

LAARS-STOR[®] SERIES

Indirect Water Heaters



- Outstanding Performance
- Fast Recovery
- Superior Corrosion Resistance
- Limited Lifetime Warranty



LAARS[®] 
Heating Systems Company
A subsidiary of **BRADFORD WHITE[®]** Corporation

LAARS-STOR[®] SERIES

Indirect Water Heaters

Laars[®] Heating Systems proudly offers industry leading, high volume, single-wall and double-wall indirect water heaters.

All model types feature extremely efficient heat exchangers that produce copious amounts of domestic hot water - making them the perfect match for your boiler, heat pump or solar heating system. Whether the Laars-Stor indirect water heater is for use with an existing boiler system or new one, rest assured that you're choosing the best the industry has to offer. That's why all residential Laars-Stor and LAARS-STOR2 SERIES indirect water heaters offer a Limited Lifetime Tank and Heat Exchanger Warranty!!

THE LAARS-STOR ADVANTAGE



SAVE MONEY AND ENERGY

Indirect water heaters use the home's boiler, heat pump or solar heating system as the heat source. They are usually the least expensive way to provide hot water.



HIGH PERFORMANCE

Laars-Stor models feature an extremely efficient heat exchanger made of a glass-lined carbon steel tubing or high grade stainless steel giving exceptional first hour delivery and high volumes of hot water.



INSTALLATION EASE

These water heaters require no fuel or venting materials. They connect directly to an existing boiler.



LOW PRESSURE DROP

Laars-Stor Series indirect water heaters were designed to minimize pressure drop so that customers get the hot water they want at the pressure they have come to expect.



LIMITED LIFETIME WARRANTY

Laars-Stor models were designed and built for problem free and reliable service. We offer this warranty because of our confidence in the dependability and durability of the product.



AHRI CERTIFIED

These water heaters are rated by the Air Conditioning, Heating and Refrigeration institute to provide accurate performance data generated by following the toughest industry standards.



INTELLIGENTLY DESIGNED

Performance & Reliability Built In

Each Laars-Stor Series model includes the Laars Total Performance System that reduces sediment build-up, increases first-hour rating and minimizes temperature build-up in the tank. This results in higher efficiency, longer operational life and minimizes fuel bills.

Steel Tank—Heavy gauge steel automatically formed, rolled and welded to assure a continuous seam for glass lining.

OR

Stainless Steel Tank—Long life, corrosion resistant titanium stabilized type 444 stainless steel alloy.

Reliable, High Output Heat Exchanger—Select from stainless steel or glass lined material options to best match your homes hot water needs.

Immersed Adjustable Honeywell Aquastat—All Laars-Stor indirect tanks are supplied with a fast acting immersion aquastat for precise and automatic temperature control. This ensures you have hot water when you need it!



T&P Relief Valve Installed

Premium Insulation—Up to 2 inches of non-CFC foam insulation results in superior heat retention, saving you money.

Supply and Return Connections located on the front of the tank for easier and less cluttered connection to boiler.

Brass Drain Valve.



LAARS-STOR®

RESIDENTIAL SINGLE-WALL INDIRECT WATER HEATER

The ingenious Laars-Stor single wall was engineered to provide the lowest pressure drop, the highest hot water output and the highest amount of effective heat transfer area of any indirect fired water heater in the industry.



- **Heat Exchanger**—Single wall glass lined steel. 1-1/2" outside diameter.
- **Total Performance Sediment Reduction System**—Increases first hour delivery of hot water while minimizing temperature build-up at top of tank.
- **Three Protective Anode Rods**—Provides corrosion protection for long trouble-free service.
- **Glass Lined Tank**—Protected from the corrosive effects of hot water by a proprietary porcelain-like ceramic coating.
- **Immersed Adjustable Aquastat**—Supplied with a fast acting immersion aquastat for automatic temperature control.
- **Factory Installed Nipples**—For longer water heater life, easier installation.
- **Potable Water Connections**—3/4" NPT (120 Gallon 1" NPT) connections on 8" centers.
- **Supply and Return Connections**—1" NPT female connections located on the front of the water heater.
- **2" Non-CFC Foam Insulation**—Saves energy by dramatically reducing heat loss.
- **Stand-by Heat Loss**—Less than 1/2°F per hour.
- **Brass Drain Valve.**
- **T&P Relief Valve Included**—All models feature opening on side of tank.
- **Limited Lifetime Warranty on Steel Tank and Heat Exchanger.**
- **Six Year Limited Warranty on Parts.**

