

SANYO

SPECIFICATIONS OF COMPRESSOR

Model No: C-SBS180H38C

Output : 5HP



DALIAN SANYO COMPRESSOR Co.,Ltd.

23-Jan-14

GENERAL SPECIFICATIONS

Model No:	C-SBS180H38C	
Application		
Evaporating Temp Range	(°C)	-12.0 ~ 12.0
Refrigerant	R134a	
Compressor Cooling	Natural Cooling	
Rated Performance		
		50Hz-380V / 60Hz-440V
Capacity	(W)	9990 / 11900
Input	(W)	3050 / 3680
Current	(A)	5.9 / 6.0
Revolution	(min ⁻¹)	2900 / 3450
Sound Level (MAX)	(dB(A))	60 / 65
Rating Conditions		
Power Source	50Hz-380V / 60Hz-440V	
Evaporating Temp	(°C)	7.2
Condensing Temp	(°C)	54.4
Suction Gas Temp	(°C)	18.3
Liquid Temp	(°C)	43.8
Ambient Temp	(°C)	35.0
Measuring Point of Sound Level		
Distance from the Compressor	(m)	1.0
Compressor		
Design	Hermetic Scroll	
Displacement	(cm ³)	83.7
Suction Line Connection	(Φ mm OD)	22.22
Discharge Line Connection	(Φ mm OD)	12.7
Oil	(ml)	1700 (FV68S)
Mass(Incl.Oil)	(kg)	38
Motor		
Type	3-PH Induction Motor(3IR)	
Pole	2	
Rated Power Source	3Ph 50Hz 380-415V/ 3Ph 60Hz 440-460V	
Voltage Range	(V)	342 ~ 456 / 396 ~ 506
Starting Current	(A)	52 / 55

DALIAN SANYO COMPRESSOR Co.,Ltd.

PERFORMANCE DATA

Compressor Model	C-SBS180H38C
Power Source	3PH 50Hz 380V
Suction Gas Superheat(K)	11.1
Sub Cooling(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R134a

CAPACITY(W)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	4,800	5,960	6,880	9,190	11,130	12,560	14,190	15,470
40.5	4,530	5,610	6,470	8,640	10,440	11,780	13,290	14,480
45.0	4,310	5,340	6,160	8,200	9,910	11,170	12,590	13,720
50.0	4,090	5,060	5,820	7,740	9,340	10,530	11,860	12,920
54.4		4,820	5,540	7,360	8,870	9,990	11,250	12,250
60.0			5,210	6,900	8,310	9,350	10,520	11,440
65.0				6,520	7,840	8,810	9,910	10,780

POWER(W)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	1,970	2,010	2,040	2,070	2,080	2,080	2,080	2,080
40.5	2,180	2,230	2,260	2,290	2,310	2,310	2,320	2,320
45.0	2,380	2,430	2,460	2,500	2,520	2,530	2,530	2,530
50.0	2,630	2,680	2,710	2,760	2,780	2,790	2,800	2,800
54.4		2,920	2,950	3,010	3,030	3,050	3,050	3,060
60.0			3,290	3,350	3,380	3,400	3,410	3,420
65.0				3,690	3,730	3,750	3,770	3,780

CURRENT(A)

