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COLD CHAIN CENTERS

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EMERSON

CONSIDER IT SOLVED.

ASIA10-B0303-R01-07/2018

COMMERCIAL REFRIGERATION COMPRESSORS

Distributed by: Stareast International Pty Ltd

Stareast International Pty Ltd
HVAC&R ENGINEERING SPECIALISTS, SPARES & EQUIPMENT

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.

Copeland™ Reciprocating Compressors

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

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

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

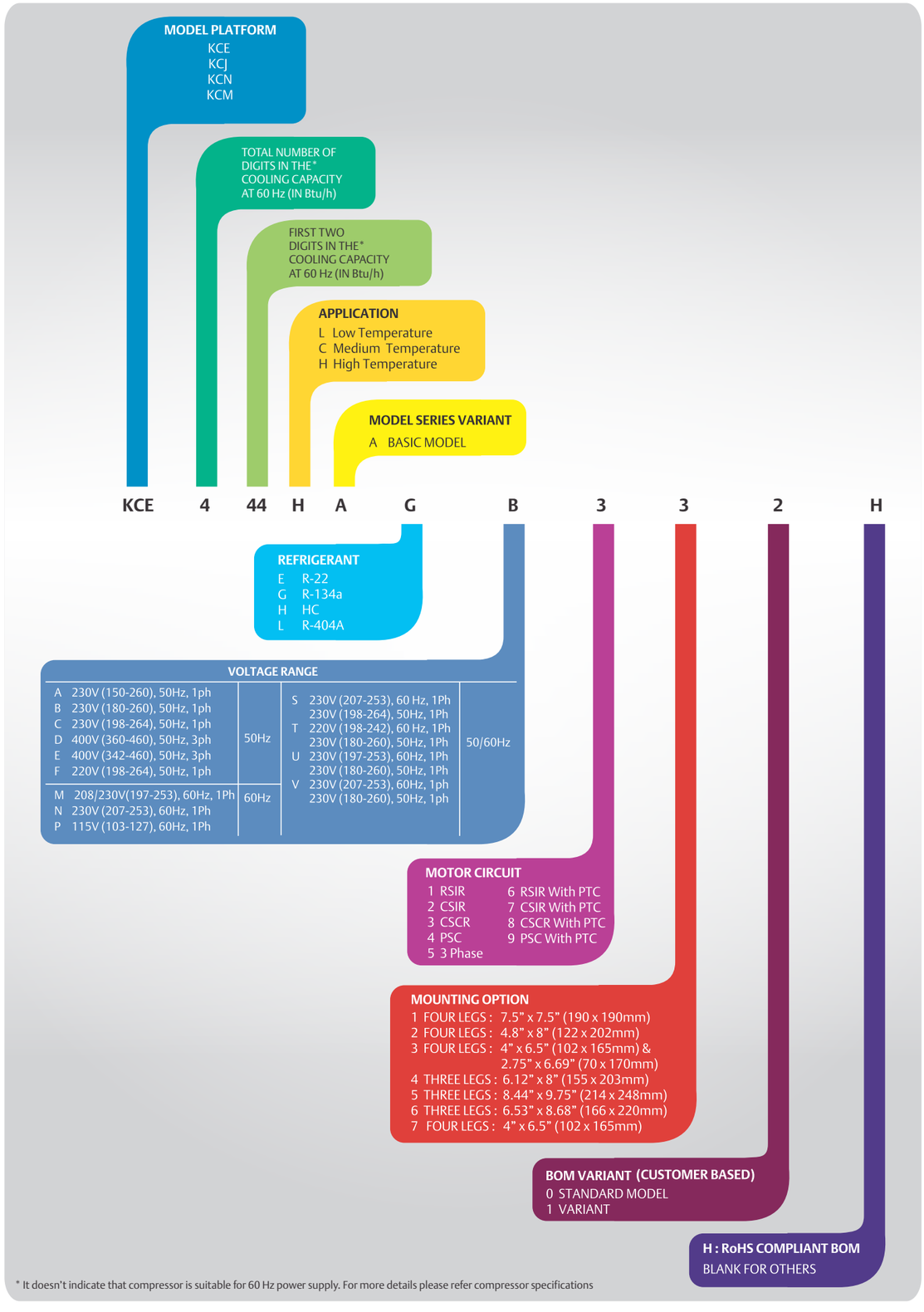
High Back Pressure

- 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

COMPRESSOR FAMILY SERIES
ECZ PRODUCT FAMILY

CAPACITY
NUMBERS OF DIGITS IN NOMINAL COMPRESSOR COOLING CAPACITY AT 60Hz RATING CONDITIONS

CAPACITY
FIRST TWO DIGITS IN NOMINAL COMPRESSOR COOLING CAPACITY AT 60Hz RATING CONDITIONS

APPLICATION

L	LBP
C	CBP
H	HBP

REFRIGERANT

E	R-22
G	R-134a
H	R-290
L	R-404A

ECZ 4 44 H G 1 1 M 11D0

TYPICAL ELECTRICAL CODES

CODE	50 Hz	60 Hz
1	220-230V, 1Ph	220-230V, 1Ph
2	-	230V, 1Ph
3	220-230V, 1Ph	-
4	-	115V, 1Ph
5	380-420V, 3Ph	-

MOTOR & PROTECTOR CODES

CODE	MOTOR	PROTECTOR
1	STANDARD	EXTERNAL
2	STANDARD	INTERNAL
3	MODIFIED	EXTERNAL
4	MODIFIED	INTERNAL

MOTOR CIRCUIT & ACCESSORIES SUPPLY

	RSIR	CSIR	CSCR	3PH	PSC
NO ACCESSORIES	A	E	L	T	W
PREWIRED MO	B	F	M		X
CLOSED BOX		G	N		
PARTIAL ACCESSORIES		H	P		Y
FUTURE	C,D	J,K	Q,R,S	U,V	Z

PRODUCT VARIATIONS
4 CHARACTER BILL OF MATERIAL NUMBER INDICATING CONFIGURATION

CR Series Compressor Nomenclature

Compressor Family Series
C Series Compressor

Refrigerant Identifies

Code	Refrigerant
R	R22/R407C/R404A
P	R410A

Capacity
First Two Digits Of Nominal Compressor Cooling Capacity At 60 Hz Rating Condition

Capacity Multiplier
K : 1,000

Model Series Variation
Arbitrary Number Or Letter Assigned To Indicate Different Model Types Within Any One Family Series
Q: CR Large; 6:CR,
7: High Eff CR
8: Ultra High Efficiency

C R 62 K Q M T F D XXX XX

Identifier
M : Optimized Design

Motor Type

Motor Type	Code
Single Phase Capacitor Run, Permanent Split Capacitor	P
Three Phase	T

Motor Protection Type

Code	Description
F	Internal Inherent Protection One Protector, Use With Contactor (Single or Three Phase)

Typical Electrical Codes

Code	50 Hz	60 Hz
V	-	208-230, 1
Z	220-240,1	-
D	380-420, 3	380-460, 3
M	380-420, 3	-
5	-	200-230, 3
1	220-240V, 1	-

Product Variations
Three-digit Bill Of Material Number That Indicates Compressor Configuration

Special Build Bill Identifier
2 Digit Special Build Identifier Indicating Additional Variations

