



**RIMATRIX5**  
DRIVING IT-PERFORMANCE

# Rittal IT Solutions



# Cooling

RimatriX5 IT Solutions from Rittal

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## RimatriX5 IT Solutions from Rittal

Heat is just one of the many factors severely affecting IT performance. Beat the heat with Rittal's scalable climate control solutions. From passive air to active liquid, Rittal's flexible cooling concepts are designed according to your requirements, to effectively handle unwanted heat loads.

Software assisted planning and requirements calculation, together with modular, rack-compatible technology help to minimize investment costs, thereby offering a particularly future-safe solution, thanks to the high degree of flexibility.

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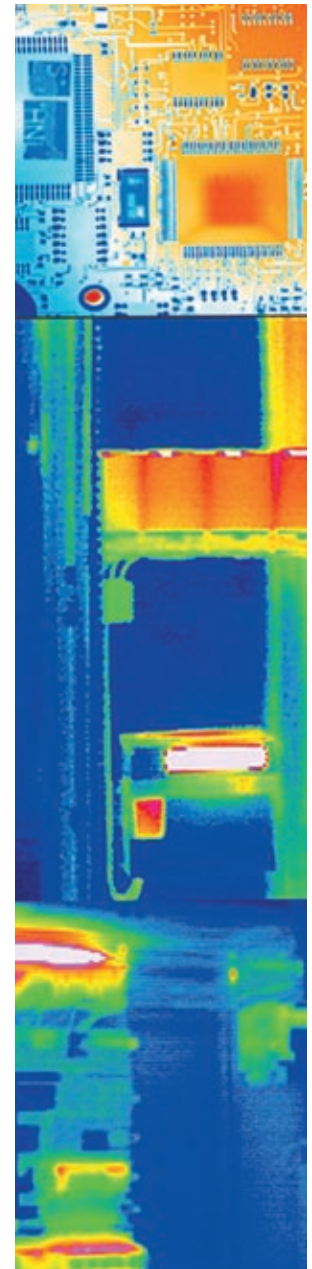
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Cooling

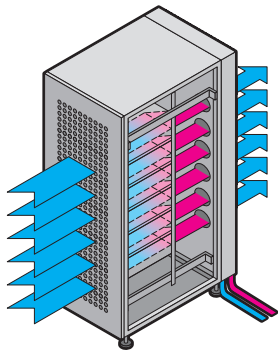
## Rittal Liquid Cooling Package



### Modular climate control concepts – to your specific requirements!

Rittal RimatriX5 solves the problem of climate control for high heat losses per rack with the Liquid Cooling Package (LCP) range. Extremely high heat loads are dissipated from the rack via the LCP air/water heat exchanger. Additionally, this system also allows temperature-neutral expansion of the data center.

### LCP Extend



**Installation while operational**  
Air/water heat exchanger (10 kW) to support climate control of the room. For Rittal racks, the relevant door is preconfigured in the factory and exchanged on site.

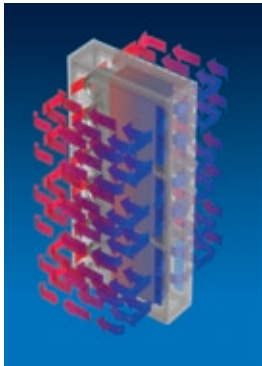


**Suitable for use on any surface**  
The stand-alone unit may be fitted onto any suitably sized rear door (including other brands).

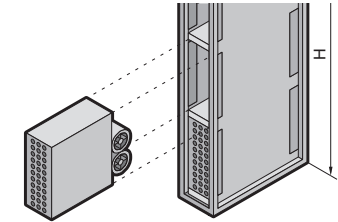


**Water connection variants**  
Water connection either at the bottom or top. Connection to the existing cooling circuit (optionally via water/water heat exchanger) or to recooling systems.

### LCP Standard



**Bayable with TS 8 server racks**  
As the height and depth are identical, it may be bayed either in the middle of an enclosure suite or at the end, for added assembly and service-friendliness.

