

Unistat® 620w

Heating and cooling a Buchi Glas Uster CR101 100-litre reactor

Requirement

This case study illustrates the performance curve of a Unistat 620w connected to a Buchi Glas Uster 100-litre reactor with 2x1.5 m M38x1.5 hoses.

Method

The Unistat and reactor were connected using two 1.5-metre hoses. The reactor was filled with 75 litre of "M90.055.03", a Huber supplied silicon based HTF.

Results

The "internal" (jacket) temperature ramps the process temperature to the set-points. The rapidly induced ΔT between jacket and process pulls the process temperature until it reaches the target temperature with negligible over/under shoot.

Once at target, the set-point is maintained in a highly stable manner.

Setup details

Unistat® 620w & Buchi Glas Uster 100-litre GLSS reactor

- Temperature range: -60...200 °C
- Cooling power: 12.0 kW @ 200...-20 °C
6.5 kW @ -40 °C
- Heating power: 12 kW
- Hoses: 2x1.5 m; M38x1.5 (#6656)
- HTF: DW-Therm (#6479)
- Reactor: 100-litre jacketed glass reactor (#6259)
- Reactor content: 75 litre M90.055.03
- Stirrer speed: 80 rpm
- Control: process

