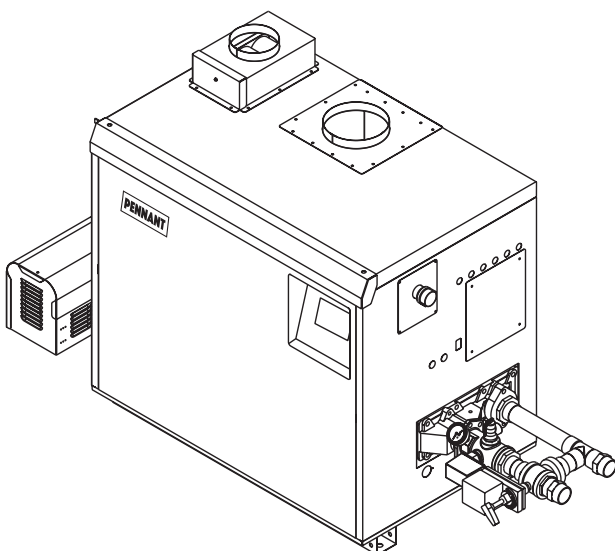


PENNANT®



Pump-Mounted Pool Heater

PNCP | Pump Mounted Pool Heater

Indoor/Outdoor Sizes 500-2000



Submittal Data

Date:

Project #:

Engineer:

Prepared By:

Bid Date:

Project Name:

Location:

Contractor:

Standard Equipment

- ASME 160 psi working pressure heat exchanger
- ASME "H" stamp
- Electronic firing & ignition control with LCD touchscreen
- Adjustable heater and pool system pump time delays
- BACnet MSTP and Modbus (optional BACnet IP, Metasys, or LonWorks)
- Accepts external 0-10VDC or 4-20mA for remote control of temperature or stages
- Displays messages in clear text form
- Complete diagnostics for analog and digital inputs
- Password protected parameters
- Quick start configuration
- Hot surface ignition
- 24V control system
- On/off toggle switch
- 115/24VAC transformer
- Sensors on pool supply, pool return, heater inlet, and heater outlet
- Manual reset heater high limit
- Automatic reset heater high limit
- Automatic reset pool loop high limit
- Dry run and alarm contacts
- Anti-frost mode
- Anti-short-cycle mode
- Pump, mounted and wired
- Anti-Condensing mixing system
- Flanged water connections
- Glass-lined headers
- External header gaskets
- 75 psi (517kPa) ASME rated pressure relief valve
- Water flow switch
- Temperature/pressure gauge
- Multiple operating gas valve/pressure regulators
- Manual "A" gas valve
- Multiple removable burner trays
- Stainless steel burners
- Built-in draft fan for Category I or III vent systems
- Intake air filter
- Air pressure switch
- Burner site glass

Boiler Data

Number of Units:

Fuel

- ☐ Natural
☐ Propane

Heat Exchanger








- ☐ Copper
☐ Cupro-Nickel
☐ Copper, Reversed
☐ Cupro-Nickel, Reversed








Options

- ☐ CSD-1 (LWCO not incl.)
☐ Low water cutoff
☐ Alternate display orientation for top unit in stacked system







Sizing Data

	Size	Input ¹ BTU/H	Output ¹ BTU/H	Gas Conn. Size inches ²	Heater Water Conn. Size inches ²	Mixing System Water Conn. Size inches ²	Shipping Weight	
							lbs	kg
	500	500,000	425,000	1¼	2	2	775	352
	750	750,000	638,000	1¼	2	2	870	395
	1000	999,000	849,000	1½	2½	2	1035	469
	1250	1,250,000	1,062,500	2	2½	2	1130	513
	1500	1,500,000	1,275,000	2	2½	2	1285	583
	1750	1,750,000	1,487,500	2	2½	2	1380	626
	2000	1,999,000	1,699,000	2	2½	2	1510	685

	Size	Input ¹ kW	Output ¹ kW
	500	147	125
	750	220	187
	1000	293	249
	1250	366	312
	1500	440	374
	1750	513	436
	2000	586	498

- 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. Shipping weight is approximate, based on previous units shipped and can be affected by several variables including the various weights for optional pumps and even the green or dry wood used in the crate.

