Slant/Fin®

CARAVAN®

BP-B SERIES

COMPACT DOMESTIC HOT WATER HEAT EXCHANGERS

BRAZED PLATE DESIGN REDUCES COST, IMPROVES PERFORMANCE

- Compact and reliable
- Specifically designed for compatibility with Caravan modular boilers
- Typical applications: apartments, industrial buildings, schools, hotels, restaurants
- For instantaneous hot water or circulation to a storage tank
- Up to 1232 gallons per hour 450 psig working pressure
- A fraction of the size and cost of shell and tube heat exchangers or separately fired water heaters

With Slant/Fin's new BP domestic hot water heat exchangers installed in your Caravan modular boiler system, you can provide abundant hot water to your building with greater economy and reliability.

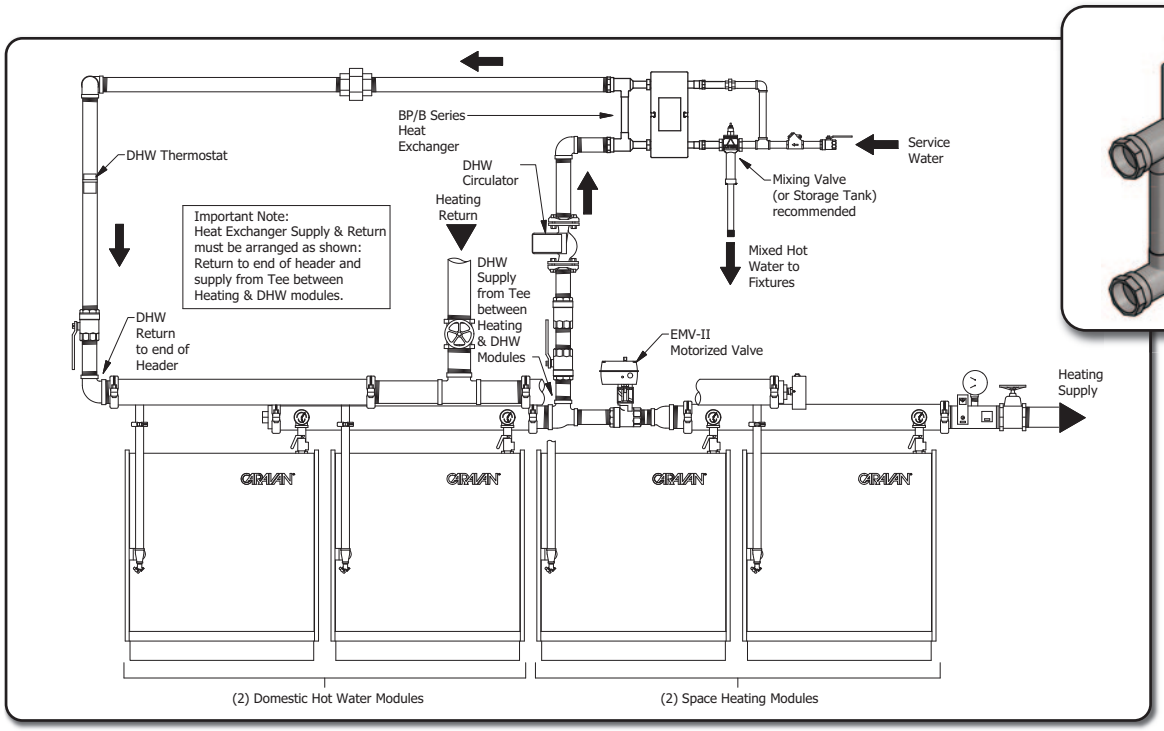
Utilizing the remarkable heat transfer properties of brazed plate technology, the BP heater provides clear advantages over other methods of generating domestic hot water.

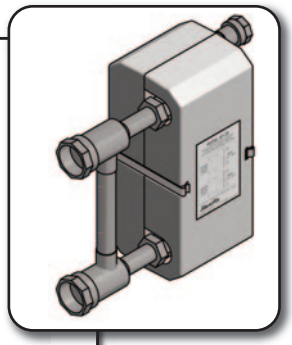
Lower installed cost

You'll save in both materials and labor when you choose a Caravan BP heat exchanger for your domestic hot water. Equipment cost is about half that of alternate methods. Labor cost is lower too, because the BP can easily be installed by one person. More cumbersome shell and tube units, as well as independently fired water heaters, require at least two installers because of their bulk and weight. Piping from the boiler to the BP heat exchanger is easy-to-install 1½ or 2-inch copper. Because pressure drop is lower, a substantially smaller pump can be used. The compact size and light weight of the BP can be supported by its own piping system. A shell and tube heater of equivalent capacity is many times the weight, requires heavy–duty threaded steel pipe and substantial structural supports.

Less space required

The BP fits into just about any equipment room layout. It's easily located just above or behind the boiler modules, regardless of ceiling or side wall clearance. For comparison, shell and tube heaters typically require 8 to 12 feet for the length of the unit plus room to pull the tubes for servicing, while the BP is less than a foot wide.



