SPECIFICATIONS OF COMPRESSOR

Model No: 7CC185LA01(4)

Output : 10HP

Temporary

Sonyo Compressor (Dalian) Co.,Ltd.

02/Nov/24

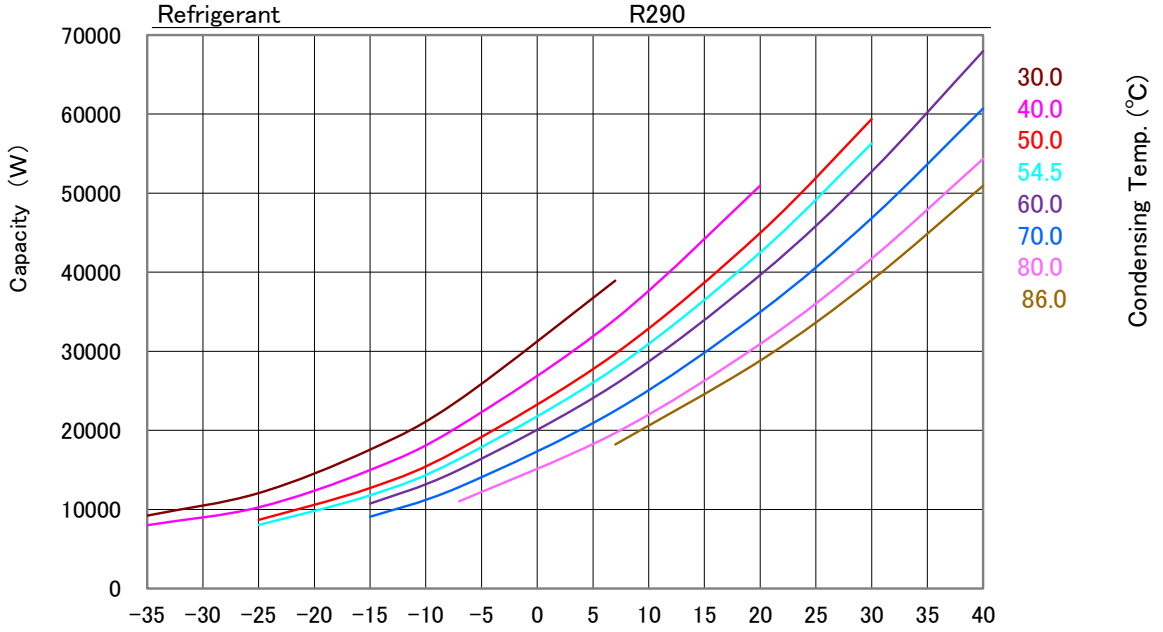
GENERAL SPECIFICATIONS

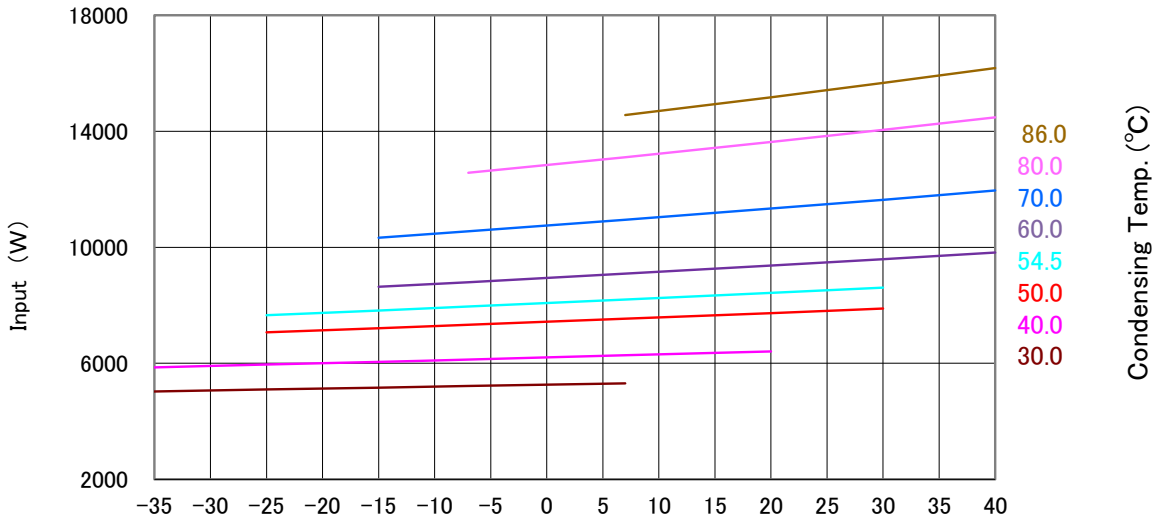
Model No:		7CC185LA01(4)
Application		
Evaporating Temp Range	(℃)	-35 ～ 40
Refrigerant		R290
Compressor Cooling		Natural Cooling
Rated Performance		
Capacity	(W)	27,900
Input	(W)	8,200
Current	(A)	14.4
Revolution	(min-1)	2900
Sound Level	(dB(A))	-
Rating Conditions		
Power Source		3-PH 50Hz 380V
Evaporating Temp	(℃)	7
