

LAARS[®] **NEOTHERM[®]**

High Efficiency
Commercial Modulating,
Condensing Boilers



PACKED WITH FEATURES

- *Advanced LCD Control Interface*
- *Less Than 10ppm NOx*
- *Up to 96.6% Thermal Efficiency*
- *6 Models 285 to 850 MBH*
- *Vent up to 100 feet, horizontal or vertical*
- *Zero clearance to combustibles for tight installations*



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

LAARS® NEOTHERM®

Hydronic Boiler

NeoTherm is a direct vent, sealed combustion, condensing boiler with thermal efficiency as high as 96.6% that modulates with a 5 to 1 turndown. The boiler features an ASME stainless steel heat exchanger, boiler pump (size 285 only, sizes 399-500 optional) and low NOx emissions (10 ppm NOx), for a package that's easy to use and easy on the environment.

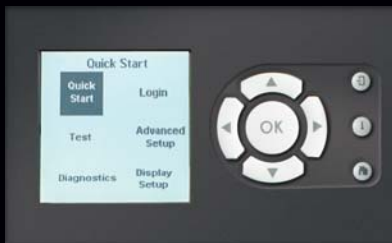
NeoTherm is built standard with the upgraded LAARS Integrated Control System that puts the ignition control, temperature control and high limit in one user-friendly device that does it all with functions clearly spelled out in English rather than complicated codes.

The PID control system has outdoor reset and indirect water heater priority, frost protection, and loads of other features. It seamlessly integrates with building automation systems and can easily become part of multiple boiler sequencing, including a cascading feature that rotates load across up to eight NeoTherms to optimize boiler life without the need for additional system controls.

Available for natural or propane gas, with a selection of factory mounted options, and 6 sizes ranging from 285 to 850 MBH, indoor models are suitable for a broad variety of residential and commercial applications.



NEOTHERM INTEGRATED CONTROLS FEATURES:



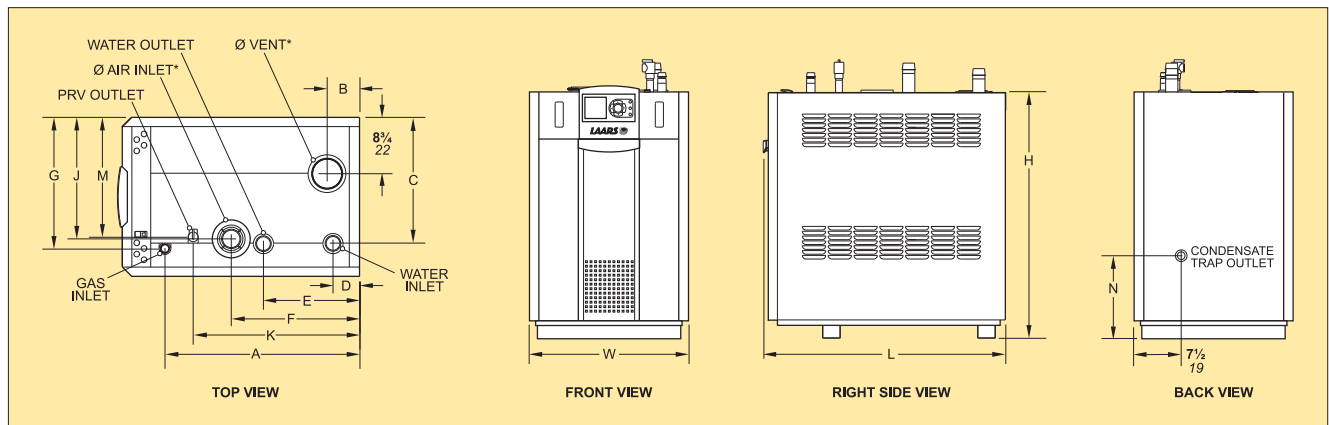
- **Bright LCD with touch pad, adjustable contrast and customizable home screen**
- **Easy to use menus for login, quick start, advanced setup, tests and diagnostics**
- **Integrated PID temperature and ignition control**
- **Accepts 4-10mA or 0-10VDC input for modulation**
- **Lead Lag with up to 8 other NeoTherm boilers**
- **Quick start feature for easy one boiler setups**
- **Outdoor reset with customizable reset curves, DHW override and warm weather shutdown**
- **Complete diagnostics for analog and digital inputs**
- **Test feature allows for forced min and max firing**
- **Display holds, alerts and errors in clear text form**
- **Password protected parameters for installer use**

LAARS® NEOTHERM® HYDRONIC BOILER

Standard Equipment:

- High condensing efficiency
- Modulation down to 20% of full fire (5:1 turndown)
- Sealed combustion chamber
- Stainless Steel Heat Exchanger
- Pre-mix stainless steel burner
- Low NOx system (10ppm) exceeds the most stringent regulations for air quality
- Horizontal or vertical direct vent
- Horizontal vent and air terminals
- Vent and air pipe lengths of up to 100 equivalent feet (each)
- Built-in condensate trap
- Vent temperature cutoff feature
- Integrates with Building Automation Systems
- Spark ignition system
- 160 psi maximum working pressure
- Stainless steel heat exchanger with welded construction (no gaskets)
- ASME "H" stamp
- 75 psi (517 kPa) ASME rated pressure relief valve
- Temperature & pressure gauge
- Drain valve
- Multiple pump control for boiler pump, system pump and indirect domestic water pump, each with delay
- Connections from top of unit
- ENERGY STAR® for 285 size only
- Electronic PID modulating control
- Large user-interface and display
- Alarm output
- Accepts external (4-20mA) modulation control
- Indirect water heater priority with sensor
- Outdoor reset with sensor
- On/off toggle switch
- Manual reset high limit
- Burner sight glass
- Zero clearance to combustible surfaces for alcove and closet installations
- 10 year limited warranty

Dimensional Data



Size	W	L	A	B	C	D	E	F	G	H	J	K	M	N	Air Inlet*	Vent*																
	in.	cm	in.	cm	in.	cm	in.	cm	in.	cm	in.	cm	in.	cm	in.	cm																
285	25	64	26 ³ / ₄	68	20 ¹ / ₄	52	7 ¹ / ₄	19	19 ³ / ₄	50	4 ¹ / ₄	11	11 ¹ / ₄	29	13 ¹ / ₂	34	14	36	38 ¹ / ₄	97	15	38	17	43	18 ³ / ₄	48	13	33	4 ¹ / ₂	11	4 ¹ / ₂	11
399	25	64	31 ¹ / ₂	80	25	64	5 ¹ / ₄	13	19 ³ / ₄	50	4 ¹ / ₄	11	14 ³ / ₄	37	18 ¹ / ₂	47	19 ¹ / ₄	49	38 ¹ / ₄	97	16 ¹ / ₂	42	21 ³ / ₄	55	18 ³ / ₄	48	13	33	4 ¹ / ₂	11	4 ¹ / ₂	11
500	25	64	37 ³ / ₄	96	30 ¹ / ₄	77	5 ¹ / ₄	13	19 ³ / ₄	50	4 ¹ / ₄	11	15 ¹ / ₂	38	20	51	20 ¹ / ₂	52	38 ¹ / ₄	97	19	48	26	66	18 ³ / ₄	48	13	33	4 ¹ / ₂	11	4 ¹ / ₂	11
600	25	64	37 ³ / ₄	96	29 ³ / ₄	76	5	13	19 ¹ / ₂	50	4 ¹ / ₄	11	15	38	20	51	3	8	38 ¹ / ₄	97	19	48	26	66	18 ³ / ₄	48	8 ¹ / ₄	21	4 ¹ / ₂	11	4 ¹ / ₂	11
750	25	64	51	130	35 ¹ / ₂	90	6	15	19 ¹ / ₂	50	5 ¹ / ₄	13	19	48	40 ¹ / ₂	103	3 ¹ / ₄	8	38 ¹ / ₄	97	19	48	30 ³ / ₄	78	18 ³ / ₄	48	8 ¹ / ₄	21	4 ¹ / ₂	11	6 ¹ / ₂	17
850	25	64	55 ¹ / ₄	130	39 ³ / ₄	101	6	15	19 ¹ / ₂	50	5 ¹ / ₄	13	19	48	44 ³ / ₄	114	3 ¹ / ₂	9	38 ¹ / ₄	97	19	48	35	89	18 ³ / ₄	48	8 ¹ / ₄	21	4 ¹ / ₂	11	6 ¹ / ₂	17

Efficiency Data

Size	Thermal Efficiency %	Combustion Efficiency %	AFUE %	Input		Output		Connection Size (NPT)		Weight
				BTU/h	kW	BTU/h	kW	Water	Gas	
285	N/A	N/A	95.4	285,000	83.5	269,040	78.8	1 ¹ / ₂ "	3/4"	276
399	96.5	96.5	N/A	399,000	116.9	375,000	109.9	1 ¹ / ₂ "	3/4"	346
500	95.0	95.0	N/A	500,000	146.5	475,000	139.2	1 ¹ / ₂ "	1"	381
600	95.3	96.0	N/A	600,000	175.8	576,000	167.0	1 ¹ / ₂ "	1"	394
750	96.6	96.6	N/A	750,000	219.8	723,000	208.9	2"	1 ¹ / ₂ "	469
850	95.7	95.7	N/A	850,000	249.1	810,000	236.7	2"	1 ¹ / ₂ "	502

Dimensions are nominal.
*NeoTherm is shipped with adapters for the air and vent.



View our entire product line at www.Laars.com



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