

LAARS[®] ENDURANCE

Gas Fired Hydronic Boilers and
Combination Boiler/Water Heater



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

LAARS® ENDURANCE

The Industry's Smartest Boiler

Installation Almost Anywhere An internal bypass, built-in pump, venting options, small footprint and minimal clearances allow for fast, flexible installation and effortless start-up.

Environmentally Friendly NO_x levels of less than 25 ppm and 85% AFUE.

Domestic Hot Water Heating The EBP combines boiler operation with a 20-gallon steel buffer/transfer tank to provide domestic water heating through a powerful plate heat exchanger.

Save Big on Fuel Bills Innovative full modulation. ENDURANCE automatically adjusts to the home's varied heat demands. This saves energy and adds comfort by maintaining an even temperature throughout the home.

Comfort and Safety ENDURANCE provides natural, even heat. There are no hot blasts of air, cold spots or chilly corners. And the sealed combustion design safeguards against the possibility of flue gases leaking into the house. ENDURANCE is a perfect fit for radiant floor applications.

Self-Monitoring With a sleek design encompassing leading edge technology, ENDURANCE has a built-in microprocessor that guarantees overall performance by monitoring the boiler, tank and flow temperatures. The microprocessor also features a diagnostic display to greatly simplify servicing.

Available in Three Models and Two Sizes Endurance is a gas-fired, fully modulating, sealed combustion boiler offered in two sizes: the 110 modulates from 61,800 to 108,200 BTU/hr., and the 175 modulates from 102,900 to 175,300 BTU/hr.

ENDURANCE EBP is a combination boiler/water heater.

ENDURANCE EDP is a boiler for space heating.

ENDURANCE EDN is a non-ferrous version of the EDP boiler for space heating.

- Design certified and tested to ANSI standard Z21.13
- Designed and constructed in accordance with the ASME Boiler & Pressure Vessel Code, Sections II, IV, and IX
- Maximum working pressure – water 30 psi, ASME rated
- Hydrostatic test pressure at factory – 60 psi
- Natural or propane gas
- Minimum gas supply pressure – 4" w.c.
- Maximum gas supply pressure – 13" w.c.
- 85+% A.F.U.E.
- Sealed stainless steel combustion chamber
- Hot surface ignition
- Automatic burner modulation from 57% to full fire
- NO_x levels less than 25ppm
- Venting – Direct vent (sealed combustion with ducted combustion air in concentric vent) or Category III
- Design certified for installation directly on a combustible floor (except carpeting)
- One-inch clearance on all 4 sides
- Zero clearance from combustibles to the vent when concentric venting is used
- Electrical: 115V-60HZ – 1PH less than 15 Amps with 24V transformer mounted and wired
- Outdoor reset with the addition of outdoor air sensor (limited temperature range available for EBP models)
- Control overrides outdoor reset when air sensor is faulty
- Easy-to-use viewing and programming menus
- 3-character alphanumeric display of temperatures and fault codes
- Displays fault codes for supply sensor, return sensor, tank sensor (EBP only), outdoor air sensor, internal control, and lockout
- Displays 6 temperatures: supply water, return water, tank water (EBP only), heat exchanger temperature rise, outdoor air temperature (when outdoor reset is used), and calculated setpoint (when outdoor reset is used)
- Control LEDs indicate pump energized, attempt to ignite and gas valve energized
- Ignition control LEDs show faults for erroneous flame signal, internal error and lockout
- Low water temperature feature – attempts to run the pump when supply water temperature falls below 39°F (4°C)
- Built-in circulating pump and by-pass loop
- Equipped with anti-condensing controls
- Pump exerciser to ensure pump remains free from corrosion
- Built-in safety limit
- Copper finned, cylindrical tube design heat exchanger brazed into ASME bronze headers
- EBP units store 20 gallons of boiler water to provide instantaneous domestic hot water production through a brazed plate heat exchanger, with DHW priority
- 20 Year limited warranty

FULLY MODULATING TO INCREASE PERFORMANCE AND COMFORT

Satisfaction Guaranteed Program

Performance beyond expectations and commitment to customer satisfaction are standard at Laars. We have such confidence in ENDURANCE that we offer a warranty that rivals any in the industry. With the Satisfaction Guaranteed Program, you can rest assured that you and your customers will experience 100% satisfaction with the operation of ENDURANCE

Made in the USA Manufactured with pride, ENDURANCE has a 20-year limited warranty.

Competitive Price Value pricing and cost-saving features make ENDURANCE a perfect choice.



The EDP Model is a compact boiler for space heating. The EDN Model is a non-ferrous configuration of the EDP model.

The EBP Model features a 20 gallon tank, heat exchanger and low limit control

DIMENSIONS AND VENTING

Tapping Sizes:
 System Supply and Return 1-1/4" NPTM (EBP)
 System Supply and Return 1-1/4" Copper (EDP and EDN)
 Domestic Hot Water Connections 3/4" Copper
 Gas Supply 1/2" NPT

Dimensions in inches *cm*.

Direct Vent SEALED COMBUSTION

- Utilizes outside air for combustion.
- Horizontal vent lengths up to 15' with three 90° bends.

Optional Vent Terminal-Direct Vent:

- For vent locations less than 16 1/2" above grade.

Alternative Vent

- Horizontal and vertical venting.
- Up to 50 equivalent feet.
- Can take combustion air from outside or from inside space.
- Vent material must meet code UL1738 (US) or ULC636 (Canada).

Specifications

Model Number	Input		Output		AFUE%	Continuous GPH @ 100 F Rise	Intermittent DHW Output @ 77 F Rise	NOx Levels ppm
	MBTU/h	kW	MBTU/h	kW				
EDP 110	61.8 to 108.2	18.1 to 31.7	53.7 to 94.0	15.7 to 27.5	85.5	N/A	N/A	<25
EDP 175	102.9 to 175.3	30.1 to 51.4	88.6 to 151.0	25.4 to 44.2	86.1	N/A	N/A	<25
EBP 110	61.8 to 108.2	18.1 to 31.7	53.7 to 94.0	15.7 to 27.5	85.5	114	4 gpm	<25
EBP 175	102.9 to 175.3	30.1 to 51.4	88.6 to 151.0	25.4 to 44.2	86.1	183	5 gpm	<25
EDN 110	61.8 to 108.2	18.1 to 31.7	53.7 to 94.0	15.7 to 27.5	85.5	N/A	N/A	<25
EDN 175	102.9 to 175.3	30.1 to 51.4	88.6 to 151.0	25.4 to 44.2	86.1	N/A	N/A	<25

Minimum Clearances from Adjacent Construction

Appliance Surface	Minimum Clearance from Combustible Material		Suggested Serviceability Clearance	
	Inches	mm	Inches	mm
Back	1	25	18	457
Left Side	1	25	6	152
Right Side	1	25	6	152
Front	1	25		
Top (Alcove Install)	1	25		
Top (Closet Install)*	22	559		
Vent: Concentric, Direct	0	0		
Vent: Category IV	3	76		

*Minimum closet height 6'9" (206cm)



View our entire product line at www.Laars.com



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