



# Centrifugal Compressor Chillers



**Turnbull & Scott™**  
Trusted.



## INTRODUCING GEOCLIMA CHILLERS

Whether you need to deliver comfortable and healthy environments for people, or temperature sensitive industrial processes, we provide exceptional custom designed and standardised chiller systems all underpinned by world-class engineering and technologies.

Whatever your cooling load, our intelligently controlled chiller systems can be configured and optimised according to your priorities whether they be precision temperature control, ultra-efficiency across load levels, low noise, low environmental impact, minimised footprint or a combination of all.

As a long established and trusted UK manufacturer of robust cooling coils and Dry Air Coolers, we partner with award winning Italian chiller system manufacturer Geoclima, to extend our commercial and industrial cooling system products right along the 'cooling systems continuum' from ambient to sub-ambient temperature levels.

Geoclima chillers have world-class compressor efficiency at their core delivered through a combination of rigorously developed technologies:

- Premium compressors with highly accurate load matching capacity control
- Generously dimensioned condensers
- Flooded evaporators or unsurprisingly selected plate & DX heat exchangers
- Highly precise fan speed and refrigerant expansion valve control
- 'Onboard Touch' web-based monitoring solution



## ULTRA-EFFICIENT. HIGHLY INTELLIGENT. PRECISE.



200kW - 2500kW: Ultra-efficient Air Cooled & Water Cooled chillers with centrifugal compressors. Exceptionally precise chilled water temperature control at +/- 0.1oC of design temperature. Ideally suited for critical industrial cooling systems and specialist HVAC environments including data centres.

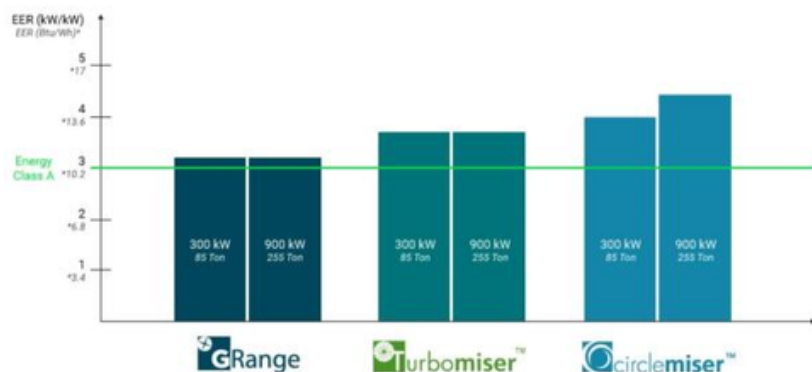
The Turbocor Smart range is designed around the pioneering Turbocor™ oil-free centrifugal compressors, with unparalleled intelligent load matching capability. The use of Turbocor™ compressors reduces energy demand & costs by up to 50% over traditional units using screw or reciprocating compressors.



The range combines a group of technologies that deliver dramatically reduced energy consumption with exceptional EERs, ultra-reliability, low noise operation, reduced refrigerant charges which elevate the Turbocor Smart range to the top flight of chillers. The range incorporates Water Cooled chillers & Air Cooled chillers including models with Adiabatic & Free Cooling systems & the new 'EER superstar' chiller Circlemiser™.



The ultra-efficient Turbocor Smart range takes chiller efficiency to an incomparable level with its Circlemiser™ model (TMA-CM). A unique design incorporating a cascade flooded evaporator with cylindrical condensers that increases EER by up to +9.5% on a single compressor chiller unit & up to +15% on a multi compressor unit.



Eco-sustainability is a paramount priority & Geoclima have excelled in the design of Turbomiser™ chillers working with ultral low GWP refrigerant HFO 1234ze in addition to standard R134a and R513a refrigerants.



Eco-sustainability is a paramount priority & Geoclima have excelled in the design of Turbocor Smart Range chillers working with ultra low GWP refrigerant HFO 1234ze in addition to standard R134a and R513a refrigerants.

## SMART CHILLER TECHNOLOGIES



Remote monitoring, diagnostics & programming is available via the Onboard Touch™ web-based solution. From anywhere in the world the Geoclima engineering team, and approved trained on-site engineers, can analyse all chiller activity including voltage swings, that may affect performance, and fix problems to ensure optimal performance at all times.



For environments sensitive to noise, the smart Dynamic Noise Control (DNC) system constantly measures chiller noise & "adapts" performance within permissible ranges & programmable time-slots.



The new smart power supply management system Teslamiser™, enables the lithium battery to charge up during time-slots when energy costs are low and release stored energy when costs are higher. Also designed to function as an uninterruptible power supply (UPS) to support chiller operation during power outage.



TurboCocor Smart range provides significant scope for precise configuration of each model enabling optimisation for specific priorities, applications & operating conditions. Customisation options include specific dimensions, galvanised frames with hersite coils, low speed fans & compressor sound insulation kits - Low noise (LN) or super low noise (LLN), low temp chilled water/glycol to -30C, extreme climate operation adaptations (-40oC & +40oC), pump pressurisation units & expansion vessels, construction for explosive environments.



## THE TURBOMISER PRODUCT RANGE



### **TMA: 200kW - 2400kW**

Air Cooled chillers - Turbocor centrifugal compressors - flooded evaporator (R134a) - dry expansion evaporator (HFO 1234ze) - EC axial fans



### **TMA CM: 200kW - 1820kW**

Air Cooled 'Circlemisier' chillers - Turbocor centrifugal compressors - cascade flooded evaporators - microchannel cylindrical condensers (+45% Hx surface) - EC axial fans



### **TMA ES: 200kW - 2500kW**

Air Cooled chillers - Adiabatic system - Turbocor centrifugal compressors - flooded evaporator (R134a) - dry expansion evaporator (HFO 1234ze) - EC axial fans



### **TMA FC: 190kW - 1200kW**

Air Cooled chillers - Free Cooling system - Turbocor centrifugal compressors - dry expansion evaporator (HFO 1234ze) - EC axial fans



### **TMH: 200kW - 2500kW**

Water Cooled chillers - Turbocor centrifugal compressors - flooded evaporator (R134a) - dry expansion evaporator (HFO 1234ze)



### **TSE: 200kW - 2400kW**

Water Cooled chillers - condenserless - Turbocor centrifugal compressors - flooded evaporator (R134a) - dry expansion evaporator (HFO 1234ze)



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