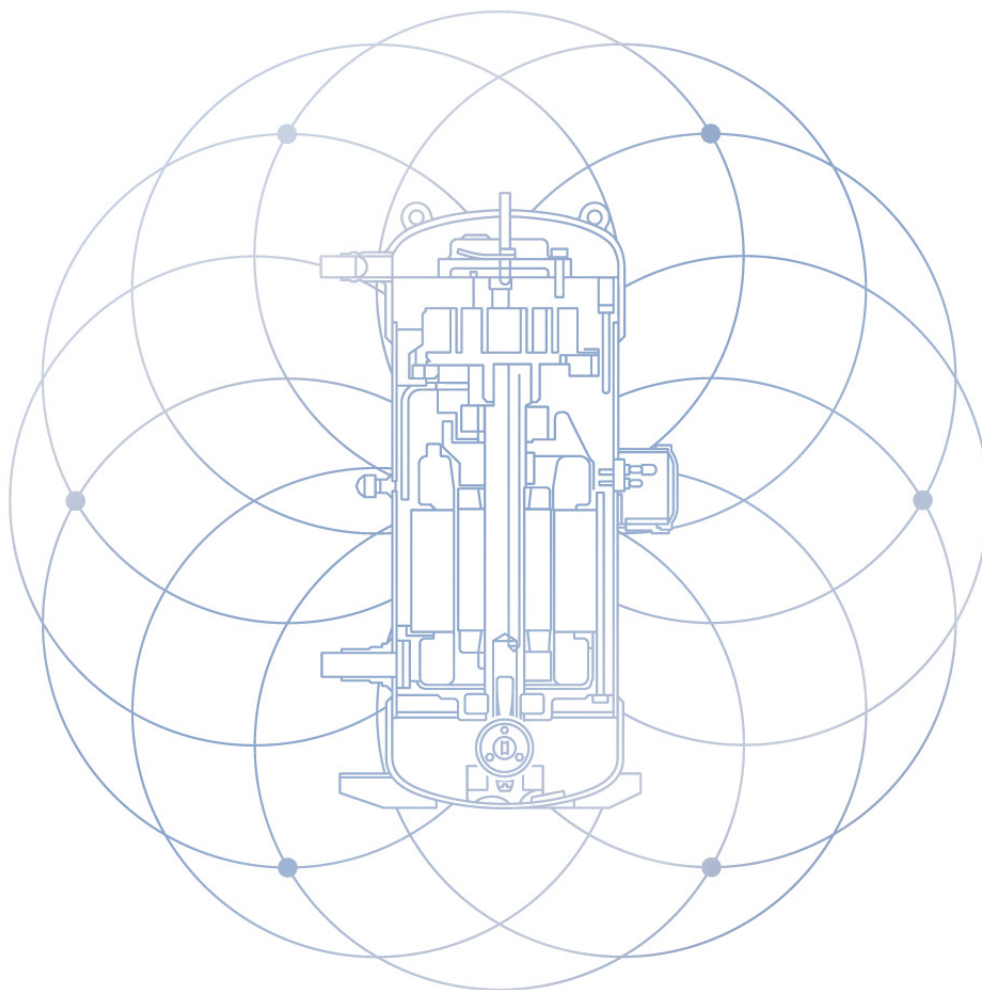


Bsonyo
松洋压缩机



冷冻冷藏专用压缩机

Compressor for Refrigeration Application



冰山松洋压缩机(大连)有限公司
Sonyo Compressor (Dalian) Co., Ltd.



7 大产品特点

- 1 采用喷液冷却、中间补气技术，完美解决低蒸发温度工况的高排气温度问题。
- 2 依靠超精密加工及组装配合，获得更低运行噪音。
- 3 使用温度开关保护电机，温度保护更精准。
- 4 专业的油镜和回油接头设计。
- 5 最低蒸发温度可达 -45°C ，满足多领域冷冻冷藏需求。
- 6 采用环保的R404A、R410A、R448A、R449A等多种主流制冷剂。
- 7 变频技术快速制冷、高效节能。

7 PRODUCTS FEATURES

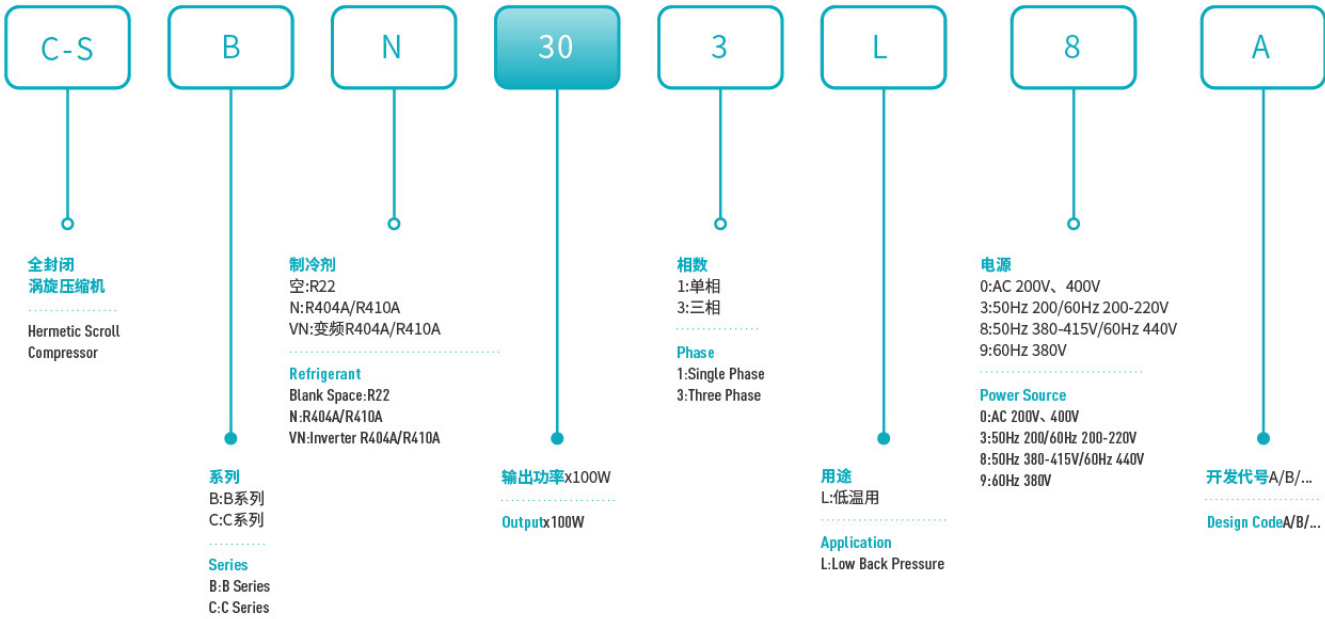
- 1 Adoption of liquid or vapor injection technology, solving the problem of high discharge temperature under low evaporating temperature condition.
- 2 Lower sound level by ultra-precision machining and assembly technologie.
- 3 UAaccurate motor temperature protection with inside thermostat.
- 4 Oil level sight glass and oil return connector,professional design for refrigeration application.
- 5 Minimum -45°C evaporating temperature,meeting the requirements of different refrigeration application.
- 6 Environmental friendly refrigerant R404A,R410A,R448A,R449A.
- 7 Inverter solutions, fast cooling, high efficiency and energy saving.

01	产品特点	Product Features
03	命名规则	Model Nomenclature
04	产品型谱	Product Line-up
05	低温技术参数	Technical Parameters for Low Temp. Application
14	中温技术参数	Technical Parameters for Medium Temp. Application
21	使用标准	Application Standard
28	外观图	Outline Graph

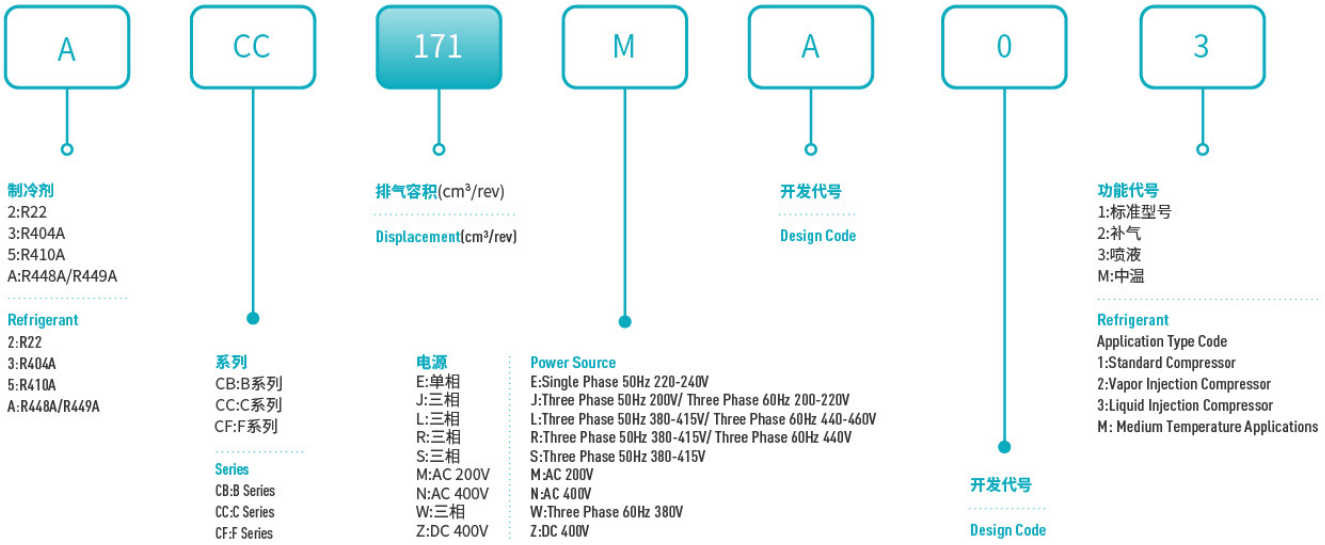


* 如需使用其他制冷剂或应用范围，请与我公司联系
For more information about other refrigerants products
and applications,please contact with us.

命名规则 1
Model Nomenclature 1



命名规则 2
Model Nomenclature 2



*2018年起新机型使用新命名规则

低温机型型谱
Low Temperature Application Line-up

产品类别 Product Class	制冷剂 Refrigerant	电源 Power	额定功率 Output (HP)												
			2	3	4	5	6	7	8	10	12	12.5	13	14	
喷液压缩机 Liquid Injection Compressor	R404A	50Hz 380-415V 3 Phase 60Hz 440-460V 3 Phase		●	●	●	●	●	●	●	●		●		
		50Hz 200V 3 Phase 60Hz 200-220V 3 Phase				●	●	●	●	●		●			
		60Hz 380V 3 Phase			●	●	●	●	●	●		●			
		AC Inverter 400V 3 Phase		●											
		AC Inverter 200V 3 Phase		●										●	
	R448A R449A	50Hz 200V 3 Phase 60Hz 200-220V 3 Phase									●		●		
		AC Inverter 400V 3 Phase		●											
		AC Inverter 200V 3 Phase		●										●	
	R22	50Hz 380-415V 3 Phase 60Hz 440-460V 3 Phase			●	●	●			●	●		●		
		50Hz 200V 3 Phase 60Hz 200-220V 3 Phase				●	●	●	●	●					
		60Hz 380V 3 Phase					●	●	●	●					
	R410A	50Hz 200V 3 Phase 60Hz 200-220V 3 Phase									●				●
60Hz 380V 3 Phase										●					
AC Inverter 400V 3 Phase AC Inverter 200V 3 Phase			●												
补气压缩机 Vapor Injection compressor	R404A	50Hz 380-415V 3 Phase 60Hz 440-460V 3 Phase							●	●	●				

中温机型型谱
Medium Temperature Application Line-up

产品类别 Product Class	制冷剂 Refrigerant	电源 Power	额定功率 Output (HP)											
			3	3.5	4	5	6	7	8	9	10	12	15	20
常规机型 Standard Compressor	R404A	50Hz 380-415V 3 Phase	●		●	●	●	●	●	●	●	●	●	●
		50Hz 220-240V 1 Phase	●											
		DC Inverter 400V 3 Phase												
		AC Inverter 400V 3 Phase												
	R22	50Hz 380-415V 3 Phase 60Hz 440-460V 3 Phase		●	●	●	●	●	●	●	●	●		
		50Hz 220-240V 1 Phase	●		●									

低温制冷应用
for Low Temperature Applications

50Hz 380-415V/60Hz 440-460V														 R404A	
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	50Hz				60Hz				堵转 电流 LRA	额定 电流 RLA	最大持 续电流 MCC	接管类型 Connections
				制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current				
	HP	cm³/rev		kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	A	A	A	
3	3	52	3CB052LA03	4.03	13.7	2.90	5.4	4.91	16.7	3.39	5.4	44	6.4	9.0	焊接 Brazed
	4	67	C-SBN303L8A	5.30	18.1	3.67	6.6	6.48	22.1	4.27	6.6	70	6.4	9.0	焊接 Brazed
	5	83	C-SBN373L8A	6.50	22.2	4.70	8.2	8.10	27.7	5.50	8.2	66	8.7	12.2	焊接 Brazed
	6	96	C-SBN453L8A	7.40	25.3	4.95	9.2	9.15	31.2	5.85	9.1	77	10.1	14.2	焊接 Brazed
		104	C-SCN453L8H	8.15	27.8	5.80	10.4	9.75	33.3	6.86	11.3	-	-	-	法兰 Flanged
	7	120	C-SCN523L8H	9.35	31.9	6.45	11.8	11.10	37.9	7.65	11.7	99	12.9	18.1	法兰 Flanged
			3CC120SA03	9.35	31.9	6.45	11.8	-	-	-	-	99	12.9	18.1	焊接 Brazed
	8	137	C-SCN603L8H	10.20	34.8	7.40	13.5	12.40	42.3	8.85	13.5	104	14.5	20.3	法兰 Flanged
			3CC137SA03	10.20	34.8	7.40	13.5	-	-	-	-	104	14.5	20.3	焊接 Brazed
	10	171	C-SCN753L8H	13.30	45.4	9.00	16.3	15.70	53.6	10.70	16.4	121	18.0	25.2	法兰 Flanged
			3CC171SA03	13.30	45.4	9.00	16.3	-	-	-	-	121	18.0	25.2	焊接 Brazed
	12.5	216	3CC216SA03	16.90	57.7	11.40	20.6	-	-	-	-	151	21.0	29.4	焊接 Brazed

低温制冷应用
for Low Temperature Applications

60Hz 380V											 R404A
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	60Hz				堵转 电流 LRA	额定 电流 RLA	最大持 续电流 MCC	接管类型 Connections
				制冷量 Capacity		功率 Input	电流 Current				
	HP	cm³/rev		kW	kBTU/h			kW	A	A	
3	4	67	3CB067WA03	6.40	21.8	4.45	7.7	58	8.4	11.8	焊接 Brazed
	5	83	3CB084WA03	8.15	27.8	5.54	9.4	68	9.8	13.7	焊接 Brazed
	6	96	3CB096WA03	9.25	31.6	6.15	10.9	93	10.6	14.8	焊接 Brazed
	7	120	C-SCN523L9H	11.60	39.6	7.55	13.5	—	13.4	18.8	法兰 Flanged
			3CC120WA03	11.60	39.6	7.55	13.5	—	13.4	18.8	焊接 Brazed
	8	137	C-SCN603L9H	13.10	44.7	8.80	15.4	—	15.1	21.1	法兰 Flanged
			3CC137WA03	13.10	44.7	8.80	15.4	—	15.1	21.1	焊接 Brazed
	10	171	C-SCN753L9H	16.50	56.3	10.60	18.5	—	18.8	26.3	法兰 Flanged
			3CC171WA03	16.50	56.3	10.60	18.5	126	18.8	26.3	焊接 Brazed
	12.5	216	3CC216WA03	19.80	67.6	13.00	22.5	143	22.1	30.9	焊接 Brazed

50Hz 380-415V/60Hz 440-460V 低温补气 Vapor Injection														 R404A	
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	50Hz				60Hz				堵转 电流 LRA	额定 电流 RLA	最大持 续电流 MCC	接管类型 Connections
				制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current				
				kW	kBTU/h	kW	A	kW	kBTU/h	kW	A				
3	8	137	3CC137LA02	14.60	49.8	8.80	15.0	17.70	60.4	10.20	14.9	100	15.5	21.7	焊接 Brazed
	10	171	3CC171LA02	18.00	61.4	10.30	17.5	21.60	73.7	12.40	17.5	108	22.5	31.5	焊接 Brazed
	12	205	3CC205SA02	20.90	71.2	12.20	20.9	-	-	-	-	107	27.1	37.9	焊接 Brazed

交流变频 AC Inverter 400V										 R404A
压缩机型号 Compressor Model	排气量 Displacement	50Hz				70Hz				接管类型 Connections
		制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current	
	cm³/rev	kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	
C-SCVN603L0J	144	13.90	47.4	7.90	15.4	18.1	61.8	11.4	20.7	法兰 Flanged

