SPECIFICATIONS OF COMPRESSOR

Model No: 3CC205LA0M

Output : 12 HP

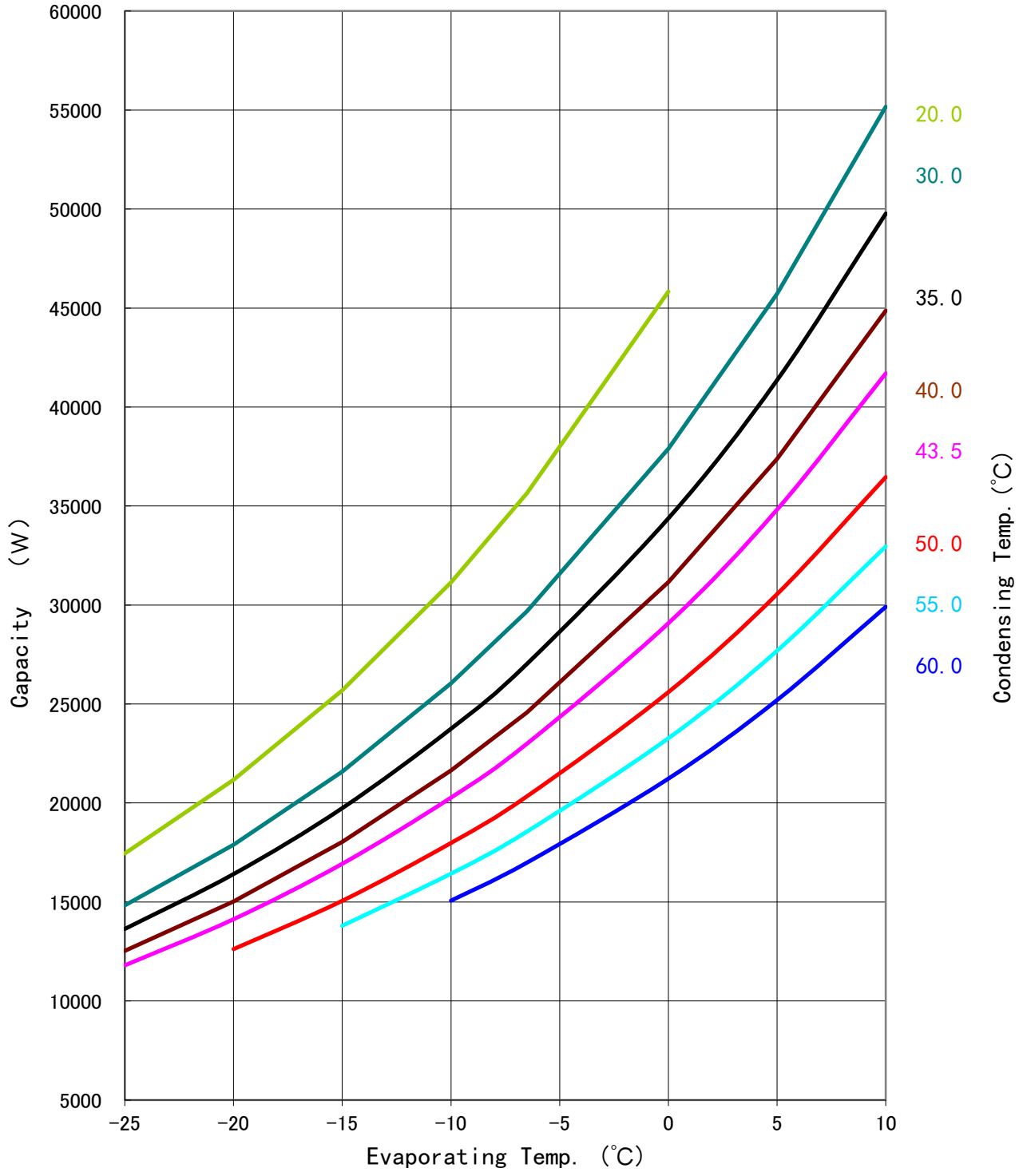
Sonyo Compressor (Dalian) Co.,Ltd.

