

TT-410 X

Oil temperature control unit

- high performance unit with wide temperature range: -20°C up to $+240^{\circ}\text{C}$
- for reactors and double-walled vessels



Oil -20°C up to 240°C

Heating capacity **48 kW**

Cooling capacity

150 kW @ 230°C tubular heat exchanger

175 kW @ 80°C plate heat exchanger

Cooling system indirect

Applications: reactors 50 - 400 litres



Functions

- Self-optimizing temperature controller with temperature display $1/10^{\circ}\text{C}$ – steps
- Display in $^{\circ}\text{C}$ or $^{\circ}\text{F}$ 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

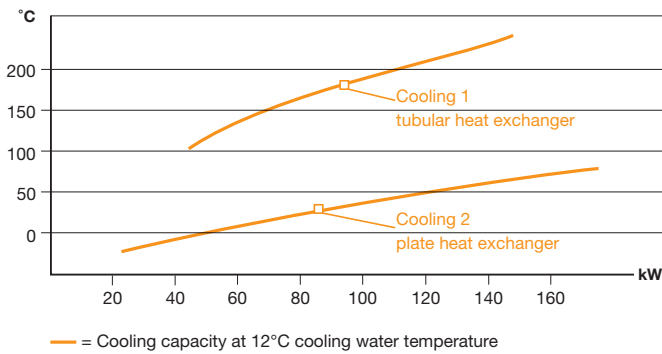
Construction

- High-performance centrifugal pump
- Hot oil circuit with bypass, which ensures the internal oil circulation when the valves are closed
- With two cooling circuits:
circuit 1: $+80^{\circ}\text{C}$ to $+240^{\circ}\text{C}$
circuit 2: -20°C to $+80^{\circ}\text{C}$
- 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 adjustable feet

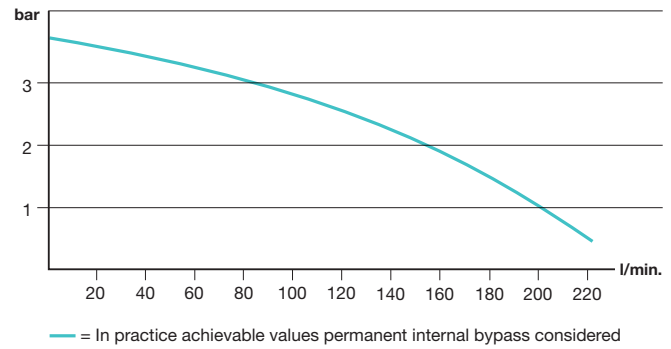
Safety features

- 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-410 X
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	48 kW
Switchable in stages		8/8/16/16 Automatic switching of the required heating power
Cooling capacity		
Cooling 1		150 kW at 230°C – see diagram - tubular heat exchanger
Cooling 2		175 kW at 80°C – see diagram - plate heat exchanger
Pump capacity	kW	
Motor		4 kW
Pressure mode		Max. 4,0 bar / max. 230 l/min – see diagram
Expansion tank capacity		96 litres
Filling amount		75 litres
Expansion volume		75 litres
Connections		
Oil circuit		Flange DN32 / PN16
Cooling water		1½" BSP female thread
Water-glycole		1½" BSP female thread
Compressed air		¼" BSP female thread, min. 5 bar
Dimensions (L×W×H)	mm	1'710×790×1'540 mm, incl. adjustable feet
Weight	kg	Approx. 590 kg, empty
Colour		Silvergry RAL 7001