



Brazed Plate Heat Exchangers

Bell & Gossett Model BPX™ Features

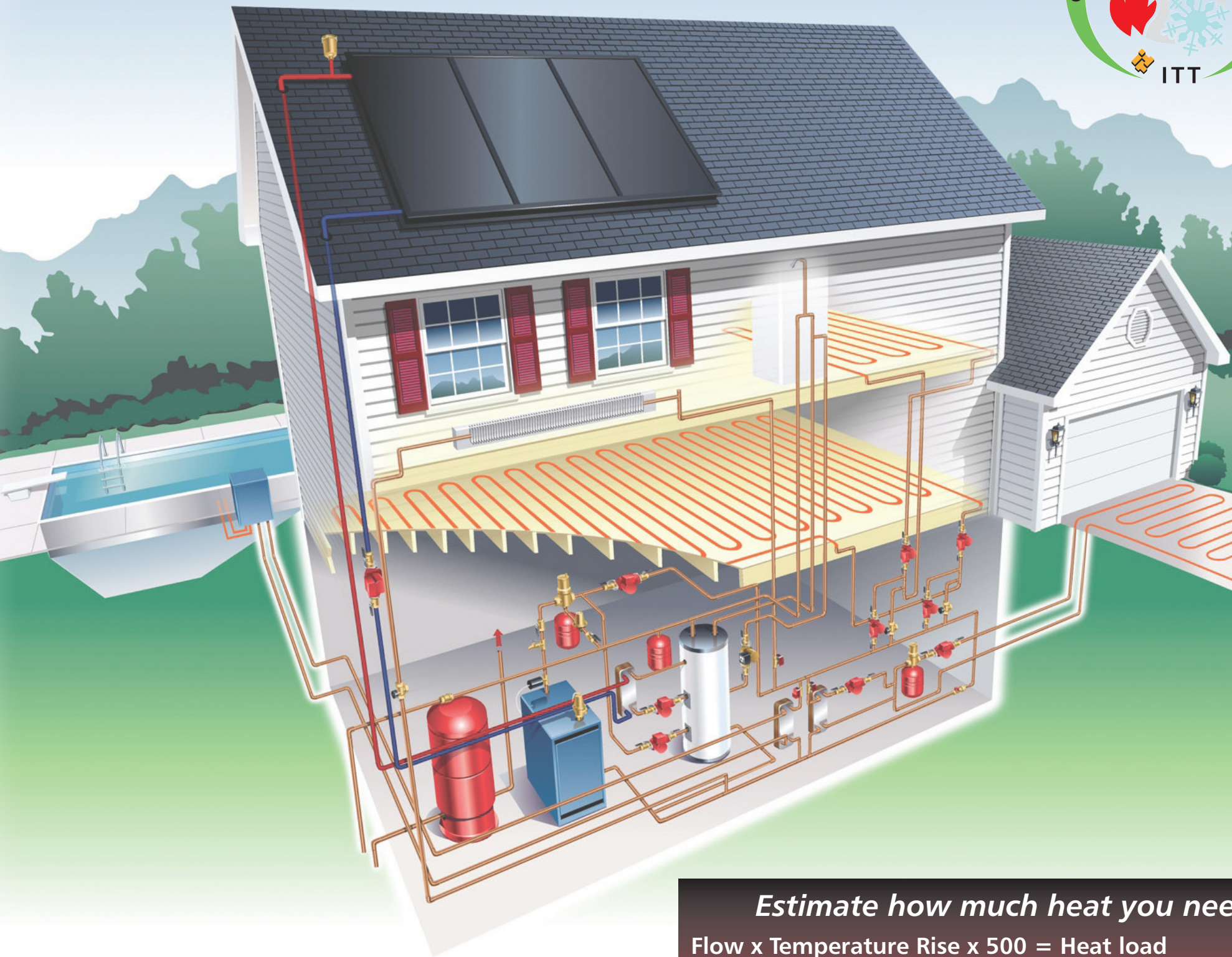
