FLO FAB
SINCE 1981

Heat Exchangers

Plate and Frame

FFW AHRI

Shell and Tube

W & S

Brazed

FFB

www.flofab.com

001-cat-2016-he

Go to www.flofab.com in Our Products Section to see the Master Spec - http://www.arcomnet.com/masterspec/

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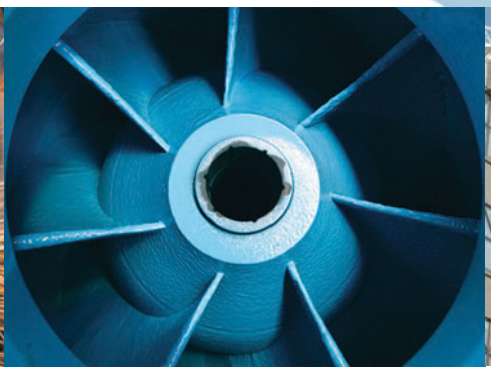
HISTORY

Flo Fab was established in 1981 by Denis Gauvreau who created and developed the products line and constantly being perfected by Marc Gauvreau, as well as by a team of professional engineers and designers. It's a combination of existing designs from several renowned products and the innovative ideas of a new generation professionals.

Through the years, Flo Fab has acquired several companies and service entities including : AQUA-PROFAB (ASME Tanks manufacturer), MÉNARD, LÉONARD ÉLECTRIQUE, PMA. , Furthermore Flo Fab purchased equipment, fabrication designs and patterns from IDEALCO, a manufacturer of shell and tube type heat exchangers.
The after sales services, sales, engineering, R&D, production, quality control, accounting and administration departments of all the above companies share the same location.

In December 2014, Marc Gauvreau, son of the founder, acquired all shares of The company. Flo Fab and is constantly investing in new state of the art innovations new product like the XRI series and Prefab Skid for Hydronic Hearing 8 cooling system, pumping systems. This has allowed Flo Fab to retain competent and experienced staff of professionals with varied and specialized abilities that constantly work on improving our existing products and add new engineered solutions that exceeding customer's expectations . Flo Fab has grown quite rapidly and now proudly offers of a wide range of products available directly from one manufacturer. This includes pumps & pump packages, tanks, heat exchangers & hydronic accessories. This allows each project stakeholders to enjoy economical savings, peace of mind, best value for their investment and optimized total cost of ownership.


Product Specifications

FFW Series

PLATE HEAT EXCHANGERS WITH GASKETS

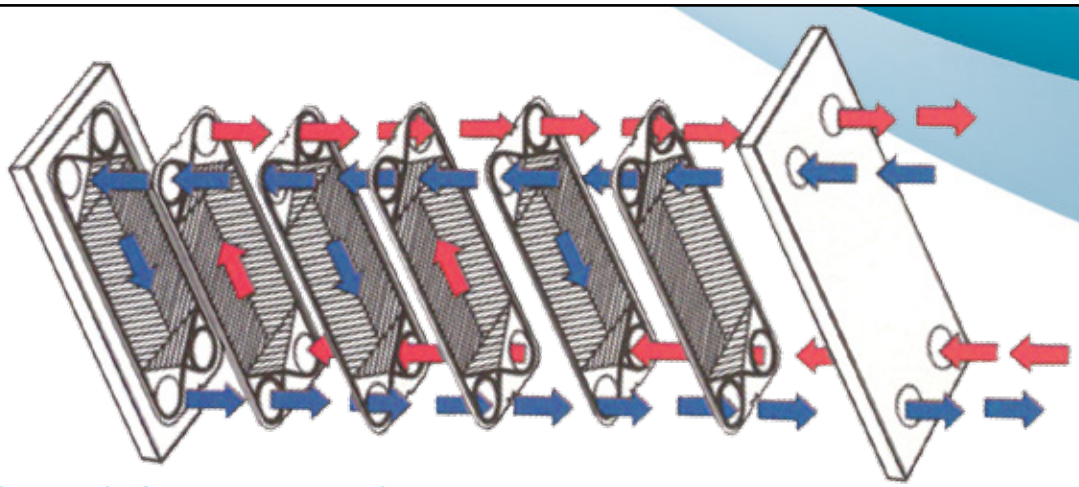
Water is the must effective media for heat transfer. In typical HVAC installations, primary loops circulate water throughout a building to transport energy from the source to the building load. A chiller or central cooling source is used to remove heat and a boiler or central heating source is used to add heat to these primary loops. Heat exchangers transfer heat from the building's primary loops to secondary loops and can also serves as a separation device to reduce system costs. These loops can serve auxiliary equipment like heating or cooling secondary systems, potable water heating, and pool water heating systems. Secondary loops provide better temperature control, differentiated system operating pressures. Separation of water and glycol loops. separation of primary water and potable water loops. and separation of potentially contaminated open systems to closed loops. In all cases, the heat exchanger is relied on to transfer as much heat as possible at the lowest cost.

HOW IT WORKS ?

The Flo Fab heat exchanger consists of stamped plates designed to maximize heat transfer. Gaskets are fixed between the plates to contain the two separate fluids. These fluids flow alternately between every other plate, counter-flowing to produce the greatest rate of heat transfer and provide the closest temperature approach to the incoming cold fluid. The stamped plates use enhanced surface area flow to create scrubbing turbulence that increase the U-coefficient and increases heat transfer.

The heat transfer plates are typically stainless steel or titanium and vary in thickness from 0.4mm to 0.6mm. This allows for tailored designs of all pressures and corrosion allowances for any job. Glueless gaskets are made from specialty elastomers and applied to the plates with an integrated clip for a clean, reliable installation. The plates and gaskets are then constrained by a heavy-duty base frame that is ASME—certified to stringent pressure vessel standards.

Heat transfer plates are available in many lengths, widths. connection sizes, thicknesses and stamped configurations that create various depths and angles to maximize heat transfer and reduce installed cost. The most common plate angles are 30° and 60°. The 30° plate creates a tortuous path for greater heat transfer, but with a higher pressure drop than the 60° plate. Flo Fab' sizing software will calculate the optimum heat transfer plate and plate sequencing for any application.



- FFW Series

MATERIAL OF CONSTRUCTION

PLATES:
Stainless Steel (304SS or 316SS)
or Titanium
GASKETS:
Nitrile, EPDM

CERTIFICATION

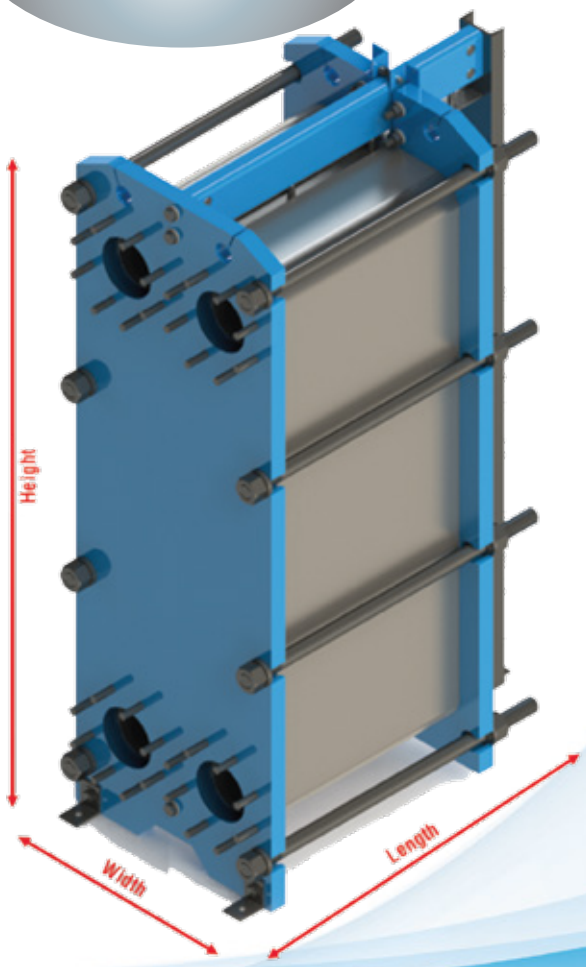
SAFETY:
ASME for pressure vessels
CRN for Canadian Registration
AHRI upon Request

TYPICAL SPECIFICATIONS

Fumish and install, as shown on plans, a Flo Fab model _____ to heat or cool with the capacity and pressure/temperature rating as detailed in the schedule. The heat exchanger must be constructed with most recent addendum of Section Vlll of the ASME Boiler and Pressure Vessel Code.

Each heat exchanger shall be Flo Fab Model _____ or approved equal.

