

SPECIFICATIONS OF COMPRESSOR

Model No: 7CE069LA01/04

Output : 4 HP



Sonyo Compressor (Dalian) Co., Ltd.

23-Jan-25

GENERAL SPECIFICATIONS

Model No:		7CE069LA01/04	
Application			
Evaporating Temp Range	(°C)	-30 ~ 40	
Refrigerant		R290	
Compressor Cooling		Natural Cooling	
Rated Performance			
Capacity	(W)	10780	13200
Input	(W)	3300	3950
Current	(A)	6.3	6.3
Revolution	(min ⁻¹)	—	—
Sound Level	(dB(A))	60	65
Rating Conditions			
Power Source		3-PH 380V 50Hz	3-PH 440V 60Hz
Evaporating Temp	(°C)	7	
Condensing Temp	(°C)	54.5	
Suction Gas Temp	(°C)	18.5	
Liquid Temp	(°C)	46	
Ambient Temp	(°C)	35.0	
Measuring Point of Sound Level			
Distance from the Compressor	(m)	1.0	
Compressor			
Design		Hermetic Scroll	
Displacement	(cm3)	68.9	
Suction Line Connection	(Φ mm OD)	22.22	
Discharge Line Connection	(Φ mm OD)	12.7	
Oil	(ml)	1700 (PZ68S)	
Mass(Incl.Oil)	(kg)	32.5	
Motor			
Type		3-PH Induction Motor(3IR)	
Pole		2	
Rated Power Source		3-PH 50Hz 380-415V 3-PH 60Hz 440-460V	
Voltage Range	(V)	342~456/396~506	
Starting Current	(A)		

Sonyo Compressor (Dalian) Co., Ltd.

PERFORMANCE DATA

Compressor Model	7CE069LA01/04
Power Source	3PH 50Hz 380-415V
Suction Gas Superheat(K)	11.5
Sub Cooling(K)	8.5
Compressor Cooling	Natural Cooling
Refrigerant	R290

CAPACITY(W)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-30	-20	-10	0	7	20	30	40
30.0	3,100	4,940	7,700	11,370	14,480	21,450	27,870	35,200
40.0		4,430	6,760	10,020	12,860	19,340	25,400	32,400
50.0		3,970	5,920	8,810	11,390	17,410	23,130	29,800
54.5			5,570	8,300	10,780	16,610	22,170	28,690
60.0			5,170	7,730	10,080	15,670	21,060	27,390
65.0				7,230	9,470	14,860	20,090	26,260
70.0				6,780	8,910	14,100	19,170	25,180
80.0					7,900	12,710	17,470	23,160

POWER(W)

Condensing Temperature(°C)								
	-30	-20	-10	0	7	20	30	40
30.0	2,130	2,110	2,100	2,090	2,080	2,060	2,040	2,030
40.0		2,520	2,500	2,490	2,470	2,450	2,430	2,420
50.0		3,070	3,050	3,030	3,010	2,980	2,960	2,940
54.5			3,340	3,320	3,300	3,270	3,250	3,220
60.0			3,740	3,710	3,690	3,660	3,630	3,600
65.0				4,110	4,080	4,050	4,020	3,990
70.0				4,540	4,510	4,470	4,440	4,400
80.0					5,480	5,420	5,380	5,340

