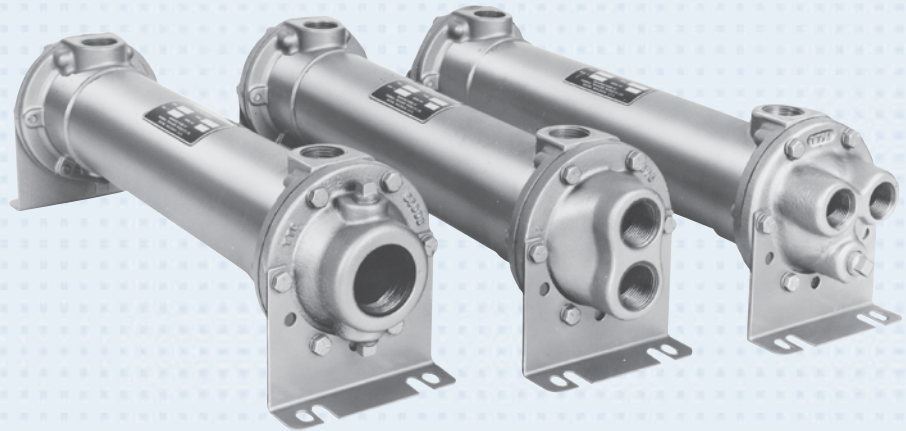


FLUID COOLING | Shell & Tube B Series

COPPER & STEEL CONSTRUCTION

Features

- Young Touchstone Interchange
- Optional Non-Ferrous Construction
- Competitively Priced
- 1/4" or 3/8" Tubes Standard
- Water to Water Applications
- Sea Water Applications
- Optional 90/10 Copper Nickel Cooling Tubes and Bronze End Bonnets for Sea Water Service
- NPT, SAE O-Ring, SAE Flange, or BSPP Shell Side Connections Available
- End Bonnets Removable for Servicing
- Mounting Feet Included (May be Rotated in 90° Increments)



Ratings

- Maximum Shell Pressure** 250 psi
- Maximum Tube Side Pressure** 150 psi
- Maximum Temperature** 350° F

Materials

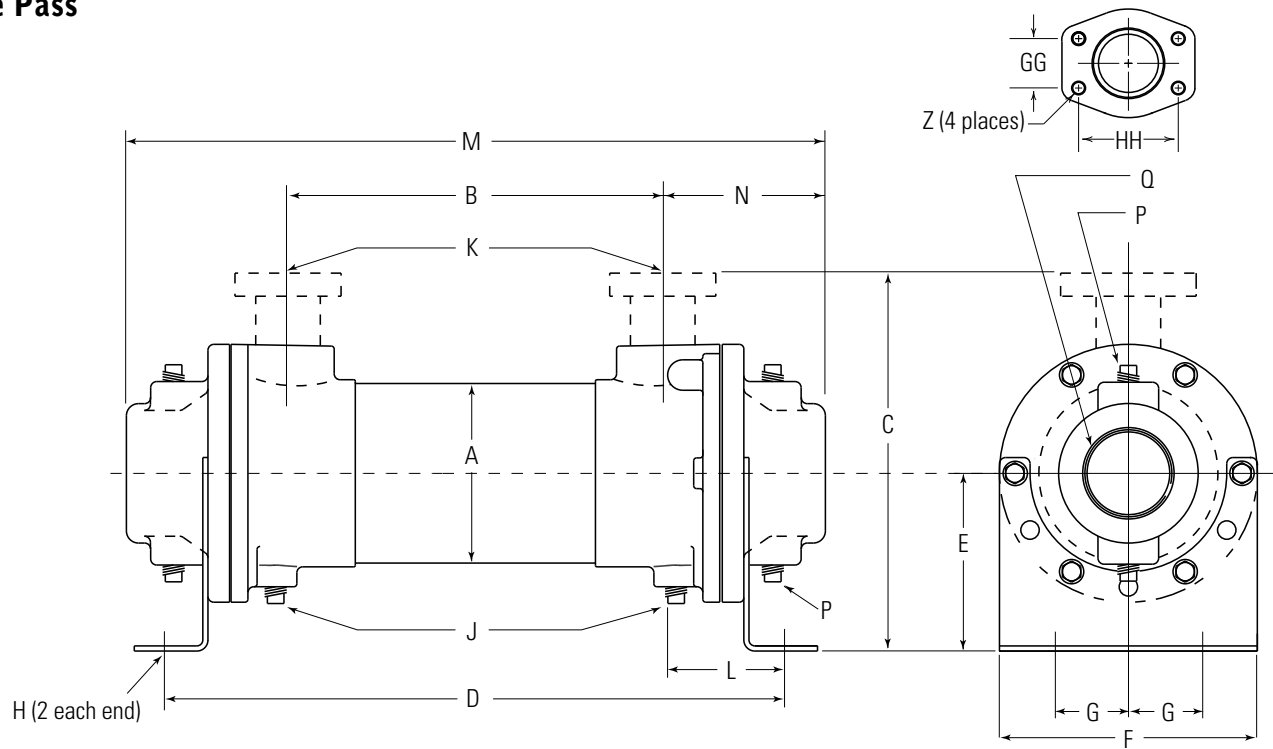
- Tubes** Copper
- Hubs & Tubesheets** Steel or Brass
- Shell** Steel or Brass
- Baffles** Brass
- End Bonnets** Cast Iron
- Mounting Brackets** Steel
- Gaskets** Nitrile Rubber/Cellulose Fiber
- Nameplate** Aluminum Foil