Condensing Temp	(℃)	54.5
Suction Gas Temp	(℃)	18.5
Liquid Temp	(℃)	46
Ambient Temp	(℃)	35.0
Measuring Point of Sound Level		
Distance from the Compressor	(m)	1.0
Compressor		
Design		Hermetic Scroll
Displacement	(cm3)	185
Suction Line Connection	(Φmm 0D)	34.93
Discharge Line Connection	(Φmm 0D)	22.23
Oil	(mL)	2800(PZ68S)
Mass(Incl.Oil)	(kg)	69.7
Motor		
Type		3-PH Induction Motor(3IR)
Pole		2
Rated Power Source		3-PH 50/60Hz 380-415V/440-460V
Voltage Range	(V)	342～506
Starting Current	(A)	-

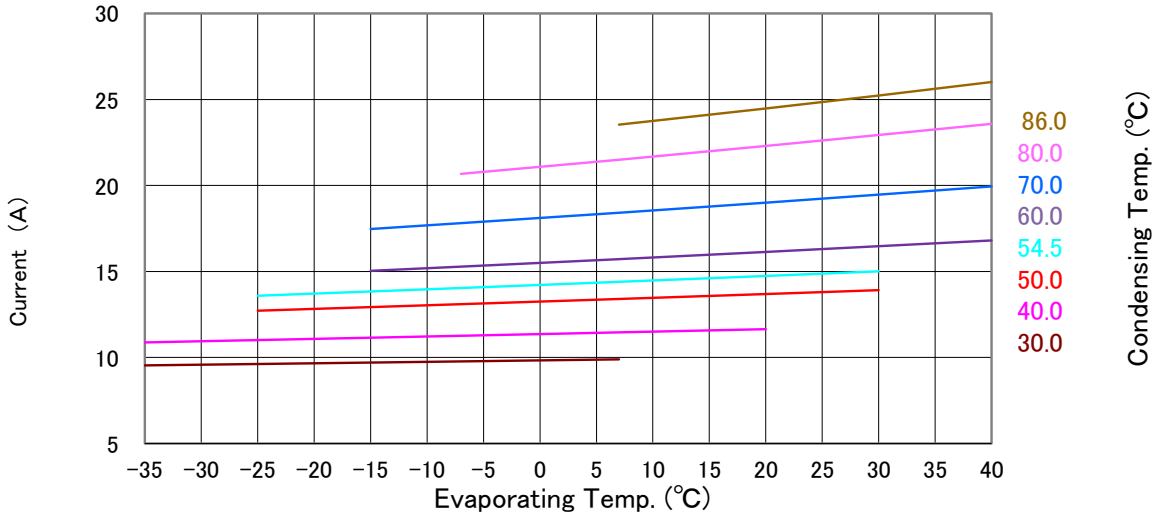
Sonyo Compressor (Dalian) Co.,Ltd.

