

**SANYO**

# SANYO SCROLL COMPRESSORS

Code : 809 956 88

Model : C-SBN373H8G



DALIAN SANYO COMPRESSOR CO.,LTD.

Rev.2007-5

## **SANYO Scroll Compressor**



**Model** C-SBN373H8G

**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>14500</u>	<u>17800</u>
Power (W)	<u>4950</u>	<u>5960</u>
Current (A)	<u>8.5</u>	<u>8.8</u>
COP (W/W)	<u>2.93</u>	<u>2.99</u>
Mass Flow (kg/h)	<u>350</u>	<u>429</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>10.1</u>	
MCC (A)	<u>14.1</u>	
LRA (A)	<u>48</u>	<u>52</u>
RPM (min <sup>-1</sup> )	<u>2900</u>	<u>3450</u>

### **Compressor**

Maximum Discharge Temp(°C)	<u>130</u>
Displacement (cm <sup>3</sup> /rev)	<u>83.2</u>
Weight (with oil kg)	<u>38</u>
VDE File Number	<u>40010537</u>

### **Oil**

Oil Type	<u>FV68S</u>
Initial Charge (ml)	<u>1700</u>
Re-charge (ml)	<u>1600</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-SBN373H8G (809 956 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	8,030	9,790	11,150	14,530	17,300	19,320	21,580	23,360
40.5	7,330	8,960	10,220	13,370	15,940	17,830	19,940	21,600
45.0	6,800	8,330	9,510	12,470	14,900	16,680	18,680	20,250
50.0	6,260	7,670	8,780	11,540	13,810	15,480	17,360	18,840
54.4		7,140	8,180	10,780	12,920	14,500	16,270	17,670
60.0			7,480	9,880	11,870	13,340	14,990	16,290
65.0				9,160	11,020	12,400	13,950	15,170

**POWER(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	3,100	3,130	3,140	3,160	3,170	3,170	3,170	3,160
40.5	3,530	3,550	3,560	3,580	3,580	3,580	3,580	3,570
45.0	3,940	3,960	3,970	3,980	3,970	3,970	3,960	3,960
50.0	4,470	4,480	4,480	4,480	4,470	4,460	4,460	4,450
54.4		4,990	4,980	4,970	4,960	4,950	4,940	4,930
60.0			5,700	5,670	5,650	5,640	5,620	5,610
65.0				6,370	6,340	6,320	6,300	6,290

