

SPECIFICATIONS OF COMPRESSOR

Model No: 3CB084ZA0M



Panasonic Appliances Compressor (Dalian) Co.,Ltd.

23/Nov/22

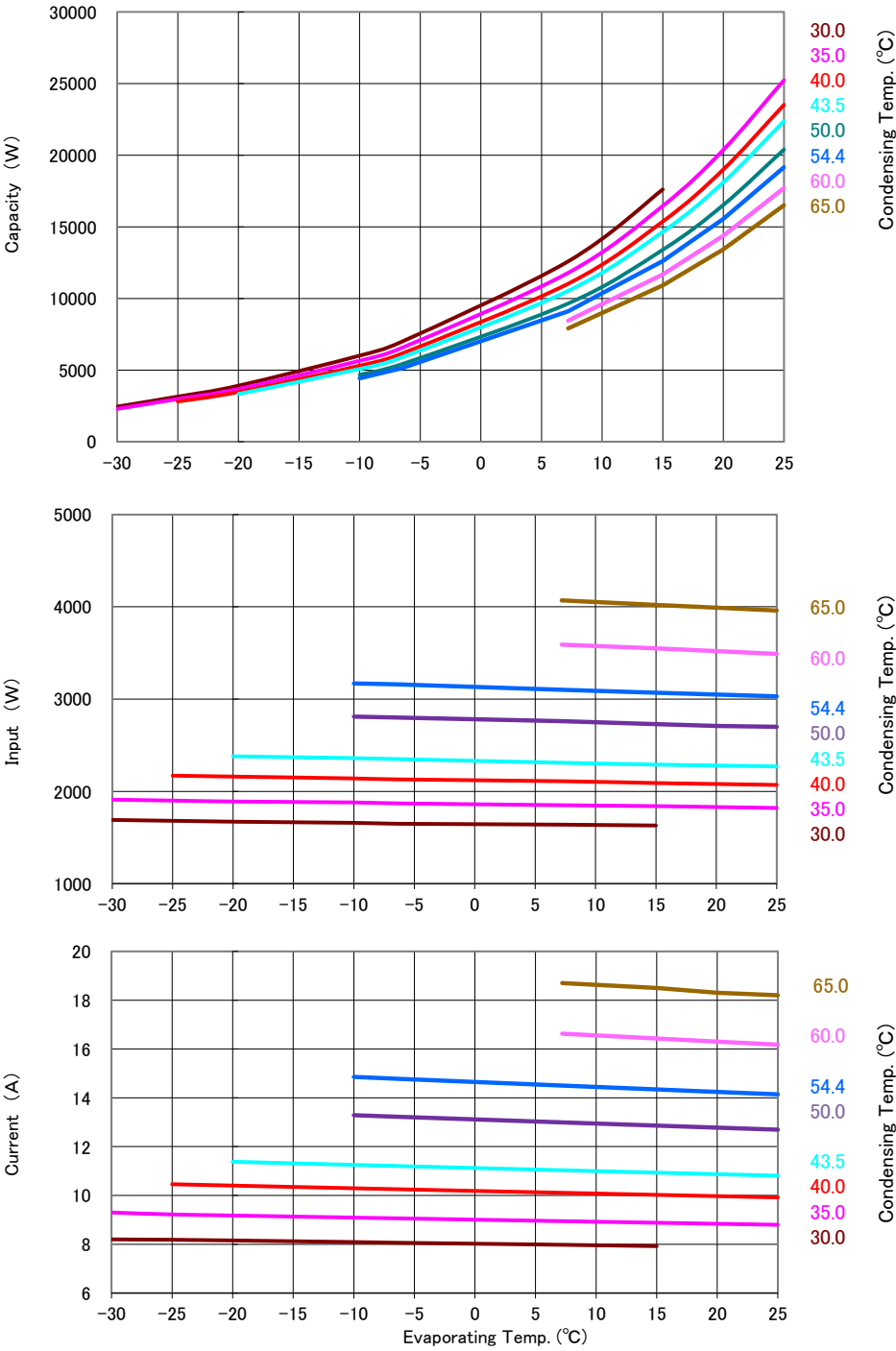
GENERAL SPECIFICATIONS

Model No:		3CB084ZA0M		
Application				
Evaporating Temp Range	(°C)	-30 ~ 25		
Refrigerant		R407C		
Compressor Cooling		Natural Cooling		
Rated Performance				
Capacity	(W)	19,400		
Input	(W)	5,630		
Current	(A)	14.0		
Revolution	(min ⁻¹)	3600		
Sound Level	(dB(A))	-		
Rating Conditions				
Power Source		3-PH	60rps	255V
Evaporating Temp	(°C)	7.2		
Condensing Temp	(°C)	54.4		
Suction Gas Temp	(°C)	18.3		
Liquid Temp	(°C)	43.9		
Ambient Temp	(°C)	35.0		
Method		Midpoint		
Measuring Point of Sound Level				
Distance from the Compressor	(m)	1.0		
Compressor				
Design		Hermetic Scroll		
Displacement	(cm3)	84.0		
Suction Line Connection	(Φ mm 0D)	25.4		
Discharge Line Connection	(Φ mm 0D)	15.9		
Oil	(mL)	2000 (FV68S)		
Mass(Incl.Oil)	(kg)	40		
Motor				
Type		DC Brushless Motor		
Pole		4		
Rated Power Source		3PH	380V	
Voltage Range	(V)	-		
Starting Current	(A)	-		

Panasonic Appliances Compressor (Dalian) Co.,Ltd.

