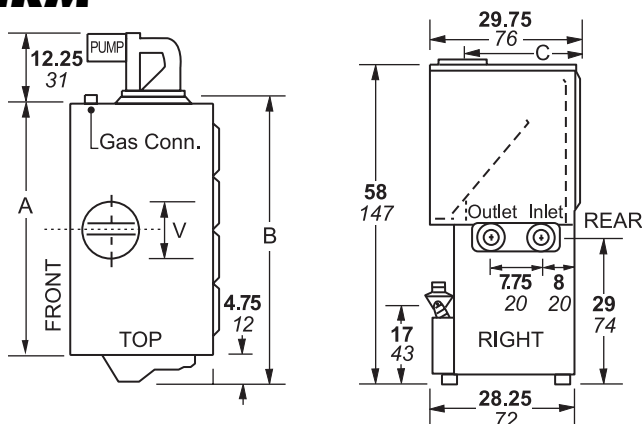


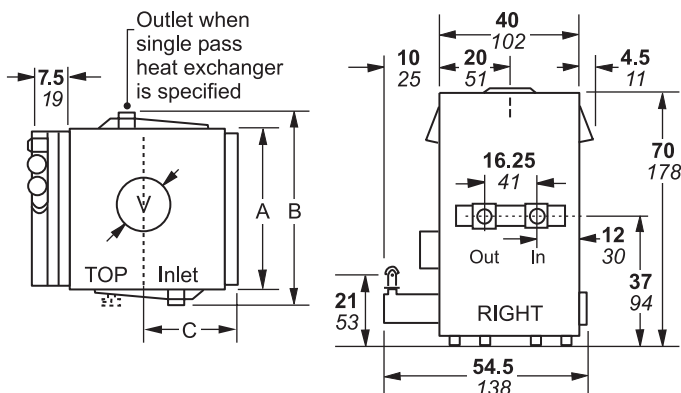
# MIGHTY THERM®

# Hydronic Boilers

Indoor  
Sizes 500-1825



Indoor  
Sizes 2000-5000



HH	Hydronic Heating Boiler
PH	Hydronic Heating Boiler with mounted pump

Indoor Sizes 500,000 - 5,000,000 BTU/h

Submittal Data **LAARS** Heating Systems

Dimensions shown in inches cm.

## Standard Equipment

- ASME 160 lb. working pressure heat exchanger
- 24V control system
- Operating gas valve/pressure regulator
- Water flow sensing device
- Removable burner tray (500-1825)
- Built-in draft hood
- Glass lined cast iron headers
- Covered control box
- Redundant safety gas valve
- Operating control
- Manual reset high limit
- Automatic reset high limit (3050-5000)
- Manual "A" gas valve
- Manual pilot valve
- Pilot gas regulator
- Manual shut-off valve
- Stainless steel burners
- External water side gaskets
- Flanged connections
- High gas pressure switch (3050-5000)
- Pressure relief valve (75 PSI)
- 115/24V transformer
- Terminal strip
- Temperature/pressure gauge
- On/off toggle switch
- 2 amp fuse
- Power on light

## Dimensional Data

Models HH/PH*	Input <sup>1,4</sup> BTU/h x1000	Output <sup>1,4</sup> BTU/h x1000	IBR Net <sup>1,4</sup> Rating BTU/h x1000	Gas Connection Size inches <sup>2</sup>		Water Conn. Size in <sup>2</sup>	Dimensions inches <sup>2,4</sup>				Ship Weight lbs <sup>3</sup>
				Natural <sup>5</sup>	LP <sup>5</sup>		A	B	C	V	
500	500	405	357	1	3/4/1	2	33 <sup>3</sup> / <sub>4</sub>	45 <sup>1</sup> / <sub>4</sub>	23 <sup>3</sup> / <sub>4</sub>	10	690
600	600	486	428	1	3/4/1	2	38 <sup>3</sup> / <sub>4</sub>	50 <sup>1</sup> / <sub>4</sub>	22 <sup>3</sup> / <sub>4</sub>	12	780
715	715	579	510	1	3/4/1	2	44 <sup>1</sup> / <sub>4</sub>	55 <sup>3</sup> / <sub>4</sub>	22 <sup>3</sup> / <sub>4</sub>	12	850
850	850	689	606	1 1/1 1/4	3/4/1 1/4	2	50 <sup>3</sup> / <sub>4</sub>	62 <sup>1</sup> / <sub>4</sub>	21 <sup>3</sup> / <sub>4</sub>	14	900
1010	1010	818	720	1 1/4	1/1 1/4	2 1/2	58	69 <sup>1</sup> / <sub>2</sub>	20 <sup>3</sup> / <sub>4</sub>	16	1020
1200	1200	972	856	1 1/4	1/1 1/4	2 1/2	66 <sup>1</sup> / <sub>4</sub>	77 <sup>3</sup> / <sub>4</sub>	20 <sup>3</sup> / <sub>4</sub>	16	1145
1430	1430	1158	1020	1 1/4	1 1/4	2 1/2	76	87 <sup>1</sup> / <sub>2</sub>	19 <sup>3</sup> / <sub>4</sub>	18	1290
1670	1670	1353	1191	1 1/4/1 1/2	1 1/4	2 1/2	85 <sup>1</sup> / <sub>2</sub>	97	19 <sup>3</sup> / <sub>4</sub>	18	1375
1825	1825	1478	1302	1 1/4/1 1/2	1 1/4	2 1/2	92 <sup>1</sup> / <sub>4</sub>	103 <sup>3</sup> / <sub>4</sub>	19 <sup>3</sup> / <sub>4</sub>	18	1425
2000	1999	1639	1425	1 1/2	1 1/4 / 1 1/2	4	55 <sup>1</sup> / <sub>2</sub>	73	24 <sup>1</sup> / <sub>2</sub>	22	1755
2450	2450	2009	1747	1 1/2 / 2	1 1/2	4	65 <sup>1</sup> / <sub>2</sub>	83	24 <sup>1</sup> / <sub>2</sub>	24	2010
3050	3050	2501	2175	1 1/2 / 2	1 1/2	4	78	95 <sup>1</sup> / <sub>2</sub>	24 <sup>1</sup> / <sub>2</sub>	26	2350
3500	3500	2870	2496	2	1 1/2	4	88	105 <sup>1</sup> / <sub>2</sub>	24 <sup>1</sup> / <sub>2</sub>	28	2510
4050	4050	3321	2888	2/2 1/2	2	4	100 <sup>1</sup> / <sub>2</sub>	118	24 <sup>1</sup> / <sub>2</sub>	30	2910
4500	4500	3690	3209	2 1/2	2	4	110 <sup>1</sup> / <sub>2</sub>	128	24 <sup>1</sup> / <sub>2</sub>	32	3075
5000	5000	4100	3565	2 1/2	2	4	123	140 <sup>1</sup> / <sub>2</sub>	24 <sup>1</sup> / <sub>2</sub>	34	3500

