



SPECIFICATIONS OF COMPRESSOR

Model No: C-SBS120H38A

Output : 3.5HP



DALIAN SANYO COMPRESSOR Co.,Ltd.

23-Jan-14

GENERAL SPECIFICATIONS

Model No:	C-SBS120H38A	
Application		
Evaporating Temp Range	(°C)	-12.0 ~ 12.0
Refrigerant	R407C	
Compressor Cooling	Natural Cooling	
Rated Performance		50Hz-380V / 60Hz-440V
Capacity	(W)	6560 / 8070
Input	(W)	2220 / 2670
Current	(A)	4.9 / 4.8
Revolution	(min ⁻¹)	2900 / 3450
Sound Level (MAX)	(dB(A))	62 / 65
Rating Conditions		50Hz-380V / 60Hz-440V
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)	55.7
Suction Line Connection	(Φ mm OD)	22.22
Discharge Line Connection	(Φ mm OD)	12.7
Oil	(ml)	1700 (FV68S)
Mass(Incl.Oil)	(kg)	40
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 / --

DALIAN SANYO COMPRESSOR Co.,Ltd.

PERFORMANCE DATA

Compressor Model	C-SBS120H38A
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	3,050	3,810	4,420	5,970	7,270	8,240	9,350	10,220
40.5	2,850	3,570	4,140	5,590	6,820	7,730	8,770	9,600
45.0	2,690	3,370	3,920	5,300	6,460	7,330	8,320	9,110
50.0	2,530	3,170	3,690	4,990	6,090	6,910	7,850	8,590
54.4		3,010	3,490	4,730	5,780	6,560	7,450	8,160
60.0			3,260	4,430	5,410	6,140	6,980	7,650
65.0				4,170	5,100	5,800	6,590	7,220

POWER(W)