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
							54.4	-	-	-	840	1082	1347
	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
							54.4	-	-	-	1293	1593	2286
	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
							54.4	1306	1419	1681	2067	2573	3220
	60		14507	4248	1720	7.96	43.3	1830	2001	2258	2761	3494	4301
							54.4	1489	1618	1917	2357	2933	3671
CR22K6M-PF1	50	40.80	19000	5563	1750	7.80	43.3	1421	1909	2803	3740	4783	6017
							54.4	-	-	2065	2912	3822	4881
CR30K6M-PF1	50	51.47	25000	7330	2350	11.00	43.3	2021	2559	3666	4946	6340	7916
							54.4	-	-	2734	3915	5162	6572
CR36K6M-PFZ	50	59.65	30100	8814	2720	13.60	43.3	2412	3120	4526	5965	7563	9366
							54.4	-	-	3264	4774	6220	7847
CR42K6M-PFZ	50	72.08	36100	10572	3240	15.40	43.3	3203	3882	5300	7018	9014	11282
							54.4	-	-	4155	5659	7402	9404
CR47KQM-PFZ	50	82.74	41752	12226	3950	20.00	43.3	2842	3992	6091	8285	10560	12932
							54.4	-	-	4700	6729	8772	10866
CR47KQM-PFV	60		47500	13921	4650	22.00	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
							54.4	-		5722	7239	8986	10791
	60		48379	14167	4550	6.80	43.3	5534	6431	8170	10148	12351	15110
							54.4	-	-	6901	8746	10883	13028
CR53KQM-TFD	50	88.28	45800	13411	4350	7.70	43.3	-	-	7436	9434	11796	15251
							54.4	-	-	7672	9617	11811	14681
	60		54300	15910	5200	7.50	43.3	-	-	8860	11237	14041	18172
							54.4	-	-	8425	10662	13136	16143
CR57KQM-TFD	50	94.61	48995	14347	4650	8.30	43.3	-	-	7596	10128	13030	16195
							54.4	-	-	7759	10149	12866	15821
	60		58425	17108	5550	8.10	43.3	-	-	9054	11981	15384	19156
							54.4	-	-	8474	10752	13838	17399
CR62KQM-TFD	50	101.92	52800	15461	5100	8.80	43.3	-	6806	8760	11129	13847	16933
							54.4	-	-	8390	10538	12970	15528
	60		62800	18400	6075	8.70	43.3	-	8234	10594	13491	16794	20534
							54.4	-	-	10142	12718	15664	18282
CR72KQM-TFM	50	115.79	61500	18024	6100	10.5	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
							54.4	147	177	235	301	379	470
	60		2075	608	275	1.8	43.3	181	227	308	395	497	623
							54.4	171	215	290	366	451	555
ECZ426HG-13M	50	6	2150	630	240	1.1	43.3	248	272	344	443	556	672
							54.4	227	241	296	380	480	583
	60		2575	754	300	1.3	43.3	271	298	379	493	622	751
							54.4	282	299	365	465	583	702
ECZ431HG-13M	50	7.22	2555	749	298	1.4	43.3	297	339	425	526	646	788
							54.4	266	297	364	448	553	681
	60		3050	894	368	1.7	43.3	321	374	475	592	729	894
							54.4	311	365	447	544	663	811
ECZ434HG-13M	50	8.7	3150	924	335	1.8	43.3	312	370	492	637	805	994
							54.4	243	290	393	520	669	840
	60		3750	1099	398	2.0	43.3	397	466	613	788	986	1207
							54.4	296	352	475	628	806	1008
ECZ444HG-13M	50	10.5	3700	1083	411	2.1	43.3	374	447	575	714	883	1102
							54.4	342	404	511	629	778	976
	60		4325	1266	480	2.3	43.3	434	521	671	834	1031	1286
							54.4	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

Refrigeration Capacity (Watts) #		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				21	207-253							
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					197-253							
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				36	207-253							
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				115	197-253							
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				51	361-506							
15994	17723												
16570	18358	1330	Fan 400	36.20	61	342-462	3 Ph	-	-	-	-	-	Internal
15682	17245												
19725	21863				60	361-506							
17475	19197												
18464	20399	1330	Fan 400	36.20	61	342-462	3 Ph	-	-	-	-	-	Internal
17028	18875												
21805	24150				60	361-506							
18625	20750												
19132	21144	1330	Fan 400	36.20	55	342-462	3 Ph	-	-	-	-	-	Internal
16939	18756												
23187	25592				50	361-506							
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					207-253							
684	772												
776	825	240	Fan 350	9.4	9	187-260	CSCR	4	40/60	6	KARPN3041	-	5TM734NFBYY-53
677	721												
865	915					207-253							
807	854												
955	1060	240	Fan 350	9.5	10	187-260	CSCR	4	40/60	6	KARPN3541	-	5TM734NFBYY-53
835	935												
1093	1221					207-253							
994	1114												
1205	1332	260	Fan 350	11.2	13.5	187-254	CSCR	4	40/60	6	KARPN4241	-	5TM739NHBYY-53
1031	1148												
1446	1586					207-253							
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					207-253							
1451	16 69												

*These are optional

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. (℃)	-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
							54.4	144	166	213	262	322	415
	60		1861	545	282	1.50	43.3	215	257	317	384	476	608
							54.4	169	194	250	306	377	486
KCE425HAG	50	7.58	2145	628	360	2.30	43.3	259	289	347	417	517	669
							54.4	192	229	280	337	419	547
	60		2438	714	380	2.20	43.3	294	329	395	474	588	761
							54.4	219	260	318	383	476	622
KCE432HAG	50	9.42	2690	788	375	2.75	43.3	213	287	417	547	675	832
							54.4	138	201	315	427	539	676
	60		3227	945	470	2.75	43.3	256	344	500	656	810	997
							54.4	166	241	378	513	647	811
KCE444HAG	50	12.05	3675	1077	450	2.00	43.3	412	480	596	737	931	1176
							54.4	294	373	489	611	771	962
	60		4276	1252	535	2.20	43.3	479	558	694	858	1084	1368
							54.4	342	434	569	711	897	1120
KCJ444HAG	50	12.58	3700	1084	450	2.80	43.3	365	414	523	665	876	1198
							54.4	282	340	444	552	703	939
KCN463HAG	50	15.33	5250	1538	615	2.70	43.3	-	-	-	1111	1343	1644
							54.4	-	-	-	966	1175	1424
	60		6304	1846	810	3.65	43.3	-	-	-	1236	1534	1929
							54.4	-	-	-	1069	1342	1670
KCJ467HAG	50	18.27	5600	1641	675	3.90	43.3	527	638	864	1132	1430	1780
							54.4	414	498	681	910	1170	1483
	60		6704	1963	820	4.10	43.3	627	759	1029	1347	1702	2119
							54.4	492	592	811	1083	1393	1765
KCJ482HAG	50	22.01	7075	2073	837	3.91	43.3	982	1016	1177	1450	1818	2262
							54.4	740	773	920	1166	1493	1884
	60		8100	2374	964	4.47	43.3	1125	1164	1348	1660	2081	2590
							54.4	847	885	1054	1336	1710	2157
KCJ498HAG	50	25.91	8200	2402	975	5.90	43.3	1115	1185	1355	1627	2049	2567
							54.4	909	978	1101	1333	1688	2149
	60		9255	2710	1120	6.10	43.3	1267	1347	1540	1849	2328	2917
							54.4	1025	1103	1251	1515	1918	2442
KCJ511HAG	50	29.3	9290	2723	1050	4.95	43.3	1312	1352	1559	1914	2387	2950
							54.4	995	1034	1227	1553	1981	2483
	60		10640	3118	1213	5.67	43.3	1503	1549	1785	2192	2734	3378
							54.4	1139	1184	1405	1778	2269	2844
KCJ513HAG	50	38.04	12135	3553	1419	6.34	43.3	1586	1653	1935	2404	3034	3800
							54.4	1322	1347	1556	1953	2513	3209
	60		13400	3924	1630	7.30	43.3	1768	1842	2156	2679	3399	4256
							54.4	1459	1488	1719	2158	2776	3544
KCM511CAL#	50	40.80	11300	3312	1260	5.8	43.3	950	1175	1632	2169	2796	3526
							54.4	759	923	1275	1712	2248	2896
KCM514CAL#	50	51.47	15350	4499	1640	7.9	43.3	1202	1518	2145	2872	3731	4748
							54.4	955	1202	1700	2298	3024	3912
KCM519CAL#	50	59.65	19000	5568	2110	8.4	43.3	1392	1840	2658	3546	4581	5838
							54.4	1216	1530	2128	2828	3701	4824
KCM522CAL#	50	72.08	21800	6389	2300	10.1	43.3	1720	2151	3030	4065	5284	6714
							54.4	1342	1691	2415	3285	4332	5586
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 ℃

