SANYO SCROLL COMPRESSORS

Code : **809 966 88**

Model : **C-SBN453H8G**

DALIAN SANYO COMPRESSOR CO.,LTD.

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

Model: C-SBN453H8G **Electrical:** 380-415 Volts 3 Phase 50Hz **R134a**

Nominal Performance at ARI and 50Hz-380V

Capacity	(W)	12200
Power	(W)	3700
Current	(A)	6.8
COP	(W/W)	3.30
Mass Flow	(kg/h)	298

Rating Conditions at ARI

Condensing Temperature(℃)	54.4
Evaporating Temperature(℃)	7.2
Return Gas temperature(℃)	18.3
Liquid Temperature(℃)	46.1
Ambient Temperature(℃)	35

Motor

	50Hz
Operating Voltage Range(V)	342-456
Locked Rotor Amps(A)	66
Maximum Continuous Current(A)	-
RPM(min^{-1})	2900

Compressor

Maximum Discharge Temp(℃)	130
Displacement (cm^3/rev)	100
Weight (with oil kg)	39.5
CCC File Number	2002020704000230

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

PERFORMANCE DATA

Compressor Model(Code)	**C-SBN453H8G (80996688)**
Power Source	**3PH 50Hz 380-415V**
Suction Gas Superheat(K)	**11.1**
Sub Cooling(K)	**8.3**
Compressor Cooling	**Natural Cooling**
Refrigerant	**R134a**

CAPACITY(W)

Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	12
40.5	6,210	7,520	8,530	11,030	13,060	14,540	16,190	17,480
45.0	5,810	7,050	8,020	10,390	12,330	13,740	15,320	16,550
50.0	5,400	6,570	7,470	9,720	11,560	12,900	14,400	15,580
54.4	5,060	6,160	7,030	9,170	10,920	12,200	13,630	14,760
60.0		5,690	6,500	8,510	10,150	11,360	12,720	13,780
65.0			6,060	7,960	9,520	10,670	11,960	12,970
70.0				7,460	8,940	10,030	11,260	12,220

POWER(W)

Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	12
40.5	2,700	2,740	2,760	2,770	2,770	2,760	2,740	2,720
45.0	2,960	3,010	3,030	3,040	3,040	3,030	3,010	3,000
50.0	3,300	3,340	3,360	3,380	3,370	3,370	3,360	3,350
54.4	3,630	3,660	3,680	3,700	3,700	3,700	3,690	3,690
60.0		4,110	4,130	4,150	4,160	4,170	4,170	4,170
65.0			4,570	4,600	4,620	4,630	4,640	4,640
70.0				5,090	5,110	5,130	5,140	5,160

