

# Fluid Cooling Brazen Plate BPW Series

## STAINLESS STEEL CONSTRUCTION

### Performance Notes

- Customized sizes and options
- Stacked plate
- Stainless steel
- Copper brazed (nickel option)
- High performance
- Compact design
- Corrosion resistant Type 316 stainless steel plates
- Mounting studs standard (except 8x3 plates)



**Option**  
Foot Mounting Bracket  
(except 8x3 plates)

### Ratings

**Maximum Working Pressure**

450 psi (31 BAR)

**Test Pressure**

650 psi (44 BAR)

**Minimum Working Temperature**

-320°F (-19°C)

**Maximum Working Temperature**

437°F (225°C)

*Pressure rating is for copper brazed only. Consult factory for alternatives.*

### Materials

**Plate Material - Fluid Contact**

316 stainless steel

**Braze Material** Copper

*(Nickel option 12x5 plate BPNW only)*

**Connectors** 316 stainless steel

**Stud Bolts** 304 stainless steel

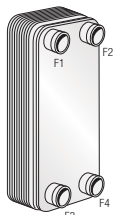
**Foot Mounting Bracket** Carbon steel



**Optional Foot Mounting Brackets**  
(See page 155)

## How to Order

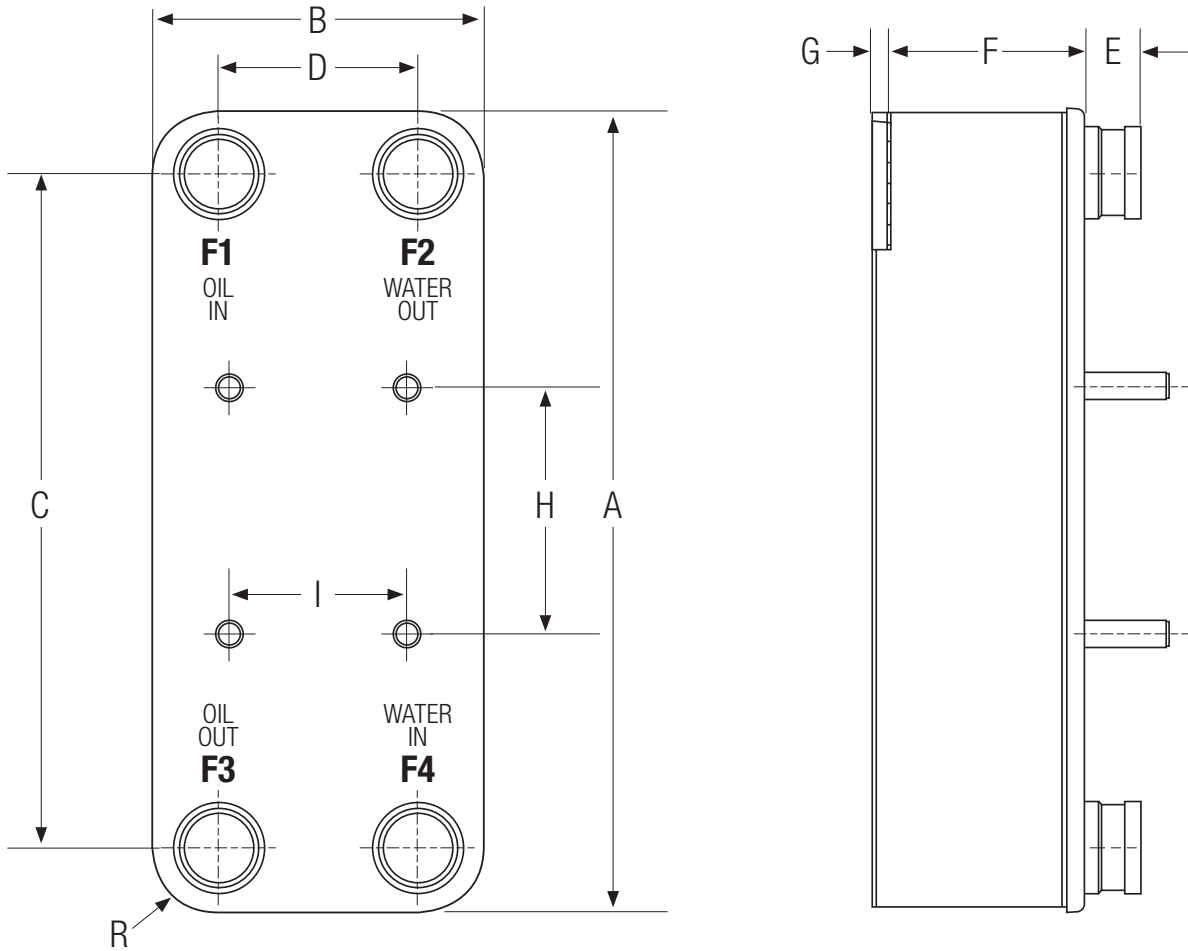
<b>BPW</b>	-		-		-		-		-		-		-		-		
<b>Model Series</b> BPW		<b>Number of Plates</b>	<b>Model Size Selected</b> 8x3 12x5 20x5 15x5 15x10 20x10 28x10	<b>Connection*</b> F3	<b>Connection*</b> F1	<b>Connection*</b> F2	<b>Connection*</b> F4		<b>Option</b> Foot Mounting Brackets (ordered as a separate item)								



