.33	481.31	253.46
-8	115.61	380.55	291.26	368.68	360.02	187.71	112.86	332.7	243.55	514.01	511.96	522.81	279.21
-6	132.95	414.6	321.05	401.17	392.21	208.61	129.8	363.64	270.13	556.93	554.74	566.53	306.36
-4	151.35	450.44	352.55	435.33	426.07	230.63	147.76	396.22	298.26	602.08	599.74	612.55	334.96
-2	170.84	488.13	385.8	471.21	461.65	253.82	166.77	430.51	327.99	649.54	647.05	660.94	365.04
0	191.48	527.73	420.89	508.87	499.01	278.21	186.88	466.54	359.39	699.38	696.73	711.78	396.66
2	213.29	569.31	457.88	548.36	538.19	303.85	208.12	504.4	392.52	751.68	748.86	765.15	429.88
4	236.34	612.92	496.83	589.73	579.27	330.76	230.54	544.12	427.43	806.51	803.52	821.13	464.73
6	260.65	658.62	537.81	633.05	622.29	359	254.18	585.77	464.2	863.96	860.79	879.8	501.27
8	286.29	706.49	580.89	678.38	667.32	388.59	279.09	629.4	502.89	924.11	920.75	941.26	539.55
10	313.28	756.58	626.14	725.77	714.42	419.59	305.3	675.08	543.56	987.04	983.48	1005.6	579.62
12	341.69	808.95	673.64	775.29	763.65	452.02	332.86	722.87	586.28	1052.8	1049.1	1072.9	621.54
14	371.55	863.68	723.45	826.99	815.07	485.94	361.82	772.82	631.11	1121.6	1117.6	1143.2	665.35
16	402.93	920.83	775.65	880.94	868.73	521.38	392.21	825	678.13	1193.3	1189.1	1216.6	711.11
18	435.85	980.46	830.32	937.2	924.72	558.38	424.1	879.46	727.41	1268.2	1263.8	1293.3	758.88
20	470.38	1042.6	887.53	995.84	983.09	596.98	457.52	936.27	779.01	1346.3	1341.7	1373.2	808.69
22	506.57	1107.4	947.37	1056.9	1043.9	637.23	492.51	995.5	833.02	1427.7	1422.8	1456.6	860.62
24	544.46	1174.9	1009.9	1120.5	1107.2	679.17	529.14	1057.2	889.5	1512.4	1507.3	1543.5	914.72
26	584.1	1245.2	1075.2	1186.7	1173.2	722.84	567.44	1121.4	948.54	1600.7	1595.4	1634	971.03
28	625.56	1318.2	1143.4	1255.5	1241.7	768.28	607.46	1188.3	1010.2	1692.5	1686.9	1728.2	1029.6
30	668.87	1394.2	1214.6	1327	1313.1	815.53	649.27	1257.8	1074.6	1788	1782.2	1826.2	1090.6
32	714.1	1473.2	1288.8	1401.3	1387.2	864.64	692.9	1330	1141.7	1887.3	1881.3	1928.1	1153.9
34	761.3	1555.1	1366.1	1478.5	1464.2	915.65	738.4	1405.1	1211.8	1990.5	1984.2	2034	1219.6
36	810.52	1640.2	1446.7	1558.7	1544.2	968.61	785.83	1483	1284.8	2097.6	2091.1	2144.1	1287.9
38	861.83	1728.5	1530.6	1641.8	1627.2	1023.5	835.25	1563.9	1360.8	2208.9	2202.1	2258.3	1358.8
40	915.27	1820.1	1618	1728.1	1713.3	1080.5	886.7	1647.7	1440	2324.3	2317.4	2377	1432.3
42	970.9	1915	1708.8	1817.6	1802.7	1139.6	940.25	1734.7	1522.4	2444.1	2437	2500.1	1508.4
44	1028.8	2013.3	1803.3	1910.3	1895.4	1200.7	995.94	1824.8	1608.2	2568.4	2561	2627.8	1587.4
46	1089	2115.2	1901.6	2006.5	1991.5	1264.1	1053.8	1918.1	1697.3	2697.2	2689.7	2760.3	1669.1
48	1151.6	2220.6	2003.8	2106.1	2091.1	1329.6	1114	2014.7	1790.1	2830.8	2823.2	2897.6	1753.8
50	1216.6	2329.7	2109.9	2209.3	2194.4	1397.4	1176.5	2114.7	1886.4	2969.2	2961.5	3039.9	1841.4
52	1284.1	2442.5	2220.2	2316.2	2301.4	1467.5	1241.3	2218.1	1986.6	3112.7	3104.9	3187.4	1932
54	1354.2	2559.2	2334.7	2427	2412.3	1540	1308.6	2325.1	2090.6	3261.4	3253.6	3340.1	2025.7
56	1426.9	2679.8	2453.7	2541.7	2527.2	1614.8	1378.5	2435.6	2198.7	3415.4	3407.7	3498.4	2122.6
58	1502.3	2804.5	2577.3	2660.5	2646.3	1692.1	1450.8	2549.9	2310.9	3575.1	3567.4	3662.2	2222.7
60	1580.5	2933.2	2705.6	2783.5	2769.7	1771.9	1525.9	2667.9	2427.4	3740.5	3733	3831.9	2326.2

