SPECIFICATIONS OF COMPRESSOR

Model No: 7CG124LA01(4)

Output : 7HP

Temporary

Sonyo Compressor (Dalian) Co.,Ltd.

02/Nov/24

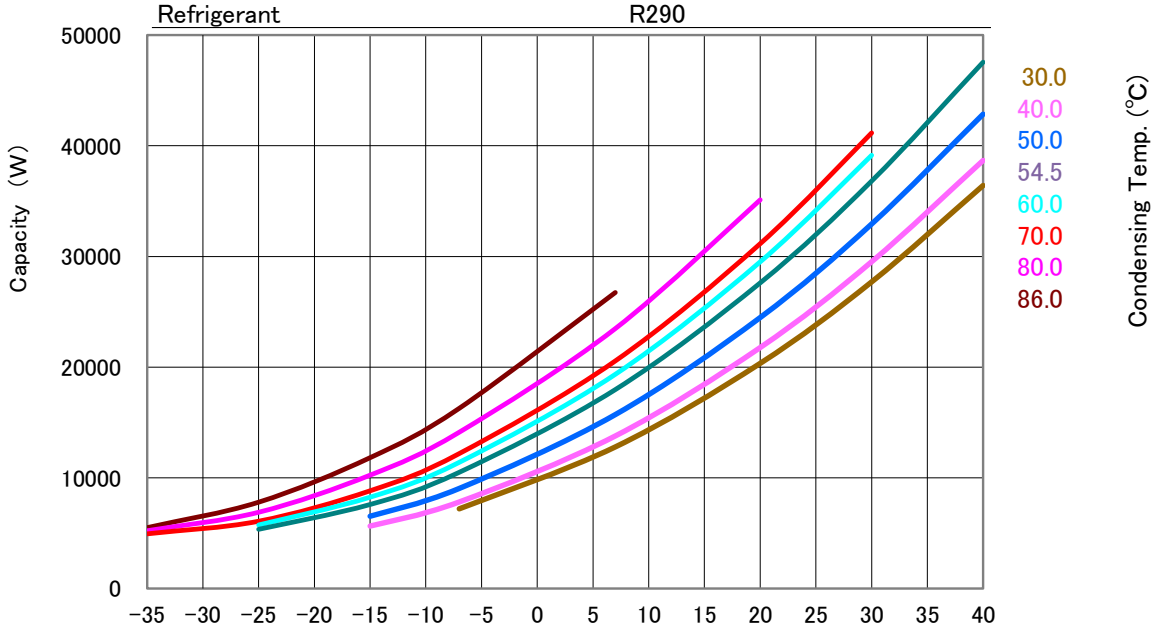
GENERAL SPECIFICATIONS

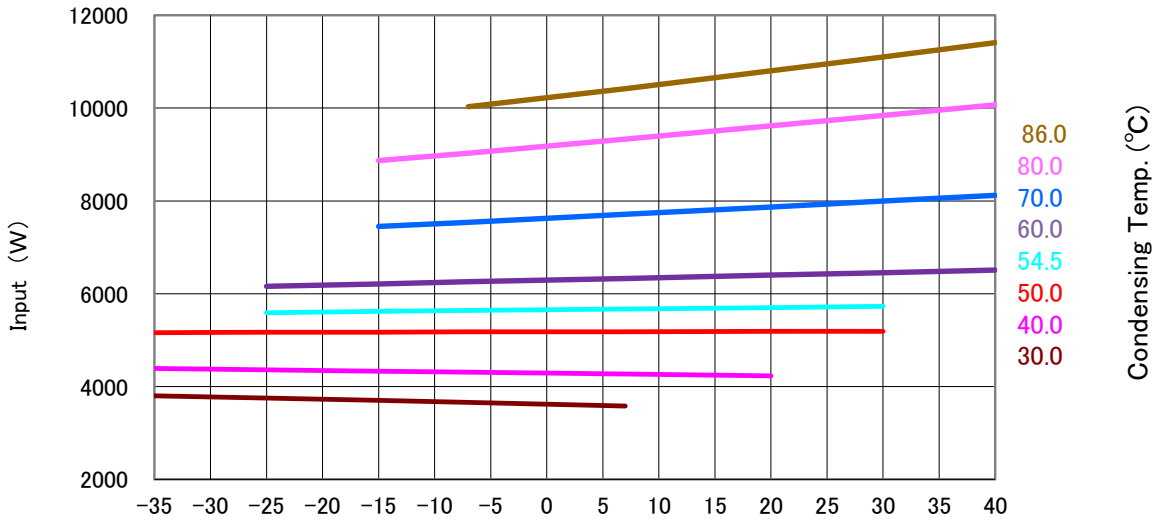
Model No:		7CG124LA01(4)
Application		
Evaporating Temp Range	(℃)	-35 ～ 40
Refrigerant		R290
Compressor Cooling		Natural Cooling
Rated Performance		
Capacity	(W)	19,350
Input	(W)	5,670
Current	(A)	10.9
Revolution	(min-1)	2900
Sound Level	(dB(A))	-
Rating Conditions		
Power Source		3-PH 50Hz 380V
Evaporating 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)	124.0
Suction Line Connection	(Φmm 0D)	28.58
Discharge Line Connection	(Φmm 0D)	22.23
Oil	(mL)	2500(PZ68S)
Mass(Incl.Oil)	(kg)	55
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)	-