50Hz 200V/60Hz 200-220V												 R404A
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	50Hz			60Hz			接管类型 Connections		
				制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity			功率 Input	电流 Current
	HP	cm³/rev		kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	
3	5	89	C-SCN373L3H	6.95	23.7	5.10	19.2	8.20	28.0	5.90	19.3	法兰 Flanged
	6	104	C-SCN453L3H	8.10	27.7	5.85	21.6	9.55	32.6	6.80	21.9	法兰 Flanged
	7	120	C-SCN523L3H	9.25	31.6	6.50	23.6	10.90	37.2	7.55	24.2	法兰 Flanged
	8	137	C-SCN603L3H	10.50	35.8	7.45	27.0	12.40	42.3	8.85	28.3	法兰 Flanged
	10	171	C-SCN753L3H	13.05	44.6	9.15	32.5	15.20	51.9	10.75	34.4	法兰 Flanged
			ACC171JA03	13.05	44.6	9.15	32.5	15.20	51.9	10.75	34.4	法兰 Flanged
	12.5	216	C-SCN903L3H	16.90	57.7	11.40	39.8	19.60	66.9	13.50	42.6	法兰 Flanged
			ACC216JA03	16.90	57.7	11.40	39.8	19.60	66.9	13.50	42.6	法兰 Flanged

交流变频 AC Inverter 400V										 R448A	 R449A
压缩机型号 Compressor Model	排气量 Displacement	50Hz				75Hz				接管类型 Connections	
		制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current		
	cm³/rev	kW	kBTU/h	kW	A	kW	kBTU/h	kW	A		
ACC144NA03	144	13.20	45.1	8.20	18.2	17.9	61.1	11.45	19.1	焊接 Brazed	

低温制冷应用
for Low Temperature Applications

交流变频 AC Inverter 200V										 R448A	 R449A
压缩机型号 Compressor Model	排气量 Displacement	50Hz				80Hz				接管类型 Connections	
		制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current		
		cm³/rev	kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	
ACC144MA03	144		14.30	48.8	8.15	32.6	19.3	65.9	11.8	39	法兰 Flanged
ACC171MA03	171		16.80	57.4	9.50	34.7	21.8	74.4	13.6	43.8	法兰 Flanged

低温制冷应用
for Low Temperature Applications

60Hz 380V								 R22
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	60Hz				接管类型 Connections
				制冷量 Capacity		功率 Input	电流 Current	
				HP	cm³/rev	kW	kBTU/h	
3	6	104	C-SC453L9H	9.45	32.3	6.00	11.3	法兰 Flanged
	7	120	C-SC523L9H	11.00	37.6	6.75	12.3	法兰 Flanged
	8	137	C-SC603L9H	12.00	41.0	7.80	13.7	法兰 Flanged
	10	171	C-SC753L9H	15.90	54.3	9.50	16.7	法兰 Flanged

50Hz 380-415V/60Hz 440-460V														 R22	
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	50Hz				60Hz				堵转 电流 LRA	额定 电流 RLA	最大持 续电流 MCC	接管类型 Connections
				制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current				
	HP	cm³/rev		kW	kBTU/h	kW	A	kW	kBTU/h	kW	A				
3	4	67	C-SB303L8A	5.22	17.8	3.34	6.0	6.34	21.6	3.89	6.0	70	6.4	9.0	焊接 Brazed
	5	83	C-SB373L8A	6.70	22.9	4.20	7.5	8.10	27.6	4.95	7.5	66	7.9	11.1	焊接 Brazed
	6	96	C-SB453L8A	7.70	26.3	4.70	8.7	8.98	30.5	5.55	8.7	77	9.4	13.2	焊接 Brazed
	8	137	C-SC603L8H	10.50	35.8	6.65	12.4	12.40	42.3	7.90	12.4	116	13.6	19.0	法兰 Flanged
			2CC137RA03	10.50	35.8	6.65	12.4	12.40	42.3	7.90	12.4	101	13.6	19.0	焊接 Brazed
	10	171	C-SC753L8H	13.00	44.4	8.05	14.8	15.50	52.9	9.60	14.8	110	17.1	24.0	法兰 Flanged
			2CC171RA03	13.00	44.4	8.05	14.8	15.50	52.9	9.60	14.8	117	17.1	24.0	焊接 Brazed
	12.5	216	2CC216RA03	16.80	57.3	9.90	17.9	20.00	68.2	11.80	18.1	115	19.5	27.3	焊接 Brazed

50Hz 200V/60Hz 200-220V												 R410A
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	50Hz				60Hz				接管类型 Connections
				制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current	
				kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	
3	10	120	C-SCVN753L3J	13.10	44.7	9.25	33.1	15.60	53.3	10.60	33.9	法兰 Flanged
	14	171	C-SCN113L3A	18.50	63.2	12.50	43.9	21.60	73.7	14.70	46.8	法兰 Flanged

50Hz 200V/60Hz 200-220V											 R22	
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	50Hz			60Hz			接管类型 Connections		
				制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity			功率 Input	电流 Current
	HP	cm³/rev		kW	kBTU/h	kW	A	kW	kBTU/h		kW	A
3	5	89	C-SC373L3G	6.80	23.2	4.70	16.3	8.05	27.5	5.50	17.5	法兰 Flanged
	6	104	C-SC453L3G	7.95	27.1	5.20	18.0	9.35	31.9	6.10	19.3	法兰 Flanged
	7	120	C-SC523L3G	9.30	31.8	6.05	21.6	10.95	37.4	7.00	22.2	法兰 Flanged
	8	137	C-SC603L3G	10.40	35.5	7.00	23.5	12.30	42.0	8.25	26.0	法兰 Flanged
	10	171	C-SC753L3G	13.20	45.1	8.45	28.0	15.60	53.3	10.00	31.0	法兰 Flanged

60Hz 380V											 R410A
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	60Hz				堵转 电流 LRA	额定 电流 RLA	最大持 续电流 MCC	接管类型 Connections
				制冷量 Capacity		功率 Input	电流 Current				
				kW	kBTU/h	kW	A				
3	10	120	5CC120WA03	15.90	54.3	10.60	18.6	—	17.7	24.8	法兰 Flanged

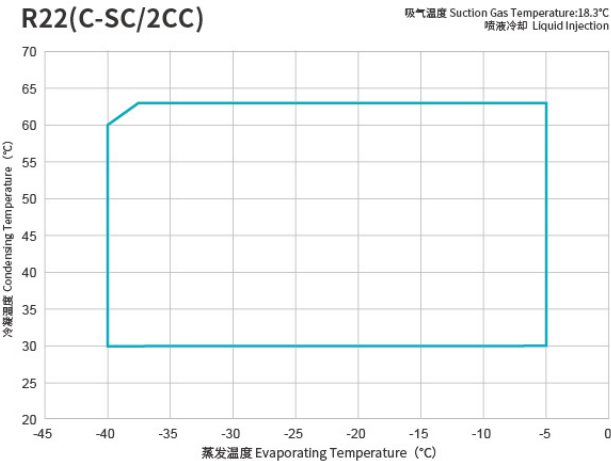
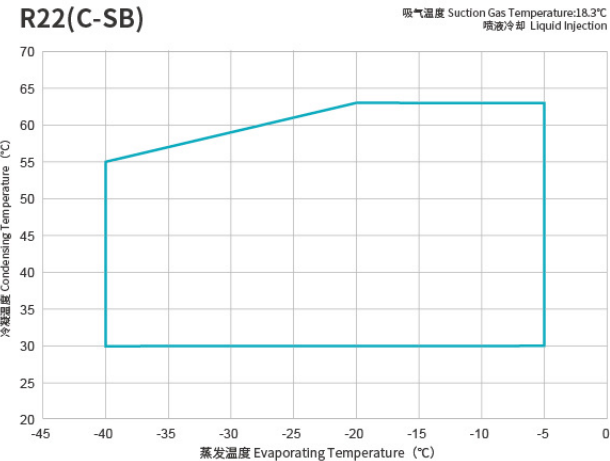
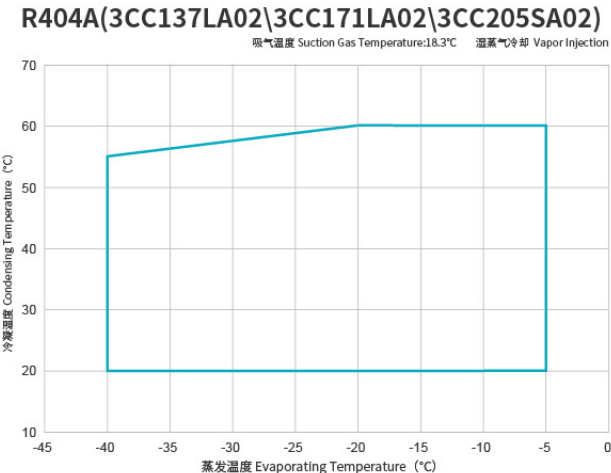
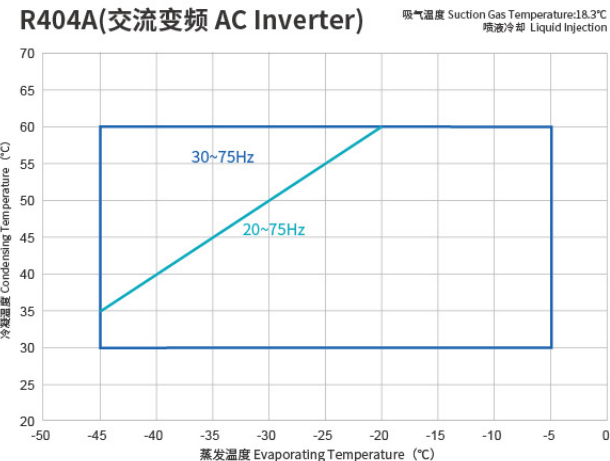
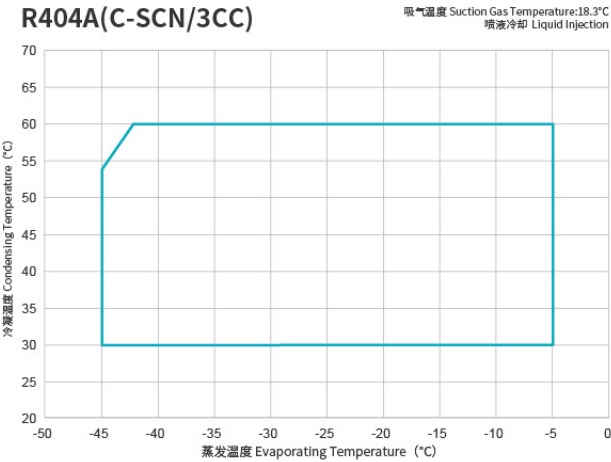
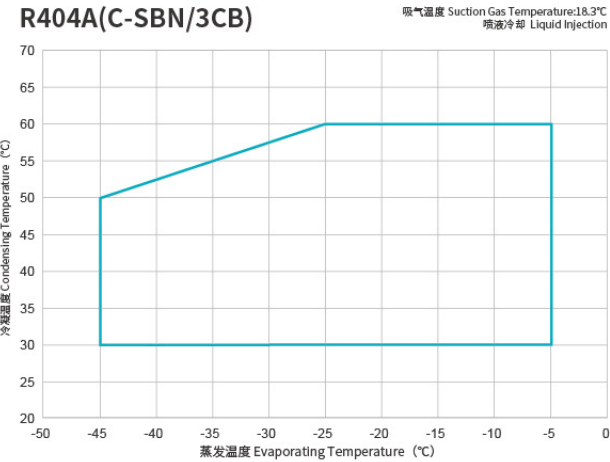
低温制冷应用
for Low Temperature Applications

AC Inverter 400V										R410A
压缩机型号 Compressor Model	排气量 Displacement cm³/rev	50Hz				75Hz				接管类型 Connections
		制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current	
		kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	
5CC120NA03	120	15.90	54.3	10.10	18.6	21.6	73.7	13.3	22.4	法兰 Flanged

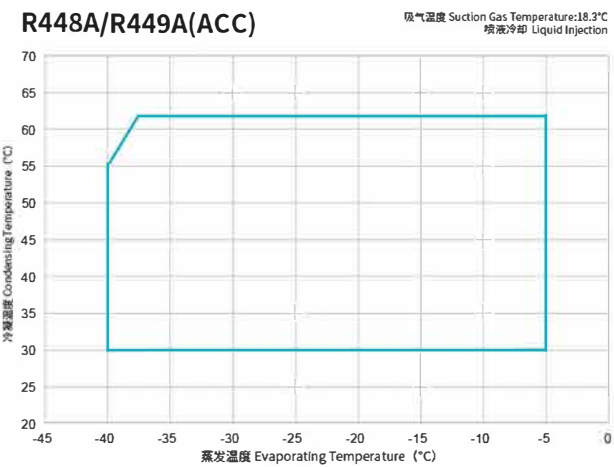
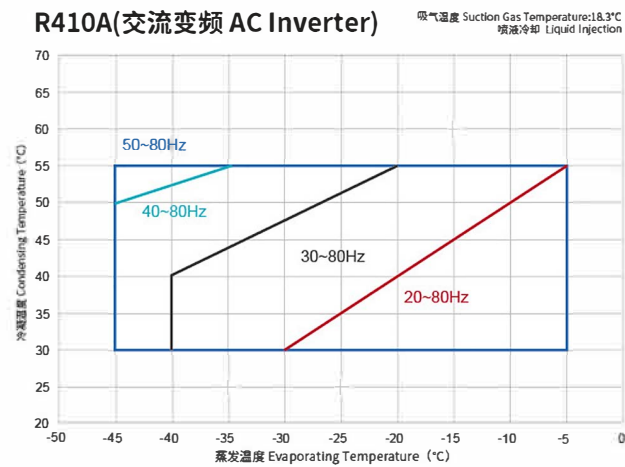
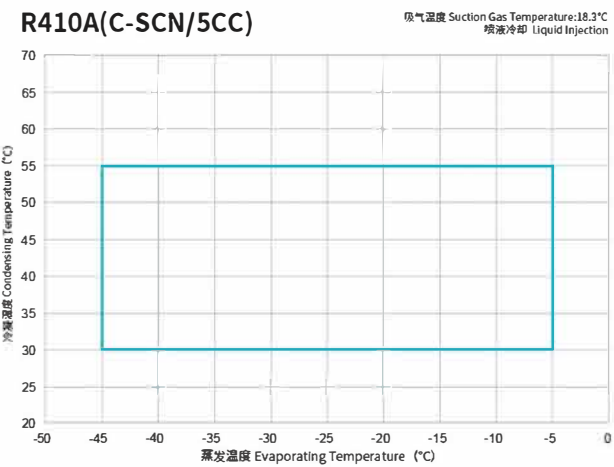
AC Inverter 200-240V										R410A
压缩机型号 Compressor Model	排气量 Displacement cm³/rev	50Hz				70Hz				接管类型 Connections
		制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current	
		kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	
C-SCVN753L0J	120	16.10	55.0	9.60	36.6	22	75.1	13.5	44.8	法兰 Flanged

低温机型测试条件 Rating Condition for Low Temperature Model				
	定频 Fixed speed (涡旋型 Scroll)		交流变频 AC Inverter (涡旋型 Scroll)	
	℃	°F	℃	°F
冷凝温度 Condensing Temperature	50	122	50	122
蒸发温度 Evaporating Temperature	-15	5	-10	14
过冷度 Sub Cooling	0	0	0	0
吸气温度 Suction Gas Temperature	18.3	65	18.3	65

低温运行范围
Operating Envelope for Low Temperature Applications



低温运行范围
Operating Envelope for Low Temperature Applications



低温机型制冷量(kW)
Capacity For Low Temperature Applications

50Hz 380-415V										
型号 Model	冷凝温度 Condensing Temp.(°C)	蒸发温度 Evaporating Temp(°C)								
		-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0
3CB052LA03	30.0	1.57	1.94	2.42	2.99	3.7	4.59	5.7	7.09	8.76
	40.0	1.36	1.68	2.11	2.55	3.14	3.88	4.78	5.96	7.25
	50.0	1.18	1.45	1.83	2.17	2.66	3.26	3.99	4.97	5.99
	60.0	-	-	-	-	2.26	2.75	3.35	4.14	4.96
C-SBN303L8A	30.0	1.99	2.43	3.04	3.82	4.78	5.91	7.23	8.72	10.39
	40.0	1.63	2.00	2.52	3.19	4.02	5.00	6.13	7.42	8.85
	50.0	1.35	1.68	2.13	2.73	3.45	4.31	5.30	6.42	7.68
	60.0	-	-	-	-	2.97	3.72	4.58	5.57	6.67
C-SBN373L8A	30.0	2.48	2.98	3.71	4.67	5.86	7.28	8.92	10.80	12.90
	40.0	1.98	2.46	3.11	3.96	5.00	6.22	7.63	9.22	11.01
	50.0	1.57	2.01	2.60	3.35	4.25	5.30	6.50	7.86	9.36
	60.0	-	-	-	-	3.61	4.52	5.54	6.70	7.97
C-SCN453L8H C-SBN453L8A	30.0	2.97	3.67	4.53	5.59	6.90	8.53	10.53	13.00	16.06
	40.0	2.43	3.02	3.75	4.66	5.79	7.19	8.93	11.09	13.77
	50.0	1.99	2.48	3.10	3.87	4.84	6.04	7.55	9.43	11.78
	60.0	-	-	-	-	4.05	5.09	6.39	8.03	10.09
C-SCN523L8H 3CC120SA03	30.0	4.49	5.35	6.37	7.58	9.03	10.75	12.81	15.25	18.16
	40.0	3.55	4.28	5.17	6.24	7.52	9.08	10.95	13.21	15.94
	50.0	2.80	3.43	4.19	5.12	6.26	7.65	9.35	11.43	13.97
	60.0	-	2.74	3.40	4.21	5.21	6.45	7.99	9.89	12.25
C-SCN603L8H 3CC137SA03	30.0	4.76	5.67	6.76	8.05	9.59	11.43	13.62	16.23	19.33
	40.0	3.79	4.58	5.54	6.69	8.08	9.76	11.79	14.24	17.21
	50.0	3.02	3.70	4.53	5.55	6.80	8.33	10.20	12.49	15.30
	60.0	-	2.99	3.71	4.61	5.72	7.11	8.83	10.96	13.61
C-SCN753L8H 3CC171SA03	30.0	5.24	5.86	7.05	8.80	11.12	13.99	17.43	21.42	25.98
	40.0	4.11	5.00	6.28	7.94	9.98	12.42	15.23	18.44	22.03
	50.0	3.19	4.26	5.58	7.15	8.95	11.01	13.30	15.84	18.62
	60.0	-	3.64	4.97	6.43	8.03	9.76	11.62	13.62	15.75
3CC216SA03	30.0	6.87	8.40	10.26	12.54	15.33	18.73	22.89	27.97	34.18
	40.0	5.57	6.86	8.46	10.42	12.85	15.83	19.51	24.04	29.63
	50.0	4.51	5.60	6.96	8.65	10.75	13.36	16.60	20.63	25.64
	60.0	-	4.57	5.73	7.18	9.00	11.28	14.13	17.71	22.19