**CURRENT(A)**

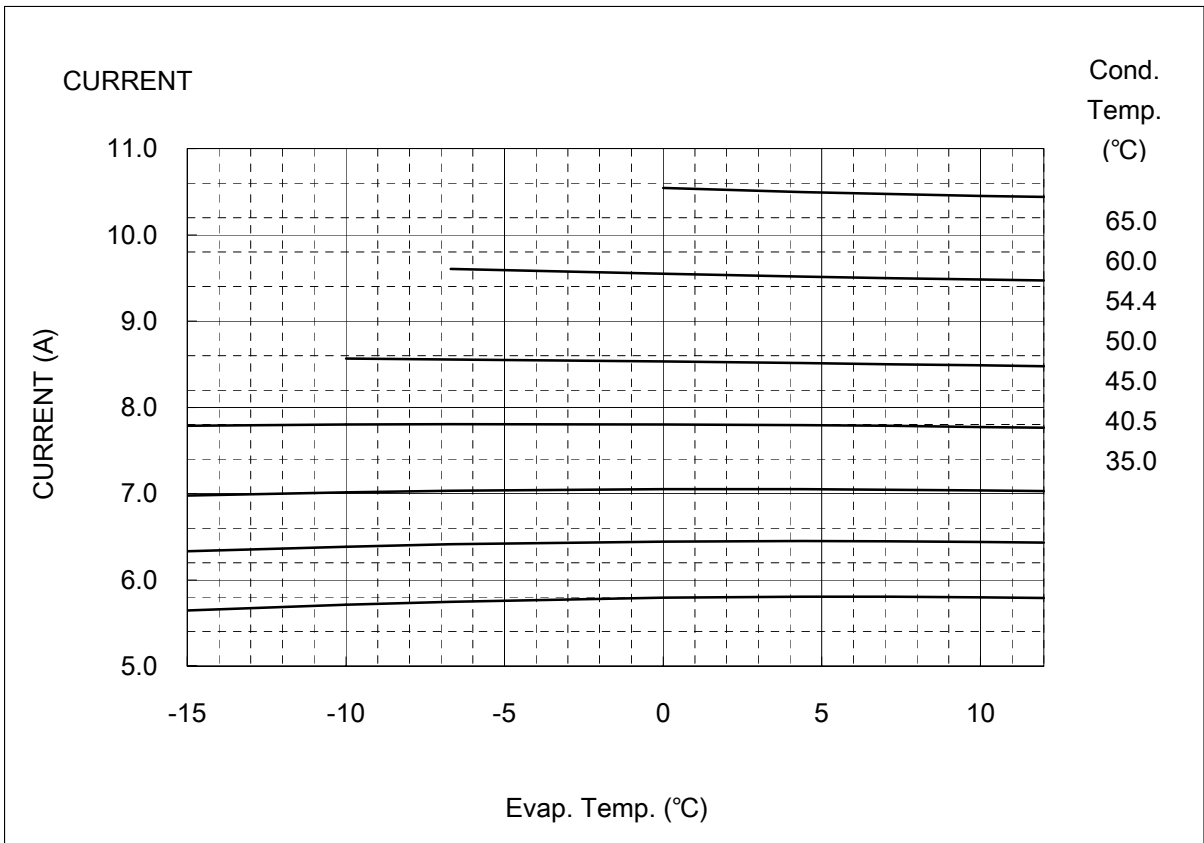
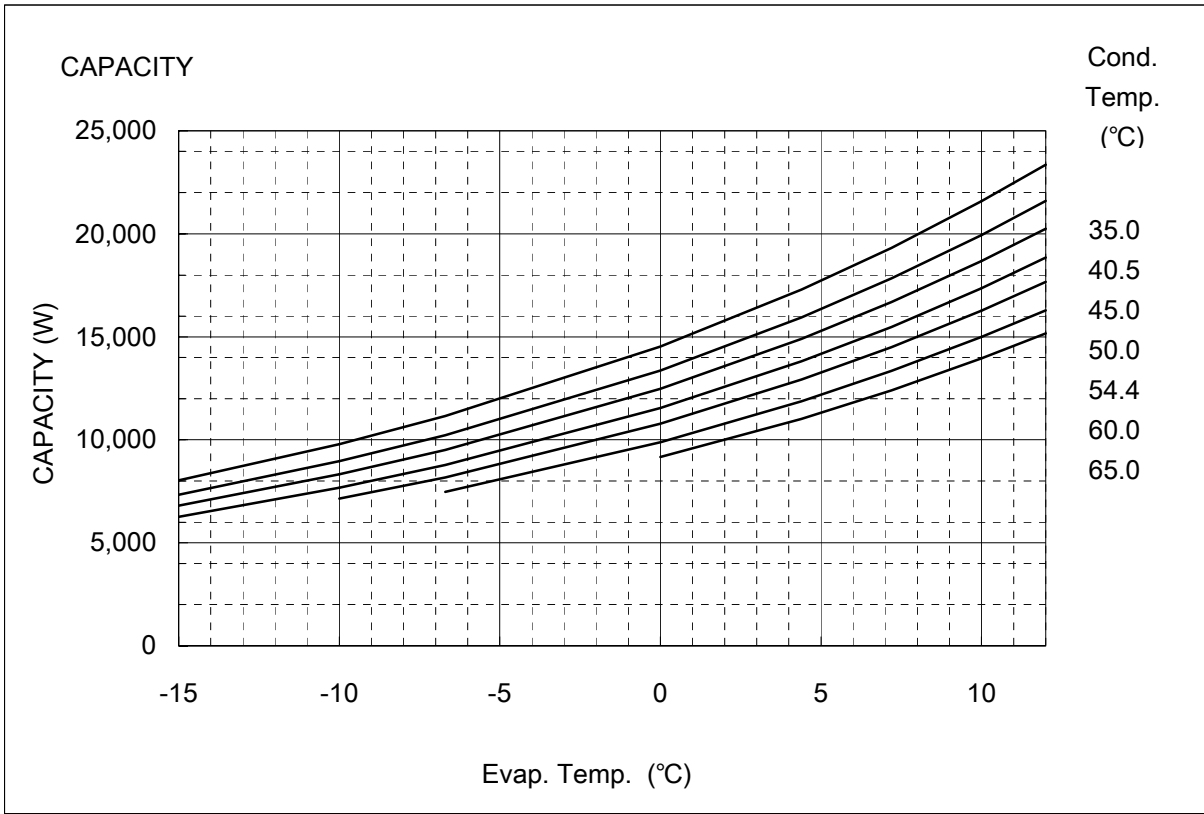
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	5.6	5.7	5.7	5.8	5.8	5.8	5.8	5.8
40.5	6.3	6.4	6.4	6.4	6.5	6.4	6.4	6.4
45.0	7.0	7.0	7.0	7.1	7.1	7.0	7.0	7.0
50.0	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
54.4		8.6	8.6	8.5	8.5	8.5	8.5	8.5
60.0			9.6	9.5	9.5	9.5	9.5	9.5
65.0				10.5	10.5	10.5	10.5	10.4

