

Accessories for Hot and Cold Stages, Chucks, and Plates

WP115C/WP230C CIRCULATION WATER PUMP

Description

The WP115C/WP230C is an in-expensive and flexible water-cooling option for Instec hot and cold stages, chucks, and plates. It enables the hot and cold stage, chuck, and plate system to cool the sample down to 5°C. The WP115C/WP230C is PID controlled by the Instec STC200 temperature controller. This means when the stage, chuck, or plate is heating, the pump is off; when the pump is on, stage heating is off. The WP115C/WP230C consists of a submersible water pump (rated at 115V for WP115C, and 230V for WP230C) and water lines ready for Instec's hot and cold stages, chucks, and plates.

Features:

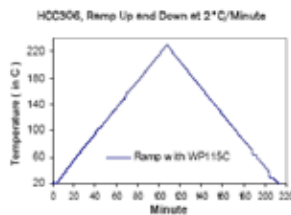
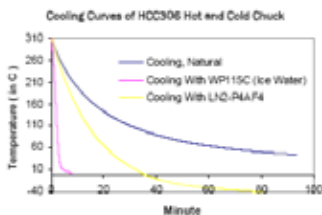
- Economic Cooling Option
- Ideal for Fast Cooling, Quenching or Annealing of Sample
- PID Controlled by STC200 Controller.
- Below Ambient Cooling Down to 5 °C
- 0.1" ID Tubing



Technical Specification

Voltage	115V for WP115C; 230V for WP230C
Water Line Diameter	¼ " reduced to .094"
Automatic Operation	Yes, with STC200 Temperature Controller (always plug to out2 of the STC200)
Dimension	3" x4" x4"
Maximum Flow Rate	10L/Min.

The below data was taken using Instec HCS410-STC20A hot and cold stage system, LN2-P2AF2 liquid nitrogen cooling accessory, and WP115C circulation water pump.



The graphic at left shows cooling curves of HCC306 hot and chuck, using different cooling options. Water-cooling is much faster than liquid nitrogen cooling due to the large heat capacitance of water, and can cool the sample down to 5°C.

The graphic at right shows controlled heating and cooling of HCC306-STC20A using WP115C circulation water pump: ramp up and down at 2°C/minute. Uncontrolled fast cooling is easy when using the WP115C. However, it is not easy to get controlled fast cooling, due to the large heat capacitance of water.

Ordering information

Part Number	Description
WP115C	Circulation Water Pump (115V AC pump) for sample cooling. 0.1" inlet and outlet tubing ID
WP230C	Circulation Water Pump (230V AC pump) for sample cooling. 0.1" inlet and outlet tubing ID



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