** Exceeds critical temperature. Italic figures indicate vacuum in units of inches of Hg (psig scale) or mm of Hg (barg scale).

Pressure kPa (gauge)									Temp °C
R438A*		R507	R744	R717	SP34E		R600A	R290	
Bubble	Dew		CO ₂	NH ₃	Bubble	Dew	ISO-Butane	Propane	
-31.968	-52.113	-14.949	581.02	-60.489	-60.686	-68.08	-84.528	-30.756	-50
-24.542	-46.341	-5.9972	638.17	-55.414	-56.175	-64.045	-82.545	-23.766	-48
-16.497	-40.038	3.6694	698.83	-49.83	-51.264	-59.623	-80.376	-16.243	-46
-7.7981	-33.17	14.09	763.12	-43.699	-45.928	-54.787	-78.008	-8.1608	-44
1.5922	-25.7	25.303	831.19	-36.98	-40.139	-49.508	-75.428	0.50954	-42
11.711	-17.593	37.35	903.17	-29.633	-33.872	-43.759	-72.623	9.7962	-40
22.597	-8.8098	50.272	979.19	-21.614	-27.096	-37.51	-69.577	19.728	-38
34.288	0.68768	64.111	1059.4	-12.878	-19.784	-30.731	-66.278	30.335	-36
46.827	10.94	78.911	1143.9	-3.3793	-11.905	-23.39	-62.709	41.646	-34
60.253	21.987	94.715	1232.9	6.9313	-3.4284	-15.455	-58.856	53.693	-32
74.608	33.872	111.57	1326.4	18.103	5.6776	-6.8929	-54.703	66.507	-30
89.935	46.637	129.52	1424.7	30.189	15.445	2.3301	-50.233	80.119	-28
106.28	60.327	148.61	1527.9	43.241	25.908	12.249	-45.43	94.561	-26
123.68	74.987	168.88	1636.2	57.314	37.101	22.899	-40.276	109.87	-24
142.19	90.662	190.4	1749.6	72.466	49.057	34.317	-34.755	126.06	-22
161.84	107.4	213.2	1868.3	88.754	61.813	46.539	-28.848	143.19	-20
182.7	125.25	237.33	1992.5	106.24	75.406	59.605	-22.537	161.28	-18
204.8	144.26	262.84	2122.4	124.98	89.871	73.551	-15.803	180.37	-16
228.19	164.47	289.8	2258	145.04	105.25	88.419	-8.6279	200.49	-14
252.92	185.95	318.23	2399.6	166.49	121.57	104.25	-0.99178	221.67	-12
279.03	208.74	348.21	2547.4	189.39	138.89	121.08	7.125	243.95	-10
306.59	232.89	379.78	2701.4	213.81	157.23	138.95	15.742	267.37	-8
335.64	258.45	412.99	2861.8	239.81	176.65	157.91	24.881	291.97	-6
366.22	285.49	447.91	3028.9	267.47	197.17	177.99	34.561	317.76	-4
398.4	314.05	484.58	3202.9	296.87	218.85	199.24	44.804	344.81	-2
432.22	344.2	523.06	3383.8	328.06	241.72	221.71	55.631	373.13	0
467.73	375.98	563.41	3572	361.13	265.83	245.44	67.063	402.77	2
504.99	409.46	605.69	3767.5	396.16	291.23	270.47	79.123	433.77	4
544.06	444.7	649.95	3970.7	433.21	317.95	296.85	91.833	466.16	6
