

**SANYO**

# SANYO SCROLL COMPRESSORS

Code : 809 103 88

Model : C-SCN753H8K



DALIAN SANYO COMPRESSOR CO.,LTD.

Rev.2009-12

## **SANYO Scroll Compressor**



**Model** C-SCN753H8K

**Refrigerant** R407C

**Electrical** 380-415 Volts 3 Phase 50Hz

440-460 Volts 3 Phase 60Hz

### **Nominal Performance at ARI**

Power Source	<u>50Hz-380V</u>	<u>60Hz-440V</u>
Capacity (W)	<u>29900</u>	<u>35900</u>
Power (W)	<u>9350</u>	<u>11500</u>
Current (A)	<u>15.9</u>	<u>16.7</u>
COP (W/W)	<u>3.20</u>	<u>3.12</u>
Mass Flow (kg/h)	<u>719</u>	<u>859</u>

### **Rating Conditions (MID Point)**

Condensing Temperature(°C)	<u>54.4</u>
Evaporating Temperature(°C)	<u>7.2</u>
Return Gas temperature(°C)	<u>18.3</u>
Liquid Temperature(°C)	<u>43.8</u>
Ambient Temperature(°C)	<u>35</u>

### **Motor**

	<b>50Hz</b>	<b>60Hz</b>
Voltage Range(V)	<u>342-456</u>	<u>396-506</u>
RLA (A)	<u>19.1</u>	
MCC (A)	<u>26.7</u>	
LRA (A)	<u>96</u>	<u>101</u>
RPM (min <sup>-1</sup> )	<u>2900</u>	<u>3450</u>

### **Compressor**

Maximum Discharge Temp(°C)	<u>135</u>
Displacement (cm <sup>3</sup> /rev)	<u>171.2</u>
Weight (with oil kg)	<u>69.5</u>
VDE File Number	<u>40010537</u>

### **Oil**

Oil Type	<u>FV68S</u>
Initial Charge (ml)	<u>2800</u>
Re-charge (ml)	<u>2600</u>

### **Electrical Components**

Motor Protector Type	<u>Internal</u>
Run Capacitor Rating (MFD/Volts)	<u>n/a</u>

Nominal performance values +/-5% with 1 hr run-in.

Ratings with air over compressor.

Specifications subject to change without notice.



Made by: Dalian **SANYO** Compressor Co., Ltd.

**PERFORMANCE DATA**

Compressor Model(Code)	<b>C-SCN753H8K (809 103 88)</b>
Power Source	<b>3PH 50Hz 380-415V</b>
Suction Gas Superheat(K)	<b>9</b>
Sub Cooling(K)	<b>8.3</b>
Compressor Cooling	<b>Natural Cooling</b>
Refrigerant	<b>R407C</b>

**CAPACITY(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	16,240	19,880	22,720	29,790	35,590	39,860	44,640	48,400
40.5	15,030	18,390	21,000	27,510	32,850	36,770	41,160	44,620
45.0	14,100	17,240	19,680	25,760	30,740	34,400	38,500	41,720
50.0	13,130	16,030	18,300	23,930	28,540	31,930	35,720	38,700
54.4		15,050	17,160	22,430	26,740	29,900	33,440	36,220
60.0			15,820	20,660	24,610	27,510	30,750	33,300
65.0				19,210	22,870	25,550	28,550	30,910

**POWER(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	6,070	6,200	6,260	6,330	6,320	6,300	6,270	6,230
40.5	6,740	6,880	6,950	7,030	7,040	7,020	7,000	6,970
45.0	7,360	7,510	7,580	7,680	7,700	7,700	7,690	7,670
50.0	8,130	8,280	8,360	8,480	8,520	8,540	8,540	8,530
54.4		9,030	9,120	9,260	9,320	9,350	9,370	9,380
60.0			10,180	10,340	10,440	10,490	10,540	10,570
65.0				11,400	11,530	11,600	11,680	11,730

