# SANYO SCROLL COMPRESSORS

**Code : 809 930 88**

**Model : C-SBN263H8A**

DALIAN SANYO COMPRESSOR CO.,LTD.

Rev. 2007-5

## SANYO Scroll Compressor

| | | | |
|---|---|---|---|
| **Model** | C-SBN263H8A | **Electrical** | 380-415 Volts 3 Phase 50Hz |
| **Refrigerant** | R407C | | 440-460 Volts 3 Phase 60Hz |

### Nominal Performance at ARI

| | | 50Hz-380V | 60Hz-440V |
|---|---|---|---|
| Power Source | | | |
| Capacity | (W) | 9600 | 11800 |
| Power | (W) | 3350 | 4100 |
| Current | (A) | 6.2 | 6.4 |
| COP | (W/W) | 2.87 | 2.88 |
| Mass Flow | (kg/h) | 230 | 284 |

### Rating Conditions (MID Point)

| | |
|---|---|
| Condensing Temperature(℃) | 54.4 |
| Evaporating Temperature(℃) | 7.2 |
| Return Gas temperature(℃) | 18.3 |
| Liquid Temperature(℃) | 43.8 |
| Ambient Temperature(℃) | 35 |

### Motor

| | 50Hz | 60Hz |
|---|---|---|
| Voltage Range(V) | 342-456 | 396-506 |
| RLA (A) | 7.3 | |
| MCC (A) | 10.2 | |
| LRA (A) | 48 | 51 |
| RPM ($min^{-1}$) | 2900 | 3450 |

### Compressor

| | |
|---|---|
| Maximum Discharge Temp(℃) | 130 |
| Displacement ($cm^3$/rev) | 55.7 |
| Weight (with oil kg) | 36.5 |

### Oil

| | |
|---|---|
| Oil Type | FV68S |
| Initial Charge (ml) | 1700 |
| Re-charge (ml) | 1600 |

### Electrical Components

| | |
|---|---|
| Motor Protector Type | Internal |
| Run Capacitor Rating (MFD/Volts) | n/a |

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) | **C-SBN263H8A (809 930 88)** |
| Power Source | **3PH 50Hz 380-415V** |
| Suction Gas Superheat(K) | **9** |
| Sub Cooling(K) | **8.3** |
| Compressor Cooling | **Natural Cooling** |
| Refrigerant | **R407C** |

**CAPACITY(W)**

| Condensing Temperature(℃) | Evaporating Temperature(℃) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | -15 | -10 | -6.7 | 0 | 4.4 | 7.2 | 10 | 12 |
| 35.0 | 5,260 | 6,420 | 7,330 | 9,590 | 11,440 | 12,800 | 14,320 | 15,520 |
| 40.5 | 4,790 | 5,870 | 6,710 | 8,810 | 10,540 | 11,810 | 13,230 | 14,360 |
| 45.0 | 4,430 | 5,440 | 6,240 | 8,220 | 9,850 | 11,050 | 12,400 | 13,460 |
| 50.0 | 4,060 | 5,010 | 5,740 | 7,600 | 9,120 | 10,250 | 11,520 | 12,520 |
| 54.4 | | 4,650 | 5,340 | 7,090 | 8,530 | 9,600 | 10,800 | 11,750 |
| 60.0 | | | 4,880 | 6,490 | 7,830 | 8,830 | 9,950 | 10,840 |
| 65.0 | | | | 6,010 | 7,270 | 8,200 | 9,260 | 10,100 |

**POWER(W)**

| Condensing Temperature(℃) | Evaporating Temperature(℃) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | -15 | -10 | -6.7 | 0 | 4.4 | 7.2 | 10 | 12 |
| 35.0 | 2,160 | 2,170 | 2,170 | 2,160 | 2,150 | 2,140 | 2,120 | 2,110 |
| 40.5 | 2,440 | 2,440 | 2,440 | 2,440 | 2,430 | 2,410 | 2,400 | 2,390 |
| 45.0 | 2,700 | 2,710 | 2,710 | 2,700 | 2,690 | 2,680 | 2,670 | 2,660 |
| 50.0 | 3,030 | 3,040 | 3,040 | 3,040 | 3,030 | 3,020 | 3,010 | 3,000 |
| 54.4 | | 3,360 | 3,370 | 3,370 | 3,360 | 3,350 | 3,340 | 3,330 |
| 60.0 | | | 3,830 | 3,840 | 3,830 | 3,820 | 3,810 | 3,800 |
| 65.0 | | | | 4,300 | 4,290 | 4,290 | 4,280 | 4,270 |

