duotemp®
Kältetechnik in Perfektion

PROCESS AIR COOLERS

Series: DV with refrigeration circuit.
Available as air or water-cooled version

DV SERIES

Process air cooler with refrigeration circuit

HOW TO COOL YOUR PROCESS AIR

DV series process air coolers are used wherever customer air/circulating air systems require constant temperature control.

Specifications and cooler configurations

DV coolers are designed for easy technical and geometrical adaptation to specific applications, such as structural conditions or customer-specific performance parameters.

The required system capacity is determined by the maximum ambient temperature, air volume, inlet/outlet temperature and humidity. DV coolers use hot gas bypass or capacity-controlled compressors to adjust the cooling capacity to the different operating conditions across a range of 0 to 100%. A flange plate, which is screwed onto the evaporator insertion opening of the customer's air duct, enables easy connection to the process air system. To condense the refrigerant, you can choose between the water or air-cooled variant.

The DV series features:

- Compact modular design
- Individual design
- Demand-oriented cooling course
- High reliability

DESIGNS FOR YOUR SPECIFIC REQUIREMENTS

Variable temperature control

There are two types of high-precision temperature control to choose from: Fixed-value temperature control for a constant supply air temperature or differential control with reference-guided supply air temperature.

A microprocessor-controlled temperature control unit regulates the supply air temperature and ensures that the cooling system capacity is adjusted.

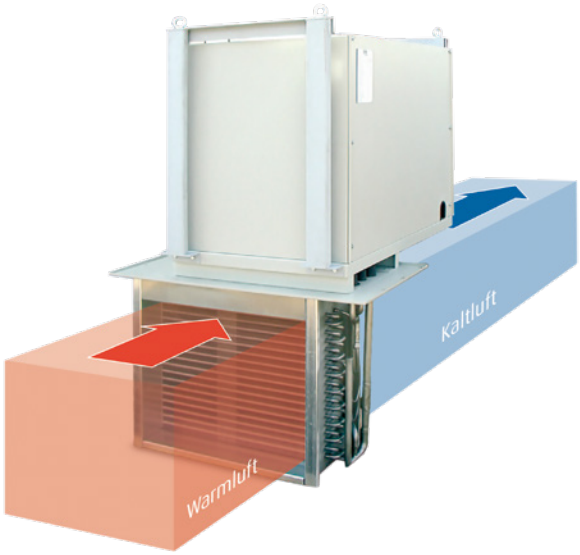
Temperature deviations are signalled via a parametrizable alarm output. The setpoint and actual temperature are visualized on the switch cabinet.
The setpoint can be changed by the customer.

During commissioning, the system can be optimized to the customer's conditions on site.

Each DV unit is wired ready for connection, including the switch cabinet. Other interfaces can be provided at the customer's request.

The modular design allows adaptation to different installation situations. This enables us to provide fast and tailor-made solutions for every customer requirement – naturally, with all the standard voltages and mains frequencies as well as in accordance with common electrical standards.

DV coolers are subjected to extensive functional and performance tests and pushed to their limits in order to guarantee the performance described.



Product features

- High-performance evaporator with copper tubes and press-fitted aluminium fins
- High-performance condenser with axial fan in air-cooled version
- Stainless steel plate heat exchanger with cooling water controller in water-cooled version
- Full or semi-hermetic compressor, 100% suction gas-cooled
- Thermostatic or electronic expansion valves
- Microprocessor-controlled temperature control unit
- Automatic power control
- Control accuracy ±1 K
- Condensation pressure control
- Pre-wired switch cabinet in industry standard design
- Signal exchange via Harting connector for external release, operating and fault signalling

Individual design, modular constructions

DV coolers are optionally available with an evaporator housing. Our DV series evaporators are made of copper pipes with aluminium fins.
The heat exchangers are optionally available in V2A or V4A stainless steel versions.

In versions with an evaporator housing, condensation water is drained off via an open outlet. A droplet separator is installed depending on the technical specifications.

Industries and applications

- Air conditioning
- Feeding cooling zones for workpieces in the metalworking industry
- Manufacturing processes for syrups and chocolate in the food industry

Options at a glance

- High-performance evaporators in various material combinations, e.g. stainless steel tubes (V2A, V4A) with pressfitted epoxy resin-coated aluminium fins
- Special voltages and special standards such as UL, CSA
- Control accuracy ±0.5 K
- Reference control
- Outdoor installation
- Evaporator housing
- Housing with special paintwork finishes or stainless steel version
- Fan speed control
- ASI/Profibus connection, Ethernet connections
- PLC controls
- Speed controlled compressors for energy-efficient output adjustment
- Flexible switch cabinet installation
- External condenser/condensing unit

Advantages at a glance

- Planning, project scheduling, optimization and production from one source
- Electronic integration into central control systems
- Instruction and training courses for operators
- Using well-known brand manufacturers enables fast spare parts deliveries.
- 24-hour hotline and service network
- 5 years' warranty with a maintenance contract

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