*\*Add (INT) for internal threads. Add (M) for external threads. Please see pages 146-147 for all possible connection sizes and types. Note: Connections on the cooler must all be the same height. Cannot use connections of different heights.*

Part No.	Plate Size
56839	- 12x5
56840	- 20x5
56841	- 15x5
56842	- 15x10
56843	- 20x10
56844	- 28x10

# Dimensions



Model	A	B	C	D	E	G	F	H	I	Stud Bolt		R	Weight Approx. LBS (KG)
										Thread	Length		
BPW-NoP-8X3	7.6 (193)	2.98 (76)	6.06 (154)	1.57 (40)	See Connection Tables	0.28 (7)	0.157+0.088*NoP (0.157+0.088*NoP*25.4)	NA	NA	NA	NA	0.70 (18)	1.082+0.097*NoP (1.082+0.097*NoP*.454)
BPW-NoP-12X5	11.4 (290)	4.69 (119)	9.57 (243)	2.83 (72)		0.24 (6)	0.157+0.088*NoP (0.157+0.088*NoP*25.4)	5.51 (140)	2.36 (60)	M8	0.76 (19)	0.90 (23)	3.058+0.21*NoP (3.058+0.21*NoP*.454)
BPW-NoP-20X5	20.7 (526)	4.69 (119)	18.5 (470)	2.48 (63)		0.24 (6)	0.157+0.088*NoP (0.157+0.088*NoP*25.4)	8.86 (225)	2.36 (60)	M8	1.19 (30)	0.90 (23)	4.967+0.362*NoP (4.967+0.362*NoP*.454)
BPW-NoP-15X5	14.8 (376)	4.69 (119)	12.6 (320)	2.48 (63)		0.24 (6)	0.157+0.088*NoP (0.157+0.088*NoP*25.4)	8.86 (225)	2.36 (60)	M8	0.79 (20)	0.90 (23)	3.814+0.265*NoP (3.814+0.265*NoP*.454)
BPW-NoP-15X10	15.5 (394)	9.57 (243)	12.76 (324)	6.85 (174)		0.12 (3)	0.315+0.092*NoP (0.315+0.092*NoP*25.4)	5.51 (140)	3.94 (100)	M12	0.75 (19)	1.38 (35)	15.41+0.75*NoP (15.41+0.75*NoP*.454)
BPW-NoP-20X10	20.7 (526)	9.57 (243)	17.95 (456)	6.85 (174)		0.16 (4)	0.394+0.09*NoP (0.394+0.09*NoP*25.4)	5.51 (140)	3.94 (100)	M12	1.53 (39)	1.38 (35)	22.641+0.891*NoP (22.641+0.891*NoP*.454)
BPW-NoP-28X10	27.3 (693)	9.57 (243)	23.54 (598)	5.83 (148)		0.04 (1)	0.63+0.096*NoP (0.63+0.096*NoP*25.4)	12.13 (308)	3.94 (100)	M12	1.53 (39)	1.89 (48)	35.741+1.25*NoP (35.741+1.25*NoP*.454)

NoP = Number of Plates

All dimensions are inches (millimeters), unless noted otherwise.

Note: We reserve the right to make reasonable design changes without notice.