**CURRENT(A)** @380V

| Condensing Temperature(℃) | Evaporating Temperature(℃) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | -15 | -10 | -6.7 | 0 | 4.4 | 7.2 | 10 | 12 |
| 35.0 | 4.2 | 4.2 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 40.5 | 4.7 | 4.7 | 4.8 | 4.8 | 4.8 | 4.8 | 4.7 | 4.7 |
| 45.0 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 |
| 50.0 | 5.8 | 5.8 | 5.8 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| 54.4 | | 6.4 | 6.3 | 6.3 | 6.2 | 6.2 | 6.2 | 6.2 |
| 60.0 | | | 7.1 | 7.0 | 6.9 | 6.9 | 6.9 | 6.9 |
| 65.0 | | | | 7.7 | 7.6 | 7.6 | 7.6 | 7.6 |

**NOTE:**

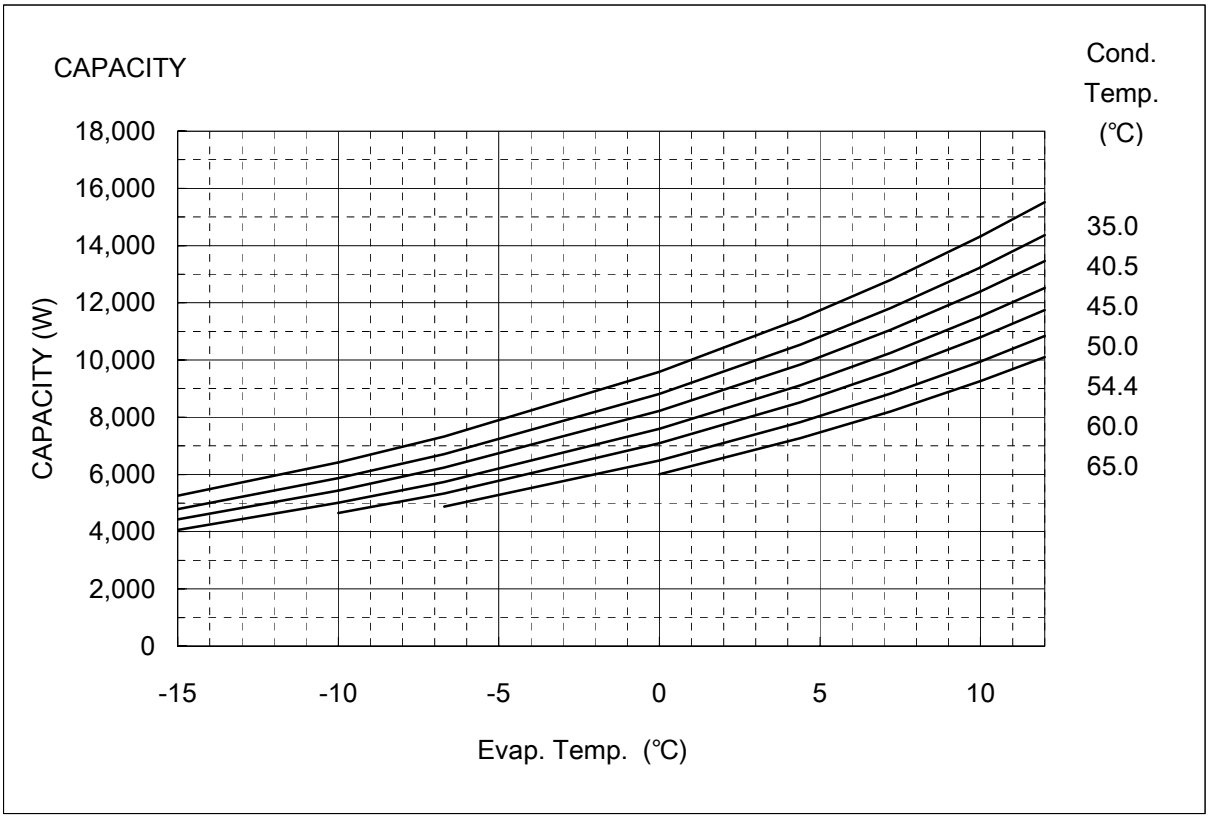
*** The performance values are based on MID point method.**