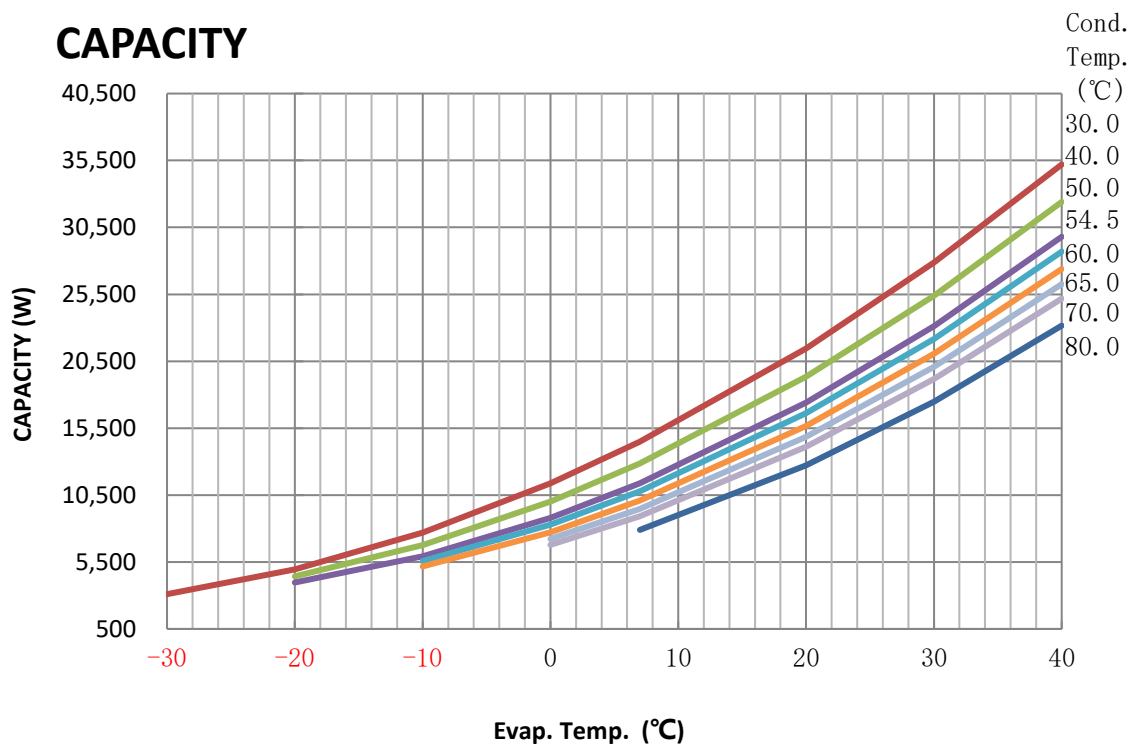
CURRENT(A)

Condensing Temperature(°C)								
	-30	-20	-10	0	7	20	30	40
30.0	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
40.0		5.3	5.3	5.3	5.3	5.3	5.2	5.2
50.0		6.0	6.0	6.0	6.0	5.9	5.9	5.9
54.5			6.3	6.3	6.3	6.3	6.2	6.2
60.0			6.8	6.8	6.7	6.7	6.7	6.6
65.0				7.2	7.2	7.1	7.1	7.1
70.0				7.6	7.6	7.6	7.5	7.5
80.0					8.6	8.5	8.5	8.4

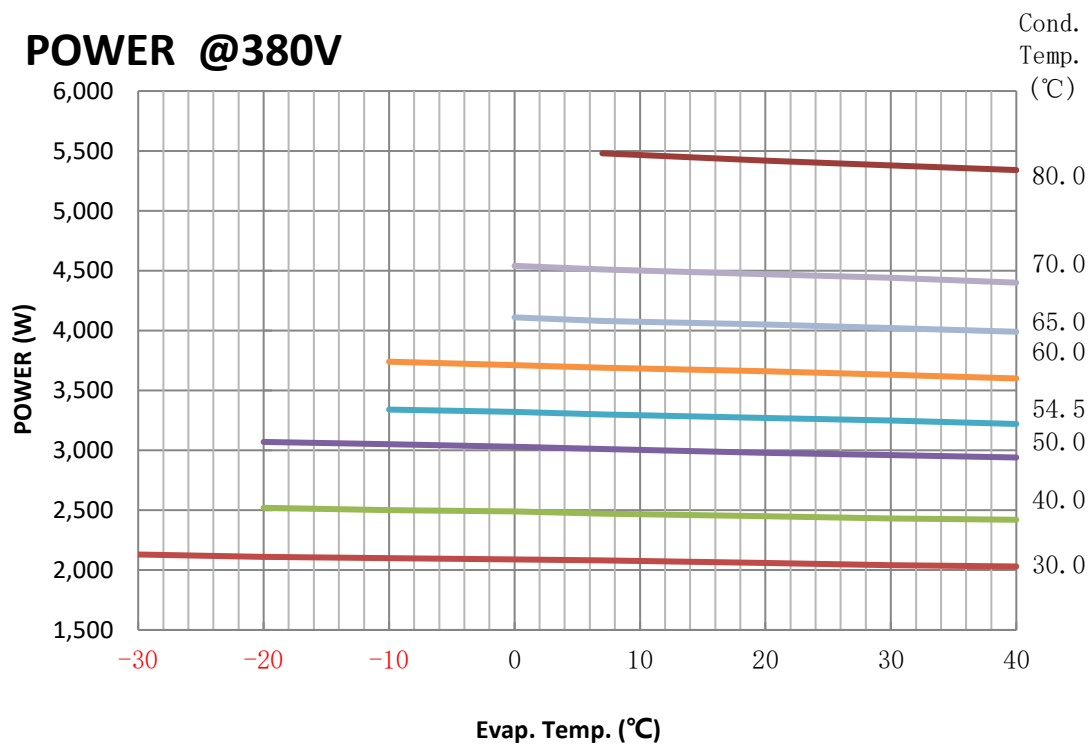
REFRIG FLOW(kg/h)

