

Ministat® 125-cc®-NR

Ministat® 125-cc®-NR controlling Syrris Atlas 0,5 litre reactor

Requirement

This case study demonstrates the closeness of the temperature control and the minimum process temperature achievable in the process mass.

Method

The 0,5 litre Syrris Atlas reactor was connected to the Ministat 125-cc-NR using two M16x1 1-meter flexible hoses. The thermofluid used in the system was Ethanol. "Process" control was carried out via a Pt100 sensor located in the process mass. Stirrer speed was set to 400 rpm.

Setup details

Temperature range:	-25°C...+150°C
Cooling power:	0.30 kW @ +20°C 0.21 kW @ 0°C 0.05 kW @ -20°C
Heating power:	1.0 kW
Hoses:	M16x1; 2* 1 m
Thermofluid:	Ethanol
Reactor:	Syrris Atlas 0,5 litre reactor
Reactor content:	380 ml Ethanol
Stirrer speed:	400 rpm
Control:	process



Results

This case study demonstrate the temperature control possibilities of the Ministat 125-cc-NR in combination with the Syrris reactor. Once stable at +20°C under "Process" control, a set-point of -25°C is entered. The Ministat cools the reactor down to the minimum achievable process

temperature of -9°C. In the next step a rapid heat-up time of less than 25 minutes from -9°C to +20°C can be seen. The temperature controller stabilize the process temperature fast and accurate.

