

**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



# Unistat® 925w

**Controlling a Buchi Glas Uster «chemReactor» CR252 GLSS reactor between -40 °C and 20 °C**

**Requirement**

This case study looks at the ease with which a Unistat 925w controls the process temperature of 200 litre of Ethanol within a Buchi Glas Uster CR252 GLSS reactor.

**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.

It can be seen that the jacket can be rapidly ramped to pull the process temperature from 20 °C to -40 °C, maintained at exactly -40 °C before being returned to 20 °C.

