

COMMERCIAL REFRIGERATION COMPRESSORS



COPELAND™



EMERSON™

Emerson At-a-Glance

- Founded In 1890
- 200 Manufacturing Locations
- Featured in the Fortune 500 list of America's Largest Corporations by revenue



Headquarters in St. Louis, Mo.

About Emerson

Emerson is a global technology and engineering company providing innovative solutions for customers in industrial, commercial, and residential markets. Our Emerson Commercial and Residential Solutions business helps ensure human comfort and health, protect food quality and safety, advance energy efficiency, and create sustainable infrastructure.

Emerson provides advanced compressors, condensing units, flow control systems and electronic controls to protect food quality while enabling operators to maximize equipment uptime and increase energy efficiency. Fractional and Integral Horse Power compressors provide

perfect cooling, creating value for its users. The compressors are manufactured at a state-of-the-art India plant located at Atit, in Maharashtra.

The performance of the compressors is optimized using Computer Aided Engineering facilities with the components being subjected to stringent Emerson qualification standards. Additionally the compressor performance is validated by testing in a suitable appliance at an ambient of 46°C.

The countrywide sales and service network of Emerson is geared to provide prompt after sales service to our customers.



Psychrometric Lab Facility at Karad, India

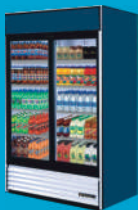


Manufacturing Plant at Atit, India



Copeland™ Reciprocating Compressors

Partner For All Your Cooling Needs With
Energy Efficient And Rugged Designs



Visi Cooler

KCE 1/6 to 1/2 HP R22,
R134a



ECZ 0.17 - 0.46 HP
R134a, R404A



Freezer on Wheels

CRK6/KCM 1.3 to 3 1/2
HP, R22, R134a, R404A



Split AC



Cold Room

KCN 1/6 to 1/2 HP R134a,
R404A



Deep Freezer



Display Cabinet

KCJ 1 to 1 1/4 HP R22,
R404A



Bulk Milk Cooler

CRKQM 4 to 6HP R22



KCJ 1/4 to 1HP R22, R134a,
R404A



Water Cooler

Product Range Serving your High, Medium & Low Temp Applications



FHP Applications

Low Back Pressure

- Chest Freezers
- Softy Machines
- Ice Cube Machine
- Centrifuge, Low Temp. Baths
- Blood / Plasma Storage
- Freezer on Wheels

Commercial Back Pressure

- Chest Coolers
- Display Cabinets
- Visi-Coolers

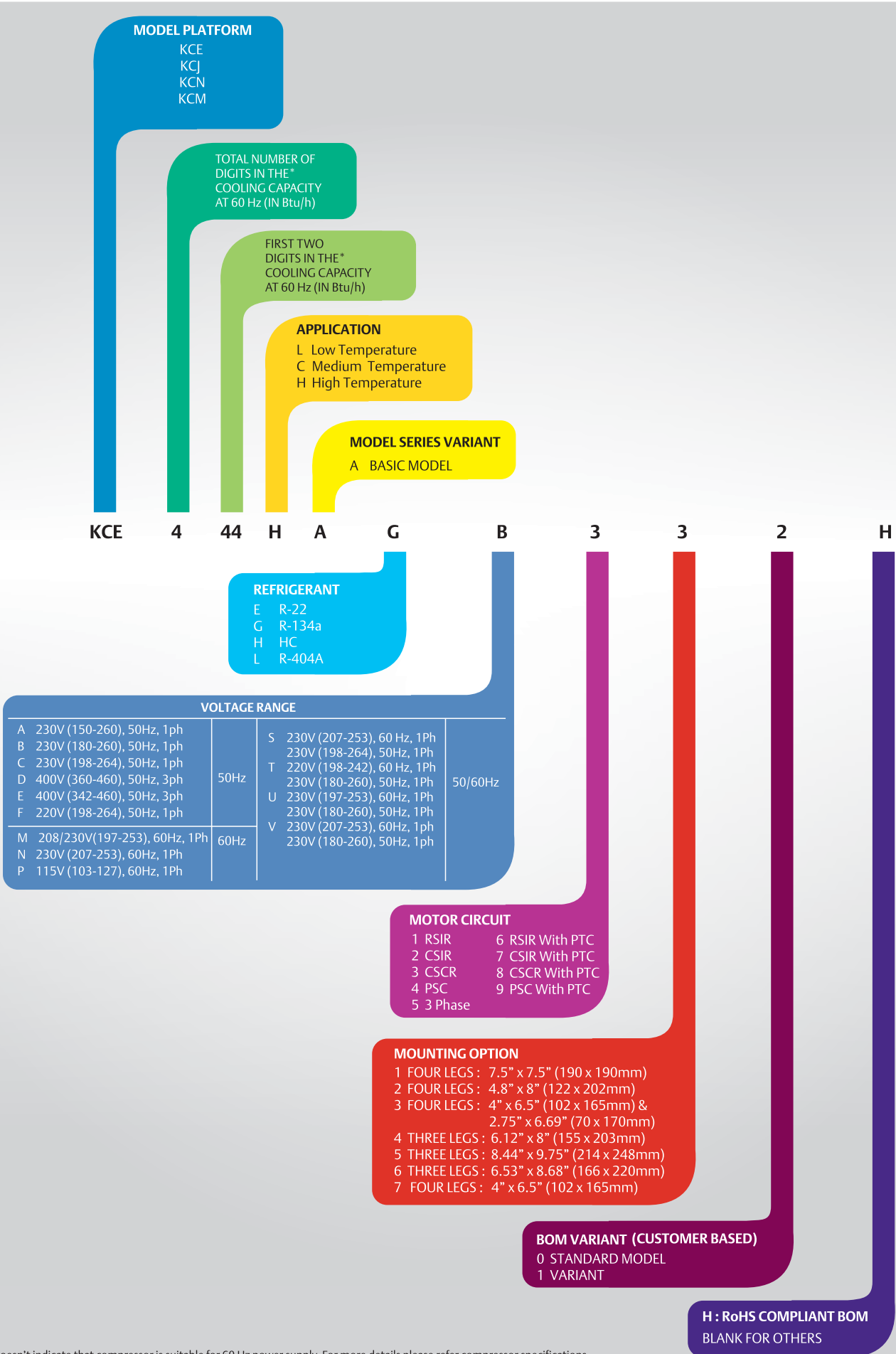
High Back Pressure

- Water-Coolers
- Air Dryers, Panel Coolers
- Oil-Coolers

IHP Applications

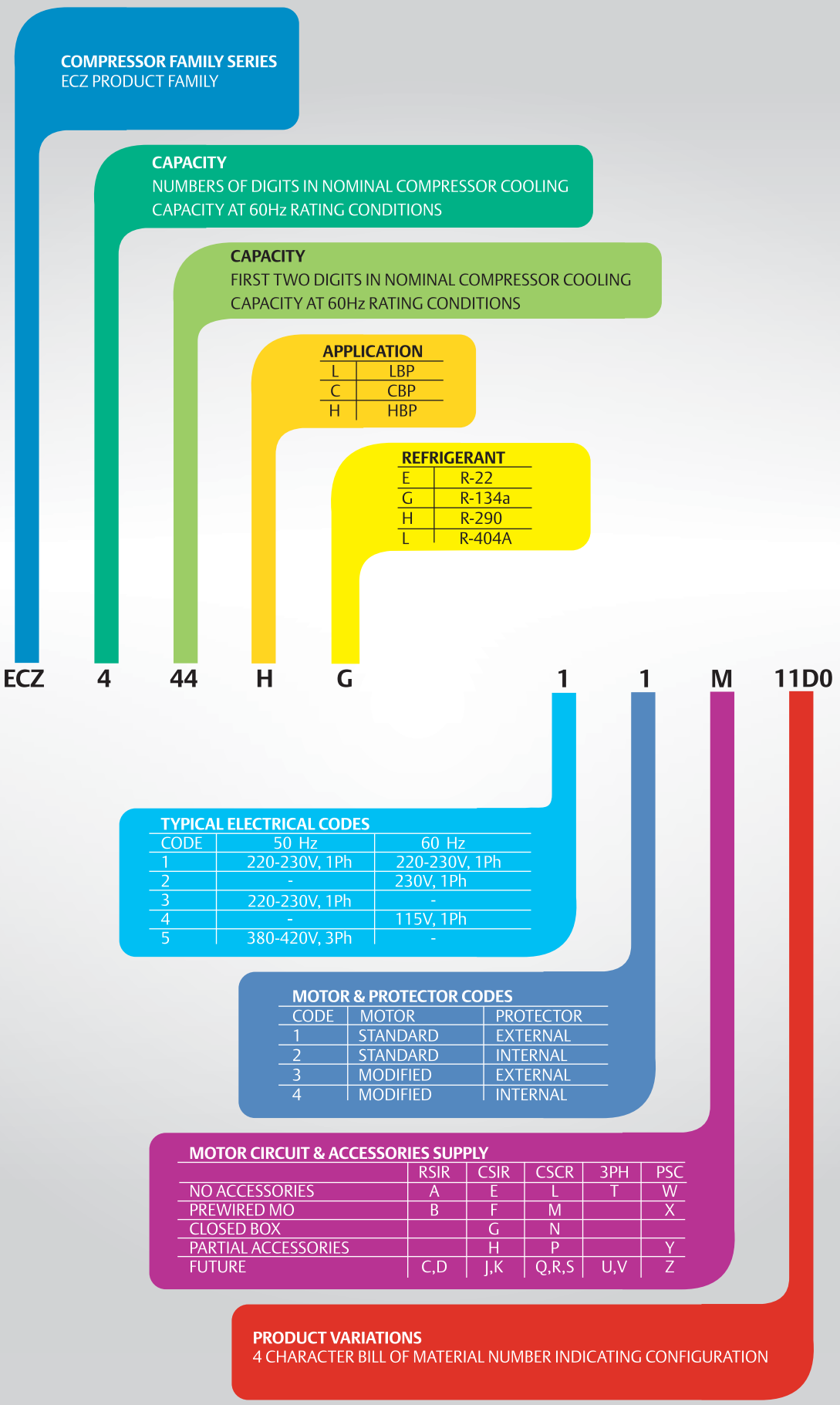
- Multi Deck
- Cabinet
- Island Freezer
- Cold Rooms
- Small Flake Ice Machines
- Environmental Chamber
- Clean Air Room
- Water Chiller
- Bulk Milk Cooler

KCX Series Compressor Nomenclature

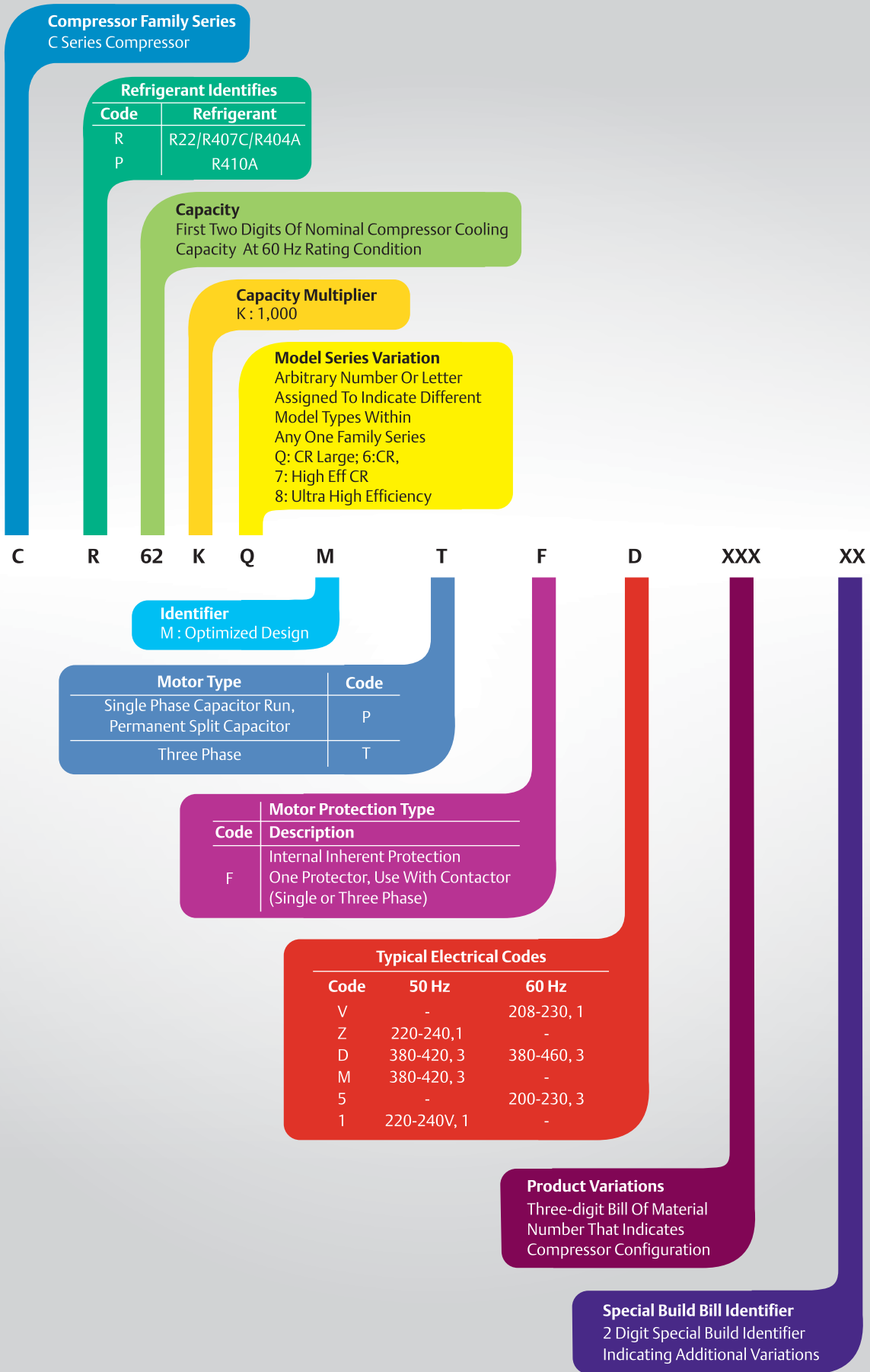


* It doesn't indicate that compressor is suitable for 60 Hz power supply. For more details please refer compressor specifications

