

# THE BIG THING FROM GERMANY

IT Cooling Solutions

**CyberCool 2** – The high-end chiller  
for data centres

Find out more now:  
[products@stulz.com](mailto:products@stulz.com)

## German powers of innovation cool data centres around the world

Every year, more than one billion euros a year are spent in Germany on supplying electricity to data centres. Data centre operators are therefore interested in two things when it comes to **air conditioning** their IT: **Reliability** without compromise – and a drastic reduction in the **energy costs** of air conditioning.

As one of the most advanced companies in the field of IT Cooling Solutions, we have developed a high-end chiller especially for use in data centres, which satisfies all requirements for **efficiency and reliability**.

**“THE NEXT BIG THING FROM GERMANY”** is pure German innovative spirit. For with the noise-optimised **CyberCool 2**, STULZ offers a complete, horizontally integrated air-conditioning solution for your IT – including control for the higher-level system network. These units, which were designed and produced in Hamburg, boast a cooling capacity from 10 to as much as 1,400 kW and are available as an air-cooled version. Thanks to the diverse range of available options and the intelligent control technology, the new CyberCool 2 is already one of **the most energy-saving chillers**.

But as well as maximum efficiency, **STULZ quality** also means unlimited reliability: in keeping promises, in well qualified **consulting** and system design, in commissioning, maintenance and round-the-clock **service**.





## High-end in every detail

**STULZ CyberCool2 for more energy efficiency, reliability and cost savings in the data centre**

- Designed, developed and produced in Germany
- Maximum energy efficiency (according to Eurovent Class A)
- Integrated Free Cooling system
- Noise-optimised system operation
- Optimised for use in data centres
- Diverse range of industry-specific options

[www.stulz.com/cybercool2](http://www.stulz.com/cybercool2)

### Efficiency – Minimal energy consumption

Equipped with innovative high-end components, the CyberCool2 boosts energy efficiency to the maximum

#### Large coil surfaces

- Condenser
  - Full aluminium microchannel coil
  - Reduced condensation temperature in DX mode
  - Improved heat transfer with reduced quantities of refrigerant
- Free Cooling coil
  - Early switchover to Free Cooling mode (reduced compressor runtime)

#### Fans with large surface areas

- Speed-controlled EC fans
- Size-maximised version (Ø 910 mm) for power reserves and energy efficiency in partial load mode, and low speeds for noise optimisation

#### Speed-controlled screw compressors with flooded evaporation

- Variable-speed screw compressors from approx. 470 – 1,000 kW
- Variable-speed compressors in combination with flooded evaporation

#### Speed-controlled scroll compressors

- Scroll from approx. 10 – 600 kW
- Constant and variable-speed versions

#### Optimised refrigerant circuit

- Compressor mix-match is avoided
- Increased performance thanks to Eco switching

#### Integrated Free Cooling option with flexible switchover

#### According to Eurovent A certification



### Diversity – Numerous options

Thanks to the diverse options and equipment versions available, you can perfectly adapt the CyberCool2 to your particular requirements

- Control with UPS buffer
- Integrated quick-start routine (operating point is reached after approx. 120 seconds)
- Fan diffuser attachment for reduced energy and noise
- Bypass circuit inside the machine for minimal hydraulic pressure losses
- Fold-away fans for coil cleaning against the air flow without interrupting operation
- Soft-start option for constant-speed compressors (avoids current spikes when the compressors are started)
- Integrated pump and hydraulic modules

### Design – Quality without compromise

High-quality materials and components are part and parcel of all STULZ units. This naturally also applies to the design of the CyberCool2