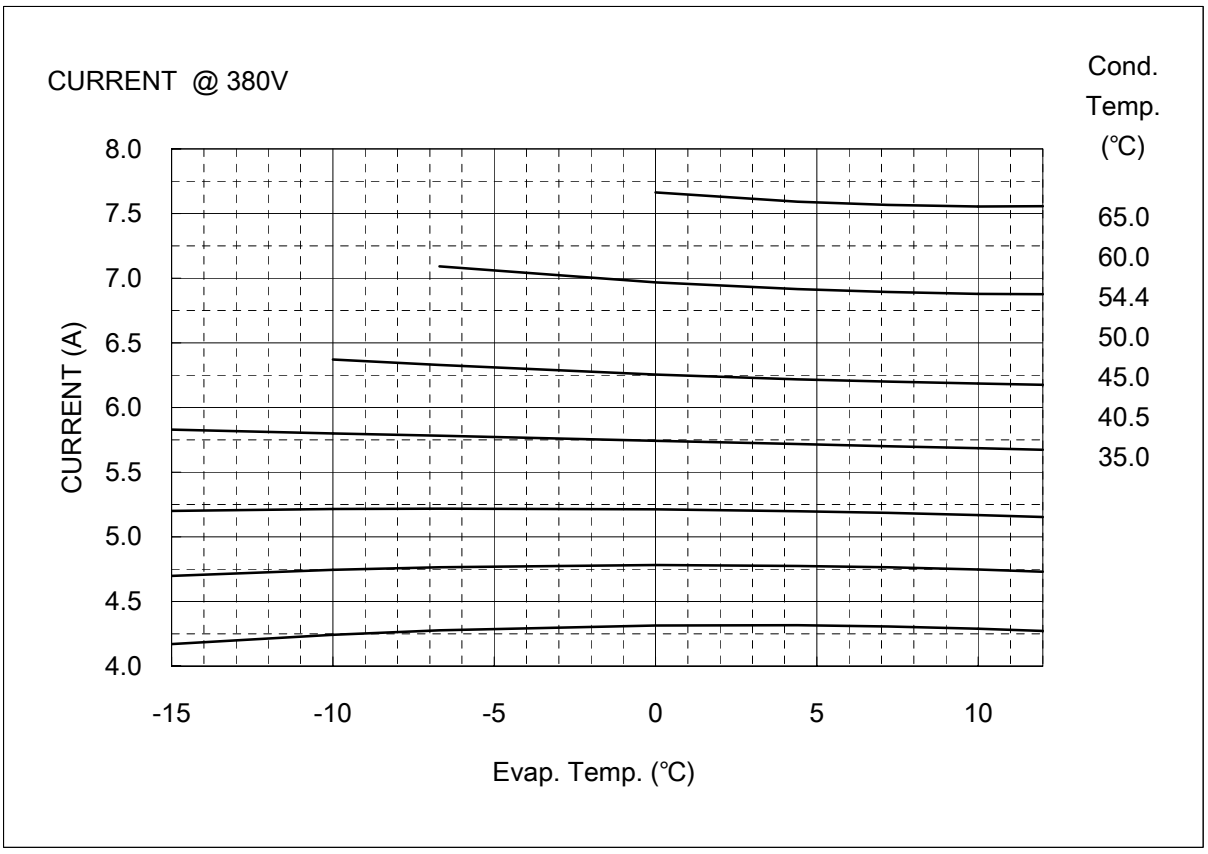
*** The performance values subject to change without notice.**