PERFORMANCE CURVE

Code No.	3CB084ZA0M
Power Source	3-PH 30rps 139V
Condensing Temp.(°C)	30、35、40、43.5、50、54.4、60、65
Super Heating (K)	9
Sub Cooled(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R407C



PERFORMANCE DATA

Code No.	3CB084ZA0M
Power Source	3-PH 30rps 139V
Condensing Temp.(°C)	30、35、40、43.5、50、54.4、60、65
Super Heating (K)	9
Sub Cooled(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R407C

Capacity (W)		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp.(°C)	30.0	2,450	3,150	3,910	6,010	6,990	12,590	17,610		
	35.0	2,290	2,980	3,680	5,650	6,560	11,790	16,460	20,380	25,240
	40.0		2,810	3,470	5,310	6,160	11,030	15,370	19,010	23,520
	43.5			3,330	5,080	5,890	10,530	14,650	18,110	22,380
	50.0				4,680	5,420	9,650	13,400	16,530	20,400
	54.4				4,430	5,130	9,100	12,610	15,550	19,160
	60.0						8,450	11,680	14,380	17,710
	65.0						7,910	10,920	13,430	16,510

Input (W)		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp.(°C)	30.0	1,690	1,680	1,670	1,660	1,650	1,640	1,630		
	35.0	1,910	1,900	1,890	1,880	1,870	1,850	1,840	1,830	1,820
	40.0		2,170	2,160	2,140	2,130	2,110	2,090	2,080	2,070
	43.5			2,380	2,360	2,350	2,310	2,290	2,280	2,270
	50.0				2,810	2,800	2,760	2,730	2,710	2,700
	54.4				3,170	3,160	3,100	3,070	3,050	3,030
	60.0						3,590	3,550	3,520	3,490
	65.0						4,070	4,020	3,990	3,960

Current (A)		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp.(°C)	30.0	8.2	8.2	8.2	8.1	8.1	8.0	7.9		
	35.0	9.3	9.2	9.2	9.1	9.1	8.9	8.9	8.8	8.8
	40.0		10.5	10.4	10.3	10.3	10.1	10.0	10.0	9.9
	43.5			11.4	11.3	11.2	11.0	10.9	10.9	10.8
	50.0				13.3	13.2	13.0	12.9	12.8	12.7
	54.4				14.9	14.8	14.5	14.3	14.2	14.1
	60.0						16.6	16.4	16.3	16.2
	65.0						18.7	18.5	18.3	18.2

REFRIG FLOW(kg/h)		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp.(°C)	30.0	33	50	70	118	138	226	284		
	35.0	36	51	70	115	134	222	282	325	370
	40.0		52	69	113	131	219	280	324	370
	43.5			68	111	129	217	279	323	370
	50.0				107	125	213	276	321	371
	54.4				105	122	210	274	321	371
	60.0						207	272	319	372
	65.0						204	270	318	372

Coefficients of Polynomial Formula

	Capacity (W)	Input (W)	Current (A)	Flow (kg/h)
C1	13866.1416	1346.407227	6.138237953	198.2909393
C2	640.395874	-1.315665722	-0.007783089	6.435874939
C3	-182.851593	-17.95902061	-0.052398317	-0.737947643
C4	12.52327633	-7.46405E-05	-1.35291E-05	0.014027913
C5	-9.032622337	0.080472007	0.000379893	-0.001494997
C6	0.927058697	0.932917655	0.00383867	0.000632599
C7	0.106352307	-0.000225123	4.25093E-08	-6.14614E-06
C8	-0.109681867	-7.22942E-06	5.27612E-07	0.001296354
C9	0.041668516	-0.002411566	-1.13597E-05	-6.13358E-06
C10	-1.04292E-07	-4.43568E-09	6.98235E-12	5.47076E-11

Note: The polynomial coefficients subject to change without notice.

$X = C1 + C2*(S) + C3*D + C4*(S^2) + C5*(S*D) + C6*(D^2) + C7*(S^3) + C8*(D*S^2) + C9*(S*D^2) + C10*(D^3)$

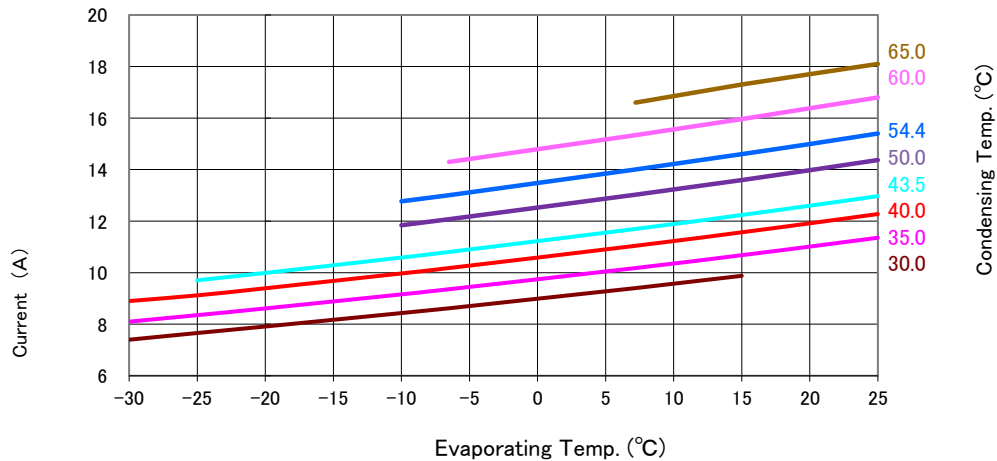
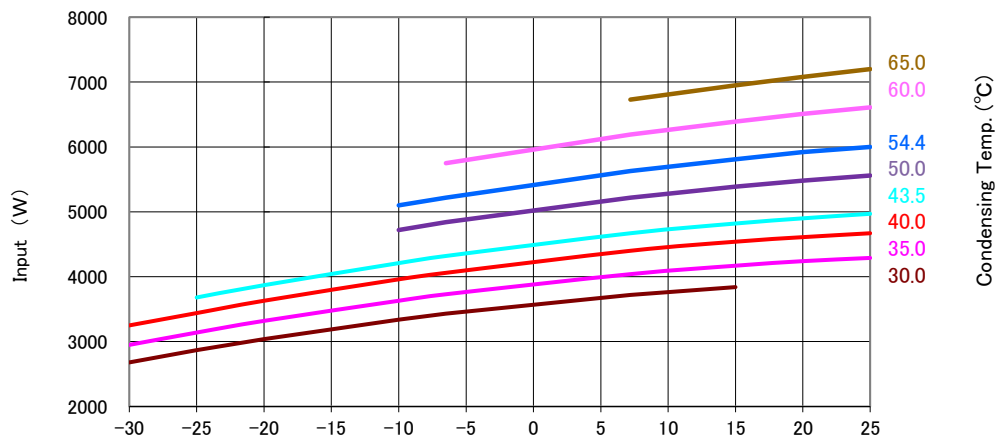
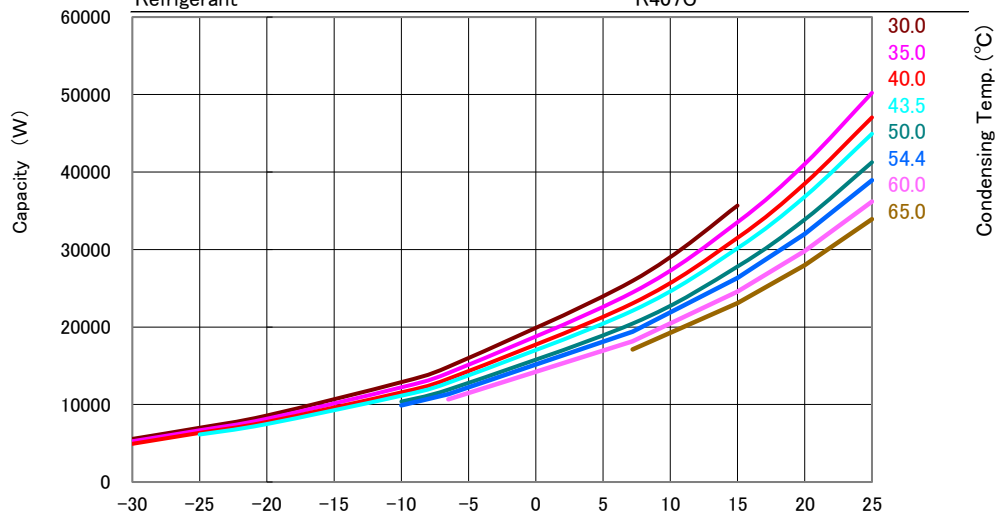
X——CAPACITY(W) OR POWER(W) OR CURRENT(A)

