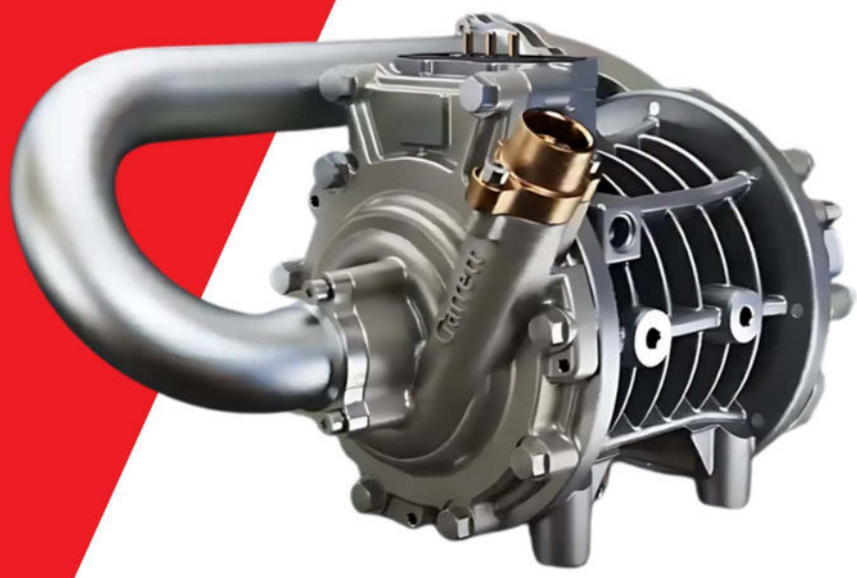
Garrett
ADVANCING MOTION

For Ultra-Low GWP and Natural Refrigerants

Garrett Oil-free Centrifugal Compressor



Characteristics

- Oil-free foil bearing
- Centrifugal design
- Enabling ultra-low GWP refrigerants
- Increased durability
- Wide operating envelope
- High-speed motor

Benefits

- Installation flexibility & no maintenance
- Enabling sustainable design compliance
- Superior energy efficiency
- Applicable for various use cases
- Less noise & vibration
- Compact and lightweight

For HVAC rooftop units, data center cooling, comfort cooling chillers, and battery energy storage system thermal management and beyond.

Request more information

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Why Garrett

70+ Years of engineering leadership in high-speed turbomachinery and oil-free technologies – now applied to HVAC

- **Proven expertise** in oil-free foil bearing technology, validated since 2016
- **In-house development** of high-speed electric motors, advanced power electronics, control software
- **Track record of driving** robust innovation for highly competitive industries
- **Global footprint** in engineering and production to improve collaboration efficiency

Garrett Centrifugal Compressor Benefits

Oil Free	No performance degradation, resilient operation No oil management limitation at high suction temperature
More Sustainable	Superior energy efficiency with ultra-low GWP refrigerants
Wide Operating Envelope	Applicable for various use cases
Continuity of Service	Reliable and durable Rapid re-starting in case of power outage
Less Noisy	Low vibration and low noise
Compact and Lightweight	Smaller and lighter for the same cooling and heating power

Suitable for HVAC rooftop unit, data center cooling, comfort cooling chillers, battery energy storage system thermal management and beyond.

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Product Specification

Performance Specification

Parameter	Value	Parameter	Value
Max Cooling Power	60-80 kW *	Min Cooling Power	8kW****
Max Heating Power	60-80 kW *	System Efficiency	>70%
Max Operating Speed	90,000 RPM	Pressure Ratio	1.1 – 5.8
Evaporation Temp.	-5 to 20°C	Refrigerant	R1234ze(E) **
Inlet Pressure Range	101 – 766 kPaA***	Outlet Pressure Range	427 - 1611 kPaA ***

* Depending on refrigerant and wheel design
* * Product is also available for R134a
*** Including transients
**** Tevap-5°C & Min speed

Electrical Specification

Parameter	Value	Parameter	Value
Shaft Power	30 kW	Max AC Current	70 Arms
Input Voltage	380/400/480 VAC	Power Factor	>0.92
Frequency	50/60 Hz	THD to Grid	<40% with filter
Communication Protocol	Modbus RTU	Physical Layer	RS485

Mechanical & Environmental Specification

Parameter	Value	Parameter	Value
Compressor Weight	<20 kg	VFD Weight	<30 kg
System Volume	<60 liters	Noise Level	<70 dBA @ 1.5m
Design Lifetime	15 years	Operating Hours	50,000 hours
Start/Stop Cycles	>100,000	Daily Starts	4 cycles/day
Operating Temperature	-40°C to +60°C	Storage Temperature	-40°C to +85°C
Maximum Altitude	3000 m	Installation	Indoor/Outdoor