Model Number	Capacity			A		B		C		D		E		F		G		Shipping Weight Approx. lbs. kg.
	Imp. Gal.	U.S. Gal.	Liters	Jacket Diameter in. cm.	Height Floor to Heater Top in. cm.	Height Floor to T&P Conn. in. cm.	Height Floor to Water Conn. in. cm.	Height Floor to Exchanger Outlet in. cm.	Height Floor to Exchanger Inlet in. cm.	Height Floor to Aquastat in. cm.	Approx. lbs. kg.							
LS-SW-2-30-L	25	30	114	22 56	33 5/8 85	28 1/4 72	34 3/8 87	5 3/8 14	27 1/2 70	11 1/2 30	164 74							
LS-SW-2-40-L	32	38	143	22 56	41 1/8 104	34 3/8 87	41 7/8 106	5 3/8 14	27 1/2 70	11 1/2 30	185 85							
LS-SW-2-50-L	40	48	182	22 56	46 1/4 112	40 1/8 102	47 119	5 3/8 14	27 1/2 70	11 1/2 30	195 89							
LS-SW-2-65-L	50	60	227	22 56	59 1/4 150	53 1/8 135	60 152	5 3/8 14	27 1/2 70	11 1/2 30	225 102							
LS-SW-2-80-L	62	75	284	24 61	59 150	52 7/8 135	59 3/4 152	5 3/8 14	27 1/2 70	11 1/2 30	250 114							
LS-SW-2-120-L	97	116	439	28 1/4 72	62 1/2 159	55 3/4 142	63 1/4 161	6 3/8 16	28 1/2 72	11 1/2 30	370 167							

AHRI Certified Water Heater Ratings

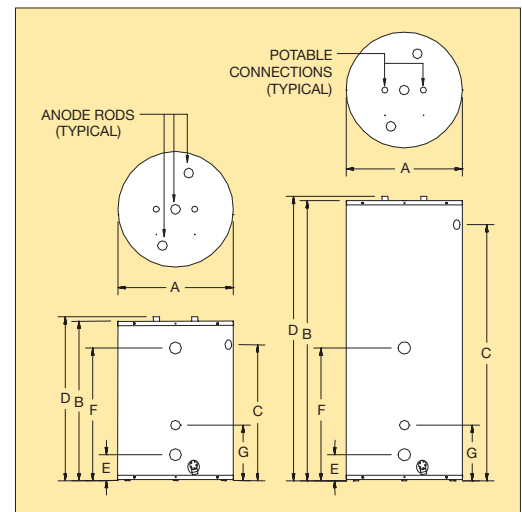
Model Number	First Hour Delivery @ 135°F (Gal.)	Continuous Draw Rating @ 135°F (Gal./Hr.)	Standby Heat Loss Rating (°F/Hr.)	Minimum Output Rate of Heat Source (BTU/Hr.)	Minimum Heat Source Flow Rate (Gal./Min.)
SW-2-30-L	255	235	1.2	157,000	13.7
SW-2-40R-L	260	235	1.1	157,000	13.7
SW-2-50R-L	265	235	0.9	157,000	13.7
SW-2-65-L	275	235	0.7	157,000	13.7
SW-2-80-L	295	235	0.6	157,000	13.7
SW-2-120-L	325	235	0.4	157,000	13.7

Heat Exchanger Head Loss

GPM	5	8	10	12	14
Ft. of Hd. Loss	0.01	0.09	0.22	0.80	0.50

DOE Water Heater Performance

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



LAARS-STOR®

COMMERCIAL SINGLE-WALL INDIRECT WATER HEATER

Laars-Stor single wall commercial models incorporate a super-efficient heat exchanger. Made of 1.5" diameter carbon steel tubing and coated with a glass-lining, it has a total heat surface area of 27.2 square feet. The result is an exceptional first hour delivery and vast hot water reserves.