# Connection Options

Model	Connection Types	Size	Height E
BPW-NoP-8x3	SAE	5/8" O-Ring	0.79 (20)
	Solder	8.2	0.79 (20)
		12.2	0.79 (20)
		10	0.79 (20)
		15.9	0.79 (20)
		12.8	0.79 (20)
		16	0.79 (20)
		22	0.79 (20)
	ISO-G	1/2"	0.79 (20)
		3/4"	0.79 (20)
		5/8"	0.79 (20)
	ISO-G INT Hex	1/2"	0.79 (20)
		3/4"	0.79 (20)
	UNF	5/8"	0.79 (20)
		3/4"	0.79 (20)
	NPT	1/2" INT	0.79 (20)
		3/8" INT	0.79 (20)
		3/4" INT	0.79 (20)
		1/2" (M)	0.79 (20)
		3/4" (M)	0.79 (20)
		3/4" & 16 (Combo M)	0.79 (20)
1" (M)		0.79 (20)	
SAE	1" O-Ring	1.06 (27)	
	1 1/4" O-Ring (Setting Up)	1.06 (27)	
	Solder	12.8	0.79 (20)
		16	0.79 (20)
22U		0.79 (20)	
28U		0.79 (20)	
UNF	3/4"	0.79 (20)	
	5/8"	0.79 (20)	
NPT	1" INT	1.06 (27)	
	1" (M)	1.77 (45)	
	1/2" INT	0.79 (20)	
	3/4" (M)	0.79 (20)	
BPW-NoP-15x5	SAE	1/4" O-Ring	1.06 (27)
	Solder	6.5	1.06 (27)
		35.1	1.77 (45)
		42U	1.06 (27)
		28U	1.06 (27)
		12.8	1.06 (27)
		16	1.06 (27)
	ISO-G	1 1/4" INT	1.77 (45)
		1 1/4" INT HEX	1.06 (27)
		1/2" (M)	1.06 (27)
		1 1/4" (M)	1.77 (45)
		1" (M)	1.06 (27)
		1 1/2"	1.06 (27)
1 1/4" INT		1.06 (27)	
NPT	1 1/4" (M)	1.06 (27)	
	1 1/4" INT	1.77 (45)	

Model	Connection Types	Size	Height E
BPW-NoP-20x5	SAE	1 1/4" O-Ring	1.06 (27)
	Solder	6.5	1.06 (27)
		35.1	1.77 (45)
		42U	1.06 (27)
		12.8	1.06 (27)
		28U	1.06 (27)
		22U	1.06 (27)
		16	1.06 (27)
		ISO-G	1 1/4" INT
	1 1/4" INT HEX		1.06 (27)
	1/2"		1.06 (27)
	1 1/4" (M)		1.77 (45)
	1"		1.06 (27)
	1 1/2" (M)		1.77 (45)
	NPT	1" INT HEX	1.06 (27)
		1/2" INT	1.06 (27)
		1 1/4" (M)	1.06 (27)
		1 1/4" INT	1.77 (45)
		1" INT	1.77 (45)
		1 1/4" INT	1.77 (45)
		1 1/4" (M)	1.77 (45)
Victaulic	1 1/2"	1.06 (27)	
	1 1/4" (M)	1.06 (27)	
	1 1/2"	1.77 (45)	
	1 1/4" (M)	1.06 (27)	
	1 1/2"	1.77 (45)	
BPW-NoP-15x10	SAE	1 1/2" O-Ring	1.06 (27)
	Solder	16	1.06 (27)
		54.3	1.06 (27)
		12.8	1.06 (27)
		22U	1.06 (27)
		28U	1.06 (27)
		35.1	1.06 (27)
		42U	1.06 (27)
	ISO-G	1 1/2"	1.06 (27)
	NPT	2" (M)	1.06 (27)
		1 1/2" (M)	1.06 (27)
		1 1/2" INT	1.06 (27)
	Victaulic	3/4" INT	1.06 (27)
1 1/2"		1.06 (27)	
2"		1.06 (27)	
2"		2.13 (54)	
2 1/2"		2.13 (54)	

All dimensions are in inches (millimeters), unless noted otherwise.