**CURRENT(A)**

@380V

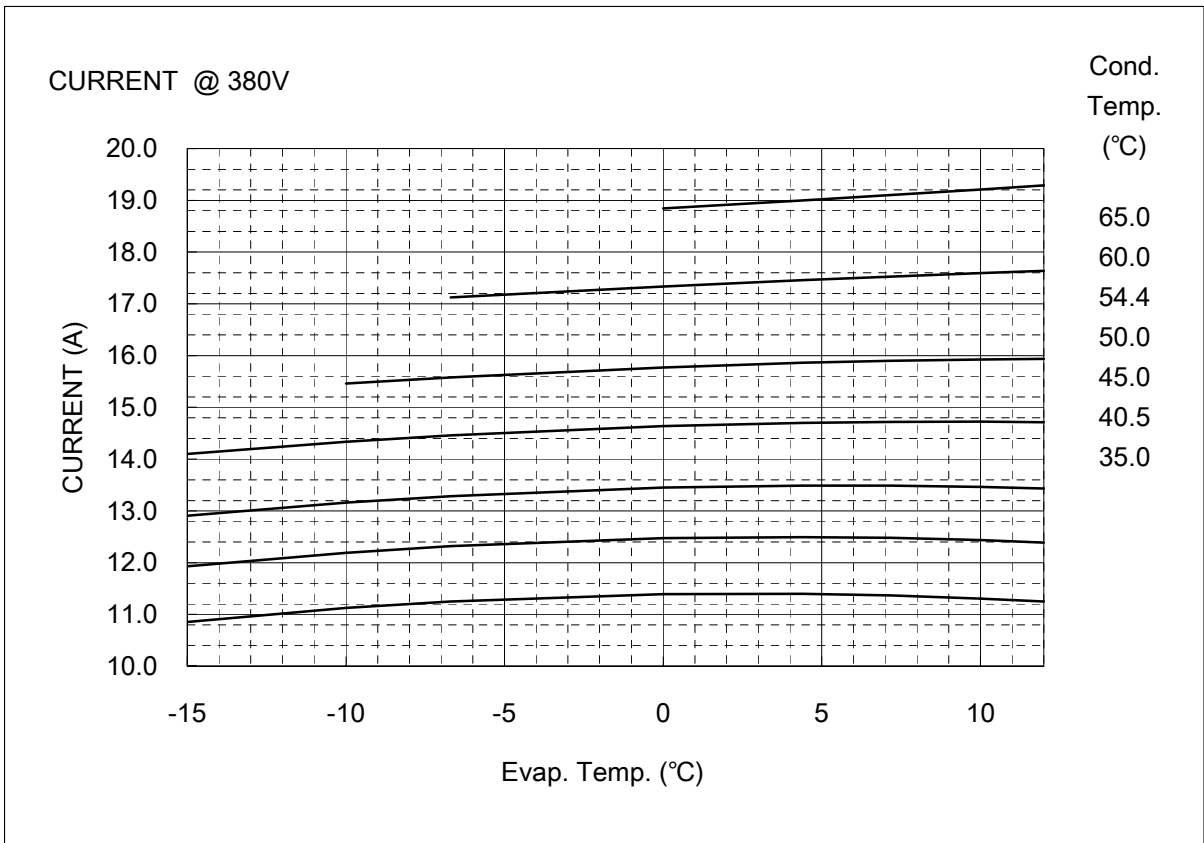
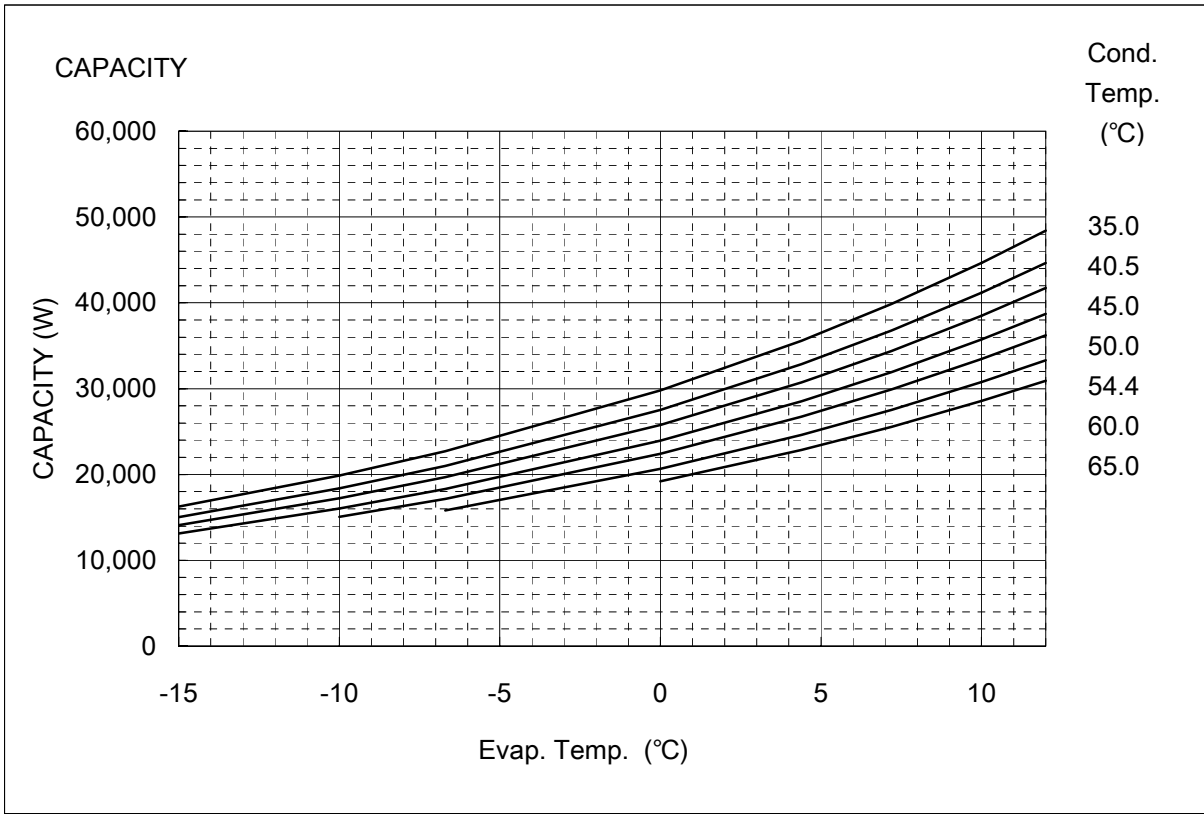
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	10.9	11.1	11.3	11.4	11.4	11.4	11.3	11.2
40.5	11.9	12.2	12.3	12.5	12.5	12.5	12.4	12.4
45.0	12.9	13.2	13.3	13.4	13.5	13.5	13.5	13.4
50.0	14.1	14.3	14.5	14.6	14.7	14.7	14.7	14.7
54.4		15.5	15.6	15.8	15.9	15.9	15.9	15.9
60.0			17.1	17.3	17.5	17.5	17.6	17.6
65.0				18.8	19.0	19.1	19.2	19.3