- **Heat Exchanger**—Single wall glass lined steel. 1-½" outside diameter.
- **Total Performance Sediment Reduction System**—Increases first hour delivery of hot water while minimizing temperature build-up at top of tank.
- **Three Protective Anode Rods**—Provides corrosion protection for long trouble-free service.
- **Glass Lined Tank**—Protected from the corrosive effects of hot water by a proprietary porcelain-like ceramic coating.
- **Immersed Adjustable Aquastat**—Supplied with a fast acting immersion aquastat for automatic temperature control.
- **Factory Installed Nipples**—For longer water heater life, easier installation.
- **Potable Water Connections**—1" NPT connections on 8" centers, all models.
- **Supply and Return Connections**—1" NPT female connections located on the front of the water heater.
- **2" Non-CFC Foam Insulation**—Saves energy by dramatically reducing heat loss.
- **Stand-by Heat Loss**—Less than ½°F per hour.
- **Brass Drain Valve.**
- **T&P Relief Valve Installed**—All models feature opening on side of tank.
- **Five year Limited Warranty on Steel Tank and Heat Exchanger.**
- **One Year Limited Warranty on Parts.**

Model Number	Capacity			A		B		C		D		E		F		H		Shipping Weight	
	Imp. Gal.	U.S. Gal.	Liters	Jacket Diameter in.	cm.	Height Floor to Heater Top in.	cm.	Height Floor to T&P Conn. in.	cm.	Height Floor to Water Conn. in.	cm.	Height Floor to Exchanger Outlet in.	cm.	Height Floor to Exchanger Inlet in.	cm.	Height Floor to Aquastat in.	cm.	Approx. lbs.	kg.
LS-SW-65C-5	48	58	220	22	56	59 1/4	150	53 1/8	135	60	152	5 3/8	14	47 3/4	121	11 1/2	29	265	120
LS-SW-80C-5	61	73	276	24	61	59	150	52 7/8	134	59	152	5 3/8	14	47 3/4	121	11 1/2	29	293	133
LS-SW-120C-5	95	114	431	28 1/4	72	62 1/2	159	55 3/4	142	60	161	6 3/8	16	48 3/4	124	11 1/2	29	415	188

AHRI Certified Water Heater Ratings

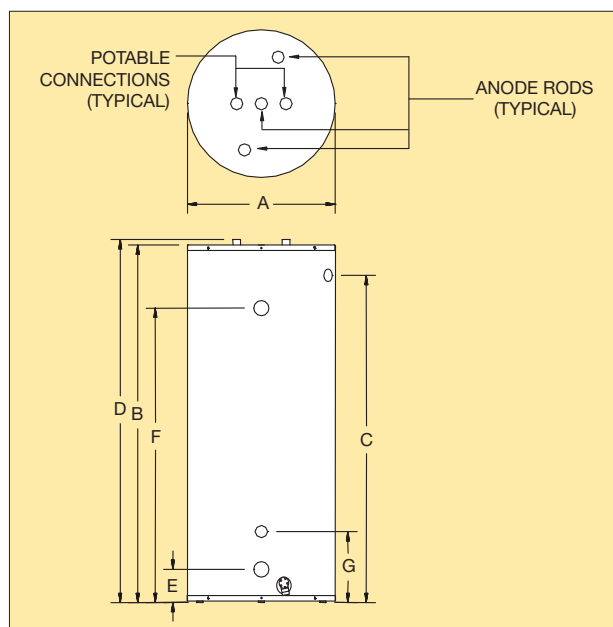
Model Number	First Hour Delivery @ 135°F (Gal.)	Continuous Draw Rating @ 135°F (Gal./Hr.)	Standby Heat Loss Rating (°F/Hr.)	Minimum Output Rate of Heat Source (BTU/Hr.)	Minimum Heat Source Flow Rate (Gal./Min.)
SW-65C-5	405	370	0.7	245,000	14.0
SW-80C-5	415	370	0.6	245,000	14.0
SW-120C-5	445	370	0.4	245,000	14.0

