

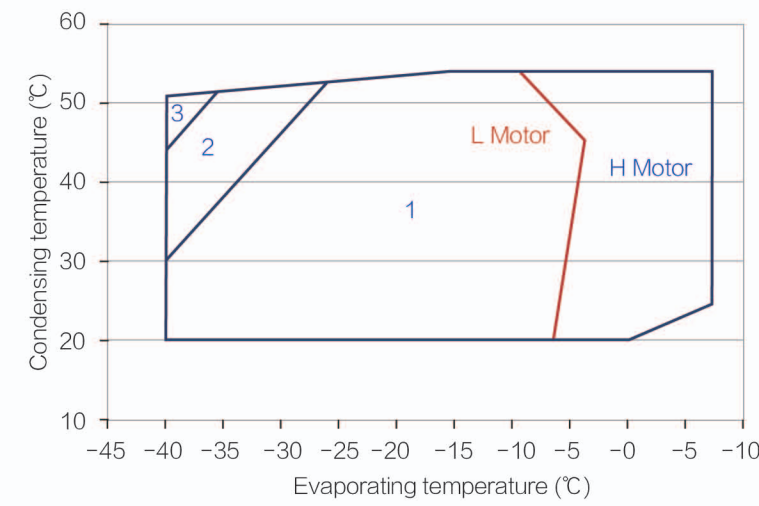
Application

The compressor can be widely applied in the air-conditioning, ice making, refrigeration, concrete cooling, ice storage, etc.



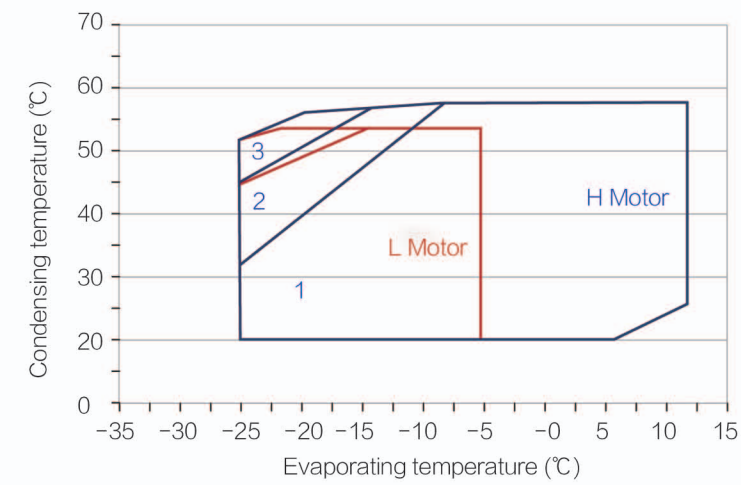
Application scope

R404A-R507 Application scope



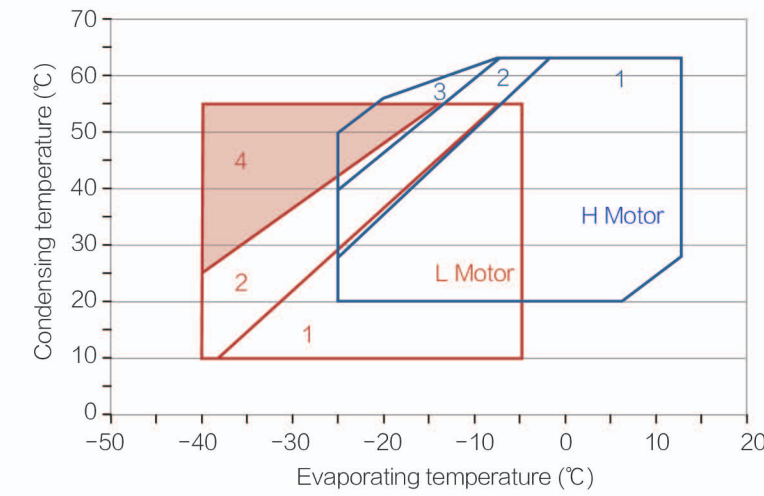
Application Range of Full Load Operation
 1=standard application scope (suction temperature: 25°C)
 2=application scope of additional cooling
 3=application scope of additional cooling + maximum suction superheat (20K)

R407C Application scope



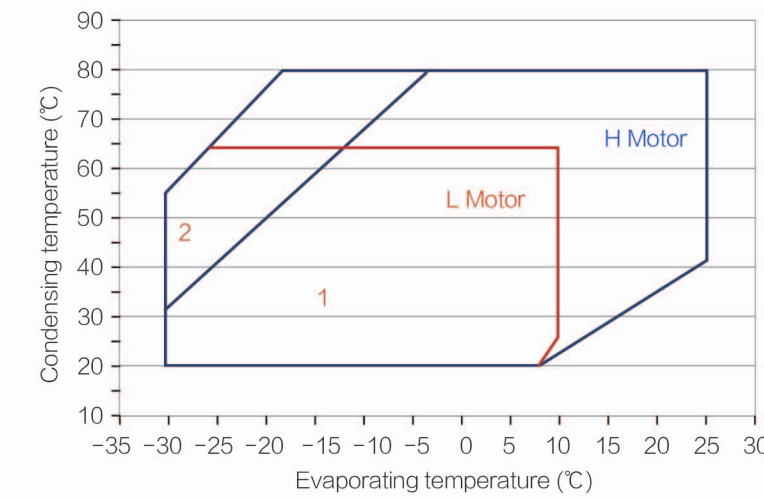
Application Range of Full Load Operation
 1=standard application scope (suction temperature: 25°C)
 2=application scope of additional cooling
 3=application scope of additional cooling + maximum suction superheat (20K)

R22 Application scope



Application Range of Full Load Operation
 1=standard application scope (suction temperature: 25°C)
 2=application scope of additional cooling
 3=application scope of additional cooling + maximum suction superheat (20K)
 4=application scope of additional cooling + spray cooling LCM
 Not applicable to 8-cylinder models: SP8H... SP8L.

R134a Application scope



Application Range of Full Load Operation
 1=standard application scope (suction temperature: 25°C)
 2=application scope of additional cooling

RefComp

SP Semi-hermetic Piston Compressor

RefComp Italy

The World Famous Brand for Screw Compressor and Piston Compressor

Focusing on commercial refrigeration compressor

25 years of experience in semi-hermetic compressor manufacture

The classical tradition, manufacturing Art is born, and innovation is endless.



RefComp

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RefComp SP Semi-hermetic Piston Compressor

RefComp SP series piston compressors are divided into 42 models, with the displacement of 17.5–268m³/h and power range of 3–70Hp. Refrigerants such as R22, R407C, R134a, R404A and R507 are applicable. Due to the compact design, low noise, high efficiency, multiple models and easy installation, these piston compressors can meet the requirements of water coolers, air coolers and heat pump units of various kinds of efficiency and excellent performance.



Housing

- Working pressure: 28bar;
- Optimized design of suction air ways, low suction resistance and sufficient cooling of motor; straight-through middle air runner, reduction of the loss along the way; little discharge throttling loss and low energy consumption;
- Small size, integration of the filter, shut-off valve and temperature sensor, and compact structure.

Motor

- Partial winding or Y-Δ start, with small start current and low energy consumption in operation;
- Various kinds of operating voltage and frequency, meeting voltage requirements of various areas;
- Special custom material, compatible with various refrigerants such as R22, R407C, R134a, R404A and R507;
- Special structure design and space layout. The motor can be cooled efficiently with the overflow refrigerant gas between the suction shut-off valve and piston suction side.

Bearing

- Combination of the sliding bearing (bush) and thrust gasket, avoiding the axial/radial wear and overload of the crankshaft. High accuracy, wear resistance and low noise.
- Sliding body of high precision and wear resistance, good lubrication and design life of 50,000h to 80,000h.

Motor protection

- INT69 and INT69B2 protective modules are used to protect the motor from over high temperature, reversal and phase loss.
- 6 PTC thermistors in series are used to prevent the motor burnt out due to high temperature;
- The system operation information is tracked for real-time feedback of the motor and system operation state.

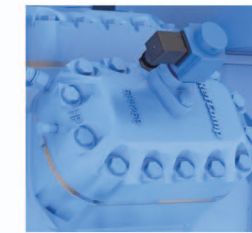
Shut-off valve

- Some suction/discharge shut-off valves can rotate 360°. Shut-off valves compact, flexible and easy to install.



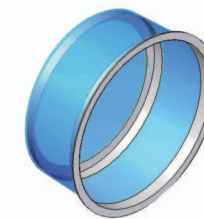
Crankshaft and connecting rod piston

- Use the crankshaft designed by RefComp, with the balancing block, ensuring stable operation, small vibration and good lubrication.
- High efficiency, high strength, small vibration and air pulsation, and low noise. The new technology reaches the international highest level among similar models.
- The design is optimized, increasing the compression efficiency. The unit can be efficiently applied in medium/low-temperature application.
- The rod and piston are connected by connecting rod, which has lushing inside to prolong the service life.



Refrigeration capacity adjustment

- Select the Refrigeration capacity according to the full or partial load conditions. Control the solenoid valve to adjust the Refrigeration capacity.
- The Refrigeration capacity control is divided into 50% for the 4-cylinder unit, 33% to 66% for the 6-cylinder unit and 50% to 75% for the 8-cylinder unit, meeting the refrigeration capacity requirements of the system to the largest extent.



Suction filter

- With the built-in high-density suction filter, impurities in refrigerant gas can be removed, and the motor can be protected.
- The suction filter is set on the outside of the suction end of the housing, and has a compact structure. It can be replaced easily.

Safety valve

- The safety valve is built in the housing, and connected to the high-pressure and low-pressure side, thus preventing the pressure inside the housing from exceeding the safety value.
- The safety valve conforms to high design requirements and is sealed reliably. It is characterized by reliable sealing, accurate opening, full opening at the appropriate time, stable discharge and prompt return. It is also safe and reliable.



