

## Residential **LAARS-STOR**<sup>™</sup> Single-Wall Indirect Water Heater



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

### *The LAARS-STOR<sup>™</sup> Single-Wall Models feature:*

- **Heat Exchanger**—Single-Wall 1½" (38mm) O.D. glass coated carbon steel coil. The coil has a heat transfer area of 14.2 sq. ft. and a stored water volume of 2.7 Gal. (10.2L) Maximum supply temperature from the boiler must not exceed 240°F (116°C).
- **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<sup>®</sup> 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), (27°C to 71°C).
- **Supply and Return Connections**—1" (25mm) NPT female connections are located on the front for both the boiler collector supply and return.
- **Insulation System**—2" (51mm) Non-CFC foam insulation covers the sides and top of the tank, reducing heat loss. This results in less energy consumption, improved efficiencies, and jacket rigidity.
- **Potable Water Connections**—¾" (19mm) NPT (1" (25mm) NPT for 120 gallon (454L) model) factory installed true dielectric fittings extend water heater life and eases installation.
- **Three Protective Aluminum Anode Rods**—Provide added protection against corrosion for long-term, 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.
- **Low Restriction Brass Drain Valve**—Durable tamper proof design.
- **AHRI Certified**—These water heaters are rated by the Air-Conditioning, Heating, and Refrigeration Institute to provide accurate performance data within the standards of the certification. This certification provides 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.

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,682,666; 7,634,976; 5,660,165; 5,954,492; 6,056,542; 6,935,280; 5,372,185; 5,485,879; 5,574,822; 7,971,560; 7,992,526; 6,684,821; 6,442,178; 7,334,419; 7,866,168; 7,270,087; 7,007,748; 5,596,952; 6,142,216; 7,699,026; 5,341,770; 7,337,517; 7,665,211; 7,665,210; 7,063,132; 7,063,133; 7,559,293; 7,900,589; 5,943,984; 8,082,888; 5,988,117; 7,621,238; 7,650,859; 5,761,379; 7,409,925; 5,277,171; 8,146,772; 7,458,341; 2,262,174. OTHER U.S. AND FOREIGN PATENT APPLICATIONS PENDING. CURRENT CANADIAN PATENTS: 2,314,845; 2,504,824; 2,108,186; 2,143,031; 2,409,271; 2,548,958; 2,112,515; 2,476,685; 2,239,007; 2,092,105; 2,107,012.

# Residential LAARS-STOR™ Indirect Water Heater

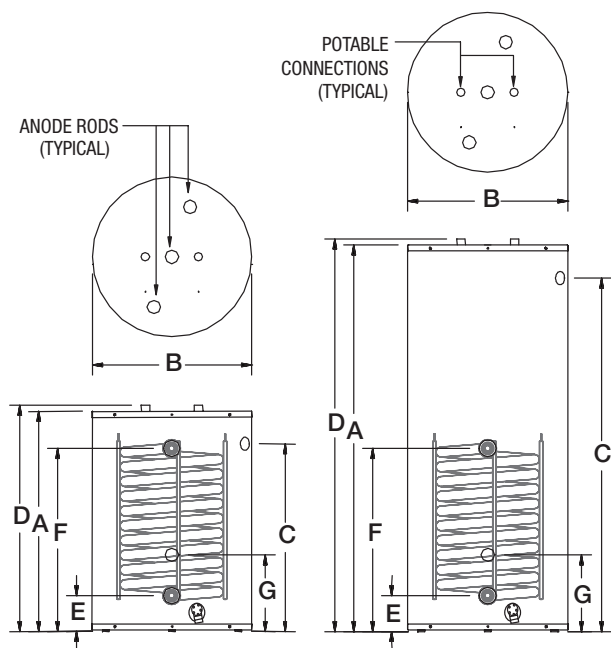
## Single Wall Models

Meet or exceed ASHRAE 90.1b (current standard)

