

Unistat® 925w

Heating and cooling a Buchi Glas Uster CR252, a 250-litre GLSS reactor

Requirement

This case study demonstrates the performance of a Unistat 925w when heating and cooling a Buchi Glas Uster CR252 GLSS reactor between 20 °C and -50 °C and -20 °C.

Method

The Unistat and reactor are connected using two 2-metre insulated metal hoses. The reactor is filled with 200 litre of Ethanol.

Results

The minimum jacket temperature of the Buchi Glas Uster reactor was limited to -60 °C as was the ramp rate to avoid damaging the glass lining.

Starting at 35 °C and cooling to 20 °C and stabilising before ramping to 100 °C, the Unistat 925w controls the temperature of the process exactly to each new set-point.

Setup details

Temperature range:	-90...200 °C
Cooling power:	16 kW @ 200...-20 °C 15 kW @ -40 °C 13,5 kW @ -60 °C
Heating power:	24 kW
Hoses:	M38x1,5; 2*2 m
HTF:	DW-Therm
Reactor:	Buchi Glas Uster CR252 250-litre insulated jacketed GLSS reactor
Reactor content:	200 litre Ethanol
Reactor stirrer speed:	90 rpm
Control:	process

