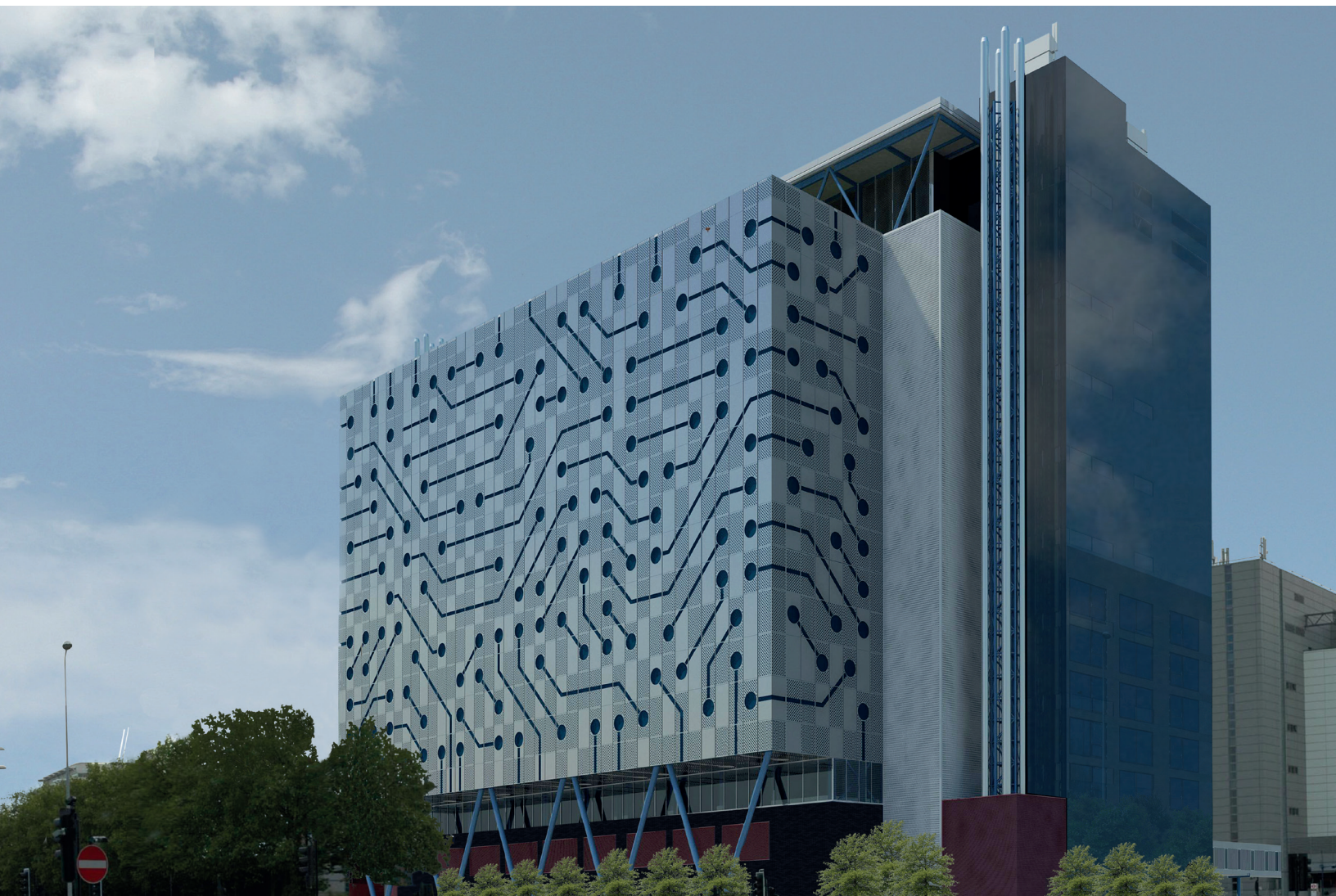


PRECISION-ENGINEERED FOR DATA CENTER COOLING



Excool **modul_R** s-series advanced screw chillers

OPTIMISED DESIGN FOR DATA CENTERS

WHO ARE EXCOOL?

At Excool, we are experts at developing cutting-edge data center cooling technology, addressing the evolving needs of today's and tomorrow's data centers. We set the standard with the most advanced cooling technology available. Our portfolio of data center cooling solutions ensures low energy consumption, without compromising on reliability and security for all colocation, hyperscale, edge and AI data centers across the world. With locations in the UK, Germany, North America and Singapore allowing us to support our Global customers with local expertise.



Excool has three production factories located on site. The latest factory was officially opened in 2022 by The Princess Royal. This expansion enhances our impressive 180,000 square feet manufacturing capabilities and introduces a state-of-the-art Factory Acceptance Testing (FAT) facility. This significant development allows for multiple production lines, enabling the simultaneous production of various cooling solutions.