***Dalian SANYO Compressor Co.,Ltd.***

Compressor Model(Code) **C-SBN263H8A (809 930 88)**

Power Source **3PH 50Hz 380-415V**



# COEFFICIENTS OF PERFORMANCE CURVES

| | |
|---|---|
| Compressor Model | **C-SBN263H8A (809 930 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

| **380V-50Hz** | CAPACITY (W) | POWER (W) | CURRENT (A) |
|---|---|---|---|
| C1 | 1.584856E+04 | 1.591341E+03 | 3.013003E+00 |
| C2 | 5.966492E+02 | -1.417228E+00 | 7.185024E-04 |
| C3 | -2.110736E+02 | -1.335040E+01 | -2.619542E-03 |
| C4 | 1.051167E+01 | -1.355647E-01 | -1.999940E-03 |
| C5 | -6.994694E+00 | -6.796510E-02 | 4.221289E-04 |
| C6 | 9.185084E-01 | 8.458923E-01 | 1.142654E-03 |
| C7 | 9.328952E-02 | -1.479324E-03 | 3.080586E-06 |
| C8 | -7.498673E-02 | -4.564635E-04 | 4.116685E-05 |
| C9 | 2.775751E-02 | 1.362023E-03 | -1.112836E-05 |
| C10 | 6.936612E-09 | -1.539886E-09 | -1.357605E-11 |

Note:The polynomial coefficients subject to change without notice.

**PERFORMANCE DATA**

| | |
|---|---|
| Compressor Model(Code) | **C-SBN263H8A (809 930 88)** |
| Power Source | **3PH 60Hz 440-460V** |
| Suction Gas Superheat(K) | **9** |
| Sub Cooling(K) | **8.3** |
| Compressor Cooling | **Natural Cooling** |
| Refrigerant | **R407C** |

**CAPACITY(W)**

| Condensing Temperature(℃) | Evaporating Temperature(℃) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | -15 | -10 | -6.7 | 0 | 4.4 | 7.2 | 10 | 12 |
| 35.0 | 6,480 | 7,880 | 8,970 | 11,650 | 13,840 | 15,440 | 17,230 | 18,630 |
| 40.5 | 5,920 | 7,230 | 8,240 | 10,760 | 12,810 | 14,320 | 16,010 | 17,330 |
| 45.0 | 5,500 | 6,730 | 7,680 | 10,070 | 12,020 | 13,460 | 15,060 | 16,330 |
| 50.0 | 5,060 | 6,210 | 7,110 | 9,350 | 11,190 | 12,550 | 14,070 | 15,270 |
| 54.4 | | 5,790 | 6,640 | 8,760 | 10,510 | 11,800 | 13,250 | 14,400 |
| 60.0 | | | 6,080 | 8,060 | 9,700 | 10,910 | 12,280 | 13,360 |
| 65.0 | | | | 7,490 | 9,040 | 10,190 | 11,480 | 12,500 |

**POWER(W)**

| Condensing Temperature(℃) | Evaporating Temperature(℃) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | -15 | -10 | -6.7 | 0 | 4.4 | 7.2 | 10 | 12 |
| 35.0 | 2,720 | 2,720 | 2,720 | 2,710 | 2,700 | 2,690 | 2,690 | 2,680 |
| 40.5 | 3,020 | 3,030 | 3,030 | 3,030 | 3,030 | 3,020 | 3,010 | 3,010 |
| 45.0 | 3,290 | 3,320 | 3,330 | 3,340 | 3,340 | 3,330 | 3,320 | 3,320 |
| 50.0 | 3,630 | 3,670 | 3,700 | 3,720 | 3,720 | 3,720 | 3,710 | 3,700 |
| 54.4 | | 4,020 | 4,050 | 4,090 | 4,100 | 4,100 | 4,090 | 4,080 |
| 60.0 | | | 4,560 | 4,620 | 4,640 | 4,630 | 4,630 | 4,610 |
| 65.0 | | | | 5,140 | 5,160 | 5,160 | 5,150 | 5,140 |

