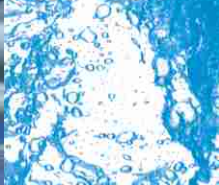


# Shell & Tube Heat Exchangers

**PS** Steam to Liquid Applications

**PW** Liquid to Liquid Applications

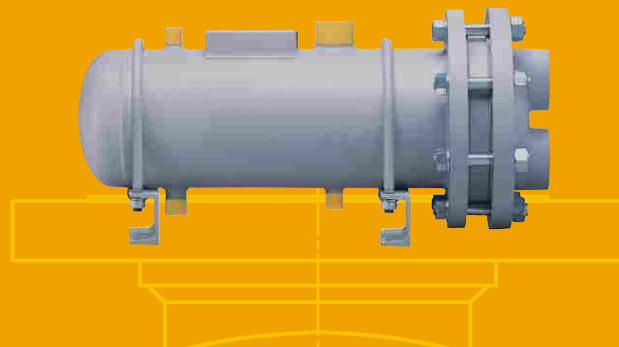


Perfecting  
the art  
of heat  
transfer

aico   
ALLIANCE



# Shell & Tube Heat Exchangers



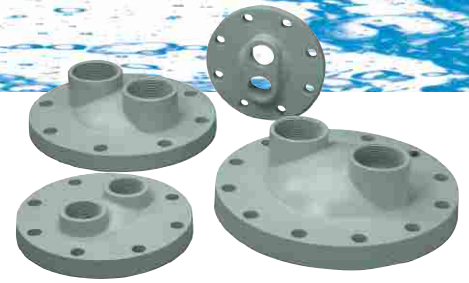
**PS** and **PW-type** U-tube heat exchangers are designed for a wide range of liquid to liquid (PW) and steam to liquid (PS) applications. We offer products of the highest quality and reliability to satisfy our customers' most rigorous demands.

## Features

- U-tube construction.
- Units designed for liquid to liquid (PW) and steam to liquid (PS) applications.
- Available in 2 or 4 pass construction.
- Removable tube bundles for convenience in cleaning and inspection.
- Strong, durable construction with stainless steel tubes and rugged cast-iron or steel head in standard units. (Optional materials are available).
- Coil and baffle arrangements designed to maximize heat transfer performance.
- Tubes expanded into stationary tubesheet allow for tube expansions and contractions, due to thermal fluctuations, without causing stresses on the joints. Welding tubes to the tubesheet is optional.



# PS/PW Heat Transfer Solutions



## 1 CONNECTIONS

Standardized sizes for easy assembly. Additional thread and surface protection for clean installation.

## 2 TUBESHEET

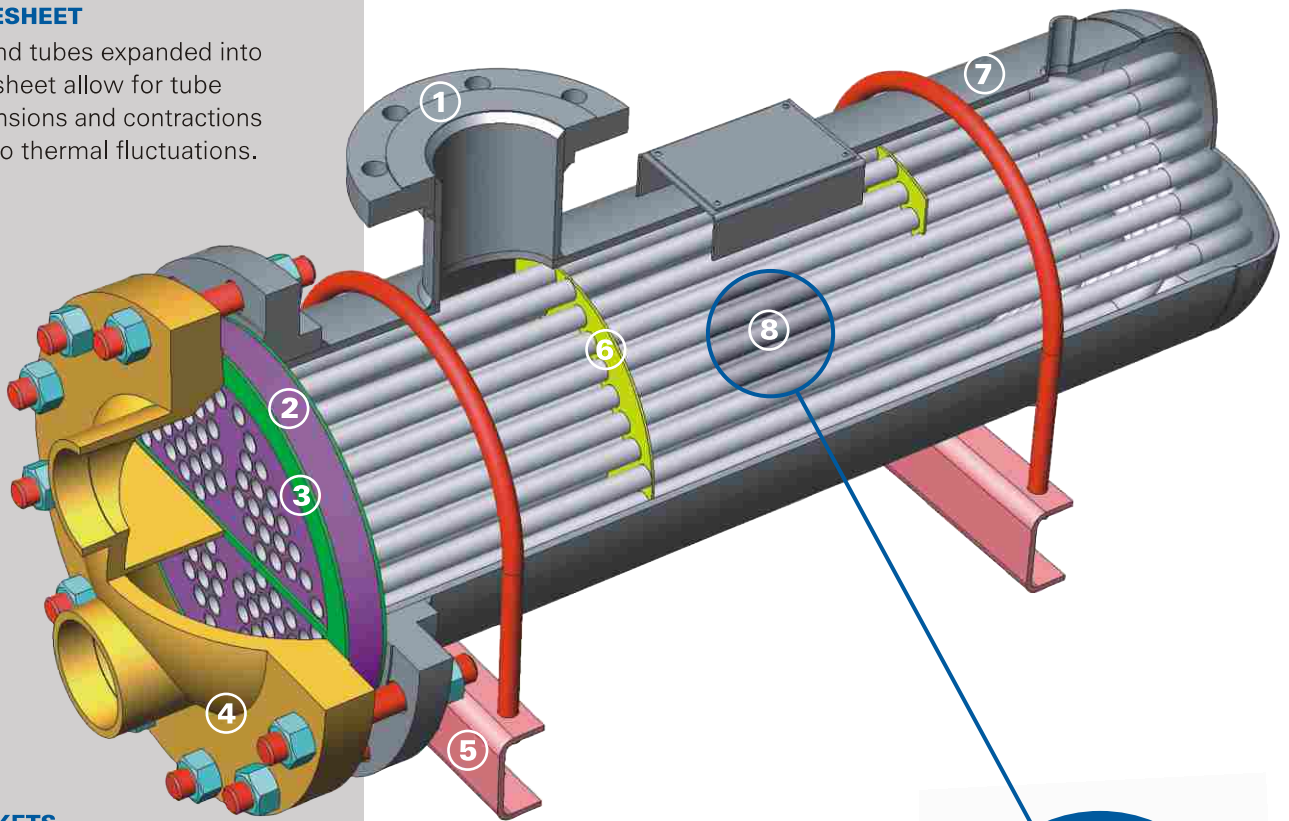
U-bend tubes expanded into tubesheet allow for tube expansions and contractions due to thermal fluctuations.