Table of Technical Parameters

Table 1 Main Technical Parameters of SP Series

Model	Inside diameter of discharge pipe(mm)	Inside diameter of suction pipe(mm)	Dimension (mm)			Displacement (m³/h)		Rated power of motor (kW)
			Length	Width	Height	50Hz	60Hz	
SP2H0500/SP2H050E	16	28	585	291	325	17.5	21	3.7
SP2H0600/SP2H060E	16	28	585	291	325	21	25.7	4.4
SP2H0800/SP2H080E	22	28	622	291	325	24.5	29.4	5.9
SP2H0900/SP2H090E	22	28	622	291	325	28	33.6	6.6
SP2L0300/SP2L030E	16	28	585	291	325	17.5	21	2
SP2L0400/SP2L040E	16	28	585	291	325	21	25.7	3
SP2L0500/SP2L050E	22	28	585	291	325	24.5	29.4	3.7
SP2L0600/SP2L060E	22	28	585	291	325	28	33.6	4.4
SP4HF1000/SP4HF100E	22	28	650	339	394	35	42	7.5
SP4HN1000/SP4HN100E	22	28	630	339	394	35	42	7.5
SP4HF1200/SP4HF120E	28	35	650	339	394	42	50.4	8.9
SP4HN1200/SP4HN120E	28	35	630	339	394	42	50.4	8.9
SP4HF1500/SP4HF150E	28	42	680	339	394	49	58.8	11.2
SP4HN1500/SP4HN150E	28	42	660	339	394	49	58.8	11.2
SP4HF2000/SP4HF200E	28	42	680	339	394	56	67.2	14.9
SP4HN2000/SP4HN200E	28	42	660	339	394	56	67.2	14.9
SP4LF0600/SP4LF060E	22	28	650	339	394	35	42	4.5
SP4LN0600/SP4LN060E	22	28	630	339	394	35	42	4.5
SP4LF0800/SP4LF080E	28	35	650	339	394	42	50.4	5.9
SP4LN0800/SP4LN080E	28	35	630	339	394	42	50.4	5.9
SP4LF1000/SP4LF100E	28	35	650	339	394	49	58.8	7.5
SP4LN1000/SP4LN100E	28	35	630	339	394	49	58.8	7.5
SP4LF1200/SP4LF120E	28	35	650	339	394	56	67.2	8.9
SP4LN1200/SP4LN120E	28	35	630	339	394	56	67.2	8.9
SP4H2200/SP4H220E	28	42	724	507	459	64.7	77.6	16.4
SP4H2500/SP4H250E	28	54	724	507	459	75	90	18.7
SP4H3000/SP4H300E	28	54	724	507	459	86.1	103.3	22.4
SP4H3500/SP4H350E	35	54	724	507	459	102.9	123.5	26.1
SP4L1500/SP4L150E	28	42	724	507	459	64.7	77.6	12.2
SP4L1800/SP4L180E	28	42	724	507	459	75	90	13.3
SP4L2200/SP4L220E	28	54	724	507	459	86.1	103.3	16.4
SP4L2500/SP4L250E	35	54	724	507	459	102.9	123.5	18.7
SP6H3700/SP6H370E	35	54	807	563	498	112.5	135	27.6
SP6H4000/SP6H400E	35	54	807	563	498	129.1	154.9	29.9
SP6H5000/SP6H500E	42	54	787	563	498	154.4	185.3	37.3
SP6L2700/SP6L270E	35	54	807	563	498	112.5	135	20.2
SP6L3000/SP6L300E	35	54	807	563	498	129.1	154.9	22.4
SP6L4000/SP6L400E	42	54	787	563	498	154.4	185.3	29.9
SP8H6000/SP8H600E	54	67	906	512	537	186	224	45
SP8H7000/SP8H700E	54	67	906	512	537	222	268	52
SP8L5000/SP8L500E	54	67	906	512	537	186	224	37
SP8L6000/SP8L600E	54	67	906	512	537	222	268	45

Application

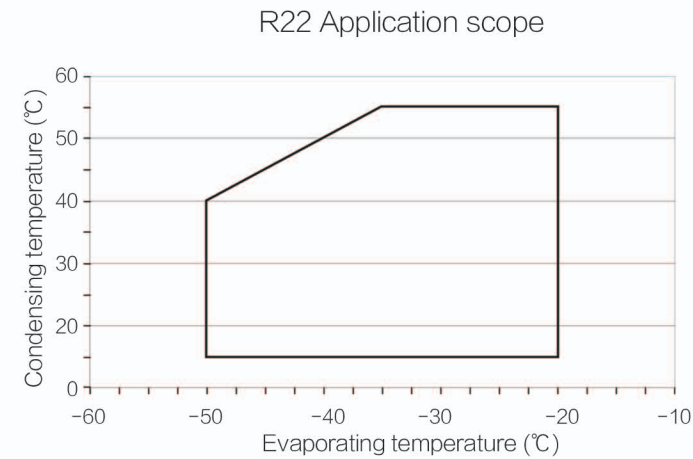
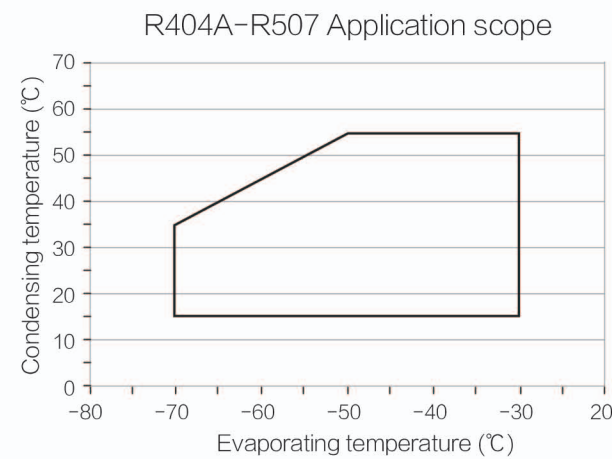
The compressor can be widely applied in ice making, refrigeration, concrete cooling, ice storage, etc.



RefComp

SB Semi-hermetic Double-stage Piston Compressor

Application scope



Application range of Full Load Running
Suction superheat=20K

Application range of Full Load Running
Suction superheat=20K

Table of Technical Parameters

Model	Inside diameter of discharge port(mm)	Inside diameter of suction port(mm)	Dimension (mm)			Discharge amount (m³/h)		Rated power of motor(kW)
			Length	Width	Height	Low pressure stage	High pressure stage	
SB4 L1200	28	35	724	488	505	43	27.6	8.8
SB4 L1400	28	35	724	488	505	51.5	32.4	10.3
SB6 L1600	35	35	820	548	525	64.7	32.4	11.8
SB6 L2000	35	35	820	548	525	75	37.5	14.7
SB6 L2500	42	42	820	548	525	86.1	43	18.4
SB6 L3000	42	42	820	548	525	102.9	51.5	22.1

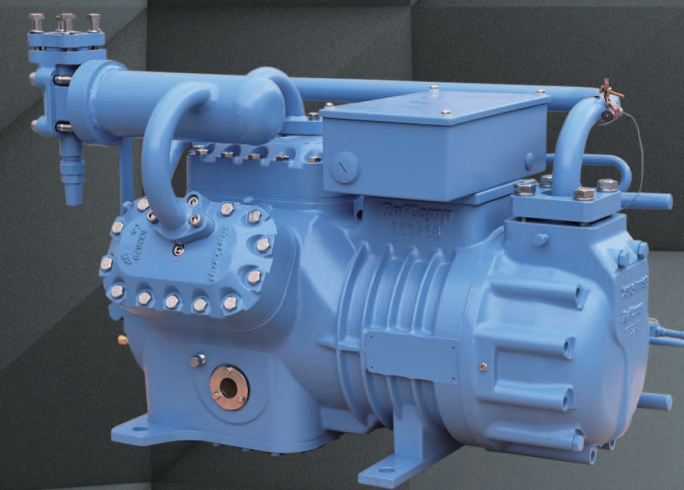
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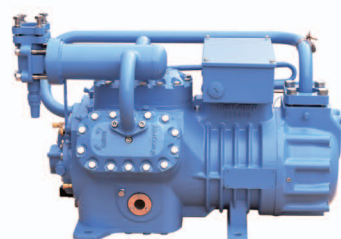
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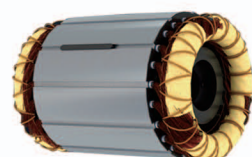
RefComp SB Double-stage Piston Compressor

RefComp SB series compound two stage piston compressors cover six models, with HP stage displacement ranging from 27.6–51.5m³/h and motor power ranging from 12–30Hp. SB two stage semi-hermetic piston compressor is applicable to refrigerant: R22, R404A and R507, and has the feature of high efficiency, durability, compact structure, small vibration, etc. Final discharge of the compound compressor is after two consecutive compression stages. In the first-stage compression, the refrigerant gas from the evaporator is sucked in from the suction end and compressed into the intermediate cavity, which is also the suction cavity of the second-stage compression. In the second-stage compression, the refrigerant gas sucked into the intermediate cavity is compressed to the final discharge pressure and then discharged. Compared to the single-stage compressor, the compression ratio of each stage of the double-stage compressor can be reduced, thus reducing the discharge temperature and improving the efficiency.



Housing

- Working pressure: 28bar;
- Optimized design of suction air ways, low suction resistance and sufficient cooling of motor; straight-through middle air runner, reduction of the loss along the way; little discharge throttling loss and low energy consumption;
- Small size, integration of the filter, shut-off valve and temperature sensor, and compact structure.



Motor

- Various kinds of operating voltage and frequency, meeting voltage requirements of various areas.
- Special custom material, compatible with various refrigerants such as R22, R404A, R507A and R410A.

Motor protection

- The INT69B2 protective module is used to prevent the motor from too high temperature and phase loss.
- 6 PTC thermistors in series are used to prevent the motor burnt out due to high temperature;
- The system operation information is tracked for real-time feedback of the motor and system operation state.



Safety valve

- The safety valve is built in the housing and connected to the intermediate cavity and low-pressure cavity. It is used to prevent the pressure inside the housing from exceeding the safety value.
- The safety valve conforms to high design requirements and is sealed reliably. It is characterized by reliable sealing, accurate opening, full opening at the appropriate time, stable discharge and prompt return. It is also safe and reliable.