Condensing Temperature(°C)								
	-30	-20	-10	0	7	20	30	40
30.0	37.6	56.6	82.9	116.7	144.7	206.2	262.0	325.2
40.0		55.6	80.9	114.2	142.3	204.9	262.3	327.7
50.0		54.6	78.8	111.8	140.0	203.7	262.7	330.3
54.5			77.9	110.7	139.0	203.2	262.8	331.4
60.0			76.8	109.4	137.8	202.5	263.0	332.9
65.0				108.2	136.6	201.9	263.2	334.1
70.0				107.1	135.5	201.3	263.4	335.4
80.0					133	200	264	338

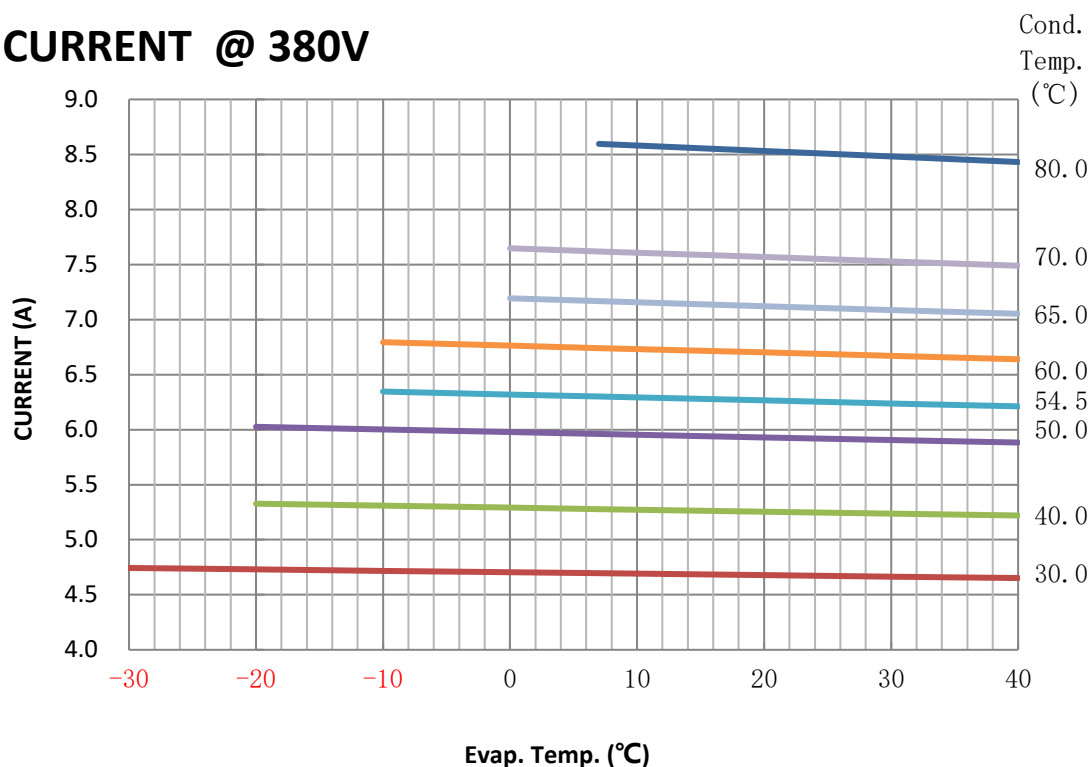
CAPACITY



POWER @380V



CURRENT @ 380V



COEFFICIENTS OF PERFORMANCE CURVES

Compressor Model **7CE069LA01/04**
 Power Source **3PH 50Hz 380-415V**
 Suction Gas Superheat (K) **11.5**
 Sub Cooling (K) **8.5**
 Compressor Cooling **Natural Cooling**
 Refrigerant **R290**

