

## Knürr CoolAdd®

*The universal retrofit solution against overheating in server racks*



# Knürr CoolAdd® – *When cold air is no longer enough!*

Data centers are subject to constant changes: new server technologies, changing IT-requirements and economic pressures mean that modifications form an inevitable part of day-to-day life in data centers.

At the same time, rapid technological advances combined with continuously rising expectations for data center technology place existing infrastructures under further pressure. It is not

always possible to build from scratch in order to meet these increased demands. In most cases, planning must be restricted within the confines of existing structures.

The migration of new servers within existing data centers places great demands on existing infrastructures. In most cases, technical limitations are met and overcome through retrofitting. However, even if it is possible to adjust the network infrastructure and electrical supply at reasonable operating expense, current air conditioning technology reaches its limitations very quickly. Overheating within such installations is thus inevitable. Hotspots within the entire data center inevitably lead to the slow-down of data processors until complete shutdown.

CoolAdd® represents the ideal retrofit solution for data centers and IT rooms. It safeguards against the risk of hotspots and helps to avoid overheating of the server racks. A special feature of this quick and highly effective solution is that the existing server rack remains within the data center. In addition, the entire wiring may remain as it is, without the need for any alterations!

Therefore, CoolAdd® is an easy-to-use replacement for the server's rear door. It operates on the following technical principle: safe cooling of the servers'

emitted air temperature in order to meet the required supply air temperature.

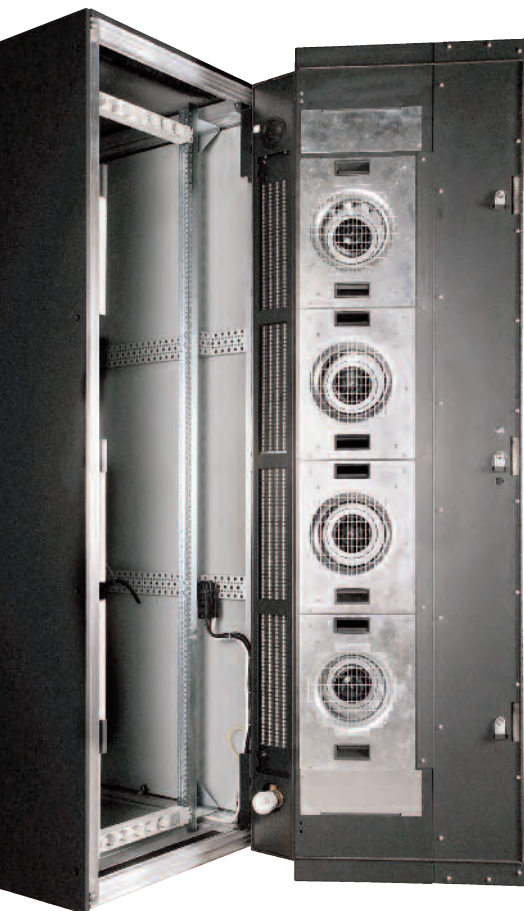
CoolAdd® consists of three basic components:

- connection adaptor for the existing server rack
- air-water-heat-exchanger (fixed to the rack)
- backdoor with fans

The server's thermal power loss is transferred into the data center's cold water installation by means of the air-water-heat-exchanger. Powerful fans ensure optimum cooling-out.

Convenient installation: CoolAdd® may be mounted on all currently available server racks. The installation is mounted onto an adaptor frame. As a second step, the heat-exchanger is fixed onto the existing rack. It is recommended that the cold water supply is connected through the base. Fans are positioned at the door in order to maintain perfect access to the entire installation within the rack.

CoolAdd® - the quick and economic solution against hotspots in data centers and IT-rooms; the immediate aid for securing business-critical processes (Business-Critical Continuity™).







## Features

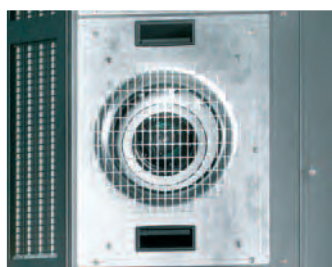
- Installation with adapter kit
- Adjustment of just a few parts
- Thermostatic shuttle valve for regulating cooling power
- Manual fan speed setting
- Individual fan monitoring
- Individual fan protection
- Installation with adapter kit
- Shuttle valve for regulating cooling power
- Heat exchanger is firmly connected with the existing rack (pipes and other connections are not accessible in the data centre)
- Redundant n+1 fan set-up

## Benefits

- CoolAdd® can be used with all current rack types
- Server rack remains unchanged
- Slim design heat exchanger (85 mm)
- Access to components is always maintained
- Water-carrying components are safely shielded from the rack
- Existing racks can continue to be used
- Existing cabling remains
- Quick installation
- Just a few CoolAdd® components have to be adjusted
- Cools the server's warm exhaust air side
- Access to all built-in components always maintained
- Relieves the data centre's thermal management system
- Cools an additional 8,000 watts



Shouldered thermostat relay  
with extensible component  
(without auxiliary power)



Optimal fans, including casings



Fan failure display/  
four speed levels



Robust and safe 3 pt.-interlock

Cooling capacity	Width	Height	Depth	Weight	Water content	Fans	Air-Volume flow
<b>8 kW</b>	600 mm 700 mm 800 mm	2000 mm or 2200 mm	160 mm	41 kg up to 47 kg	1.6 l	4 Fans	2500 m <sup>3</sup> /h