S——EVAPORATING TEMP, °C

D——CONDENSING TEMP, °C

PERFORMANCE CURVE

Code No.	3CB084ZA0M
Power Source	3-PH 60rps 255V
Condensing Temp.(°C)	30、35、40、43.5、50、54.4、60、65
Super Heating (K)	9
Sub Cooled(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R407C



PERFORMANCE DATA

Code No.	3CB084ZA0M
Power Source	3-PH 60rps 255V
Condensing Temp.(°C)	30、35、40、43.5、50、54.4、60、65
Super Heating (K)	9
Sub Cooled(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R407C

Capacity (W)

		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp. (°C)	30.0	5,560	7,000	8,580	12,890	14,870	25,960	35,670		
	35.0	5,260	6,670	8,160	12,220	14,070	24,470	33,530	41,040	50,220
	40.0	4,930	6,340	7,750	11,570	13,320	23,060	31,510	38,510	47,050
	43.5		6,130	7,480	11,140	12,810	22,110	30,170	36,820	44,940
	50.0				10,380	11,920	20,450	27,810	33,880	41,260
	54.4				9,890	11,350	19,400	26,330	32,020	38,940
	60.0					10,670	18,150	24,560	29,810	36,190
	65.0						17,110	23,090	27,980	33,920

Input (W)

		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp. (°C)	30.0	2,680	2,870	3,040	3,340	3,430	3,720	3,840		
	35.0	2,950	3,140	3,320	3,630	3,730	4,040	4,170	4,240	4,290
	40.0	3,250	3,440	3,630	3,960	4,060	4,400	4,540	4,610	4,670
	43.5		3,680	3,870	4,210	4,320	4,670	4,820	4,900	4,970
	50.0				4,720	4,840	5,220	5,390	5,480	5,560
	54.4				5,100	5,220	5,630	5,810	5,920	6,000
	60.0					5,750	6,190	6,390	6,510	6,610
	65.0						6,730	6,950	7,080	7,200

Current (A)

		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp. (°C)	30.0	7.4	7.7	7.9	8.4	8.6	9.4	9.9		
	35.0	8.1	8.4	8.6	9.2	9.4	10.2	10.7	11.0	11.4
	40.0	8.9	9.1	9.4	10.0	10.2	11.0	11.6	11.9	12.3
	43.5		9.7	10.0	10.6	10.8	11.7	12.2	12.6	13.0
	50.0				11.8	12.1	13.0	13.6	14.0	14.4
	54.4				12.8	13.0	14.0	14.6	15.0	15.4
	60.0					14.3	15.3	16.0	16.4	16.8
	65.0						16.6	17.3	17.7	18.1

REFRIG FLOW(kg/h)

		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp. (°C)	30.0	60	105	153	259	299	471	579		
	35.0	70	110	154	254	293	466	578	655	736
	40.0	80	115	154	249	287	461	577	658	744
	43.5		118	155	246	283	457	576	660	749
	50.0				240	276	451	575	663	758
	54.4				236	271	447	574	665	765
	60.0					265	442	573	669	773
	65.0						437	572	671	781

Coefficients of Polynomial Formula

	Capacity (W)	Input (W)	Current (A)	Flow (kg/h)
C1	2.783172E+04	2501.092041	6.181951523	416.6247253
C2	1.228859E+03	14.66805744	0.04062961	12.13302326
C3	-3.307476E+02	14.30253792	0.04326997	-1.347541451
C4	2.317382E+01	-0.309352368	0.000169821	-0.055525158
C5	-1.626917E+01	0.164398164	0.000503079	0.013175129
C6	1.580465E+00	0.725447893	0.001667592	0.00130281
C7	1.885235E-01	-0.00013062	3.80767E-07	2.36513E-06
C8	-1.992322E-01	0.00075601	4.2753E-07	0.003963792
C9	7.182904E-02	0.00211885	1.35376E-06	-4.74243E-05
C10	-1.823566E-07	-3.51752E-09	2.04833E-12	4.57028E-11

Note: The polynomial coefficients subject to change without notice.

