Pentair Water
Commercial Pool and Spa™

PowerMax™

High Performance Commercial Pool Heaters

When performance is critical, the new PowerMax™ heater provides peak efficiency and easy maintenance in both indoor and outdoor applications. Models from 500-2000 MBTU with 85% efficiency for commercial swimming pool and theme park applications.

Today's PowerMax is the result of over 50 years of design and manufacturing experience, and is packed with advanced features specific to the commercial swimming pool and water theme park market.

Available in seven sizes from 500 to 2000 MBTU/h, PowerMax runs reliably on natural or LP gas and delivers efficiency levels up to 85%.

A 10-tube heat exchanger uses finned tubing for the quickest and most efficient heat transfer, and the water heater meets the ASHRAE® 90.1 standard for efficiency for use with storage tanks. With superior overall construction and high-efficiency combustion, PowerMax can cut fuel costs significantly compared to conventional water heating systems, and the savings can amount to thousands of dollars over the life of the equipment.

Standard Features

- Reliable operation with natural or propane gas.
- Fan-assisted and filtered combustion air.
- Dual ignition systems for all models over 750,000 BTU.
- 2-stage, 3-stage, and 4-stage firing.
- Immune to thermal shock down to 30° F.
- Built-in automatic mixing system reduces condensation possibilities.
- Compact size allows PowerMax to fit through standard doorways.
- 200/208 and 575 volt models available on request.
- Meets Low NOx requirements for cleaner combustion.
- One-year limited warranty. See warranty for details.

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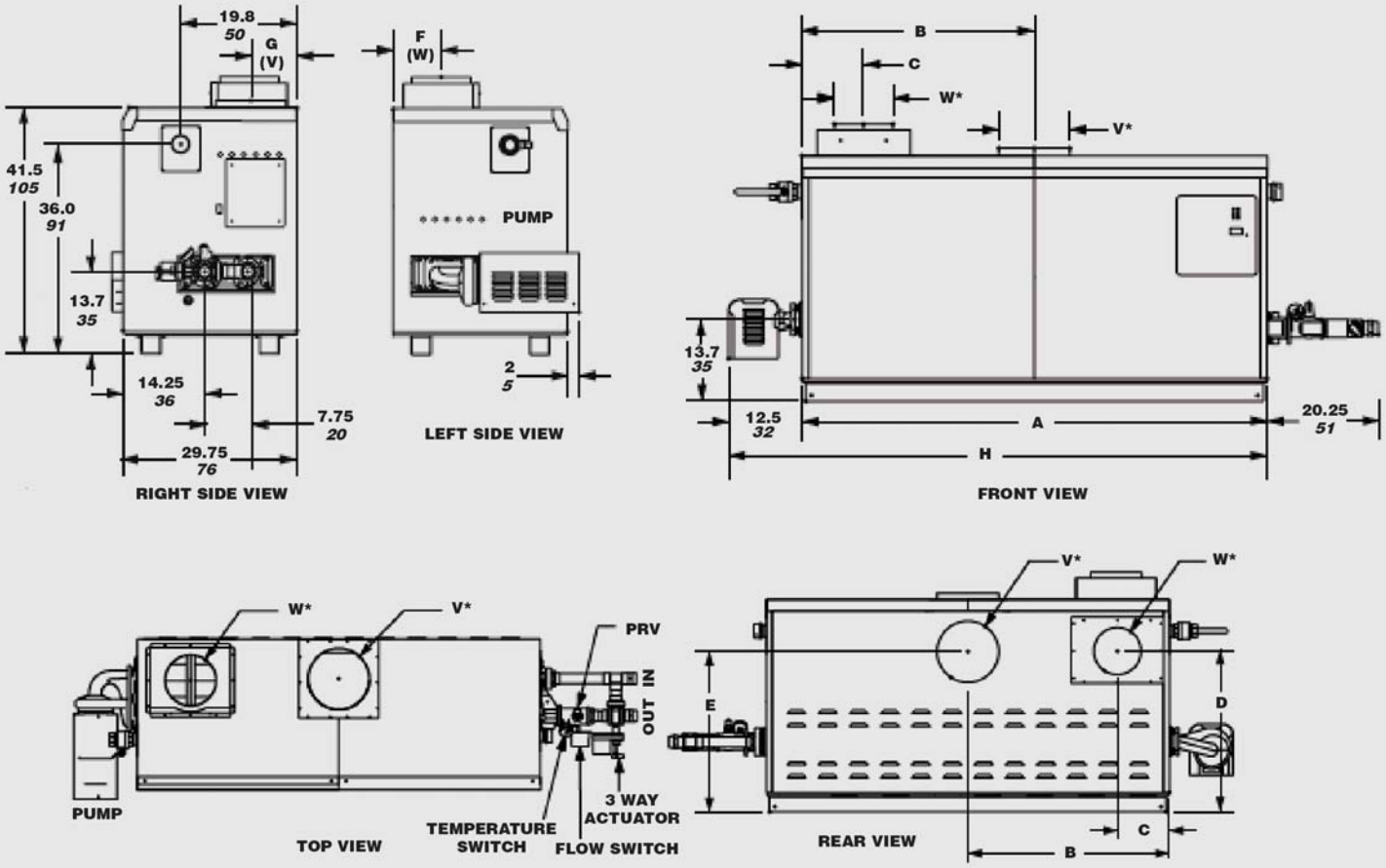
DIMENSIONAL AND SIZING DATA