Spread chilled water: 14 / 20°C  
 Exhaust temperature after heat exchanger: 22°C  
 Connection heat exchanger: 3/4" male thread  
 Cooling water volume flow: 1.15 m<sup>3</sup>/h  
 Pressure loss (heat exchanger): 400 mbar

Max. operating pressure heat exchanger: 10 bar  
 Max. absolute humidity on site: 8 g / kg  
 Standard colours: RAL 7021 (black grey)  
 Elt. Connection (fans / fan control): 230 V / 50 Hz 525-725 W  
 Protection class: IP 20



## *Knürr CoolAdd® – setting standards*

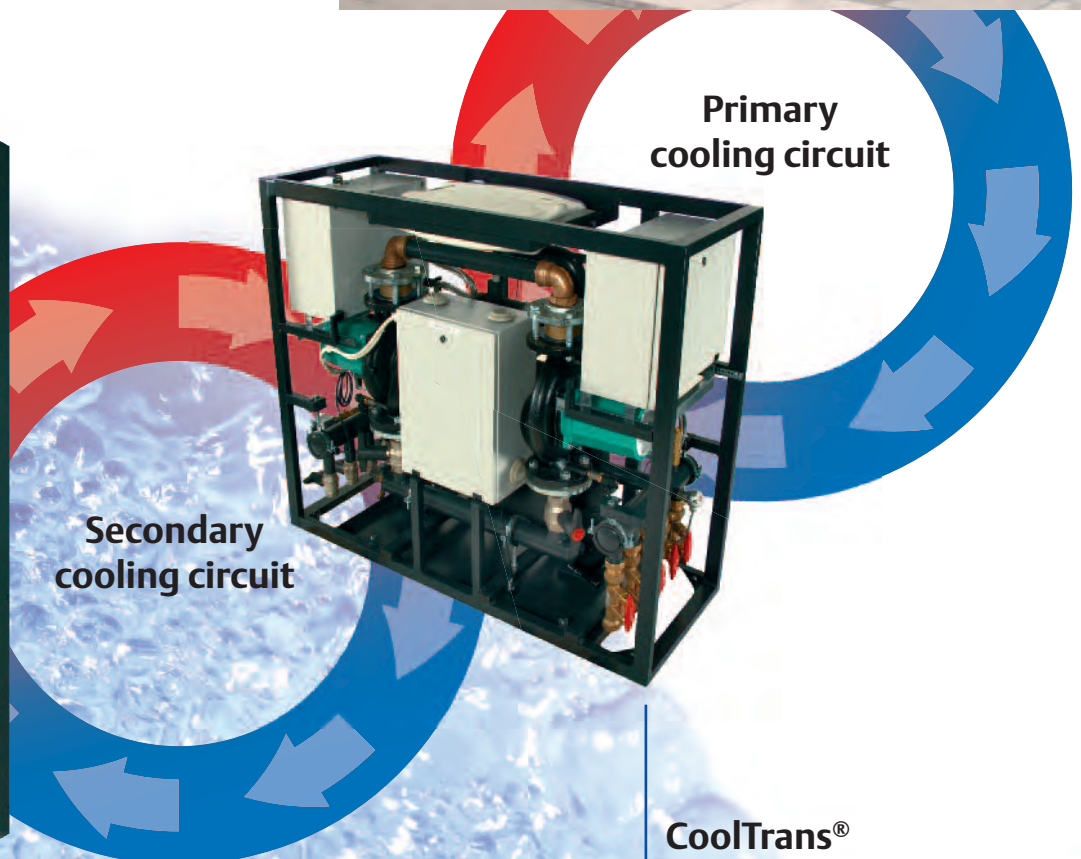
**Knürr's CoolAdd®** sets new standards when it comes to cost-effectiveness – as an ideal upgrade solution for all current server racks in small IT rooms or large-scale data centers!

Knürr is also a guarantor for system solutions in IT and network technology with products of an exceptional level of quality. Innovative rack platforms, proven-in-practice thermal management and tailor-made power supplies meet the future-proof requirements of the data center, telecommunications and network technology.

**Adaptive Architecture™ –  
The solution for securing  
business-critical processes.**



**CoolAdd®**



**CoolTrans®**

Emerson Network Power is a consistent global technology leader and recognised expert that helps to secure business-critical processes, and by doing so contributes to a “business-critical continuity”.

A series of the most diverse applications, including the tried, tested and proven Knürr rack system solutions and the thermal management connected with them, ensure the required network stability with the highest technological adaptability at the same time.

Knürr system solutions in the world of information and network technology are part of an adaptive Emerson Network Power architecture, which flexibly adjusts to all changes concerning security/safety, high-density and all associated capacities. Companies profit in a sustainable and long-term way from the high IT availability, operative flexibility and impressive reduction in investment and operating costs.

Knürr AG is recognised around the world as one of the leading developers, manufacturers and distributors of rack and enclosure platforms in the indoor and outdoor area, including all relevant active/passive components of 19” structures and the technologies connected with them.

Knürr is certified in accordance with EN ISO 9001 and the EN ISO 14001 standard. Knürr’s quality management continuously guarantees the highest level of quality in all areas of the company.

#### Emerson Network Power

The global leader in enabling business-critical continuity

■ AC Power Systems	■ Embedded Power	■ Power Switching & Controls	■ Site Monitoring
■ Connectivity	■ Integrated Cabinet Solutions	■ Precision Cooling	■ Surge & Signal Protection
■ DC Power Systems	■ Outside Plant	■ Services	■ Rack & Enclosure Systems

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