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 ℃ to 12.8 ℃
** Except KCN : -37℃ to -6.7℃

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: Potential / PTC	Relay: Current	OLP
677	800	310	Fan 350	10.20	12	180-260	RSIR	3	-	-	-	KARP3627	TAE19/H3
557	662												
792	936				11	207-253							
652	774												
891	1059	310	Fan 350	10.80	13	180-260	CSIR	6	40/60	-	-	KARP4241	KAT0072/H3 or MRA12309-12101
741	891												
1013	1204					207-253							
843	1014												
1157	1388	310	Fan 350	11.80	12.5	180-260	CSIR	6	40/60	-	-	KARP4241/ MTRP4241	KAT0072/H3 or MRA12309-12101
984	1188												
1388	1664					207-253							
1180	1424												
1573	1876	310	Fan 350	11.80	13	180-260	CSCR	4	40/60	10	KARPN4241	-	KAT0072/H3
1283	1535												
1830	2183					207-253							
1493	1786												
1658	2018	890	Fan 350	20.20	17	180-260	CSIR	6	80/100	-	-	KARP4841/ MTRP4841	KAT0159/B2
1286	1568												
2027	2312	380	Fan 350	11.50	14	180-260	CSCR	4	80/100	15	-	KARPN5041	KAT0463/B2 / MRA12308-12102
1749	1974												
2392	2728					197-253							
2064	2329												
2206	2494	890	Fan 350	21.00	23	180-260	CSIR	6	80/100	-	-	KARP-5641/ MTRP-5641 MTRP5941	KAT0733/B2
1878	2147												
2626	2968					198-242							
2247	2569												
2766	3067	890	Fan 350	21.5	32	198-264	PSC/CSCR*	4	80/100*	25	HLR3800-3F3C-4*	-	Internal
2319	2577												
3167	3512					207-253							
2656	2951												
3182	3596	890	Fan 350	21.50	32	198-264	CSIR	5	80/100	-	AC85001 or HLR3800-6H3C-1	-	KAT0163 / B2 KAT0167/B2
2708	3108												
3616	4086					207-253							
3077	3518												
3572	3936	890	Fan 350	21.5	32	180-260	PSC/CSCR*	4	80/100*	25	HLR3800-3F3C-4*	-	Internal
3030	3344												
4090	4506					207-253							
3469	3829												
4675	5203	890	Fan 350	22.7	45	180-260	PSC/CSCR*	4	80/100*	36	HLR3800-6H3C-1*	-	Internal
4015	4506												
5235	5827					207-253							
4435	4977												
4378	4906	1330	Fan 400	29.80	54	180-260	CSCR	4	80/100	36	AC85004	-	Internal
3669	4159												
5961	6729	1330	Fan 400	32.50	72	180-260	CSCR		150/200	45	AC85001 / HLR3800-6H3C-1	-	Internal
4991	5686												
7388	8408	1330	Fan 400	34.90	85	180-260	CSCR	4	130/156	40	AC85004 / 3ARR3 CT3P5 / RVA-3F6D	-	Internal
6272	7242												
8391	9440	1330	Fan 400	34.90	104	180-260	CSCR	4	189/227	60	AC85005 / 3ARR3C T24S5 /RVA-3AG 6D	-	Internal
7075	8015												
4358	4883	1330	Fan 400	29.50	20	342-462	3Ph	-	-	-	-	-	Internal
3660	4147												
5946	6726	1330	Fan 400	30.00	28	342-462	3Ph	-	-	-	-	-	Internal
4979	5697												
7324	8320	1330	Fan 400	31.00	41	342-460	3 Ph	-	-	-	-	-	Internal
6201	7154												
8194	9217	1330	Fan 400	32.7	45	342-460	3 Ph	-	-	-	-	-	Internal
6908	7828												

*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

10	12.8	Mechanical Specification			Electrical Specification								
		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	-												
871	-					207-253							
754	-												
914	-	340	Fan 350	9.70	10	180-260	CSCR	4	40/60	6	PTC-8EA19D7	-	KAT0413 / H3 or MRA 12390-12101
794	-												
1051	-					207-253							
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												

#Performance Table at ARI Conditions.

Notes

1. 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.
2. Operating voltage range signifies the range of voltage for which the compressor can start and run up to 43C ambient.
3. Cooling capacity and power consumption are nominal values at specified rating conditions and subject to ±5% variation.
4. Direct air flow on glass terminal cover should be avoided.
5. Compressors with CSIR, CSCR circuit and three phase models may be used with thermostatic expansion valve.
6. Compressors with RSIR Circuit must use capillary tube only.
7. All compressors use two pole motors.
8. Compressors for specific applications are rated for IS-10617 Part I and Part III-1983.
9. 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
							54.4	-	110	136	177	232	303
	60		790	231	183	0.9	43.3	-	132	178	236	306	389
							54.4	-	131	163	212	279	363
ECZ396LG-13M	50	8.21	760	223	190	0.8	43.3	-	111	148	196	255	324
							54.4	-	110	136	177	232	303
	60		890	261	228	1.0	43.3	-	184	208	264	346	446
							54.4	-	121	167	236	319	410
KCN396LAG	50	9.00	800	235	205	1.85	43.3	-	115	174	247	323	403
							54.4	-	107	157	215	276	343
ECZ411LG-13M	50	10.5	915	268	218	1.3	43.3		140	209	288	380	490
							54.4	-	109	170	242	329	434
	60		1050	307	233	1.30	43.3	-	161	240	331	437	563
							54.4		125	195	278	378	499
KCN411LAG	50	11.10	960	282	245	2.10	43.3	-	135	207	297	396	515
							54.4	-	106	177	255	348	467
KCJ412LAG	50	16.35	1028	301	280	2.75	43.3	-	-	-	358	500	683
							54.4	-	-	-	260	405	583
KCN415LAG	50	15.33	1260	371	325	1.80	43.3	-	150	259	373	509	677
							54.4	-	112	210	328	466	625
ECZ416LG-13M	50	13.8	1260	369	280	1.3	43.3	-	238	272	358	486	648
							54.4	-	231	256	333	453	606
KCJ423LAG	50	32.61	1925	566	485	3.00	43.3	-	-	-	661	943	1267
							54.4	-	-	-	486	740	1016
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	457
KCN414LAL	50	7.31	1150	337	325	2.30	43.3	166	198	263	354	458	578
							54.4	137	159	222	307	399	506
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	457
KCN418LAL	50	9.00	1455	426	385	2.00	43.3	205	257	354	470	607	759
							54.4	178	203	276	385	504	637
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	786
KCN422LAL	50	11.10	1825	535	455	2.20	43.3	256	321	443	588	759	949
							54.4	225	255	348	486	635	802
KCJ430LAL	50	16.35	2435	713	580	3.20	43.3	304	389	550	747	977	1232
							54.4	222	293	460	647	865	1125
KCN430LAL	50	15.33	2575	754	580	4.40	43.3	364	454	626	831	1074	1342
							54.4	317	359	489	682	892	1127
KCJ450LAL	50	32.64	4100	1201	1000	5.50	43.3	416	591	934	1325	1771	2235
							54.4	273	438	727	1079	1512	1992
KCM475LAL	50	51.47	5703	1670	1250	6.80	43.3	876	1068	1490	1880	2514	3298
							54.4	-	-	1114	1529	2205	2974

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

ASRE/T Rating Conditions

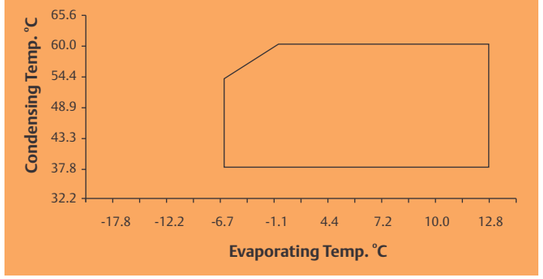
Ambient Temperature	Evaporating Temperature	Condensing Temperature	Sub Cooled Liquid Temp	Suction Gas Temperature	Suction Pressure			Discharge Pressure		
					R134a	R22	R404A	R134a	R22	R404A
C	C	C	C	C	psig	psig	psig	psig	psig	psig
High Temperature										
35	7.2	54.4	46.1	35	40	77	93.7	196	300	354
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