**NOTE:**

- \* The performance values are based on MID point method.
- \* The performance values subject to change without notice.

Compressor Model(Code)  
Power Source

**C-SCN753H8K (809 103 88)**  
**3PH 50Hz 380-415V**



## COEFFICIENTS OF PERFORMANCE CURVES



Compressor Model           **C-SCN753H8K (809 103 88)**  
 Power Source               **3PH 50Hz 380-415V**  
 Suction Gas Superheat (K) **9**  
 Sub Cooling (K)           **8.3**  
 Compressor Cooling       **Natural Cooling**  
 Refrigerant                 **R407C**

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

X—CAPACITY(W) OR POWER(W) OR CURRENT(A) OR FLOW(kg/h)

S—EVAPORATING TEMP, °C

D—CONDENSING TEMP, °C

<b>380V-50Hz</b>	CAPACITY (W)	POWER (W)	CURRENT (A)
C1	4.797932E+04	4.371793E+03	7.691082E+00
C2	2.033853E+03	8.551055E+00	1.293557E-02
C3	-6.104432E+02	-5.003705E+00	2.919796E-02
C4	3.653768E+01	-1.754224E+00	-3.808981E-03
C5	-2.800579E+01	-7.345515E-01	-6.935101E-04
C6	2.585029E+00	1.742379E+00	2.192700E-03
C7	2.740031E-01	2.134075E-03	3.887831E-06
C8	-3.367704E-01	2.199234E-02	5.571838E-05
C9	1.291170E-01	1.635757E-02	1.631642E-05
C10	-4.195312E-08	-1.460408E-08	-2.199720E-11

Note:The polynomial coefficients subject to change without notice.