PLATE AND FRAME - HEAT EXCHANGERS



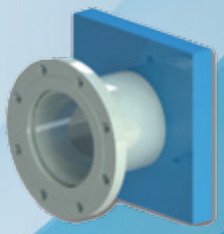
DESIGN LIMITS

MAX FLOW:
10,000 GPM // 2271 m^3/hr
DUTY MAX:
50,000,000 BTU/HR
MAX PRESSURE:
150/300/400 PSI // 1034/2068/2758 kPa
MAX TEMPERATURE:
320°F // 160°C

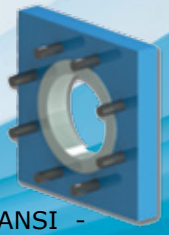
CONNECTION TYPES


NPT - Steel (Internal)


NPT - Alloy (External)


ANSI - Flanged (Optional)


ANSI - Studded Steel


ANSI - Studded Alloy Lined

√	Model Number	Dimensions										Weight			
		Max. Flowrate (GPM)	Max. Flowrate (m^3/h)	Height (in)	Height (mm)	Width (in)	Width (mm)	Max. Length (in)	Max. Length (mm)	Conn. Size	Area Max.	Base (lbs)	Base (kg)	Per Plate (lbs)	Per Plate (kg)
	FFW10	60	13.63	21	533	8	203	18	457	1	30	150	68	0.5	0.23
	FFW20	250	56.77	35	889	14	356	60	1524	2	400	500	227	2.0	0.91
	FFW21	250	56.77	35	889	14	356	60	1524	2	500	500	227	1.5	0.68
	FFW40	1000	227.09	44	1118	19	483	84	2134	4	600	1000	454	3.5	1.59
	FFW41	1000	227.09	44	1118	19	483	84	2134	4	1000	1000	454	3.0	1.36
	FFW45	1000	227.09	74	1880	19	483	96	2438	4	2000	1600	726	6.0	2.72
	FFW60	2200	499.60	75	1905	25	635	108	2743	6	2400	3000	1361	8.0	3.63
	FFW61	2200	499.60	75	1905	25	635	108	2743	6	4200	3000	1361	7.0	3.18
	FFW80	4000	908.37	88	2235	30	762	192	4877	8	4500	3000	1361	11.0	4.99
	FFW81	4000	908.37	88	2235	30	762	192	4877	8	5000	3000	1361	10.0	4.54
	FFW101	5000	1135.46	109	2769	35	889	216	5486	10	11000	5500	2495	16.0	7.26
	FFW140	10000	2270.92	112	2845	45	1143	240	6096	14	12500	8000	3629	20.0	9.07
	Double Wall Models														
	FFW10DW	60	13.63	21	533	8	203	18	457	1	30	150	60	0.5	0.23
	FFW20DW	250	56.77	35	889	14	356	60	1524	2	400	500	250	2.0	0.91
	FFW21DW	250	56.77	35	889	14	356	60	1524	2	500	500	250	2.0	0.91
	FFW41DW	1000	227.09	44	1118	19	483	84	2134	4	1000	1000	1000	3.5	1.59
	FFW45DW	1000	227.09	74	1880	19	483	96	2438	4	2000	1600	1000	6.0	2.72
	FFW61DW	2200	499.60	75	1905	25	635	108	2743	6	4200	3000	2200	7.0	3.18

Other size available upon request.

"With over 35 years of experience in pressure vessel design and manufacture, our goal is to provide sustainable **energy saving solutions** that help make a greener HVAC world."

Lower Air Conditionning Costs
The Flo Fab heat exchanger can result in 30% annual energy savings tor cooling when used as a water side economizer to supplement or replace a mechanical chiller. The greatest savings are realized at installations that have year-round chilled water requirements such as data centers and hospitals.

Lower Pumping Costs
Flo Fab uses only the most efficient heat transfer plate designs to maximize temperature cross and allow the closest approach temperatures that ensure the greatest percentage ot heat recovery. The shape of the corrugation in FloFab heat transter plates maintains high turbulence at lower velocities, which allows lower flows to have high rates of heat transfer. This improved efficiency, coupled with the advantages of variable speed pumping, can result in tremendous energy savings.

The energy used by the pump sewing the heat exchanger can be reduced as much as 50% by lowering the pressure drop and/or the flow through the heat exchanger while maintaining the required amount of heat transfer.

Lowest installed Cost
Flo Fab heat exchangers are less expensive, more compact, and easier to install because they utilize only the most efficient heat transfer plate designs. Connections are on the fixed end to reduce first cost installation and increase serviceability. The units are fully assembled and ASME hydrostatically tested. Flo Fab can then be disassembled tor delivery through a small opening and reassembled on site.

Low Risk
All units come certified by the appropriate safety code (ASME. CRN. etc..). Every Flo Fab heat exchanger is sized with 20% excess plate capacity so plates can be added to increase the system performance. Heat transfer plates are corrosion resistant materials. The gaskets are vented to the outside so there is no cross contamination between fluids If a gasket fails. For potable water applications. double wall heat transfer plates are used to prevent cross contamination it there is a breach of a plate. Every unit is provided with a safety shield that surrounds the plates and gaskets.

Less Maintenance
All heat exchangers require preventative maintenance and service. Flo Fab exchangers are designed tor easy serviceability. All plate hanging surtaces are stainless steel so plates slide easily. Heat transfer plates have either comer inter-locking tabs or a live point alignment system to matte closing and sealing the unit consistem. Glue-free gaskets secure around the outer edge of the heat transter plate. This design allows tor the ability to perform a visual check to confirm the gasket is in the proper location tor best sealing and trouble free operation.

Product Specifications

S & W Series

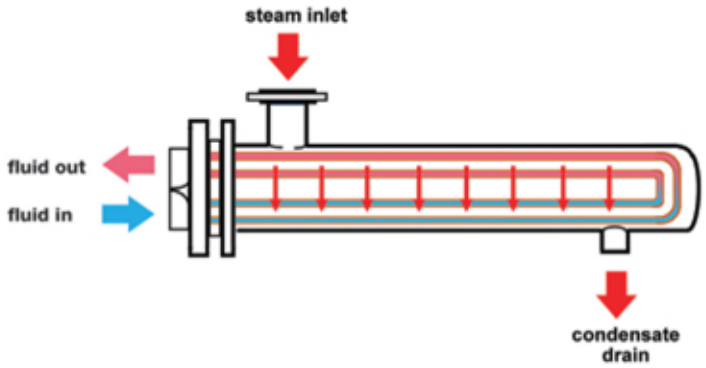
Steam and water are effective media for transferring heat. In typical HVAC heat applications, steam or hot water primary loops distribute heat from the central boiler out to secondary loops through U-tube style heat exchangers. Heat exchangers transfer heat from the building's primary loops to secondary loops and can also serve as separation devices to reduce system costs. These loops serve auxiliary equipment like heating systems, potable water heating and pool water heating. The heat exchangers provide better temperature control, differential system operating pressures and separation of steam, water, glycol and potable water systems. In all cases, the heat exchanger is relied on to transfer as much heat as possible at the lowest cost.

How it works

The Flo Fab' shell and tube heat exchanger consists of two sides for two different fluids. The Tube Side fluid flows inside the tubes and is diverted by the heat exchanger head located on the end into two or four passes or circuits. The Shell Side fluid flows on the outside of the tubes and is contained by the shell where it is diverted by baffles or tube supports that also carry the weight of the tubes. The wall of the tubes is the heat transfer surface. The tube bundle consists of U-shaped tubes confined at one end by the tube sheet that separates the two fluids. The tube bundle is assembled into a steel shell and head that forms a two sided heat exchanger.

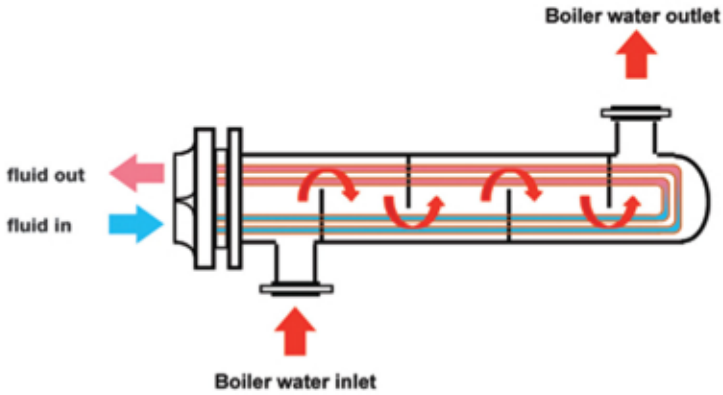
Flo Fab' shell and tube heat exchangers comes in two different configurations depending on the shell side fluid:

S Steam in Shell



The S works by introducing steam (water vapor) into the shell where it naturally distributes across the outer tube surface and condenses and heats the water inside the tubes. The condensate exits through a drain in the shell. Tube supports carry the weight of the tubes and do not divert the steam.

W Boiler Water in Shell



The W works by introducing boiler water into the shell where it is diverted back and forth across the tube surface by baffles, heating the water inside the tubes. The distance between the baffles is called the «battle spacing," which controls the rate of heat transfer and pressure drop of the shell side fluid.

