



### Setup details

Unistat® 425w & HWS reactor

|                    |  |
|--------------------|--|
| Temperature range: | -40...250 °C   |
| Cooling power:     | 2.8 kW @ 250...100 °C<br>2.5 kW @ 0 °C<br>1.9 kW @ -20 °C<br>0.2 kW @ -40 °C |
| Heating power:     | 2.0 kW   |
| Hoses:             | 2x1.5 m; M38x1.5 (#6656)   |
| HTF:               | DW-Therm (#6479)   |
| Reactor:           | 5-litre jacketed glass reactor   |
| Reactor content:   | 3.75 litre M90.055.03 (#6259)  |
| Stirrer:           | 200 rpm  |
| Control:           | process  |

## Unistat® 425w

### Periodic and Aperiodic control on a 5-litre HWS reactor

#### Requirement

The "Unistat-Pilot" offers the possibility of using either periodic or aperiodic control settings. That means the set-point temperature can be achieved with or without an overshoot.

The graphic shows the performance curve of a Unistat 425w working with a HWS 5-litre glass reactor as it heat and cools between 20 °C and 60 °C under different control dynamics.

#### Method

The Unistat 425w is connected to the 5-litre HWS glass reactor using two 1.5-metre insulated metal hoses. The reactor is filled with 3.75 litre of "M90.055.03", a silicon based HTF.

#### Results

The first process curve (with overshoot) goes from 20 °C to 60 °C in just 10 minutes and the second curve (without overshoot) working with the same temperature range takes 15 minutes.