CURRENT(A) @380V

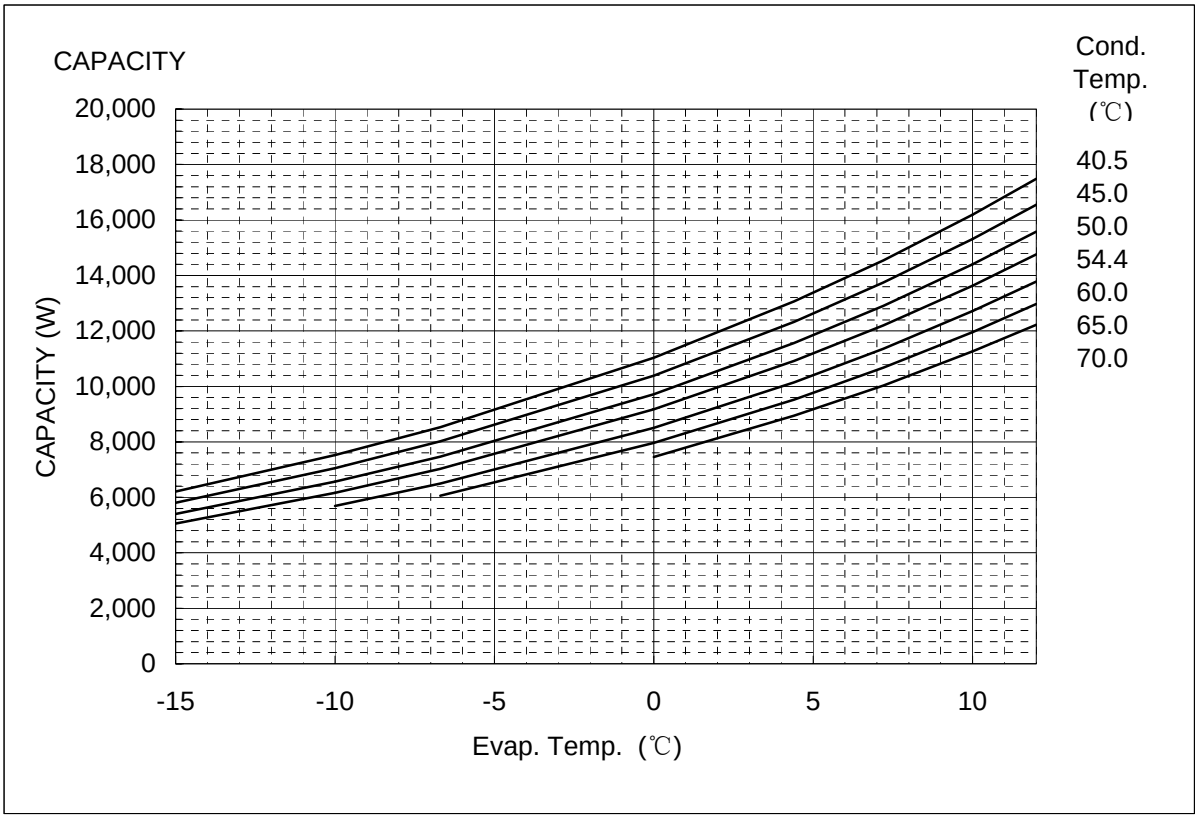
Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	12
40.5	5.4	5.5	5.5	5.5	5.5	5.5	5.5	5.4
45.0	5.8	5.9	5.9	5.9	5.9	5.9	5.9	5.8
50.0	6.2	6.3	6.3	6.4	6.4	6.4	6.3	6.3
54.4	6.6	6.7	6.7	6.8	6.8	6.8	6.8	6.8
60.0		7.3	7.3	7.4	7.4	7.4	7.4	7.4
65.0			7.9	7.9	8.0	8.0	8.0	8.0
70.0				8.5	8.6	8.6	8.6	8.7

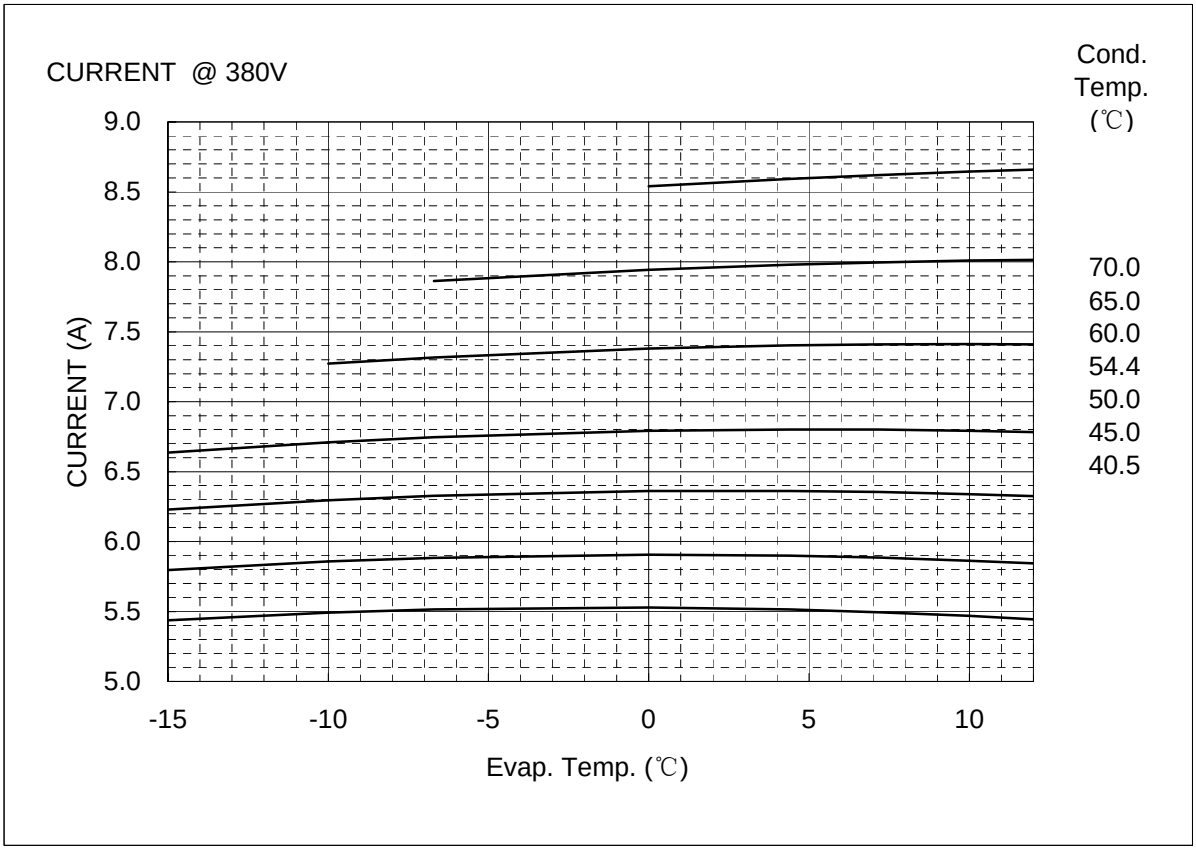
NOTE:

