

SP & SB SERIES

Reciprocating Compressors

活塞压缩机

SP系列3-70Hp, 17-222m³/h, 50Hz

2-Stage Reciprocating Compressors

双级活塞压缩机

SB系列12-30Hp, 43-103m³/h, 50Hz



MODEL DESIGNATION

型号说明

2

Series SP
Series SB

COMPRESSOR / 压缩机	S	P	8	H	N	6000
	S	P	4	L	F	080E
	S	B	4			1400

COMPRESSOR TYPE / 压缩机型号	
	Semi-hermetic / 半封闭

SERIES / 系列	
SP	Reciprocating compressor / 活塞压缩机
SB	Reciprocating compressor double stage / 双级活塞机

N° OF CYLINDERS / 气缸数	
	SP系列: 2 - 4 - 6 - 8
	SB系列: 4 - 6 - 8

MOTOR SIZE / 电机类型 (ONLY SP SERIES / 仅对SP系列)	
H	Full size electrical motor / 高温压缩机电机
L	Small size electrical motor / 低温压缩机电机

LUBRICATION / 油润滑方式 ⁽¹⁾ (ONLY SP SERIES / 仅SP系列)	
F	Pressure lubrication (with oil pump) 压力润滑 (带油泵)
N	Splasher lubrication (without oil pumps) 飞溅润滑 (不带油泵)

NOMINAL MOTOR POWER Hp X 100 名义电机功率 HP X 100 ⁽²⁾	
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(1) Only for 4-cylinder models from 10 to 20 [Hp] (in H version) and from 6 to 12 [Hp] (in L version) / 仅针对4缸型号: 10~20[HP]高温压缩机和6~12[HP]低温的压缩机

(2) Last digit replaced with "E" letter for compressor with POE oil / 字母"E"结尾的型号表示用POE油的压缩机

INTRODUCTION

产品介绍

SP SERIES

The so many applications in which the semi-hermetic reciprocating compressors are involved comprise the commercial / industrial refrigeration field and, although more rarely, also specific air-conditioning projects.

Our SP series compressors fit perfectly most of such a wide variety of applications. Although already known for its high quality and reliable reciprocating compressors, RefComp has continued to invest in research and new technology, so as to improve constantly also this range. Which is now characterized by extremely high efficiency and silentness; can be used in enlarged application envelopes and comprise new smaller and larger sizes. Precisely, nowadays, the SP series consist of 34 models, with 2, 4, 6 or 8 cylinders. Its nominal power and displacement range from 3 to 70 [Hp] and from 17,5 to 222 [m³/h] at 50 [Hz], respectively.

SB SERIES

Two-stage semi-hermetic reciprocating compressors with high efficiency, robustness, compactness, reduced vibrations and minimum dead space. Through the two-stage compressors the final discharge pressure is achieved with two subsequent compression stages. In the first stage the gas is sucked from the evaporator, compressed and sent to an intermediate chamber from which it will be sent to the second compression stage, reaching then the final pressure. This way, the two compression ratios are way lower than that of a hypothetical single stage, granting thus a lower discharge temperature and a higher efficiency in comparison to that solution.

SP系列

半封闭往复压缩机应用十分广泛，不但使用在商业制冷和工业制冷场合，还应用在一些特种空调制冷的场合。

RefComp SP 系列压缩机就具有广泛的适应性，能够很好地应用于各种制冷场合。尽管活塞式压缩机是一种发展的很成熟产品，其可靠性比较高，但是RefComp依然孜孜不倦，不断研究和创新，为的就是进一步地提高活塞压缩机的质量和可靠性等性能指标。如今，RefComp 活塞压缩机在确保高效率 and 低噪音的同时，应用界限也进一步地拓宽，还开发了一些更小匹数和更大匹数的压缩机型号。迄今为止，RefComp SP 系列活塞压缩机共有 34 个型号，拥有 2 缸、4 缸、6 缸和 8 缸机机型，额定功率从 3 至 70 [Hp]，对应的排气量范围从 17.5 至 222 [m³/h] (当电源频率 50 [Hz] 时)。

SB系列

双级半封闭活塞压缩机具有高效、耐用、紧凑和震动低等特点。

双级压缩机的最终排气，是通过连续压缩再次后所获得的。第一级压缩过程中，从蒸发器过来的制冷剂气体由吸气端吸入，然后压缩至中间腔，那里同时是第二级压缩的吸气腔；第二级压缩过程中，制冷剂气体由中间腔吸入后被压缩至最终排气压力后排出。于单级压缩机相比，双级压缩机的每一级的压缩都可以小些，从而降低排气温度，提高效率。

TECHNICAL DATA

技术参数

4

Series SP
Series SB

MODEL SP/型号 SP		H (FULL SIZE MOTOR) / H (高温压缩机)					
		SP2H				SP4HF / SP4HN	
		0500	0600	0800	0900	1000	1200
		050E	060E	080E	090E	100E	120E
Nominal motor power 额定功率	[Hp/kW]	5 / 3,7	6 / 4,4	8 / 5,9	9 / 6,6	10 / 7,5	12 / 8,9
Displacement at 50/60 [Hz] 排气量 50/60[Hz]	[m ³ /hr]	17,5 / 21	21 / 25,7	24,5 / 29,4	28 / 33,6	35 / 42	42 / 50,4
N° of cylinders / 气缸数		2	2	2	2	4	4
Weight / 重量	[Kg]	86	87	87	91	143	146
Oil charge / 注油量	[dm ³]	1,8	1,8	1,8	1,8	2,6	2,6
Crankcase heater 曲轴箱加热器		230 [V] -120 [W] -PTC 50/60 [Hz]				230 [V] -220 [W] 50/60[Hz]	
Discharge line, internal Ø 排气管内径Ø	[mm/ inches]	16 / 5/8"	16 / 5/8"	22 / 7/8"	22 / 7/8"	22 / 7/8"	28 / 1"1/8
Suction line, internal Ø 吸气管内径Ø	[mm/ inches]	28 / 1"1/8	28 / 1"1/8	28 / 1"1/8	28 / 1"1/8	28 / 1"1/8	35 / 1"3/8
Capacity control steps 能量调节		-	-	-	-	100, 50%	100, 50%
Standard motor (part winding) 标准电机		△230 [V]/3/50[Hz] Y400 [V]/3/50[Hz]				400 [V] /3/50 [Hz] 460 [V] /3/60 [Hz] ⁽¹⁾ P W	
Starting current PW/DOL 启动电流PW/DOL	[A]	-- / 54	-- / 60	-- / 85	-- / 97	71 / 110	75 / 125
Starting current Y/ D 启动电流Y/D	[A]	54 / --	60 / --	85 / --	97 / --	--	--
Max running current 最大运行电流	[A]	12	14	16	20	24	27

MODEL SP/型号 SP		L (SMALL SIZE MOTOR) / L (低温压缩机)					
		SP2L				SP4LF / SP4LN	
		0300	0400	0500	0600	0600	0800
		030E	040E	050E	060E	060E	080E
Nominal motor power 额定功率	[Hp/kW]	3 / 2	4 / 3	5 / 3,7	6 / 4,4	6 / 4,5	8 / 5,9
Displacement at 50/60 [Hz] 排气量 50/60[Hz]	[m ³ /hr]	17,5 / 21	21 / 25,7	24,5 / 29,4	28 / 33,6	35 / 42	42 / 50,4
N° of cylinders / 气缸数		2	2	2	2	4	4
Weight / 重量	[Kg]	84	85	85	86	134	139
Oil charge / 注油量	[dm ³]	1,8	1,8	1,8	1,8	2,6	2,6
Crankcase heater 曲轴箱加热器		230 [V] -120 [W] -PTC 50/60 [Hz]				230 [V] -220 [W] 50/60[Hz]	
Discharge line, internal Ø 排气管内径Ø	[mm/ inches]	16 / 5/8"	16 / 5/8"	22 / 7/8"	22 / 7/8"	22 / 7/8"	28 1"1/8
Suction line, internal Ø 吸气管内径Ø	[mm/ inches]	28 / 1"1/8	28 / 1"1/8	28 / 1"1/8	28 / 1"1/8	28 / 1"1/8	35 1"3/8
Capacity control steps 能量调节		-	-	-	-	100, 50%	100, 50%
Standard motor (part winding) 标准电机		△230 [V]/3/50[Hz] Y400 [V]/3/50[Hz]				400 [V] /3/50 [Hz] 460 [V] /3/60 [Hz] ⁽¹⁾ P W	
Starting current PW/DOL 启动电流PW/DOL	[A]	-- / 35	-- / 49	-- / 54	-- / 60	43 / 70	54 / 88
Starting current Y/ D 启动电流Y/D	[A]	35 / --	49 / --	54 / --	60 / --	--	--
Max running current 最大运行电流	[A]	9	10	12	14	16	19

(1) Voltage tolerance / 电压允许波动范围 ± 10%

H (FULL SIZE MOTOR)/H (高温压缩机)										
SP4HF / SP4HN		SP4H				SP6H			SP8H	
1500	2000	2200	2500	3000	3500	3700	4000	5000	6000	7000
150E	200E	220E	250E	300E	350E	370E	400E	500E	600E	700E
15 / 11,2	20 / 14,9	22 / 16,4	25 / 18,7	30 / 22,4	35 / 26,1	37 / 27,6	40 / 29,9	50 / 37,3	60 / 45	70 / 52
49 / 58,8	56 / 67,2	64,7 / 77,6	75 / 90	86,1 / 103,3	102,9 / 123,5	112,5 / 135	129,1 / 154,9	154,4 / 185,3	186 / 224	222 / 268
4	4	4	4	4	4	6	6	6	8	8
152	155	193	206	209	238	241	246	250	345	350
2,6	2,6	3,7	3,7	3,7	3,7	4,2	4,2	4,2	5	5
230 [V] -220 [W] 50/60 [Hz]		230 [V] -150 [W] -50/60 [Hz]							230 [V] -200 [W] -50/60 [Hz]	
28 / 1"1/8	28 / 1"1/8	28 - 1 1/8"	28 - 1 1/8"	28 - 1 1/8"	35 - 1 3/8"	35 - 1 3/8"	35 - 1 3/8"	42 - 1 5/8"	54 / 2"1/8	54 / 2"1/8
42 / 1"5/8	42 / 1"5/8	42 - 1 5/8"	54 - 2 1/8"	54 - 2 1/8"	54 - 2 1/8"	54 - 2 1/8"	54 - 2 1/8"	54 - 2 1/8"	67 / 2" 5/8	67 / 2" 5/8
100, 50%	100, 50%	100,50%	100,50%	100,50%	100,50%	100,66,33%	100,66,33%	100,66,33%	100,75,50%	100,75,50%
400 [V] /3/50 [Hz] 460 [V] /3/60 [Hz] ⁽¹⁾ P W		400 [V] /3/50 [Hz] - 460 [V] /3/60 [Hz] ⁽¹⁾ P W							400 [V] /3/50 [Hz] 460 [V] /3/60 [Hz] ⁽¹⁾ P W	
86 / 144	106 / 168	102 / 170	123 / 201	150 / 243	178 / 290	178 / 290	201 / 330	233 / 394	271 / 361	329 / 439
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33	40	37	43	52	56	60	75	93	115	140

L (SMALL SIZE MOTOR)/L (低温压缩机)										
SP4LF/SP4LN		SP4L				SP6L			SP8L	
1000	1200	1500	1800	2200	2500	2700	3000	4000	5000	6000
100E	120E	150E	180E	220E	250E	270E	300E	400E	500E	600E
10 / 7,5	12 / 8,9	15 / 11,2	18 / 13,3	22 / 16,4	25 / 18,7	27 / 20,2	30 / 22,4	40 / 29,9	50 / 37	60 / 45
49 / 58,8	56 / 67,2	64,7 / 77,6	75 / 90	86,1 / 103,3	102,9 / 123,5	112,5 / 135	129,1 / 154,9	154,4 / 185,3	186 / 224	222 / 268
4	4	4	4	4	4	6	6	6	8	8
144	146	182	186	195	220	230	236	247	340	345
2,6	2,6	3,7	3,7	3,7	3,7	4,2	4,2	4,2	5	5
230 [V] -220 [W] 50/60 [Hz]		230 [V] -150 [W] -50/60 [Hz]							230 [V] -200 [W] -50/60 [Hz]	
28 1"1/8	28 1"1/8	28 - 1 1/8"	28 - 1 1/8"	28 - 1 1/8"	35 - 1 3/8"	35 - 1 3/8"	35 - 1 3/8"	42 - 1 5/8"	54 / 2"1/8	54 / 2"1/8
35 1"3/8	35 1"3/8	42 - 1 5/8"	42 - 1 5/8"	54 - 2 1/8"	54 - 2 1/8"	54 - 2 1/8"	54 - 2 1/8"	54 - 2 1/8"	67 / 2" 5/8	67 / 2" 5/8
100, 50%	100, 50%	100,50%	100,50%	100,50%	100,50%	100,66,33%	100,66,33%	100,66,33%	100,75,50%	100,75,50%
400 [V] /3/50 [Hz] 460 [V] /3/60 [Hz] ⁽¹⁾ P W		400 [V] /3/50 [Hz] - 460 [V] /3/60 [Hz] ⁽¹⁾ P W							400 [V] /3/50 [Hz] 460 [V] /3/60 [Hz] ⁽¹⁾ P W	
71 / 110	75 / 125	88 / 146	102 / 170	102 / 170	123 / 201	123 / 201	150 / 243	201 / 330	237 / 316	271 / 361
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24	27	29	33	39	43	48	54	75	97	115

(1) Voltage tolerance / 电压允许波动范围 $\pm 10\%$

TECHNICAL DATA

技术参数

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Series SP
Series SB

MODEL SB/型号 SB		SB4-1200	SB4-1400	SB6-1600	SB6-2000	SB6-2500	SB6-3000
		SB4-120E	SB4-140E	SB6-160E	SB6-200E	SB6-250E	SB6-300E
Nominal motor power 额定功率	[Hp/kW]	18/8,8	14/10,3	16/11,8	20/14,7	25/18,4	30/22,1
Displacement at 50 [Hz] - LP/HP 排气量(50[Hz]时 - 低压级/高压级)	[m ³ /hr]	43 / 27,6	51,5 / 27,6	64,7 / 32,4	75 / 37,5	86,1 / 43	102,9 / 51,5
N° of cylinders / 气缸数		4	4	6	6	6	6
Weight / 重量	[Kg]	202	206	215	225	235	242
Oil charge / 注油量	[dm ³]	3,7	3,7	4,2	4,2	4,2	4,2
Crankcase heater 曲轴箱加热器		230 [V] - 150 [W] - 50/60 [Hz]					
Discharge line, internal Ø 排气管内径Ø	[mm/ inches]	28 1" 1/8	28 1" 1/8	35 1" 3/8	35 1" 3/8	42 1" 5/8	42 1" 5/8
Suction line, internal Ø 吸气管内径Ø	[mm/ inches]	35 1" 3/8	35 1" 3/8	42 1" 5/8	42 1" 5/8	42 1" 5/8	42 1" 5/8
Standard motor (part winding) 标准电机 (部分绕组)		400 / 3 / 50 [Hz] ⁽¹⁾					
Locked rotor amperage LRA (A) 启动电流LRA(A)	[A]	74/123	88/146	88/146	102/170	123/201	150/243
Max absorbed power (kW) 最大消耗功率(KW)	[kW]	15	20	22	26	29	33
Max running current 最大运行电流	[A]	27	34	39	46	50	55

(1) Voltage tolerance / 电压 ± 10%

BENEFITS

产品特点

FLEXIBILITY FOR A WIDE RANGE OF APPLICATIONS

在各个领域应用的灵活性

SP SERIES

- This series can be used with R22, and with the chlorine-free refrigerants R407C, R134a, R404A and R507 as well without making it necessary any mechanical changes.
- Developed specifically for air-conditioning and refrigeration applications at mid or low evaporating temperatures, this range can work up to 80 [°C] condensing temperature with R134a and down to -40 [°C] evaporating temperature with R22 or R404A or R507.
- It is available either with "full size" (H) electric motors - for air conditioning systems - or with "small size" (L) electric motors - for refrigeration systems.

SB SERIES

- Two-stage semi-hermetic reciprocating compressors, suitable for R22, R404A-R507 refrigerants.
- To further improve the efficiency of the compressor, it is possible to install a subcooler (as option - already fitted or not). This way the gas contained in the intermediate chamber is cooled down by the injection of liquid refrigerant before the second compression stage occurs.
- The lubrication is assured by an oil pump and a Venturi internal oil recovery system. It is protected by a high efficiency oil filter and can be monitored by means of differential pressure switches.
- Electrical motor provided with an electronic protection device based on temperature control and generously selected to grant the best performances, safety and reliability.
- Suction and discharge plate equipped with reed valves and made of specific materials for low temperature applications.

SP系列

- SP系列压缩机不仅适用于R22制冷剂，而且在不需要更换任何机械零件的情况下，即可用于无氯制冷剂R407C、R134a、R404A和R507等。
- 专门为空调和中低蒸发温度制冷应用而开发的P系列压缩机，对于R134a制冷剂，其最高工作冷凝温度可达80；对于R22、R404A、R507制冷剂，其最低工作蒸发温度可达-40。
- 可提供两种规格的电机：高温压缩机电机(H)（用于空调系统）和低温压缩机电机(L)（用于冷冻系统）。

SB系列

- 双级半封闭活塞压缩机，适用于R22、R404A、R507制冷剂。
- 通过加装过冷器（可选配件-可选装在机器上或不装），能进一步提高其压缩效率。在配置过冷器的情况下，压缩机中间腔内的制冷剂气体被来自过冷器的制冷剂冷却后，再进入第二级被压缩。
- 润滑油的循环是通过油泵和文丘里管内部回油系统实现的，油循环系统中安装有高效油过滤器进行保护，同时通过安装油压差开关可以实现润滑的监控。
- 电机配有电子保护模块，对其进行温度监控。而且电机的选择也考虑了留有余量，以保护压缩机的性能、安全和可靠。
- 吸气和排气阀板装备有特殊材料制作的簧片阀，使低温应用时性能更好。

EFFICIENCY

高效率

OPTIMIZED LUBRICATION

优化的润滑

RELIABILITY AND OPERATING SAFETY

可靠且运转安全

LOUDNESS AND STABILITY

噪音低，运转平稳

COMPACTNESS AND INSTALLATION
SIMPLICITY

结构紧凑，安装简便

EASY MAINTENANCE

易于维护

ENVELOPE

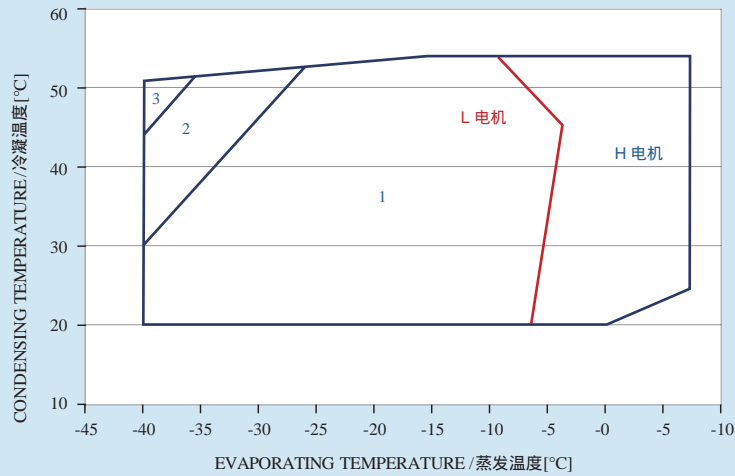
应用范围

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Series SP
Series SB

SP系列

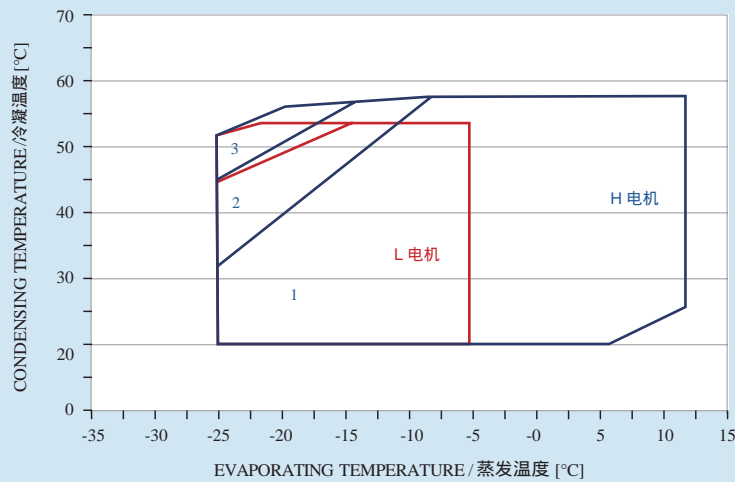
R404A - R507 APPLICATION LIMITS / R404A - R507 应用范围



Limits refer to full load operation / 满负荷运行应用范围

- 1 = Standard applications (25 [°C] suction gas temperature)
标准应用范围 (25 [°C] 吸气温度)
- 2 = Additional cooling / 附加冷却应用范围
- 3 = Additional cooling + 20 [K] max DT suction gas superheat
需附加冷却+最大20[K]吸气过热度的应用范围

R407C APPLICATION LIMITS / R407C 应用范围



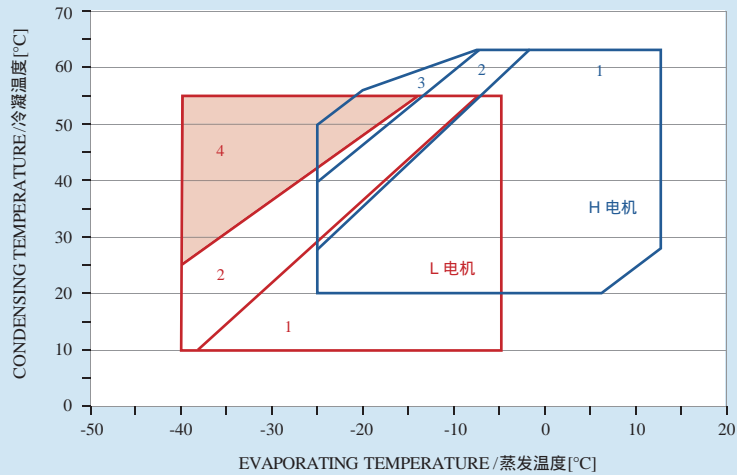
Limits refer to full load operation / 满负荷运行应用范围

