HYDAC INTERNATIONAL

Fluid Cooling Systems
FLKS / FWKS / RFCS / HCC

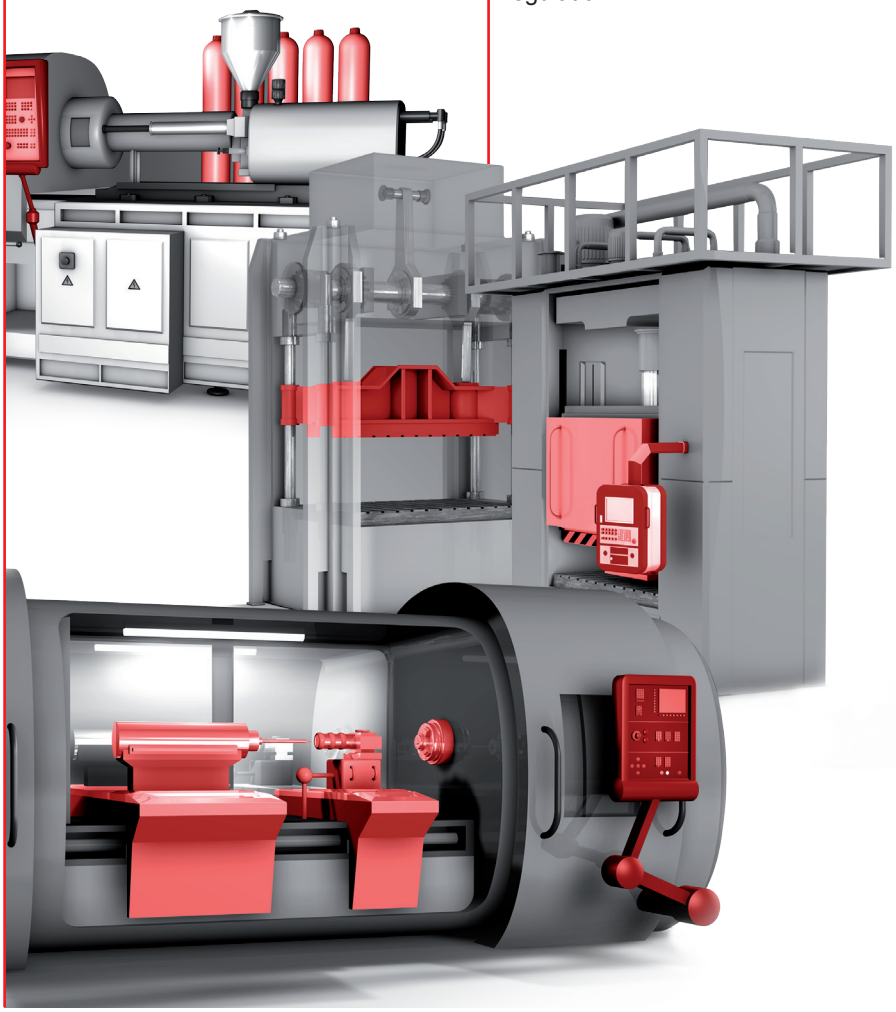
General

The heat arising from internal thermal loss in main spindles, drives, control cabinets, cooling lubricants and hydraulics can be channelled away very effectively by fluid cooling.

Using HYDAC chiller systems with air cooling, water cooling or compressor cooling allows all requirements to be fulfilled and a constant cooling temperature to be achieved.

Energy-efficient control systems, such as the speed control used for fan drives, not only reduce noise levels but also provide significant energy savings.

Performance-controlled compressor cooling units allow operation to be adjusted to suit requirements, saving energy while achieving temperature control accuracy of ±0.2 K. Using the patented mixer-valve system in conjunction with an immersion pump allows this exact set-up to be realized inexpensively and with precise regulation.