**NOTE:**

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

Compressor Model(Code)  
Power Source

**C-SBN373H8G (809 956 88)**  
**3PH 50Hz 380-415V**



## COEFFICIENTS OF PERFORMANCE CURVES



Compressor Model           **C-SBN373H8G (809 956 88)**  
 Power Source               **3PH 50Hz 380-415V**  
 Suction Gas Superheat (K) **9**  
 Sub Cooling (K)           **8.3**  
 Compressor Cooling       **Natural Cooling**  
 Refrigerant                 **R407C**

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

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

S—EVAPORATING TEMP, °C

D—CONDENSING TEMP, °C

<b>380V-50Hz</b>	CAPACITY (W)	POWER (W)	CURRENT (A)
C1	2.393620E+04	2.354472E+03	3.997399E+00
C2	8.977231E+02	-9.447593E-02	4.632066E-04
C3	-3.171122E+02	-2.194115E+01	-6.277482E-03
C4	1.555728E+01	-3.163111E-01	-1.025817E-03
C5	-1.063516E+01	2.429827E-01	4.325318E-04
C6	1.381446E+00	1.287573E+00	1.646924E-03
C7	1.326935E-01	-1.861264E-04	1.465522E-06
C8	-1.138737E-01	4.329727E-03	1.785544E-05
C9	4.196070E-02	-5.237536E-03	-9.419194E-06
C10	7.894790E-09	6.462307E-09	-1.038949E-11

Note:The polynomial coefficients subject to change without notice.

**PERFORMANCE DATA**

Compressor Model(Code)	<b>C-SBN373H8G (809 956 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	9,870	11,990	13,640	17,710	21,020	23,450	26,150	28,270
40.5	9,060	11,030	12,560	16,350	19,440	21,710	24,230	26,220
45.0	8,440	10,290	11,730	15,300	18,220	20,360	22,750	24,630
50.0	7,800	9,530	10,870	14,210	16,950	18,960	21,210	22,970
54.4		8,900	10,160	13,320	15,900	17,800	19,930	21,600
60.0			9,330	12,260	14,660	16,430	18,420	19,980
65.0				11,400	13,650	15,310	17,180	18,650

**POWER(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	3,820	3,850	3,870	3,910	3,920	3,930	3,940	3,950
40.5	4,270	4,310	4,340	4,380	4,400	4,410	4,420	4,420
45.0	4,690	4,750	4,780	4,830	4,850	4,860	4,860	4,860
50.0	5,220	5,290	5,330	5,390	5,410	5,410	5,420	5,410
54.4		5,820	5,870	5,930	5,950	5,960	5,960	5,950
60.0			6,620	6,700	6,720	6,730	6,720	6,710
65.0				7,460	7,480	7,480	7,470	7,460