ECZ Series Compressor Nomenclature



CR Series Compressor Nomenclature



Performance Nominals And Specifications

R22

R134a

High Temperature

Model	Hz	Displacement (CC/rev)	Performance at ASRE/T Rated Condition				Refrigeration Capacity (Watts) #						
			Capacity		Power	Current	Evap. Temp. / Cond. Temp. (°C)	-17.8	-15	-10	-5	0	5
			Btu/hr	W	W	A							
R22, 1Phase													
KCE443HAE	50	8.00	3600	1055	460	2.10	43.3	-	-	-	692	894	1125
							54.4	-	-	-	543	731	919
KCE461HAE	50	11.50	5100	1494	625	2.90	43.3	-	-	-	1047	1323	1649
	60		6103	1787	740	3.30	43.3	-	-	-	1246	1574	1964
							54.4	-	-	-	1001	1289	1605
KCJ511HAE	50	18.27	9150	2681	1020	4.70	43.3	-	-	-	1647	2025	2807
	60		10505	3076	1175	5.30	43.3	-	-	-	1911	2348	3256
							54.4	-	-	-	1500	1847	2652
KCJ513HAE	50	25.91	12800	3750	1440	6.80	43.3	1605	1732	1981	2422	3065	3772
	60		14507	4248	1720	7.96	43.3	1306	1419	1681	2067	2573	3220
							54.4	1830	2001	2258	2761	3494	4301
CR22K6M-PF1	50	40.80	19000	5563	1750	7.80	43.3	1489	1618	1917	2357	2933	3671
							54.4	1421	1909	2803	3740	4783	6017
CR30K6M-PF1	50	51.47	25000	7330	2350	11.00	43.3	-	-	2065	2912	3822	4881
							54.4	2021	2559	3666	4946	6340	7916
CR36K6M-PFZ	50	59.65	30100	8814	2720	13.60	43.3	-	-	2734	3915	5162	6572
							54.4	2412	3120	4526	5965	7563	9366
CR42K6M-PFZ	50	72.08	36100	10572	3240	15.40	43.3	-	-	3264	4774	6220	7847
							54.4	3203	3882	5300	7018	9014	11282
CR47KQM-PFZ	50	82.74	41752	12226	3950	20.00	43.3	2842	3992	6091	8285	10560	12932
	60		47500	13921	4650	22.00	43.3	-	-	4700	6729	8772	10866
CR47KQM-PFV	60						43.3	4248	5406	7489	9732	12311	15179
							54.4	-	-	6004	8034	10261	12720
R22, 3 Phase													
CR22K6M-TFM	50	40.80	18350	5373	1750	3.20	43.3	1454	1906	2649	3571	4666	5952
							54.4	2188	-	1930	2733	3690	4805
CR30K6M-TFM	50	51.47	24400	7144	2275	4.20	43.3	2050	2647	3697	4857	6132	7638
							54.4	-	-	2773	3787	4893	6224
CR36K6M-TFM	50	59.66	29900	8755	2680	4.90	43.3	2556	3222	4496	5931	7515	9301
							54.4	-	-	3405	4744	6188	7796
CR42K6M-TFM	50	72.09	35100	10278	3300	6.10	43.3	3382	4014	5367	6979	8823	10977
							54.4	-	-	4231	5594	7227	9114
CR47KQM-TFD	50	78.78	40692	11916	3825	6.90	43.3	4583	5325	6756	8387	10227	12522
	60		48379	14167	4550	6.80	43.3	-	5722	7239	8986	10791	13110
							54.4	5534	6431	8170	10148	12351	15110
CR53KQM-TFD	50	88.28	45800	13411	4350	7.70	43.3	-	-	7436	9434	11796	15251
	60		54300	15910	5200	7.50	43.3	-	-	7672	9617	11811	14681
							54.4	-	-	8860	11237	14041	18172
CR57KQM-TFD	50	94.61	48995	14347	4650	8.30	43.3	-	-	8425	10662	13136	16143
	60		58425	17108	5550	8.10	43.3	-	-	7596	10128	13030	16195
							54.4	-	-	7759	10149	12866	15821
CR62KQM-TFD	50	101.92	52800	15461	5100	8.80	43.3	-	-	9054	11981	15384	19156
	60		62800	18400	6075	8.70	43.3	-	-	8474	10752	13838	17399
							54.4	-	-	8760	11129	13847	16933
CR72KQM-TFM	50	115.79	61500	18024	6100	10.5	43.3	-	6806	8760	11129	13847	16933
							54.4	-	-	8390	10538	12970	15528
							43.3	-	8234	10594	13491	16794	20534
							54.4	-	-	10142	12718	15664	18282
							43.3	8859	10191	12278	14212	16249	18646
							54.4	-	-	11114	12839	14583	16602
R134a, 1 Phase													
ECZ421HG-13F	50	5.3	1760	516	231	1.5	43.3	178	211	277	354	445	551
	60		2075	608	275	1.8	43.3	147	177	235	301	379	470
							54.4	181	227	308	395	497	623
ECZ426HG-13M	50	6	2150	630	240	1.1	43.3	171	215	290	366	451	555
	60		2575	754	300	1.3	43.3	248	272	344	443	556	672
							54.4	227	241	296	380	480	583
ECZ431HG-13M	50	7.22	2555	749	298	1.4	43.3	271	298	379	493	622	751
	60		3050	894	368	1.7	43.3	282	299	365	465	583	702
							54.4	297	339	425	526	646	788
ECZ434HG-13M	50	8.7	3150	924	335	1.8	43.3	266	297	364	448	553	681
	60		3750	1099	398	2.0	43.3	321	374	475	592	729	894
							54.4	311	365	447	544	663	811
ECZ444HG-13M	50	10.5	3700	1083	411	2.1	43.3	312	370	492	637	805	994
	60		4325	1266	480	2.3	43.3	243	290	393	520	669	840
							54.4	397	466	613	788	986	1207
							43.3	296	352	475	628	806	1008
							54.4	374	447	575	714	883	1102
							43.3	342	404	511	629	778	976
							54.4	434	521	671	834	1031	1286
							43.3	399	472	596	735	908	1140

Please refer our separate catalogues for CR Models with R407C Refrigerant.

Note

Model	Return Gas Temperature (°C)	Subcooled Liquid Temperature(°C)
KCE, KCN, KCJ	35	46.1
CR, KCM,	18.3	46.1
KCM475LAL, 515LAL	32	46.1

		Mechanical Specification			Electrical Specification									
10	12.8	Oil Charge(cc)	Cooling Type (CFM)	Net Wt. (Kg.)	LRA (A)	Voltage Range(V)	Motor Type	Fig No.	Start Capacitor (Mfd)	Run Capacitor (Mfd)	Relay		OLP	
											Potential / PTC	Current		
1503	1706	310	Fan 350	11.80	13	180-260	CSCR	4	40/60	10	LT85002 or HLR3800-4L3C-2		-	KAT0072/K3 or MRA12309-12103
1222	1441													
2016	2250	510	Fan 350	13.40	17	180-260	PSC / CSCR*	1/4	60/80*	15	LT85003* or HLR3800-4L3C-3		-	KAT0159/B2 (Annapurna) or MRA12397-12102 (Sensata)
1693	1912													
2399	2678													
2025	2275													
3750	4265	905	Fan 350	21.50	25	180-260	PSC / CSCR*	1/4	80/100*	25	LT85002* or HLR3800-4L3C-2		-	Internal
3135	3618													
4350	4947													
3636	4196													
4869	5435	890	Fan 350	22.50	30	198-264	PSC / CSCR*	1/4	80/100*	36	AC85001* or HLR3800-6H3C-1		-	Internal
4337	4858													
5551	6195													
4944	5538													
7501	8529	1330	Fan 400	29.80	54	180-260	PSC / CSCR*	1/4	80/100*	36	AC85004*		-	Internal
6182	7059													
9640	10735	1330	Fan 400	32.50	72	180-260	PSC / CSCR*	1/4	150/200*	45	AC85001M*		-	Internal
8116	9088													
11398	12735	1330	Fan 400	34.90	85	198-264	CSCR	4	130/156	40 or 45	AC85004		-	Internal
9640	10853													
13712	15294	1330	Fan 400	34.90	104	198-264	CSCR	4	189/227	60 or 65	AC85005		-	Internal
11573	12912													
15763	17023	1330	Fan 400	36.00	110	198-264	CSCR	4	189/227	60	AC85005		-	Internal
13331	14679													
18400	20363													
15617	17280													
7354	8235	1330	Fan 400	29.50	20	342-462	3 Ph	-	-	-	-		-	Internal
6036	6794													
9464	10706	1330	Fan 400	30.00	28	342-462	3 Ph	-	-	-	-		-	Internal
7823	8941													
11280	12559	1330	Fan 400	31.00	41	360-460	3 Ph	-	-	-	-		-	Internal
9552	10647													
13478	15088	1330	Fan 400	32.70	45	340-460	3 Ph	-	-	-	-		-	Internal
11280	12735													
15038	16639	1330	Fan 400	36.20	60	342-462	3 Ph	-	-	-	-		-	Internal
13198	14630													
18142	20076													
15994	17723													
16570	18358	1330	Fan 400	36.20	61	342-462	3 Ph	-	-	-	-		-	Internal
15682	17245													
19725	21863													
17475	19197													
18464	20399	1330	Fan 400	36.20	61	342-462	3 Ph	-	-	-	-		-	Internal
17028	18875													
21805	24150													
18625	20750													
19132	21144	1330	Fan 400	36.20	55	342-462	3 Ph	-	-	-	-		-	Internal
16939	18756													
23187	25592													
20493	22701													
21658	23709	1330	Fan 400	37.5	69	360-460	3 Ph	-	-	-	-		-	Internal
19154	20911													
677	757	240	Fan 350	9.5	11	180-260	CSIR	6	40/60	-	KARP3841		-	5TM734NFBYY-53
578	647													
780	884													
684	772													
776	825	240	Fan 350	9.4	9	187-260	CSCR	4	40/60	6	KARPN3041		-	5TM734NFBYY-53
677	721													
865	915													
807	854													
955	1060	240	Fan 350	9.5	10	187-260	CSCR	4	40/60	6	KARPN3541		-	5TM734NFBYY-53
835	935													
1093	1221													
994	1114													
1205	1332	260	Fan 350	11.2	13.5	187-254	CSCR	4	40/60	6	KARPN4241		-	5TM739NHBY-53
1031	1148													
1446	1586													
1229	1361													
1389	1586	260	Fan 350	11.2	13.5	180-260	CSCR	4	40/60	6	KARPN4241		-	5TM743SFBYY-53
1243	1430													
1620	1851													
1451	1669													

Performance Nominals And Specifications

R134a High Temperature

Model	Hz	Dis- placement (CC/rev)	Performance at ASRE/T Rated Condition				Refrigeration Capacity (Watts) #						
			Capacity		Power	Current	Evap. Temp. / Cond. Temp. (°C)	-17.8	-15	-10	-5	0	5
			Btu/hr	W	W	A							
R134a, 1Phase													
KCE419HAG	50	5.79	1588	465	245	1.40	43.3	184	219	271	322	457	558
	60		1861	545	282	1.50	54.4	144	166	213	262	322	415
KCE425HAG	50	7.58	2145	628	360	2.30	43.3	215	257	317	384	476	608
	60		2438	714	380	2.20	54.4	169	194	250	306	377	486
KCE432HAG	50	9.42	2690	788	375	2.75	43.3	259	289	347	417	517	669
	60		3227	945	470	2.75	54.4	192	229	280	337	419	547
KCE444HAG	50	12.05	3675	1077	450	2.00	43.3	294	329	395	474	588	761
	60		4276	1252	535	2.20	54.4	219	260	318	383	476	622
KCJ444HAG	50	12.58	3700	1084	450	2.80	43.3	213	287	417	547	675	832
KCN463HAG	50	15.33	5250	1538	615	2.70	54.4	138	201	315	427	539	676
	60		6304	1846	810	3.65	43.3	256	344	500	656	810	997
KCJ467HAG	50	18.27	5600	1641	675	3.90	54.4	166	241	378	513	647	811
	60		6704	1963	820	4.10	43.3	412	480	596	737	931	1176
KCJ482HAG	50	22.01	7075	2073	837	3.91	54.4	294	373	489	611	771	962
	60		8100	2374	964	4.47	43.3	479	558	694	858	1084	1368
KCJ498HAG	50	25.91	8200	2402	975	5.90	54.4	342	434	569	711	897	1120
	60		9255	2710	1120	6.10	43.3	365	414	523	665	876	1198
KCJ511HAG	50	29.3	9290	2723	1050	4.95	54.4	282	340	444	552	703	939
	60		10640	3118	1213	5.67	43.3	-	-	-	1111	1343	1644
KCJ513HAG	50	38.04	12135	3553	1419	6.34	54.4	-	-	-	966	1175	1424
	60		13400	3924	1630	7.30	43.3	-	-	-	1236	1534	1929
KCM511CAL [†]	50	40.80	11300	3312	1260	5.8	54.4	527	638	864	1132	1430	1780
KCM514CAL [†]	50	51.47	15350	4499	1640	7.9	54.4	414	498	681	910	1170	1483
KCM519CAL [†]	50	59.65	19000	5568	2110	8.4	54.4	627	759	1029	1347	1702	2119
KCM522CAL [†]	50	72.08	21800	6389	2300	10.1	54.4	492	592	811	1083	1393	1765
KCM511CAL [†]	50	40.80	11300	3312	1260	2.4	43.3	982	1016	1177	1450	1818	2262
							54.4	740	773	920	1166	1493	1884
KCM514CAL [†]	50	51.47	15200	4455	1640	3.3	43.3	1115	1185	1355	1627	2049	2567
							54.4	909	978	1101	1333	1688	2149
KCM519CAL [†]	50	59.65	18750	5495	2110	4.0	43.3	1267	1347	1540	1849	2328	2917
							54.4	1025	1103	1251	1515	1918	2442
KCM522CAL [†]	50	72.08	21300	6242	2300	4.7	43.3	1312	1352	1559	1914	2387	2950
							54.4	995	1034	1227	1553	1981	2483
KCM514CAL [†]	50	51.47	15200	4455	1640	3.3	43.3	1152	1480	2119	2849	3704	4727
							54.4	926	1169	1662	2251	2978	3874
KCM519CAL [†]	50	59.65	18750	5495	2110	4.0	43.3	1448	1861	2638	3511	4543	5791
							54.4	1257	1536	2095	2778	3649	4768
KCM522CAL [†]	50	72.08	21300	6242	2300	4.7	43.3	1679	2101	2960	3968	5158	6556
							54.4	1310	1650	2359	3209	4229	5454
R134a, 3 Phase													
KCM511CAL [†]	50	40.80	11300	3312	1260	2.4	43.3	958	1178	1632	2163	2784	3514
							54.4	771	932	1281	1714	2248	2893
KCM514CAL [†]	50	51.47	15200	4455	1640	3.3	43.3	1152	1480	2119	2849	3704	4727
							54.4	926	1169	1662	2251	2978	3874
KCM519CAL [†]	50	59.65	18750	5495	2110	4.0	43.3	1448	1861	2638	3511	4543	5791
							54.4	1257	1536	2095	2778	3649	4768
KCM522CAL [†]	50	72.08	21300	6242	2300	4.7	43.3	1679	2101	2960	3968	5158	6556
							54.4	1310	1650	2359	3209	4229	5454

[†]Performance Table at ARI Conditions.

