

**SANYO**

# SANYO SCROLL COMPRESSORS

**Code : 809 957 88**

**Model : C-SBN373H8H**



DALIAN SANYO COMPRESSOR CO.,LTD.

Rev. 2007-9

## **SANYO Scroll Compressor**



**Model** C-SBN373H8H

**Refrigerant** R410A

**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>14100</u>	<u>17100</u>
Power (W)	<u>4750</u>	<u>5600</u>
Current (A)	<u>8.22</u>	<u>8.3</u>
COP (W/W)	<u>2.97</u>	<u>3.05</u>
Mass Flow (kg/h)	<u>322</u>	<u>391</u>

### **Rating Conditions**

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>46.1</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>63</u>	<u>69</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>55.7</u>
Weight (with oil kg)	<u>39</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-SBN373H8H (809 957 88)</b>
Power Source	<b>3PH 50Hz 380-415V</b>
Suction Gas Superheat(K)	<b>11.1</b>
Sub Cooling(K)	<b>8.3</b>
Compressor Cooling	<b>Natural Cooling</b>
Refrigerant	<b>R410A</b>

**CAPACITY(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	8,140	9,830	11,130	14,320	16,900	18,780	20,870	22,500
40.5	7,420	8,990	10,190	13,170	15,580	17,340	19,300	20,830
45.0	6,880	8,340	9,480	12,280	14,560	16,220	18,080	19,530
50.0	6,320	7,680	8,740	11,360	13,500	15,060	16,800	18,170
54.4		7,140	8,130	10,600	12,620	14,100	15,750	17,050
60.0			7,420	9,710	11,590	12,970	14,510	15,720
65.0				8,990	10,740	12,040	13,490	14,630

**POWER(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	3,130	3,130	3,130	3,120	3,100	3,090	3,080	3,060
40.5	3,520	3,520	3,510	3,500	3,480	3,470	3,450	3,440
45.0	3,900	3,890	3,890	3,870	3,850	3,830	3,810	3,800
50.0	4,380	4,370	4,360	4,330	4,310	4,290	4,270	4,260
54.4		4,850	4,830	4,790	4,770	4,750	4,730	4,720
60.0			5,500	5,450	5,420	5,400	5,380	5,370
65.0				6,110	6,070	6,050	6,030	6,010