-10	-6.7	Mechanical Specification: Oil Charge(cc)	Cooling Type (CFM)	Net Wt. (Kg.)	Electrical Specification: LRA (A)	Voltage Range(V)	Motor Type	Fig No.	Start Capacitor (Mfd)	Run Capacitor (Mfd)	Relay: Potential / PTC	Relay: Current	OLP
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					207-253							
467	545												
405	464	240	Fan 350	9.8	15	187-260	CSCR	4	40/60	10	-	KARPN3741	5TM739NHBYY-53
389	454												
556	631					207-253							
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					207-253							
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												

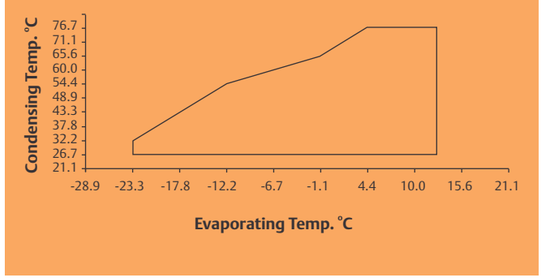
Operating Envelopes

High Temperature (R22)

KCE443HAE, KCE461HAE, KCJ511HAE, KCJ513HAE

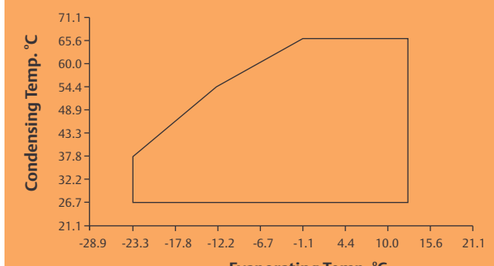


CR22K6M, CR30K6M, CR36K6M, CR42K6M



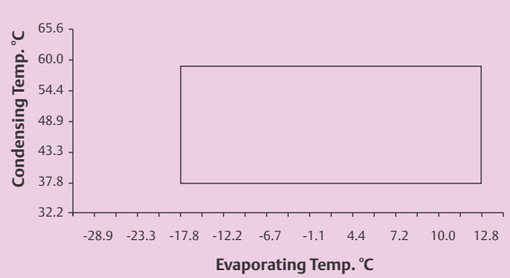
High Temperature (R22)

CR47KQM, CR53KQM, CR57KQM, CR62KQM, CR72KQM



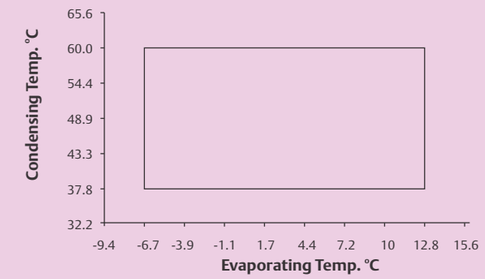
High Temperature (R134a)

KCE419HAG, KCE425HAG, KCE432HAG, KCE444HAG, KCJ444HAG, KCJ467HAG, KCJ498HAG



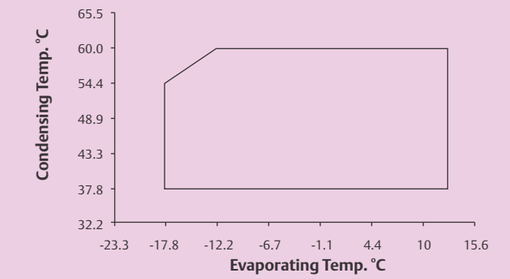
High Temperature (R134a)

KCN463HAG



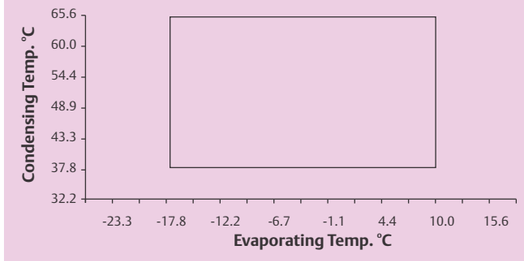
High Temperature (R134a)

KCM511, KCM514, KCM519, KCM522 CAL, KCJ482HAG, KCJ511HAG, KCJ513HAG, ECZ421, ECZ426, ECZ431, ECZ434, ECZ444.



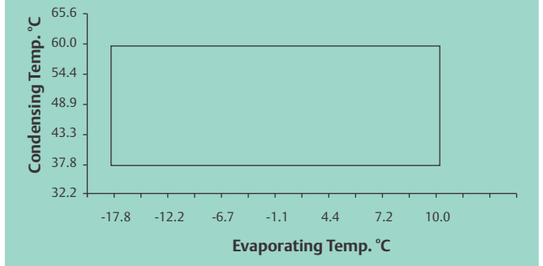
Medium Temperature (R134a)

KCN413CAG & KCN416CAG

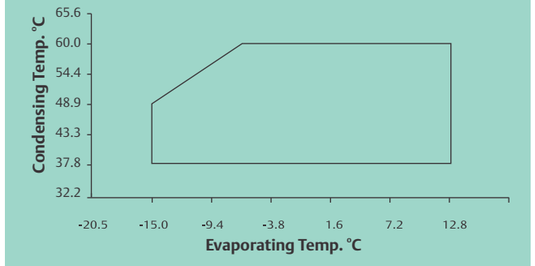


Medium Temperature (R404A)

KCJ438CAL, KCJ461CAL, KCJ484CAL

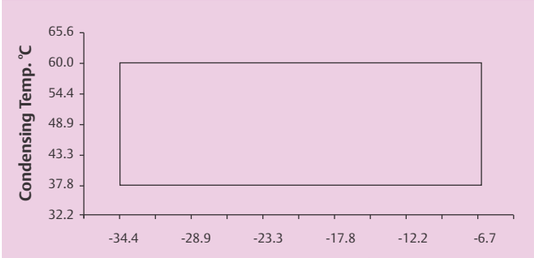


KCM511CAL, KCM514CAL, KCM519CAL, KCM522CAL

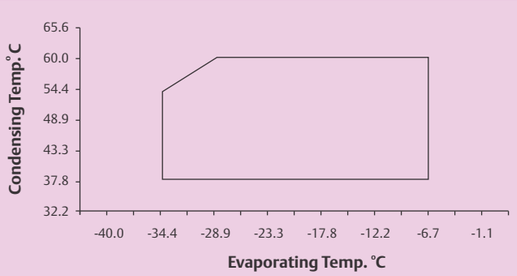


Low Temperature (R134a)

KCN396LAG

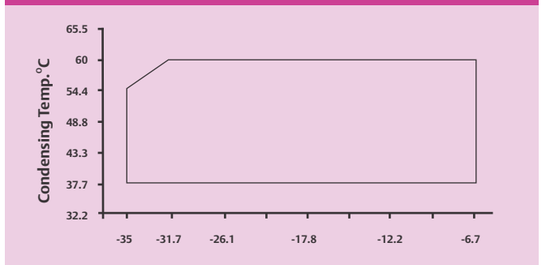


KCN411LAG, KCJ412LAG, KCN415LAG, KCJ423LAG

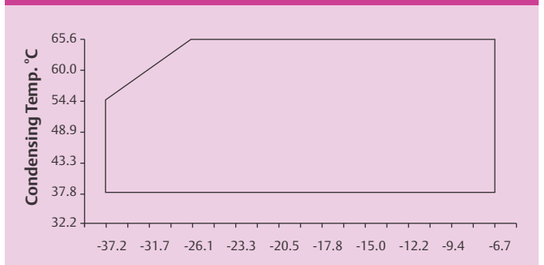


Low Temperature (R134a)

