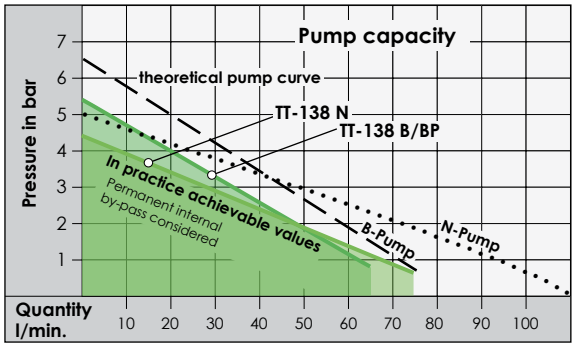
Temperature Control Unit

TT-138 N, B/BP

Powerful pressurised water unit with 18 or 24 kW heating capacity

Operational use:

Model N	**with water up to 140°C**	**pump with axial face seal**
Model B/BP	**with water up to 160°C**	**pump with seal less magnetic drive**

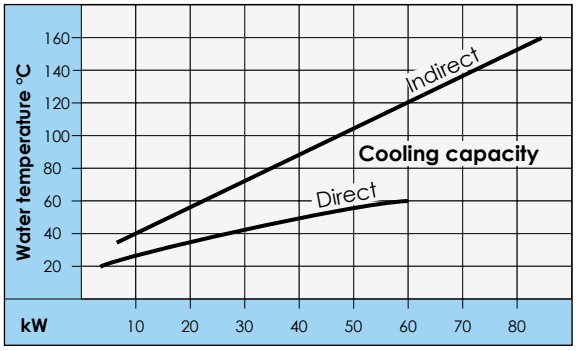


Features included

- Self-optimizing temperature controller with digital display of the set and actual temperature. With high precision regulation in $^{1}/_{10}°$ range; can be adjusted to read °C or °F.
- Automatic temperature control - difference between set and actual temperature activates an alarm.
- Indication of the pressure to the mould and of the system pressure.
- Automatic mould drain, pressure discharge, aeration and water filling.
- Lime scale free heat exchanger.
- All components in contact with water are made of stainless steel or bronze.
- Heating switchable in stages.
- 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 castors.

Unit equipped with 2 cooling systems:

- **Indirect cooling from 30°C up to 160°C**
- **Direct cooling up to 80°C**



Particularities

- Digital flow indication with control of the minimum flow.
- Reversing switch for temperature controlling at the mould.
- Mould drain by compressed air ensures complete emptying of the consumer.
- Leakstopper device – unit can be used in pressure or vacuum mode. No medium is lost on leaking tools, therefore ensuring continued production.
- Optional with digital interface controller MP-988.

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Technical data	TT-138 N		TT-138 B/BP	
Temperature range				
water	up to 140°C		up to 160°C	
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	**18 kW**	**24 kW**	**18 kW**	**24 kW**
Switchable in stages	6/12	6/18	6/12	6/18
Cooling capacity				
Indirect	approx. 85 kW at 160°C			
Direct	approx. 60 kW at 60°C			
Pump capacity	motor 1,8 kW		motor 1,8 kW	
Pressure mode	max. 5 bar / max. 110 l/min.		max. 6,5 bar / max. 75 l/min.	
Vacuum mode	vacuum max. 8 mH_2O		vacuum max. 8 mH_2O	
Model	axial face seal		seal less magnetic drive	
Pressure increasing pump	no		yes	
Temperature measurement at the mould	yes		yes	
Pressure discharge	yes		yes	
Leakstopper and mould drain	with compressed-air		with compressed-air	
Filling	automatic		automatic	
Connections				
Medium	¾" BSP female thread			
Cooling water	1" BSP male thread, inlet with water filter 1" BSP female thread			
Compressed-air	¼" BSP female thread			
Dimensions (LxWxH)	1'240 x 480 x 1'400 mm, incl. castors			
Weight	approx. 180 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.

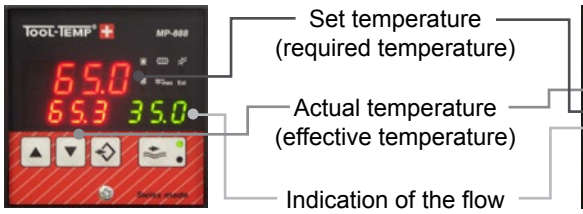
Electronic temperature controllers

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



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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