



Setup details

Unistat® 705w & DDPS reactor

Temperature range: -75...250 °C
 Cooling power: 0.6 kW @ 250...100 °C
 0.65 kW @ 0 °C
 0.6 kW @ -20...-40 °C
 0.3 kW @ -60 °C

Heating power: 1.5 kW / 3 kW
 Pump speed: 3300 rpm
 Hoses: 2x1 m; M24x1.5 (#9325)
 HTF: DW-Therm (#6479)
 Reactor: DDPS 2-litre un-insulated jacketed glass reactor

Reactor content: 1.5 litre M90.055.03 (#6259)

Stirrer speed: 200 rpm
 Control: process

Unistat® 705w

Cooling a 2-litre jacketed glass reactor to 20 °C from 180 °C

Requirement

This case study looks at the performance of a Unistat 705w cooling a 2-litre glass reactor from 180 °C to 20 °C under "process" control.

Method

The Unistat and reactor are connected using two 1-metre insulated metal hoses. The reactor is filled with 1.5 litre of "M90.055.03", a Huber supplied silicon based HTF.

Results

The process is ramped from 180 °C to 20 °C (160 K) within 60 minutes (ramp rate > 2.6 K/min).

