

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 11 languages (EN, DE, FR, IT, ES, RU, CN, PT, JP, CZ, PL). 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.

3-2-2 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	1-5-
Sensor external connection	Pt100	
Interface digital	Ethernet, USB (Host u. Device), RS232	
Safety classification	Class III / FL	
Heating power	2 kW	1000
Cooling power		10.00
at 100°C	0,42 kW	
at 20°C	0,42 kW	
at 0°C	0,38 kW	
at -10°C	0,33 kW	
at -20°C	0,25 kW	~
at -40°C	0,05 kW	
Refrigeration machine	air-cooled, natural refrigerant	
Refrigerant	R290	
Refrigerant quantity	0,1 kg Order-No.: 2015.0005.01	
Gas warning sensor	without Order-No 2015.0005.01	ļ
Pressure pump		
max. delivery	27 l/min	
max. delivery pressure	0.7 bar	
Suction pump	yes	
max. delivery (suction)	20 l/min	
max. delivery pressure (suction)	0.4 bar	
Pump connection	M16x1 male	
max. permissible kin. viscosity	50 mm²/s	
Bath volume	3,7	
min. filling capacity	2,8	
Bath capacity with displacement rack	1,7	
Width bath opening WxD / bath depth	170 x 85 / 135 mm	
Overall dimensions WxDxH **	255x450x476 mm	
Net weight	35 kg	
Power supply requirement	230V 1~ 50/60Hz	

from Serial-No.:	152163	1.1/15
min. ambient temperature	5 °C	
max. ambient temperature	40 °C	
Degree of Protection	IP20	
Fuse (1 phase)	16 A	
max. current	11 A	

Technical details and dimensions are subject to change. No liability is accepted for errors or omissions.

Accessories and periphery: mini-USB cable #54949*, Adapter nom. dia. 12 mm*, dummy plugs*, sleeve nuts thread M16x1*, connection tubes, drain valve, displacement insert to reduce bath volume, calibration insert * standard equipment

Output data valid for: Room temperature 20°C 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 B, Group 1

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