



Setup details
Unistat® 910w & Chemglass reactor

Temperature range: -90...250 °C
 Cooling power: 5.2 kW @ 250...-20 °C
 Heating power: 6.0 kW
 Hoses: 2x1.5 m; M30x1.5 (#6386)
 HTF: DW-Therm (#6479)
 Reactor: 50-litre un-insulated jacketed glass reactor
 Reactor content: 35 litre M90.055.03 (#6259)
 Stirrer speed: 80 rpm
 Control: process

Unistat® 910w

Heating and cooling a Chemglass 50-litre un-insulated glass reactor

Requirement
The graphic shows the performance of a Unistat 910w connected to an un-insulated 50-litre reactor with M30x1.5 hoses.

Method
The Unistat and reactor are connected using two 1.5-metre insulated metal hoses. The reactor is filled with 35 litre of "M90.055.03", a Huber supplied silicon based HTF.

Results
From a starting temperature of 20 °C, the purpose of the test is to illustrate the ramp speed of the process temperature in response to setpoint of 100 °C and then back to 20 °C. The process temperature reaches 100 °C from 20 °C within 53 minutes (ramp rate > 1.3 K/min.). The cooling ramp-rate is > 1.7 K/min. reaching 20 °C from 100 °C in 47 minutes.

