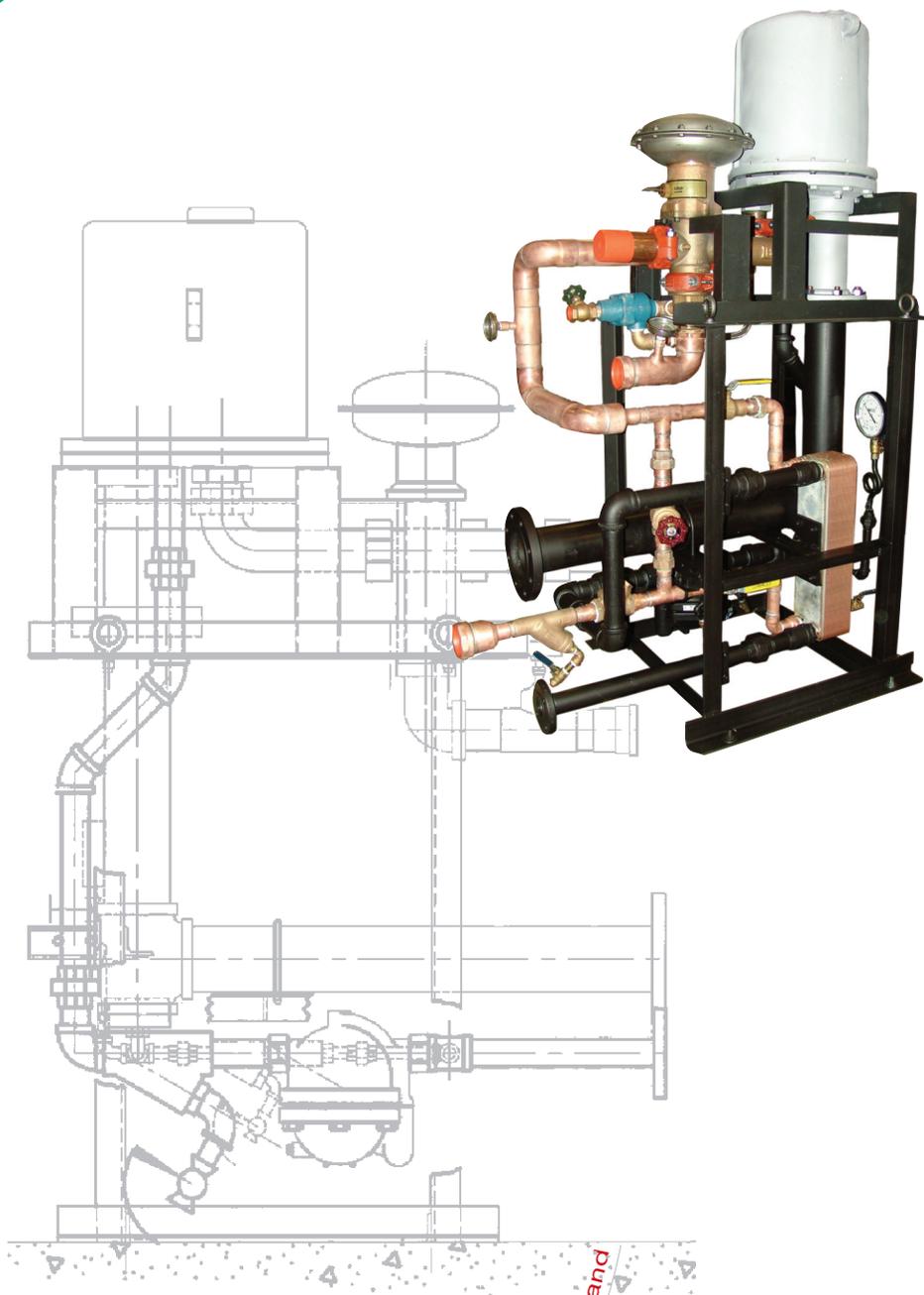


SAVE UP TO 15%  
OF CURRENT CAPACITY!



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**ECONO**  **STEAM**™

**instantaneous water heater**

# Brochure



**LESLIE**  
CONTROLS, INC.

*The Energy-Efficiency Leader!*

A subsidiary of CIRCOR International, Inc.