WATER COOLED B



Dimensions

One Pass



Flange Size	GG	HH	Z - CF	Z - CFM
1	1.03	2.06	3/8-16 UNC	M-10
1.50	1.41	2.75	1/2-13 UNC	M-12
2	1.69	3.06		
3	2.44	4.19	5/8-11 UNC	M-16

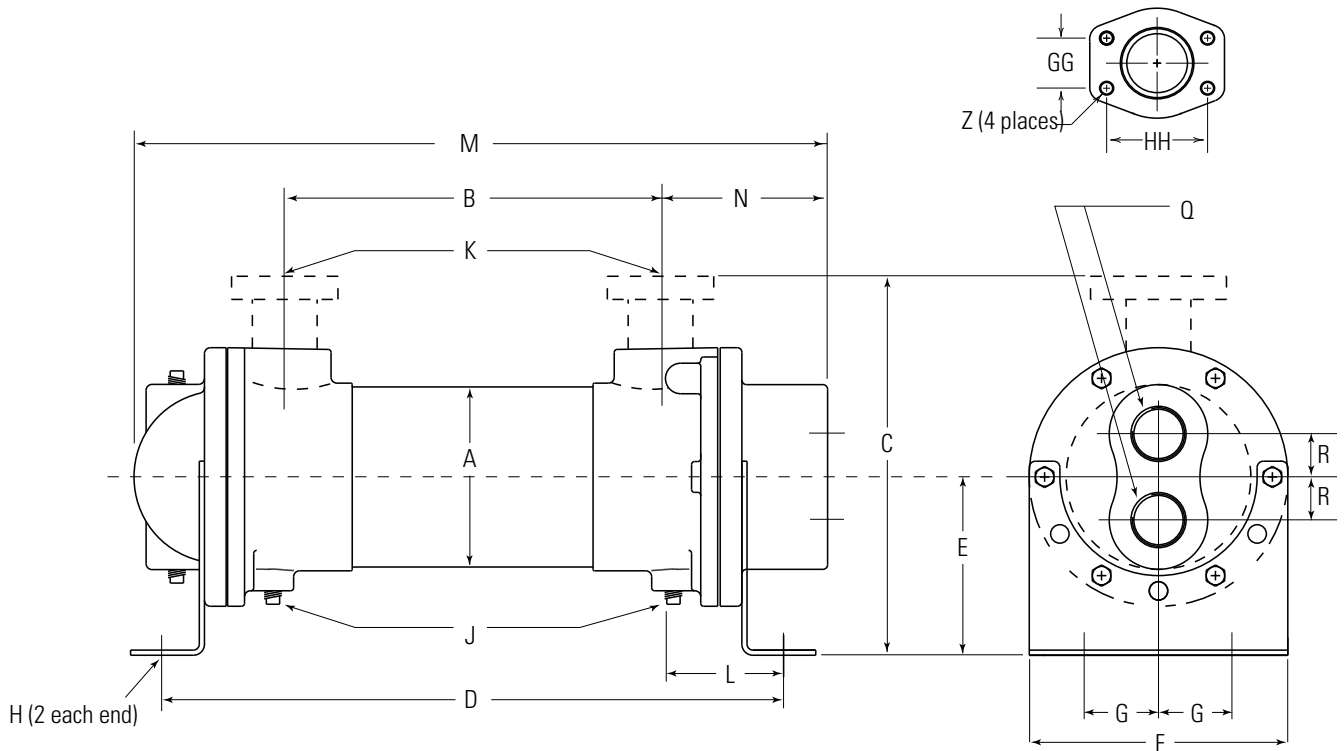
MODEL	A	B	C		D	E	F	G	H	J	K		L	M	N	P	Q
			NPT/BSPP SAE O-RING	SAE FLANGE							NPT/BSPP FLANGE	SAE O-RING					
B-401	2.125	7.62	3.50	—	11.01	1.94	2.62	.88	.41 Dia.	—	*.50	#8, 3/4-16 UNF-2B	11.24	1.81	—	1.00	
B-402		16.62			20.01								20.24				
B-701	3.656	7.00	6.25	C/F	12.01	3.62	5.25	1.50	.44 x 1.00	(2) .38	1.00	#16, 1 ⁹ / ₁₆ -12 UNF-2B	13.64	3.24	(4) .38	1.50	
B-702		16.00			21.01								22.64				
B-703	5.125	25.00	7.38	8.46	30.01	4.00	6.75	2.00	.44 x .88	(6) .38	1.50	#24, 1 ⁷ / ₈ -12 UN-2B	31.64	4.05	—	2.00	
B-1002		15.50			21.71								23.60				
B-1003	6.125	24.50	8.81	10.50	30.71	4.75	7.50	2.50	.44 x .88	(6) .38	2.00	#32, 2 ¹ / ₂ -12 UN-2B	32.60	4.88	(4) .50	3.00	
B-1004		33.50			39.71								41.60				
B-1202	8.00	14.62	12.13	15.61	21.50	6.50	8.62	3.50	.44 x 1.00	(6) .38	3.00	—	24.38	6.52	—	4.00	
