Unistat 645w

Refrigerated Heating Circulator with water-cooled cooling machine and electronical level indicator. Magnetic coupled circulation pump made of stainless steel. Automatical switch-over and capacity adaption 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.

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
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, natural refrigerant
Refrigerant (ASHRAE, GHS)	R-1270 (A3, H220)
Global Warming Potential (GWP)	0
UN-number	UN 3358
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
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

Order-No.: 1063.0011.01

Technical data according to DIN 12876

max. permissible kin. viscosity	50 mm²/s
Cooling water connection	G1 1/4 male
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 **	1850x1348x2167 mm
Power supply requirement	460V 3~ 60Hz
Degree of Protection	IP20
min. ambient temperature	5 °C
max. ambient temperature	40 °C

from Serial-No.: **1.0/24**

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.

Note: Connection option for extract ventilation

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. 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

External branch circuit protection according to UL 489 required.
For the specification, please refer to the electrical schematics.

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