

Danfoss Turbocor technology advancements enable new advantages for the HVACR industry

- **Outstanding energy efficiency:** The Turbocor family of chillers' competitive full load and outstanding part load efficiency enables HVACR OEM's to exceed ASHRAE 90.1 and California Title 24 energy efficiency requirements.
- **Totally oil-free operation:** No oil management hardware, controls or downtime costs. Improved heat transfer efficiency.
- **Extended equipment life with minimal scheduled maintenance:** Solid-state electronics, no lubrication and no metal-to-metal contact of rotating components.
- **Onboard digital controls and power electronics:** Enables effective monitoring, control and self-diagnosis/correction of system operation. Eliminates some traditional OEM control and power panel costs.
- **Exceptionally quiet operation:** 70dBA (conversation level) sound with virtually no vibration.
- **Compact:** 50% less footprint and 1/4 to 1/5 the weight of traditional compressors. The actual operating weight is only 265 pounds while conventional screw compressors can weigh over 1000 pounds.
- **Environmentally responsive:** Optimized for CFC-free HFC-134a, plus high-energy efficiency means reduced greenhouse gas emissions.
- **ETL Listed**

Magnetic Bearings

- The Danfoss Turbocor family of compressors' rotor shafts and impellers levitate during rotation and float on a magnetic cushion.
- Two radial and one axial magnetic bearing are employed.
- Bearing sensors feed back real-time orbit information to digitally controlled bearings.
- Centered rotation is instantaneously self-corrected and maintained.
- When not powered, the rotor is supported by carbon composite, touchdown bearings designed for years of use.

Variable Speed

- The Danfoss Turbocor compressor speed adjusts to changes in load and/or condensing temperature.
- As compressor speed reduces due to lower loads and /or condensing temperatures, energy consumption dramatically reduces. Part load energy efficiency is outstanding, with energy savings greater than 30% compared to traditional screw compressors.

Digital Control

- The Danfoss Turbocor family of compressors are the world's first "smart" compressors.
- Microprocessors proactively manage compressor operation.
- Self-diagnosis and correction are built in.
- Precludes the need for many traditional HVACR product control and power electronics functions saving costs for OEM's.
- Plug n'Play control modules are easy to replace on site.
- Interactive control capability with easy access for BAS and web-enabled monitoring.

Centrifugal Compression

- Centrifugal compression offers higher aerodynamic efficiency compared to any other compressor designs.
- Variable-speed drive provides best part load efficiency, and operates most effectively with centrifugal compression.
- Compressor has one (1) main moving part. The two impellers are keyed directly to the motor rotor as shown in the illustration.
- Compressor has two stages of centrifugal with the potential to incorporate an economizer cycle.
- Well-proven, long-life in central plant applications.

Quiet Operation

- The Danfoss Turbocor family of compressors are the quietest compressors in the industry!
- They operate at 70dBA (conversation level) sound with virtually no vibration.
- Given normal equipment room background sound levels, one literally can not hear the compressor operate.