



LAARS[®] OUTDOOR NEOTHERM[®]

***High Efficiency Modulating
Boilers & Volume Water Heaters***

PACKED WITH FEATURES

- Large Color Touch Screen
- Vent up to 100 Feet, Horizontal or Vertical
- Tested and Certified to Meet Your Outdoor Installation Needs.

LAARS[®] NEOTHERM[®]

Outdoor



NeoTherm is a direct vent, sealed combustion, condensing boiler or volume water heater with ultra-high thermal efficiency that modulates with a 5 to 1 turndown and is designed specifically for outdoor installations.



Low NO_x emissions and meets low lead installation requirements for a package that's easy to use and easy on the environment.



Available in three water heater models (150-285 MBH) for natural gas or propane, and five boiler and volume water heater models (399-850 MBH) for propane, these outdoor models are offered with a selection of factory mounted options making them suitable for a broad variety of residential and commercial applications.



The boiler features an ASME stainless steel heat exchanger, direct spark ignition system, optional boiler pump and LAARS integrated control system.



NEOTHERM[®] INTEGRATED CONTROLS FEATURES:

- Large, easy to navigate color touch screen
- Easy to use menus for login, quick start, advanced setup, tests and diagnostics
- Integrated PID temperature and ignition control
- Accepts 4-20mA or 0-10VDC input for modulation
- Cascade up to 8 NeoTherm units
- Quick start feature for easy one boiler setups
- Modbus capable
- 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

NeoTherm							
Demand	CH	Firing rate			2120 RPM		
Burner state	Run	Setpoint			180°F		
Inlet	Outlet	Stack	DHW	4-20mA	Outdoor	Flame	
120°F	146°F	140°F	158°F	LOCAL	57°F	27.33V	
Modulation							
Demand rate		81%					
Limited rate		0%					
Override rate		0%					
History							
Configure	Operation	Diagnostics	Details				

LAARS® OUTDOOR NEOTHERM® FEATURES



NeoTherm Features:

- Stainless steel heat exchanger
- Low NOx system
- LAARS Integrated Control System
- Integrates with Building Automation Systems
- Meets ANSI Z21.13-2013, section 5.26 boilers for outdoor installations
- Meets ANSI Z21.10.3-2013, section 5.24 wind test and section 5.30 rain test
- Easy to service

Standard Equipment:

- High condensing efficiency
- Modulation down to 20% of full fire (5:1 turndown)
- Sealed combustion chamber
- Pre-mix stainless steel burner
- Built-in condensate trap
- Vent temperature cutoff feature
- Spark ignition system
- Sensor for domestic water tank
- 160 psi maximum working pressure
- Stainless steel heat exchanger with welded construction (no gaskets)
- Optional pumps (sized to model) [150-600 models only]
- ASME "H" stamp (optional "HLW" stamp for volume water heaters)
- Meets NSF/ANSI-372 Low Lead Content Certification (NTV)
- Water flow switch (399-850)
- 125 psi (861 kPa) ASME rated pressure relief valve (volume water heaters)
- 75 psi (517 kPa) ASME rated pressure relief valve
- Multiple pump control for boiler pump, system pump and indirect domestic water pump, each with delay (boiler models)
- Outdoor reset with customizable reset curves, domestic hot water override and warm weather shutdown (boiler models)
- Outdoor air temperature sensor (boiler models)
- Indirect water heater priority (boiler models)
- Sensor for indirect domestic water tank (boiler models)
- Temperature & pressure gauge
- Drain valve
- Electronic PID modulating control stages up to eight boilers
- Large color touch screen
- Alarm output
- Accepts external 4-20mA (0-10V with optional converter) modulation signal
- On/off toggle switch
- Manual reset high limit
- Burner sight glass
- 8 year limited warranty (volume water heater)
- 10-year limited warranty (boiler)

