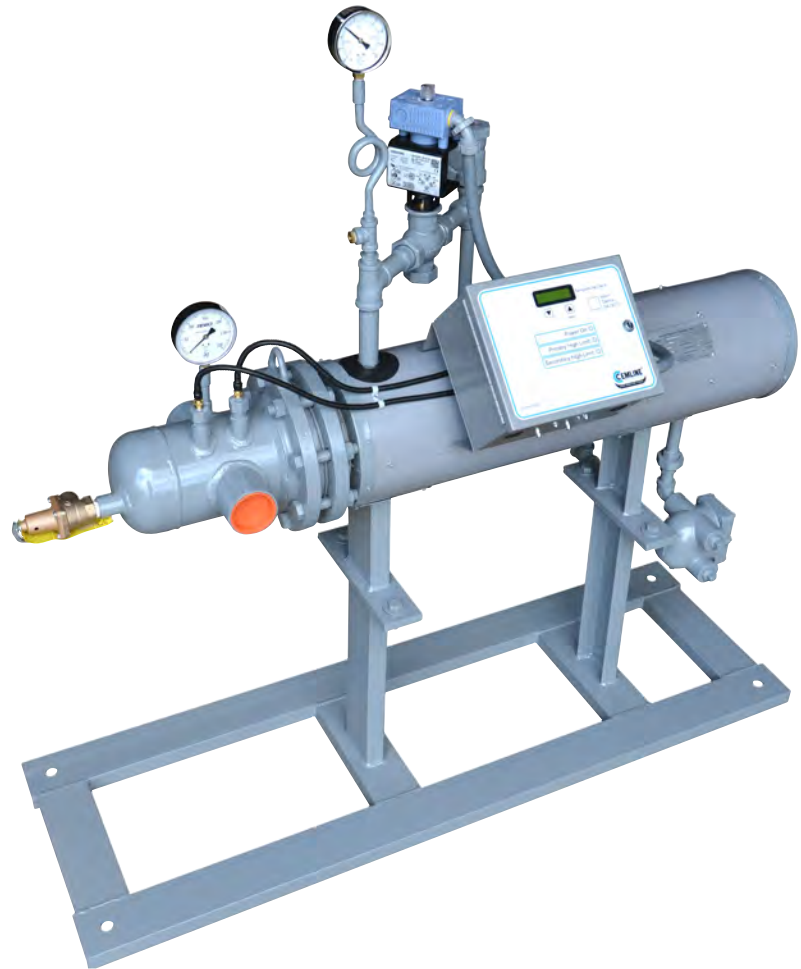


Heat Transfer Package



Heat Transfer Package (HTP Series)

- Building Heat, Process Heat, Swimming Pool Heater, Cooling Applications
- Steam, Boiler Water, High Temperature Hot Water, Chilled Water
- Shell & Tube and Plate Heat Exchangers



The Cemline Heat Transfer Package (HTP Series) is a heat exchange package designed to provide heat transfer between energy source (steam, boiler water, HTHW or chilled water) and the process liquid (water, pool water, thermal oil, or glycol blend, etc.).

This package is provided with a heat exchanger, controls, and accessories allowing easy installation. When using boiler water as the energy source the brazed plate heat exchanger is supplied. A brazed plate heat exchanger can provide a lower approach temperature than a shell and tube heat exchanger while helping

to improve the efficiency of today's condensing boiler(s). The Cem-trol® electronic controller and 2 or 3-way control valve delivers steady output temperature to the process fluid in a boiler water application. A shell and tube heat exchanger is an industry standard when using steam as the energy source and is supplied with a steam

application. The Cem-trol® controller and steam control valve and condensate traps provide delivers steady output temperature to the process fluid in a steam application. Factory packaging keeps contractor installation time to a minimum the only connections of steam/condensate, boiler water or HTHW, heating fluid, and electric.

