

Unistat® 910w

Rapid heating and cooling of a DDPS 25-litre jacketed glass reactor

Requirement

This case study demonstrates the heating and cooling performance of a Unistat 910w connected to a DDPS 25-litre vacuum insulated jacketed glass reactor.

Method

The Unistat and reactor are connected using two 1.5-metre insulated metal hoses. The reactor is filled with 18.75 litre of "M90.055.03", a Huber supplied silicon based HTF.

Results

To heat the contents (18.75 litre M90.055.03) from 20 °C to 60 °C takes 29 minutes. To cool back to a 20 °C set-point takes approximately 20 minutes.

Setup details

Unistat® 910w & DDPS reactor

- Temperature range: -90...250 °C
- Cooling power: 5.2 kW @ 250...-20 °C
4.7 kW @ -40 °C
- Heating power: 6.0 kW
- Hoses: 2x1.5 m; M38x1.5 (#6656)
- HTF: DW-Therm (#6479)
- Reactor: 25-litre vacuum insulated jacketed glass reactor (#6259)
- Reactor content: 18.75 litre M90.055.03 (#6259)
- Stirrer speed: 70 rpm
- Control: process