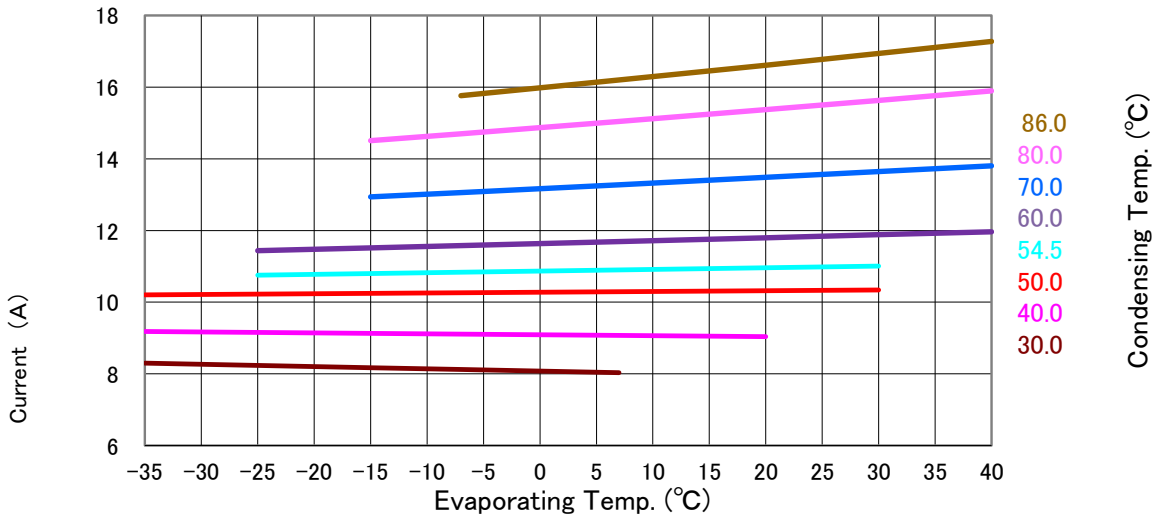
Sonyo Compressor (Dalian) Co.,Ltd.

PERFORMANCE CURVE

Code No.	7CG124LA01(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.	7CG124LA01(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	5,500	7,800	11,820	16,280	26,740			
40.0	5,220	6,890	10,240	14,120	23,480	35,110		
50.0	4,940	6,080	8,830	12,190	20,560	31,150	41,160	
54.5		5,740	8,250	11,400	19,350	29,510	39,140	
60.0		5,350	7,590	10,500	17,970	27,610	36,810	47,550
70.0			6,530	9,040	15,710	24,480	32,930	42,850
80.0			5,640	7,820	13,780	21,770	29,520	38,670
86.0				7,200	12,790	20,340	27,700	36,410

Input (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	3,800	3,750	3,700	3,660	3,580			
40.0	4,390	4,360	4,330	4,310	4,270	4,230		
50.0	5,160	5,170	5,170	5,180	5,180	5,190	5,190	
54.5		5,590	5,620	5,640	5,670	5,700	5,730	
60.0		6,160	6,210	6,260	6,330	6,400	6,450	6,510
70.0			7,450	7,540	7,710	7,870	8,000	8,120
80.0			8,870	9,030	9,330	9,620	9,840	10,070
86.0				10,030	10,420	10,800	11,100	11,410

