LAARS®
Heating Systems Company
A subsidiary of BRADFORD WHITE® Corporation

Residential LAARS-STOR™ Single-Wall Indirect Water Heater

Photo is of
LS-SW-2-65-L

The LAARS-STOR™ Single-Wall Models feature:

- **Heat Exchanger—**Single-Wall 1½" O.D. glass coated (Vitraglas®) carbon steel coil. The coil has a heat transfer area of 14.2 sq. ft. and a stored water volume of 2.7 Gal. Maximum supply temperature from the boiler must not exceed 250° F.
- **Factory Installed Sediment Reducing Inlet Tube—**Cold water inlet sediment reducing device helps prevent sediment build up in tank. Increases first hour delivery of hot water while minimizing temperature build up in tank.
- **Glass-lined Steel Tank—**LAARS water heater tanks are protected from the corrosive effects of hot water by an exclusive ceramic porcelain-like coating. The high silica lining provides a tough interior surface for our hot water tanks.
- **Immersed Adjustable Honeywell Aquastat—**Fast acting immersion aquastat for automatic temperature control (adjustable from 80°F to 160°F).
- **Supply and Return Connections—**1" NPT female connections are located on the front for both the boiler collector supply and return.
- **2" Non-CFC Foam Insulation—**Covers the side and top of tank, reducing the amount of heat loss. This results in less energy consumption, improved operation efficiencies and jacket rigidity.
- **Potable Water Connections—**3⁄4" NPT factory installed true dielectric fittings extend water heater life and eases installation.
- **Three Protective Aluminum Anode Rods—**Provide added protection against corrosion for long trouble-free service.
- **Steel Tank—**Heavy gauge steel automatically formed, rolled and welded to assure a continuous seam for glass lining.
- **T&P Relief Valve—**Included.
- **Brass Drain Valve**.
- **I=B=R Certified—**These water heaters are rated by the Institute of Boiler and Radiation Manufacturers (I=B=R) to provide accurate performance data within the standards of the certification. The I=B=R rating is issued by the Hydronics Institute Division of GAMA and provide a recognized standard for proper comparison of hydronic appliances.

Limited Lifetime Tank and Heat Exchanger Warranties / 6-Year Limited Warranty on Component Parts.

For products installed in USA, Canada and Puerto Rico. Some states do not allow limitations on warranties.
See complete copy of the warranty included with the heater.

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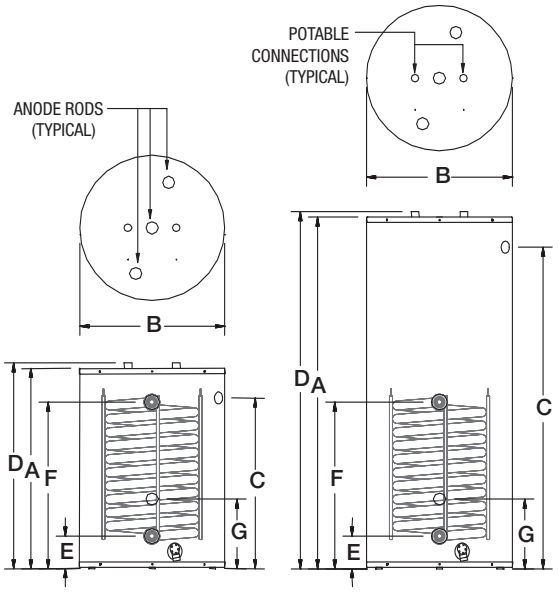
Model Specific Information

Meet or exceed ASHRAE 90.1b (current standard)