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

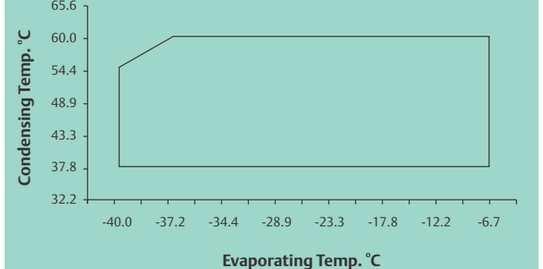


KCN372LAG



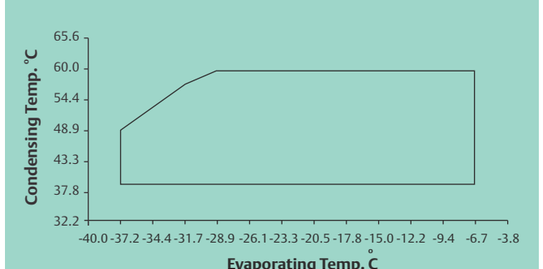
Low Temperature (R404A)

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



Low Temperature (R404A)

KCM475LAL



Standard BoM Data

Model	Standard* Domestic	Circuit	Suction	Mounting Option
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	
	E513H	Three Phase	Spud	
KCM515LAL	E510H	Three Phase	Tube	
	E513H	Three Phase	Spud	
KCM519CAL	B310H	CSCR	Tube	
	B313H	CSCR	Spud	
	E510H	Three Phase	Tube	
	E513H	Three Phase	Spud	
KCM522CAL	B310H	CSCR	Tube	
	B314H	CSCR	Spud	
	E510H	Three Phase	Tube	
	E514H	Three Phase	Spud	
ECZ421HG	F37D0	CSIR	Tube	4.00" x 6.50"
ECZXXXHG/LG/LL	M37D0	CSCR		
ECZ XXXLG/LL FOW Series	M37DF			

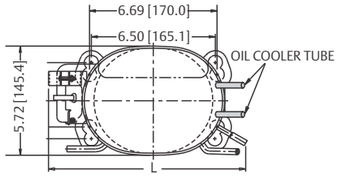
* Contact Emerson Representative for non standard BoM.

Standard BoM Data For CR Compressor

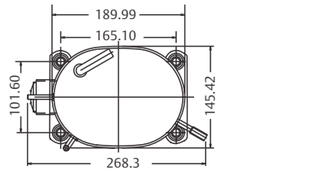
Model	Ordering BoM
CR22K6M-PF1	111DM
CR30K6M-PF1	111DE
CR22K6M-TFM CR30K6M-TFM	111DM
CR36K6M-PFZ	121DM
CR42K6M-PFZ	101DM
CR36K6M-TFM	121DM
CR42K6M-TFM	101DM
CRXXKQM-TFD (47,53,57,62) CR72KQM-TFM	233DM

Dimensional Drawings

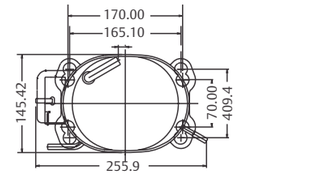
KCE



KCE461HAE

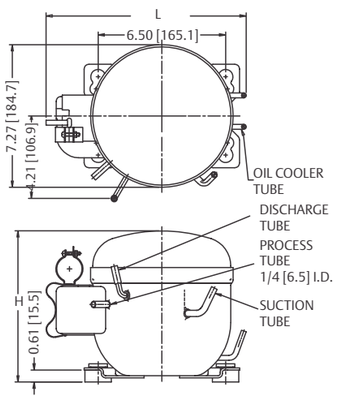


KCE443HAE



Model	Suction ID		Discharge ID		L	H	Capacitor Mounting
	Inch	mm	Inch	mm	mm	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

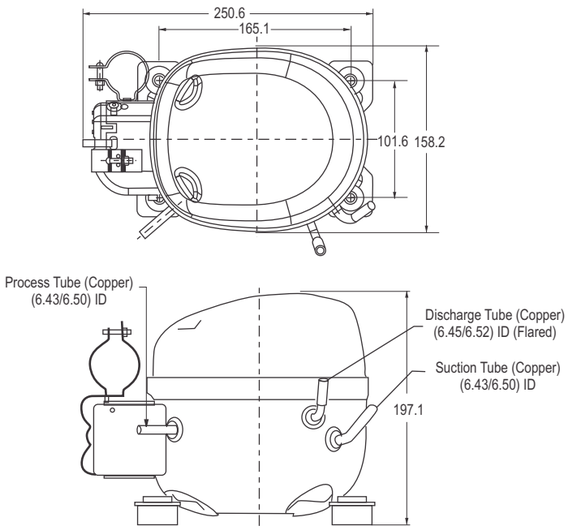
KCN



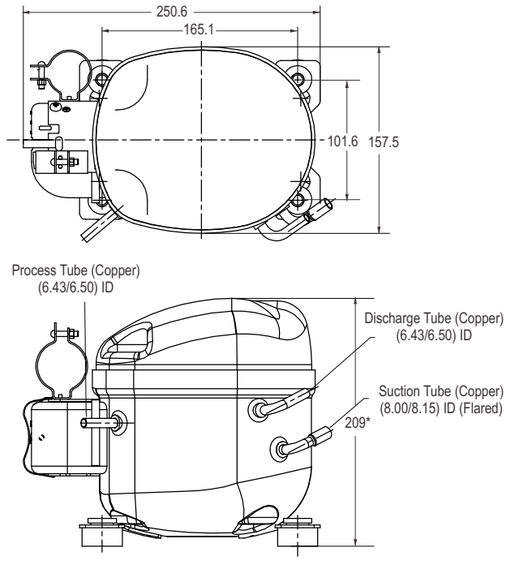
Model	Suction ID		Discharge ID		L	H	Oil Cooler Tube		Capacitor Mounting
	Inch	mm	Inch	mm	mm	mm	Inch	mm	
KCN372LAG	1 / 4	6.5	1 / 4	6.5	259.2	189.4	3 / 16	4.9	NO
KCN396LAG	1 / 4	6.5	1 / 4	6.5	259.2	195.8	3 / 16	4.9	YES
KCN411LAG	5 / 16	8.0	5 / 16	8.0	250.8	202.1	—	—	YES
KCN415LAG	5 / 16	8.0	5 / 16	8.0	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

