

Refrigerated Heating Circulator with water-cooled cooling machine and electrical level indicator. Magnetic coupled circulation pump made of stainless steel. Automatic switch-over and capacity adaptation for heating and cooling machine. Copper soldered evaporator, moistened parts and housing made of stainless steel. For externally closed applications. With adjustable overtemperature protection according to DIN 12876. Powerful variable speed pump (soft start) with integrated pressure control with optional external pressure sensor.

#### Pilot ONE:

The Pilot ONE controller with pioneering technology and advanced control functions brings numerous advantages to routine work. The extensive features list includes a brilliant 5,7" TFT touchscreen display, USB and network connections, an integrated technical glossary and language support in 13 languages (EN, DE, FR, IT, ES, RU, ZH, PT, JA, CS, PL, KO, TR). The Pilot ONE has a convenient navigation system with easily remembered icons and menu categories which are colour sorted to make routine work simpler. Thanks to a favourites menu and One-Click operator guidance all important information is always just a few keystrokes away. Software wizards also help you to set up, ensuring correct settings. The USB port allows connection of the system to a PC or notebook. Together with the Spy software, requirements such as remote control or data transmission are easily achieved in a cost-effective manner. Network integration is easy with the internet port.

#### Further functions:

E-grade Professional installed as standard, TAC (True Adaptive Control) - self optimising internal and cascade control, selectable temperature control mode (Internal/Process), programmer with 10 programs (max. 100 steps), ramp function (linear and non-linear), 5 point calibration, scalable graphic display, favourites menu, display resolution 0,01 K, integrated technical glossary, 2nd set point, user menus (Administrator level), calendar start, wallpaper selection.

4-year warranty - registration required.

The dimensions specified below are approximate and may be subject to change.

#### Technical data according to DIN 12876

Operating temperature range	-60...200 °C	
Temperature stability at -10°C	0,01 K	
temperature set point / display	5,7" colour Touchscreen	<b>Order-No.: 1063.0014.01</b>
Resolution of display	0,01 K	
Internal temperature sensor	Pt100	
Sensor external connection	Pt100	
Interface digital	Ethernet, USB (Host u. Device), RS232	
digital input	ECS ONE	
digital output	POKO ONE	
Alarm message	optic, acoustic, relay	
Safety classification	III / FL	
Heating power	36 kW	
Cooling power with	Thermooil	
at 200°C	45 kW	
at 100°C	45 kW	
Cooling power with	Ethanol	
at 0°C	45 kW	
at -20°C	42 kW	
at -40°C	21 kW	
at -60°C	6 kW	
Refrigeration machine	water-cooled, CFC- and HCFC-free	
Refrigerant stage 1.1 (ASHRAE, GHS)	R-507 (A1, H280)	
Global Warming Potential (GWP)	3985	
CO2-Äquivalent Stufe 1.1	0,0 t	
Refrigerant stage 1.2 (ASHRAE, GHS)	R-507 (A1, H280)	
Global Warming Potential (GWP)	3985	
CO2 equivalent stage 1.2	0,0 t	
UN-number	UN 2857	
Circulation pump:	MK pump	
max. delivery	343 l/min	
max. delivery pressure	4 bar	
Delivery at 1,0 bar	300 l/min	
Delivery at 1,5 bar	276 l/min	

## Technical data according to DIN 12876

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Delivery at 2,0 bar	250 l/min
Delivery at 2,5 bar	219 l/min
Delivery at 3,0 bar	183 l/min
Delivery at 3,5 bar	136 l/min
Pump connection	flange DN32 PN10/40 EN1092-1
max. permissible kin. viscosity	50 mm <sup>2</sup> /s
Cooling water connection	flange DN32 PN10/40 EN1092-1
Consumption at water 15°C, flow 0°C	5000 l/h
min. cooling water differential pressure	3 bar
max. cooling water pressure	6 bar
min. filling capacity	30 l
Filling capacity expansion tank	30 l
Overall dimensions WxDxH **	2210x1300x2160 mm
Power supply requirement	400V 3~ 50Hz
Pressure equipment category	I
Degree of Protection	IP20
min. ambient temperature	5 °C
max. ambient temperature	40 °C

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from Serial-No.:

1.0/26

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Technical details and dimensions are subject to change. No liability is accepted for errors or omissions. Illustrations can deviate from the original.

Included Accessories:

mini-USB cable #54949, E-grade "Professional" #9496

Optional accessories:

E-grade "Explore" #10495, external sensor, temperature control / - connection hoses, heat transfer fluid, RS232 adapter cable #55018, further accessories, etc.: see catalog.

Note: Pump connections: Bore shape Y (60°) according to DIN 3863, pipework/flexible tempering hoses: Ball socket according to DIN 3863, sleeve nut according to DIN 3870.

Output data valid for: Room temperature 20°C, cooling water inlet 15°C and 3 bar differential pressure between cooling water inlet and - outlet. This temperature control unit is designed to operate with cooling water intake temperature between 5°C and 20°C. When cooling water temperatures fall below the condensation point, it is essential to insulate the cooling water pipes in the unit.

As the cooling water temperature increases, drop in the cooling power should be expected, and also an increased cooling water flow rate possible. Materials used in the cooling water circuit include; copper, Stainless steel 1.4401, MS, PA, PPE, PTFE and EPDM. Please use suitable cooling water.

in accordance with EN60034-1 the following voltage and frequency tolerances are valid:

Voltage + / - 5% with a simultaneous frequency tolerance of + / - 2%

Example -5% voltage and + 2% frequency -> not allowed!

-5% voltage and - 2% frequency -> allowed

Information to Electromagnetic compatibility:

Classification (disturbance) to EN55011: Class A, Group 1

Attention: leakage current > 3,5mA

Standard delivery conditions - Power cable configuration:

1. Single / two-phase devices (100V to 240V) --> with power cable and country-specific plug (please specify when ordering)
2. Three-phase devices with current consumption less than 63A --> with cable, without plug
3. Three-phase devices with current consumption greater than 63A --> without cable, without plug

This equipment is compliant to US-SNAP and all applicable EU laws. The US-SNAP end-use for this equipment is the industrial process refrigeration. Certification by a Notified Body upon request.

\*\* Please respect space requirements. See operating conditions at [www.huber-online.com](http://www.huber-online.com)