Material of Construction

TUBES
Standard: Stainless Steel // Option:Cooper or Cu Ni

SHELL
Standard: Steel // Option: Stainless

TUBESHEETS
Standard: Steel // Option:Stainless, Brass, 90/10 Cu Ni

HEADS
Standard: Cast Iron // Option: Steel, Stainless

Certification

SAFETY
ASME for pressure vessels
CRN for Canadian Registration

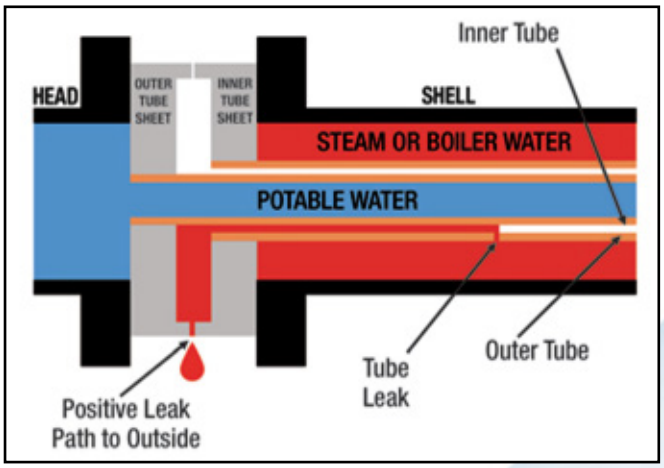
Design Limits

TUBE SIDE:
Standard: 125 // Option: 150, 300, 400 PSI
400°F - 204°C
SHELL SIDE:
Standard: 150 // Option: 300 PSI
375°F - 190°C

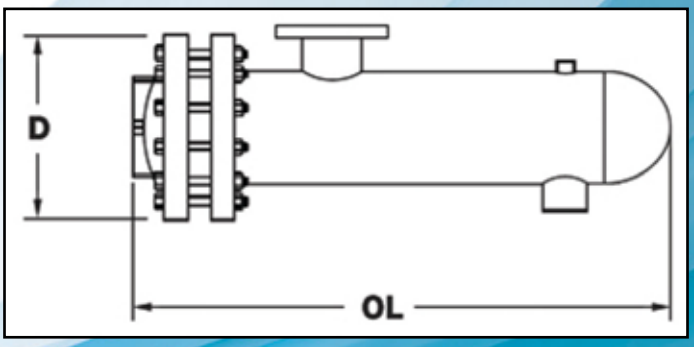
Product Specifications

SDW & WDW Series

SDW/WDW Double Wall



The SDW and WDW are made with inner and outer double tubes and double tube sheets that provide a positive leak path between the two fluids. This design prevents the cross-contamination of the potable water by the surrounding steam or treated boiler water.

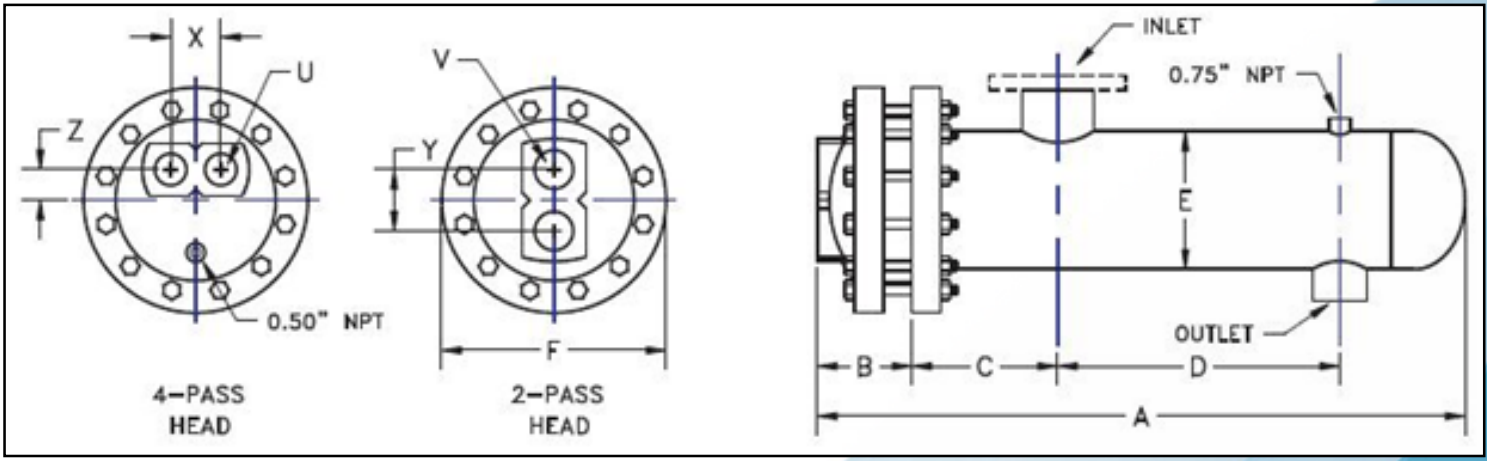


NOMENCLATURE

S = Steam to Liquid
W = Liquid to Liquid
E = Extended Shell
F = Head Flanged
TH = Tank Heater Single and Double
DW = Double Wall

Please note that the models SDW & WDW are available upon request.

Typical S Dimensions



√	Size	Dimensions							-2 pass	Conn Size	-4 Pass		Conn Size	Steam In	Cond Out
		A	B	C	D	E	F	LBS	Y	V	X	Z	U	NPT	NPT
	S-0402	27.9	2.6	4.8	15.8	4.5	7.3	60	2.6	1.25	2.3	1.0	1	2	1
	S-0403	39.9	2.6	4.75	27.8		7.3	76	2.6	1.25	2.3	1.0	1	2	1
	S-0404	51.9	2.6	4.75	39.8		7.3	92	2.6	1.25	2.3	1.0	1	2	1
	S-0405	63.9	2.6	4.75	51.8		7.3	108	2.6	1.25	2.3	1.0	1	2.5	1.25
	S-0406	75.9	2.6	4.75	63.8		7.3	124	2.6	1.25	2.3	1.0	1	2.5	1.25
	S-0407	87.9	2.6	4.75	75.8		7.3	140	2.6	1.25	2.3	1.0	1	2.5	1.25
	S-0408	99.9	2.6	4.75	87.8		7.3	156	2.6	1.25	2.3	1.0	1	2.5	1.25
	S-0409	111.9	2.6	4.75	99.8		7.3	172	2.6	1.25	2.3	1.0	1	2.5	1.25
	S-0410	123.9	2.6	4.75	111.8		7.3	186	2.6	1.25	2.3	1.0	1	2.5	1.25
	S-0411	135.9	2.6	4.75	123.8		7.3	200	2.6	1.25	2.3	1.0	1	2.5	1.25
	S-0412	147.9	2.6	4.75	135.8		7.3	214	2.6	1.25	2.3	1.0	1	2.5	1.25
	S-0602	28.6	3.3	5.3	15	6.63	10.5	132	3.8	2	4.0	2.0	2	1.5	1
	S-0603	40.6	3.3	5.3	27		10.5	159	3.8	2	4.0	2.0	2	2	1
	S-0604	52.6	3.3	5.3	39		10.5	186	3.8	2	4.0	2.0	2	2.5	1
	S-0605	64.6	3.3	5.3	51		10.5	213	3.8	2	4.0	2.0	2	2.5	1
	S-0606	76.6	3.3	5.3	63		10.5	240	3.8	2	4.0	2.0	2	3	1
	S-0607	88.6	3.3	5.3	75		10.5	267	3.8	2	4.0	2.0	2	3	1
	S-0608	100.6	3.3	5.3	87		10.5	294	3.8	2	4.0	2.0	2	3	1
	S-0802	29.1	3.7	6.4	13	8.63	12.5	220	5.0	3	4.0	2.0	2	2	1
	S-0803	41.1	3.7	6.4	25		12.5	260	5.0	3	4.0	2.0	2	2.5	1
	S-0804	53.1	3.7	6.4	37		12.5	300	5.0	3	4.0	2.0	2	3	1
	S-0805	65.1	3.7	6.4	49		12.5	340	5.0	3	4.0	2.0	2	4*	1
	S-0806	77.1	3.7	6.4	61		12.5	380	5.0	3	4.0	2.0	2	4*	1.25
	S-0807	89.1	3.7	6.4	73		12.5	420	5.0	3	4.0	2.0	2	4*	1.25
	S-0808	101.1	3.7	6.4	85		12.5	460	5.0	3	4.0	2.0	2	6*	1.25

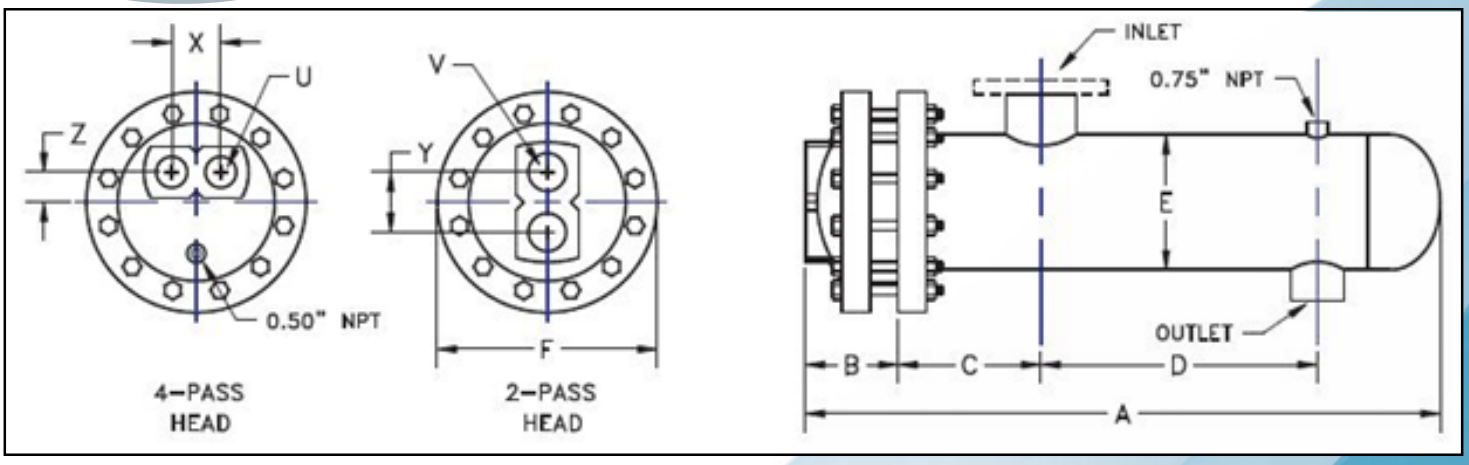
Add 1/4 to dimension B for Double Wall

*indicates ANSI type connections

DESIGN CONDITIONS(S4,S6 & S8)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	150 Psig	150 Psig
TEST PRESSURE	195 Psig	195 Psig
DESIGN TEMPERATURE	375 °F	375 °F
MIN METAL: TEMPERATURE	35 °F	35 °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical S Dimensions