**PERFORMANCE DATA**

Compressor Model(Code)	<b>C-SCN753H8K (809 103 88)</b>
Power Source	<b>3PH 60Hz 440-460V</b>
Suction Gas Superheat(K)	<b>9</b>
Sub Cooling(K)	<b>8.3</b>
Compressor Cooling	<b>Natural Cooling</b>
Refrigerant	<b>R407C</b>

**CAPACITY(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	19,680	24,240	27,810	36,750	44,140	49,600	55,740	60,580
40.5	18,130	22,280	25,530	33,660	40,370	45,310	50,860	55,240
45.0	16,930	20,780	23,790	31,300	37,480	42,040	47,150	51,170
50.0	15,680	19,220	21,980	28,850	34,500	38,660	43,310	46,980
54.4		17,940	20,490	26,850	32,070	35,900	40,190	43,570
60.0			18,750	24,510	29,230	32,690	36,560	39,600
65.0				22,620	26,930	30,090	33,620	36,400

**POWER(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	7,210	7,450	7,580	7,740	7,780	7,780	7,760	7,730
40.5	8,050	8,300	8,420	8,600	8,650	8,660	8,660	8,640
45.0	8,840	9,080	9,210	9,390	9,460	9,490	9,500	9,490
50.0	9,820	10,050	10,180	10,380	10,470	10,510	10,540	10,550
54.4		10,990	11,120	11,330	11,440	11,500	11,550	11,580
60.0			12,430	12,660	12,800	12,890	12,970	13,030
65.0				13,960	14,130	14,240	14,360	14,440

