# Unistat® 615w

**Heating and cooling a 250-litre GLSS reactor**

**Setup details**

| | |
|---|---|
| Temperature range: | –60...200 °C |
| Cooling power: | 9.5 kW @ 200…0 °C |
| | 8.0 kW @ -20 °C |
| | 4.8 kW @ -40 °C |
| | 1.2 kW @ -60 °C |
| Heating power: | 12 kW |
| Hoses: | M38x1,5; 2x2 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 |

**Requirement**

This case study shows the remarkable power transfer capabilities of the Unistat range in using a Unistat 615w to heat and cool a 250-litre Buchi Glas Uster GLSS reactor.

**Method**

The Unistat was connected to the reactor using two 2-metre insulated metal hoses. The reactor was filled with 200 litre of Ethanol.

**Results**

The graph shows the close control and rapid response of the jacket to change the process temperature from 20 °C to -10 °C and back again. It takes approximately 60 minutes to cool the process through 30 K from 20 °C to -10 °C.