**CURRENT(A)**

@380V

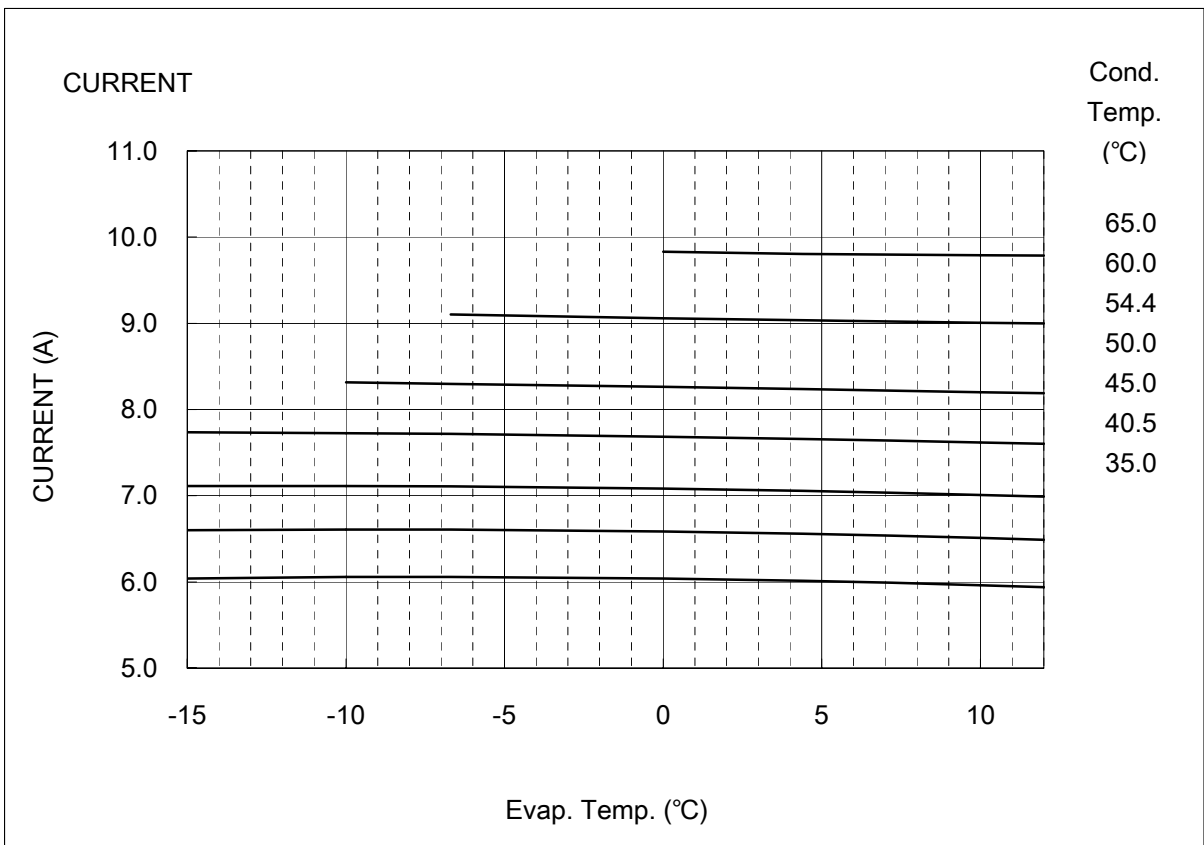
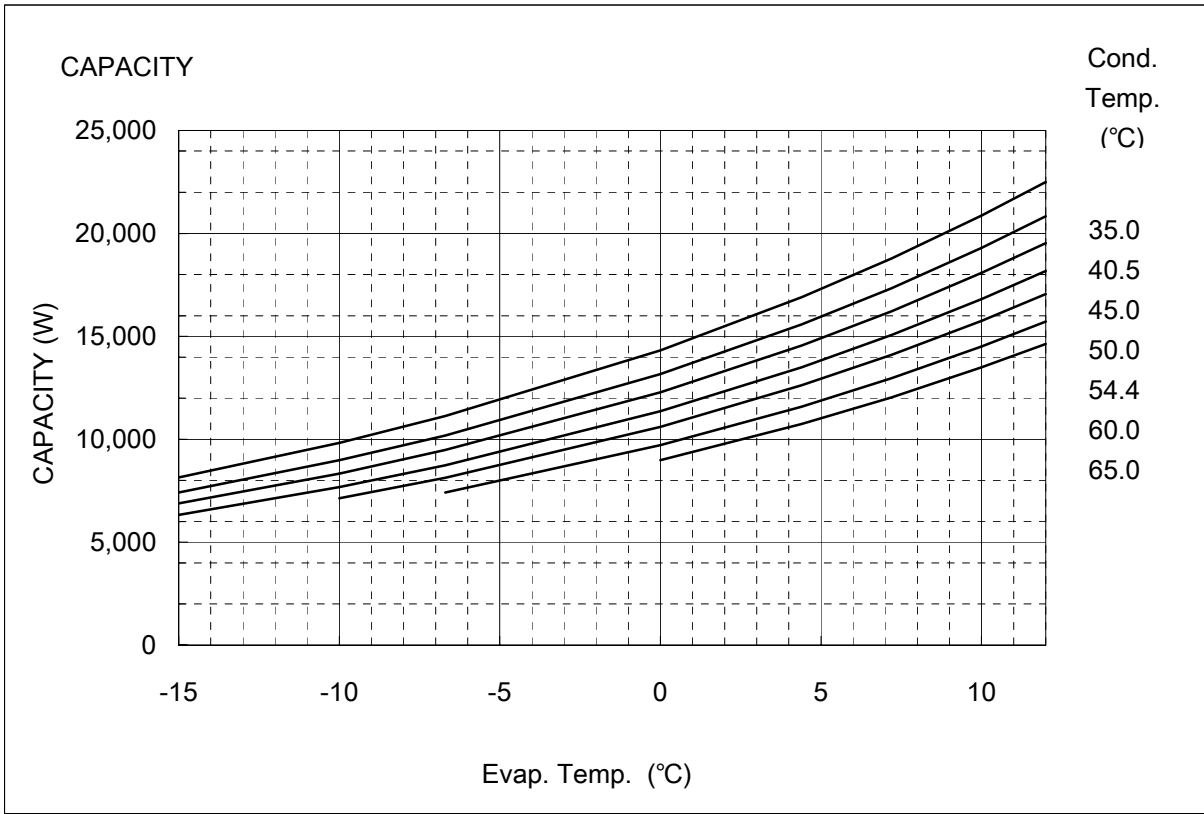
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	6.0	6.1	6.1	6.0	6.0	6.0	6.0	5.9
40.5	6.6	6.6	6.6	6.6	6.6	6.5	6.5	6.5
45.0	7.1	7.1	7.1	7.1	7.1	7.0	7.0	7.0
50.0	7.7	7.7	7.7	7.7	7.7	7.6	7.6	7.6
54.4		8.3	8.3	8.3	8.2	8.2	8.2	8.2
60.0			9.1	9.1	9.0	9.0	9.0	9.0
65.0				9.8	9.8	9.8	9.8	9.8