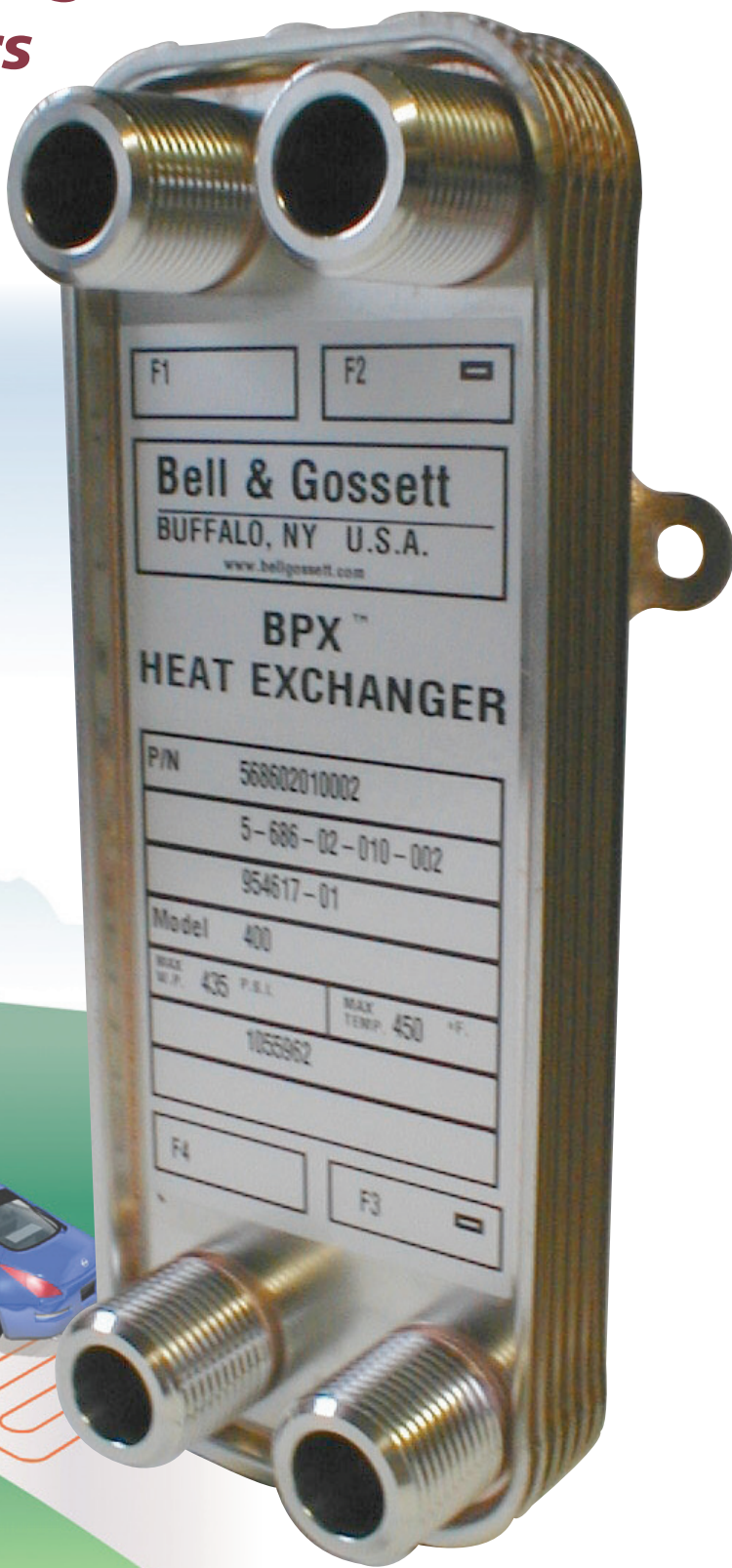
- ✓ Flush Mount Tabs
- ✓ Stock Availability
- ✓ Numerous Connection Options
- ✓ Made in U.S.A.