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

Compressor Model(Code) **C-SBN453H8G (80996688)**

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





COEFFICIENTS OF PERFORMANCE CURVES

Compressor Model	**C-SBN453H8G (80996688)**
Power Source	**3PH 50Hz 380-415V**
Suction Gas Superheat (K)	**11.1**
Sub Cooling (K)	**8.3**
Compressor Cooling	**Natural Cooling**
Refrigerant	**R134a**

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

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

S——EVAPORATING TEMP, °C

D——CONDENSING TEMP, °C

380V-50Hz	CAPACITY (W)	POWER (W)	CURRENT (A)
C1	1.863282E+04	1.855889E+03	3.468807E+00
C2	5.919316E+02	-7.256485E+00	-2.020077E-02
C3	-2.260483E+02	-9.335608E+00	2.216103E-02
C4	1.017555E+01	-1.013775E+00	-1.441648E-03
C5	-4.161537E+00	1.690434E-01	4.605093E-04
C6	9.520102E-01	7.935619E-01	7.166197E-04
C7	8.930386E-02	-2.842176E-04	-2.259939E-06
C8	-4.929794E-02	1.530060E-02	1.813361E-05
C9	-2.170817E-06	-4.777420E-07	-1.107218E-09
C10	-2.651670E-06	-5.246221E-07	-4.579498E-10

Note:The polynomial coefficients subject to change without notice.

PERFORMANCE DATA

Compressor Model	**C-SBN453H8G**
Power Source	**3PH 60Hz 440-460V**
Suction Gas Superheat(K)	**11.1**
Sub Cooling(K)	**8.3**
Compressor Cooling	**Natural Cooling**
Refrigerant	**R134a**

CAPACITY(W)

Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	7,030	8,730	10,080	13,470	16,310	18,410	20,790	22,670
40.5	6,630	8,230	9,480	12,660	15,300	17,260	19,470	21,230
45.0	6,320	7,830	9,020	12,020	14,520	16,370	18,450	20,110
50.0	5,990	7,410	8,530	11,350	13,690	15,420	17,380	18,930
54.4		7,060	8,120	10,790	13,000	14,640	16,490	17,940
60.0			7,630	10,120	12,180	13,700	15,420	16,770
65.0				9,560	11,490	12,920	14,520	15,790

POWER(W)

Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	2,870	2,930	2,970	3,020	3,030	3,040	3,040	3,040
40.5	3,180	3,250	3,290	3,350	3,370	3,370	3,380	3,380
45.0	3,470	3,550	3,590	3,650	3,670	3,690	3,690	3,690
50.0	3,830	3,910	3,950	4,020	4,050	4,070	4,080	4,080
54.4		4,260	4,310	4,380	4,420	4,440	4,450	4,460
60.0			4,800	4,890	4,930	4,960	4,980	4,990
65.0				5,380	5,430	5,460	5,490	5,510

CURRENT(A)

