UNFIRED STEAM GENERATORS

Application Data

- Clean steam
- Humidification
- Sterilization
- Food processing
- Parts cleaning

Ratings

Steam pressure: 0- 125 psi (8.6 bar) steam
Steam flow: 0 - 20,000 #/hr of steam
Source steam: 10-125 PSI (.7-8.6 bar)
Source hot water: 250-500°F (121-260 bar)

SIZING INFORMATION
CONSULT FACTORY

Features

- **Steam or high temperature water as energy source**
- **Stainless steel or carbon steel construction**
- **A.S.M.E. code constructed**
- **Horizontal or vertical construction**

Options

- Vacuum Breaker
- Bell
- Control
- Centrifugal Boiler Blow Off/Condensate Cooler (CBO)
- High Water Cut Off
- Make-up Water Feeding options
- Solenoid Valve
- Feed Water Pump
- Automatic Blowdown Options
- Automatic Blowdown - Time Method
- Automatic Blowdown - Total Dissolved Solids Method

The Leslie unfired steam generators are designed to produce clean steam with steam or high temperature hot water as an energy source.

UNFIRED STEAM GENERATORS

Specifications

Unfired Steam Generator shall be as manufactured by Leslie Controls, Tampa, FL.

Unfired Steam Generator shall be furnished as a complete package ready for installation.

Unfired Steam Generator shall be ASME Code constructed and stamped in accordance with Section VIII, Division I, for Unfired Steam Generators. Unfired Steam Generators shall be registered with the National Board of Boiler and Pressure Vessel Inspectors, and signed copy of shop inspection report shall be furnished. Unfired Steam Generator shall be built in accordance with Section VIII "Unfired Steam Generators" and shall bear the "UB" stamp.

Unfired Steam Generator and all components subject to steam side shall be (316-L grade stainless) (carbon) steel.

Unfired Steam Generator shall be insulated with not less than 3" of Fiberglass insulation, protected by not less than 20 ga. thick enameled steel jacket.

Unfired Steam Generator shall be mounted on a suitable I-Beam support skid, which shall be permanently welded to the shell.

Unfired Steam Generator shall have submerged coil of (16) (18) (20) BWG (copper) (90:10 Copper-Nickel) ((316) (304) stainless steel tubes) expanded into a (steel) ((316) (304) stainless steel) tube sheet with cast iron heads.

Unfired Steam Generator shall be furnished with ASME Code Section I pressure relief valve or valves with a capacity to relieve the total BTU of output of the generator.

All components for the Unfired Steam Generator shall be factory mounted, piped, and tested and the unit shall be shipped from the factory as a complete unit ready for installation. Unfired Steam Generator shall be furnished with a steam separator.

Materials of Construction

Tubes: .....Copper, 90:10 Copper-nickel, 304 or 316 Stainless Steel
Coil Head: .....Cast Iron, or Carbon Steel
Level Control: .....Cast Iron or Stainless Steel

Additional Specifications For High Temperature Hot Water As Energy Source

Unfired Steam Generator shall be furnished with an (air) (electronic) operated (2) (3) - way control valve to modulate the in-coming HTHW to maintain the desired output of steam pressure ±2 psi. Control valve shall be suitable for 400 psi at 400°F. Control valve pilot shall monitor output steam pressure and modulate the HTHW to maintain constant output pressure.

Unfired Steam Generator shall be furnished with a vessel steam gauge, thermometer to monitor the incoming HTHW temperature. Unfired Steam Generator shall be furnished with (electronic)(float type) level controller. Water column shall also be furnished with gauge glass.

Unfired Steam Generator shall be furnished with tandem blow off valves.

Unfired Steam Generator shall be Leslie Model _____, designed with an output of _____ pound per hour at_____ psi pressure and feed water of _____ °F. when supplied with _____ GPM of _____ °F boiler water.