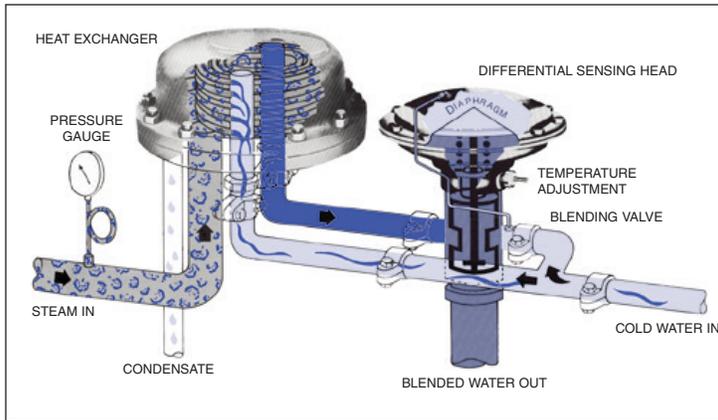
Member of the U.S. Green Building Council



# ECONOSTEAM™ COMPACT PRE-PIPED DESIGN AND FEEDFORWARD OPERATION

## QUALITY, DURABILITY, SAVINGS

### Econosteam™ for Most Applications - (Constant Steam Pressure)



### WARRANTY

The main heat exchanger shall carry an extended warranty in addition to the manufacturers warranty as follows:

**COILS**—The heat exchanger coils shall carry an unconditional, non-prorated 10-year guarantee against failure due to thermal shock, mechanical failure or erosion.

**PRESSURE VESSEL**—The heat exchanger pressure vessel shall carry an unconditional, non-prorated 10 year guarantee against any failure.

All other parts of the package, such as blending valve, gauges and traps, etc. have the standard LESLIE warranty.

### MATERIALS OF CONSTRUCTION

Exchanger: Ductile Iron (single wall only)(75 psi) (517 kPa)  
Cast Steel .....(150 psi) (1034 kPa)  
(ASME SEC. VIII div. 1)

Economizer: Brazed plate and frame heat exchanger  
(316L SS plates, copper brazed)

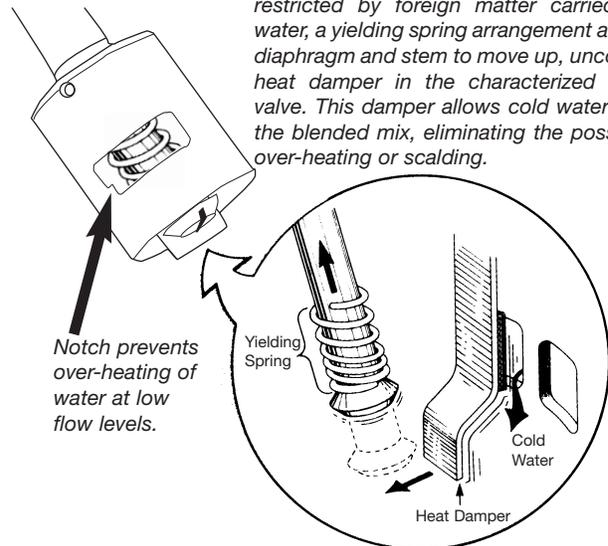
Blending Valve:  
Body: .....Bronze  
Coils: Standard .....Copper  
Optional - Double Wall: Admiralty, Cupro-nickel,  
Stainless Steel

### OPTIONS

- High-Capacity Economizer System
- Skidded
- Recirculation Kit
- Automatic Descaler
- Insulated Cover
- Pressure Gradient Monitor

### TWO INNOVATIONS TO ENSURE SAFETY

Should movement of the blending valve be restricted by foreign matter carried in the water, a yielding spring arrangement allows the diaphragm and stem to move up, uncovering a heat damper in the characterized blending valve. This damper allows cold water to enter the blended mix, eliminating the possibility of over-heating or scalding.