**CURRENT(A)** @440V

| Condensing Temperature(℃) | Evaporating Temperature(℃) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | -15 | -10 | -6.7 | 0 | 4.4 | 7.2 | 10 | 12 |
| 35.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| 40.5 | 4.9 | 4.9 | 5.0 | 5.0 | 5.0 | 4.9 | 4.9 | 4.9 |
| 45.0 | 5.3 | 5.3 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| 50.0 | 5.7 | 5.8 | 5.8 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 |
| 54.4 | | 6.3 | 6.3 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 |
| 60.0 | | | 7.0 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |
| 65.0 | | | | 7.7 | 7.8 | 7.8 | 7.8 | 7.8 |

**NOTE:**

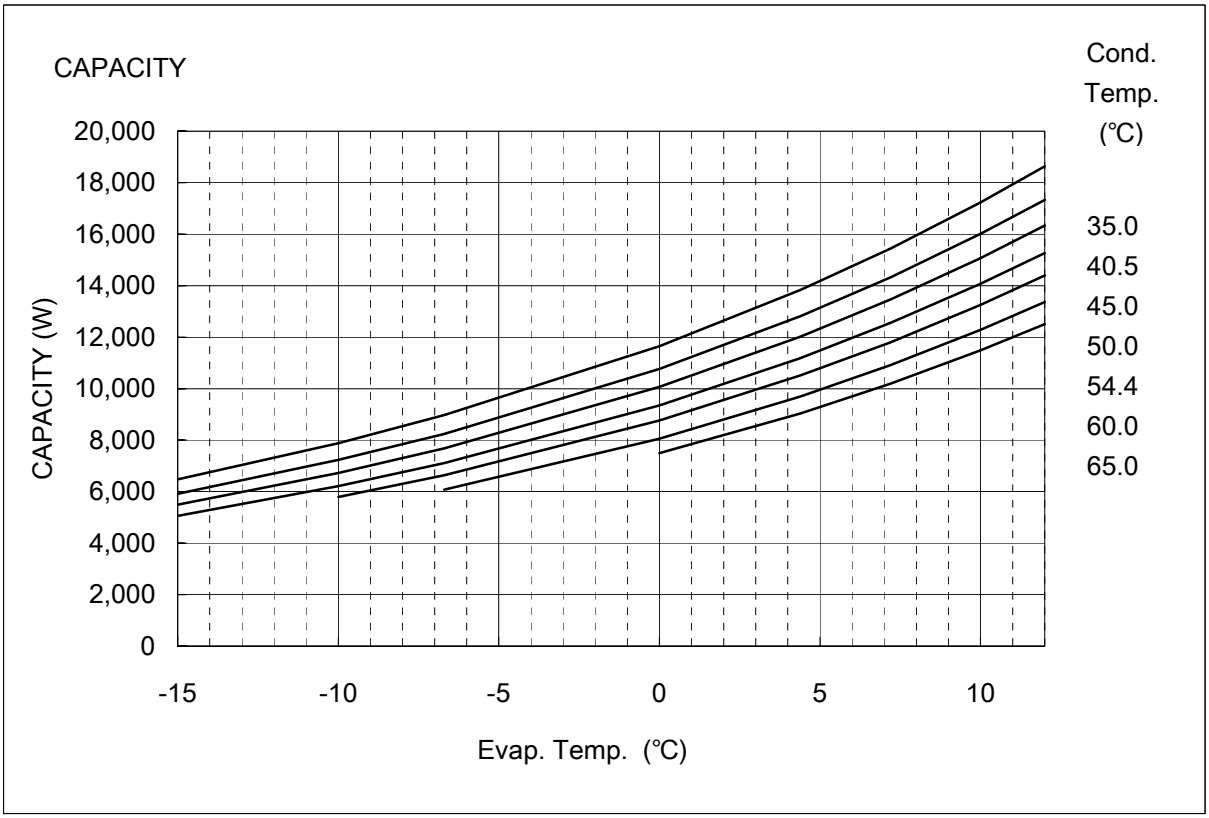
*** The performance values are based on MID point method.**