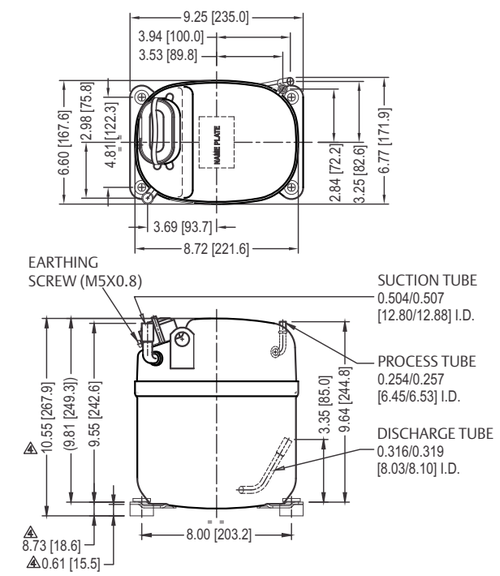


ECZ411, ECZ416, ECZ417, ECZ419, ECZ434, ECZ444

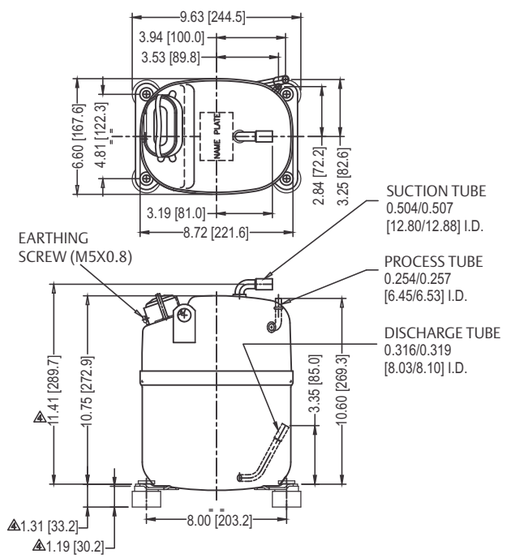


*Height is 215.5mm for ECZ416/417/419

KCJ412LAG

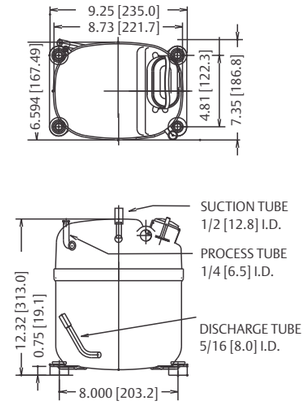


KCJ423LAG

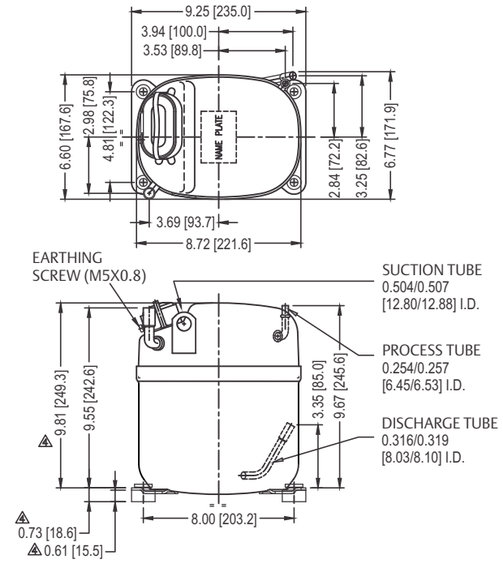


Dimensional Drawings

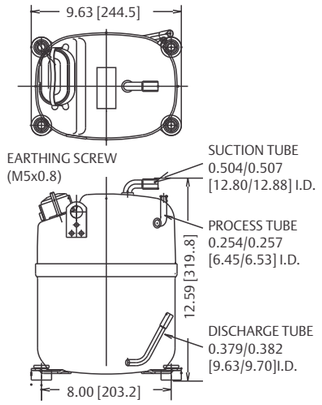
KCJ430LAL



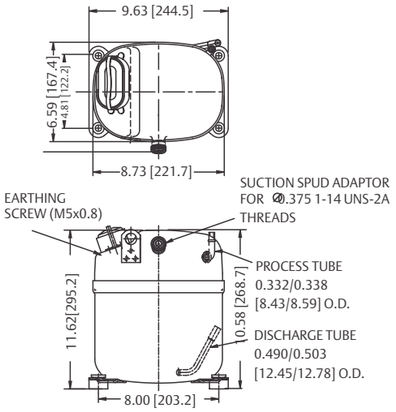
KCJ444HAG



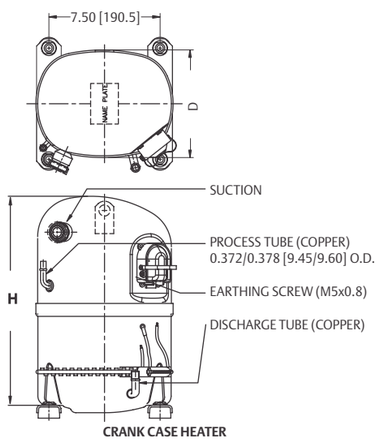
KCJ450LAL with Suction Tube



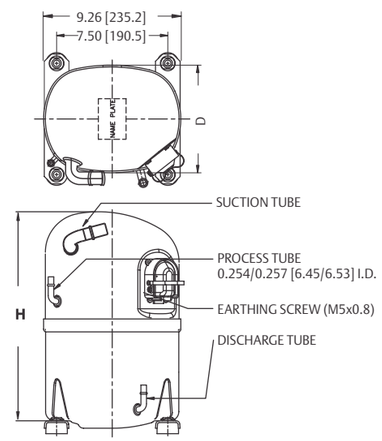
KCJ450LAL with Suction Spud



KCM475LAL/KCM511CAL/514CAL with Spud

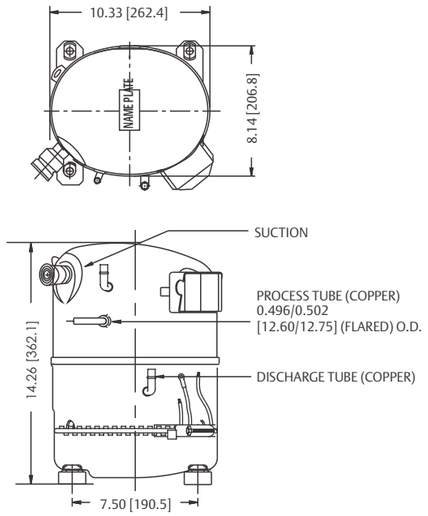


KCM475LAL/KCM511CAL/514CAL with Suction Tube

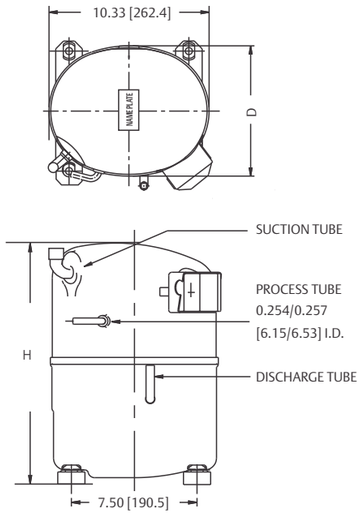


Dimensional Drawings

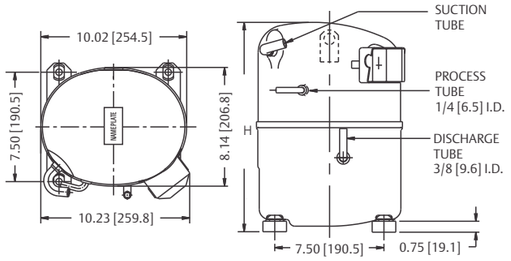
KCM519CAL/522CAL with Spud



KCM522CAL with Suction Tube

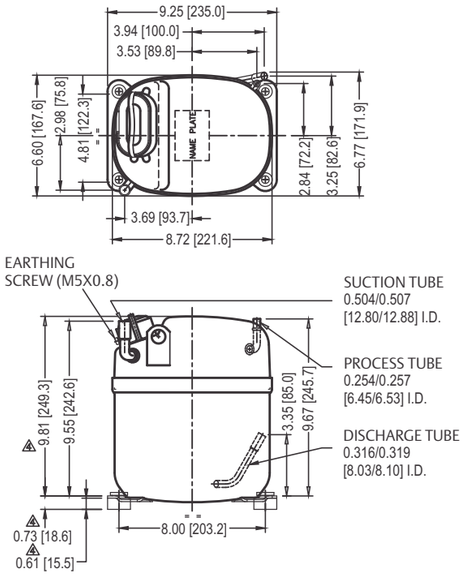


KCM519CAL with Suction Tube

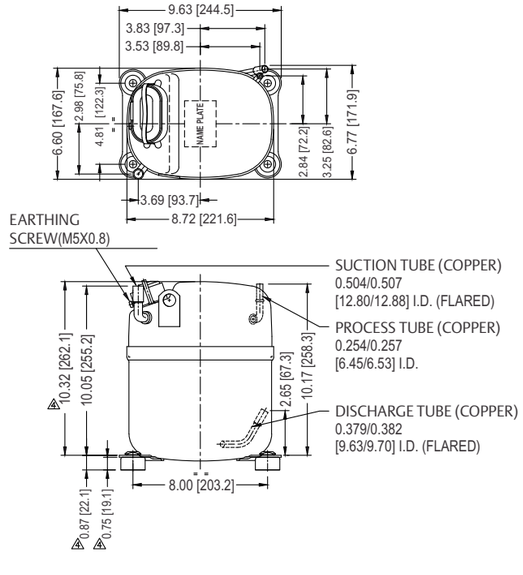


Model	Suction Spud	Suction Tube	Discharge Tube	Height, H (mm)	Depth, D (mm)
KCM475CAL	Ø0.625 11/4-12UNF Rolled Threads	5/8”	3/8”	358.2	184.4
KCM511CAL	1.1/412UNF-2A Threads	5/8”	3/8”	339	184.4
KCM514CAL	1.1/412UNF-2A Threads	7/8”	3/8”	358	184.4
KCM519CAL	Ø0.625 11/4-12UNF Rolled Threads	7/8”	3/8”	349.4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