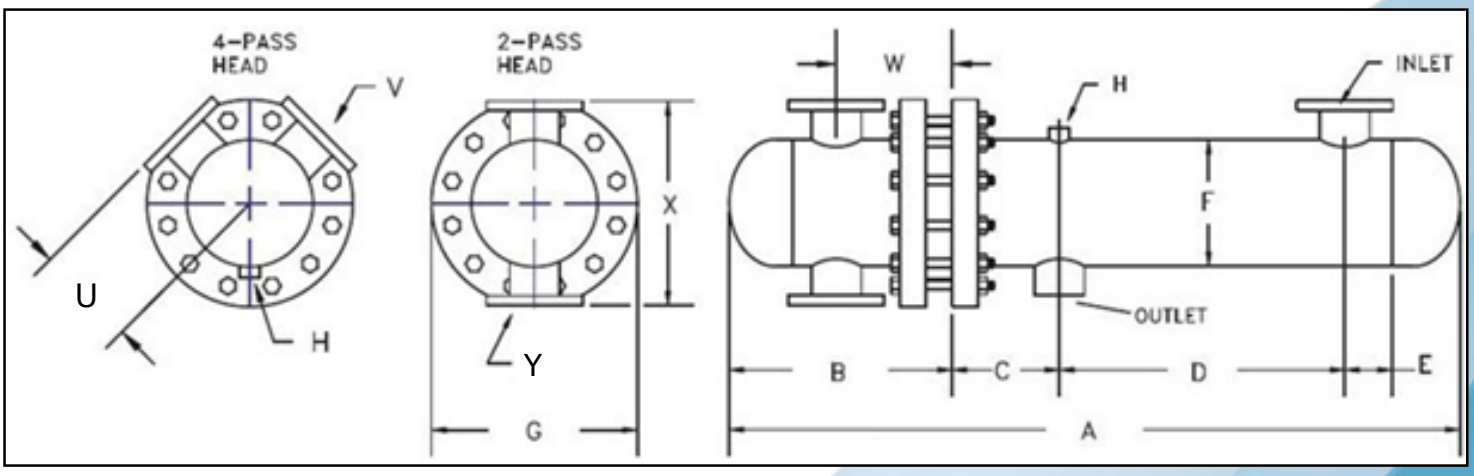
√	Size	Dimensions							-2 pass	Conn Size	-4 Pass		Conn Size	Steam In	Cond Out
		A	B	C	D	E	F	LBS	Y	V	X	Z	U	ANSI	NPT
	S-1002	30	4.8	6.6	12.5		14.6	340	5.8	4	4.8	2.4	3	4	1.5
	S-1003	42	4.8	6.6	24.5		14.6	400	5.8	4	4.8	2.4	3	4	1.5
	S-1004	54	4.8	6.6	36.5		14.6	460	5.8	4	4.8	2.4	3	6	2
	S-1005	66	4.8	6.6	48.5		14.6	520	5.8	4	4.8	2.4	3	6	2
	S-1006	78	4.8	6.6	60.5	10.8	14.6	580	5.8	4	4.8	2.4	3	6	2
	S-1007	90	4.8	6.6	72.5		14.6	640	5.8	4	4.8	2.4	3	6	2
	S-1008	102	4.8	6.6	84.5		14.6	700	5.8	4	4.8	2.4	3	6	2
	S-1009	114	4.8	6.6	96.5		14.6	760	5.8	4	4.8	2.4	3	6	2
	S-1010	126	4.8	6.6	108.5		14.6	820	5.8	4	4.8	2.4	3	6	2
	S-1203	42.8	5.6	7.8	22.8		16.6	565	7.4	4	5.9	2.6	4	6	2
	S-1204	54.8	5.6	7.8	34.8		16.6	670	7.4	4	5.9	2.6	4	6	2
	S-1205	66.8	5.6	7.8	46.8		16.6	775	7.4	4	5.9	2.6	4	6	2
	S-1206	78.8	5.6	7.8	58.8		16.6	880	7.4	4	5.9	2.6	4	8	2
	S-1207	90.8	5.6	7.8	70.8	12.8	16.6	985	7.4	4	5.9	2.6	4	8	2.5
	S-1208	102.8	5.6	7.8	82.8		16.6	1090	7.4	4	5.9	2.6	4	8	2.5
	S-1209	114.8	5.6	7.8	94.8		16.6	1195	7.4	4	5.9	2.6	4	8	2.5
	S-1210	126.8	5.6	7.8	106.8		16.6	1300	7.4	4	5.9	2.6	4	8	2.5
	S-1211	138.8	5.6	7.8	118.8		16.6	1405	7.4	4	5.9	2.6	4	8	2.5
	S-1212	150.8	5.6	7.8	130.8		16.6	1510	7.4	4	5.9	2.6	4	8	2.5
	S-1403	43.8	6.2	8.3	38		18	695	8	6	5.9	3.3	4	8	2
	S-1404	55.8	6.2	8.3	50		18	815	8	6	5.9	3.3	4	8	2
	S-1405	67.8	6.2	8.3	62		18	935	8	6	5.9	3.3	4	8	2.5
	S-1406	79.8	6.2	8.3	74		18	1055	8	6	5.9	3.3	4	8	2.5
	S-1407	91.8	6.2	8.3	86		18	1180	8	6	5.9	3.3	4	8	2.5
	S-1408	103.8	6.2	8.3	98	14	18	1300	8	6	5.9	3.3	4	8	2.5
	S-1409	115.8	6.2	8.3	110		18	1420	8	6	5.9	3.3	4	8	2.5
	S-1410	127.8	6.2	8.3	122		18	1540	8	6	5.9	3.3	4	8	2.5
	S-1411	139.8	6.2	8.3	134		18	1661	8	6	5.9	3.3	4	8	2.5
	S-1412	151.8	6.2	8.3	146		18	1781	8	6	5.9	3.3	4	8	2.5

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (S10,S12/S14)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	125/150 Psig	150 Psig
TEST PRESSURE	163/195 Psig	195 Psig
DESIGN TEMPERATURE	375 °F	375 °F
MIN METAL: TEMPERATURE	35 °F	35 °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical S Dimensions