PERFORMANCE CURVE

Code No.	7CC185LA01(4)
Power Source	3-PH 50Hz 380V
Condensing Temp.(℃)	30、40、50、54.5、60、70、80、86
Suction Gas Superheat(K)	11.5
Sub Cooled(K)	8.5
Compressor Cooling	Natural Cooling
Refrigerant	R290







PERFORMANCE DATA

Code No.	7CC185LA01(4)
Power Source	3-PH 50Hz 380V
Condensing Temp.(℃)	30、40、50、54.5、60、70、80、86
Suction Gas Temp.(℃)	11.5
Sub Cooled(K)	8.5
Compressor Cooling	Natural Cooling
Refrigerant	R290

Capacity (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	9,220	12,070	17,570	23,860	38,940			
40.0	8,010	10,270	14,990	20,540	34,060	50,950		
50.0		8,680	12,710	17,600	29,700	44,970	59,370	
54.5		8,040	11,790	16,400	27,900	42,500	56,290	
60.0			10,740	15,030	25,840	39,650	52,730	67,960
70.0			9,080	12,840	22,500	34,970	46,840	60,710
80.0				11,030	19,670	30,930	41,720	54,340
86.0					18,220	28,820	39,000	50,940

Input (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	5,030	5,100	5,160	5,220	5,310			
40.0	5,860	5,960	6,050	6,130	6,280	6,410		
50.0		7,070	7,210	7,330	7,540	7,730	7,890	
54.5		7,660	7,820	7,960	8,200	8,430	8,610	
60.0			8,640	8,800	9,090	9,370	9,590	9,820
70.0			10,330	10,550	10,950	11,340	11,640	11,960
80.0				12,570	13,110	13,630	14,050	14,480
86.0					14,560	15,170	15,670	16,180

Current (A)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	9.5	9.6	9.7	9.8	9.9			
40.0	10.9	11.0	11.2	11.3	11.5	11.6		
50.0		12.7	12.9	13.1	13.4	13.7	13.9	
54.5		13.6	13.8	14.0	14.4	14.7	15.0	
60.0			15.0	15.3	15.7	16.1	16.5	16.8
70.0			17.5	17.8	18.4	19.0	19.5	19.9
80.0				20.7	21.5	22.3	22.9	23.6
86.0					23.5	24.5	25.2	26.0

PERFORMANCE DATA

MassFlow(kg/H)

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	107	136	188	246	382			
40.0	96	127	179	237	373	538		
50.0		118	171	230	365	528	678	
54.5		114	168	226	361	524	673	
60.0			164	222	357	518	667	836
70.0			157	215	349	509	656	823
80.0				208	341	499	645	810
86.0					336	494	638	802

COP

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	1.83	2.37	3.41	4.57	7.33			
40.0	1.37	1.72	2.48	3.35	5.42	7.95		
50.0		1.23	1.76	2.40	3.94	5.82	7.52	
54.5		1.05	1.51	2.06	3.40	5.04	6.54	
60.0			1.24	1.71	2.84	4.23	5.50	6.92
70.0			0.88	1.22	2.05	3.08	4.02	5.08
80.0				0.88	1.50	2.27	2.97	3.75
86.0					1.25	1.90	2.49	3.15