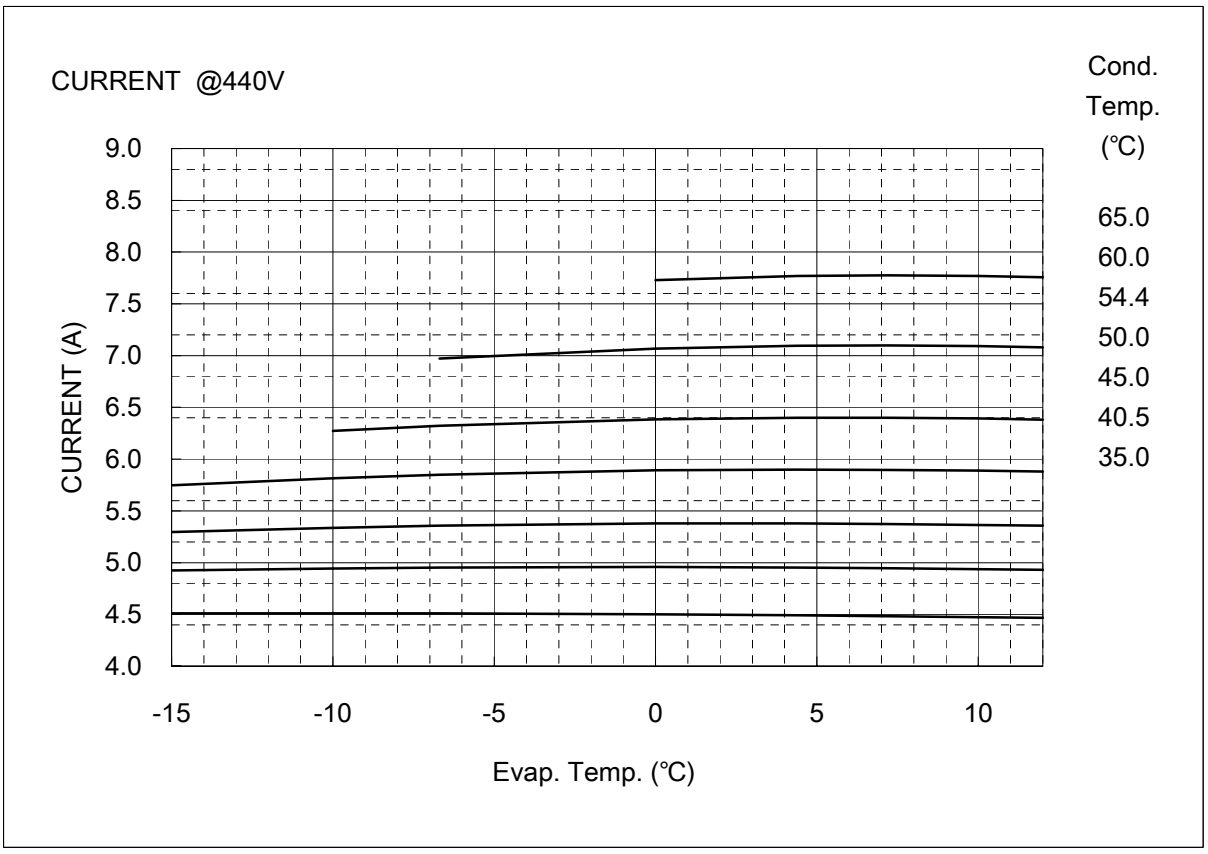
*** The performance values subject to change without notice.**

***Dalian SANYO Compressor Co.,Ltd.***

Compressor Model(Code) **C-SBN263H8A (809 930 88)**

Power Source **3PH 60Hz 440-460V**



# COEFFICIENTS OF PERFORMANCE CURVES

| | |
|---|---|
| Compressor Model | **C-SBN263H8A (809 930 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