NeoTherm® Outdoor Sizing Data

Hydronic Boiler

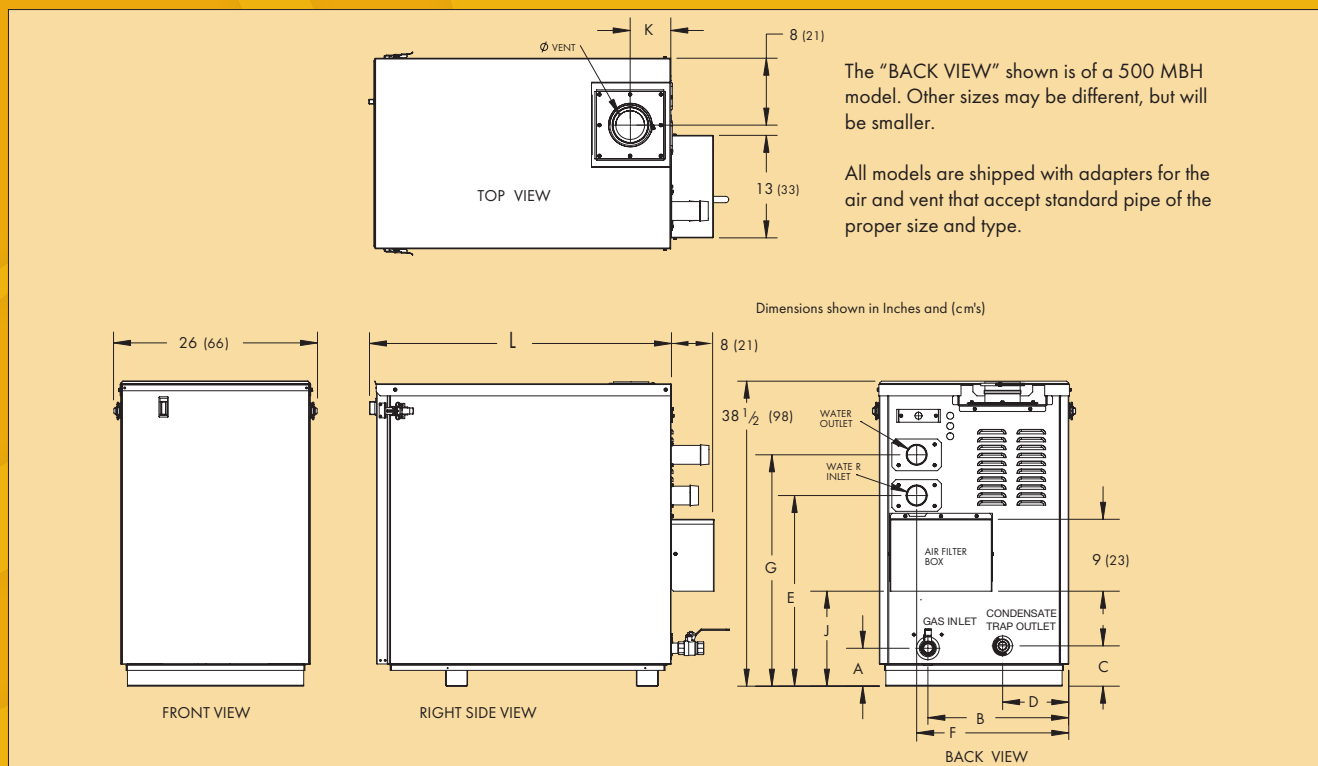
Size	Natural Gas	Propane	Input		Output		Shipping Weight	
			MBH	kW	MBH	kW	lbs.	kg
NTH 399	N/A	X	399	117.2	386	113.1	364	165
NTH 500	N/A	X	500	146.4	475	136.1	419	190
NTH 600	N/A	X	600	175.7	572	167.6	426	193
NTH 750	N/A	X	750	219.8	724	212.1	481	218
NTH 850	N/A	X	850	248.9	813	238.2	503	228

Volume Water Heater

Size	Natural Gas	Propane	Input		Output		Shipping Weight	
			MBH	kW	MBH	kW	lbs.	kg
NTV 150	X	X	150	44	142.5	42.8	228	103
NTV 199	X	X	199	58.3	193.0	56.6	270	123
NTV 285	X	X	285	83.5	270.8	79.3	299	136
NTV 399	N/A	X	399	116.9	393.0	112.3	364	165
NTV 500	N/A	X	500	146.5	480.0	141.1	419	190
NTV 600	N/A	X	600	175.8	582.0	170.5	426	193
NTV 750	N/A	X	750	219.8	705.0	206.7	481	218
NTV 850	N/A	X	850	249	816.0	239.1	503	228



Dimensional Data



Laars® NeoTherm® Outdoor

	A		B		C		D		E		F		G		H		J		K		L		Vent	
Size	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm
150	6 1/4	16	11	28	13	33	17 1/4	43.8	23 1/2	60	18	45.7	27	69	38 1/4	97	23 1/2	60	5 1/4	19	20	60	3	7.6
199	6 1/4	16	11	28	13	33	17 1/4	43.8	23 1/2	60	18	45.7	27	69	38 1/4	97	24 1/2	60	5 1/4	30	27	68.6	3	7.6
285	6	15.56	11	28	5	13	17 1/4	43.8	24	61	19	48	28 1/4	72	38 1/4	97	12	30.5	7 1/4	43	27	68.6	4	11
399	8	15.5	19 1/2	50	7 3/4	20	17 1/4	43.8	24	61	19	48	28 1/4	72	38 1/4	97	12	30.5	6	55	31 1/4	80.5	4	11
500	5	13	17 3/4	45	5	13	8 1/4	21	24	61	19	48	29 1/4	74	38 1/4	97	12	30.5	5.5	66	38	96.5	4	11
600	33 1/2	85	3.0	8	5	13	8 1/4	21	24	61	19	48	29 1/4	74	38 1/4	97	12	30.5	5 3/4	66	38	96.5	4	11
750	32 3/4	83.2	3.0	8	5 1/4	13.4	17 1/4	43.8	24	61	19	48	29 1/4	74	38 1/4	97	12	30.5	5 3/4	78	51 1/4	130	6	17
850	32 3/4	83.2	3.0	8	5 1/4	13.4	17 1/4	43.8	24	61	19	48	29 1/4	74	38 1/4	97	12	30.5	5 3/4	89	55 1/4	141.5	6	17

View our entire product line at www.Laars.com



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