- 1 = Standard applications (25 [°C] suction gas temperature)
标准应用范围 (25 [°C] 吸气温度)
- 2 = Additional cooling / 附加冷却应用范围
- 3 = Additional cooling + 20 [K] max DT suction gas superheat
需附加冷却+最大20[K]吸气过热度的应用范围

ENVELOPE

应用范围

R22 APPLICATION LIMITS / R22 应用范围



Limits refer to full load operation / 满负荷运行应用范围

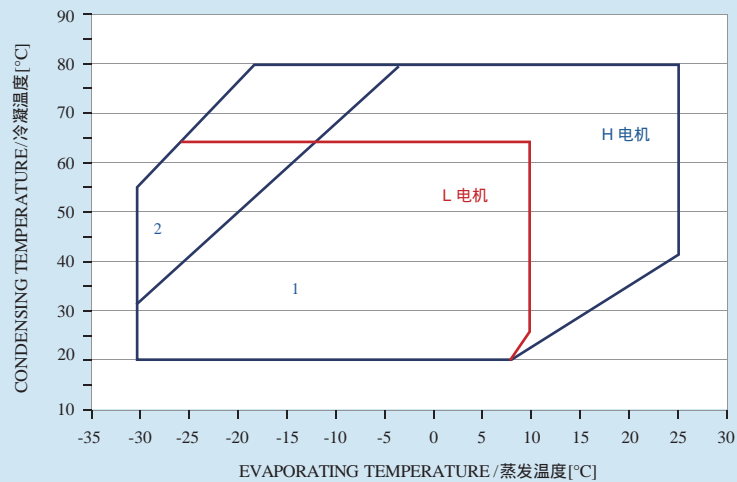
1 = Standard applications (25 [°C] suction gas temperature)
标准应用范围 (25[°C]吸气温度)

2 = Additional cooling / 附加冷却应用范围

3 = Additional cooling + 20 [K] max DT suction gas superheat
需附加冷却+最大20[K]吸气过热度的应用范围

4 = Additional cooling + liquid injection LCM / 需附加冷却+喷液冷却LCM的应用范围
(Not applicable for SP8H...SP8L models / 不适用于8缸型号SP8H.....SP8L)

R134a APPLICATION LIMITS / R134a 应用范围



Limits refer to full load operation / 满负荷运行应用范围

1 = Standard applications (25 [°C] suction gas temperature)
标准应用范围 (25[°C]吸气温度)

2 = Additional cooling / 附加冷却应用范围

ENVELOPE

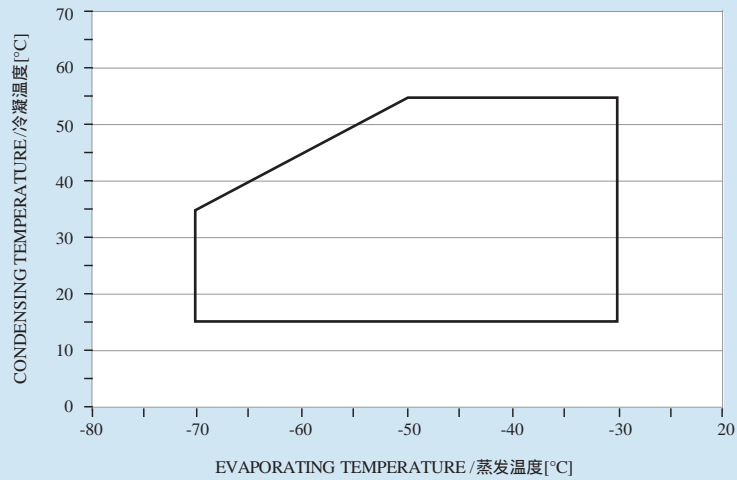
应用范围

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Series SP
Series SB

SB系列

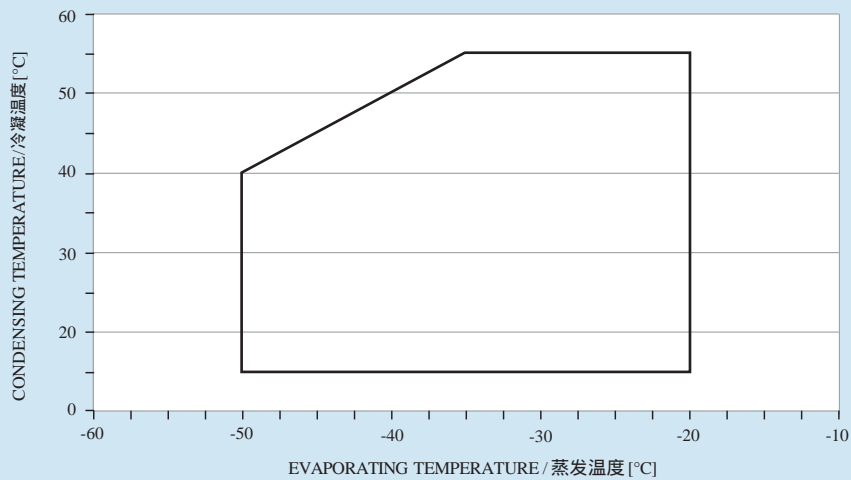
R404A - R507 APPLICATION LIMITS / R404A-R507 应用范围



Limits refer to full load operation / 满负荷运行应用范围

Suction gas superheat / 吸气过热度 = 20 [°C]

R22 APPLICATION LIMITS / R22 应用范围



Limits refer to full load operation / 满负荷运行应用范围

Suction gas superheat / 吸气过热度 = 20 [°C]

INTRODUCTION

性能参数

SP-H, 制冷剂R22

SP2-H-0500								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	5.1	2.4	4.4	2.5	3.7	2.5	-	-
-20	6.8	2.7	5.8	2.9	4.9	3.0	-	-
-15	8.7	3.0	7.6	3.3	6.4	3.5	-	-
-10	10.9	3.3	9.6	3.6	8.2	3.9	6.8	4.2
-5	13.4	3.5	11.8	3.9	10.3	4.3	8.7	4.7
0	16.2	3.6	14.4	4.2	12.6	4.7	10.8	5.2
5	19.3	3.7	17.3	4.4	15.3	5.0	13.3	5.6
10	22.8	3.8	20.6	4.6	18.3	5.3	16.1	6.0

SP2-H-0600								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	6.1	2.8	5.3	2.9	4.4	3.0	-	-
-20	8.1	3.2	7.0	3.4	5.9	3.6	-	-
-15	10.4	3.6	9.1	3.9	7.7	4.2	-	-
-10	13.1	3.9	11.5	4.3	9.8	4.7	6.2	5.0
-5	16.1	4.2	14.2	4.7	12.3	5.2	10.4	5.6
0	19.4	4.3	17.3	5.0	15.2	5.6	13.0	6.2
5	23.2	4.5	20.8	5.2	18.4	6.0	16.0	6.7
10	27.3	4.5	24.7	5.4	22.0	6.3	19.3	7.2

SP2-H-0800								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	7.1	3.3	6.1	3.4	5.1	3.4	-	-
-20	9.5	3.8	8.2	4.0	6.9	4.2	-	-
-15	12.2	4.2	10.6	4.5	9.0	4.8	-	-
-10	15.3	4.5	13.4	5.0	11.5	5.4	9.5	5.8
-5	18.8	4.8	16.6	5.4	14.4	6.0	12.1	6.5
0	22.7	5.0	20.2	5.8	17.7	6.5	15.1	7.2
5	27.0	5.2	24.3	6.1	21.4	7.0	18.6	7.8
10	31.9	5.2	28.8	6.3	25.7	7.3	22.5	8.4

SP2-H-0900								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	8.1	3.7	7.0	3.9	5.9	3.9	-	-
-20	10.8	4.3	9.3	4.6	7.8	4.7	-	-
-15	13.9	4.8	12.1	5.2	10.3	5.5	-	-
-10	17.5	5.2	15.3	5.7	13.1	6.2	10.9	6.6
-5	21.5	5.5	19.0	6.2	16.4	6.8	13.9	7.4
0	25.9	5.7	23.1	6.6	20.2	7.4	17.3	8.2
5	30.9	5.9	27.7	6.9	24.5	7.9	21.3	8.9
10	36.4	6.0	32.9	7.2	29.3	8.4	25.8	9.5

SP4-HF-1000/SP4-HN-1000								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	10.2	4.1	8.8	4.2	7.3	4.3	-	-
-20	13.5	4.7	11.7	5.0	9.8	5.2	-	-
-15	17.4	5.2	15.1	5.7	12.8	6.0	-	-
-10	21.8	5.7	19.1	6.3	16.4	6.8	13.6	7.2
-5	26.8	6.0	23.7	6.8	20.5	7.5	17.3	8.1
0	32.4	6.3	28.9	7.2	25.3	8.1	21.6	8.9
5	38.6	6.4	34.7	7.6	30.6	8.6	26.6	9.7
10	45.5	6.5	41.1	7.8	36.7	9.1	32.2	10.4

SP4-HF-1200/SP4-HN-1200								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	12.2	4.9	10.5	5.1	8.8	5.1	-	-
-20	16.2	5.6	14.0	6.0	11.8	6.2	-	-
-15	20.9	6.3	18.2	6.8	15.4	7.2	-	-
-10	26.2	6.8	22.9	7.5	19.6	8.1	16.4	8.6
-5	32.2	7.2	28.4	8.1	24.6	9.0	20.8	9.7
0	38.9	7.5	34.6	8.6	30.3	9.7	26.0	10.7
5	46.4	7.7	41.6	9.1	36.8	10.4	31.9	11.6
10	54.6	7.8	49.4	9.4	44.0	11.0	38.6	12.5

SP4-HF-1500/SP4-HN-1500								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	14.2	5.7	12.3	5.9	10.3	6.0	-	-
-20	18.9	6.5	16.4	7.0	13.7	7.2	-	-
-15	24.4	7.3	21.2	7.9	17.9	8.4	-	-
-10	30.5	7.9	26.8	8.8	22.9	9.5	19.1	10.1
-5	37.5	8.4	33.2	9.5	28.7	10.5	24.3	11.3
0	45.4	8.8	40.4	10.1	35.4	11.3	30.3	12.5
5	54.1	9.0	48.5	10.6	42.9	12.1	37.2	13.6
10	63.7	9.1	57.6	11.0	51.3	12.8	45.1	14.6

SP4-HF-2000/SP4-HN-2000								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	16.3	6.5	14.0	6.8	11.7	6.8	-	-
-20	21.6	7.5	18.7	8.0	15.7	8.3	-	-
-15	27.8	8.3	24.2	9.0	20.5	9.6	-	-
-10	34.9	9.0	30.6	10.0	26.2	10.8	21.8	11.5
-5	42.9	9.6	37.9	10.8	32.8	11.9	27.7	13.0
0	51.9	10.0	46.2	11.5	40.4	12.9	34.6	14.3
5	61.8	10.3	55.5	12.1	49.0	13.8	42.5	15.5
10	72.8	10.4	65.8	12.5	58.7	14.6	51.5	16.4

SP4-H-2200								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	18.7	7.8	16.4	8.8	14.2	9.6	-	-
-20	23.9	8.9	21.0	10.1	18.2	11.1	-	-
-15	30.3	9.8	26.8	11.2	23.4	12.4	-	-
-10	38.0	10.6	33.8	12.2	29.8	13.7	25.9	15.2
-5	47.1	11.3	42.1	13.0	37.3	14.9	32.7	16.8
0	57.4	11.9	51.7	13.8	46.1	15.9	40.7	18.3
5	69.1	12.3	62.4	14.5	56.0	16.9	49.7	19.6
10	82.2	12.6	74.5	15.0	67.1	17.8	59.9	21.0

SP4-H-2500								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	21.7	9.0	19.0	10.3	16.4	11.1	-	-
-20	27.7	10.3	24.3	11.7	21.1	12.8	-	-
-15	35.1	11.4	31.1	13.0	27.2	14.4	-	-
-10	44.1	12.3	39.2	14.1	34.6	15.9	30.1	17.7
-5	54.6	13.1	48.8	15.1	43.3	17.2	38.0	19.5
0	66.6	13.8	59.9	16.0	53.4	18.5	47.2	21.2
5	80.2	14.3	72.4	16.8	64.9	19.6	57.6	22.8
10	95.3	14.7	86.4	17.4	77.8	20.7	69.4	24.3

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性能参数

SP4-H-3000								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	24.9	10.4	21.8	11.8	18.8	12.7	-	-
-20	31.7	11.8	27.9	13.4	24.2	14.7	-	-
-15	40.3	13.1	35.6	14.9	31.2	16.5	-	-
-10	50.6	14.1	45.0	16.2	39.6	18.2	34.5	20.3
-5	62.6	15.0	56.0	17.3	49.7	19.8	43.5	22.3
0	76.4	15.8	68.7	18.4	61.3	21.2	54.1	24.3
5	92.0	16.4	83.1	19.2	74.4	22.5	66.1	26.1
10	109.3	16.8	99.1	20.0	89.2	23.7	79.6	27.9

SP4-H-3500								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	29.8	12.4	26.1	14.1	22.5	15.2	-	-
-20	37.9	14.1	33.4	16.0	29.0	17.6	-	-
-15	48.2	15.6	42.6	17.8	37.3	19.8	-	-
-10	60.5	16.9	53.8	19.3	47.4	21.8	41.2	24.2
-5	74.8	18.0	67.0	20.7	59.4	23.6	52.0	26.7
0	91.3	18.9	82.1	22.0	73.2	25.3	64.6	29.0
5	109.9	19.6	99.3	23.0	89.0	26.9	79.0	31.2
10	130.7	20.1	118.5	23.9	106.6	28.3	95.2	33.3

SP6-H-3700								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	32.6	13.6	28.5	15.4	24.6	16.7	-	-
-20	41.5	15.4	36.5	17.5	31.7	19.3	-	-
-15	52.7	17.1	46.6	19.5	40.8	21.6	-	-
-10	66.2	18.5	58.9	21.2	51.9	23.9	45.1	26.5
-5	81.9	19.7	73.3	22.7	65.0	25.9	57.0	29.2
0	99.9	20.6	89.9	24.0	80.1	27.7	70.7	31.8
5	120.3	21.4	108.7	25.2	97.4	29.4	86.5	34.2
10	143.0	22.0	129.6	26.2	116.7	31.0	104.1	36.5

SP6-H-4000								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	37.5	15.6	32.8	17.7	28.3	19.2	-	-
-20	47.7	17.7	42.0	20.2	36.4	22.1	-	-
-15	60.6	19.6	53.6	22.4	46.9	24.9	-	-
-10	76.1	21.2	67.7	24.3	59.6	27.4	54.8	30.5
-5	94.1	22.6	84.2	26.1	74.7	29.7	65.5	33.6
0	114.9	23.7	103.3	27.6	92.1	31.9	81.3	36.5
5	138.3	24.6	124.9	28.9	111.9	33.8	99.4	39.3
10	164.4	25.3	149.0	30.1	134.1	35.6	119.7	41.9

SP6-H-5000								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	44.8	18.6	39.2	21.1	38.8	22.9	-	-
-20	57.0	21.2	50.2	24.1	43.5	26.5	-	-
-15	72.4	23.5	64.0	26.7	56.0	29.7	-	-
-10	90.9	25.4	80.9	29.1	71.2	32.8	61.9	36.4
-5	112.5	27.0	100.7	31.2	89.2	35.5	78.2	40.1
0	137.3	28.4	123.4	33.0	110.1	38.1	97.2	43.6
5	165.3	29.4	149.2	34.6	133.7	40.4	118.8	47.0
10	196.4	30.2	178.1	35.9	160.3	42.6	143.1	50.1

SP8-H-6000								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	59.8	23.3	47.6	24.9	40.3	26.0	-	-
-20	74.6	25.9	61.7	28.2	53.5	30.0	-	-
-15	91.9	28.2	78.1	31.3	68.6	33.9	-	-
-10	112.2	30.3	97.2	34.2	86.1	37.6	73.9	40.4
-5	135.8	32.1	119.3	36.8	106.3	41.0	91.9	44.8
0	163.1	33.6	144.8	39.2	129.7	44.3	112.7	49.0
5	194.5	34.8	174.1	41.3	156.5	47.3	136.6	53.0
10	230.3	35.7	207.5	43.1	187.1	50.1	164.1	56.8

SP8-H-7000								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	71.4	27.8	56.8	29.8	48.1	31.0	-	-
-20	89.0	30.9	73.7	33.7	63.8	35.8	-	-
-15	109.7	33.7	93.3	37.4	81.9	40.4	-	-
-10	133.9	36.2	116.0	40.8	102.8	44.8	88.2	48.3
-5	162.1	38.3	142.4	44.0	126.9	49.0	109.7	53.5
0	194.7	40.1	172.9	46.8	154.8	52.9	134.5	58.5
5	232.1	41.6	207.8	49.3	186.7	56.5	163.1	63.3
10	274.9	42.7	247.6	51.5	223.3	59.8	195.8	67.8

KEY / 图例

Pf = cooling capacity / 制冷量 (kW)
 Pa = input power / 输入功率 (kW)
 Te = evaporating temperature / 蒸发温度 (°C)
 Tc = condensing temperature / 冷凝温度 (°C)
 50Hz = frequency / 频率
 Liquid subcooling / 液体过冷度 5K
 Suction gas superheat / 吸气过热度 10K
 identifies additional cooling required (see application limits)
 表示需要附加冷却 (参考应用界限)

Limits refer to full load 50 Hz operation / 参考全负荷50 Hz运转界限

For data at different working conditions please refer to RefComp LEONARDO selection program / 不同工况下的性能数据请参考莱富康 LEONARDO 选型软件

INTRODUCTION

性能参数

SP-L, 制冷剂R22

SP2-L-0300								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	1.5	1.7	1.5	1.5	1.3	1.5	1.0	1.5
-35	2.5	1.9	2.3	1.9	1.9	1.9	1.6	2.0
-30	3.6	2.1	3.3	2.2	2.8	2.4	2.4	2.5
-25	5.1	2.4	4.5	2.5	3.8	2.8	3.5	2.9
-20	6.7	2.6	5.9	2.9	5.1	3.2	4.7	3.4
-15	8.6	2.8	7.6	3.2	6.6	3.6	6.1	3.8
-10	10.7	3.0	9.5	3.5	8.4	4.0	7.8	4.2
-5	13.0	3.3	11.6	3.8	10.3	4.4	9.7	4.7

SP2-L-0400								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	1.8	2.0	1.8	1.8	1.5	1.8	1.2	1.8
-35	3.0	2.3	2.8	2.2	2.3	2.3	2.0	2.4
-30	4.4	2.5	4.0	2.6	3.3	2.8	2.9	3.0
-25	6.1	2.8	5.4	3.0	4.6	3.3	4.2	3.5
-20	8.0	3.1	7.1	3.4	6.2	3.8	5.6	4.0
-15	10.3	3.4	9.1	3.8	8.0	4.3	7.4	4.6
-10	12.8	3.6	11.4	4.2	10.0	4.8	9.4	5.1
-5	15.6	3.9	13.9	4.6	12.4	5.2	11.6	5.6

SP2-L-0500								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	2.1	2.4	2.1	2.1	1.8	2.1	1.4	2.1
-35	3.4	2.7	3.2	2.6	2.7	2.7	2.3	2.8
-30	5.1	3.0	4.6	3.1	3.9	3.3	3.4	3.4
-25	7.1	3.3	6.3	3.5	5.4	3.9	4.9	4.1
-20	9.4	3.6	8.3	4.0	7.2	4.4	6.6	4.7
-15	12.0	3.9	10.6	4.4	9.3	5.0	8.6	5.3
-10	15.0	4.2	13.3	4.9	11.7	5.5	10.9	5.9
-5	18.2	4.5	16.3	5.3	14.4	6.1	13.6	6.5

SP2-L-0600								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	2.4	2.7	2.4	2.4	2.0	2.4	1.6	2.4
-35	3.9	3.0	3.7	2.9	3.1	3.0	2.6	3.2
-30	5.8	3.4	5.3	3.5	4.4	3.7	3.9	3.9
-25	8.1	3.7	7.2	4.0	6.2	4.4	5.6	4.6
-20	10.7	4.1	9.5	4.5	8.2	5.0	7.5	5.3
-15	13.7	4.4	12.2	5.0	10.6	5.7	9.8	6.0
-10	17.1	4.8	15.2	5.5	13.4	6.3	12.5	6.7
-5	20.9	5.1	18.6	6.1	16.5	6.9	15.5	7.3

SP4-LF-0600/SP4-LN-0600								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	3.0	3.2	3.0	2.8	2.5	2.8	2.0	2.9
-35	4.9	3.5	4.6	3.5	3.8	3.6	3.3	3.7
-30	7.3	4.0	6.6	4.1	5.6	4.4	4.9	4.6
-25	10.1	4.4	9.0	4.7	7.7	5.2	6.9	5.4
-20	13.4	4.8	11.9	5.3	10.3	5.9	9.4	6.3
-15	17.1	5.2	15.2	5.9	13.2	6.7	12.3	7.1
-10	21.4	5.6	19.0	6.5	16.7	7.4	15.6	7.9
-5	26.1	6.1	23.2	7.1	20.6	8.4	19.4	8.6

SP4-LF-0800/SP4-LN-0800								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	3.6	3.8	3.6	3.4	3.0	3.3	2.4	3.4
-35	5.9	4.3	5.5	4.2	4.6	4.3	3.9	4.5
-30	8.8	4.7	7.9	4.9	6.7	5.3	5.9	5.5
-25	12.1	5.2	10.8	5.6	9.2	6.2	8.3	6.5
-20	16.1	5.7	14.3	6.4	12.3	7.1	11.3	7.5
-15	20.6	6.2	18.3	7.1	15.9	8.0	14.7	8.5
-10	25.6	6.8	22.8	7.8	20.1	8.9	18.7	9.4
-5	31.3	7.3	27.9	8.6	24.7	9.8	23.2	10.4