584.98	481.75	696.26	4181.7	472.37	346.04	324.63	105.21	499.99	8
627.82	520.67	744.67	4400.9	513.72	375.55	353.84	119.29	535.28	10
672.62	561.53	795.25	4628.3	557.34	406.52	384.55	134.08	572.08	12
719.45	604.4	848.06	4864.4	603.31	439.01	416.79	149.62	610.42	14
768.36	649.32	903.16	5109.5	651.71	473.05	450.62	165.91	650.35	16
819.4	696.37	960.62	5363.8	702.63	508.7	486.08	183	691.91	18
872.64	745.62	1020.5	5627.7	756.15	546	523.22	200.9	735.14	20
928.14	797.13	1082.9	5901.8	812.36	585.01	562.1	219.63	780.07	22
985.95	850.98	1147.8	6186.4	871.35	625.78	602.76	239.22	826.74	24
1046.1	907.22	1215.4	6482.4	933.21	668.35	645.26	259.69	875.21	26
1108.8	965.94	1285.6	6790.5	998.02	712.78	689.64	281.08	925.5	28
1173.9	1027.2	1358.7	7112.4	1065.9	759.12	735.96	303.4	977.67	30
1241.5	1091.1	1434.6	*critical temp 31°C	1136.9	807.43	784.28	326.67	1031.8	32
1311.8	1157.7	1513.4		1211.1	857.75	834.64	350.94	1087.8	34
1384.8	1227	1595.2		1288.6	910.14	887.11	376.21	1145.8	36
1460.5	1299.3	1680.2		1369.6	964.67	941.73	402.51	1205.9	38
1539.1	1374.4	1768.3		1454.1	1021.4	998.57	429.88	1268.1	40
1620.5	1452.7	1859.7		1542.2	1080.3	1057.7	458.34	1332.4	42
1704.9	1534	1954.4		1634	1141.6	1119.1	487.91	1398.9	44
1792.3	1618.5	2052.6		1729.6	1205.2	1183	518.62	1467.6	46
1882.8	1706.4	2154.4		1829.2	1271.2	1249.2	550.5	1538.6	48
1976.4	1797.7	2259.9		1932.7	1339.8	1318	583.57	1612	50
2073.3	1892.5	2369.2		2040.4	1410.9	1389.4	617.87	1687.7	52
2173.5	1990.9	2482.4		2152.3	1484.6	1463.4	653.42	1765.8	54
2277.2	2093.2	2599.7		2268.5	1560.9	1540.2	690.24	1846.5	56
2384.2	2199.3	2721.3		2389.1	1640.1	1619.7	728.37	1929.7	58
2494.9	2309.4	2847.3		2514.3	1722	1702.1	767.84	2015.4	60

A-GAS®

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 = Bru/hr
 HP x 746 = watts
 ton (refr) x 3517 = watts

Temperature

$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \div 1.8$
 $^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$

Pressure

kPa ÷ 6.89 = psi
 inch Hg x 3.39 = kPa
 inch H₂O x 0.249 = kPa
 mm Hg (1 torr) x 0.133 = kPa

Volume

ft³ x 0.02832 = m³

Volume Flow

cfm x 0.472 = l/s
 fpm x 0.00508 = m/s
 imp. gal/min x 0.0758 = l/s
 U.S. gal/min x 0.0631 = l/s

Velocity

fps x 0.3048 = m/s
 fpm x 0.00508 = m/s

Please note:

This chart is intended as a guide only.