$X = C1 + C2*(S) + C3*D + C4*(S^2) + C5*(S*D) + C6*(D^2) + C7*(S^3) + C8*(D*S^2) + C9*(S*D^2) + C10*(D^3)$

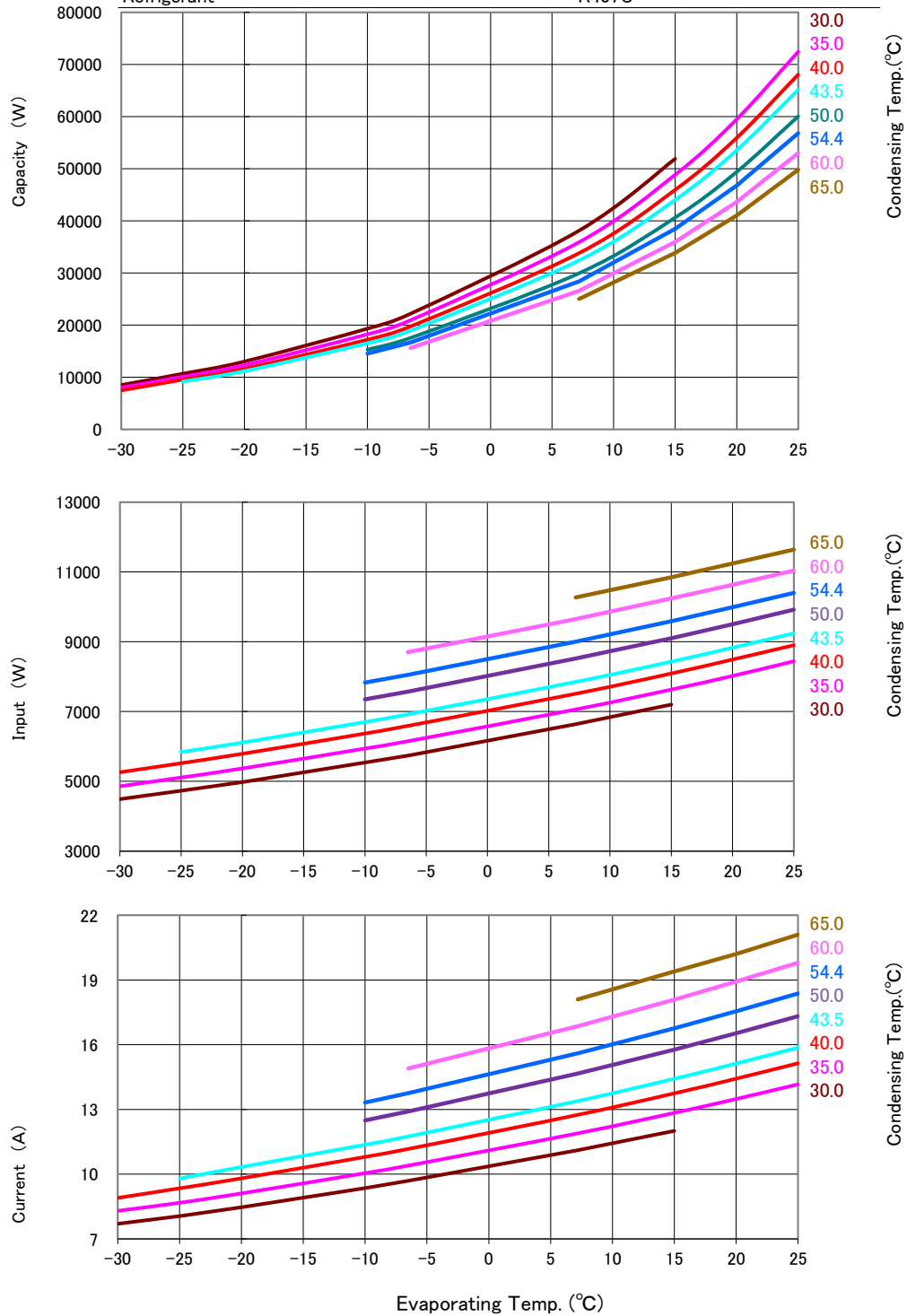
X——CAPACITY(W) OR POWER(W) OR CURRENT(A)

S——EVAPORATING TEMP, °C

D——CONDENSING TEMP, °C

PERFORMANCE CURVE

Code No.	3CB084ZA0M
Power Source	3-PH 90rps 353V
Condensing Temp.(°C)	30、35、40、43.5、50、54.4、60、65
Super Heating (K)	9
Sub Cooled(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R407C



PERFORMANCE DATA

Code No.	3CB084ZA0M
Power Source	3-PH 90rps 353V
Condensing Temp.(°C)	30、35、40、43.5、50、54.4、60、65
Super Heating (K)	9
Sub Cooled(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R407C

Capacity (W)

Capacity (W)		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp.(°C)	30.0	8,510	10,670	13,010	19,310	22,180	38,120	51,890		
	35.0	8,000	10,090	12,290	18,230	20,930	35,910	48,830	59,470	72,430
	40.0	7,470	9,540	11,610	17,200	19,740	33,810	45,940	55,910	68,050
	43.5		9,170	11,160	16,510	18,940	32,410	44,000	53,530	65,130
	50.0				15,300	17,540	29,950	40,620	49,380	60,030
	54.4				14,530	16,660	28,400	38,480	46,750	56,800
	60.0					15,600	26,550	35,930	43,630	52,970
	65.0						25,010	33,820	41,040	49,800

Input (W)