Current (A)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	8.3	8.2	8.2	8.1	8.0			
40.0	9.2	9.2	9.1	9.1	9.1	9.0		
50.0	10.2	10.2	10.2	10.3	10.3	10.3	10.3	
54.5		10.8	10.8	10.8	10.9	11.0	11.0	
60.0		11.4	11.5	11.6	11.7	11.8	11.9	12.0
70.0			12.9	13.1	13.3	13.5	13.6	13.8
80.0			14.5	14.7	15.0	15.4	15.6	15.9
86.0				15.8	16.2	16.6	16.9	17.3

PERFORMANCE DATA

MassFlow(kg/H)

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	64	88	126	167	262			
40.0	63	85	123	163	257	370		
50.0	62	83	119	159	252	365	469	
54.5		82	118	157	250	363	467	
60.0		81	116	155	248	360	465	585
70.0			113	151	243	356	460	581
80.0			110	148	239	351	456	576
86.0				145	236	348	453	574

COP

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	1.45	2.08	3.19	4.45	7.47			
40.0	1.19	1.58	2.36	3.28	5.50	8.30		
50.0	0.96	1.18	1.71	2.35	3.97	6.00	7.93	
54.5		1.03	1.47	2.02	3.41	5.18	6.83	
60.0		0.87	1.22	1.68	2.84	4.31	5.71	7.30
70.0			0.88	1.20	2.04	3.11	4.12	5.28
80.0			0.64	0.87	1.48	2.26	3.00	3.84
86.0				0.72	1.23	1.88	2.50	3.19

Coefficients of Polynominal Formula

	Capacity (W)	Input (W)	Current (A)	MassFlow(kg/H)
C1	3.069631E+04	2.971405E+03	6.090796E+00	2.253649E+02
C2	1.025662E+03	1.278413E-01	-8.209194E-03	6.917735E+00
C3	-3.616771E+02	-1.175739E+01	4.015442E-02	-5.004759E-01
C4	9.640294E+00	-2.063783E-02	-1.254687E-05	6.890236E-02
C5	-1.033840E+01	-4.268633E-01	-1.377916E-04	-5.849363E-03
C6	1.354269E+00	1.117709E+00	8.707747E-04	6.448778E-04
C7	-3.969087E-04	2.334732E-05	1.528887E-08	-4.197432E-06
C8	-3.243537E-02	4.809254E-04	3.275525E-07	1.305213E-04
C9	3.558316E-02	8.596619E-03	6.841733E-06	8.841092E-06
C10	1.653774E-08	-1.616537E-08	-3.389881E-12	-5.180456E-10

Note:The polynomial coefficients subject to change without notice.

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

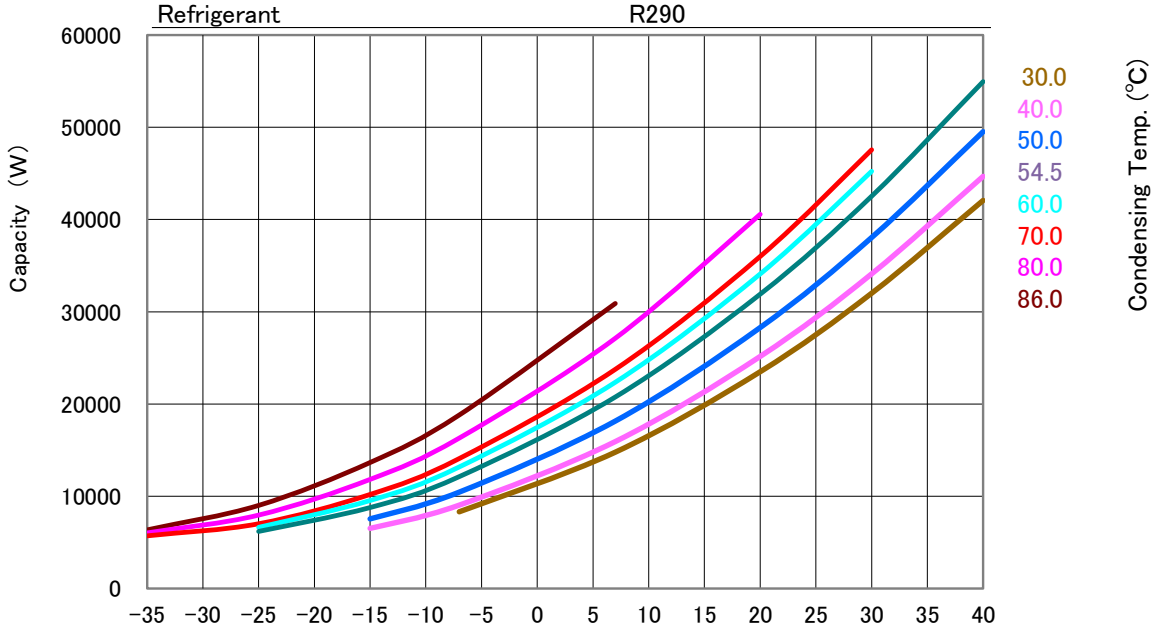
X——CAPACITY(W) OR POWER(W) OR CURRENT(A)

