

## PRESTO W50

# Heating a 50 liters reactor from +20 °C to +150 °C

### 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

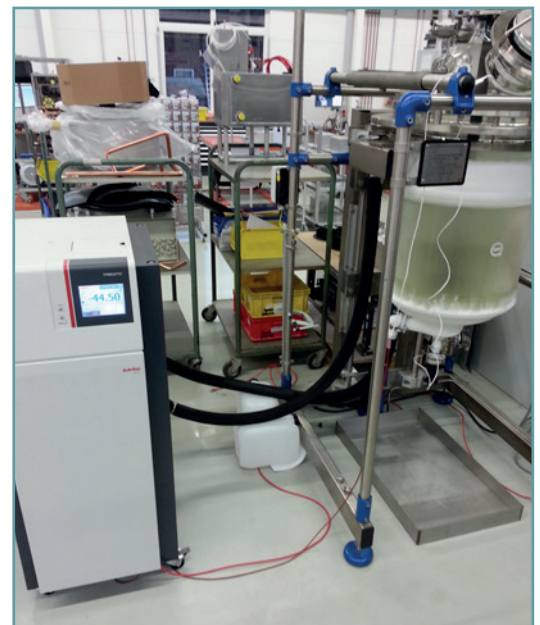
Room temperature +20 °C  
 Humidity 45%  
 Voltage 400 V / 50 Hz

### 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

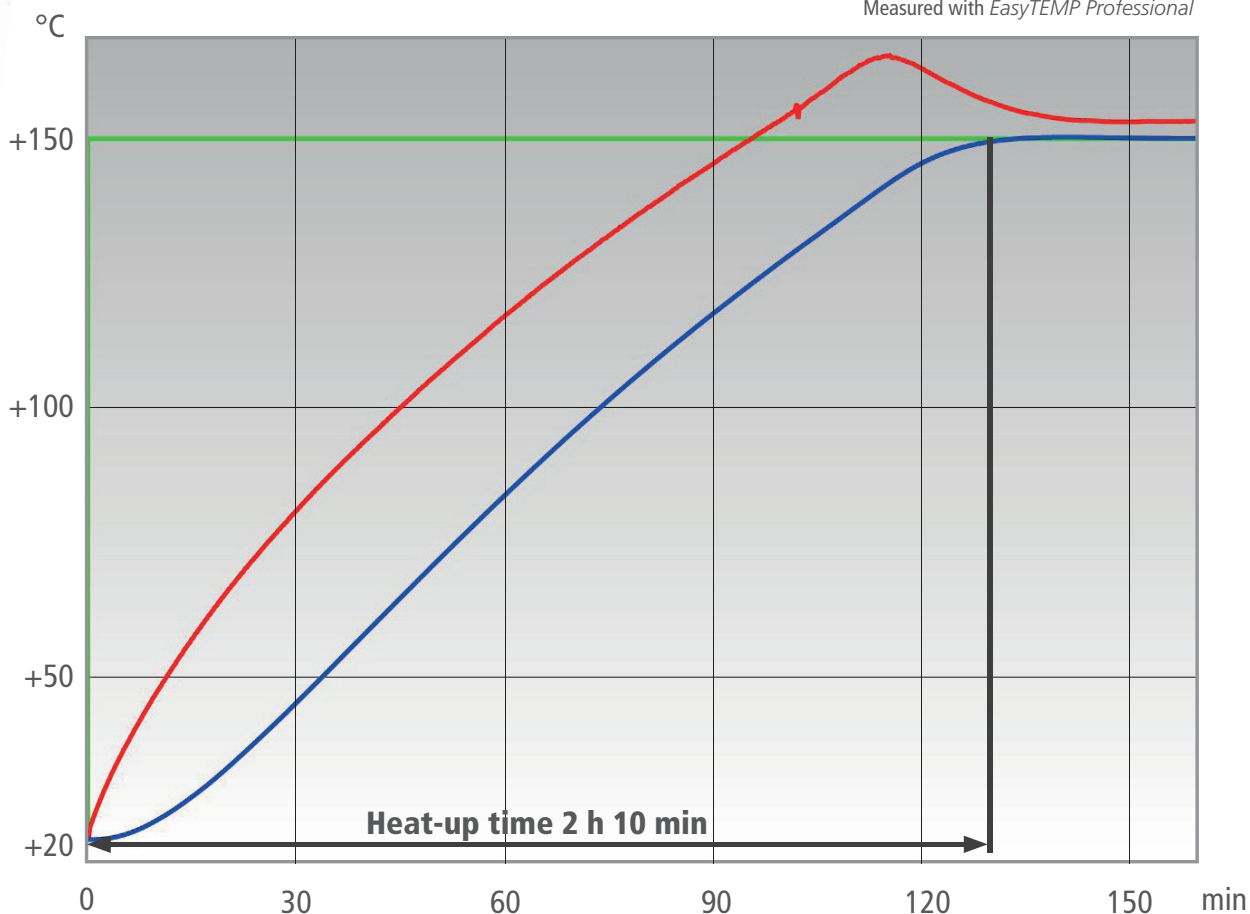
Xp	0.2 K
Tn	695 s
Tv	85 s
Xpu	15 K



## Test Results

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

Measured with *EasyTEMP Professional*

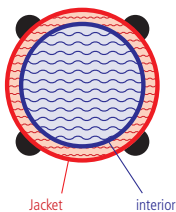


- Setpoint
- Temperature in reactor's interior
- Temperature in reactor's jacket

### Tip

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

Profile of reactor



### Tip

You can also use the robust Pt100 with PTFE coating.