Coefficients of Polynominal Formula

	Capacity (W)	Input (W)	Current (A)	MassFlow(kg/H)
C1	4.577393E+04	4.194847E+03	7.458391E+00	3.357650E+02
C2	1.467923E+03	7.450092E+00	7.340052E-03	9.739855E+00
C3	-5.684949E+02	-7.692606E+00	2.474779E-02	-9.677075E-01
C4	1.554374E+01	-2.918845E-02	-5.110526E-05	1.206206E-01
C5	-1.447866E+01	-2.622186E-01	-3.186663E-04	5.841446E-04
C6	2.286045E+00	1.447356E+00	1.820769E-03	1.786290E-03
C7	4.058638E-04	8.046006E-05	4.685708E-08	-7.321648E-07
C8	-7.970154E-02	9.863751E-04	1.510162E-06	-2.551429E-04
C9	4.798976E-02	8.096404E-03	1.201766E-05	-4.677756E-05
C10	-9.969687E-09	1.208772E-09	-4.516095E-12	-1.160223E-09

Note:The polynomial coefficients subject to change without notice.

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

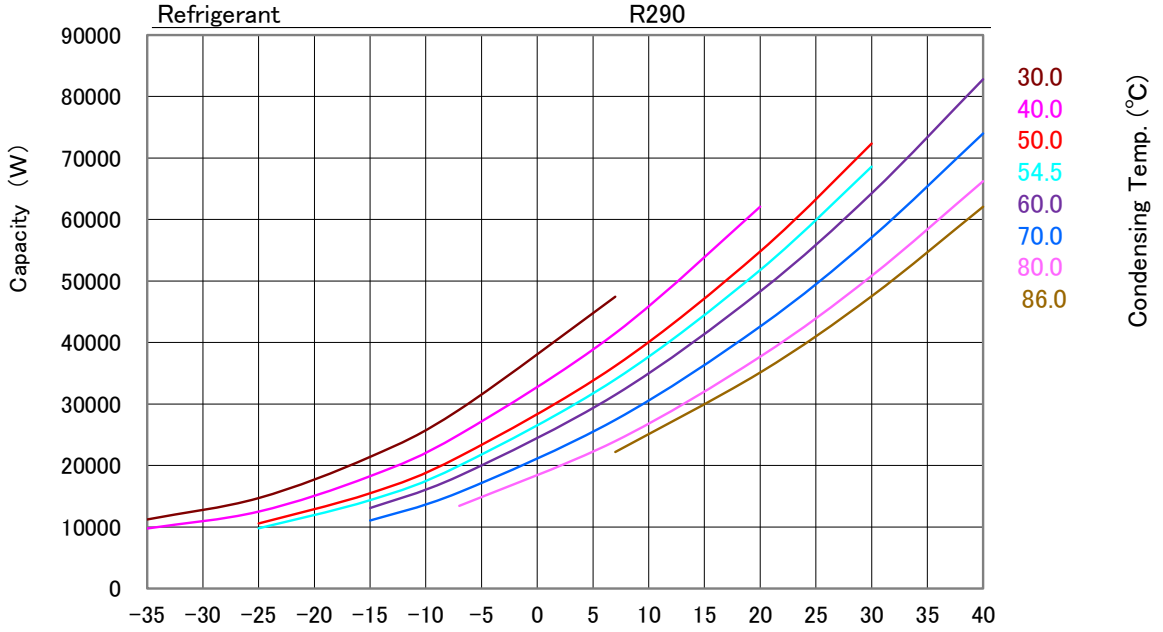
X——CAPACITY(W) OR POWER(W) OR CURRENT(A)