Additional Specifications For Steam As Energy Source

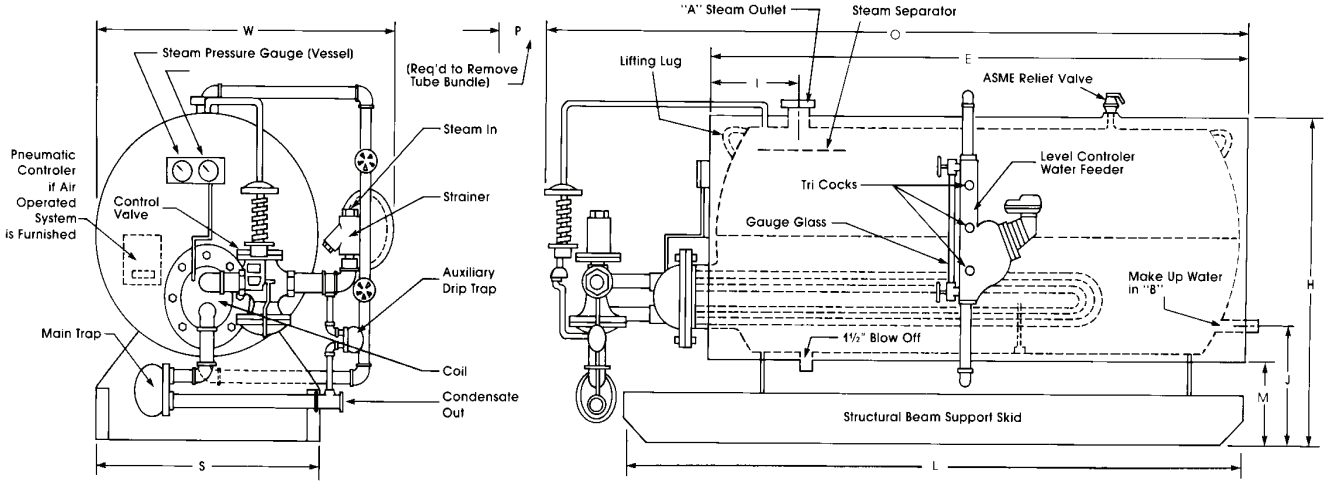
Unfired Steam Generator shall be furnished with an (air) (pilot) (electric) operated control valve to modulate the in-coming steam to maintain the desired output of steam pressure ±2 psi. Control valve shall be suitable for 150 psi. Control valve pilot shall monitor output steam pressure and modulate the steam to maintain constant output pressure.

Unfired Steam Generator shall be factory supplied with dual float and thermostatic traps, one for the coil and one for the drip before the control valve. Unfired Steam Generator shall have incoming strainer.

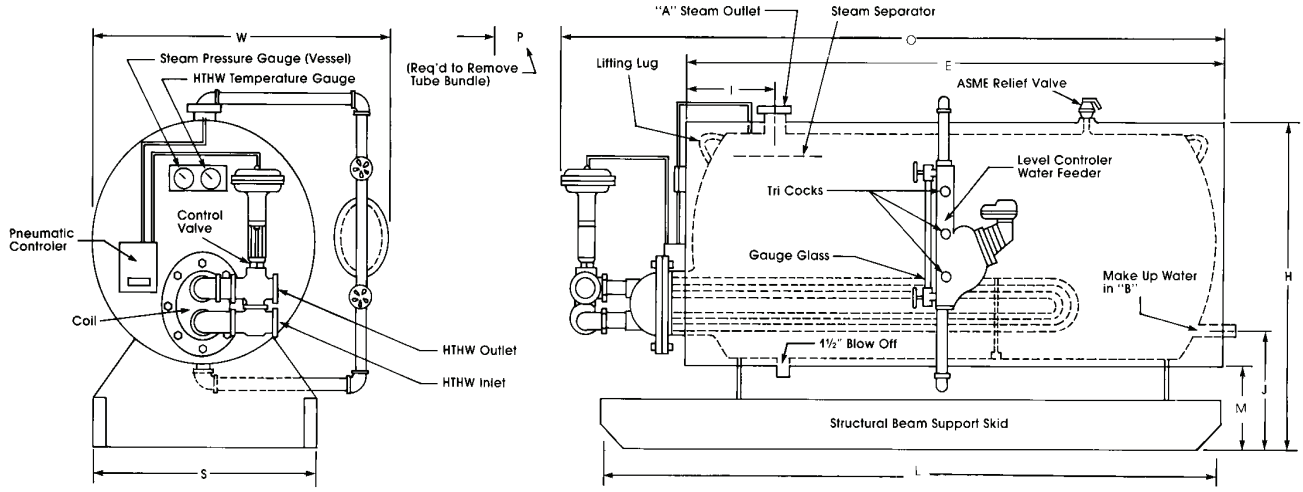
Unfired Steam Generator shall be furnished with a vessel steam gauge. Unfired Steam Generator shall be furnished with electronic level controller. Water column shall also be furnished with gauge glass. Unfired Steam Generator shall be furnished with tandem blow off valves.