Permitted Evaporating Temperature Range in °C

Model	Refrigerant	High Temperature	Medium Temperature	Low Temperature
KCJ, KCE, KCN, KCM	R134a	-17.8 to 12.8*	-17.8 to 12.9	-28.8 to -6.7**
KCJ, KCE	R22	-6.7 to 12.8	N.A.	N.A.
KCN, KCJ, KCM	R404A	N.A.	-17.8 to 10.0	-40.0 to -6.7

* Except KCN463HAG / KCJ498HAG : -6.7 °C to 12.8 °C

** Except KCN : -37°C to -6.7°C

		Mechanical Specification				Electrical Specification								
10	12.8	Oil Charge(cc)	Cooling Type (CFM)	Net Wt. (Kg.)	LRA (A)	Voltage Range(V)	Motor Type	Fig No.	Start Capacitor (Mfd)	Run Capacitor (Mfd)	Relay		OLP	
												Potential / PTC	Current	
677	800	310	Fan 350	10.20	12	180-260	RSIR	3	-	-	-	KARP3627	TAE19/H3	
557	662				11	207-253								
792	936													
652	774	310	Fan 350	10.80	13	180-260	CSIR	6	40/60	-	-	KARP4241	KAT0072/H3 or MRA12309-12101	
891	1059				207-253									
741	891													
1013	1204													
843	1014	310	Fan 350	11.80	12.5	180-260	CSIR	6	40/60	-	-	KARP4241/ MTRP4241	KAT0072/H3 or MRA12309-12101	
1157	1388				207-253									
984	1188													
1388	1664													
1180	1424	310	Fan 350	11.80	13	180-260	CSCR	4	40/60	10	KARPN4241	-	KAT0072/H3	
1573	1876				207-253									
1283	1535													
1830	2183													
1493	1786	890	Fan 350	20.20	17	180-260	CSIR	6	80/100	-	-	KARP4841/ MTRP4841	KAT0159/B2	
1658	2018				207-253									
1286	1568	380	Fan 350	11.50	14	180-260	CSCR	4	80/100	15	-	KARPN5041	KAT0463/B2 / MRA12308-12102	
2027	2312				197-253									
1749	1974													
2392	2728													
2064	2329	890	Fan 350	21.00	23	180-260	CSIR	6	80/100	-	-	KARP-5641/ MTRP-5641 MTRP5941	KAT0733/B2	
2206	2494				198-242									
1878	2147													
2626	2968													
2247	2569	890	Fan 350	21.5	32	198-264	PSC/CSCR*	4	80/100*	25	HLR3800-3F3C-4*	-	Internal	
2766	3067				207-253									
2319	2577													
3167	3512													
2656	2951	890	Fan 350	21.50	32	198-264	CSIR	5	80/100	-	AC85001 or HLR3800-6H3C-1	-	KAT0163 / B2 KAT0167/B2	
3182	3596				207-253									
2708	3108													
3616	4086													
3077	3518	890	Fan 350	21.5	32	180-260	PSC/CSCR*	4	80/100*	25	HLR3800-3F3C-4*	-	Internal	
3572	3936				207-253									
3030	3344													
4090	4506													
3469	3829	890	Fan 350	22.7	45	180-260	PSC/CSCR*	4	80/100*	36	HLR3800-6H3C-1*	-	Internal	
4675	5203				207-253									
4015	4506													
5235	5827													
4435	4977	1330	Fan 400	29.80	54	180-260	CSCR	4	80/100	36	AC85004	-	Internal	
4378	4906				207-253									
3669	4159	1330	Fan 400	32.50	72	180-260	CSCR	4	150/200	45	AC85001 / HLR3800-6H3C-1	-	Internal	
5961	6729				207-253									
4991	5686	1330	Fan 400	34.90	85	180-260	CSCR	4	130/156	40	AC85004 / 3ARR3 CT3P5 / RVA-3F6D	-	Internal	
7388	8408				207-253									
6272	7242	1330	Fan 400	34.90	104	180-260	CSCR	4	189/227	60	AC85005 / 3ARR3C T24S5 / RVA-3AG 6D	-	Internal	
8391	9440				207-253									
7075	8015													
4358	4883	1330	Fan 400	29.50	20	342-462	3Ph	-	-	-	-	-	Internal	
3660	4147				207-253									
5946	6726	1330	Fan 400	30.00	28	342-462	3Ph	-	-	-	-	-	Internal	
4979	5697				207-253									
7324	8320	1330	Fan 400	31.00	41	342-460	3 Ph	-	-	-	-	-	Internal	
6201	7154				207-253									
8194	9217	1330	Fan 400	32.7	45	342-460	3 Ph	-	-	-	-	-	Internal	
6908	7828				207-253									

*These are optional

Performance Nominals And Specifications

R134a

R404A

Medium Temperature

Model	Hz	Displacement (CC/rev)	Performance at ASRE/T Rated Condition				Refrigeration Capacity (Watts) #						
			Capacity		Power	Current	Evap. Temp. / Cond. Temp. (°C)	-17.8	-15	-10	-5	0	5
			Btu/hr	W	W	A							
R134a, 1 Phase													
KCN413CAG	50	6.15	1080	316	180	0.80	43.3	268	301	355	424	518	613
							54.4	235	243	289	355	446	538
	60		1240	363	205	0.80	43.3	307	346	408	486	594	704
							54.4	270	279	331	407	512	618
KCN416CAG	50	7.31	1342	393	220	1.00	43.3	284	328	409	511	627	763
							54.4	236	271	342	431	535	655
	60		1540	451	250	1.10	43.3	326	377	470	588	721	876
							54.4	271	312	393	496	615	753
R404A, 1 Phase													
KCJ438CAL	50	11.50	3200	938	625	3.70	43.3	639	745	952	1189	1455	1749
							54.4	459	545	712	919	1161	1418
KCJ461CAL	50	18.27	5100	1494	925	4.10	43.3	1147	1338	1709	2134	2612	3139
							54.4	824	979	1279	1649	2085	2545
KCJ484CAL	50	25.91	7000	2051	1250	6.20	43.3	1571	1833	2341	2924	3579	4287
							54.4	1128	1341	1752	2259	2856	3487
KCM511CAL [#]	50	40.80	9000	2638	1385	6.7	43.3	-	2043	2770	3754	4950	6310
							54.4	-	-	2043	2837	3833	4988
KCM514CAL [#]	50	51.47	12000	3517	1840	9.1	43.3	-	2462	3546	4815	6219	7702
							54.4	-	-	2644	3819	5102	6436
KCM519CAL [#]	50	59.65	16100	4718	2360	12.3	43.3	-	3822	4941	6439	8235	10257
							54.4	-	-	3766	5003	6524	8256
KCM522CAL [#]	50	72.08	18300	5363	2600	12.5	43.3	-	4569	5779	7447	9504	11878
							54.4	-	-	4317	5727	7491	9545
R404A, 3 Phase													
KCM511CAL [#]	50	40.80	9450	2770	1380	2.4	43.3	-	2013	2890	3956	5152	6407
							54.4	-	-	2081	2986	4015	5102
KCM514CAL [#]	50	51.47	13000	3810	1865	3.5	43.3	-	2567	3693	5014	6480	8027
							54.4	-	-	2746	3971	5308	6703
KCM519CAL [#]	50	59.65	15800	4631	2325	4.7	43.3	-	3728	4839	6342	8147	10167
							54.4	-	-	3681	4909	6433	8165
KCM522CAL [#]	50	72.08	18650	5466	2640	5.2	43.3	-	4683	5905	7561	9604	11984
							54.4	-	-	4417	5832	7593	9651

[#]Performance Table at ARI Conditions.

		Mechanical Specification			Electrical Specification								
10	12.8	Oil Charge(cc)	Cooling Type (CFM)	Net Wt. (Kg.)	LRA (A)	Voltage Range(V)	Motor Type	Fig No.	Start Capacitor (Mfd)	Run Capacitor (Mfd)	Relay		OLP
											Potential / PTC	Current	
759	-	340	Fan 350	9.70	8	180-260	CSCR	4	40/60	6	PTC-8EA19D7	-	KAT0411/H3
656	-					207-253							
871	-												
754	-												
914	-	340	Fan 350	9.70	10	180-260	CSCR	4	40/60	6	PTC-8EA19D7	-	KAT0413 / H3 or MRA 12390-12101
794	-					207-253							
1051	-												
912	-												
2185	-	890	Fan 350	21.50	24	180-260	CSIR	6	80/100	-	-	KARP5641 / MTRP5641	T0732/B9
1808	-												
3922	-	890	Fan 350	21.50	25	180-260	CSCR	4	80/100	25	LT85002 or HLR3800-4I3C-2	-	Internal
3246	-												
5373	-	890	Fan 350	22.50	37	180-260	CSCR	4	80/100	25	AC85001 OR HLR3800-6H3C-1	-	Internal
4448	-												
7787	8646	1330	Fan 400	29.80	54	180-260	CSCR	4	80/100	36	AC85004	-	Internal
6257	6993												
9211	10041	1330	Fan 400	32.50	72	180-260	CSCR	4	150/100	45	AC85001 or HLR3800-6H3C-1	-	Internal
7769	8490												
12435	13683	1330	Fan 400	34.90	85	180-260	CSCR	4	120/150	45	AC85004 or 3ARR3CT3P5 or RVA-3F6	-	Internal
10131	11207												
14501	16040	1330	Fan 400	34.90	104	180-260	CSCR	4	120/150	60	AC85005 or 3ARR3CT24S5 or RVA-3AG 6D	-	Internal
11817	13147												
7655	8323	1330	Fan 400	29.50	20	342-462	3Ph	-	-	-	-	-	Internal
6184	6758												
9598	10460	1330	Fan 400	30.00	28	342-462	3Ph	-	-	-	-	-	Internal
8092	8842												
12309	13516	1330	Fan 400	31.00	41	342-460	3Ph	-	-	-	-	-	Internal
10014	11058												
14651	16236	1330	Fan 400	32.70	45	342-460	3Ph	-	-	-	-	-	Internal
11954	13323												

Notes

- Electrical rating is 230 V, 50 Hz and 230 V, 60 Hz for single phase models and, 400 V, 50 Hz for three phase models.
- Operating voltage range signifies the range of voltage for which the compressor can start and run up to 43°C ambient.
- Cooling capacity and power consumption are nominal values at specified rating conditions and subject to ±5% variation.
- Direct air flow on glass terminal cover should be avoided.
- Compressors with CSIR, CSCR circuit and three phase models may be used with thermostatic expansion valve.
- Compressors with RSIR Circuit must use capillary tube only.
- All compressors use two pole motors.
- Compressors for specific applications are rated for IS-10617 Part I and Part III-1983.
- All run capacitor should have a rating of 440 VAC and start capacitor 275 VAC surge, unless otherwise specified by Emerson.

Performance Nominals And Specifications

R134a

R404A

Low Temperature

Model	Hz	Displacement (CC/rev)	Performance at ASRE/T Rated Condition				Refrigeration Capacity (Watts) #						
			Capacity		Power	Current	Evap. Temp. / Cond. Temp. (°C)	-37.2	-35	-30	-25	-20	-15
			Btu/hr	W	W	A							
R134a, 1 Phase													
KCN372LAG	50	7.31	600	176	159	1.34	43.3	80	94	130	181	246	321
							54.4	76	86	115	162	223	294
ECZ380LG-13M	50	7.22	660	193	154	0.8	43.3	-	111	148	196	255	324
	60		790	231	183	0.9	54.4	-	110	136	177	232	303
ECZ396LG-13M	50	8.21	760	223	190	0.8	43.3	-	111	148	196	255	324
	60		890	261	228	1.0	54.4	-	110	136	177	232	303
KCN396LAG	50	9.00	800	235	205	1.85	43.3	-	111	148	196	255	324
								54.4	-	110	136	177	232
ECZ411LG-13M	50	10.5	915	268	218	1.3	43.3	-	111	148	196	255	324
	60		1050	307	233	1.30	54.4	-	110	136	177	232	303
KCN411LAG	50	11.10	960	282	245	2.10	43.3	-	111	148	196	255	324
								54.4	-	110	136	177	232
KCJ412LAG	50	16.35	1028	301	280	2.75	43.3	-	111	148	196	255	324
								54.4	-	110	136	177	232
KCN415LAG	50	15.33	1260	371	325	1.80	43.3	-	111	148	196	255	324
								54.4	-	110	136	177	232
ECZ416LG-13M	50	13.8	1260	369	280	1.3	43.3	-	111	148	196	255	324
								54.4	-	110	136	177	232
KCJ423LAG	50	32.61	1925	566	485	3.00	43.3	-	111	148	196	255	324
								54.4	-	110	136	177	232
R404A, 1 Phase													
ECZ412LL-31M	50	6.35	984	288	219	1.0	43.3	154	176	239	316	410	520
								54.4	114	133	188	261	350
KCN414LAL	50	7.31	1150	337	325	2.30	43.3	166	198	263	354	458	578
								54.4	137	159	222	307	399
ECZ417LL-31M	50	8.7	1318	386	292	1.46	43.3	154	176	239	316	410	520
								54.4	114	133	188	261	350
KCN418LAL	50	9.00	1455	426	385	2.00	43.3	205	257	354	470	607	759
								54.4	178	203	276	385	504
ECZ419LL-31M	50	9.9	1642	481	333	1.6	43.3	235	273	380	520	697	915
								54.4	196	225	314	434	590
KCN422LAL	50	11.10	1825	535	455	2.20	43.3	256	321	443	588	759	949
								54.4	225	255	348	486	635
KCJ430LAL	50	16.35	2435	713	580	3.20	43.3	304	389	550	747	977	1232
								54.4	222	293	460	647	865
KCN430LAL	50	15.33	2575	754	580	4.40	43.3	364	454	626	831	1074	1342
								54.4	317	359	489	682	892
KCJ450LAL	50	32.64	4100	1201	1000	5.50	43.3	416	591	934	1325	1771	2235
								54.4	273	438	727	1079	1512
KCM475LAL	50	51.47	5703	1670	1250	6.80	43.3	876	1068	1490	1880	2514	3298
								54.4	-	-	1114	1529	2205