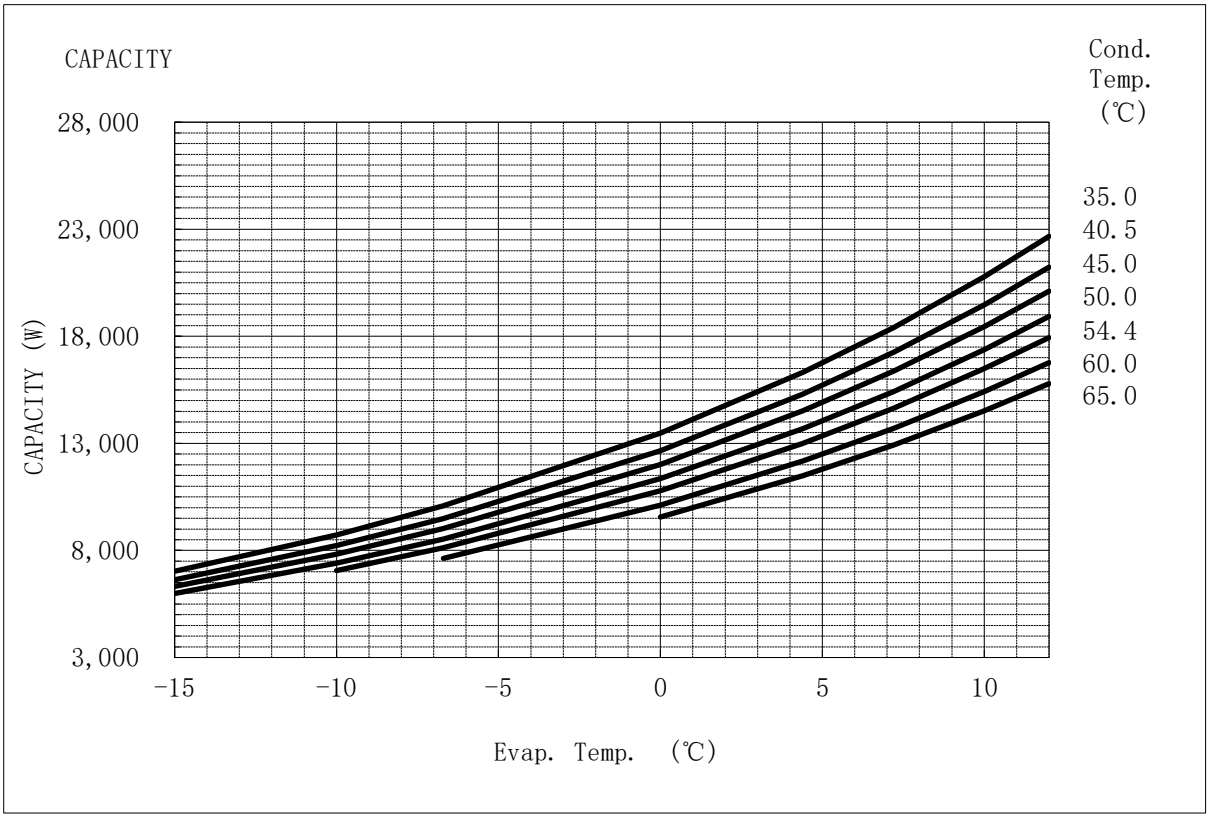
Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	5.3	5.3	5.3	5.4	5.4	5.4	5.4	5.4
40.5	5.6	5.7	5.7	5.7	5.8	5.8	5.8	5.8
45.0	5.9	6.0	6.0	6.0	6.1	6.1	6.1	6.1
50.0	6.2	6.3	6.3	6.4	6.4	6.5	6.5	6.5
54.4		6.6	6.7	6.7	6.8	6.8	6.8	6.8
60.0			7.1	7.2	7.2	7.3	7.3	7.3
65.0				7.6	7.7	7.7	7.7	7.8

