Unistat® 910w

Cooling a Radleys 10-litre reactor from 180 °C to 20 °C

Requirement
This graphic shows the performance of a Unistat 910w cooling a Radleys 10-litre glass reactor from 180 °C to 20 °C under process control.

Method
The Unistat and reactor are connected using two 1.5-metre insulated metal hoses. The reactor is filled with 7.5 litre of "M90.055.03", a Huber supplied silicon based HTF.

Results
The „internal" (jacket) temperature quickly cools to -28 °C pulling the process temperature to the set-point.
The process temperature ramps through 160 K (180 °C to 20 °C) in 32 minutes, a process ramp rate of 5 K/min.

Setup details
Unistat® 910w & Radleys reactor

Temperature range:	-90...250 °C
Cooling power:	5.2 kW @ 250...-20 °C 4.7 kW @ -40 °C
Heating power:	6.0 kW
Hoses:	2x1.5 m; M30x1.5 (#6386)
HTF:	DW-Therm (#6479)
Reactor:	10-litre glass reactor
Reactor content:	7.5 litre M90.055.03 (#6259)
Stirrer speed:	200 rpm
Control:	process