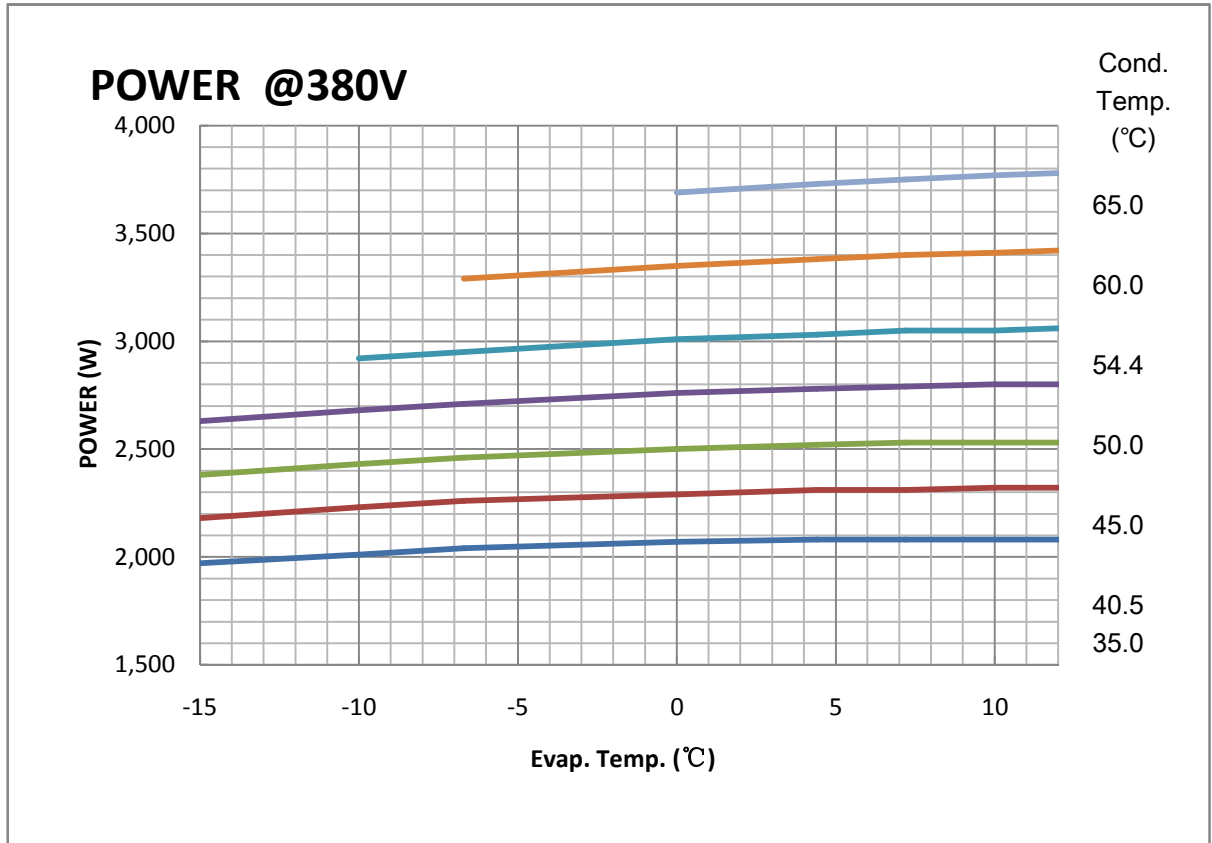
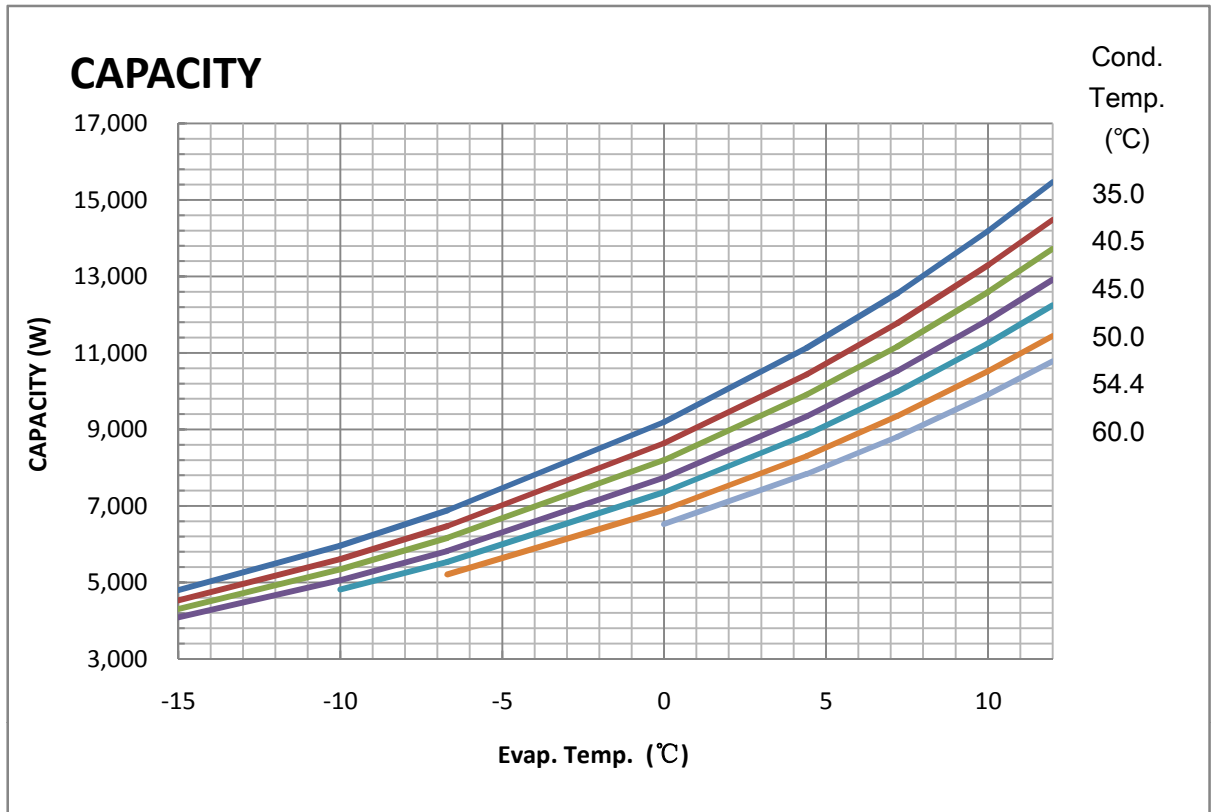
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	4.6	4.6	4.7	4.7	4.7	4.7	4.7	4.7
40.5	4.9	4.9	5.0	5.0	5.0	5.0	5.0	5.0
45.0	5.1	5.2	5.2	5.3	5.3	5.3	5.3	5.3
50.0	5.4	5.5	5.5	5.6	5.6	5.6	5.6	5.6
54.4		5.8	5.8	5.9	5.9	5.9	5.9	5.9
60.0			6.2	6.3	6.3	6.3	6.4	6.4
65.0				6.7	6.7	6.7	6.7	6.8