GENERAL SPECIFICATIONS

Model No:		3CC205LA0M
Application		
Evaporating Temp Range	(℃)	-25.0 ～ 10.0
Refrigerant		R404A
Compressor Cooling		Natural Cooling
Rated Performance		
Capacity	(W)	23,000
Input	(W)	9,700
Current	(A)	16.6
Revolution	(min^{-1})	2,900
Sound Level	(dB(A))	—
Rating Conditions		
Power Source		3-PH 50Hz 380V
Evaporating Temp	(℃)	-6.5
Condensing Temp	(℃)	43.5
Suction Gas Temp	(℃)	18.5
Liquid Temp	(℃)	43.5
Ambient Temp	(℃)	35.0
Measuring Point of Sound Level		
Distance from the Compressor	(m)	1.0
Compressor		
Design		Hermetic Scroll
Displacement	(cm3)	205.4
Suction Line Connection	(Φmm OD)	25.4
Discharge Line Connection	(Φmm OD)	19.05
Oil	(ml)	2800 (FV68S)
Mass(Incl.Oil)	(kg)	70.5
Motor		
Type		3-PH Induction Motor(3IR)
Pole		2
Rated Power Source		3-PH 50Hz 380～415V/60Hz 440～460V
Voltage Range	(V)	342～456/396～506
Starting Current	(A)	96

PERFORMANCE CURVE

Code No.	3CC205LA0M
Power Source	3-PH 50Hz 380V
Condensing Temp.(℃)	20, 30, 35, 40, 43.5, 50, 55, 60
Suction Gas Superheat(K)	18.5
Sub Cooled(K)	0
Compressor Cooling	Natural Cooling
Refrigerant	R404A