COOLROOM + FREEZER **QUICK** SELECTION

Totaline

Coolroom Quick Selection Guide

Outside Dimensions	Coolroom +2 Deg.C SST/ 38 Deg.C Ambient				Equipment						
L X W X 2.4m Height	Int Vol M³	Product Load Kg /24hrs	Room Usage	16 /24 hrs Watts	Condensing Unit	Evaporator	TX Valve	Orifice	Controller	Drier	Sight Glass
1.8 X 1.2	5.1	80-550	Medium	1200	EMBUT6217GK	TEM16	SPORJ8EF-SW	SPORJ8C-01	ELIID961/230V	C-053	700078P
			Heavy	1600	EMBNT6222GK	TEM17	SPORJ8EF-SW	SPORJ8C-01	ELIID961/230V	C-053	700078P
1.8 x 1.8	7.7	140	Medium	1450	EMBNT6222GK	TEM16	SPORJ8EF-SW	SPORJ8C-01	ELIID961/230V	C-053	700078P
			Heavy	2000	EMBNJ9226GK	TEM23	SPORJ8EF-SW	SPORJ8C-02	ELIID961/230V	C-083	700078P
2.4 x 1.8	10.36	180	Medium	1650	EMBNJ9226GK	TEM17	SPORJ8EF-SW	SPORJ8C-02	ELIID961/230V	C-083	700078P
			Heavy	2250	EMBNJ9232GK	TEM23	SPORJ8EF-SW	SPORJ8C-02	ELIID961/230V	C-083	700078P
2.4 x 2.4	13.8	250	Medium	2100	EMBNJ9232GK	TEM23	SPORJ8EF-SW	SPORJ8C-02	ELIID961/230V	C-083	700078P
			Heavy	2750	EMBNJ9238GK	TEM26	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P
3.0 x 2.4	17.2	320	Medium	2400	EMBNJ9238GK	TEM23	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P
			Heavy	3150	EMEICMN110BE	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P
3.0 x 3.0	21.6	400	Medium	2750	EMBNJ9238GK	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P
			Heavy	3550	EMEICMN110BE	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P
3.6 x 2.4	20.7	380	Medium	2700	EMBNJ9238GK	TEM26	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P
			Heavy	3500	EMEICMN140BE	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P
3.6 x 3.0	25.9	480	Medium	3050	EMEICMN110BE	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P
			Heavy	4000	EMEICMN140BE	TEM40	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P
3.6 x 3.6	31.1	580	Medium	3400	EMEICMN110BE	TEM35	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-083	700078P
			Heavy	4600	EMEICMN140BE	TEM51	SPORJ8EF-SW	SPORJ8C-04	ELIID961/230V	C-162	700078P
4.8 x 3.6	41.4	780	Medium	4150	EMEICMN140BE	TEM40	SPORJ8EF-SW	SPORJ8C-03	ELIID961/230V	C-162	700078P
			Heavy	5350	EMEIZSI09BE-TFM-500	TEM53	SPORJ8EF-SW	SPORJ8C-04	ELIID961/230V	C-162	700078P
4.8 x 4.8	55.2	1050	Medium	5150	EMEIZSI09BE-TFM-500	TEM51	SPORJ8EF-SW	SPORJ8C-04	ELIID961/230V	C-162	700078P
			Heavy	6500	EMEIZSI011BF-TFM-500	TFM62	SPORJ8EF-SW	SPORJ8C-05	ELIID961/230V	C-162	700078P