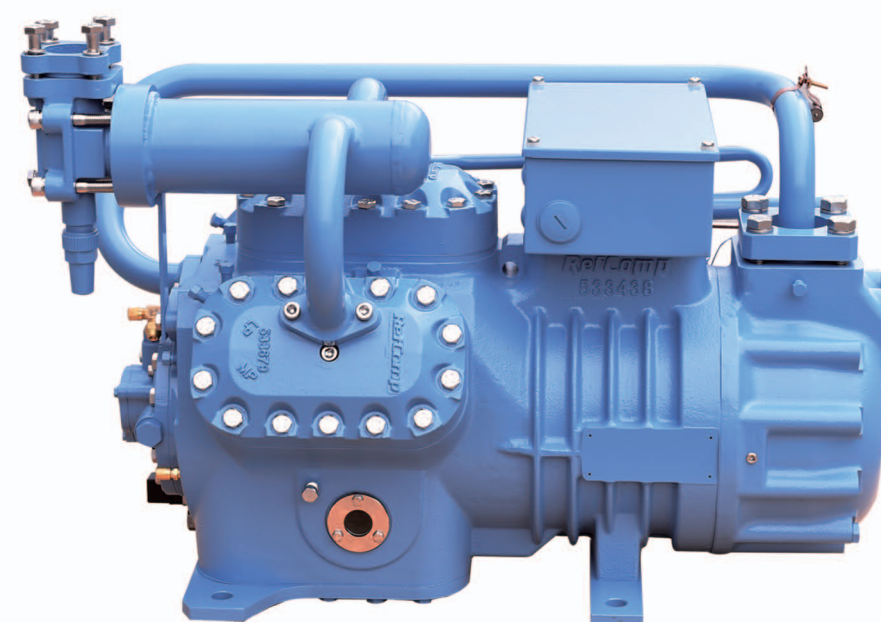
Suction filter

- With the built-in high-density suction filter, impurities in refrigerant gas can be removed, and the motor can be protected.
- The suction filter is set in the suction pipe, and has a compact structure. It can be replaced easily.



Shut-off valve

- Some suction/discharge shut-off valves can rotate 360°. Shut-off valves are compact, flexible and easy to install.



- The valve plate design is reliable, using the impact-resistant spring steel valve.
- The space requirement is minimal, and the size design is compact.
- Little vibration and low noise. 4-cylinder and 6-cylinder structure, optimized mass balance design, and quiet operation.
- High refrigeration capacity and low energy consumption.
 - a. Adopt the high-efficiency working valve.
 - b. Design the minimum dead point clearance.
 - c. Use the high-efficiency and large-capacity motor.
- High-reliability drive components
 - a. The surfaces of the eccentric shaft and crankshaft are hardened.
 - b. Use large-capacity oil pump.
 - c. Use low friction bush and aluminum piston.
 - d. The surface of the piston ring is hard chrome plated.
- The differential oil pressure lubrication supply system is equipped with the two-way gear pump.
- With the subcooler, the compression efficiency is further improved.

www.refcomp.com

Version Number: 20202042

RefComp

Semi-hermetic Reciprocating Compressor

SPC Series of semi-hermetic piston compressors



Commercial
Classic
Advanced
Technology

Originated from Italy,
advanced screw & piston
compressor technology

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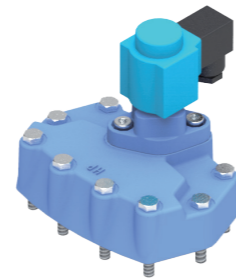
RefComp SPC series semi-hermetic piston compressor structure diagram

RefComp SPC series semi-hermetic compressors are widely used in commercial and industrial refrigeration fields.

RefComp SPC series semi-hermetic piston compressors have 8 models in total, with rated power ranging from 5 to 10 [Hp], and the corresponding displacement range from 19.3 to 33.1 [m³/h] (when the power frequency is 50 [HZ]).

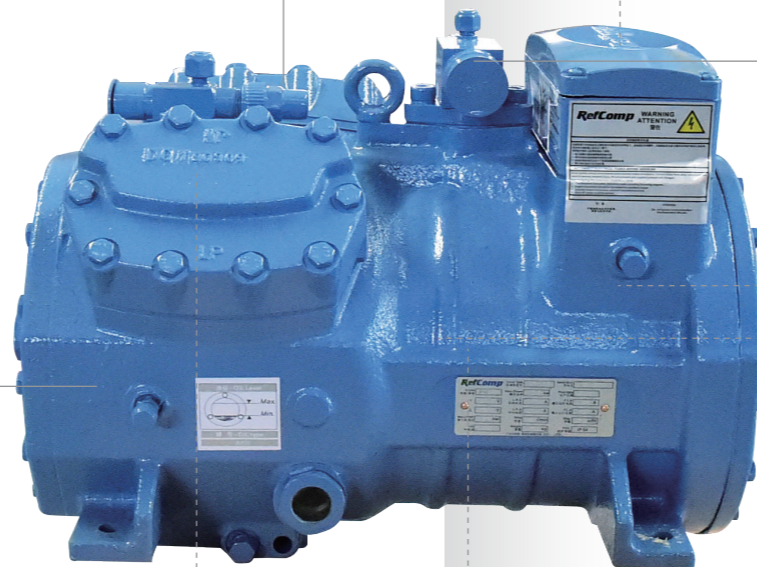
Cooling capacity adjustment

- Select different cooling capacity according to full load or partial load conditions, and control the solenoid valve to adjust the cooling capacity;
- The cooling capacity is adjusted to 50% of the cooling capacity of the 4-cylinder machine to meet the cooling capacity demand of the system.



Body

- Working pressure up to 30bar;
The design of the intake air passage is optimized, the air intake resistance is small, and the motor can be fully cooled at the same time; the direct air passage in the middle reduces the loss along the process; the exhaust throttling loss is small and the loss is low;
- The size of the whole machine is small, and the filter, globe valve and temperature sensor are integrated into one, and the structure is compact.



Crankshaft, connecting rod, piston

- The crankshaft designed by RefComp has smooth operation, low vibration and good lubrication;
- High efficiency, high strength, low vibration, low noise, using new technology, reaching the advanced level of similar models;
- Optimized design to improve compression efficiency;
- The connecting rod and piston are connected by connecting rods, and there are wear-resistant bearing bushes inside, which can prolong the service life.



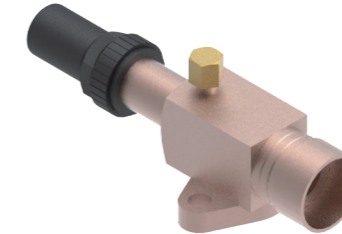
Motor protection

- The INT69B2 protection module protects the motor from being burned.



Shut-off valve

- The partial suction/exhaust shut-off valve can be rotated 360° for easy, compact and flexible installation.



Suction filter

- Built-in high-density suction filter, which can remove impurities in the refrigeration gas and protect the motor;
- It is placed outside the suction end of the body, with compact structure and easy replacement.



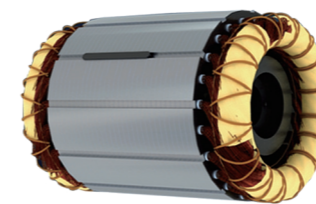
Bearing

- The combination of sliding bearing (bearing bush) and thrust washer is adopted to reduce the axial/radial wear of the crankshaft, with high load, high precision, super wear resistance and low noise;
- High wear-resistant sliding body and good lubrication, the design life is 50,000 to 80,000 hours.



Motor

- Using 400V-Y, 230V-Δ to start the motor directly, the starting current is small, and the running energy consumption is low;
- According to the voltage in different regions, various operating voltages and frequencies are designed to meet various voltage requirements;
- Special customized materials, compatible with R22, R407C, R134a, R404A, R507 and other refrigerants at the same time;
- The special structural design and space layout use the over-flow refrigerant gas from the suction shut-off valve to the suction side of the piston to effectively cool the motor.



Model Description

Compressor	SPC	4	-	19	L
	SPC	4	-	19	H

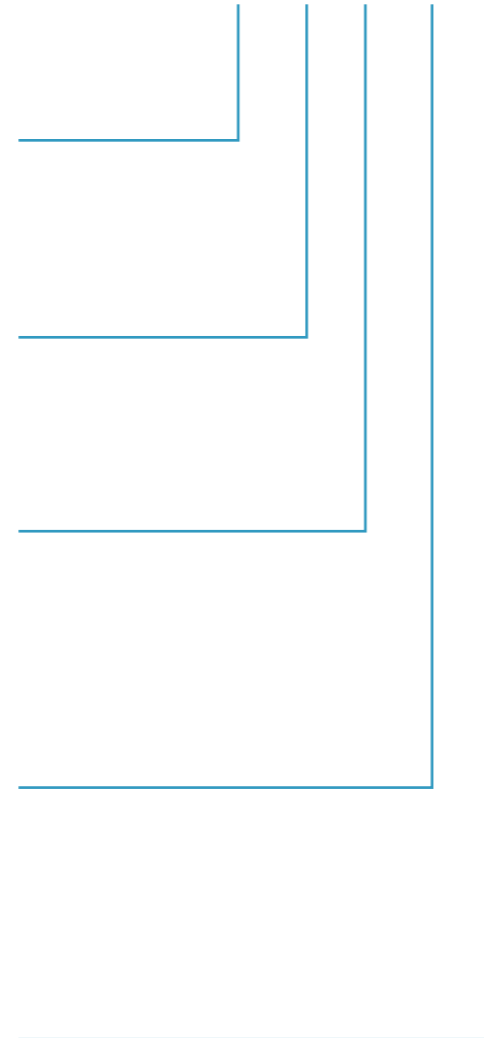
Series	
SPC	Small semi-hermetic piston compressor

