

PRESTO W92tt

Cool-down a 100 liters reactor from +20 °C to lowest possible temperature

Objective

This case study tests the lowest possible temperature of the PRESTO W92tt with a 100 liters glass reactor. The PRESTO W92tt is connected to the reactor via 3 m metal tubings. The PRESTO W92tt 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 W92tt
Cooling power	+20 °C 19 kW
	0 °C 15.5 kW
	-20 °C 9.5 kW
Heating capacity	36 kW
Band limit	without
Flow pressure	0.5 bar
Bath fluid	Thermal HL80
Reactor	100 l glass reactor (Büchiglas) filled with 70 l Ethanol
Jacket volume	30 l
Control	External (ICC)

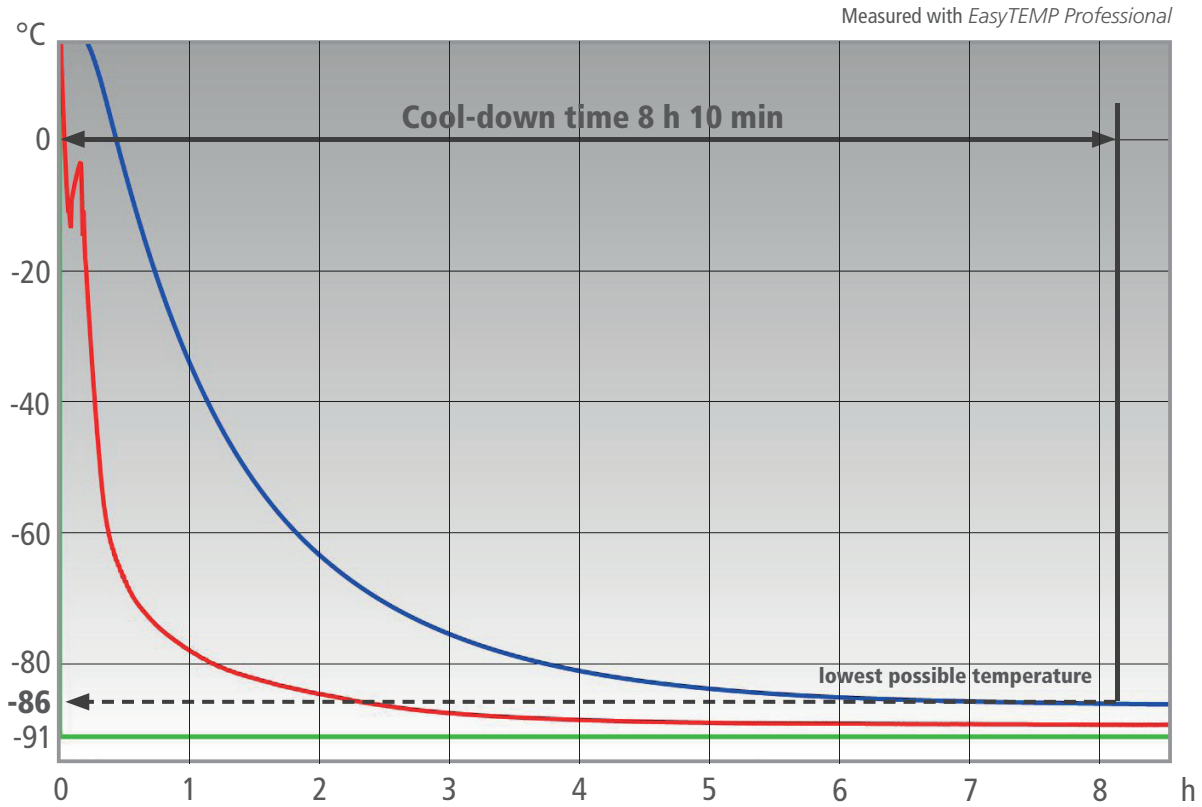
Control Parameters

Xp 0.2 K
 Tn 720 s
 Tv 100 s
 Xpu 24 K



Test Results

The PRESTO W92tt cooled the reactor from +20 °C down to the lowest possible temperature in 8 h 10 min. Within these test conditions the lowest possible temperature is -86 °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