Applications

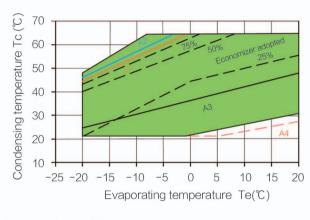
The compressor is widely used in marine refrigeration, food flash-freezing and low temperature refrigeration.







Working Conditions



A1 = Cooling oil or spraying liquid A2 = A oil cooling A3 = Oil filter monitoring A4 = Load <75%

Technical Parameters

Model	Inside diameter of discharge port (mm)	Inside diameter of suction port (mm)	Dimensions (mm)			Refrigeration capacity (m³/h)		Rated motor power
			Length	Width	Height	50Hz	60Hz	(kW)
134-S-071	54.1	80.0	1393	502	655.5	270	324	52
134-S-081	54.1	80.0	1393	502	655.5	307	368	60
134-S-091	54.1	92.5	1393	502	655.5	344	413	67
134-S-101	67.0	92.5	1393	502	655.5	380	456	75
134-S-110	80.0	105.5	1537	599.5	770	413	496	85
134-S-120	80.0	105.5	1537	599.5	770	480	576	90
134-S-140	80.0	105.5	1537	599.5	770	560	672	105
134-S-160	80.0	105.5	1776	616	819	640	768	120
134-S-180	80.0	105.5	1776	616	819	720	864	135
134-S-210	80.0	105.5	1776	616	819	805	966	157
134-S-220	80.0	105.5	1776	616	819	850	1020	164
134-S-240	105.5	134.8	2091	696	879	910	1092	175
134-S-270	105.5	134.8	2091	696	879	1000	1200	200
134-S-300	105.5	134.8	2091	696	879	1100	1320	220



134-S Semi-hermetic

Refrigeration Screw Compressor







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RefComp 134-S Semi-hermetic Screw Compressor

RefComp 134-S series compressors with oil spraying design are specially applicable for R134a. The series covers 14 models with displacement ranging from 270~1,100 m³/h, and motor power ranging from 70Hp~300Hp. The compressors have features like: Build- in oil separator, compact structure, low noise, high efficiency, multiple models and easy installation, catering to chiller manufacturers' demands to produce advanced highly efficient water/water, air/water refrigerating and heat pump units.



Compressor body

- Optimized design of suction air ways, low suction resistance and sufficient cooling for 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

- Part-winding or Y-∆ start-up, with small starting current and low energy consumption in operation;
- Several operating voltages and frequencies are designed for different areas to meet different voltage demands; specially customized materials are used to adapt to refrigerant requirements;
- Special structure design and layout, effectively cooled by the over-flow refrigerant gas from the suction shut-off check valve to the rotor suction side.



Motor protection

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



Bearing

- Multiple bearings are combined to prevent the rotor from 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.



Built-in oil separator

- A built-in oil separator, boasting a low-noise design, three-stage separation, multilayer oil mist filters, with oil separating efficiency up to 99.85%;
- An embedded structure redues the size of the compressor, ensuring there is lubricating oil inside the compressor to keep bearings and rotors lubricated, preventing lubricating oil from entering the refrigeration system.



Rotor

- Utilizing an asymmetric tooth profile-line with the setup of 5/6 for male/female rotors designed by RefComp, which optimizes compression stroke; featuring perfect lubrication, perfect meshing, smooth and quiet operation of the compressor;
- High efficiency, high strength and low vibration, new technology, low gas pulsation and noise, marking its leading position internationally among its counterparts;
- The optimized length/diameter ratio design improving compression efficiency, suitable tor the refrigeration in moderate to high temperatures effectively.



Refrigeration capacity control

- Select different refrigeration capacities on the basis of different working conditions with full load or partial load; control solenoid valves to adjust cooling capacity in a stepped or step-less way;
- The minimum, 50%, 75% and 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.



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.





Suction filter

Suction filters are configured at an interval of $100\,\mu\,m$ to remove impurities from cold gas and protect the motor.

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.