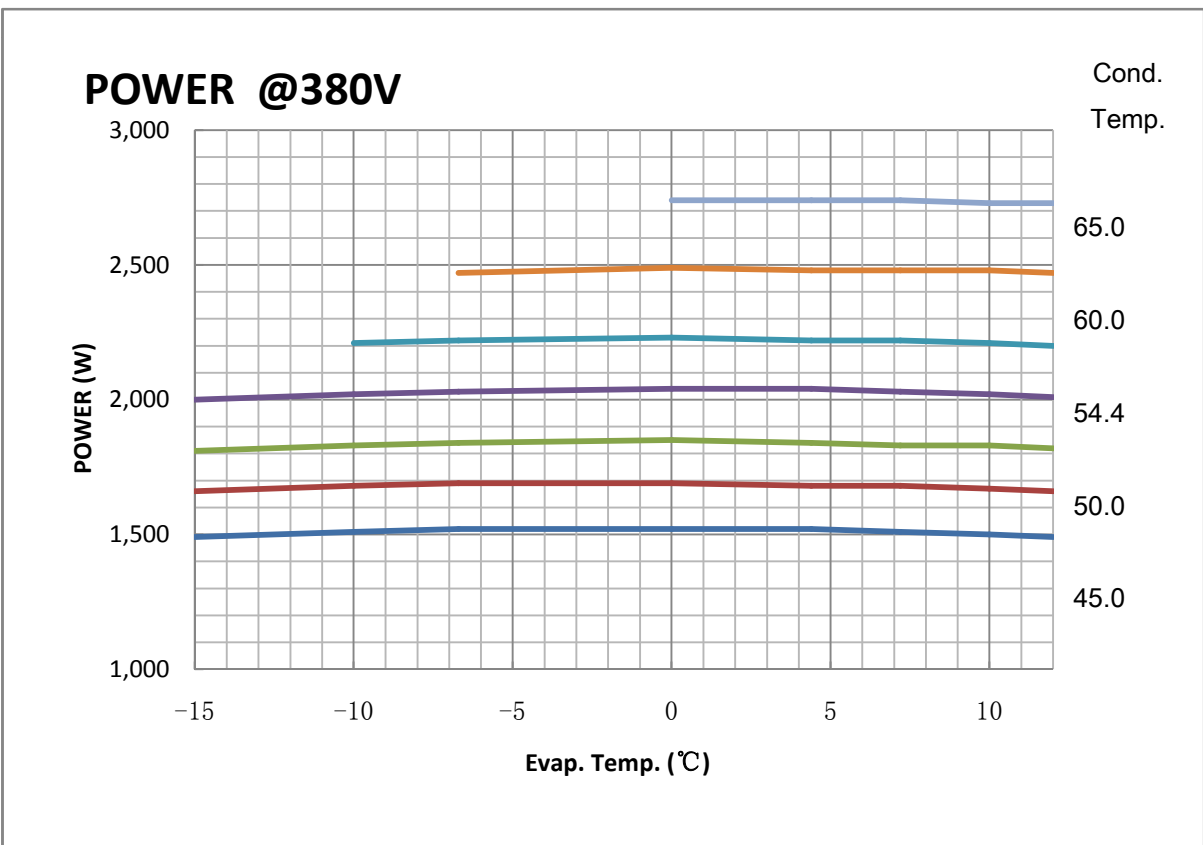
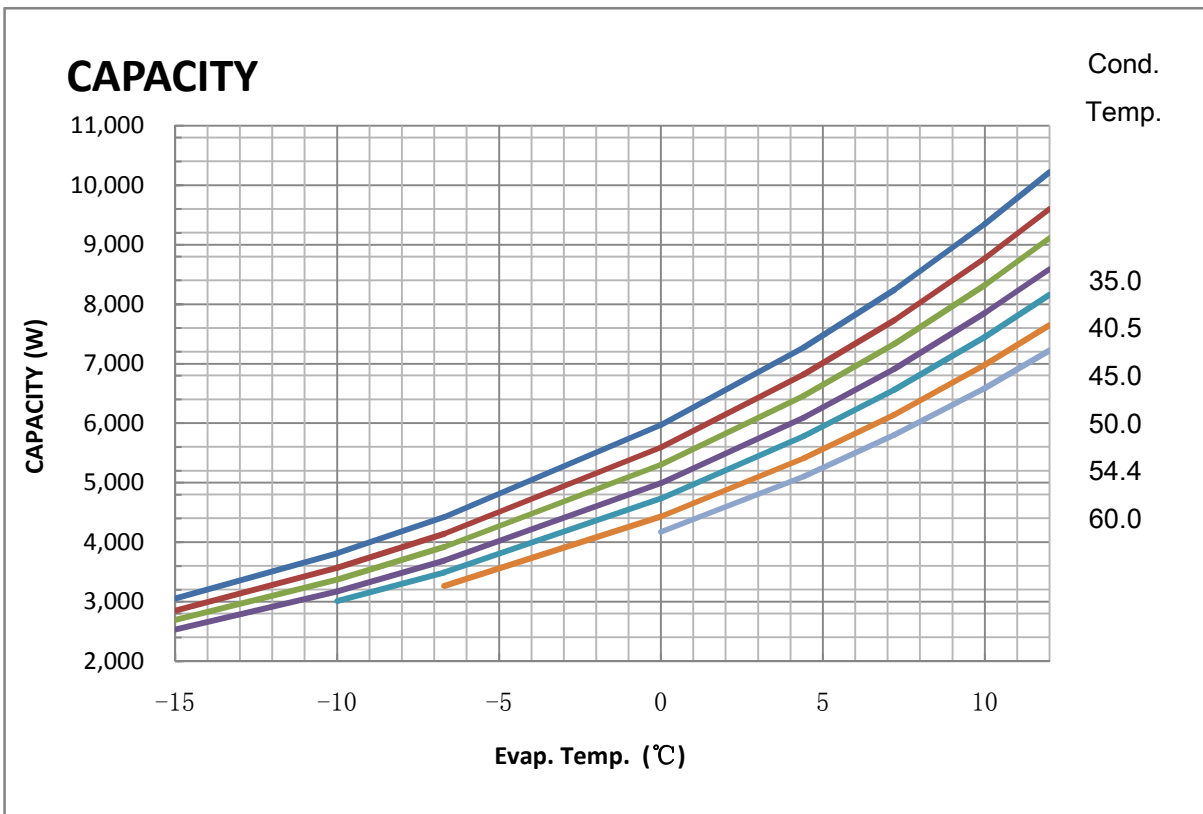
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	1,490	1,510	1,520	1,520	1,520	1,510	1,500	1,490
40.5	1,660	1,680	1,690	1,690	1,680	1,680	1,670	1,660
45.0	1,810	1,830	1,840	1,850	1,840	1,830	1,830	1,820
50.0	2,000	2,020	2,030	2,040	2,040	2,030	2,020	2,010
54.4		2,210	2,220	2,230	2,220	2,220	2,210	2,200
60.0			2,470	2,490	2,480	2,480	2,480	2,470
65.0				2,740	2,740	2,740	2,730	2,730

