

Rittal – Piping systems in the data centre



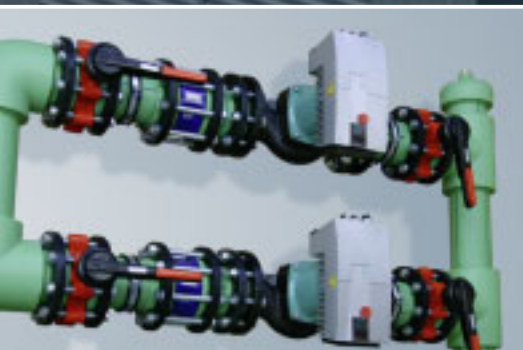
Hot air does not stand a chance

Cool connection

Efficient cooling solutions rely on an excellent infrastructure. The Rittal piping system provides the link between the equipment and the refrigeration system.

An optimum design and targeted media supply ensure efficient operation of all cooling components.

This also includes safety-relevant options such as redundant pumps, emergency cooling or buffer stores.



Speed-controlled pumps are used to convey the coolant. The pumped volume may be varied by using state-of-the-art EC motors.

Your practical benefit:

Lower energy consumption thanks to "cold water on demand". Only the volume of water that is actually needed for cooling is moved through the system.

The standard hydraulic layout includes the use of a hydraulic separating filter. Different volumes of water on the producer side and equipment side for process cooling do not adversely affect the function of the cooling systems.

Your practical benefit:

Less energy consumption thanks to the use of free-cooling heat exchangers. Chiller pumps may be switched on and off as required.

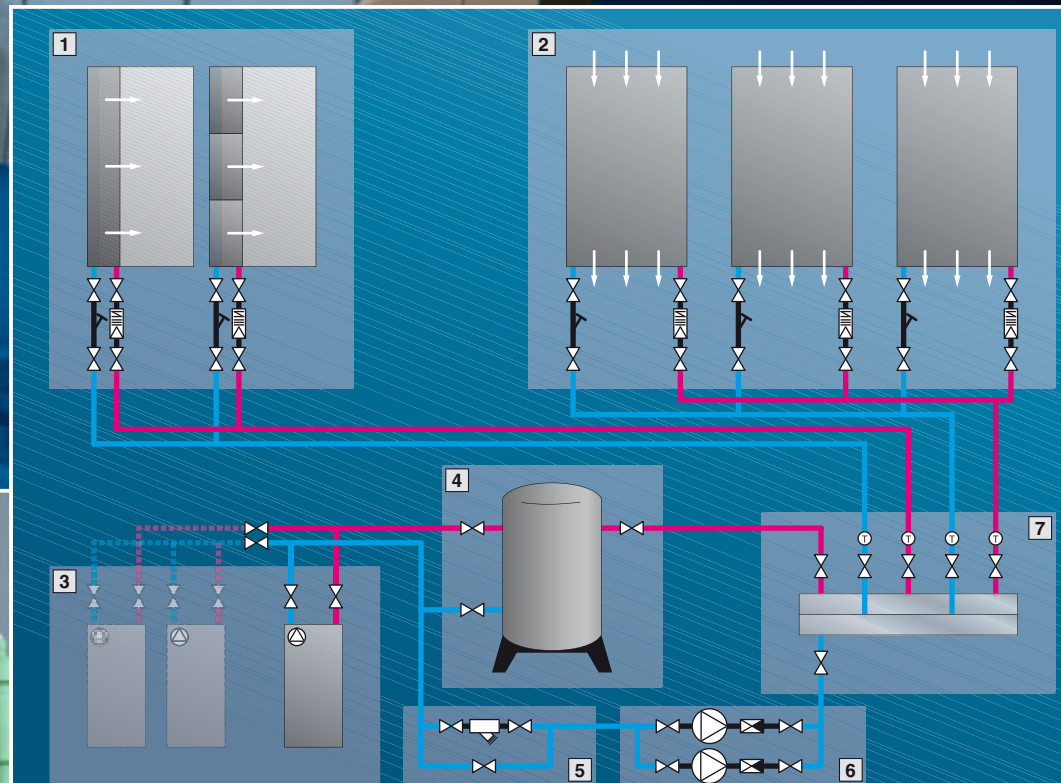
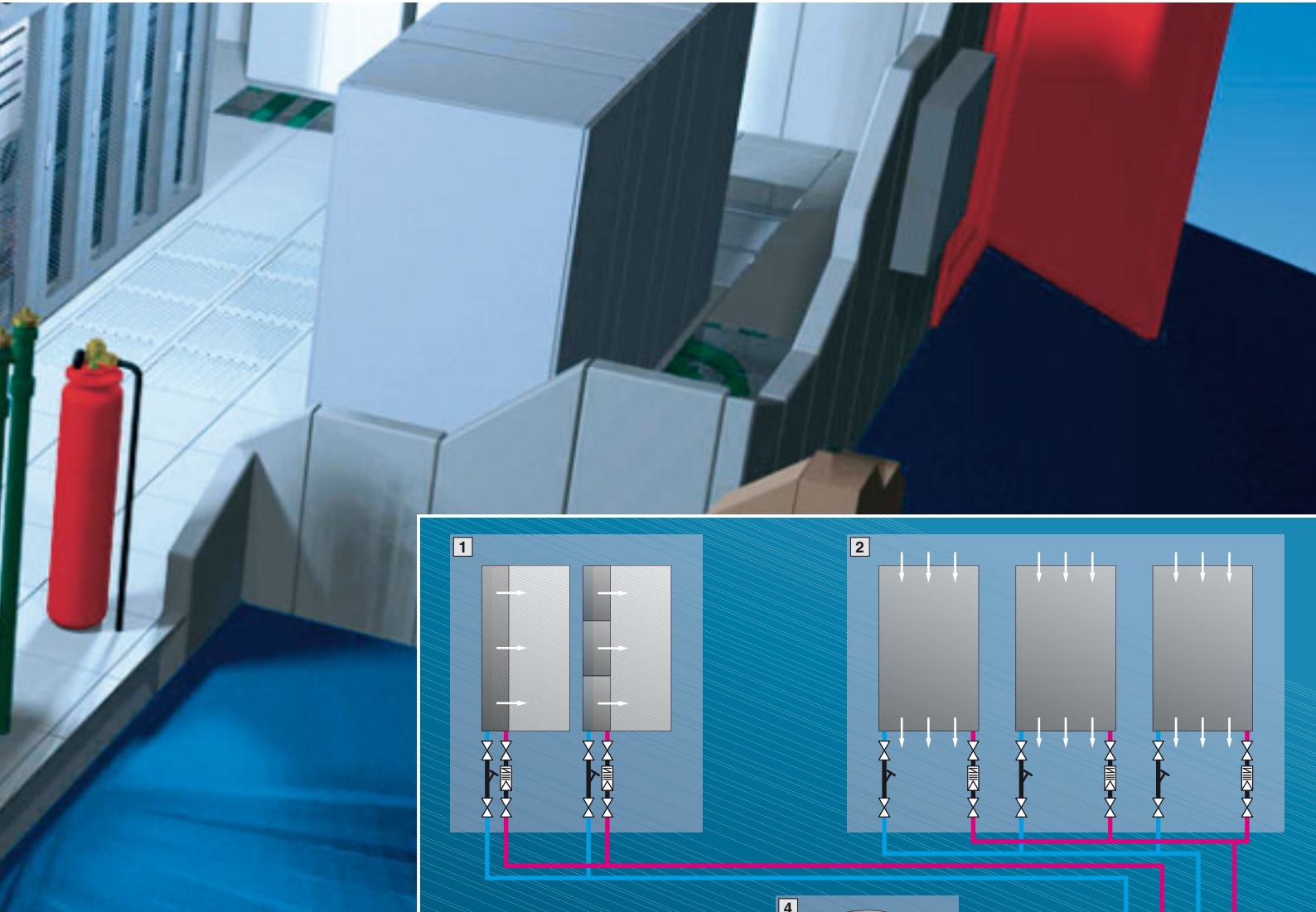
Use of compact distributors to distribute the cooling medium among different pieces of equipment.