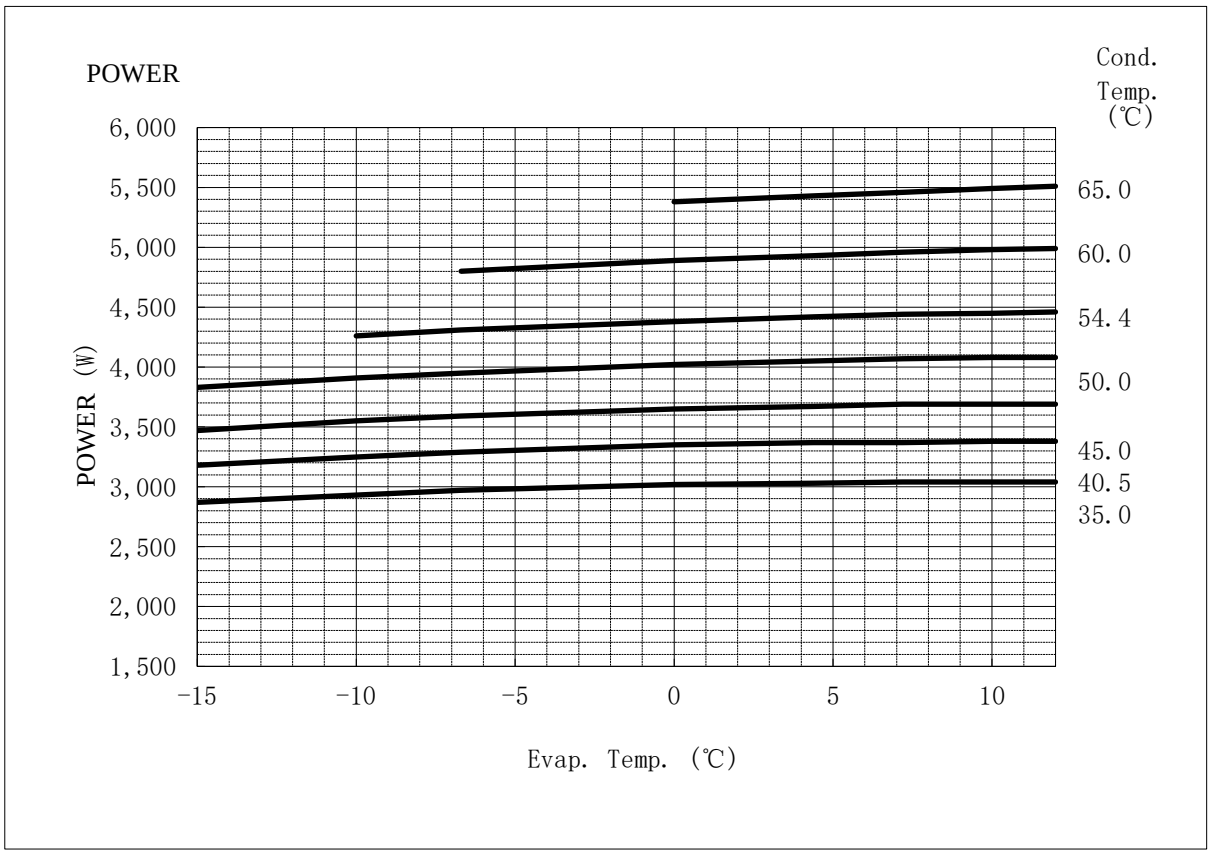
REFRIG FLOW(kg/h)