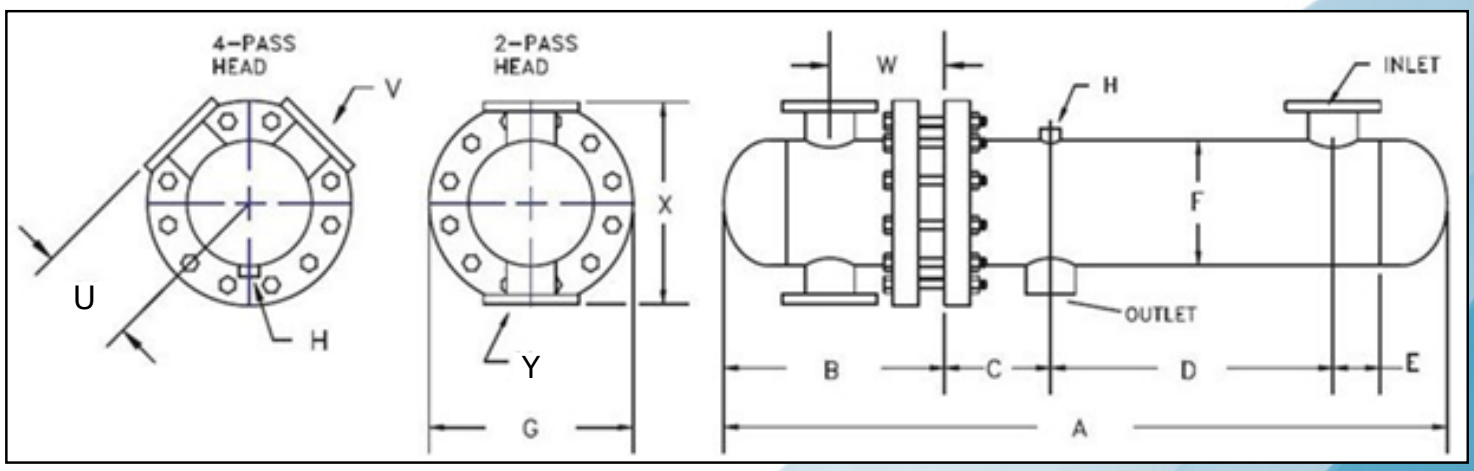


√	Size	Dimensions									-2 pass	Conn Size	-4 Pass	Conn Size	Steam In	Cond Out
		A	B	C	D	F	G	H	W	LBS	X	Y	U	V	ANSI	NPT
	S-1603	70.6	17.6	5.3	37.3	16	20	NPT	8.9		25.0	6	12.5	4	10	3
	S-1604	82.6	17.6	5.3	49.3				8.9		25.0	6	12.5	4	10	3
	S-1605	94.6	17.6	5.3	61.3				8.9		25.0	6	12.5	4	10	3
	S-1606	106.6	17.6	5.3	73.3				8.9		25.0	6	12.5	4	10	3
	S-1607	118.6	17.6	5.3	85.3				8.9		25.0	6	12.5	4	10	3
	S-1608	130.6	17.6	5.3	97.3				8.9		25.0	6	12.5	4	10	3
	S-1609	142.6	17.6	5.3	109.3				8.9		25.0	6	12.5	4	10	3
	S-1610	154.6	17.6	5.3	121.3				8.9		25.0	6	12.5	4	10	3
	S-1611	166.6	17.6	5.3	133.3				8.9		25.0	6	12.5	4	10	3
	S-1612	178.6	17.6	5.3	145.3				8.9		25.0	6	12.5	4	10	3
															ANSI	**ANSI**
	S-18															
															ANSI	**ANSI**
	S-2003	77	20.9	6.5	36.9	20	24	NPT	10.6	1260	32.0	8	16.0	6	12	4
	S-2004	89	20.9	6.5	48.9				10.6	1500	32.0	8	16.0	6	12	4
	S-2005	101	20.9	6.5	60.9				10.6	1740	32.0	8	16.0	6	12	4
	S-2006	113	20.9	6.5	72.9				10.6	1980	32.0	8	16.0	6	12	4
	S-2007	125	20.9	6.5	84.9				10.6	2220	32.0	8	16.0	6	12	4
	S-2008	137	20.9	6.5	96.9				10.6	2460	32.0	8	16.0	6	12	4
	S-2009	149	20.9	6.5	108.9				10.6	2700	32.0	8	16.0	6	12	4
	S-2010	161	20.9	6.5	120.9				10.6	2940	32.0	8	16.0	6	12	4
	S-2011	173	20.9	6.5	132.9				10.6	3180	32.0	8	16.0	6	12	4
	S-2012	185	20.9	6.5	144.9				10.6	3420	32.0	8	16.0	6	12	4

This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

Typical S Dimensions

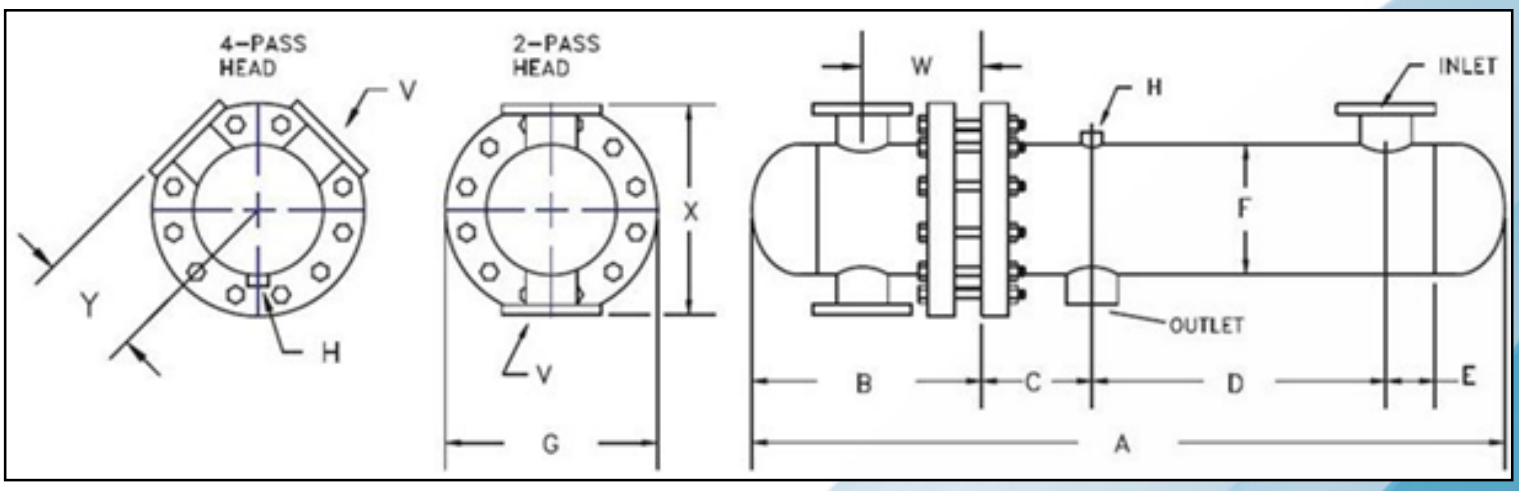


√	Size	Dimensions									-2 pass	Conn Size	-4 Pass	Conn Size	Steam In	Cond Out
		A	B	C	D	F	G	H	W	LBS	X	Y	U	V	ANSI	ANSI
	S-22															
	S-2403	76	24.5	6.5	32.5	24	28	NPT	12	1985	36.0	10	18.0	8	10	3
	S-2404	88	24.5	6.5	44.5				12	2248	36.0	10	18.0	8	10	3
	S-2405	102	24.5	6.5	57.5				12	2518	36.0	10	18.0	8	12	4
	S-2406	114	24.5	6.5	69.5				12	2845	36.0	10	18.0	8	12	4
	S-2407	127	24.5	6.5	82.3				12	3272	36.0	10	18.0	8	14	4
	S-2408	141	24.5	7.5	94.3				12	3828	36.0	10	18.0	8	16	6
	S-2409	153	24.5	7.5	106.3				12	4632	36.0	10	18.0	8	16	6
	S-2410	165	24.5	7.5	118.3				12	5095	36.0	10	18.0	8	16	6
	S-2411	179	24.5	8.5	130				12	5570	36.0	10	18.0	8	18	8
	S-2412	191	24.5	8.5	142				12	6044	36.0	10	18.0	8	18	8
	S-2603	80.5	28.3	6.5	32.5	26	31	NPT	13.5	2510	38.0	12	19.0	8	10	3
	S-2604	94.5	28.3	6.5	45.5				13.5	2810	38.0	12	19.0	8	12	4
	S-2605	106.5	28.3	6.5	57.5				13.5	3120	38.0	12	19.0	8	12	4
	S-2606	119.5	28.3	6.5	70				13.5	3495	38.0	12	19.0	8	14	4
	S-2607	133.5	28.3	7.5	82				13.5	3950	38.0	12	19.0	8	16	6
	S-2608	145.5	28.3	7.5	94				13.5	4540	38.0	12	19.0	8	16	6
	S-2609	159.5	28.3	7.5	107				13.5	5310	38.0	12	19.0	8	18	6
	S-2610	171.5	28.3	7.5	119				13.5	6425	38.0	12	19.0	8	18	6
	S-2611	183.5	28.3	7.5	131				13.5	7030	38.0	12	19.0	8	18	6
	S-2612	197.5	28.3	8.5	142.8				13.5	7635	38.0	12	19.0	8	20	6

This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

Typical S Dimensions



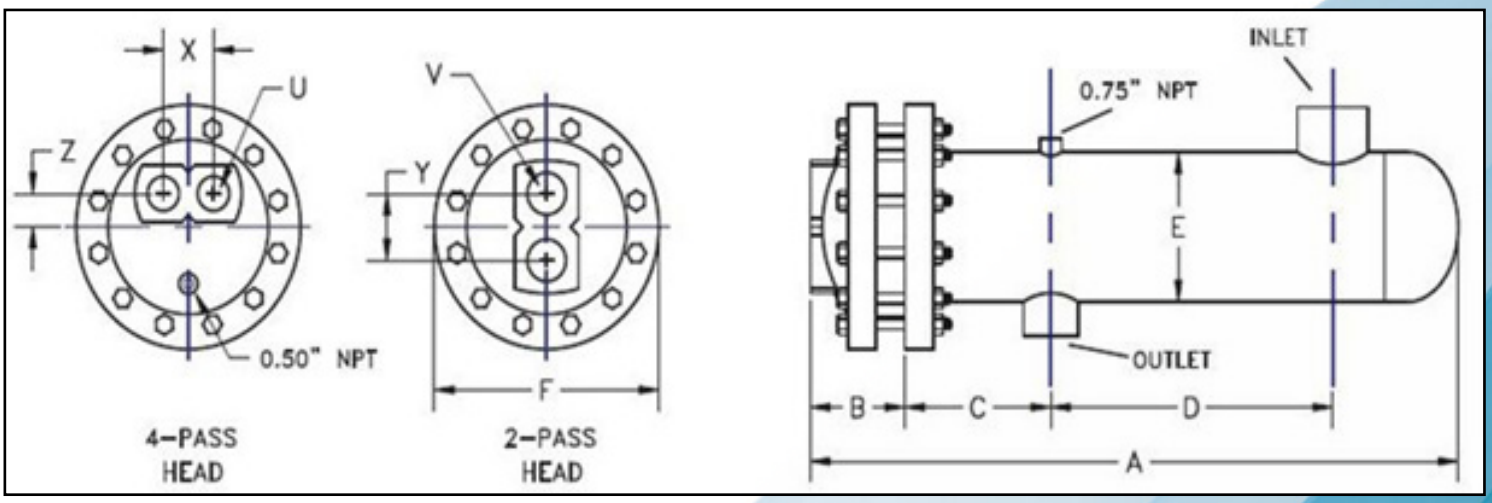
√	Size	Dimensions									-2 pass	Conn Size	-4 Pass	Conn Size	Steam In	Cond Out
		A	B	C	D	F	G	H	W	LBS	X	Y	U	V	ANSI	ANSI
	S-2803	84	29	6.5	33.8	28	33	NPT	14.3	3130	40	12	20	10	12	4
	S-2804	96	29	6.5	45.8				14.3	3515	40	12	20	10	12	4
	S-2805	109	29	6.5	58.5				14.3	3900	40	12	20	10	14	4
	S-2806	123	29	7.5	70.5				14.3	4370	40	12	20	10	16	6
	S-2807	135	29	7.5	82.5				14.3	4935	40	12	20	10	16	6
	S-2808	149	29	7.5	95.5				14.3	5675	40	12	20	10	18	6
	S-2809	161	29	7.5	107.5				14.3	6640	40	12	20	10	18	6
	S-2810	175	29	7.5	120.5				14.3	8035	40	12	20	10	20	6
	S-2811	189	29	8.5	132.5				14.3	8790	40	12	20	10	22	8
	S-2812	201	29	8.5	144				14.3	9540	40	12	20	10	22	8

