

# Unistat<sup>®</sup> petite fleur<sup>®</sup>

Ramping a 0.5-litre reactor between 20 °C and -10 °C

### Requirement

This case demonstrates the responsive and tight control over process temperature that can be achieved in a 0.5-litre Schlee glass jacketed reactor using a Petite Fleur.

### Method

The Petite Fleur was connected to the reactor using 2x1-metre M16 insulated flexible metal hoses. The HTF used was ethanol and the reactor was un-insulated.

### Results

The graphic shows that the process temperature is ramped to -10 °C from 20 °C at a uniform rate of 2.5 K/min. and back to 20 °C at 6 K/min.

### Setup details

Petite Fleur<sup>®</sup> & Schlee GmbH

Temperature range: -40...200 °C  
 Cooling power: 0.48 kW @ 200...0 °C  
 0.27 kW @ -20 °C  
 Heating power: 1.5 kW  
 Hoses: 2x1 m; M16x1 (#9608)  
 HTF: Ethanol  
 Reactor: 0.5-litre un-insulated glass reactor  
 Reactor content: 375 ml M90.055.03 (#6259)  
 Stirrer speed: 160 rpm  
 Control: process

