

VILTER TRANSCRITICAL CO₂ COMPRESSOR UNIT

Step into the sustainable future of industrial refrigeration

Industrial CO₂ is here.

CO₂ is gaining global acceptance as a safe and eco-friendly refrigerant alternative, and many industrial operators are eager to make the transition. Existing CO₂ refrigeration solutions are based on commercial-grade, multi-compressor refrigeration strategies, which have been proven complex and less reliable.

Building on our legacy of innovations, Vilter has engineered one of the industry's first transcritical CO₂ screw compressors—purpose-built for heavy-duty industrial requirements and rated for CO₂ transcritical pressures.



The Transcritical CO₂ Compressor Unit is based on proven single-screw compression technology and is equipped with on-board controls, a suction valve/strainer, an oil management system and an inverter duty motor.

Units are built for maximum flexibility, scaling from single-, dual- and tri-compressor configurations, depending on capacity requirements, all while utilizing the same oil management system and controller.



Product specs:

- Designed for high side CO₂ transcritical system.
- Available in seven displacements.
- Power range from 100 to 800 HP per compressor.
- Engineered and rated to withstand the high pressures of transcritical operation.

Purpose-built for the rigors of CO₂ industrial refrigeration

The industrial refrigeration market is at an inflection point. As occupational safety requirements tighten around ammonia and the phasedown of hydrofluorocarbon (HFC) refrigerants continues, industrial operators are exploring safer, greener and less complex alternatives for refrigeration systems. To date, eco-friendly CO₂ refrigeration options have not been well-suited for industrial applications.

Current CO₂ solutions are mismatched for heavy-duty, high-capacity market requirements. These multi-compressor, commercial rack configurations utilize tens of lower-capacity CO₂ compressors—resulting in less reliable architectures that strain under the pressure of industrial applications.

Vilter is reshaping the future of industrial refrigeration with one of the industry's first Transcritical CO₂ Screw Compressor Unit. Leveraging proven single-screw compression technology, this Vilter solution is engineered to overcome industrial CO₂ refrigeration challenges:

- Simplifying CO₂ applications.
- Standing up to CO₂'s high pressures, even in transcritical mode.
- Delivering significant capacity and performance improvements.

When paired with our new Subcritical CO₂ Compressor Unit, the Transcritical CO₂ Compressor comprises one of the industry's first purpose-built CO₂ transcritical systems.



**MAKE OUR NEXT FIRST
YOUR NEXT MOVE**

To discover the next generation of industrial CO₂ compression technologies, scan the code to connect with our application experts about your next move.

Balancing reliability, sustainability and simplicity.



Reliability

Designed specifically for industrial refrigeration, the Vilter Transcritical CO₂ Compressor Unit is inherently more reliable than its commercial counterparts.

The single-screw design delivers balanced forces for multiple energy-efficiency and reliability benefits:

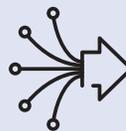
- Longer lifespan.
- Reduced maintenance requirements.
- Fewer production shutdowns/delays.
- Lower total cost of ownership (TCO).



Sustainability

The future of industrial refrigeration is being driven by a dynamic mix of refrigerant regulations, shifting operational preferences and corporate sustainability goals. Ammonia's increasing regulatory compliance and occupational safety requirements and the HFC phasedown are limiting use of legacy refrigerants.

Vilter is supporting the global need for safe, sustainable solutions by leading the advancement of industrial CO₂ refrigeration technologies.



Simplicity

Industrial refrigeration applications are demanding, and current commercial CO₂ solutions create unnecessary system complexities. Operators seek new technological approaches to simplify a variety of operational challenges:

- Eliminating the need for multi-compressor, commercial CO₂ architectures.
- Integrating compressors and components to streamline system designs.
- Minimizing safety concerns and the documentation requirements of ammonia.

Vilter's purpose-built Transcritical CO₂ Compressor Unit reduces system complexities and simplifies the application of CO₂ refrigeration technologies.