Meets ASME Code

- ✓ Sec. VIII, Div. 1
- ✓ U1 Stamp available

FOR ENERGY EFFICIENT:

- ✓ Domestic Water Heating
- ✓ Snow Melt Applications
- ✓ Radiant Floor Heating
- ✓ Swimming Pool Heating
- ✓ Outdoor Wood Boilers
- ✓ Solar Heating



Estimate how much heat you need:

Flow x Temperature Rise x 500 = Heat load

Example: (20 GPM) (20° F) (500) = 200,000 BTU/Hr

For a Radiant Heating Application, the choice would be a BP400-40.

For more information visit www.bellgossett.com

Quick Selection Tables

Domestic Water Heating

Boiler Side: Water 180° F supply, 130° F return
Domestic Water Side: Water 50° F supply, 140° F return

Model	Heat Exchanged BTU/Hr	Boiler Side		Domestic Water Side		B&G Pump Selection ¹	Pipe Size ^{1†}
		Flow GPM	Pressure Drop PSI	Flow GPM	Pressure Drop PSI		
BP400-10 (¾" MPT)	60,000	2.5	1.6	1.3	0.3	NBF-9U	¾"
BP400-20 (¾" MPT)	150,000	6.2	2.1	3.3	0.6	NBF-9U	¾"
BP400-30 (¾" MPT)	225,000	9.3	2.2	5.0	0.7	NBF-9U	1"
BP400-40 (¾" MPT)	350,000	14.4	3.4	7.8	1.0	NBF-12	1½"
BP410-30 (1" MPT)	450,000	18.6	6.2	10.0	1.8	NBF-25	1½"
BP410-40 (1" MPT)	600,000	24.8	6.2	13.3	2.0	NBF-25	1½"
BP410-50 (1" MPT)	800,000	33.0	6.9	17.8	2.4	NBF-25	1½"
BP410-60 (1" MPT)	900,000	37.1	6.9	20.0	2.2	NBF-25	2"
BP410-80 (1" MPT)	1,100,000	45.4	6.8	24.4	2.2	NBF-36	2"
BP423-30 (2" MPT)	1,500,000	61.9	4.6	33.3	1.4	NBF-45	2"
BP423-40 (2" MPT)	2,000,000	82.5	4.6	44.4	1.4	PL-45B	2½"
BP423-50 (2" MPT)	2,500,000	103.1	4.8	55.5	1.5	PL-75B	2½"

Larger models are available upon request. † Assumptions: 200 ft. TEL of copper pipe with (6) 90 degree elbows. †† Pipe size shown is not the connection size of the heat exchanger.

Snow Melt Applications

Boiler Side: Water 180° F supply, 160° F return
Snow Side: Water 40° P.G. 100° F supply, 130° F return

Model	Heat Exchanged BTU/Hr	Boiler Side		Snow Melt Side		B&G Pump Selection ¹	Pipe Size ^{1†}
		Flow GPM	Pressure Drop PSI	Flow GPM	Pressure Drop PSI		
BP400-10 (¾" MPT)	30,000	3.1	2.4	2.1	0.9	NRF-25	¾"
BP400-10 (¾" MPT)	45,000	4.6	5.1	3.2	2.1	NRF-35	¾"
BP400-14 (¾" MPT)	60,000	6.2	4.2	4.3	1.9	NRF-25	1"
BP400-20 (¾" MPT)	100,000	10.3	5.4	7.1	2.7	NRF-36	1"
BP400-40 (¾" MPT)	175,000	18.0	5.2	12.5	2.8	NRF-36	1½"
BP412-30 (1" MPT)	250,000	25.8	4.1	17.9	2.1	PL-36	1½"
BP412-30 (1" MPT)	300,000	30.9	5.8	21.4	2.9	PL-55	2"
BP412-50 (1" MPT)	450,000	46.4	6.2	32.1	3.3	613	2"
BP424-20 (2" MPT)	600,000	61.8	4.8	42.9	2.8	609	2"
BP424-30 (2" MPT)	900,000	92.7	4.8	64.3	3.0	614	2½"
BP424-40 (2" MPT)	1,200,000	123.6	5.1	85.7	3.2	625	3"
BP424-50 (2" MPT)	1,350,000	139.1	4.7	96.4	2.9	625	3"

Larger models are available upon request. † Assumptions: Longest radiant loop is 250 ft. PEX. †† Pipe size shown isn't the connection size of the heat exchanger.

Radiant Floor Heating

Boiler Side: Water 180° F supply, 160° F return
Radiant Floor Side: Water 100° F supply, 120° F return

Model	Heat Exchanged BTU/Hr	Boiler Side		Radiant Floor Side		B&G Pump Selection ¹	Pipe Size ^{1†}
		Flow GPM	Pressure Drop PSI	Flow GPM	Pressure Drop PSI		
BP400-10 (¾" MPT)	30,000	3.1	2.4	3.0	1.6	NRF-25	¾"
BP400-10 (¾" MPT)	50,000	5.2	6.1	5.0	4.2	NRF-36	1"
BP400-20 (¾" MPT)	100,000	10.3	5.2	10.1	4.4	NRF-36	1½"
BP400-30 (¾" MPT)	150,000	15.5	5.3	15.2	4.9	NRF-36	1½"
BP400-40 (¾" MPT)	200,000	20.6	5.8	20.2	5.5	NRF-36	1½"
BP411-20 (1" MPT)	250,000	25.8	3.3	25.2	3.0	PL-36	2"
BP411-20 (1" MPT)	350,000	36.1	6.3	35.3	5.6	PL-55	2"
BP411-30 (1" MPT)	450,000	46.4	6.1	45.4	5.8	607	2"
BP424-20 (2" MPT)	600,000	61.8	4.8	60.6	4.2	609	2½"
BP424-30 (2" MPT)	900,000	92.7	4.8	90.9	4.5	611	3"
BP424-40 (2" MPT)	1,200,000	123.6	5.1	121.2	5.0	625	3"
BP424-50 (2" MPT)	1,350,000	139.1	4.7	136.3	4.6	619	3"

Larger models are available upon request. † Assumptions: Longest radiant loop is 200 ft. PEX. †† Pipe size shown isn't the connection size of the heat exchanger.