B-1203		23.50			30.38								33.25				
B-1204	8.00	32.38	12.13	15.61	39.25	6.50	8.62	3.50	.44 x 1.00	(6) .38	3.00	—	42.12	6.52	—	4.00	
B-1205		41.38			48.25								51.12				
B-1206	8.00	50.50	12.13	15.61	57.38	6.50	8.62	3.50	.44 x 1.00	(6) .38	3.00	—	60.25	6.52	—	4.00	
B-1207		59.50			66.38								69.25				
B-1208	8.00	68.38	12.13	15.61	75.25	6.50	8.62	3.50	.44 x 1.00	(6) .38	3.00	—	78.12	6.52	—	4.00	
B-1602		13.60			22.38								26.62				
B-1603	8.00	22.60	12.13	15.61	31.38	6.50	8.62	3.50	.44 x 1.00	(6) .38	3.00	—	35.62	6.52	—	4.00	
B-1604		31.60			40.38								44.62				
B-1605	8.00	40.60	12.13	15.61	49.38	6.50	8.62	3.50	.44 x 1.00	(6) .38	3.00	—	53.62	6.52	—	4.00	
B-1606		49.60			58.38								62.62				
B-1607	8.00	58.60	12.13	15.61	67.38	6.50	8.62	3.50	.44 x 1.00	(6) .38	3.00	—	71.62	6.52	—	4.00	
B-1608		67.60			76.38								80.62				
B-1609	8.00	76.60	12.13	15.61	85.38	6.50	8.62	3.50	.44 x 1.00	(6) .38	3.00	—	89.62	6.52	—	4.00	
B-1610		85.60			94.38								98.62				