Unfired Steam Generator shall be Leslie Model ____, designed with an output of _____ pounds per hour at _____psi pressure and feed water of _____°F. when supplied with _____ psi steam to the control valve.

UNFIRED STEAM GENERATORS DIMENSIONS - HORIZONTAL



Horizontal - Energy Source: Steam



Horizontal - Energy Source: High Temperature Hot Water

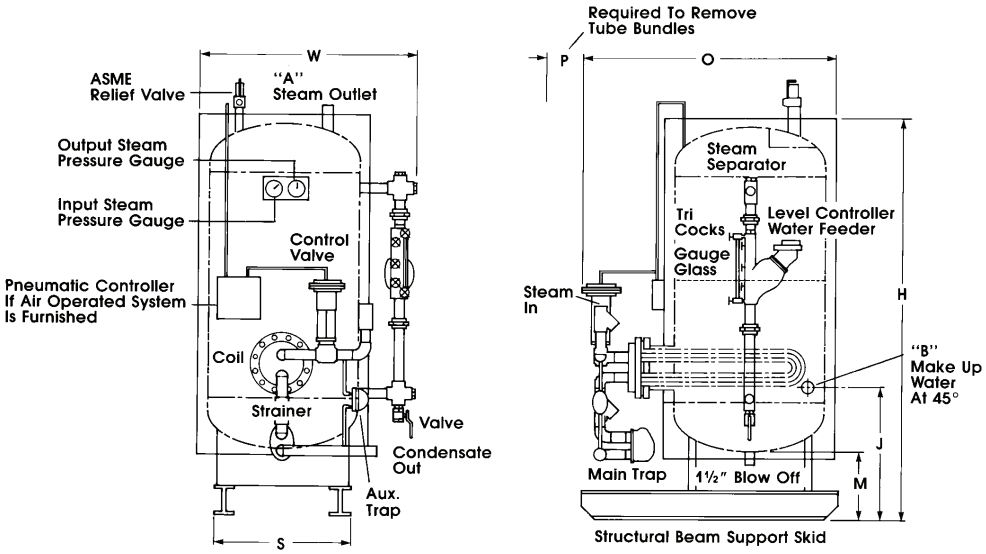
HORIZONTAL CONFIGURATION DIMENSIONS inches (mm)

Model Number	Boiler Vessel Size	W	H	O	S	E	M	J	I	P*	A**	B	L
H60LUSG	20 x 48 (508 x 1219)	34 (864)	42 (1067)	70 (1778)	24 (610)	52 (1321)	18 (457)	24 (610)	17 (432)	48 (1219)	1½NPT (38)	¾ NPT (19)	64 (1626)
H120LUSG	24 x 63 (610 x 1600)	38 (965)	46 (1168)	84 (2134)	28 (711)	67 (1702)	18 (457)	24 (610)	17 (432)	60 (1524)	1½ NPT (38)	¾ NPT (19)	79 (2007)
H205LUSG	30 x 72 (762 x 1829)	44 (1118)	49 (1245)	95 (2413)	34 (864)	76 (1930)	15 (381)	21 (533)	18 (457)	72 (1829)	2 NPT (50)	1 NPT (25)	88 (2235)
H395LUSG	36 x 96 (914 x 2438)	50 (1270)	52 (1321)	123 (3124)	40 (1016)	100 (2540)	12 (305)	20 (508)	20 (508)	96 (3438)	3 NPT (76)	1 NPT (25)	112 (2845)
H670LUSG	42 x 120 (1067 x 3048)	56 (1422)	58 (1473)	151 (3835)	46 (1168)	124 (3150)	12 (305)	20 (508)	22 (559)	120 (3048)	4 FLG (102)	1½ NPT (38)	140 (3556)
H860LUSG	48 x 12 (1219 x 3048)	62 (1575)	64 (1626)	149 (3785)	52 (1321)	124 (3150)	12 (305)	20 (508)	24 (610)	120 (3048)	5 FLG (127)	1½ NPT (38)	140 (3556)
H1085LUSG	54 x 120 (1372 x 3048)	68 (1727)	70 (1778)	152 (3861)	58 (1473)	124 (3150)	12 (305)	22 (559)	28 (711)	120 (3048)	6 FLG (152)	2 NPT (51)	140 (3556)