**CURRENT(A)**

@440V

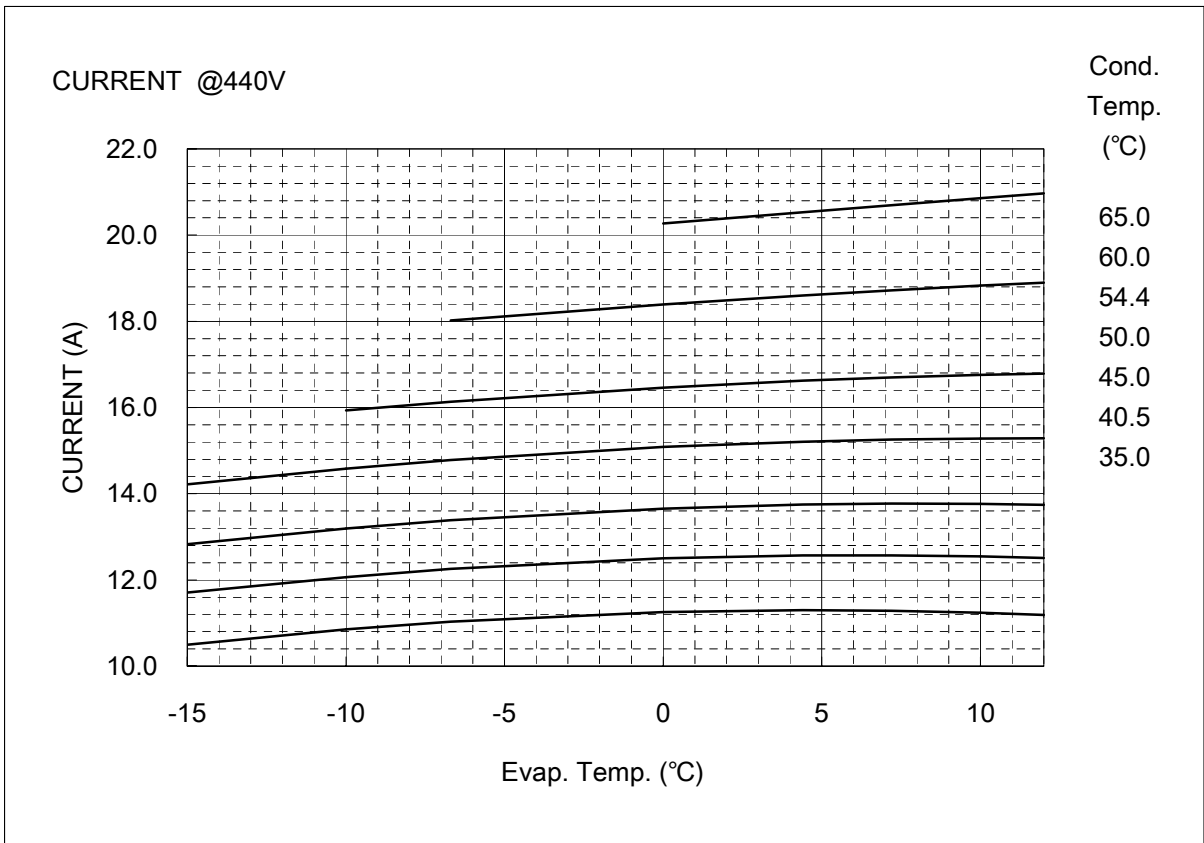
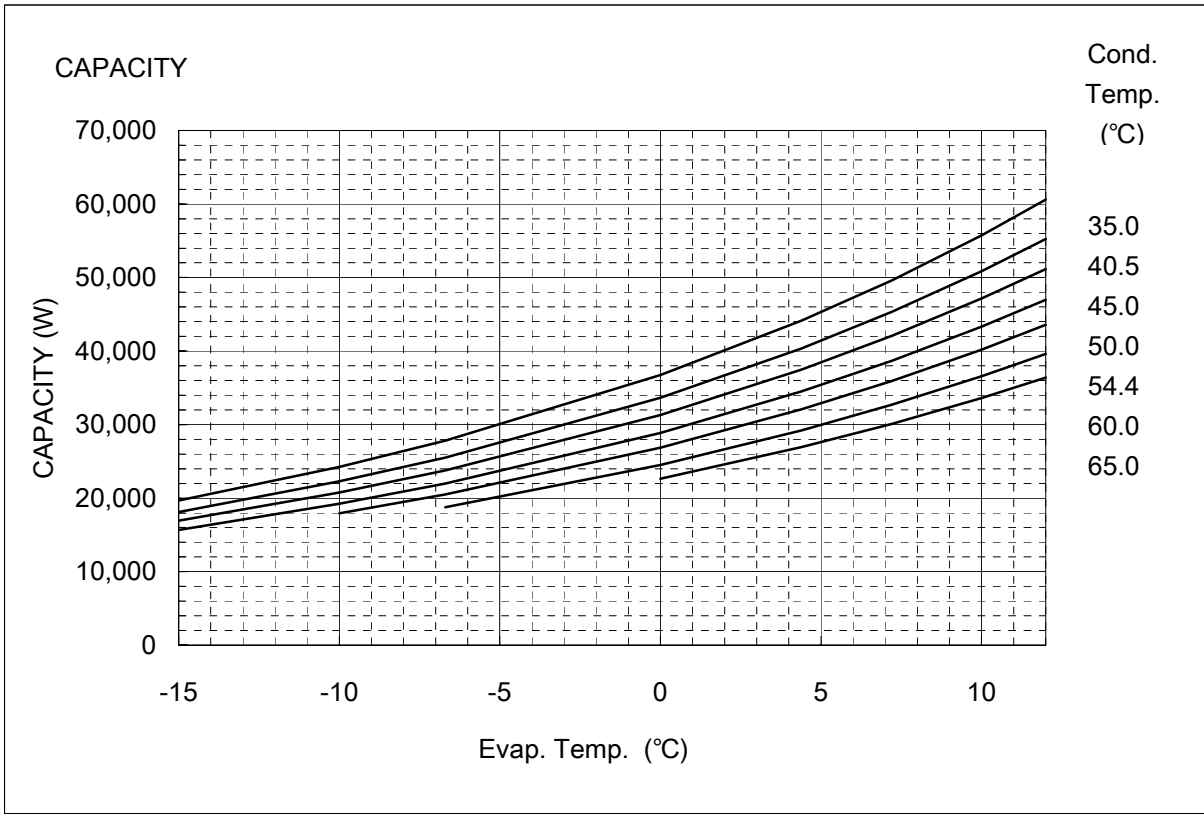
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	10.5	10.9	11.0	11.3	11.3	11.3	11.2	11.2
40.5	11.7	12.1	12.3	12.5	12.6	12.6	12.5	12.5
45.0	12.8	13.2	13.4	13.7	13.7	13.8	13.8	13.7
50.0	14.2	14.6	14.8	15.1	15.2	15.3	15.3	15.3
54.4		15.9	16.1	16.5	16.6	16.7	16.8	16.8
60.0			18.0	18.4	18.6	18.7	18.8	18.9
65.0				20.3	20.5	20.7	20.9	21.0