## 6 BAFFLES

Punched baffles with minimum clearances between tubes assure correct fluid flow and minimized bypass.

## 7 SHELL

Welded shell protected with high quality paint for corrosion resistance.



## 3 GASKETS

High quality compressed fibers (reusable).

## 4 HEAD

Standard cast-iron or steel head for heavy duty services (also available as a spare part).

## 5 MOUNTING

Saddles attached with standard units for quick & easy mounting.

## 8 TUBE BUNDLE

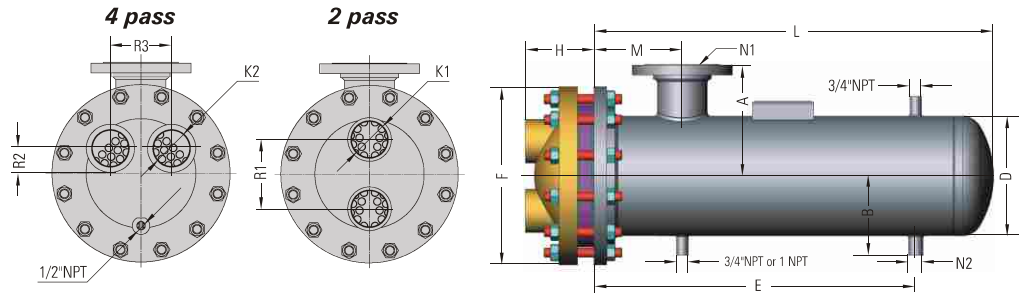
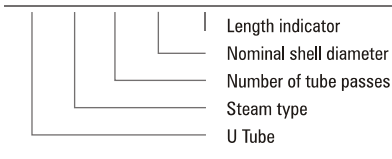
Stainless steel tubes allow for strong, durable performance over a wide range of applications. Unique tube bundle layout minimizes buildup problems at the edges and optimizes media flow in the units.

# Heat Exchangers Type PS steam to liquid

## 4 - 10 inch

### Model Number Key

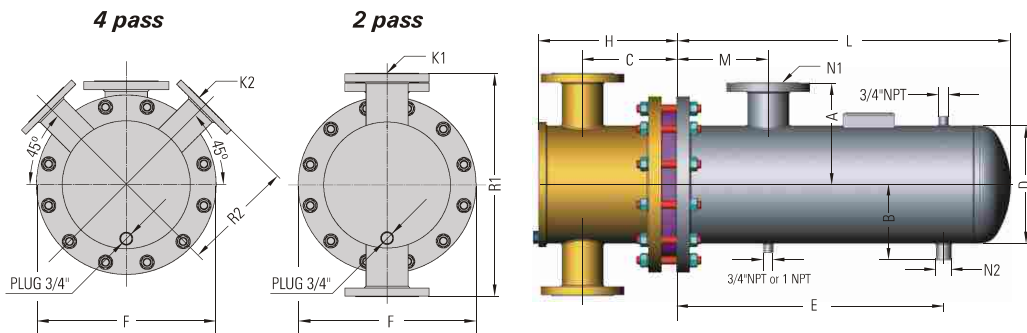
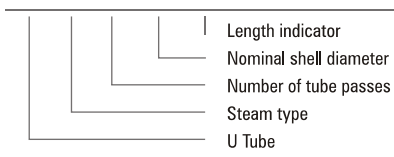
**P S 2 04 1**