Please refer our separate catalogue for KCM low temperature 3 phase models

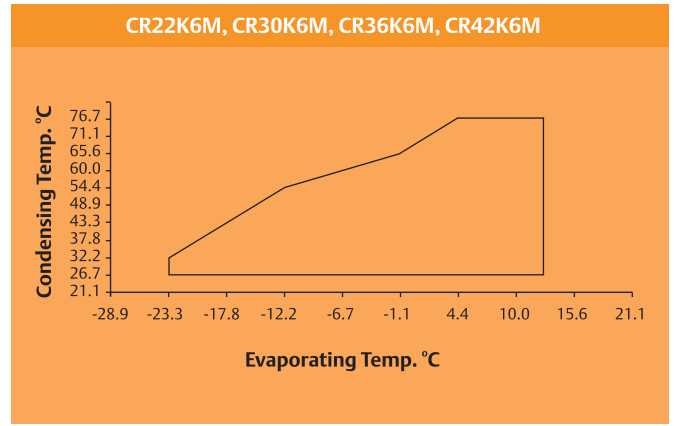
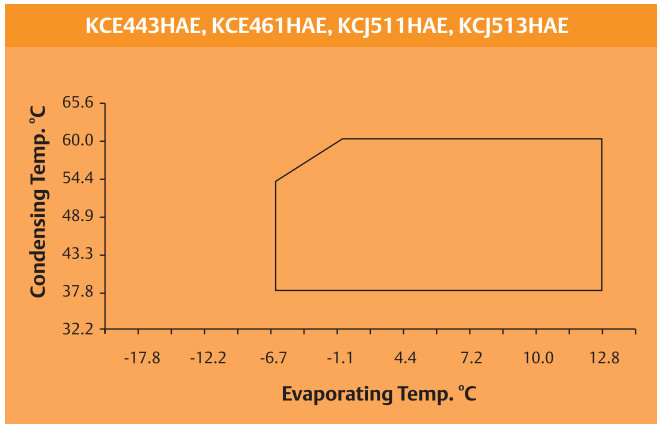
ASRE/T Rating Conditions

Ambient Temperature	Evaporating Temperature	Condensing Temperature	Sub Cooled Liquid Temp	Suction Gas Temperature	Suction Pressure			Discharge Pressure		
					R134a	R22	R404A	R134a	R22	R404A
°C	°C	°C	°C	°C	psig	psig	psig	psig	psig	psig
High Temperature										
35	7.2	54.4	46.1	35	40	77	93.7	196	300	354
Medium Temperature										
35	-6.7	54.4	46.1	35	18	----	55.6	196	----	354
Low Temperature										
32	-23.3	54.4	32	32	1.9	----	24.6	196	----	354

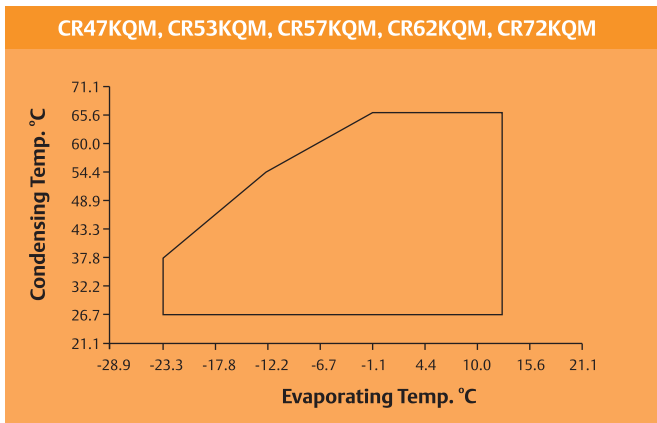
		Mechanical Specification				Electrical Specification								
-10	-6.7	Oil Charge(cc)	Cooling Type (CFM)	Net Wt. (Kg.)	LRA (A)	Voltage Range(V)	Motor Type	Fig No.	Start Capacitor (Mfd)	Run Capacitor (Mfd)	Relay		OLP	
												Potential / PTC	Current	
404	462	340	Oil / Fan 260	10.20	10	180-260	CSIR	6	40/60	-	-	KARP-3141/ MTRP-3141 KARP3227	TAE15/H3	
377	438						RSIR	3						
405	465	240	Fan 350	9.5	10	180-260	CSCR	4	40/60	6	PTC-8EA19D7	-	5TM734NFBYY-53	
389	454													
486	558													
467	545													
405	464	240	Fan 350	9.8	15	187-260	CSCR	4	40/60	10	-	KARPN3741	5TM739NHBYY-53	
389	454													
556	631													
500	556													
488	547	340	Oil / Fan 260	10.20	10	180-260	CSIR	6	40/60	-	-	KARP 4141/ MTRP 4141	TAE5M/H3	
418	471													
620	719	300	Fan 350	11.2	13.5	180-260	CSCR	4	40/60	6	-	KARPN4241	5TM743SFBYY-53	
561	658													
713	827													
645	757													
653	750	380	Fan 350	11.50	10	180-160	CSIR	6	40/60	-	-	KARP4241/ MTRP4241	KAT0072/H3 OR MRA12309-12101	
604	699													
907	1068	890	Fan 350	21.00	24	180-260	CSIR	6	80/100	-	-	MTRP 4841/ KARP4841	KAT0159/B2	
802	968													
867	1000	380	Fan 350	11.50	14	180-260	CSCR	4	80/100	10	LT85002 OR HLR3800-413C-2	-	KAT0072/H3 or MRA-12309-12101	
805	932													
834	965	300	Fan 350	11.7	16.3	187-260	CSCR	4	80/100	10	-	KARPN4341	5TM743PFBYY-53	
783	909													
1683	2000	890	Fan 350	22.50	30	198-264	CSCR	4	150/200	10	LT85003	-	T0732/B2 or KAT0732/B2	
1390	1712													
647	740	300	Fan 350	11.2	11	187-260	CSCR	4	40/60	6	-	KARPN3741	5TM739LFBYY-53	
582	675													
727	838	340	Fan 350	10.20	16	180-260	CSIR	6	60/80	-	-	KARP- 4241	KAT0072/ H3 or MRA2309-12101	
640	738													
647	740	300	Fan 350	11.7	19	187-260	CSCR	4	80/100	10	-	KARPN4441	5TM757LFBYY-53	
582	675													
934	1065	380	Fan 350	11.50	14	180-260	CSCR	4	80/100	10	LT85002 or HLR3800-413C-2	-	KAT0072/B2 or MRA12309-12102 or T0072/B2	
806	938													
1176	1375	300	Fan 350	11.7	19	187-260	CSCR	4	80/100	10	-	KARPN4841	5TM757LFBYY-53	
1025	1209													
1168	1331	380	Fan 350	11.50	17	180-260	CSCR	4	80/100	15	LT85003 or HLR3800-4L3C-3	-	KAT0164/ B2 or T0164/K9	
1015	1182													
1474	1612	890	Fan 350	22.50	30	180-260	CSCR	4	150/200	10	LT85003 or HLR3800-4L3C-3	-	Internal	
1381	1524													
1652	1883	420	Fan 350	12.50	18	180-260	CSCR	4	80/100	15	LT85003 or HLR3800-4L3C-3	-	KAT0733/ B2	
1426	1660													
2698	3003	890	Fan 350	25.00	50	180-260	CSCR	4	150/200	25	AC85005	-	Internal	
2476	2788													
4236	4966	1300	Fan 350	32.50	72	198-264	CSCR	4	150/200	25	AC85004	-	Internal	
3785	4386													

Operating Envelopes

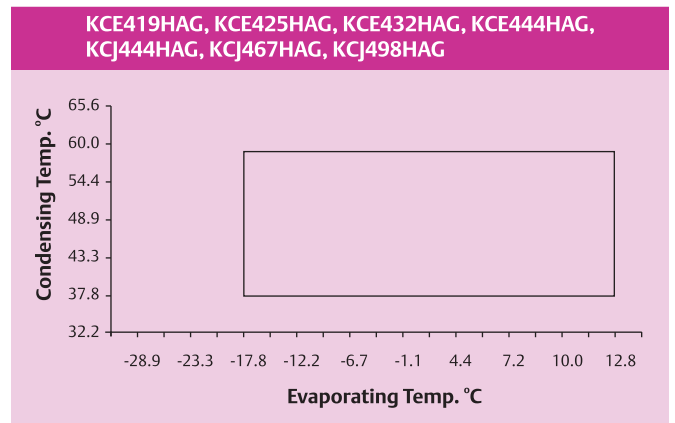
High Temperature (R22)



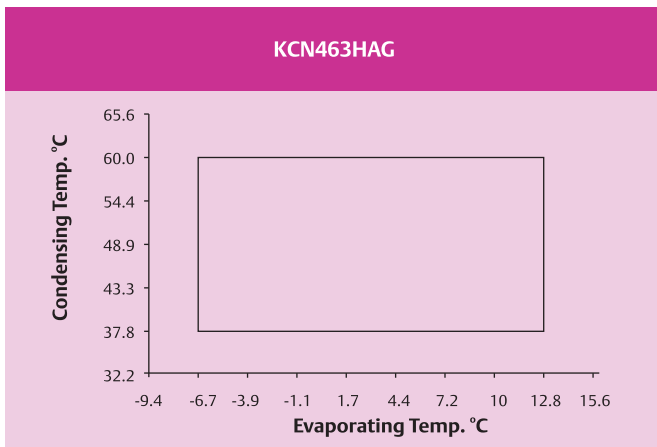
High Temperature (R22)



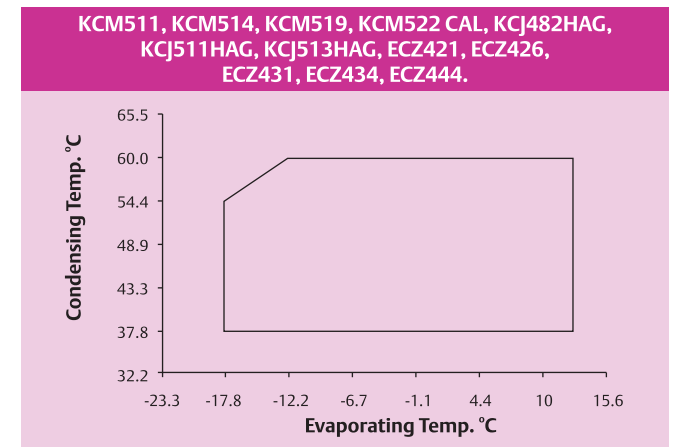
High Temperature (R134a)



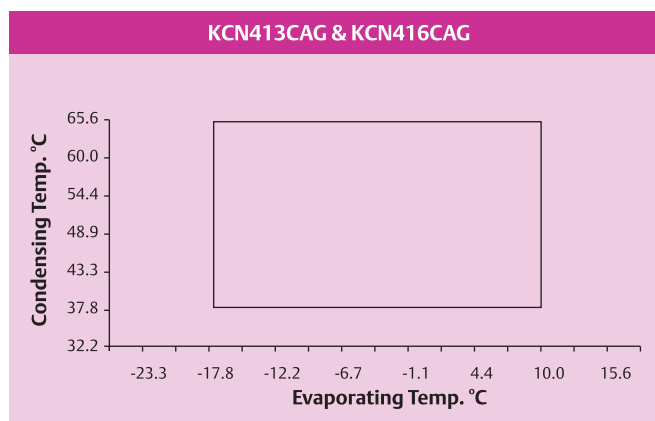
High Temperature (R134a)



High Temperature (R134a)

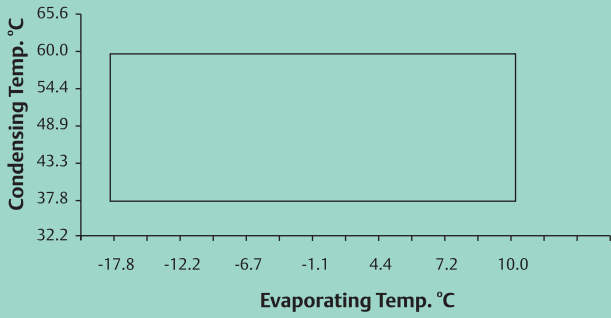


Medium Temperature (R134a)

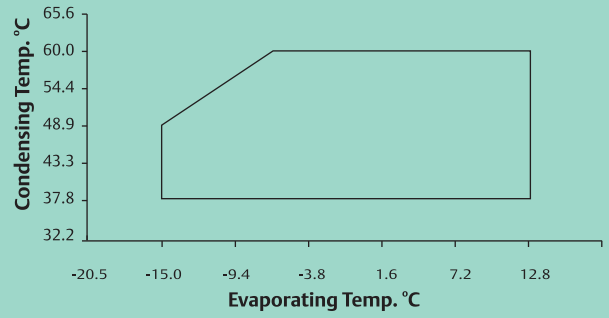


Medium Temperature (R404A)

