

C-SDP330H02B Specification

(Translation Copy)

1. General Specification

Item	Unit	Content/Specification	
Model Number	-	C-SDP330H02B	
Type	-	DC Inverter Scroll Compressor	
Application	-	HBP	
Eva. Temperature Range	°C	-15 ~ +12	
Compressor Cooling Type	-	Air Cool	
Power Source Type	-	DC Inverter	
Voltage Supply Type	V	Vector Control	
Working Range	Rps	30 ~ 90	
Inverter Input Power	V	380-415V, 3phase, 50/60Hz	
Weight(Include oil)	Kg	-	
Refrigerant	-	R410A	
Oil Type	-	FV68S	
Oil Feed	ml	1700	
Displacement	cm ³ /rev	66.7	
Motor	Type	-	3phase DC Inverter sync. motor
	Pole	-	4
	Insulation Level	-	E
	Rated speed(*1)	min ⁻¹	synchro-speed
	Starting current(*2)	A	-
	Coil resistance(25 °C)	Ω	U-V
U-W			0.553
V-W			0.553
Connection part(*3)	Suction pipe(O.D)	mm(in)	22.2(0.875)
	Discharge pipe(O.D)	mm(in)	12.7(0.5)
Surface	-	Black	
Remark:			
*1 : Rated running speed			
*2 : Starting current measure by COLD method			
*3 : Connection part pipe O.D			
C-SDP330H02B is new model number of Sanyo scroll inverter compressor, this is preliminary specification sheet			

2. Characteristic Guarantee

2.1 Performance

Compressor input power (Inverter output power)	Hz	60	Remark
	V	257	
Cooling capacity	W	21900	+/- 5%
	Btu/h	74700	+/- 5%
Input Power(not include Inverter)	W	6800	+/- 5%
Current(Not include inverter)	A	17.50	+/- 5%

Test Condition

Refrigerant	-	R410A	/
Condensing temp.	°C	54.4	/
Eva.temp.	°C	7.2	/
Suction.Temp.	°C	18.3	
Expansion valve inlet temp.	°C	46.1	
Ambient.Temp.	°C	35.0	

2.2 The Requirement of Inverter

Starting frequency	Hz	>= 5
Acceleration	Hz/sec	1 ~3
Starting requirement	Mpa	Suction pressure<=2.1Mpa (pressure difference of suction and discharge <0.2Mpa)
Max. Current	A	47
Start-stop cycle	Times/h	<6

2.3 Vibration and Noise

Vibration	um	50 Max.
Noise	dB(A)	65Max.
Remark: 1. Running condition same as 2.1 2. Microphone position: Compressor crosswise 1meter 3. Noise value is average value		

2.4 Other Characteristic

Item	Unit	Guarantee Value
Design pressure	Low pressure part	Mpa(G)
	High pressure part	Mpa(G)
Insulation Resistance	MΩ	>100 (not include refrigerant)
Withstand voltage	V	2300(1sec)
Residual moisture	mg	<200
Remark: Insulation resistance use DC500V insulation resistance meter.		

6. Performance curve

6.2 压缩机性能曲线

电源类型: 3Φ 30Hz 146V
 压缩机冷却条件: 自然空冷
 冷媒类型: R410A
 转速: 30rps

Power : 3phase 30Hz 146V
 Compressor cold condition: Air Cold
 Refrigerant: R410A
 Running speed: **30rps**

CAPACITY (W)

Condensing Temperature (°C)	Evaporating Temperature (°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	5,910	6,920	7,670	9,480	10,880	11,880	12,980	13,820
40.5	5,570	6,530	7,250	8,970	10,320	11,280	12,330	13,140
45.0	5,250	6,160	6,850	8,500	9,790	10,710	11,710	12,490
50.0	4,950	5,820	6,470	8,040	9,280	10,160	11,130	11,870
54.4		5,530	6,160	7,660	8,850	9,700	10,630	11,350
60.0			5,780	7,210	8,340	9,150	10,030	10,720