DOE Water Heater Performance

Model Number	Maximum First Hour Rating (Gal.) @		Continuous Draw Rating (Gal./Min.) @		Approximate Boiler Output Needed for Rating (BTU/Hr.)
	140°F	115°F	140°F	115°F	
SW-65C-5	534	820	8.0	12.8	420,000
SW-80C-5	546	834	8.0	12.8	420,000
SW-120C-5	583	871	8.0	12.8	420,000

Heat Exchanger Head Loss

GPM	5	8	10	12	14
Ft. of Hd. Loss	0.64	1.63	2.55	3.67	5.00



LAARS-STOR2®

RESIDENTIAL DOUBLE-WALL INDIRECT WATER HEATER

The Laars-Stor2 features a patented double-wall carbon steel heat exchanger coil coated with a glass-lining for corrosion resistance and long life. The Laars-Stor2 supplies a first hour rating of 120 to 158 gallons per hour.



- **Heat Exchanger**—Double wall 1½" O.D. glass coated steel coil. The double wall coil ensures that hydronic fluid remains separate from potable water.
- **Low Heat Exchanger Head Loss**—Greatly reduces the required pump size with 10 gpm max flow at less than 5 ft. of head.
- **Total Performance Sediment Reduction System**—Increases first hour delivery of hot water while minimizing temperature build-up at top of tank.
- **Glass Lined Tank**—Protected from the corrosive effects of hot water by a proprietary porcelain-like ceramic coating.
- **Immersed Adjustable Aquastat**—Supplied with a fast acting immersion aquastat for automatic temperature control.
- **Water Connections**—¾" NPT factory installed true dielectric fittings. Extends water heater life and eases installation.
- **2" Non-CFC Foam Insulation**—Save energy by dramatically reducing heat loss.
- **Two Protective Aluminum Rods**—Provides added protection against corrosion for long trouble-free service.
- **Supply and Return Connections**—¾" NPT female connections are located on the front of the water heater.
- **Stand-by Heat Loss**—Less than ½°F per hour.
- **Brass Drain Valve.**
- **T&P Relief Valve Included**—All models feature opening on side of tank.
- **Steel Tank**—Heavy gauge steel automatically formed, rolled and welded to assure a continuous seam for glass lining.
- **Limited Lifetime Warranty on Steel Tank and Heat Exchanger.**
- **Six Year Limited Warranty on Parts.**

