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Recirculating Chiller ULK-402 NP

Description

The ULK-402 NP Circulating Chiller combines attractive design with sustainable technology and is the optimal solution for a wide range of applications in laboratories, industry, research, and production. Thanks to its innovative housing design, it impresses with its particularly low weight and compact dimensions.

Combined with the quiet cooling unit, this handy cooler is ideal for placement directly on a desk at work. Environmentally friendly and future-oriented thanks to natural refrigerants: reduced refrigerant volume and significantly lower GWP (global warming potential) values, as well as low power consumption.

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Included in delivery:

- Thermal fluid
- Two hose connections each for hose diameters: 8 mm / 10 mm / 13 mm

Specifications

- Electronic temperature controller with LED display
- High-efficiency natural refrigerant
- Increased pump performance: discharge pressure 0.8 bar (max.) and flow rate 8 l/min (max.)
- Low operating noise
- Level indicator on the front of the unit
- Level monitoring with automatic pump shutdown
- Visual and audible alarm
- Refrigeration unit: hermetically sealed, air-cooled, low-maintenance
- Filling opening and hose connections on the top of the unit

Option

Color variants ULK 402 NP:

- grey
- white

Accessories

- Hose Ø 9mm | 16 bar | down to -20°C | PVC | with fabric | suitable for hose connection Ø 8mm
- Hose Ø 10mm | 16 bar | down to -20°C | PVC |with fabric | suitable for hose connection Ø 10mm
- Hose Ø 12.7mm | 16 bar | down to -20°C | PVC | with fabric | suitable for hose connection Ø 13mm
- Hose Ø 9mm | thermally insulated | 16 bar | down to -20°C | PVC | with fabric | suitable for hose connection Ø 8mm
- Hose Ø 10mm | thermally insulated | 16 bar | down to -20°C | PVC | with fabric | suitable for hose connection Ø 10mm
- Hose Ø 12.7mm | thermally insulated | 16 bar | down to -20°C | PVC | with fabric | Suitable for hose connection Ø 13mm
- Hose set Ø 9mm | thermally insulated | 16 bar | down to -20°C | PVC | with fabric | 2x2m | Suitable for hose connection Ø 8mm
- Hose set Ø 10mm | thermally insulated | 16 bar | down to -20°C | PVC | with fabric | 2x2m | Suitable for hose connection Ø 10mm
- Hose set Ø 12.7mm | thermally insulated | 16 bar | down to -20°C | PVC | with fabric | 2x2m | Suitable for hose connection Ø 13mm

Thermoplate TP

For cooling and thermostatting in conjunction with ULK recirculating chillers

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Low Noise

During the development of the ULK recirculating chillers, special emphasis was placed on energy efficiency and user-friendliness. The particularly quiet fan adjusts its speed to the required power. You thus benefit from lower energy consumption and low operating noise. Other components of the recirculating chillers, such as the pump, were also designed for low-noise operation.

User-friendly Operation

The filling funnel is integrated into the top of the device. The hose connectors feature a quick-release coupling and are self-sealing. This allows for easy, clean, and convenient filling, emptying, and changing of hoses.
The recirculating chiller scores highly in terms of user-friendliness thanks to its easy accessibility and intuitive touchscreen controller.
The controller with its glass surface is high-quality, easy to clean, and easy to read. The flow indicator and digital fill level indicator are integrated into the controller. Error messages are displayed clearly in plain text.

Sustainability and Efficiency

By using natural refrigerants, the amount of refrigerant in the devices has been reduced. Furthermore, natural refrigerants have a significantly lower GWP (global warming potential) than conventional refrigerants.
Another advantage of natural refrigerants is their significantly lower electricity consumption. This protects both the environment and your budget.

Operational Safety

With freeze and overheat protection, as well as flow monitoring with pump shutdown in the event of a water shortage, the device achieves a high level of operational safety, thus protecting your applications and the chiller. If the permissible temperature range is exceeded or not met, a visual and audible alarm will alert you to the deviation.

Versatile Use

The ten-liter coolant tank ensures high temperature stability. It also serves as a cold storage device and absorbs peaks in cooling demand. However, with minimal filling, you have a highly dynamic system that can respond quickly to your cooling needs with short cooling times.

The recirculating chillers, with cooling capacity from 600 to 2,000 watts and a temperature range from -10°C to +40°C, can be used for a wide variety of cooling tasks in laboratories, processes, and manufacturing, e.g., for cooling rotary evaporators, fermenters, electron microscopes, lasers, or industrial and production equipment. Thanks to their high-quality workmanship and long-lasting design, the recirculating chillers are an economically attractive alternative to tap water cooling.

Advantages and Features at a Glance

- Highest quality through the use of components from renowned manufacturers.
- Compact design combined with low operating noise allows for installation directly at the workplace.
- Well-thought-out construction allows for the installation of multiple coolers directly next to each other.
- Operates with natural refrigerant.
- Individually adaptable to your needs thanks to a variety of options:
  - Mobile design
  - MOD-Bus interface
  - Potential-free alarm contact for connection to an external alarm system
  - Voltage input for external setpoint
  - Voltage output for actual value output
  - Interface converter/gateway from RS485 to USB or Ethernet
  - Direct temperature measurement in your application possible using an external sensor. The tracked setpoint achieves greater temperature consistency than standard systems.

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Technical Data

Operation	-10°C up to +40°C
Temperature accuracy at -10°C	+/- 1 K
Display resolution	0.1 K
Cooling Capacity	
at +20 °C	400 W
at +10 °C	350 W
at 0 °C	250 W
at -10 °C	80 W
Circulation Pump	
Flow rate (max. with hose Ø10 mm)	8 l/min
Flow pressure (max. with hose Ø10 mm)	0.80 bar
Hose connection	G 1/4" for hose Ø 8/10/13mm
Filling volume	1.5 to 4.0 l
General Technical Data	
External dimensions (W x D x H)	260 x 370 x 405 mm
Installation dimensions (W x D)	660 x 570 mm
Weight	19 kg
Noise (distance 1 m)	47 dB(A)
Ambient temperature range	+5°C to +40°C
Max. coolant temperature	60°C
Electrical connection	230 V / 50 Hz
Power consumption	200 W
Max. current consumption	1.6 A
Protection class	IP 20
Classification	I / NFL
Max. operating pressure	25 bar
Refrigerant	R290 (GWP 3*)
Minimum room volume (Minimum available air volume of the installation room according to DIN EN IEC 61010-2-011)	8 m^3