

# Temperature Control Unit

Powerful temperature control unit

# TT-168

TT-168 E, TT-168 H with water up to 90°C mould weight up to 1'200 kg  
 with oil up to 150°C mould weight up to 600 kg  
 TT-168 E/A, TT-168 H/A with water up to 90°C mould weight up to 1'800 kg

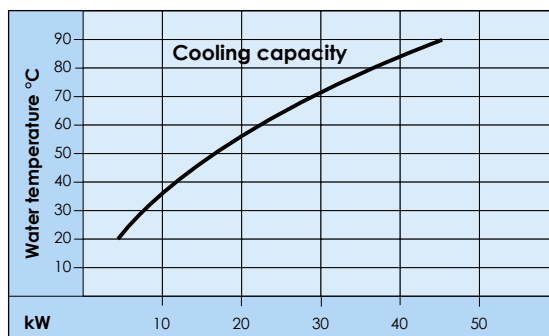
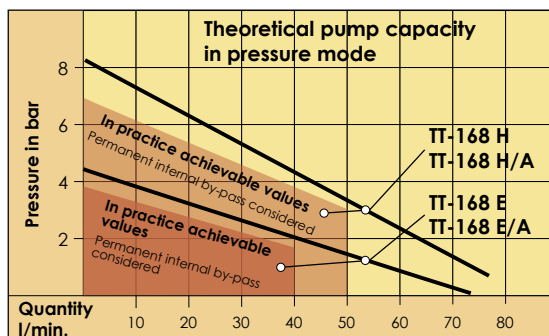
With electronic flow control

can be used with water or oil operation and also in the leakstopper mode



## Features included

- Digital flow indication with control of the minimum flow.
- Automatic temperature control - difference between set and actual temperature activates an alarm.
- Submersible seal less pump manufactured from bronze.
- Self-optimizing temperature control unit with digital display of the set and actual temperature. With high precision regulation in  $1/10^\circ$  range; can be adjusted to indicate  $^\circ\text{C}$  or  $^\circ\text{F}$ .
- Reversing switch for temperature controlling at the mould with connection for external thermocouple.
- Automatic mould drain.
- Leakstopper device – unit can be used in pressure or vacuum mode. No medium is lost at leaking tools, therefore ensuring continued production.
- Automatic water refill or manual oil refill.
- Time-limited water refill – prevents an uncontrollable filling when working with defective hoses.
- Lime scale free heat exchanger.
- Corrosion free unit with a long life span.
- All components in contact with water are made of stainless steel or bronze.
- Heating switchable in stages – switchable from 6 kW oil operation to 12 kW water operation.
- Safety devices:
  - Level control with two different levels: pre-warning with indication lamp and acoustic alarm; the unit continues to operate. If further liquid is missing, the unit stops.
  - Separate mechanical safety thermostat and electronic temperature limiter installed in the controller.
  - Main switch, automatic cutout, transformer and motor protection switch.
- Horn in case of failure: The alarm for the level pre-warning is indicated with a continuous sound, all others with an intermittent sound.
- All failures are visually indicated.
- Handles and castors.



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## Technical data

There are 4 different models available

	TT-168 E	TT-168 H	TT-168 E/A	TT-168 H/A
<b>Temperature range</b>	with water up to 90°C with oil up to 150°C			
<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 (water)</b>	12 kW	12 kW	18 kW	18 kW
<i>Switchable in stages</i>	3 / 9 / 12	3 / 9 / 12	9 / 9 / 18	9 / 9 / 18
<b>Heating capacity (oil)</b>	6 kW	6 kW	not suitable for oil operation	
<i>Switchable in stages</i>	3 / 3	3 / 3		
<b>Cooling capacity</b>	45 kW at 90°C			
<b>Pump capacity</b>	motor 0,75 kW	1,5 kW	0,75 kW	1,5 kW
<i>Pressure mode</i>	max. 4,5 bar	max. 8,0 bar	max. 4,5 bar	max. 8,0 bar
	max. 75 l/min.	max. 75 l/min.	max. 75 l/min.	max. 75 l/min.
<i>Vacuum mode</i>	vacuum max. 8 mHzO			
<b>Content of unit</b>	min. 16 litres / max. 20 litres			
<b>Connections</b>				
<i>Medium</i>	1/2" BSP female thread			
<i>Cooling water</i>	3/8" BSP male thread, inlet with water filter 3/8" BSP female thread			
<b>Dimensions</b>	Length: 710 x Width: 325 x Height: 785 mm, incl. castors and handles			
<b>Weight</b>	approx. 67 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 read °F.

## Electronic temperature controller MP-888

The electronic controller can be adjusted to indicate °C or °F. The analogue interfaces 0 – 5 V, 0 – 10 V and 4 – 20 mA are standard included in the controller – there is **no additional price** for them.

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



Set temperature / required temperature  
Adjustable in 1/10° range

Actual temperature / effective temperature displayed in 1/10° range

Indication of flow rate in different units, possible are litres per minute with 1/10 litres display. Switchable from English gallons to American gallons. As soon as the flow falls below a minimum, the alarm is activated.

### Flow control with automatic or manual pre-adjusted mode:

**Automatic:** The electronic flow control measures the actual flow, generates automatically a minimum flow and as soon as the flow falls below this value, the alarm will be activated.

**Manual:** The minimum flow can be adjusted manually. As soon as the flow falls below this value, the alarm will be activated.



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