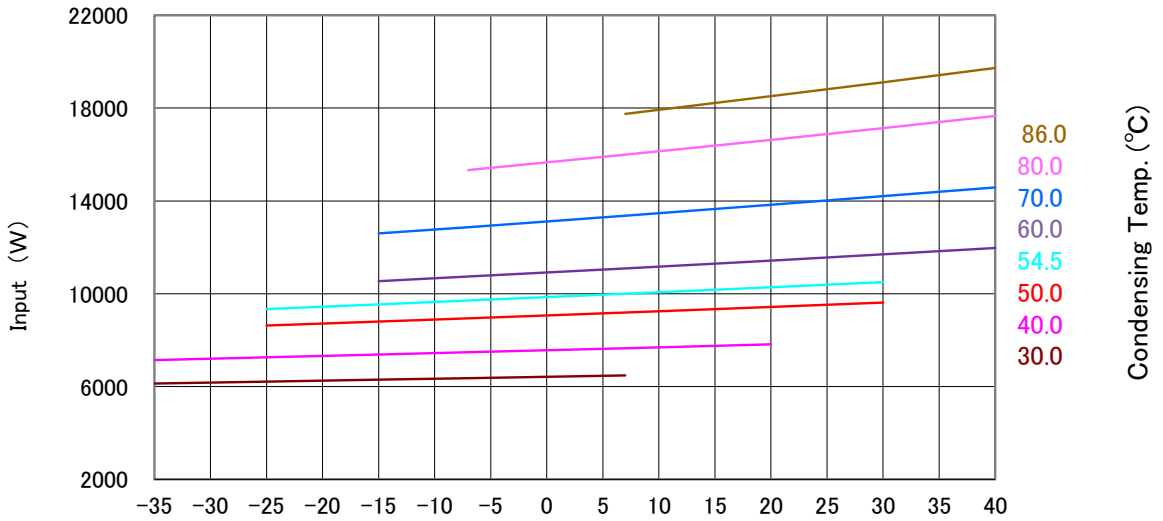
S——EVAPORATING TEMP, °C

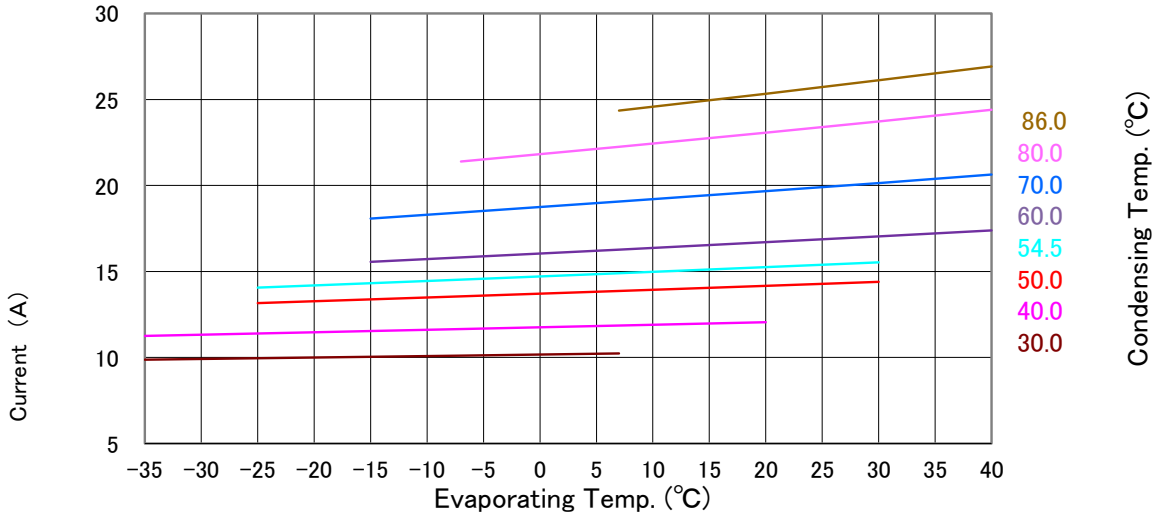
D——CONDENSING TEMP, °C

PERFORMANCE CURVE

Code No.	7CC185LA01(4)
Power Source	3-PH 60Hz 440V
Condensing Temp.(℃)	30、40、50、54.5、60、70、80、86
Suction Gas Superheat(K)	11.5
Sub Cooled(K)	8.5
Compressor Cooling	Natural Cooling
Refrigerant	R290