测试条件 Rating Condition: 吸气温度 Suction Gas Temperature 18.3°C, 过冷度 Sub-cooling 0K

低温机型制冷量(kW)
Capacity For Low Temperature Applications

50Hz 380-415V 补气压缩机 Vapor Injection compressor										R404A	
型 号 Model	冷凝温度 Condensing Temp.(°C)	蒸发温度 Evaporating Temp(°C)									
		-40.0	-35.0	-31.5	-25.0	-20.0	-15.0	-10.0	-5.0		
3CC137LA02	30.0	6.24	7.68	8.89	11.65	14.35	17.67	21.76	26.79		
	40.5	5.86	7.06	8.04	10.24	12.33	14.84	17.87	21.52		
	50.0	5.68	6.77	7.64	9.39	11.42	13.60	16.19	19.21		
	60.0	-	-	7.28	9.00	10.60	12.48	14.69	17.29		
3CC171LA02	30.0	8.41	10.48	12.11	15.52	18.50	21.77	25.35	29.24		
	40.5	7.78	9.67	11.16	14.28	17.01	20.00	23.28	26.83		
	50.0	7.24	8.99	10.36	13.25	15.76	18.52	21.54	24.82		
	60.0	-	-	-	-	14.55	17.09	19.86	22.88		
3CC205SA02	30.0	10.37	12.66	14.48	18.35	21.77	25.56	29.73	34.28		
	40.5	9.24	11.38	13.08	16.67	19.81	23.30	27.12	31.28		
	50.0	8.32	10.33	11.92	15.27	18.19	21.41	24.94	28.78		
	60.0	-	-	-	-	16.63	19.60	22.85	26.37		

AC Inverter 400V										R404A	
型 号 Model	转 速 r/s	冷凝温度 Condensing Temp.(°C)	蒸发温度 Evaporating Temp(°C)								
			-45.0	-40.0	-30.0	-20.0	-15.0	-10.0	-5.0		
C-SCVN603L0J ACC144NA03	50	30.0	4.54	4.98	7.17	11.11	13.73	16.79	20.28		
		40.0	3.75	4.33	6.51	10.03	12.29	14.89	17.82		
		50.0	3.07	3.77	5.91	9.05	11.00	13.20	15.64		
		60.0	2.52	3.29	5.37	8.17	9.84	11.70	13.74		
	75	30.0	6.49	7.13	10.20	15.67	19.31	23.55	28.39		
		40.0	5.26	6.21	9.41	14.35	17.47	21.03	25.02		
		50.0	4.22	5.42	8.68	13.13	15.80	18.76	22.02		
		60.0	3.39	4.74	8.01	12.01	14.29	16.75	19.39		

50Hz 380-415V										R22	
型 号 Model	冷凝温度 Condensing Temp.(°C)	蒸发温度 Evaporating Temp(°C)									
		-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0		
C-SB303L8A	30.0	2.19	2.71	3.35	4.15	5.14	6.37	7.89	9.77		
	40.0	1.94	2.41	3.00	3.73	4.64	5.77	7.17	8.92		
	50.0	1.72	2.14	2.68	3.34	4.18	5.22	6.52	8.15		
	60.0	-	1.91	2.39	3.00	3.77	4.73	5.93	7.44		
C-SB373L8A	30.0	2.99	3.67	4.50	5.52	6.76	8.29	10.17	12.46		
	40.0	2.62	3.23	3.98	4.90	6.05	7.46	9.19	11.34		
	50.0	2.29	2.83	3.51	4.36	5.40	6.70	8.31	10.30		
	60.0	-	2.49	3.11	3.87	4.83	6.02	7.51	9.37		
C-SB453L8A	30.0	3.27	4.02	4.93	6.05	7.43	9.13	11.21	13.76		
	40.0	3.02	3.70	4.54	5.57	6.84	8.39	10.29	12.62		
	50.0	2.79	3.41	4.18	5.13	6.28	7.70	9.44	11.56		
	60.0	-	3.15	3.85	4.72	5.78	7.07	8.66	10.60		
C-SC603L8H 2CC137RA03	30.0	4.06	5.69	7.46	9.36	11.40	13.59	15.90	18.36		
	40.0	3.63	4.87	6.33	7.99	9.87	11.95	14.24	16.75		
	50.0	3.24	4.16	5.35	6.80	8.52	10.50	12.75	15.26		
	60.0	-	3.56	4.52	5.79	7.36	9.24	11.42	13.90		
C-SC753L8H 2CC171RA03	30.0	5.07	6.51	8.30	10.45	12.94	15.79	18.99	22.55		
	40.0	4.29	5.76	7.50	9.51	11.79	14.33	17.15	20.23		
	50.0	3.61	5.09	6.77	8.65	10.73	13.00	15.47	18.14		
	60.0	-	4.51	6.12	7.87	9.76	11.79	13.96	16.27		
2CC216RA03	30.0	7.21	8.92	11.02	13.65	16.99	21.17	26.36	32.70		
	40.0	6.10	7.68	9.59	11.95	15.05	18.86	23.63	29.61		
	50.0	5.18	6.60	8.29	10.43	13.28	16.80	21.26	26.90		
	60.0	-	-	7.17	9.12	11.71	14.97	19.13	24.44		

测试条件 Rating Condition: 吸气温度 Suction Gas Temperature 18.3℃, 过冷度 Sub-cooling 0K

中温制冷应用
for Medium Temperature Applications

50Hz 380-415V/60Hz 440-460V															 R404A
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	50Hz				60Hz				堵转 电流 LRA	额定 电流 RLA	最大持 续电流 MCC	接管类型 Connections
				制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current				
	HP	cm³/rev		kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	A	A	A	
3	3	52	3CB052SA0M	6.20	21.2	2.70	5.3	-	-	-	-	52	6.0	8.4	焊接 Brazed
	4	67	3CB067SA0M	8.00	27.3	3.25	6.1	-	-	-	-	57	8.4	11.8	焊接 Brazed
	5	84	3CB084SA0M	10.00	34.1	4.00	7.2	-	-	-	-	70	10.9	15.3	焊接 Brazed
	6	100	3CB100SA0M	11.80	40.3	4.80	8.3	-	-	-	-	70	11.5	16.1	焊接 Brazed
	7	110	3CB110SA0M	13.00	44.4	5.25	9.4	-	-	-	-	78	14.4	20.1	焊接 Brazed
	8	137	3CC137LA0M	16.05	54.8	6.70	11.9	19.15	65.4	8.10	12.2	95	15.1	21.1	焊接 Brazed
	9	149	3CC149LA0M	17.40	59.4	7.20	12.6	20.70	70.7	8.75	13.1	95	16.7	23.4	焊接 Brazed
	10	171	3CC171LA0M	19.85	67.8	8.10	14.2	23.60	80.6	9.90	14.7	111	18.5	25.9	焊接 Brazed
	12	205	3CC205LA0M	23.00	78.5	9.70	16.6	27.40	93.5	11.70	17.2	111	24.2	33.9	焊接 Brazed
	15	260	3CC260LA0M	30.20	103.0	12.40	22.3	35.20	120.1	15.10	22.9	167	28.6	40.0	焊接 Brazed
	20	277	3CF277SA0M	34.90	119.0	13.15	24.6	-	-	-	-	205	30.7	43.0	焊接 Brazed

50Hz 220-240V											 R404A
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	50Hz				堵转 电流 LRA	额定 电流 RLA	最大持 续电流 MCC	接管类型 Connections
	HP	cm³/rev		制冷量 Capacity		功率 Input	电流 Current				
				kW	kBTU/h	kW	A	A	A		
1	3	52	3CB052EA0M	6.05	20.6	2.80	12.5	108	16.6	23.3	焊接 Brazed

DC Inverter 400V										 R404A
压缩机型号 Compressor Model	排气量 Displacement	60r/s				90r/s				接管类型 Connections
		制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current	
	cm³/rev	kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	
3CB084ZA0M	84	12.7	43.3	4.85	12.6	18.9	64.5	7.6	13.6	焊接 Brazed

中温制冷应用
for Medium Temperature Applications

AC Inverter 400V										R404A
压缩机型号 Compressor Model	排气量 Displacement	60Hz				90Hz				接管类型 Connections
		制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current	
	cm³/rev	kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	
C-SBS180H00B	56	8.58	29.3	3.90	8.4	12.67	43.3	5.87	10.2	焊接 Brazed

中温制冷应用
for Medium Temperature Applications

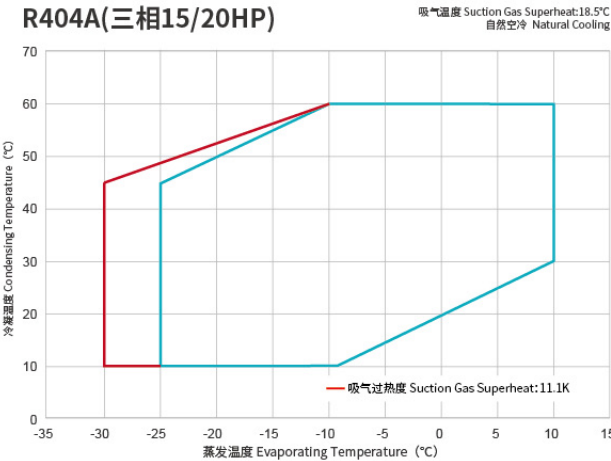
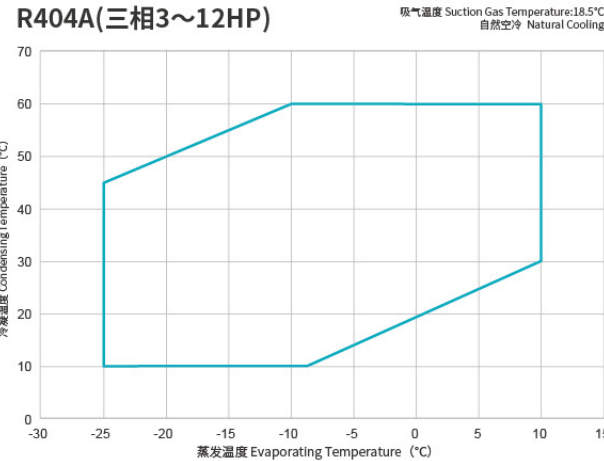
50Hz 220-240V											 R22
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	50Hz				堵转 电流 LRA	额定 电流 RLA	最大持 续电流 MCC	接管类型 Connections
				制冷量 Capacity		功率 Input	电流 Current				
	HP	cm³/rev		kW	kBTU/h	kW	A	A	A		
1	3	52	2CB052EA0M	5.80	19.8	2.45	10.9	108	16.2	22.7	焊接 Brazed
		67	2CB067EA0M	7.36	25.1	2.95	14.3	108	26.9	37.6	焊接 Brazed

AC Inverter 400V										R404A
压缩机型号 Compressor Model	排气量 Displacement	50Hz				80Hz				接管类型 Connections
		制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current	
	cm³/rev	kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	
C-SBVN373L0B	86	10.30	35.2	4.36	8.9	15.9	54.3	6.97	12.2	焊接 Brazed

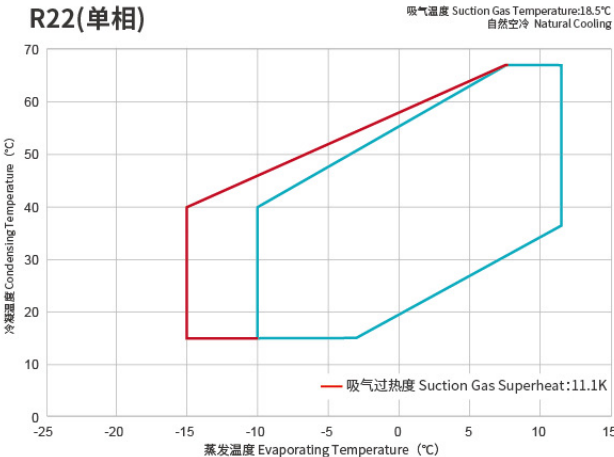
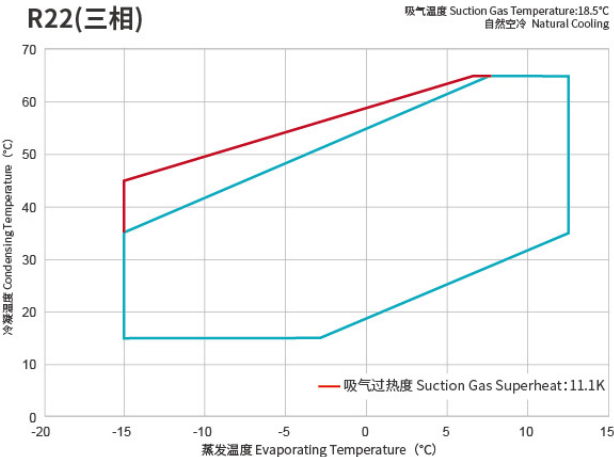
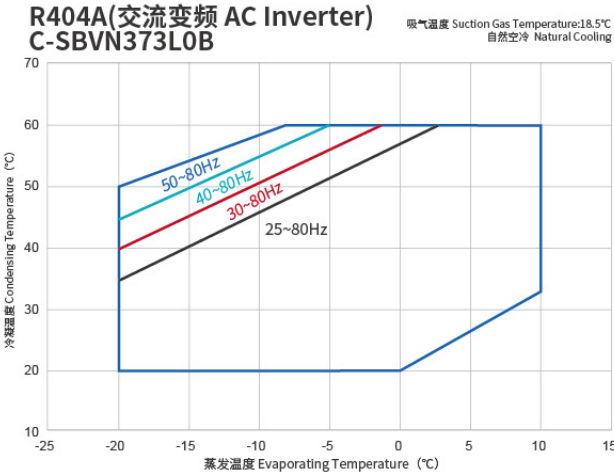
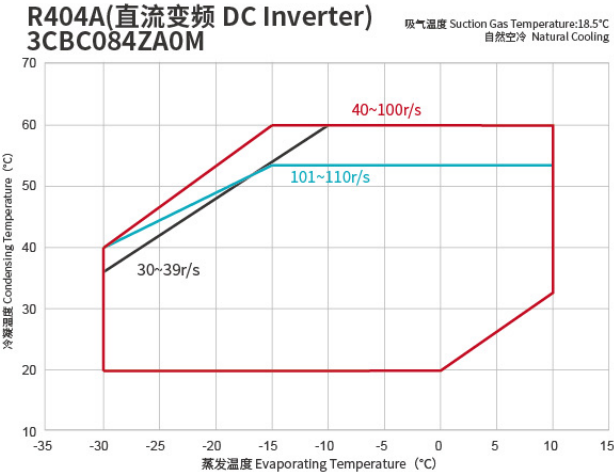
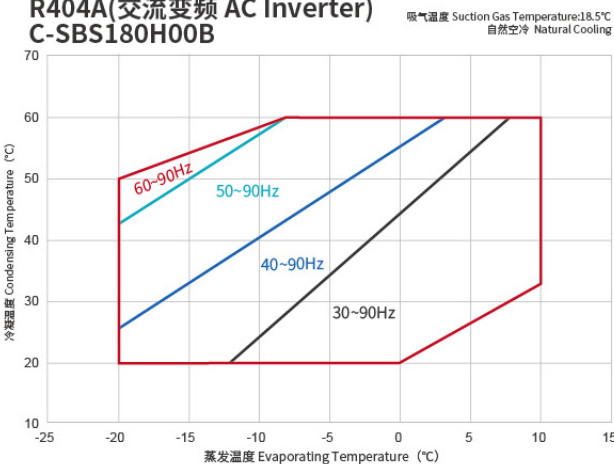
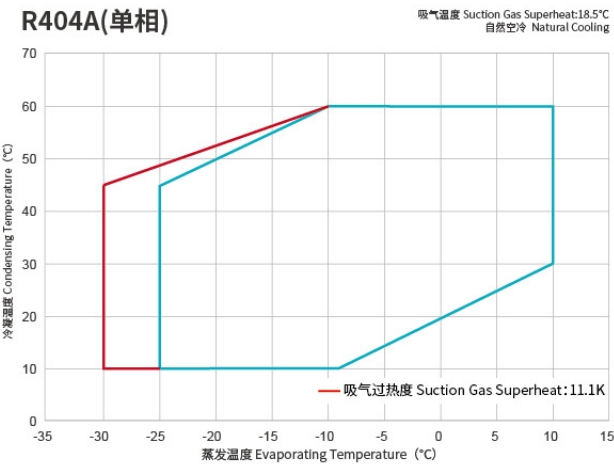
中温机型测试条件 Rating Condition for Medium Temperature Model		
	℃	℉
冷凝温度 Condensing Temperature	43.5	110
蒸发温度 Evaporating Temperature	-6.5	20
过冷度 Sub Cooling	0	0
吸气温度 Suction Gas Temperature	18.5	65

