

PRESTO W50

Cool-down a 50 liters reactor from +20 °C to lowest possible temperature

Objective

This case study tests the lowest possible temperature of the PRESTO W50 with a 50 liters glass reactor. The PRESTO W50 is connected to the reactor via 2 m metal tubings. The PRESTO W50 cools down from +20 °C to the lowest possible temperature.

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 l glass reactor (QVF) filled with 35 l Thermal HL60
Jacket volume	26.5 l
Control	External (ICC)

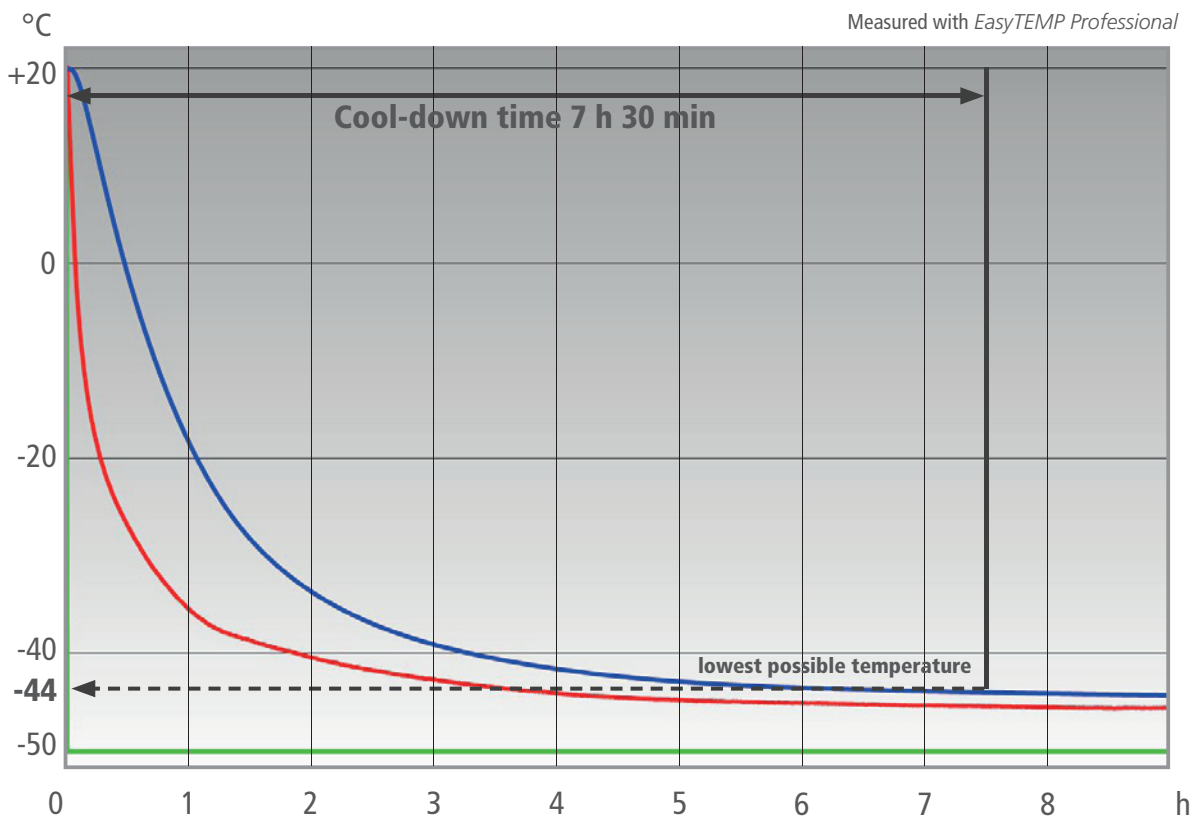
Control Parameters

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



Test Results

The PRESTO W50 cooled the reactor from +20 °C down to the lowest possible temperature in 7 h 30 min. Within these test conditions the lowest possible temperature is -44 °C.



- 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
Use the free of charge *EasyTEMP* software to control the units with the PC and to show the temperature curves graphically.

EasyTEMP