



MATIC Oil

300 12 A

300 12 Z

Functions

- IRIS control system
- Pt100 temperature sensor in feed and return lines
- Heater control by solid-state relays
- Variable-speed pump with automatic eco-mode
- Mould drainage
- Leakstop operating mode

Construction

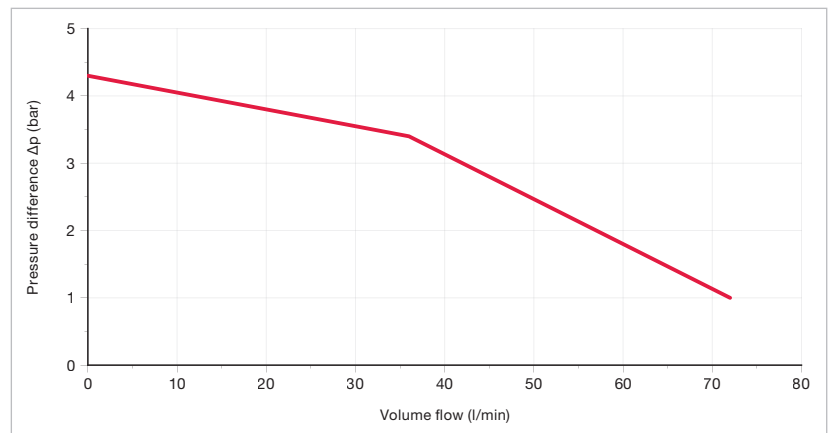
- Triple-bearing high-temperature pump, developed and manufactured by Tool-Temp
- Inverter, limescale-free shell & tube heat exchanger
- Fully immersed heaters made of high-temperature corrosion-free Nickel alloy (Incoloy 800)
- Maintenance-free flow meter
- Stainless-steel solid piping

Safety features

- Mechanical temperature limiter with multiple redundancy
- Pump motor monitored by the variable frequency drive
- Configurable safeguard limits and corresponding reactions
- Configurable audible alarm