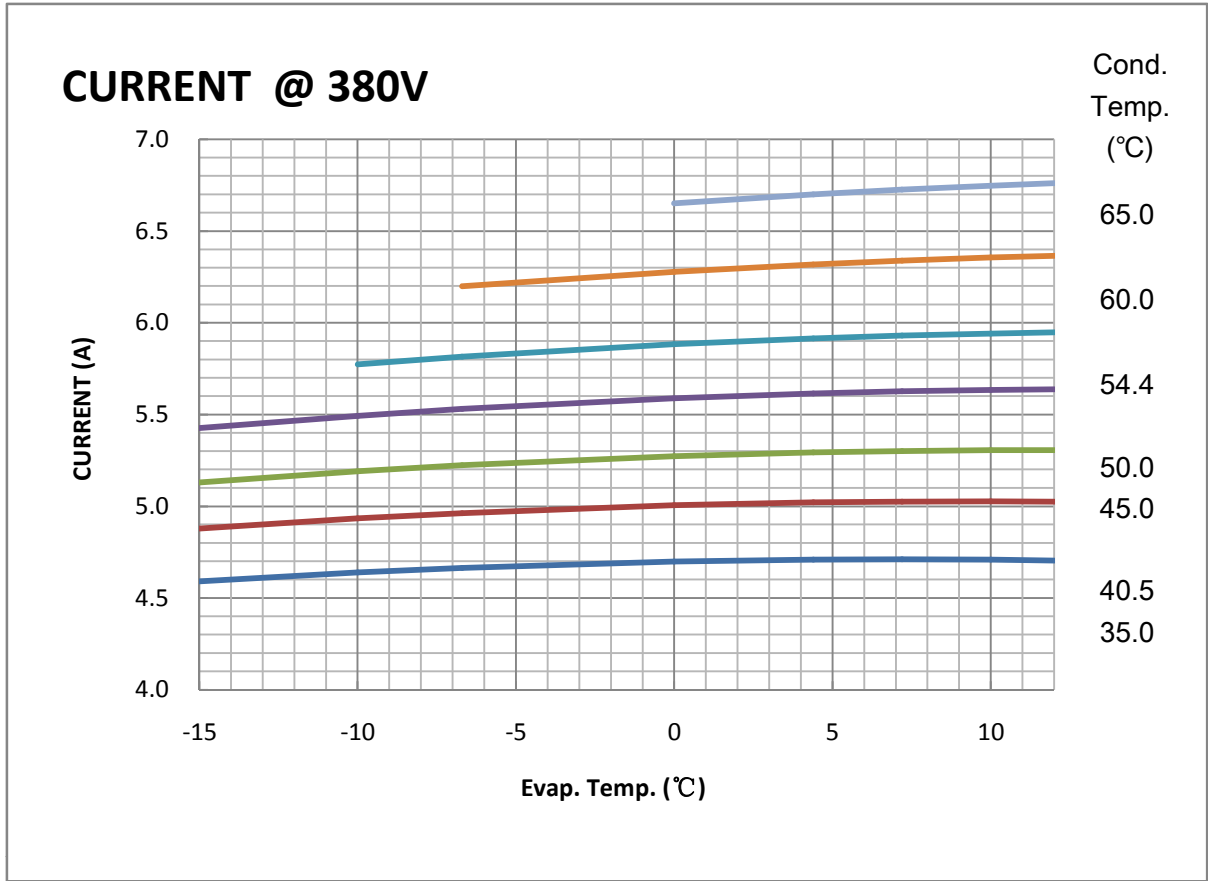
REFRIG FLOW(kg/h)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	106	129	146	190	226	252	281	304
40.5	106	128	145	188	223	249	277	299
45.0	105	128	145	187	221	246	274	296
50.0	105	127	144	186	219	243	270	292
54.4		127	143	184	217	241	267	288
60.0			143	183	215	238	264	284
65.0				181	212	235	260	280