		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp.(°C)	30.0	4,490	4,730	4,980	5,540	5,740	6,640	7,200		
	35.0	4,860	5,110	5,370	5,940	6,150	7,060	7,630	8,020	8,440
	40.0	5,260	5,520	5,790	6,370	6,590	7,510	8,090	8,490	8,900
	43.5		5,840	6,110	6,700	6,920	7,850	8,430	8,830	9,240
	50.0				7,350	7,570	8,520	9,100	9,500	9,920
	54.4				7,830	8,050	9,000	9,590	9,990	10,400
	60.0					8,700	9,650	10,240	10,630	11,040
	65.0						10,270	10,850	11,240	11,640

Current (A)

		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp.(°C)	30.0	7.7	8.1	8.5	9.4	9.7	11.1	12.0		
	35.0	8.3	8.7	9.1	10.0	10.4	11.9	12.8	13.5	14.2
	40.0	8.9	9.3	9.8	10.8	11.2	12.7	13.7	14.4	15.1
	43.5		9.8	10.3	11.4	11.7	13.4	14.4	15.1	15.9
	50.0				12.5	12.9	14.7	15.8	16.5	17.3
	54.4				13.3	13.8	15.6	16.8	17.5	18.4
	60.0					14.9	16.9	18.1	18.9	19.8
	65.0						18.1	19.4	20.2	21.1

REFRIG FLOW(kg/h)

		REFRIG FLOW(kg/h)								
		Evaporating Temp. (°C)								
		-30	-25	-20	-10	-6.5	7.2	15	20	25
Condensing Temp.(°C)	30.0	101	165	235	390	448	702	864		
	35.0	117	173	235	380	438	692	860	976	1,099
	40.0	134	181	236	371	427	683	856	978	1,109
	43.5		186	236	365	419	676	854	980	1,116
	50.0				354	406	663	849	984	1,129
	54.4				346	397	655	846	986	1,138
	60.0					385	645	843	989	1,150
	65.0						635	839	992	1,160

Coefficients of Polynomial Formula

	Capacity (W)	Input (W)	Current (A)	Flow (kg/h)
C1	41344.40625	4370.806641	7.276314735	639.0290527
C2	1721.800415	53.57469559	0.075852819	18.05422783
C3	-492.6252136	39.22005844	0.06200511	-2.576788425
C4	31.53182411	0.415023923	0.000390134	-0.100056022
C5	-21.72418022	0.489097297	0.00069806	0.015869621
C6	2.282265425	0.670478523	0.00133538	0.002707386
C7	0.261132866	0.000879928	1.81377E-06	2.21681E-06
C8	-0.252545297	-0.002448674	4.18823E-06	0.006679208
C9	0.09326607	-0.00382797	6.86745E-06	-8.03817E-05
C10	-2.20892E-07	9.90987E-10	5.60331E-12	-4.28348E-11

Note: The polynomial coefficients subject to change without notice.

$X = C1 + C2*(S) + C3*D + C4*(S^2) + C5*(S*D) + C6*(D^2) + C7*(S^3) + C8*(D*S^2) + C9*(S*D^2) + C10*(D^3)$

X—CAPACITY(W) OR POWER(W) OR CURRENT(A)

