

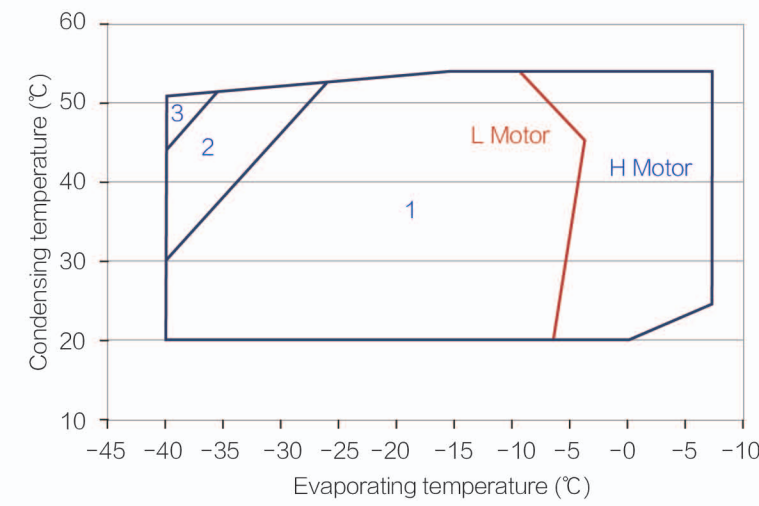
Application

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



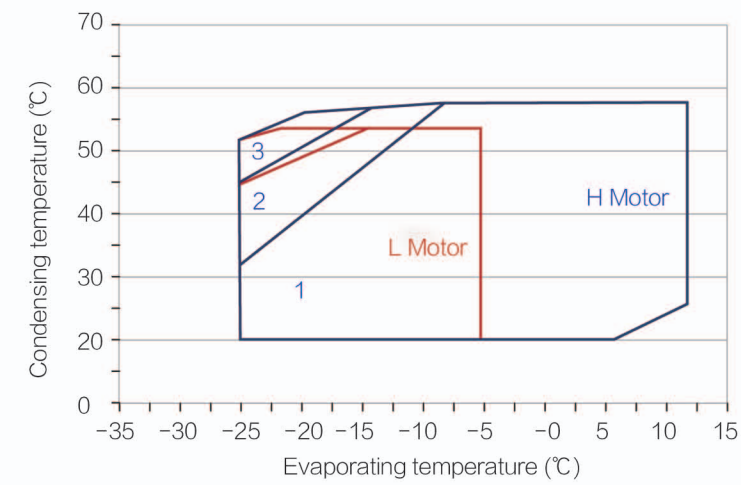
Application scope

R404A-R507 Application scope



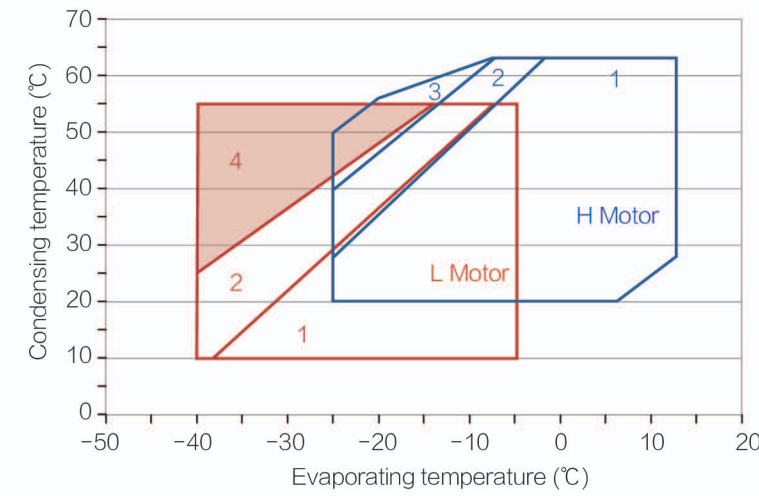
Application Range of Full Load Operation
 1=standard application scope (suction temperature: 25°C)
 2=application scope of additional cooling
 3=application scope of additional cooling + maximum suction superheat (20K)

R407C Application scope



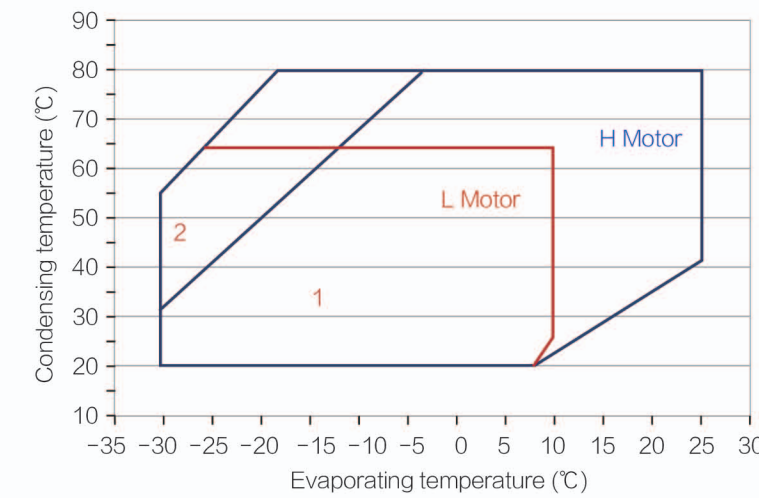
Application Range of Full Load Operation
 1=standard application scope (suction temperature: 25°C)
 2=application scope of additional cooling
 3=application scope of additional cooling + maximum suction superheat (20K)

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

SP Semi-hermetic Piston Compressor

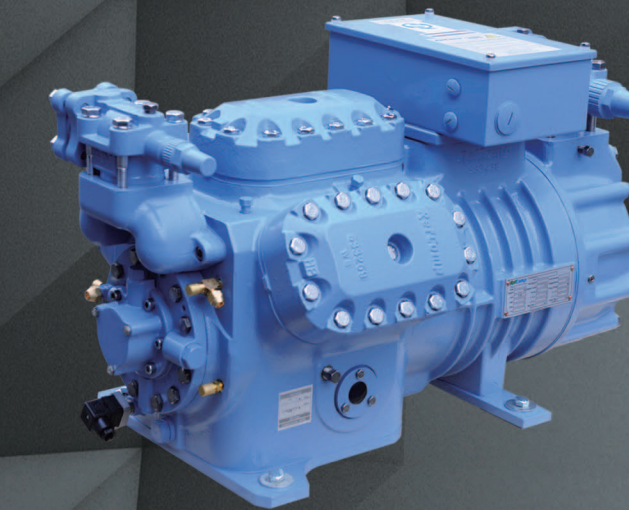
RefComp Italy

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 (m ³ /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