POWER (W)

Condensing Temperature (°C)	Evaporating Temperature (°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	2,220	2,230	2,240	2,260	2,270	2,280	2,290	2,290
40.5	2,570	2,580	2,580	2,600	2,610	2,610	2,620	2,620
45.0	3,010	3,010	3,020	3,020	3,030	3,030	3,030	3,040
50.0	3,550	3,550	3,540	3,540	3,540	3,540	3,530	3,530
54.4		4,090	4,080	4,070	4,060	4,050	4,040	4,040
60.0			4,870	4,840	4,810	4,800	4,780	4,770

INV CURRENT (A)

@380V

Condensing Temperature (°C)	Evaporating Temperature (°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	11.5	11.6	11.7	11.8	11.8	11.9	11.9	12.0
40.5	13.1	13.2	13.2	13.3	13.3	13.4	13.4	13.4
45.0	15.0	15.0	15.0	15.1	15.1	15.1	15.1	15.1
50.0	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
54.4		19.3	19.3	19.3	19.2	19.2	19.2	19.2
60.0			22.4	22.3	22.2	22.1	22.0	22.0

NOTE:

* 使用不同变频器可能数据会稍有不同.

6.2 压缩机性能曲线

电源类型:

3 ϕ 60Hz 275V

压缩机冷却条件:

自然空冷

冷媒类型:

R410A

转速:

60rps

Power : 3phase 60Hz 275V

Compressor cold condition: Air Cold

Refrigerant: R410A

Running speed: 60rps

CAPACITY (W)

Condensing Temperature (°C)	Evaporating Temperature (°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	13,310	15,660	17,420	21,650	24,960	27,330	29,930	31,930
40.5	12,480	14,690	16,350	20,340	23,470	25,710	28,170	30,060
45.0	11,840	13,940	15,520	19,320	22,310	24,450	26,790	28,600
50.0	11,160	13,140	14,650	18,250	21,090	23,120	25,340	27,060
54.4		12,480	13,920	17,350	20,060	22,000	24,130	25,770
60.0			13,040	16,280	18,830	20,660	22,670	24,220
65.0				15,380	17,800	19,540	21,450	22,920

POWER (W)

Condensing Temperature (°C)	Evaporating Temperature (°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	4,180	4,270	4,340	4,470	4,560	4,610	4,670	4,710
40.5	4,810	4,890	4,940	5,050	5,120	5,170	5,210	5,240
45.0	5,430	5,490	5,530	5,610	5,660	5,690	5,730	5,750
50.0	6,210	6,250	6,270	6,310	6,340	6,350	6,370	6,380
54.4		7,000	7,000	7,000	7,000	7,000	7,000	7,000
60.0			8,050	7,980	7,940	7,910	7,880	7,860
65.0				8,950	8,860	8,800	8,740	8,690

INV. CURRENT (A)

@380V

Condensing Temperature (°C)	Evaporating Temperature (°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	11.4	11.6	11.8	12.0	12.2	12.3	12.5	12.5
40.5	12.9	13.1	13.2	13.4	13.5	13.6	13.7	13.8
45.0	14.3	14.4	14.5	14.7	14.8	14.8	14.9	14.9
50.0	16.1	16.1	16.2	16.2	16.3	16.3	16.3	16.3
54.4		17.8	17.8	17.8	17.7	17.7	17.7	17.7
60.0			20.1	19.9	19.7	19.7	19.6	19.5
65.0				22.0	21.7	21.6	21.4	21.3

NOTE:

* 使用不同变频器可能数据会稍有不同.

Aislu comments:

Rated run this compressor at 60rps, and not exceed 75Hz for normal uses.

