

# **LAARS® MIGHTY THERM<sup>2</sup> POOL**

Economical  
Commercial  
Pool Heaters



**LAARS®**   
**Heating Systems Company**  
A subsidiary of **BRADFORD WHITE** Corporation

# **Mighty Therm<sup>®</sup> 2 Pool**

## **Economical Commercial Pool Heaters**

### **Extremely easy to live with**

For over 65 years, the LAARS brand has stood for quality, reliability, and innovation in heating system design. Mighty Therm2 builds on that tradition with an outstanding line of commercial pool heaters designed for today's most demanding applications. The new line of fan-assisted, modular heaters from LAARS ranks among the industry's most versatile and environmentally friendly systems for exceptional pool heating.

Available in 7 sizes from 500 to 2000 MBH, Mighty Therm2 pool heaters run reliably on natural or LP gas and deliver thermal efficiency levels of 87%. The systems are also among the "greenest" in the industry with NO<sub>x</sub> emissions below 10 ppm. The Mighty Therm2 has been specifically designed to meet the needs of the replacement market by offering simple and straightforward controls. Mighty Therm2 pool heaters feature convenient, modular construction that separates the burner trays, gas train, and blower assembly. All models use lightweight insulation, and non-ferrous waterways. The 10-tube heat exchanger design uses finned tubing for the quickest and most efficient heat transfer on the market. Units are available with copper or cupronickel heat exchanger tubing for use in various conditions, and include factory-mounted pumps sized for the heat exchanger and 30 feet of piping.

With superior overall construction and high-efficiency combustion, Mighty Therm2 can cut fuel costs significantly compared to conventional pool heaters, and the savings can amount to thousands of dollars over the life of the equipment.

### **Features:**

- 87% Thermal efficiency
- NO<sub>x</sub> below 10 ppm
- Indoor/Outdoor construction
- Immune to thermal shock down to 30°F
- Operates in altitudes up to 10,000 feet
- Ambient temperatures from -40°F to +140°F
- Waterways able to operate in a maximum water hardness of 17 gpg
- Gas and water supply right or left side (field convertible)
- Factory-mounted pump sized for heat exchanger, 30 feet of pipe and 3 elbows total pressure drop
- Fan-assisted combustion system
- 120vac, 60 Hz single phase power

### **Durable construction**

- Modular construction: burner trays, gas train, blower assembly
- Thermostatic mixing valve
- Heat exchanger uses efficient 10 finned-tube design
- Lightweight insulation
- Compliant end-walls to accommodate thermal expansion
- Non-ferrous waterways
- Backed by LAARS 5 year limited warranty and superior customer service

### **Flexible venting**

- Category III (horizontal) venting, up to 50 feet with 3 elbows, without additional fans
- Fan-assisted category I venting with standard B-vent
- Combustion air can be taken from room, or ducted to the unit from the outside

### **Easy maintenance**

- Heat exchanger is removable from top, back or front
- Washable air filter
- Wiring terminal strip makes electrical troubleshooting easy
- Easy access to ignitor via special service panel
- Easy-to-service burner assembly
- The Mighty Therm2 is the perfect choice for your commercial pool heating needs such as hotels, schools, universities, theme parks and municipalities.



## Mighty Therm2 Pool Heater Sizing Data

Size	Input BTU/Hr.	Input kW	Output BTU/Hr.	Output kW	Thermal Efficiency %	Gas Conn. Sizes inches	Pool Heater Water Conn. Size inches	Mixing System Water Conn. Size inches	Approx. Shipping Weight* lbs. kg
500	500,000	147	435,000	127	87	1¼	2	2	495 225
750	750,000	220	652,500	191	87	1¼	2	2	575 261
1000	999,000	293	869,130	254	87	1¼	2½	2	685 311
1250	1,250,000	366	1,087,500	318	87	2	2½	2	730 331
1500	1,500,000	440	1,305,000	382	87	2	2½	2	830 377
1750	1,750,000	513	1,522,500	446	87	2	2½	2	880 400
2000	1,999,000	586	1,739,130	509	87	2	2½	2	1025 465

**NOTE:** 1. Input and output must be derated 4% per 1000 feet above sea level when installed above 2000 feet altitude.  
2. Dimensions are nominal.

### FOR INDOOR POOLS

The selection charts to the right will assist in choosing the correct size Mighty Therm2 for an indoor pool. First, calculate the surface area of the pool in square feet. Second, refer to the selection chart. Third, find the closest square footage in the 10°F (6°C) Temperature Difference column, and the heater model which corresponds to it. For normal conditions, Laars recommends using the 10°F (6°C) Temperature Difference columns; this will provide a temperature increase of approximately 6°F (3°C) per 24 hour period.