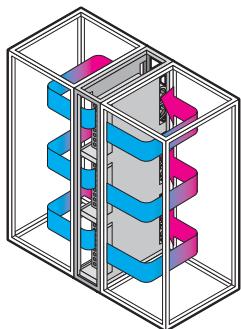


**Up to 20 kW useful cooling output**  
The useful cooling output is achieved with a modular configuration (1 – 3 modules). Active condensate management supports inlet temperatures from 43°F to 68°F (+6°C to +20°C).



**Safe insertion, simple assembly**  
The separation of cooling and rack prevents water from penetrating the server rack. A recooling system supplies the required cooling fluid.

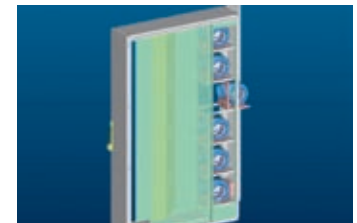
### LCP Plus



**Up to 40 kW useful cooling output**  
Useful cooling outputs of 28 kW (rack height 78.74" [2000 mm]) or 40 kW (rack height 94.49"



[2400 mm]) are achieved with 6 or 8 high-performance fans, which may be exchanged without the need for tools. Overall, the LCP Plus has been optimized for use in data



centers. Even with the enclosure doors open, e.g., during servicing work on servers, climate control is 100% guaranteed.

\* Cold water chillers and water/water HX available upon request  
\* SNMP monitored or controllable power strips available upon request

## Rittal Liquid Cooling Package



### LCP Extend

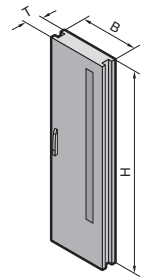
Air/water heat exchanger for retrofitting to racks while operational.

The stand-alone unit may be fitted onto any rear doors (including other brands).

For Rittal racks, the relevant door is preconfigured in the factory ready to be connected and exchanged on site.

#### Technical Specifications:

- Up to 10 kW useful cooling output
- Max. air volume 1767 cfm (3000 m<sup>3</sup>/h)
- Water connection either at the bottom or top



B = Width  
H = Height  
T = Depth



### LCP Standard

Air/water heat exchanger, bayable with server racks based on TS8.

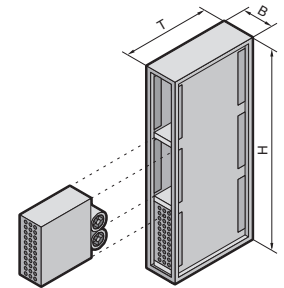
The useful cooling output of max. 20 kW can be achieved by installing additional modules.

The separation of cooling and rack prevents water from penetrating the server rack, and makes it more assembly and service-friendly.

LCPs are easy to handle (max. 6.5' [2 m]) and may be transported in lifts and through doors. The low weight means a minimal area load.

#### Technical Specifications:

- Up to 20 kW useful cooling output
- Max. air volume 1767 cfm (3000 m<sup>3</sup>/h)
- TÜV GS, UL/CUL, DIN 3168



B = Width  
H = Height  
T = Depth



### LCP Plus

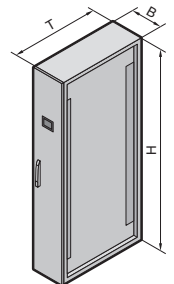
Air/water heat exchanger, bayable with server racks based on TS8. Complete unit with 28 kW useful cooling output.

The separation of cooling and rack prevents water from penetrating the server rack, and makes it more assembly and service-friendly.

LCPs are easy to handle (max. 6.5' [2 m]) and may be transported in lifts and through doors. The low weight means a minimal area load.

#### Technical Specifications:

- Up to 28 kW useful cooling output
- Max. air volume 2827 cfm (4800 m<sup>3</sup>/h)