Model Number		Cast Iron Heads [ in. ]						Dimensions [ in. ]									Htg. Surf.
2 Pass	4 Pass	2 Pass			4 Pass			2 Pass and 4 Pass									[ sq.ft ]
4 inch		R1	K1 FNPT	R3	K2	R2	H	D	F	M	E	B	A	L	N1	N2	
PS2041	PS4041	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	19 1/2	4	4	24 1/2	2\"NPT	1\"NPT	4.7
PS2042	PS4042	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	31 1/2	4	4	36 1/2	2\"NPT	1\"NPT	6.9
PS2043	PS4043	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	43 1/2	4	4	48 1/2	2\"NPT	1\"NPT	9.1
PS2044	PS4044	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	55 1/2	4	4	60 1/2	2\"NPT	1\"NPT	11.3
PS2045	PS4045	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	67 1/2	4	3 7/8	72 1/2	2\"NPT	1\"NPT	13.6
PS2046	PS4046	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	79 1/2	4	3 3/4	84 1/2	2\"NPT	1\"NPT	15.8
PS2047	PS4047	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	91 1/2	4	3 3/4	96 1/2	2\"NPT	1\"NPT	18
PS2048	PS4048	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	103 1/2	4	3 3/4	108 1/2	2\"NPT	1\"NPT	20.3
PS2049	PS4049	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	115 1/2	4	3 3/4	120 1/2	2\"NPT	1\"NPT	22.5
<b>6 inch</b>																	
PS2061	PS4061	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	18 1/2	4 7/8	4 7/8	25	3\"NPT	1\"NPT	10.7
PS2062	PS4062	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	30 1/2	4 7/8	4 7/8	37	3\"NPT	1\"NPT	15.9
PS2063	PS4063	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	42 1/2	4 7/8	5 3/4	49	3\"NPT	1\"NPT	21.1
PS2064	PS4064	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	54 1/2	4 7/8	5 3/4	61	3\"NPT	1\"NPT	26.3
PS2065	PS4065	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	66 1/2	4 7/8	5 9/16	73	3\"NPT	1\"NPT	31.5
PS2066	PS4066	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	78 1/2	4 7/8	5 9/16	85	3\"NPT	1\"NPT	36.7
PS2067	PS4067	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	90 1/2	4 7/8	5 9/16	97	3\"NPT	1\"NPT	41.9
PS2068	PS4068	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	102 1/2	4 7/8	5 9/16	109	3\"NPT	1\"NPT	47.1
PS2069	PS4069	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	114 1/2	4 7/8	5 9/16	121	3\"NPT	1\"NPT	52.3
<b>8 inch</b>																	
PS2081	PS4081	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	18	6	6	24	3\"NPT	1\"NPT	14.7
PS2082	PS4082	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	30	6	6 7/8	36	3\"NPT	1\"NPT	22.7
PS2083	PS4083	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	42	6	6 13/16	48	3\"NPT	1\"NPT	30.7
PS2084	PS4084	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	54	6	8 7/8	60	4\" Flange	1\"NPT	38.7
PS2085	PS4085	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	66	6	8 7/8	72	4\" Flange	1 1/4\"NPT	46.6
PS2086	PS4086	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	78	6	8 7/8	84	4\" Flange	1 1/4\"NPT	54.6
PS2087	PS4087	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	90	6	8 7/8	96	6\" Flange	1 1/4\"NPT	62.6
PS2088	PS4088	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	102	6	8 7/8	108	6\" Flange	1 1/4\"NPT	70.6
PS2089	PS4089	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	114	6	8 7/8	120	6\" Flange	1 1/4\"NPT	78.6
<b>10 inch</b>																	
PS2101	PS4101	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	17	7 1/8	7 15/16	24	4\" Flange	1\"NPT	23.7
PS2102	PS4102	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	29	7 1/8	10	36	4\" Flange	1\"NPT	37.7
PS2103	PS4103	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	41	7 1/8	10	48	4\" Flange	1 1/4\"NPT	51.5
PS2104	PS4104	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	53	7 1/8	10	60	6\" Flange	1 1/4\"NPT	65.5
PS2105	PS4105	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	65	7 1/8	10	72	6\" Flange	1 1/2\"NPT	79.4
PS2106	PS4106	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	77	7 1/8	10	84	6\" Flange	1 1/2\"NPT	93.3
PS2107	PS4107	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	88 1/2	7 1/8	10	96	6\" Flange	2\"NPT	107.2
PS2108	PS4108	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	100 1/2	7 1/8	10	108	6\" Flange	2\"NPT	121.1
PS2109	PS4109	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	112 1/2	7 1/8	10	120	6\" Flange	2\"NPT	135.1

