

## Chili

**Chili controls a 5 liter vacuum insulated reactor**

**Requirement**

This Case Study demonstrates the process temperature control abilities of Chili when it is connected to an Asahi 5 liter vacuum insulated glass reactor.

**Method**

The 5 liter Asahi vacuum insulated reactor was connected to Chili using 1 meter metal insulated hoses M16. The thermofluid used in the system was "M20.195/235". Process control was carried out. Stirrer speed was set to 150 rpm.

**Setup details**

- Temperature range: +65°C...+300°C
- Heating power: 3.0 kW
- Hoses: 1 m metal insulated M16
- HTF: M20.195/235
- Reactor: Asahi 5 liter vacuum insulated
- Reactor content: 4.0 l M20.195/235
- Stirrer speed: 150 rpm
- Control: process
- Amb. temperature: +24°C



### Results

**Performance:**

The graphic shows the speed, accuracy and stability of the Chili as it reaches and maintains 200°C.

The accessory to assist in cooling: the HTF, the Cooling coil coupling (# 359353) was used to accelerate cooling from +100°C to +30°C. The effect on the cooling rate can clearly be seen on the graphic.

Start T	End T	Approximate Time	Av. Ramp Rate
+70°C	+200°C	27 minutes	4.8 K/min