6.2 压缩机性能曲线

电源类型:

3 ϕ 90Hz 347V

Power : 3phase 90Hz 347V

压缩机冷却条件:

自然空冷

Compressor cold condition: Air Cold

冷媒类型:

R410A

Refrigerant: R410A

转速:

90rps

Running speed: **90rps**

CAPACITY (W)

Condensing Temperature (°C)	Evaporating Temperature (°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	19,670	23,300	26,060	32,700	37,950	41,730	45,880	49,100
40.5	18,560	21,950	24,530	30,720	35,610	39,130	42,990	45,980
45.0	17,690	20,900	23,330	29,180	33,800	37,110	40,740	43,550
50.0	16,770	19,790	22,070	27,560	31,880	34,980	38,370	41,000
54.4		18,850	21,020	26,200	30,280	33,200	36,400	38,880
60.0			19,750	24,570	28,360	31,070	34,040	36,340

POWER (W)

Condensing Temperature (°C)	Evaporating Temperature (°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	6,260	6,490	6,640	6,970	7,190	7,340	7,480	7,590
40.5	7,110	7,320	7,470	7,760	7,960	8,100	8,230	8,330
45.0	7,910	8,110	8,230	8,500	8,680	8,800	8,920	9,000
50.0	8,920	9,080	9,190	9,420	9,570	9,670	9,760	9,830
54.4		10,040	10,130	10,310	10,420	10,500	10,580	10,630
60.0			11,450	11,550	11,620	11,660	11,700	11,730

INV. CURRENT (A)

@380V

Condensing Temperature (°C)	Evaporating Temperature (°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	12.4	12.7	13.0	13.5	13.9	14.2	14.4	14.6
40.5	13.9	14.2	14.5	15.0	15.3	15.5	15.7	15.9
45.0	15.2	15.6	15.8	16.2	16.6	16.8	17.0	17.1
50.0	17.0	17.2	17.4	17.8	18.1	18.3	18.4	18.6
54.4		18.9	19.0	19.3	19.6	19.7	19.8	19.9
60.0			21.3	21.5	21.6	21.7	21.8	21.8

NOTE:

* 使用不同变频器可能数据会稍有不同.

7. Standard recommended practice (Standard). Use Limitation(Limitation).

For correct use this vertical scroll compressor, list below standard recommended practice and use limitation:

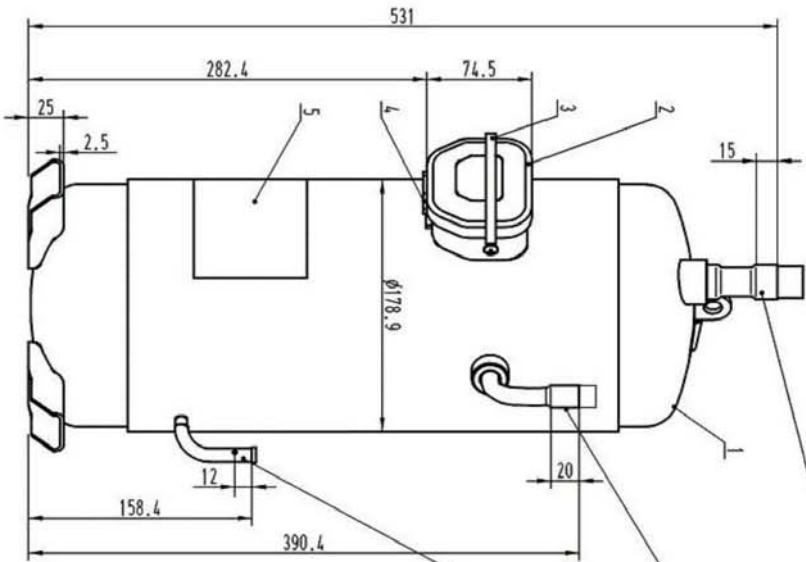
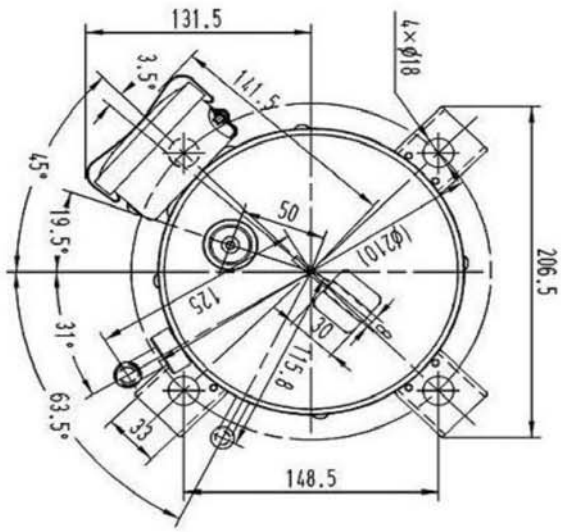
Standard recommended practice: as normal use condition, refer to Japan JIS B8616.