### Model Number Key

**P S 2 04 1**



Model Number		Heads [ in. ]				Dimensions [ in. ]										Htg. Surf. [ sq.ft ]
2 Pass	4 Pass	2 Pass		4 Pass		2 Pass and 4 Pass										
12 inch		R1	K1	R2	K2	C	H	D	F	M	E	B	A	L	N1	N2
PS2121	PS4121	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	29	8 1/8	11	36 1/4	4" Flange	1 1/4"NPT
PS2122	PS4122	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	41	8 1/8	11	48 1/4	6" Flange	1 1/4"NPT
PS2123	PS4123	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	53	8 1/8	11	60 1/4	6" Flange	1 1/2"NPT
PS2124	PS4124	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	65	8 1/8	11	72 1/4	6" Flange	2"NPT
PS2125	PS4125	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	77	8 1/8	11	84 1/4	8" Flange	2"NPT
PS2126	PS4126	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	88	9	11	96 1/4	8" Flange	2 1/2"NPT
PS2127	PS4127	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	100	9	11	108 1/4	8" Flange	2 1/2"NPT
PS2128	PS4128	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	112	9	11	120 1/4	8" Flange	2 1/2"NPT
<b>14 inch</b>																
PS2141	PS4141	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	29	8 3/4	12	37 1/4	6" Flange	1 1/4"NPT
PS2142	PS4142	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	40 1/2	8 3/4	12	49 1/4	6" Flange	2"NPT
PS2143	PS4143	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	52 1/2	8 3/4	12	61 1/4	6" Flange	2"NPT
PS2144	PS4144	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	64 1/2	8 3/4	12	73 1/4	8" Flange	2"NPT
PS2145	PS4145	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	76	9 5/8	12	85 1/4	8" Flange	2 1/2"NPT
PS2146	PS4146	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	88	9 5/8	12	97 1/4	8" Flange	2 1/2"NPT
PS2147	PS4147	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	100	9 5/8	12	109 1/4	10" Flange	2 1/2"NPT
PS2148	PS4148	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	112	9 5/8	12	121 1/4	10" Flange	3"NPT
<b>16 inch</b>																
PS2161	PS4161	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	28 1/2	9 3/4	13	37	6" Flange	1 1/2"NPT
PS2162	PS4162	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	40	9 3/4	13	49	6" Flange	2"NPT
PS2163	PS4163	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	52	10 5/8	13	61	8" Flange	2 1/2"NPT
PS2164	PS4164	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	64	10 5/8	13	73	8" Flange	2 1/2"NPT
PS2165	PS4165	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	76	10 5/8	13	85	10" Flange	2 1/2"NPT
PS2166	PS4166	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	87 1/2	10 5/8	13	97	10" Flange	3"NPT
PS2167	PS4167	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	99 1/2	10 5/8	13	109	10" Flange	3"NPT
PS2168	PS4168	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	111 1/2	10 5/8	13	121	10" Flange	3"NPT
<b>18 inch</b>																
PS2181	PS4181	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	27 1/2	10 3/4	14	36 1/2	6" Flange	2"NPT
PS2182	PS4182	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	39 1/2	10 3/4	14	48 1/2	8" Flange	2"NPT
PS2183	PS4183	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	51	11 5/8	14	60 1/2	8" Flange	2 1/2"NPT
PS2184	PS4184	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	62 1/2	11 5/8	14	72 1/2	10" Flange	3"NPT
PS2185	PS4185	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	74 1/2	11 5/8	14	84 1/2	10" Flange	3"NPT
PS2186	PS4186	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	86 1/2	11 5/8	14	96 1/2	10" Flange	3"NPT
PS2187	PS4187	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	98 1/2	11 5/8	14	108 1/2	12" Flange	3"NPT
PS2188	PS4188	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	110 1/2	12	14	120 1/2	12" Flange	4" Flange

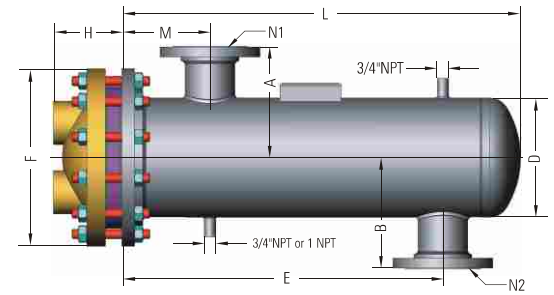
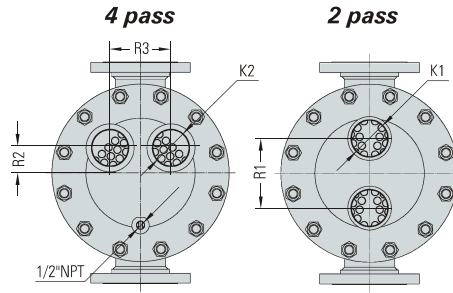
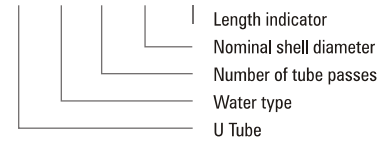
Model Number		Heads [ in. ]						Dimensions [ in. ]										Htg. Surf.
2 Pass	4 Pass	2 Pass		4 Pass				2 Pass and 4 Pass										[ sq.ft ]
20 inch		R1	K1	R2	K2	C	H	D	F	M	E	B	A	L	N1	N2	[ sq.ft ]	
PS2201	PS4201	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	27 1/2	11 3/4	15	36 3/4	8" Flange	2"NPT	163.9	
PS2202	PS4202	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	39	12 2/3	15	48 3/4	8" Flange	2 1/2"NPT	223.6	
PS2203	PS4203	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	50 1/2	12 2/3	15	60 3/4	10" Flange	3"NPT	283.3	
PS2204	PS4204	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	62 1/2	12 2/3	15	72 3/4	10" Flange	3"NPT	343	
PS2205	PS4205	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	74 1/2	12 2/3	15	84 3/4	12" Flange	3"NPT	402.7	
PS2206	PS4206	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	86 1/2	13	15	96 3/4	12" Flange	4" Flange	462.4	
PS2207	PS4207	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	98 1/2	13	15	108 3/4	12" Flange	4" Flange	522.2	
PS2208	PS4208	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	110 1/2	13	17	120 3/4	14" Flange	4" Flange	581.9	
<b>22 inch</b>																		
PS2221	PS4221	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	25 3/8	16	17	38 3/8	12" Flange	4" Flange	193.5	
PS2222	PS4222	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	37 3/8	16	17	50 3/8	12" Flange	4" Flange	265	
PS2223	PS4223	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	49 3/8	16	17	62 3/8	12" Flange	4" Flange	336.5	
PS2224	PS4224	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	61 3/8	16	17	74 3/8	12" Flange	4" Flange	408	
PS2225	PS4225	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	73 3/8	16	17	86 3/8	12" Flange	4" Flange	479.5	
PS2226	PS4226	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	85 3/8	16	17	98 3/8	12" Flange	4" Flange	551	
PS2227	PS4227	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	15	97 3/8	16	18	110 3/8	14" Flange	4" Flange	622.5	
PS2228	PS4228	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	15	109 3/8	16	18	122 3/8	14" Flange	4" Flange	694	
<b>24 inch</b>																		
PS2241	PS4241	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	25	17	18	38	12" Flange	4" Flange	236	
PS2242	PS4242	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	37	17	18	50	12" Flange	4" Flange	324	
PS2243	PS4243	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	49	17	18	62	12" Flange	4" Flange	412	
PS2244	PS4244	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	61	17	18	74	12" Flange	4" Flange	500	
PS2245	PS4245	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	73	17	18	86	12" Flange	4" Flange	588	
PS2246	PS4246	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	85	17	18	98	12" Flange	4" Flange	676	
PS2247	PS4247	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	15	97	17	19	110	14" Flange	5" Flange	764	
PS2248	PS4248	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	15	109	17	19	122	14" Flange	5" Flange	852	
<b>26 inch</b>																		
PS2261	PS4261	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	23 3/4	18	20	36	14" Flange	5" Flange	288.6	
PS2262	PS4262	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	35 3/4	18	20	48	14" Flange	5" Flange	393.4	
PS2263	PS4263	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	47 3/4	18	20	60	14" Flange	5" Flange	500.2	
PS2264	PS4264	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	59 3/4	18	20	72	14" Flange	5" Flange	607	
PS2265	PS4265	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	71 3/4	18	20	84	14" Flange	5" Flange	713.8	
PS2266	PS4266	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	83 3/4	18	20	96	14" Flange	5" Flange	820.6	
PS2267	PS4267	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	16	95 3/4	18	21	108	16" Flange	6" Flange	927.4	
PS2268	PS4268	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	16	107 3/4	18	21	120	16" Flange	6" Flange	1034.4	
<b>30 inch</b>																		
PS2301	PS4301	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	23	20	22	38 1/2	16" Flange	6" Flange	377.6	
PS2302	PS4302	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	35	20	22	50 1/2	16" Flange	6" Flange	520.5	
PS2303	PS4303	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	47	20	22	62 1/2	16" Flange	6" Flange	663.4	
PS2304	PS4304	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	59	20	22	74 1/2	16" Flange	6" Flange	806.3	
PS2305	PS4305	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	71	20	22	86 1/2	16" Flange	6" Flange	949.2	
PS2306	PS4306	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	83	20	22	98 1/2	16" Flange	6" Flange	1092	
PS2307	PS4307	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	17	95	20	22	110 1/2	18" Flange	8" Flange	1235	
PS2308	PS4308	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	17	107	20	22	122 1/2	18" Flange	8" Flange	1378	

