

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-today 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 de-

mands. 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
8 kW	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 ³ /h

Spread chilled water:	14 / 20°C	Max. operating pressure heat exchanger:	10 bar
Exhaust temperature after heat exchanger:	22°C	Max. absolute humidity on site:	8 g / kg
Connection heat exchanger:	3/4" male thread	Standard colours:	RAL 7021 (black grey)
Cooling water volume flow:	1.15 m ³ /h	Elt. Connection (fans / fan control):	230 V / 50 Hz 525-725 W
Pressure loss (heat exchanger):	400 mbar	Protection class:	IP 20

Knürr CoolAdd® – setting standards

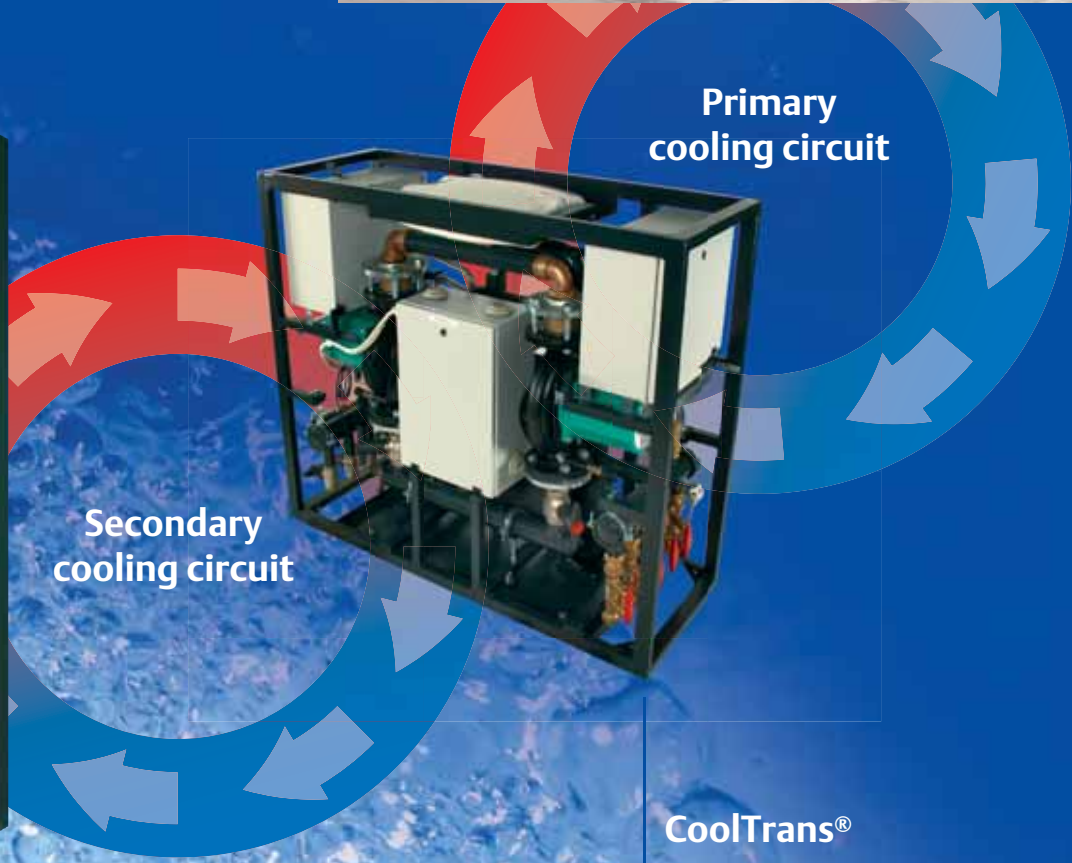
Knürr's CoolAdd® sets new standards when it comes to cost-effectiveness – as an ideal upgrade solution for all current server racks in small IT rooms or large-scale data centers!

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, a division of Emerson (NySE:EMR), is the world's leading provider of Business-Critical Continuity™ "Grid-to-Chip" solutions for telecommunication networks, data centers, medical facilities and industrial systems.

Emerson Network Power provides innovative solutions and expertise in areas such as AC and DC power supply, precision cooling systems, embedded computer and power supply systems, integrated racks and enclosures, network circuits and controls, monitoring and connectivity. All solutions are supported locally all over the world by Emerson Network Power customer service technicians. You will find more information on Emerson Network Power's products and support services at

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