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

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	1.601647E+04	1.749716E+03	3.537297E+00	1.242316E+02
2	5.516089E+02	-1.030971E+00	-7.183462E-04	3.755815E+00
3	-1.728451E+02	-1.016299E+01	2.402013E-02	-2.573077E-01
4	4.504032E+00	-5.907358E-03	-4.122344E-07	2.708834E-02
5	-5.106109E+00	2.158200E-03	3.752966E-07	-5.021530E-04
6	5.795540E-01	7.140458E-01	4.957295E-04	1.710997E-04
7	-3.445846E-04	3.122334E-06	1.963359E-09	-1.295128E-07
8	3.424659E-03	1.231488E-04	1.941758E-08	3.249761E-04
9	1.599113E-02	-4.958214E-04	-6.750899E-07	-8.641442E-07
10	-3.033482E-09	-6.617641E-09	1.978406E-12	1.744390E-11

PERFORMANCE DATA

Compressor Model	7CE069LA01/04
Power Source	3PH 60Hz 440-460V
Suction Gas Superheat(K)	11.5
Sub Cooling(K)	8.5
Compressor Cooling	Natural Cooling
Refrigerant	R290

CAPACITY(W)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-30	-20	-10	0	7	20	30	40
30.0	3,800	6,050	9,430	13,920	17,730	26,270	34,120	43,100
40.0		5,430	8,280	12,270	15,750	23,690	31,110	39,670
50.0		4,870	7,250	10,780	13,950	21,320	28,330	36,490
54.5			6,820	10,170	13,200	20,330	27,150	35,130
60.0			6,340	9,460	12,340	19,180	25,780	33,540
65.0				8,860	11,600	18,200	24,600	32,150
70.0				8,300	10,910	17,260	23,470	30,830
80.0					9,680	15,570	21,400	28,360

POWER(W)

Condensing Temperature(°C)								
	-30	-20	-10	0	7	20	30	40
30.0	2,550	2,530	2,510	2,500	2,490	2,460	2,450	2,430
40.0		3,020	3,000	2,970	2,960	2,930	2,910	2,890
50.0		3,670	3,650	3,620	3,600	3,570	3,550	3,520
54.5			4,000	3,970	3,950	3,910	3,890	3,860
60.0			4,470	4,440	4,420	4,380	4,350	4,310
65.0				4,910	4,890	4,840	4,810	4,770
70.0				5,430	5,400	5,350	5,310	5,270
80.0					6,550	6,490	6,440	6,390

