

Ministat[®] 125-cc[®]-NR

Controlling a vacuum insulated Syrris 2-litre glass jacketed reactor to T_{min}

Requirement

The Ministat 125-cc-NR is the smallest unit in the Ministat range. This case study demonstrates the lowest achievable temperature, speed of cooling and heating and level of control when connected with a Syrris "Atlas" system configured with a 2-litre reactor.

Method

The reactor was filled to 1.6 litre with M90.055.03, the HTF used was Ethanol, the stirrer set to 700 rpm and the control to "process". The results were recorded using the "Spyware" software.

Results

The Ministat 125-cc-NR cools the jacket to -12 °C with a corresponding minimum process temperature of -11 °C. The heat up phase shows the process is returned to 20 °C in approximately 20 minutes.

Setup details

Ministat[®] 125-cc[®]-NR & Syrris vacuum-insulated 2-litre glass jacketed reactor.

Temperature range: -25...150 °C
 Cooling power: 0.21 kW @ 0 °C
 0.05 kW @ -20 °C
 Heating power: 1 kW
 Pump speed: 4500 rpm
 Hoses: 2x1 m; M16x1 (#9608)
 HTF: Ethanol
 Reactor: 2-litre jacketed glass reactor
 Reactor contents: 1.4 litre M90.055.03 (#6259)
 Reactor stirrer speed: 700 rpm
 Control: process