# Heat Exchangers Type PW liquid to liquid

## 4 - 10 inch

### Model Number Key

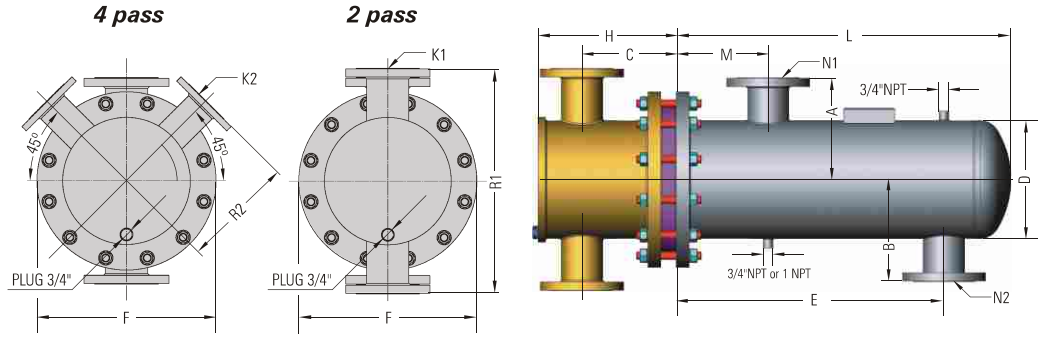
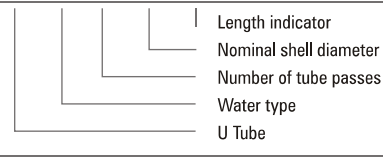
**P W 2 04 1**