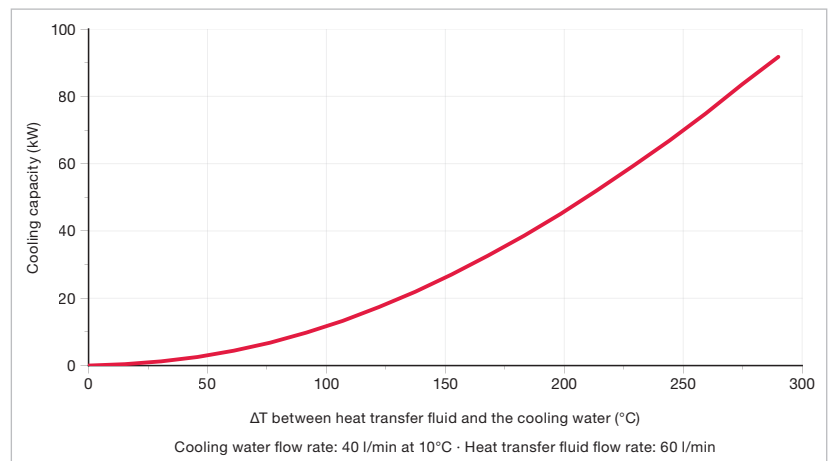


Pump performance

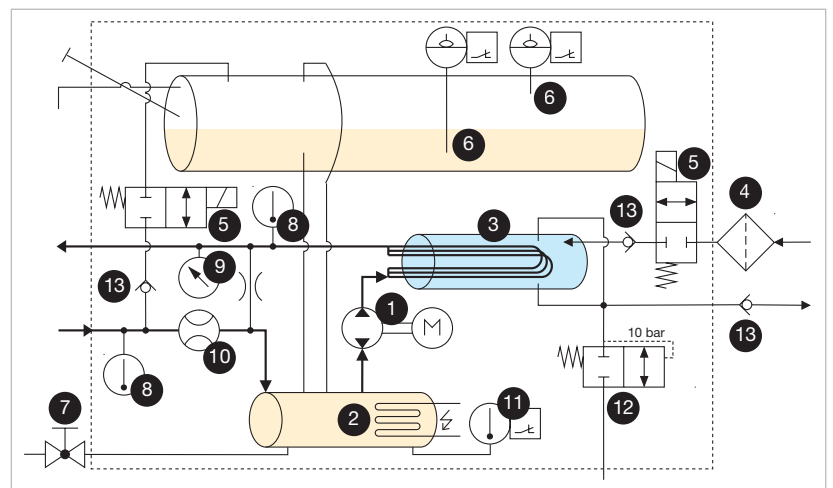


Performance data using Tool-Therm SH3 heat transfer oil at 200°C

Cooling capacity

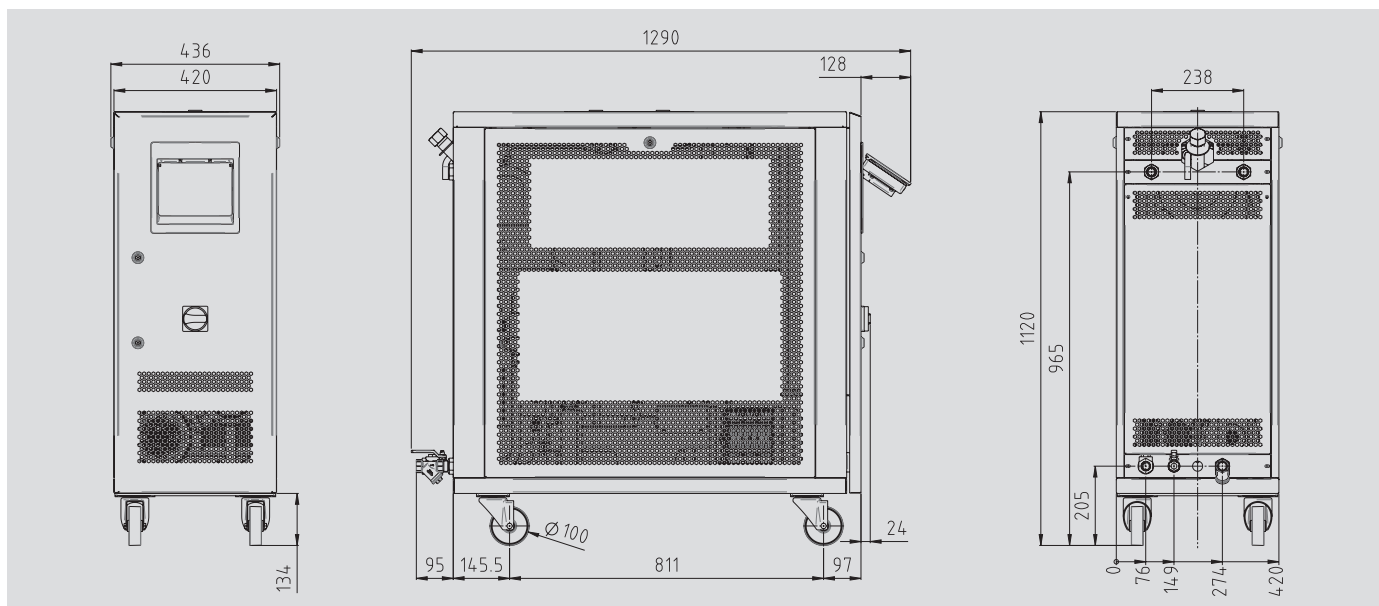


Fluidic diagram



1 pump with reversible pumping direction, 2 heating element, 3 cooling coil, 4 filter, 5 2-2 way valve (normally closed), 6 level sensors, 7 ball valve, 8 temperature sensor, 9 pressure sensor, 10 flow sensor, 11 safety temperature limiter, 12 pressure-relief valve, 13 check valve

Technical data



	Oil
Maximum temperature	300 °C
Heat output	12 kW
Cooling capacity	See diagram
Filling volume (heat transfer fluid)	Min. 9 litres
Expansion volume	17 litres
Pump	Type A or Z
Pressure and flow rate	See diagram
Motor rated power	1.5 kW
Control system	IRIS
Temperature measurement	3-wire Pt100 (F0.15 according to IEC 60751), feed and return
Pump-pressure measurement	Piezoresistive pressure transmitter
Flow measurement (heat transfer fluid)	Impeller wheel sensor with inductive pick-up
Languages	EN, DE, FR, IT, ES, NL, CZ, PT, HU, PL, SV, HBS, JA, TR, ZH, RO (expandable)
Interfaces	IO1: RS232, RS485, CL 20 mA, CAN (accessories)
OPC UA (standard)	IO2: Profibus, Profinet, EtherNet/IP (accessories)
	IO3: 0-10 V, 0/4-20 mA, external measurement (accessories)
Connections	
Heat transfer fluid (feed and return)	¾" BSPP (G¾) female thread
Cooling water inlet	¾" BSPP (G¾) female thread, with water filter
Cooling water outlet	¾" BSPP (G¾) female thread
Empty weight	150 kg
Colour	RAL 7035 light grey
Surroundings	
Temperature range	5-40 °C
Relative humidity	40-80% RH (non-condensing, no ice formation)
Installation	Inside, ventilation openings must be at least 10 cm clear
Continuous sound pressure level	< 70 dB(A)
Power supply	380-480 V, 50/60 Hz or alternatively 200-240 V, 50/60 Hz
Connected load	13.6 kW
Conductor cross-section of connection cable	
200-240 V	16 mm²
380-480 V	6 mm²
Protection class device	IP44, IP54 (optional)
Labeling	CE, UL-ready