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 55lbs. for sizes 500-1825. 4. For other boiler ratings:

Boiler Horsepower:  $HP = \frac{Output}{33,475}$  Radiation Surface:  $EDR \text{ sq. ft.} = \frac{Output}{150}$  IBR sq. ft. =  $\frac{Net \text{ IBR Rating}}{150}$

5. When two gas connection sizes are shown, the smaller applies to the standard gas train, while the larger applies to optional trains, such as four stage or motorized gas valves. Consult factory for exact specifications.  
\*Model PH (500-1825) only.

**Rate of  
Flow and  
Pressure  
Drop**

Size	Design Temperature Rise Across Boiler							
	20°F		25°F		30°F		35°F	
	Hd. Loss		Hd. Loss		Hd. Loss		Hd. Loss	
	GPM	Ft	GPM	Ft	GPM	Ft	GPM	Ft
500	38	1.4	31	1.1	26	0.9	22	0.6
600	47	1.8	37	1.4	31	1.2	27	0.8
715	56	2.5	45	1.9	37	1.5	32	1
850	66	3.4	53	2.5	44	2	38	1.4
1010	79	4.7	63	3.4	53	2.7	45	1.9
1200	94	6.5	75	4.8	62	3.7	53	2.6
1430	112	8.9	89	6.5	74	5	64	3.5
1670	*	*	102	8.8	85	6.7	73	4.7
1825	*	*	114	10	95	8	81	5.5
2000-1P	164	3.9	131	2.3	109	1.5	94	1
2P	164	10.5	131	7.4	109	4.9	94	3
2450-1P	201	5.9	161	4.2	134	3.3	115	2.6
2P	201	16.4	161	10.2	134	7.7	115	5.7
3050-1P	250	9.3	200	6.2	167	4.5	143	3.8
2P	*	*	200	16.4	167	11.7	143	8.5
3500-1P	284	12	230	8.3	189	5.7	164	4.8
2P	*	*	*	*	189	15.8	164	11.3
4050-1P	332	17.2	266	11.6	222	8.1	190	5.8
2P	*	*	*	*	222	24	190	16
4500-1P	369	21.8	295	13.2	246	9.4	211	7
2P	*	*	*	*	*	*	211	20
5000-1P	410	27	328	17.2	273	12.2	234	9
2P	*	*	*	*	*	*	*	*

\*Not recommended. Consult factory.

**NOTES:** Sizes 2200 to 4500; 1P designates single-pass heat exchanger, 2P designates two-pass heat exchanger.

**Motor  
Electrical  
Data**

Sizes	Power (HP)	Voltage/Phase	Current (Amps)
500-850	1/3	115/1	5.4
1010-1200	1/2	115/1	5.8
1430-1825	3/4	115/1	8.8

**Minimum  
Clearances  
from  
Adjacent  
Construction**

Recommended Minimum Clearance From	Sizes 500-1825	Sizes 2000-5000
	inches	inches
Top	30	24
Water Connection Side	12	24
Opposite Side	6	24
Front	Alcove	48
Rear	8	24
Vent	6*	6*

**NOTE:** Sizes 500 to 1825 must be installed on non-combustible floors or with base for combustible floors (Laars optional base A.G.A. design certified). Sizes 2000 to 5000 require installation on non-combustible floors. **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 (refer to manufacturer's instructions).



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