

Date:

Project #:

Engineer:

Prepared By:

Bid Date:

Submittal Data



Project Name:

Location:

Contractor:

Standard Equipment

- High condensing efficiency
- Modulation down to 10% of full fire (10:1 turndown)
- Sealed combustion chamber
- Pre-mix stainless steel burner
- Low NOx system
- Horizontal or vertical direct vent
- Vent and air pipe lengths of up to 100 equivalent feet (each)
- Direct spark ignition system
- Electronic PID modulating control with large touchscreen and color display
- Available with pump matched to boiler.
- Controller cascades with up to four other NeoTherm LC boilers to lead/lag the boilers together
- Accepts external 4-20mA modulation control (0-10V with optional converter)
- Multiple pump control for boiler pump, system pump and indirect domestic water pump, each with delay
- Alarm output
- Indirect water heater priority
- Sensor for indirect domestic water tank
- Outdoor reset
- Outdoor air temperature sensor
- Manual reset high limit
- On/off toggle switch
- Vent temperature cutoff feature
- Built-in condensate trap
- 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
- Water flow switch
- Temperature & pressure gauge
- Burner site glass
- 10-Year limited warranty

Boiler Data

Number of Units:

Fuel

☐ Propane

Pump Options

- ☐ Pump included
☐ No pump

Factory Mounted Options

- ☐ CSD-1 (covers FM & GAP)
- ☐ Low water cutoff
- ☐ High & Low gas pressure switches
- ☐ Variable speed boiler pump control
- ☐ Additional auto reset high limit*
- ☐ Additional manual reset high limit*
- ☐ Bell for ignition failure
- ☐ Air filter
- ☐ 30 psi pressure relief valve
- ☐ 50 psi pressure relief valve
- ☐ 60 psi pressure relief valve
- ☐ 125 psi pressure relief valve
- ☐ 150 psi pressure relief valve

* Auto reset high limit and manual reset high limit cannot be ordered together.



Accessories for Field Mounting

<input type="checkbox"/> Boiler Pump	<input type="checkbox"/> Horizontal vent terminal for stainless steel	<input type="checkbox"/> Outdoor vent terminal
<input type="checkbox"/> Low water cutoff	<input type="checkbox"/> Horizontal air terminal for PVC / CPVC	<input type="checkbox"/> Outdoor air terminal
<input type="checkbox"/> High & low gas pressure switches	<input type="checkbox"/> Horizontal air terminal for stainless steel or polypropylene	<input type="checkbox"/> BACnet gateway
<input type="checkbox"/> Air filter	<input type="checkbox"/> Vertical air terminal for PVC / CPVC	<input type="checkbox"/> LON gateway
<input type="checkbox"/> Additional auto reset high limit*	<input type="checkbox"/> Screen kit for stainless steel or polypropylene vertical air or vent pipe	<input type="checkbox"/> Condensate neutralizer kit
<input type="checkbox"/> Additional manual reset high limit*		<input type="checkbox"/> Condensate neutralizer kit with pump
<input type="checkbox"/> VARI-PRIME, variable speed pump frequency drive		<input type="checkbox"/> 0-10V converter for modulation control
<input type="checkbox"/> Horizontal vent terminal for PVC / CPVC		<input type="checkbox"/> Conversion kit, Nat to LP

Sizing Data

Model	Input		Output		Indoor Efficiencies		Outdoor Efficiencies		Gas Conn. size	Water Conn. size	Product Weight		Shipping Weight	
	BTU/h	kW	BTU/h	kW	Thermal	Combustion	Thermal	Combustion	inches	inches	lbs	kg	lbs	kg
<input type="checkbox"/> NTH 1000	999,000	293	942,000	276	94.2%	94.2%	94.2%	94.2%	1½	2	518	235	750	341
<input type="checkbox"/> NTH 1200	1,200,000	351	1,120,000	328	94.8%	95.1%	94.7%	95.1%	1½	2	538	244	770	350

NOTES:

For other boiler ratings:

Boiler Horsepower: HP = $\frac{\text{Output}}{33,475}$

Radiation Surface: EDR sq. ft. = $\frac{\text{Output}}{150}$

Clearances

Appliance Surface	Suggested Service Access Clearance		Clearance to Combustibles	
	inches	cm	inches	cm
Front	24	61	2	5.1
Left Side	12	30	0	0
Right Side	18	46	0	0
Top	24	61	8	20
Back	24	61	0	0
Vent	—	—	1	2.5

Electrical Data

Boiler	Boiler Circuit		Boiler Pump Circuit*	
Size MBH	1000	1200	1000	1200
Voltage	120V 1PH	120V 1PH	120V 1PH	120V 1PH
FLA	6 Amps	11 Amps	16 Amps	16 Amps
MCA	8 Amps	14 Amps	20 Amps	20 Amps
MOP	14 Amps	25 Amps	36 Amps	36 Amps

FLA = Full Load Amperage

MCA = Minimum Circuit Ampacity

MOP = Maximum Over-current Protection

* Note: For any pump(s) exceeding 7.4 FLA / 120V VAC, an external pump relay / contactor must be used. Units that are purchased with pumps include a pump contactor.