Compressor Model(Code)
Power Source

C-SBS180H38C
3PH 50Hz 380V





COEFFICIENTS OF PERFORMANCE CURVES

Compressor Model **C-SBS180H38C**
 Power Source **3PH 50Hz 380V**
 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) OR FLOW(kg/h)
 S—EVAPORATING TEMP, °C
 D—CONDENSING TEMP, °C

380V-50Hz	CAPACITY (W)	POWER (W)	CURRENT (A)	FLOW (kg/h)
1	1.349534E+04	1.413551E+03	3.294451E+00	2.007963E+02
2	6.217397E+02	2.232938E+00	8.330723E-05	8.676798E+00
3	-1.413471E+02	-2.484343E-01	2.668805E-02	-3.216318E-01
4	1.249152E+01	-2.726312E-01	-2.488955E-04	1.810794E-01
5	-7.364598E+00	-4.992901E-02	-6.038649E-06	-3.738390E-02
6	5.244178E-01	5.426724E-01	3.839663E-04	2.763505E-04
7	1.044271E-01	2.068860E-04	5.491754E-08	1.674622E-03
8	-1.049290E-01	1.599295E-03	-8.769117E-08	-9.345594E-04
9	3.041230E-02	2.439228E-03	2.923630E-06	7.389637E-05
10	-5.946025E-09	9.068634E-09	1.161729E-12	-5.081967E-11

PERFORMANCE DATA

Compressor Model	C-SBS180H38C
Power Source	3PH 60Hz 440V
Suction Gas Superheat(K)	11.1
Sub Cooling(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R134a

CAPACITY(W)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	6,020	7,370	8,410	11,020	13,150	14,720	16,480	17,860
40.5	5,520	6,790	7,790	10,290	12,350	13,870	15,580	16,930
45.0	5,140	6,350	7,310	9,720	11,720	13,200	14,870	16,190
50.0	4,740	5,900	6,810	9,120	11,050	12,490	14,120	15,400
54.4		5,520	6,400	8,630	10,500	11,900	13,480	14,740
60.0			5,910	8,040	9,840	11,190	12,720	13,940
65.0				7,550	9,280	10,590	12,080	13,280

POWER(W)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	2,380	2,430	2,460	2,530	2,580	2,600	2,630	2,650
40.5	2,630	2,690	2,720	2,790	2,840	2,870	2,900	2,920
45.0	2,870	2,920	2,960	3,030	3,080	3,110	3,140	3,160
50.0	3,160	3,210	3,250	3,320	3,370	3,400	3,430	3,450
54.4		3,500	3,530	3,600	3,650	3,680	3,710	3,730
60.0			3,920	3,990	4,040	4,070	4,100	4,120
65.0				4,370	4,420	4,450	4,480	4,500

