Setup details
Unistat® 910w & Radleys reactor

Temperature range:	-90...250 °C
Cooling power:	5.2 kW @ 250...-20 °C
Heating power:	6.0 kW
Hoses:	2x1.5 m; M30x1.5 (#6386)
HTF:	DW-Therm (#6479)
Reactor:	10-litre jacketed glass reactor
Reactor content:	7.5 litre M90.055.03 (#6259)
Stirrer speed:	200 rpm
Control:	process

Unistat® 910w

Heating and cooling a Radleys 10-litre glass reactor

Requirement
The graphic shows the temperature profile of a Unistat 910w working with a Radleys 10-litre glass reactor.

Method
The Unistat and reactor are connected using two 1.5-metre insulated metal hoses. The reactor is filled with 7.5 litre of "M90.055.03", a Huber supplied silicon based HTF.

Results
The Unistat needs only 36 minutes to heat the reactor up to 100 °C. The process temperature heating rate ramps at > 2.6 K/min. The cooling process temperature back to 20 °C takes 31 minutes to accomplish. This process cooling ramps occurs at a rate of 4.16 K/min.

The Unistat 910w is over-sized for a 10-litre reactor but the capabilities of the unit to work accurately with small as well as larger vessels is demonstrated here. The superb flexibility of the unit as well as the control capability can clearly be seen here.