Vent System

Size	Intake (Air) Pipe	Exhaust (Vent) Pipe	Maximum Allowable Equivalent Length*	
1000	6"	6"	100 ft	30 m
1200	6"	6"	100 ft	30 m

Installations in the U.S. require exhaust vent pipe that is a combination of PVC and CPVC complying with ANSI/ASTM D1785 F441, polypropylene pipe that complies with ULC S636, or stainless steel complying with UL 1738. Installations in Canada require exhaust vent pipe that is certified to ULC S636.

NOTE: The first 12" (30cm) of vent must be CPVC if using a PCV vent system.

Intake (air) pipe may be ABS, PVC, CPVC or galvanized material.

Closet and alcove installations do not allow the use of PVC under any circumstances.

*To calculate max equivalent length, measure the linear feet of the pipe, and add 5 feet (1.5m) for each elbow used.

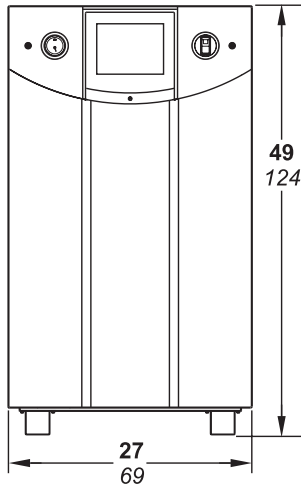
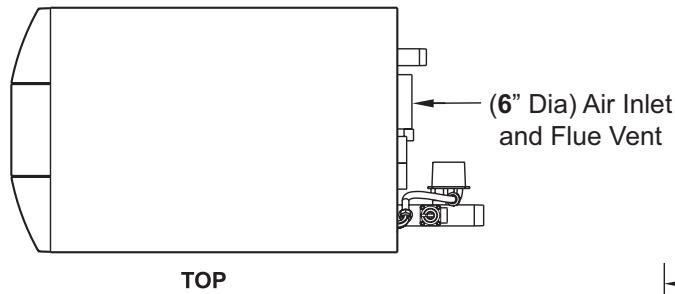
Water Flow Requirements

Size	Temperature Rise									
	20°F		30°F		40°F		50°F		60°F	
	Flow	H/L	Flow	H/L	Flow	H/L	Flow	H/L	Flow	H/L
	gpm	feet	gpm	feet	gpm	feet	gpm	feet	gpm	feet
1000	95	26.7	62	12.8	48	8.2	38	5.5	32	4.0
1200	114	36.6	76	18.2	57	11.1	46	7.5	38	5.5

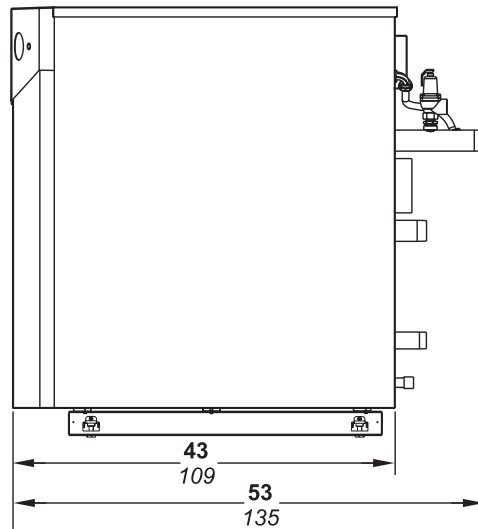
Size	Temperature Rise									
	11°C		17°C		22°C		28°C		33°C	
	Flow	H/L	Flow	H/L	Flow	H/L	Flow	H/L	Flow	H/L
	lpm	m	lpm	m	lpm	m	lpm	m	lpm	m
1000	360	8.1	235	3.9	182	2.5	144	1.7	120	1.2
1200	432	11.2	288	5.5	216	3.4	173	2.3	144	1.7

NOTE: Pumps supplied with boilers are meant for primary-secondary piping systems, and are sized to serve the boiler and 30 feet of boiler loop piping with a typical number of fittings, for approximately 25-30°F temp rise across the boiler.

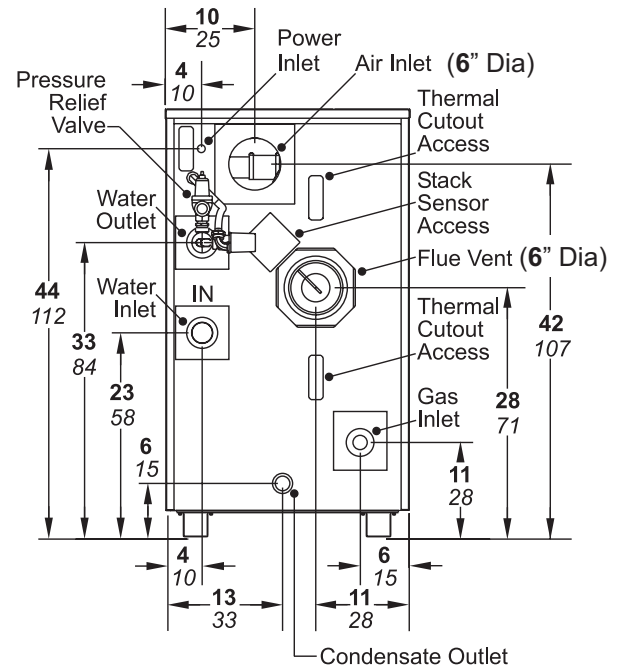
Dimensional Data
NeoTherm LC
1000 & 1200



FRONT



RIGHT



BACK

Laars Heating Systems Company reserves the right to change specifications, components, features, or to discontinue products without notice.