50Hz 380~415V/60Hz 440~460V														 R22	
相 Phase	额定功率 Output	排气量 Displacement	压缩机型号 Compressor Model	50Hz				60Hz				堵转 电流 LRA	额定 电流 RLA	最大持 续电流 MCC	接管类型 Connections
				制冷量 Capacity		功率 Input	电流 Current	制冷量 Capacity		功率 Input	电流 Current				
	HP	cm³/rev		kW	kBTU/h	kW	A	kW	kBTU/h	kW	A	A	A	A	
3	3.5	56	2CB056LA0M	6.39	21.8	2.43	4.7	7.65	26.1	2.90	4.8	53	7.9	11.1	焊接 Brazed
	4	67	2CB067LA0M	7.75	26.5	2.86	5.3	9.34	31.9	3.45	5.4	53	8.6	12.0	焊接 Brazed
	5	83	2CB083LA0M	9.45	32.3	3.53	6.4	11.64	39.7	4.32	6.6	62	9.7	13.6	焊接 Brazed
	6	100	2CB100LA0M	11.45	39.1	4.18	7.5	14.03	47.9	5.12	7.8	69	11.6	16.3	焊接 Brazed
	7	110	2CB110RA0M	12.67	43.3	4.50	8.5	15.43	52.7	5.50	8.7	76	11.5	16.1	焊接 Brazed
	8	137	2CC137LA0M	15.55	53.1	5.80	10.3	18.80	64.2	7.05	10.6	95	14.3	20.0	焊接 Brazed
	9	149	2CC149LA0M	17.10	58.4	6.30	11.1	20.30	69.3	7.70	11.5	95	13.7	19.2	焊接 Brazed
	10	171	2CC171LA0M	19.70	67.3	7.05	12.4	23.80	81.3	8.60	12.8	110	19.0	26.6	焊接 Brazed
	205	2CC205SA0M	23.35	79.7	8.50	14.5	-	-	-	-	110	24.2	33.9	焊接 Brazed	

中温运行范围
Operating Envelope for Medium Temperature Applications



中温运行范围
Operating Envelope for Medium Temperature Applications



中温机型制冷量 (kW)
Capacity for Medium Temperature Applications

50Hz 380-415V										R404A
型号 Model	冷凝温度 Condensing Temp.(°C)	蒸发温度 Evaporating Temp(°C)								
		-25.0	-20.0	-15.0	-10.0	-6.5	0.0	5.0	10.0	
3CB052SA0M	20.0	4.59	5.56	6.74	8.16	9.34	11.99	-	-	
	30.0	3.92	4.73	5.71	6.90	7.87	10.05	12.13	14.64	
	43.5	3.15	3.79	4.54	5.46	6.20	7.86	9.44	11.33	
	50.0	-	3.40	4.07	4.87	5.53	6.99	8.37	10.02	
	60.0	-	-	-	4.13	4.67	5.87	7.00	8.35	
3CB067SA0M	20.0	6.11	7.37	8.90	10.73	12.24	15.63	-	-	
	30.0	5.15	6.20	7.47	9.00	10.25	13.05	15.72	18.94	
	43.5	4.05	4.87	5.85	7.03	8.00	10.16	12.21	14.67	
	50.0	-	4.34	5.21	6.25	7.10	9.01	10.81	12.97	
	60.0	-	-	-	5.25	5.96	7.54	9.03	10.82	
3CB084SA0M	20.0	7.16	8.79	10.84	13.31	15.29	19.49	-	-	
	30.0	6.14	7.46	9.14	11.17	12.80	16.28	19.35	22.78	
	43.5	4.96	5.95	7.22	8.76	10.00	12.66	15.03	17.66	
	50.0	-	5.34	6.44	7.79	8.88	11.22	13.31	15.63	
	60.0	-	-	-	6.55	7.45	9.39	11.12	13.05	
3CB100SA0M	20.0	8.79	10.28	12.44	15.25	17.62	22.87	-	-	
	30.0	7.45	8.76	10.59	12.94	14.89	19.20	23.11	27.55	
	43.5	5.92	7.01	8.47	10.30	11.80	15.06	17.99	21.28	
	50.0	-	6.30	7.61	9.23	10.55	13.40	15.95	18.80	
	60.0	-	-	-	7.84	8.94	11.27	13.35	15.67	
3CB110SA0M	20.0	9.52	11.57	14.06	17.09	19.60	25.26	-	-	
	30.0	8.20	9.90	11.97	14.46	16.51	21.11	25.51	30.82	
	43.5	6.65	7.97	9.56	11.45	13.00	16.45	19.72	23.63	
	50.0	-	7.18	8.58	10.24	11.59	14.59	17.42	20.80	
	60.0	-	-	-	8.68	9.79	12.23	14.51	17.22	
3CC137LA0M	20.0	11.61	14.18	17.33	21.16	24.34	31.57	-	-	
	30.0	10.03	12.16	14.73	17.86	20.43	26.23	31.79	38.54	
	43.5	8.16	9.79	11.74	14.09	16.00	20.27	24.31	29.16	
	50.0	-	8.83	10.53	12.57	14.23	17.91	21.37	25.50	
	60.0	-	-	-	10.64	11.97	14.92	17.67	20.92	
CC149LA0M	20.0	12.63	15.43	18.84	23.01	26.47	34.33	-	-	
	30.0	10.91	13.22	16.02	19.42	22.22	28.53	34.58	41.91	
	43.5	8.88	10.65	12.77	15.32	17.40	22.04	26.44	31.71	
	50.0	-	9.60	11.45	13.67	15.47	19.47	23.24	27.74	
	60.0	-	-	-	11.57	13.02	16.22	19.21	22.75	
3CC171LA0M	20.0	14.25	17.39	21.23	25.91	29.80	38.61	-	-	
	30.0	12.38	15.00	18.16	21.99	25.14	32.25	39.05	47.29	
	43.5	10.17	12.19	14.60	17.49	19.85	25.10	30.07	36.03	
	50.0	-	11.03	13.15	15.67	17.72	22.26	26.53	31.61	
	60.0	-	-	-	13.33	14.99	18.63	22.03	26.05	
3CC205LA0M	20.0	17.45	21.17	25.68	31.15	35.65	45.83	-	-	
	30.0	14.83	17.89	21.58	26.04	29.69	37.90	45.72	55.16	
	43.5	11.80	14.13	16.93	20.27	32.00	29.08	34.82	41.70	
	50.0	-	12.62	15.06	17.98	20.34	25.60	30.55	36.46	
	60.0	-	-	-	15.07	16.99	21.23	25.20	29.91	
3CC260LA0M	30.0	18.59	22.66	27.63	33.74	38.79	50.18	60.96	73.73	
	43.5	14.87	18.30	22.26	26.51	30.24	37.75	45.74	55.01	
	50.0	-	-	20.08	23.65	26.57	33.21	39.63	45.95	
	60.0	-	-	-	20.02	21.67	27.02	31.79	37.18	
3CF277SA0M	30.0	19.69	23.97	29.19	35.54	40.79	52.69	72.2	78.12	
	43.5	13.37	20.96	25.3	30.53	34.82	44.46	55.9	64.76	
	50.0	15.76	18.89	22.64	27.14	30.81	38.99	49.3	56.01	
	60.0	-	-	-	22.7	25.58	31.93	40.9	44.92	

测试条件 Rating Condition: 吸气温度 Suction Gas Temperature 18.3°C, 过冷度 Sub-cooling 0K

中温机型制冷量 (kW)

Capacity for Medium Temperature Applications

50Hz 220-240V								
型 号 Model	冷凝温度 Condensing Temp.(°C)	蒸发温度 Evaporating Temp(°C)						
		-20.0	-15.0	-10.0	-6.5	0.0	5.0	10.0
3CB052EA0M	20.0	5.42	6.57	7.96	9.11	11.71	-	-
	30.0	4.63	5.59	6.74	7.68	9.79	11.81	14.24
	43.5	3.72	4.46	5.33	6.05	7.64	9.15	10.95
	50.0	-	0.40	4.77	5.40	6.78	8.09	9.65
	60.0	-	-	4.04	4.56	5.69	6.75	8.01

直流变频 DC Inverter 400V								 R404A	
型 号 Model	转速 r/s	冷凝温度 Condensing Temp.(°C)	蒸发温度 Evaporating Temp(°C)						
			-30.0	-25.0	-20.0	-15	-6.5	0	10.0
3CB084ZA0M	60	20.0	7.16	8.77	10.74	13.16	18.58	24.19	36.30
		30.0	6.46	7.81	9.46	11.47	15.90	20.41	29.97
		40.0	5.66	6.92	8.30	9.95	13.54	17.14	24.64
		50.0	-	-	7.28	86.63	11.53	14.40	20.25
		60.0	-	-	-	7.54	9.89	12.1	16.75
	90	20.0	10.97	13.38	16.30	19.86	27.79	35.93	53.35
		30.0	9.88	11.86	14.28	17.20	23.60	30.06	43.62
		40.0	8.64	10.46	12.45	14.83	19.95	25.03	35.48
		50.0	-	-	10.85	12.78	16.85	20.83	28.85
		60.0	-	-	-	11.09	14.35	17.477	23.64

交流变频 AC Inverter 400V								 R404A	
型 号 Model	转速 r/s	冷凝温度 Condensing Temp.(°C)	蒸发温度 Evaporating Temp(°C)						
			-20.0	-15.0	-10.0	-6.7	0.0	4.4	12.0
C-SBS180H00B	60	35	5.84	7.13	8.70	9.93	12.97	15.46	20.94
		45	4.84	5.93	7.25	8.29	10.87	12.89	17.65
		54.4	4.05	4.97	6.10	6.98	9.17	10.98	14.98
		65	-	4.08	5.02	5.75	7.59	9.11	12.47
	90	35	8.75	10.63	12.92	14.70	19.09	22.67	30.50
		45	7.21	8.80	10.73	12.24	15.97	19.03	25.74
		54.4	6.00	7.34	8.99	10.27	13.47	16.09	21.87
		65	-	6.00	7.37	8.45	11.13	13.34	18.24
C-SBVN373L0B	50	35	8.80	10.56	12.66	14.27	18.21	21.38	28.18
		45	7.19	8.58	10.25	11.52	14.61	17.08	22.36
		54.4	5.95	7.08	8.41	9.43	11.90	13.86	18.04
		65	-	-	-	7.66	9.61	11.15	14.42
	80	35	14.51	17.41	20.89	23.56	30.07	35.30	46.57
		45	11.52	13.74	16.38	18.40	23.29	27.19	35.52
		54.4	9.27	10.99	13.03	14.57	18.31	21.27	27.55
		65	-	-	-	11.45	14.26	16.48	21.16

测试条件 Rating Condition: 吸气温度 Suction Gas Temperature 18.3℃, 过冷度 Sub-cooling 0K

中温机型制冷量 (kW)

Capacity for Medium Temperature Applications

50Hz 380-415V							
型 号 Model	冷凝温度 Condensing Temp.(°C)	蒸发温度 Evaporating Temp(°C)					
		-15.0	-10.0	-6.5	0.0	7.0	12.0
2CB056LA0M	30.0	5.64	6.80	7.75	9.89	12.86	-
	43.5	4.66	5.61	6.39	8.14	10.56	12.72
	50.0	4.24*	5.11*	5.82	7.40	9.60	11.55
	60.0	-	-	-	6.40	8.29	9.97
2CB067LA0M	30.0	6.97	8.33	9.43	11.90	15.27	-
	43.5	5.69	6.82	7.75	9.82	12.67	15.20
	50.0	5.15*	6.19*	7.04	8.94	11.57	13.90
	60.0	-	-	-	7.75	10.06	12.13
2CB083LA0M	30.0	8.34	9.95	11.27	14.18	18.17	-
	43.5	6.98	8.34	9.45	11.91	15.28	18.25
	50.0	6.41*	7.66*	8.68	10.94	14.04	16.78
	60.0	-	-	-	9.61	12.34	14.76
2CB100LA0M	30.0	9.76	12.03	13.93	18.28	24.49	-
	43.5	8.18	9.97	11.45	14.81	19.55	23.83
	50.0	7.50*	9.09*	10.40	13.37	17.51	21.24
	60.0	-	-	-	11.43	14.80	17.80
2CB110RA0M	30.0	10.89	13.20	15.11	19.41	25.41	-
	43.5	9.27	11.14	12.67	16.09	20.81	25.01
	50.0	8.57*	10.26*	11.63	14.68	18.88	22.59
	60.0	-	-	-	12.77	16.27	19.34
2CC137LA0M	30.0	12.51	15.34	17.70	23.07	30.70	-
	43.5	10.86	13.23	15.18	19.61	25.83	31.46
	50.0	10.14*	12.31 *	14.09	18.12	23.76	28.83
	60.0	-	-	-	16.05	20.89	25.22
2CC149LA0M	30.0	13.73	16.81	19.37	25.19	33.44	-
	43.5	11.80	14.36	16.47	21.25	27.96	34.01
	50.0	10.97*	13.30*	15.22	19.56	25.63	31.08
	60.0	-	-	-	17.23	22.43	27.07
2CC171LA0M	30.0	15.76	19.24	22.11	28.66	37.88	-
	43.5	13.84	16.75	19.15	24.55	32.08	38.84
	50.0	12.99*	15.66*	17.86	22.78	29.60	35.69
	60.0	-	-	-	20.30	26.16	31.35
2CC205SA0M	30.0	18.62	22.73	26.13	33.86	44.75	-
	43.5	16.36	19.80	22.63	29.01	37.90	45.88
	50.0	15.35*	18.51*	21.10	26.91	34.97	42.17
	60.0	-	-	-	23.99	30.91	37.05

50Hz 220-240V							
型 号 Model	冷凝温度 Condensing Temp.(°C)	蒸发温度 Evaporating Temp(°C)					
		-15.0	-10.0	-6.5	0.0	7.0	12.0
2CB052EA0M	30.0	5.36	6.46	7.36	9.39	11.32	-
	43.5	-	5.72	5.80	7.33	8.77	10.50
	50.0	-	-	-	6.50	7.76	9.25
	60.0	-	-	-	-	6.47	7.68
2CB067EA0M	30.0	6.27	7.48	8.47	10.66	13.66	-
	43.5	5.71	6.76	7.60	9.45	11.96	14.14
	50.0	5.46*	6.43*	7.21	8.92	11.21	13.21
	60.0	-	-	-	8.16	10.16	11.89

测试条件 Rating Condition: 吸气温度 Suction Gas Temperature 18.5℃, 过冷度 Sub-cooling 0K
(*工况吸气过热度为11K, Superheat 11.1K for * Conditions)



R404A低温喷液机型使用标准・使用极限

Application Standard & Limit(R404A Low Temperature Model)

为正确使用立式涡旋压缩机，对其使用标准、使用极限作如下规定：

使用标准值:适用于常用条件下(日本JIS B8616与JIS B8616相关标准、过载、低温条件下的商品运转条件)的运转。

使用极限值:适用于过渡条件下的短时间运转。

The following requirement apply to Vertical type Hermetic Scroll Compressors:Applicable to ordinary conditions in Japan JIS B8616 or equivalent condition,such as standard rating conditions, maximum operating conditions, low temp erature conditions,etc. Applicable to transitional brief periods, such as start-up and beginning of defrast mode.

序号 No.	项目 Item	使用标准值 Standard		使用极限值 Limit	备注 Note
1	制冷剂 Refrigerant	R404A			
2	蒸发温度范围 Evaporating Temp.	-45~-5℃ 0.004~0.411MPa(G)			压力指吸气压力 Compressor suction pressure
3	冷凝温度范围 Condensing Temp.	+30~+60℃ 1.31~2.77MPa(G)			确保温度膨胀阀前后的差压在0.8MPa(g)以上 To ensure pressure difference between expansion valve's inlet and outlet over 0.8MPa(g)
4	压缩比 Compression Ratio	24以下24Max			
5	电动机绕组温度 Winding Temp.	90℃以下 90℃ Max.	110℃		
6	压缩机外壳底部温度 Shell Bottom Temp.	上限：90℃以下 Upper Limit:90℃ Max. 下限：蒸发压力相对应饱和温度+12℃以上 Lower Limit:Evaporating Temp.+12℃ Min.			安装曲轴箱加热器 To install crankcase heater
		下限：环境温度+11K以上 Lower Limit:Ambient Temp.+11K Min.			
7	排气温度 Discharge Gas Temp.	115℃以下 115℃ Max	125℃		C-sb系列:距压缩机排气口10cm以内位置的排气管温度 C-sb series:within 10cm(4in) of the discharge fitting. C-sc系列:上盖铜管内排气温度保护器的检测温度 C-sc series:inside of the well pipe on the top of compressor.
8	吸气温度 Suction Gas Temp.	吸气过热度在5K以上 Superheat:5K Min.	应无由于液体吸入而引起的冲刷音(不增加电流及振动) No excessive noise.		压缩机入口30cm以内位置的吸气管温度。 还应同时满足5、6、7、13项 it should meet the requirement of item 5,6,7 and 13 within 30cm of the suction fitting.
9	运转时供电电压 Running Voltage	额定电压±10% Within ±10% of the rated voltage.			运转时压缩机接线柱电压 Voltage at compressor terminals.
10	启动时供电电压 Starting Voltage	额定电压85%以上 Three Phase Models: 85% of the rated voltage min.			指在启动电流升高，电压下降时的压缩机接线柱电压 dropped voltage at compressor terminals.
11	启停周期 On/Off Period	运转时间：至少应使油回到指定油位所需的时间 ON Period:Until the oil level returns to the center of the lower bearing.			一个循环周期为10分钟以上，停机3分钟，以此为基准，启停周期不得超过20万个周期 For at least 7 minutes-on/3 minutes-off is recommendable.200,000 cycle max.
		停止时间：至少应使高低压达到平衡所需的时间 OFF Period:Until balance of high and low pressure is obtained.			
12	制冷剂注入量 Refrigerant Charge	制冷剂充入量应尽量少 To minimum the charged refrigerant.			通过商品的冷却、温度、压力等适当调节 Properly adjust according to the commodities cooling, temperature,presure,etc...
		膨胀阀前不应产生闪发气体 No flash gas in front of expansion valve.			
13	压缩机内最低油面 Minimum Oil Level	运转时保持油面在视油镜下部或[LOW]标识处 Keep oil level above the bottom or “LOW” grade of oil level gauge when in operation			
14	异常升压/降压 Abnormal Pressure Rise/Drop	压力上升：2.79MPa(G)以下 Pressure Rise: 2.79MPa(G)Max.			高压开关设定值 By high pressure switch
		压力下降：-0.02MPa(G)以上 Pressure Drop: -0.02MPa(G) Min.			低压开关设定值 By low pressure switch
15	水份 System Moisture Level	制冷回路中水份要求在200ppm以下 Keep the moisture in refrigeration loop below 200ppm.			
16	不凝性气体 System Uncondensable Gas Level	制冷回路中不凝性气体要求在1%(容积比)以下 1Vol.%Max. 残留氧气要求在0.1%(容积比)以下 Residual Oxygen 0.1Vol.% Max			抽真空24小时以后绝对压力应在1.01kPa以下 24 hrs. After vacuuming:1.01kPa max.
17	倾斜角度 Tilt	压缩机倾斜最大5° 5°Max.			