SP4-LF-1000/SP4-LN-1000								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	4.2	4.4	4.2	4.0	3.5	3.9	2.9	4.0
-35	6.9	5.0	6.4	4.8	5.4	5.0	4.6	5.2
-30	10.2	5.5	9.2	5.7	7.8	6.1	6.9	6.4
-25	14.2	6.1	12.6	6.6	10.8	7.2	9.7	7.6
-20	18.8	6.7	16.6	7.4	14.4	8.3	13.2	8.8
-15	24.0	7.3	21.3	8.3	18.6	9.4	17.2	9.9
-10	29.9	7.9	26.6	9.1	23.4	10.4	21.8	11.0
-5	36.5	8.5	32.5	10.0	28.8	11.4	27.1	12.1

SP4-LF-1200/SP4-LN-1200								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	4.8	5.1	4.8	4.6	4.0	4.5	3.3	4.6
-35	7.9	5.7	7.4	5.5	6.1	5.7	5.2	6.0
-30	11.7	6.3	10.6	6.5	8.9	7.0	7.8	7.3
-25	16.2	7.0	14.4	7.5	12.3	8.2	11.1	8.7
-20	21.4	7.6	19.0	8.5	16.4	9.5	15.0	10.0
-15	27.4	8.3	24.3	9.5	21.2	10.7	19.7	11.3
-10	34.2	9.0	30.4	10.4	26.7	11.9	25.0	12.6
-5	41.7	9.7	37.2	11.4	33.0	13.0	31.0	13.8

SP4-L-1500								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	6.9	4.7	5.8	4.9	4.8	4.9	4.5	4.8
-35	9.7	5.7	8.2	6.0	7.0	6.4	6.5	6.4
-30	13.2	6.6	11.3	7.3	9.7	7.9	9.0	8.1
-25	17.5	7.6	15.1	8.5	13.1	9.4	12.2	9.8
-20	22.7	8.6	19.8	9.8	17.4	10.9	16.3	11.5
-15	29.1	9.6	25.6	11.0	22.7	12.5	21.4	13.1
-10	36.8	10.6	32.7	12.2	29.2	14.0	27.7	14.8
-5	45.9	11.5	41.1	13.4	37.1	15.5	35.4	16.4

SP4-L-1800								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	8.0	5.5	6.7	5.6	5.6	5.7	5.2	5.6
-35	11.3	6.6	9.5	7.0	8.1	7.4	7.5	7.5
-30	15.3	7.7	13.1	8.4	11.2	9.1	10.4	9.4
-25	20.3	8.9	17.5	9.9	15.2	10.9	14.2	11.3
-20	26.4	10.0	23.0	11.3	20.1	12.7	18.9	13.3
-15	33.8	11.2	29.7	12.8	26.3	14.5	24.9	15.2
-10	42.7	12.3	37.9	14.2	33.9	16.2	32.2	17.2
-5	53.2	13.3	47.7	15.6	43.0	17.9	41.0	19.1

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SP4-L-2200								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	9.2	6.3	7.7	6.5	6.4	6.5	5.9	6.4
-35	13.0	7.5	10.9	8.0	9.3	8.5	8.6	8.6
-30	17.6	8.8	15.0	9.7	12.8	10.5	12.0	10.8
-25	23.3	10.2	20.0	11.3	17.4	12.5	16.3	13.0
-20	30.3	11.5	26.3	13.0	23.1	14.6	21.7	15.2
-15	38.7	12.8	34.1	14.7	30.2	16.6	28.5	17.5
-10	48.9	14.1	43.5	16.3	38.9	18.6	36.9	19.7
-5	61.0	15.3	54.7	17.8	49.3	20.6	47.0	21.9

SP4-L-2500								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	11.0	7.5	9.2	7.7	7.7	7.8	7.1	7.7
-35	15.5	9.0	13.1	9.6	11.1	10.1	10.3	10.2
-30	21.0	10.6	17.9	11.6	15.3	12.5	14.3	12.9
-25	27.8	12.2	24.0	13.5	20.8	15.0	19.4	15.5
-20	36.2	13.7	31.5	15.5	27.6	17.4	26.0	18.2
-15	46.3	15.3	40.7	17.5	36.1	19.8	34.1	20.9
-10	58.5	16.8	52.0	19.5	46.5	22.2	44.1	23.6
-5	73.0	18.3	65.4	21.3	59.0	24.6	56.2	26.1

SP6-L-2700								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	12.1	8.3	10.1	8.5	8.4	8.6	7.8	8.4
-35	17.0	9.9	14.3	10.5	12.1	11.1	11.2	11.2
-30	23.0	11.6	19.6	12.6	16.8	13.7	15.6	14.1
-25	30.4	13.3	26.2	14.8	22.7	16.4	21.3	17.0
-20	39.6	15.0	34.5	17.0	30.2	19.1	28.4	19.9
-15	50.7	16.8	44.6	19.2	39.5	21.7	37.3	22.9
-10	64.0	18.4	56.9	21.3	50.8	24.3	48.3	25.8
-5	79.8	20.0	71.6	23.3	64.6	26.9	61.5	28.6

SP6-L-3000								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	13.9	9.5	11.6	9.7	9.7	9.8	8.9	9.7
-35	19.5	11.3	16.4	12.1	13.9	12.7	12.9	12.9
-30	26.4	13.3	22.5	14.5	19.3	15.7	18.0	16.2
-25	35.0	15.3	30.1	17.0	26.1	18.8	24.5	19.5
-20	45.5	17.3	39.6	19.6	34.7	21.9	32.7	22.9
-15	58.2	19.3	51.3	22.1	45.4	25.0	42.9	26.3
-10	73.6	21.2	65.4	24.5	58.4	28.0	55.5	29.6
-5	91.8	23.0	82.3	26.8	74.2	30.9	70.7	32.9

SP6-L-4000								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	16.6	11.3	13.8	11.6	11.6	11.8	10.7	11.6
-35	23.3	13.6	19.6	14.4	16.6	15.2	15.4	15.4
-30	31.6	15.9	26.9	17.4	23.1	18.8	21.5	19.3
-25	41.8	18.3	36.0	20.4	31.2	22.5	29.2	23.3
-20	54.4	20.7	47.3	23.4	41.5	26.2	39.0	27.4
-15	69.6	23.0	61.2	26.4	54.2	29.8	51.3	31.4
-10	87.9	25.3	78.1	29.3	69.8	33.4	66.3	35.4
-5	109.7	27.5	98.3	32.1	88.7	36.9	84.5	39.3

SP8-L-5000								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	-	-	-	-	-	-	-	-
-35	36.2	17.4	24.7	17.7	-	-	-	-
-30	47.0	20.1	35.2	21.3	-	-	-	-
-25	59.6	22.9	47.4	24.8	40.0	26.0	-	-
-20	74.3	25.6	61.4	28.4	53.0	30.4	-	-
-15	91.6	28.2	77.8	31.7	68.1	34.7	63.3	35.4
-10	111.7	30.4	96.7	34.8	85.5	38.7	79.9	39.9
-5	135.0	32.3	118.7	37.5	105.7	42.3	99.0	44.1

SP8-L-6000								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	-	-	-	-	-	-	-	-
-35	43.6	20.7	29.4	21.2	-	-	-	-
-30	56.1	24.0	42.0	25.4	-	-	-	-
-25	71.1	27.4	56.5	29.7	47.8	31.0	-	-
-20	88.7	30.6	73.3	33.9	63.3	36.3	-	-
-15	109.3	33.6	92.8	37.9	81.3	41.4	75.6	42.2
-10	133.3	36.3	115.5	41.6	102.1	46.2	95.3	47.6
-5	161.2	38.5	141.7	44.8	126.2	50.5	118.2	52.6

KEY / 图例

- Pf = cooling capacity / 制冷量 (kW)
- Pa = input power / 输入功率 (kW)
- Te = evaporating temperature / 蒸发温度 (°C)
- Tc = condensing temperature / 冷凝温度 (°C)
- 50Hz = frequency / 频率
- Liquid subcooling / 液体过冷度 5K
- Suction gas superheat / 吸气过热度 10K
- Identifies additional cooling required (see application limits) / 表示需要附加冷却 (参考应用界限)

Limits refer to full load 50 Hz operation / 参考全负荷50 Hz运转界限

For data at different working conditions please refer to RefComp LEONARDO selection program / 不同工况下的性能数据请参考莱富康LEONARDO选型软件

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性能参数

SP-H, 制冷剂R407C

SP2-H-050E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	4.3	1.8	3.4	1.9	2.8	1.9	-	-
-20	5.7	2.2	4.6	2.3	3.7	2.4	-	-
-15	7.5	2.5	6.2	2.7	5.1	2.9	-	-
-10	9.6	2.8	8.2	3.1	6.8	3.3	-	-
-5	12.2	3.0	10.6	6.4	8.9	3.7	7.6	3.9
0	15.3	3.1	13.3	3.6	11.4	4.0	9.8	4.4
5	18.7	3.2	16.5	3.8	14.2	4.4	12.3	4.8
10	22.5	3.3	20.1	4.0	17.5	4.7	15.3	5.1

SP2-H-060E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	5.2	2.2	4.1	2.3	3.4	2.3	-	-
-20	6.8	2.6	5.5	2.8	4.5	2.9	-	-
-15	6.9	3.0	7.4	3.3	6.4	3.4	-	-
-10	11.6	3.3	9.8	3.7	8.2	3.9	-	-
-5	14.7	3.5	12.7	4.0	10.7	4.4	9.1	4.7
0	18.3	3.7	16.0	4.3	13.7	4.8	11.7	5.2
5	22.4	3.9	19.8	4.6	17.1	5.2	14.8	5.7
10	27.0	3.9	24.1	4.8	21.0	5.5	18.3	6.1

SP2-H-050E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	6.0	2.5	4.7	2.6	3.9	2.6	-	-
-20	7.9	3.0	6.4	3.2	5.2	3.3	-	-
-15	10.4	3.5	8.6	3.8	7.1	4.0	-	-
-10	13.5	3.8	11.4	4.2	9.5	4.6	-	-
-5	17.1	4.1	14.8	4.7	12.4	5.1	10.6	5.4
0	21.4	4.3	18.7	5.0	15.9	5.6	13.7	6.0
5	26.2	4.5	23.1	5.3	19.9	6.0	17.3	6.6
10	31.5	4.6	28.2	5.6	24.5	6.4	21.4	7.1

SP2-H-090E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	6.9	2.9	5.4	3.0	4.5	3.0	-	-
-20	9.1	3.5	7.3	3.7	6.0	3.8	-	-
-15	11.9	3.9	9.9	4.3	8.1	4.5	-	-
-10	15.4	4.4	13.1	4.8	10.9	5.2	-	-
-5	19.6	4.7	16.9	5.3	14.2	5.8	12.1	6.2
0	24.4	4.9	21.4	5.7	18.2	6.4	15.6	6.9
5	29.9	5.1	26.5	6.0	22.8	6.9	19.7	7.5
10	36.0	5.2	32.2	6.3	28.0	7.3	24.4	8.1

SP4-HF-100E/SP4-HN-100E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	8.6	3.6	6.8	3.7	5.6	3.8	-	-
-20	11.4	4.3	9.2	4.6	7.5	4.8	-	-
-15	14.9	4.9	12.4	5.4	10.2	5.7	-	-
-10	19.3	5.4	16.3	6.0	13.6	6.5	-	-
-5	24.5	5.8	21.1	6.6	17.8	7.3	15.2	7.7
0	30.5	6.2	26.7	7.1	22.8	7.9	19.5	8.6
5	37.4	6.4	33.1	7.5	28.5	8.6	24.7	9.4
10	45.0	6.5	40.2	7.9	35.0	9.2	30.5	10.1

SP4-HF-120E/SP4-HN-120E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	10.3	4.3	8.1	4.5	6.7	4.5	-	-
-20	13.6	5.2	11.0	5.5	9.0	5.7	-	-
-15	17.9	5.9	14.8	6.4	12.2	6.8	-	-
-10	23.1	6.5	19.6	7.2	16.3	7.8	-	-
-5	29.4	7.0	25.3	7.9	21.3	8.7	18.2	9.3
0	36.6	7.4	32.0	8.5	27.3	9.5	23.4	10.3
5	44.8	7.6	39.7	9.0	34.2	10.3	29.6	11.2
10	54.1	7.8	48.3	9.5	42.0	11.0	36.7	12.2

SP4-HF-150E/SP4-HN-150E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	12.1	5.0	9.5	5.2	7.8	5.3	-	-
-20	15.9	6.0	12.9	6.4	10.5	6.7	-	-
-15	20.9	6.9	17.3	7.5	14.2	7.9	-	-
-10	27.0	7.6	22.9	8.4	19.0	9.1	-	-
-5	34.3	8.2	29.6	9.3	24.9	10.2	21.2	10.8
0	42.7	8.6	37.4	9.9	31.9	11.1	27.3	12.0
5	52.3	8.9	46.3	10.5	39.9	12.0	34.5	13.1
10	63.1	9.1	56.3	11.0	49.0	12.8	42.8	14.2

SP4-HF-200E/SP4-HN-200E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	13.8	5.7	10.9	6.0	9.0	6.0	-	-
-20	18.2	6.9	14.7	7.4	12.0	7.6	-	-
-15	23.9	7.9	19.8	8.6	16.3	9.1	-	-
-10	30.9	8.7	26.2	9.6	21.7	10.4	-	-
-5	39.2	9.3	33.8	10.6	28.5	11.6	24.2	12.4
0	48.8	9.8	42.7	11.4	36.4	12.7	31.3	13.7
5	59.8	10.2	52.9	12.0	45.6	13.7	39.5	15.0
10	72.1	10.4	64.4	12.6	56.0	14.7	48.9	16.2

SP4-H-220E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	15.9	7.2	12.5	8.2	10.3	9.0	-	-
-20	21.0	8.1	17.0	9.4	13.9	10.4	-	-
-15	27.6	9.0	22.9	10.4	18.8	11.8	-	-
-10	35.7	9.7	30.2	11.4	25.1	13.0	-	-
-5	45.3	10.3	39.0	12.2	32.9	14.2	28.0	15.9
0	56.4	10.9	49.3	13.0	42.1	15.3	36.1	17.2
5	69.1	11.3	61.1	13.6	52.7	16.2	45.6	18.5
10	83.3	11.6	74.4	14.1	64.7	17.0	56.5	19.7

SP4-H-250E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	18.5	8.4	14.6	9.5	12.0	10.4	-	-
-20	24.3	9.4	19.7	10.9	16.1	12.1	-	-
-15	32.0	10.4	26.5	12.1	21.8	13.7	-	-
-10	41.4	11.3	35.0	13.2	29.1	15.1	-	-
-5	52.5	12.0	45.3	14.2	38.1	16.5	32.5	18.4
0	65.4	12.6	57.2	15.0	48.8	17.7	41.9	20.0
5	80.1	13.1	70.9	15.8	61.1	18.8	52.9	21.4
10	96.6	13.5	86.3	16.4	75.1	19.8	65.5	22.8

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SP4-H-300E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	21.2	9.6	16.7	10.9	13.8	6.5	-	-
-20	27.9	10.8	22.6	12.5	18.4	8.5	-	-
-15	36.7	11.9	30.4	13.9	25.0	10.5	-	-
-10	47.4	12.9	40.2	15.1	33.4	12.5	-	-
-5	60.2	13.8	51.9	16.2	43.7	14.6	37.3	21.1
0	75.0	14.5	65.6	17.2	55.9	16.6	48.0	22.9
5	91.9	15.0	81.3	18.1	70.1	18.6	60.6	24.6
10	110.7	15.4	98.9	18.8	86.1	20.6	75.1	26.1

SP4-H-300E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	25.3	11.4	20.0	13.1	16.5	14.3	-	-
-20	33.4	12.9	27.0	14.9	22.0	16.6	-	-
-15	43.8	14.3	36.3	16.6	29.9	18.7	-	-
-10	56.7	15.5	48.0	18.1	39.9	20.7	-	-
-5	72.0	16.5	62.1	19.4	52.3	22.6	44.5	25.2
0	89.7	17.3	78.4	20.6	66.9	24.3	57.4	27.4
5	109.8	17.9	97.2	21.6	83.8	25.8	72.5	29.4
10	132.4	18.4	118.3	22.5	102.9	27.1	89.8	31.3

SP6-H-370E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	27.7	12.5	21.8	14.3	18.0	15.6	-	-
-20	36.5	14.2	29.5	16.3	24.1	18.2	-	-
-15	48.0	15.6	39.8	18.1	32.7	20.5	-	-
-10	62.0	16.9	52.6	19.8	43.7	22.7	-	-
-5	78.8	18.0	67.9	21.3	57.2	24.7	48.7	27.6
0	98.1	18.9	85.8	22.5	73.2	26.5	62.8	30.0
5	120.2	19.6	106.3	23.7	91.7	28.2	79.3	32.2
10	144.9	20.2	129.4	24.6	112.6	29.7	98.3	34.2

SP6-H-400E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	31.9	14.4	26.1	16.4	20.7	17.9	-	-
-20	42.1	16.3	33.9	18.7	27.7	20.9	-	-
-15	55.1	18.0	45.7	20.8	37.5	23.6	-	-
-10	71.3	19.4	60.4	22.7	50.2	26.1	-	-
-5	90.5	20.7	78.1	24.4	65.8	28.4	56.0	31.7
0	112.8	21.7	98.7	25.9	84.1	30.5	72.2	34.4
5	138.1	22.6	122.2	27.2	105.4	32.4	94.2	37.0
10	166.5	23.2	148.8	28.2	129.4	34.1	112.9	39.3

SP6-H-500E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	38.1	17.2	30.0	19.6	24.7	21.4	-	-
-20	50.2	19.5	40.6	22.4	33.1	24.9	-	-
-15	65.9	21.5	54.6	24.9	44.9	28.2	-	-
-10	85.2	23.2	72.2	27.2	60.0	31.2	-	-
-5	108.2	24.7	93.3	29.2	78.6	33.9	67.0	37.9
0	134.8	26.0	117.9	31.0	100.5	36.5	86.3	41.2
5	165.1	27.0	146.1	32.5	125.9	38.7	109.0	44.2
10	199.0	27.7	177.8	33.8	154.7	40.7	135.0	47.0

SP8-H-600E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	46.7	20.3	41.5	21.5	33.0	21.8	-	-
-20	62.6	23.4	55.7	25.2	45.9	26.2	-	-
-15	81.1	26.1	72.3	28.6	60.7	30.4	-	-
-10	102.7	28.5	91.6	31.8	77.9	34.4	-	-
-5	127.9	30.6	114.1	34.7	98.2	38.2	85.0	40.6
0	157.1	32.3	140.5	37.3	121.9	41.9	106.8	45.1
5	191.0	33.7	171.2	39.7	149.6	45.4	132.3	49.5
10	230.0	34.7	206.6	41.9	181.8	48.6	162.1	53.8

SP8-H-700E								
Tc	30		40		50		58	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	55.7	24.2	49.5	25.6	39.4	26.0	-	-
-20	74.7	27.9	66.5	30.0	54.7	31.3	-	-
-15	96.8	31.2	86.3	34.1	72.4	36.3	-	-
-10	122.6	34.1	109.3	37.9	93.0	41.1	-	-
-5	152.6	36.5	136.2	41.4	117.2	45.7	101.5	48.5
0	187.5	38.6	167.7	44.6	145.5	50.0	127.5	53.9
5	228.0	40.2	204.3	47.4	178.6	54.1	157.9	59.1
10	274.5	41.4	246.7	50.0	217.0	58.1	193.5	64.2

KEY / 图例

Pf = cooling capacity / 制冷量 (kW)
 Pa = input power / 输入功率 (kW)
 Te = evaporating temperature / 蒸发温度 (°C)
 Tc = condensing temperature / 冷凝温度 (°C)
 50Hz = frequency / 频率
 Liquid subcooling / 液体过冷度 5K
 Suction gas superheat / 吸气过热度 10K
 identifies additional cooling required (see application limits)
 表示需要附加冷却 (参考应用界限)

Limits refer to full load 50 Hz operation / 参考全负荷50 Hz运转界限

For data at different working conditions please refer to RefComp LEONARDO selection program / 不同工况下的性能数据请参考莱富康 LEONARDO 选型软件

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性能参数

SP-L, 制冷剂R407C

SP2-L-030E									
Tc	30			40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	4.3	1.7	3.4	1.8	2.8	1.8	-	-	
-20	5.7	2.1	4.6	2.2	3.7	2.3	3.5	2.3	
-15	7.5	2.4	6.2	2.6	5.1	2.7	4.7	2.8	
-10	9.6	2.6	8.2	2.9	6.8	3.1	6.3	3.2	
-5	12.2	2.8	10.6	3.2	6.9	3.5	8.2	3.6	

SP2-L-040E									
Tc	30			40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	5.2	2.0	4.1	2.1	3.4	2.1	-	-	
-20	6.8	2.5	5.5	2.6	4.5	2.7	4.2	2.7	
-15	8.9	2.8	7.4	3.1	6.1	3.2	5.6	3.3	
-10	11.6	3.1	9.8	3.4	8.2	3.7	7.5	3.8	
-5	14.7	3.3	12.7	3.8	10.7	4.1	9.9	4.3	

SP2-L-050E									
Tc	30			40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	6.0	2.4	4.7	2.5	3.9	2.5	-	-	
-20	7.9	2.9	6.4	3.0	5.2	3.1	4.9	3.2	
-15	10.4	3.3	8.6	3.5	7.1	3.8	6.5	3.8	
-10	13.5	3.6	11.4	4.0	9.5	4.3	8.8	4.4	
-5	17.1	3.9	14.8	4.4	12.4	4.8	11.5	5.0	

SP2-L-060E									
Tc	30			40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	6.9	2.7	5.4	2.8	4.5	2.8	-	-	
-20	9.1	3.2	7.3	3.5	6.0	3.6	5.5	3.6	
-15	11.9	3.7	9.9	4.0	8.1	4.3	7.5	4.3	
-10	15.4	4.1	13.1	4.5	10.9	4.9	10.0	5.0	
-5	19.6	4.4	16.9	5.0	14.2	5.5	13.2	5.6	