**CURRENT(A)**

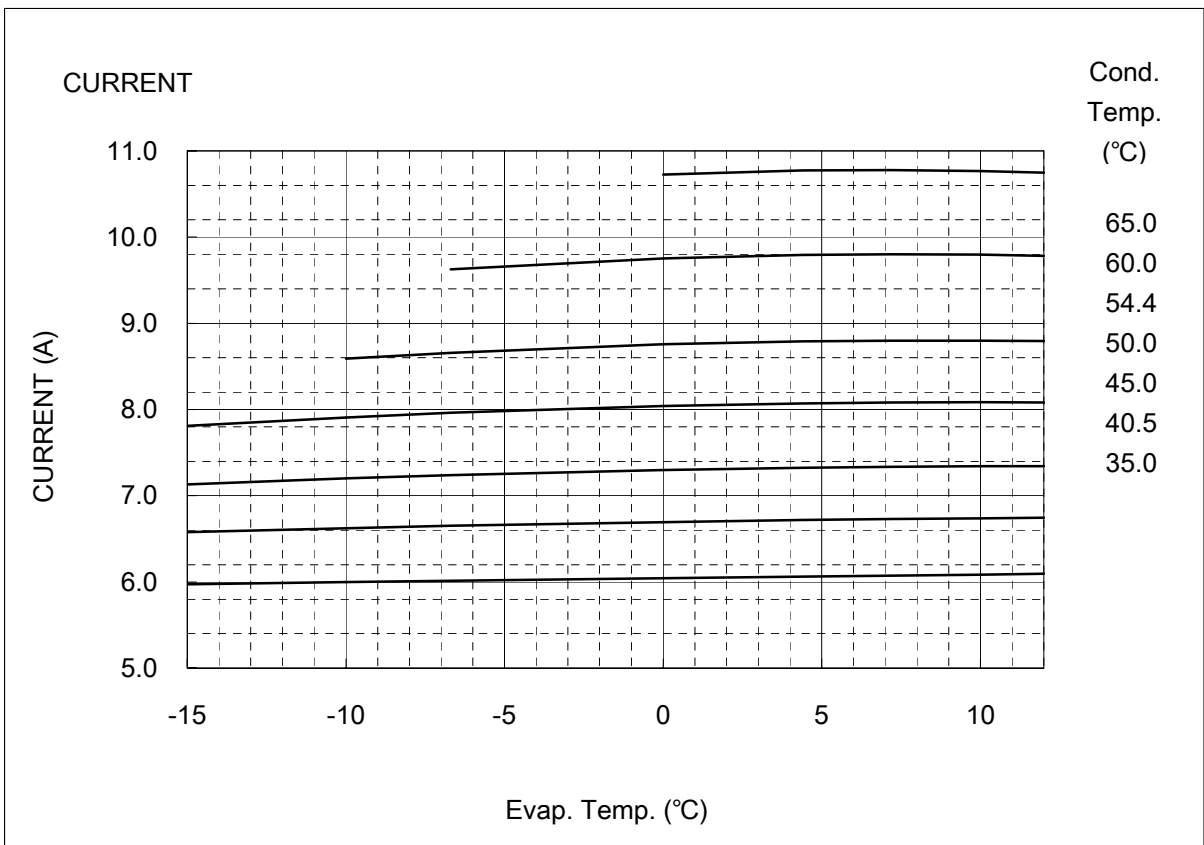
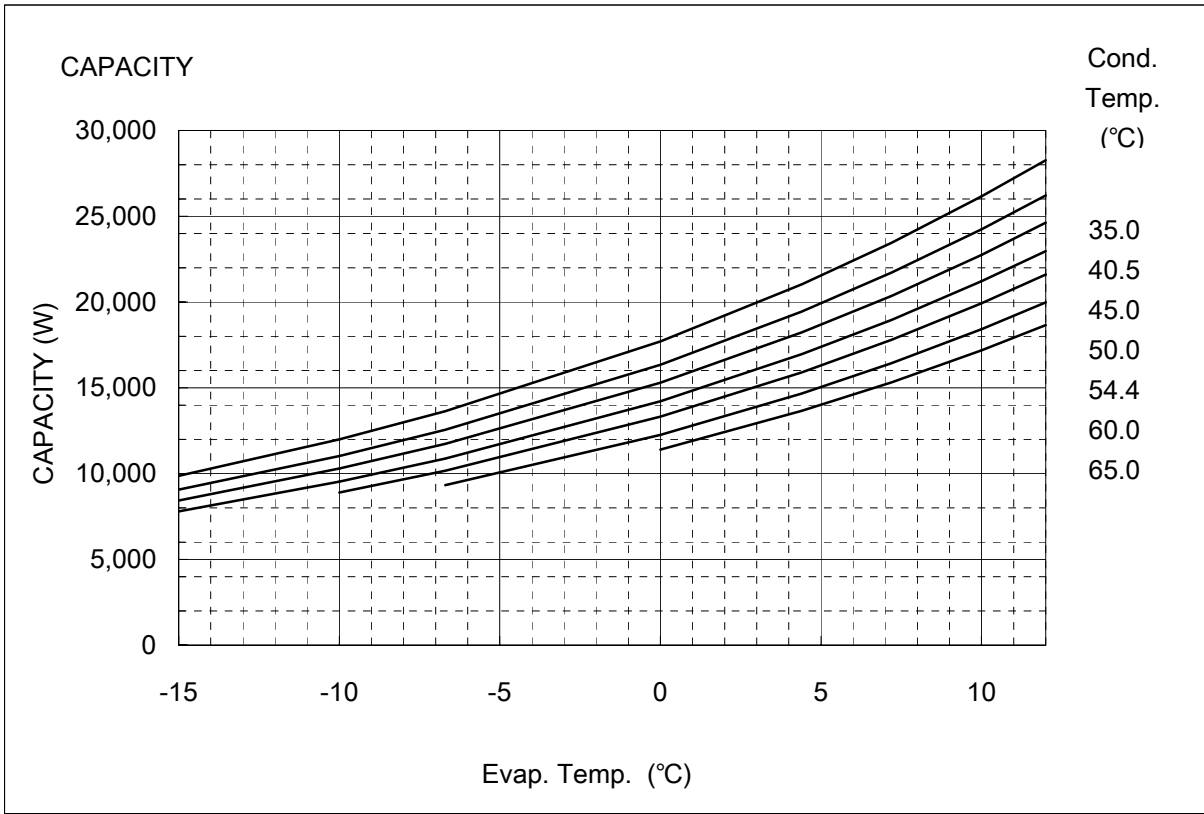
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	6.0	6.0	6.0	6.0	6.1	6.1	6.1	6.1
40.5	6.6	6.6	6.7	6.7	6.7	6.7	6.7	6.7
45.0	7.1	7.2	7.2	7.3	7.3	7.3	7.3	7.3
50.0	7.8	7.9	8.0	8.0	8.1	8.1	8.1	8.1
54.4		8.6	8.7	8.8	8.8	8.8	8.8	8.8
60.0			9.6	9.8	9.8	9.8	9.8	9.8
65.0				10.7	10.8	10.8	10.8	10.7

