

LATTNER

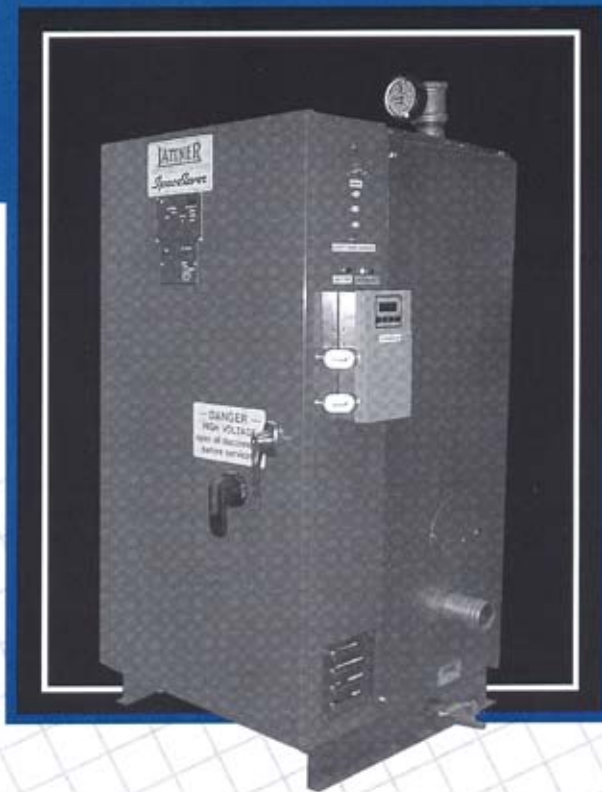
Safe • Sure • Simple

Space Saver

5 to 165 KW

17.0 to 563 MBH

Space Saver Electric Hot Water Boilers



introduction

The **Lattner Space Saver** - Electric Hot Water Boiler is self-contained and UL Listed for closet and equipment room installation. It requires a minimum amount of floor space and is designed for extended life when used as the primary, supplementary or standby hydronic heating source.

standard features

VESSEL CONSTRUCTION - ASME Section IV rated vessel, registered with National Board. H Stamped units rated to 160 psi and 250°F. Vertical construction. Data reports furnished

ENCLOSURE - NEMA 1, ventilated control panel with hinged door, key lock and vessel enclosure with removable panels are mounted on steel channel base. Heat resistant silicon acrylic enamel protects all surfaces to 180°F.

INSULATION - to minimize heat loss, vessel is insulated with four inches of one pound per cubic foot density fiberglass.

SAFETY PRESSURE RELIEF- ASME rated pressure relief valve is factory mounted to reduce field labor costs.

HIGH LIMIT CUTOUT - manual reset high temperature cutout provides protection in the event of an overtemperature condition.

LOW WATER CUTOFF - manual reset, probe type cutout de-energizes boiler on low water condition. External test and manual reset pushbuttons provided to meet CSD-1

CONTROLS - fused control transformer with on-off switch and indicator lamp provides control power. Heating circuits are protected by 200,000 AIC fuses. Heavy duty discharge controller(s) operate full line break contactors. Solid State control with digital display and no-load recycle feature is standard on 3 and 4 step units.

FLOW SWITCH - optional; recommended for installation in water inlet line to de-energize boiler if water flow stops.

DRAIN VALVE - provided for right side connection as standard, easily accessible from boiler front.

GAUGE - combination temperature/pressure-indicating gauge is factory installed for front visibility.

MAIN SUPPLY TERMINALS - Furnished on all boilers for copper conductors. Knockouts for supply conductors are provided on right side of control panel.

ELEMENT BUNDLE - Element bundle utilizes single bend incoloy elements widely spaced for maximum heat dissipation to reduce lime build-up between passes. Element terminals are double sealed with epoxy and silicone rubber to ensure long life. Elements are individually replaceable. Incoloy will withstand scaling and temperatures to approximately 1600°F as compared to 450°F for copper.

UL LISTED - under file NO. E30432
Due to space limitations, some built-in features may not be available in combination with others; consult factory representative.

