

# Unistat® 825w

Cooling a Buchi Glas Uster 10-litre jacketed glass reactor from 20 °C to  $T_{min}$

### Requirement

The graphic shows the performance of a Unistat 825w cooling a Buchi Glas Uster 10-litre reactor from 20 °C to -85 °C under "process" control.

### Method

The Unistat and reactor are connected using two 1.5-metre insulated metal hoses. The reactor is filled with 7.5 litre of "M90.055.03", a Huber supplied silicon based HTF.

### Results

The internal temperature reaches -80 °C within 1:13 hr. Over the remainder of the 2 hour case study the internal (jacket) temperature reaches -84 °C with a corresponding process temperature of -77 °C.

### Setup details

Unistat® 825w & Buchi Glas Uster «miniPilot» 10 reactor

- Temperature range: -85...250 °C
- Cooling power: 2.4 kW @ 0...-40 °C  
1.5 kW @ -60 °C
- Heating power: 3.0 kW
- Pump speed: 3.500 rpm
- Hoses: 2x1.5 m; M30x1.5 (#6386)
- HTF: DW-Therm (#6479)
- Reactor: 10-litre jacketed glass reactor
- Reactor contents: 7.5 litre M90.055.03 (#6259)
- Reactor stirrer speed: 400 rpm
- Control: internal