Number of cylinders	
SPC series:	4

Delimiter	
-	Number separator

Theoretical displacement (@50Hz)	
19	19/23/27/33 m ³ /hr

Motor type	
H	High temperature compressor
L	Cryogenic compressor

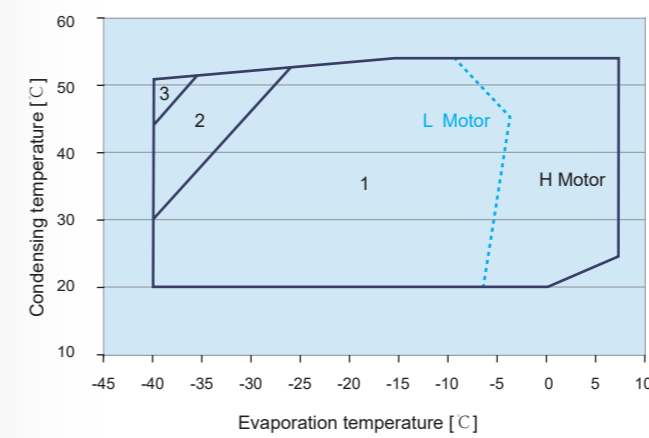


Technical parameter

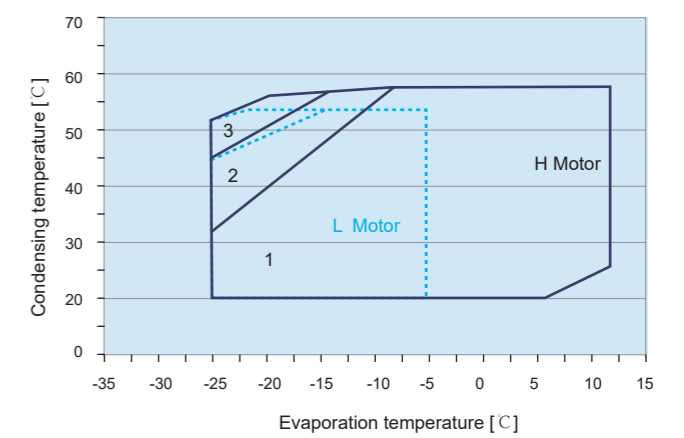
Model	SPC4								
	19L	19H	23L	23H	27L	27H	33L	33H	
Nominal power of compressor [Hp]/[kW]	5/3.7	6/4.4	5/3.7	6/4.4	6/4.4	8/5.9	8/5.9	10/7.4	
Displacement 50/60Hz [m ³ /hr]	19.3/23.2	19.3/23.2	23.1/27.7	23.1/27.7	27.3/32.8	27.3/32.8	33.1/39.7	33.1/39.7	
Number of compressor cylinders	4	4	4	4	4	4	4	4	
Weight [Kg]	78	79	78	79	79	85	84	87	
Oil charge [dm ³]	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Crankcase heater electrical parameters	230V-120W-PTC-50/60Hz								
Exhaust port [mm]/ [inches]	19-3/4"	19-3/4"	22-7/8"	22-7/8"	22-7/8"	22-7/8"	28-1 1/8"	28-1 1/8"	
Suction port [mm]/ [inches]	28-1 1/8"	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"	
Energy regulation stage	100,50%								
Standard Motor Electrical Parameters	400V/3/50Hz-Y(230V/3/50Hz-D)								
Starting current Y/D [A]	54/94	60/104	54/94	60/104	60/104	85/148	85/148	108/188	
Maximum operating current [A]	12/21	14/24	12/21	14/24	14/24	16/28	16/28	24/42	

Scope of application

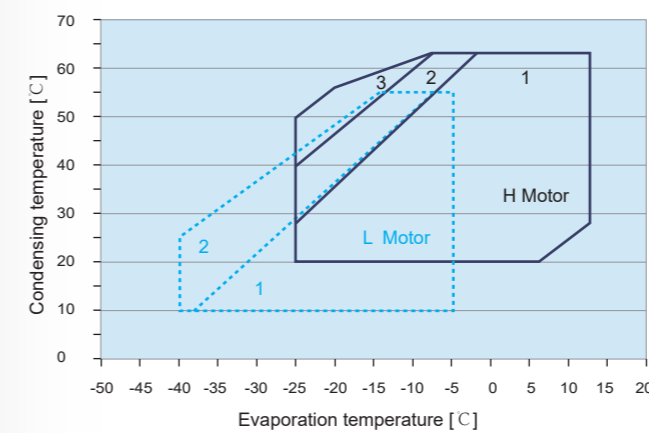
SPC series: R404A-R507 Application range



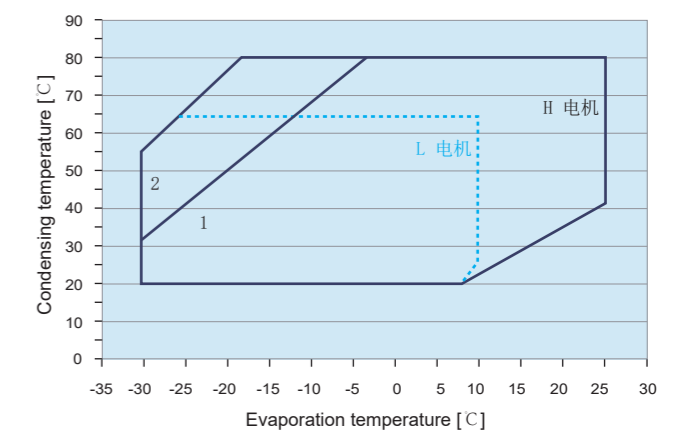
SPC series: R407C application range



SPC series: R22 application range



SPC series: R134a application range



Full load operation application range

1 = Standard application area 2 = Additional cooling application area 3 = Application area requiring additional cooling + maximum [20°C] suction superheat.

Features

Flexibility of application in various fields

SPC series

- SPC series compressors are not only suitable for R22 refrigerant, but also can be used for chlorine-free refrigerants such as R407C, R134a, R404A and R50 without replacing any mechanical parts.
- SPC series compressors specially developed and designed for air conditioning and medium and low evaporative temperature refrigeration applications, for R134a refrigerant, its working condensing temperature can reach up to 80 °C; up to -40°C.
- Two types of compressors are available: high temperature compressor (H) (for air conditioning systems) and low temperature compressors (L) (for refrigeration systems).

High efficiency; optimized lubrication system; stable and reliable operation;

Low noise, compact structure, easy maintenance

Supply

Standard accessories items:

- SPC star connection motor (400V/3/50Hz) or delta connection motor (230V/3/50Hz);
- Crankcase heater;
- Exhaust stop valve;
- Suction shut-off valve;
- Rubber shock pad;
- Direct start over bridge (DOL);
- Oil sight glass;
- oil filling;
- PTC thermistor protection resistor;
- INT69B2 protection module (230V/1/50-60Hz);
- IP54 grade electrical box;
- Nitrogen filling protection.

Optional accessory items:

- SPC star connection motor (380V/3/60Hz) or delta connection motor (220V/3/60Hz);
- Photoelectric oil level switch assembly;
- CR energy regulation components;
- fan assembly;
- Exhaust temperature probe assembly;
- Special packaging.

The standard electrical system of the compressor's electronic accessories (electronic protection module, crankcase heater, CR solenoid valve coil) is 230V AC 50/60Hz, if you need special electrical accessories, please consult RefComp.

Performance parameters (refrigerant R22)

SPC-19L					
Tc	10.0	15.0	20.0	25.0	30.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	3.2	2.9	2.6	2.3	-
-35.0	4.3	3.9	3.6	3.2	2.9
-30.0	5.5	5.1	4.7	4.3	3.9
-25.0	7.1	6.6	6.1	5.6	5.2
-20.0	8.9	8.3	7.8	7.2	6.7
-15.0	11.0	10.4	9.7	9.1	8.4
-10.0	13.5	12.7	12.0	11.2	10.5
-5.0	16.3	15.5	14.6	13.7	12.9

SPC-19H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-25.0	5.7	5.2	4.7	4.3	3.9
-20.0	7.3	6.7	6.2	5.7	5.2
-15.0	9.2	8.6	7.9	7.3	6.7
-10.0	11.5	10.7	10.0	9.2	8.5
-5.0	14.1	13.2	12.3	11.5	10.7
0.0	17.2	16.1	15.1	14.1	13.2
5.0	20.7	19.5	18.3	17.2	16.1
10.0	24.7	23.3	22.0	20.7	19.4

SPC-23L					
Tc	10.0	15.0	20.0	25.0	30.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	4.3	3.9	3.5	3.1	-
-35.0	5.7	5.2	4.7	4.3	3.9
-30.0	7.3	6.8	6.3	5.7	5.2
-25.0	9.3	8.7	8.1	7.5	6.9
-20.0	11.7	11.0	10.3	9.6	8.9
-15.0	14.5	13.7	12.8	12.0	11.2
-10.0	17.8	16.8	15.8	14.8	13.9
-5.0	21.5	20.3	19.2	18.1	17.0

SPC-23H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-25.0	6.9	6.3	5.8	5.3	4.8
-20.0	8.8	8.2	7.5	6.9	6.4
-15.0	11.2	10.4	9.6	8.9	8.2
-10.0	13.9	12.9	12.0	11.2	10.4
-5.0	17.0	16.0	14.9	13.9	12.9
0.0	20.7	19.5	18.2	17.1	15.9
5.0	24.9	23.5	22.1	20.7	19.4
10.0	29.7	28.1	26.5	24.9	23.4

SPC-27L					
Tc	10.0	15.0	20.0	25.0	30.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	5.0	4.5	4.1	3.7	-
-35.0	6.6	6.0	5.5	5.0	4.5
-30.0	8.5	7.9	7.3	6.7	6.1
-25.0	10.8	10.1	9.4	8.7	8.0
-20.0	13.5	12.7	11.9	11.1	10.3
-15.0	16.7	15.8	14.8	13.9	12.9
-10.0	20.5	19.3	18.2	17.1	16.1
-5.0	24.7	23.5	22.2	20.9	19.7

SPC-27H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-25.0	8.2	7.5	6.9	6.3	5.8
-20.0	10.5	9.7	8.9	8.3	7.6
-15.0	13.2	12.3	11.4	10.5	9.8
-10.0	16.4	15.3	14.3	13.3	12.3
-5.0	20.1	18.8	17.6	16.4	15.3
0.0	24.4	22.9	21.5	20.1	18.8
5.0	29.3	27.6	26.0	24.4	22.9
10.0	34.9	33.0	31.1	29.3	27.5

SPC-33L					
Tc	10.0	15.0	20.0	25.0	30.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	6.4	5.8	5.3	4.8	-
-35.0	8.4	7.7	7.1	6.5	5.9
-30.0	10.8	10.0	9.3	8.6	7.9
-25.0	13.7	12.8	11.9	11.1	10.3
-20.0	17.1	16.1	15.1	14.1	13.1
-15.0	21.1	19.9	18.8	17.6	16.4
-10.0	25.8	24.4	23.0	21.7	20.3
-5.0	31.1	29.5	28.0	26.4	24.9

