



# Ministat® 240-cc®-NR

Ministat® 240-cc®-NR cycling a 2 litre Radleys jacketed reactor

# Requirement

This case study demonstrates the ability of Ministat® 240-cc®-NR to cycle the process temperature in a range from +100°C to -20°C, the closeness of the temperature control and the minimum process temperature achievable in the process mass.

#### Method

The 2 litre Radleys reactor was connected to the Ministat® 240-cc®-NR using two M16x1 1-meter flexible hoses. The thermofluid used in the system was M40.165.10 "Process" control was carried out via a Pt100 sensor located in the process mass. Stirrer speed was set to 200 rpm.

#### Setup details

Temperature range: -45°C...+200°C Cooling power: 0.60 kW @ +20°C

0.55 kW @ 0°C 0.35 kW @ -20°C 0.20 kW @ -30°C

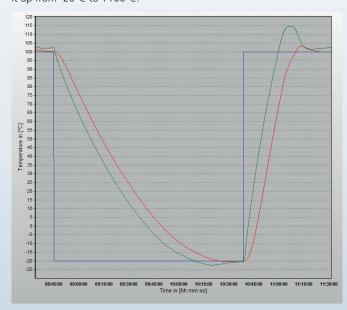
Heating power: 2.0 kW Hoses: M16x1; 2\* 1 m HTF. M40.165.10 Radleys 2 litre Reactor: jacketed reactor Reactor content: 2 litre M40.165.10

Stirrer speed: 200 rpm Control: process

# **Results**

## Performance:

Cooling down and heating up in a range from +100°C to -20°C. The Ministat® 240-cc®-NR needs approximately 95 minutes to cool down the reactor from +100°C to -20°C and approximately 40 minutes to heat it up from -20°C to +100°C.



## Lowest achievable temperature (Tmin):

The Ministat® 240-cc®-NR cools the reactor down to the minimum achievable process temperature of -25°C.