B-401 and B-402 SAE Flange not available. NOTE: We reserve the right to make reasonable design changes without notice. Consult factory. All dimensions are inches.



Dimensions

Two Pass



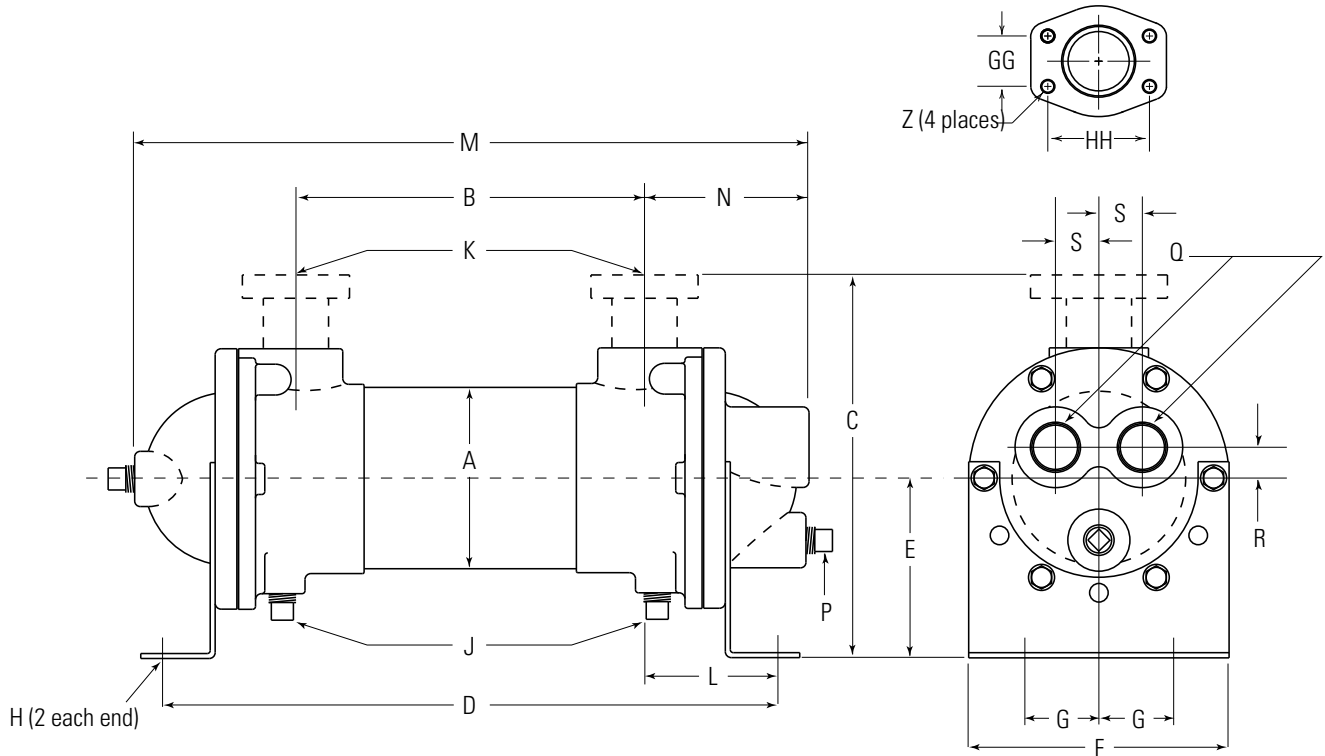
Flange Size	GG	HH	Z - CF	Z - CFM
1	1.03	2.06	3/8-16 UNC	M-10
1.50	1.41	2.75	1/2-13 UNC	M-12
2	1.69	3.06		
3	2.44	4.19	5/8-11 UNC	M-16