Residential Laars-Stor2®

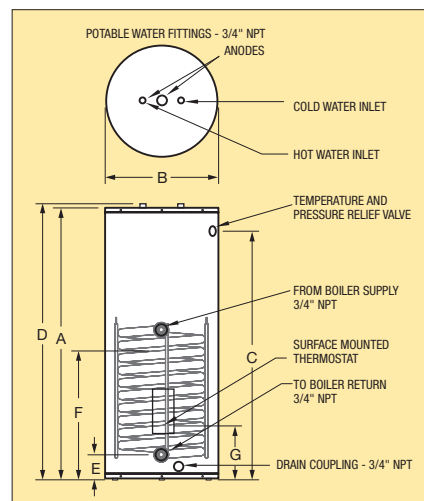
Model Number	Capacity			A		B		C		D		E		F		G		Shipping Weight	
	Imp. Gal.	U.S. Gal.	Liters	Floor to Heater Top in.	Heater Top in. cm.	Jacket Diameter in.	Diameter in. cm.	Floor to T&P Conn. in.	T&P Conn. in. cm.	Floor to Water Conn. in.	Water Conn. in. cm.	Floor to Boiler Outlet in.	Boiler Outlet in. cm.	Floor to Boiler Inlet in.	Boiler Inlet in. cm.	Floor to Thermostat in.	Thermostat in. cm.	Approx. lbs. kg.	
LS-DW-2-40-L	32	38	144	41	104	22	56	34 ³ / ₈	87	41 ⁷ / ₈	108	5 ³ / ₈	14	27 ¹ / ₂	70	11 ¹ / ₂	29	170	76
LS-DW-2-50-L	40	48	182	46 ¹ / ₄	117	22	56	40 ¹ / ₈	102	47 ¹ / ₄	120	5 ³ / ₈	14	27 ¹ / ₂	70	11 ¹ / ₂	29	180	89
LS-DW-2-65-L	54	64	242	59	150	22	56	53 ¹ / ₈	135	60	153	5 ³ / ₈	14	27 ¹ / ₂	70	11 ¹ / ₂	29	196	89
LS-DW-2-80-L	63	75	284	59	150	24	61	52 ⁷ / ₈	134	59 ³ / ₄	152	5 ³ / ₈	14	27 ¹ / ₂	70	11 ¹ / ₂	29	224	102

Heat Exchanger Head Loss

GPM	2	5	8	10	12
Ft. of Hd. Loss	trace	0.4	2.3	4.6	6.9

AHRI Water Heater Ratings					
Model	First Hour Rating @ 135°F (Gal./Hr.)	Continuous Draw Rating @ 135°F (Gal./Hr.)	Standby Heat Loss Rating (°F/Hr.)	Minimum Heat Req. Rate (BTU/Hr.)	Minimum Heat Source Flow Rate (Gal./Min.)
LS-DW-2-40-L	123	98	1.1	65,000	8.0
LS-DW-2-50-L	133	98	0.9	65,000	8.0
LS-DW-2-65-L	148	98	0.7	65,000	8.0
LS-DW-2-80-L	158	98	0.6	65,000	8.0

DOE Water Heater Performance					
Model	Maximum First Hour Rating (Gal./Hr.) @ 140°F 115°F	Continuous Draw Rating (Gal./Min.) @ 140°F 115°F	Approximate Boiler Output Needed For Ratings (BTU/Hr.)		
LS-DW-2-40-L	80	122	0.9	1.6	55,000
LS-DW-2-50-L	87	129	0.9	1.6	55,000
LS-DW-2-65-L	96	138	0.9	1.6	55,000
LS-DW-2-80-L	106	148	0.9	1.6	55,000



LAARS-STOR® SS

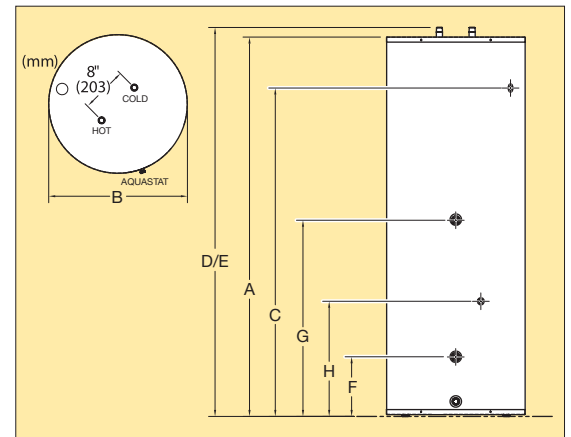
STAINLESS STEEL INDIRECT WATER HEATER

The Laars-Stor SS utilizes a superior grade of type 444 passivated stainless steel for the tank and the heat transfer coil. This construction is lightweight and also resists pitting while minimizing inter-granular and stress corrosion. The Laars-Stor SS models provide superior thermal conductivity for higher efficiency.