Your practical benefit:

Redundancies in the supply lines to the equipment may be designed as required. For example, a layout can be designed to facilitate the automatic shut off of sub-trains in the event of pipe leaks.

- Pipeline systems are part of a turnkey solution for the targeted cooling of IT operating environments
- Media network for the connection of coolers (IT chillers) and cooling equipment (liquid cooling package and CRAC systems)
- Free scalability of chiller and equipment output via the hydraulic separation of the producer and equipment sides
- Use of a hydraulic separating filter with dual function as a buffer store

- Maximum energy efficiency thanks to the use of polypropylene piping with exceptionally low pipe friction losses
- Systems are suitable for the use of cold water and water/antifreeze mixtures (glycol)
- Media pumping redundancy by fitting every chiller with its own primary pump and via the use of redundant main pumps on the equipment side



The innovative polypropylene piping is distinguished by minimal pipe friction resistance.

Your practical benefit:

Less energy consumption for conveying the cooling medium, thanks to lower flow resistance.

The material is corrosion-resistant and may be machined without residues.

- 1 Direct cooling systems (e.g. LCP)
- 2 CRAC systems
- 3 IT chiller
- 4 Buffer store

- 5 Dirt collector station with maintenance bypass
- 6 Main pump (redundant)
- 7 Compact distributor with lockable outlets

Turnkey philosophy

Rittal recommends its turnkey philosophy for cooling IT operating environments.

This refers to a complete cooling solution, from the IT chiller through to energy-efficient refrigeration with free cooling concepts, including the entire Rittal piping system with hydraulic separating filter and redundant media pumping. The range also includes customised cooling units for direct cooling of hardware or for conventional cooling using a raised floor for air distribution.



Queries and information

We will be happy to send you further information or advise you in person.

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