Use limitation: suitable for under the condition of transition

No.	Item	Use value (range)	Remark
1	Refrigerant	R410A	
2	Evaporation Temperature	-15 ~ + 12°C 0.38 ~ 1.05MPa (G)	Compressor suction pressure
3	Condensing temp.	Under (<) 65 °C ~ 4.15MPa(G)	Compressor discharge pressure
4	Compression ratio	2 ~ 8 (except starting, defrosting..etc)	
5	Motor Coil temperature	Under(<) 120 °C	
6	Compressor body bottom temperature	Under(<) 100 °C Condensing temperature(>) + 0.5K	
7	Discharge temperature	Under(<) 115 °C	Position of compressor discharge pipe 10cm
8	Suction temperature	Suction overheat > 5K	Suction pipe temperature of position of compressor inlet side less than 30cm
9	Inverter input voltage (on running)	Rated voltage +/- 20%	Inverter output voltage on running
10	Inverter input voltage (on starting)	3phase : more than 85% of rated voltage	Voltage of inverter of starting current rise and voltage drop
11	Start-stop cycle	Running time: ensure there is enough time for oil return back to indicated oil level. Stop time: Ensure high-low pressure balance	1 cycle: > 10 minutes Stop: > 3minutes Run: >5minutes
12	Refrigerant charge	Suggested oil/refrigerant weight ratio>0.35	Oil specific gravity 0.94
13	Start-stop frequency	200,000 cycles	
14	Oil level inside of compressor	Not less compressor under end face of lower bearing	
15	Unusual pressure rise/drop	Pressure rise: <4.15MPa(G) Pressure drop: >0.15MPa(G)	High-pressure switch set value Low-pressure switch set value
16	Moisture	Refrigeration circuit moisture <200ppm	Dryer (ref. Sanyo D-S type)
17	Non-condensable gas	non-condensable gas in refrigeration circuit < 1% (volume ratio), residual oxygen <0.1% (volume ratio)	Vacuum 24hours absolute pressure <1.01kPa
18	Angle of inclination	5degree max.	

8. Outline/Dimension.

11



吸气管
内径φ22.22(7/8)
[外径]铜管

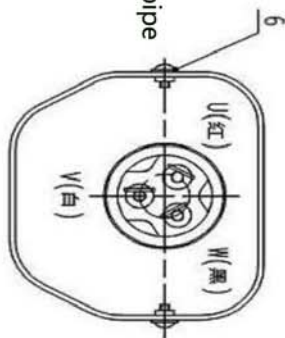
Suction

No.	Part Code	Qty	Name
1	C-SDP330H02B	1	Compressor
2	A-0101-DSB	1	Terminal Box Cover
3	A-0201-DSB	1	Terminal Box Clip
4	A-0301-DSB	1	Insulating Grommet
5	A-5102-DSB	1	Nameplate
6	B-0101-DSB	1	Screw Special

Discharge

排气管
内径φ12.7(1/2)
[外径]铜管

in parallel oil equalizer pipe
并联均油管
接φ6(外径)铜管



Part Code
D-0108-DSB
Name
Compressor Outline Drawing