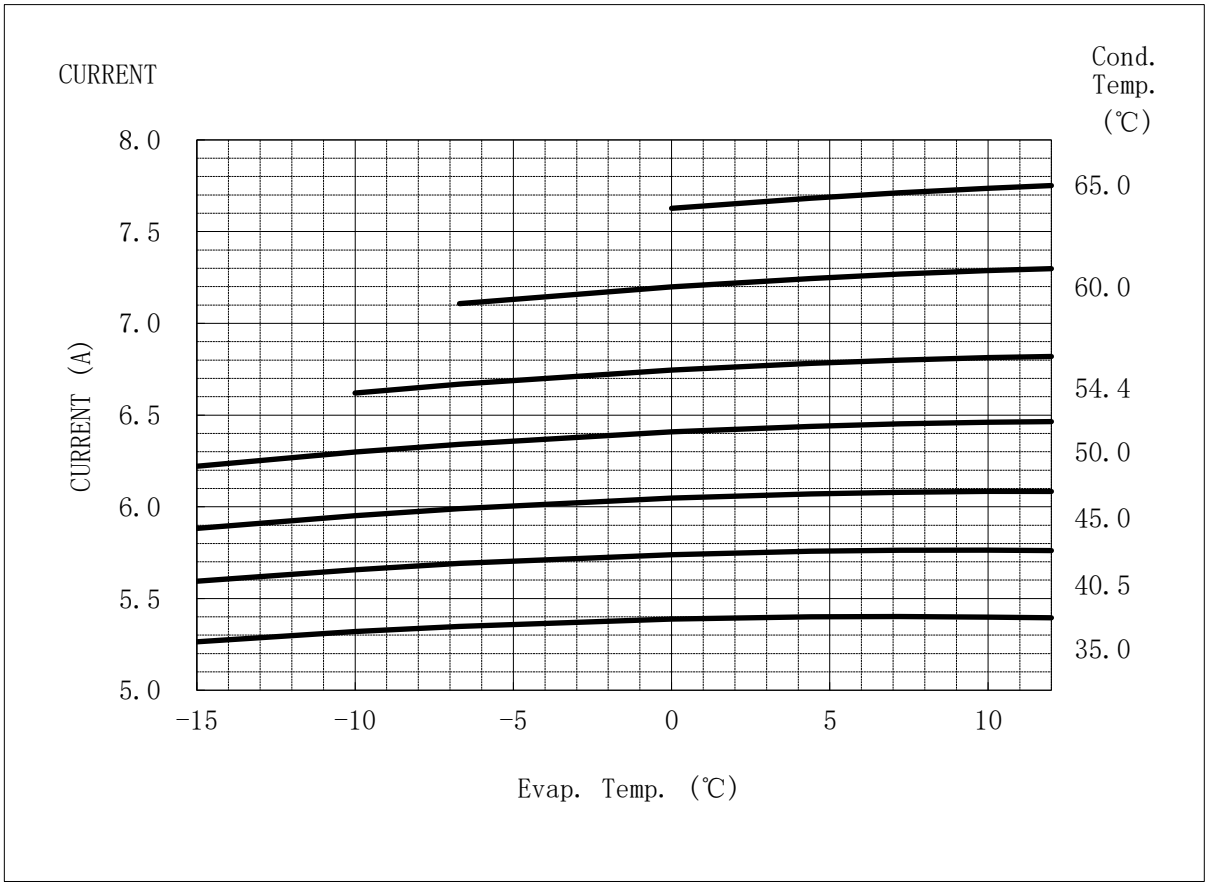
Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	155	189	215	279	332	370	413	446
40.5	155	188	214	277	328	365	407	440
45.0	155	188	213	275	325	362	403	434
50.0	155	187	212	273	322	358	397	429
54.4		186	211	271	319	354	393	423
60.0			210	268	315	350	387	417
65.0				266	312	346	383	411

Compressor Model(Code) **C-SBN453H8G**

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







COEFFICIENTS OF PERFORMANCE CURVES

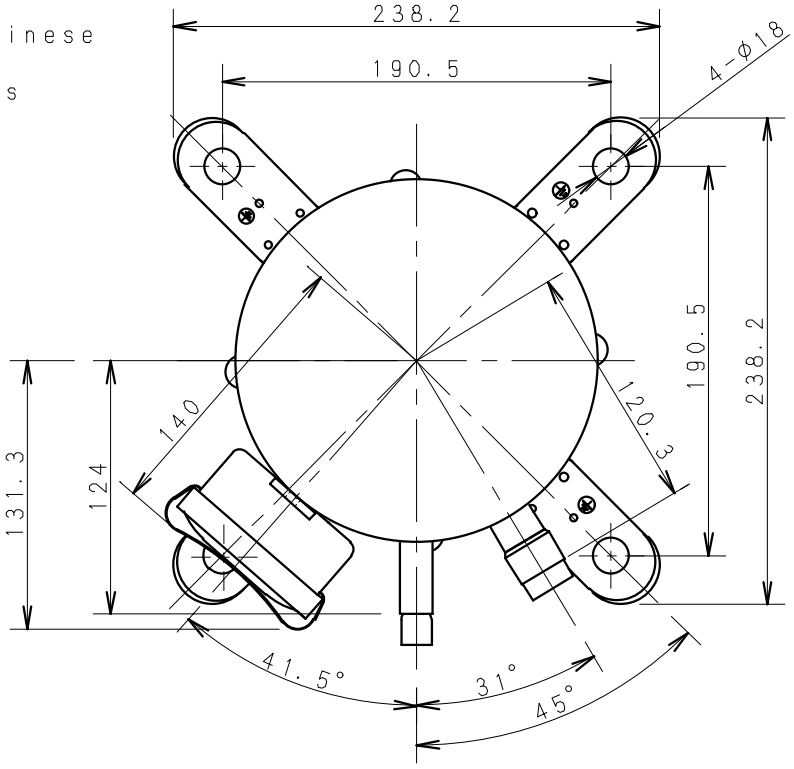
Compressor Model	**C-SBN453H8G**
Power Source	**3PH 60Hz 440-460V**
Suction Gas Superheat (K)	**11.1**
Sub Cooling (K)	**8.3**
Compressor Cooling	**Natural Cooling**
Refrigerant	**R134a**

