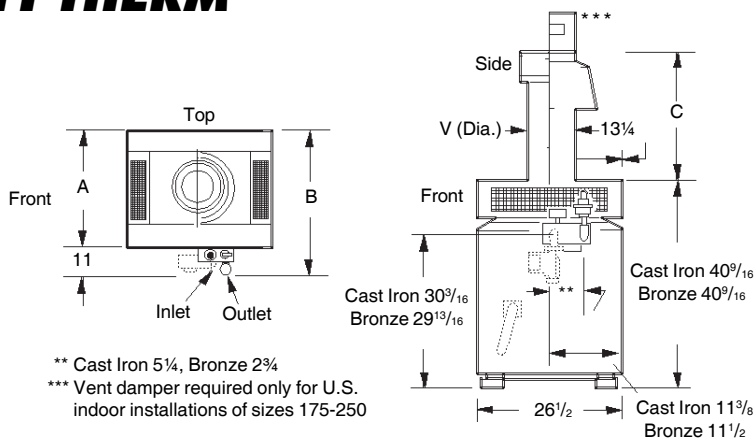


MIGHTY THERM®



** Cast Iron 5¹/₄, Bronze 2¹/₄
 *** Vent damper required only for U.S. indoor installations of sizes 175-250

Hydronic Boilers

HH	Hydronic Heating Boiler
PH	Hydronic Heating Boiler with mounted pump

Indoor/Outdoor Sizes 175-400

Submittal Data **LAARS** Heating Systems

Standard Equipment

- ASME 160 lb. working pressure heat exchanger
- 24V control system
- Operating valve/pressure regulator
- Redundant safety gas valve
- Operating control
- Manual reset high temperature limit
- Standing pilot (system #1)
- Water flow sensing device
- Pressure relief valve (75 PSI)
- 115/24V transformer
- Terminal strip
- Temperature/pressure gauge
- On/off toggle switch
- EM² pump control with relay (Model PH)
- Stainless steel burners
- Glass lined cast iron headers
- 2 amp fuse
- 100% shut-off/lockout (system #1)
- Vent damper (required for U.S. indoor installations of 175-250)

Dimensional Data

Indoor Size	Input ¹ BTU/h x 1000	Output ¹ BTU/h x 1000	Gas Connection Size inches ²		Water Conn Size inches	Dimensions inches ²				Shipping Weight lbs ⁴	
			Natural	LP		A	B	C			V
								with Vent Damper ³	w/o Vent Damper		
175	175	142	1/2/3/4	1/2	1-1/2	18	26-1/2	28-1/2	23-1/2	6	255
250	250	203	3/4	1/2	1-1/2	22-1/2	31	30-1/2	24-3/4	7	285
325	325	263	3/4	1/2	1-1/2	26-3/4	35-1/4	—	25-7/8	8	325
400	400	324	3/4	1/2	1-1/2	31-3/4	40-1/4	—	26-7/8	9	360

Outdoor Size	Input ¹ BTU/h x 1000	Output ¹ BTU/h x 1000	Gas Connection Size inches ²		Water Conn Size inches	Dimensions inches ²				Shipping Weight lbs ⁴	
			Natural	LP		A	B	C			V
								with Vent Damper ³	w/o Vent Damper		
175	175	137	1/2/3/4	1/2	1-1/2	18	26-1/2	14-1/16	—	6	255
250	250	195	3/4	1/2	1-1/2	22-1/2	31	18-5/8	—	7	285
325	325	254	3/4	1/2	1-1/2	26-3/4	35-1/4	19-3/16	—	8	325
400	400	312	3/4	1/2	1-1/2	31-3/4	40-1/4	22-5/8	—	9	360

NOTES: 1. Input and output must be derated 4% per 1000 feet above sea level when installed above 2000 feet altitude.
 2. Dimensions are nominal.
 3. Vent damper required only for U.S. indoor installations of sizes 175-250.
 4. Units with pumps add 20 pounds.

Rate of Flow and Pressure Drop

Size	Design Temperature Rise Across Boiler					
	20°F		25°F		30°F	
	Hd. Loss GPM	Hd. Loss Ft.	Hd. Loss GPM	Hd. Loss Ft.	Hd. Loss GPM	Hd. Loss Ft.
175	14	0.5	11	0.6	9	0.5
250	20	2.1	16	1.2	13	0.8
325	25	3.4	20	2.1	17	1.4
400	31	5.2	25	3.4	21	2.3

Ignition Safeguard Systems

System #1: Standing pilot with thermocouple flame supervision. 100% safety shutdown on flame failure. 24V control circuit. Standard on natural and propane sizes.

System #12: Intermittent electronic ignition with electronic flame supervision. Responds in less than 0.8 second upon flame failure. 24V control circuit. Optionally available on natural or propane gas sizes.

CONTROL OPTIONS	System #1	System #12
Firing Modes		
ON/OFF Firing	S	S
Two Stage Firing	O	O
Four Stage Firing	N/A	N/A
Mechanical Modulation	1	1
Motorized Gas Valve ON/OFF	N/A	N/A
Motorized Modulation	N/A	N/A
Gas Train		
Standing Pilot	S	N/A
Intermittent Ignition Device	N/A	S
Manual Pilot Valve	N/A	N/A
Pilot Gas Valve	N/A	S
Pilot Gas Regulator	N/A	N/A
Manual Shut-Off Valve	N/A	N/A
Safety Gas Valve	S	S
Motorized Safety Gas Valve	N/A	N/A
Lubricated Plug Cock	N/A	N/A

OPTIONS	System #1	System #12
Control Components		
Alarm Bell/Indicator Lights	O	O
Electronic Flame Relay	N/A	S
Gas Pressure Switch – High	2	2
Gas Pressure Switch – Low	2	2
Hi-Limit – Automatic Reset	O	O
Hi-Limit – Manual Reset	S	S
Low Water Cut-Off	O	O
ON/OFF Toggle Switch	S	S
Operating Control	S	S
100% Shut-Off/Lockout	S	O
Terminal Strip	S	S
Water Flow Sensing Device	S	S
Vent Valve, Normally Open	N/A	N/A

KEY: Provided as Standard = S
Optional = O
Not Available = N/A

NOTES: 1. Mechanical modulation only available on HH & PH sizes 325-400. 2. High and low gas pressure switches shipped loose.

Minimum Clearances from Adjacent Construction

Recommended Minimum Clearance From	Sizes 175-400	
	Indoor inches	Outdoor inches
Top	37	Unobstructed
Water Connection Side	12	Unobstructed
Opposite Side	6	6
Front	Unobstructed	Unobstructed
Rear	6	6
Vent	6*	—

* 1" if B-vent is used.

NOTES: Base for combustible flooring is standard on all indoor and outdoor sizes. **At least 48" clearance should be provided in front of the boiler for maintenance accessibility (removal of burners, etc.).**

Motor Electrical Data

Factory Provided Pumps — Model PH Boilers			
Size	Power (HP)	Voltage/Phase	Current (Amps)
175	1/25	115/1	0.75
250	1/12	115/1	1.62
325 & 400	1/6	115/1	2.15



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