**NOTE:**

\* The performance values subject to change without notice.

Compressor Model(Code)  
Power Source

**C-SBN373H8H (809 957 88)**  
**3PH 50Hz 380-415V**



## COEFFICIENTS OF PERFORMANCE CURVES



Compressor Model           **C-SBN373H8H (809 957 88)**  
 Power Source               **3PH 50Hz 380-415V**  
 Suction Gas Superheat (K) **11.1**  
 Sub Cooling (K)           **8.3**  
 Compressor Cooling       **Natural Cooling**  
 Refrigerant                 **R410A**

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

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	2.354166E+04	2.498193E+03	4.177193E+00
C2	8.263569E+02	-3.713576E+00	-1.507840E-03
C3	-3.097891E+02	-2.631897E+01	1.400488E-02
C4	1.364960E+01	-3.480457E-01	-8.696072E-04
C5	-9.357483E+00	1.316946E-01	-1.330550E-04
C6	1.321054E+00	1.259463E+00	1.122924E-03
C7	1.134214E-01	2.752273E-04	1.015386E-06
C8	-9.474550E-02	5.343033E-03	1.507434E-05
C9	3.451120E-02	-3.088744E-03	1.062066E-06
C10	7.338276E-09	1.655876E-09	-1.957214E-12

Note:The polynomial coefficients subject to change without notice.

**PERFORMANCE DATA**

Compressor Model(Code)	<b>C-SBN373H8H (809 957 88)</b>
Power Source	<b>3PH 60Hz 440-460V</b>
Suction Gas Superheat(K)	<b>11.1</b>
Sub Cooling(K)	<b>8.3</b>
Compressor Cooling	<b>Natural Cooling</b>
Refrigerant	<b>R410A</b>

**CAPACITY(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	9,990	12,040	13,610	17,480	20,600	22,870	25,380	27,350
40.5	9,160	11,050	12,510	16,090	18,980	21,080	23,420	25,250
45.0	8,530	10,300	11,670	15,020	17,740	19,710	21,910	23,630
50.0	7,870	9,510	10,780	13,910	16,440	18,280	20,330	21,930
54.4		8,870	10,060	12,990	15,370	17,100	19,030	20,540
60.0			9,210	11,910	14,110	15,710	17,490	18,890
65.0				11,030	13,080	14,570	16,230	17,530

**POWER(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	3,760	3,730	3,710	3,690	3,670	3,670	3,660	3,660
40.5	4,190	4,170	4,150	4,130	4,120	4,110	4,100	4,100
45.0	4,600	4,590	4,580	4,560	4,540	4,530	4,520	4,510
50.0	5,120	5,120	5,120	5,100	5,080	5,070	5,050	5,040
54.4		5,640	5,650	5,640	5,620	5,600	5,580	5,550
60.0			6,410	6,410	6,380	6,360	6,320	6,290
65.0				7,170	7,140	7,100	7,060	7,020