SP4-LF-060E/SP4-LN-060E									
Tc	30			40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	8.6	3.9	6.8	4.4	5.6	4.9	-	-	
-20	11.4	4.4	9.2	5.1	7.5	5.6	7.0	5.8	
-15	14.9	4.9	12.4	5.6	10.2	6.4	9.4	6.7	
-10	19.3	5.3	16.3	6.2	13.6	7.1	12.5	7.4	
-5	24.5	5.6	21.1	6.6	17.8	7.7	16.5	8.1	

SP4-LF-080E/SP4-LN-080E									
Tc	30			40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	10.3	4.7	8.1	5.3	6.7	5.8	-	-	
-20	13.6	5.3	11.0	6.1	9.0	6.8	8.4	7.0	
-15	17.9	5.8	14.8	6.8	12.2	7.7	11.2	8.0	
-10	23.1	6.3	19.6	7.4	16.3	8.5	15.0	8.9	
-5	29.4	6.7	25.3	7.9	21.3	9.2	19.8	9.7	

SP4-LF-100E/SP4-LN-100E									
Tc	30			40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	12.1	5.5	9.5	6.2	7.8	6.8	7.4	7.0	
-20	15.9	6.2	12.9	7.1	10.5	7.9	9.7	8.2	
-15	20.9	6.8	17.3	7.9	14.2	8.9	13.1	9.3	
-10	27.0	7.4	22.9	8.6	19.0	9.9	17.6	10.4	
-5	34.3	7.8	29.6	9.3	24.9	10.8	23.1	11.4	

SP4-LF-120E/SP4-LN-120E									
Tc	30			40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	13.8	6.2	10.9	7.1	9.0	7.8	-	-	
-20	18.2	7.0	14.7	8.1	12.0	9.0	11.1	9.4	
-15	23.9	7.8	19.8	9.0	16.3	10.2	15.0	10.7	
-10	30.9	8.4	26.2	9.8	21.7	11.3	20.1	11.9	
-5	39.2	9.0	33.8	10.6	28.5	12.3	26.3	13.0	

SP4-L-150E									
Tc	30			40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	15.9	7.2	12.5	8.2	10.3	9.0	-	-	
-20	21.0	8.1	17.0	9.4	13.9	10.4	12.9	10.8	
-15	27.6	9.0	22.9	10.4	18.8	11.8	17.3	12.3	
-10	35.7	9.7	30.2	11.4	25.1	13.0	23.2	13.7	
-5	45.3	10.3	39.0	12.2	32.9	14.2	30.4	15.0	

SP4-L-180E									
Tc	30			40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	18.5	8.4	14.6	9.5	12.0	10.4	-	-	
-20	24.3	9.4	19.7	10.9	16.1	12.1	14.9	12.5	
-15	32.0	10.4	26.5	12.1	21.8	13.7	20.1	14.3	
-10	41.4	11.3	35.0	13.2	29.1	15.1	26.9	15.9	
-5	52.5	12.0	45.3	14.2	38.1	16.5	35.3	17.4	

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性能参数

SP4-L-220E								
Tc	30		40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	21.2	9.6	16.7	10.9	13.8	11.9	-	-
-20	27.9	10.8	22.6	12.5	18.4	13.9	16.8	14.5
-15	36.7	11.9	30.4	13.9	25.0	15.7	22.6	16.5
-10	47.4	12.9	40.2	15.1	33.4	17.4	30.2	18.5
-5	60.2	13.8	51.9	16.2	43.7	18.9	39.7	20.3

SP4-L-250E								
Tc	30		40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	25.5	11.5	20.1	13.2	16.6	14.4	-	-
-20	33.6	13.0	27.2	15.0	22.2	16.7	20.6	17.3
-15	44.1	14.4	36.6	16.7	30.0	18.9	27.7	19.7
-10	57.1	15.5	48.3	18.2	40.2	20.9	37.1	21.9
-5	72.4	16.6	62.5	19.5	52.6	22.7	48.7	24.0

SP6-L-270E								
Tc	30		40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	27.7	12.5	21.8	14.3	18.0	15.6	-	-
-20	36.5	14.2	29.5	16.3	24.1	18.2	22.4	18.8
-15	48.0	15.6	39.8	18.1	32.7	20.5	30.1	21.4
-10	62.0	16.9	52.6	19.8	43.7	22.7	40.3	23.9
-5	78.8	18.0	67.9	21.3	57.2	24.7	53.0	26.1

SP6-L-300E								
Tc	30		40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	31.9	14.4	25.1	16.4	20.7	17.9	-	-
-20	42.0	16.3	33.9	18.7	27.7	20.9	25.7	21.6
-15	55.1	18.0	45.7	20.8	37.5	23.6	34.6	24.6
-10	71.3	19.4	60.4	22.7	50.2	26.1	46.4	27.4
-5	90.5	20.7	78.1	24.4	65.8	28.4	60.9	30.0

SP6-L-400E								
Tc	30		40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	38.2	17.3	30.1	19.7	24.8	21.5	-	-
-20	50.4	19.5	40.7	22.5	33.2	25.0	30.9	25.9
-15	66.2	21.6	54.9	25.0	45.1	28.3	41.6	29.5
-10	85.6	23.3	72.5	27.3	60.3	31.3	55.6	32.9
-5	108.6	24.8	93.7	29.3	78.9	34.1	73.0	36.0

SP8-L-500E								
Tc	30		40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	46.7	20.3	41.5	21.5	33.0	21.8	-	-
-20	62.6	23.4	55.7	25.2	45.9	26.2	41.5	26.4
-15	81.1	26.1	72.3	28.6	60.7	30.4	55.7	30.9
-10	102.7	28.5	91.6	31.8	77.9	34.4	72.2	35.3
-5	127.9	30.6	114.1	34.7	98.2	38.2	91.6	39.5

SP8-L-600E								
Tc	30		40		50		54	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	55.7	24.2	49.5	25.6	39.4	26.0	-	-
-20	74.7	27.9	66.5	30.0	54.7	31.3	49.5	31.5
-15	96.8	31.2	86.3	34.1	72.4	36.3	66.4	36.9
-10	122.6	34.1	109.3	37.9	93.0	41.1	86.2	42.1
-5	152.6	36.5	136.2	41.4	117.2	45.7	109.3	47.1

KEY / 图例

- Pf = cooling capacity / 制冷量 (kW)
- Pa = input power / 输入功率 (kW)
- Te = evaporating temperature / 蒸发温度 (°C)
- Tc = condensing temperature / 冷凝温度 (°C)
- 50Hz = frequency / 频率
- Liquid subcooling / 液体过冷度 5K
- Suction gas superheat / 吸气过热度 10K
- Identifies additional cooling required (see application limits)
表示需要附加冷却(参考应用界限)

Limits refer to full load 50 Hz operation / 参考全负荷50 Hz运转界限

For data at different working conditions please refer to RefComp LEONARDO selection program / 不同工况下的性能数据请参考莱富康 LEONARDO 选型软件

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性能参数

SP-H, 制冷剂R134a

SP2-H-050E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	3.2	1.7	2.5	1.8	1.8	1.8	1.3	1.8
-15	4.2	2.0	3.4	1.0	2.6	2.1	2.0	2.1
-10	5.5	2.2	4.6	2.3	3.7	2.4	2.9	2.5
-5	7.1	2.4	6.0	2.6	5.0	2.8	4.1	2.9
0	9.0	2.7	7.7	2.9	6.5	3.1	5.5	3.3
5	11.1	2.9	9.7	3.2	8.3	3.5	7.1	3.7
10	13.4	3.2	11.8	3.5	10.2	3.9	8.8	4.1
15	16.0	3.4	14.1	3.9	12.3	4.3	10.8	4.6

SP2-H-050E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	3.8	2.0	3.0	2.1	2.2	2.1	1.6	2.1
-15	5.0	2.3	4.1	2.4	3.1	2.5	2.4	2.5
-10	6.6	2.6	5.5	2.8	4.4	2.9	3.5	3.0
-5	8.6	2.9	7.2	3.1	6.0	3.3	4.9	3.4
0	10.8	3.2	9.3	3.5	7.8	3.7	6.6	3.9
5	13.3	3.5	11.6	3.9	9.9	4.2	8.5	4.4
10	16.1	3.8	14.2	4.2	12.3	4.6	10.6	4.9
15	19.2	4.1	17.0	4.6	14.8	5.1	12.9	5.5

SP2-H-080E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	4.4	2.4	3.5	2.4	2.5	2.5	1.8	2.5
-15	5.9	2.7	4.7	2.8	3.6	2.9	2.8	2.9
-10	7.7	3.0	6.4	3.2	5.1	3.4	4.1	3.4
-5	10.0	3.4	8.4	3.6	7.0	3.8	5.7	4.0
0	12.6	3.7	10.8	4.0	9.1	4.3	7.7	4.5
5	15.5	4.0	13.5	4.5	11.6	4.8	9.9	5.1
10	18.8	4.4	16.5	4.9	14.3	5.4	12.4	5.7
15	22.4	4.7	19.8	5.4	17.3	5.9	15.1	6.4

SP2-H-090E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	5.0	2.7	4.0	2.8	2.9	2.8	2.1	2.8
-15	6.7	3.1	5.4	3.2	4.2	3.3	3.2	3.3
-10	8.8	3.4	7.3	3.7	5.9	3.8	4.7	3.9
-5	11.4	3.8	9.7	4.1	8.0	4.3	6.6	4.5
0	14.4	4.2	12.4	4.6	10.4	4.9	8.8	5.1
5	17.8	4.6	15.5	5.1	13.2	5.5	11.3	5.8
10	21.5	5.0	18.9	5.6	16.3	6.1	14.1	6.5
15	25.6	5.4	22.6	6.1	19.8	6.7	17.2	7.2

SP4-HF-100E/SP4-HN-100E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	6.3	2.9	4.9	3.0	3.6	3.1	2.6	3.0
-15	8.4	3.4	6.8	3.5	5.2	3.6	4.0	3.6
-10	11.0	3.8	9.1	4.0	7.3	4.2	5.9	4.3
-5	14.3	4.2	12.1	4.5	9.9	4.8	8.2	4.9
0	18.0	4.6	15.5	5.5	13.0	5.4	10.9	5.6
5	22.2	5.0	19.3	5.6	16.5	6.0	14.1	6.3
10	26.9	5.4	23.6	6.1	20.4	6.7	17.6	7.1
15	32.0	5.9	28.3	6.7	24.7	7.3	21.5	7.9

SP4-HF-120E/SP4-HN-120E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	7.6	3.5	5.9	3.6	4.4	3.7	3.2	3.7
-15	10.1	4.0	8.1	4.2	6.3	4.3	4.8	4.4
-10	13.2	4.5	11.0	4.8	8.8	5.0	7.0	5.1
-5	17.1	5.0	14.5	5.4	11.9	5.7	9.8	5.9
0	21.6	5.5	18.6	6.0	15.6	6.4	13.2	6.7
5	26.6	6.0	23.2	6.7	19.8	7.2	17.0	7.6
10	32.2	6.5	28.3	7.3	24.5	8.0	21.2	8.5
15	38.4	7.0	33.9	8.0	29.6	8.8	25.8	9.5

SP4-HF-150E/SP4-HN-150E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	8.8	4.1	6.9	4.2	5.1	4.3	3.7	4.3
-15	11.7	4.7	9.5	4.9	7.3	5.0	5.6	5.1
-10	15.5	5.3	12.8	5.6	10.3	5.8	8.2	6.0
-5	20.0	5.9	16.9	6.3	13.9	6.7	11.5	6.9
0	25.2	6.4	21.6	7.0	18.2	7.5	15.3	7.9
5	31.1	7.0	27.0	7.8	23.1	8.4	19.8	8.9
10	37.6	7.6	33.0	8.6	28.6	9.3	24.7	10.0
15	44.7	8.2	39.6	9.3	34.6	10.3	30.1	11.1

SP4-HF-200E/SP4-HN-200E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	10.1	4.7	7.9	4.8	5.8	4.9	4.2	4.9
-15	13.4	5.4	10.8	5.6	8.3	5.8	6.4	5.8
-10	17.7	6.0	14.6	6.4	11.7	6.7	9.4	6.8
-5	22.8	6.7	19.3	7.2	15.9	7.6	13.1	7.9
0	28.8	7.4	24.7	8.1	20.8	8.6	17.5	9.0
5	35.5	8.0	30.9	8.9	26.5	9.6	22.6	10.2
10	43.0	8.7	37.8	9.8	32.7	10.7	28.3	11.4
15	51.1	9.4	45.2	10.7	39.5	11.8	34.4	12.7

SP4-H-220E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	11.7	5.6	10.0	5.7	8.4	5.8	6.9	5.7
-15	15.7	6.3	13.4	6.6	11.3	6.8	9.3	6.9
-10	20.7	7.1	17.8	7.6	15.1	7.9	12.5	8.0
-5	26.6	7.9	23.1	8.5	19.7	9.0	16.5	9.3
0	33.7	8.7	29.4	9.5	25.3	10.1	21.4	10.6
5	41.7	9.5	36.6	10.5	31.7	11.3	27.1	12.0
10	50.8	10.3	44.9	11.5	39.1	12.6	33.6	13.4
15	61.0	11.1	54.1	12.6	47.4	13.9	40.9	14.9

SP4-H-250E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	13.6	6.5	11.6	6.6	9.7	6.7	8.0	6.7
-15	18.2	7.3	15.6	7.7	13.1	7.9	10.8	8.0
-10	24.0	8.3	20.6	8.8	17.5	9.1	14.5	9.3
-5	30.9	9.2	26.8	9.9	22.9	10.4	19.2	10.8
0	39.0	10.1	34.1	11.0	29.3	11.7	24.8	12.3
5	48.4	11.0	42.5	12.2	36.8	13.1	31.4	13.9
10	59.0	11.9	52.0	13.4	45.4	14.6	38.9	15.6
15	70.8	12.8	62.7	14.6	55.0	16.1	47.5	17.3

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SP4-H-300E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	15.6	7.4	13.3	7.6	11.1	7.7	9.2	7.6
-15	20.9	8.4	17.8	8.8	15.0	9.0	12.4	9.1
-10	27.5	9.5	23.7	10.0	20.0	10.5	16.6	10.7
-5	35.4	10.5	30.7	11.3	26.3	11.9	22.0	12.4
0	44.8	11.6	39.1	12.6	33.6	13.5	28.4	14.1
5	55.5	12.6	48.7	14.0	42.2	15.1	36.0	15.9
10	67.6	13.7	59.7	15.3	52.0	16.7	44.7	17.8
15	81.1	14.7	71.9	16.7	63.1	18.4	54.5	19.8

SP4-H-350E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	18.7	8.8	15.9	9.1	13.3	9.2	10.9	9.1
-15	25.0	10.1	21.3	10.5	18.0	10.8	14.8	10.9
-10	32.8	11.3	28.3	12.0	24.0	12.5	19.9	12.8
-5	42.4	12.6	36.7	13.5	31.4	14.3	26.3	14.8
0	53.5	13.8	46.7	15.1	40.2	16.1	34.0	16.9
5	66.3	15.1	58.2	16.7	50.5	18.0	43.0	19.0
10	80.8	16.3	71.3	18.3	62.2	20.0	53.4	21.3
15	97.0	17.6	86.0	20.0	75.4	22.0	65.1	23.7

SP6-H-370E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	20.4	9.7	17.4	9.9	14.6	10.0	12.0	10.0
-15	27.3	11.0	23.3	11.5	19.6	11.8	16.2	11.9
-10	35.9	12.4	30.9	13.1	26.2	13.7	21.8	14.0
-5	46.4	13.7	40.2	14.8	34.3	15.6	28.8	16.2
0	58.6	15.1	51.1	16.5	44.0	17.6	37.2	18.4
5	72.6	16.5	63.7	18.3	55.2	19.7	47.1	20.8
10	88.5	17.9	78.1	20.1	68.1	21.9	58.4	23.3
15	106.2	19.3	94.1	21.9	82.5	24.1	71.3	26.0

SP6-H-400E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	23.5	11.1	20.0	11.4	16.8	11.5	13.8	11.5
-15	31.4	12.7	26.8	13.2	22.6	13.6	18.6	13.7
-10	41.3	14.2	35.6	15.1	30.1	15.7	25.0	16.1
-5	53.3	15.8	46.2	17.0	39.5	17.9	33.1	18.6
0	67.3	17.4	58.8	19.0	50.6	20.3	42.8	21.2
5	83.4	19.0	73.3	21.0	63.5	22.7	54.1	24.0
10	101.7	20.6	89.7	23.1	78.2	25.1	67.2	26.8
15	122.0	22.1	108.2	25.2	94.8	27.7	81.9	29.8

SP6-H-500E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	28.1	13.3	23.9	13.6	20.0	13.8	16.5	13.7
-15	37.5	15.1	32.1	15.8	27.0	16.2	22.2	16.4
-10	49.4	17.0	42.5	18.0	36.0	18.8	29.9	19.2
-5	63.7	18.9	55.2	20.3	47.2	21.4	39.5	22.2
0	80.5	20.8	70.2	22.7	60.5	24.2	51.1	25.3
5	99.7	22.7	87.6	25.1	75.9	27.1	64.7	28.6
10	121.5	24.6	107.2	27.5	93.5	30.0	80.3	32.1
15	145.8	26.5	129.3	30.1	113.3	33.1	97.9	35.6

SP8-H-600E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	34.9	16.4	29.0	17.0	22.4	17.3	15.0	18.0
-15	45.2	18.7	38.5	19.6	31.0	20.4	22.9	21.5
-10	58.0	21.0	50.1	22.4	41.4	23.5	32.2	25.1
-5	73.6	23.2	64.0	25.1	53.9	26.8	43.3	28.9
0	92.1	25.2	80.6	27.7	68.7	30.1	56.3	32.9
5	113.9	27.1	100.2	30.3	86.0	33.3	71.5	36.8
10	139.3	28.7	122.9	32.6	106.2	36.5	89.3	40.7
15	168.4	30.0	149.1	34.8	129.5	39.5	109.8	44.6

SP6-H-500E								
Tc	40		50		60		70	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-20	41.6	19.6	34.7	20.3	26.7	20.7	17.9	21.5
-15	54.0	22.3	45.9	23.4	37.0	24.3	27.3	25.6
-10	69.3	25.1	59.8	26.7	49.5	28.1	38.5	30.0
-5	87.8	27.7	76.4	29.9	64.3	32.0	51.7	34.5
0	110.0	30.1	96.2	33.1	82.0	35.9	67.2	39.2
5	136.0	32.3	119.6	36.1	102.7	39.8	85.4	43.9
10	166.2	34.2	146.7	38.9	126.8	43.5	106.5	48.6
15	201.0	35.8	177.9	41.5	154.6	47.1	131.0	53.2

KEY / 图例

Pf = cooling capacity / 制冷量 (kW)
 Pa = input power / 输入功率 (kW)
 Te = evaporating temperature / 蒸发温度 (°C)
 Tc = condensing temperature / 冷凝温度 (°C)
 50Hz = frequency / 频率
 Liquid subcooling / 液体过冷度 5K
 Suction gas superheat / 吸气过热度 10K
 Identifies additional cooling required (see application limits)
 表示需要附加冷却 (参考应用界限)

Limits refer to full load 50 Hz operation / 参考全负荷50 Hz运转界限

For data at different working conditions please refer to RefComp LEONARDO selection program / 不同工况下的性能数据请参考莱富康LEONARDO选型软件

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性能参数

SP-L, 制冷剂R134a

SP2-L-030E								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	2.8	1.4	2.4	1.4	2.0	1.4	1.7	1.4
-20	3.7	1.6	3.2	1.6	2.7	1.7	2.3	1.7
-15	4.9	1.7	4.2	1.9	3.6	1.9	3.1	2.0
-10	6.4	1.9	5.6	2.1	4.8	2.2	4.1	2.3
-5	8.2	2.1	7.2	2.3	6.2	2.5	5.3	2.6
0	10.3	2.3	9.1	2.5	7.9	2.8	6.8	3.0
5	12.7	2.4	11.3	2.8	9.9	3.1	8.6	3.3
10	15.4	2.6	13.7	3.0	12.1	3.4	10.6	3.7

SP2-L-040E								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	3.3	1.6	2.9	1.7	2.4	1.7	2.1	1.7
-20	4.4	1.9	3.8	1.9	3.2	2.0	2.7	2.0
-15	5.9	2.1	5.1	2.2	4.4	2.3	3.7	2.4
-10	7.7	2.3	6.7	2.5	5.8	2.6	4.9	2.7
-5	9.9	2.5	8.6	2.8	7.5	3.0	6.4	3.1
0	12.4	2.7	10.9	3.0	9.5	3.3	8.2	3.5
5	15.3	2.9	13.5	3.3	11.9	3.7	10.3	3.9
10	18.5	3.1	16.5	3.6	14.6	4.0	12.7	4.4

SP2-L-050E								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	3.9	1.9	3.3	1.9	2.8	2.0	2.4	1.9
-20	5.2	2.2	4.4	2.3	3.8	2.3	3.2	2.3
-15	6.9	2.4	5.9	2.6	5.1	2.7	4.3	2.7
-10	9.0	2.7	7.8	2.9	6.7	3.1	5.7	3.2
-5	11.5	2.9	10.1	3.2	8.7	3.4	7.5	3.6
0	14.4	3.1	12.7	3.5	11.1	3.8	9.6	4.1
5	17.8	3.4	15.8	3.8	13.9	4.2	12.0	4.6
10	21.6	3.6	19.2	4.2	17.0	4.7	14.8	5.1

SP2-L-060E								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	4.4	2.2	3.8	2.2	3.2	2.2	2.7	2.2
-20	5.9	2.5	5.1	2.6	4.3	2.6	3.6	2.7
-15	7.8	2.7	6.8	2.9	5.8	3.0	4.9	3.1
-10	10.3	3.0	8.9	3.3	7.7	3.5	6.5	3.6
-5	13.1	3.3	11.5	3.6	10.0	3.9	8.5	4.1
0	16.5	3.6	14.6	4.0	12.7	4.4	10.9	4.7
5	20.4	3.8	18.1	4.4	15.9	4.8	13.7	5.2
10	24.7	4.1	22.0	4.7	19.4	5.3	16.9	5.8