KCJ467HAG

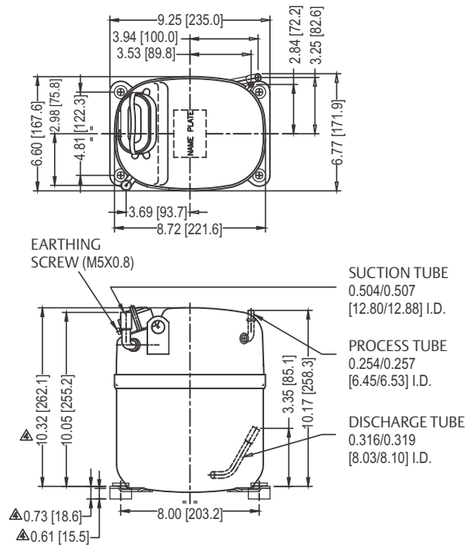


KCJ482HAG

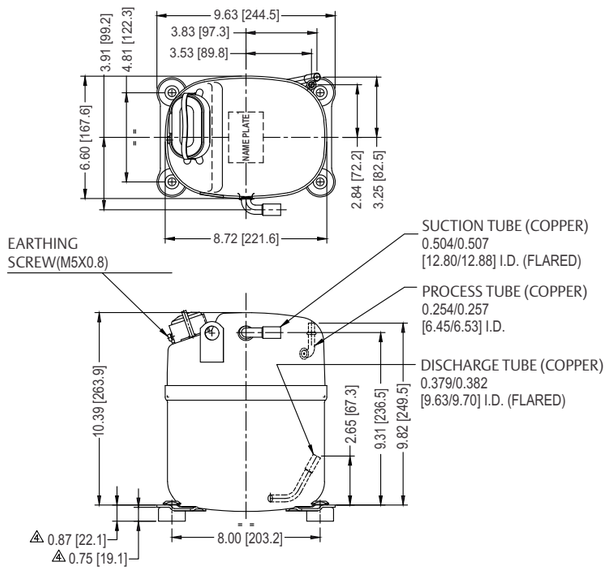


Dimensional Drawings

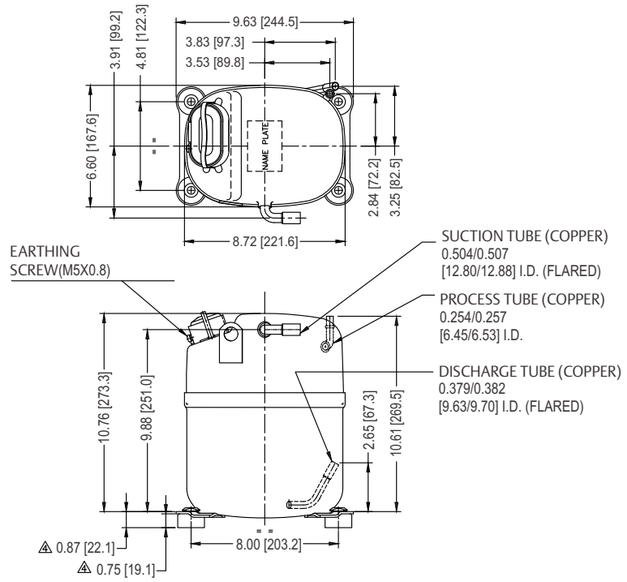
KCJ498HAG



KCJ511HAG

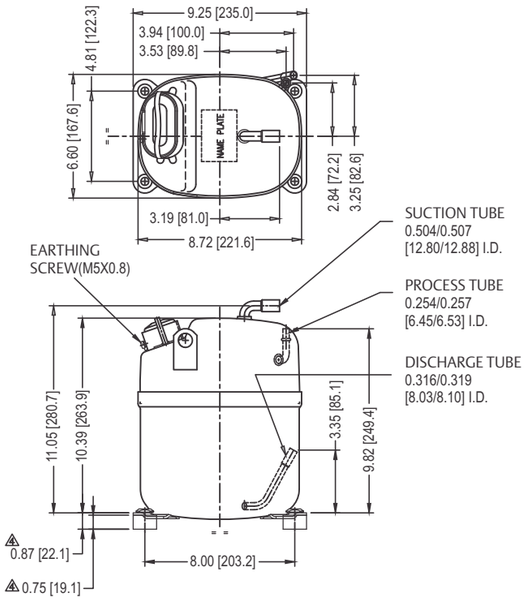


KCJ513HAG

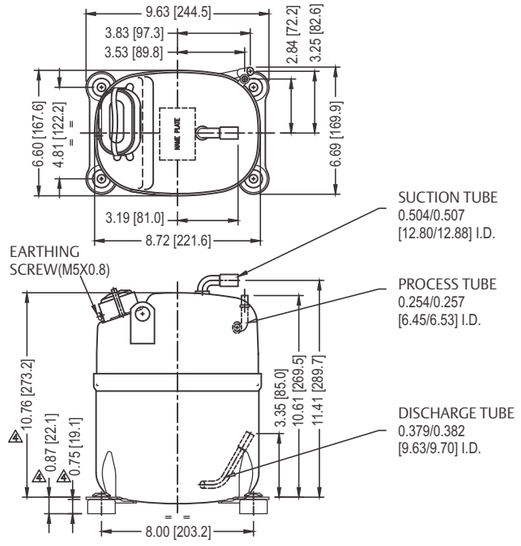


Dimensional Drawings

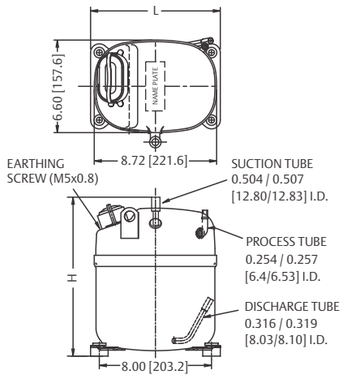
KCJ511HAE



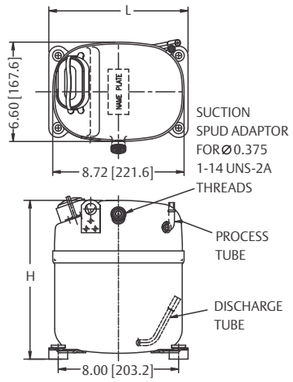
KCJ513HAE



KCJ***CAL with Suction Tube



KCJ***CAL with Suction Spud

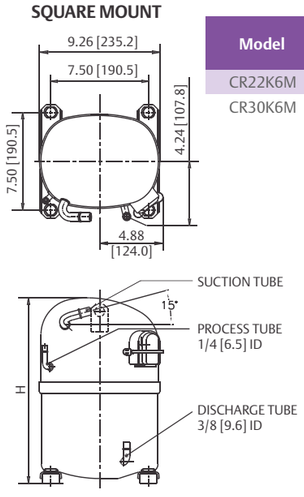


Model	With Suction Spud	With Suction Tube	L
	Height,(H) (mm)		(mm)
KCJ438CAL	274.9	290	235
KCJ461CAL	286	308	235
KCJ484CAL	317.2	295.2	244.5