KCJ438CAL, KCJ461CAL, KCJ484CAL

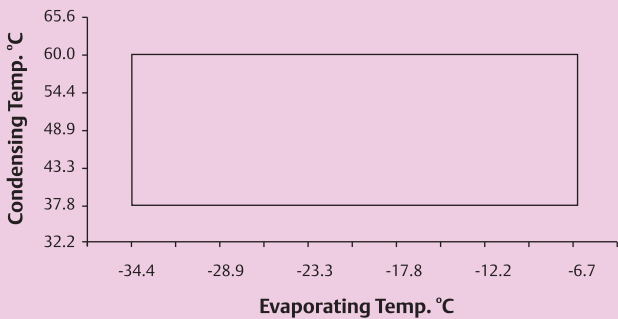


KCM511CAL, KCM514CAL, KCM519CAL, KCM522CAL

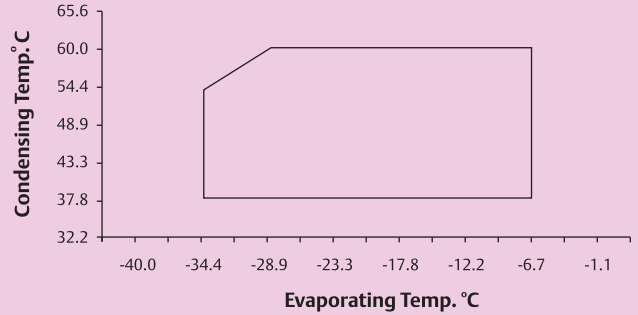


Low Temperature (R134a)

KCN396LAG

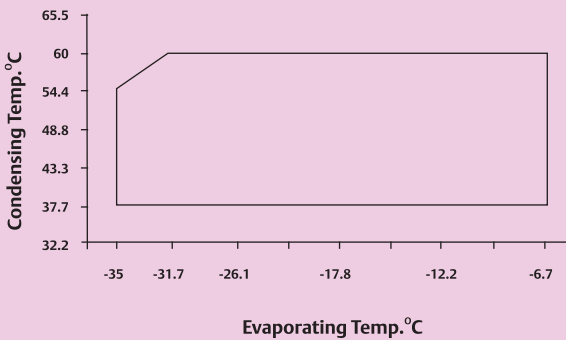


KCN411LAG, KCJ412LAG, KCN415LAG, KCJ423LAG

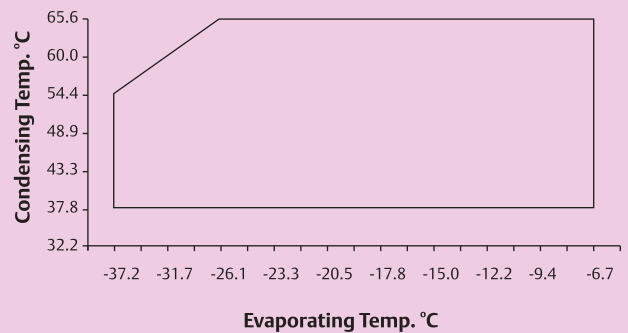


Low Temperature (R134a)

ECZ380LG-13M-37XX, ECZ396LG-13M-37XX, ECZ411LG-13M-37XX & ECZ416LG-13M-37XX

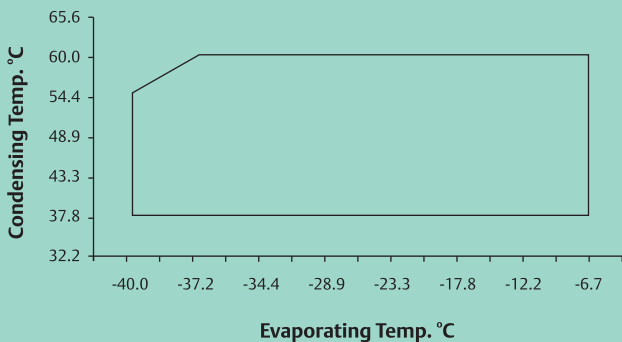


KCN372LAG



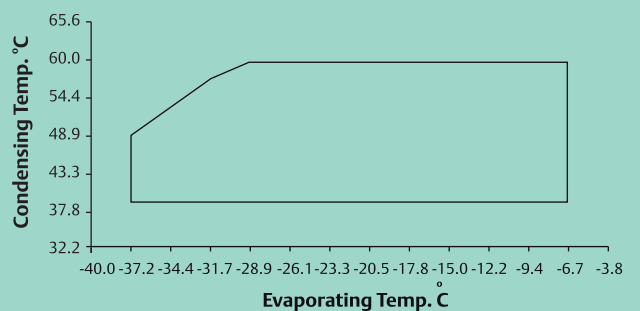
Low Temperature (R404A)

KCN414, 418,422,430LAL, KCJ430, 450LAL, ECZ412, ECZ417, ECZ419



Low Temperature (R404A)

KCM475LAL



Standard BoM Data

Model	Standard*	Circuit	Suction	Mounting Option	
	Domestic				
KCE419HAG	V130H	RSIR	Tube	Dual Mounting 4.00" x 6.50" & 2.75" x 6.69"	
KCE425HAG	V230H	CSIR	Tube		
KCE432HAG	S230H	CSIR	Tube		
KCE443HAE	B330H	CSCR	Tube		
KCE444HAG	B332H, S330H	CSCR	Tube		
	V333H, V334H	CSCR	Tube		
	S430H	PSC	Tube		
KCE461HAE	V470H	PSC	Tube		
KCN372LAG	B130H	RSIR	Tube		Dual Mounting 4.00" x 6.50" & 2.7" x 6.69"
	B230H	CSIR	Tube		
KCN396LAG	B230H	CSIR	Tube		
KCN411LAG	B230H	CSIR	Tube		
KCN413CAG	C230H	CSIR	Tube		
	V830H	CSCR	Tube		
KCN414LAL	B230H	CSIR	Tube		
KCN415LAG	B332H	CSCR	Tube		
KCN416CAG	V833H, B833H	CSCR	Tube		
KCN418LAL	B330H	CSCR	Tube		
KCN422LAL	B330H	CSCR	Tube		
KCN430LAL	B330H	CSCR	Tube		
KCN463HAG	U336H	CSCR	Tube		
KCJ412LAG	B220H	CSIR	Tube	4.80"x 8.00 "	
KCJ423LAG	C320H	CSCR	Tube		
KCJ430LAL	B320H	CSCR	Tube		
	B324H	CSCR	Spud		
KCJ438CAL	B220H	CSIR	Tube		
KCJ438CAL	B222H	CSIR	Tube		
KCJ444HAG	B220H	CSIR	Tube		
KCJ450LAL	B320H	CSCR	Tube		
	B324H	CSCR	Spud		
KCJ461CAL	B320H	CSCR	Tube		
	B322H	CSCR	Spud		
KCJ467HAG	T220H	CSIR	Tube		
KCJ482HAG	S420H	PSC	Tube		
KCJ484CAL	B320H	CSCR	Tube		
	B322H	CSCR	Spud		
KCJ498HAG	S220H	CSIR	Tube		
KCJ511HAE	U420H	PSC	Tube		
KCJ511HAG	U420H	PSC	Tube		
KCJ513HAE	S420H	PSC	Tube		
KCJ513HAG	B420H	PSC	Tube		
KCM475LAL	C310H	CSCR	Tube		Square Mount 7.50" x 7.50"
KCM475LAL	C313H	CSCR	Spud		
KCM511CAL	B310H	CSCR	Tube		
	B313H	CSCR	Spud		
	E510H	Three Phase	Tube		
	E513H	Three Phase	Spud		
KCM514CAL	B310H	CSCR	Tube		
	B314H	CSCR	Spud		
	E510H	Three Phase	Tube		
KCM515LAL	E513H	Three Phase	Spud		
	E510H	Three Phase	Tube		
	E513H	Three Phase	Spud		
KCM519CAL	B310H	CSCR	Tube		
	B313H	CSCR	Spud		
	E510H	Three Phase	Tube		
KCM522CAL	E513H	Three Phase	Spud		
	B310H	CSCR	Tube		
	B314H	CSCR	Spud		
ECZ421HG	F37D0	CSIR	Tube	4.00" x 6.50"	
	ECZXXXHG/LG/LL	M37D0			
ECZ XXXLG/LL FOW Series	M37DF	CSCR			

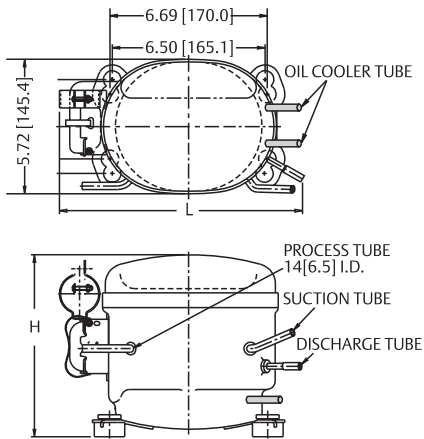
* Contact Emerson Representative for non standard BoM.

Standard BoM Data For CR Compressor

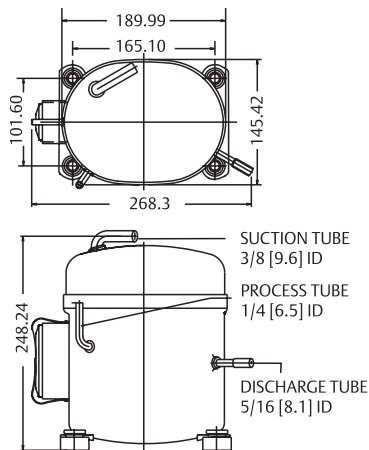
Model	Ordering BoM
CR22K6M-PF1	111DM
CR30K6M-PF1	111DE
CR22K6M-TFM	111DM
CR30K6M-TFM	111DM
CR36K6M-PFZ	121DM
CR42K6M-PFZ	101DM
CR36K6M-TFM	121DM
CR42K6M-TFM	101DM
CRXXKQM-TFD (47,53,57,62) CR72KQM-TFM	233DM

Dimensional Drawings

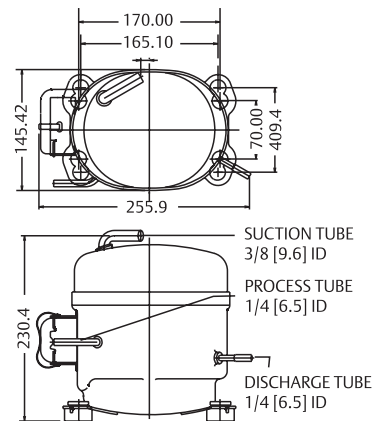
KCE



KCE461HAE

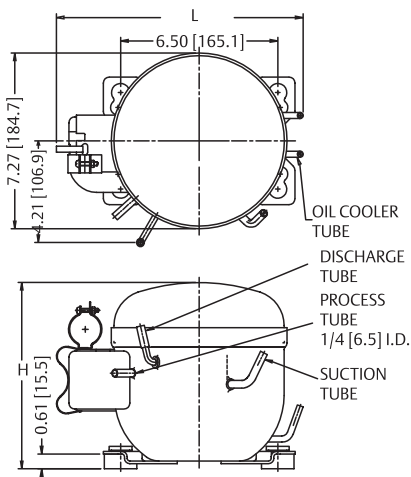


KCE443HAE



Model	Suction ID		Discharge ID		L	H	Capacitor Mounting
	Inch	mm	Inch	mm			
KCE419HAG	1/4	6.5	1/4	6.5	253.9	196.8	NO
KCE425HAG	1/4	6.5	1/4	6.5	262.7	196.8	YES
KCE432HAG	5/16	8.0	1/4	6.5	265.7	191.2	YES
KCE444HAG	5/16	8.0	1/4	6.5	260.3	191.2	NO

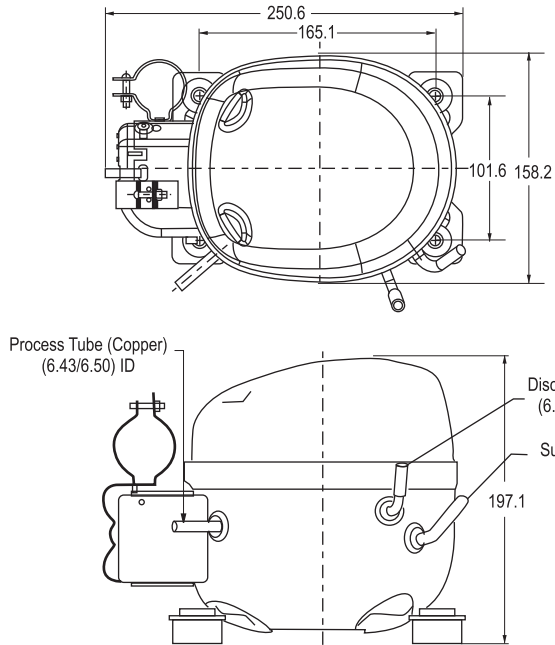
KCN



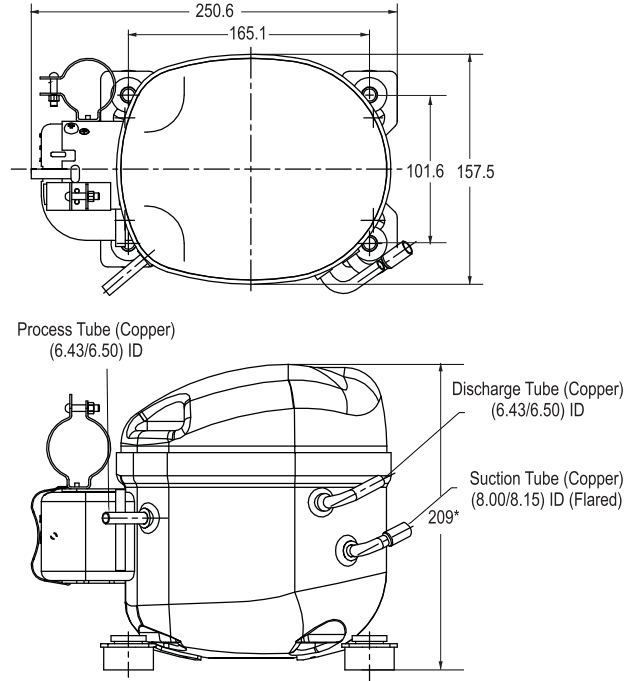
Model	Suction ID		Discharge ID		L	H	Oil Cooler Tube		Capacitor Mounting
	Inch	mm	Inch	mm			Inch	mm	
KCN372LAG	1/4	6.5	1/4	6.5	259.2	189.4	3/16	4.9	NO
KCN396LAG	1/4	6.5	1/4	6.5	259.2	195.8	3/16	4.9	YES
KCN411LAG	5/16	8.0	5/16	8.0	250.8	202.1	—	—	YES
KCN415LAG	5/16	8.0	5/16	8.0	250.8	202	—	—	YES
KCN463HAG	5/16	8.0	5/16	8.0	250.8	202	—	—	YES
KCN413CAG	1/4	6.5	1/4	6.5	250.8	189.4	—	—	YES
KCN416CAG	1/4	6.5	1/4	6.5	244	189	—	—	YES
KCN414LAL	5/16+	8.0	5/16	7.93	250.8	202.1	—	—	YES
KCN418LAL	5/16+	8.0	5/16	7.93	250.8	202.8	—	—	YES
KCN422LAL	5/16+	8.0	5/16	7.93	250.8	202.8	—	—	YES
KCN430LAL	5/16+	8.0	5/16	7.93	250.8	215.4	—	—	YES