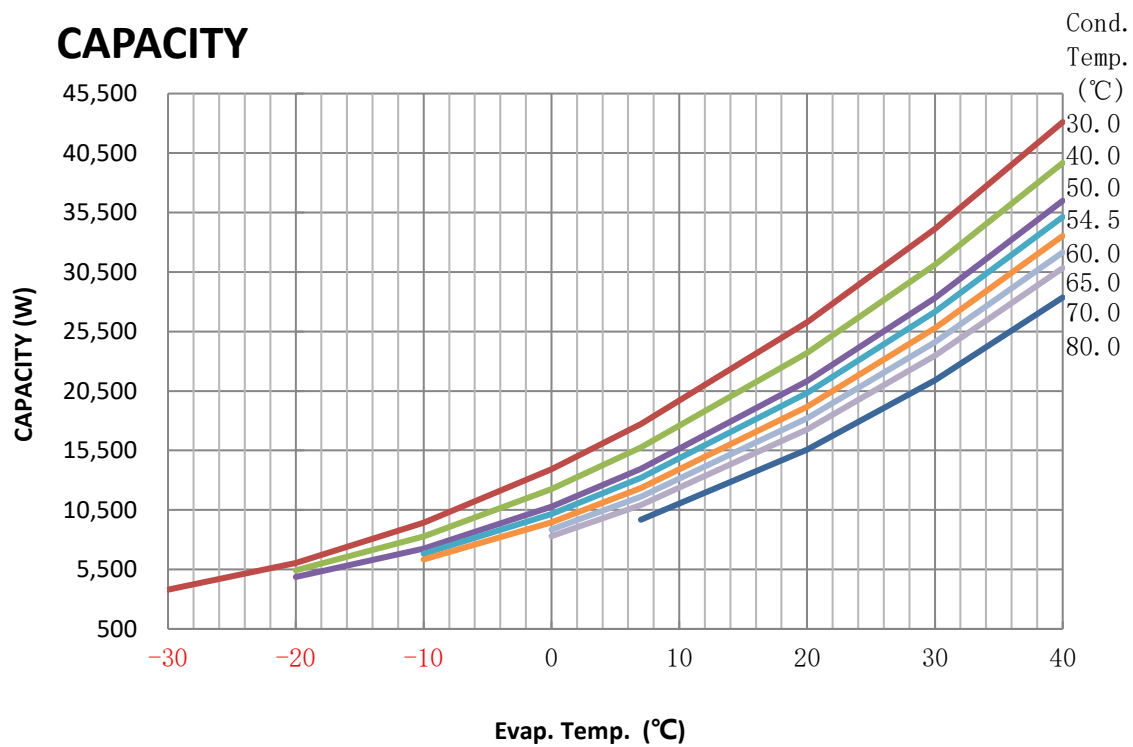
CURRENT(A)

Condensing Temperature(°C)								
	-30	-20	-10	0	7	20	30	40
30.0	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
40.0		5.3	5.3	5.3	5.3	5.3	5.2	5.2
50.0		6.0	6.0	6.0	6.0	5.9	5.9	5.9
54.5			6.3	6.3	6.3	6.3	6.2	6.2
60.0			6.8	6.8	6.7	6.7	6.7	6.6
65.0				7.2	7.2	7.1	7.1	7.1
70.0				7.6	7.6	7.6	7.5	7.5
80.0					8.6	8.5	8.5	8.4

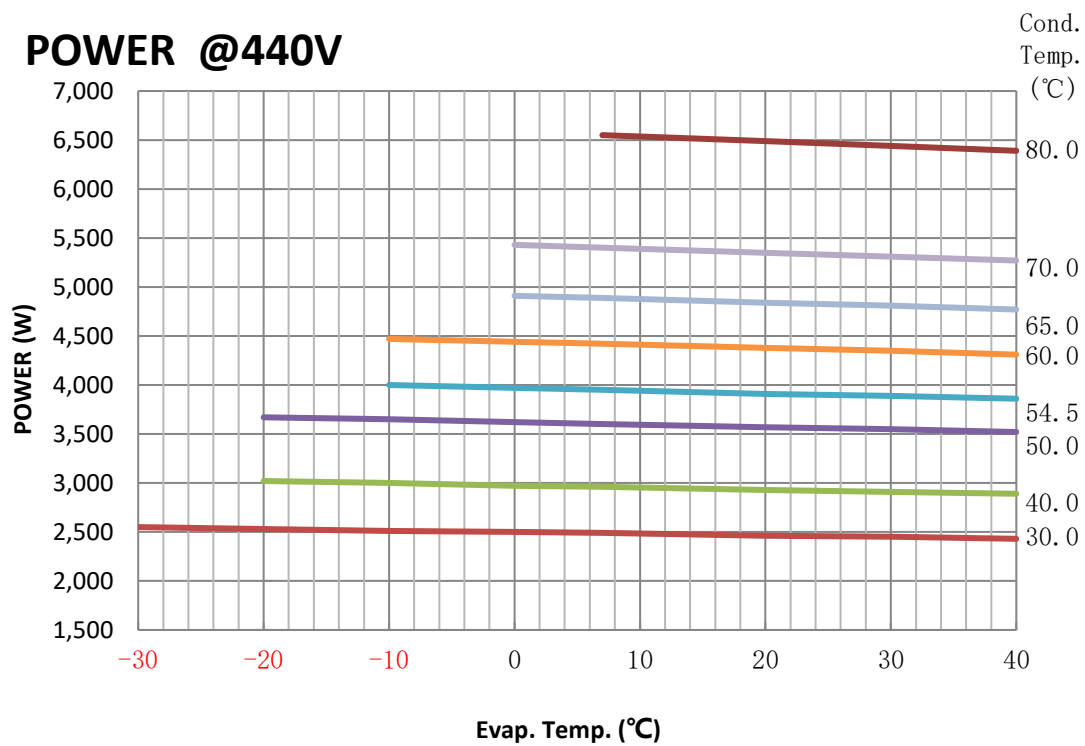
REFRIG FLOW(kg/h)