### FOR OUTDOOR POOLS

The selection charts to the right will assist in choosing the correct size Mighty Therm2 for an outdoor pool. First, determine the difference between the desired pool temperature and the average air temperature during the coldest month in which the pool will be used (referred to in the chart to the right as "Temperature Difference"). Second, calculate the surface area of the pool. Third, refer to the selection chart. Listed are the maximum pool surface areas for each heater model with typical temperature differences. Make the appropriate selection from the chart.

### Temperature Difference

	10°F	15°F	20°F	25°F	30°F	35°F	40°F	45°F	50°F
<b>MT2P Surface Area of Pool</b>									
Model	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.
500	4090	2720	2040	1630	1360	1170	1020	910	810
750	6130	4090	3060	2450	2040	1750	1530	1360	1220
1000	8180	5450	4090	3270	2720	2340	2040	1820	1630
1250	10230	6820	5110	4090	3410	2920	2550	2280	2040
1500	12270	8180	6130	4910	4090	3510	3060	2730	2450
1750	14320	9540	7160	5720	4770	4090	3580	3190	2860
2000	16370	10910	8180	6540	5450	4680	4090	3650	3270

### Temperature Difference

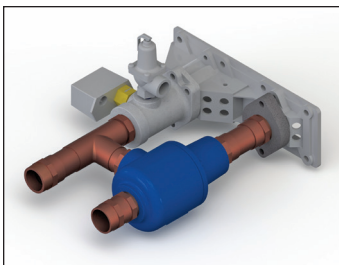
	6°C	8°C	11°C	14°C	17°C	19°C	22°C	25°C	28°C
<b>MT2P Surface Area of Pool</b>									
Model	sq. m.	sq. m.	sq. m.	sq. m.	sq. m.	sq. m.	sq. m.	sq. m.	sq. m.
500	370	250	180	150	120	100	90	80	70
750	560	370	280	220	180	160	140	120	110
1000	750	500	370	300	250	210	180	160	150
1250	950	630	470	370	310	270	230	210	180
1500	1130	750	560	450	370	320	280	250	220
1750	1330	880	660	530	440	370	330	290	260
2000	1520	1010	750	600	500	430	370	330	300

### Clearences

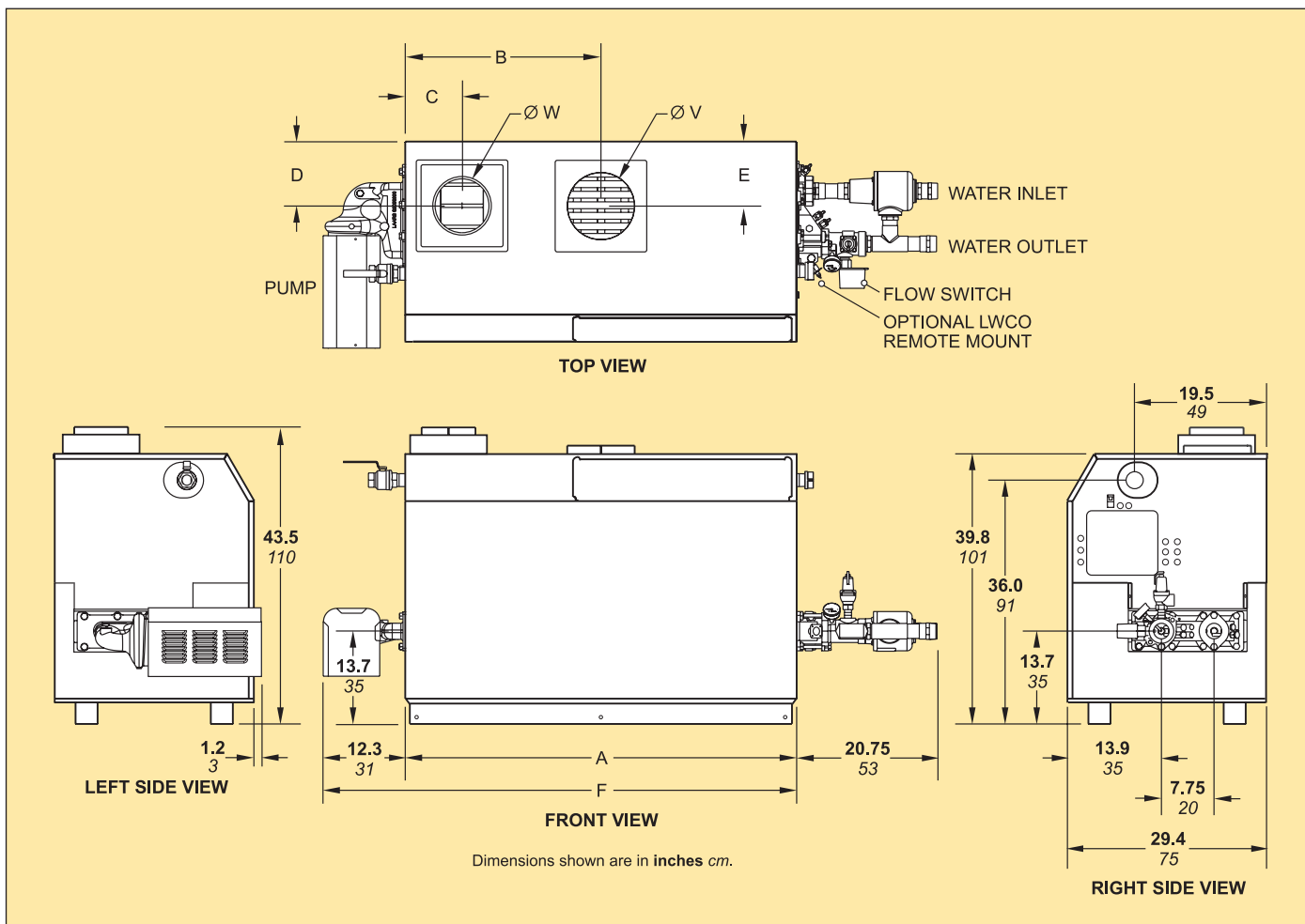
Appliance Surface	Clearance From Combustible materials	Service Access Clearance
Right Side	1" 2.5 cm	24" 61 cm
Left Side	1" 2.5 cm	24" 61 cm
Front	1" 2.5 cm	36" 91 cm