CURRENT(A)

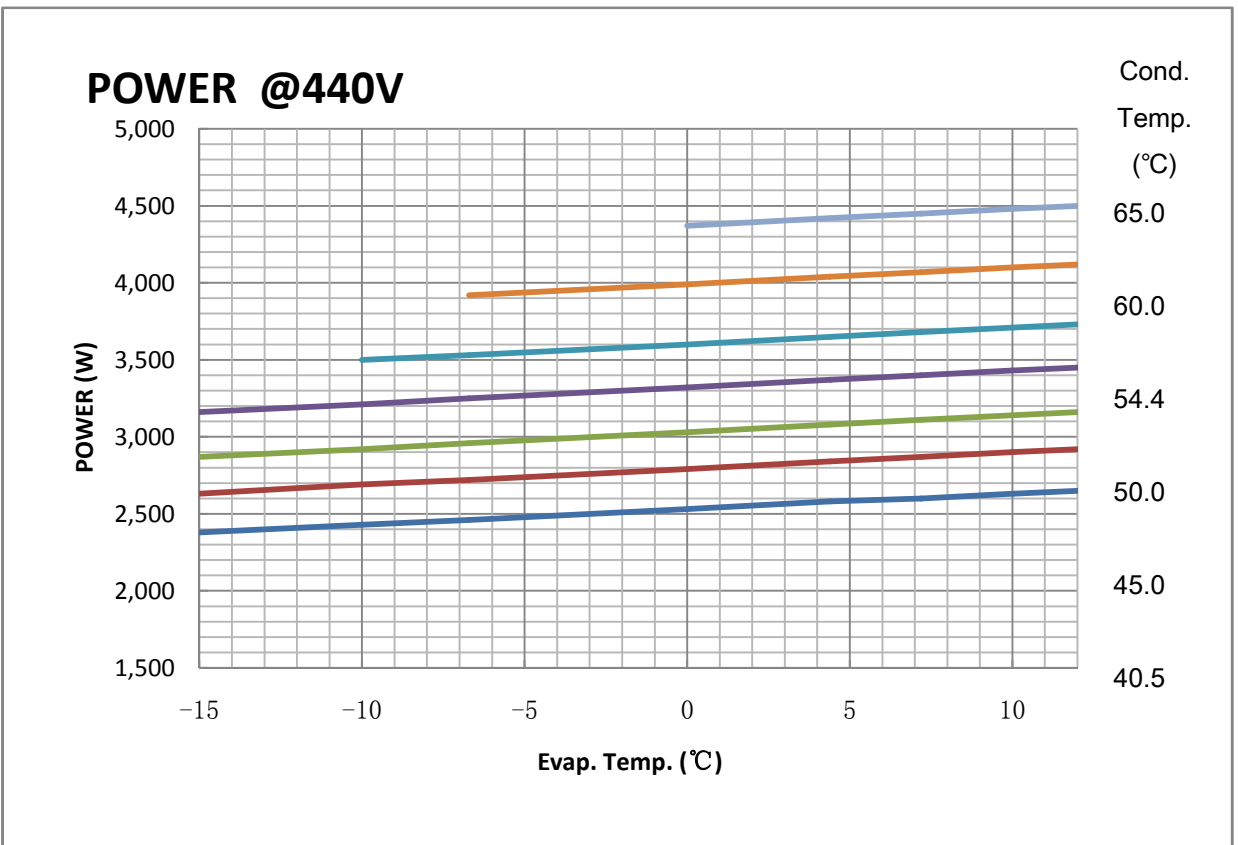
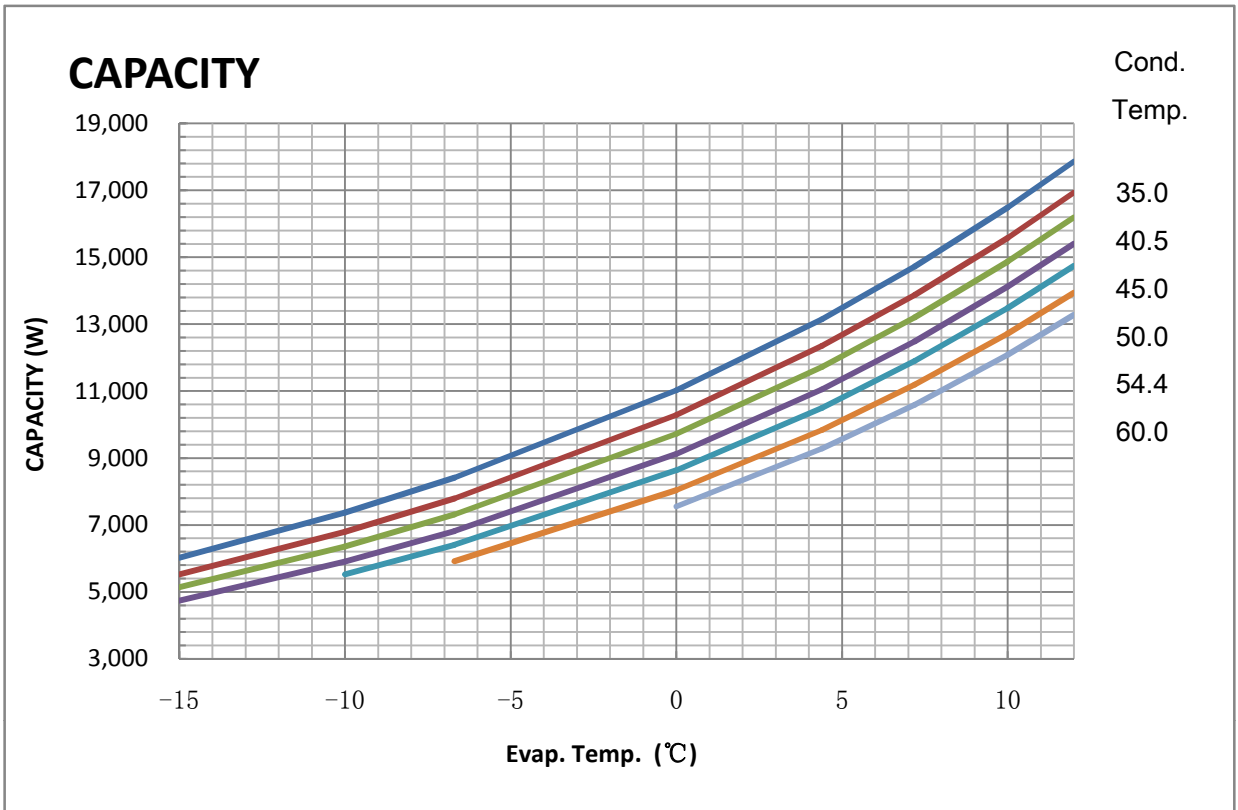
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	4.5	4.5	4.6	4.6	4.7	4.7	4.7	4.8
40.5	4.8	4.8	4.9	5.0	5.0	5.0	5.1	5.1
45.0	5.1	5.1	5.2	5.2	5.3	5.3	5.3	5.4
50.0	5.4	5.4	5.5	5.6	5.6	5.6	5.7	5.7
54.4		5.7	5.8	5.9	5.9	6.0	6.0	6.0
60.0			6.2	6.3	6.3	6.4	6.4	6.4
65.0				6.7	6.7	6.8	6.8	6.9