### APPLICATION DATA

- Hospital Patient & Domestic Hot Water
- University Dormitories
- Safety Shower Systems
- Industrial Shower Rooms
- Booster Heater
- Building Heat

### RATINGS

#### Adjustable temperature range:

45-120 GPM: 105-180°F (41-82°C)  
15 and 30 GPM: 105-150°F (41-65°C)

**Steam pressure:** 2-250 PSIG (14-1725 kPa)  
over 15 PSIG (104 kPa), requires steam reducing valve

**Water pressure:** 150 PSI max. (1034 kPa)  
Option: 250 PSI max. (1723 kPa)(single wall only)

#### Flow ranges:

Single Wall: 15, 30, 45, 60, 75, 90, 105, 120 GPM  
(57, 114, 170, 227, 284, 341, 397, 454 L/min)  
Double Wall: 30, 60, 90, 120 GPM (114, 227, 341, 454 L/min)

\* For higher steam pressure use a pressure regulator to reduce pressure to 15 psi.

# ECONOSTEAM™ HEATER

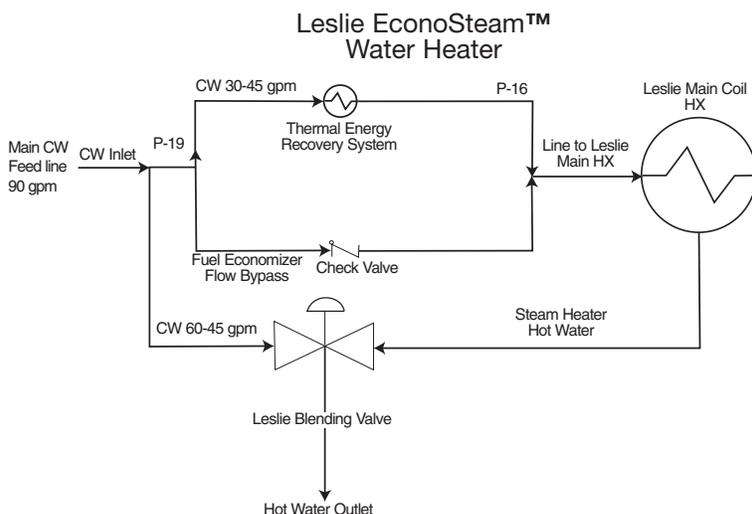
## FEATURES

- Energy-Saving Economizer
- Fits LEED-Certified Projects
- Feed-Forward Control
- Flows up to 120 GPM
- Adjustable Temperature 105-180°F
- No Storage Tank Required
- Built In Safety
- Heats Water Only on Demand
- Fits Through Standard Doorways
- High Turndown

Leslie EconoSteam™ Constantemp Heater Model \_\_\_\_\_ steam water heater, for use on 2-250 psig steam, consists of an integrally piped helical designed coil and heat exchanger, with feed forward blending valve actuated by differential pressure mounted on a heavy-duty steel frame with all traps, strainers, pressure and temperature gauges necessary, fully assembled and piped. Factory certified pressure tested for leaks.

The integral blending valve shall have a differential pressure sensing head with a bronze body and Hastelloy plug. The differential pressure head shall sense flow rate and mix the proper amounts of hot and cold water to control the final temperature. The heater shall have an integral safety feature, should the movement of the blending valve be restricted by foreign matter carried in the water. A yielding spring arrangement will allow the diaphragm and stem to move up, un-covering a heat damper in the characterized blending valve. This damper shall allow cold water to enter the blended mix, eliminating the possibility of ever obtaining over-heated or scalding water.

The water shall flow through the tubes and the steam in the shell. When the hot water system has recirculation, each heater shall be equipped with a



Leslie recirculation system kit, with a non-adjustable valve to set the recirculation temperature and prevent temperature creep during low peak times and shall be equipped with a Thermal Energy Recovery System (TERS).

The Thermal Energy Recovery System (TERS) shall include a condensate cooler to be a brazed plate and frame exchanger. TERS will pre-heat incoming and/or makeup cold water while sub-cooling hot condensate prior to discharging it, thus recovering additional energy.