MODEL	A	B	C		D	E	F	G	H	J	K		L	M	N	P	Q	R															
			NPT/BSPP SAE O-RING	SAE FLANGE							NPT/BSPP FLANGE	SAE O-RING																					
B-701	3.656	7.00	6.25	C/F	12.01	3.62	5.25	1.50	.44 x 1.00	(2) .38	1.00	#16, 1 ⁵ / ₁₆ -12 UNF-2B	2.69	13.28	3.30	(2) .38	1.00	.88															
B-702		16.00			21.01									22.28																			
B-703		25.00			30.01									31.28																			
B-1002	5.125	15.50	7.38	8.46	21.71	4.00	6.75	2.00	.44 x 1.00	(6) .38	1.50	#24, 1 ⁷ / ₈ -12 UN-2B	3.06	23.29	3.80	(2) .38	1.50	1.19															
B-1003		24.50			30.71									32.29																			
B-1004		33.50			39.71									41.29																			
B-1202		14.62			21.50									23.94																			
B-1203	6.125	23.50	8.81	10.50	30.38	4.75	7.50	2.50	.44 x .88	(6) .38	2.00	#32, 2 ¹ / ₂ -12 UN-2B	3.44	32.81	4.56	(2) .50	2.00	1.44															
B-1204		32.38			39.25									41.69																			
B-1205		41.38			48.25									50.69																			
B-1206		50.50			57.38									59.81																			
B-1207		59.50			66.38									68.81																			
B-1208		68.38			75.25									77.69																			
B-1602		8.00			13.60									12.13					15.61	22.38	6.50	8.62	3.50	.44 x 1.00	(6) .38	3.00	—	4.39	25.10	6.08	(2) .50	2.50	1.88
B-1603					22.60															31.38									34.10				
B-1604	31.60		40.38	43.10																													
B-1605	40.60		49.38	52.10																													
B-1606	49.60		58.38	61.10																													
B-1607	58.60		67.38	70.10																													
B-1608	67.60		76.38	79.10																													
B-1609	76.60		85.38	88.10																													
B-1610	85.60		94.38	97.10																													

NOTE: We reserve the right to make reasonable design changes without notice. Consult factory. All dimensions are inches.