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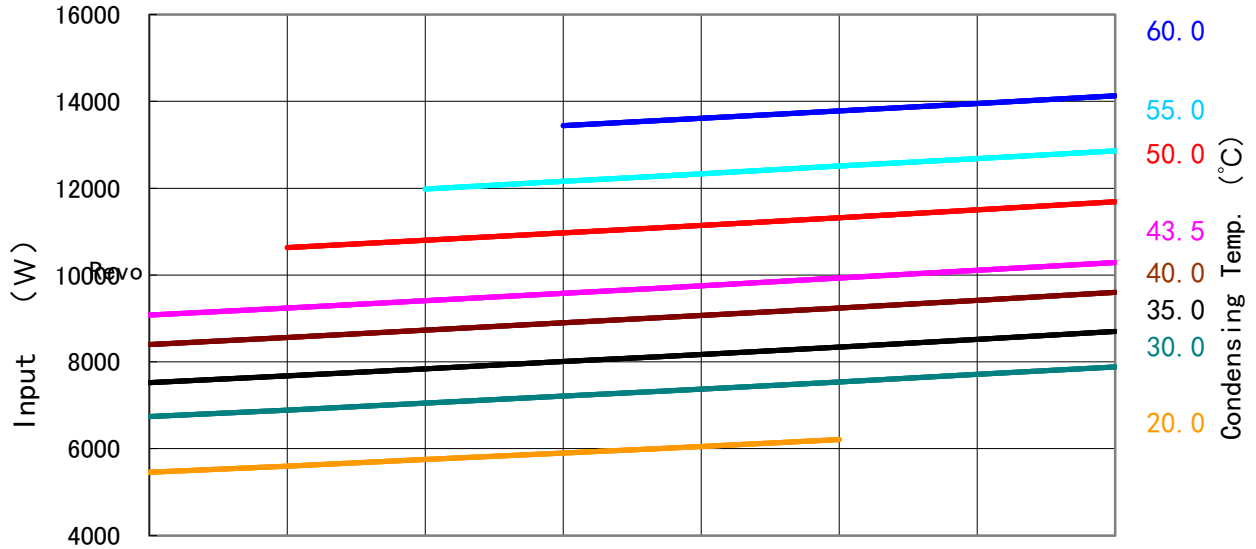
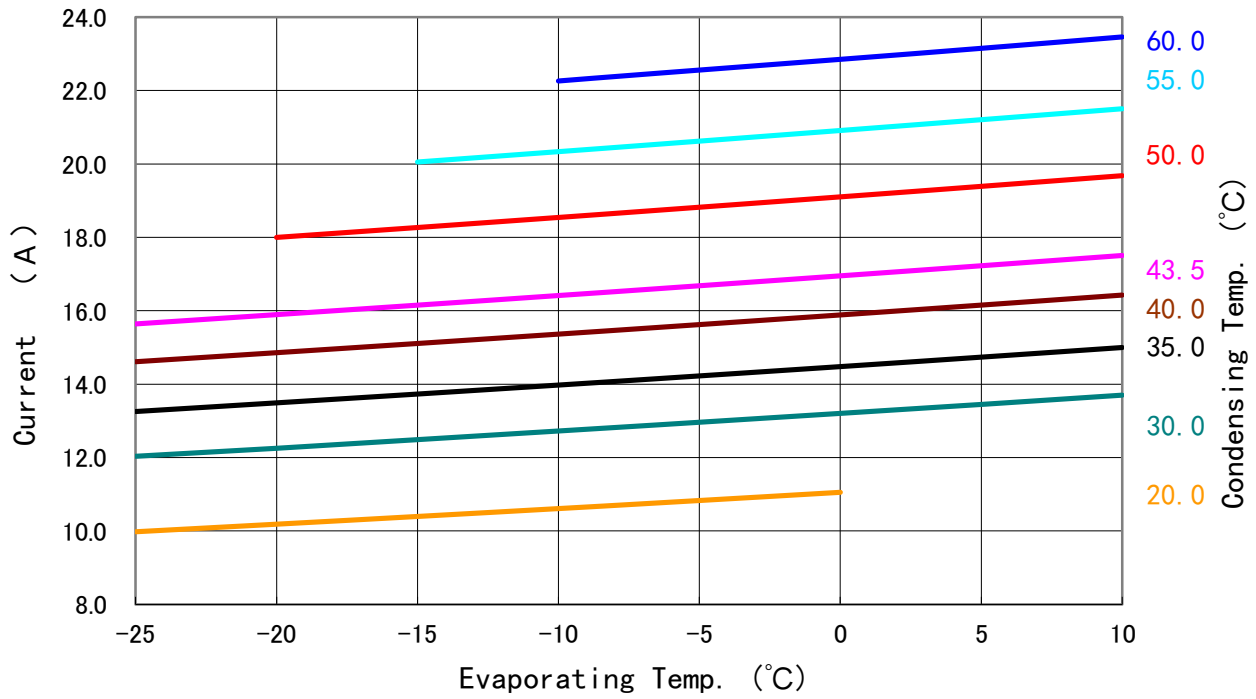




PERFORMANCE DATA

Code No.	3CC205LA0M
Power Source	3-PH 50Hz 380V
Condensing Temp.(℃)	20, 30, 35, 40, 43.5, 50, 55, 60
Suction Gas Superheat(K)	18.5
Sub Cooled(K)	0
Compressor Cooling	Natural Cooling
Refrigerant	R404A

Capacity (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-25	-20	-15	-10	-6.5	0	5	10
20.0	17,450	21,170	25,680	31,150	35,650	45,830		
30.0	14,830	17,890	21,580	26,040	29,690	37,900	45,720	55,160
35.0	13,640	16,410	19,740	23,750	27,030	34,380	41,360	49,770
40.0	12,530	15,030	18,030	21,640	24,580	31,160	37,380	44,860
43.5	11,800	14,130	16,930	20,270	23,000	29,080	34,820	41,700
50.0		12,620	15,060	17,980	20,340	25,600	30,550	36,460
55.0			13,800	16,430	18,560	23,270	27,690	32,960
60.0				15,070	16,990	21,230	25,200	29,910