- **Stainless Steel Tank and Heat Exchanger**—Made from chromium molybdenum - titanium ferritic 444 stainless steel alloy.
- **Stainless Steel Heat Exchanger**—Single-wall 1" (25mm) O.D. stainless steel coil. Maximum supply temperature from the boiler must not exceed 240°F (116°C).
- **Factory Installed Sediment Reducing Inlet Tube**—Sediment reducing device that also increases first hour rating of hot water while minimizing temperature build-up in tank (excluding LS-SS-120-L).
- **Immersed Adjustable Honeywell Aquastat**—Supplied with a fast acting immersion aquastat for automatic temperature control (adjustable from 80-160°F / 27-71°C).
- **Supply and Return Connections**—1" NPT female connections are located on the front for both the boiler supply and boiler 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**—3/4" NPT (1" NPT on LS-SS-120-L).
- **T&P Relief Valve**—Included.
- **Low Restrictive Brass Drain Valve**—Durable tamper proof design (excluding the LS-SS-120-L).
- **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 Warranty on Tank and Heat Exchanger.**
- **Six Year Limited Warranty on Parts**
- **Five Year Limited Warranty on Commercial Models.**
- **One Year Limited Warranty on Parts on Commercial Models.**

Model Number	First Hour Delivery Rating	Continuous Draw @ 135°F	Standby Heat Loss Rating	Minimum Heat Required Rate	Minimum Heat Source Flow Rate
	Gal./Hr.	Gal./Hr.	°F/Hr.	BTU/Hr.	Gal./Min.
LS-SS-30-L	179	160	0.8	105,000	14.0
LS-SS-40-L	237	209	0.6	135,000	14.0
LS-SS-50-L	269	229	0.5	145,000	14.0
LS-SS-75-L	367	307	0.4	193,000	14.0
LS-SS-120-L	409	319	0.3	199,000	9.0



Model Number	Capacity			A		B		C		D		E		F		G		H		Shipping Weight	
	U.S. Gal.	Imp. Gal.	Liters	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	lbs.	kg.
LS-SS-30-L	29	24	110	31 ⁵ / ₈	803	24	610	22 ¹ / ₂	572	32 ¹ / ₂	826	32 ¹ / ₂	826	10	254	22 ⁵ / ₈	575	16 ¹ / ₂	419	75	34
LS-SS-40-L	38	31	142	38 ³ / ₄	972	24	610	29 ¹ / ₈	740	38 ⁷ / ₈	987	38 ⁷ / ₈	987	10	254	24 ³ / ₄	629	18 ³ / ₄	476	91	41
LS-SS-50-L	50	42	189	48	1219	24	610	39 ³ / ₄	1010	48 ⁷ / ₈	1241	48 ⁷ / ₈	1241	10	254	29 ¹ / ₄	743	19 ¹ / ₂	495	103	47
LS-SS-75-L	73	60	274	65 ⁵ / ₈	1667	24	610	56 ¹ / ₂	1435	66 ¹ / ₄	1683	66 ¹ / ₄	1683	10	254	33 ⁵ / ₈	854	19 ¹ / ₂	495	142	64
LS-SS-120-L	111	92	420	68 ³ / ₈	1737	30 ¹ / ₄	768	63 ¹ / ₂	1613	53	1346	2	51	11	279	39 ¹ / ₈	994	30 ¹ / ₂	775	217	98



View our entire product line at www.Laars.com



Notes: AHRI 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.

Notes: DOE water heater performance ratings are based on 200°F boiler water temperature and 50°F potable water inlet temperature.

Meets or exceeds the insulating standards established under ASHRAE Standard 90.1b (current edition).

All units are certified at 300 PSI test pressure (2068 kPa) and 150 PSI working pressure (1034 kPa).

Warranty: 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.

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 water side. The potable side of this unit 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.



800.900.9276 • FAX 800.559.1583 (Customer Service, Service Advisors)

20 Industrial Way, Rochester, NH 03867 • 603.335.6300 • FAX 603.335.3355 (Applications Engineering)

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