

Ministat 230



Refrigerated Heating Circulator Bath with air-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 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.

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.

Technical data according to DIN 12876

Operating temperature range	-40200 °C	
Temperature stability at -10°C	0,02 K	
temperature set point / display	5,7" colour Touchscreen	
Internal temperature sensor	Pt100	En Des
Sensor external connection	Pt100	
Interface digital	Ethernet, USB (Host u. Device), RS232	
Safety classification	III / FL	
Heating power	1,5 kW	
Cooling power		
at 100°C	0,42 kW	
at 20°C	0,42 kW	and the second se
at 0°C	0,38 kW	
at -10°C	0,33 kW	
at -20°C	0,25 kW	2 Uttime
at -30°C	0,14 kW	
at -40°C	0,05 kW	
Refrigeration machine	air-cooled, natural	
5	refrigerant	
Refrigerant (ASHRAE, GHS)	R-290 (A3, H220)	Order-No.: 2015.0012.01
Global Warming Potential (GWP)	0,02	Order-No 2015.0012.01
Refrigerant quantity	0,099 kg	
Pressure pump	yes	
max. delivery	22 I/min	
max. delivery pressure	0,7 bar	
Suction pump	yes	
max. delivery (suction)	16 l/min	
max. delivery pressure (suction)	0,4 bar	
Pump connection	M16x1 male	
max. permissible kin. viscosity	50 mm²/s	
Bath volume	3,5 I	
min. filling capacity	3	
Bath capacity with displacement rack	1,7 I	
Width bath opening WxD / bath depth	170 x 85 / 135 mm	
Overall dimensions WxDxH **	255x450x476 mm	
Net weight	37 kg	

Technical data according to DIN 12876

from Serial-No.:	401064	1.4/20
min. ambient temperature	5 °C	
max. ambient temperature	40 °C	
Degree of Protection	IP20	
Pressure equipment category	Art. 4.3 PED	
Fuse	16 A	
max. current	14 A	
Power supply requirement	110-120V 1~ 60Hz	

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, 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. If the ambient temperature rises, the cooling capacity may drop.

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

** Please respect space requirements. See operating conditions at www.huber-online.com