**NOTE:**

- \* The performance values are based on MID point method.
- \* The performance values subject to change without notice.

Compressor Model(Code)  
Power Source

**C-SCN753H8K (809 103 88)**  
**3PH 60Hz 440-460V**



## COEFFICIENTS OF PERFORMANCE CURVES



Compressor Model           **C-SCN753H8K (809 103 88)**  
 Power Source               **3PH 60Hz 440-460V**  
 Suction Gas Superheat (K) **9**  
 Sub Cooling (K)           **8.3**  
 Compressor Cooling       **Natural Cooling**  
 Refrigerant                 **R407C**

$$X=C1+C2*(S)+C3*D+C4*(S2)+C5*(S*D)+C6*(D2)+C7*(S3)+C8*(D*S2)+C9*(S*D2) +C10*(D3)$$

X—CAPACITY(W) OR POWER(W) OR CURRENT(A) OR FLOW(kg/h)

S—EVAPORATING TEMP, °C

D—CONDENSING TEMP, °C

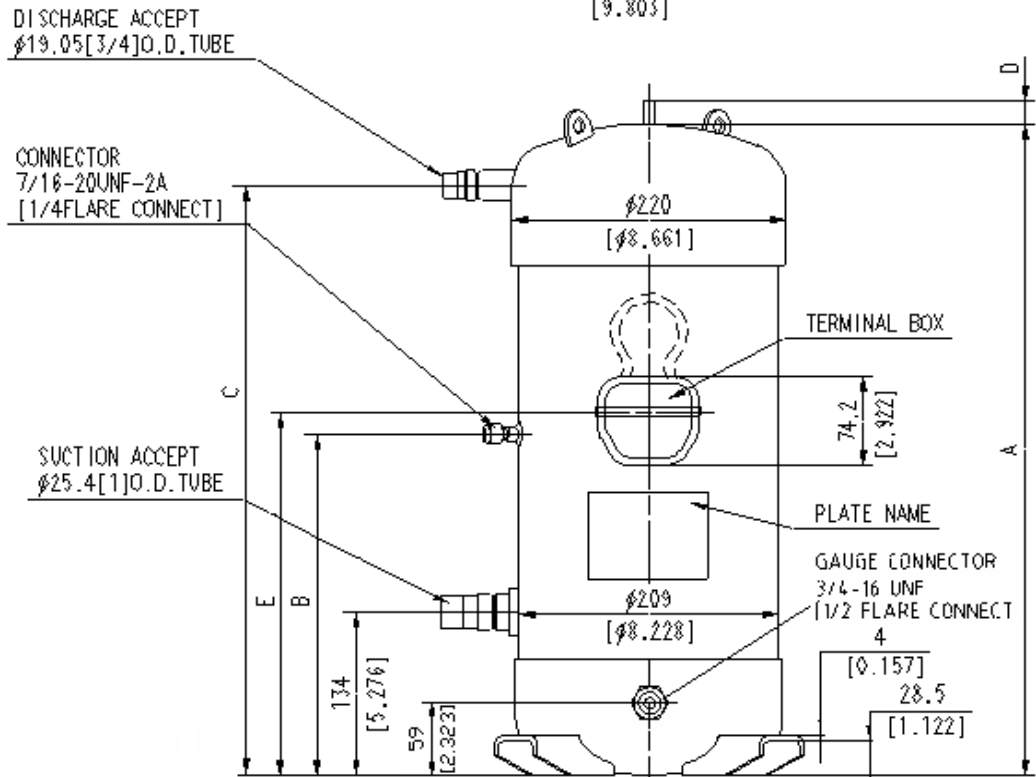
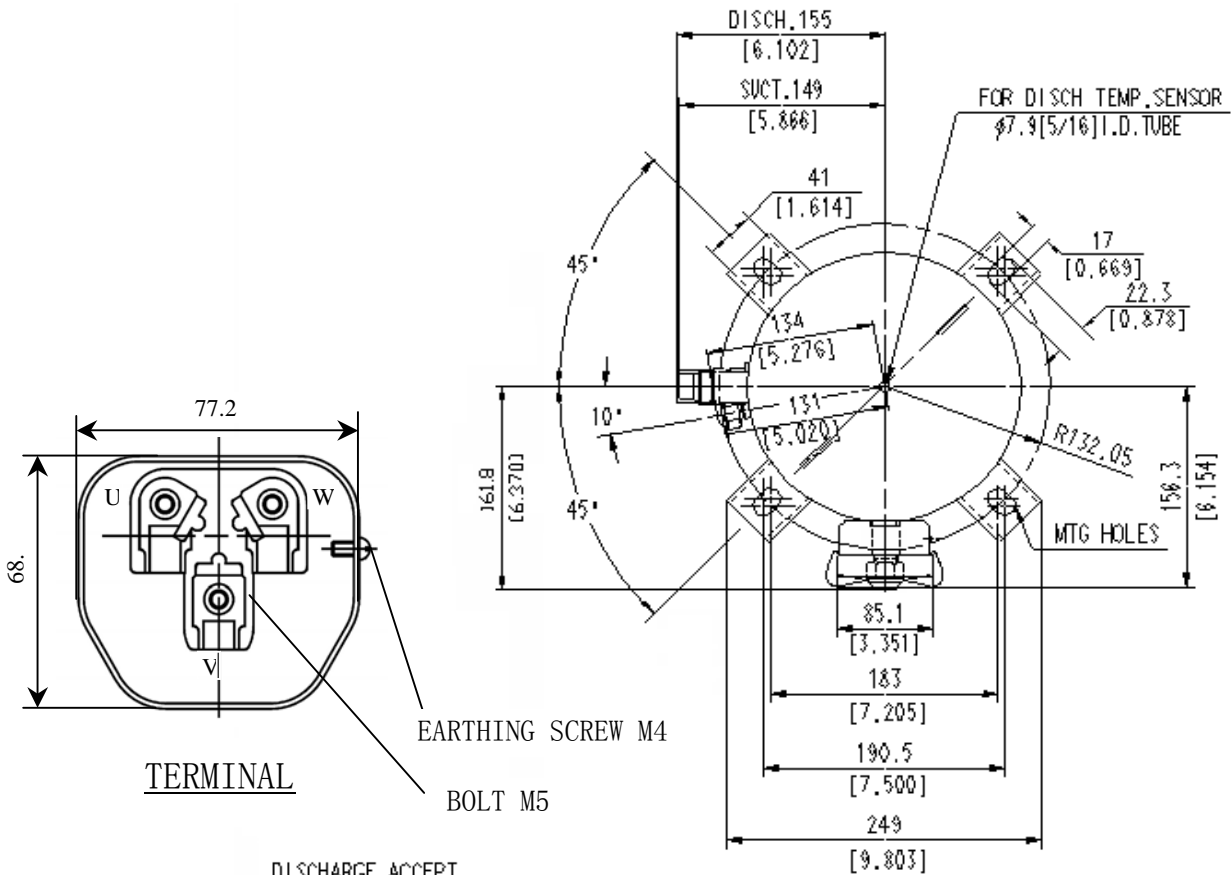
<b>440V-60Hz</b>	CAPACITY (W)	POWER (W)	CURRENT (A)
C1	6.191389E+04	5.369481E+03	7.794964E+00
C2	2.797610E+03	1.705669E+01	2.620355E-02
C3	-8.533468E+02	-7.271359E+00	-9.246664E-03
C4	5.056453E+01	-2.878179E+00	-4.037198E-03
C5	-4.361163E+01	-5.613271E-01	-1.134040E-03
C6	3.835166E+00	2.146992E+00	3.097420E-03
C7	3.583486E-01	5.546402E-03	4.816531E-06
C8	-5.215309E-01	4.208278E-02	5.252983E-05
C9	2.204579E-01	1.395681E-02	2.604591E-05
C10	-8.761903E-08	-2.070664E-08	-2.449136E-11

Note:The polynomial coefficients subject to change without notice.