SP4-LF-060E/SP4-LN-060E								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	5.5	2.5	4.8	2.6	4.1	2.6	3.4	2.6
-20	7.4	2.9	6.4	3.0	5.4	3.1	4.5	3.1
-15	9.8	3.2	8.5	3.4	7.3	3.6	6.1	3.7
-10	12.8	3.5	11.2	3.9	9.6	4.1	8.2	4.3
-5	16.4	3.9	14.4	4.3	12.5	4.6	10.7	4.9
0	20.6	4.2	18.2	4.7	15.9	5.1	13.7	5.5
5	25.4	4.5	22.6	5.1	19.8	5.7	17.2	6.1
10	30.9	4.8	27.5	5.6	24.3	6.2	21.2	6.8

SP4-LF-080E/SP4-LN-080E								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	6.6	3.0	5.7	3.1	4.9	3.1	4.1	3.1
-20	8.8	3.5	7.6	3.6	6.5	3.7	5.4	3.7
-15	11.8	3.9	10.2	4.1	8.7	4.3	7.3	4.4
-10	15.4	4.3	13.4	4.6	11.5	4.9	9.8	5.1
-5	19.7	4.6	17.3	5.1	15.0	5.5	12.8	5.8
0	24.8	5.0	21.9	5.6	19.1	6.2	16.4	6.6
5	30.5	5.4	27.1	6.2	23.8	6.8	20.6	7.4
10	37.0	5.7	33.0	6.7	29.1	7.5	25.4	8.2

SP4-LF-100E/SP4-LN-100E								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	7.7	3.6	6.7	3.6	5.7	3.7	4.8	3.6
-20	10.3	4.0	8.9	4.2	7.6	4.3	6.3	4.4
-15	13.7	4.5	11.9	4.8	10.2	5.0	8.6	5.1
-10	18.0	5.0	15.6	5.4	13.5	5.7	11.4	6.0
-5	23.0	5.4	20.2	6.0	17.5	6.4	14.9	6.8
0	28.9	5.8	25.5	6.6	22.3	7.2	19.2	7.7
5	35.6	6.3	31.6	7.2	27.7	8.0	24.0	8.6
10	43.2	6.7	38.5	7.8	34.0	8.7	29.6	9.5

SP4-LF-120E/SP4-LN-120E								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	8.8	4.1	7.6	4.1	6.5	4.2	5.5	4.1
-20	11.8	4.6	10.2	4.8	8.7	4.9	7.3	5.0
-15	15.7	5.2	13.6	5.5	11.6	5.7	9.8	5.9
-10	20.5	5.7	17.9	6.2	15.4	6.5	13.0	6.8
-5	26.3	6.2	23.1	6.8	20.0	7.4	17.1	7.8
0	33.0	6.7	29.1	7.5	25.4	8.2	21.9	8.8
5	40.7	7.2	36.1	8.2	31.7	9.1	27.5	9.8
10	49.4	7.6	44.0	8.9	38.8	10.0	33.9	10.9

SP4-L-150E								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	10.2	4.7	8.8	4.8	7.5	4.8	6.3	4.8
-20	13.6	5.3	11.7	5.6	10.0	5.7	8.4	5.8
-15	18.1	6.0	15.7	6.3	13.4	6.6	11.3	6.8
-10	23.7	6.6	20.7	7.1	17.8	7.6	15.1	7.9
-5	30.4	7.1	26.6	7.9	23.1	8.5	19.7	9.0
0	38.1	7.7	33.7	8.7	29.4	9.5	25.3	10.1
5	47.0	8.3	41.7	9.5	36.6	10.5	31.7	11.3
10	57.0	8.8	50.8	10.3	44.9	11.5	39.1	12.6

SP4-L-180E								
Tc	30		40		50		60	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	11.8	5.4	10.2	5.6	8.7	5.6	7.3	5.6
-20	15.8	6.2	13.6	6.5	11.6	6.6	9.7	6.7
-15	21.0	6.9	18.2	7.3	15.6	7.7	13.1	7.9
-10	27.5	7.6	24.0	8.3	20.6	8.8	17.5	9.1
-5	35.2	8.3	30.9	9.2	26.8	9.9	22.9	10.4
0	44.2	9.0	39.0	10.1	34.1	11.0	29.3	11.7
5	54.5	9.6	48.4	11.0	42.5	12.2	36.8	13.1
10	66.1	10.2	59.0	11.9	52.0	13.4	45.4	14.6

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性能参数

SP4-L-220E									
Tc	30		40		50		60		
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	13.6	6.2	11.7	6.4	10.0	6.4	8.4	6.4	
-20	18.1	7.1	15.6	7.4	13.3	7.6	11.1	7.7	
-15	24.1	7.9	20.9	8.4	17.8	8.8	15.0	9.0	
-10	31.5	8.7	27.5	9.5	23.7	10.0	20.0	10.5	
-5	40.4	9.5	35.4	10.5	30.7	11.3	26.3	11.9	
0	50.7	10.3	44.8	11.6	39.1	12.6	33.6	13.5	
5	62.6	11.0	55.5	12.6	48.7	14.0	42.2	15.1	
10	75.9	11.7	67.6	13.7	59.7	15.3	52.0	16.7	

SP4-L-250E									
Tc	30		40		50		60		
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	16.3	7.5	14.1	7.7	12.0	7.7	10.1	7.7	
-20	21.8	8.5	18.8	8.9	16.0	9.1	13.4	9.2	
-15	29.0	9.5	25.1	10.1	21.5	10.6	18.1	10.9	
-10	37.9	10.5	33.1	11.4	28.5	12.1	24.1	12.6	
-5	48.6	11.4	42.6	12.6	37.0	13.6	31.6	14.4	
0	61.0	12.4	53.9	13.9	47.0	15.2	40.5	16.2	
5	75.3	13.2	66.8	15.2	58.6	16.8	50.8	18.1	
10	91.3	14.1	81.3	16.4	71.8	18.4	62.6	20.1	

SP6-L-270E									
Tc	30		40		50		60		
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	17.8	8.2	15.3	8.3	13.0	8.4	11.0	8.3	
-20	23.7	9.3	20.4	9.7	17.4	9.9	14.6	10.0	
-15	31.5	10.4	27.3	11.0	23.3	11.5	19.6	11.8	
-10	41.2	11.4	35.9	12.4	30.9	13.1	26.2	13.7	
-5	52.9	12.4	46.4	13.7	40.2	14.8	34.3	15.6	
0	66.4	13.4	58.6	15.1	51.1	16.5	44.0	17.6	
5	81.8	14.4	72.6	16.5	63.7	18.3	55.2	19.7	
10	99.2	15.4	88.5	17.9	78.1	20.1	68.1	21.9	

SP6-L-300E									
Tc	30		40		50		60		
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	20.4	9.4	17.6	9.6	15.0	9.7	12.7	9.6	
-20	27.3	10.7	23.5	11.1	20.0	11.4	16.8	11.5	
-15	36.3	11.9	31.4	12.7	26.8	13.2	22.6	13.6	
-10	47.4	13.1	41.3	14.2	35.6	15.1	30.1	15.7	
-5	60.8	14.3	53.3	15.8	46.2	17.0	39.5	17.9	
0	76.3	15.4	67.3	17.4	58.8	19.0	50.6	20.3	
5	94.1	16.6	83.4	19.0	73.3	21.0	63.5	22.7	
10	114.1	17.6	101.7	20.6	89.7	23.1	78.2	25.1	

SP6-L-400E									
Tc	30		40		50		60		
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	24.5	11.3	21.1	11.5	18.0	11.6	15.2	11.5	
-20	32.7	12.8	28.2	13.4	24.0	13.7	20.1	13.8	
-15	43.5	14.3	37.7	15.2	32.2	15.9	27.1	16.3	
-10	56.9	15.7	49.6	17.1	42.7	18.1	36.2	18.9	
-5	72.9	17.2	63.9	19.0	55.4	20.4	47.4	21.5	
0	91.6	18.5	80.8	20.9	70.5	22.8	60.7	24.3	
5	112.9	19.9	100.1	22.8	87.9	25.2	76.2	27.2	
10	136.9	21.2	122.0	24.7	107.7	27.7	93.9	30.2	

SP8-L-500E									
Tc	30		40		50		60		
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	31.0	13.2	26.7	14.2	21.4	14.4	15.3	14.5	
-20	39.8	15.1	34.9	16.4	29.0	17.0	22.4	17.3	
-15	51.1	17.1	45.2	18.7	38.5	19.6	31.0	20.4	
-10	65.2	18.9	58.0	21.0	50.1	22.4	41.4	23.5	
-5	82.5	20.5	73.6	23.2	64.0	25.1	53.9	26.8	
0	103.0	22.0	92.1	25.2	80.6	27.7	68.7	30.1	
5	127.2	23.2	113.9	27.1	100.2	30.3	86.0	33.3	
10	155.3	24.0	139.3	28.7	122.9	32.6	106.2	36.5	

SP8-L-600E									
Tc	30		40		50		60		
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	
-25	37.0	15.7	31.9	16.9	25.6	17.2	18.2	17.2	
-20	47.5	18.1	41.6	19.6	34.7	20.3	26.7	20.7	
-15	61.0	20.4	54.0	22.3	45.9	23.4	37.0	24.3	
-10	77.9	22.5	69.3	25.0	59.8	26.7	49.5	28.1	
-5	98.4	24.5	87.8	27.7	76.4	29.9	64.3	32.0	
0	123.0	26.2	110.0	30.1	96.2	33.1	82.0	35.9	
5	151.9	27.7	136.0	32.3	119.6	36.1	102.7	39.8	
10	185.3	28.7	166.2	34.2	146.7	38.9	126.8	43.5	

KEY / 图例

Pf = cooling capacity / 制冷量 (kW)
 Pa = input power / 输入功率 (kW)
 Te = evaporating temperature / 蒸发温度 (°C)
 Tc = condensing temperature / 冷凝温度 (°C)
 50Hz = frequency / 频率
 Liquid subcooling / 液体过冷度 5K
 Suction gas superheat / 吸气过热度 10K
 identifies additional cooling required (see application limits)
 表示需要附加冷却 (参考应用界限)

Limits refer to full load 50 Hz operation / 参考全负荷 50 Hz 运转界限

For data at different working conditions please refer to RefComp LEONARDO selection program / 不同工况下的性能数据请参考莱富康 LEONARDO 选型软件

INTRODUCTION

性能参数

SP-H, 制冷剂R404A-R507

SP2-H-050E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	6.1	2.9	4.9	2.8	3.7	2.8	-	-
-20	8.1	3.3	6.6	3.3	5.0	3.4	-	-
-15	10.4	3.6	8.6	3.8	6.6	3.9	5.6	4.0
-10	13.0	3.9	10.9	4.2	8.6	4.4	7.4	4.5
-5	16.0	4.1	13.5	4.5	10.8	4.9	9.4	5.0
0	19.3	4.3	16.5	4.8	13.4	5.3	11.8	5.5
5	22.9	4.4	19.9	5.1	16.4	5.7	14.5	5.9

SP2-H-060E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	7.3	3.5	5.9	3.4	4.4	3.4	-	-
-20	9.7	3.9	7.9	4.0	6.0	4.1	-	-
-15	12.5	4.3	10.3	4.5	8.0	4.7	6.8	4.8
-10	15.6	4.6	13.1	5.0	10.3	5.3	8.8	5.4
-5	19.1	4.9	16.2	5.4	13.0	5.8	11.3	6.0
0	23.1	5.1	19.8	5.8	16.1	6.3	14.2	6.6
5	27.5	5.2	23.8	6.1	19.7	6.8	17.5	7.1

SP2-H-080E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	8.5	4.0	6.9	3.9	5.2	3.9	-	-
-20	11.3	4.5	9.2	4.6	7.0	4.7	-	-
-15	14.5	5.0	12.0	5.2	9.3	5.5	7.9	5.6
-10	18.2	5.4	15.3	5.8	12.0	6.1	10.3	6.3
-5	22.3	5.7	19.0	6.3	15.2	6.8	13.2	7.0
0	27.0	5.9	23.1	6.7	18.8	7.4	16.5	7.6
5	32.1	6.1	27.8	7.1	23.0	7.9	20.4	8.2

SP2-H-090E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	9.7	4.6	7.8	4.5	5.9	4.5	-	-
-20	12.9	5.2	10.6	5.3	8.0	5.4	-	-
-15	16.6	5.7	13.7	6.0	10.6	6.3	9.0	6.4
-10	20.8	6.2	17.4	6.7	13.7	7.1	11.8	7.3
-5	25.5	6.5	21.7	7.2	17.4	7.8	15.1	8.1
0	30.8	6.8	26.4	7.7	21.5	8.5	18.9	8.8
5	36.7	7.0	31.8	8.2	26.2	9.1	23.3	9.5

SP4-HF-100E/SP4-HN-100E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	11.0	5.1	8.8	5.0	6.6	5.0	-	-
-20	14.6	5.8	11.9	5.9	9.0	6.0	-	-
-15	18.7	6.4	15.5	6.7	12.0	7.0	10.2	7.1
-10	23.4	6.8	19.6	7.4	15.5	7.8	13.3	8.1
-5	28.8	7.2	24.4	8.0	19.5	8.7	17.0	8.9
0	34.7	7.6	29.8	8.6	24.2	9.4	21.3	9.8
5	41.3	7.8	35.8	9.0	29.6	10.1	26.2	10.2

SP4-HF-120E/SP4-HN-120E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	13.2	6.2	10.6	6.0	8.0	6.0	-	-
-20	17.5	7.0	14.3	7.1	10.9	7.2	-	-
-15	22.4	7.6	18.6	8.0	14.4	8.4	12.2	8.5
-10	28.1	8.2	23.6	8.8	18.6	9.4	15.9	9.7
-5	34.5	8.7	29.3	9.6	23.5	10.4	20.4	10.7
0	41.7	9.1	35.7	10.3	29.1	11.3	25.5	11.7
5	49.6	9.3	43.0	10.8	35.5	12.1	31.5	12.6

SP4-HF-150E/SP4-HN-150E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	15.4	7.2	12.4	7.0	9.3	7.0	-	-
-20	20.4	8.1	16.6	8.2	12.7	8.4	-	-
-15	26.2	8.9	21.7	9.3	16.8	9.8	14.2	10.0
-10	32.8	9.6	27.5	10.3	21.7	11.0	18.6	11.3
-5	40.3	10.1	34.2	11.2	27.4	12.1	23.8	12.5
0	48.6	10.6	41.7	12.0	33.9	13.2	29.8	13.7
5	57.9	10.9	50.1	12.7	41.4	14.1	36.7	14.7

SP4-HF-200E/SP4-HN-200E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	17.6	8.2	14.1	8.0	10.6	8.0	-	-
-20	23.3	9.3	19.0	9.4	14.5	9.6	-	-
-15	29.9	10.2	24.8	10.7	19.2	11.1	16.3	11.4
-10	37.5	11.0	31.4	11.8	24.8	12.5	21.2	12.9
-5	46.0	11.6	39.0	12.8	31.3	13.9	27.2	14.3
0	55.6	12.1	47.7	13.7	38.8	15.0	34.1	15.6
5	66.1	12.4	57.3	14.5	47.3	16.1	41.9	16.8

SP4-H-220E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	20.7	9.3	16.9	10.0	13.1	10.7	-	-
-20	26.3	10.4	21.8	11.3	17.2	12.2	-	-
-15	33.4	11.4	28.1	12.5	22.5	13.7	19.6	14.3
-10	41.9	12.3	35.7	13.7	29.0	15.1	25.4	15.8
-5	51.8	13.0	44.6	14.7	36.6	16.4	32.4	17.2
0	63.2	13.6	54.8	15.6	45.4	17.6	40.4	18.6
5	76.1	14.2	66.3	16.5	55.4	18.8	49.6	19.9

SP4-H-250E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	24.0	10.8	19.6	11.6	15.2	12.4	-	-
-20	30.5	12.1	25.3	13.1	20.0	14.2	-	-
-15	38.7	13.2	32.6	14.5	26.1	15.9	22.7	16.6
-10	48.6	14.2	41.4	15.8	33.6	17.5	29.5	18.3
-5	60.1	15.1	51.7	17.0	42.5	19.0	37.5	20.0
0	73.3	15.8	63.5	18.1	52.7	20.4	46.9	21.6
5	88.2	16.4	76.9	19.1	64.3	21.8	57.5	23.1

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性能参数

SP4-H-300E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	27.6	12.4	22.4	13.3	17.4	14.2	-	-
-20	35.0	13.9	29.0	15.0	22.9	16.3	-	-
-15	44.4	15.2	37.4	16.7	29.9	18.2	26.1	19.0
-10	55.7	16.3	47.5	18.2	38.5	20.1	33.8	21.0
-5	68.9	17.3	59.3	19.5	48.7	21.8	43.1	22.9
0	84.1	18.1	72.9	20.8	60.4	23.7	53.8	24.7
5	101.2	18.8	88.2	21.9	73.7	24.9	65.9	26.5

SP4-H-350E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	33.0	14.8	26.8	15.8	20.8	17.0	-	-
-20	41.9	16.6	34.7	18.0	27.4	19.4	-	-
-15	53.1	18.1	44.7	19.9	35.8	21.8	31.2	22.7
-10	66.6	19.5	56.7	21.7	46.1	24.0	40.4	25.1
-5	82.4	20.7	70.9	23.4	58.2	26.0	51.5	27.4
0	100.5	21.7	87.1	24.8	72.2	28.0	64.3	29.6
5	120.9	22.5	105.4	26.2	88.1	29.8	78.8	31.6

SP6-H-370E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	36.1	16.2	29.3	17.3	22.8	18.6	-	-
-20	45.8	18.1	38.0	19.7	30.0	21.3	-	-
-15	58.1	19.8	48.9	21.8	39.2	23.8	34.1	24.9
-10	72.9	21.3	62.1	23.8	50.4	26.2	44.3	27.5
-5	90.2	22.6	77.6	25.6	63.7	28.5	56.3	30.0
0	110.0	23.7	95.3	27.2	79.0	30.6	70.6	32.4
5	132.4	24.6	115.3	28.6	96.4	32.6	86.2	34.6

SP6-H-400E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	41.5	18.7	33.7	19.9	26.2	21.3	-	-
-20	52.7	20.9	43.6	22.6	34.4	24.4	-	-
-15	66.8	22.8	56.2	25.1	45.0	27.4	39.2	28.6
-10	83.8	24.5	71.4	27.3	58.0	30.2	50.9	31.6
-5	103.7	26.0	89.1	29.4	73.2	32.8	64.7	34.5
0	126.5	27.3	109.6	31.2	90.9	35.2	80.8	37.2
5	152.1	28.3	132.6	32.9	110.8	37.5	99.1	39.8

SP6-H-500E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	49.5	22.3	40.3	23.8	31.3	25.5	-	-
-20	62.9	24.9	52.2	27.0	41.2	29.2	-	-
-15	79.8	27.3	67.1	29.9	53.8	32.7	46.9	34.1
-10	100.1	29.3	85.3	32.6	69.3	36.0	60.8	37.8
-5	123.9	31.1	106.5	35.1	87.5	39.2	77.4	41.2
0	151.1	32.6	130.9	37.3	108.6	42.1	96.6	44.5
5	181.8	33.8	158.4	39.3	132.4	44.8	118.5	47.6

SP8-H-600E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	68.0	29.0	49.5	29.5	37.4	29.2	-	-
-20	83.6	31.8	64.1	33.3	50.1	33.9	-	-
-15	102.2	34.5	81.3	37.0	64.9	38.7	56.9	38.9
-10	124.2	36.8	101.5	40.6	82.4	43.4	72.6	44.2
-5	150.1	38.9	125.0	43.9	102.7	48.0	91.1	49.5
0	180.1	40.4	152.3	46.9	126.4	52.4	112.6	54.7
5	214.7	41.5	183.7	49.5	153.8	56.7	137.7	59.7

SP8-H-700E								
Tc	30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-25	81.1	34.6	59.1	35.3	44.6	34.8	-	-
-20	99.7	38.0	76.5	39.8	59.8	40.5	-	-
-15	122.0	41.2	97.0	44.2	77.5	46.1	67.9	46.5
-10	148.3	44.0	121.1	48.4	98.3	51.8	86.7	52.8
-5	179.1	46.4	149.2	52.4	122.6	57.3	108.7	59.1
0	215.0	48.3	181.8	56.0	150.9	62.6	134.4	65.3
5	256.3	49.6	219.3	59.1	183.6	67.6	164.4	71.3

KEY / 图例

- Pf = cooling capacity / 制冷量 (kW)
- Pa = input power / 输入功率 (kW)
- Te = evaporating temperature / 蒸发温度 (°C)
- Tc = condensing temperature / 冷凝温度 (°C)
- 50Hz = frequency / 频率
- Liquid subcooling / 液体过冷度 5K
- Suction gas superheat / 吸气过热度 10K
- identifies additional cooling required (see application limits)
表示需要附加冷却 (参考应用界限)

Limits refer to full load 50 Hz operation / 参考全负荷50 Hz运转界限

For data at different working conditions please refer to RefComp LEONARDO selection program / 不同工况下的性能数据请参考莱富康LEONARDO选型软件

INTRODUCTION

性能参数

SP-L, 制冷剂R404A-R507

SP2-L-030E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	2.6	1.6	2.0	1.6	1.4	1.6	-	-
-35	3.5	1.9	2.7	2.0	1.9	2.0	-	-
-30	4.6	2.2	3.6	2.3	2.7	2.4	2.5	2.5
-25	5.9	2.5	4.8	2.7	3.7	2.9	3.5	2.9
-20	7.6	2.8	6.3	3.0	5.0	3.3	4.7	3.3
-15	9.4	3.0	7.9	3.3	6.5	3.7	6.1	3.7
-10	11.5	3.3	9.9	3.7	8.2	4.1	7.9	4.1
-6	13.4	3.5	11.6	3.9	9.8	4.4	9.4	4.5

SP2-L-040E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	3.1	1.9	2.4	1.9	1.6	1.9	-	-
-35	4.2	2.3	3.2	2.3	2.3	2.4	-	-
-30	5.5	2.6	4.4	2.8	3.2	2.9	3.0	2.9
-25	7.1	3.0	5.8	3.2	4.4	3.4	4.1	3.4
-20	9.1	3.3	7.5	3.6	5.9	3.9	5.6	4.0
-15	11.3	3.6	9.5	4.0	7.7	4.4	7.4	4.5
-10	13.8	3.9	11.9	4.4	9.8	4.8	9.4	4.9
-6	16.1	4.2	13.9	4.7	11.7	5.2	11.3	5.3

