

PENNANT CP

Low Temp Boiler

for Heat Pump

Systems



The Pennant CP Boiler

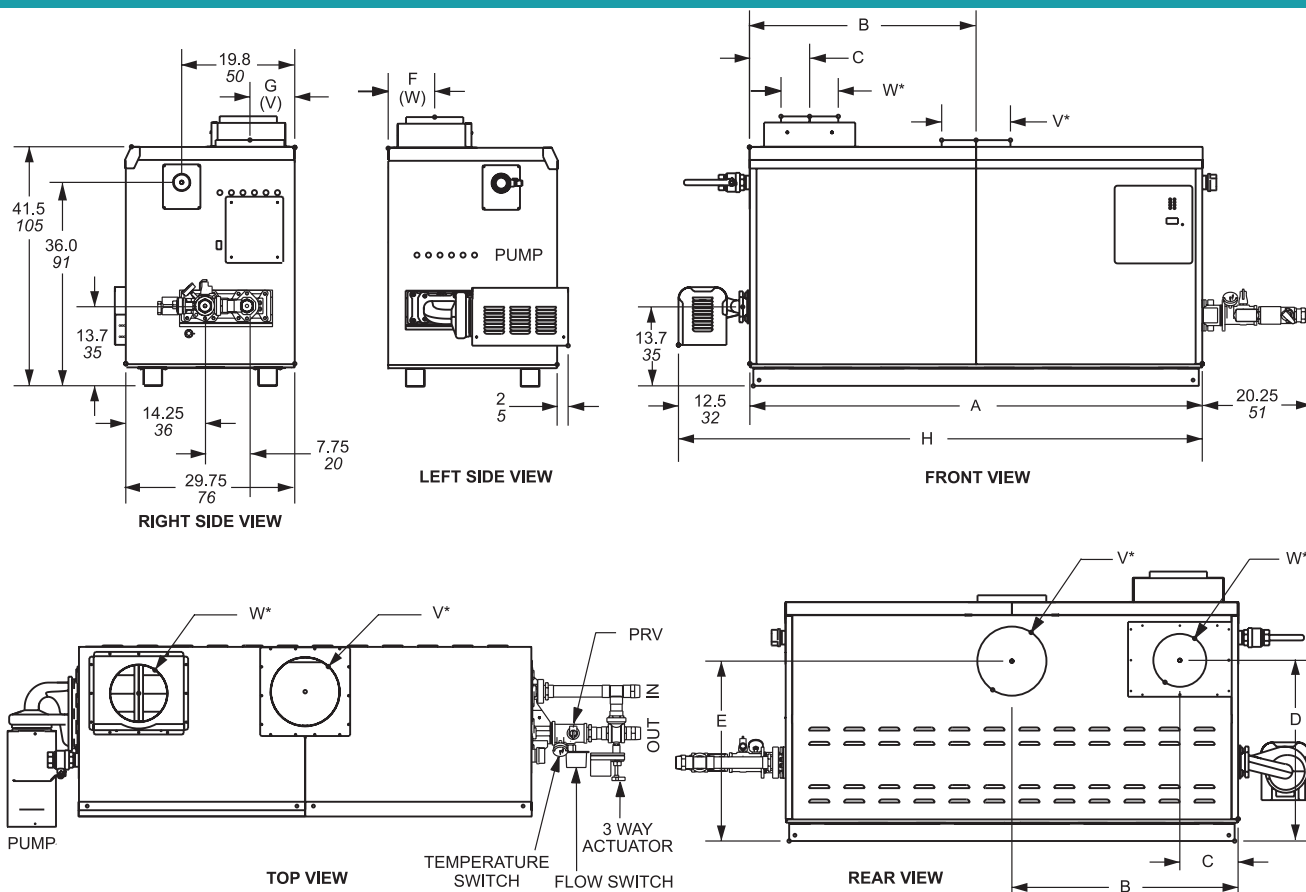
The Problem:

When copper fin tube boilers operate with low return water temperatures, condensation can develop on the boiler heat exchanger. This condensation due to low inlet temperature is very destructive and will greatly shorten the boiler life. In the past, external by-pass piping, balancing valves, and careful water balancing were required to raise the internal temperature of the boiler water above the dew point to control condensation. Careful manual water balancing was required on start-up to protect the boiler from low return water temperature, and sometimes this procedure had to be repeated frequently as conditions changed within the system.

The Solution:

A factory mounted three-way valve and an automatic by-pass system working in concert with the boiler operating control maintains an internal temperature of 120°F. Boiler operation is automatically maintained above the dew point to prevent condensation and insure a long boiler life, even when there are rapid swings in the return water temperature from the system. This “plug and play” boiler can handle return water temperatures as low as 50°F - making it the perfect heat pump boiler for your system.

Dimensional and Sizing Data



Dimensional Data

Dimensions shown in inches, cm.

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	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 Pennant, and are field convertible.

Sizing Data

Indoor Model	Input ¹ 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.



A subsidiary of BRADFORD WHITE Corporation

20 Industrial Way, Rochester, NH 03867 • 603.335.6300 • Fax 603.335.3355
1355 Kuehner Drive, Simi Valley, CA 93063 • 800.900.9276 • Fax 800.559.1583 (Sales, Service)
480 S. Service Rd. West, Oakville, Ontario, Canada L6K 2H4 • 905.844.8233 • Fax 905.844.2635

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