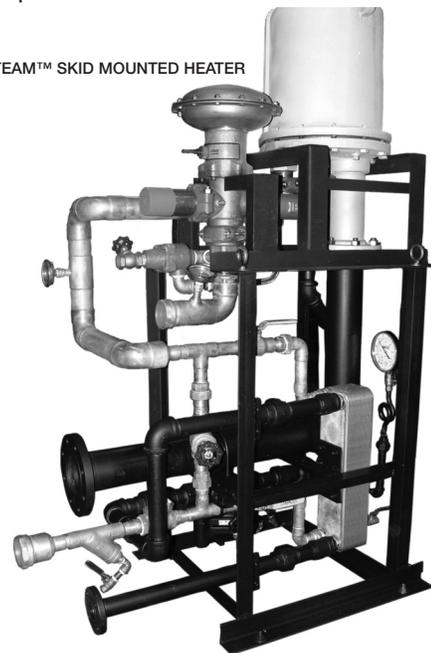
Each heater control package shall be capable of supplying 100% of hot water when heated from \_\_\_ degrees F to \_\_\_ degrees F for a total of -\_\_GPM without the use of thermostatic control devices or storage tanks. Heater shall be capable of maintaining +/- 3 degrees F set point over a flow range of a few percent to 100 percent, while recovering and using condensate to pre-heat cold water through a thermal energy recovery system (TERS).

As an added safety feature, if equipped with a recirculation pump, then a temperature switch measures the return water temperature to prevent over-tempering conditions.

Warranty of the coil shall have a ten-year unconditional non-prorated guarantee against failure due to thermal shock, mechanical failure or erosion. The heat exchanger pressure vessel shall carry an unconditional non-prorated 10-year guarantee against failure.

Heater shall be constructed with integral design such that it can be considered and approved for LEEDS points.

ECONOSTEAM™ SKID MOUNTED HEATER



## SPECIFICATIONS (SKID-MOUNTED)

Econosteam™ heater to be mounted on a skid with all traps, strainers, pressure and temperature gauges all fully assembled and piped. Complete temperature package to be pressure tested for leaks.

Unit to be assembled so there is sufficient room between heat exchanger and traps for proper operation.

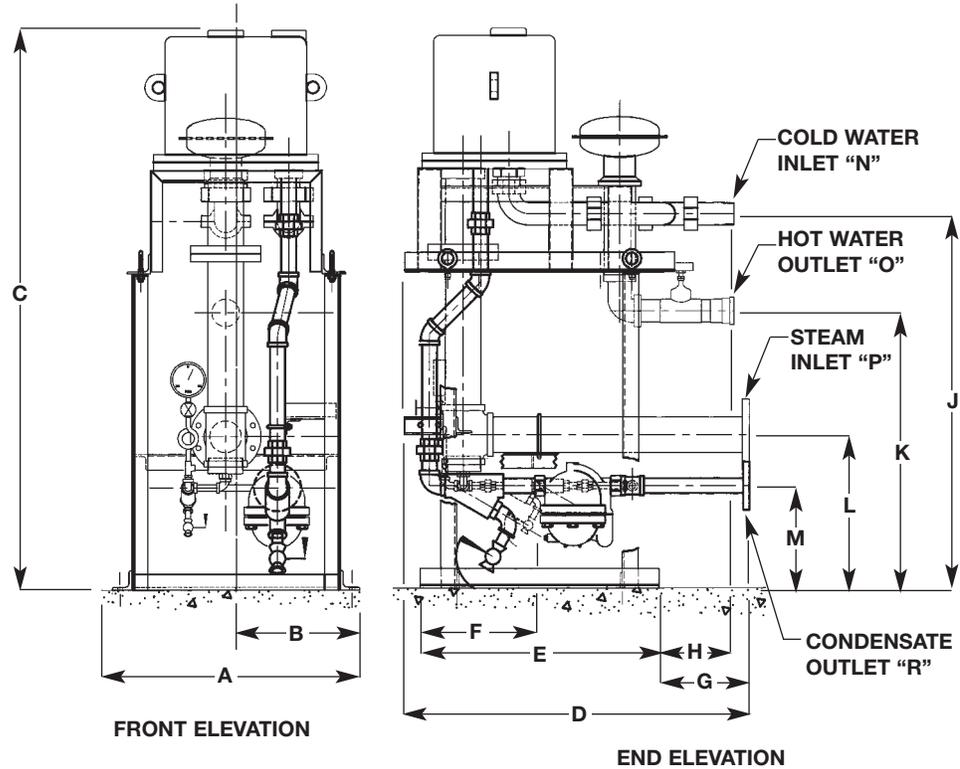
Customer shall only need to hook up steam, cold water in, hot water out and condensate.