SPC-33H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-25.0	10.5	9.7	8.9	8.2	7.6
-20.0	13.4	12.4	11.5	10.6	9.8
-15.0	16.8	15.6	14.5	13.5	12.6
-10.0	20.8	19.4	18.1	16.9	15.8
-5.0	25.4	23.9	22.4	20.9	19.5
0.0	30.8	29.0	27.2	25.5	23.9
5.0	36.9	34.9	32.9	30.9	29.0
10.0	43.9	41.6	39.3	37.0	34.8

Legend

Pf = cooling capacity (kW)

Te = Evaporation temperature (°C)

Tc = Condensing temperature (°C)

For the performance data under different working conditions, please refer to the Refcon selection software

Performance parameters (refrigerant R134a)

SPC-19L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	2.2	1.9	1.7	1.4	1.2
-25.0	3.1	2.8	2.5	2.2	1.9
-20.0	4.2	3.8	3.5	3.1	2.8
-15.0	5.5	5.1	4.7	4.2	3.8
-10.0	7.2	6.7	6.1	5.6	5.1
-5.0	9.2	8.5	7.9	7.3	6.7
0.0	11.5	10.8	10.1	9.3	8.5
5.0	14.4	13.5	12.6	11.7	10.8

SPC-19H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-20.0	4.0	3.7	3.3	3.0	2.7
-15.0	5.3	4.9	4.5	4.1	3.7
-10.0	6.9	6.4	5.9	5.4	4.9
-5.0	8.8	8.2	7.6	7.0	6.4
0.0	11.0	10.3	9.6	8.9	8.2
5.0	13.7	12.9	12.0	11.2	10.3
10.0	16.9	15.9	14.8	13.8	12.8
12.0	18.3	17.2	16.1	15.0	13.9

SPC-23L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	2.8	2.5	2.2	2.0	1.7
-25.0	3.8	3.5	3.1	2.8	2.5
-20.0	5.1	4.7	4.3	3.9	3.5
-15.0	6.6	6.1	5.6	5.1	4.6
-10.0	8.4	7.8	7.2	6.7	6.1
-5.0	10.7	9.9	9.2	8.6	7.9
0.0	13.3	12.5	11.6	10.8	10.0
5.0	15.1	15.5	14.5	13.6	12.6

SPC-23H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-20.0	4.8	4.4	4.0	3.7	3.3
-15.0	6.4	6.0	5.5	5.0	4.6
-10.0	8.3	7.8	7.2	6.6	6.1
-5.0	10.6	9.9	9.2	8.5	7.8
0.0	13.3	12.4	11.6	10.8	9.9
5.0	16.5	15.4	14.4	13.4	12.4
10.0	20.2	19.0	17.8	16.6	15.4
12.0	21.9	20.6	19.3	18.0	16.7

SPC-27L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	3.4	3.0	2.7	2.3	2.0
-25.0	4.5	4.0	3.6	3.2	2.8
-20.0	5.8	5.3	4.9	4.4	3.9
-15.0	7.6	7.0	6.4	5.9	5.3
-10.0	9.7	9.0	8.4	7.7	7.0
-5.0	12.3	11.5	10.7	9.9	9.1
0.0	15.3	14.4	13.4	12.4	11.5
5.0	18.8	17.7	16.6	15.5	14.3

SPC-27H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-20.0	5.8	5.4	4.9	4.4	4.0
-15.0	7.6	7.0	6.5	5.9	5.3
-10.0	9.7	9.0	8.4	7.7	7.0
-5.0	12.3	11.5	10.7	9.9	9.0
0.0	15.3	14.4	13.4	12.4	11.5
5.0	18.9	17.8	16.7	15.5	14.3
10.0	23.1	21.8	20.4	19.1	17.7
12.0	24.9	23.5	22.1	20.6	19.2

SPC-33L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	3.9	3.5	3.1	2.7	2.4
-25.0	5.3	4.8	4.4	3.9	3.5
-20.0	7.1	6.5	5.9	5.4	4.8
-15.0	9.2	8.5	7.8	7.1	6.5
-10.0	11.8	10.9	10.1	9.3	8.5
-5.0	14.9	13.9	12.9	11.9	11.0
0.0	18.5	17.4	16.2	15.1	14.0
5.0	22.8	21.5	20.1	18.8	17.5

SPC-33H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-20.0	7.2	6.7	6.2	5.7	5.2
-15.0	9.4	8.8	8.2	7.6	7.0
-10.0	12.1	11.3	10.5	9.8	9.1
-5.0	15.2	14.2	13.3	12.4	11.5
0.0	18.9	17.7	16.6	15.5	14.4
5.0	23.1	21.7	20.4	19.0	17.7
10.0	28.1	26.4	24.8	23.2	21.6
12.0	30.3	28.5	26.8	25.1	23.4

legend

Pf = cooling capacity (kW)

Te = Evaporation temperature (°C)

Tc = Condensing temperature (°C)

For the performance data under different working conditions, please refer to the Refcon selection software

Performance parameters (refrigerant R507a)

SPC-19L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	2.8	2.5	2.1	1.8	1.5
-35.0	3.8	3.4	3.0	2.6	2.2
-30.0	5.0	4.5	4.0	3.5	3.0
-25.0	6.5	5.9	5.3	4.7	4.1
-20.0	8.3	7.6	6.8	6.1	5.3
-15.0	10.5	9.6	8.7	7.8	6.8
-10.0	13.1	12.1	11.0	9.8	8.7
-5.0	-	14.9	13.6	12.3	-

SPC-19H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	4.8	4.4	3.9	3.5	3.0
-25.0	6.3	5.7	5.2	4.6	4.1
-20.0	8.0	7.3	6.7	6.0	5.4
-15.0	10.0	9.2	8.5	7.7	6.9
-10.0	12.3	11.4	10.5	9.6	8.7
-5.0	14.9	13.9	12.9	11.8	10.8
0.0	17.9	16.7	15.5	14.3	13.1
5.0	21.2	19.9	18.5	17.2	15.8

SPC-23L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	3.4	3.0	2.6	2.2	1.8
-35.0	4.6	4.1	3.6	3.1	2.6
-30.0	6.1	5.5	4.9	4.3	3.7
-25.0	7.9	7.1	6.4	5.7	4.9
-20.0	10.1	9.2	8.3	7.4	6.4
-15.0	12.7	11.6	10.5	9.4	8.3
-10.0	15.8	14.5	13.2	11.9	10.6
-5.0	19.5	18.0	16.4	14.9	13.3

SPC-23H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	5.8	5.2	4.6	4.0	3.4
-25.0	7.6	6.8	6.1	5.4	4.6
-20.0	9.8	8.8	7.9	7.0	6.2
-15.0	12.3	11.2	10.1	9.0	8.0
-10.0	15.3	14.0	12.6	11.4	10.1
-5.0	18.7	17.1	15.6	14.1	12.6
0.0	22.7	20.8	19.0	17.2	15.5
5.0	27.1	25.0	22.9	20.8	18.8

SPC-27L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	3.9	3.4	3.0	2.5	2.1
-35.0	5.3	4.8	4.2	3.6	3.1
-30.0	7.0	6.3	5.6	4.9	4.2
-25.0	9.1	8.3	7.4	6.5	5.7
-20.0	11.7	10.6	9.6	8.5	7.5
-15.0	14.7	13.4	12.2	10.9	9.6
-10.0	18.3	16.8	15.3	13.8	12.3
-5.0	22.5	20.8	19.0	17.2	15.4

SPC-27H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	7.1	6.4	5.7	5.0	4.4
-25.0	9.3	8.4	7.6	6.7	5.9
-20.0	11.9	10.8	9.8	8.7	7.7
-15.0	15.0	13.7	12.4	11.1	9.8
-10.0	18.5	17.0	15.4	13.9	12.4
-5.0	22.6	20.8	19.0	17.2	15.4
0.0	27.3	25.2	23.1	21.0	18.9
5.0	32.7	30.2	27.8	25.4	22.9

SPC-33L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	4.8	4.2	3.6	3.0	2.5
-35.0	6.6	5.8	5.1	4.4	3.7
-30.0	8.8	7.8	6.9	6.0	5.2
-25.0	11.4	10.3	9.2	8.1	7.0
-20.0	14.6	13.2	11.9	10.6	9.3
-15.0	18.4	16.8	15.2	13.6	12.0
-10.0	22.8	21.0	19.1	17.2	15.4
-5.0	28.1	25.9	23.8	21.6	19.4

SPC-33H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	8.9	8.1	7.2	6.4	5.7
-25.0	11.5	10.4	9.4	8.4	7.4
-20.0	14.6	13.2	12.0	10.7	9.5
-15.0	18.1	16.6	15.0	13.6	12.1
-10.0	22.3	20.5	18.6	16.9	15.1
-5.0	27.2	25.0	22.8	20.8	18.7
0.0	32.7	30.2	27.7	25.3	22.9
5.0	39.1	36.1	33.3	30.4	27.7

legend

Pf = cooling capacity (kW)

Te = Evaporation temperature (°C)

Tc = Condensing temperature (°C)

For the performance data under different working conditions, please refer to the Refcon selection software

Performance parameters (refrigerant R404a)

SPC-19L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	2.7	2.4	2.1	1.8	1.5
-35.0	3.6	3.3	2.9	2.5	2.1
-30.0	4.8	4.4	3.9	3.4	2.9
-25.0	6.3	5.7	5.1	4.5	3.9
-20.0	8.1	7.4	6.7	5.9	5.2
-15.0	10.2	9.4	8.5	7.6	6.7
-10.0	12.7	11.7	10.7	9.6	8.5
-6.0	15.1	13.9	12.7	11.5	10.3

SPC-19H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	4.6	4.2	3.8	3.3	2.9
-25.0	6.0	5.5	5.0	4.4	3.9
-20.0	7.7	7.1	6.5	5.8	5.2
-15.0	9.8	9.0	8.3	7.5	6.7
-10.0	12.2	11.3	10.4	9.4	8.5
-5.0	15.0	13.9	12.8	11.7	10.6
0.0	18.1	16.9	15.6	14.3	13.0
5.0	21.7	20.3	18.8	17.3	15.8

