

Heat Transfer Training Systems

Educational Training Equipment for the 21st Century

Bulletin 685

H-6850 Heat Transfer Unit

Purpose

The Hampden **Model H-6850** Heat Transfer Unit has been designed to provide the primary facilities for generating heated and chilled water.

Description

The heated water supply is generated by three 3 kW electric immersion heaters located inside a 37 gallon (140 liter) insulated water tank. The water tank features a manually adjustable temperature selector with an integral limit control (190°F, 85°C). The immersion heaters are also protected by a low liquid level switch. The chilled water is generated by a refrigerating unit using HFC-134a with a capacity of 17,000 Btu/hr (5 kW). The chiller coils are located in an 18 gallon (68 liter) insulated water tank and is capable of forming ice on the coils.

The heated and chilled water supplies are circulated at 13 gpm max. (49 lpm). A flowmeter is mounted in each of the water lines to measure the water supplied to the experiment. In addition, the unit is supplied with a differential pressure gauge and tubing to be used to measure the pressure loss in the experimental setups. The flow rates are metered with adjustable needle valves and the excess flows are routed back to their respective water tanks to increase the heat transfer rates through greater turbulence. The water temperatures are monitored at the inlet and outlet of each water line and are indicated by a multipoint digital temperature meter. The unit is equipped with type T thermocouples.



Model H-6850 Heat Transfer Unit

Dimensions: 61"H x 66"W x 32"D, Shipping Weight: 2,000 lbs.

The entire assembly is mounted on a bench constructed out of square mechanical tubing with a white faced, laminated plastic top. At the rear of the unit is an instrument panel constructed out of 11 gauge sheet metal which houses the instrumentation supplied with the unit. The bench dimensions are 61"H x 66"W x 32"D (1549mm x 1676mm x 813mm). A complete Operating Instruction/Technical manual, Bulletin 685-OI, is also supplied with the unit.

Services Required

208V-3Ø-50/60Hz

Optional Units

H-6850 Series Heat Exchangers

All Hampden units are available for operation at any voltage or frequency

Hampden
ENGINEERING CORPORATION

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