Cemline Heat Transfer Package (HTP Series)

Brazed Plate Dimensional Data

Basic Plate Package Includes:

- Heat Exchanger: Brazed Plate or Plate & Frame
- Cem-trol® Controller – complete with PID Control, temperature read-out, High Limits, and temperature sensors
- Control Valve: Electric, Pneumatic
- Inlet Strainers (Boiler Water Side & Heating Fluid Side)
- Intra-Heater circulator
- Clean out ports for heat exchanger (Plate Heater Only)
- Steel Channel Base
- 16 Gauge Steel Frame with hammer tone enamel paint
- Boiler Water Temperature Gauge & Fluid Pressure Gauge
- Double Walled Plate Heat Exchanger

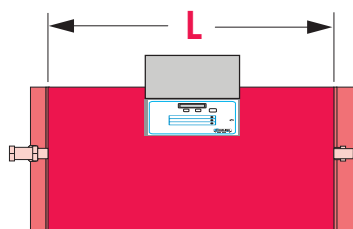
Optional Equipment:

- 1/3 – 2/3 Control Valves
- 3 way Motorized Tempering Valve
- Ball Valves for isolation of heat exchanger
- Boiler Water Pump
- Heating Fluid Pump
- BACNET Interface

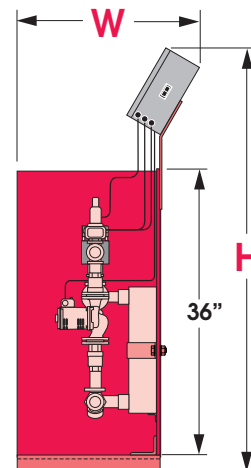
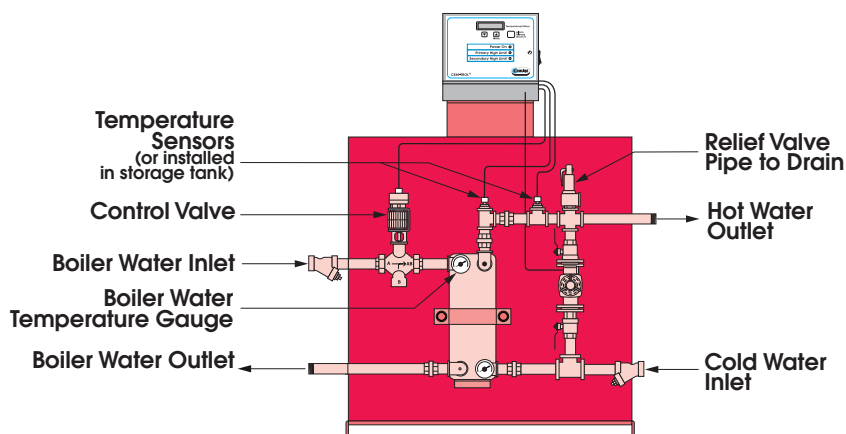


Sizing Data— Brazed Plate

Heated Fluid				Boiler Water			
Model	GPM	Inlet Temp. (°F)	Outlet Temp. (°F)	GPM	Inlet Temp. (°F)	Outlet Temp. (°F)	Heat Load BTU/hr.
HTP-250	12.5	40	80	12.8	180	140	250,000
HTP-500	25	40	80	26	180	140	500,000
HTP-750	38	40	80	38	180	140	750,000
HTP-1000	50	04	80	51	180	140	1,000,000



Boiler Model Number	W	L	H
HTP 250	20"	45"	50"
HTP 500	20"	45"	50"
HTP 750	25"	50"	55"
HTP 1000	25"	50"	55"



Cemline Heat Transfer Package (HTP Series)

Shell and Tube Dimensional Data

Basic Shell & Tube Package Includes:

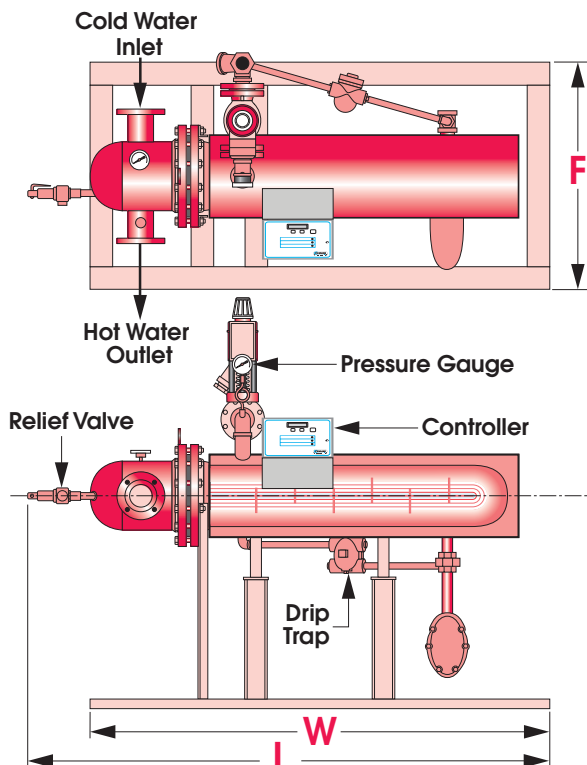
- Shell & Tube Heat Exchanger - A.S.M.E Code Rated 150 PSIG
- Cem-trol® Controller – complete with PID Control, temperature read-out, High Limits, and temperature sensors
- Control Valve: Electric, Pneumatic, Pilot (Steam Only)
- Inlet Steam Strainer (Steam Only)
- Main and Drip Trap (Steam Only)
- Vacuum Breaker (Steam Only)
- Steel Channel Base
- 16 Gauge Steel Jacket & Insulation
- Steam & Fluid Pressure Gauge

