



Setup details

Unistat® 610w & Buchi Glas Uster reactor

Temperature range: -60...200 °C
 Cooling power: 7.0 kW @ 200...0 °C
 6.4 kW @ -20 °C
 3.3 kW @ -40 °C
 0.8 kW @ -60 °C
 Heating power: 6.0 kW
 Hoses: 2x1.5 m; M38x1.5 (#6656)
 HTF: DW-Therm (#6479)
 Reactor: 20 litre jacketed glass reactor
 Reactor content: 15 litre DW-Therm (#6479)
 Stirrer speed: 70 rpm
 Control: process

Unistat® 610w

Heating and cooling a Buchi Glas Uster 20-litre glass reactor

Requirement

The graphic shows the performance of Unistat 610w responding to set-point changes in process temperature of a 20-litre glass reactor from 20 °C to 180 °C and back to 20 °C.

Method

M30x1.5 hoses are used to connect the setup and the working fluid is DW-Therm. The reactor is filled with 15 litre of "M90.055.03", a Huber supplied silicon based HTF.

Results

The machine needs approximately 60 minutes to reach 180 °C from 20 °C and 41 minutes to cool back to 20 °C. The heating and cooling rates for the processes are 2.67 K/min. and 3.9 K/min. respectively.