SPC-23L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	3.2	2.8	2.5	2.1	1.8
-35.0	4.4	3.9	3.5	3.0	2.5
-30.0	5.8	5.3	4.7	4.1	3.5
-25.0	7.6	6.9	6.2	5.5	4.8
-20.0	9.7	8.9	8.0	7.2	6.3
-15.0	12.3	11.3	10.2	9.2	8.1
-10.0	15.3	14.1	12.9	11.6	10.3
-6.0	18.2	16.8	15.4	13.9	12.5

SPC-23H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	5.6	5.0	4.4	3.9	3.3
-25.0	7.3	6.6	5.9	5.2	4.6
-20.0	9.4	8.5	7.7	6.8	6.0
-15.0	11.9	10.8	9.8	8.8	7.8
-10.0	14.8	13.5	12.3	11.0	9.8
-5.0	18.3	16.7	15.2	13.7	12.3
0.0	22.2	20.4	18.6	16.9	15.2
5.0	26.8	24.6	22.5	20.5	18.5

SPC-27L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	3.7	3.3	2.9	2.4	2.0
-35.0	5.1	4.6	4.0	3.5	3.0
-30.0	6.8	6.1	5.4	4.8	4.1
-25.0	8.8	8.0	7.2	6.3	5.5
-20.0	11.3	10.3	9.3	8.3	7.3
-15.0	14.2	13.1	11.9	10.6	9.4
-10.0	17.7	16.3	14.9	13.5	12.0
-6.0	20.9	19.4	17.8	16.1	14.5

SPC-27H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	7.1	6.4	5.7	5.0	4.3
-25.0	9.2	8.4	7.5	6.7	5.8
-20.0	11.8	10.8	9.7	8.7	7.7
-15.0	14.9	13.6	12.3	11.1	9.9
-10.0	18.4	16.9	15.4	13.9	12.4
-5.0	22.4	20.6	18.9	17.1	15.4
0.0	27.1	25.0	22.9	20.9	18.9
5.0	32.3	29.9	27.5	25.2	22.9

SPC-33L					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-40.0	4.6	4.0	3.5	2.9	2.4
-35.0	6.3	5.6	4.9	4.2	3.6
-30.0	8.4	7.6	6.7	5.8	5.0
-25.0	11.0	9.9	8.9	7.8	6.8
-20.0	14.1	12.8	11.5	10.3	9.0
-15.0	17.8	16.3	14.8	13.3	11.8
-10.0	22.2	20.4	18.6	16.8	15.1
-6.0	26.2	24.2	22.2	20.2	18.2

SPC-33H					
Tc	30.0	35.0	40.0	45.0	50.0
Te	Pf	Pf	Pf	Pf	Pf
-30.0	9.0	8.0	7.0	6.1	5.6
-25.0	11.6	10.4	9.2	8.0	7.2
-20.0	14.7	13.2	11.7	10.3	9.2
-15.0	18.2	16.6	14.8	13.1	11.6
-10.0	22.4	20.4	18.3	16.2	14.4
-5.0	27.2	24.8	22.3	19.9	17.7
0.0	32.6	29.9	27.0	24.1	21.5
5.0	38.7	35.6	32.3	29.0	25.8

legend
 Pf = cooling capacity (kW)
 Te = Evaporation temperature (°C)
 Tc = Condensing temperature (°C)
 For the performance data under different working conditions, please refer to the Refcon selection software

Dimensions

SPC4-19L_SPC4-23L_SPC4-27L_SPC4-33L
 SPC4-19H_SPC4-23H_SPC4-27H_SPC4-33H

Key:
 1) High voltage port 1/8"NPT
 Discharge temperature sensor 1/8"NPT (optional)
 2) High pressure 1/4"SAE-FLARE
 3) Low pressure 1/8"NPT
 4) Low pressure 1/4"SAE-FLARE
 5) Oil filling port 1/4"NPT
 6) Drain port 1/4"NPT
 7) Crankcase heater
 8) Oil level sight glass 1-1/8"-18UNEF
 Photoelectric oil level switch (optional)
 9) Junction box
 SL) Suction shut-off valve
 DL) Discharge shut-off valve

Item	Units	Parameter	Note
Type	/	SPC4-19L SPC4-19H SPC4-23L SPC4-23H SPC4-27L SPC4-27H SPC4-33L SPC4-33H	
Dimensions	mm	452.5x310 x336 452.5x310 x336 452.5x310 x336 452.5x310 x336 482x310 x336 482x310 x336 482x310 x336	
Size A	mm/inch	28.851 1/8" 28.851 1/8" 28.851 1/8" 28.851 1/8" 28.851 1/8" 28.851 1/8" 35.511 3/8"	
Size B	mm/inch	19.351 3/4" 19.351 3/4" 22.451 7/8" 22.451 7/8" 22.451 7/8" 22.451 7/8" 28.851 1/8"	
Size C	mm	452.5 452.5 452.5 452.5 482 482 482	
Size D	mm	29 29 29 29 29 29 29	
Size E	mm	149 149 149 149 149 149 155	
Size F	mm	10.5 10.5 17 17 17 17 28	

Applications

The compressor can be widely applied in ice-storage projects, food quick-freezing, marine refrigeration and cold storage.



Working Conditions

Figure 1 Refrigerant R404A

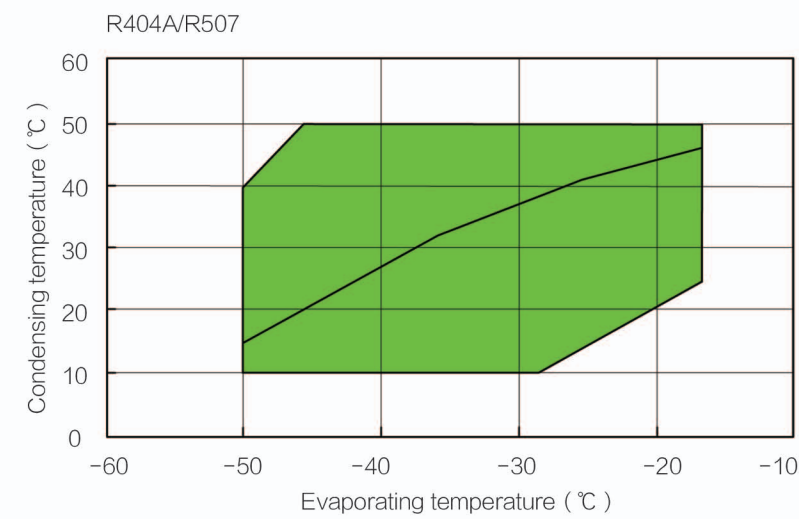
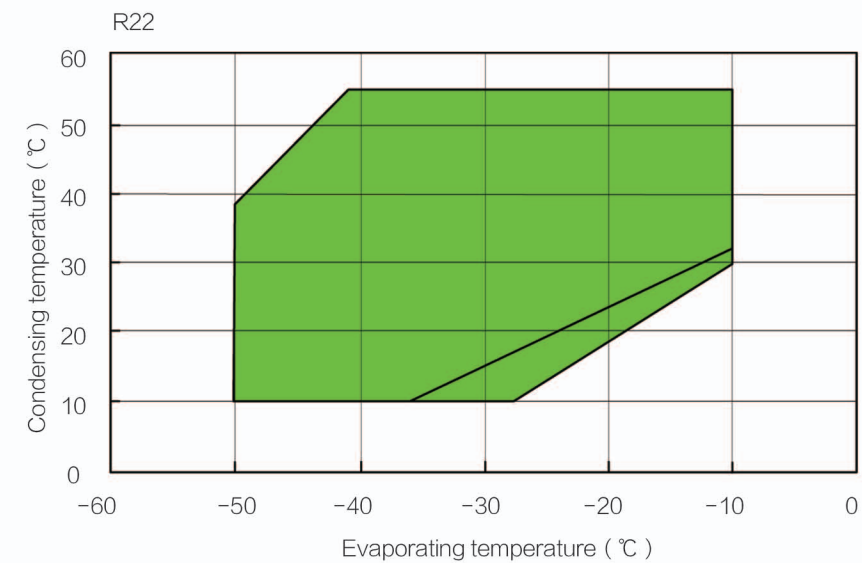


Figure 2 Refrigerant R22



Technical Parameters

Table 1 Main technical parameters of SW1L series

Model	Inside diameter of exhaust port (mm)	Inside diameter of suction port (mm)	Dimensions (mm)			Refrigeration capacity (m³/h)		Rated motor power (kW)
			Length	Width	Height	50Hz	60Hz	
SW1L3000	42	54	944	561	473	118	142	22
SW1L4000	42	54	944	561	473	150	180	30
SW1L5000	42	54	944	561	473	175	210	37
SW1L6500	54	67	1153	522	594	205	246	48
SW1L8000	54	67	1153	522	594	237	284	60
SW1L9500	54	80	1322	595	655	286	343	71
SW1L10500	54	80	1322	595	655	318	382	78
SW1L11500	54	80	1322	595	655	341	409	89
SW1L13000	80	92	1444	718	668	402	482	89
SW1L15000	80	92	1444	718	668	445	534	112
SW1L17000	80	92	1444	718	668	510	612	127
SW1L20000	80	104.8	1464	753	721	562	674	149
SW1L22000	80	104.8	1464	753	721	600	720	164
SW1L23000	80	104.8	1464	753	721	700	840	164

Table 2 Main technical parameters of SW3L series

Model	Inside diameter of exhaust port (mm)	Inside diameter of suction port (mm)	Dimensions (mm)			Refrigeration capacity (m³/h)		Rated motor power (kW)
			Length	Width	Height	50Hz	60Hz	
SW3L3000	42	54	944	561	473	118	142	22
SW3L4000	42	54	944	561	473	150	180	30
SW3L5000	42	54	944	561	473	175	210	37
SW3L6000	54	67	1153	522	594	205	246	45
SW3L7000	54	67	1153	522	594	237	284	52
SW3L8000	54	80	1322	595	618	286	343	60
SW3L9500	54	80	1322	595	618	318	382	71
SW3L10500	54	80	1322	595	618	341	409	78
SW3L11500	80	92	1444	722	668	380	456	89
SW3L13000	80	92	1444	722	668	445	534	89
SW3L16000	80	92	1444	722	668	510	612	112
SW3L18000	80	104.8	1459	753	721	562	674	127
SW3L20000	80	104.8	1459	753	721	600	720	149
SW3L22000	80	104.8	1459	753	721	700	840	164