SP2-L-050E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	3.6	2.2	2.8	2.2	1.9	2.2	-	-
-35	4.8	2.7	3.8	2.7	2.7	2.8	-	-
-30	6.4	3.1	5.1	3.2	3.7	3.4	3.5	3.4
-25	8.3	3.5	6.8	3.7	5.2	4.0	4.8	4.0
-20	10.6	3.9	8.8	4.2	6.9	4.5	6.6	4.6
-15	13.2	4.2	11.1	4.6	9.0	5.1	8.6	5.2
-10	16.1	4.6	13.8	5.1	11.5	5.6	11.0	5.7
-6	18.8	4.9	16.2	5.4	13.7	6.1	13.1	6.2

SP2-L-060E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	4.2	2.5	3.2	2.5	2.2	2.5	-	-
-35	5.5	3.0	4.3	3.1	3.0	3.2	-	-
-30	7.3	3.5	5.8	3.7	4.3	3.8	4.0	3.9
-25	9.5	3.9	7.7	4.2	5.9	4.5	5.5	4.6
-20	12.1	4.4	10.0	4.8	7.9	5.1	7.5	5.2
-15	15.1	4.8	12.7	5.3	10.3	5.8	9.8	5.9
-10	18.4	5.2	15.8	5.8	13.1	6.4	12.6	6.5
-6	21.4	5.5	18.6	6.2	15.6	6.9	15.0	7.0

SP4-LF-060E/SP4-LN-060E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	5.2	3.4	4.0	3.4	2.7	3.3	-	-
-35	6.9	4.0	5.4	4.4	3.8	4.2	-	-
-30	9.2	4.6	7.3	4.9	5.3	5.1	5.0	5.1
-25	11.9	5.2	9.7	5.6	7.4	6.0	6.9	6.1
-20	15.1	5.8	12.5	6.3	9.9	6.8	9.4	6.9
-15	18.8	6.4	15.9	7.0	12.9	7.7	12.3	7.8
-10	23.0	6.9	19.8	7.7	16.4	8.5	15.7	8.7
-6	26.8	7.3	23.2	8.2	19.5	9.1	18.8	9.3

SP4-LF-080E/SP4-LN-080E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	6.2	4.1	4.8	4.0	3.3	4.0	-	-
-35	8.3	4.8	6.5	4.9	4.6	5.1	-	-
-30	11.0	5.6	8.7	5.8	6.4	6.1	5.9	6.2
-25	14.3	6.3	11.6	6.7	8.9	7.2	8.3	7.3
-20	18.1	7.0	15.0	7.6	11.9	8.2	11.2	8.3
-15	22.6	7.7	19.1	8.4	15.5	9.2	14.8	9.4
-10	27.7	8.3	23.7	9.2	19.7	10.2	18.8	10.4
-6	32.1	8.8	27.8	9.9	23.4	11.0	22.5	11.2

SP4-LF-100E/SP4-LN-100E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	7.3	4.7	5.6	4.7	3.8	4.6	3.5	4.6
-35	9.7	5.6	7.5	5.8	5.3	5.9	4.9	5.9
-30	12.8	6.5	10.2	6.8	7.5	7.1	6.9	7.2
-25	16.6	7.3	13.5	7.8	10.3	8.4	9.7	8.5
-20	21.1	8.1	17.5	8.8	13.9	9.6	13.1	9.7
-15	26.4	8.9	22.3	9.8	18.1	10.7	17.2	10.9
-10	32.3	9.7	27.7	10.8	22.9	11.9	22.0	12.1
-6	37.5	10.3	32.5	11.5	27.3	12.8	26.3	13.1

SP4-LF-120E/SP4-LN-120E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	8.3	5.4	6.4	5.4	4.4	5.3	-	-
-35	11.1	6.4	8.6	6.6	6.4	6.7	-	-
-30	14.6	7.4	11.6	7.8	8.6	8.2	7.9	8.2
-25	19.0	8.4	15.5	9.0	11.8	9.6	11.1	9.7
-20	24.2	9.3	20.1	10.1	15.8	10.9	15.0	11.1
-15	30.1	10.2	25.4	11.2	20.6	12.3	19.7	12.5
-10	36.9	11.1	31.6	12.3	26.2	13.6	25.1	13.9
-6	42.9	11.7	37.1	13.2	31.2	14.6	30.1	14.9

SP4-L-150E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	9.6	6.2	7.4	6.2	5.0	6.1	-	-
-35	12.8	7.4	10.0	7.6	7.0	7.8	-	-
-30	16.9	8.6	13.5	9.0	9.9	9.4	9.2	9.5
-25	22.0	9.7	17.9	10.4	13.6	11.0	12.8	11.2
-20	27.9	10.8	23.2	11.7	18.3	12.6	17.3	12.8
-15	34.8	11.8	29.4	13.0	23.9	14.2	22.7	14.4
-10	42.6	12.8	36.5	14.2	32.3	15.7	29.0	16.0
-6	49.5	13.6	42.9	15.2	36.1	16.9	34.7	17.3

SP4-L-180E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	11.1	7.2	8.6	7.2	5.8	7.1	-	-
-35	14.8	8.6	11.6	8.8	8.1	9.0	-	-
-30	19.6	9.9	15.6	10.4	11.5	10.9	10.6	11.0
-25	25.5	11.2	20.7	12.0	15.8	12.8	14.8	13.0
-20	32.4	12.5	26.9	13.5	21.2	14.7	20.1	14.9
-15	40.4	13.7	34.1	15.0	27.7	16.5	26.4	16.7
-10	49.4	14.8	42.4	16.5	35.1	18.2	33.7	18.6
-6	57.4	15.7	49.7	17.6	41.9	19.6	40.3	20.0

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性能参数

SP4-L-220E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	12.8	8.3	9.8	8.2	6.7	8.1	-	-
-35	17.0	9.9	13.3	10.1	9.3	10.4	-	-
-30	22.5	11.4	17.9	12.0	13.1	12.5	12.2	12.7
-25	29.2	12.9	23.8	13.8	18.1	14.7	17.0	14.9
-20	37.1	14.3	30.8	15.5	24.3	16.8	23.0	17.1
-15	46.3	15.7	39.1	17.2	31.7	18.9	30.2	19.2
-10	56.7	17.0	48.6	18.9	40.3	20.9	38.6	21.3
-6	65.9	18.0	57.0	20.2	48.0	22.5	46.2	23.0

SP4-L-250E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	15.4	10.0	11.8	9.9	8.1	9.8	-	-
-35	20.5	11.9	15.9	12.2	11.2	12.5	-	-
-30	27.1	13.7	21.5	14.4	15.8	15.1	14.6	15.2
-25	35.1	15.5	28.6	16.6	21.8	17.7	20.5	17.9
-20	44.7	17.2	37.1	18.7	29.3	20.2	27.7	20.5
-15	55.7	18.9	47.0	20.7	38.2	22.7	36.4	23.1
-10	68.2	20.5	58.4	22.8	48.5	25.1	46.5	25.6
-6	79.2	21.7	68.6	24.3	57.8	27.1	55.6	27.6

SP6-L-270E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	16.7	10.9	12.8	10.8	8.8	10.6	-	-
-35	22.3	12.9	17.3	13.3	12.2	13.5	-	-
-30	29.4	14.9	23.4	15.7	17.2	16.4	15.9	16.6
-25	38.2	16.9	31.1	18.0	23.7	19.2	22.3	19.5
-20	48.6	18.7	40.3	20.3	31.8	22.0	30.1	22.3
-15	60.6	20.5	51.1	22.6	41.5	24.7	39.5	25.1
-10	74.1	22.3	63.5	24.7	52.7	27.3	50.5	27.9
-6	86.2	23.6	74.6	26.4	62.8	29.4	60.4	30.0

SP6-L-300E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	19.2	12.5	14.8	12.4	10.1	12.2	-	-
-35	25.6	14.9	19.9	15.2	14.0	15.6	-	-
-30	33.8	17.2	26.9	18.0	19.8	18.9	18.3	19.0
-25	43.9	19.4	35.7	20.7	27.3	22.1	25.6	22.4
-20	55.8	21.5	46.3	23.4	36.6	25.3	34.6	25.7
-15	69.6	23.6	58.8	25.9	47.7	28.4	45.5	28.9
-10	85.2	25.6	73.0	28.4	60.6	31.4	58.1	32.0
-6	99.0	27.1	85.8	30.4	72.2	33.8	69.4	34.5

SP6-L-400E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	23.1	15.0	17.7	14.9	12.1	14.7	-	-
-35	30.7	17.8	23.9	18.3	16.8	18.7	-	-
-30	40.6	20.6	32.3	21.6	23.7	22.6	22.0	22.8
-25	52.7	23.2	42.9	24.9	32.8	26.5	30.7	26.9
-20	67.0	25.8	55.6	28.0	43.9	30.3	41.6	30.8
-15	83.5	28.3	70.5	31.1	57.2	34.1	54.6	34.7
-10	102.3	30.7	87.7	34.1	72.7	37.7	69.7	38.4
-6	118.8	32.5	102.9	36.5	86.6	40.6	83.3	41.4

SP8-L-500E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	34.8	20.6	17.6	18.5	9.2	15.8	-	-
-35	43.8	22.8	26.6	21.6	17.3	19.7	-	-
-30	54.7	25.5	37.1	25.2	26.5	24.2	24.8	23.6
-25	67.8	28.4	49.4	29.1	37.2	29.1	35.0	28.8
-20	83.4	31.4	63.9	33.2	49.7	34.3	47.1	34.2
-15	101.9	34.2	81.0	37.3	64.5	39.6	61.3	39.7
-10	123.7	36.8	101.0	41.2	81.8	44.8	78.0	45.1
-6	143.8	38.5	119.4	44.0	-	-	-	-

SP8-L-600E								
Tc	30		40		50		52	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-40	41.6	24.5	21.1	22.1	11.0	18.9	-	-
-35	52.3	27.2	31.8	25.8	20.7	23.5	-	-
-30	65.3	30.4	44.3	30.0	31.6	28.9	29.6	28.2
-25	80.9	33.9	59.0	34.7	44.4	34.8	41.8	34.4
-20	99.5	37.4	76.3	39.6	59.3	41.0	56.2	40.8
-15	121.6	40.9	96.7	44.5	76.9	47.3	73.1	47.4
-10	147.7	43.9	120.6	49.1	97.7	53.4	93.1	53.9
-6	171.7	46.0	142.6	52.5	-	-	-	-

KEY / 图例

- Pf = cooling capacity / 制冷量 (kW)
- Pa = input power / 输入功率 (kW)
- Te = evaporating temperature / 蒸发温度 (°C)
- Tc = condensing temperature / 冷凝温度 (°C)
- 50Hz = frequency / 频率
- Liquid subcooling / 液体过冷度 5K
- Suction gas superheat / 吸气过热度 10K
- identifies additional cooling required (see application limits)
表示需要附加冷却 (参考应用界限)

Limits refer to full load 50 Hz operation / 参考全负荷50 Hz运转界限

For data at different working conditions please refer to RefComp LEONARDO selection program / 不同工况下的性能数据请参考莱富康 LEONARDO 选型软件

INTRODUCTION

性能参数

SB,制冷剂R22

SB-4-1200										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-50	5.9	4.2	5.5	4.7	-	-	-	-	-	-
-45	7.7	4.8	7.4	5.4	7.2	6	-	-	-	-
-40	9.9	5.5	9.6	6.2	9.3	6.9	-	-	-	-
-35	12.5	6.1	12.2	6.9	11.8	7.8	11.5	8.7	-	-
-30	15.5	6.7	15	7.7	14.6	8.7	14.2	9.7	14.1	10.2
-25	18.8	7.3	18.1	8.4	17.6	9.6	17.2	10.7	17	11.3
-20	22.6	7.9	21.6	9.2	20.9	10.5	20.5	11.7	20.3	12.4

SB-4-1400										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-50	7	5	6.6	5.6	-	-	-	-	-	-
-45	9.1	5.8	8.8	6.5	8.5	7.2	-	-	-	-
-40	11.7	6.5	11.4	7.4	11.1	8.2	-	-	-	-
-35	18.4	7.9	17.8	9.1	17.3	10.3	16.9	11.5	16.7	12.1
-30	14.8	7.2	14.4	8.3	14	9.3	13.7	10.3	-	-
-25	22.3	8.7	21.5	10.0	20.9	11.4	20.4	12.7	20.2	13.4
-20	26.8	9.4	25.7	10.9	24.8	12.4	24.3	13.9	24.1	14.7

SB-6-1600										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-50	8.6	6.2	8.1	6.9	-	-	-	-	-	-
-45	11.3	7.1	10.9	8	10.5	8.8	-	-	-	-
-40	14.5	8.0	14.1	9.1	13.7	10.1	-	-	-	-
-35	18.3	8.9	17.8	10.2	17.3	11.4	16.8	12.7	-	-
-30	22.6	9.8	21.9	11.3	21.3	12.7	20.8	14.2	20.6	14.9
-25	27.5	10.7	26.5	12.4	25.8	14.0	25.2	15.7	24.9	16.5
-20	33.0	11.6	31.6	13.4	30.9	15.3	29.9	17.2	29.7	18.1

SB-6-2000										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-50	10	7.2	9.4	8	-	-	-	-	-	-
-45	13.1	8.2	12.6	9.2	12.1	10.3	-	-	-	-
-40	16.8	9.3	16.3	10.5	15.9	11.8	-	-	-	-
-35	21.2	10.3	20.6	11.8	20.1	13.3	19.5	14.7	-	-
-30	26.2	11.3	25.4	13.1	24.7	14.7	24.1	16.4	23.8	17.3
-25	31.9	12.4	30.8	14.3	29.9	16.2	29.2	18.2	28.9	19.1
-20	38.3	13.4	36.7	15.6	35.6	17.8	34.7	19.9	34.4	21.0

SB-6-2600										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-50	11.5	8.2	10.8	9.1	-	-	-	-	-	-
-45	15.0	9.4	14.5	10.6	13.9	11.8	-	-	-	-
-40	19.3	10.6	18.7	12.1	18.2	13.5	-	-	-	-
-35	24.3	11.8	23.7	13.5	23	15.2	22.4	16.9	-	-
-30	30.1	13.0	29.2	15	28.4	16.9	27.7	18.8	27.4	19.8
-25	36.6	14.2	35.3	16.4	34.3	18.6	33.5	20.8	33.2	21.9
-20	43.9	15.4	42.1	17.9	40.7	20.4	39.8	22.9	39.5	24.1

SB-6-2000										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-50	13.7	9.9	12.9	10.9	-	-	-	-	-	-
-45	17.9	11.3	17.3	12.7	16.6	14.1	-	-	-	-
-40	23.0	12.7	22.4	14.4	21.8	26.1	-	-	-	-
-35	29.1	14.1	28.3	16.2	27.5	18.2	26.8	20.2	-	-
-30	36.0	15.6	34.9	17.9	33.9	20.2	33.1	22.5	32.7	21.7
-25	43.8	17.0	42.2	19.7	41.0	22.3	40.0	24.9	39.7	26.2
-20	52.5	18.5	50.3	21.4	48.7	24.4	47.6	27.3	47.3	28.8

KEY / 图例

Pf = cooling capacity / 制冷量 (kW)

Pa = input power / 输入功率 (kW)

Te = evaporating temperature / 蒸发温度 (°C)

Tc = condensing temperature / 冷凝温度 (°C)

Subcooling by means of subcooler only / 过冷度 (仅仅借助于过冷器得到)

Suction gas superheat / 吸气过热度 20 °C

Frequency power supply / 电源频率 50Hz (1450 rpm)

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性能参数

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Series SP
Series SB

SB,制冷剂R404A-R507

SB-4-120E										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-70	2.5	3	2.3	3.2	-	-	-	-	-	-
-65	3.5	3.5	3.2	3.9	3	4.2	-	-	-	-
-60	4.7	4.0	4.4	4.5	4.1	5	-	-	-	-
-55	6.2	4.6	5.7	5.2	5.3	5.7	5.0	6.8	-	-
-50	7.8	5.2	7.3	5.9	6.8	6.6	6.4	7.2	6.1	7.6
-45	9.7	5.9	9.1	6.6	8.6	7.4	8.0	8.2	7.7	8.6
-40	11.7	6.5	11.2	7.4	10.5	8.3	9.8	9.2	9.5	9.6
-35	14.0	7.2	13.4	8.2	12.8	9.1	12.0	10.2	11.5	10.7
-30	16.5	8.0	15.9	9.0	15.2	10.1	14.3	11.2	13.8	10.8

SB-4-140E										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-70	2.9	3.5	2.8	3.8	-	-	-	-	-	-
-65	4.2	4.1	3.8	4.6	3.6	5	-	-	-	-
-60	5.6	4.8	5.2	5.3	4.8	5.9	-	-	-	-
-55	7.3	5.5	6.8	6.1	6.3	6.8	5.9	7.5	-	-
-50	9.3	6.2	8.7	7.0	8.1	7.8	7.5	8.6	7.3	9
-45	11.5	7.0	10.8	7.9	10.2	8.8	9.5	9.7	9.1	10.2
-40	13.9	7.8	13.2	8.8	12.5	9.8	11.7	10.9	11.3	11.4
-35	16.6	8.6	15.9	9.7	15.1	10.9	14.2	12.1	13.7	12.7
-30	19.5	9.4	18.9	10.7	18.1	12.0	17.0	13.3	16.3	14.0

SB-6-160E										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-70	3.6	4.3	3.4	4.7	-	-	-	-	-	-
-65	5.1	5.1	4.7	5.6	4.4	6.2	-	-	-	-
-60	6.9	5.9	6.4	6.6	5.9	7.3	-	-	-	-
-55	9.0	6.7	8.4	7.6	7.8	8.4	7.3	9.2	-	-
-50	11.4	7.6	10.7	8.6	10.0	9.6	9.3	10.6	9	11.1
-45	14.1	8.6	13.3	9.7	12.5	10.8	11.7	12.0	11.3	12.6
-40	17.1	9.6	16.3	10.8	15.4	12.1	14.4	13.4	13.9	14.1
-35	20.5	10.6	19.6	12.0	18.7	13.4	17.5	14.9	16.8	15.6
-30	24.1	11.6	23.3	13.2	22.3	14.7	20.9	16.4	20.1	17.2

SB-6-200E										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-70	4.2	5	4	5.5	-	-	-	-	-	-
-65	5.9	5.9	5.5	6.5	5.2	7.1	-	-	-	-
-60	8.0	6.8	7.4	7.6	6.9	8.4	-	-	-	-
-55	10.5	7.8	9.7	8.8	9.0	9.7	8.4	10.7	-	-
-50	13.2	8.9	12.4	10.0	11.6	11.1	10.8	12.3	10.4	12.9
-45	16.4	9.9	15.5	11.2	14.5	12.5	13.5	13.9	13.0	14.6
-40	19.9	11.1	18.9	12.5	17.9	14.0	16.7	15.5	16.1	16.3
-35	23.7	12.3	22.8	13.9	21.6	15.5	20.3	17.2	19.5	18.1
-30	27.9	13.5	27.0	15.3	25.8	17.1	24.2	19.0	23.3	20.0

SB-6-250E										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-70	4.8	5.8	4.6	6.3	-	-	-	-	-	-
-65	6.8	6.8	6.3	7.5	5.9	8.2	-	-	-	-
-60	9.2	7.8	8.5	8.8	7.9	9.7	-	-	-	-
-55	12.0	9.0	11.1	10.1	10.4	11.2	9.7	12.3	-	-
-50	15.2	10.2	14.2	11.4	13.3	12.8	12.4	14.1	11.9	14.8
-45	18.8	11.4	17.7	12.9	16.7	14.4	15.5	15.9	15.0	16.7
-40	22.8	12.7	14.4	20.5	20.5	16.1	19.2	17.8	18.5	18.7
-35	27.2	14.1	26.1	15.9	24.8	17.8	23.3	19.8	22.4	10.8
-30	32.0	15.5	31.0	17.5	29.6	19.6	27.8	21.8	26.8	22.9

SB-6-300E										
Tc	20		30		40		50		55	
Te	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa	Pf	Pa
-70	5.8	6.9	5.5	7.5	-	-	-	-	-	-
-65	8.2	8.1	7.5	9	7.1	9.8	-	-	-	-
-60	11.0	9.4	10.2	10.5	9.5	11.6	-	-	-	-
-55	14.3	10.7	13.3	12.0	12.4	13.4	11.6	14.7	-	-
-50	18.2	12.2	17.0	13.7	15.9	15.3	14.8	16.8	14.3	17.6
-45	22.5	13.6	21.2	15.4	19.9	17.2	18.6	19.0	17.9	20.0
-40	27.3	15.2	26.0	17.2	24.5	19.2	22.9	21.3	22.1	22.4
-35	32.6	16.8	31.3	19.0	29.7	21.3	27.8	23.3	26.8	24.9
-30	38.3	18.5	37.1	20.9	35.4	23.4	33.3	26.1	32.0	27.4

KEY / 图例

Pf = cooling capacity / 制冷量 (kW)

Pa = input power / 输入功率 (kW)

Te = evaporating temperature / 蒸发温度 (°C)

Tc = condensing temperature / 冷凝温度 (°C)

Subcooling by means of subcooler only / 过冷度 (仅仅借助于过冷器得到)

Suction gas superheat / 吸气过热度 20 °C

Frequency power supply / 电源频率 50Hz (1450 rpm)

DELIVERY

供货

COMPONENT

SP SERIES

Star (400 [V]) or Delta (230 [V]) motor for SP2 models, part-winding start-up motor for all the other models (400 [V] /3/50 [Hz] - 460/3/60 [Hz]); suction shut-off valve; discharge shut-off valve; integrated safety relief valve; oil sight glass; oil filter⁽¹⁾; oil charge; PTC sensors embedded in the electrical motor; crankcase heater electronic protection devices (230 [V] /1/50-60 [Hz]) INT 69 for SP2 and INT 69 VS for the rest of the models; IP54-class electrical box; nitrogen protective charge, spring vibration dampers⁽²⁾, bridges for D.O.L. start.

(1) Except for SP2 and SP4_N models (with splasher lubrication).