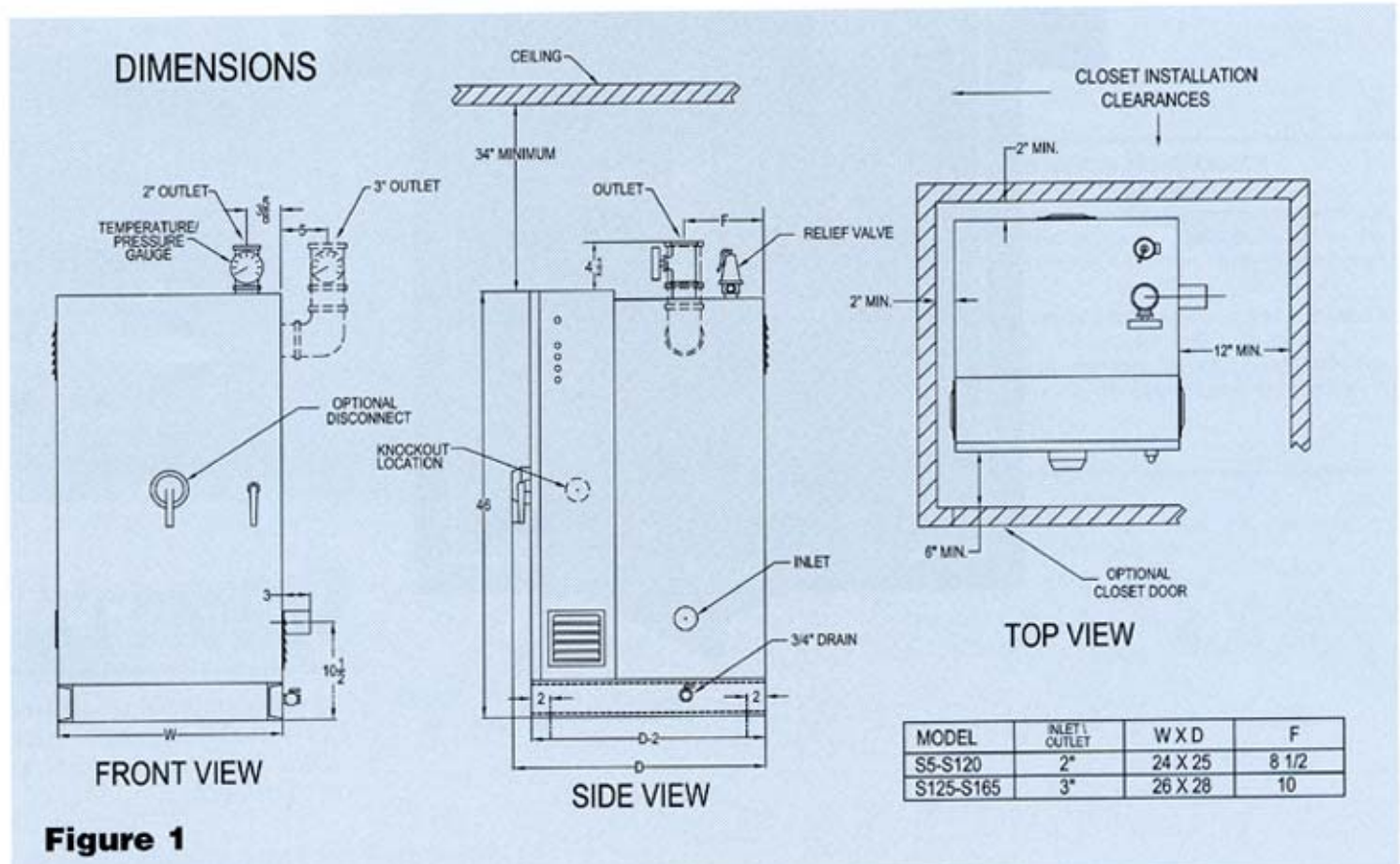


Figure 1

typical boiler piping diagram

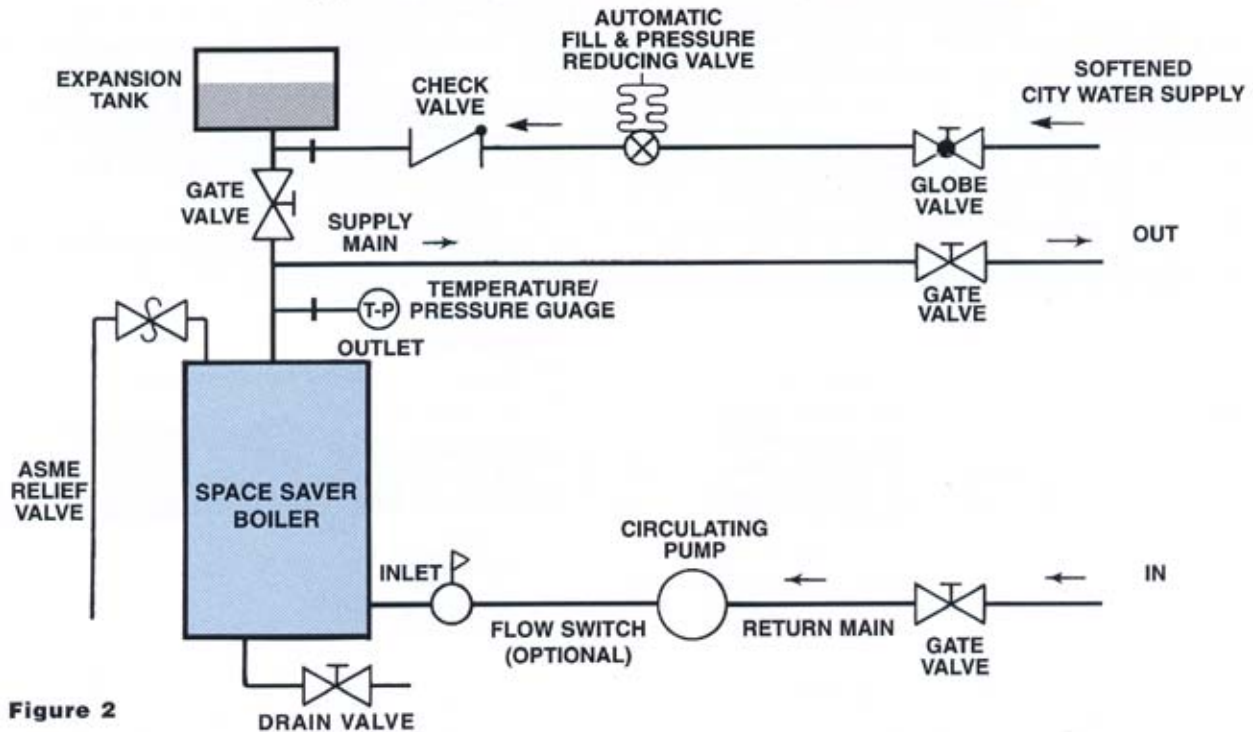


Figure 2

TABLE 1: MODEL NUMBERS AND CAPACITIES

CAPACITY		NO. STEPS**	MODEL NO.					APPROX. WEIGHT LBS.
KW	MBH		480V, 3Ø	208V, 3Ø	240V, 3Ø	208V, 1Ø	240V, 1Ø	
5.0/5.6 7.5 9.4/10.0	17/19 25.6 32/34	1	- S8LW-4803 -	S6LW-2083 - -	- S8LW-2403 -	S6LW-208 S8LW-208 S9LW-208	S5LW-240 S8LW-240 S10LW-240	480
11.3/12.5 15.0 18.8/20.0	39/43 51.2 64/68	1	- S15LW-4803 -	S11LW-2083 - -	- S15LW-2403 -	S11LW-208 S15LW-208 S19LW-208	S13LW-240 S15LW-240 S20LW-240	490
22.5 25.0 30.0 33.8/35.0	76.8 85.3 102.4 115/119	1	S23LW-4803 - S30LW-4803 -	S23LW-2083 - - S34LW-2083	- - S30LW-2403 -	S23LW-208 - - S34LW-208	- S25LW-240 S30LW-240 S35LW-240	500
40/41.2 45.0 55/56 60.0	136/141 153.6 188/192 204.8	2	- S45LW-4803 - S60LW-4803	- S45LW-2083 S56LW-2083 -	- S45LW-2403 - S60LW-2403	S41LW-208 S45LW-208 S56LW-208 -	S40LW-240 S45LW-240 S55LW-240 S60LW-240	550
67.5 75.0 78.8/80 90.0	230.4 256.0 269/273 307.2	3	- S75LW-4803 - S90LW-4803	S68LW-2083 - S79LW-2083 S90LW-2083	- S75LW-2403 - S90LW-2403	S68LW-208 - - -	- S75LW-240 S80LW-240 S90LW-240	600
105.0 120.0 135.0 150.0 165.0	358.4 410.0 461.0 512.0 563.1	4	S105LW-4803 S120LW-4803 S135LW-4803 S150LW-4803 S165LW-4803	- - - - -	S105LW-2403 S120LW-2403 S135LW-2403 S150LW-2403 S165LW-2403	- - - - -	S105LW-240 - - - -	600 600 760 760 800

NOTE: *Capacity on standard 75W/in² incoloy elements. For derated elements or nonstandard materials or higher voltages up to 600V, consult factory.