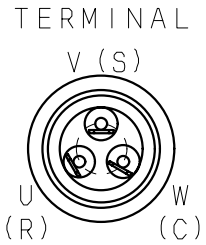
X=C1+C2*(S)+C3*D+C4*(S2)+C5*(S*D)+C6*(D2)+C7*(S3)+C8*(D*S2)+C9*(S*D2) +C10*(D3)
X——CAPACITY(W) OR POWER(W) OR CURRENT(A) OR FLOW(kg/h)
S——EVAPORATING TEMP, °C
D——CONDENSING TEMP, °C

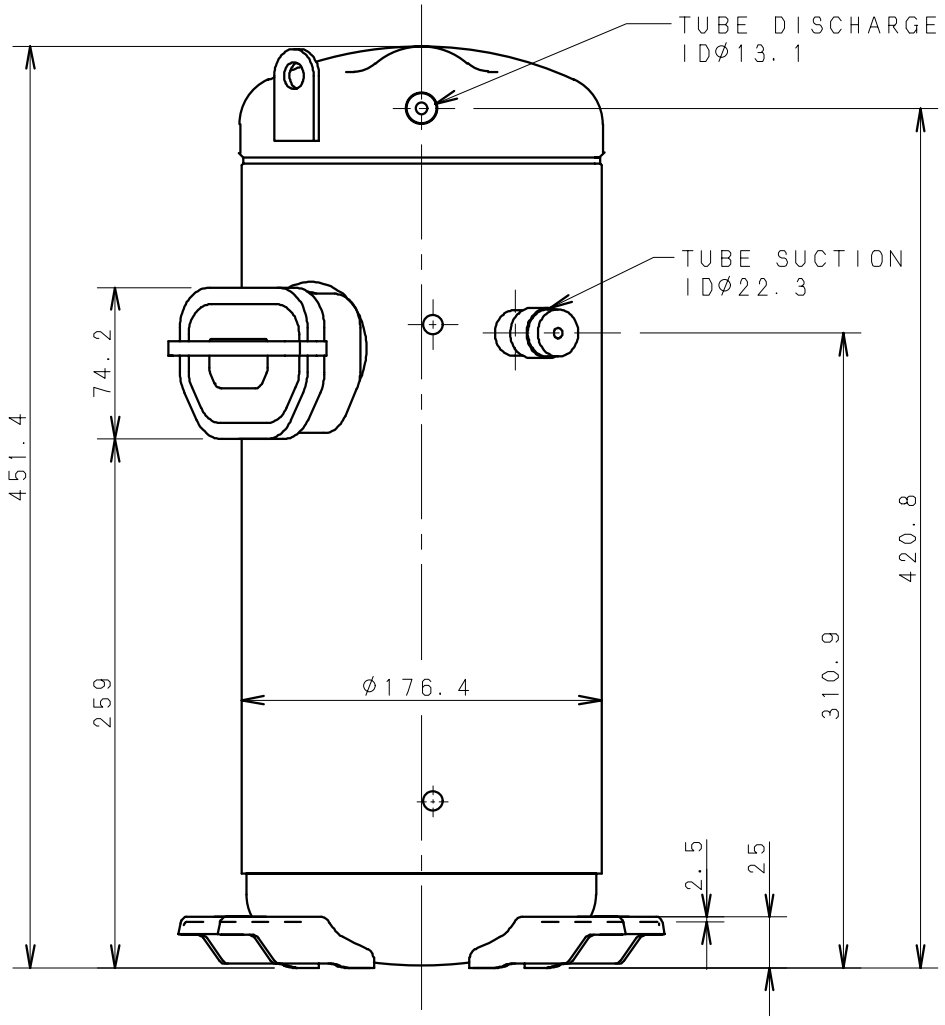
440V-60Hz	CAPACITY (W)	POWER (W)	CURRENT (A)	FLOW (kg/h)
1	1.975412E+04	2.057816E+03	3.777070E+00	2.950068E+02
2	9.143447E+02	5.636506E+00	1.867041E-04	1.276387E+01
3	-2.063068E+02	-1.359518E-01	3.063325E-02	-4.709700E-01
4	1.841681E+01	-3.936604E-01	-2.839116E-04	2.658575E-01
5	-1.093413E+01	-1.671026E-01	-1.103805E-05	-5.530969E-02
6	7.618954E-01	7.882460E-01	4.400010E-04	3.961705E-04
7	1.536137E-01	1.745484E-03	7.319557E-08	2.453301E-03
8	-1.566271E-01	2.334333E-03	-1.351860E-07	-1.363168E-03
9	4.607489E-02	4.379285E-03	3.397196E-06	1.106118E-04
10	-6.848051E-09	1.019756E-09	-1.085465E-12	-1.094529E-10