Input (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-25	-20	-15	-10	-6.5	0	5	10
20.0	5,460	5,600	5,750	5,900	6,000	6,210		
30.0	6,740	6,890	7,050	7,210	7,320	7,540	7,710	7,880
35.0	7,520	7,680	7,840	8,010	8,120	8,340	8,520	8,700
40.0	8,400	8,560	8,730	8,900	9,020	9,240	9,420	9,600
43.5	9,080	9,240	9,410	9,580	9,700	9,930	10,110	10,290
50.0		10,630	10,800	10,970	11,090	11,320	11,500	11,690
55.0			11,980	12,160	12,280	12,510	12,680	12,860
60.0				13,440	13,560	13,780	13,950	14,130

Current (A)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-25	-20	-15	-10	-6.5	0	5	10
20.0	10.0	10.2	10.4	10.6	10.8	11.1		
30.0	12.0	12.3	12.5	12.7	12.9	13.2	13.5	13.7
35.0	13.3	13.5	13.7	14.0	14.1	14.5	14.7	15.0
40.0	14.6	14.9	15.1	15.4	15.5	15.9	16.2	16.4
43.5	15.6	15.9	16.2	16.4	16.6	17.0	17.2	17.5
50.0		18.0	18.3	18.5	18.7	19.1	19.4	19.7
55.0			20.1	20.3	20.5	20.9	21.2	21.5
60.0				22.3	22.5	22.9	23.2	23.5

Massflow(kg/H)

Condensing Temp. (°C) \ Evaporating Temp. (°C)	-25	-20	-15	-10	-6.5	0	5	10
20.0	331	421	529	656	756	967		
30.0	346	420	517	636	732	939	1,124	1,331
35.0	353	420	511	626	720	925	1,111	1,319
40.0	360	420	506	616	708	912	1,097	1,308
43.5	365	421	502	609	700	902	1,088	1,300
50.0		421	495	597	685	885	1,071	1,285
55.0			490	588	674	872	1,058	1,274
60.0				578	662	859	1,045	1,263

COP(W/W)

Condensing Temp. (°C) \ Evaporating Temp. (°C)	-25	-20	-15	-10	-6.5	0	5	10
20.0	3.20	3.78	4.47	5.28	5.94	7.38		
30.0	2.20	2.60	3.06	3.61	4.06	5.03	5.93	7.00
35.0	1.81	2.14	2.52	2.97	3.33	4.12	4.85	5.72
40.0	1.49	1.76	2.07	2.43	2.73	3.37	3.97	4.67
43.5	1.30	1.53	1.80	2.12	2.37	2.93	3.44	4.05
50.0		1.19	1.39	1.64	1.83	2.26	2.66	3.12
55.0			1.15	1.35	1.51	1.86	2.18	2.56
60.0				1.12	1.25	1.54	1.81	2.12

Coefficients of Polynominal Formula

	Capacity (W)	Input (W)	Current (A)	Massflow (kg/H)
C1	6.603747E+04	4.672646E+03	8.352903E+00	1.025217E+03
C2	2.614927E+03	2.545799E+01	3.694185E-02	3.533930E+01
C3	-1.129201E+03	3.925548E+01	8.160860E-02	-2.955132E+00
C4	4.087489E+01	9.923254E-02	1.069878E-04	2.603089E-01
C5	-4.683466E+01	3.901245E-01	4.251165E-04	-2.047896E-02
C6	6.388860E+00	1.875455E+00	2.667710E-03	3.003501E-03
C7	2.395384E-01	-4.625420E-06	1.842073E-07	-2.518887E-07
C8	-4.730788E-01	-1.124164E-03	-4.803202E-07	6.010140E-03
C9	2.510302E-01	-3.769111E-03	-5.551994E-07	3.848944E-05
C10	-1.120986E-06	9.359162E-08	5.095587E-11	1.412740E-09

