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

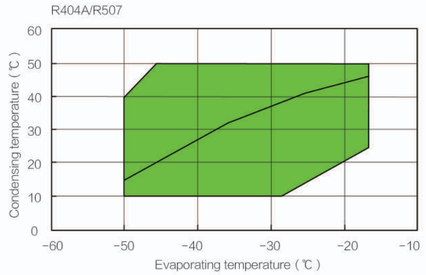
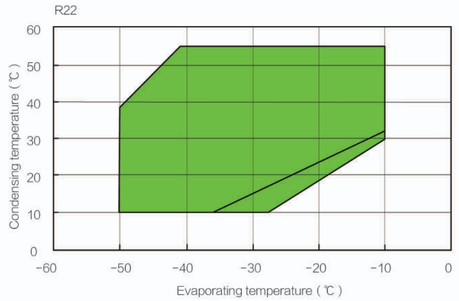


Figure 2 Refrigerant R22



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

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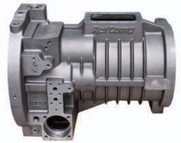
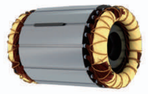
RefComp SW Semi-hermetic Screw Compressor

RefComp SW semi-hermetic low-temperature refrigerant screw compressor, SW1L and SW3H, have 28 models. They have a discharge volume of 118~700 m^3/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

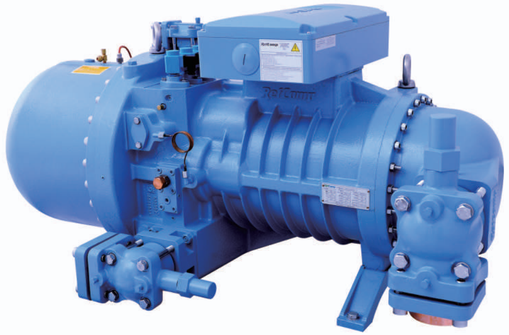
- Adopting part-winding or in the Y-△ starting method, small starting current, low energy consumption in operation;
- Several operating voltages and frequencies are designed for different areas to meet different voltage demands;
- Special customized materials, compatible with multiple refrigerants, such 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-△ 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.

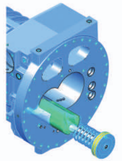


Check valve

- 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.