Model Number		Cast Iron Heads [ in. ]						Dimensions [ in. ]								Htg. Surf.	
2 Pass	4 Pass	2 Pass		4 Pass				2 Pass and 4 Pass								[ sq.ft ]	
4 inch		R1	K1 FNPT	R3	K2	R2	H	D	F	M	E	B	A	L	N1	N2	
PW2041	PW4041	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	19 1/2	3 3/4	3 3/4	24 1/2	1 1/2" NPT	1 1/2" NPT	4.7
PW2042	PW4042	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	31 1/2	3 3/4	3 3/4	36 1/2	1 1/2" NPT	1 1/2" NPT	6.9
PW2043	PW4043	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	43 1/2	3 3/4	3 3/4	48 1/2	1 1/2" NPT	1 1/2" NPT	9.1
PW2044	PW4044	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	55 1/2	3 3/4	3 3/4	60 1/2	1 1/2" NPT	1 1/2" NPT	11.3
PW2045	PW4045	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	67 1/2	3 3/4	3 3/4	72 1/2	1 1/2" NPT	1 1/2" NPT	13.6
PW2046	PW4046	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	79 1/2	3 3/4	3 3/4	84 1/2	1 1/2" NPT	1 1/2" NPT	15.8
PW2047	PW4047	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	91 1/2	3 3/4	3 3/4	96 1/2	1 1/2" NPT	1 1/2" NPT	18
PW2048	PW4048	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	103 1/2	3 3/4	3 3/4	108 1/2	1 1/2" NPT	1 1/2" NPT	20.3
PW2049	PW4049	2 1/2	1 1/2	2 3/8	1	7/8	2 7/8	4 1/2	9	5	115 1/2	3 3/4	3 3/4	120 1/2	1 1/2" NPT	1 1/2" NPT	22.5
<b>6 inch</b>																	
PW2061	PW4061	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	18 1/2	4 7/8	4 7/8	25	2 1/2" NPT	2 1/2" NPT	10.7
PW2062	PW4062	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	30 1/2	4 7/8	4 7/8	37	2 1/2" NPT	2 1/2" NPT	15.9
PW2063	PW4063	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	42 1/2	4 7/8	4 7/8	49	2 1/2" NPT	2 1/2" NPT	21.1
PW2064	PW4064	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	54 1/2	4 7/8	4 7/8	61	2 1/2" NPT	2 1/2" NPT	26.3
PW2065	PW4065	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	66 1/2	4 7/8	4 7/8	73	2 1/2" NPT	2 1/2" NPT	31.5
PW2066	PW4066	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	78 1/2	4 7/8	4 7/8	85	2 1/2" NPT	2 1/2" NPT	36.7
PW2067	PW4067	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	90 1/2	4 7/8	4 7/8	97	2 1/2" NPT	2 1/2" NPT	41.9
PW2068	PW4068	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	102 1/2	4 7/8	4 7/8	109	2 1/2" NPT	2 1/2" NPT	47.1
PW2069	PW4069	4	2	3 3/4	1 1/2	1 1/4	3 7/16	6 5/8	11	5	114 1/2	4 7/8	4 7/8	121	2 1/2" NPT	2 1/2" NPT	52.3
<b>8 inch</b>																	
PW2081	PW4081	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	18	7 3/8	7 3/8	24	4" Flange	4" Flange	14.7
PW2082	PW4082	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	30	7 3/8	7 3/8	36	4" Flange	4" Flange	22.7
PW2083	PW4083	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	42	7 3/8	7 3/8	48	4" Flange	4" Flange	30.7
PW2084	PW4084	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	54	7 3/8	7 3/8	60	4" Flange	4" Flange	38.7
PW2085	PW4085	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	66	7 3/8	7 3/8	72	4" Flange	4" Flange	46.6
PW2086	PW4086	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	78	7 3/8	7 3/8	84	4" Flange	4" Flange	54.6
PW2087	PW4087	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	90	7 3/8	7 3/8	96	4" Flange	4" Flange	62.6
PW2088	PW4088	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	102	7 3/8	7 3/8	108	4" Flange	4" Flange	70.6
PW2089	PW4089	5	3	4	2	2	4 1/4	8 5/8	13 1/2	8	114	7 3/8	7 3/8	120	4" Flange	4" Flange	78.6
<b>10 inch</b>																	
PW2101	PW4101	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	17	8 1/2	8 1/2	24	4" Flange	4" Flange	23.7
PW2102	PW4102	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	29	8 1/2	8 1/2	36	4" Flange	4" Flange	37.7
PW2103	PW4103	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	41	8 1/2	8 1/2	48	4" Flange	4" Flange	51.5
PW2104	PW4104	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	53	8 1/2	8 1/2	60	4" Flange	4" Flange	65.5
PW2105	PW4105	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	65	8 1/2	8 1/2	72	4" Flange	4" Flange	79.4
PW2106	PW4106	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	77	8 1/2	8 1/2	84	4" Flange	4" Flange	93.3
PW2107	PW4107	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	88 1/2	8 1/2	8 1/2	96	4" Flange	4" Flange	107.2
PW2108	PW4108	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	100 1/2	8 1/2	8 1/2	108	4" Flange	4" Flange	121.1
PW2109	PW4109	6 1/4	3	5 1/2	3	2 1/4	4 7/8	10 3/4	16	8	112 1/2	8 1/2	8 1/2	120	4" Flange	4" Flange	135.1

