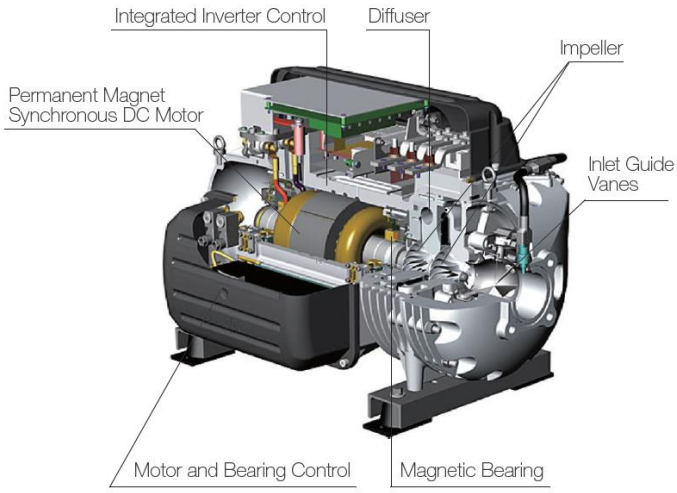
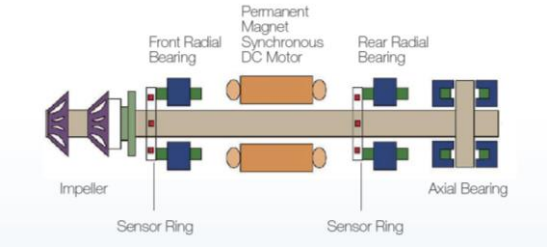
Magnetic Levitation Oil-free Centrifugal Compressor



■ Inverter driven high-efficiency magnetic levitation oil-free compressor: the compressor is designed with aerodynamic optimized two-stage centrifugal and magnetic levitation technology, high performance pulse width modulator (PWM), automatic regulation of rotation speed, which promise optimal operation and high-efficiency under both full load and part load operation.



■ A significant improvement(15%) in the heat exchange can be achieved by magnetic levitation technology without oil lubrication system, contact friction and the thermal resistance caused by oil film.The reliability of unit is remarkably improved in the meanwhile and makes service convenient.

■ With build-in inverter, which enables variable motor speed of compressor under part load condition, the units are able to operate effectively and with lower power consumption. Soft start-up function makes the starting current of unit low to 2A, therefore to reduce impulse on power network and decease thermal stress of motor stator.

■ Liquid refrigerant spray cooling promises stable operation of motor.

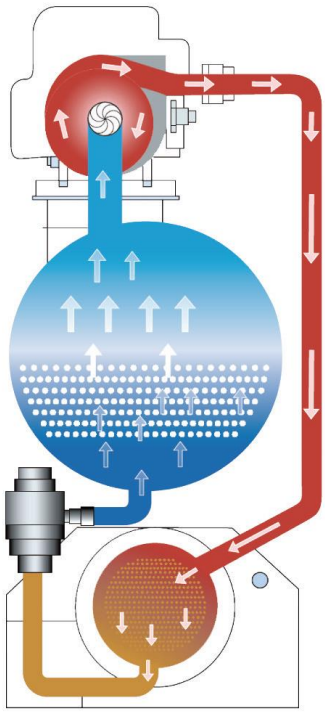
■ The rotator and impeller of compressor are suspended in the magnetic field when operation. The sensor ring under the bearing keep sending real-time data to the bearing control system and adjust the position of shaft immediately to maintain its optimal running condition.

■ The compressor operates without any oil, allowing its stable and low-noise operation. Furthermore, the whole system of the unit is greatly simplified because of eliminating oil system, which remarkably saves the cost of operation and maintenance.

Super-low Noise and Vibration

■ High speed of compressor running, while with no mechanical contact of bearing, enables super-low noise and vibration of compressor under both part load and full load

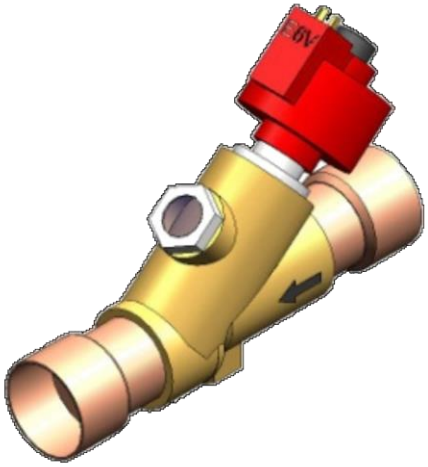
High-efficiency Flooded Type Evaporator and Condenser.



■ The threaded tube facilitates the formation of gasification core, which therefore greatly enhances heat exchange efficiency of tube outside surface.
■ The tube of condenser with thread benefits the dropwise condensation of refrigerant, which increases tube external efficiency. Moreover, the thread inside the tube of both evaporator and condenser enhances the disturbance and turbulence of water.
■ Single circuit design for multiple compressors system improves unit part load efficiency.

Electronic Expansion Valve (EXV)

■ The electronic valve is adopted to grant the ideal operation of the evaporator in all conditions.
■ The fast processing of the acquired data allows a quick, fluctuation-free regulation, and therefore a highly accurate adjustment to the swings of load and ambient conditions.



Energy Conservation and Environment Protection

■ Environment friendly refrigerant of HFC134a is adopted with ODP value 0.
■ Optimized refrigerant system for better energy saving, lower CO_2 emission and higher operation efficiency.

Stability and Reliability

■ In the case of power outage, the motor becomes a generator which feeds power to the various controls and bearing actuators then until the rotor de-levitates onto the touch-down bearings.
■ The design, manufacturing and test of the unit are strictly complied with AHRI、EN、UNI、JIS and GB/T18430.1 standards.
■ The protection level of enclosure conforms to GB4208- 2008(China GB).
■ The electric system is designed according to IEC60204-1/ GB5226.1 and the system meets with EMC specification.
■ Performance test of the unit shall be strictly conducted before ex-work to ensure operation stability.

Easy Installation

■ Vertically arrangement of compressor, condenser and evaporator enables compact design of the unit and small footprint.
■ Refrigerant charge, commissioning and test have been done before ex-factory.
■ Water pipe connection and power supply are the only work need to do on site before operation.