■ 超出以上极限范围的运转必须得到我公司的认可。Operation beyond the above limits must be approved by our company.

(G)：表压 Gauge Pressure



R448A/R449A低温喷液机型使用标准・使用极限

Application Standard & Limit(R448A/R449A Low Temperature Model)

为正确使用立式涡旋压缩机，对其使用标准、使用极限作如下规定：

使用标准值:适用于常用条件下(日本JIS B8616与JIS B8616相关标准、过载、低温条件下的商品运转条件)的运转。

使用极限值:适用于过渡条件下的短时间运转。

The following requirement apply to Vertical type Hermetic Scroll Compressors:Applicable to ordinary conditions in Japan JIS B8616 or equivalent condition,such as standard rating conditions, maximum operating conditions, low temp erature conditions,etc. Applicable to transitional brief periods, such as start-up and beginning of defrast mode.

序号 No.	项目 Item	使用标准值 Standard		使用极限值 Limit	备注 Note
1	制冷剂 Refrigerant	R448A/R449A			
2	蒸发温度范围 Evaporating Temp.	-40~-5℃ 0.003~0.34MPa(G)			压力指吸气压力 Compressor suction pressure
3	冷凝温度范围 Condensing Temp.	+30~+62℃ 1.19~2.75MPa(G)			确保温度膨胀阀前后的差压在0.8MPa(g)以上 To ensure pressure difference between expansion valve's inlet and outlet over 0.8MPa(g)
4	压缩比 Compression Ratio	24以下24Max			
5	电动机绕组温度 Winding Temp.	90℃以下 90℃ Max.	110℃		
6	压缩机外壳底部温度 Shell Bottom Temp.	上限: 90℃以下 Upper Limit:90℃ Max. 下限: 蒸发压力相对应饱和温度+12℃以上 Lower Limit:Evaporating Temp.+12℃ Min.			安装曲轴箱加热器 To install crankcase heater
		下限: 环境温度+11K以上 Lower Limit:Ambient Temp.+11K Min.			
7	排气温度 Discharge Gas Temp.	115℃以下 115℃ Max	125℃		C-sb系列:距压缩机排气口10cm以内位置的排气管温度 C-sb series:within 10cm(4in) of the discharge fitting. C-sc系列:上盖铜管内排气温度保护器的检测温度 C-sc series:inside of the well pipe on the top of compressor.
8	吸气温度 Suction Gas Temp.	吸气过热度在5K以上 Superheat:5K Min.	应无由于液体吸入而引起的冲刷音(不增加电流及振动) No excessive noise.		压缩机入口30cm以内位置的吸气管温度。 还应同时满足5、6、7、13项 it should meet the requirement of item 5,6,7 and 13 within 30cm of the suction fitting.
9	运转时供电电压 Running Voltage	额定电压±10% Within ±10% of the rated voltage.			运转时压缩机接线柱电压 Voltage at compressor terminals.
10	启动时供电电压 Starting Voltage	额定电压85%以上 Three Phase Models: 85% of the rated voltage min.			指在启动电流升高，电压下降时的压缩机接线柱电压 dropped voltage at compressor terminals.
11	启停周期 On/Off Period	运转时间: 至少应使油回到指定油位所需的时间 ON Period:Until the oil level returns to the center of the lower bearing.			一个循环周期为10分钟以上，停机3分钟，以此为基准，启停周期不得超过20万个周期 For at least 7 minutes-on/3 minutes-off is recommendable.200,000 cycle max.
		停止时间: 至少应使高低压达到平衡所需的时间 OFF Period:Until balance of high and low pressure is obtained.			
12	制冷剂注入量 Refrigerant Charge	制冷剂充入量应尽量少 To minimum the charged refrigerant. 膨胀阀前不应产生闪发气体 No flash gas in front of expansion valve.			通过商品的冷却、温度、压力等适当调节 Properly adjust according to the commodities cooling, temperature,presure,etc...
13	压缩机内最低油面 Minimum Oil Level	运转时保持油面在视油镜下部或[LOW]标识处 Keep oil level above the bottom or “LOW” grade of oil level gauge when in operation			
14	异常升压/降压 Abnormal Pressure Rise/Drop	压力上升: 2.79MPa(G)以下 Pressure Rise: 2.79MPa(G)Max.			高压开关设定值 By high pressure switch
		压力下降: -0.02MPa(G)以上 Pressure Drop: -0.02MPa(G) Min.			低压开关设定值 By low pressure switch
15	水份 System Moisture Level	制冷回路中水份要求在200ppm以下 Keep the moisture in refrigeration loop below 200ppm.			
16	不凝性气体 System Uncondensable Gas Level	制冷回路中不凝性气体要求在1%(容积比)以下 1Vol.%Max. 残留氧气要求在0.1%(容积比)以下 Residual Oxygen 0.1Vol.% Max			抽真空24小时以后绝对压力应在1.01kPa以下 24 hrs. After vacuuming:1.01kPa max.
17	倾斜角度 Tilt	压缩机倾斜最大5° 5°Max.			

■ 超出以上极限范围的运转必须得到我公司的认可。Operation beyond the above limits must be approved by our company.

(G)：表压 Gauge Pressure



R22低温喷液机型使用标准・使用极限

Application Standard & Limit(R22 Low Temperature Model)

为正确使用立式涡旋压缩机，对其使用标准、使用极限作如下规定：

使用标准值:适用于常用条件下(日本JIS B8616与JIS B8616相关标准、过载、低温条件下的商品运转条件)的运转。

使用极限值:适用于过渡条件下的短时间运转。

The following requirement apply to Vertical type Hermetic Scroll Compressors:Applicable to ordinary conditions in Japan JIS B8616 or equivalent condition,such as standard rating conditions, maximum operating conditions, low temp erature conditions,etc. Applicable to transitional brief periods, such as start-up and beginning of defrast mode.

序号 No.	项目 Item	使用标准值 Standard		使用极限值 Limit	备注 Note
1	制冷剂 Refrigerant	R22			
2	蒸发温度范围 Evaporating Temp.	-40~-5℃ 0.004~0.320MPa(G)			压力指吸气压力 Compressor suction pressure
3	冷凝温度范围 Condensing Temp.	+30~+63℃ 1.09~2.49MPa(G)			确保温度膨胀阀前后的差压在0.8MPa(g)以上 To ensure pressure difference between expansion valve's inlet and outlet over 0.8MPa(g)
4	压缩比 Compression Ratio	24以下24Max			
5	电动机绕组温度 Winding Temp.	90℃以下 90℃ Max.	110℃		
6	压缩机外壳底部温度 Shell Bottom Temp.	上限：90℃以下 Upper Limit:90℃ Max. 下限：蒸发压力相对应饱和温度+12℃以上 Lower Limit:Evaporating Temp.+12℃ Min.			安装曲轴箱加热器 To install crankcase heater
		下限：环境温度+11K以上 Lower Limit:Ambient Temp.+11K Min.			
7	排气温度 Discharge Gas Temp.	115℃以下 115℃ Max	125℃		C-sb系列:距压缩机排气口10cm以内位置的排气管温度 C-sb series:within 10cm(4in) of the discharge fitting. C-sc系列:上盖铜管内排气温度保护器的检测温度 C-sc series:inside of the well pipe on the top of compressor.
8	吸气温度 Suction Gas Temp.	吸气过热度在5K以上 Superheat:5K Min.	应无由于液体吸入而引起的冲刷音(不增加电流及振动) No excessive noise.		压缩机入口30cm以内位置的吸气管温度。 还应同时满足5、6、7、13项 it should meet the requirement of item 5,6,7 and 13 within 30cm of the suction fitting.
9	运转时供电电压 Running Voltage	额定电压±10% Within ±10% of the rated voltage.			运转时压缩机接线柱电压 Voltage at compressor terminals.
10	启动时供电电压 Starting Voltage	额定电压85%以上 Three Phase Models: 85% of the rated voltage min.			指在启动电流升高，电压下降时的压缩机接线柱电压 dropped voltage at compressor terminals.
11	启停周期 On/Off Period	运转时间：至少应使油回到指定油位所需的时间 ON Period:Until the oil level returns to the center of the lower bearing.			一个循环周期为10分钟以上，停机3分钟，以此为基准，启停周期不得超过20万个周期 For at least 7 minutes-on/3 minutes-off is recommendable.200,000 cycle max.
		停止时间：至少应使高低压达到平衡所需的时间 OFF Period:Until balance of high and low pressure is obtained.			
12	制冷剂注入量 Refrigerant Charge	制冷剂充入量应尽量少 To minimum the charged refrigerant. 膨胀阀前不应产生闪发气体 No flash gas in front of expansion valve.			通过商品的冷却、温度、压力等适当调节 Properly adjust according to the commodities cooling, temperature,presure,etc...
13	压缩机内最低油面 Minimum Oil Level	运转时保持油面在视油镜下部或[LOW]标识处 Keep oil level above the bottom or “LOW” grade of oil level gauge when in operation			
14	异常升压/降压 Abnormal Pressure Rise/Drop	压力上升：2.55MPa(G)以下 Pressure Rise: 2.55MPa(G)Max.			高压开关设定值 By high pressure switch
		压力下降：-0.02MPa(G)以上 Pressure Drop: -0.02MPa(G) Min.			低压开关设定值 By low pressure switch
15	水份 System Moisture Level	制冷回路中水份要求在200ppm以下 Keep the moisture in refrigeration loop below 200ppm.			
16	不凝性气体 System Uncondensable Gas Level	制冷回路中不凝性气体要求在1%(容积比)以下 1Vol.%Max. 残留氧气要求在0.1%(容积比)以下 Residual Oxygen 0.1Vol.% Max			抽真空24小时以后绝对压力应在1.01kPa以下 24 hrs. After vacuuming:1.01kPa max.
17	倾斜角度 Tilt	压缩机倾斜最大5° 5°Max.			

■ 超出以上极限范围的运转必须得到我公司的认可。Operation beyond the above limits must be approved by our company.

(G)：表压 Gauge Pressure



R410A低温喷液机型使用标准・使用极限

Application Standard & Limit(R410A Low Temperature Model)

为正确使用立式涡旋压缩机，对其使用标准、使用极限作如下规定：

使用标准值:适用于常用条件下(日本JIS B8616与JIS B8616相关标准、过载、低温条件下的商品运转条件)的运转。

使用极限值:适用于过渡条件下的短时间运转。

The following requirement apply to Vertical type Hermetic Scroll Compressors:Applicable to ordinary conditions in Japan JIS B8616 or equivalent condition,such as standard rating conditions, maximum operating conditions, low temp erature conditions,etc. Applicable to transitional brief periods, such as start-up and beginning of defrast mode.

序号 No.	项目 Item	使用标准值 Standard		使用极限值 Limit	备注 Note
1	制冷剂 Refrigerant	R410A			
2	蒸发温度范围 Evaporating Temp.	-45~-5℃ 0.037~0.575MPa(G)			压力指吸气压力 Compressor suction pressure
3	冷凝温度范围 Condensing Temp.	+30~+55℃ 1.77~3.30MPa(G)			确保温度膨胀阀前后的差压在0.8MPa(g)以上 To ensure pressure difference between expansion valve's inlet and outlet over 0.8MPa(g)
4	压缩比 Compression Ratio	24以下24Max			
5	电动机绕组温度 Winding Temp.	90℃以下 90℃ Max.	110℃		
6	压缩机外壳底部温度 Shell Bottom Temp.	上限：90℃以下 Upper Limit:90℃ Max. 下限：蒸发压力相对应饱和温度+12℃以上 Lower Limit:Evaporating Temp.+12℃ Min.			安装曲轴箱加热器 To install crankcase heater
		下限：环境温度+11K以上 Lower Limit:Ambient Temp.+11K Min.			
7	排气温度 Discharge Gas Temp.	115℃以下 115℃ Max	125℃		C-sb系列:距压缩机排气口10cm以内位置的排气管温度 C-sb series:within 10cm(4in) of the discharge fitting. C-sc系列:上盖铜管内排气温度保护器的检测温度 C-sc series:inside of the well pipe on the top of compressor.
8	吸气温度 Suction Gas Temp.	吸气过热度在5K以上 Superheat:5K Min.	应无由于液体吸入而引起的冲刷音(不增加电流及振动) No excessive noise.		压缩机入口30cm以内位置的吸气管温度。 还应同时满足5、6、7、13项 it should meet the requirement of item 5,6,7 and 13 within 30cm of the suction fitting.
9	运转时供电电压 Running Voltage	额定电压±10% Within ±10% of the rated voltage.			运转时压缩机接线柱电压 Voltage at compressor terminals.
10	启动时供电电压 Starting Voltage	额定电压85%以上 Three Phase Models: 85% of the rated voltage min.			指在启动电流升高，电压下降时的压缩机接线柱电压 dropped voltage at compressor terminals.
11	启停周期 On/Off Period	运转时间：至少应使油回到指定油位所需的时间 ON Period:Until the oil level returns to the center of the lower bearing.			一个循环周期为10分钟以上，停机3分钟，以此为基准，启停周期不得超过20万个周期 For at least 7 minutes-on/3 minutes-off is recommendable.200,000 cycle max.
		停止时间：至少应使高低压达到平衡所需的时间 OFF Period:Until balance of high and low pressure is obtained.			
12	制冷剂注入量 Refrigerant Charge	制冷剂充入量应尽量少 To minimum the charged refrigerant. 膨胀阀前不应产生闪发气体 No flash gas in front of expansion valve.			通过商品的冷却、温度、压力等适当调节 Properly adjust according to the commodities cooling, temperature,presure,etc...
13	压缩机内最低油面 Minimum Oil Level	运转时保持油面在视油镜下部或[LOW]标识处 Keep oil level above the bottom or “LOW” grade of oil level gauge when in operation			
14	异常升压/降压 Abnormal Pressure Rise/Drop	压力上升：3.50MPa(G)以下 Pressure Rise: 3.50MPa(G)Max.			高压开关设定值 By high pressure switch
		压力下降：0.01MPa(G)以上 Pressure Drop: 0.01MPa(G) Min.			低压开关设定值 By low pressure switch
15	水份 System Moisture Level	制冷回路中水份要求在200ppm以下 Keep the moisture in refrigeration loop below 200ppm.			
16	不凝性气体 System Uncondensable Gas Level	制冷回路中不凝性气体要求在1%(容积比)以下 1Vol.%Max. 残留氧气要求在0.1%(容积比)以下 Residual Oxygen 0.1Vol.% Max			抽真空24小时以后绝对压力应在1.01kPa以下 24 hrs. After vacuuming:1.01kPa max.
17	倾斜角度 Tilt	压缩机倾斜最大5° 5°Max.			

■ 超出以上极限范围的运转必须得到我公司的认可。Operation beyond the above limits must be approved by our company.

(G)：表压 Gauge Pressure



R404A低温补气机型使用标准・使用极限

Application Standard & Limit(R404A Low Temperature Vapor Injection Model)

为正确使用立式涡旋压缩机，对其使用标准、使用极限作如下规定：

使用标准值:适用于常用条件下(日本JIS B8616与JIS B8616相关标准、过载、低温条件下的商品运转条件)的运转。

使用极限值:适用于过渡条件下的短时间运转。

The following requirement apply to Vertical type Hermetic Scroll Compressors:Applicable to ordinary conditions in Japan JIS B8616 or equivalent condition,such as standard rating conditions, maximum operating conditions, low temp erature conditions,etc. Applicable to transitional brief periods, such as start–up and beginning of defrast mode.