# ECONOSTEAM™ SKID MOUNTED HEATER

Download your QR Reader application from the site below.

<http://get.beetagg.com/>

100% Leslie Assembly  
100% Pressure Tested



SIZING INFORMATION  
SEE INDIVIDUAL HEATERS

## DIMENSIONS inches (mm)

Model	A	B	C	D	E	F	G	H	J	K	L	M		
E1500L/E300L	28 $\frac{1}{4}$ (718)	14 $\frac{1}{4}$ (359)	55 $\frac{1}{2}$ (1410)	37 $\frac{1}{2}$ (953)	30 $\frac{1}{2}$ (775)	15 $\frac{1}{4}$ (387)	6 $\frac{1}{2}$ (162)	4 $\frac{1}{4}$ (108)	45 $\frac{1}{16}$ (1167)	34 $\frac{1}{4}$ (879)	22 $\frac{1}{2}$ (572)	12 (305)	22.5 (559)	12 (305)
E4500L/E600L	28 $\frac{1}{4}$ (718)	14 $\frac{1}{4}$ (359)	58 $\frac{1}{4}$ (1480)	39 $\frac{3}{8}$ (1006)	30 $\frac{1}{2}$ (775)	15 $\frac{1}{4}$ (387)	8 $\frac{1}{2}$ (216)	4 $\frac{1}{8}$ (111)	46 $\frac{1}{16}$ (1188)	35 $\frac{1}{4}$ (895)	22 $\frac{1}{2}$ (565)	13 $\frac{3}{8}$ (349)	22 $\frac{1}{4}$ (565)	13 $\frac{3}{8}$ (349)
E7500L/E900L	28 $\frac{1}{4}$ (718)	14 $\frac{1}{4}$ (359)	68 $\frac{1}{4}$ (1734)	42 $\frac{1}{2}$ (1083)	30 $\frac{1}{2}$ (775)	15 $\frac{1}{4}$ (387)	11 $\frac{1}{2}$ (292)	4 $\frac{1}{8}$ (121)	47 $\frac{1}{16}$ (1210)	35 $\frac{1}{4}$ (895)	19 (483)	11 (279)	19 (483)	11 (279)
E10500L/E1200L	31 $\frac{1}{2}$ (800)	15 $\frac{1}{4}$ (387)	68 $\frac{1}{4}$ (1734)	44 (1118)	30 $\frac{1}{2}$ (775)	15 $\frac{1}{4}$ (387)	11 $\frac{1}{2}$ (292)	9 $\frac{1}{2}$ (241)	47 $\frac{1}{16}$ (1210)	35 $\frac{1}{4}$ (895)	19 (483)	11 (279)	19 (483)	11 (279)

End Connection	E1500L/300L	E4500L/600L	E7500L/900L	E1050L/1200L
"N" Cold Water Inlet (2x)	1 $\frac{1}{2}$ MNPT	2 MNPT	2 $\frac{1}{2}$ MNPT	2 $\frac{1}{2}$ MNPT
"O" Hot Water Outlet (1)	2 FNPT	2 FNPT	2 $\frac{1}{2}$ FNPT	2 $\frac{1}{2}$ FNPT
"P" Steam Inlet (1)	3 150# Fig. RF	3 150# Fig. RF	4 150# Fig. RF	4 150# Fig. RF
"R" Condensate Outlet (1)	1 150# Fig. RF	1 $\frac{1}{2}$ 150# Fig. RF	1 $\frac{1}{2}$ 150# Fig. RF	1 $\frac{1}{2}$ 150# Fig. RF

Dimensions are approximate and may vary slightly than shown. All dimensions are in inches. Standard tolerance for location of horizontal pipe are plus or minus 2" and vertical is plus or minus 1 $\frac{1}{2}$ ".

Since LESLIE CONTROLS was founded in 1900, we have been an industry leader in quality fluid control equipment. We have developed a full line of engineered products to suit your requirements, including diaphragm control valves, control instrumentation, pressure and temperature regulators and steam water heaters.



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