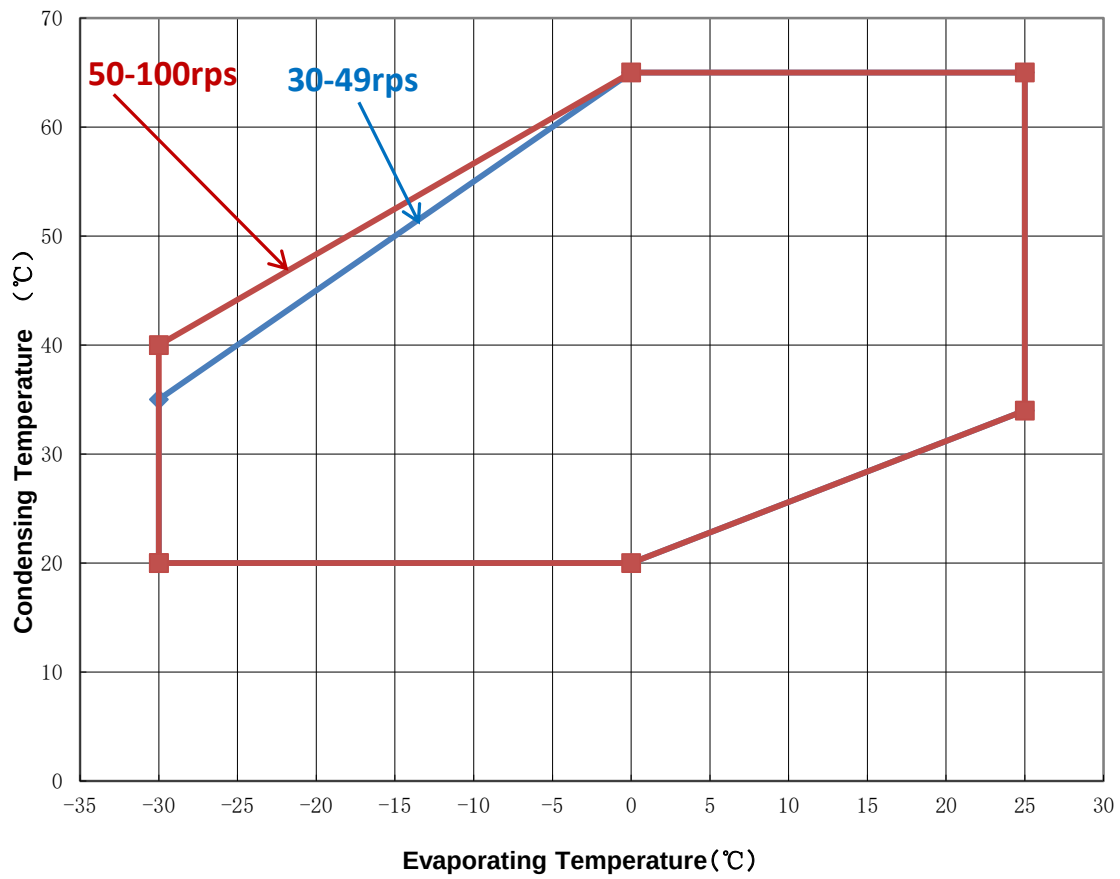
S—EVAPORATING TEMP, °C

D—CONDENSING TEMP, °C

5. Operating Envelope

Refrigerant : R407C

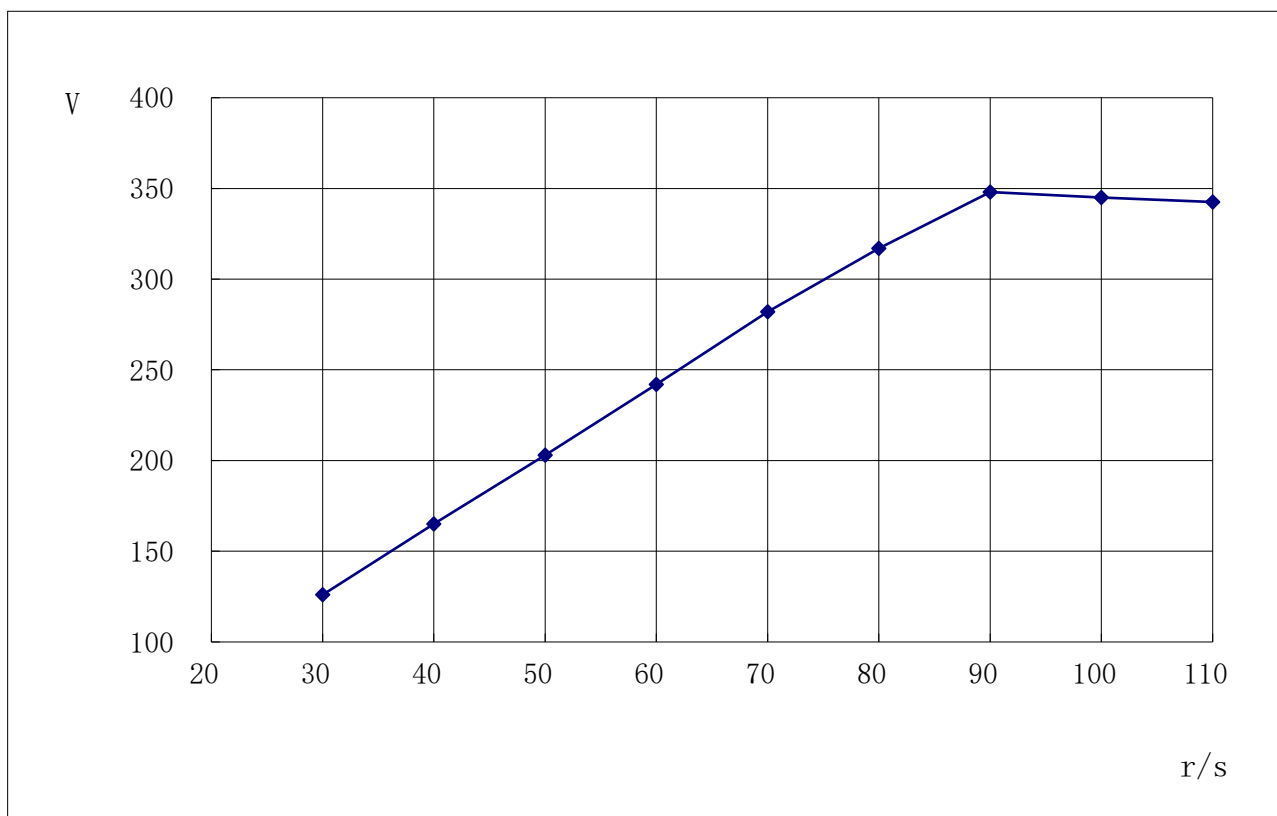
Suction Gas Temp:18.3℃



V-F curve

Voltage (V)	126	165	203	242	282	317	348	345	343
Rotation speed (r/s)	30	40	50	60	70	80	90	100	110

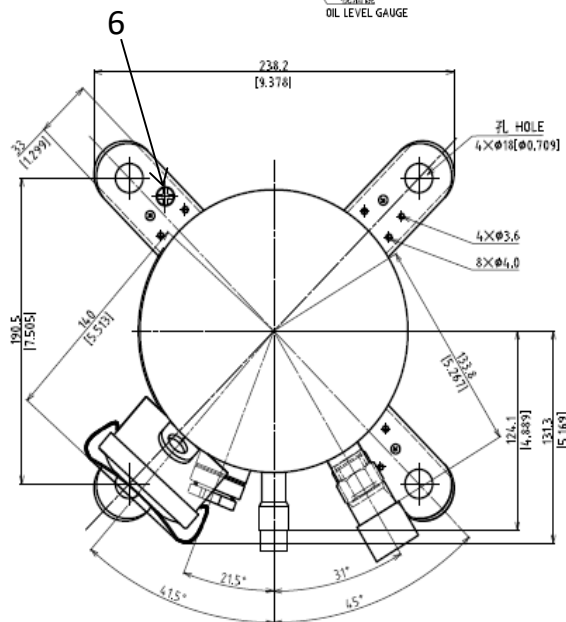
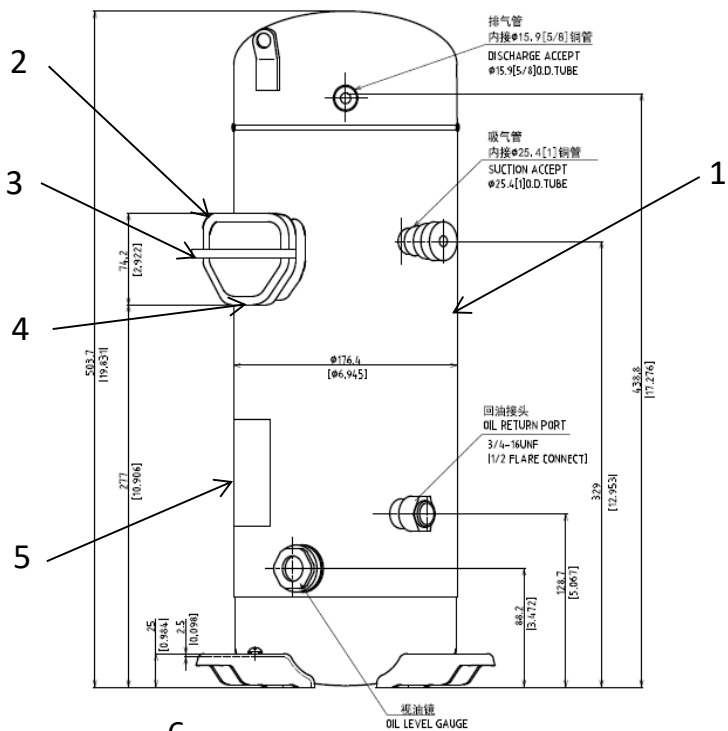
Remarks: input voltage to inverter is 380V, the curve may be different under different input voltage.