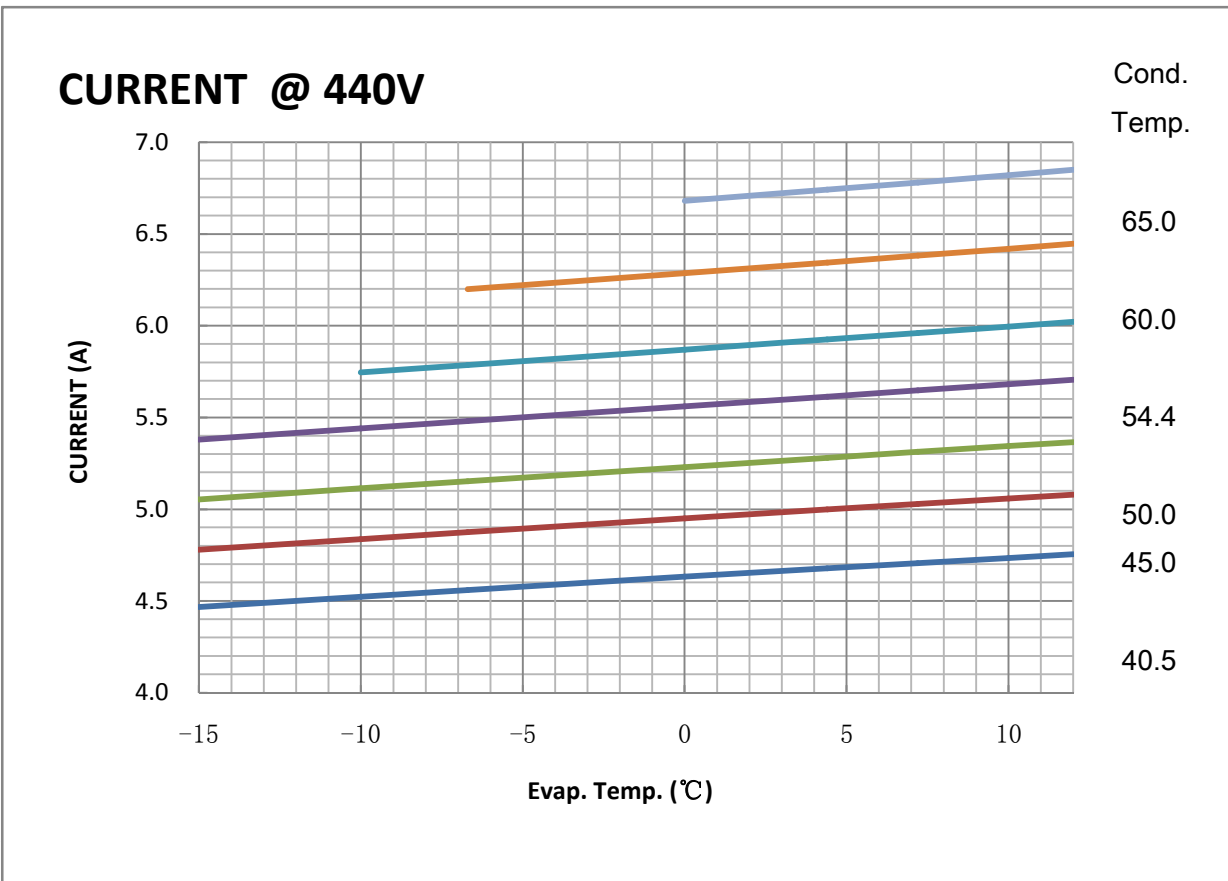
REFRIG FLOW(kg/h)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	127	154	174	224	265	294	327	353
40.5	127	153	173	223	263	292	325	350
45.0	126	152	173	222	262	291	323	348
50.0	126	152	172	221	260	289	321	346
54.4		151	171	220	259	288	319	344
60.0			170	219	258	286	317	342
65.0				218	256	284	315	340

