



Setup details

Unistat® 910w & Diehm 100-litre reactor

Temperature range: -90...250 °C
Cooling power: 5.2 kW from 250 °C to -20 °C

4.7 kW @ -40 °C
3.1 kW @ -60 °C
0.9 kW @ -80 °C
Heating power: 6.0 kW
Hoses: M38x1.5; 1x 2m #6657 ; 1x1m # 6655, VPC Bypass installed

HTF: M90.055.03 (#6259)
Reactor: 100-litre Diehm un-insulated jacketed glass reactor

Reactor content: 75 litre M90.055.03
Stirrer speed: 410 rpm
Control: process

Unistat® 910w

Cooling a Diehm 100-litre jacketed glass reactor to T_{min}

Requirement

This case study looks at the minimum process temperature that a Diehm 100-litre reactor can reach when connected to a Unistat 910w.

Method

The Unistat and reactor are connected using two 1.5-metre insulated metal hoses. The reactor is filled with 75 litre of "M90.055.03", a Huber supplied silicon based HTF.

Results

A 100-litre reactor represents a large thermal load for the Unistat 910w which is designed to operate on reactors of up to 50 litre however, over time the Unistat 910w can still bring the process temperature to -75 °C.