序号 No.	项目 Item	使用标准值 Standard	使用极限值 Limit	备注 Note
1	制冷剂 Refrigerant	R404A		
2	蒸发温度范围 Evaporating Temp.	-40~-5℃ 0.033~0.411MPa(G)		压力指吸气压力 Compressor suction pressure
3	冷凝温度范围 Condensing Temp.	+20~+60℃ 0.99~2.77MPa(G)	+60℃ 2.77MPa(G)	压力指吸气压力 Compressor suction pressure
4	压缩比 Compression Ratio	19以下19Max		
5	电动机绕组温度 Winding Temp.	90℃以下 90℃ Max.	110℃	
6	压缩机外壳底部温度 Shell Bottom Temp.	上限：90℃以下 Upper Limit:90℃ Max. 下限：蒸发压力相对应饱和温度+12K以上 Lower Limit:Evaporating Temp.+12K Min. 比环境温度高+11K以上 Lower Limit: Ambient Temp.+11K Min.		运转时 when compressor is running 停机时 when compressor shuts off
7	排气温度 Discharge Gas Temp.	115℃以下 115℃ Max	125℃	压缩机上盖中部的铜管内排气 温度保护器的检测温度 Inside of the well pipe on the top of compressor
		排气温度保护器的设定值为125℃ ON,79℃ OFF Discharge Therostat:125℃ ON,79℃ OFF		
8	吸气温度 Suction Gas Temp.	吸气过热度在5K以上 Superheat:5K Min.	应无由于液体吸入而引起的冲刷 音(不增加电流及振动) No excessive noise.	压缩机入口30cm以内位置的吸气管温度。 还应同时满足5、6、7、13项 it should meet the requirement of item 5,6,7 and 13 within 30cm of the suction fitting.
9	运转时供电电压 Running Voltage	额定电压±10% Within ±10% of the rated voltage.		运转时压缩机接线柱电压 Voltage at compressor terminals.
10	启动时供电电压 Starting Voltage	额定电压85%以上 Three Phase Models: 85% of the rated voltage min.		指在启动电流升高，电压下降时的压缩机接线柱 电压 dropped voltage at compressor terminals.
11	启停周期 On/Off Period	运转时间：至少应使油回到指定油位所需的时间 ON Period:Until the oil level returns to the center of the lower bearing.		一个循环周期为10分钟以上，停机3分钟，以此为 基准，启停周期不得超过20万个周期 For at least 7 minutes-on/3 minutes-off is recommendable.200,000 cycle max.
		停止时间：至少应使高低压达到平衡所需的时间 OFF Period:Until balance of high and low pressure is obtained.		
12	制冷剂注入量 Refrigerant Charge	制冷剂充入量应尽量少 To minimum the charged refrigerant. 膨胀阀前不应产生闪发气体 No flash gas in front of expansion valve.		油比重： 0.94 specific gravity oil:0.94
13	压缩机内最低油面 Minimum Oil Level	运转时保持油面在视油镜下部或[LOW]标识处 Keep oil level above the bottom or “LOW” grade of oil level gauge when in operation		
14	异常升压/降压 Abnormal Pressure Rise/Drop	压力上升： 2.79MPa(G)以下 Pressure Rise: 3.50MPa(G)Max.		高压开关设定值 By high pressure switch
		压力下降： 0.01MPa(G)以上 Pressure Drop: 0.01MPa(G) Min.		低压开关设定值 By low pressure switch
15	水份 System Moisture Level	制冷回路中水份要求在200ppm以下 Keep the moisture in refrigeration loop below 200ppm.		
16	不凝性气体 System Uncondensable Gas Level	制冷回路中不凝性气体要求在1%(容积比)以下 1Vol.%Max. 残留氧气要求在0.1%(容积比)以下 Residual Oxygen 0.1Vol.% Max		抽真空24小时以后绝对压力应在1.01kPa以下 24 hrs. After vacuuming:1.01kPa max.
17	倾斜角度 Tilt	压缩机倾斜最大5° 5°Max.		



R404A中温机型使用标准・使用极限

Application Standard & Limit(R404A Medium Temperature Model)

为正确使用立式涡旋压缩机，对其使用标准、使用极限作如下规定：

使用标准值:适用于常用条件下(日本JIS B8616与JIS B8616相关标准、过载、低温条件下的商品运转条件)的运转。

使用极限值:适用于过渡条件下的短时间运转。

The following requirement apply to Vertical type Hermetic Scroll Compressors:Applicable to ordinary conditions in Japan JIS B8616 or equivalent condition,such as standard rating conditions, maximum operating conditions, low temp erature conditions,etc. Applicable to transitional brief periods, such as start–up and beginning of defrast mode.

序号 No.	项目 Item	使用标准值 Standard		使用极限值 Limit	备注 Note
1	制冷剂 Refrigerant	R404A			
2	蒸发温度范围 Evaporating Temp.	-25~10℃ 0.15~0.73Mp(G)			压力指吸气压力 Compressor suction pressure
3	冷凝温度范围 Condensing Temp.	+10~+60℃ 0.72~2.77MPa(G)			确保温度膨胀阀前后的差压在0.8MPa(g)以上 To ensure pressure difference between expansion valve's inlet and outlet over 0.8MPa(g)
4	压缩比 Compression Ratio	1.8~8.5			
5	电动机绕组温度 Winding Temp.	90℃以下 90℃ Max.	125℃		
6	压缩机外壳底部温度 Shell Bottom Temp.	上限：90℃以下 Upper Limit:90℃ Max. 下限：蒸发压力相对应饱和温度+12℃以上 Lower Limit:Evaporating Temp.+12℃ Min.			安装曲轴箱加热器 To install crankcase heater
		下限：环境温度+11K以上 Lower Limit:Ambient Temp.+11K Min.			
7	排气温度 Discharge Gas Temp.	115℃以下 115℃ Max	C-SB:130℃以下 130℃Max.		C-sb系列:距压缩机排气口10cm以内位置的排气管温度 C-sb series:within 10cm(4in) of the discharge fitting. C-sc系列:上盖铜管内排气温度保护器的检测温度 C-sc series:inside of the well pipe on the top of compressor.
			C-SC:135℃以下 135℃Max.		
8	吸气温度 Suction Gas Temp.	吸气过热度在5K以上 Superheat:5K Min.	应无由于液体吸入而引起的冲刷音(不增加电流及振动) No excessive noise.		压缩机入口30cm以内位置的吸气管温度。 还应同时满足5、6、7、13项 it should meet the requirement of item 5,6,7 and 13 within 30cm of the suction fitting.
9	运转时供电电压 Running Voltage	额定电压±10% Within ±10% of the rated voltage.			运转时压缩机接线柱电压 Voltage at compressor terminals.
10	启动时供电电压 Starting Voltage	额定电压85%以上 Three Phase Models: 85% of the rated voltage min.			指在启动电流升高，电压下降时的压缩机接线柱电压 dropped voltage at compressor terminals.
11	启停周期 On/Off Period	运转时间：至少应使油回到指定油位所需的时间 ON Period:Until the oil level returns to the center of the lower bearing.			一个循环周期为10分钟以上，停机3分钟，以此为基准，启停周期不得超过20万个周期 For at least 7 minutes-on/3 minutes-off is recommendable.200,000 cycle max.
		停止时间：至少应使高低压达到平衡所需的时间 OFF Period:Until balance of high and low pressure is obtained.			
12	制冷剂注入量 Refrigerant Charge	制冷剂充入量应尽量少 To minimum the charged refrigerant. 膨胀阀前不应产生闪发气体 No flash gas in front of expansion valve.			通过商品的冷却、温度、压力等适当调节 Properly adjust according to the commodities cooling, temperature,presure,etc...
13	压缩机内最低油面 Minimum Oil Level	运转时保持油面在视油镜下部或[LOW]标识处 Keep oil level above the bottom or “LOW” grade of oil level gauge when in operation			
14	异常升压/降压 Abnormal Pressure Rise/Drop	压力上升：2.79MPa(G)以下 Pressure Rise: 2.79MPa(G)Max.			高压开关设定值 By high pressure switch
		压力下降：0.10MPa(G)以上 Pressure Drop: 0.10MPa(G) Min.			低压开关设定值 By low pressure switch
15	水份 System Moisture Level	制冷回路中水份要求在200ppm以下 Keep the moisture in refrigeration loop below 200ppm.			
16	不凝性气体 System Uncondensable Gas Level	制冷回路中不凝性气体要求在1%(容积比)以下 1Vol.%Max. 残留氧气要求在0.1%(容积比)以下 Residual Oxygen 0.1Vol.% Max			抽真空24小时以后绝对压力应在1.01kPa以下 24 hrs. After vacuuming:1.01kPa max.
17	倾斜角度 Tilt	压缩机倾斜最大5° 5°Max.			

R22中温机型使用标准·使用极限

Application Standard & Limit(R22 Medium Temperature Model)

为正确使用立式涡旋压缩机，对其使用标准、使用极限作如下规定：

使用标准值:适用于常用条件下(日本JIS B8616与JIS B8616相关标准、过载、低温条件下的商品运转条件)的运转。

使用极限值:适用于过渡条件下的短时间运转。

The following requirement apply to Vertical type Hermetic Scroll Compressors:Applicable to ordinary conditions in Japan JIS B8616 or equivalent condition,such as standard rating conditions, maximum operating conditions, low temp erature conditions,etc. Applicable to transitional brief periods, such as start-up and beginning of defrast mode.

序号 No.	项目 Item	使用标准值 Standard		使用极限值 Limit	备注 Note
1	制冷剂 Refrigerant	R22			
2	蒸发温度范围 Evaporating Temp.	-15~-+12℃ 0.20~0.62MPa(G)			压力指吸气压力 Compressor suction pressure
3	冷凝温度范围 Condensing Temp.	+15~+65℃ 0.69~2.60MPa(G)			确保温度膨胀阀前后的差压在0.8MPa(g)以上 To ensure pressure difference between expansion valve's inlet and outlet over 0.8MPa(g)
4	压缩比 Compression Ratio	1.8~6			
5	电动机绕组温度 Winding Temp.	90℃以下 90℃ Max.	125℃		
6	压缩机外壳底部温度 Shell Bottom Temp.	上限: 90℃以下 Upper Limit:90℃ Max. 下限: 蒸发压力相对应饱和温度+12℃以上 Lower Limit:Evaporating Temp.+12℃ Min.			安装曲轴箱加热器 To install crankcase heater
		下限: 环境温度+11K以上 Lower Limit:Ambient Temp.+11K Min.			
7	排气温度 Discharge Gas Temp.	115℃以下 115℃ Max	C-SB:130℃以下 130℃Max.	C-sb系列:距压缩机排气口10cm以内位置的排气管温度 C-sb series:within 10cm(4in) of the discharge fitting.	
			C-SC:135℃以下 135℃Max.	C-sc系列:上盖铜管内排气温度保护器的检测温度 C-sc series:inside of the well pipe on the top of compressor.	
8	吸气温度 Suction Gas Temp.	吸气过热度在5K以上 Superheat:5K Min.	应无由于液体吸入而引起的冲刷音(不增加电流及振动) No excessive noise.		压缩机入口30cm以内位置的吸气管温度。 还应同时满足5、6、7、13项 it should meet the requirement of item 5,6,7 and 13 within 30cm of the suction fitting.
9	运转时供电电压 Running Voltage	额定电压±10% Within ±10% of the rated voltage.			运转时压缩机接线柱电压 Voltage at compressor terminals.
10	启动时供电电压 Starting Voltage	额定电压85%以上 Three Phase Models: 85% of the rated voltage min.			指在启动电流升高, 电压下降时的压缩机接线柱电压 dropped voltage at compressor terminals.
11	启停周期 On/Off Period	运转时间: 至少应使油回到指定油位所需的时间 ON Period:Until the oil level returns to the center of the lower bearing.			一个循环周期为10分钟以上, 停机3分钟, 以此为基准, 启停周期不得超过20万个周期 For at least 7 minutes-on/3 minutes-off is recommendable.200,000 cycle max.
		停止时间: 至少应使高低压达到平衡所需的时间 OFF Period:Until balance of high and low pressure is obtained.			
12	制冷剂注入量 Refrigerant Charge	制冷剂充入量应尽量少 To minimum the charged refrigerant. 膨胀阀前不应产生闪发气体 No flash gas in front of expansion valve.			通过商品的冷却、温度、压力等适当调节 Properly adjust according to the commodities cooling, temperature,presure,etc...
13	压缩机内最低油面 Minimum Oil Level	运转时保持油面在视油镜下部或[LOW]标识处 Keep oil level above the bottom or "LOW" grade of oil level gauge when in operation			
14	异常升压/降压 Abnormal Pressure Rise/Drop	压力上升: 2.70MPa(G)以下 Pressure Rise: 2.70MPa(G)Max.			高压开关设定值 By high pressure switch
		压力下降: 0.15MPa(G)以上 Pressure Drop: 0.15MPa(G) Min.			低压开关设定值 By low pressure switch
15	水份 System Moisture Level	制冷回路中水份要求在200ppm以下 Keep the moisture in refrigeration loop below 200ppm.			
16	不凝性气体 System Uncondensable Gas Level	制冷回路中不凝性气体要求在1%(容积比)以下 1Vol.%Max. 残留氧气要求在0.1%(容积比)以下 Residual Oxygen 0.1Vol.% Max			抽真空24小时以后绝对压力应在1.01kPa以下 24 hrs. After vacuuming:1.01kPa max.
17	倾斜角度 Tilt	压缩机倾斜最大5° 5°Max.			

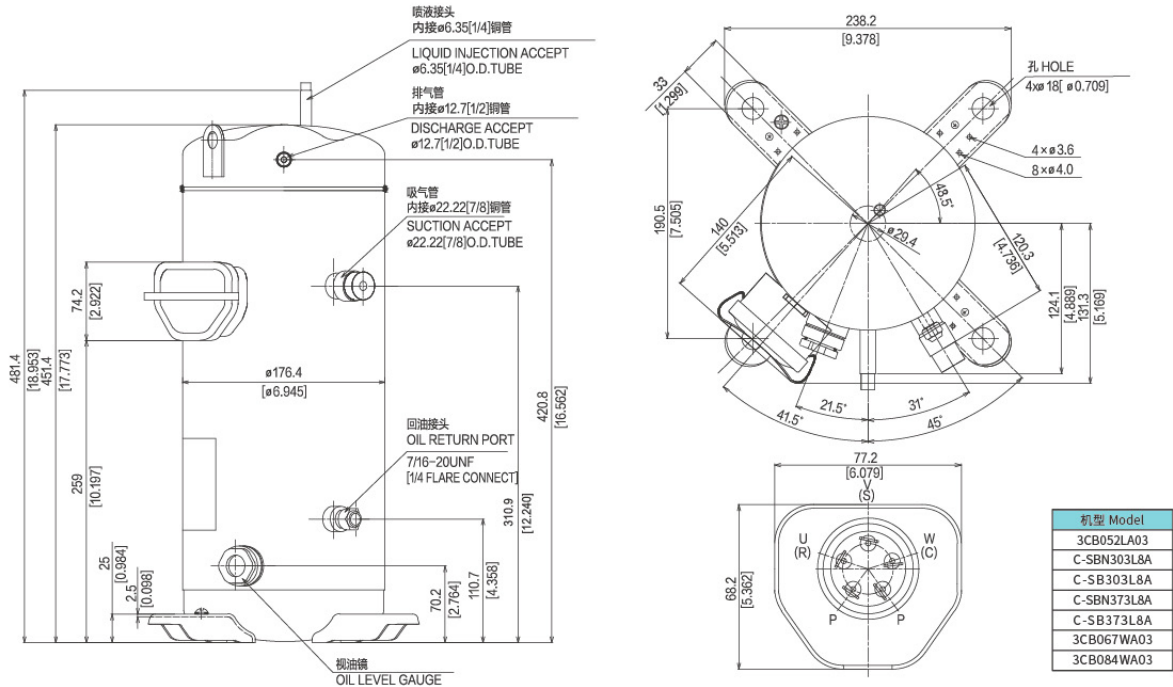
■ 超出以上极限范围的运转必须得到我公司的认可。Operation beyond the above limits must be approved by our company. (G): 表压 Gauge Pressure

外观图

Outline Graph

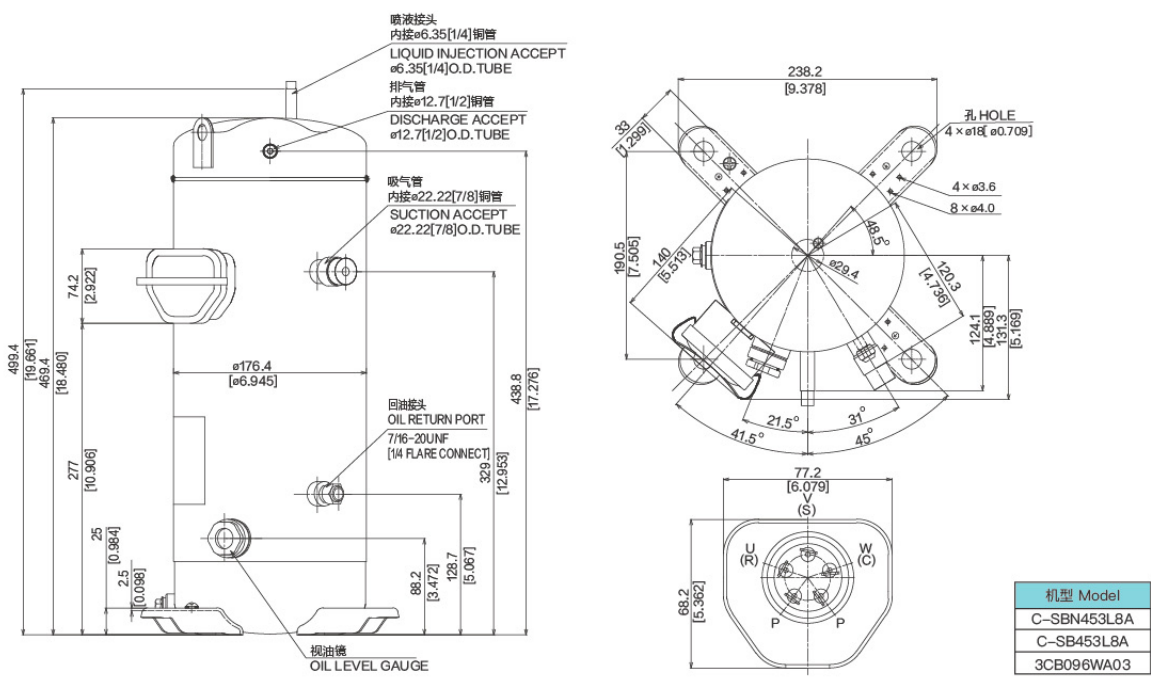
低温喷液机型 (3~5HP)