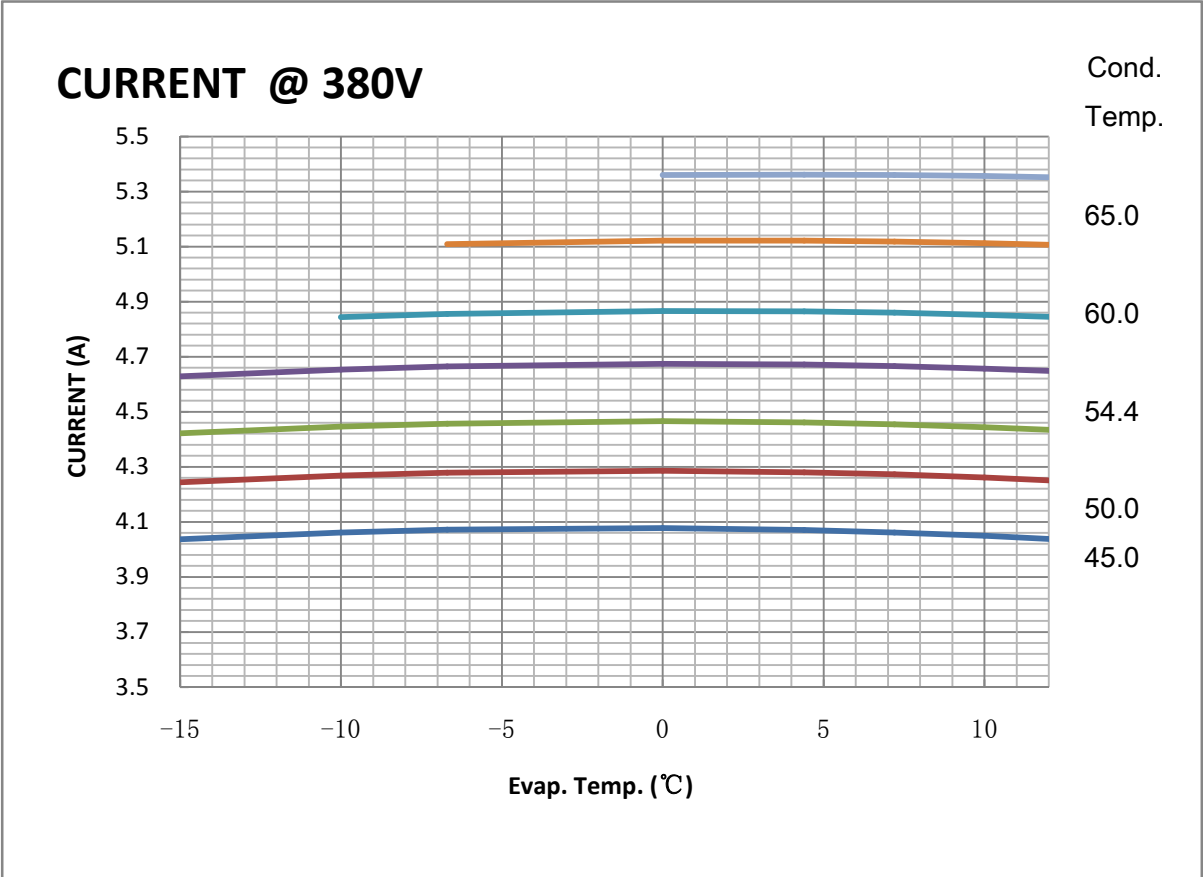
CURRENT(A)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	4.0	4.1	4.1	4.1	4.1	4.1	4.0	4.0
40.5	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3
45.0	4.4	4.4	4.5	4.5	4.5	4.5	4.4	4.4
50.0	4.6	4.7	4.7	4.7	4.7	4.7	4.7	4.6
54.4		4.8	4.9	4.9	4.9	4.9	4.9	4.8
60.0			5.1	5.1	5.1	5.1	5.1	5.1
65.0				5.4	5.4	5.4	5.4	5.4

