

Temperature Control Unit

TT-388/2

2 x 16 kW
2 x 24 kW

Double-circuit oil unit for temperatures up to 360°C
Heating capacity: 2 x 16 kW or 2 x 24 kW

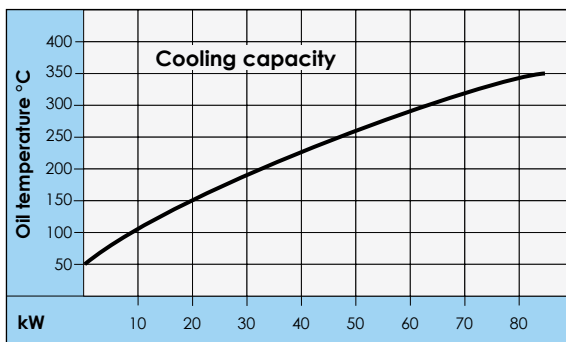
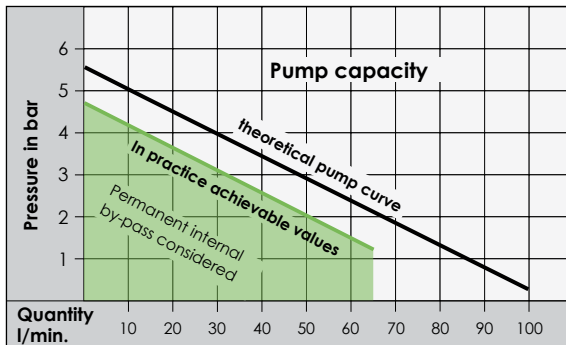
Operational use:
moulds in the die casting industry, small rollers and plates

Model Z pump with axial face seal
Model A pump with seal less magnetic drive



Features included

- Self-optimizing temperature controller with digital display of the set and actual temperature. With high precision regulation in $1/10^\circ$ 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.
- Reversing switch for temperature controlling at the mould.
- Leakstopper device – unit can be used in pressure or vacuum mode. No medium is lost on leaking tools, therefore ensuring continued production.
- Automatic mould drain.
- Lime scale free heat exchanger.
- Leak free high temperature pump with axial face seal.
- Hot oil circuit with by-pass, which ensures internal circulation if valves are closed.
- Expansion tank with a drip pan.
- No oil cracking because of special construction of the heating elements.
- Heating switchable in stages.
- Safety devices:
 - 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 castors.



Option

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



TOOL-TEMP®

Technical data

TT-388/2 Z or A

TT-388/2 Z or A

Temperature range	up to 360°C with heat transfer oil TOOL-THERM SH-3	
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	2 x 16 kW	2 x 24 kW
<i>Switchable in stages</i>	2 x 8/8	2 x 8/16
Cooling capacity	2 x 90 kW at 360°C circulating temperature	
Pump capacity	motor 1,8 kW	
<i>Pressure mode</i>	max. 5,5 bar / max. 100 l/min	
<i>Vacuum mode</i>	vacuum max. 8 mH ₂ O	
<i>Model Z</i>	pump with axial face seal and triple bearing system	
<i>Model A</i>	pump with seal less magnetic drive	
Temperature measurement at the mould	yes	yes
Leakstopper and mould drain	yes	yes
Expansion tank capacity	1 x 46 litres	1 x 46 litres
Filling amount	1 x 30 litres	1 x 42 litres
Expansion volume	1 x 36 litres	1 x 36 litres
Connections		
<i>Oil circuit</i>	¾" BSP female thread	
<i>Cooling water</i>	inlet water filter 1" BSP female thread outlet 1" BSP male thread	
Dimensions (LxWxH)	1'240 x 720 x 1'400 mm, incl. castors	
Weight	approx. 335 kg empty	approx. 375 kg empty
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

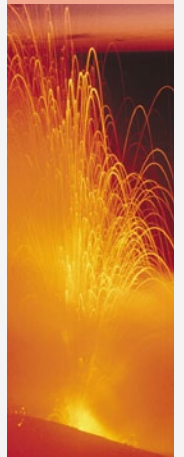
- RS-485, RS-232, Current Loop 20 mA, CAN-bus, Profibus
- Incl. all existing machine protocols

Temperature difference monitoring

Indication of up to three temperatures

Analog interfaces

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



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