



**Setup details**

Unistat® 830 & Radleys reactor

- Temperature range: -85...200 °C
- Cooling power: 4.0 kW @ 200 °C  
3.8 kW @ 100 °C  
3.6 kW @ 0 °C
- Heating power: 3 kW
- 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: 80 rpm
- Control: process

# Unistat® 830

**Cooling a Radleys 10-litre jacketed reactor from 180 °C to 20 °C**

**Requirement**

The graphic demonstrates the performance of a Unistat 830 working to control the process temperature inside a Radleys 10-litre reactor.

**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 goes down to approx. -27 °C within 34 minutes. This provides cooling at a rate of 6.5 K/min. to the process. The process temperature takes 55 minutes to be fully stable at 20 °C and remains exact and stable at the set-point.