Dimensional Data Dimensons shown in inches, *cm*.

Size (000's)	A		B		C		D		E		F		G		H		Air Conn. W*		Vent Conn. V*		Horiz. Vent Pipe	
500	33½	*85*	15¾	*40*	5¾	*15*	29¾	*76*	32¾	*83*	7¾	*20*	8¾	*22*	46	*117*	6	*15*	6	*15*	6	*15*
750	45½	*116*	21¾	*55*	5¾	*15*	29¾	*76*	32¾	*83*	7¾	*20*	8¾	*22*	58	*147*	6	*15*	8	*20*	6	*15*
1000	57½	*146*	28¾	*73*	5¾	*15*	29¾	*76*	32¾	*83*	7¾	*20*	7	*18*	70	*178*	8	*20*	10	*25*	8	*20*
1250	68	*172*	34	*86*	10¼	*26*	30¾	*78*	29½	*75*	8¾	*22*	8¾	*22*	80	*203*	8	*20*	12	*30*	8	*20*
1500	78½	*199*	39¾	*101*	10¼	*26*	30¾	*78*	29½	*75*	8¾	*22*	8¾	*22*	91	*231*	8	*20*	12	*30*	8	*20*
1750	89	*226*	44½	*113*	10¼	*26*	30¾	*78*	29½	*75*	8¾	*22*	8¾	*22*	101	*256*	8	*20*	14	*36*	8	*20*
2000	99½	*253*	49¾	*126*	10¼	*26*	30¾	*78*	29½	*75*	8¾	*22*	8¾	*22*	112	*284*	12	*30*	14	*36*	12	*30*

*Air and vent connections may be on top or back of the PowerMax, and are field convertible.

Sizing Data

Indoor Model	Input BTU/h x1000	Output[1] BTU/h x1000	Gas Conn. Size inches[2]	Heater Water Conn. Size inches[2]	Mixing System Water Conn. Size inches[2]	Shipping Weight lbs.	*kg*
500	500	425	1¼	2	2	495	*225*
750	750	638	1¼	2	2	575	*261*
1000	999	849	1½	2½	2	685	*311*
1250	1250	1063	2	2½	2	730	*331*
1500	1500	1275	2	2½	2	830	*377*
1750	1750	1488	2	2½	2	880	*400*
2000	1999	1699	2	2½	2	1025	*465*

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

For Indoor Pools

1. Calculate the surface area of the pool in square feet.
2. Refer to the selection chart.
3. 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, Pentair 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