Dimensional Drawings

ECZ380, ECZ396, ECZ421, ECZ426, ECZ431, ECZ412

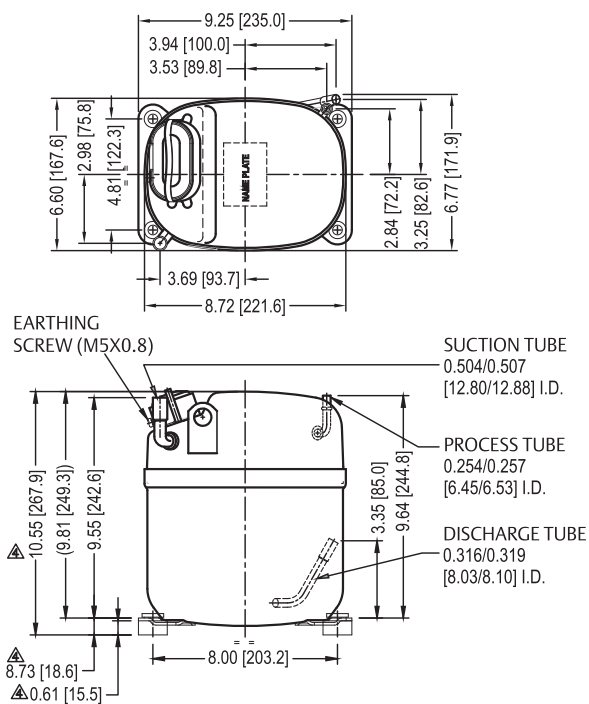


ECZ411, ECZ416, ECZ417, ECZ419, ECZ434, ECZ444

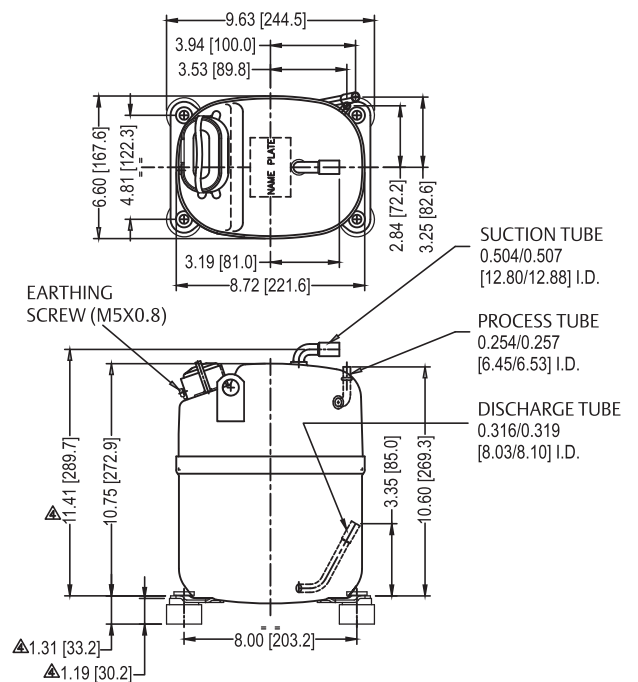


*Height is 215.5mm for ECZ416/417/419

KCJ412LAG

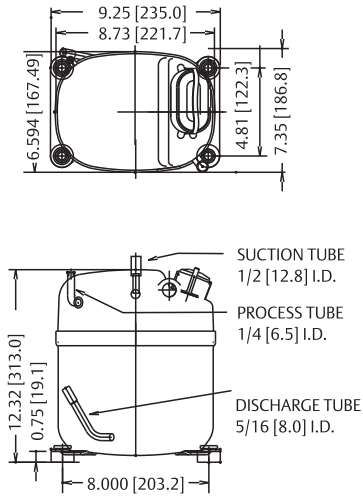


KCJ423LAG

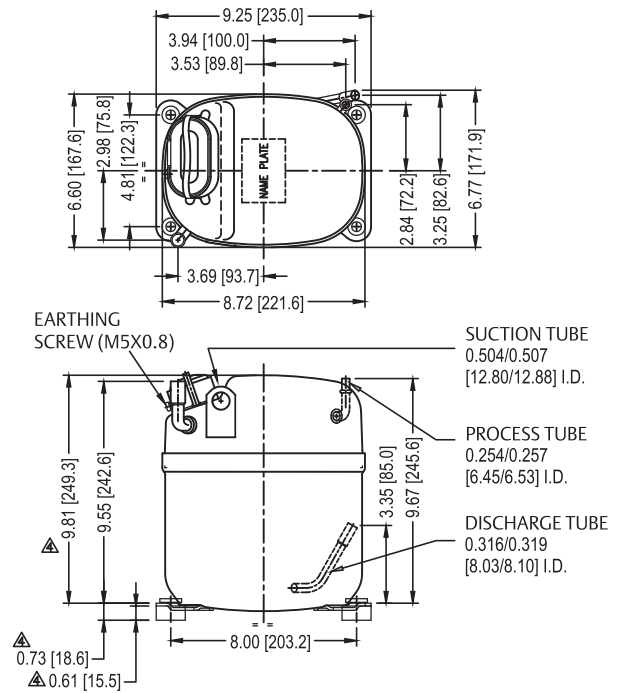


Dimensional Drawings

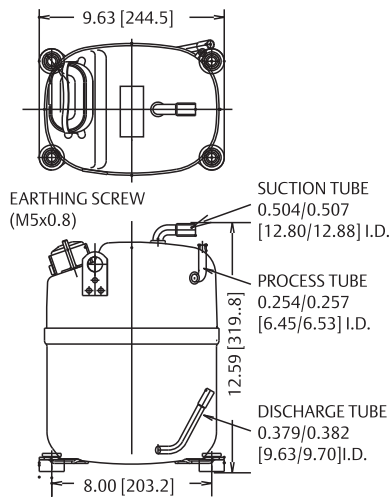
KCJ430LAL



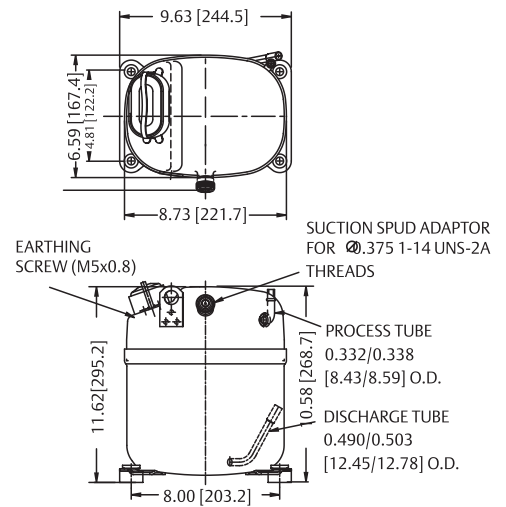
KCJ444HAG



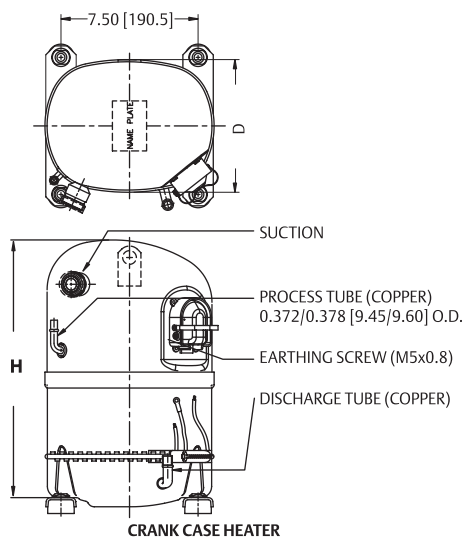
KCJ450LAL with Suction Tube



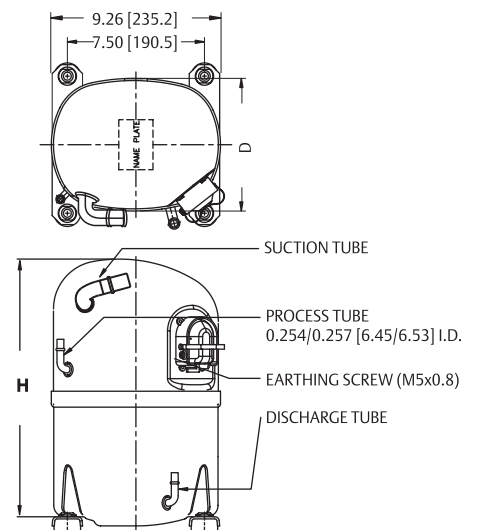
KCJ450LAL with Suction Spud



KCM475LAL/KCM511CAL/514CAL with Spud

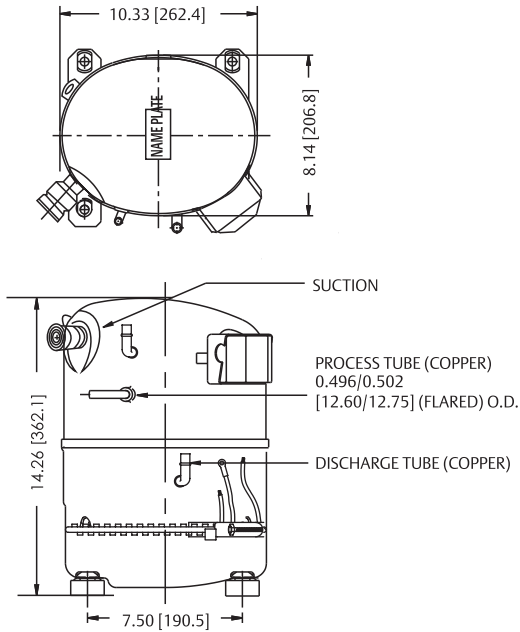


KCM475LAL/KCM511CAL/514CAL with Suction Tube

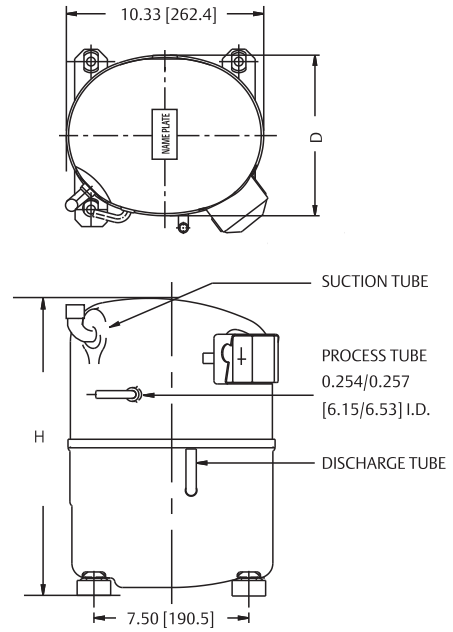


Dimensional Drawings

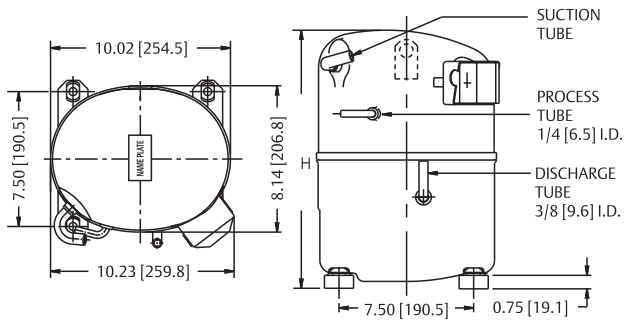
KCM519CAL/522CAL with Spud



KCM522CAL with Suction Tube

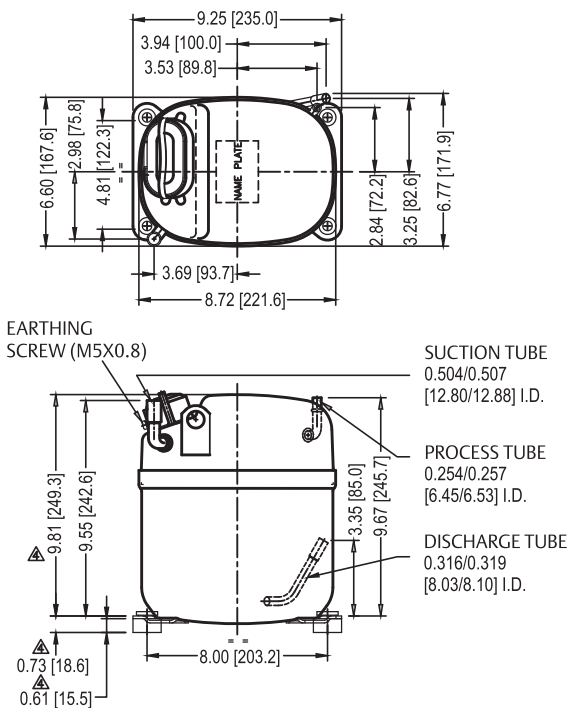


KCM519CAL with Suction Tube

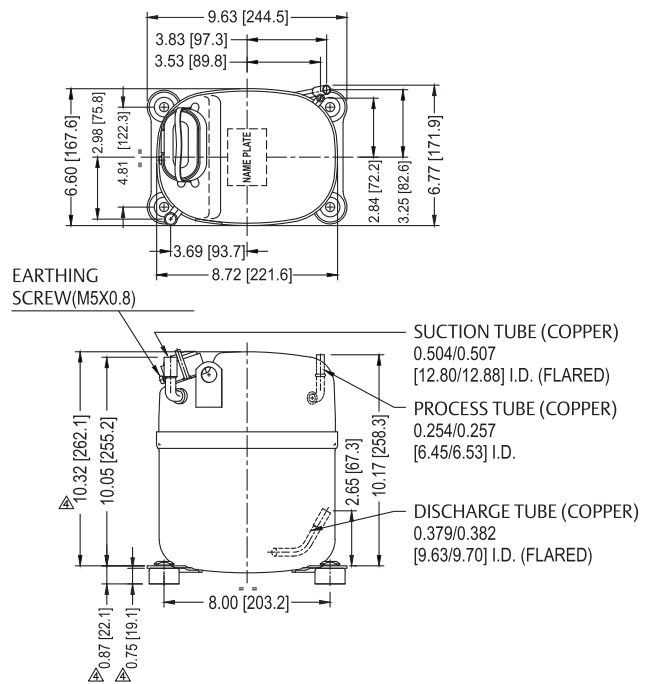


Model	Suction Spud	Suction Tube	Discharge Tube	Height, H (mm)	Depth, D (mm)
KCM475CAL	Ø0.625 11/4-12UNF Rolled Threads	5/8"	3/8"	358.2	184.4
KCM511CAL	1.1/412UNF-2A Threads	5/8"	3/8"	339	184.4
KCM514CAL	1.1/412UNF-2A Threads	7/8"	3/8"	358	184.4
KCM519CAL	Ø0.625 11/4-12UNF Rolled Threads	7/8"	3/8"	349.4	206.8
KCM522CAL	Ø0.625 11/4-12UNF Rolled Threads	7/8"	3/8"	362.1	206.8

