Setup details
Unistat® 825w & Buchi Glas Uster «miniPilot» 10 reactor

Temperature range:	-85…250 °C
Cooling power:	2.4 kW @ 0…-40 °C 1.5 kW @ -60 °C
Heating power:	3.0 kW
Pump speed:	3500 rpm
Hoses:	2x1.5 m; M30x1.5 (#6386)
HTF:	DW-Therm (#6479)
Reactor:	10-litre jacketed glass reactor
Reactor contents:	7.5 litre M90.055.03 (#6259)
Reactor stirrer speed:	400 rpm
Control:	process

Unistat® 825w

Heating and cooling a Buchi Glas Uster 10-litre reactor

Requirement
The graphic illustrates the performance temperature of a Unistat 825w heating and cooling a Buchi Glas Uster 10-litre reactor between 20 °C and 60 °C.

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 process temperature heats at a ramp rate of 3.8 K/min. taking 30 minutes to reach the set-point. The cooling ramp rate is at a rate of 5.7 K/min. and takes 27 minutes to cool through 40 K (60 °C to 20 °C).