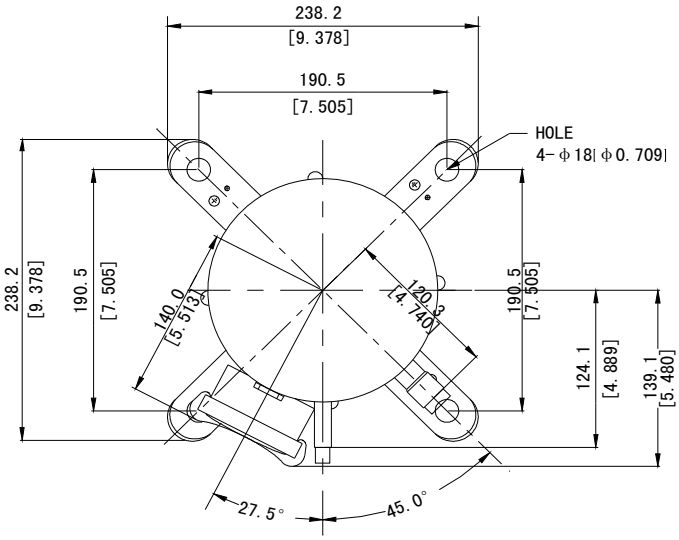
D——CONDENSING TEMP, °C

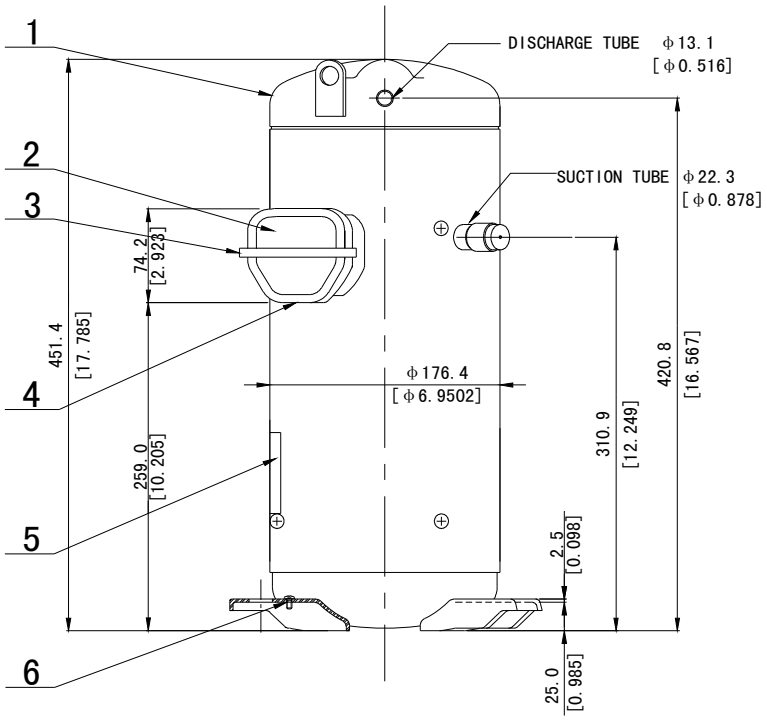
| **440V-60Hz** | CAPACITY (W) | POWER (W) | CURRENT (A) |
|---|---|---|---|
| C1 | 1.876717E+04 | 1.883485E+03 | 2.948552E+00 |
| C2 | 6.753423E+02 | -2.987259E-01 | -2.086318E-03 |
| C3 | -2.383428E+02 | -7.392815E+00 | 1.015761E-02 |
| C4 | 1.163682E+01 | 6.334747E-01 | 7.854054E-04 |
| C5 | -7.131043E+00 | -2.249525E-01 | -2.326093E-04 |
| C6 | 9.978926E-01 | 8.832812E-01 | 9.744790E-04 |
| C7 | 1.073469E-01 | -4.390099E-04 | -1.167962E-06 |
| C8 | -7.256734E-02 | -1.872041E-02 | -2.394198E-05 |
| C9 | 2.535770E-02 | 5.348912E-03 | 6.983738E-06 |
| C10 | -1.390836E-09 | 1.025294E-08 | 7.528350E-12 |