**CURRENT(A)**

@440V

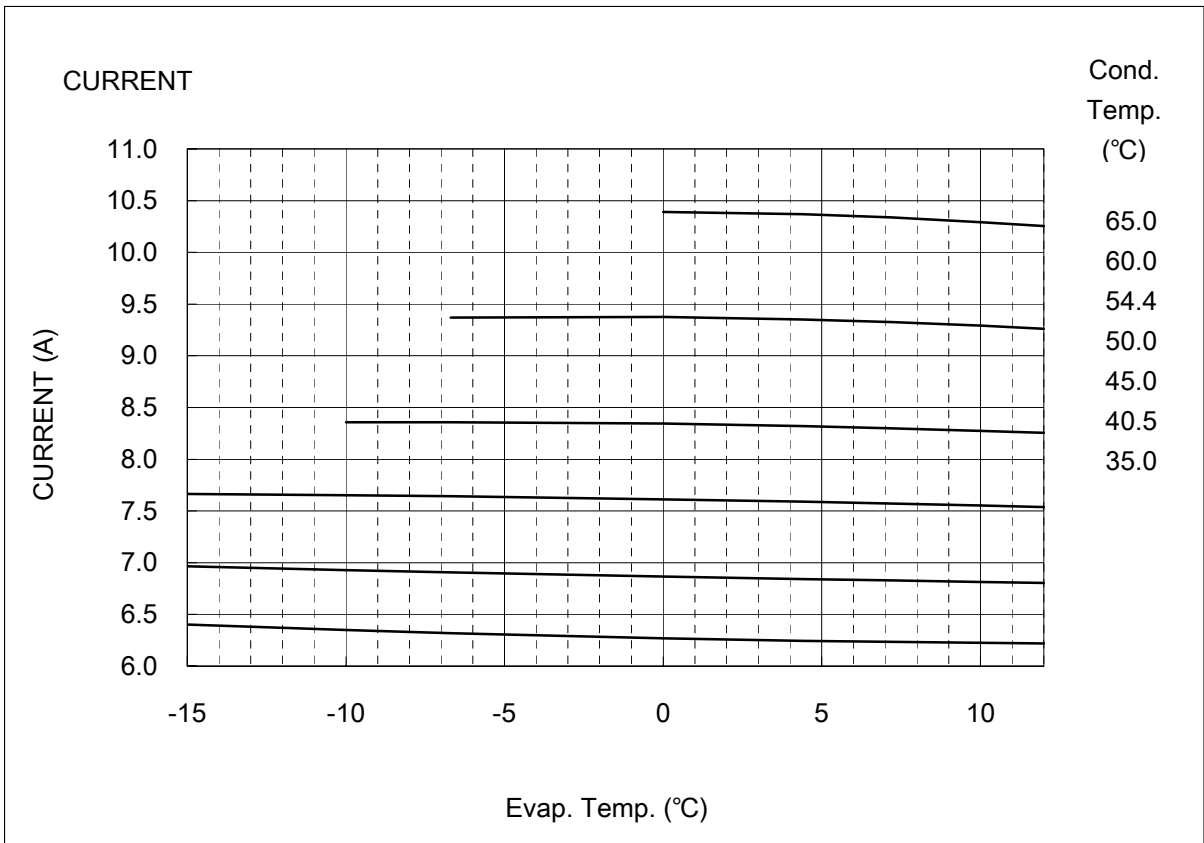
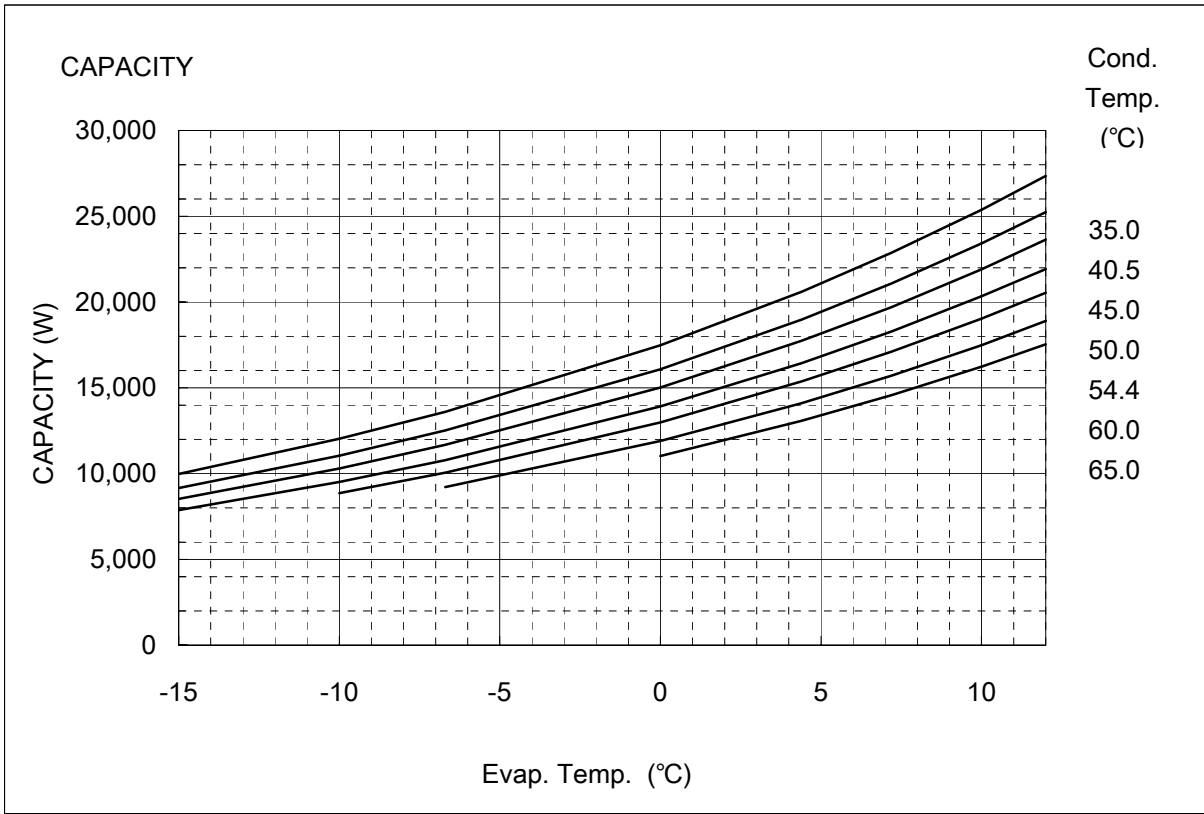
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	5.8	5.7	5.7	5.6	5.6	5.6	5.6	5.6
40.5	6.4	6.3	6.3	6.3	6.2	6.2	6.2	6.2
45.0	7.0	6.9	6.9	6.9	6.8	6.8	6.8	6.8
50.0	7.7	7.7	7.6	7.6	7.6	7.6	7.6	7.5
54.4		8.4	8.4	8.3	8.3	8.3	8.3	8.3
60.0			9.4	9.4	9.4	9.3	9.3	9.3
65.0				10.4	10.4	10.3	10.3	10.3