Allow extra 550W per glass door insert

Capacity based on the following

Coolroom 75mm Styrene insulation, Pull down time : 16/24 hrs
Product entering 8 Deg above Cool Room temperature,

Totaline

Freezer Quick Selection Guide

Outside Dimensions	Coolroom -18 Deg.C SST/ 38 Deg.C Ambient				Equipment						
L X W X 2.4m Height	Int Vol M³	Product Load Kg /24hrs	Room Usage	16 /24 hrs Watts	Condensing Unit	Evaporator	TX Valve	Orifice	Controller	Drier	Sight Glass
1.8 X 1.2	5.1	60	Medium	1100	EMBUNJ2212GK	TEL15	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-053	700078P
			Heavy	1350	EMBUNJ2212GK	TEL15	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-053	700078P
1.8 x 1.8	7.7	100	Medium	1150	EMBUNJ2212GK	TEL15	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-053	700078P
			Heavy	1650	EMEIZSI06AE-PFZ-500	TEL22	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-083	700078P
2.4 x 1.8	10.36	140	Medium	1300	EMBUNJ2212GK	TEL15	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-083	700078P
			Heavy	1850	EMEIZSI06AE-PFZ-500	TEL22	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
2.4 x 2.4	13.8	190	Medium	1450	EMBUNJ2212GK	TEL15	SPORJ8ES-SW	SPORJ8C-01	EL11974/230	C-083	700078P
			Heavy	2350	EMEIZSI08AE-PFZ-500	TEL25	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
3.0 x 2.4	17.2	250	Medium	1900	EMEIZSI06AE-PFZ-500	TEL22	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
			Heavy	2600	EMEIZSI09BE-TFM-500	TEL25	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
3.0 x 3.0	21.6	320	Medium	2100	EMEIZSI06AE-PFZ-500	TEL22	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
			Heavy	2950	EMEIZSI09BE-TFM-500	TEL31	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
3.6 x 2.4	20.7	310	Medium	2050	EMEIZSI06AE-PFZ-500	TEL22	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
			Heavy	2850	EMEIZSI09BE-TFM-500	TEL28	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
3.6 x 3.0	25.9	390	Medium	2350	EMEIZSI08AEPFZ-500	TEL25	SPORJ8ES-SW	SPORJ8C-02	EL11974/230	C-083	700078P
			Heavy	3300	EMEIZSI011BE-TFM-500	TEL38	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
3.6 x 3.6	31.1	480	Medium	2550	EMEIZSI08AE-PFZ-500	TEL28	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
			Heavy	3550	EMEIZSI011BE-TFM-500	TEL38	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
4.8 x 3.6	41.4	660	Medium	3350	EMEIZSI011BE-TFM-500	TEL38	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
			Heavy	4500	EMEIZSI14CE-TFM-500	TFL48	SPORJ8ES-SW	SPORJ8C-04	EL11974/230	C-083	700078P
4.8 x 4.8	55.2	890	Medium	3550	EMEIZSI011BE-TFM-500	TEL38	SPORJ8ES-SW	SPORJ8C-03	EL11974/230	C-083	700078P
			Heavy	5050	EMEIZSI18DE-TFM-500	TFL54	SPORJ8ES-SW	SPORJ8C-04	EL11974/230	C-163	700247P

Allow extra 600W per glass door insert

Capacity based on the following

Freezer Room 150mm Styrene insulation with 150mm floor insulation

Product entering pre frozen only, pull down time : 16/24 hrs



COOLSELECT

A selection of coolroom/freezer equipment

The information that you provide below will be used as the basis for selection advice. Totaline takes no responsibility for advice if the information is incorrect, changed without notice or if assumptions need to be made if information is incomplete. Fax back to: 03 8326 7099. Enquiries: 03 8551 0386