Condensing Temperature(°C)								
	-30	-20	-10	0	7	20	30	40
30.0	45.8	69.0	101.1	142.2	176.3	251.3	319.3	396.3
40.0		67.7	98.6	139.2	173.5	249.8	319.7	399.4
50.0		66.5	96.1	136.2	170.6	248.3	320.1	402.5
54.5			95.0	134.9	169.4	247.6	320.3	403.9
60.0			93.7	133.3	167.9	246.8	320.5	405.7
65.0				131.9	166.5	246.1	320.8	407.2
70.0				130.5	165.2	245.4	321.0	408.8
80.0					163	244	321	412

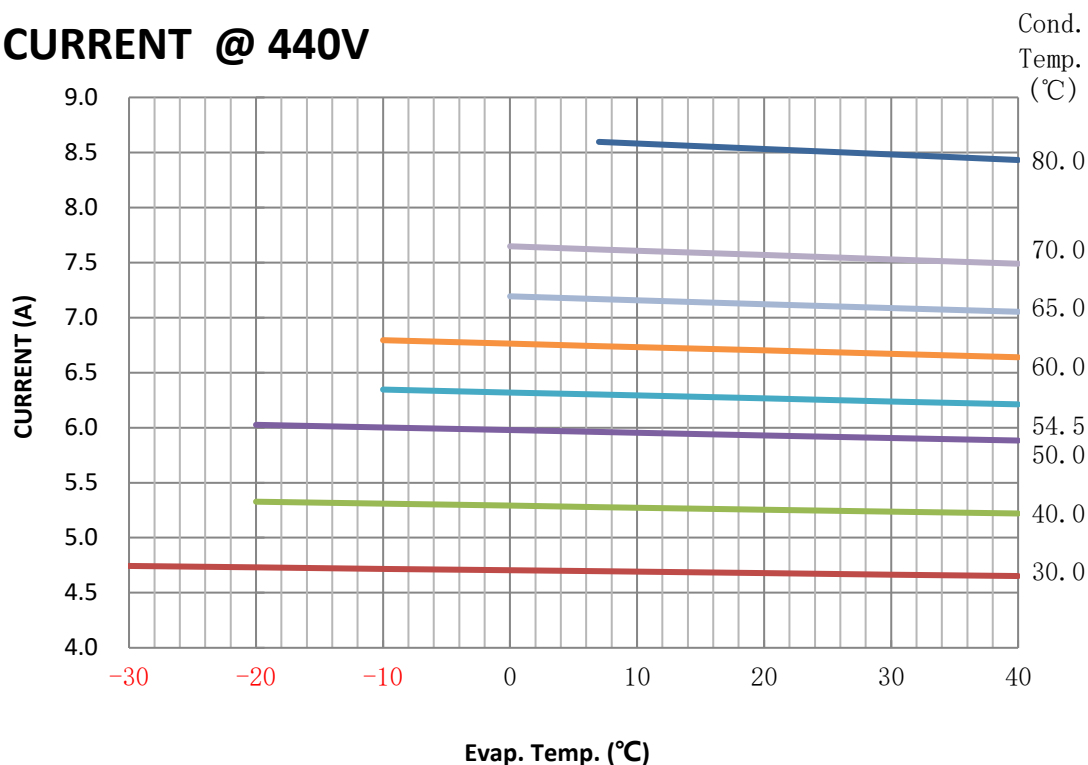
CAPACITY



POWER @440V



CURRENT @ 440V



COEFFICIENTS OF PERFORMANCE CURVES

Compressor Model **7CE069LA01**
 Power Source **3PH 60Hz 440-460V**
 Suction Gas Superheat (K) **11.5**
 Sub Cooling (K) **8.5**
 Compressor Cooling **Natural Cooling**
 Refrigerant **R290**