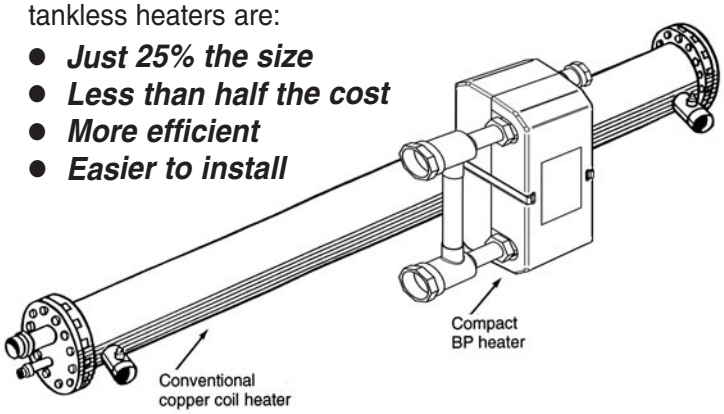


Typical Caravan modular boiler system with two modules for domestic hot water

Compare Caravan BP units to copper coil external heaters...

Caravan BP compact external tankless heaters are:

- ***Just 25% the size***
- ***Less than half the cost***
- ***More efficient***
- ***Easier to install***



MODELS	GALLONS PER HOUR continuous draw*	DIMENSIONS Inches	BOILER WATER PUMP G.P.M.	D.H.W. PRESSURE DROP	SHIP WEIGHT Lb.
Shell and tube model	280	6x50	33	3.8	150
Caravan BP-1B	**411**	**5x10x15**	**21**	**2.0**	**20**
Shell and tube model	420	6x50	33	3.8	160
Shell and tube model	680	6x50	55	3.8	170
Caravan BP-2B	**821**	**7x11x14**	**41**	**1.6**	**30**
Shell and tube model	840	6x50	55	5.4	180
Shell and tube model	1040	6x75	55	4.7	215
Caravan BP-3B	**1232**	**7x14x14**	**57**	**2.0**	**40**
Shell and tube model	1240	6x75	80	4.7	235

* Based on 200°F boiler water.

Superior performance

Its array of stainless steel plates provides a large heat exchange surface with a very high heat transfer coefficient, allowing the ability to heat large volumes of water in a minimum space.

The BP heat exchanger is designed specifically for compatibility with Caravan modular boilers. The three BP models are each sized to handle the full heating capacity of one, two or three Caravan boiler modules, respectively. The boiler water flow pattern through the heat exchanger is designed to provide a 100° temperature rise for the domestic water, while return water to the boiler is maintained with an approximate 20° temperature drop. Because pressure drop through the BP heat exchanger is only about half that of a shell and tube unit, domestic water pressure from the street to the tap is better maintained by the BP. A heavy layer of foam insulation adds to the BP's efficiency by virtually eliminating standby loss.

Virtually maintenance free... Fewer service calls

Caravan BP heaters are self-cleaning with durable, corrosion resistant, stainless steel construction inside and out. High velocity water flow prevents particulate matter from settling in passageways. The true counter-flow design minimizes the difference between boiler water and DHW temperatures at points of heat transfer, preventing scaling. The BP is built for long life, even under severe conditions. BP's compact size makes access extremely simple should servicing ever be required.

Ratings & Specifications

Heat Exchanger Model	BP-1B		BP-2B		BP-3B	
No. of Modules	1		2		3	
Fuel	Gas	Oil	Gas	Oil	Gas	Oil
Boiler (DOE) output MBH	300	342	600	684	900	1026
DHW pressure drop psi	1.6	2.0	1.3	1.6	1.6	2.0
Max GPH 40˚-140˚F	361	411	720	821	1081	1232
Shipping Weight	20 lbs.		30 lbs.		40 lbs.	
Construction	Polyurathane foam insulated plastic jacket					
Working Pressure	450 psi					

* Based on 200°F boiler water.

Boiler Water Pump & Piping Selection

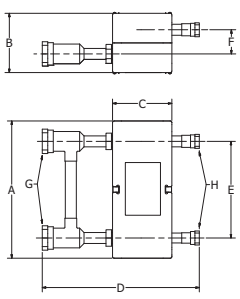
Heat Exchanger Model	BP-1B	BP-2B	BP-3B
Pump volume GPM	21	41	57
Pump volume Feet	5.6	5.1	7.5
Recommended pump	Taco #0010	Taco #0012	Taco #121
Recommended field pipe size	1-1/2"	2"	2"
Max field pipe length EQ Ft	31	39	44

RECOMMENDED CONTROLS

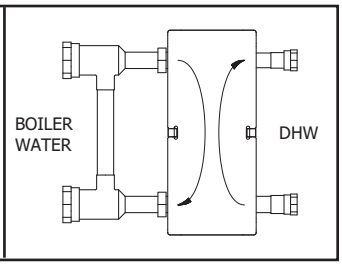
Model Number	Motorized Valve	DHW Thermostat
BP-1B	EMV-II-1½"	L6006A Control
BP-2B	EMV-II-2"	L6006A Control
BP-3B	EMV-II-2"	L6006A Control

Dimensions

	BP-1B	BP-2B	BP-3B
"A"	15-5/8"	15-5/8"	15-5/8"
"B"	6-3/4"	6-3/4"	6-3/4"
"C"	6-3/4"	6-3/4"	8-1/2"
"D"	17-7/8"	18-1/2"	19-3/4"
"E"	11-1/16"	11-1/16"	11-1/16"
"F"	2-7/8"	2-7/8"	2-7/8"
Boiler "G"	1-1/2" FPT	2" FPT	2" FPT
DHW "H"	1" FPT	1-1/4" FPT	1-1/2" FPT



Mount heat exchanger in ANY position. Connect piping for "counterflow" operation as shown by arrows.



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