Appliance Surface	Clearance From Combustible materials	Service Access Clearance
Top	1" 2.5 cm	12" 30 cm
Back*	1" 2.5 cm	12" 30 cm
Vent	Per venting system supplier's instructions	

\*When vent and/or air is connected to the back, 36" (91 cm) is suggested.



Every Mighty Therm2 pool heater comes standard with a built-in automatic mixing system to make sure low return water temperatures won't cause problematic condensation. The LAARS mixing system includes a 3-way thermostatic mixing valve and a factory mounted and wired pump, allowing the Mighty Therm2 to handle return water temperatures as low as 60 degrees without the problem of condensation.



## Dimensions

Size	A		B		C		D		E		F		Air Conn. W		Vent Conn. V	
500	33 <sup>3</sup> / <sub>4</sub>	85	16 <sup>3</sup> / <sub>4</sub>	43	6 <sup>1</sup> / <sub>2</sub>	17	10	25	8	20	46 <sup>1</sup> / <sub>4</sub>	117	6	15	8	20
750	45 <sup>3</sup> / <sub>4</sub>	116	22 <sup>3</sup> / <sub>4</sub>	53	6 <sup>1</sup> / <sub>2</sub>	17	10	25	9 <sup>1</sup> / <sub>2</sub>	24	58 <sup>1</sup> / <sub>4</sub>	148	8	20	10	25
1000	57 <sup>3</sup> / <sub>4</sub>	147	28 <sup>3</sup> / <sub>4</sub>	73	6 <sup>1</sup> / <sub>2</sub>	17	10	25	9 <sup>1</sup> / <sub>2</sub>	24	70 <sup>1</sup> / <sub>4</sub>	178	8	20	10	25
1250	68 <sup>1</sup> / <sub>4</sub>	173	34	87	10 <sup>1</sup> / <sub>4</sub>	26	10	25	9	23	80 <sup>3</sup> / <sub>4</sub>	205	12	30	12	30
1500	78 <sup>3</sup> / <sub>4</sub>	200	39 <sup>1</sup> / <sub>2</sub>	100	10 <sup>1</sup> / <sub>4</sub>	26	10	25	9	23	91 <sup>1</sup> / <sub>4</sub>	232	12	30	12	30
1750	89 <sup>1</sup> / <sub>4</sub>	227	44 <sup>3</sup> / <sub>4</sub>	113	10 <sup>1</sup> / <sub>4</sub>	26	10	25	9	23	101 <sup>3</sup> / <sub>4</sub>	258	12	30	14	36
2000	99 <sup>3</sup> / <sub>4</sub>	253	49 <sup>3</sup> / <sub>4</sub>	127	10 <sup>1</sup> / <sub>4</sub>	26	10	25	9	23	112 <sup>1</sup> / <sub>4</sub>	285	12	30	14	36

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