



**ABOUT THE i-TEMP RANGE**

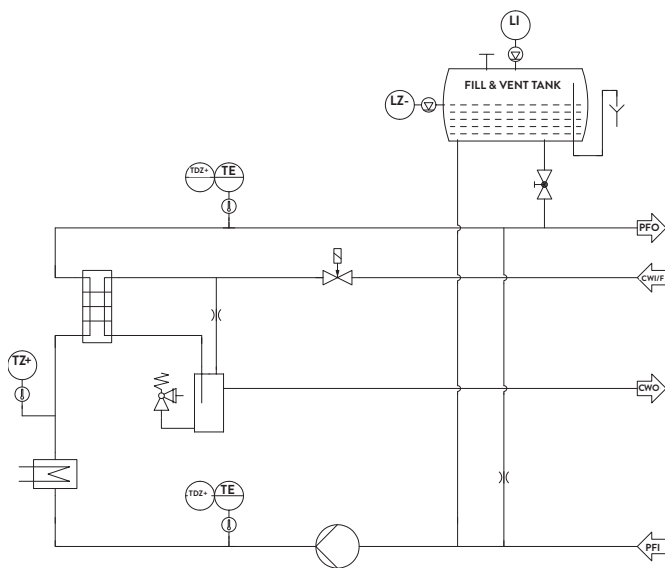
This collection of units featuring oil heat transfer are used for circulating temperatures of up to 350°C. Thermal oil has a low oxidation stability when it comes into direct contact with ambient air which is found in other manufacturer’s heater units which feature a submersible pump and tank.

This absorption of air can cause the oil’s viscosity to increase and the pump flow rate to decrease. This can cause premature oil degradation and carbon deposits due to the decreased flow rate and increased oil film temperature on the heating elements. The result of this is reduced performance and early machine failure and increased maintenance costs.

Designed specifically for applications requiring high temperatures, the to/tt and th series uses low watts/cm<sup>2</sup> heating elements resulting in low film temperatures at normal flow rates, flow monitoring is built into the system which sets off an alarm if the flow rate becomes too low.

The i-Temp **tt/th** units feature a layer of cold oil within the expansion vessel which can also be equipped with a nitrogen supply device upon request.




















**i-TEMP to VERSION**



**Unit features include:**

- Self optimising C8 advanced controller with high control accuracy
- Measuring, indication and monitoring of the flow rate (optional)
- Integrated operating and service information
- Storage and recall of process parameters with memory card
- Solid State Relays – energy saving control
- Continuous monitoring of process parameters
- Optional connection for external probe (PT100 or Fe-CuNi)
- Optional interfaces at front panel (analogue 0-10v, 0/4-20mA; serial RS 232, RS 422, RS 485, TTY, Profibus, Profinet)
- Splash proof electrics

**SYMBOL INDEX**

 COOLING COIL	 HIGH PRESSURE SWITCH	 N/C SOLENOID VALVE	 PROCESS FLUID INLET
 ELECTRICAL HEATER	 LOW LEVEL SWITCH	 PRESSURE RELIEF VALVE	 PROCESS FLUID OUTLET
 PUMP	 OVER TEMPERATURE STAT	 NON RETURN VALVE	 COOLING WATER OUTLET
 PLATE HEAT EXCHANGER	 TEMPERATURE SENSOR	 Y TYPE STRAINER	 MANUAL FILL
	 3 WAY SWITCHABLE BLOCK	 REDUCED FLOW BYPASS	 COOLING WATER INLET / FILL

Temperature controllers thermal oil 180°C, 300°C and 350°C

● = Standard / ○ = Option / – = not available/ Values in () optional

Model i-Temp	i-Temp to 50	i-Temp tt 50	i-Temp tt 60	i-Temp tt 100	i-Temp tt 140	i-Temp th 60	i-Temp th 100	i-Temp th 140
Fluid	thermal oil	thermal oil	thermal oil	thermal oil	thermal oil	thermal oil	thermal oil	thermal oil
Temperature max. (°C)	180	300	300	300	300	350	350	350
Pump capacity max. (l/min/bar)	90/6.2	60/6.0	60/6.0	100/8.0	150/7.0 (200/5.6)	60/6.0	100/8.0	150/7.0
Heating capacity max (kW)	8	4/6/8	9/13.5/18	9/12/18/27/36	12/18/27/36/45/54	3/6	6/9/12	9/18/27
Cooling	water indirect	water indirect	water indirect	water indirect	water indirect	water indirect	water indirect	water indirect
Cooling capacity max. (kW) <sup>1</sup>	40	15/30	82/110/200	82/110/200/ 250/275	82/110/200/ 250/275/450	82/110	82/110/200	82/110/200
Process circuit supply and return connections	DN 20	G¾"	DN 25	DN 25	DN 32	DN 25	DN 25	DN 32
Cooling water supply and return connections <sup>2</sup>	G½"	G½"	G½", ¾"	G½", ¾", 1"	G½", ¾", 1", 1¼"	G½"	G½", ¾"	G½", ¾"
Housing length L (mm) <sup>3</sup>	1036	850	1320	1320	1320	1320	1320	1320
Housing width W (mm) <sup>3</sup>	295	295	500	570	570	500	570	570
Housing height H (mm) <sup>3</sup>	725	725	1275	1275	1275	1275	1275	1275
Weight min., depending on the specification (kg)	75	75	210	310	410	210	310	410
Control of cooling with solenoid valve	•	•	•	•	•	•	•	•
Sealless pump with mag drive	-	•	•	•	•	•	•	•
Oil seal in expansion tank	•	•	•	•	•	•	•	•
Difference temperature control with switch-off function	•	•	•	•	•	•	•	•
Electronic level control with dry running protection	•	•	•	•	•	•	•	•
Safety thermostat	•	•	•	•	•	•	•	•
Adjustable set point limits	•	•	•	•	•	•	•	•
Ramp function for temperature alteration	•	•	•	•	•	•	•	•
Cooling down to safe temperature when switching off	•	•	•	•	•	•	•	•
Strainer in return line process fluid	○	○	○	○	○	○	○	○
Galvanised steel, painted in RAL 3020/7035	•	•	•	•	•	•	•	•
Continuous heater control with switch cabinet fan	•	•	•	•	•	•	•	•
Return temperature indication	•	•	•	•	•	•	•	•
Flow control with switch-off function	-	-	○	○	○	○	○	○
Filter group in suction pipe	-	-	○	○	○	○	○	○
Bellows type shut off valves	○	○	○	○	○	○	○	○
Acoustic alarm	○	○	○	○	○	○	○	○
Connection for external (Fe-CuNi or Pt 100)	○	○	○	○	○	○	○	○
Interface for central machine control	○	○	○	○	○	○	○	○
Strainer in return line process fluid	○	○	○	○	○	○	○	○
Cooling Bypass with 3-way motor valve	-	-	○	○	○	○	○	○
Connection for nitrogen blanket at expansion tank	-	-	○	○	○	○	○	○
Digital flow rate indication and monitoring	○	○	○	○	○	○	○	○

\* shut off valve on PFI/PFO

- 1) at 15°C cooling water temperature and 200°C circulation medium temperature
- 2) depending on cooling water amount
- 3) depending on built in heating and cooling capacities as well as the size of the expansion tank