(2) Except for 2- and 8-cylinder models, supplied as standard with rubber vibration dampers.

SB SERIES

Suction and discharge shut-off valves, 4 spring vibration dampers, PTC embedded in the electrical motor and electronic motor protection device Kriwan INT 69 VS, IP54 enclosure class terminal box, internal safety relief valve, intermediate pressure line with manometer joint, oil sight glass, thermostatic valve with its own kit consisting of a solenoid valve, a liquid sight glass and a drier, all disassembled, oil charge for R22 refrigerant, nitrogen protective charge, crankcase heater, bridges for D.O.L. start.

All electric devices, either standard or optional, are meant for 230-1-50/60 [Hz] supply.

主要部件

SP系列

用于SP2型号的星(400[V])或三角(230[V])电机, 用于所有其他型号的分绕组启动电机(400[V]/3/50[Hz] - 460/3/60[Hz]); 吸气截止阀; 排气截止阀; 压力安全释放阀; 油视镜, 油过滤器⁽¹⁾; 润滑油; 嵌入电机的PTC温度传感器, 曲轴箱加热器, 电子保护模块(230[V]/1/50-60[Hz]):SP2用INT69, 其他型号用INT69VS; IP54防护等级电气接线盒; 允氮保护, 弹簧减震垫⁽²⁾, D.O.L直接启动搭接桥。

(1)SP2和SP4_N型号除外(飞溅式润滑)。

(2)2缸和8缸的型号除外, 因为其标准供货为橡胶减震垫。

SB系列

吸气和排气截止阀, 4个弹簧减震垫, 嵌入电机的PTC温度传感器和Kriwan INT69VS电子保护模块, IP54防护等级电气接线盒, 内置压力安全释放阀, 带压力表接口的中间压力管路, 油视镜, 热力膨胀阀套件(含电磁阀、液视镜和干燥过滤器), R22制冷剂用润滑油, 允氮保护, 曲轴箱加热器, D.O.L直接启动搭接桥。

所有电气保护装置, 无论是标配或是可选件, 供电电源均为230-1-50/60[Hz]。

ACCESSORI

其他附件

30

Series SP
Series SB

SP SERIES

The compressors, save for the SP2, can be equipped with an integrated capacity control system. The user can choose to have it already installed in the factory or to buy the suitable kit for a later installation. The capacity control system is achieved by the installation of one or two⁽³⁾ special heads equipped with a solenoid valve.

When energized this solenoid valve stops the suction gas from entering the compression chamber, turning the compression stroke of the underlying pistons into an idle stroke. Together with the cooling capacity reduction, which is proportional to the number of the non-effective cylinders, the power consumption also reduces, keeping energy efficiency at very high levels. Specifically, the following are the available capacity steps.

(3) Two special heads only for 6- or 8-cylinder models.

Compressor type Tipo 压缩机类型	N° of capacity control steps 能量调节的级数	Capacity control 能量调节点	N° of capacity control steps 能量调节的级数	Capacity control 能量调节点
2 Cyl. / 2 缸.	--	--	--	--
4 Cyl. / 4 缸.	1	50%	--	--
6 Cyl. / 6 缸.	1	66%	2	66%-33%
8 Cyl. / 8 缸.	1	75%	2	75%-50%

The following accessories are also available upon request: special voltage motors, start unloader device⁽⁴⁾ (SU), liquid injection control module LCM and related accessories⁽⁵⁾, fan for additional cooling⁽⁶⁾, spring vibration dampers⁽⁵⁾, discharge gas temperature monitoring sensor, oil differential pressure safety switch MP54⁽⁷⁾, electronic oil differential pressure switch⁽⁷⁾, opto-electronic oil sensor⁽⁸⁾, oil charging service valve, connections for compressor parallel operation and special packaging. The standard and/or optional electrical accessories such as the motor protection device, the crankcase heater and the solenoid valves, are suitable for 230 [V] AC 50/60 [Hz] power supply. However special voltages are also available upon request.

(4) Except for 2- and 8-cylinder models.

(5) Not valid for 2-cylinder models.

(6) Except for 8-cylinder models.

(7) Except for 4-cylinder models with splasher lubrication SP4_N.

(8) Valid for 2 and 4 cylinder models with splasher lubrication SP4_N.

SB SERIES

Special electric motors; polyol-ester oil for HFC refrigerants; MP54 electromechanical oil pressure switch; electronic oil pressure switch; oil electric oil charge service valve; control module (LCM) for liquid injection (as an alternative to the thermostatic valve) together with its own kit consisting of a solenoid valve, a liquid sight glass and a drier, all disassembled; liquid subcooler (fitted or not, as requested); discharge temperature control sensor; kit rubber anti-vibration dampers.

SP系列

除了SP2型号的压缩机，其余型号压缩机都能提供配备整套的能量调节系统CR。用户可以选择厂内安装，或者购买套件后自行安装。CR系统是通过安装一个或两个⁽³⁾带电磁阀线圈的特殊缸盖来实现的。

当给电磁阀通电时，吸气停止进入压缩腔，使其对应的活塞的压缩行程变为空转行程。无效气缸数占总气缸数的比例正对应制冷量的减少比例，功率消耗也相应减少，使能将比保持在较高水平。以下就是详细的可用能量调节级数。

(3)两个特殊缸盖仅适用于6缸或8缸的压缩机型号

以下附件可用根据客户要求提供：特殊电压的电机，启动卸载装置⁽⁴⁾ (SU)，液体喷射控制模块LCM及其相关附件⁽⁵⁾，附加冷却风扇⁽⁶⁾，弹簧减震垫⁽⁵⁾，排气温度传感器，MP54油压差开关⁽⁷⁾，电子油压差开关⁽⁷⁾，光电油位传感器⁽⁸⁾，油充注阀，压缩机并联系统接口。电气保护附件：诸如电机保护模块、曲轴箱加热器和电磁阀等选配件，其供电电源均为230[V]AC 50/60[Hz]。当然，RefComp也可以为客户特殊规格电压的电气附件。

(4)除了2缸和8缸型号压缩机。

(5)2缸压缩机不适用。

(6)除了8缸型号压缩机。

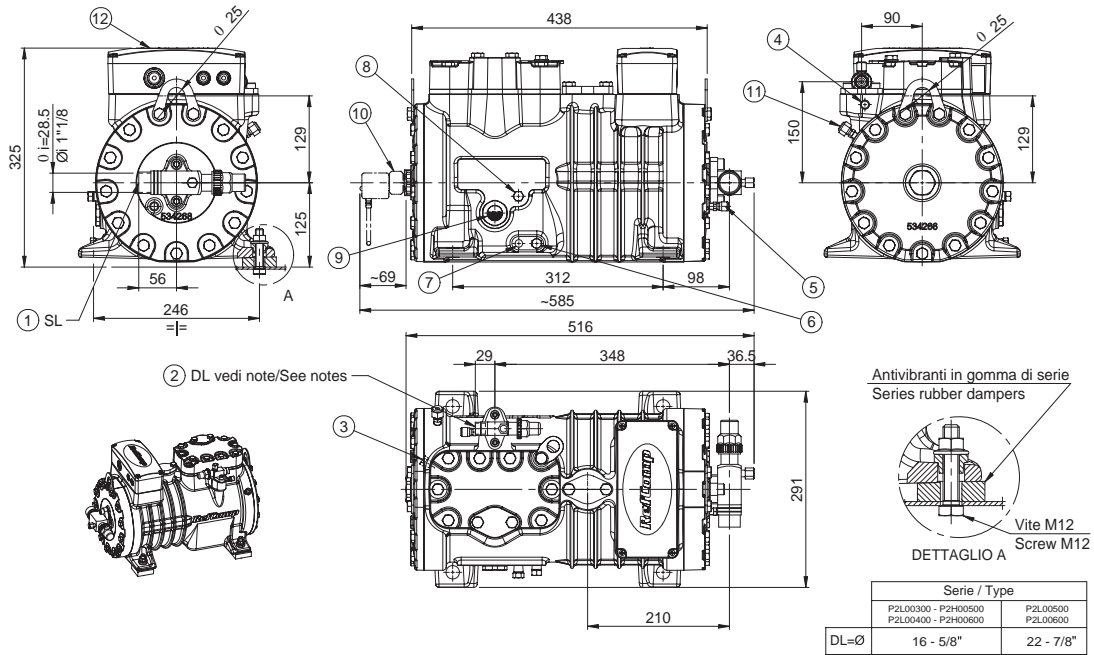
(7)除了带飞溅式润滑的4缸型号压缩机SP_4N。

(8)适用于带飞溅式润滑的4缸型号压缩机SP_4N。

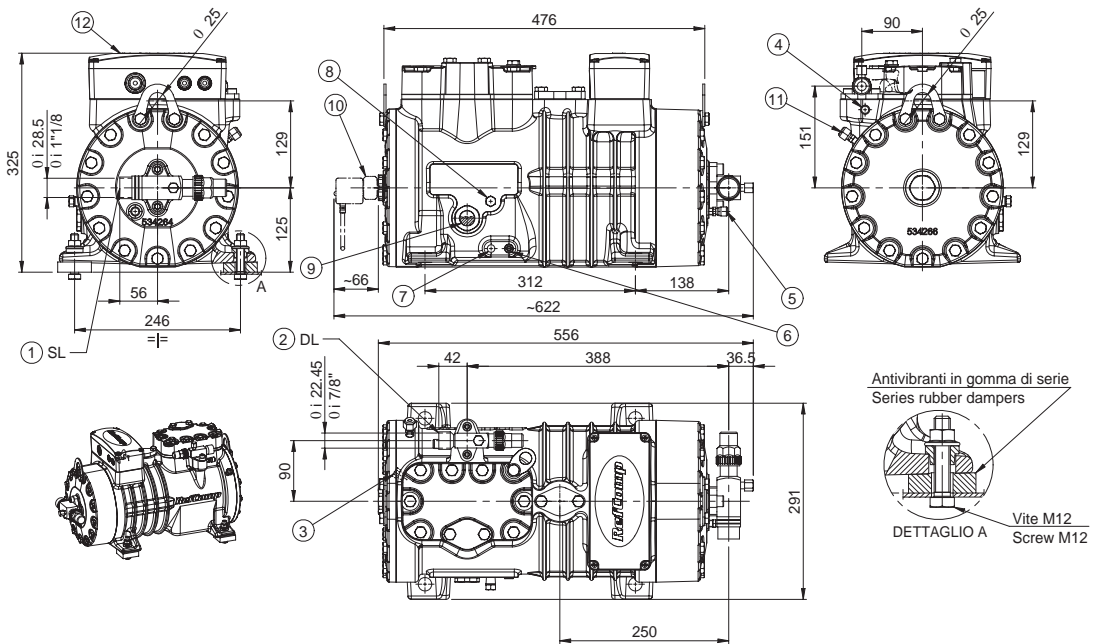
SB系列

特殊电压的电机，HFC制冷剂用POE油，MP54机电式油压差开关，电子油压差开关，油充注阀，LCM液液控制模块（或选用热力膨胀阀套件）含电磁阀、液视镜和干燥过滤器散件；液体过冷器(安装与否取决于客户要求)，排气温度传感器，橡胶减震垫套件。

SP2L0300 - SP2L030E - SP2L0400 - SP2L040E - SP2L0500 - SP2L050E
 SP2L0600 - SP2L060E - SP2H0500- SP2H050E - SP2H0600 - SP2H060E



SP2H0800 - SP2H080E
 SP2H0900 - SP2H090E



Key

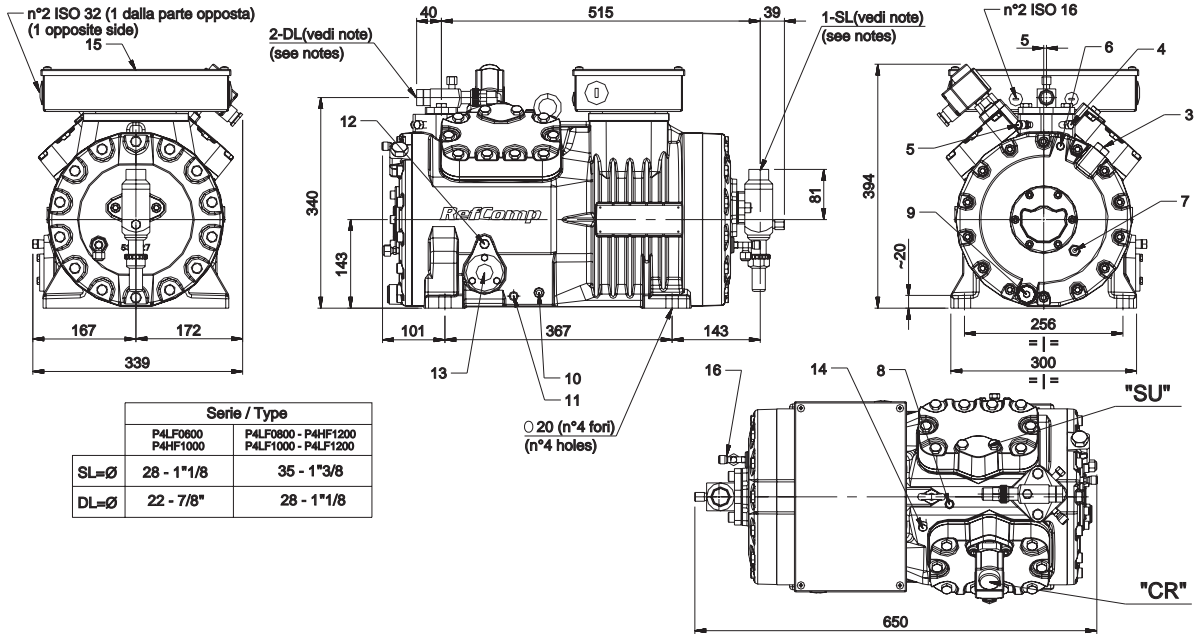
- 1) Suction shut-off valve SL
- 2) Discharge shut-off valve DL
- 3) Discharge temperature sensor 1/8"NPT (optional)
- 4) High pressure 1/4" SAE-FLARE
- 5) Low pressure 1/4" SAE-FLARE
- 6) Oil drain 1/4"NPT
- 7) Crankcase heater
- 8) Oil charging shut-off valve 1/4"NPT (optional)
- 9) Oil level sight glass
- 10) Oil level sensor (optional)

图例

- 1) 吸气截止阀 SL
- 2) 排气截止阀 DL
- 3) 排气温传感器 1/8"NPT (可选件)
- 4) 高压接口 1/4" SAE-FLARE
- 5) 低压接口 1/4" SAE-FLARE
- 6) 排油堵 1/4"NPT
- 7) 曲轴箱加热器
- 8) 注油口截止阀 1/4"NPT
- 9) 油位视镜
- 10) 油位传感器 (可选件)

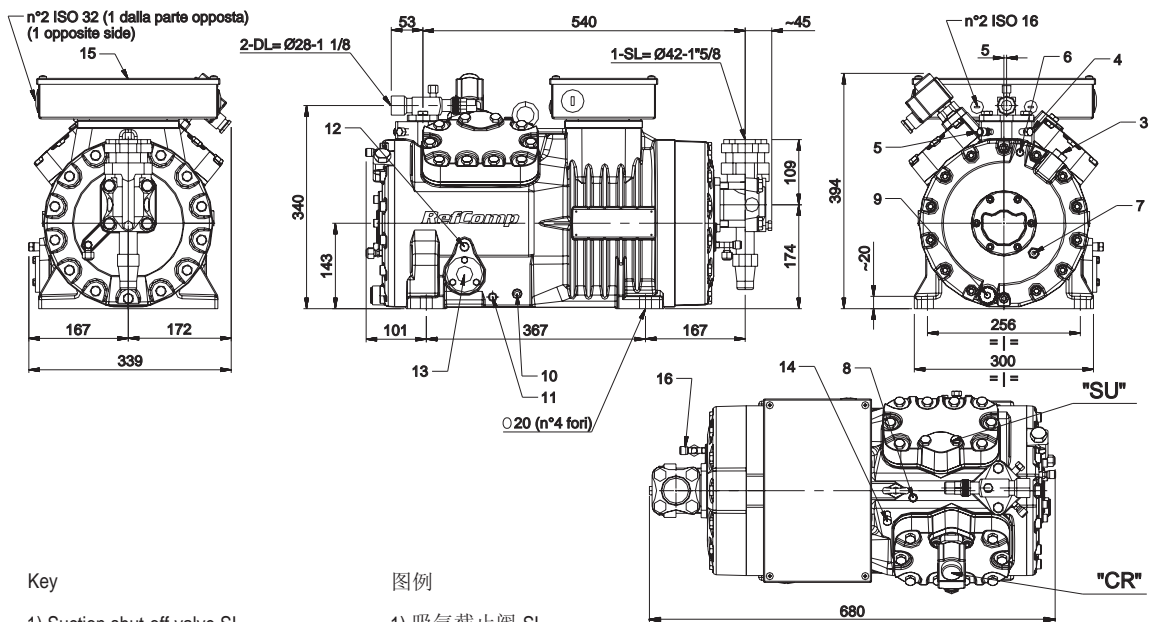
SP4LF0600 - SP4LF060E - SP4LF0800 - SP4LF080E

SP4HF/LF1000 - SP4HF/LF100E - SP4HF/LF1200 - SP4HF/LF120E



SP4HF1500 - SP4HF150E

SP4HF2000 - SP4HF200E



Key

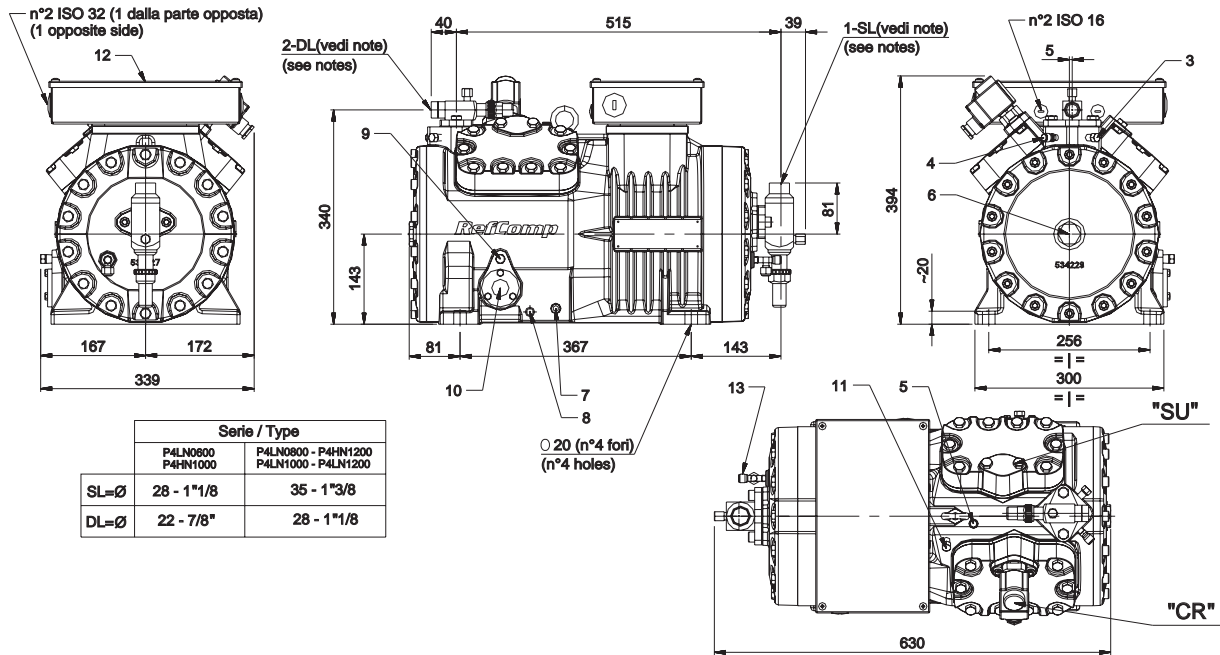
- 1) Suction shut-off valve SL
 - 2) Discharge shut-off valve DL
 - 3) Electronic oil pressure switch connection
 - 4) Discharge temperature sensor 1/8"NPT
 - 5) High pressure 1/8"NPT
 - 6) Oil high pressure 1/4" SAE-FLARE
 - 7) Oil low pressure 1/4" SAE-FLARE
 - 8) Low pressure 1/8"NPT
 - 9) Oil strainer plug M22x1.5
 - 10) Oil drain 3/8"NPT
 - 11) Crankcase heater
 - 12) Oil charging 1/4"NPT
 - 13) Oil level sight glass
 - 14) LCM injection connection 1/8"NPT
 - 15) Electric box
 - 16) Low pressure 1/4" SAE-FLARE
- "CR" Capacity regulator
 "SU" Start unloader

图例

- 1) 吸气截止阀 SL
 - 2) 排气截止阀
 - 3) 电子油压开关接口
 - 4) 排气温度传感器 1/8" NPT
 - 5) 高压接口 1/8" NPT
 - 6) 油高压侧接口 1/4" SAE-FLARE
 - 7) 油低压侧接口 1/4" SAE-FLARE
 - 8) 低压接口 1/8" NPT
 - 9) 油过滤器 M22x1.5
 - 10) 排油堵 3/8" NPT
 - 11) 曲轴箱加热器
 - 12) 注油口 1/4" NPT
 - 13) 油位视镜
 - 14) LCM喷射接口 1/8" NPT
 - 15) 接线盒
 - 16) 低压接口 1/4" SAE-FLARE
- "CR" 能量调节器
 "SU" 启动卸载装置