Dimensions

Four Pass



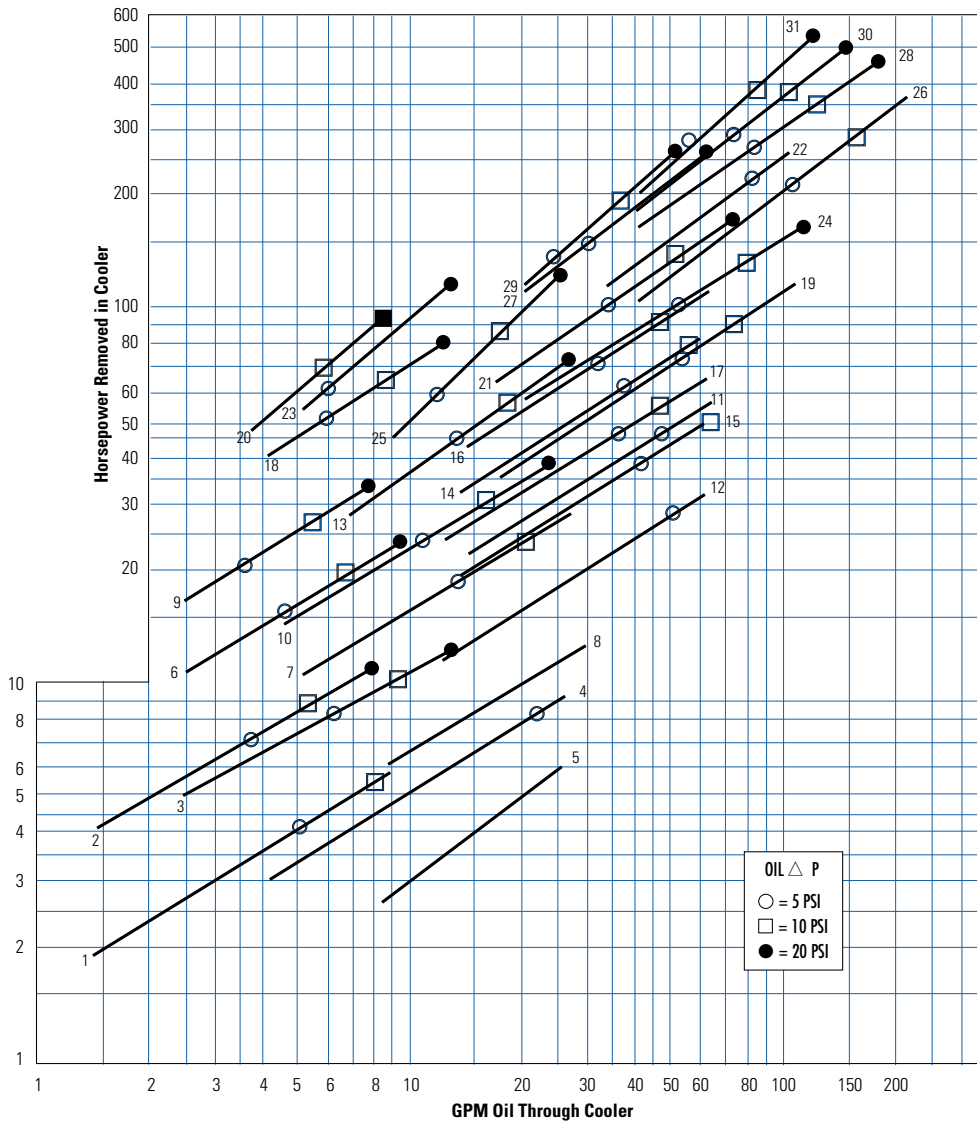
Flange Size	GG	HH	Z - CF	Z - CFM
1	1.03	2.06	3/8-16 UNC	M-10
1.50	1.41	2.75	1/2-13 UNC	M-12
2	1.69	3.06		
3	2.44	4.19	5/8-11 UNC	M-16

