**Objective**

This case study tests the heating power of PRESTO W50 with a 50 liters glass reactor. The PRESTO W50 is connected to the reactor via two 2 m metal tubings. The PRESTO W50 is programmed to heat up from +20 °C to +150 °C.

**Environment**

- Room temperature: +20 °C
- Humidity: 45%
- Voltage: 400 V / 50 Hz

**Test Conditions**

- **JULABO unit**: PRESTO W50
- **Cooling power**:
  - +20 °C: 7.5 kW
  - 0 °C: 6.5 kW
  - -20 °C: 3.0 kW
- **Heating capacity**: 6 kW
- **Band limit**: without
- **Flow pressure**: 0.5 bar
- **Bath fluid**: Thermal HL60
- **Reactor**: 50 liters glass reactor (QVF) filled with 35 l Thermal HL60
- **Jacket volume**: 26.5 l
- **Control**: External (ICC)

**Control Parameters**

- Xp: 0.2 K
- Tn: 695 s
- Tv: 85 s
- Xpu: 15 K
**Test Results**

The PRESTO W50 heating process from +20 °C to +150°C in 2 h 10 min without overshoot.

![Graph showing temperature over time with setpoints and reactor profiles.](Image)

- **Tip**
  - Protect your reactor. The function "band limit" (see above) permits setting the max. temperature difference between jacket and internal vessel.

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