

PAD SYSTEM

Adiabatic pre-cooling system – thermofin® AdiabaticPads

thermofin® dry coolers, condensers and gas coolers can be equipped as an option with Adiabatic-Pads. This type of adiabatic pre-cooling allows return and condensation temperatures below the ambient temperature or a considerably higher unit performance with the same space requirements and an improved system efficiency.

functionality:

Once the defined set point of the outlet or condensing temperature can't be achieved anymore in dry operation, due to an increasing ambient temperature, the pre-cooling system is activated.

The upstream AdiabaticPads are humidified. Depending on their design and the air condition on cooler inlet, the air can be cooled down by more than 10 K before entering the heat exchanger.



advantages

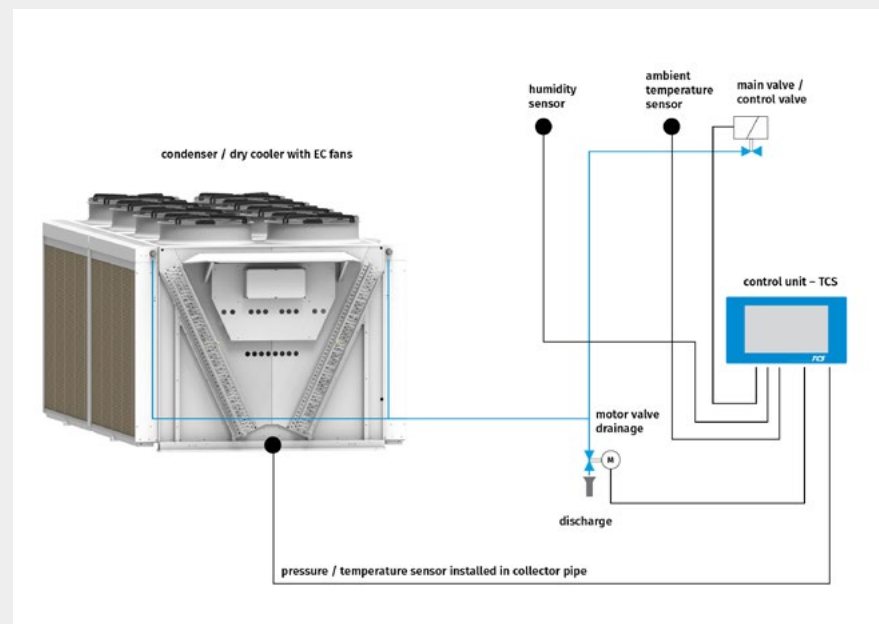
- low requirements on water quality:
 - ▶ mostly no water treatment required
 - ▶ easy connection to the water supply on site
- high switching point and hence lower water consumption
- higher unit performance with the same space requirements
- optimized water distribution due to the vertical arrangement of the pads
- corrosion protection since the humidification is limited to the pre-cooling pads
- mist-free operation

service

- easy replacement of the pads due to the cartridge design
- direct access to the water distribution

energy optimization

- option: sectionally tiltable pad system for winter months in order to reduce the energy consumption of the fans



hygiene

- no circulating water, no stagnation
- constructive optimized and self-draining tray and distribution system
- exclusion of the 42. BImSchV (German law) possible:
 - ▶ decision of individual cases according to §1 chapter (2), sentence 2
 - ▶ pre-cooling evaporation separated from the heat exchanger

intelligent control via TCS

- continuous speed regulation of the fans and control of day and night mode
- regulation of the wetting water quantity depending from the ambient and load conditions
- freeze protection: draining of the wetting water circuit