DATA CENTER OPTIMISED



modulR
S-SERIES

Air-Cooled Screw Chiller

The modulR s-series range of air cooled screw compressor water chillers start at 400 kW and range up to 3,000 kW all in a single package for electrical and water connections.

The Design of modulR s-series is optimised for the high water and Glycol mix temperature required for liquid to chip cooling.

Operation is optimised for the high ambient temperature where the designers consider the effects of global warming. As standard the chillers operate at 100% capacity up to 134°F (56.6°C).

ADVANCED TECHNOLOGY

Variable Speed Drive

The most advanced variable speed inverter screw compressors from Bitzer are used throughout the range of s-series chillers. Bitzer are the largest manufacturer of refrigeration screw compressors globally. Bitzer micro-processors inbuilt control ensure the compressor always operates within the correct envelope. Bitzer technology and quality allows a 5 year warranty as standard.

EC Condenser Fans

The **modulR** condenser fans utilise the very latest EC technology from Ziehl Abegg. The moulded impeller design together with advance air directional turning veins ensure the lowest possible energy consumption and generated noise at design speed. EC Technology together with **modulR** s-series re-start software ensures the fans are operating within a few seconds of power re-enable. All working for overall rapid re-start after power loss under all conditions.

Enhanced & Optimised controls

The quality of hardware within the control systems ensures many years of unparalleled reliable operation. Optimised software resulting from over 15 years of data center experience ensures under all conditions exact supply water temperature control is maintained. Each chiller has master/slave capability with overriding control to ensure optimum efficiency when multiple chillers are installed on the same water system. All **modulR** s-series chillers fail safe to individual control under any unforeseen event to ensure full cooling capacity is maintained under all conditions.

Water/Glycol evaporators

The refrigeration plate type heat exchangers used for evaporation are designed utilising the latest available technologies. High performing low refrigerant volumes and rapid changes in performance define plate evaporators.

Economiser & Oil separator

The inbuilt Bitzer economiser and oil separator are controlled for optimal efficiency and reliability at all times and under all conditions.

Rapid Re-start

modulR s-series air cooled chillers have class leading re-start capabilities. In less than 30 seconds from power re-enable **modulR** chillers are producing chilled water/glycol. The combination of inverter compressors, plate heat exchangers and EC fans ensure ramp up to full capacity faster than the competition.

Microchannel condenser coils

The **modulR** s-series condenser coils utilise the most advanced microchannel technology currently available. Unparalleled performance with low air and refrigerant pressure drops combine as the final part of the refrigeration cycle. All microchannel condenser coils are manufactured from premium grade aluminium treated after manufacture with a coating to aid performance and enhance already excellent anti-corrosion qualities.

OPTIMISED FOR ADVANCED DATA CENTER COOLING



OUTSTANDING PERFORMANCE IN ALL CONDITIONS

modulR s-series air cooled screw chillers from excool are manufactured to the highest quality utilizing components designed and built to the highest standards.

The chiller frames on all modulR s-series units are manufactured from stainless steel to ensure overall casework life in excess of 20 years even when exposed to severe environments.

All too often air cooled chillers appear many years old after a few due to air contamination. The utilization of stainless steel in the construction ensures overall chiller life will not be dictated by the life of the skeleton frame.

Prior to shipping all modulR s-series air cooled screw chillers are load operated to ensure rapid on site deployment.

Exceptional Capability

Rapid Re-start is the combination of the refrigeration compressor, inbuilt compressor inverter, plate evaporator, EC fans and the advanced microprocessor controls all working intelligently together.

modulR s-series re-starts in under 30 seconds is an industry leading feature which can be fully tested and demonstrated at the Factory Acceptance Testing (F.A.T).

The level of inherent quality on modulR chiller components is exceptional and allows an overall **5 year warranty** on all units sold.

This level of warranty is attributable to the high quality of components together with the level of intelligent feedback each item provides. This even extends to every EC fan being able to individually alarm on multiple levels including individual vibration sensors on each motor. It may be contained to local or physical vibration or slowly wearing bearings however the level of individual alarm capability at so many levels provides continual confidence when operating 24/7.

All stainless steel water/Glycol pipework is fabricated to avoid corrosion during an expected exceptionally long operational life.



Simplified maintenance

As all modulR s-series air cooled screw chillers continually monitor hundreds of in-built variables normal day to day maintenance only incorporates checking the remote control interface for only non-critical or critical alarms. The inbuilt monitoring sensors and software allows constant condition monitoring. In the vast majority of situations any potential issues in the future can be forecast & resolved before any failures occur.