**NOTE:**

\* The performance values subject to change without notice.

Compressor Model(Code)  
Power Source

**C-SBN373H8H (809 957 88)**  
**3PH 60Hz 440-460V**



## COEFFICIENTS OF PERFORMANCE CURVES



Compressor Model           **C-SBN373H8H (809 957 88)**  
 Power Source               **3PH 60Hz 440-460V**  
 Suction Gas Superheat (K) **11.1**  
 Sub Cooling (K)           **8.3**  
 Compressor Cooling       **Natural Cooling**  
 Refrigerant                 **R410A**

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

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

S—EVAPORATING TEMP, °C

D—CONDENSING TEMP, °C

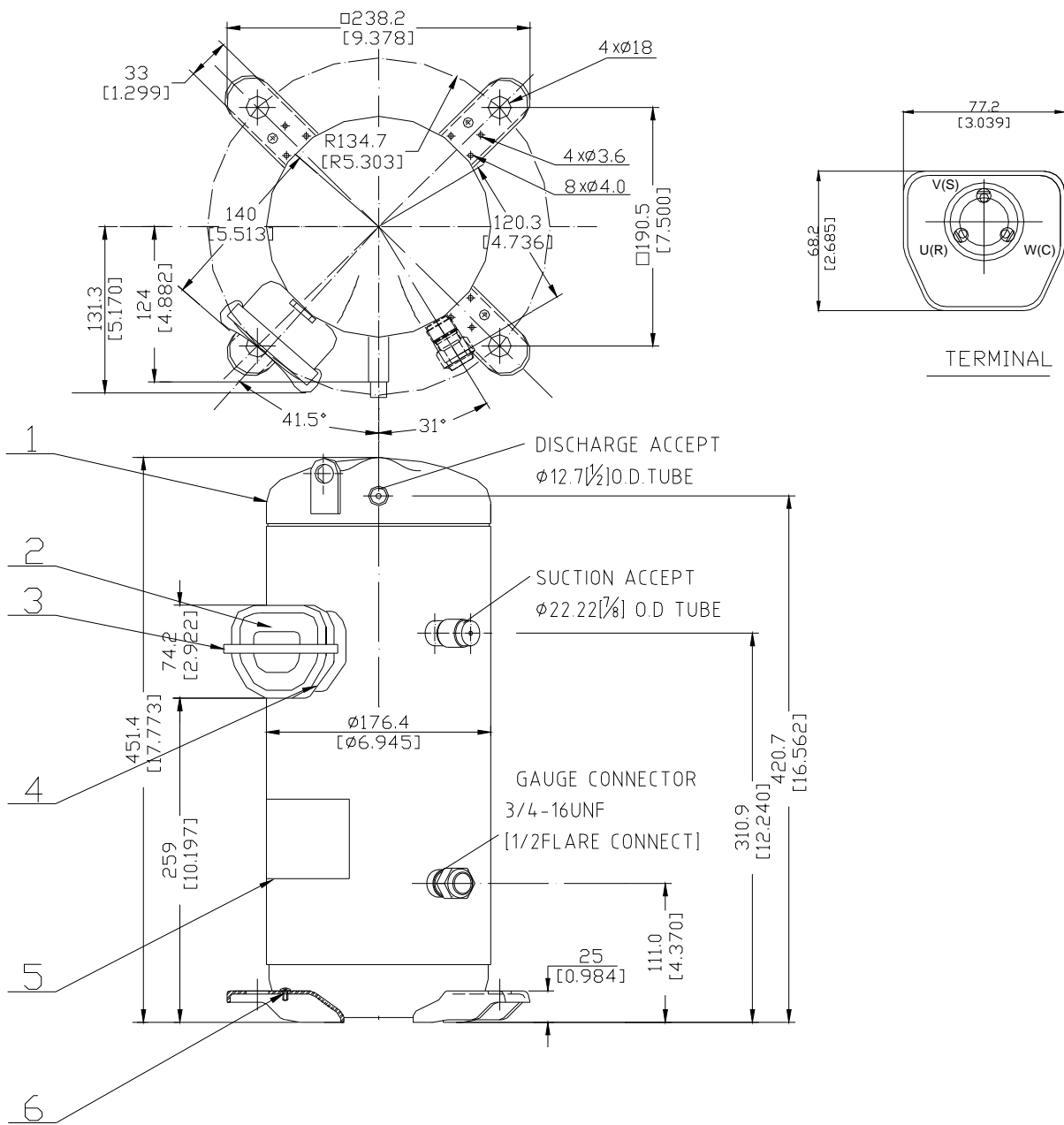
<b>440V-60Hz</b>	CAPACITY (W)	POWER (W)	CURRENT (A)
C1	2.855252E+04	2.837985E+03	4.061056E+00
C2	1.047005E+03	-6.360431E+00	-4.716481E-03
C3	-3.713430E+02	-2.536107E+01	-1.607307E-02
C4	1.727480E+01	9.725248E-01	1.434216E-03
C5	-1.311611E+01	1.770763E-01	-1.296393E-04
C6	1.567016E+00	1.414027E+00	1.743596E-03
C7	1.299814E-01	-2.588601E-03	-2.396602E-06
C8	-1.406911E-01	-2.347427E-02	-3.165750E-05
C9	5.460546E-02	-2.285470E-03	2.569023E-06
C10	-9.268498E-09	1.429778E-08	9.552248E-12