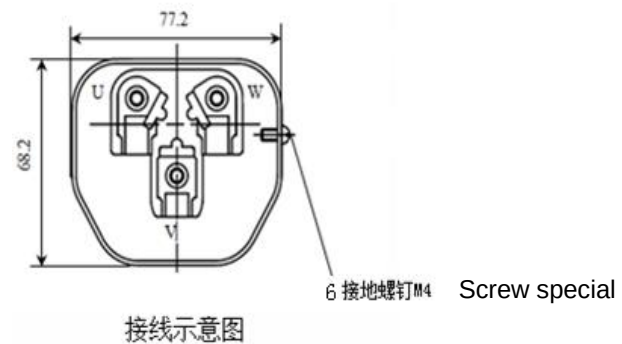
Motor Specification for 3CB084ZA0M

202203

Compressor Model		3CB084ZA0M
Compressor Type		Hermetic DC Inverter Scroll Compressor
Power source	V	Input Power Source 380-415V
Compressor Displacement	cm ³ /rev	84
DC Motor Type		DC Inverter Synchronous Motor
Number of Poles		4
Motor armature resistance	Ω	Line: 0.553 (25℃) Phase: 0.277 (25℃)
Motor d axis inductance (Ld)	mH	8.37 (under 10A) 8.06 (under 12.5A) 7.77 (under 15A) 7.47 (under 17.5A)
Motor q axis inductance (Lq)	mH	10.41 (under 10A) 9.79 (under 12.5A) 9.72 (under 15A) 8.86 (under 17.5A)
Permanent magnet flux Armature flux linkages (line)	Wb	0.598
Back electromotive force constant (line)	V/1000min-1	62.66
Torque coefficient	Nm/A	0.934 (40℃)
Rotor inertia	Kg*mm ²	Motor Rotor: 1932 Rotor + crankshaft: 5585
De-magnetizing Limit Current	A	47A (0-peak) Discharge Temp. ≤115℃



No.	Part Code	Qty	Name
1	3CB084ZA0M	1	Compressor
2	A-0101-DSB	1	Terminal Box Cover
3	A-0201-DSB	1	Terminal Box Clip
4	A-0301-DSB	1	Insulating Grommet
5		1	Nameplate
6	B-0101-DSB	2	Screw Special



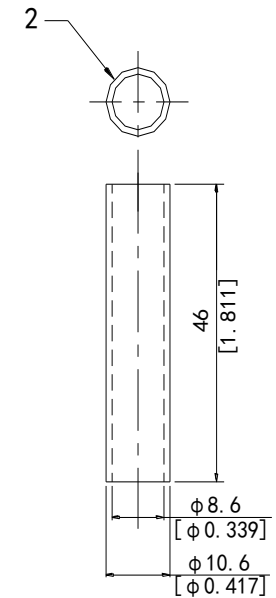
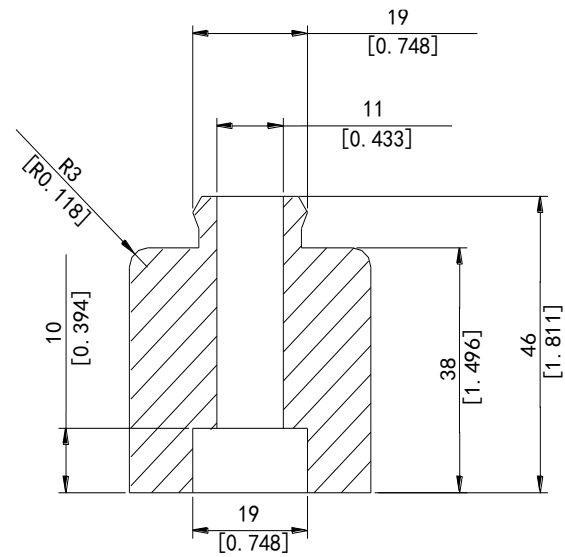
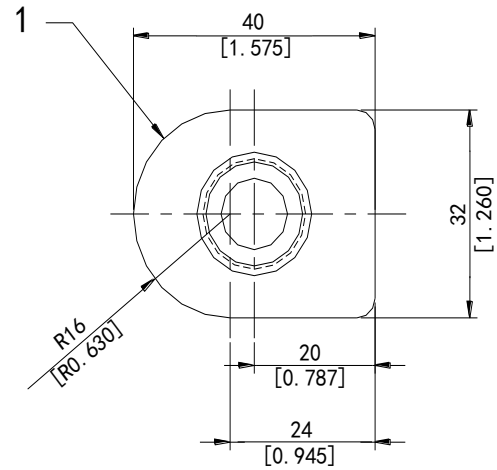
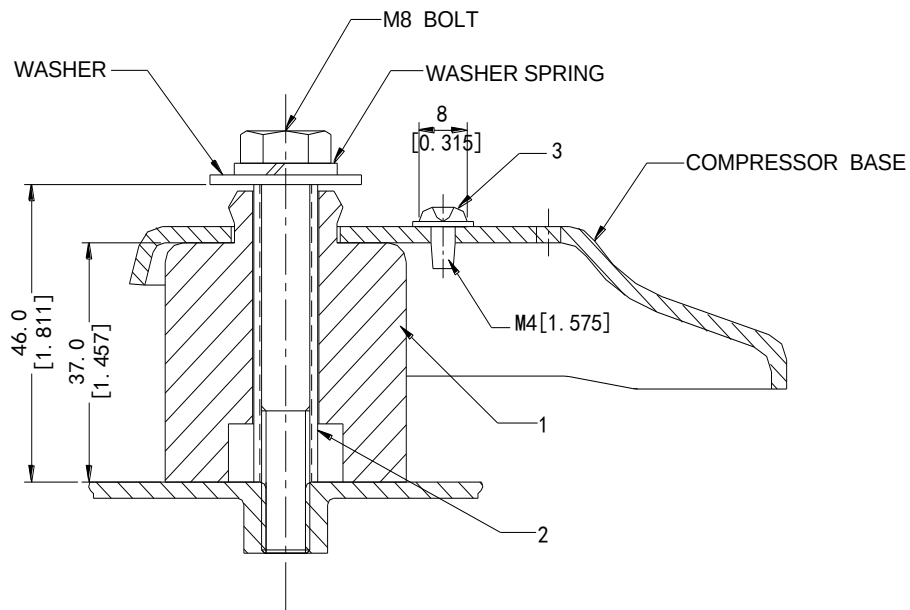
Tightening torque of adapter is 2.5-3N