DATA CENTER COOLING SOLUTIONS



**Air-cooled chiller – centrifugal
compressor 400kW – 3000kW**



**Air-cooled chiller – screw
compressor 400kW – 3000kW**



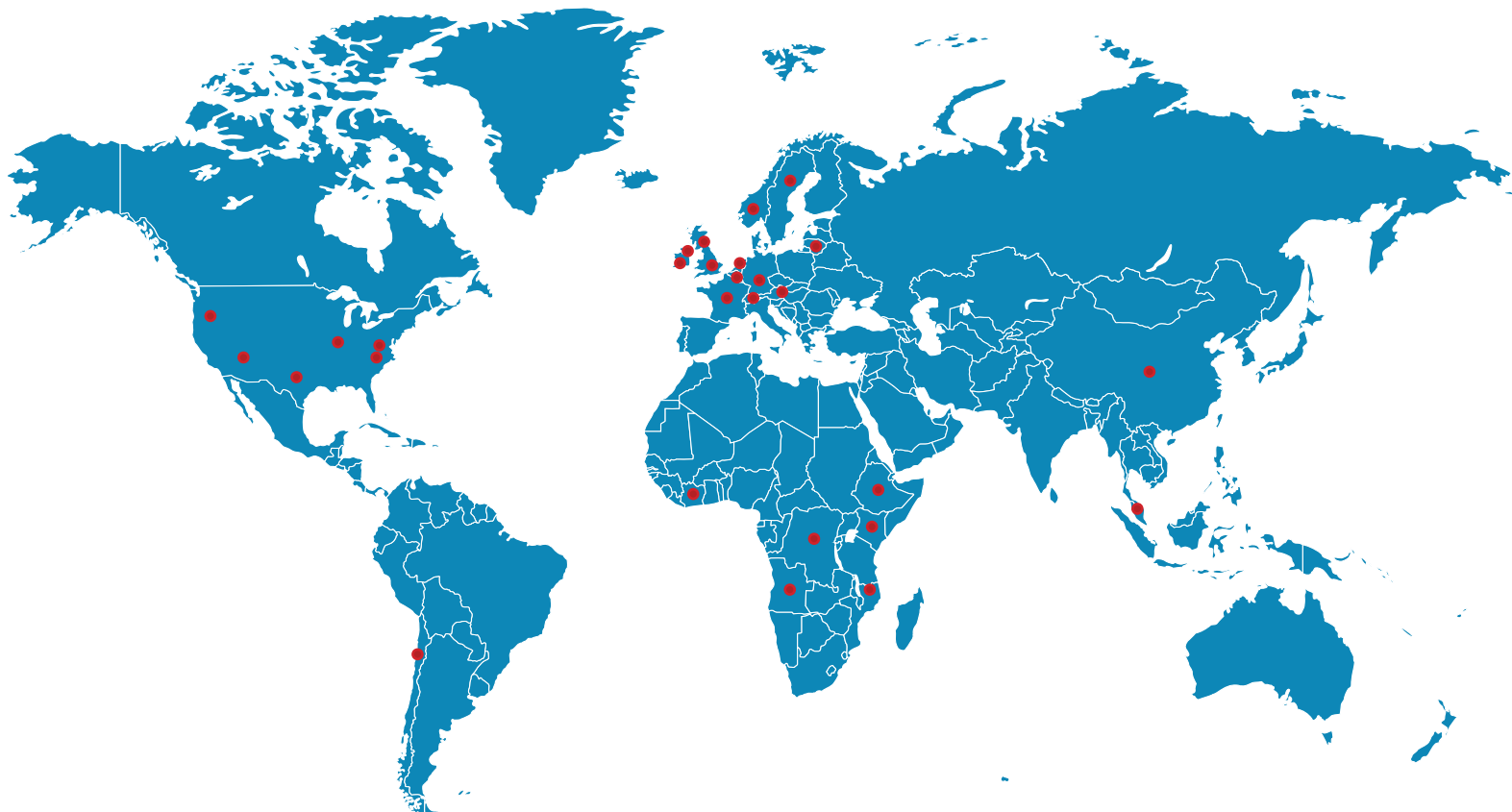
**Coolant Distribution Unit
400kW – 1500kW**



**Fan Stack
250kW – 800kW**



Excool Locations across the Globe



Across continents Excool provides 24/7 monitoring and service support.

Europe

North America

Asia

Africa



THE QUEEN'S AWARDS
FOR ENTERPRISE:
INTERNATIONAL TRADE
2022

Excool HQ. Bromsgrove, Worcestershire, B60 4EA

Tel: +44 (0) 1527 492750 | Email: info@excool.com | www.excool.com