**NOTE:**

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

Compressor Model(Code)  
Power Source

**C-SBN373H8G (809 956 88)**  
**3PH 60Hz 440-460V**



## COEFFICIENTS OF PERFORMANCE CURVES



Compressor Model           **C-SBN373H8G (809 956 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

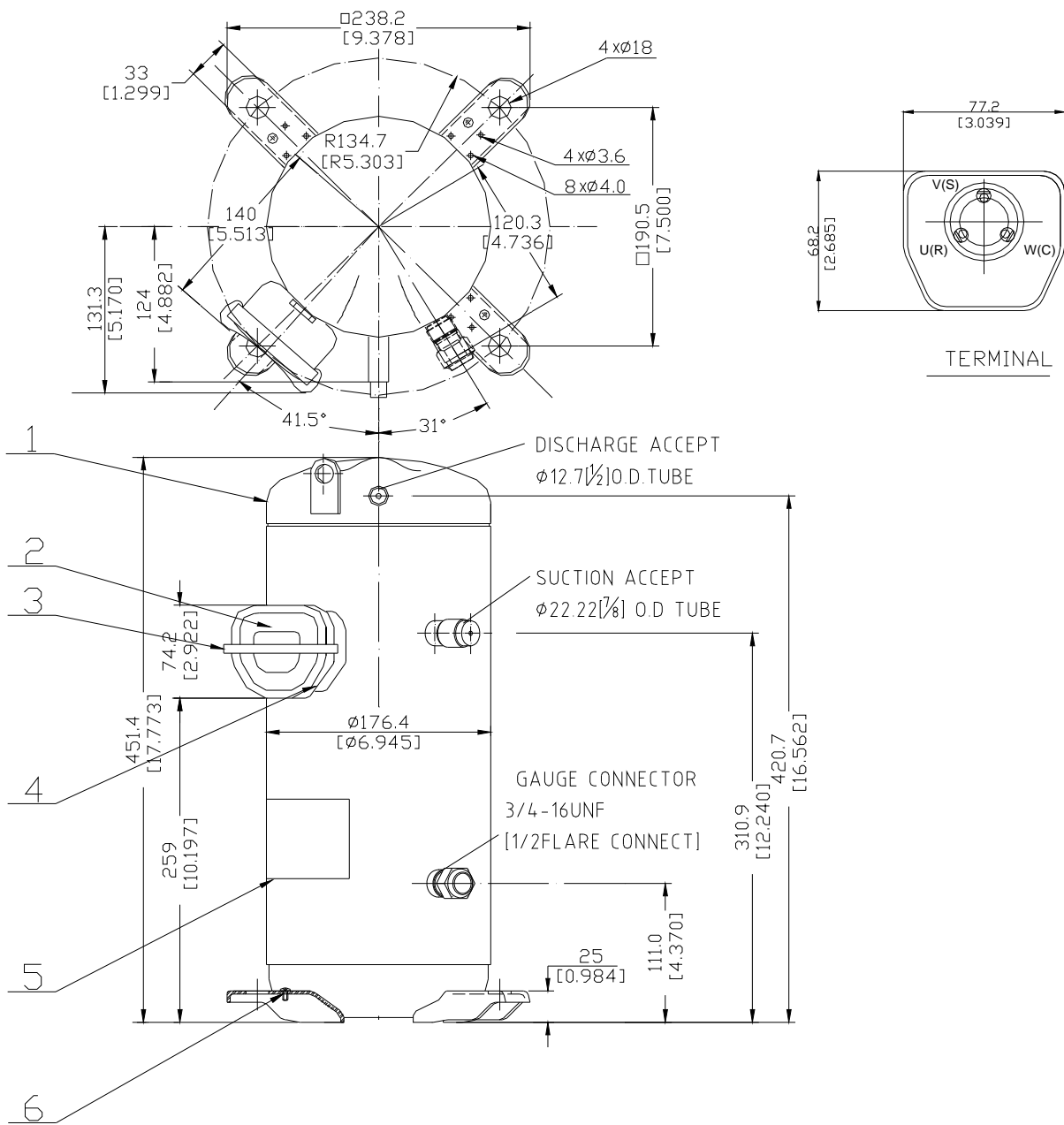
<b>440V-60Hz</b>	CAPACITY (W)	POWER (W)	CURRENT (A)
C1	2.854562E+04	2.697574E+03	3.991103E+00
C2	1.072308E+03	2.746123E+00	8.683915E-04
C3	-3.634029E+02	-1.069015E+01	5.975340E-03
C4	1.846543E+01	6.161379E-01	1.217319E-03
C5	-1.261062E+01	2.239853E-02	-1.277238E-05
C6	1.532031E+00	1.290073E+00	1.501011E-03
C7	1.541534E-01	-1.206156E-03	-1.929850E-06
C8	-1.361263E-01	-1.935476E-02	-3.378355E-05
C9	5.063741E-02	9.891219E-04	3.476208E-06
C10	3.372306E-09	1.131066E-08	9.506551E-12

Note:The polynomial coefficients subject to change without notice.