Note:The polynomial coefficients subject to change without notice.



# DIMENSIONAL SKETCH

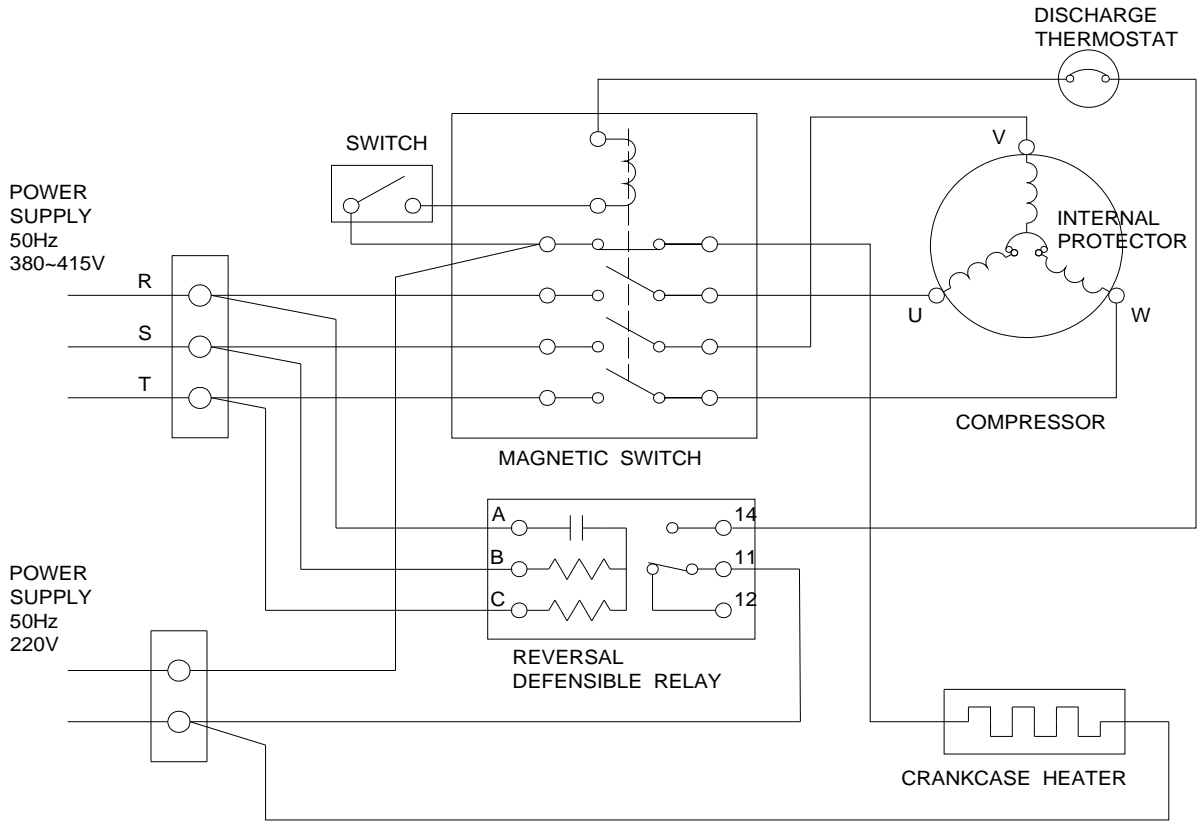
## C-SB Tandem Series



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

