



LAARS[®] NEOTHERM[®]

**High Efficiency Modulating
Volume Water Heaters**

PACKED WITH FEATURES

- Large Color Touch Screen
- Less than 10ppm NOx
- Up to 97% Thermal Efficiency
- 8 Models 150 to 850 MBH
- Vent up to 100 feet, horizontal or vertical
- Meets Low Lead Requirements

LAARS[®] NEOTHERM[®]

Volume Water Heater



NeoTherm is a direct vent, sealed combustion, condensing volume water heater with thermal efficiency as high as 97% that modulates with a 5 to 1 turndown.



Low NO_x emissions (<10ppm) and meets low lead installation requirements for a package that's easy to use and easy on the environment.



Available for natural or propane gas, with a selection of factory mounted options, and 8 sizes ranging from 150 to 850 MBH, make these models suitable for a broad variety of residential and commercial applications.



The heater features an ASME stainless steel heat exchanger, direct spark ignition system, optional heater 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 4-10mA or 0-10VDC input for modulation
- Lead Lag with up to 8 other NeoTherm volume water heaters
- Quick start feature for easy one boiler setups
- 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
- Modbus capable

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							Setpoints
Demand rate	81%						
Limited rate	0%						
Override rate	0%						
History							
Configure	Operation	Diagnostics	Details				

LAARS® NEOTHERM® VOLUME WATER HEATER FEATURES



NeoTherm Features:

- All connections are on top of unit
- Stainless steel heat exchanger
- Floor-standing appliance
- Easy to service
- Low NOx system (<10ppm) exceeds the most stringent regulations for air quality
- LAARS Integrated Control SystemSM
- Integrates with Building Automation Systems
- Meets NSF/ANSI-372 Low Lead Content Certification (MT2V)

Standard Equipment:

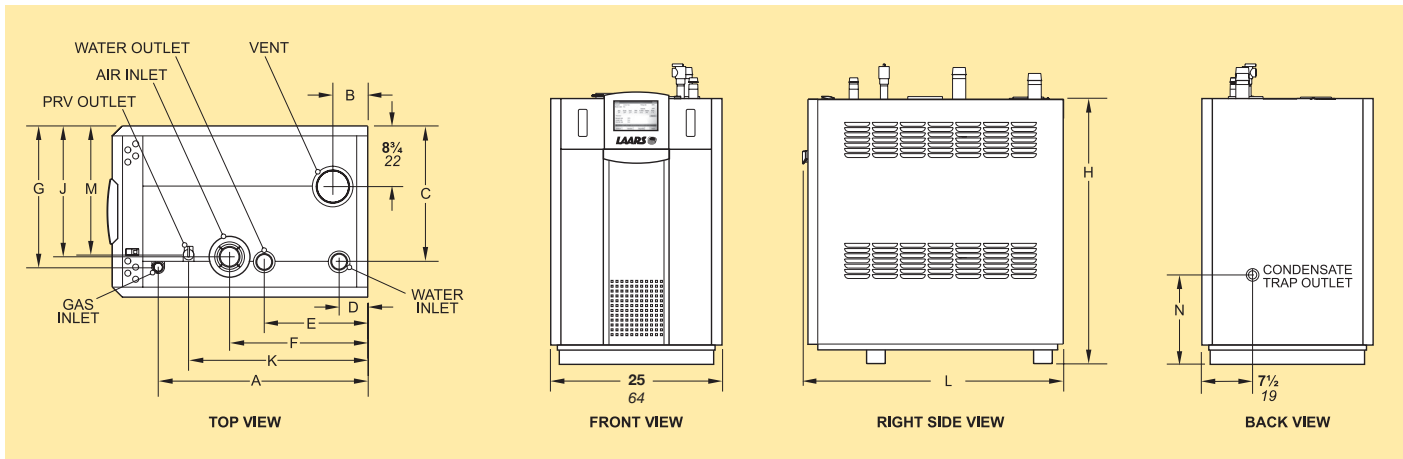
- High condensing efficiency
- Modulation down to 20% of full fire (5:1 turndown)
- Sealed combustion chamber
- Pre-mix stainless steel burner
- Horizontal or vertical direct vent
- Horizontal vent and air terminals
- Vent and air pipe lengths of up to 100 equivalent feet (each)
- Built-in condensate trap
- Vent temperature cutoff feature
- 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) available for field installation
- ASME "H" stamp
- Water flow switch (399 & 850)
- 125 psi (861 kPa) ASME rated

pressure relief valve

- 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 optional) modulation signal
- On/off toggle switch
- Manual reset high limit
- Burner sight glass
- Zero clearance to combustible surfaces for alcove and closet installations
- 8 year limited warranty

Size	Input		Output	
	MBH	kW	MBH	kW
NTV 150	150	43.9	142.5	42.8
NTV 199	199	58.3	193.0	56.6
NTV 285	285	83.5	270.8	79.3
NTV 399	399	116.8	383.0	112.3
NTV 500	500	146.4	480.0	141.1
NTV 600	600	175.7	582.0	170.5
NTV 750	750	219.6	705.0	206.7
NTV 850	850	248.9	816.0	239.1

Dimensional Data



Laars NeoTherm®

Size	A		B		C		D		E		F		G		H		J		K		L		M		N		Shipping Weight		Connections	
	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	lbs	kg	Gas	Water		
NTV 150	13¼	34	5¼	14	19	48	3¼	8	10¾	28	7½	19	14¼	36	38¼	97	19½	49	7½	19	19½	49	15¼	39	13	33	228	103	½NPT	1¼NPT
NTV 199	20½	52	5¼	14	19	48	3¼	8	17¾	45	7½	19	14¼	36	38¼	97	19½	49	11¾	30	26¾	68	15¼	39	13	33	270	123	½NPT	1¼NPT
NTV 285	20¼	52	7¼	19	19¾	50	4¼	16	11¼	29	13½	34	14	36	38¼	97	15	38	17	43	26¾	68	18¾	48	13	33	299	136	¾NPT	2NPT
NTV 399	25	64	5¼	13	19¾	50	4¼	11	14¾	37	18½	47	19¼	49	38¼	97	16½	42	21¾	55	31½	80	18¾	48	13	33	364	165	¾NPT	2NPT
NTV 500	30¼	77	5¼	13	19¾	50	4¼	11	15¼	38	20	51	20½	52	38¼	97	19	48	26	66	37¾	96	18¾	48	13	33	419	190	1NPT	2NPT
NTV 600	29¾	76	5	13	19½	50	4¼	11	15	38	20	51	3	8	38¼	97	19	48	26	66	37¾	96	18¾	48	8¼	21	426	193	1NPT	2NPT
NTV 750	35½	90	6	15	19½	50	5¼	13	19	48	40½	103	3¼	8	38¼	97	19	48	30¾	78	51	130	18¾	48	8¼	21	481	218	1½NPT	2NPT
NTV 850	39¾	101	6	15	19½	50	5¼	13	19	48	44¾	114	3½	9	38¼	97	19	48	35	89	55¼	130	18¾	48	8¼	21	503	228	1½NPT	2NPT



View our entire product line at www.Laars.com



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