# CC-410wl

Refrigerated Heating Circulator Bath with air- and water-cooled cooling machine. Powerful, variable speed, pressure and suction pump, evaporator (cooler) and housing of stainless steel, CFC and H-CFC free. With adjustable overtemperature protection according to DIN 12876.

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.

The range of functions can be expanded very easily via E-grade at any time by entering a unit specific upgrade code:

E-grade "Exclusive": TAC (True Adaptive Control) - self optimising internal and cascade control, selectable temperature control mode (Internal/Process), programmer with 3 programs (max. 15 steps), ramp function (linear), 5 point calibration, scalable graphic display, favourites menu, display resolution 0,01 K.

E-grade "Professional": Programmer with 10 programs (max. 100 steps), ramp function for temperature gradients (linear and non-linear), 2nd set point, user menus (Administrator level), calendar start.

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 | -45...200 °C |
| Temperature stability at -10°C | 0,02 K |
| temperature set point / display | 5,7" colour Touchscreen |
| Internal temperature sensor | Pt100 |
| Sensor external connection | Pt100 |
| Interface digital | Ethernet, USB (Host u. Device), RS232 |
| Safety classification | III / FL |
| Heating power | 2,4 kW |
| Cooling power | |
| at 100°C | 0,8 kW |
| at 20°C | 0,8 kW |
| at 0°C | 0,8 kW |
| at -20°C | 0,5 kW |
| at -30°C | 0,15 kW |
| at -40°C | 0,1 kW |
| Refrigeration machine | air- water-cooled, natural refrigerant |
| Refrigerant (ASHRAE, GHS) | R-1270 (A3, H220) |
| Global Warming Potential (GWP) | 0 |
| UN-number | UN 3358 |
| max. delivery | 25 l/min |
| max. delivery pressure | 0,7 bar |
| Suction pump | yes |
| max. delivery (suction) | 18,5 l/min |
| max. delivery pressure (suction) | 0,4 bar |
| Pump connection | M16x1 male |
| max. permissible kin. viscosity | 50 mm²/s |
| Cooling water connection | G1/2 male |
| min. cooling water differential pressure | 3 bar |
| max. cooling water pressure | 6 bar |
| Bath volume | 22 l |
| min. filling capacity | 17 l |
| Bath capacity with displacement rack | 8,5 l |



**Order-No.: 2019.0019.01**

**Technical data according to DIN 12876**

| | |
|---|---|
| Width bath opening WxD / bath depth | 280 x 280 / 200 mm |
| Height of bath opening | 520 mm |
| Overall dimensions WxDxH ** | 420x565x719 mm |
| Power supply requirement | 208V 2~ 60Hz |
| Degree of Protection | IP20 |
| max. ambient temperature | 40 °C |
| min. ambient temperature | 5 °C |

**from Serial-No.:** **1.0/25**

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, blank plug , hose connector NW12 , sleeve nuts thread , bath cover .

Optional accessories:
drain valve, hose coupling 3/8", cooling water outlet 7/16", displacement insert to reduce bath volume, calibration insert, Com.G@te, temperature control / - connection hoses, thermofluids, further accessories, etc.: see catalog.

Output data valid for: Room temperature 20°C, cooling water inlet 15°C and 3 bar differential pressure between cooling water inlet and -outlet.The temperature control unit is designed for cooling water temperatures between 5 °C and 20 °C. If the cooling water temperature is below the dew 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. If the ambient temperature rises, the cooling capacity may drop. Materiels 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

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