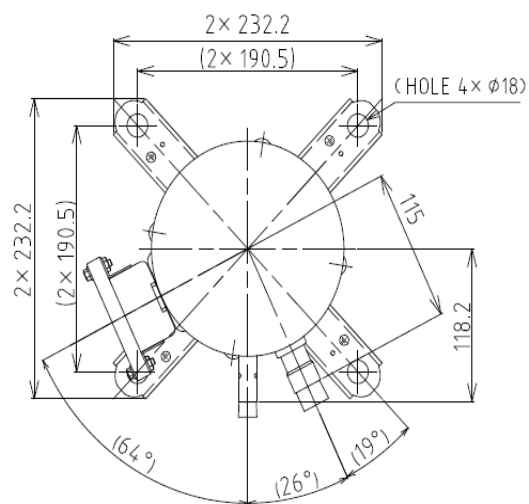
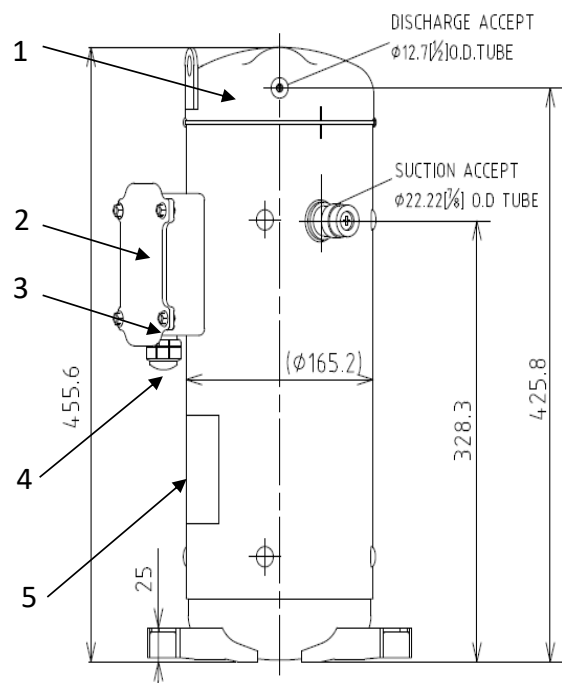
$X = C1 + C2*(S) + C3*D + C4*(S^2) + C5*(S*D) + C6*(D^2) + C7*(S^3) + C8*(D*S^2) + C9*(S*D^2) + C10*(D^3)$

X—CAPACITY(W) OR POWER(W) OR CURRENT(A) OR FLOW(kg/h)

S—EVAPORATING TEMP, °C

D—CONDENSING TEMP, °C

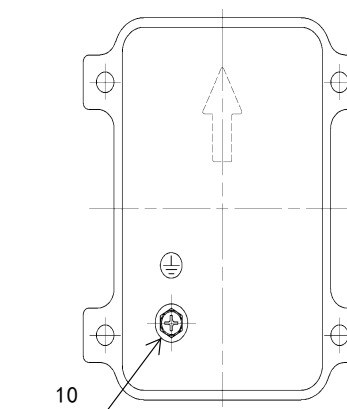
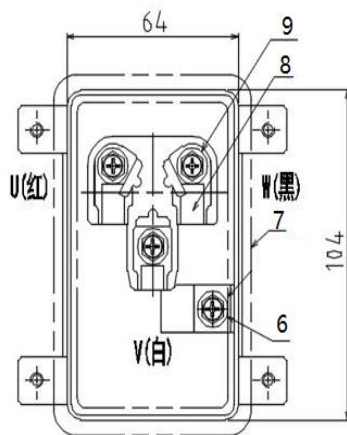
440V-60Hz	CAPACITY (W)	POWER (W)	CURRENT (A)	FLOW (kg/h)
1	1.960599E+04	2.084284E+03	3.537297E+00	1.514118E+02
2	6.749644E+02	-1.492071E+00	-7.183462E-04	4.581294E+00
3	-2.113058E+02	-1.177148E+01	2.402013E-02	-3.134367E-01
4	5.516301E+00	-1.214158E-03	-4.122344E-07	3.297583E-02
5	-6.231909E+00	9.676658E-03	3.752966E-07	-7.781875E-04
6	7.058575E-01	8.506477E-01	4.957295E-04	2.081857E-04
7	-4.132555E-04	8.126040E-05	1.963359E-09	-2.783585E-07
8	4.174666E-03	7.574082E-05	1.941758E-08	3.963471E-04
9	1.935789E-02	-6.571507E-04	-6.750899E-07	6.672238E-07
10	1.080824E-08	-8.102227E-09	1.978406E-12	-2.810493E-11