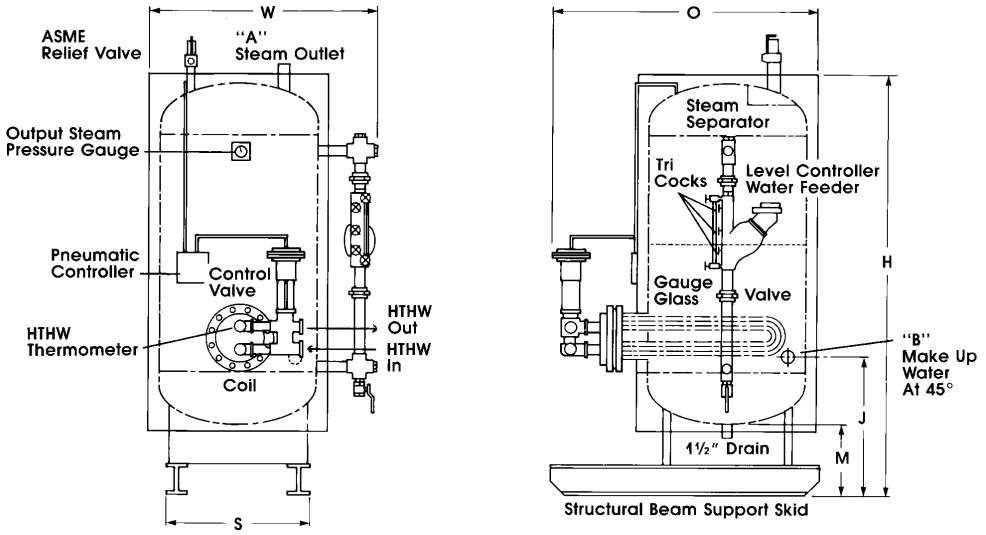
* This dimension is for the longest coil available, shorter coils with a corresponding shorter "P" dimension are available. Consult factory.

** Dimension A can be changed to suit customer requirements.

UNFIRED STEAM GENERATORS DIMENSIONS - VERTICAL



Vertical Energy Source: Steam



Vertical Energy Source: High Temperature Hot Water

VERTICAL CONFIGURATION DIMENSIONS inches (mm)

Model Number	W	H	O	S	M	J	P	A	B
V45LUSG	34 (864)	50 (1270)	36 (914)	20 (508)	10 (254)	20 (508)	10 (254)	1½ (38)	¾ (19)
V90LUSG	38 (965)	62 (1575)	42 (1067)	20 (508)	10 (254)	24 (610)	14 (356)	2 (50)	¾ (19)
V160LUSG	44 (1118)	68 (1727)	48 (1219)	24 (610)	10 (254)	28 (711)	20 (508)	3 (76)	1 (25)
V240LUSG	50 (1270)	74 (1880)	54 (1372)	30 (762)	10 (254)	28 (711)	26 (660)	4 FLG (102)	1 (25)
V320LUSG	56 (1422)	74 (1880)	60 (1524)	36 (914)	10 (254)	30 (762)	30 (762)	5 FLG (127)	1 (25)
V410LUSG	62 (1575)	74 (1880)	66 (1676)	42 (1067)	10 (254)	30 (762)	38 (965)	6 FLG (152)	1½ (38)
V510LUSG	68 (1727)	74 (1880)	72 (1829)	48 (1219)	10 (254)	31 (287)	44 (1118)	8 FLG (203)	1½ (38)

* This dimension is for the longest coil available, shorter coils with a corresponding shorter "P" dimension are available. Consult factory.

** Dimension A can be changed to suit customer requirements.