Low Temperature Model



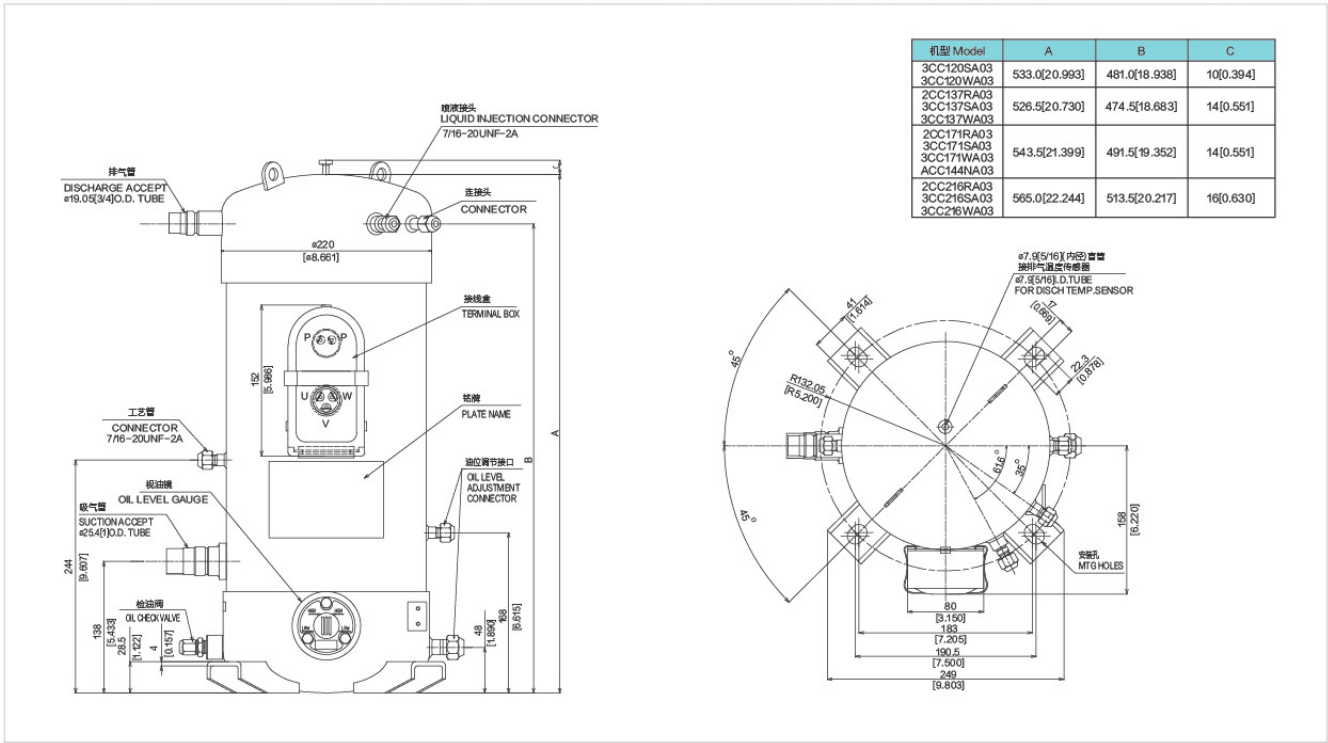
低温喷液机型 (6HP)