**Note:** Connections on the cooler must all be the same height. Cannot use connections of different heights.

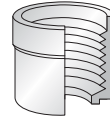
# Connection Options

Model	Connection Types	Size	Height (E)
BPW-NoP-20x10	SAE	1½" O-Ring	1.06 (27)
	Solder	16	1.06 (27)
		54.3	1.06 (27)
		12.8	1.06 (27)
		22U	1.06 (27)
		28U	1.06 (27)
		35.1	1.06 (27)
	ISO-G	1½"	1.77 (45)
	NPT	1½" (M)	1.06 (27)
		1½" INT	1.06 (27)
	Victaulic	1½"	1.06 (27)
		2"	1.06 (27)
2"		2.13 (54)	
2½"		2.13 (54)	
BPW-NoP-28x10	SAE	Flange connection is set up	2.13 (54)
	Solder	54.3	2.13 (54)
		70U	2.13 (54)
		42U	2.13 (54)
		66.85	2.13 (54)
		35.1	2.13 (54)
		76U	2.13 (54)
	ISO-G	2"	2.13 (54)
		2½"	2.13 (54)
		3"	2.13 (54)
	NPT	2½" (M)	2.13 (54)
		2½" INT is setup	2.13 (54)
	SAE Flange	2½"	1.18 (30)
		3"	1.18 (30)
		1½" Round	1.18 (30)
		2" Round	1.18 (30)
	DIN Compact Flange	DN65C cs	2.13 (54)
DN80C cd		2.13 (54)	

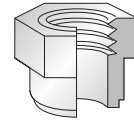
All dimensions are in inches (millimeters), unless noted otherwise.

**Note:** Connections on the cooler must all be the same height. Cannot use connections of different heights.

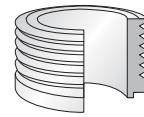
## Optional Connection Types



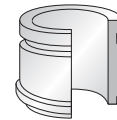
Internally threaded (female)



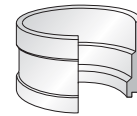
Internally threaded (female) with Hexagonal exterior



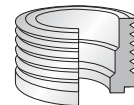
Externally threaded (male)



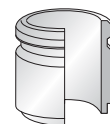
Victaulic



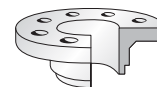
Solder



Combo



Welding



Flanges of DIN/DNC Type

# Plate Limits

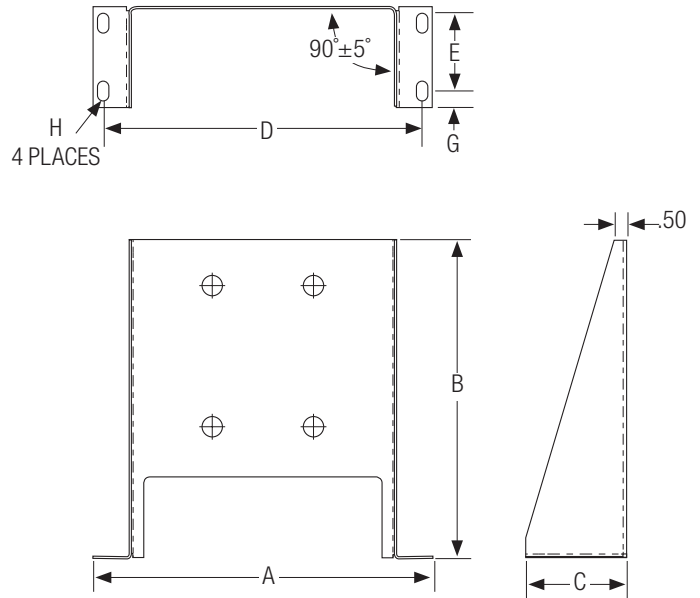
Model	Number of Plates	HP Removed	KW Removed	Max Oil Flow GPM	Max Oil Flow LPM
BPW-NoP-8X3	10	2	1.5	2	8
	20	5	4.1	4	15
	30	8	6.1	6	23
	40	11	8.1	8	30
	50	16	12.2	12	45
	60	22	16.2	16	61
	70	26	19.3	18	68
	80	27	20.3	18.5	70
BPW-NoP-12X5	10	8	6.1	4	15
	20	20	15.2	10	38
	30	29	21.3	14	53
	40	38	28.4	18	68
	50	52	38.6	22	83
	60	59	43.6	24	91
	70	64	47.7	26	98
	80	72	53.8	30	114
	90	84	62.9	34	129
	100	95	71.0	38	144
	110	106	79.2	40	151
	120	112	83.2	42	159
	130	120	89.3	42	159
	140	125	93.4	42	159
BPW-NoP-15X5	10	7	5.1	3	11
	20	11	8.1	6	23
	30	22	16.2	9	34
	40	33	24.4	14	53
	50	46	34.5	18	68
	60	57	42.6	22	83
	70	65	48.7	28	106
	80	73	54.8	34	129
	90	88	66.0	38	144
	100	98	73.1	42	159
	110	106	79.2	46	174
	120	122	91.3	56	212
	130	150	111.6	66	250
	140	177	131.9	78	295
BPW-NoP-20X5	10	11	8.1	3	11
	20	24	18.3	6	23
	30	38	28.4	9	34
	40	54	40.6	13	49
	50	71	52.8	17	64
	60	87	65.0	21	79
	70	103	77.1	25	95
	80	120	89.3	29	110
	90	163	121.8	40	151
	100	190	142.1	46	174
	110	218	162.4	52	197
	120	245	182.7	58	220
	130	259	192.8	64	242
	140	299	223.3	80	303