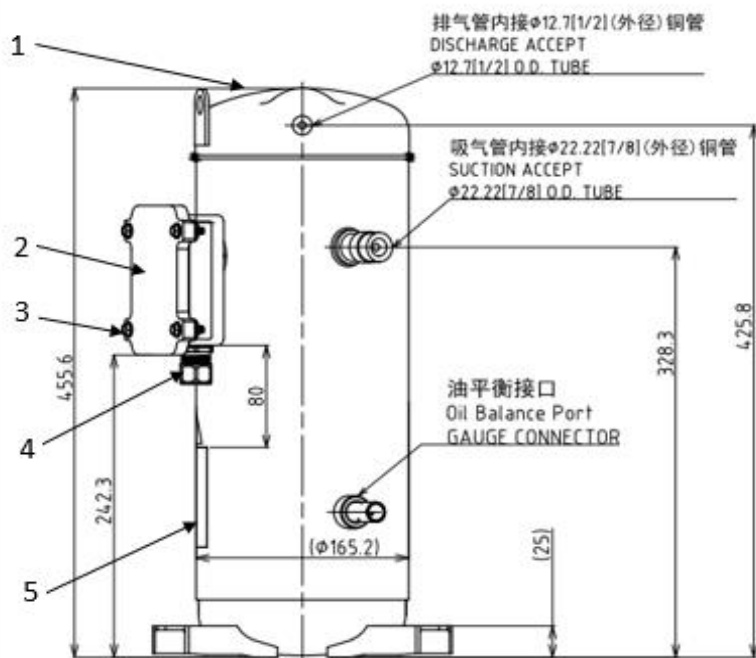
No.	Part Code	Qty	Name
1	7CE069LA01	1	Compressor
2	A-0102-DSW	1	Terminal Box Cover
3	A-0201-DSW	4	Screw
4		1	Cable Gland (As required)
5		1	Nameplate
6	4-A-0645-ORC	1	Screw Special
7	A-0301-DSW	1	Seal
8	3-E-1999-ORC	1	Connector Block
9	4-A-0645-ORC	3	Screw Special
10	4-A-0645-ORC	1	Screw Special

Remarks:

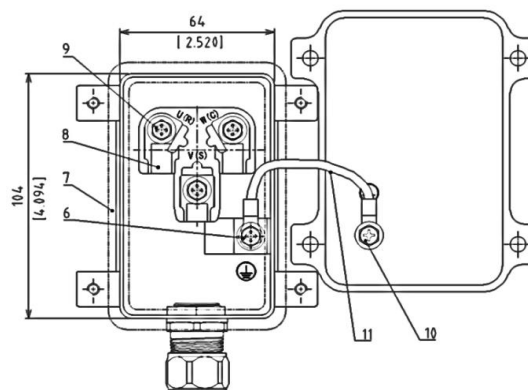
- 1.Part 10 could not be used singly for ground connection.
- 2.Please refer to E-0913-DSW-0 for the internal wiring diagram.
- 3.Tighten torque of parts 3,6,9,10 is 2.5~3.0N·m.
- 4.Part 4 is not supplied together with the compressor.
5. IP level is IP67 after part 4 installed.
- 6.Please pay attention to the installation direction of part 2.



Part Code
 D-0105-DSE
 Name
 Compressor Outline Drawing

Remarks:

1. Part 10 could not be used singly for ground connection.
2. Please refer to E-0913-DSW-0 for the internal wiring diagram.
3. Tighten torque of parts 3,6,9,10 is 2.5~3.0N·m.
4. Part 4 is supplied together with the compressor.
5. IP level is IP67 after part 4 installed.
6. Please pay attention to the installation direction of part 2.



Part Code
D-0106-DSE
Name
Compressor Outline Drawing

Section 5. Operating Envelope
Refrigerant : R290