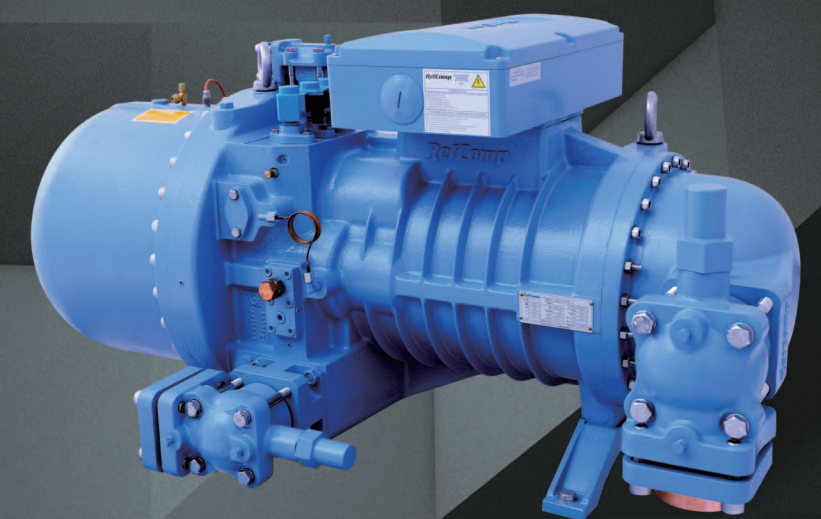
RefComp

SW Semi-hermetic type Refrigeration Screw Compressor

RefComp Italy The World Famous Brand for Screw Compressor and Piston Compressor

Specialized in Commercial Refrigeration Compressor

25 Years of Exploration in Screw Technology for Energy-saving and Environment-protection.
The First R134a Screw Compressor in the World
The First Frequency-converter-integrated Screw Compressor in the World



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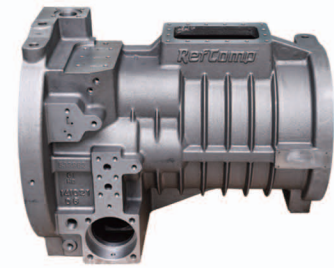
Fujian Snowman Co., Ltd.

Address: West Dongshan Road, Minjiangkou Industrial Zone of Fuzhou, Fujian, China
Tel: 0086-591-28701111 Fax: 0086-591-28709222
Http: //www.snowkey.com E-mail: info@snowkey.com



RefComp SW Semi-hermetic Screw Compressor

RefComp SW semi-hermetic low-temperature refrigerant screw compressor, SW1L and SW3H, have 28 models. They have a discharge volume of 118–700 m³/h, and a power range of 30–240Hp. They are applied in low-temperature evaporation conditions (from the lowest –50° C to the highest discharge temperature 110° C) and the superheat at the suction sides is allowed to be 5–15 K. They are suitable for various refrigerants, such as R22, R134a, R507A, R404A and R407C.



Compressor body

- The working pressure is up to 25 bar;
- Optimized design of suction airways, low suction resistance and sufficient cooling of the motor; straight-through middle airway, reduction of on-way loss; little discharge throttling loss and low energy consumption;
- Compact design and compact structure with integrated filter, check valve and temperature sensor.

Motor

- Adopting part-winding or in the Y-Δ starting method, small starting current, low energy consumption in operation;
- Several operating voltages and frequencies are designed for different areas to meet different voltage demands;
- Special customized materials, compatible with multiple refrigerants, such as R22, R404A, R507A and R410A;
- Special structure design and layout, using over-flow refrigerant gas in the section from air suction check valve to the screw suction side to cool motor effectively.

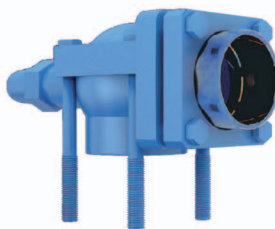
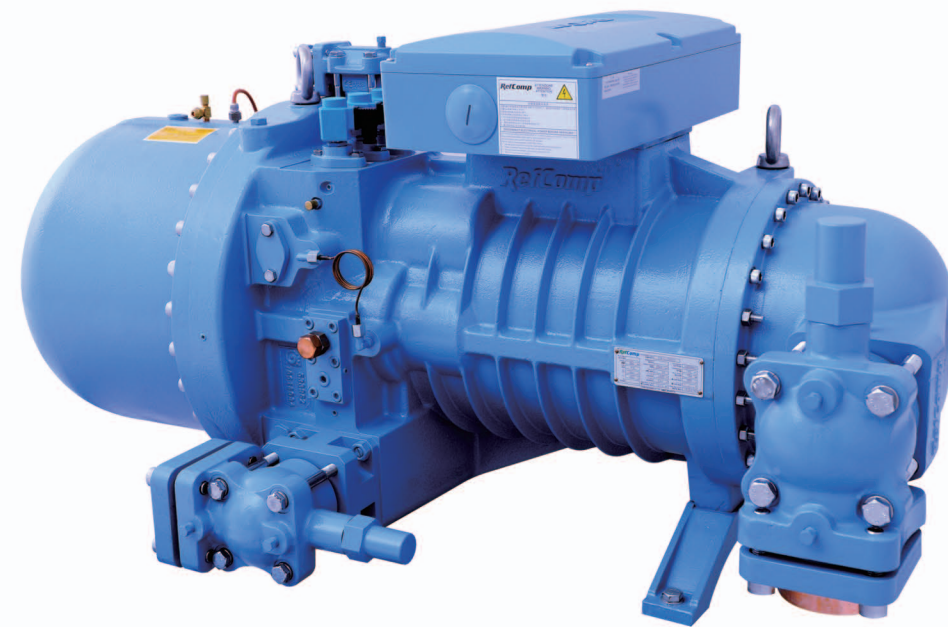
Motor protection

- Part-winding or Y-Δ start-up, with small start current and low energy consumption during operation;
- Several operating voltages and frequencies are designed for different areas to meet different voltage demands; special customized materials are used to adapt to refrigerant requirements;
- System operational information tracking, providing real-time feedback of operating status of the motor and the system.



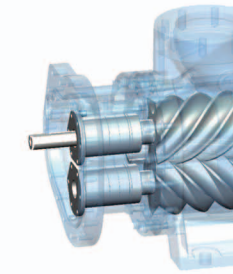
Rotor

- Asymmetric tooth profile at 5/6 for male rotors/female rotors designed by RefComp is used to optimize compression stroke and maintain smooth and quiet operation of the compressor with favorable lubrication and perfect meshing;
- With high efficiency, high strength and low vibration, low gas pulsation and noise made possible through new technologies, our compressors reach the highest level worldwide among the equivalents;
- The optimized length/diameter ratio design improves the compression efficiency, effectively working for refrigeration in moderate to high temperatures.



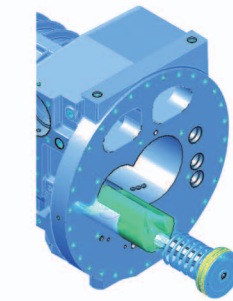
Check valve

- Built-in discharge check valves with low resistance to prevent refrigerant oil backflow during downtime.
- Air suction/discharge check valves rotate 360° with a compact structure, for easy and flexible installation.



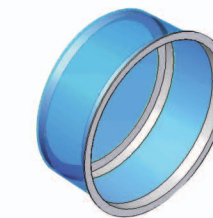
Bearing

- Multi bearings are combined to prevent the rotor being worn axially/radially and achieve high loads and low noise;
- Highly precise & wear-resistant roller element and special profile line with a designed service-life of 80,000 h.



Refrigeration capacity control

- Select different refrigeration capacities on the basis of different working conditions by full load or partial load; control solenoid valves to adjust cooling capacity in a stepped or step less way;
- A minimum of either, 50%, 75% or 100% refrigeration capacities are available with stepped control, completely satisfying the various capacity of refrigeration system;
- The sliding valve is installed between the shell and rotor, presenting a reasonable and compact design with superior sealing performance;
- The proper design of discharge port structure improves radial discharge efficiency effectively.



Suction filter

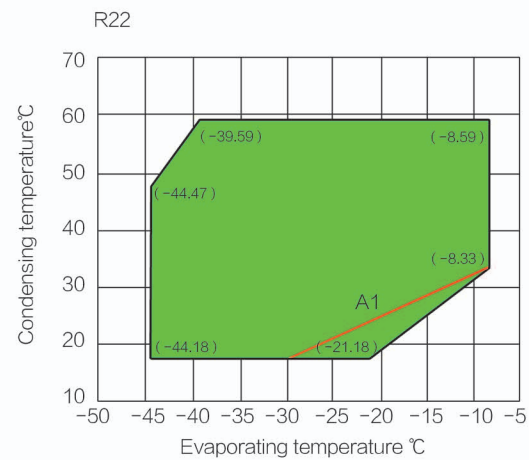
- Suction filters are configured at an interval of 100μm to remove mpurities from cold gas and protect the motor.



Safety valve

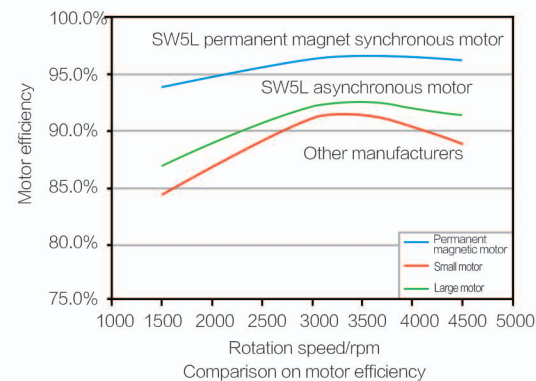
- The built-in safety valve connecting the high pressure side and the low pressure side, ensures the internal pressure does not exceed the safety value;
- Designed with high specifications, reliable sealing, precise opening, fully opening timely, stable discharging and closing timely, safe and reliable.

