Objective
This case study tests the maximum low temperature of the PRESTO® A40 with a 20 liters vacuum insulated glass reactor. The A40 is connected to the reactor via 2.0 m metal tubings. The A40 is programmed to cool down from +25 °C to maximum low temperature.

Test Conditions
JULABO unit          JULABO Presto A40
Cooling power        +20 °C  1.2 kW
                      0 °C     0.9 kW
                      -20 °C   0.6 kW
Heating capacity     2.7 kW
Band limit           No
Flow pressure        0.40 bar
Bath fluid           JULABO Thermal HL40
Reactor              Triple walled 20 liters glass reactor (Asahi)
                      filled with 18 liter JULABO Thermal HL40
Jacket volume        7.0 l
Control              External (ICC)

Test Results
See chart on back page: The A40 cooled the reactor from +25 °C down to maximum low temperature of -32 °C in 4 h 30 min.

Environment
Room temperature     +20 °C
Humidity             45 %
Voltage              230 V / 50 Hz

Tip
You can also use the robust Pt100 with PTFE coating.

More tips on back page >>
**Tip**

Make use of the option to regulate the pump pressure. You can define the desired pressure in the PRESTO® settings.

**Tip**

The Ethernet interface permits full access to all operational functions of the PRESTO®.

Setpoint

Temperature in reactor’s interior

Temperature in reactor’s jacket

Cool-down time 4 h 30 min

Measured with EasyTEMP Professional

<table>
<thead>
<tr>
<th>°C</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>-32</td>
<td>+20</td>
<td>0</td>
<td>-20</td>
<td>-32</td>
<td>0</td>
<td>-20</td>
</tr>
</tbody>
</table>

lowest temperature