Low Temperature Model



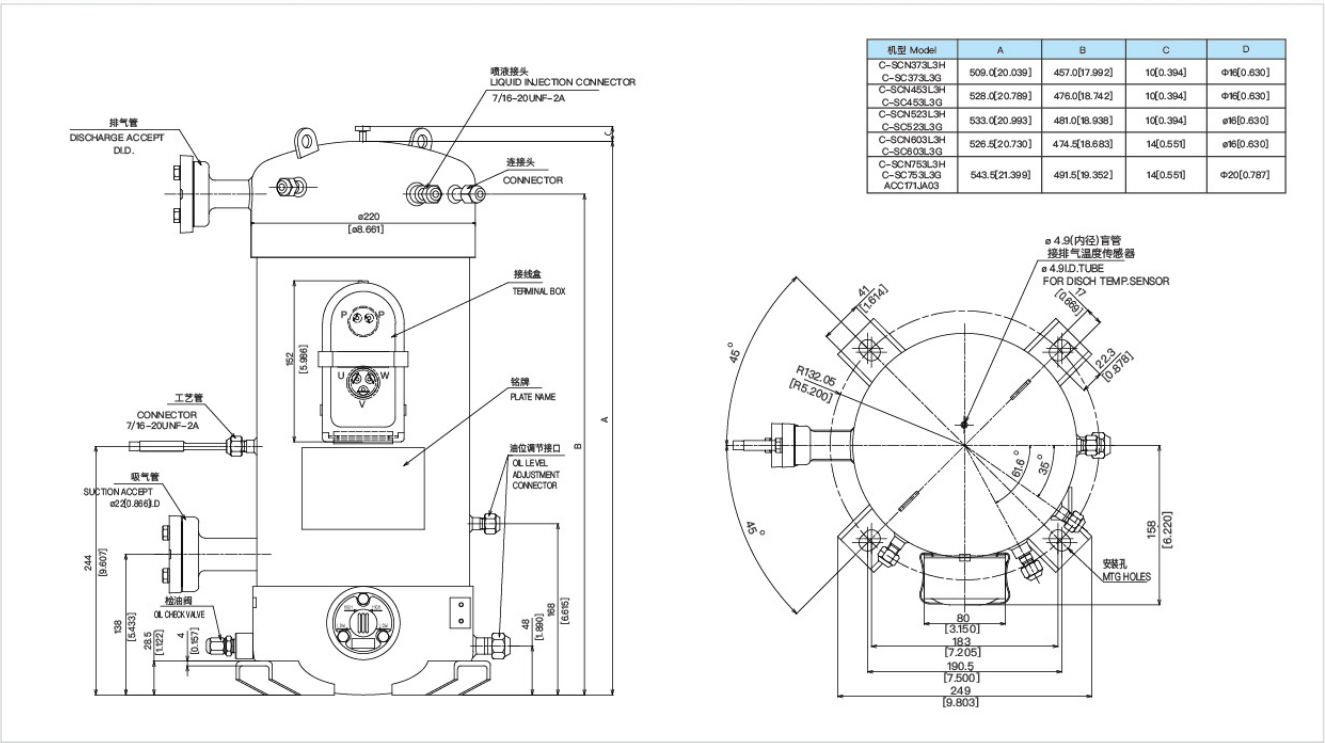
外观图
Outline Graph

低温喷液机型 (7~12.5HP)
Low Temperature Model

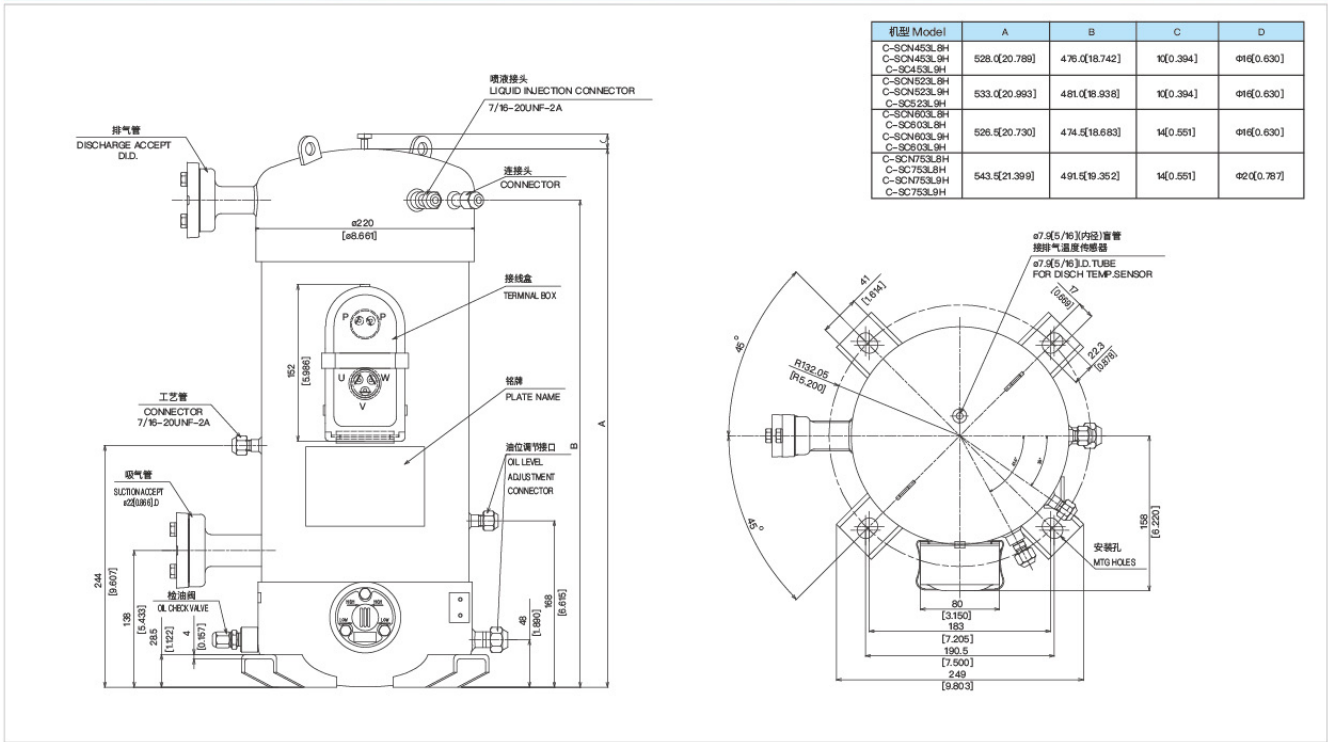


外观图
Outline Graph

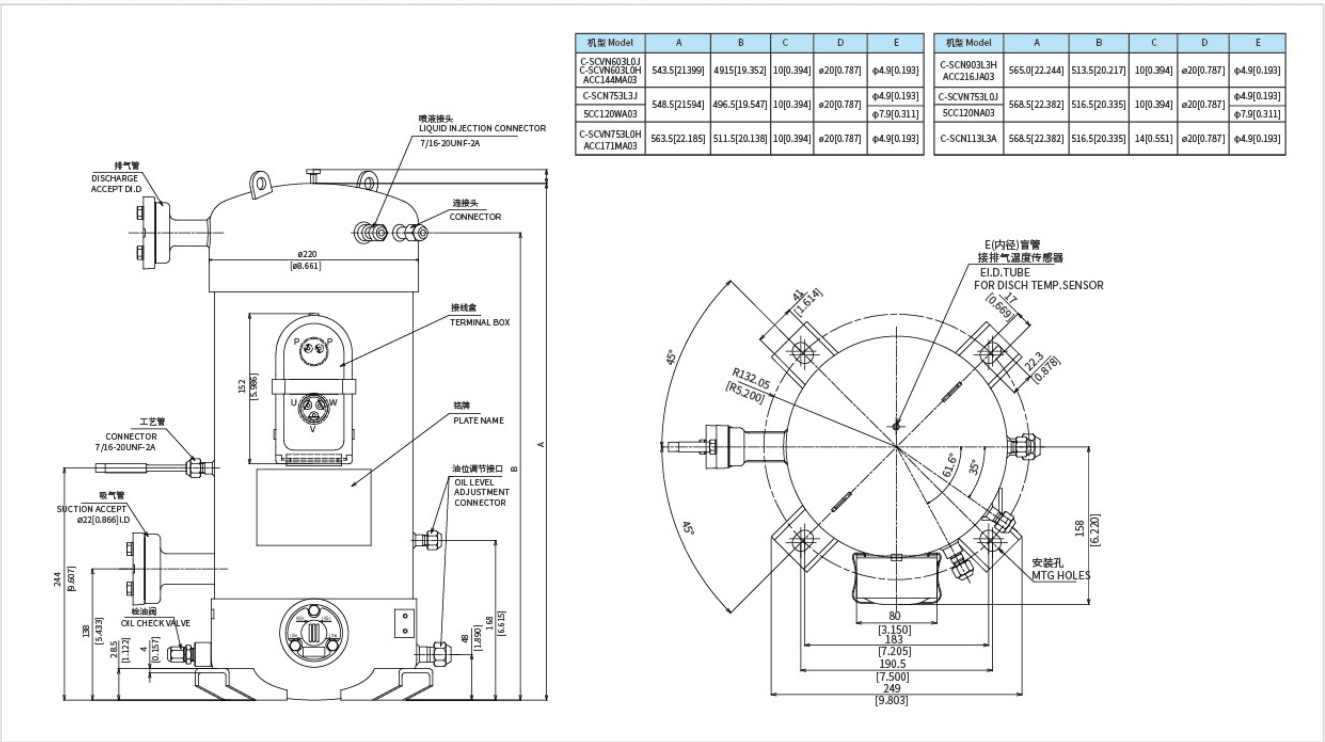
低温喷液机型 (5~10HP)
Low Temperature Model



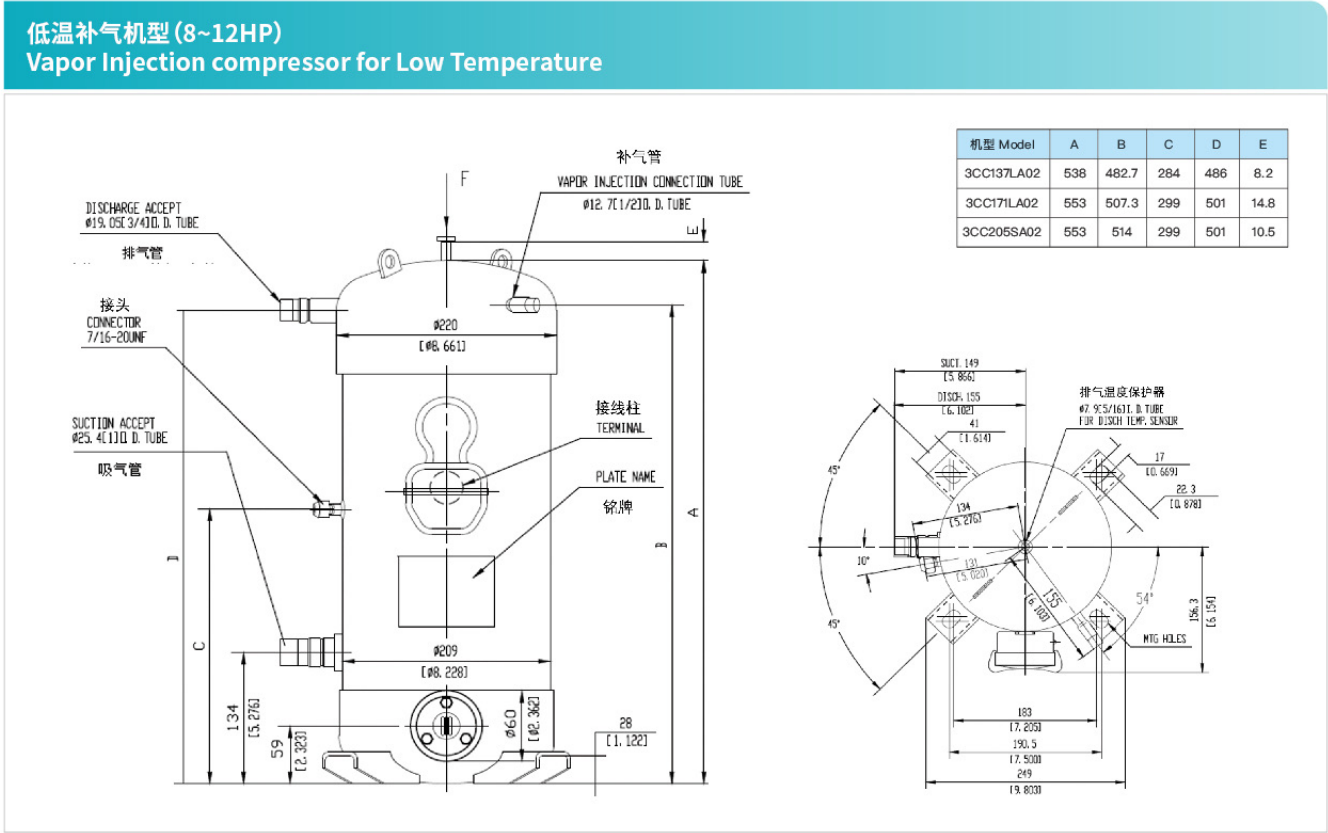
低温喷液机型 (6~10HP)
Low Temperature Model



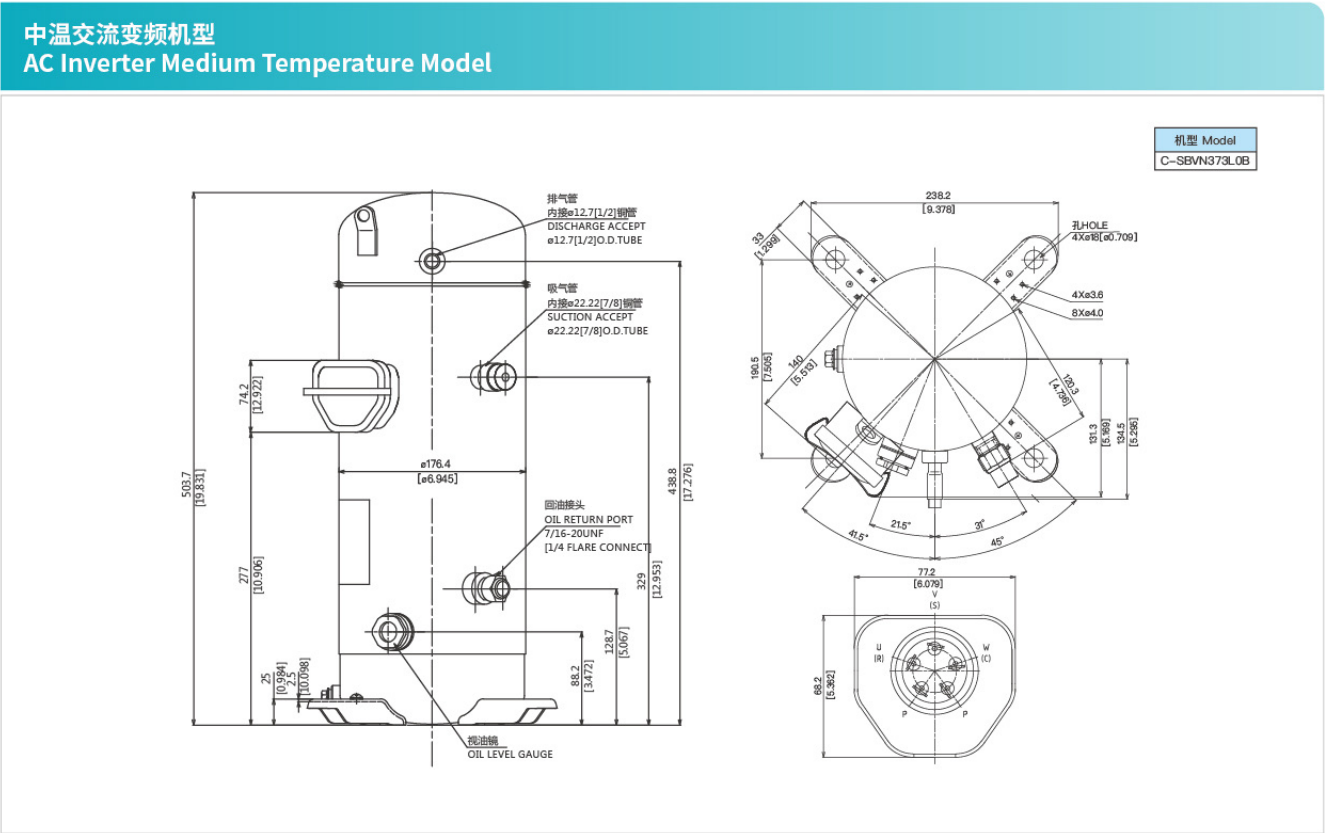
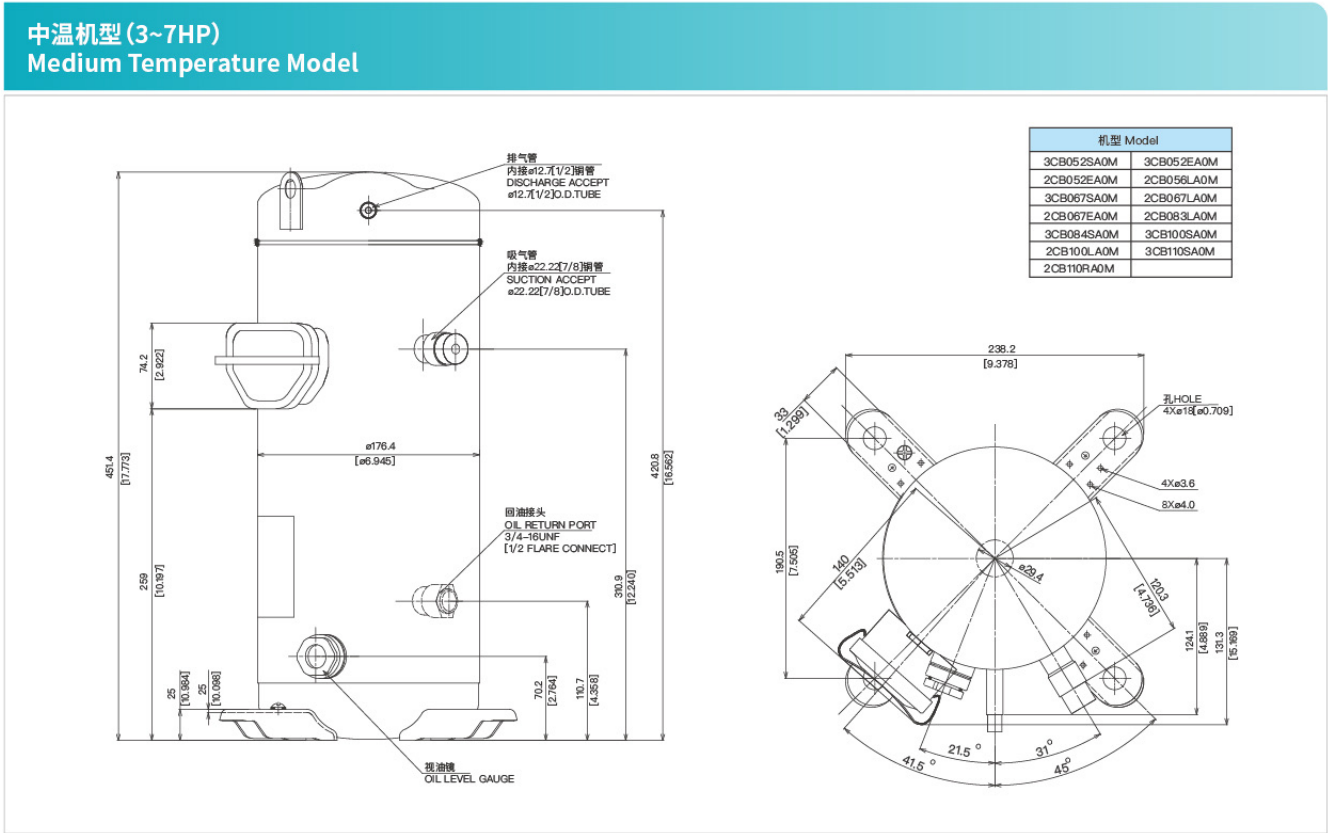
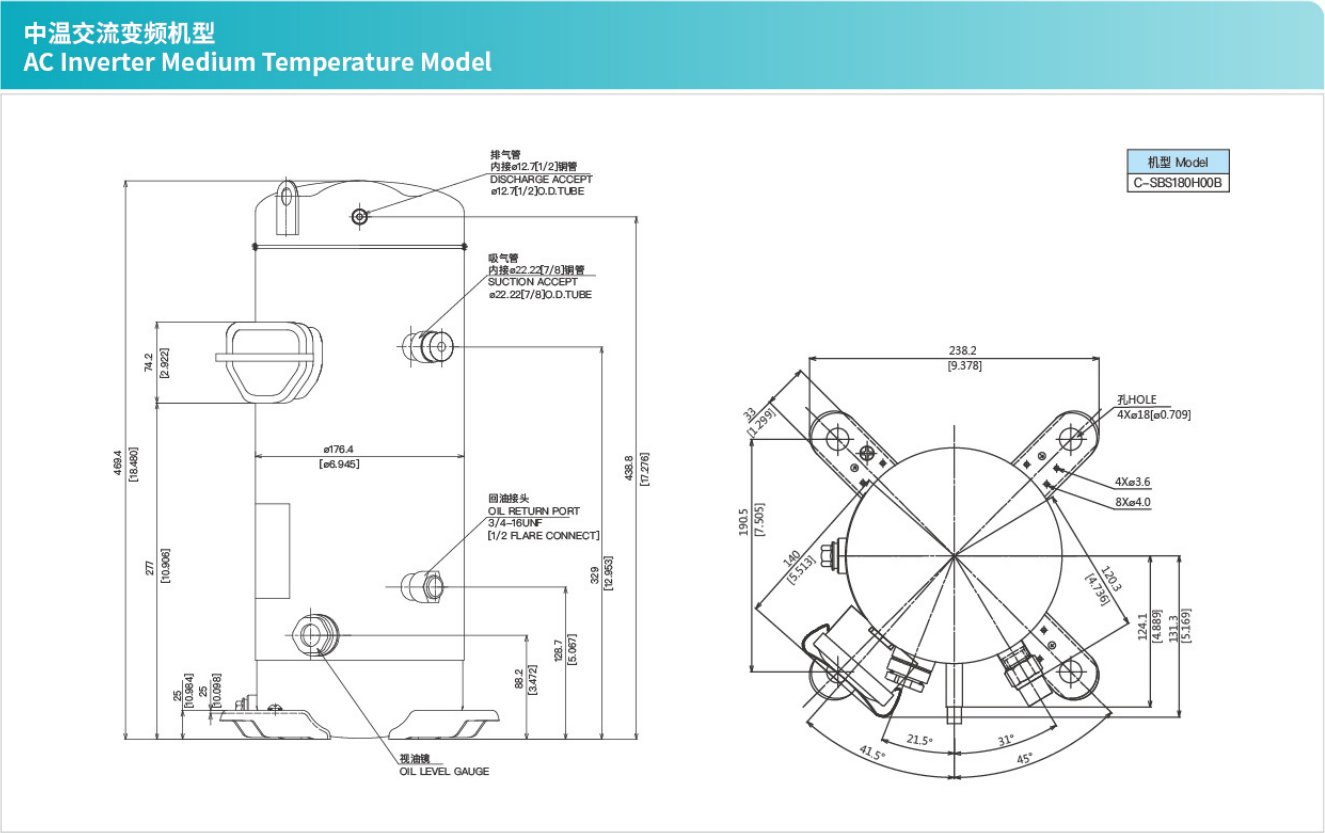
低温喷液机型 (8~14HP)
Low Temperature Model



外观图
Outline Graph



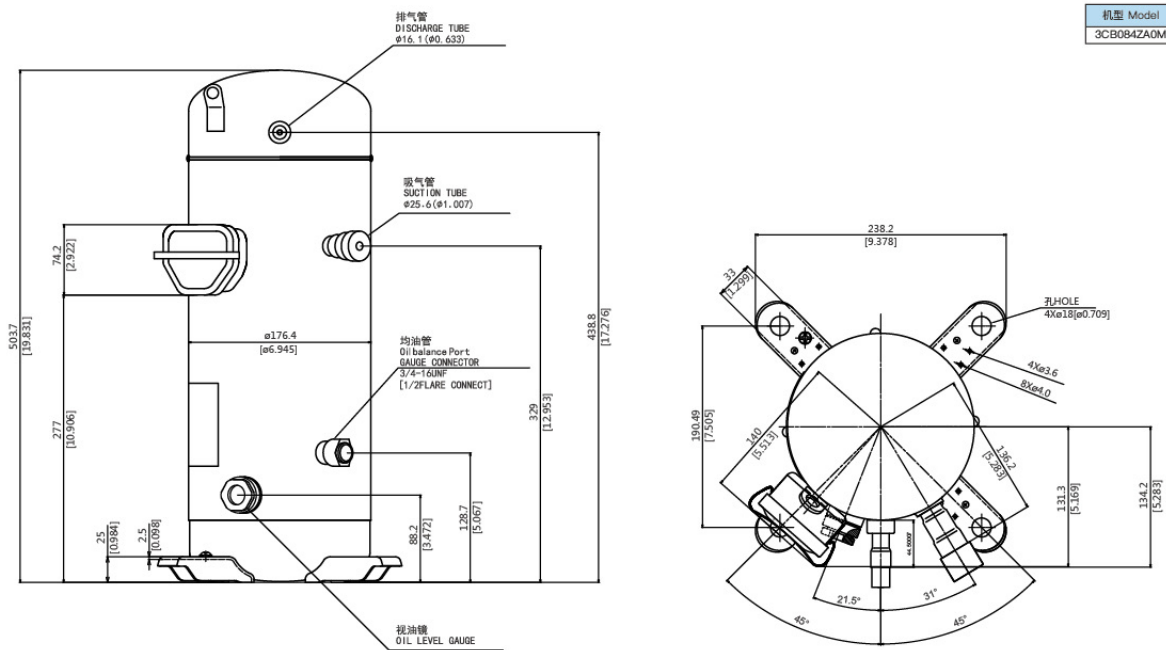
外观图
Outline Graph



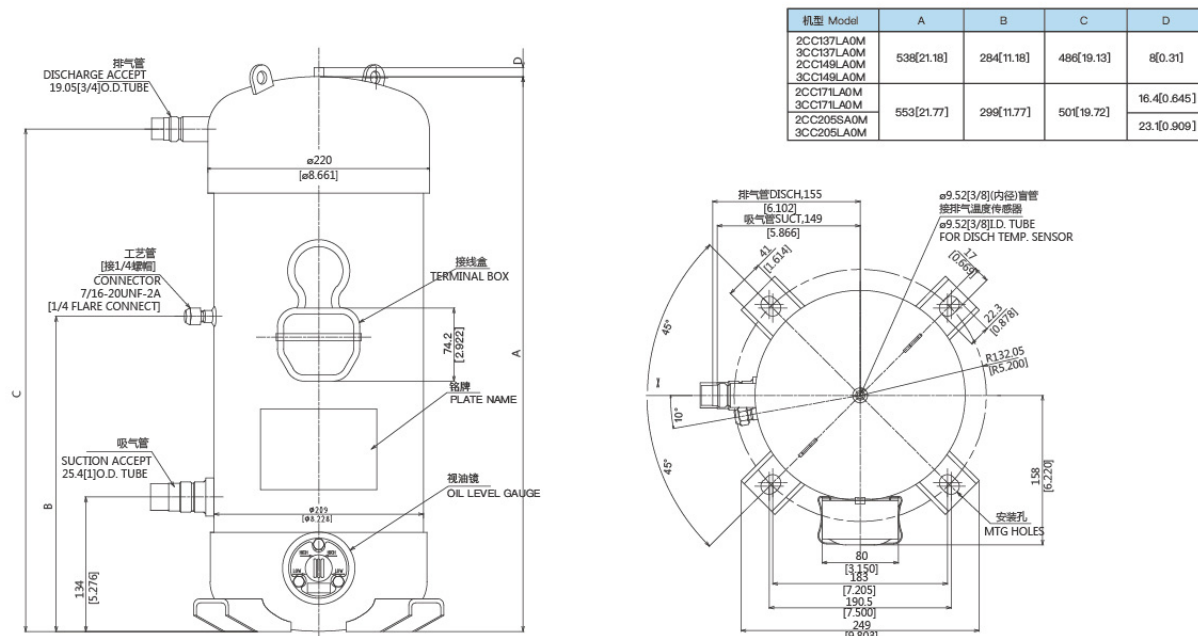
外观图

Outline Graph

中温直流变频机型 DC Inverter Medium Temperature Model



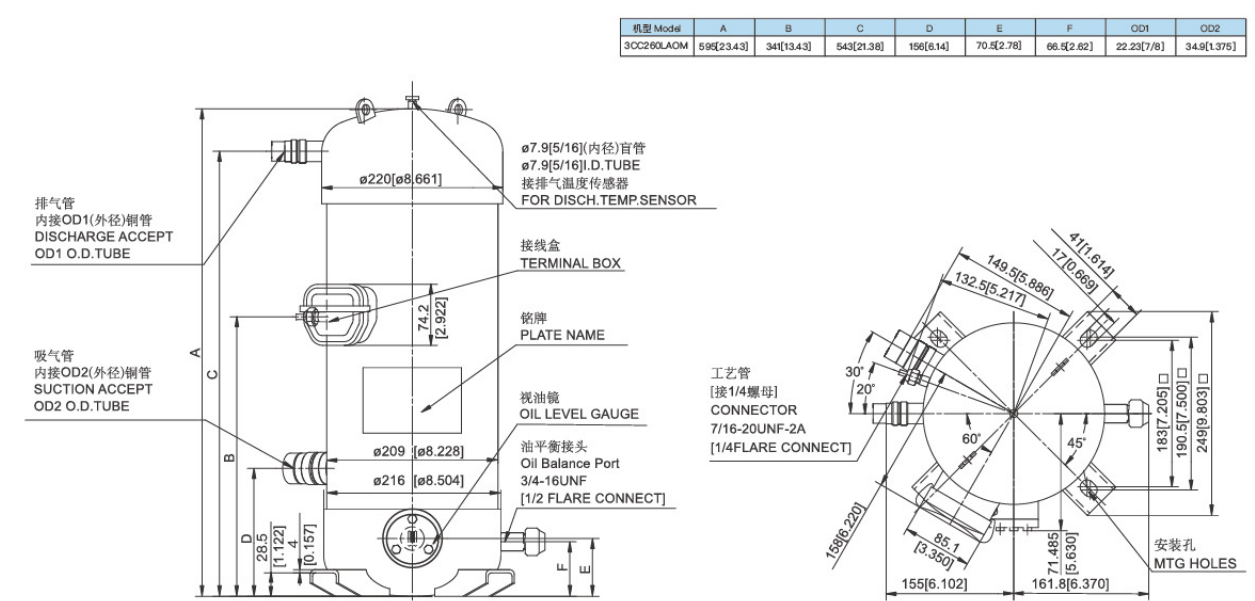
中温机型 (8~12HP) Medium Temperature Model



外观图

Outline Graph

中温机型 (15HP) Medium Temperature Model



中温机型 (20HP) Medium Temperature Model