KCJ467HAG

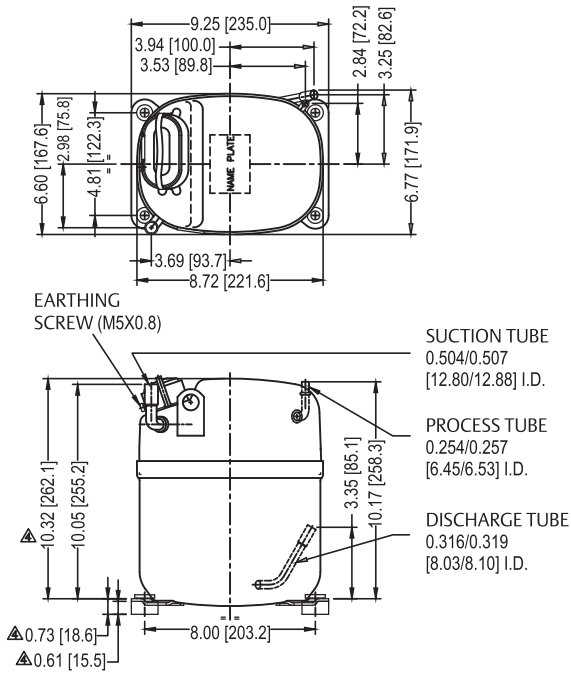


KCJ482HAG

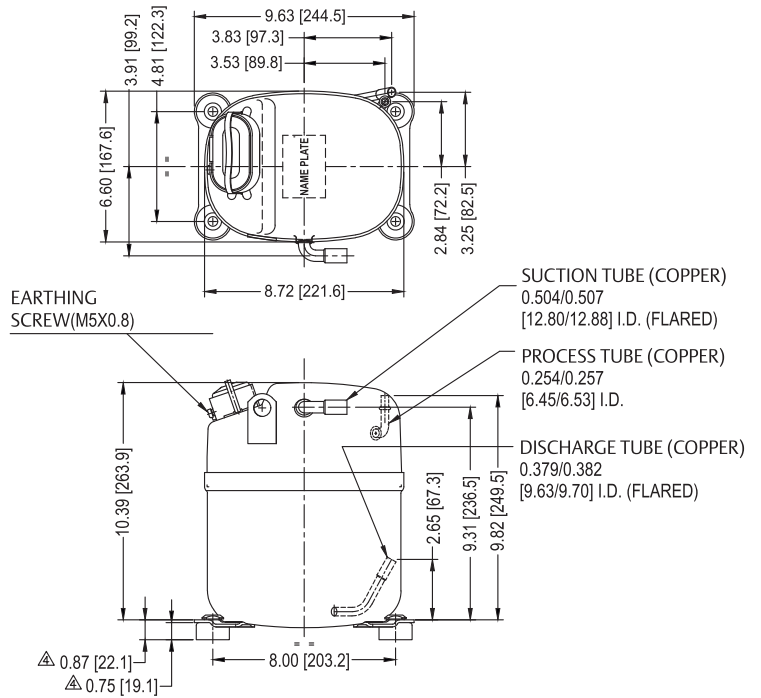


Dimensional Drawings

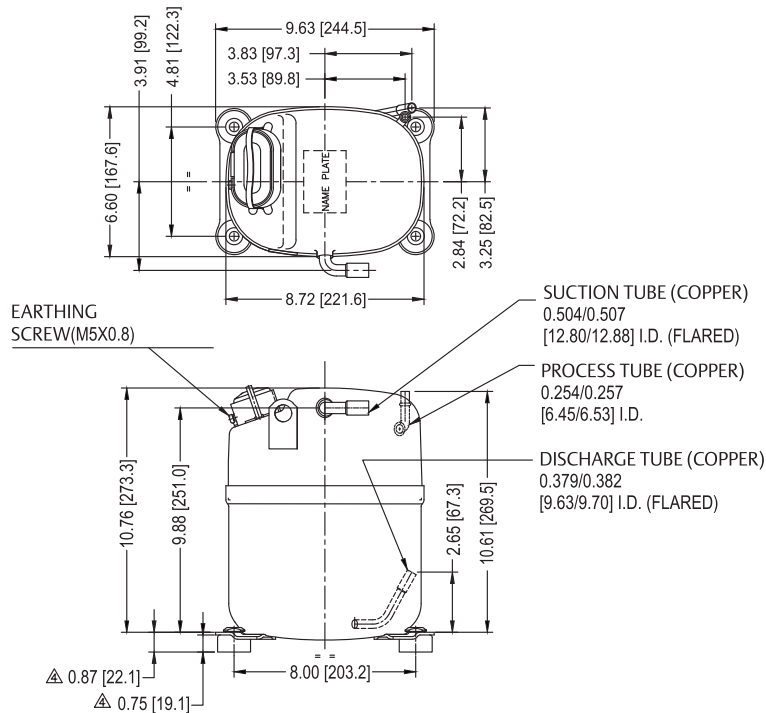
KCJ498HAG



KCJ511HAG



KCJ513HAG

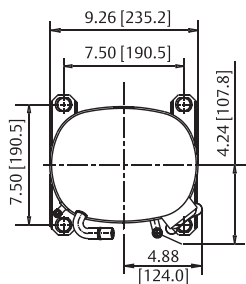


Dimensional Drawings

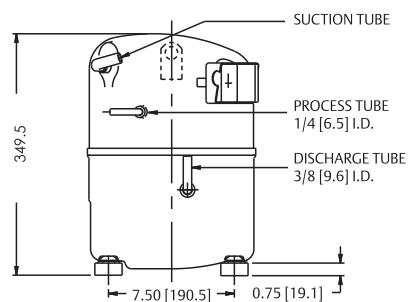
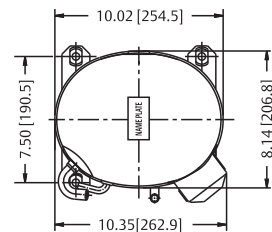
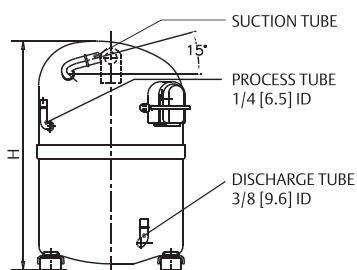
CR22K6M / CR30K6M

CR36K6M

SQUARE MOUNT

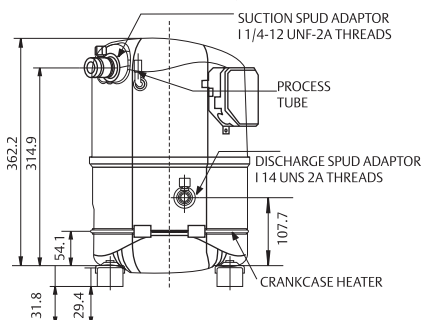
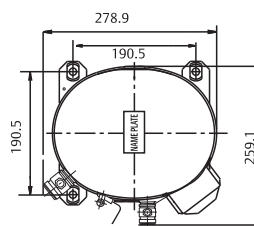
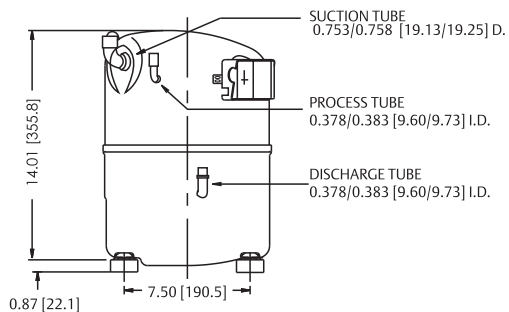
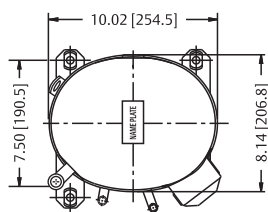


Model	Suction Tube		Height, (H)	
	inch	mm	inch	mm
CR22K6M	1/2	12.8	14.2	361
CR30K6M	5/8	15.9	14.9	381



CR42K6M

CR47, 53, 57, 62, 72 KQM



Wiring Diagrams

PERMANENT SPLIT CAPACITOR (PSC)

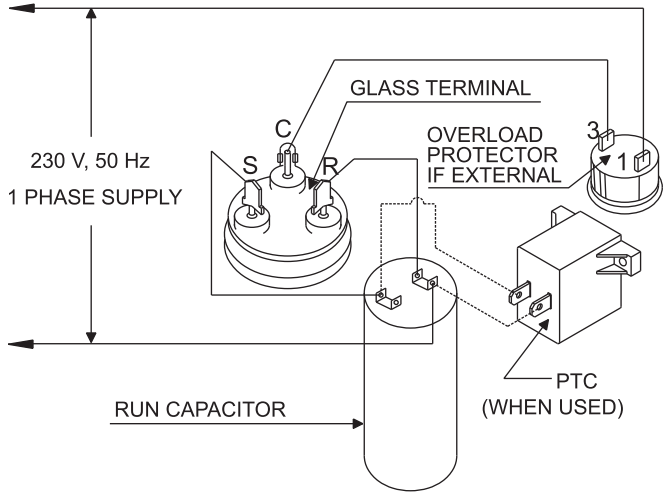


Fig. 1

CAPACITOR START INDUCTION RUN (CSIR) WITH PLUG-IN START RELAY

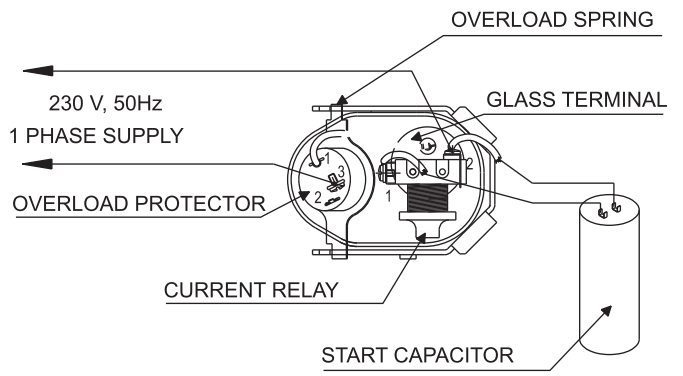


Fig. 2

RESISTANCE START INDUCTION RUN (RSIR) WITH PLUG-IN START RELAY

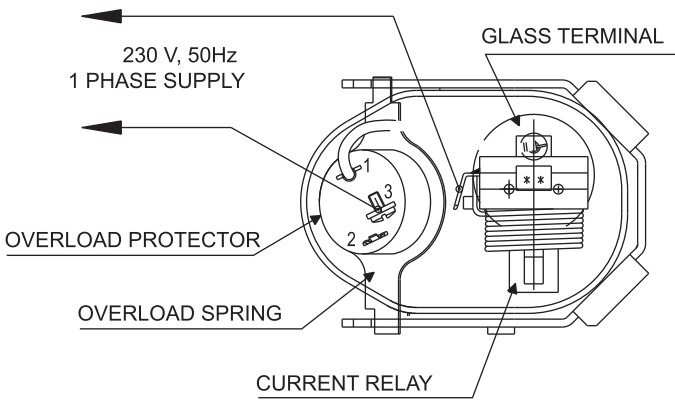


Fig. 3

CAPACITOR START CAPACITOR RUN (CSCR)

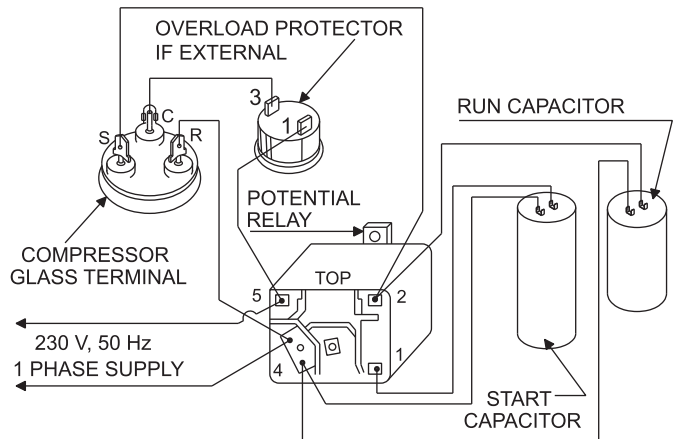


Fig. 4

Wiring Diagrams

CAPACITOR START INDUCTION RUN (CSIR)