Model Number	Capacity		A Floor to Heater Top	B Jacket Dia.	C Floor to T&P Conn.	D Floor to Water Conn.	E Floor to Exchanger Outlet	F Floor to Exchanger Inlet	G Floor to Aquastat	Approx. Shipping Weight
	U.S. Gal.	Imp. Gal.	in.	in.	in.	in.	in.	in.	in.	lbs.
LS-SW-2-30-L	29	24	33 <sup>3</sup> / <sub>8</sub>	22	28 <sup>1</sup> / <sub>4</sub>	34 <sup>3</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	27 <sup>1</sup> / <sub>2</sub>	11 <sup>1</sup> / <sub>2</sub>	164
LS-SW-2-40R-L	37	31	41 <sup>1</sup> / <sub>8</sub>	22	34 <sup>3</sup> / <sub>8</sub>	41 <sup>7</sup> / <sub>8</sub>	5 <sup>3</sup> / <sub>8</sub>	27 <sup>1</sup> / <sub>2</sub>	11 <sup>1</sup> / <sub>2</sub>	185
LS-SW-2-50R-L	43	36	46 <sup>1</sup> / <sub>4</sub>	22	40 <sup>1</sup> / <sub>8</sub>	47	5 <sup>3</sup> / <sub>8</sub>	27 <sup>1</sup> / <sub>2</sub>	11 <sup>1</sup> / <sub>2</sub>	195
LS-SW-2-65-L	57	47	59 <sup>1</sup> / <sub>4</sub>	22	53 <sup>1</sup> / <sub>8</sub>	60	5 <sup>3</sup> / <sub>8</sub>	27 <sup>1</sup> / <sub>2</sub>	11 <sup>1</sup> / <sub>2</sub>	225
LS-SW-2-80-L	71	59	59	24	52 <sup>7</sup> / <sub>8</sub>	59 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>8</sub>	27 <sup>1</sup> / <sub>2</sub>	11 <sup>1</sup> / <sub>2</sub>	250
LS-SW-2-120-L	110	92	62 <sup>1</sup> / <sub>2</sub>	28 <sup>1</sup> / <sub>4</sub>	55 <sup>3</sup> / <sub>4</sub>	63 <sup>1</sup> / <sub>4</sub>	6 <sup>3</sup> / <sub>8</sub>	28 <sup>1</sup> / <sub>2</sub>	11 <sup>1</sup> / <sub>2</sub>	370

Model Number	Capacity		A Floor to Heater Top	B Jacket Dia.	C Floor to T&P Conn.	D Floor to Water Conn.	E Floor to Exchanger Outlet	F Floor to Exchanger Inlet	G Floor to Aquastat	Approx. Shipping Weight
	Liters		mm.	mm.	mm.	mm.	mm.	mm.	mm.	kg.
LS-SW-2-30-L	110		854	559	718	873	137	699	292	74
LS-SW-2-40R-L	140		1045	559	873	1064	137	699	292	85
LS-SW-2-50R-L	163		1175	559	1019	1194	137	699	292	89
LS-SW-2-65-L	216		1505	559	1349	1524	137	699	292	102
LS-SW-2-80-L	269		1499	610	1343	1518	137	699	292	114
LS-SW-2-120-L	416		1588	718	1416	1607	162	720	292	167



### AHRI Certified 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	0.7	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.

### DOE Water Heater Performance

Model Number	Maximum First Hour Rating (Gal.) @ 140°F 115°F		Continuous Draw Rating (Gal./Min.) @ 140°F 115°F		Approximate Boiler Output Needed for Ratings (BTU/Hr.)
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.

### Heat Exchanger Head Loss

GPM	2	5	8	10	12
Ft. of Hd. Loss	0.01	0.09	0.22	0.80	0.50

### General:

All units are certified at 300 PSI (2068 kPa) test pressure and 150 PSI (1034 kPa) working pressure. Potable water connections are 3/4" (19mm) NPT on 8" (203mm) centers. The 120 gallon model has 1" (25mm) NPT potable water connections on 8" (203 mm) 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. The heat exchanger side of the unit may be used in space heating applications.