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (S16 to S28)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	150 Psig	150 Psig
TEST PRESSURE	195 Psig	195 Psig
DESIGN TEMPERATURE	375 °F	375 °F
MIN METAL: TEMPERATURE	35 °F	35 °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical SE Dimensions



√	Size	Dimensions							-2 pass	Conn Size	-4 Pass		Conn Size	Steam In	Cond Out
		A	B	C	D	E	F	LBS	Y	V	X	Z	U	NPT	NPT
	SE-04														
	SE-0602	36.8	3.3	4.0	23		10.5	132	3.8	2	4.0	2.0	2	1.5	1
	SE-0603	48.8	3.3	4.0	35		10.5	159	3.8	2	4.0	2.0	2	2	1
	SE-0604	60.8	3.3	4.0	47		10.5	186	3.8	2	4.0	2.0	2	2.5	1
	SE-0605	72.8	3.3	4.0	59	6.6	10.5	213	3.8	2	4.0	2.0	2	2.5	1
	SE-0606	84.8	3.3	4.0	71		10.5	240	3.8	2	4.0	2.0	2	3	1
	SE-0607	96.8	3.3	4.0	83		10.5	267	3.8	2	4.0	2.0	2	3	1
	SE-0608	108.8	3.3	4.0	95		10.5	294	3.8	2	4.0	2.0	2	3	1
	SE-0802	40.5	3.7	6.4	24.5		12.5	220	5.0	3	4.0	2.0	2	2	1
	SE-0803	52.5	3.7	6.4	36.5		12.5	260	5.0	3	4.0	2.0	2	2.5	1
	SE-0804	64.5	3.7	6.4	48.5		12.5	300	5.0	3	4.0	2.0	2	3	1
	SE-0805	76.5	3.7	6.4	60.5		12.5	340	5.0	3	4.0	2.0	2	4*	1
	SE-0806	88.5	3.7	6.4	72.5	8.63	12.5	380	5.0	3	4.0	2.0	2	4*	1.25
	SE-0807	100.5	3.7	6.4	84.5		12.5	420	5.0	3	4.0	2.0	2	4*	1.25
	SE-0808	112.5	3.7	6.4	96.5		12.5	460	5.0	3	4.0	2.0	2	6*	1.25
	SE-0809	124.5	3.7	6.4	108.5		12.5	500	5.0	3	4.0	2.0	2	6*	1.25
	SE-0810	136.5	3.7	6.4	120.5		12.5	540	5.0	3	4.0	2.0	2	6*	1.25

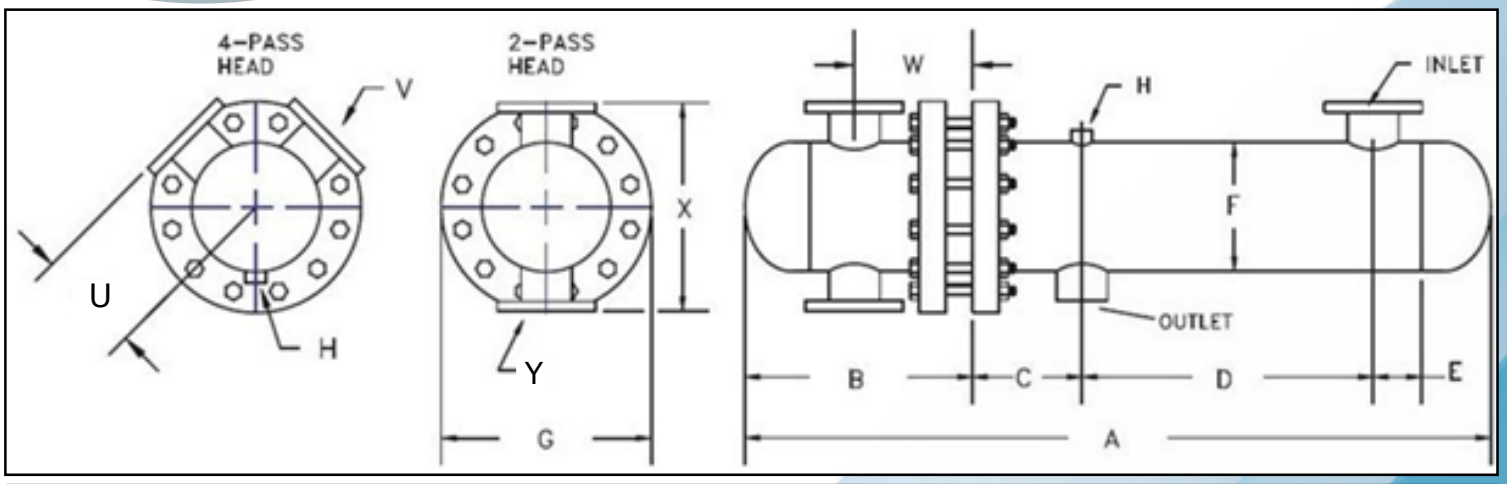
This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (SE4, SE6 and SE8)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	150 Psig	150 Psig
TEST PRESSURE	195 Psig	195 Psig
DESIGN TEMPERATURE	375 °F	375 °F
MIN METAL: TEMPERATURE	35 °F	35 °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical SE Dimensions



√	Size	Dimensions									-2 pass	Conn Size	-4 Pass	Conn Size	Steam In	Cond Out
		A	B	C	D	F	G	H	W	LBS	X	Y	U	V	ANSI	NPT
	SE-10															
	SE-12															
	SE-1403	67.1	16.4	4.5	37	14	18	NPT	8.1	695	23.0	6	11.5	4	6	2
	SE-1404	79.1	16.4	4.5	49				8.1	815	23.0	6	11.5	4	6	2
	SE-1405	91.1	16.4	4.5	61				8.1	935	23.0	6	11.5	4	8	2.5
	SE-1406	103.1	16.4	4.5	73				8.1	1055	23.0	6	11.5	4	8	2.5
	SE-1407	115.1	16.4	4.5	85				8.1	1180	23.0	6	11.5	4	8	2.5
	SE-1408	127.1	16.4	4.5	97				8.1	1300	23.0	6	11.5	4	8	2.5
	SE-1409	139.1	16.4	4.5	109				8.1	1420	23.0	6	11.5	4	8	2.5
	SE-1410	151.1	16.4	4.5	121				8.1	1540	23.0	6	11.5	4	8	2.5
	SE-1411	163.1	16.4	4.5	133				8.1	1661	23.0	6	11.5	4	8	2.5
	SE-1412	175.1	16.4	4.5	145				8.1	1781	23.0	6	11.5	4	8	2.5

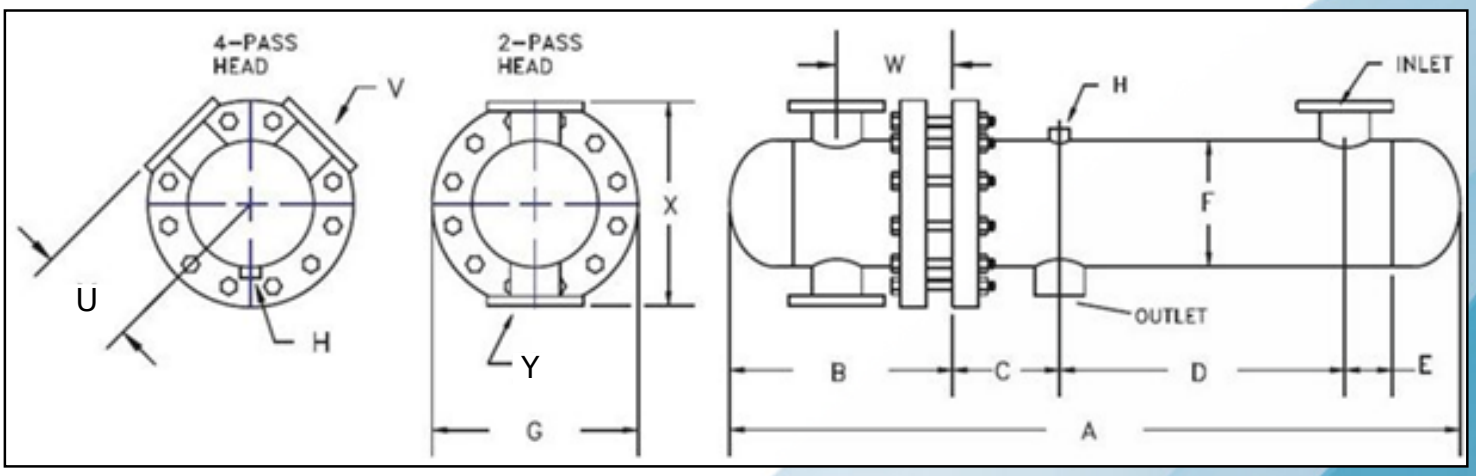
This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (S10, S12 and S14)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	150 Psig	150 Psig
TEST PRESSURE	195 Psig	195 Psig
DESIGN TEMPERATURE	375 °F	375 °F
MIN METAL: TEMPERATURE	35 °F	35 °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical SE Dimensions



