

Refrigerated Heating Circulator with water-cooled cooling machine and optical level indicator. Circulation pump made of stainless steel with cooled shaft seal with free shaft, without bearing in the liquid. Automatical switch-over and capacity adaption for heating and cooling machine. Copper soldered evaporator, moistened parts and housing made of stainless steel. As well as for externally closed and also externally open applications. With adjustable overtemperature protection according to DIN 12876. Powerful variable speed pump (soft start) with integrated pressure control with optional external pressure sensor.

Unistat „P“ Models: Circulating pumps with a high discharge pressure for applications with high pressure drops, e.g. in the Flow-Through chemistry or in the Semicon industry.

#### Pilot ONE:

The new 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, CN, PT, JP, CZ, 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.

3-2-2 warranty - registration required.

#### Technical data according to DIN 12876

|   |                                       |                                |
|---|---------------------------------------|--------------------------------|
| Operating temperature range               | -85...250 °C                          |                                |
| Temperature stability at -10°C            | 0,01 K                                |                                |
| temperature set point / display           | 5,7" colour Touchscreen               | <b>Order-No.: 1047.0001.01</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                     | Class III / FL                        |                                |
| Heating power                             | 3,4 kW                                |                                |
| Cooling power with                        | Ethanol                               |                                |
| at 0°C                                    | 1,5 kW                                |                                |
| at -40°C                                  | 1,3 kW                                |                                |
| at -80°C                                  | 0,3 kW                                |                                |
| Refrigeration machine                     | water-cooled, CFC- and HCFC-free      |                                |
| Circulation pump:                         |                                       |                                |
| max. delivery                             | 50 l/min                              |                                |
| max. delivery pressure                    | 3 bar                                 |                                |
| Pump connection                           | M30x1,5 male                          |                                |
| max. permissible kin. viscosity           | 50 mm <sup>2</sup> /s                 |                                |
| Cooling water connection                  | G1/2 male                             |                                |
| min. cooling water differential pressure  | 1 bar                                 |                                |
| max. cooling water pressure               | 6 bar                                 |                                |
| min. filling capacity                     | 3 l                                   |                                |
| Filling capacity expansion tank           | 3,6 l                                 |                                |
| Power supply factory configured (3 Phase) | 400V 3~ 50Hz *                        |                                |
| Degree of Protection                      | IP20                                  |                                |
| min. ambient temperature                  | 5 °C                                  |                                |

## Technical data according to DIN 12876

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max. ambient temperature

40 °C

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from Serial-No.:

1.0/16

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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.

Accessories and periphery: mini-USB cable #54949\*, E-grade "Professional" #9496\*, E-grade "Explore" #10495, SpyLight-Software, hose connection for G1/2 male, \* Com.G@te Namur, PC-Com.G@te-cabel, Holder for Com.G@te #10018, Com.G@te-extension cable: upon request, RS232 adapter cable #55018, Thermofluid, external pressure sensor, metal hoses, braided hoses for cooling water, external sensor, connecting cable, isolation sleeve for external open applications, float switch in sight glass for extended security.

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.

\* standard equipment

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 has been designed to operate with cooling water up to 20°C. 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

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