Part Code

D-0127-DSB

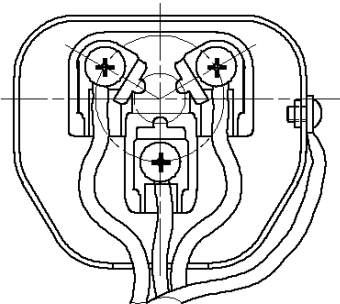
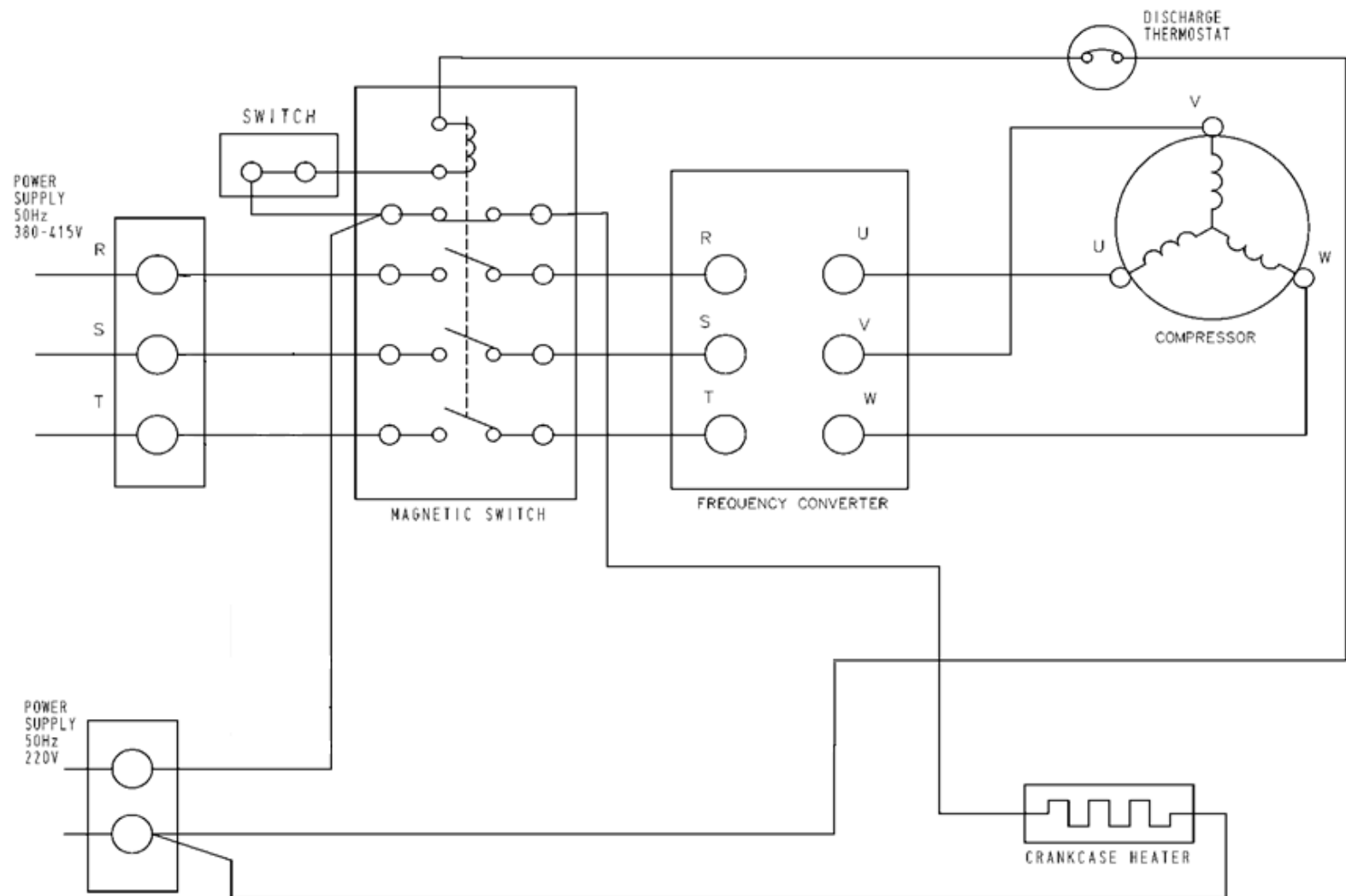
Name

Compressor Outline Drawing



No.	Part	QTY	Name
1	M-0101-DSB	4	Mounting Grommet
2	M-0201-DSB	4	Mounting Sleeve
3	B-0101-DSB	2	Screw Special

Part Code
M-5101-DSB
Name
Mounting Parts Listing



Part Code
E-0910-DSB
Name
Wiring Diagram