FLKS-2EC

FLKS-8EC

FLKS Fluid/Air Cooling Systems

Features

- Cooling of circuits which use mineral oil or water glycol
- Compact design with plastic tank, circulation pump, cooling element and fan
- Various sizes with cooling capacities up to 4.5 kW/K and flow rates up to 300 l/min

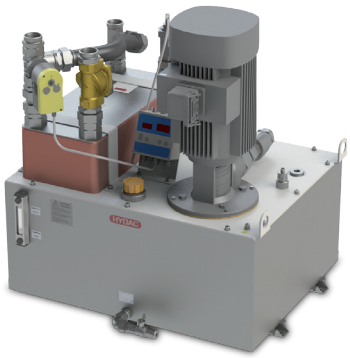
Function

The pump conveys the cooled operating fluid from the tank through the component that is to be cooled. The fluid absorbs heat from the component and then flows back to the heat exchanger, where it is returned to a cooler temperature by the air flowing from the installed fan.

Advantages

- Cost-effective and efficient cooling system
- Using immersion pumps
- Sizes FLKS-1, FLKS-2, FLKS-3, FLKS-4 and FLKS-5 with plastic tank housing; tank content > 110 l with stainless steel tank (FLKS-8 and FLKS-10)
- Energy-efficient thanks to optimized and adjusted drives and the heat being released directly to the surroundings
- Speed-controlled systems:
  The temperature of the operating fluid is controlled by adjusting the fan speed with a set difference to the ambient temperature.
  The speed control is integrated as standard for sizes FLKS-8 and -10.

FWKS-2/2.x



FWKS-5/1.x

FWKS Fluid/Water Cooling Systems

Features

- Cooling of circuits which use mineral oil or water glycol
- Compact design with plastic tank or stainless steel tank, circulation pump and plate heat exchanger
- Various sizes with cooling capacities up to 250 kW and flow rates up to 300 l/min
- Can be used as a temperature-controlled intermediate circuit.
  In this way the contamination and corrosion in the coolant circuits which could arise as a result of direct cooling with poor water quality is prevented.

Function

The pump conveys the cooled operating fluid from the tank through the component that is to be cooled. Once there, it absorbs the heat. It then flows back to the plate heat exchanger, where it is returned to a cooler temperature by the cooling water.

Advantages

- Cooling to below ambient temperatures also possible (depending on temperature of the cooling fluid)
- Using immersion pumps
- Low release of heat to surroundings and low noise emission
- Thermostatically or electronically controlled proportional valve or control ball valve available as an option: the temperature of the operating fluid can thus be maintained at a specific temperature value.

RFCS Compressor Coolers

Features

- Fluid cooling system as separate auxiliary cooler or for integration into a machine
- Cooling capacities from 1 to 160 kW
- Can be used for any cooling tasks
- Stand-alone control of the system by means of innovative controller design
- Condenser available as water-cooled or air-cooled variant
- Several cooling circuits possible
- Precise temperature control accuracies from ±0.1 K

Function

The RFCS refrigerated fluid chiller system allows various fluids such as water, water glycol and oil to be cooled. The chiller system consists of refrigerator, pump, tank and controller and is able to set the temperature of the operating fluid to a previously configured target value independently.

The energy-efficient, patented mixer principle, combined with a sealless submersible pump, makes this system the ideal component for your machine tool.

Advantages

- Target temperature can be set at or below ambient temperature
- Leak-free immersion pump
- Compact dimensions
- User-friendly controller interface
- Cleanable air filter
- Plug & Play solution
- Easy to service and user-friendly

HCC Control Cabinet Cooler

Features

- Control cabinet cooler for roof installation or wall/door mounting
- Cooling capacities from 0.1 to 15 kW
- For all cooling applications in switchgears and control cabinets
- Stand-alone control of the system by means of innovative controller design
- Air/air or air/water coolers are also available

Function

The HCC control cabinet cooler system is flexible in its installation and designed to cool control cabinets. Special heat exchanger designs ensure energy-efficient operation and a high level of operating reliability.

Regardless of the version used, whether air/air, air/water or refrigeration, the HCC series ensures optimal conditions and improved service life for electronic components.

Advantages

- Compact design
- Innovative heat exchanger designs
- Optimal condensate separation
- User-friendly controller interface
- Plug & play solution

Note

The information in this brochure relates to the operating conditions and applications described.

For applications and operating conditions not described, please contact the relevant technical department.

Subject to technical modifications and corrections.

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