Optional Equipment:

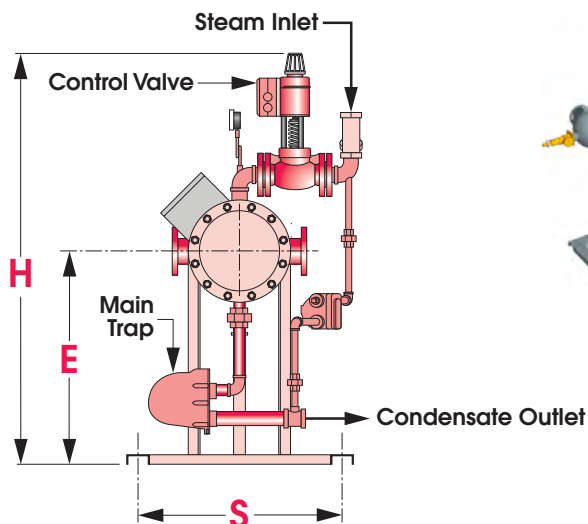
- Heat Exchanger Options:
A.S.M.E rated 300, 400, 600
Stainless Steel Shell
Stainless Steel Coil Head
Epoxy Lined Coil Head (Pool water applications)
Tubing Options: 90:10 Copper-Nickel, Stainless Steel, Double Walled Tubing (Copper/Copper, 90:10 CuNi/Copper, 90:10 Cu-Ni / 90:10 Cu-Ni).
Tubesheet Options: Steel, Copper Lined, Stainless Steel, 90:10 Cu-Ni, Admiralty Brass
- 1/3 – 2/3 Control Valves
- Pumping Trap / Non-Electric Condensate Pump
- Heating Fluid Pump
- BACNET Interface

Sizing Data— Steam

Example: 150°F - 180°F									
Inlet Steam Pressure	5 PSI			10 PSI			15 PSI		
Model	GPM	BTU/hr	#/HR	GPM	BTU/hr	#/HR	GPM	BTU/hr	#/HR
HTP-448	25	375,000	385	30	450,000	465	35	525,000	545
HTP-648	50	750,000	765	55	825,000	850	65	975,000	1010
HTP-848	80	1,200,000	1225	90	1,350,000	1390	95	1,425,000	1475
HTP-1048	150	2,250,000	2295	165	2,475,000	2540	180	2,700,000	2795
HTP-1248	200	3,000,000	3056	225	3,375,000	3390	250	3,750,000	3880



Steam Model Number	W	L	H	E	F	S
HTP448-S	72"	78"	60"	31.5"	30"	26"
HTP648-S	72"	78"	62"	33.5"	36"	32"
HTP848-S	72"	80"	64"	35.5"	36"	32"
HTP1048-S	72"	80"	65"	36.5"	36"	32"
HTP1248-S	72"	80"	65"	36.5"	36"	32"



Heat Transfer Package



Steam as Energy Source (Shell and Tube HEX)

Heat Transfer Package shall be CEMLINE Series HTP; factory assembled and packaged. Heat Transfer Package Heater shall be constructed in accordance with A.S.M.E. Code for working pressure of 150 psig. The heat exchanger shall be constructed with a carbon steel tank, with steel threaded openings, 3/4" O.D. copper tubes, steel tube sheet, and carbon steel coil head. Heat Transfer Package shall be mounted on a steel support skid. Heater shall be insulated with foam in place insulation protected by an enameled metal jacket, 20 gauge minimum thickness. Heater shall be factory assembled and piped including incoming steam strainer, (air) OR (pilot) or (electric) operated temperature regulator, main and auxiliary float and thermostatic steam traps, and condensate strainer.