Compressor Model(Code)
Power Source

C-SBS180H38C
3PH 60Hz 440V





COEFFICIENTS OF PERFORMANCE CURVES

Compressor Model **C-SBS180H38C**
 Power Source **3PH 60Hz 440V**
 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) OR FLOW(kg/h)
 S—EVAPORATING TEMP, °C
 D—CONDENSING TEMP, °C

440V-60Hz	CAPACITY (W)	POWER (W)	CURRENT (A)	FLOW (kg/h)
1	1.667967E+04	1.700646E+03	3.209651E+00	2.318094E+02
2	5.517361E+02	4.459879E+00	7.855127E-03	8.969590E+00
3	-1.868682E+02	3.544964E+00	2.576257E-02	-2.260326E-01
4	9.730787E+00	-4.574307E-02	-1.125057E-04	1.757362E-01
5	-3.169268E+00	2.504899E-01	6.164585E-05	-1.447986E-02
6	7.122009E-01	5.775346E-01	4.252360E-04	7.889943E-05
7	1.198661E-01	-9.385350E-04	8.331921E-08	1.889832E-03
8	-1.580390E-02	9.622102E-04	2.196105E-06	-3.606257E-04
9	2.253227E-03	-2.409445E-03	4.369426E-07	9.242953E-06
10	1.480700E-08	1.201613E-08	-2.063424E-12	-6.075183E-11