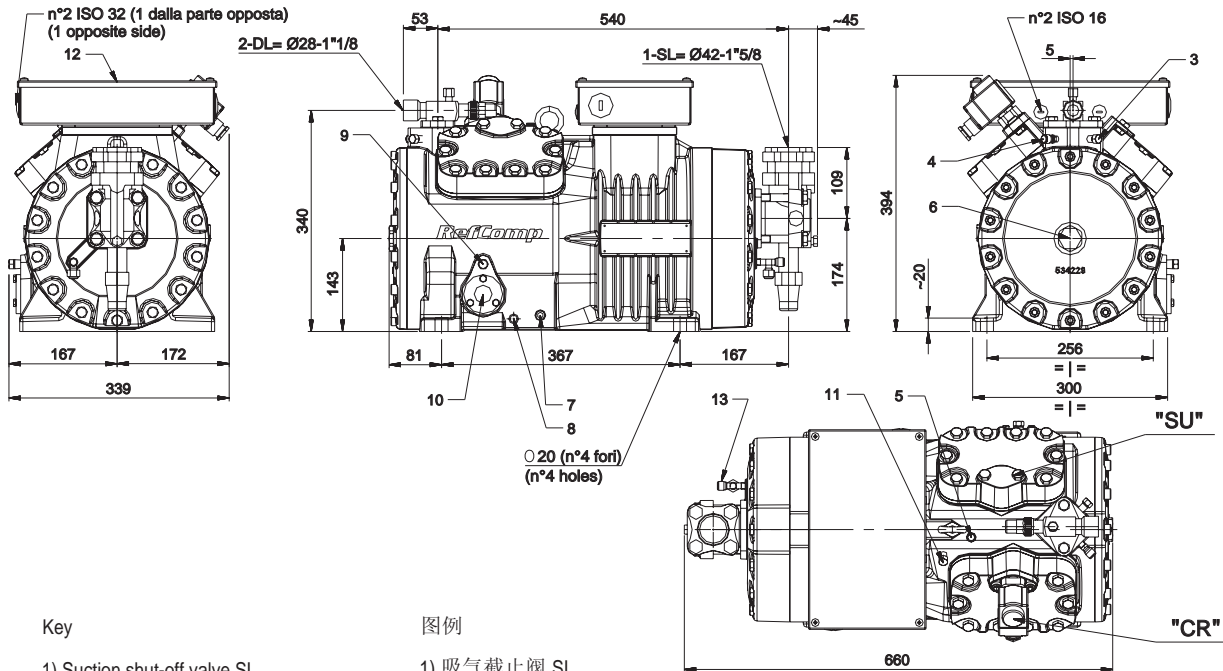
SP4LN0600 - SP4LN060E - SP4LN0800 - SP4LN080E

SP4HN/LN1000 - SP4HN/LN100E - SP4HN/LN1200 - SP4HN/LN120E



SP4HN1500 - SP4HN150E

SP4HN2000 - SP4HN200E



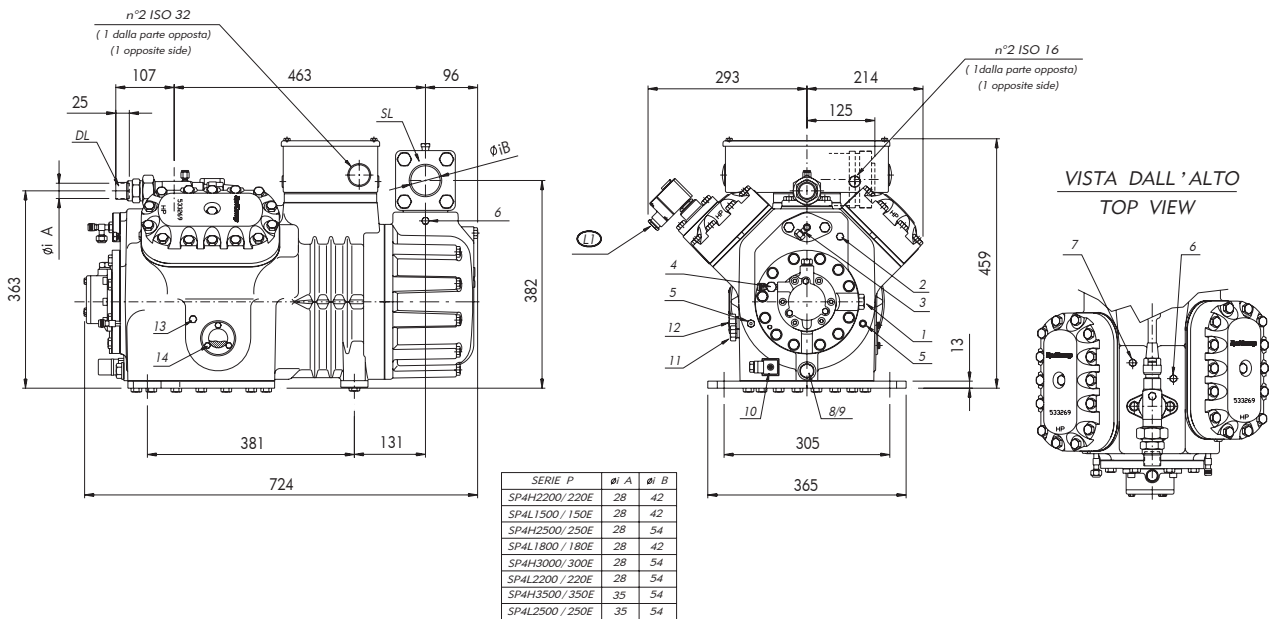
Key

- 1) Suction shut-off valve SL
 - 2) Discharge shut-off valve DL
 - 3) Discharge temperature sensor 1/8"NPT
 - 4) High pressure 1/8"NPT
 - 5) Low pressure 1/8"NPT
 - 6) Oil plug for optical sensor 1"1/8-18UNEF
 - 7) Oil drain 3/8"NPT
 - 8) Crankcase heater
 - 9) Oil charging 1/4"NPT
 - 10) Oil level sight glass
 - 11) LCM injection connection 1/8"NPT
 - 12) Electric box
 - 13) Low pressure 1/4" SAE-FLARE
- "CR" Capacity regulator
"SU" Start unloader

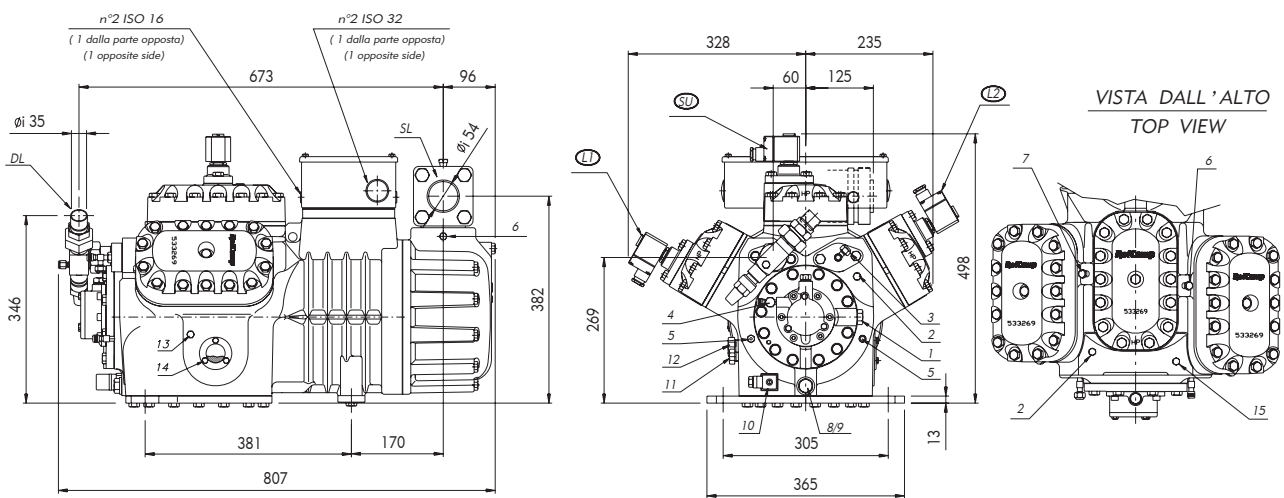
图例

- 1) 吸气截止阀 SL
 - 2) 排气截止阀 DL
 - 3) 排气温度传感器 1/8" NPT
 - 4) 高压接口 1/8" NPT
 - 5) 低压接口 1/8" NPT
 - 6) 油堵 (光电传感器接口) 1"1/8-18UNEF
 - 7) 排油堵 3/8" NPT
 - 8) 曲轴箱加热器
 - 9) 注油口 1/4" NPT
 - 10) 油位视镜
 - 11) LCM喷射接口 1/8" NPT
 - 12) 接线盒
 - 13) 低压接口 1/4" SAE-FLARE
- "CR" 能量调节器
"SU" 启动卸载装置

SP4L1500...SP4L2500 - SP4L150E...SP4H250E
 SP4H2200...SP4H3500 - SP4H220E...SP4H350E



SP6L2700 - SP6L270E - SP6L3000 - SP6L300E
 SP6H3700 - SP6H370E - SP6H4000 - SP6H400E



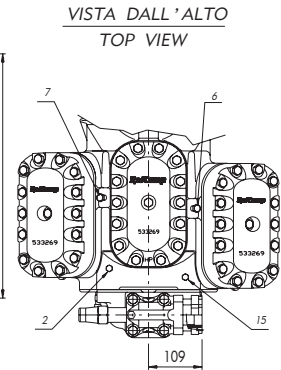
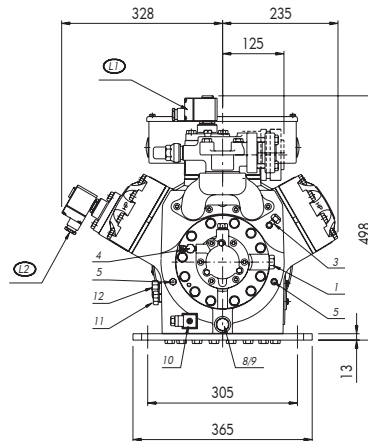
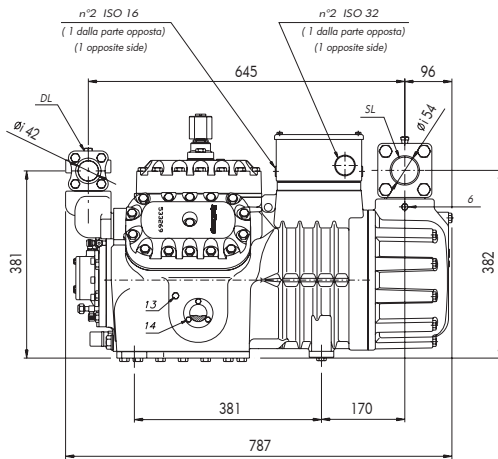
Key

- 1) Electronic oil pressure switch connection
 - 2) Discharge temperature sensor
 - 3) High pressure 1/4" SAE..FLARE
 - 4) Oil high pressure 1/4"SAE-FLARE
 - 5) Oil low pressure 1/4"SAE-FLARE
 - 6) Low pressure 1/8"NPT
 - 7) Low pressure 1/8"NPT (liquid injection)
 - 8) Oil strainer plug
 - 9) Oil drain
 - 10) Crankcase heater
 - 11) Oil equalization(parallel operation)
 - 12) Gas equalization(parallel operation)
 - 13) Oil charging 1/4"NPT
 - 14) Oil level sight glass
 - 15) High pressure 1/4"NPT
- DL) Discharge shut off valve
 SL) Suction shut off valve
 L1) Solenoid valve 1st step
 L2) Solenoid valve 2nd step
 SU) Solenoid valve unloading start

图例

- 1) 电子油压开关接口
 - 2) 排气温度传感器
 - 3) 高压接口 1/4" SAE..FLARE
 - 4) 油高压侧接口 1/4" SAE-FLARE
 - 5) 油低压侧接口 1/4" SAE-FLARE
 - 6) 低压接口 1/8" NPT
 - 7) 低压接口 1/8" NPT (液体喷射)
 - 8) 油过滤器
 - 9) 排油堵
 - 10) 曲轴箱加热器
 - 11) 油平衡接口(并联运行)
 - 12) 气平衡接口(并联运行)
 - 13) 注油口 1/4" NPT
 - 14) 油位视镜
 - 15) 高压接口 1/4" NPT
- DL) 排气截止阀
 SL) 吸气截止阀
 L1) 电磁阀第1级
 L2) 电磁阀第2级
 SU) 启动卸载电磁阀

SP6L4000 - SP6L400E
SP6H5000 - SP6H500E



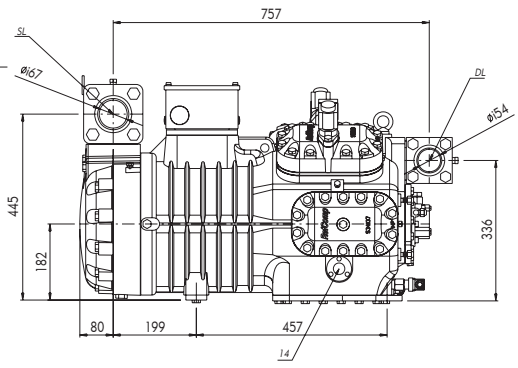
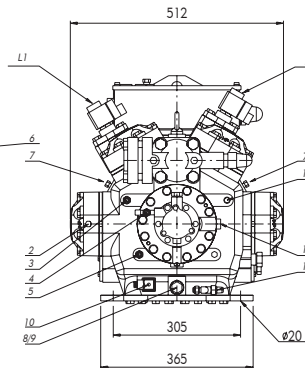
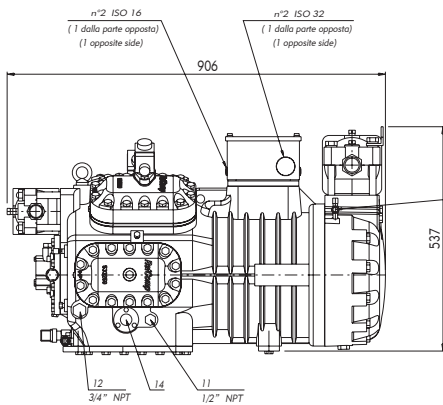
Key

- | | |
|--|--|
| 1) Electronic oil pressure switch connection | 11) Oil equalization(parallel operation) |
| 2) Discharge temperature sensor | 12) Gas equalization(parallel operation) |
| 3) High pressure 1/4" SAE..FLARE | 13) Oil charging 1/4"NPT |
| 4) Oil high pressure 1/4" SAE-FLARE | 14) Oil level sight glass |
| 5) Oil low pressure 1/4" SAE-FLARE | 15) High pressure 1/4"NPT |
| 6) Low pressure 1/8"NPT | DL) Discharge shut off valve |
| 7) Low pressure 1/8"NPT (liquid injection) | SL) Suction shut off valve |
| 8) Oil strainer plug | L1) Solenoid valve 1 st stage |
| 9) Oil drain | L2) Solenoid valve 2 nd stage |
| 10) Crankcase heater | |

图例

- | | |
|--------------------------|-------------------|
| 1) 电子油压开关接口 | 11) 油平衡接口 (并联运行) |
| 2) 排气温度传感器 | 12) 气平衡接口 (并联运行) |
| 3) 高压接口 1/4" SAE..FLARE | 13) 注油口 1/4" NPT |
| 4) 油高压侧接口 1/4" SAE-FLARE | 14) 油位视镜 |
| 5) 油低压侧接口 1/4" SAE-FLARE | 15) 高压接口 1/4" NPT |
| 6) 低压接口 1/8" NPT | DL) 排气截止阀 |
| 7) 低压接口 1/8" NPT (液体喷射) | SL) 吸气截止阀 |
| 8) 油过滤器 | L1) 电磁阀 第1级 |
| 9) 排油堵 | L2) 电磁阀 第2级 |
| 10) 曲轴箱加热器 | |

SP8H6000 - SP8H600E - SP8H7000- SP8H700E
SP8L5000 - SP8L500E - SP8L6000 - SP8L600E

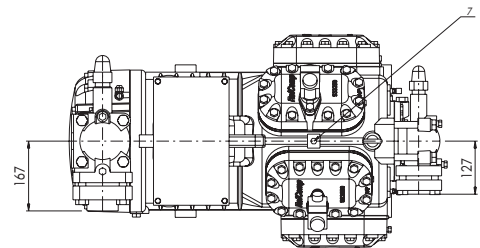


Key

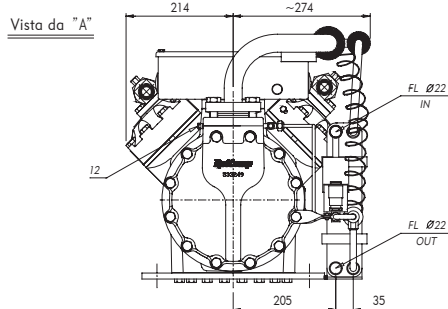
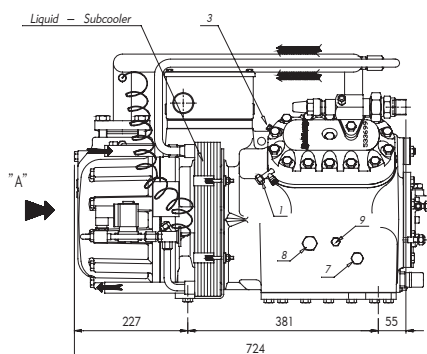
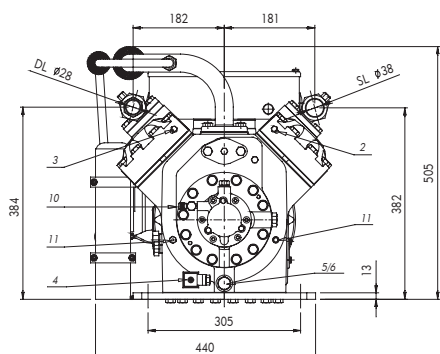
- | | |
|--|--|
| 1) Electronic oil pressure switch connection | 11) Oil equalization(parallel operation) |
| 2) Discharge temperature sensor 1/8" NPT | 12) Gas equalization(parallel operation) |
| 3) High pressure H.P. 1/4" SAE | 13) Oil charging 1/4"SAE (on request) |
| 4) Oil high pressure 1/4" SAE | 14) Oil level sight glass |
| 5) Oil low pressure 1/4" SAE | 15) High pressure H.P. Schrader-connection |
| 6) Low pressure L.P. 1/4" SAE | DL) Discharge shut off valve |
| 7) Low pressure L.P. 1/8" NPT (liquid injection) | SL) Suction shut off valve |
| 8) Oil strainer plug | L1) Solenoid valve 1 st step |
| 9) Oil drain | L2) Solenoid valve 2 nd step |
| 10) Crankcase heater | |

图例

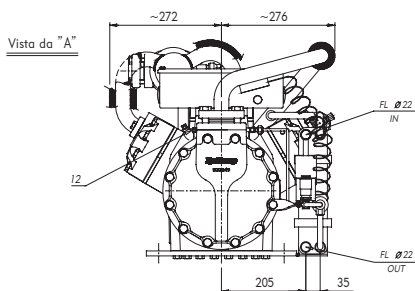
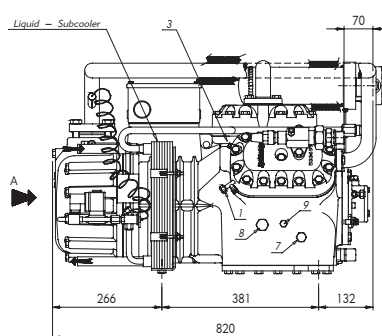
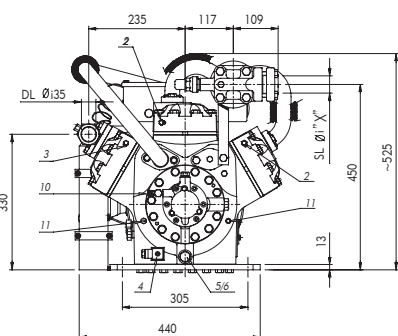
- | | |
|------------------------------|------------------------|
| 1) 电子油压开关接口 | 11) 油平衡接口 (并联运行) |
| 2) 排气温度传感器1/8" NPT | 12) 气平衡接口 (并联运行) |
| 3) 高压接口 H.P. 1/4" SAE | 13) 注油口1/4" SAE (根据要求) |
| 4) 油高压侧接口1/4" SAE | 14) 油位视镜 |
| 5) 油低压侧接口1/4" SAE | 15) 高压接口 H.P. 针阀接口 |
| 6) 低压接口 L.P. 1/4" SAE | DL) 排气截止阀 |
| 7) 低压接口 L.P. 1/8" NPT (液体喷射) | SL) 吸气截止阀 |
| 8) 油过滤器 | L1) 电磁阀 第1级 |
| 9) 排油堵 | L2) 电磁阀 第2级 |
| 10) 曲轴箱加热器 | |



SB4 1200 - SB4 120E
SB4 1400 - SB4 140E



SB6 1600 - SB6 160E - SB6 2000 - SB6 200E
SB6 2500 - SB6 250E - SB6 3000 - SB6 300E



KEY

- | | |
|---|---|
| 1) Intermediate pressure 1/4" S.A.E. - FLARE | 9) Oil charging 1/4" NPT |
| 2) Low pressure 1/8" NPT | 10) Oil high pressure 1/4" S.A.E. - FLARE |
| 3) High pressure 1/4" S.A.E. - FLARE | 11) Oil low pressure 1/4" S.A.E. - FLARE |
| 4) Crankcase heater | 12) Oil return from separator 1/8" NPT |
| 5) Oil strainer plug | 13) Suction shut-off valve |
| 6) Oil drain 1/4" NPT | 14) Discharge shut-off valve |
| 7) Oil equalization (parallel operation) 1/2" NPT | 15) Oil sight glass |
| 8) Gas equalization (parallel operation) 3/4" NPT | 16) Plate heat exchanger (optional) controlled on liquid injection module LCM or thermostatic valve |

图例

- | | |
|-------------------------------|---------------------------------------|
| 1) 中间压力接口 1/4" S.A.E. - FLARE | 9) 注油口 1/4" NPT |
| 2) 低压接口 1/8" NPT | 10) 油高压侧接口 1/4" S.A.E. - FLARE |
| 3) 高压接口 1/4" S.A.E. - FLARE | 11) 油低压侧接口 1/4" S.A.E. - FLARE |
| 4) 曲轴箱加热器 | 12) 回油口 (接油分) 1/8" NPT |
| 5) 油过滤器 | 13) 吸气截止阀 |
| 6) 排油堵 1/4" NPT | 14) 排气截止阀 |
| 7) 油平衡接口 (并联运行) 1/2" NPT | 15) 油视镜 |
| 8) 气平衡接口 (并联运行) 3/4" NPT | 16) 板式换热器 (选配件) 受控于液体喷射模块 LCM 或者热力膨胀阀 |



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