### Model Number Key

**P W 2 04 1**

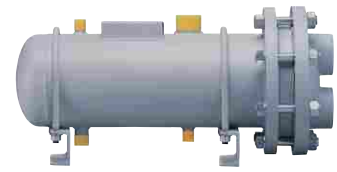


Model Number		Heads [ in. ]				Dimensions [ in. ]											Htg. Surf.
2 Pass	4 Pass	2 Pass		4 Pass		2 Pass and 4 Pass											[ sq.ft ]
12 inch		R1	K1	R2	K2	C	H	D	F	M	E	B	A	L	N1	N2	[ sq.ft ]
PW2121	PW4121	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	29	11	11	36 1/4	4" Flange	4" Flange	58.6
PW2122	PW4122	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	41	11	11	48 1/4	6" Flange	6" Flange	79
PW2123	PW4123	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	53	11	11	60 1/4	6" Flange	6" Flange	99.5
PW2124	PW4124	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	65	11	11	72 1/4	6" Flange	6" Flange	119.9
PW2125	PW4125	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	77	11	11	84 1/4	8" Flange	8" Flange	140.3
PW2126	PW4126	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	88	11	11	96 1/4	8" Flange	8" Flange	160.8
PW2127	PW4127	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	100	11	11	108 1/4	8" Flange	8" Flange	181.2
PW2128	PW4128	24	4" Flange	12	3" Flange	10 1/8	14 5/8	12 3/4	19	10	112	11	11	120 1/4	8" Flange	8" Flange	201.6
<b>14 inch</b>																	
PW2141	PW4141	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	29	12	12	37 1/4	6" Flange	6" Flange	75.7
PW2142	PW4142	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	40 1/2	12	12	49 1/4	6" Flange	6" Flange	102.4
PW2143	PW4143	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	52 1/2	12	12	61 1/4	6" Flange	6" Flange	129.1
PW2144	PW4144	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	64 1/2	12	12	73 1/4	8" Flange	8" Flange	155.8
PW2145	PW4145	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	76	12	12	85 1/4	8" Flange	8" Flange	182.5
PW2146	PW4146	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	88	12	12	97 1/4	8" Flange	8" Flange	209.2
PW2147	PW4147	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	100	12	12	109 1/4	10" Flange	10" Flange	236
PW2148	PW4148	26	6" Flange	13	4" Flange	11 5/8	16 5/8	14	21	10	112	12	12	121 1/4	10" Flange	10" Flange	262.7
<b>16 inch</b>																	
PW2161	PW4161	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	28 1/2	13	13	37	6" Flange	6" Flange	104.5
PW2162	PW4162	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	40	13	13	49	6" Flange	6" Flange	141.4
PW2163	PW4163	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	52	13	13	61	8" Flange	8" Flange	178.4
PW2164	PW4164	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	64	13	13	73	8" Flange	8" Flange	215.3
PW2165	PW4165	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	76	13	13	85	10" Flange	10" Flange	252.2
PW2166	PW4166	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	87 1/2	13	13	97	10" Flange	10" Flange	289.1
PW2167	PW4167	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	99 1/2	13	13	109	10" Flange	10" Flange	326
PW2168	PW4168	28 1/2	6" Flange	14 1/4	4" Flange	12 1/8	17 3/8	16	23 1/2	11	111 1/2	13	13	121	10" Flange	10" Flange	363
<b>18 inch</b>																	
PW2181	PW4181	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	27 1/2	14	14	36 1/2	6" Flange	6" Flange	130.7
PW2182	PW4182	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	39 1/2	14	14	48 1/2	8" Flange	8" Flange	177
PW2183	PW4183	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	51	14	14	60 1/2	8" Flange	8" Flange	223.4
PW2184	PW4184	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	62 1/2	14	14	72 1/2	10" Flange	10" Flange	269.7
PW2185	PW4185	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	74 1/2	14	14	84 1/2	10" Flange	10" Flange	316.1
PW2186	PW4186	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	86 1/2	14	14	96 1/2	10" Flange	10" Flange	362.4
PW2187	PW4187	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	98 1/2	14	14	108 1/2	12" Flange	12" Flange	408.8
PW2188	PW4188	30	6" Flange	15	4" Flange	12 3/4	18	18	25	13	110 1/2	14	14	120 1/2	12" Flange	12" Flange	455.1