√	Size	Dimensions									-2 pass	Conn Size	-4 Pass	Conn Size	Steam In	Cond Out
		A	B	C	D	F	G	H	W	LBS	X	Y	U	V	ANSI	NPT
	SE-16															
	SE-18															
	SE-20															

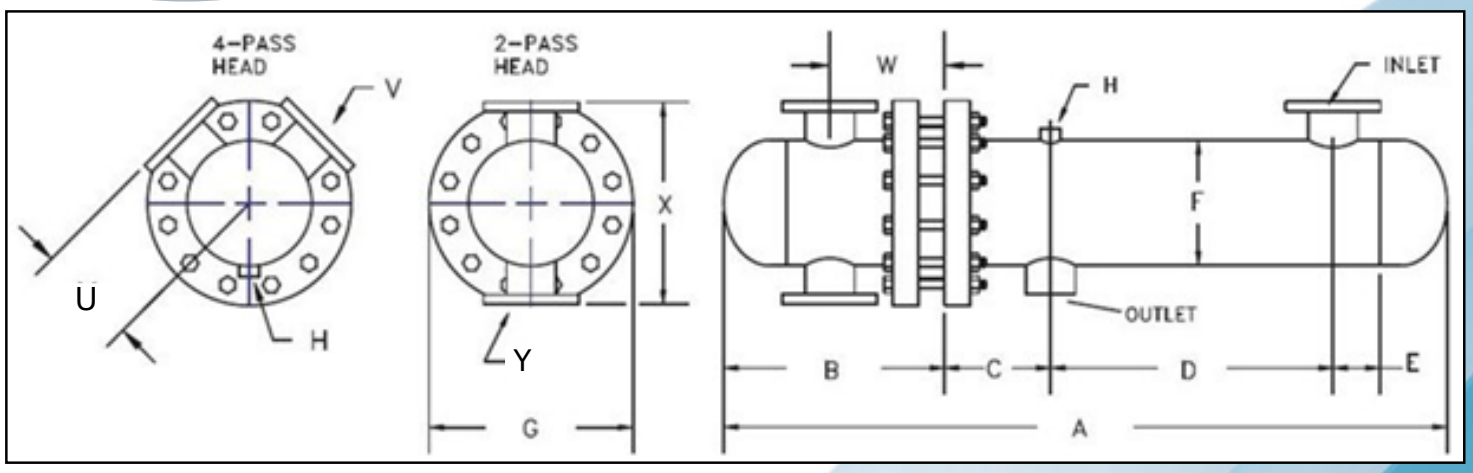
This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (SE16, SE18 and SE20)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	- Psig	- Psig
TEST PRESSURE	- Psig	- Psig
DESIGN TEMPERATURE	- °F	- °F
MIN METAL: TEMPERATURE	- °F	- °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical SE Dimensions



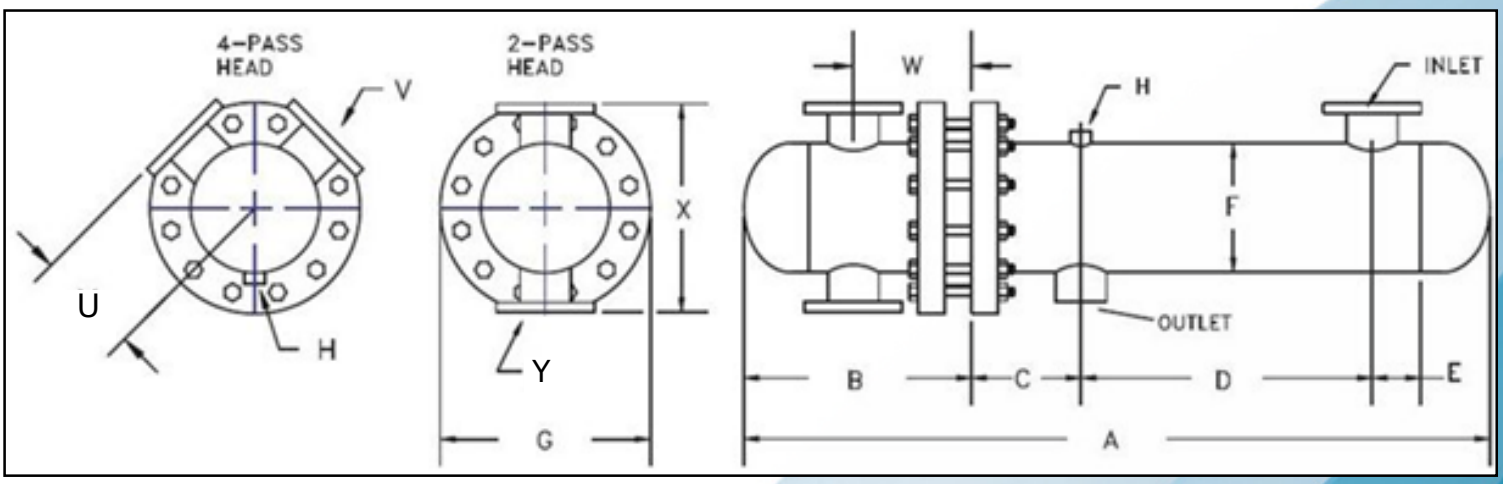
√	Size	Dimensions									-2 pass	Conn Size	-4 Pass	Conn Size	Steam In	Cond Out
		A	B	C	D	F	G	H	W	LBS	X	Y	U	V	ANSI	NPT
	SE-22															
	SE-24															
	SE-26															

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (SE22, SE24 and SE26)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	- Psig	- Psig
TEST PRESSURE	- Psig	- Psig
DESIGN TEMPERATURE	- °F	- °F
MIN METAL: TEMPERATURE	- °F	- °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical SE Dimensions



√	Size	Dimensions									-2 pass	Conn Size	-4 Pass	Conn Size	Steam In	Cond Out
		A	B	C	D	F	G	H	W	LBS	X	Y	U	V	ANSI	NPT
	SE-28															

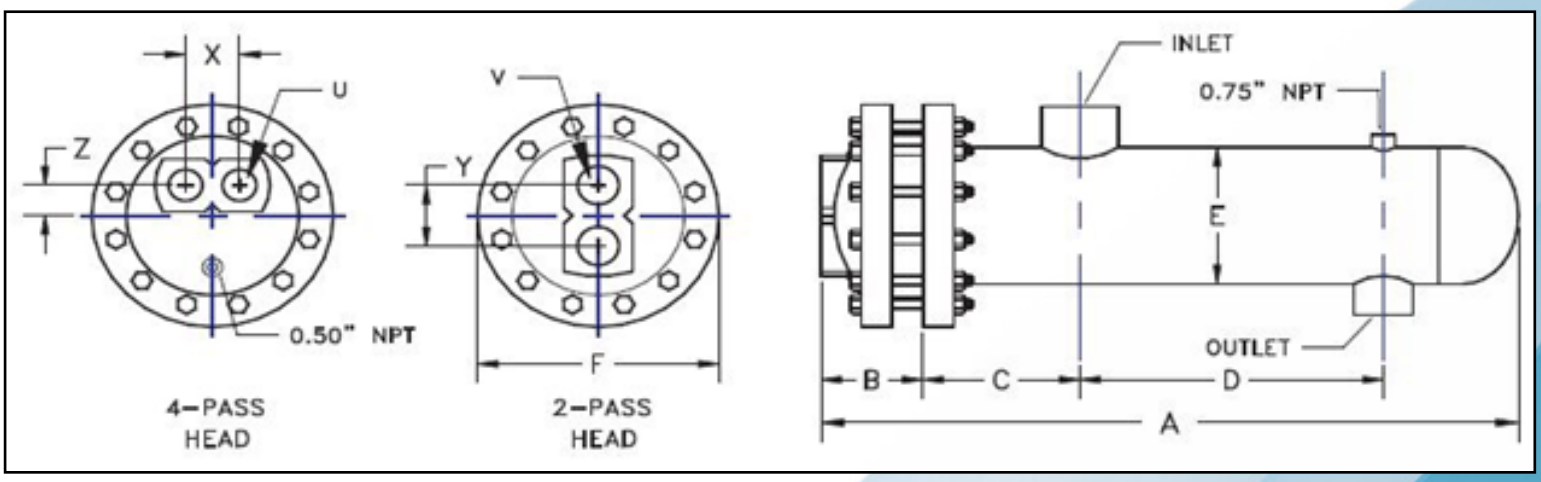
This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (SE28)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	150 Psig	150 Psig
TEST PRESSURE	195 Psig	195 Psig
DESIGN TEMPERATURE	375 °F	375 °F
MIN METAL: TEMPERATURE	35 °F	35 °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical W Dimensions