Accessories

-  Side-wall vent terminal for indoor unit with horizontal venting
  Side-wall combustion air terminal for indoor unit with horizontal ducted air
  Vent terminal for outdoor unit
  Air terminal for outdoor unit

Clearances

Appliance Surface	Required Clearance From Combustible Material		Suggested Service Access Clearances	
Left Side	1	2.5	24	61
Right Side	1	2.5	24	61
Top	1	2.5	12	30
Back*	1	2.5	12	30
Front	1	2.5	36	91
Vent	Per venting system supplier's instructions			

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

Electrical Data

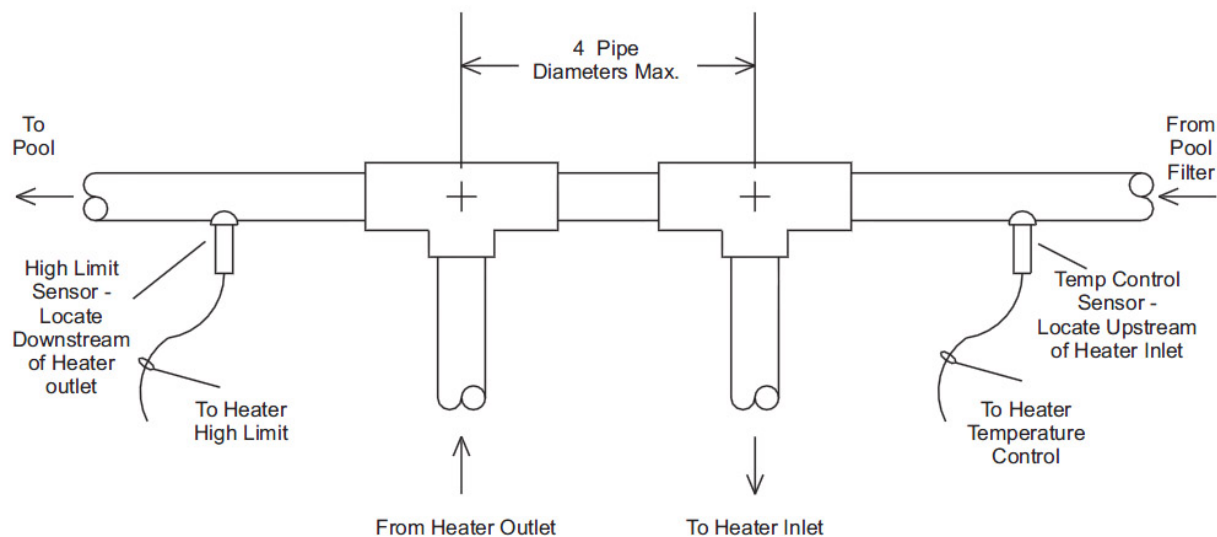
Model	Boiler / Heater			Pump			Blower(s)
	Volts	Phase	Amps	Volts	Phase	Amps	
PNCH, PNCV Pump mounted 500-1000	115	Single	Less than 12	Included in Pennant connection			Included in Pennant connection
PNCH, PNCV Pump mounted 1250-2000	115	Single	Less than 12	115	Single	Less than 12	Included in Pennant connection