Model Number	Capacity U.S. Gal.	Capacity Imp. Gal.	A Floor to Heater Top in.	B Jacket Dia. in.	C Floor to T&P Conn. in.	D Floor to Water Conn. in.	E Floor to Exchanger Outlet in.	F Floor to Exchanger Inlet in.	G Floor to Aquastat in.	Approx. Shipping Weight lbs.
LS-SW-2-30-L	30	25	33 5/8	22	28 1/4	34 3/8	5 3/8	27 1/2	11 1/2	140
LS-SW-2-40R-L	38	32	41 1/8	22	34 3/8	41 7/8	5 3/8	27 1/2	11 1/2	172
LS-SW-2-50R-L	48	40	46 1/4	22	40 1/8	47	5 3/8	27 1/2	11 1/2	180
LS-SW-2-65-L	60	50	59 1/4	22	53 1/8	60	5 3/8	27 1/2	11 1/2	196
LS-SW-2-80-L	75	62	59	24	52 7/8	59 3/4	5 3/8	27 1/2	11 1/2	224
LS-SW-2-120-L	116	97	62 1/2	28 1/4	55 3/4	63 1/4	6 3/8	28 1/2	11 1/2	355

Model Number	Capacity Liters	A Floor to Heater Top cm.	B Jacket Dia. cm.	C Floor to T&P Conn. cm.	D Floor to Water Conn. cm.	E Floor to Exchanger Outlet cm.	F Floor to Exchanger Inlet cm.	G Floor to Aquastat cm.	Approx. Shipping Weight kg.
LS-SW-2-30-L	114	85	56	72	87	14	70	30	64
LS-SW-2-40R-L	143	104	56	87	106	14	70	30	77
LS-SW-2-50R-L	182	112	56	102	119	14	70	30	82
LS-SW-2-65-L	227	151	56	135	152	14	70	30	89
LS-SW-2-80-L	284	150	61	134	152	14	70	30	102
LS-SW-2-120-L	439	159	72	142	161	16	72	30	161



DOE Water Heater Performance

Model Number	Maximum First Hour Rating (Gal.) @ 140°F	Maximum First Hour Rating (Gal.) @ 115°F	Continuous Draw Rating (Gal./Min.) @ 140°F	Continuous Draw Rating (Gal./Min.) @ 115°F	Approximate Boiler Output Needed for Ratings (BTU/H
LS-SW-2-30-L	279	429	4.2	6.7	220,000
LS-SW-2-40R-L	288	438	4.2	6.7	220,000
LS-SW-2-50R-L	297	447	4.2	6.7	220,000
LS-SW-2-65-L	306	456	4.2	6.7	220,000
LS-SW-2-80-L	321	470	4.2	6.7	220,000
LS-SW-2-120-L	357	507	4.2	6.7	220,000

Based on 200°F boiler water temperature and 50°F potable water inlet.

I=B=R Water Heater Ratings

Model Number	First Hour Delivery @ 135°F (Gal.)	Continuous Draw Rating @ 135°F (Gal./Hr.)	Standby Heat Loss Rating (°F/Hr.)	Minimum Output Rate of Heat Source (BTU/Hr.)	Minimum Heat Source Flow Rate (Gal./Min.)
LS-SW-2-30-L	255	235	1.2	157,000	13.7
LS-SW-2-40R-L	260	235	1.1	157,000	13.7
LS-SW-2-50R-L	265	235	0.9	157,000	13.7
LS-SW-2-65-L	275	235	0.8	157,000	13.7
LS-SW-2-80-L	295	235	0.6	157,000	13.7
LS-SW-2-120-L	325	235	0.4	157,000	13.7

These certified ratings were obtained with a heat source output rate and flow rate as specified and a 180°F boiler water supply temperature. Other results will be obtained under different conditions.

General

All units are certified at 300 PSI (2068 kPa) test pressure

and 150 PSI (1034 kPa) working pressure. All potable water connections are 3/4" (19mm) NPT on 8" (203mm) centers.

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

Suitable for Water (Potable) Heating and Space Heating.

Toxic chemicals, such as those used for boiler treatment, shall NEVER be introduced into the potable side of this system. The potable side may NEVER be connected to any existing heating system or component(s) previously used with a non-potable water heating appliance.

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