

Unistat® 925w

Cooling a Buchi Glas Uster CR252 to its minimum temperature

Requirement

This case study demonstrates the time required to cool a Buchi Glas Uster CR252 reactor to its minimum jacket temperature of -60 °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.

The Jacket cools rapidly to asymptote at -60 °C resulting in a minimum process temperature of -57 °C.

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 glass-lined (enameled) steel reactor
Reactor content:	200 litre Ethanol
Reactor stirrer speed:	90 rpm
Control:	process