*Ratings for voltages not shown: for 220V, multiply 240V KW or MBH by .84. For 440V KW or MBH by 0.84.

For 460V, multiply 480V KW or MBH by 0.92.

**Steps based on standard 480/3 circuits

Specifications subject to change without notice.

sample specification

1. Furnish and install UL listed LATTNER Space Saver electric boilers (s) with capacities and voltage as scheduled, equipped with replaceable incoloy element(s) mounted on standard ASA flange(s).
2. Heating element(s) to be single bend 75 w/in² not exceeding .425" diameter. Elements to be widely spaced for maximum heat dissipation and individually replaceable from flange for servicing. Unit to be suitable for installation within 7' high (floor to ceiling) alcove, including space for element removal.
3. All control components to be prewired and functionally tested. Components to include: Heavy-duty adjustable controller(s) to maintain water temperature; spring reinforced fuse blocks with Class K-5 fuses per 48 ampere circuit; disconnecting break magnetic contractors UL Listed for 100,000 cycles; fused controlled transformer; on-off control switch with pilot light indication; properly sized lugs for incoming conductors with electrical knockouts located on right side of control panel; ASME rated pressure relief valve; manual reset probe-type low water cutoff; temperature and pressure gauge; high temperature limit with manual reset, automatic air eliminator; and factory mounted drain valve.
4. Pressure vessel to be constructed per ASME Section IV, designed for 160 psi and 250°F, registered with the National Board. Data reports are to be provided. Vessel to be insulated for minimum heat loss with 4" fiberglass blanket rated at 1 lb/ft³ density and mounted on four inch steel channel base.
5. Unit to include cabinet style ventilated steel enclosure with prewired, ventilated control panel; complete assembly not to exceed 24" wide x 28" deep x 46" high. All surfaces to be corrosion protected with non-oxidizing silicon acrylic enamel heat resistant to 180°F.

OPTIONAL FEATURES - SELECT AS REQUIRED:

- Automatic Reset High Limit Cutout (provided in addition to manual reset cutout)
- Interlocking Disconnect Switch (specify right or left incoming supply)
- Solid State Step Controller (in lieu of standard controller; (specify 3 or 4 steps)
- Manual Load Limiter (for 2,3 or 4 step units)
- Toggle Switches
- Interlock Terminals (for remote start-stop, interlock and status)
- Door Interlock Switch
- Outdoor Air Reset (automatically adjusts controller set-point inversely with changes in outside temperature)
- Pneumatic Transducer (0-20 psi adjustable input)
- Ammeter
- Voltmeter
- 7 Day Program Clock
- Ground Fault Protection System (GFI)
- Float-type Low Water Cutoff (in lieu of, or in addition to probe-type; specify automatic or manual reset)
- Demand Power Limiter
- KW Load Limiter (for 2,3 or 4 step units) adjusts capacity with outdoor air
- Mercury Contactors
- Flow Switch with interlock terminals
- Circulating Pump (Specify gpm, head in feet, volts/phase)
- NSF approved liner with stainless steel fittings

how to order

Specify:

- Model Number
- KW
- Volts/Phase
- Number of Steps
- Operating Temperature
- Maximum Operating Pressure
- Copper Supply Conductors (aluminum optional)
- Number of Main Circuits Feeding Boiler
- Number & Size of Supply Conductors and Conduits
- Optional Features

MANUFACTURER'S WARRANTY

A Lattner boiler shell is guaranteed to be constructed in accordance with the ASME Code. A boiler inspector, not in our employ, certified by the National Board of Boiler and Pressure Vessel inspectors, supervises the construction, gives final hydrostatic test, and places stamp of approval on the completed shell.

Boiler accessories are guaranteed for one full year from date of shipment against defective workmanship and material and such items will be replaced FOB factory. Liability for damages caused by such defective parts is limited to such replacements and in no event shall we be liable for indirect or consequential damages.

For complete warranty, see form No. 2-98



Lattner Boiler Manufacturing Co.
1411 9th Street SW, P.O. Box 1527
Cedar Rapids, Iowa 52406, U.S.A.
800-345-1527 319-366-0778
FAX 319-366-0770

<http://www.lattner.com> • e-mail: info@lattner.com