

TRANE/FILTRINE CHILLED WATER HEAT EXCHANGER AND CONTROL PANEL FOR VARIAN UNIQUE, HALCYON AND ETHOS



TYPICAL HX MODEL

FEATURES

- Ample storage to ensure consistent temperature under fluctuating loads
- Built-in diagnostic gauges and controls
- Process water filter to protect internal cooling system
- Cleanable plate and frame heat exchanger

DESCRIPTION

A closed loop, packaged heat exchanger designed specifically to cool **VARIAN CLINAC UNIQUE, HALCYON** and **ETHOS** linear accelerators using existing plant chilled water instead of refrigeration.

Filtrine HX packages use a storage tank and cleanable plate and frame heat exchanger to provide close temperature control of recirculating process water. The tank is sealed to prevent process water evaporation or fouling; and is supplied with a liquid level gauge, fill port and clean out. The pump circulates the process water at a constant temperature and flow.

MODEL TPCP-200-24-HX

SPECIFICATIONS

Cooling Capacity:

Btu/hr..... 23,900

Watts 7,000

Rating Conditions:

Process Water Discharge Temperature 68°F [20°C]

Plant Chilled Water Temperature 45°F [7.2°C]

Description:

Cleanable plate and frame heat exchanger constructed of stainless steel plates with high efficiency heat transfer surface.

Storage Tank Capacity 20 Gals. [76 ltr]

Construction: Welded stainless steel shell. Tank tested at 250# for 125# working pressure, supplied with drain connection and insulated with closed cell thermo-elastomer with an R factor of 3.7.

Pump: Motor HP 1/3

Capacity 4 gpm @ 32 psi [15 lpm @ 2.2 bar]

Description: Bronze fitted turbine pump mounted on a rubber pad over a stainless steel condensation tray and supplied with unions and service valves and a pressure relief bypass valve. All piping and fittings brass, copper or bronze and insulated with closed cell thermo-elastomer with an R factor of 3.7.

Adjustable Differential Thermostat: 40° to 90°F [4° to 32°C]

Temperature Stability ±1.5°F [0.8°C]

Cabinet: Heavy gauge anodized aluminum panels on a welded steel frame with stainless corner legs. Panels removable without tools for access to all components.

Supply Power: 115 or 230/60/1, 208-230/60/3 or 460/60/3

Full Load Amps 1.8 or 0.9 or 0.5

NOTE: FLA may vary depending on options. See MCA & MOP ratings on nameplate of as-built unit.

Plumbing Connections In & Out 3/4" [19 mm] MPT

Shipping Weight 600 lbs [270 kg]

BUILT IN DIAGNOSTICS

CONTROLS & GAUGES

Dial thermometers: Discharge and return for process water

Pressure gauges: Discharge and return for process water

Chilled water flow meter

FILTER

75 micron polypropylene cartridge inside stainless steel housing

LOW FLOW INTERLOCK

Flow switch lights a warning light if flow rate drops below safe low limit

HIGH TEMPERATURE INTERLOCK

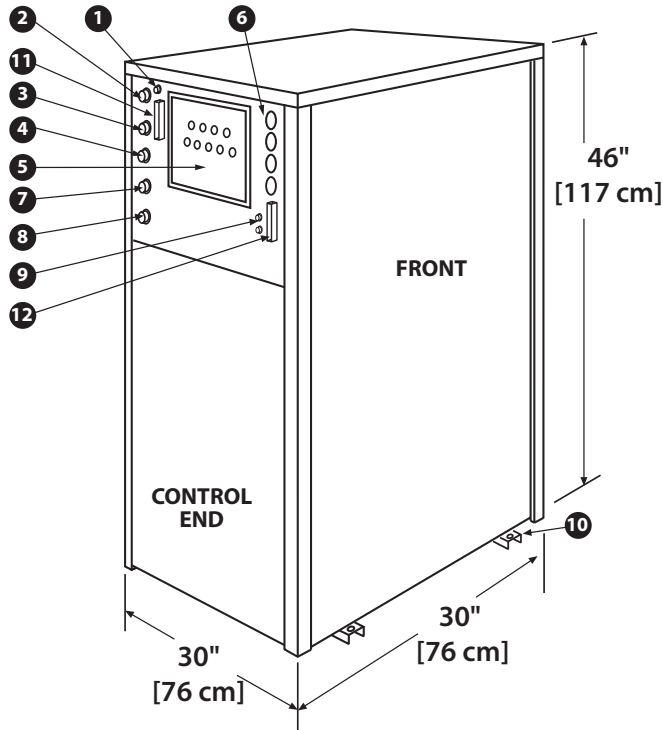
Thermostat lights a warning if coolant temperature rises above safe high limit

"FAIL SAFE" OPTIONS [Designated by suffix]

DPA DUAL PUMPS: Automatic switchover to backup pump on loss of process water flow

LL LOW LEVEL INTERLOCK: Float switch in tank lights a warning light if process water level drops below safe low limit

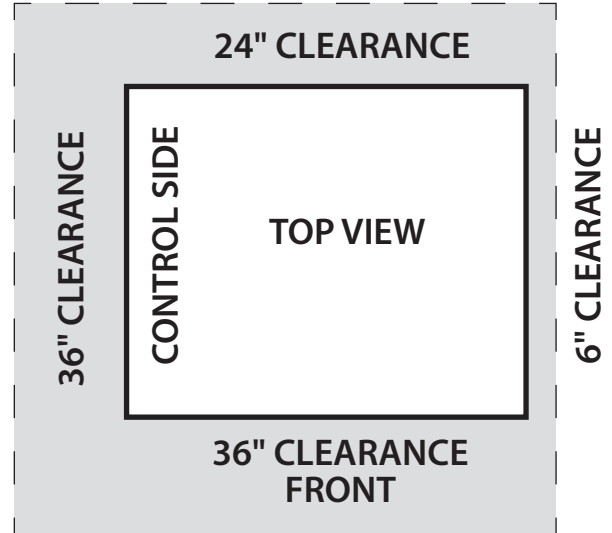
SPACE SAVING DESIGN MODEL



LEGEND

1. AirVent
2. Fill Port
3. Coolant Return
4. Coolant Discharge
5. Control Panel
6. Gauges
7. Plant Chilled Water Out 3/4" [19 mm]
8. Plant Chilled Water In 3/4" [19 mm]
9. Electrical Connection
10. Channel Skids
11. Water Level Glass
12. Flow Meter

REQUIRED CLEARANCES



START UP AND FIRST YEAR SERVICE

FILTRINE Mfg. Co. provides for startup and first year service on all parts and labor. Regular maintenance on a yearly contract basis is a wise investment and will help prevent costly downtime.

WARRANTY

All parts are covered FOB jobsite for (12) months from the start date or (15) months from the date of shipment.

SERVICE MAKES THE DIFFERENCE

Recognizing that downtime on critical medical equipment is unacceptable, Filtrine has established a national network of qualified service technicians, selected because of their extensive experience in working on medical equipment chillers and their location within the "Emergency Response Zone" (approximately 40 miles). This expert and quick service is available on a 8/5 or 24/7 basis for all Filtrine medical chillers and heat exchangers.

STANDARD OPERATING CONDITIONS

50°F to 100°F [10° to 38°C]

CHANNEL SKIDS

Allow an additional 4" [10 cm] to depth and 2" [5 cm] to height for channel skids. Center of 5/8" [1.6 cm] mounting holes located 6" [15 cm] from cabinet end and 1" [2.5 cm] from cabinet edge front and rear.

All information given on this bulletin is for general use only.
Confirm specifications with factory for your specific requirement.