REFRIG FLOW(kg/h)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	67	82	94	124	148	166	186	202
40.5	67	82	93	123	147	164	184	199
45.0	67	81	93	122	145	163	182	197
50.0	67	81	93	121	144	161	180	195
54.4		81	92	120	143	159	178	193
60.0			92	119	141	158	176	190
65.0				118	140	156	174	188





COEFFICIENTS OF PERFORMANCE CURVES

Compressor Model **C-SBS120H38A**
 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	8.882718E+03	1.024904E+03	3.033336E+00	1.302833E+02
2	4.006183E+02	1.908556E+00	-1.254732E-03	5.793804E+00
3	-9.609211E+01	3.339032E-02	2.288303E-02	-1.971975E-01
4	8.272164E+00	-1.575205E-01	-2.971678E-04	1.250022E-01
5	-4.376711E+00	-1.445182E-01	-3.567785E-06	-2.229068E-02
6	3.632620E-01	4.053133E-01	1.987379E-04	1.217288E-04
7	8.001500E-02	8.085854E-04	9.013134E-08	1.264676E-03
8	-5.998264E-02	-4.277412E-04	2.125421E-06	-5.432646E-04
9	1.750002E-02	2.051653E-03	6.318985E-07	5.145422E-05
10	7.332268E-09	-1.836713E-09	2.694366E-12	1.381505E-11

PERFORMANCE DATA

Compressor Model	C-SBS120H38A
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	3,740	4,670	5,400	7,270	8,840	10,000	11,320	12,370
40.5	3,520	4,400	5,090	6,850	8,320	9,410	10,660	11,640
45.0	3,360	4,190	4,840	6,510	7,910	8,960	10,140	11,080
50.0	3,180	3,960	4,590	6,170	7,490	8,470	9,590	10,470
54.4		3,780	4,370	5,870	7,130	8,070	9,130	9,970
60.0			4,110	5,520	6,700	7,580	8,580	9,370
65.0				5,230	6,340	7,170	8,120	8,860

POWER(W)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	1,780	1,820	1,830	1,850	1,850	1,840	1,830	1,820
40.5	1,980	2,010	2,030	2,040	2,040	2,040	2,030	2,030
45.0	2,160	2,190	2,210	2,220	2,230	2,220	2,220	2,210
50.0	2,380	2,410	2,430	2,450	2,450	2,450	2,450	2,440
54.4		2,630	2,640	2,660	2,670	2,670	2,670	2,670
60.0			2,940	2,960	2,970	2,970	2,980	2,980
65.0				3,250	3,260	3,270	3,280	3,280

CURRENT(A)

