

# Temperature Control Unit

# TT-288 Z/A

Oil unit for temperatures up to 250°C  
Available as double-circuit unit with 2 x 8 kW

Operational use:  
plastic/die casting moulds, small rollers and plates

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

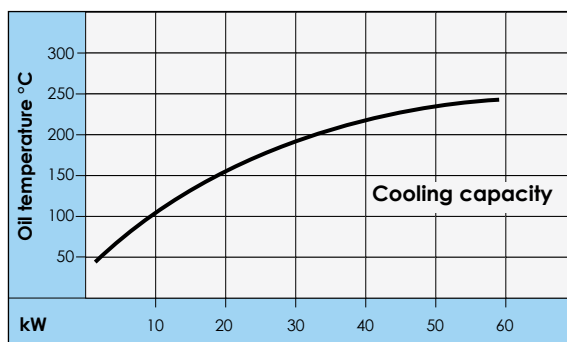
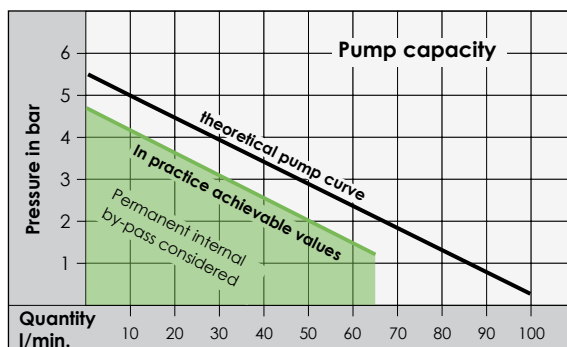
TT-288

TT-288/2



## 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  $^\circ\text{C}$  or  $^\circ\text{F}$ .
- 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.
- Additional plate heat exchanger for very high cooling capacity below 80°C.
- Digital clock timer.
- External command of the controller.
- Collective alarm.

## HEADQUARTERS & MANUFACTURER

**TOOL-TEMP AG**  
Industriestrasse 30

**CH-8583 Sulgen**  
Schweiz - Suisse - Switzerland

Tel.: +41 (0)71 644 77 77  
Fax: +41 (0)71 644 77 00

E-Mail: [info@tool-temp.ch](mailto:info@tool-temp.ch)  
Internet: [www.tool-temp.ch](http://www.tool-temp.ch)



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## Technical data

## TT-288

## TT-288/2

<b>Temperature range</b>	up to 250°C with heat transfer oil TOOL-THERM SH-3	
<b>Temperature control</b>	self-optimizing, electronic microprocessor controller MP-888 with digital display of the set and actual value. Automatic temperature monitoring.	
<b>Flow control</b>	electronically, with digital display and automatic control of the minimum flow.	
<b>Heating capacity</b>	<b>8 kW</b>	<b>2 x 8 kW</b>
<i>Switchable in stages</i>	3/5	2 x 3/5
<b>Cooling capacity</b>	60 kW	2 x 60 kW
	at 250°C circulating temperature	
<b>Pump capacity</b>	motor 1,8 kW	
<i>Pressure mode</i>	max. 5,5 bar / max. 100 l/min	
<i>Vacuum mode</i>	vacuum max. 8 mH <sub>2</sub> O	
<i>Model Z</i>	pump with axial face seal and triple bearing system	
<i>Model A</i>	pump with seal less magnetic drive	
<b>Temperature measurement at the mould</b>	yes	yes
<b>Leakstopper and mould drain</b>	yes	yes
<b>Expansion tank capacity</b>	14 litres	1 x 46 litres
<b>Filling amount</b>	9 litres	1 x 30 litres
<b>Expansion volume</b>	11 litres	1 x 36 litres
<b>Connections</b>		
<i>Oil circuit</i>	¾" BSP female thread	
<i>Cooling water</i>	inlet water filter	1" BSP female thread
	outlet non-return valve	1" BSP female thread
<b>Dimensions (L×W×H)</b>	1'130 × 390 × 1'070 mm	1'240 × 720 × 1'400 mm (incl. castors)
<b>Weight</b>	approx. 150 kg empty	approx. 325 kg empty
<b>Colour</b>	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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