B = Width  
H = Height  
T = Depth

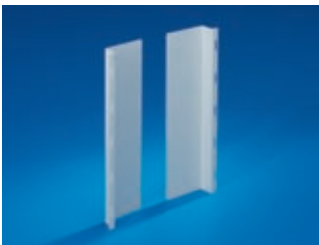
## Rittal Liquid Cooling Package

Cooling

|   |   |                              |  |                                   |                                      |  |
|---|---|------------------------------|--|-----------------------------------|--------------------------------------|--|
|   |   |                              |  |                                   |                                      |  |
| <b>Part No.</b>   | <b>3301.490<sup>1)</sup></b>            | <b>3301.230</b>              | <b>3301.420</b>  | <b>3301.480<sup>1)</sup></b>      | <b>on request</b>                    |  |
| Description   | LCP Extend                              | LCP Standard                 |  | LCP Plus                          | LCP Plus                             |  |
| Rated operating voltage V, Hz                               | 230, 50/60                              | 230, 50/60                   |  | 230, 50/60                        | 230, 50/60                           |  |
| Dimensions in inches (mm)                                   | B                                       | 20.47 (520)                  | 11.81 (300)  | 11.81 (300)                       | 11.81 (300)                          |  |
|   | H                                       | 75.20 (1910)                 | 78.74 (2000)   | 78.74 (2000)                      | 94.49 (2400)                         |  |
|   | D                                       | 6.30 (160)                   | 39.37 (1000)   | 47.24 (1200)                      | 47.24 (1200)                         |  |
| Usable U  | 42                                      | 42                           |  | 42                                | 51                                   |  |
| <b>Useful cooling output</b>                                | <b>10 kW</b>                            | <b>Up to 20 kW</b>           |  | <b>Up to 28 kW</b>                | <b>Up to 40 kW</b>                   |  |
| Rated current   | 2.4 A/3.0 A                             | 3.8 A/4.4 A                  |  | 9.3 A/10.4 A                      | Technical specifications on request. |  |
| Pre-fuse  | 6 A/6 A                                 | 10 A/10 A                    |  | 16 A/16 A                         |                                      |  |
| Cooling medium  | Water (for specifications see Internet) |                              |  |                                   |                                      |  |
| Water inlet temperature                                     | 59°F (+15°C)                            | 43°F to 68°F (+6°C to +20°C) |  |                                   |                                      |  |
| Permissible operating pressure p. max.                      | 87 psi (6 bar)                          | 87 psi (6 bar)               |  | 87 psi (6 bar)                    |                                      |  |
| Protection category to EN 60 529/10.91                      | –                                       | IP 30                        |  |                                   |                                      |  |
| Duty cycle  | 100 %                                   |                              |  |                                   |                                      |  |
| Electrical connection                                       | Connection cable                        |                              |  |                                   |                                      |  |
| Water connection  | 3/4" external thread                    |                              |  | 1" external thread                |                                      |  |
| Weight  | 99 lb (45 kg)                           | max. 376 lb (170 kg)         |  | 332 lb (150 kg)                   |                                      |  |
| Color   | RAL 7035 light grey                     |                              |  |                                   |                                      |  |
| Air throughput of fans                                      | 1767 cfm (3000 m <sup>3</sup> /h)       |                              |  | 2827 cfm (4800 m <sup>3</sup> /h) |                                      |  |
| Temperature control   | Fan control                             |                              | Electronically controlled magnetic valve and 4-way fan control |                                   |                                      |  |
| <b>Additional module</b>                                    |   |                              |  |                                   |                                      |  |
| Useful cooling output 4 kW (59°F [15°C], .28 cfm [8 l/min]) | –                                       | 3301.250                     |  | –                                 | –                                    |  |

Special voltages and sizes available on request. Technical modifications reserved.  
 Rack heights of 88" (2200 mm) are achieved with an optional add-on cover.  
<sup>1)</sup> Delivery times available on request.

For LCP Ready Cabinet, see page 18.



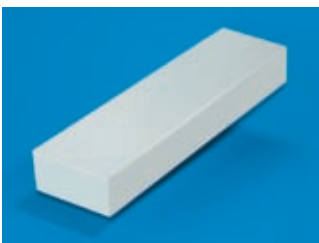
### Covers

For sealing any air inlet and outlet openings of the LCP that are not required.

#### Material:

Sheet steel, spray finished in RAL 7035

| Packs of | Part No.        |
|----------|-----------------|
| 2        | <b>3301.310</b> |



### Add-On Cover

For height compensation with 88" (2200 mm) high racks in conjunction with the LCP (H = 80" [2000 mm]).

#### Material:

Sheet steel, spray finished in RAL 7035

| For LCP  | Part No.        |
|----------|-----------------|
| 3301.210 | <b>3301.221</b> |
| 3301.230 |                 |
| 3301.420 | <b>3301.421</b> |
| 3301.480 |                 |

Delivery times available on request.