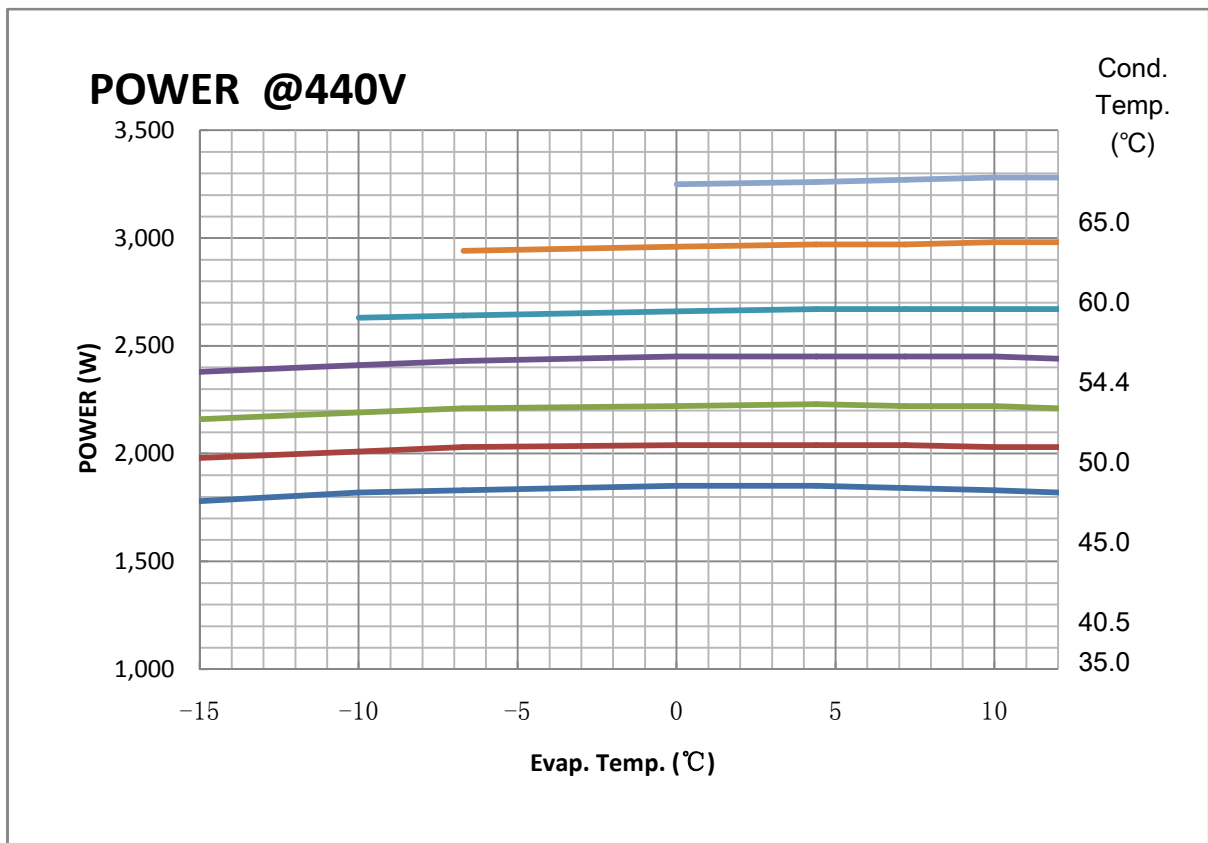
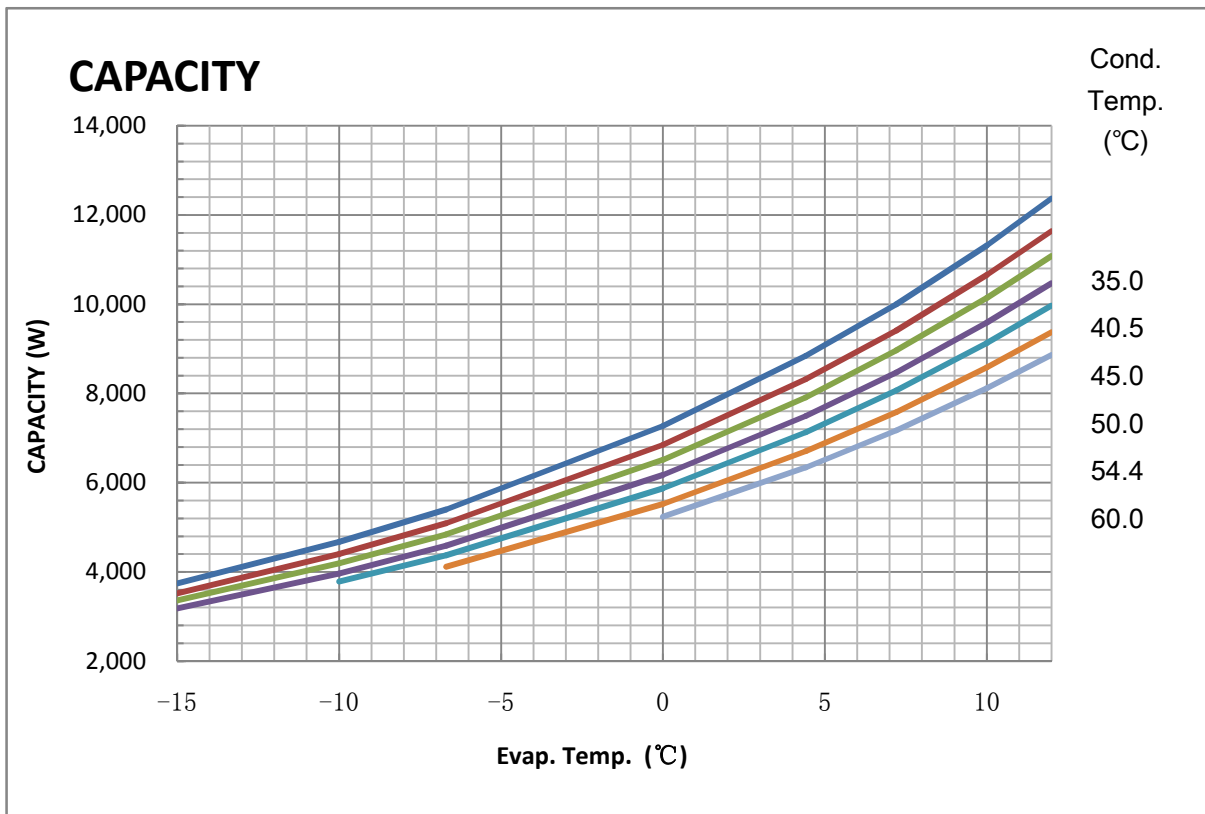
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
40.5	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
45.0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
50.0	4.5	4.5	4.5	4.6	4.6	4.6	4.6	4.6
54.4		4.7	4.7	4.8	4.8	4.8	4.8	4.8
60.0			5.0	5.0	5.1	5.1	5.1	5.1
65.0				5.3	5.3	5.3	5.3	5.3

