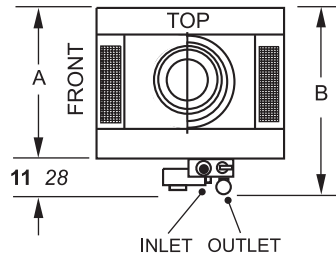
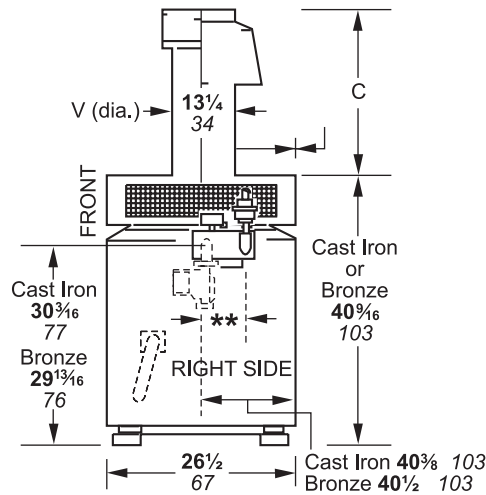


# MIGHTY THERM®



\*\* Cast Iron 5 1/4 13  
Bronze 2 3/4 7



# Volume Water Heaters

WW	Volume Water Heater (circulating storage tank type)
PW	Volume Water Heater with built-in pump

Indoor/Outdoor Sizes 175,000 - 400,000 BTU/h

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 (125 PSI)
- 115/24V transformer
- Terminal strip
- Temperature/pressure gauge
- On/off toggle switch
- EM<sup>2</sup> pump control with relay (Model PW)
- Stainless steel burners
- Glass lined cast iron headers
- 2 amp fuse
- 100% shut-off/lockout (system #1)

## Dimensional Data

Indoor Size	Input <sup>1</sup> BTU/h x 1000	Output <sup>1</sup> BTU/h x 1000	Gas Connection Size inches <sup>2</sup>		Water Conn Size inches	Dimensions inches <sup>2</sup>				Shipping Weight lbs <sup>3</sup>
			Natural	LP		A	B	C	V	
175	175	142	1/2, 3/4	1/2	1-1/2	18	26-1/2	23-1/2	6	255
250	250	204	3/4	1/2	1-1/2	22-1/2	31	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	399	324	3/4	1/2	1-1/2	31-3/4	40-1/4	26-7/8	9	360

Outdoor Size	Input <sup>1</sup> BTU/h x 1000	Output <sup>1</sup> BTU/h x 1000	Gas Connection Size inches <sup>2</sup>		Water Conn Size inches	Dimensions inches <sup>2</sup>				Shipping Weight lbs <sup>3</sup>
			Natural	LP		A	B	C	V	
175	175	140	1/2, 3/4	1/2	1-1/2	18	26-1/2	14-1/16	6	255
250	250	200	3/4	1/2	1-1/2	22-1/2	31	18-1/16	7	285
325	325	260	3/4	1/2	1-1/2	26-3/4	35-3/4	19-3/16	8	325
400	399	320	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. Units with pumps add 20 pounds.

## Recovery Tables

Gallons Per Hour Delivered

Indoor Size	Design Temperature Rise Across Boiler									
	40°F	50°F	60°F	70°F	80°F	90°F	100°F	120°F	140°F	
175	425	340	284	243	213	189	170	142	122	
250	612	490	408	350	306	272	245	204	175	
325	790	632	527	451	395	351	316	263	226	
400	972	778	648	555	486	432	389	324	278	

**Recovery  
Tables  
Continued**  
Gallons Per Hour  
Delivered

Outdoor Size	Design Temperature Rise Across Boiler									
	40°F	50°F	60°F	70°F	80°F	90°F	100°F	120°F	140°F	
175	420	336	280	240	210	187	168	140	120	
250	600	480	400	343	300	267	240	200	171	
325	780	624	520	446	390	347	312	260	223	
400	960	768	640	549	480	427	384	320	274	

**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
<b>Firing Modes</b>		
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
<b>Gas Train</b>		
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

CONTROL OPTIONS	System #1	System #12
<b>Control Components</b>		
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
<b>KEY:</b> S = Provided as Standard O = Optional N/A = Not Available		
1. Mechanical modulation only available on 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	18	Unobstructed
Rear	6	6
Vent	6*	—

**NOTE:** 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.).

\* 1" if B-vent is used.



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