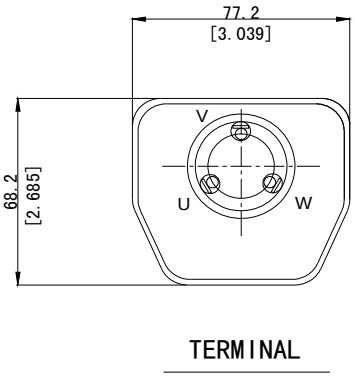
Note:The polynomial coefficients subject to change without notice.

# DIMENSIONAL SKETCH

C-SB Series (3.5HP)



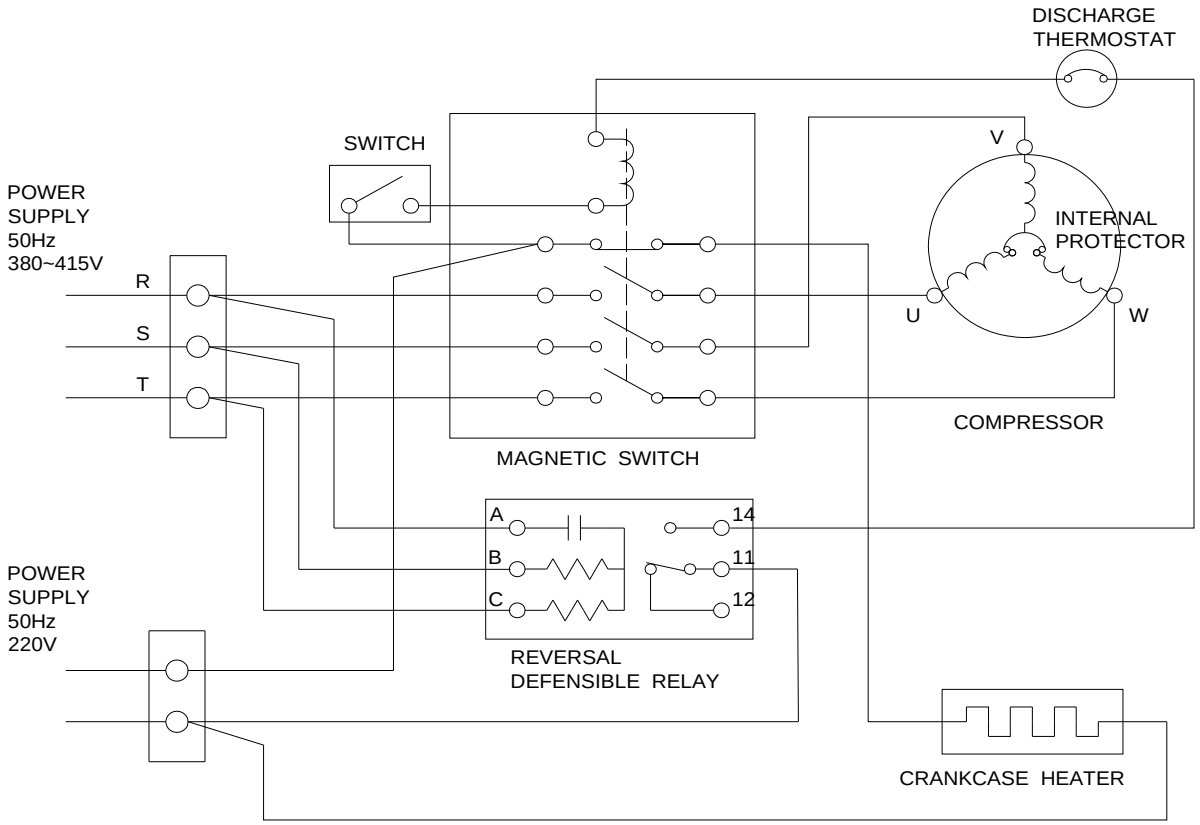

TERMINAL

| 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