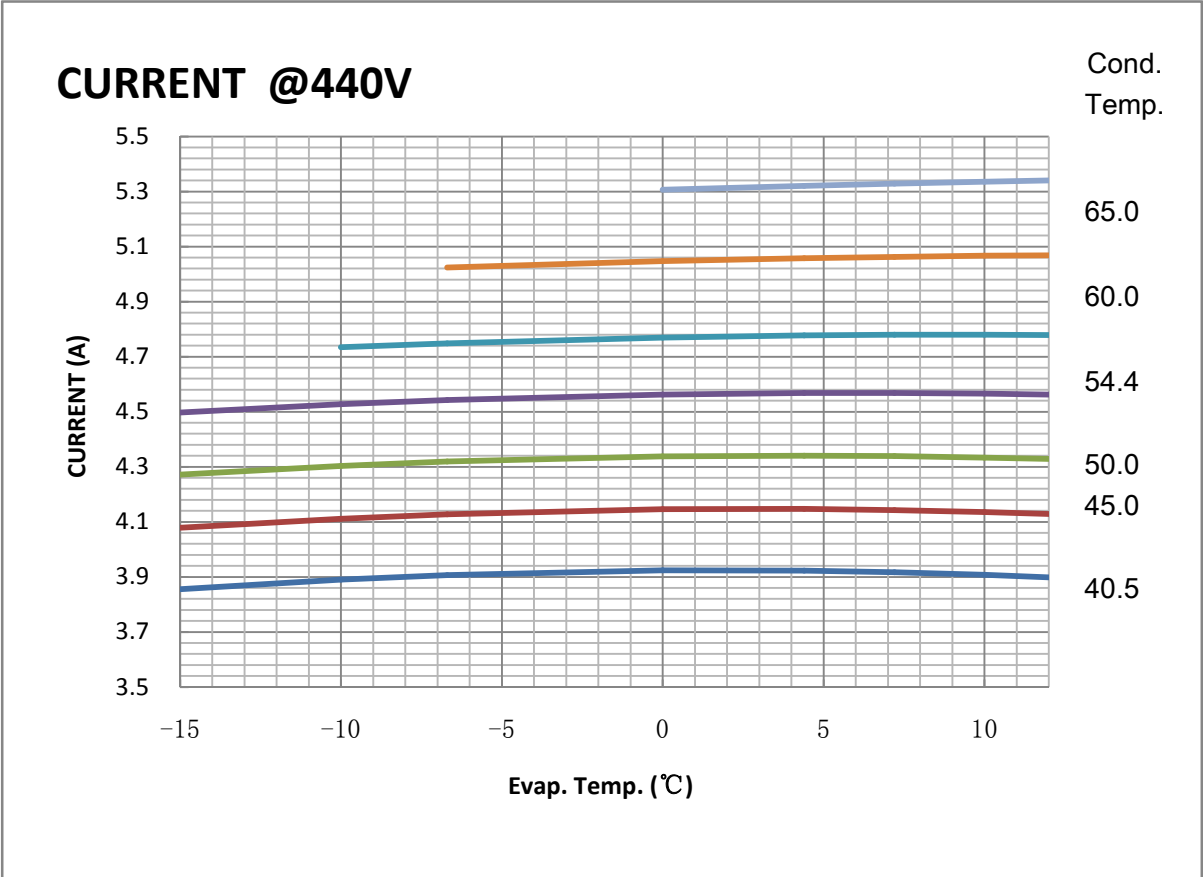
REFRIG FLOW(kg/h)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	83	102	116	151	180	201	225	244
40.5	83	101	115	150	179	200	223	242
45.0	82	100	114	149	177	198	222	240
50.0	82	100	114	148	176	197	220	238
54.4		99	113	147	175	195	218	236
60.0			112	146	174	194	216	234
65.0				145	172	192	215	232

Compressor Model(Code)
Power Source

C-SBS120H38A
3PH 60Hz 440V





COEFFICIENTS OF PERFORMANCE CURVES

Compressor Model **C-SBS120H38A**
 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	1.051476E+04	1.259738E+03	2.854171E+00	1.583747E+02
2	4.789690E+02	-4.578306E-01	4.362576E-05	6.492155E+00
3	-1.061789E+02	7.231419E-01	2.219927E-02	-2.153290E-01
4	9.859429E+00	-4.711371E-01	-4.701258E-04	1.340870E-01
5	-5.108538E+00	-4.576225E-03	-1.222560E-05	-1.367950E-02
6	3.820286E-01	4.601572E-01	2.392917E-04	1.595263E-04
7	9.074689E-02	1.322575E-03	2.304907E-07	1.492787E-03
8	-7.328632E-02	6.287604E-03	6.271590E-06	-3.245362E-04
9	1.938205E-02	9.142750E-04	9.867629E-07	1.475153E-05
10	-6.841275E-09	-6.944704E-09	1.138830E-12	-9.715568E-11