

# TT-409 Z

## Oil temperature control unit

- high performance unit with wide temperature range: -20°C up to +240°C
- for reactors and double-walled vessels



Oil -20°C up to 240°C

Heating capacity **24 kW**

Cooling capacity

**93 kW @ 230°C tubular heat exchanger**

**150 kW @ 80°C plate heat exchanger**

Cooling system indirect

Applications: reactors 50 - 150 litres



## Functions

- Self-optimizing temperature controller with temperature display 1/10°C – steps
- Display in °C or °F and l/min or gal/min
- Digital flow display and monitoring
- Automatic temperature control
- Switchover for temperature control at the consumer
- Heating switchable in stages
- Heaters with cascade connection
- Pressure indication: pump, compressed air unit, compressed air mains
- With pressure regulation

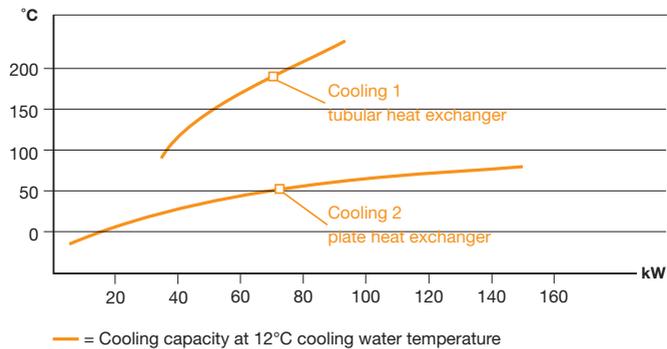
## Construction

- High temperature pump with mechanical seal
- Hot oil circuit with bypass, which ensures the internal oil circulation when the valves are closed
- With two cooling circuits:  
circuit 1: +80°C to +240°C  
circuit 2: -20°C to +80°C
- Limescale free heat exchanger
- No cracking of the oil thanks to special heating construction
- All parts in contact with water are made of stainless steel or bronze
- Unit on castors

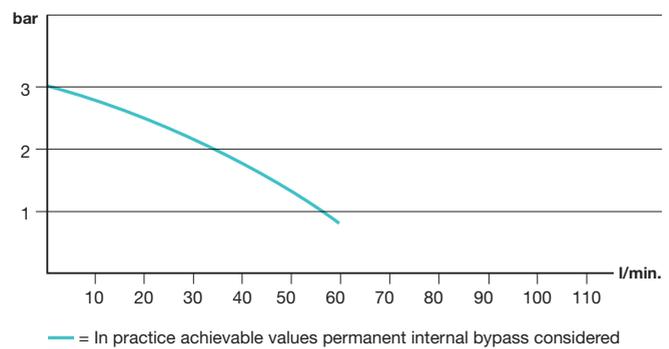
## Safety features

- Level control for dry run protection
- Expansion vessel with safety shut-off in case of overflow
- Electronic temperature limitation and monitoring in the controller
- Mechanical safety thermostats
- Visual and acoustic fault indications
- Integrated circuit breakers
- Main switch, transformer and motor protection switch

## Cooling capacity



## Pump capacity



## Technical data

Product attribute	Unit	TT-409 Z
Temperature range	°C	-20°C up to +240°C with heat transfer liquid
Temperature control		Self-optimizing, electronic microprocessor controller MP-988 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	kW	<b>24 kW</b>
Switchable in stages		8/8/8 Automatic switching of the required heating power
Cooling capacity		
Cooling 1		<b>93 kW</b> at 230°C – see diagram - tubular heat exchanger
Cooling 2		<b>150 kW</b> at 80°C – see diagram - plate heat exchanger
Pump capacity	kW	
Motor		1.8 kW
Pressure mode		Max. 3,0 bar / max. 60 l/min. – see diagram
Expansion tank capacity		46 Liter
Filling amount		60 Liter
Expansion volume		36 Liter
Connections		
Oil circuit		1" BSP female thread
Cooling water		¾" BSP female thread
Water-glycole		¾" BSP female thread
Compressed air		¼" BSP female thread, min. 5 bar
Dimensions (LxWxH)	mm	1'380x720x1'500 mm, incl. castors
Weight	kg	Approx. 340 kg, empty
Colour		Silvergrey RAL 7001