



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 as water heater model 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.

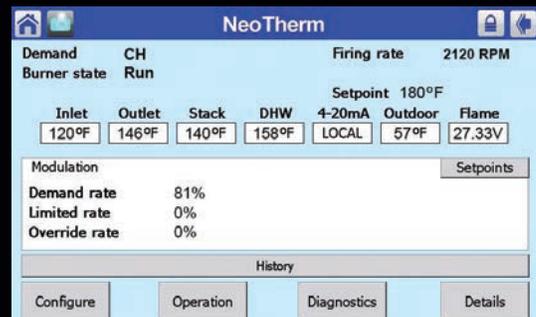


The boiler features an ASME stainless steel heat exchanger, direct spark ignition system, optional boiler pump and LAARS integrated control system.



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



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) [285-600 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

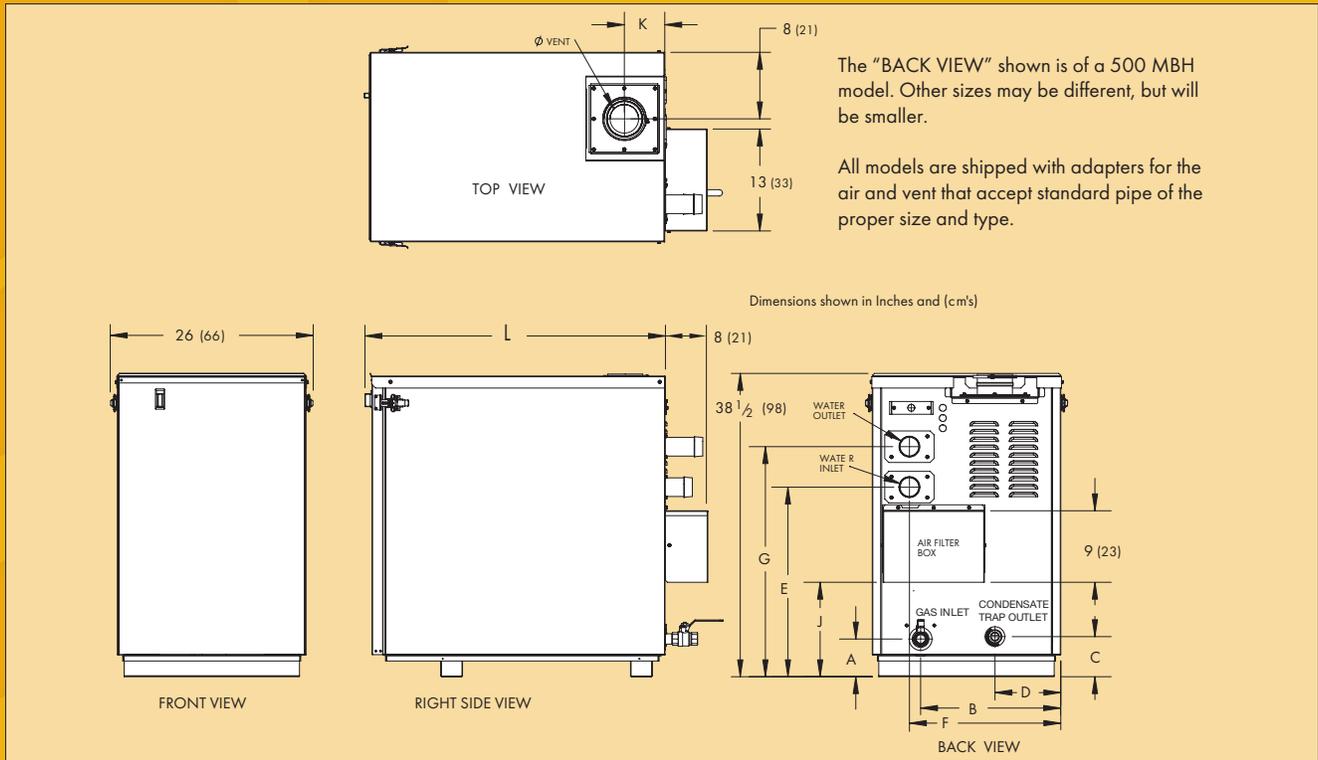
Size	Natural Gas	Propane	Input		Output		Shipping Weight	
			MBH	kW	MBH	kW	lbs.	kg
NTH 399	N/A	X	399	117.2	386	113.1	364	165
NTH 500	N/A	X	500	146.4	475	136.1	419	190
NTH 600	N/A	X	600	175.7	572	167.6	426	193
NTH 750	N/A	X	750	219.8	724	212.1	481	218
NTH 850	N/A	X	850	248.9	813	238.2	503	228

Volume Water Heater

Size	Natural Gas	Propane	Input		Output		Shipping Weight	
			MBH	kW	MBH	kW	lbs.	kg
NTV 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

Size	A		B		C		D		E		F		G		H		J		K		L		Vent	
	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm
285	6	15.56	11	28	5	13	17¼	43.8	24	61	19	48	28¼	72	38¼	97	12	30.5	7¼	43	27	68.6	4	11
399	8	15.5	19½	50	7¾	20	17¼	43.8	24	61	19	48	28¼	72	38¼	97	12	30.5	6	55	31¼	80.5	4	11
500	5	13	17¾	45	5	13	8¼	21	24	61	19	48	29¼	74	38¼	97	12	30.5	5.5	66	38	96.5	4	11
600	33½	85	3.0	8	5	13	8¼	21	24	61	19	48	29¼	74	38¼	97	12	30.5	5¾	66	38	96.5	4	11
750	32¾	83.2	3.0	8	5¼	13.4	17¼	43.8	24	61	19	48	29¼	74	38¼	97	12	30.5	5¾	78	51¼	130	6	17
850	32¾	83.2	3.0	8	5¼	13.4	17¼	43.8	24	61	19	48	29¼	74	38¼	97	12	30.5	5¾	89	55¾	141.5	6	17

View our entire product line at www.Laars.com



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