Pump Data

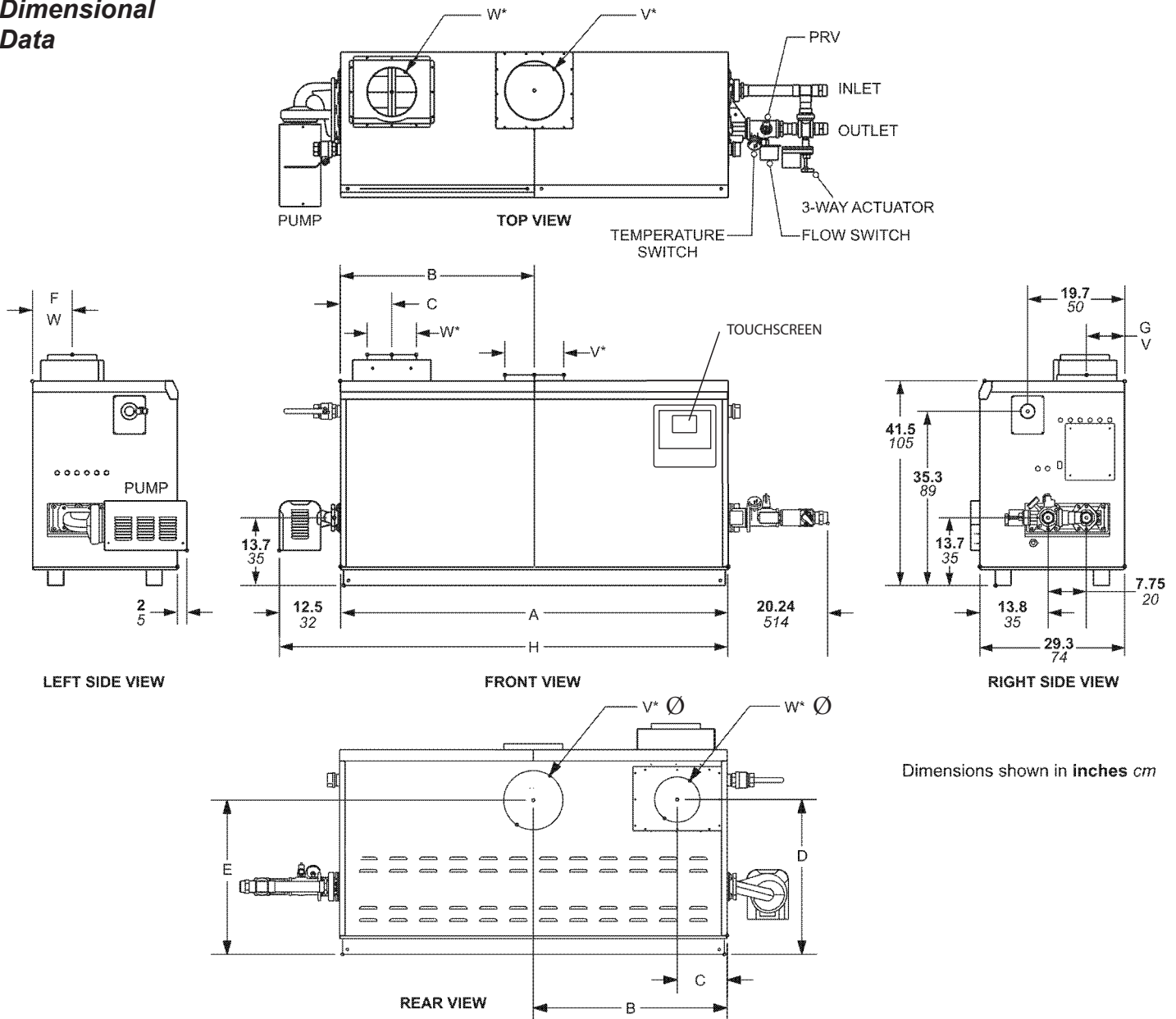
Sizes	Power (HP)	Current (Amps)
500	1/3	2.8
750	1/3	2.8
1000	1/2	5.2
1250	1/2	5.2
1500	3/4	7.2
1750	1	9.8
2000	1	9.8

Piping and Sensor Location

The Pennant Pool Heater is shipped with a field-installed mixing system, and must be piped in primary-secondary style, as shown. A remote pool temperature sensor and remote pool temperature high limit are wired to the Pennant, to be mounted in the pool water loop, as shown.



Dimensional Data



Size	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	33¾	86	7¾	20	8¾	22	46	117	6	15	8	20	6	15
750	45½	116	21¾	55	5¾	15	29¾	76	33¾	86	7¾	20	8¾	22	58	147	8	20	10	25	8	20
1000	57½	146	28¾	73	5¾	15	29¾	76	33¾	86	7¾	20	7	18	70	178	8	20	10	25	8	20
1250	68	172	34	86	10⅞	26	30¾	78	31⅞	79	8¾	22	8¾	22	80	203	12	30	12	30	10	25
1500	78½	199	39¾	101	10⅞	26	30¾	78	31⅞	79	8¾	22	8¾	22	91	231	12	30	12	30	10	25
1750	89	226	44½	113	10⅞	26	30¾	78	31⅞	79	8¾	22	8¾	22	101	256	12	30	14	36	12	30
2000	99½	253	49¾	126	10⅞	26	30¾	78	31⅞	79	8¾	22	8¾	22	112	284	12	30	14	36	12	30

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

Dimensions in inches cm