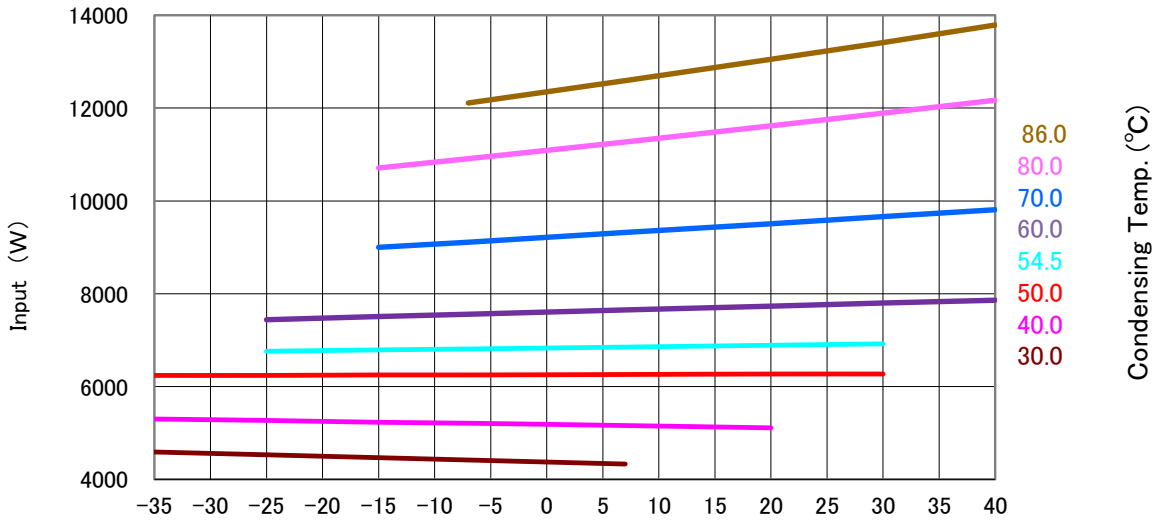
S——EVAPORATING TEMP, °C

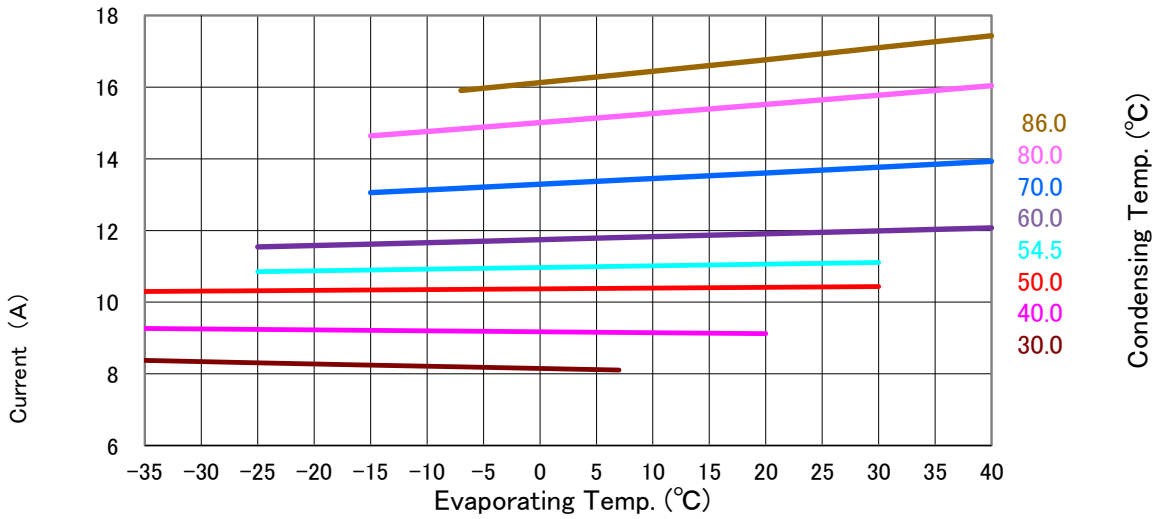
D——CONDENSING TEMP, °C

PERFORMANCE CURVE

Code No.	7CG124LA01(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.	7CG124LA01(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	6,360	9,010	13,660	18,810	30,900			
40.0	6,030	7,960	11,830	16,310	27,130	40,570		
50.0	5,710	7,020	10,200	14,090	23,760	36,000	47,560	
54.5		6,630	9,540	13,180	22,360	34,100	45,230	
60.0		6,190	8,780	12,130	20,760	31,910	42,530	54,950
70.0			7,550	10,450	18,150	28,290	38,050	49,520
80.0			6,520	9,040	15,930	25,160	34,110	44,680
86.0				8,320	14,780	23,500	32,010	42,070

Input (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	4,590	4,530	4,470	4,420	4,330			
40.0	5,300	5,270	5,230	5,210	5,160	5,110		
50.0	6,240	6,240	6,250	6,250	6,260	6,270	6,270	
54.5		6,760	6,790	6,810	6,850	6,890	6,920	
60.0		7,440	7,510	7,560	7,650	7,730	7,800	7,860
70.0			9,000	9,110	9,320	9,510	9,660	9,810
80.0			10,710	10,910	11,270	11,620	11,890	12,170
86.0				12,110	12,590	13,050	13,410	13,790

Current (A)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	8.4	8.3	8.2	8.2	8.1			
40.0	9.3	9.2	9.2	9.2	9.2	9.1		
50.0	10.3	10.3	10.3	10.4	10.4	10.4	10.4	
54.5		10.9	10.9	10.9	11.0	11.1	11.1	
60.0		11.5	11.6	11.7	11.8	11.9	12.0	12.1
70.0			13.1	13.2	13.4	13.6	13.8	13.9
80.0			14.6	14.8	15.2	15.5	15.8	16.0
86.0				15.9	16.3	16.8	17.1	17.4