Dimensional Drawings

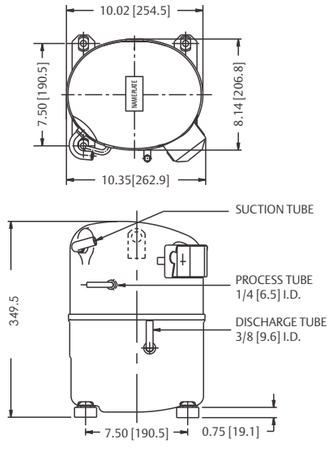
CR22K6M / CR30K6M

SQUARE MOUNT

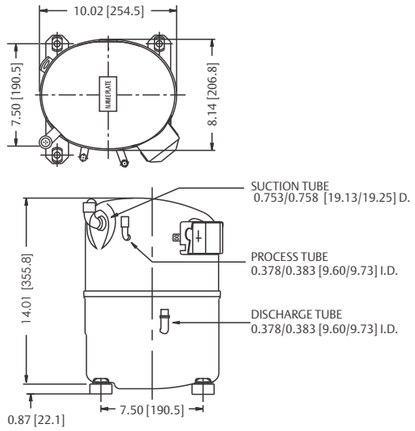


Model	Suction Tube		Height, (H)	
	inch	mm	inch	mm
CR22K6M	1/2	12.8	14.2	361
CR30K6M	5/8	15.9	14.9	381

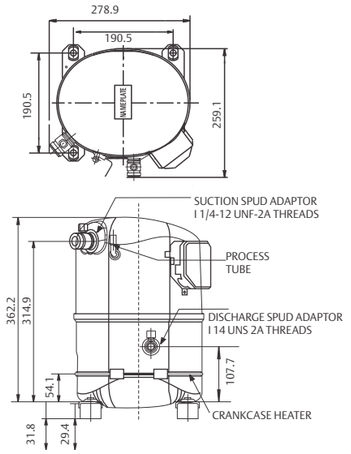
CR36K6M



CR42K6M



CR47, 53, 57, 62, 72 KQM



Wiring Diagrams

PERMANENT SPLIT CAPACITOR (PSC)

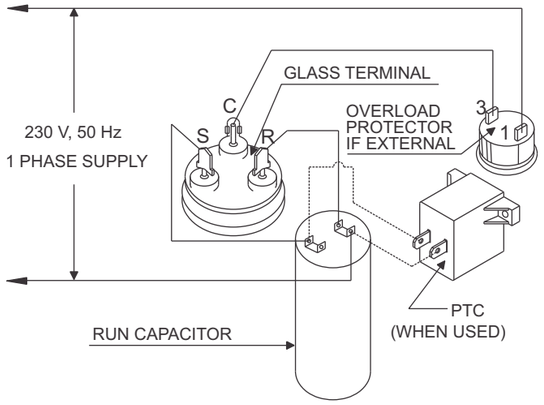


Fig. 1

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

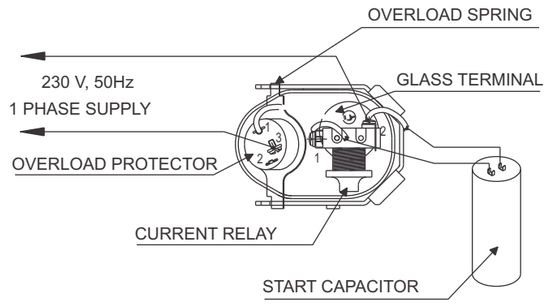


Fig. 2

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

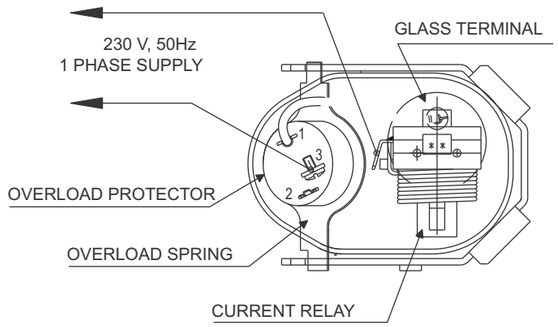


Fig. 3

CAPACITOR START CAPACITOR RUN (CSCR)

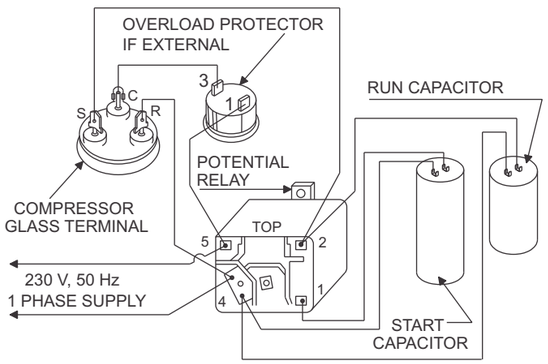


Fig. 4

Wiring Diagrams

CAPACITOR START INDUCTION RUN (CSIR)

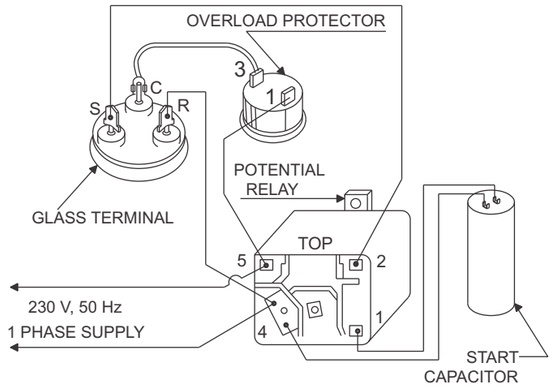


Fig. 5

CAPACITOR START INDUCTION RUN (CSIR) WITH CURRENT RELAY

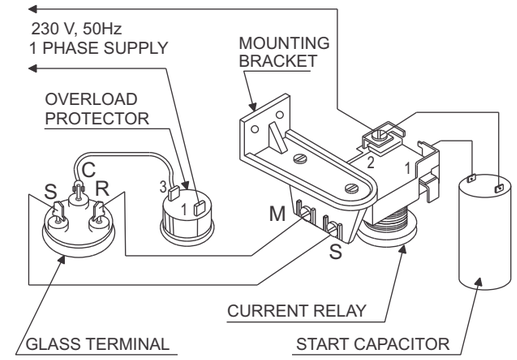


Fig. 6

CAPACITOR START CAPACITOR RUN (CSCR) WITH PTC

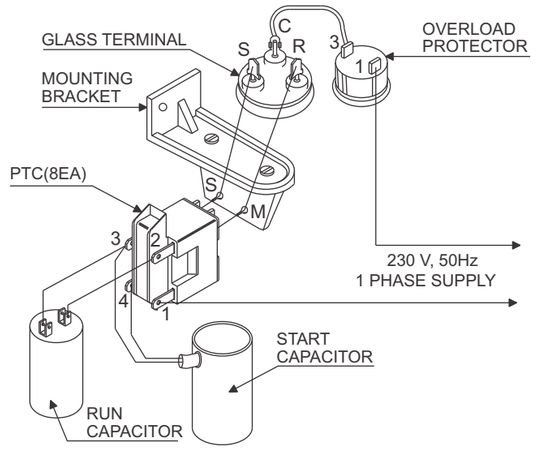


Fig. 7

CAPACITOR START CAPACITOR RUN (CSCR) WITH NTC

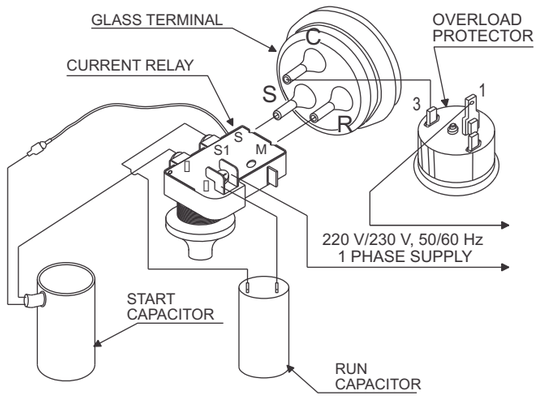


Fig. 8

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

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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