PERFORMANCE DATA

Code No.	7CC185LA01(4)
Power Source	3-PH 60Hz 440V
Condensing Temp.(℃)	30、40、50、54.5、60、70、80、86
Suction Gas Temp.(℃)	11.5
Sub Cooled(K)	8.5
Compressor Cooling	Natural Cooling
Refrigerant	R290

Capacity (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	11,230	14,710	21,410	29,080	47,450			
40.0	9,760	12,510	18,270	25,030	41,510	62,090		
50.0		10,580	15,490	21,450	36,190	54,810	72,350	
54.5		9,790	14,370	19,980	34,000	51,790	68,600	
60.0			13,090	18,320	31,490	48,310	64,260	82,810
70.0			11,060	15,650	27,420	42,610	57,080	73,990
80.0				13,440	23,970	37,700	50,840	66,230
86.0					22,200	35,130	47,530	62,080

Input (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	6,130	6,210	6,300	6,360	6,480			
40.0	7,140	7,260	7,380	7,480	7,650	7,820		
50.0		8,630	8,800	8,940	9,190	9,430	9,620	
54.5		9,340	9,540	9,710	10,000	10,280	10,500	
60.0			10,540	10,740	11,090	11,430	11,700	11,970
70.0			12,600	12,870	13,360	13,830	14,200	14,580
80.0				15,330	15,990	16,630	17,130	17,660
86.0					17,750	18,510	19,110	19,730

Current (A)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	9.9	10.0	10.0	10.1	10.2			
40.0	11.3	11.4	11.5	11.7	11.9	12.1		
50.0		13.2	13.4	13.6	13.9	14.2	14.4	
54.5		14.1	14.3	14.5	14.9	15.3	15.5	
60.0			15.6	15.8	16.3	16.7	17.0	17.4
70.0			18.1	18.4	19.1	19.7	20.1	20.6
80.0				21.4	22.2	23.1	23.7	24.4
86.0					24.4	25.3	26.1	26.9

PERFORMANCE DATA

MassFlow(kg/H)

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	131	166	229	299	465			
40.0	117	155	219	289	455	655		
50.0		144	209	280	445	643	827	
54.5		139	205	276	440	638	820	
60.0			200	271	435	632	813	1,019
70.0			191	262	425	620	799	1,003
80.0				253	415	609	786	987
86.0					410	602	778	978

COP

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	1.83	2.37	3.40	4.57	7.32			
40.0	1.37	1.72	2.48	3.35	5.43	7.94		
50.0		1.23	1.76	2.40	3.94	5.81	7.52	
54.5		1.05	1.51	2.06	3.40	5.04	6.53	
60.0			1.24	1.71	2.84	4.23	5.49	6.92
70.0			0.88	1.22	2.05	3.08	4.02	5.07
80.0				0.88	1.50	2.27	2.97	3.75
86.0					1.25	1.90	2.49	3.15

Coefficients of Polynominal Formula

	Capacity (W)	Input (W)	Current (A)	MassFlow(kg/H)
C1	5.578023E+04	5.110915E+03	7.717717E+00	4.079895E+02
C2	1.789221E+03	9.637384E+00	7.597561E-03	1.184686E+01
C3	-6.927187E+02	-9.113009E+00	2.559434E-02	-1.137965E+00
C4	1.894143E+01	-4.237085E-02	-5.296159E-05	1.475494E-01
C5	-1.765867E+01	-3.375824E-01	-3.298363E-04	9.424050E-04
C6	2.785213E+00	1.762846E+00	1.884097E-03	1.834881E-03
C7	5.177875E-04	5.461626E-05	4.831865E-08	9.789874E-06
C8	-9.712359E-02	1.275913E-03	1.564037E-06	-3.176559E-04
C9	5.861254E-02	1.001854E-02	1.243593E-05	-5.758831E-05
C10	7.098465E-10	-1.592375E-08	-7.768171E-12	-3.032211E-10

Note:The polynomial coefficients subject to change without notice.

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

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

S——EVAPORATING TEMP, °C

D——CONDENSING TEMP, °C