

Danfoss Turbocor – VTT Series of Compressors

Category: Innovative Star Award

Danfoss Turbocor Compressors has been transforming the commercial HVAC market with innovative technology that redefines lifetime operating costs for mid-range chiller and rooftop applications. Known as the pioneer and world leader in the oil-free centrifugal compressor product category, Danfoss Turbocor™ has received numerous awards and international recognition with the introduction of the world's first oil-free centrifugal in the TT Series.

VTT (Variable Twin Turbo) is the model group name of the latest compressor innovation from Danfoss Turbocor Compressors. The VTT series of compressors will be available with nominal capacity ranges from 200 to 350 Tons for voltage applications between 380 to 460Volts as well as 575Volts and operates with R134a. These models are intended for water-cooled or evaporative cooled chiller applications reaching up to 1,000 Tons or more. They are intended for commercial air conditioning or process cooling applications which require a high efficiency solution. The compressors enable chiller manufacturers to meet the new ASHRAE 90.1-2015 efficiency standards by Path A and Path B.



Based on proven TT series compressor technology, the VTT models are oil-free, variable-speed, magnetic bearing centrifugal compressors. They extend the stable operating envelope while simultaneously improving both full- and part-load efficiency. The VTT series of compressors is the first to introduce IntraFlow™ technology, an innovative and patent pending technology for improving compressor efficiency and providing an extended stable operating range while simplifying capacity control.

The new drive technology, which will be exclusive to the VTT series of compressors, is the result of integrated R&D efforts blending Danfoss' extensive expertise and capabilities in high efficiency compressors and variable frequency drives for the HVAC industry. The VTT drive will have the superior reliability and performance that has come to be expected from Danfoss in a small frame size made achievable only with refrigerant controlled heat removal.

The VTT compressors will also include newly developed control electronics capable of communicating via USB, Ethernet, and wireless. Other new features include USB drive data recording, shaft speed detection, motor & drive cooling and condensation protection. These compressors will also have the capability to download firmware and configuration updates remotely without requiring any hardware exchanges.

Up to 35% energy savings annually when using oil-free variable speed compressors compared to equivalent fixed speed screw chiller.

For more information:
<http://turbocor.danfoss.com>