

Heating and Cooling Unit

TT-1368 W

For temperatures from 20°C up to 90°C with very high cooling capacity
Powerful unit with large return volume

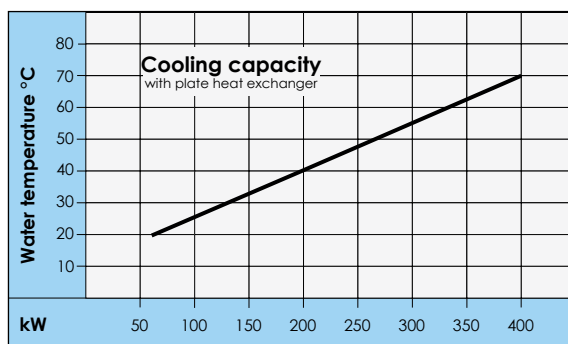
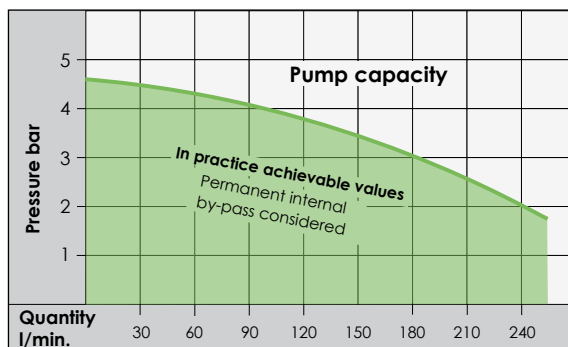
Operational use:

rollers, plates, double walled vessels and other heavy duty use



Features included

- Self-optimizing temperature controller with digital display of the set and actual temperature. With high precision regulation in $\frac{1}{10}^{\circ}$ range; can be adjusted to read °C or °F.
- Automatic temperature control - difference between set and actual temperature activates an alarm.
- Digital flow indication with control of the minimum flow.
- Indication of the pump pressure.
- Automatic water filling.
- Large return volume.
- All components in contact with water are made from stainless steel.
- Heating with automatic cascade connection.
- Safety devices:
 - Automatic level control for dry run protection.
 - Electronic temperature limiter in the controller and separate mechanical safety thermostat.
 - Main switch, transformer and motor protection switch.
 - Horn in case of failure.
- All failures are visually indicated.
- Unit on feet.



Options

- Equipped with the controller MP-988 allows over 30 different digital interfaces: RS-232, RS-485, Current Loop 20mA, CAN-bus, Profibus etc.
- Digital clock timer.
- External command of the controller.
- Collective alarm.
- With regulation of pressure.



TOOL-TEMP[®]

Technical data

Temperature range	20°C up to 90°C with water	
Temperature control	self-optimizing, electronic microprocessor controller MP-888 with digital display of the set and actual value. Automatic temperature monitoring.	
Flow control	electronically, with digital display and automatic control of the minimum flow.	
Heating capacity	48 kW	72 kW
<i>Switchable in stages</i>	8/8/8/8/8/8	16/16/16/8/8/8
	automatic shut down of the heating capacity which is not required.	
Cooling capacity	approx. 400 kW at 70°C	
Pump capacity	motor 4 kW max. 4,5 bar / max. 250 l/min	
Filling amount	70 litres	100 litres
Expansion volume	70 litres	100 litres
Connections		
<i>Medium</i>	flange DN32/PN16	
<i>Cooling water</i>	1½" BSP female thread	
Dimensions (LxWxH)	1'710 x 790 x 1'540 mm	2'150 x 1'300 x 1'950 mm
Weight (empty)	approx. 520 kg	approx. 850 kg
Colour	silvergrey RAL 7001	

All possible voltages are available from 3 x 200 V to 3 x 600 V and 50/60 Hz. The units are available conform to UL/CSA specifications. For the USA market the units are equipped with NPT-thread connections and the controller is adjusted to indicate °F.

Electronic temperature controllers

The electronic controllers MP-888 and MP-988 can be operated to read °C or °F. The analog interfaces 0-5 V, 0-10 V and 4-20 mA are standard included in the controllers - **without additional costs**.

The self-optimizing feature on these controllers allows a very high regulating accuracy even at high temperatures and adheres to the set temperatures independently of the consumer size.

Flow control:

The indication of the flow rate is possible in litres or gallons per minute. As soon as the flow falls below a minimum, the alarm is activated.

Standard controller MP-888



Set temperature
(required temperature)

Actual temperature
(effective temperature)

Indication of the flow

Analog interfaces

- 0 - 5 V, 0 - 10 V, 4 - 20 mA

Digital interface controller MP-988 (Optional)



Digital interface

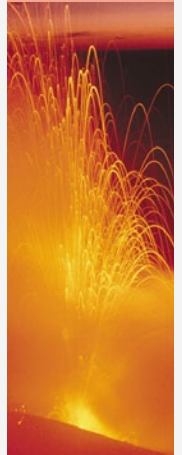
- RS-485, RS-232, Current Loop 20 mA, CAN-bus, Profibus
- Incl. all existing machine protocols

Temperature difference monitoring

Indication of up to three temperatures

Analog interfaces

- 0 - 5 V, 0 - 10 V, 4 - 20 mA



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