Model	Number of Plates	HP Removed	KW Removed	Max Oil Flow GPM	Max Oil Flow LPM
BPW-NoP-15X10	10	14	10.1	8	30
	20	30	22.3	16	61
	30	46	34.5	26	98
	40	63	46.7	34	129
	50	76	56.8	40	151
	60	90	67.0	46	174
	70	106	79.2	54	204
	80	122	91.3	64	242
	90	150	111.6	74	280
	100	163	121.8	80	303
	110	177	131.9	90	341
	140	204	152.2	100	379
	170	231	172.5	110	416
	200	259	192.8	120	454
	230	299	223.3	130	492
	250	327	243.6	130	492
BPW-NoP-20X10	10	19	14.2	4	15
	20	41	30.4	8	30
	30	68	50.7	12	45
	40	90	67.0	16	61
	50	112	83.2	20	76
	60	141	105.6	26	98
	70	171	127.9	34	129
	80	212	158.3	44	167
	90	245	182.7	54	204
	100	286	213.1	60	227
	110	313	233.4	66	250
	140	381	284.2	80	303
	170	449	334.9	90	341
	200	517	385.7	95	360
230	571	426.3	105	397	
250	612	456.7	110	416	
BPW-NoP-28X10	20	54	40.6	10	38
	40	109	81.2	20	76
	60	177	131.9	30	114
	80	231	172.5	40	151
	100	313	233.4	60	227
	120	408	304.5	80	303
	140	490	365.4	100	379
	160	585	436.4	120	454
	180	694	517.6	150	568
	200	789	588.7	180	681
	220	898	669.9	220	833
	240	966	720.6	220	833
	260	1088	812.0	260	984
	280	1361	1015.0	310	1173
280	1497	1116.5	350	1325	

Based on 100 SSU Oil, 40°F Approach Temperature, 2:1 Oil-Water Flow Ratio  
 NoP = Number of Plates

# Foot Mounting Bracket

Optional Foot Mounting Bracket for BPSW and BPW Series (except 8x3 plates).  
Constructed of carbon steel.



Mounting bracket for location purposes only. Bracket is not designed to support entire weight of the cooler. Customer to add extra support if necessary.

Part No.	Plate Size	A	B	C	D	E	G	H
56839	12x5 (305x127)	7.99 (203)	9.35 (237)	3.15 (80)	7.17 (182)	1.77 (45)	0.69 (18)	.40 x .59 (10 x 15)
56840	20x5 (508x127)	7.99 (203)	15.65 (398)	3.15 (80)	7.17 (182)	1.77 (45)	0.69 (18)	.40 x .59 (10 x 15)
56841	15x5 (381x127)	7.99 (203)	12.74 (324)	3.15 (80)	7.17 (182)	1.77 (45)	0.69 (18)	.40 x .59 (10 x 15)
56842	15x10 (381x254)	13.20 (335)	12.40 (315)	3.94 (100)	12.40 (315)	2.64 (67)	0.65 (17)	.40 x .75 (10 x 15)
56843	20x10 (508x254)	13.51 (343)	14.37 (365)	3.94 (100)	12.72 (323)	2.64 (67)	0.65 (17)	.40 x .75 (10 x 15)
56844	28x10 (711x254)	13.20 (335)	21.30 (541)	3.94 (100)	12.40 (315)	2.64 (67)	0.65 (17)	.40 x .75 (10 x 15)

All dimensions are in inches (millimeters), unless noted otherwise.