DIMENSIONAL SKETCH

C-SB Series
2.6-4.5kW
European & Chinese
power supply
specifications
models





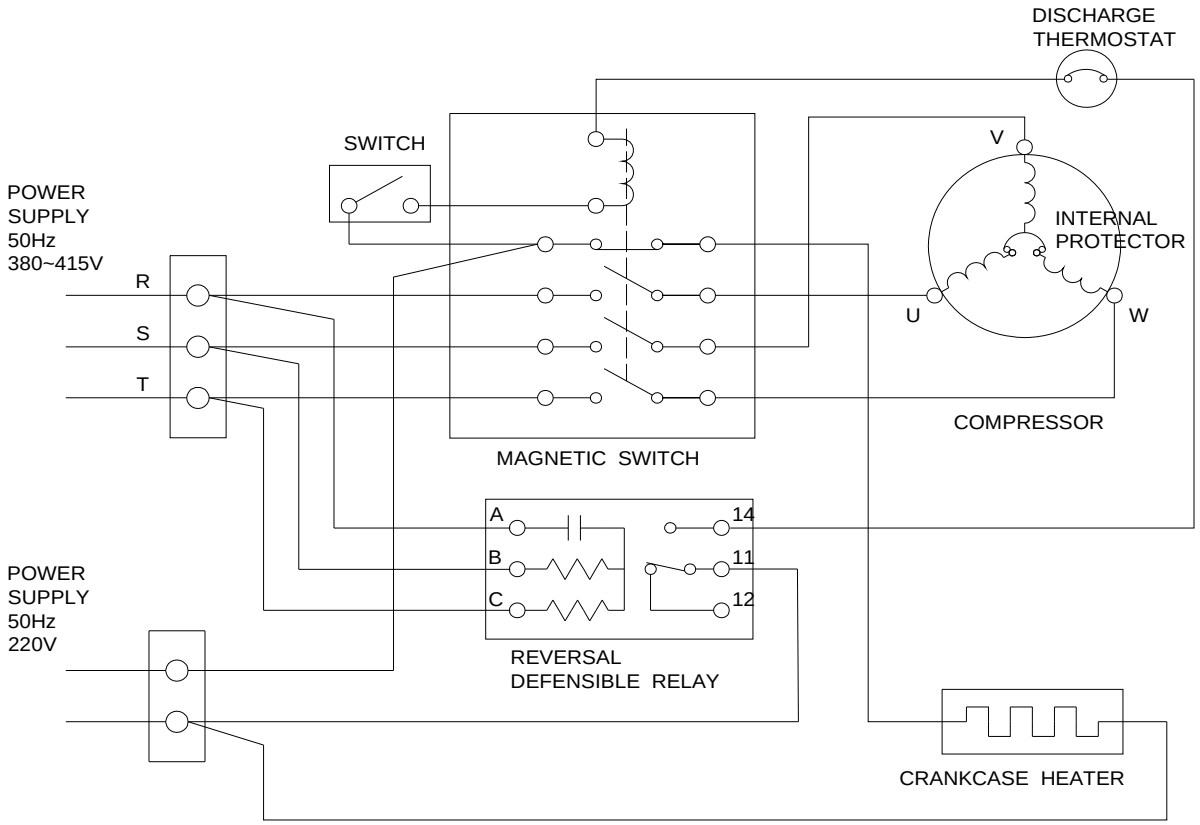


DIM-SB50

WIRING & MOUNTING SKETCH

WIRING DIAGRAM

C-SB Series 3phase B8



MOUNTING SKETCH