Working Conditions

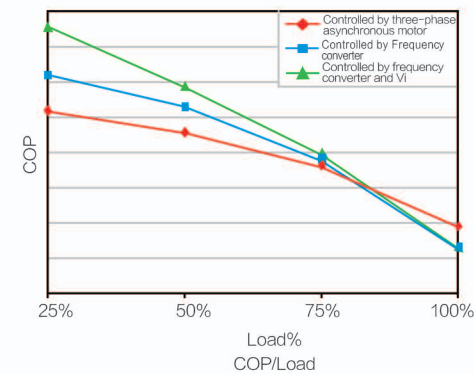


Energy-saving Analysis

Comparison on efficiency of permanent magnet synchronous motor and asynchronous motor:



Comparison on COP in different control ways:



Technical Parameters

Model	Dimension of suction tube (mm)	Dimension of exhaust tube (mm)	Dimensions (mm)			Displacement (m ³ /h)		Rated motor power (kW)
			Length	Width	Height	50Hz	60Hz	
SW5L020	54	42	803	465	411	84	100	15.00
SW5L025	54	42	803	465	411	100	120	18.75
SW5L030	54	42	803	465	411	120	144	22.50
SW5L040	54	42	890	490	390	140	168	30.00
SW5L050	54	42	890	490	390	168	201	37.50
SW5L060	80	54	1044	586	486	210	252	45.00
SW5L070	80	54	1044	586	486	230	276	52.00
SW5L075	80	54	1044	586	486	250	300	55.00
SW5L090	92	67	1280	600	501	310	372	67.00
SW5L100	92	67	1280	600	501	340	408	74.50
SW5L110	92	67	1280	600	501	370	444	89.00
SW5L125	105	80	1348	798	627	420	504	89.00
SW5L140	105	80	1348	798	627	450	540	112.00
SW5L150	105	80	1348	798	627	500	600	112.00

Notes: Please contact us for any demand on the technical parameters of the 554 ~850 m³/h (@50 Hz) compressor.

RefComp

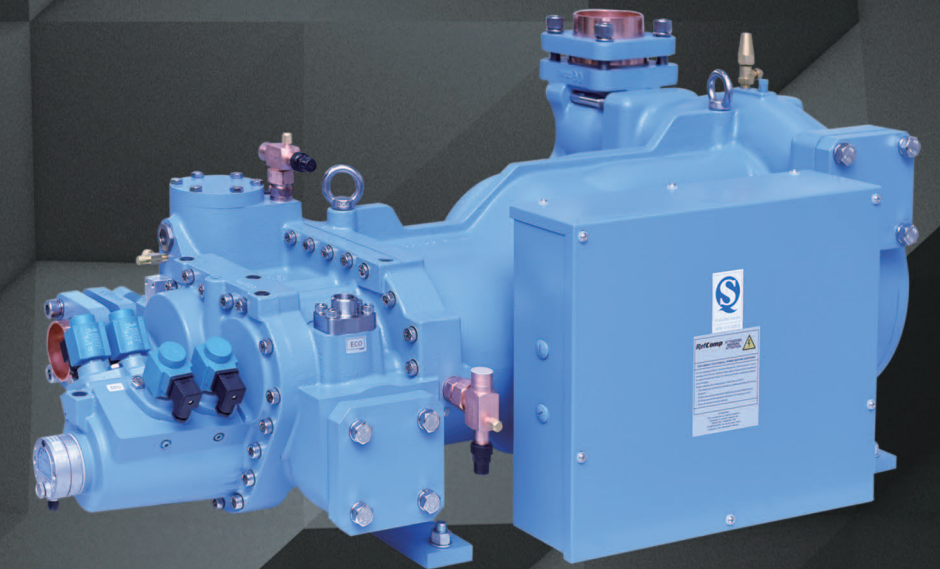
Semi-hermetic High-efficiency Variable-frequency Refrigeration Screw Compressor

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Tel: 0086-591-28701111

Fax: 0086-591-28709222

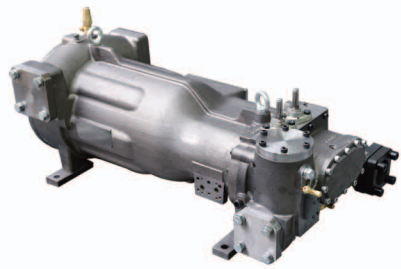
Http: //www.snowkey.com

E-mail: info@snowkey.com



RefComp SW5L Semi-hermetic High-efficiency Screw Compressor

There are 20 models of SW5L semi-hermetic variable-frequency screw compressor, with displacement of 84 – 850 m³/h, power of 20 Hp ~250 Hp, suction temperature of -45°C ~10°C and discharge temperature of + 40°C ~+ 120°C, which apply to various freon refrigerants such as R507A, R407C, R134a, R22 and R404C etc. The compressor is widely used in ice thermal-storage, food quick-freezing, ship refrigeration and ultra low temperature refrigeration and other fields.

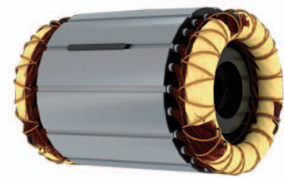


Compressor body

- High-strength design with the working pressure up to 28 bar ;
- Optimized design of suction gas path of low suction resistance and sufficient cooling of motor; with straight-through middle gas flue, to reduce the loss along the way; with little exhaust throttling loss and low energy consumption;
- Integrated oil line system that is easy to install with low failure rate;
- Small-sized design with a filter, stop valve, temperature sensor and oil flow switch configured, compact structure.

Motor

- Specially customized materials are used to apply to many kinds of freon refrigerants such as R22, R404A, R507A and R410A etc.;
- High-efficient synchronous/asynchronous variable frequency motors may be used as required by users to greatly expand the refrigeration capacity and application;
- With frequency conversion control, it may improve the efficiency of a low-load motor in operation by adjusting the speed based on the variation in loads;
- High efficient cooling is achieved by double cooling with refrigerating oil surrounded and refrigerant sprayed; to ensure long-term, stable and efficient operation.



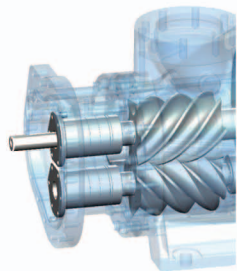
Motor protection

- INT69 SNY protection module is used to protect the device under excess temperature, reverse and default phase;
- 6 PTC thermistors in series are used to prevent the motor burnt out due to high temperature;
- Feedback of status and real-time monitoring are made on operation.



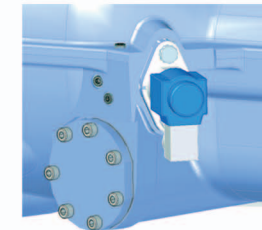
Bearing

- Multi bearings are combined to prevent the rotor from being worn axially/radially and achieve high load and low noise;
- Highly precise & wear-resistant rolling element and special profile spiral race, with a design life of 40,000 h.



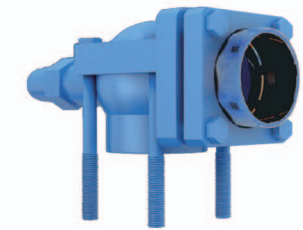
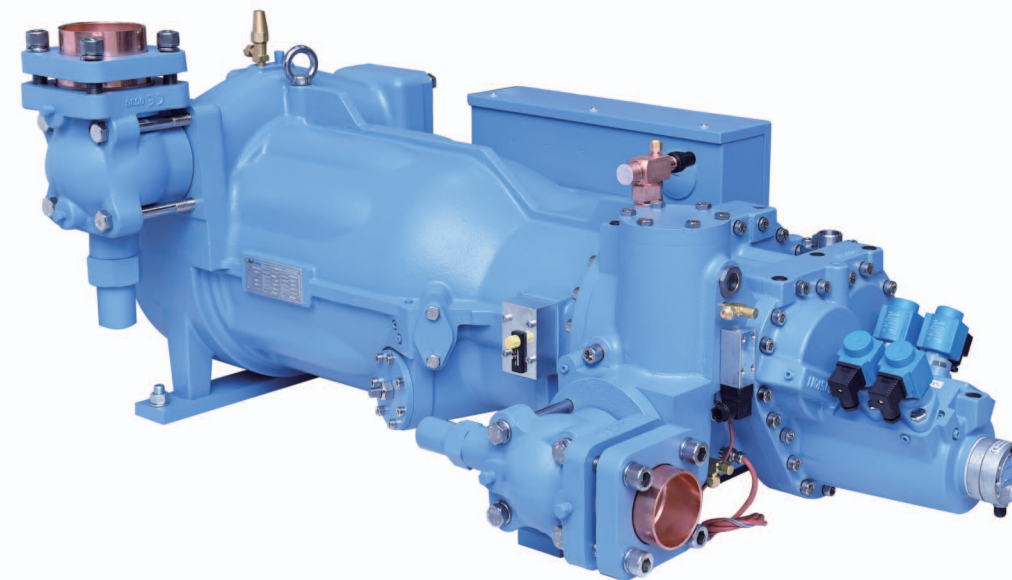
Rotor

- SRM "I" type patented profile with 5 + 7 best gear ratio combo, of high efficiency and steady operation. It is applicable to the refrigeration at low and medium temperature;
- Rotor manufactured with quality forged steel, is of high strength and wear resistance;
- The rotor is processed to micrometer precision with tight gearing, even stress and a long service life;
- As a new technology, it has the maximum speed up to 5,000 rpm, significantly increasing the refrigeration capacity.



VI (Interior volume reduction ratio)

- Fixed VI, extensive manual regulation or automatic stepless regulation is made to create a best efficiency;
- VI regulation and motor speed control may substantially increase the COP (especially in the conditions of partial loading), with a huge advantage in variable working conditions.



Stop valve

- A built-in stop valve for suction or discharge is configured to reduce the resistance and effectively prevent the backflow of refrigerant during shut-down;
- Stop valve is 360° rotatable, easy to install, compact and flexible.



Suction filter

Suction filters are configured at an interval of 100 μm to remove impurities from cold gas and protect the motor.



Energy regulation

- Stepless or stepped energy regulation may be made according to the working conditions;
- The slide valve is installed between the housing and rotor, presenting a reasonable and compact design with superior sealing performance.