Company:	Date:
Contact Name:	Ph:
Address:	Fx:
	Acc. No:
1. Application	
2. Room Dimensions: (L) (W) (H) Internal/External	
3. Insulation Thickness & Type:	
Walls	
Ceilings	
Floor	
4. Storage room Temp.	5. Ambient /Surrounding air temp.
6a. Type of product:	
6b. If packaged, type of packaging:	
6c. Weight of product entering room per day:	6d. Temp of product entering room:
6e. Product pull down time required:	
7. Type of Usage: Average/Heavy	8. Room lighting: Watts. Hrs/day
9. Number & size of glass doors	
10. Number of people working in room	Hrs/day
11. Forklift operating in room: Yes/No	Hrs/day
12. Total weight of product stored in room (fruit& veg rooms only):	
13. Are any areas of room directly exposed to sun: Yes/No	
14. Electrical supply available: 240V 1PH 50Hz 415 3PH 5-Hz	
15. Additional information:	
Form completed by:	Customer's signature:



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12. Total weight of product stored in room (fruit& veg rooms only):	
13. Are any areas of room directly exposed to sun: Yes/No	
14. Electrical supply available: 240V 1PH 50Hz 415 3PH 5-Hz	
15. Additional information:	
Form completed by:	Customer's signature:

TOTALINE

COOLSELECT

A selection of coolroom/freezer equipment

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Company:	Date:
Contact Name:	Ph:
Address:	Fx:
	Acc. No:
1. Application	
2. Room Dimensions: (L) (W) (H) Internal/External	
3. Insulation Thickness & Type:	
Walls	
Ceilings	
Floor	
4. Storage room Temp.	5. Ambient /Surrounding air temp.
6a. Type of product:	
6b. If packaged, type of packaging:	
6c. Weight of product entering room per day:	6d. Temp of product entering room:
6e. Product pull down time required:	
7. Type of Usage: Average/Heavy	8. Room lighting: Watts. Hrs/day
9. Number & size of glass doors	
10. Number of people working in room	Hrs/day
11. Forklift operating in room: Yes/No	Hrs/day
12. Total weight of product stored in room (fruit& veg rooms only):	
13. Are any areas of room directly exposed to sun: Yes/No	
14. Electrical supply available: 240V 1PH 50Hz 415 3PH 5-Hz	
15. Additional information:	
Form completed by:	Customer's signature:

NOTES



EASE OF INSTALLATION

FACTORYTM
AUTHORIZED
PARTS

ENGINEERED QUALITY



AHIC (Australia) Pty Ltd

A Carrier Joint Venture Company

TOTALINK : 1300 657 278

BRANCH LOCATIONS

VIC

Clayton (Head Office)
154 Wellington Road,
Clayton, VIC 3168
(03) 8549 7077

Mitcham

617 Whitehorse Road,
Mitcham, VIC 3132
(03) 9002 2970

Southbank

335 City Road,
Southbank, VIC 3006
(03) 8326 7070

QLD

Acacia Ridge

8 Murdoch Circuit,
Acacia Ridge, QLD 4110
(07) 3711 0800

Townsville

27 Mackley Street,
Townsville, QLD 4814
(07) 4762 7240

NSW

Alexandria

4 Doody Street,
Alexandria, NSW 2015
(02) 9154 4930

Silverwater

46-48 Derby Street,
Silverwater, NSW 2128
(02) 9202 4490

Newcastle

66 Broadmeadow Road,
Broadmeadow, NSW 2292
(02) 4908 5890

WA

Belmont

243 Great Eastern Hwy,
Belmont, WA 6104
(08) 9232 7150

NT

Winnellie

13 Swan Crescent,
Winnellie, NT 0821
(08) 8935 9444

SA

Mile End South

177 Railway Terrace,
Mile End South, SA 5031
(08) 8400 3911

Suppliers to the air-conditioning, heating and refrigeration trade.

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