Swimming Pool Heating

Boiler Side: Water 180° F supply, 130° F return
Pool Side: Water 70° F supply, 107° F return

Model ³	Pool Size Gallons ¹	Heat Exchanged BTU/Hr	Boiler Side		Pool Side	
			Flow GPM	Pressure Drop PSI	Flow ² GPM	Pressure Drop PSI
BP400-10 (¾" MPT)	2,000	33,300	1.37	0.5	1.8	0.6
BP400-10 (¾" MPT)	6,000	99,900	4.10	4.1	5.4	5.0
BP400-20 (¾" MPT)	8,000	133,200	5.50	1.7	7.3	2.5
BP400-30 (¾" MPT)	15,000	250,234	10.00	2.7	14.0	4.5
BP412-20 (1" MPT)	20,000	333,645	13.00	2.5	18.0	3.4
BP412-20 (1" MPT)	30,000	500,467	20.70	5.6	27.2	7.7
BP412-30 (1" MPT)	40,000	667,290	27.00	3.9	36.0	6.9
BP424-20 (2" MPT)	60,000	1,000,936	40.00	2.3	54.0	3.6
BP424-30 (2" MPT)	80,000	1,334,581	53.00	1.9	72.0	3.1
BP424-30 (2" MPT)	100,000	1,668,226	67.00	2.8	90.0	4.7
BP424-40 (2" MPT)	120,000	2,001,871	82.50	2.5	108.0	4.2
BP424-50 (2" MPT)	150,000	2,502,000	103.20	2.7	135.6	4.7

Larger models are available upon request.
1) Provides approx. 2° F per hour heating with 180° F boiler to achieve 80° F pool temperature.
2) Pool water flow rate usually requires flow by pass from main pool circulation.
3) Chlorinated pool water can be corrosive to SS316L and Copper. Proper control of chlorine levels is required or alternate materials of construction should be considered.

Outdoor Wood Boiler

Boiler Side: Water 180° F supply, 155° F return
House Side: Water 140° F supply, 165° F return

Model	Heat Exchanged BTU/Hr	Boiler Side		House Side	
		Flow GPM	Pressure Drop PSI	Flow GPM	Pressure Drop PSI
BP400-20LP (¾" MPT)	30,500	2.52	0.4	2.5	0.3
BP400-30LP (¾" MPT)	50,000	4.12	0.5	4.1	0.4
BP400-40LP (¾" MPT)	70,000	5.77	0.6	5.7	0.6
BP410-20LP (1" MPT)	80,000	6.60	1.9	6.5	1.6
BP410-30LP (1" MPT)	130,000	10.72	2.2	10.6	1.92
BP410-40LP (1" MPT)	179,500	14.80	2.3	14.6	2.2
BP410-50LP (1" MPT)	229,500	18.92	2.5	18.7	2.4
BP410-60LP (1" MPT)	279,000	23.00	2.8	22.8	2.6
BP410-70LP (1" MPT)	329,000	27.13	3.0	26.8	2.9
BP410-80LP (1" MPT)	378,500	31.21	3.3	30.9	3.2
BP410-90LP (1" MPT)	428,500	35.33	3.7	34.9	3.6
BP410-100LP (1" MPT)	478,000	39.41	4.0	39.0	4.0

Larger models are available upon request.

Solar Heating

Solar Side: 45% Propylene Glycol 149° F supply, 113° F return
Storage Tank Side: Water 104° F supply, 140° F return

Model	Heat Exchanged BTU/Hr	Solar Side		Storage Tank Side	
		Flow GPM	Pressure Drop PSI	Flow GPM	Pressure Drop PSI
BP410-10 (1" MPT)	2,100	0.13	< 0.10	0.12	< 0.10
BP410-20 (1" MPT)	6,100	0.38	< 0.10	0.34	< 0.10
BP410-30 (1" MPT)	10,100	0.62	< 0.10	0.57	< 0.10
BP410-40 (1" MPT)	14,100	0.87	< 0.10	0.79	< 0.10
BP415-20 (1" MPT)	24,500	1.51	0.24	1.38	0.13
BP415-24 (1" MPT)	30,800	1.90	0.25	1.73	0.15
BP415-30 (1" MPT)	40,100	2.47	0.27	2.25	0.16
BP415-34 (1" MPT)	46,500	2.86	0.28	2.61	0.17
BP415-40 (1" MPT)	56,100	3.45	0.29	3.15	0.18
BP415-50 (1" MPT)	72,000	4.43	0.30	4.04	0.20
BP415-60 (1" MPT)	87,900	5.41	0.32	4.94	0.21

Larger models are available upon request.
Normal Panel Capacity = 190 BTU/Hr•Ft²



ITT