# DIMENSIONAL SKETCH

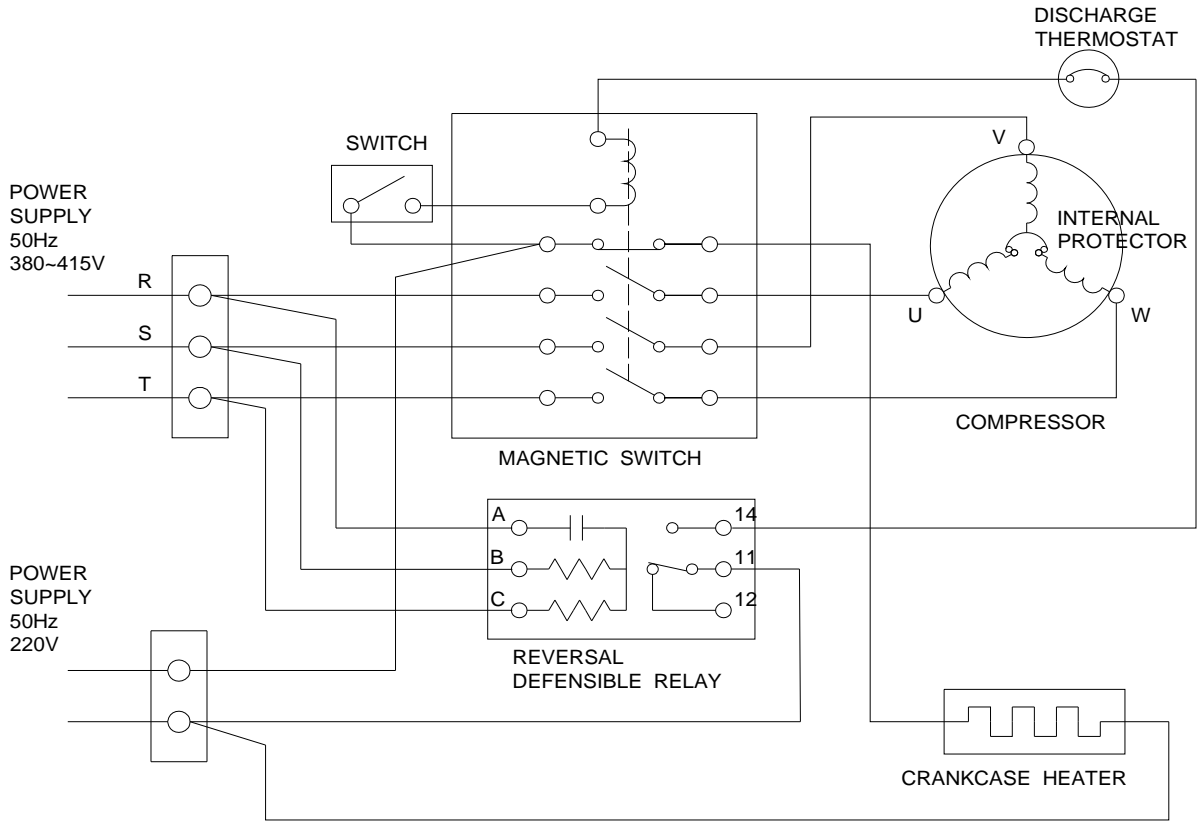
C-SB Series



No.	Qty	Name
1	1	Compressor
2	1	Terminal Box Cover
3	1	Terminal Box Clip
4	1	Insulating Grommet
5	1	Nameplate
6	1	Screw Special

# WIRING & MOUNTING SKETCH

## WIRING DIAGRAM C-SB Series 3phase B8



## MOUNTING SKETCH

