

Unistat® 425

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

Requirement

This case study looks at the performance of a Unistat 425 as it cools a jacketed glass reactor from 20 °C to -20 °C.

Method

The Unistat 425 is connected to the 2-litre DDPS glass reactor using two insulated metal 1-metre hoses. The reactor is filled with 1.5 litre of "M90.055.03", a silicon based HTF.

Results

It can be seen that the process is ramped through 40 K (20 °C to -20 °C) within 20 minutes.

Setup details

Unistat® 425 & DDPS reactor

- Temperature range: -40...250 °C
- Cooling power: 2.5 kW @ 0 °C
1.8 kW @ -20 °C
- Heating power: 2.0 kW
- Hoses: 2x1 m; M24x1.5 (#9325)
- HTF: DW-Therm (#6479)
- Reactor: 2-litre jacketed glass reactor
- Reactor content: 1.5 litre M90.055.03 (#6259)
- Stirrer speed: 150 rpm
- Control: process