# DIMENSIONAL SKETCH

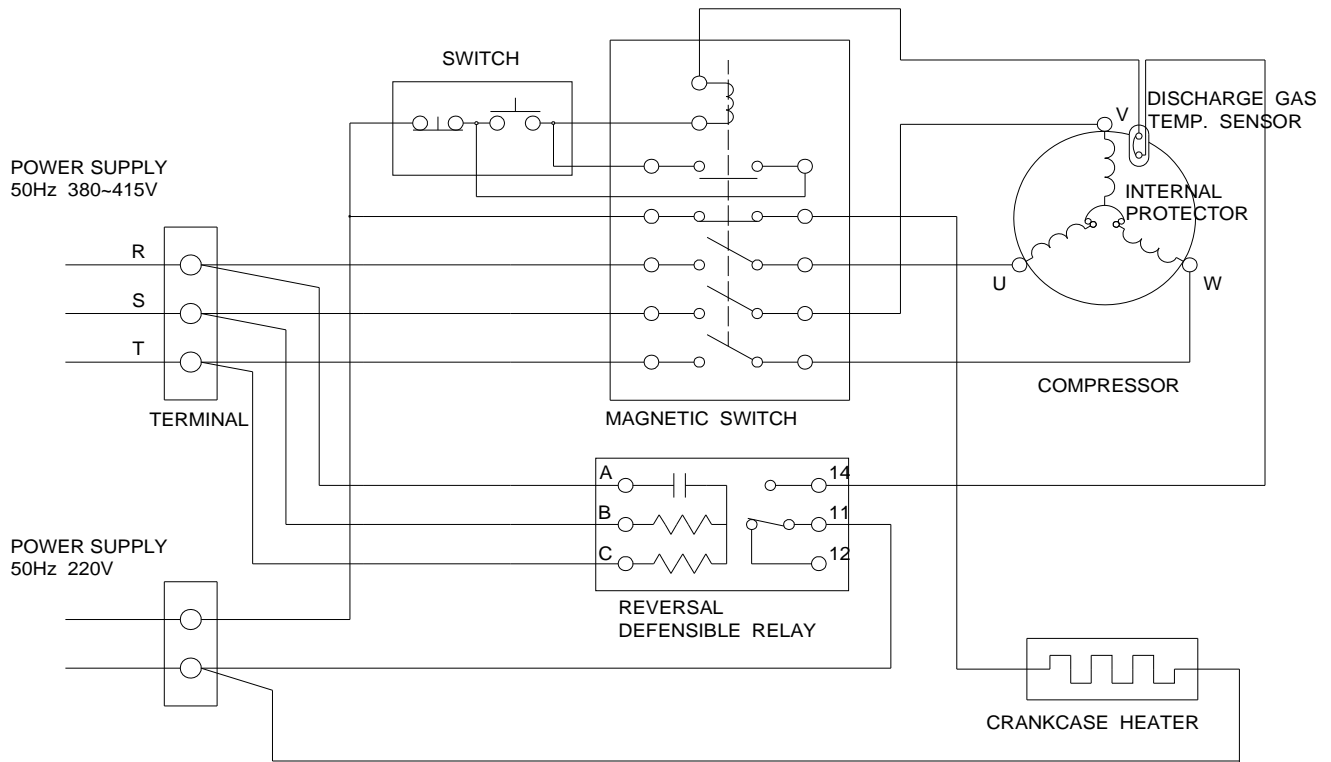
## C-SC Series



Compressor Code	A	B	C	D
809 *8* 8* (8HP)	538	284	486	8
809 *9* 8* (9HP)				
809 *0* 8*(10HP)	553	299	501	9
809 *2* 8*(12HP)				

# WIRING & MOUNTING SKETCH

## WIRING DIAGRAM C-SC Series 3phase B8



## MOUNTING SKETCH