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

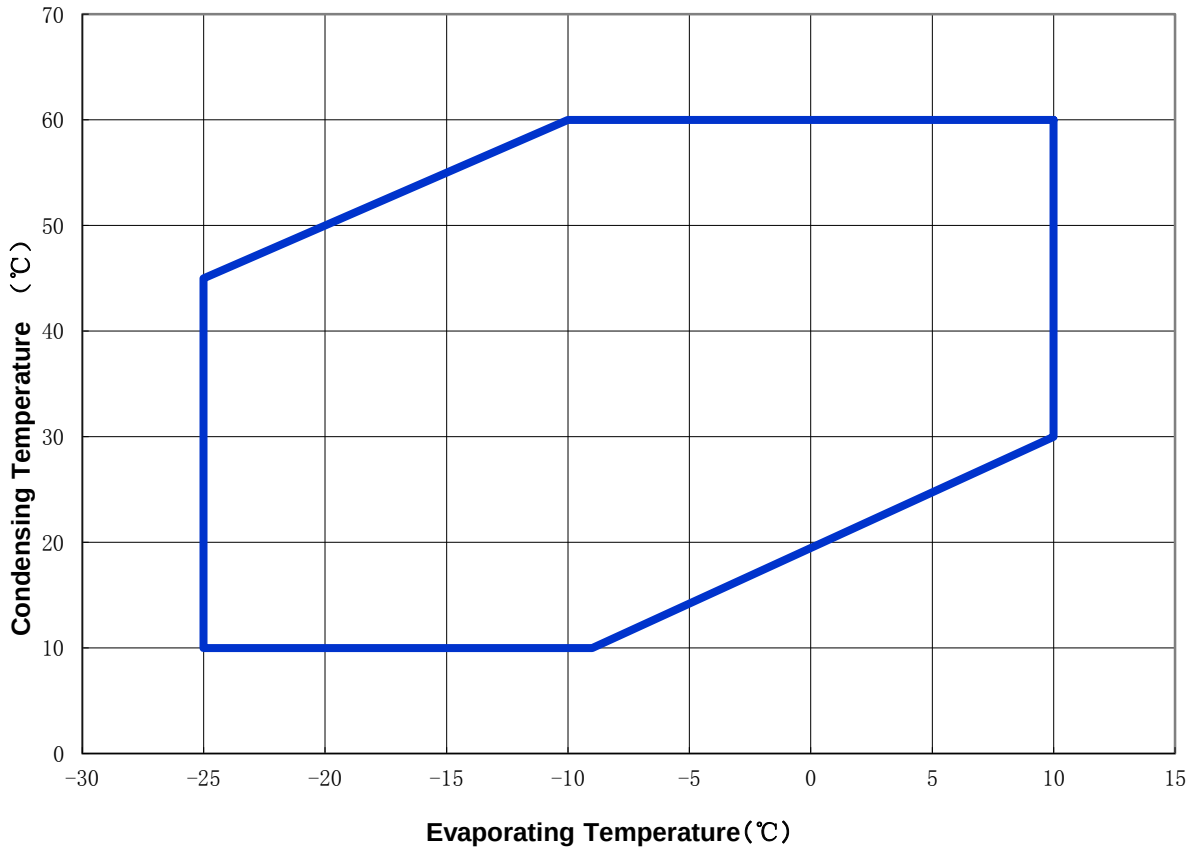
X——CAPACITY(W) OR POWER(W) OR CURRENT(A)

S——EVAPORATING TEMP, ° C

D——CONDENSING TEMP, ° C

Operating Envelope

Refrigerant : R404A

Suction Gas Temp:18.5℃

Sub Cooled: 0 K