Model Number		Heads [ in. ]						Dimensions [ in. ]									Htg. Surf.
2 Pass	4 Pass	2 Pass		4 Pass		2 Pass and 4 Pass									[ sq.ft ]		
20 inch		R1	K1	R2	K2	C	H	D	F	M	E	B	A	L	N1	N2	[ sq.ft ]
PW2201	PW4201	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	27 1/2	15	15	36 3/4	8" Flange	8" Flange	163.9
PW2202	PW4202	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	39	15	15	48 3/4	8" Flange	8" Flange	223.6
PW2203	PW4203	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	50 1/2	15	15	60 3/4	10" Flange	10" Flange	283.3
PW2204	PW4204	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	62 1/2	15	15	72 3/4	10" Flange	10" Flange	343
PW2205	PW4205	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	74 1/2	15	15	84 3/4	12" Flange	12" Flange	402.7
PW2206	PW4206	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	86 1/2	15	15	96 3/4	12" Flange	12" Flange	462.4
PW2207	PW4207	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	98 1/2	15	15	108 3/4	12" Flange	12" Flange	522.2
PW2208	PW4208	32 1/2	6" Flange	16 1/4	4" Flange	14 1/8	19 5/8	20	27 1/2	13	110 1/2	17	17	120 3/4	14" Flange	14" Flange	581.9
<b>22 inch</b>																	
PW2221	PW4221	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	25 3/8	17	17	38 3/8	12" Flange	12" Flange	193.5
PW2222	PW4222	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	37 3/8	17	17	50 3/8	12" Flange	12" Flange	265
PW2223	PW4223	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	49 3/8	17	17	62 3/8	12" Flange	12" Flange	336.5
PW2224	PW4224	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	61 3/8	17	17	74 3/8	12" Flange	12" Flange	408
PW2225	PW4225	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	73 3/8	17	17	86 3/8	12" Flange	12" Flange	479.5
PW2226	PW4226	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	14	85 3/8	17	17	98 3/8	12" Flange	12" Flange	551
PW2227	PW4227	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	15	97 3/8	18	18	110 3/8	14" Flange	14" Flange	622.5
PW2228	PW4228	35	10" Flange	17 1/4	8" Flange	17	24 1/2	22	29 1/2	15	109 3/8	18	18	122 3/8	14" Flange	14" Flange	694
<b>24 inch</b>																	
PW2241	PW4241	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	25	18	18	38	12" Flange	12" Flange	236
PW2242	PW4242	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	37	18	18	50	12" Flange	12" Flange	324
PW2243	PW4243	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	49	18	18	62	12" Flange	12" Flange	412
PW2244	PW4244	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	61	18	18	74	12" Flange	12" Flange	500
PW2245	PW4245	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	73	18	18	86	12" Flange	12" Flange	588
PW2246	PW4246	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	14	85	18	18	98	12" Flange	12" Flange	676
PW2247	PW4247	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	15	97	19	19	110	14" Flange	14" Flange	764
PW2248	PW4248	37 1/2	10" Flange	18 1/2	8" Flange	17 7/8	25 5/8	24	32	15	109	19	19	122	14" Flange	14" Flange	852
<b>26 inch</b>																	
PW2261	PW4261	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	23 3/4	20	20	36	14" Flange	14" Flange	288.6
PW2262	PW4262	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	35 3/4	20	20	48	14" Flange	14" Flange	393.4
PW2263	PW4263	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	47 3/4	20	20	60	14" Flange	14" Flange	500.2
PW2264	PW4264	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	59 3/4	20	20	72	14" Flange	14" Flange	607
PW2265	PW4265	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	71 3/4	20	20	84	14" Flange	14" Flange	713.8
PW2266	PW4266	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	15	83 3/4	20	20	96	14" Flange	14" Flange	820.6
PW2267	PW4267	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	16	95 3/4	21	21	108	16" Flange	16" Flange	927.4
PW2268	PW4268	37	12" Flange	18 1/4	8" Flange	17	24 3/4	26	34 1/4	16	107 3/4	21	21	120	16" Flange	16" Flange	1034.4
<b>30 inch</b>																	
PW2301	PW4301	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	23	22	22	38 1/2	16" Flange	16" Flange	377.6
PW2302	PW4302	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	35	22	22	50 1/2	16" Flange	16" Flange	520.5
PW2303	PW4303	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	47	22	22	62 1/2	16" Flange	16" Flange	663.4
PW2304	PW4304	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	59	22	22	74 1/2	16" Flange	16" Flange	806.3
PW2305	PW4305	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	71	22	22	86 1/2	16" Flange	16" Flange	949.2
PW2306	PW4306	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	16	83	22	22	98 1/2	16" Flange	16" Flange	1092
PW2307	PW4307	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	17	95	22	22	110 1/2	18" Flange	18" Flange	1235
PW2308	PW4308	42	14" Flange	20 3/4	10" Flange	19 5/8	28 7/8	30	38 3/4	17	107	22	22	122 1/2	18" Flange	18" Flange	1378

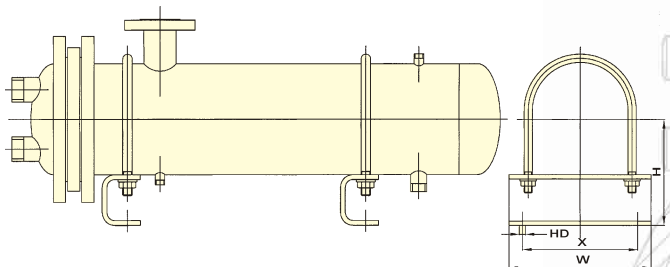
# Technical information



Materials of Construction		
	Standard	Optional
Shell	Steel	Stainless Steel (304/316)
Tubes	Stainless Steel (304)	Copper, SS 316, 90/10 CuNi
Tubesheet	Steel	Stainless Steel (304/316)
Connections	Steel	Stainless Steel (304/316)
Head	Cast Iron / Steel	Stainless Steel (304/316)
Gaskets	Non-asbestos, pressed fiber	

Design Parameters					
	Standard			Optional	
	Design Pressure (PSI)	Test Pressure (PSI)	Design Temperature (°F)	Design Pressure (PSI)	Design Temperature (°F)
Shell	150	300	375	300	421
Tubes	150	300	375	400	448

## Typical saddle dimensions



Unit Size	Dimensions			
	H	W	X	HD
4	5 1/4	6 15/16	5 1/2	1/2
6	6 5/16	9 1/4	7 1/2	5/8
8	7 5/16	11 1/4	9	5/8
10	8 3/8	13 5/8	10	3/4
12	9 3/8	15 5/8	11	3/4
14	10	17	12	3/4
16	12	19	13	3/4
18	13	21	14	3/4
20	14	23	14	3/4
22	17	25	18	7/8
24	18	27	19	7/8
26	19	30	20	7/8
30	21	33	22	7/8

Note: Adjustable saddles shown in preferred locations.

## All standard units are available with:

- 2 or 4 pass construction with lengths up to 10 ft. and shell diameters up to 30 in.
- Heat transfer area ranging from 5 to 1380 sq. ft. in 2 and 4 pass units.
- Removable U-tube bundles made from 3/4" stainless steel tubing.
- Sturdy, rugged cast-iron or steel head.
- Steel shell body.
- Mounting saddles.

All heat exchangers are designed and manufactured according to ASME Code, Section VIII, Div. 1.