MODEL	A	B	C		D	E	F	G	H	J	K		L	M	N	P	Q	R	S			
			NPT/BSPP SAE O-RING	SAE FLANGE							NPT/BSPP FLANGE	SAE O-RING										
B-701	3.656	7.00	6.25	C/F	12.01	3.62	5.25	1.50	.44 x 1.00	(2) .38	1.00	#16, 1 ⁵ / ₁₆ -12 UNF-2B	2.69	13.57	3.32							
B-702		16.00			21.01									22.57						.75	.62	.88
B-703		25.00			30.01									31.57								
B-1002	5.125	15.50	7.38	8.46	21.71	4.00	6.75	2.00			1.50	1 ⁷ / ₈ -12 UN-2B	3.06	23.57	4.12	(3) .38	1.00	.75	1.34			
B-1003		24.50			30.71									32.57						1.00	.75	1.34
B-1004		33.50			39.71									41.57								
B-1202	6.125	14.62	8.81	10.50	21.50	4.75	7.50	2.50	.44 x .88	(6) .38	2.00	#32, 2 ¹ / ₂ -12 UN-2B	3.44	24.44	4.90	(1) .50	1.50	1.06	1.40			
B-1203		23.50			30.38									33.31						1.50	1.06	1.40
B-1204		32.38			39.25									42.19								
B-1205		41.38			48.25									51.19						1.50	1.06	1.40
B-1206		50.50			57.38									60.31								
B-1207		59.50			66.38									69.31						1.50	1.06	1.40
B-1208		68.38			75.25									78.19								
B-1602		8.00			13.60									12.13						15.61	22.38	6.50
B-1603	22.60		31.38	35.72	2.00	1.38	1.88															
B-1604	31.60		40.38	44.72																		
B-1605	40.60		49.38	53.72	2.00	1.38	1.88															
B-1606	49.60		58.38	62.72																		
B-1607	58.60		67.38	71.72	2.00	1.38	1.88															
B-1608	67.60		76.38	80.72																		
B-1609	76.60		85.38	89.72	2.00	1.38	1.88															
B-1610	85.60		94.38	98.72																		

NOTE: We reserve the right to make reasonable design changes without notice. Consult factory. All dimensions are inches.



Performance Curves



Model	Ship Wt. (lbs)
*1. B-401-A4-0	7
*2. B-402-A4-0	10
*3. B-701-A4-T	23
4. B-701-B6-F	23
5. B-701-C6-T	23
*6. B-702-A4-T	28
7. B-702-B4-F	28
8. B-702-C6-T	28
*9. B-703-A4-T	35
10. B-703-B4-F	35
11. B-1002-C4-T	49
12. B-1002-C6-T	49
13. B-1003-B4-F	65
14. B-1003-C4-T	65
15. B-1003-C6-T	65
16. B-1004-C4-T	72
17. B-1004-C6-T	72
*18. B-1202-A4-F	72
19. B-1202-C4-F	72
*20. B-1204-A4-F	110
21. B-1204-C4-F	110
22. B-1206-D4-F	160
*23. B-1602-A4-F	145
24. B-1602-C4-F	145
25. B-1604-B4-F	195
26. B-1604-D4-F	195
27. B-1606-C4-F	259
28. B-1606-D4-F	259
29. B-1608-C4-F	310
30. B-1608-D4-F	310
31. B-1610-D4-F	400

Shipping Weights are approximate

Maximum Flow Rates

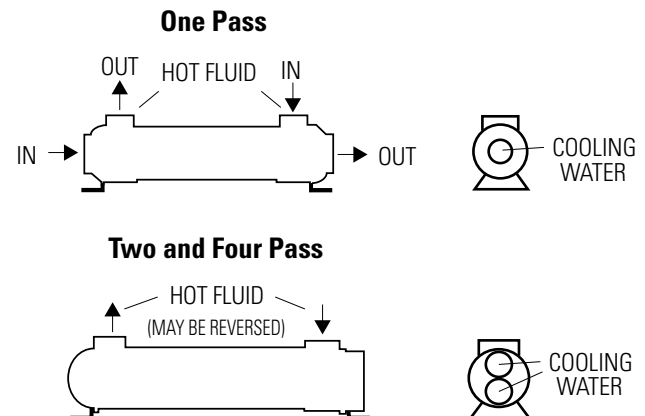
Example Model No.

B - 1003 - C4 - F

Unit Size	Shell Side (GPM)		Baffle Spacing		Tube Side (GPM)		
	A	B	C	D	O	T	F
400	9.6	—	—	—	25	—	—
700	17	29	29	—	61	31	15
1000	24	48	69	69	146	73	37
1200	29	57	115	115	224	112	56
1600	37	74	149	253	363	181	91

Caution: Incorrect installation can cause this product to fail prematurely, causing the shell side and tube side fluids to intermix.

Piping Hook-up



Specific applications may have different piping arrangements. Contact factory for assistance.