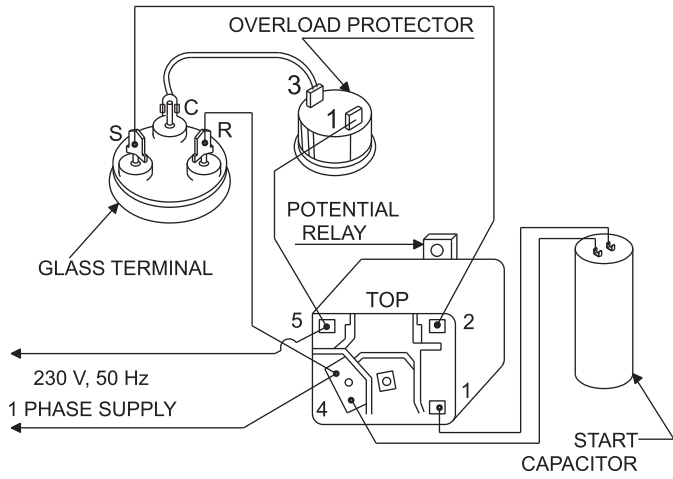


Fig. 5

CAPACITOR START INDUCTION RUN (CSIR) WITH CURRENT RELAY

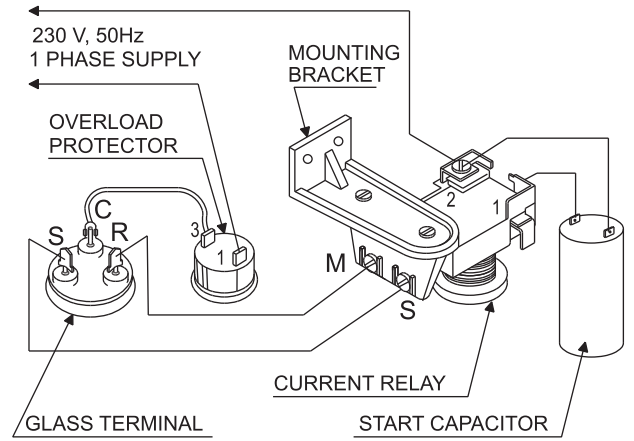


Fig. 6

CAPACITOR START CAPACITOR RUN (CSCR) WITH PTC

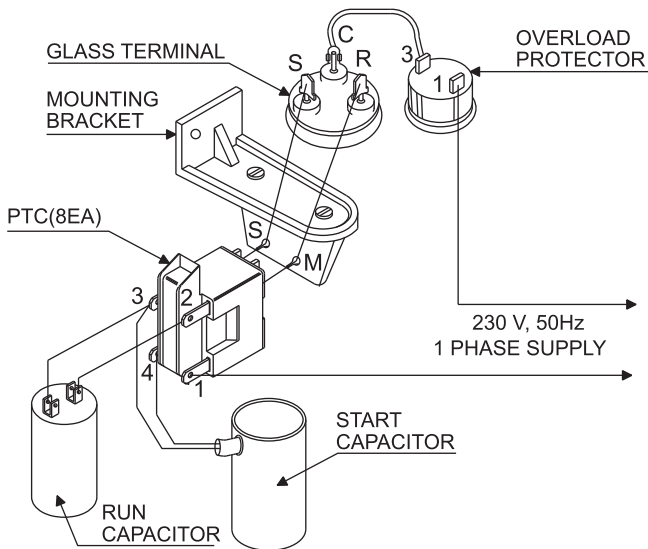


Fig. 7

CAPACITOR START CAPACITOR RUN (CSCR) WITH NTC

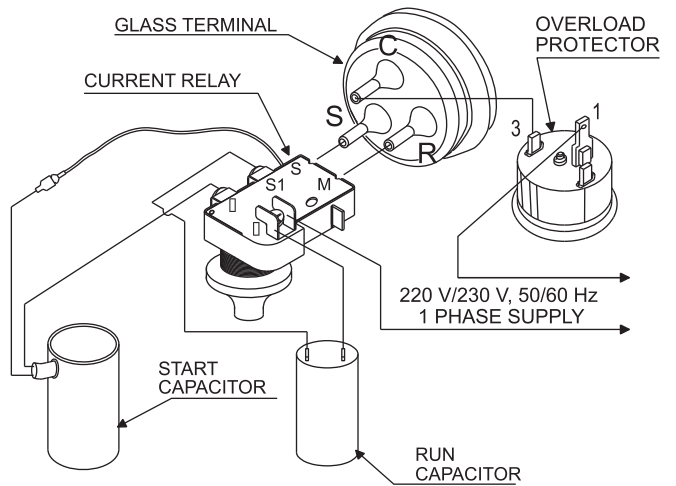


Fig. 8

Applications

Low Temperature

- Deep Freezer
- Refrigerator
- Ice Cube machine
- Walk-in Freezer
- Laboratory Appliance
- Freezer on Wheels

Medium Temperature

- Bottle Cooler
- Visi-Cooler
- Display Cabinet
- Pastry Cabinet
- Softy Icecream

High Temperature

- Water Cooler
- Oil Coolers / Panel Cooler
- Water Chiller
- Refrigerated Air Dryer
- Walk-in Cooler
- Milk Cooler



Model Selection Guide *

Deep Freezer		
Hard Top (Ltr)	Glass Top (Ltr)	Model
300	200	KCN372LAG/ECZ380LG
400	300	KCN396LAG/ECZ396LG
450	300	KCN411LAG/ECZ411LG
450	300	KCJ412LAG
500	400	KCN415LAG/ECZ416LG
800	-	KCJ423LAG
1100	-	KCJ430LAL
1800	-	KCJ450LAL

Cold Room (+4° C Room Temperature)			
Room Size (cft)	R22	R134a	R404A
500	KCJ513HAE	KCM511CAL	KCJ484CAL
800	CR22K6M	KCM511CAL	KCM511CAL
1200	CR30K6M	KCM514CAL	KCM514CAL
1600	CR30K6M	KCM519CAL	KCM514CAL
2000	CR36K6M	KCM522CAL	KCM519CAL
2500	CR42K6M	-	KCM522CAL
-	CR53KQM	-	-
-	CR62KQM	-	-

Water Cooler		
Capacity (Ltr/Hr)	R22	R134a
20	-	KCE419HAG/ECZ421HG
40	-	KCE444HAG/ KCJ444HAG/ECZ444HG
60	KCE461HAE	KCN463HAG/ KCJ467HAG
100	KCJ511HAE	KCJ498HAG/KCJ511HAG
150	KCJ513HAE	KCJ513HAG
200	CR22K6M	KCM514CAL
300	CR30K6M	KCM522CAL

* These are preliminary guidelines. The actual compressor selection may differ from the guidelines. Please check the system details before selecting compressor model.



Water Chiller			
Flow Rate (Ltr/Hr)	R22	R134a	R404A
600	KCJ513HAE	KCM514CAL	KCJ484CAL
800	CR22K6M	KCM519CAL	KCM511CAL
1000	CR30K6M	KCM522CAL	KCM514CAL
1400	CR36K6	-	KCM519CAL
1600	CR42K6	-	KCM522CAL
-	CR53KQM	-	-
-	CR62KQM	-	-

Water inlet temperature : 10°C
 Water outlet temperature: 5°C



Bottle Cooler		
Capacity(Ltr)	R22	R134a
100-120	-	KCE419HAG/ECZ421HG
150-200	-	KCE425HAG/ KCN413CAG/ECZ426HG
220-250	-	KCE432HAG/KCN416CAG/ECZ431HG/ECZ434HG
260-350	KCE443HAE	KCE444HAG/KCJ444HAG/ECZ444HG
350-500	KCE461HAE	KCN463HAG/KCJ467HAG
600-800	KCJ511HAE	KCJ498HAG



Visi-Cooler	
Case	Model
2 (110 ltr)	KCE419HAG/ECZ421HG
4 (150 ltr)	KCE425HAG/ KCN413CAG/ECZ426HG
7 (250 ltr)	KCE432HAG/KCN416CAG/ECZ431HG/ECZ434HG
9 (400 ltr)	KCE444HAG/KCJ444HAG/ECZ444HG
12(650 ltr)	KCN463HAG



Softy Machine	
Capacity (Ltr)	R404A
15	KCM511CAL
20	KCM514CAL
30	KCM519CAL
40	KCM522CAL



Freezer on Wheels		
Capacity (Ltr)	R134A	R404A
80 - 100	ECZ380LG	-
110 - 140	ECZ411LG	ECZ412LL
150 - 180	ECZ416LG	ECZ417LL
200 - 300	-	ECZ419LL

System Practice Guide

System Cleanliness

- It is absolutely necessary that all impurities / contamination like moisture, burr, cleaning agent and chemicals are removed from the system before operation in order to avoid compressor failures.
- All system components have to be de-hydrated and should be Nitrogen charged till they are taken for assembly. Use bright annealed refrigeration grade Copper tubes.
- Use Try-chloro Ethylene for flushing followed by dry air or Nitrogen to remove the trace of Try-chloro Ethylene.

Brazing

- While brazing all the joints purge low pressure Nitrogen through the tube. This will avoid internal oxidation and formation of contamination. Use adequate amount of flux while brazing.
- The joints have to be free from oil and grease before brazing. For Copper to Copper joints use phosphorous Copper as brazing alloy and Copper - Silver for Copper to Steel joints. Oxy Acetylene is best suited for brazing.

Leak Testing

- The system has to be adequately pressurized with dry air or Nitrogen.
- Use of electronic leak detectors is the best way to detect leaks.
- Conventional methods of checking the leaks can also be used.
- Do not pressurize the system with air and R134a.

Evacuation

Effective evacuation of the system ensures removal of moisture. For achieving desired vacuum level of 200 microns:

- Pull vacuum from both sides
- Heat the system with bulbs or infra red lamps
- Use Copper tubes to connect the vacuum pump and the system
- The connecting Copper tubes have to be short in length and bigger in diameter
- Use adequately sized two stage rotary vacuum pump having anti-suckback provision
- Use electronic vacuum gauge to measure the vacuum level
- Never use a hermetic compressor for evacuation. It is not meant for evacuation and cannot achieve desired vacuum level

Refrigerant Charging

- Quality and quantity of refrigerant immensely influences the performance and reliability of any refrigeration system.
- Refrigerant should be procured from genuine source. Use digital weigh balance during refrigerant charging.
- Maintain a separate set of hoses, tubes, valves for different refrigerants. Do not use anti-choke as it damages the compressor.
- Use pressure temperature chart of refrigerant for achieving optimum system performance.

Compressor Mounting

- Torque the nut adequately and ensure that the washer / bolt head rest on the sleeve and not on the rubber grommet.
- The suction and discharge piping should be properly looped to avoid vibrations and refrigerant leakages. The compressor should not be held rigidly by any means.
- These compressors are not suitable for mobile applications.

Electricals

- Always check the voltage across C & R terminals. Voltage at this point should fall within the prescribed operating voltage range. If the supply voltage conditions are poor, use appropriately sized voltage stabilizer with low, high voltage cutout and On-delay timer.
- Always use genuine electrical accessories supplied by Emerson.
- Earthing the appliance is necessary from the safety stand point.
- All electrical joints have to be firm and properly insulated.

Attending The Field Complaints

- Verify the field complaint based on facts and observations made through use of proper tools and equipment. Rule out all the possibilities before replacing the compressor. Analyze the compressor independently for its proper functioning.
- Removing of compressor from the system without understanding the root cause will lead to another compressor failure.

Disclaimer

Technical data given was correct at the time of printing. Updates may occur, and should you need confirmation of a specific value, please contact Emerson stating clearly the information required. Emerson cannot be held responsible for errors in capacities, dimensions, etc., stated herein. Products, specifications and data in this literature are subject to change without notice. The information given herein is based on data and tests which Emerson believes to be reliable and which are in accordance with today's technical knowledge. It is intended for use by persons having the appropriate technical knowledge and skill, at their own discretion and risk. Our products are designed and adapted for fixed locations. For mobile applications, failures may occur. The suitability for this has to be assured from the plant manufacturer, which may include making appropriate tests.

Note

The components listed in this catalogue are not released for use with caustic, poisonous or flammable substances. Emerson cannot be held responsible for any damage caused by using these substances.

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Chennai

Emerson Climate Technologies (India) Pvt. Ltd.
C/o. Agility Logistics Pvt Ltd.,
Kanishk Warehouse, Sr. No. 204,
Vijayanallur Village Road, Nallur Village,
Cholovaram Po, Ponneri Tk, Chennai-600067.
Tel: +918939571199

Gurgaon

Emerson Climate Technologies (India) Pvt. Ltd.
C/o Agility Logistics Pvt. Ltd.,
Khasra No.9/7/2,7/3 Min,8/1 Min, 8/2, 8/3,
Off. Revenue Estate Of Village Gadoli Khurd,
Sector-37 B, Pataudi Road,
Gadoli Khurd (Gurgaon)-122 001
Tel: +919013774070

Howrah

Emerson Climate Technologies (India) Pvt. Ltd.
C/o Agility Logistics Pvt. Ltd.,
Sankrail Industrial PARK,
Mauza-Kandua, Bhagabatipur,
Po-Kandua Howrah-711 302
Tel: +919093970556

Lucknow

Emerson Climate Technologies (India) Pvt. Ltd.
C/o Agility Logistics Pvt. Ltd.,
C-522, Maya Bhagwan Complex,
Near Shaheed Path Road, Transport Nagar,
Lucknow-226 008
Tel: +919044225771

Mumbai

Emerson Climate Technologies (India) Pvt. Ltd.
Unit No. 59, Ground Floor, 'AA' Wing,
Building No.1, at Kailas Industrial complex,
CTS No. 1/7 & 1/11, Veer Savarkar Marg,
Near Hiranandani Park,
Vikhroli (West), Mumbai-400 079
Tel: (91-22) 4270 8001

New Delhi

Emerson Climate Technologies (India) Pvt. Ltd.
56, Rama Road Industrial Area,
Nr. Mahindra Showroom,
New Delhi-110 015
Tel: (91-11) 45751000

Secunderabad

Emerson Climate Technologies (India) Pvt. Ltd.
C/o: Agility Logistics Pvt. Ltd, # 8-122,
Devaryamjal Road, Kompally, Shameerpet Mandal,
Ranga Reddy Dist.,
Secunderabad-500014,
Tel: (91) 9247000174/9000649871

COLD CHAIN CENTERS

Chakan

Emerson Climate Technologies (India) Pvt. Ltd.
Plot No. G-8/3, Block M.I.D.C.
Chakan Industrial Area, Phase - III,
Taluka : Khed. Dist : Pune - 410 501
Tel: (91- 2135) 625300

Gurgaon

Emerson Climate Technologies (India) Pvt. Ltd.
Plot No. 127,
Udyog Vihar, Phase IV,
Gurgaon - 122 015, Haryana
Tel: (91 124) 2866600

PLANT

Atit Pali Road, Atit - 415 519, Maharashtra.
Tel: (91-2162) 224200, Fax: (91-2162) 262069

REGISTERED HEAD OFFICE

Emerson Climate Technologies (India) Pvt. Ltd.
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