PERFORMANCE DATA

MassFlow(kg/H)

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	77	106	152	202	316			
40.0	76	103	148	197	310	447		
50.0	75	100	144	192	305	441	567	
54.5		99	142	190	302	438	564	
60.0		97	140	187	299	435	561	706
70.0			136	183	294	429	556	701
80.0			132	178	288	424	550	696
86.0				176	285	421	547	693

COP

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-35	-25	-15	-7	7	20	30	40
30.0	1.39	1.99	3.06	4.26	7.14			
40.0	1.14	1.51	2.26	3.13	5.26	7.94		
50.0	0.92	1.13	1.63	2.25	3.80	5.74	7.59	
54.5		0.98	1.41	1.94	3.26	4.95	6.54	
60.0		0.83	1.17	1.60	2.71	4.13	5.45	6.99
70.0			0.84	1.15	1.95	2.97	3.94	5.05
80.0			0.61	0.83	1.41	2.17	2.87	3.67
86.0				0.69	1.17	1.80	2.39	3.05

Coefficients of Polynominal Formula

	Capacity (W)	Input (W)	Current (A)	MassFlow(kg/H)
C1	3.547215E+04	3.585437E+03	6.146708E+00	2.711911E+02
C2	1.185517E+03	8.826014E-02	-8.285828E-03	8.355532E+00
C3	-4.180053E+02	-1.400409E+01	4.052185E-02	-5.628896E-01
C4	1.114314E+01	-2.622141E-02	-1.268690E-05	8.311399E-02
C5	-1.195421E+01	-5.129384E-01	-1.390082E-04	-6.944114E-03
C6	1.566458E+00	1.348448E+00	8.787696E-04	3.460844E-04
C7	-5.796407E-04	3.672773E-05	1.555403E-08	-8.493262E-06
C8	-3.760714E-02	6.015882E-04	3.310249E-07	1.594910E-04
C9	4.117593E-02	1.035895E-02	6.904083E-06	9.404307E-06
C10	3.878973E-09	-2.178820E-08	-4.665076E-12	-4.486162E-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