Heat Transfer Package shall be supplied with solid-state control module with LED backlit LCD display and LED pilot lights to indicate on-off, primary high limit, and secondary high limit. Solid-state control module shall be provided with a field programmable digital electronic PID controller allowing the owner to set operating and temperature limits on the display screen. Solid-state control module shall have red alarm light and alarm horn with built in alarm silence relay. Solid-state control module shall be supplied with dry contact closure outputs to indicate to building automation system (BAS) the occurrence of power on, primary high temperature, and secondary high temperature. The control module shall allow the BAS to turn the heater on or off through a remote relay suitable for 24 VAC, 1 amp. The control module shall allow the BAS to remotely set the temperature of the heater using a 4-20 mA input signal. The control module shall allow the BAS to remotely monitor the operating temperature. Control module shall be supplied with an on-off switch and shall be mounted in a NEMA 4 panel. All solenoids and limits shall be 24 VAC.

Heat Transfer Package shall be furnished with a water pressure gauge and an A.S.M.E. pressure relief valve of sufficient size to relieve total BTU input of the coil. Manufacturer shall assume responsibility for correct sizing of components to assure performance designated in design criteria.

Heater shall be CEMLINE Corporation Model HTP _____.

Heater shall be mounted horizontally.

Coil to heat _____ GPM of _____ °F to _____ °F with _____ psig steam to the control valve.

Boiler Water as Energy Source (Plate HEX)

Heat Transfer Package shall be CEMLINE Series HTP; factory assembled and packaged. Heat Transfer Package shall be mounted on an enameled metal base, 16 gauge minimum thickness. Heater shall be factory assembled and piped including boiler water strainer and (air) OR (electric) operated temperature regulator. Factory piping shall include inlet strainer on the heated fluid side of the heat exchanger. Heat exchanger shall be (single) OR (double) walled (brazed) OR (plate & frame) 316L stainless steel plate type.

Heat Transfer Package shall be supplied with solid-state control module with LED backlit LCD display and LED pilot lights to indicate on-off, primary high limit, and secondary high limit. Solid-state control module shall be provided with a field programmable digital electronic PID controller allowing the owner to set operating and temperature limits on the display screen. Solid-state control module shall have red alarm light and alarm horn with built in alarm silence relay. Solid-state control module shall be supplied with dry contact closure outputs to indicate to building automation system (BAS) the occurrence of power on, primary high temperature, and secondary high temperature. The control module shall allow the BAS to turn the heater on or off through a remote relay suitable for 24 VAC, 1 amp. The control module shall allow the BAS to remotely set the temperature of the heater using a 4-20 mA input signal. The control module shall allow the BAS to remotely monitor the operating temperature. Control module shall be supplied with an on-off switch and shall be mounted in a NEMA 4 panel. All solenoids and limits shall be 24 VAC.

Heater shall be furnished with a water pressure gauge and an A.S.M.E. pressure relief valve of sufficient size to relieve total BTU input of heat exchanger.

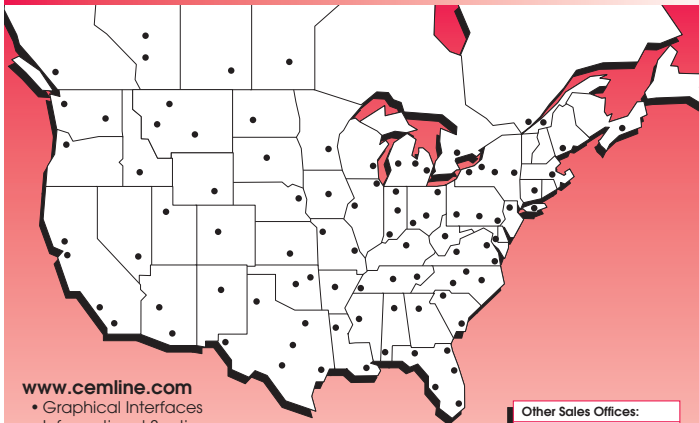
Manufacturer shall assume responsibility for correct sizing of components to assure performance designated in design criteria.

Heater shall be CEMLINE Corporation Model HTP _____.

Unit dimensions _____" width x _____" long x _____" height.

Plate exchanger to heat _____ GPM of _____ from _____ °F to _____ °F with _____ GPM of _____ °F inlet _____ °F outlet.

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