

# Food Technology Trainers

Educational Training Equipment for the 21st Century

Bulletin 641D

## H-6410 Laboratory Pasteurizer

### Purpose

The Hampden **Model H-6410** Laboratory Pasteurizer has been developed to investigate the pasteurizing process of low viscosity liquids such as milk and fruit juices.

### Description

This system utilizes high temperature over a short duration of time processing up to 5.3 gallons (20 liters) per hour.

This unit incorporates two basic modules, the control module and the pasteurizer module. The pasteurizer can be cleaned and disinfected at its bench location.

### Specifications

#### Control Module

**Enclosure:**

14 gauge furniture stock steel finished in instrument tan texture.

**Panel:**

11 gauge furniture stock steel finished in instrument white enamel

**Feet:** Non-mar**Main:**

Ground fault circuit interrupter, 30A

**Electromagnetic Circuit Protector Power Switch and Pilot Light:**

Pump, heater and accessory

**Temperature Controller:**

Microprocessor-based P.I.D. controller with RS-485 serial port

**Power Controller:**

SCR heater controller with 4-20mA input

**Digital Temperature Indicator:**

4 digit 7 segment LED display programmable for °F or °C,  $\pm 1.6^\circ\text{F} + 1/2$  LSD, resolution 0.1°F between -199.9° and 199.9° and 1°F outside -200° and 200°F

**Temperature Selector Switch:**

9-position

**Temperature Jacks:**

9 type SPJ-T-F

**Input:**

3/c #10 power cable with plug

**Nomenclature:**

Silkscreen, black KEM enamel

**Pasteurizer Module****Mounting Base:**

14 gauge stainless steel with epoxy finish

**Feet:**

Adjustable levelers with non-mar pads

**Panel:**

14 gauge stainless steel with epoxy finish

**Thermocouples:**

Spring loaded Type T with stainless steel thermowells, nine (9)

**Flowmeters:**

Cooling water with flow control

Hot water with flow control

**Feed Tank:**

Glass

**Hot Water Tank:**

Stainless steel insulated with automatic fill, automatic fill cutout switch, safety cutout, drain valve, power controller thermocouple, and 1500 watt heating element

**Hot Water Pump:**

Magnetic coupled, one gallon per minute at 2.17 psi

**Process Pump:**

Peristaltic with variable speed drive

**Holding Tube:**

Stainless steel with insulated cover

**Solenoid Valve:**

Three-way with sanitary fittings

**Heat Exchanger:**

Stainless steel multi-plate consisting of three individual sections with insulated manifold ports with sanitary fittings

### Accessories

Glass beaker - end product

Tubing, interface

Manual, Operating and Maintenance



### Mechanical Requirements

**Electrical:** 120V AC, 1Ø, 60Hz, 30A

**Water:**

45°F or below (Refrigeration is required)

**Refrigeration:**

For final cooling when chiller not used.

**Waste:**

Drain for cooling water

### Options

**H-6410A:**

Chiller consisting of hermetic compressor, air cooled condenser, water to Freon evaporator, circulator pump, tank, evaporator pressure regulator and fittings

### Computer Data Logging

This feature adds dual thermocouples and two flow transmitters into the system. One interface package containing National Instruments I/O modules is provided for interfacing into a PC computer through the USB port. Templates for LabVIEW® control software are included. Computer and National Instruments LabVIEW® Software are included.

Specify **MODEL H-6410-CDL**

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

**Hampden**  
ENGINEERING CORPORATION

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