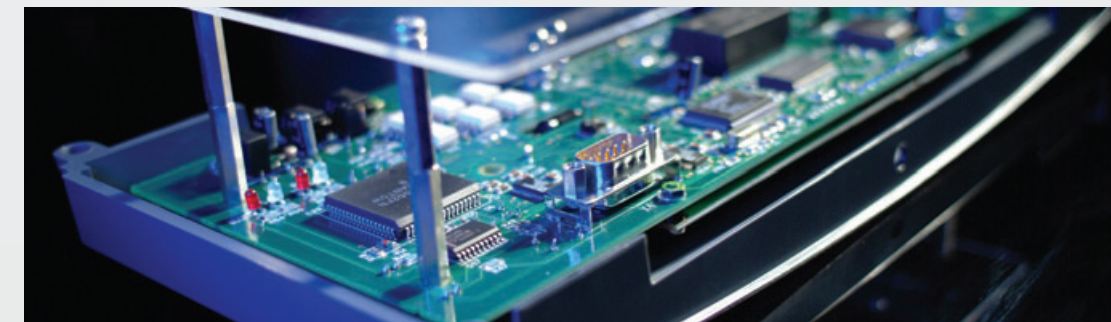
- Robust design
  - Sturdy base frame of welded steel
- Encapsulated compressor chamber for reduced noise
- Coils designed to allow the maximum surface area
- Air flow-optimised condenser modules
  - Entire coil surface is used to achieve optimum thermodynamics
  - No dead zones caused by air flow breakaway edges or turbulence
  - Air baffles ensure optimum flow to interior coil elements
- Fans with large surface areas



### Control – Innovative control system

The CyberCool2 is ideal for integration in existing systems and can be controlled to perfection by the STULZ microprocessor

- Hardware and software developed by STULZ
- Possible software adaption for specific projects
- Seamless networking with external building automation systems (supports all common BMS protocols via network and fibre-optic cables and W-LAN)
- Higher-level system network for operating several chillers in parallel with speed-controlled compressors at reduced speed
- Integrated emergency routines to cope with system failure
- Energy-efficient system operation at every operating point



### Reliability – Fail-safe performance

CyberCool2 high-end chillers were developed to provide a fail-safe performance and reliable operation in the data centre, 24/7

- Made and engineered in Germany
  - Exclusively high-quality system components used
- Continuous quality management system throughout production
  - Test runs of all mechanical and electrical components
- Suitable for a broad range of applications
  - -25 to +55 °C
- Immediate start after power failure
  - Constant-speed compressors (cooling capacity back up to 100 % after approx. 2 min.)
  - Speed-controlled compressors start up again with no delay when power returns after an outage. As the compressors are influenced by system operation as a whole, the time until the required cooling capacity is reached varies depending on the number of compressors installed and the specific circumstances of the project.
- Certification to ISO 9001 and ISO 14001

### Noise – Optimised design

The CyberCool2 also satisfies high-end requirements in terms of noise. The result is noise-optimisation at every operating point

- Encapsulated compressor chamber
- Fans with large surface areas
- Large coil surfaces

### Environment – Green Engineering

STULZ stands for "Worldwide Green Engineering". This applies to all our IT Cooling Solutions – including the CyberCool2, of course

- Energy-optimised system operation
- Noise-optimised system operation
- Reduced quantities of refrigerant needed
- Leakage losses are avoided

#### STULZ CyberCool2 models – Overview

Air-Cooled 10 – 600 kW			
Normal temperature range			
Speed-controlled scroll compressor (brazed plate heat exchanger)		Constant-speed scroll compressor (brazed plate heat exchanger)	
With Free Cooling option	Without Free Cooling option	With Free Cooling option	Without Free Cooling option
Air-Cooled 470 – 1000 kW			
Normal temperature range			
Speed-controlled screw compressor with flooded evaporation (Bitzer CSVH screw)			
With Free Cooling option		Without Free Cooling option	
Air-Cooled 470 – 1400 kW			
Normal temperature range		High temperature range	
Constant-speed screw compressor with dry evaporation (CSW screw)		Constant-speed screw compressor with dry evaporation (CSH screw)	
With Free Cooling option	Without Free Cooling option	With Free Cooling option	Without Free Cooling option

Technical data subject to changes without notice