1. 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 below as "Temperature Difference").
2. Calculate the surface area of the pool.
3. 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	*6° C*	15° F	*8° C*	20° F	*11° C*	25° F	*14° C*	30° F	*17° C*	35° F	*19° C*	40° F	*22° C*	45° F	*25° C*	50° F	*28° C*
	Surface Area of Pool																	
Model	Sq. Ft.	*Sq. M.*	Sq. Ft.	*Sq. M.*	Sq. Ft.	*Sq. M.*	Sq. Ft.	*Sq. M.*	Sq. Ft.	*Sq. M.*	Sq. Ft.	*Sq. M.*	Sq. Ft.	*Sq. M.*	Sq. Ft.	*Sq. M.*	Sq. Ft.	*Sq. M.*
500	4090	370	2720	250	2040	180	1630	150	1360	120	1170	100	1020	90	910	80	810	70
750	6130	560	4090	370	3060	280	2450	220	2040	180	1750	160	1530	140	1360	120	1220	110
1000	8180	750	5450	500	4090	370	3270	300	2720	250	2340	210	2040	180	1820	160	1630	150
1250	10230	950	6820	630	5110	470	4090	370	3410	310	2920	270	2550	230	2280	210	2040	180
1500	12270	1130	8180	750	6130	560	4910	450	4090	370	3510	320	3060	280	2730	250	2450	220
1750	14320	1330	9540	880	7160	660	5720	530	4770	440	4090	370	3580	330	3190	290	2860	260
2000	16370	1520	10910	1010	8180	750	6540	600	5450	500	4680	430	4090	370	3650	330	3270	300

Clearances

Appliance Surface	Clearance from Combustible Material	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 Material	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.

Part Numbers	Descriptions
PM0500NACC2BXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu HX
PM0750NACC2BXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu HX
PM1000NACC2BXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu HX
PM1250NACC2BXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu HX
PM1500NACC2BXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu HX
PM1750NACC2BXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu HX
PM2000NACC2BXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu HX
PM0500NACC2PXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu-Ni HX
PM0750NACC2PXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu-Ni HX
PM1000NACC2PXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu-Ni HX
PM1250NACC2PXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu-Ni HX
PM1500NACC2PXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu-Ni HX
PM1750NACC2PXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu-Ni HX
PM2000NACC2PXN	Indoor/Outdoor, w/ pump, Cat. I-III, with elec. By-pass, Cl-Cu-Ni HX

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Packed with Advanced Features

Every PowerMax™ comes standard with a built-in automatic mixing system to make sure low return water temperatures won't cause problematic condensation in the heat exchanger. The mixing system includes an automatic three-way valve, fast-acting electronic actuator, factory mounted and wired pump, and a simple operating control that monitors all important system functions. That means PowerMax can handle return water temperatures as low as 60 degrees without condensation. And, every PowerMax has a standard "Backwash Switch" that allows you to safely backwash the filter and avoid high-limit shut-downs by allowing the pump time delay to complete its cycle before shutting down the heater. NOx emissions are among the lowest in the industry at 10 ppm, and PowerMax maintains its efficiency and low NOx levels at all stages of firing.

Easy to Install and Service

PowerMax makes service easy and operation reliable because we do all of the set-up for you. Whether you use room air for combustion or take air from outside; vent into a chimney, or through a sidewall; or install the heater indoors or outside, PowerMax is ready "out of the box". The automatic bypass and combustion systems are factory preset, and no field adjustments are required. Whether you are installing at sea level or at a 10,000 ft. elevation, no orifice or component changes are needed.

We've also taken service access to a new level. PowerMax makes installation easier by providing a control system that gives installers several different operation modes, selected with the touch of a button. Modes include settings for primary/secondary piping, DHW storage tank systems, B.A.S. controls and other common applications.

PowerMax features convenient, modular construction that separates the burner trays, gas train, and blower assembly, to ensure perfect alignment of orifices and burners. Gas manifolds mount on the burner flange, and the burner flanges seal to the air box. In addition, the entire gas train can be easily removed, and the heat exchanger simply lifts out from the top or front of the unit. The air filter is a breeze to clean…just wash it with soap and water.

Controls are also service-friendly with clean and simple wiring, and are readily accessible in a slide-out drawer. All models have a convenient front-access panel with status indicator lights to monitor power, call for heat, pump on, ignition on, gas valve open, and lock out.

Installation and Service Convenience Features

- Reversible vent and intake air terminals (field convertible).
- Gas supply right or left side (field convertible).
- Reversible water connections to accommodate left or right side piping.
- Separate field wiring terminal panel.
- Front panel diagnostics.
- Optional rack-mounting.
- Quick-access panel for igniter replacement.
- Combustion chamber sight glasses on both right and left sides.

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6/06 Part #PI-354