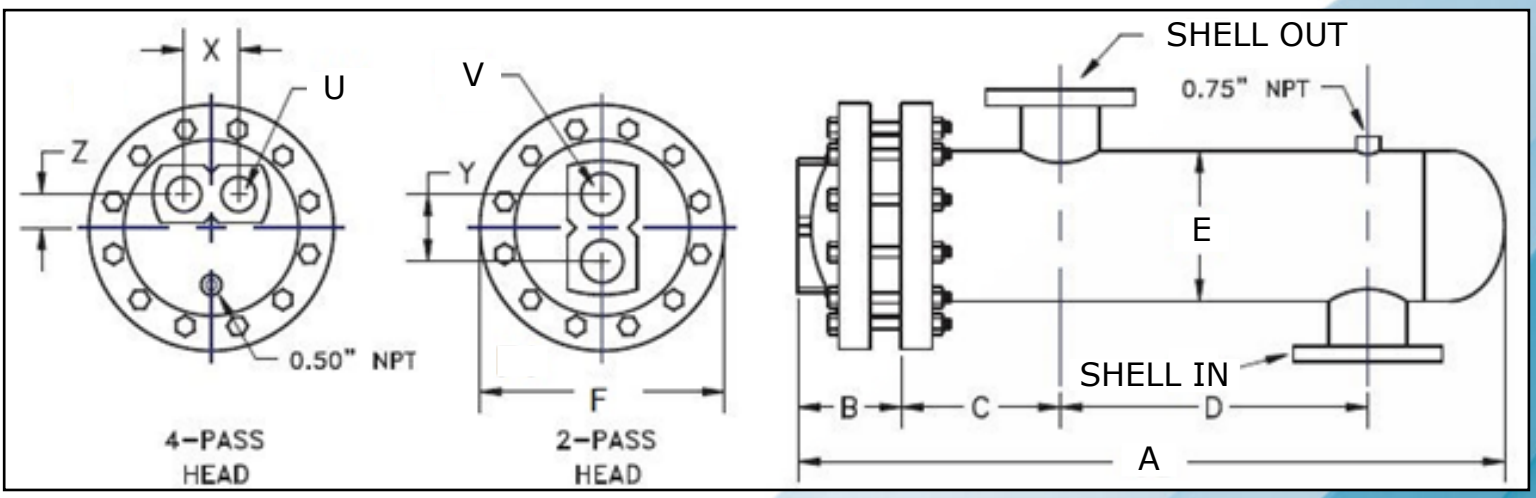


√	Size	Dimensions							-2 pass	Conn Size	-4 Pass		Conn Size	Steam In	Cond Out
		A	B	C	D	E	F	LBS	Y	V	X	Z	U	NPT	NPT
	W-04														
	W-0602	29.0	3.3	4.5	16		10.5	132	3.8	2	3.2	1.6	1.5	2	2
	W-0603	41.0	3.3	4.5	28		10.5	159	3.8	2	3.2	1.6	1.5	2	2
	W-0604	53.0	3.3	4.5	40		10.5	186	3.8	2	3.2	1.6	1.5	2	2
	W-0605	65.0	3.3	4.5	52		10.5	213	3.8	2	3.2	1.6	1.5	2	2
	W-0606	77.0	3.3	4.5	64		10.5	240	3.8	2	3.2	1.6	1.5	2	2
	W-0607	89.0	3.3	4.5	76	6.63	10.5	267	3.8	2	3.2	1.6	1.5	2	2
	W-0608	101.0	3.3	4.5	88		10.5	294	3.8	2	3.2	1.6	1.5	2	2
	W-0609	113.0	3.3	4.5	100		10.5	321	3.8	2	3.2	1.6	1.5	2	2
	W-0610	125.0	3.3	4.5	112		10.5	348	3.8	2	3.2	1.6	1.5	2	2
	W-0611	137.0	3.3	4.5	124		10.5	375	3.8	2	3.2	1.6	1.5	2	2
	W-0612	149.0	3.3	4.5	136		10.5	402	3.8	2	3.2	1.6	1.5	2	2
	W-0802	29.8	4.0	5.3	14.5		12.5	220	5.0	3	4.0	2.0	2	3	3
	W-0803	41.8	4.0	5.3	26.5		12.5	260	5.0	3	4.0	2.0	2	3	3
	W-0804	53.8	4.0	5.3	38.5		12.5	300	5.0	3	4.0	2.0	2	3	3
	W-0805	65.8	4.0	5.3	50.5		12.5	340	5.0	3	4.0	2.0	2	3	3
	W-0806	77.8	4.0	5.3	62.5		12.5	380	5.0	3	4.0	2.0	2	3	3
	W-0807	89.8	4.0	5.3	74.5	8.63	12.5	420	5.0	3	4.0	2.0	2	3	3
	W-0808	101.8	4.0	5.3	86.5		12.5	460	5.0	3	4.0	2.0	2	3	3
	W-0809	113.8	4.0	5.3	98.5		12.5	500	5.0	3	4.0	2.0	2	3	3
	W-0810	125.8	4.0	5.3	110.5		12.5	540	5.0	3	4.0	2.0	2	3	3
	W-0811	137.8	4.0	5.3	122.5		12.5	580	5.0	3	4.0	2.0	2	3	3
	W-0812	149.8	4.0	5.3	134.5		12.5	620	5.0	3	4.0	2.0	2	3	3

This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

Typical W Dimensions



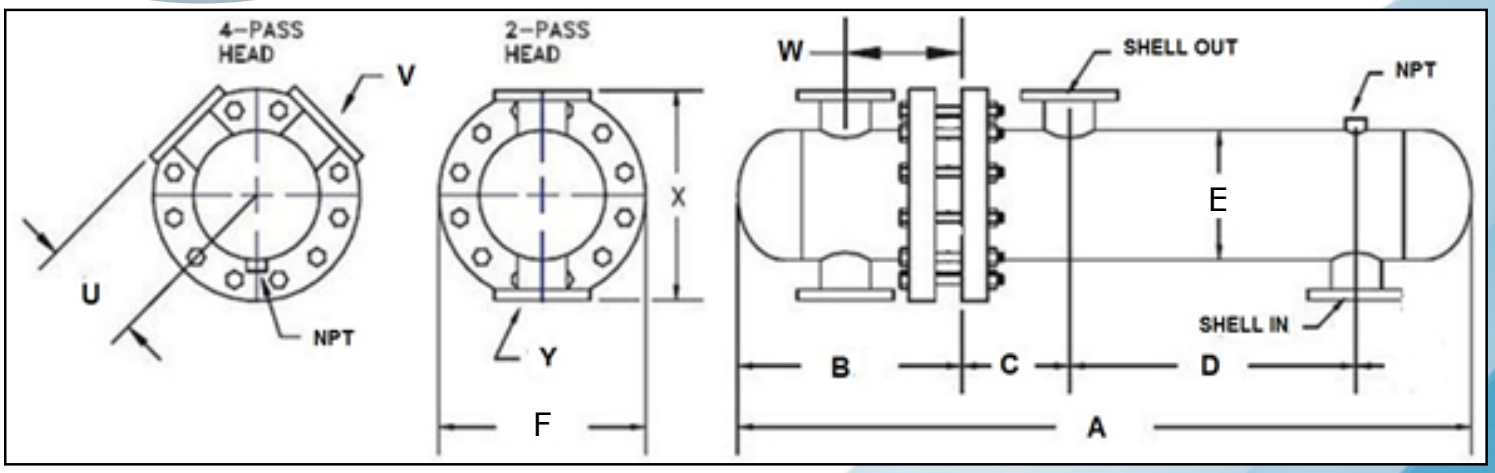
√	Size	Dimensions							-2 pass	Conn Size	-4 Pass		Conn Size	SHELL IN	SHELL OUT
		A	B	C	D	E	F	LBS	Y	V	X	Z	U	ANSI	ANSI
	W-1003	43.3	4.9	5.8	25.5		14.6	400	5.9	4	4.8	2.4	3	4	4
	W-1004	55.3	4.9	5.8	37.5		14.6	460	5.9	4	4.8	2.4	3	4	4
	W-1005	67.3	4.9	5.8	49.5		14.6	520	5.9	4	4.8	2.4	3	4	4
	W-1006	79.3	4.9	5.8	61.5		14.6	580	5.9	4	4.8	2.4	3	4	4
	W-1007	91.3	4.9	5.8	73.5		14.6	640	5.9	4	4.8	2.4	3	4	4
	W-1008	103.3	4.9	5.8	85.5	10.8	14.6	700	5.9	4	4.8	2.4	3	4	4
	W-1009	115.3	4.9	5.8	97.5		14.6	760	5.9	4	4.8	2.4	3	4	4
	W-1010	127.3	4.9	5.8	109.5		14.6	820	5.9	4	4.8	2.4	3	4	4
	W-1011	139.3	4.9	5.8	121.5		14.6	880	5.9	4	4.8	2.4	3	4	4
	W-1012	151.3	4.9	5.8	133.5		14.6	940	5.9	4	4.8	2.4	3	4	4
	W-1203	43.6	5.6	6.8	23.0		14.6	400	5.9	4	4.8	2.4	3	4	4
	W-1204	55.6	5.6	6.8	35.0		14.6	460	5.9	4	4.8	2.4	3	4	4
	W-1205	67.6	5.6	6.8	47.0		14.6	520	5.9	4	4.8	2.4	3	4	4
	W-1206	79.6	5.6	6.8	59.0		14.6	580	5.9	4	4.8	2.4	3	4	4
	W-1207	91.6	5.6	6.8	71.0		14.6	640	5.9	4	4.8	2.4	3	4	4
	W-1208	103.6	5.6	6.8	83.0	12.8	14.6	700	5.9	4	4.8	2.4	3	4	4
	W-1209	115.6	5.6	6.8	95.0		14.6	760	5.9	4	4.8	2.4	3	4	4
	W-1210	127.6	5.6	6.8	107.0		14.6	820	5.9	4	4.8	2.4	3	4	4
	W-1211	139.6	5.6	6.8	119.0		14.6	880	5.9	4	4.8	2.4	3	4	4
	W-1212	151.6	5.6	6.8	131.0		14.6	940	5.9	4	4.8	2.4	3	4	4

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (W4 to W12)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	125 Psig	150 Psig
TEST PRESSURE	163 Psig	195 Psig
DESIGN TEMPERATURE	375 °F	375 °F
MIN METAL: TEMPERATURE	35 °F	35 °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical W Dimensions

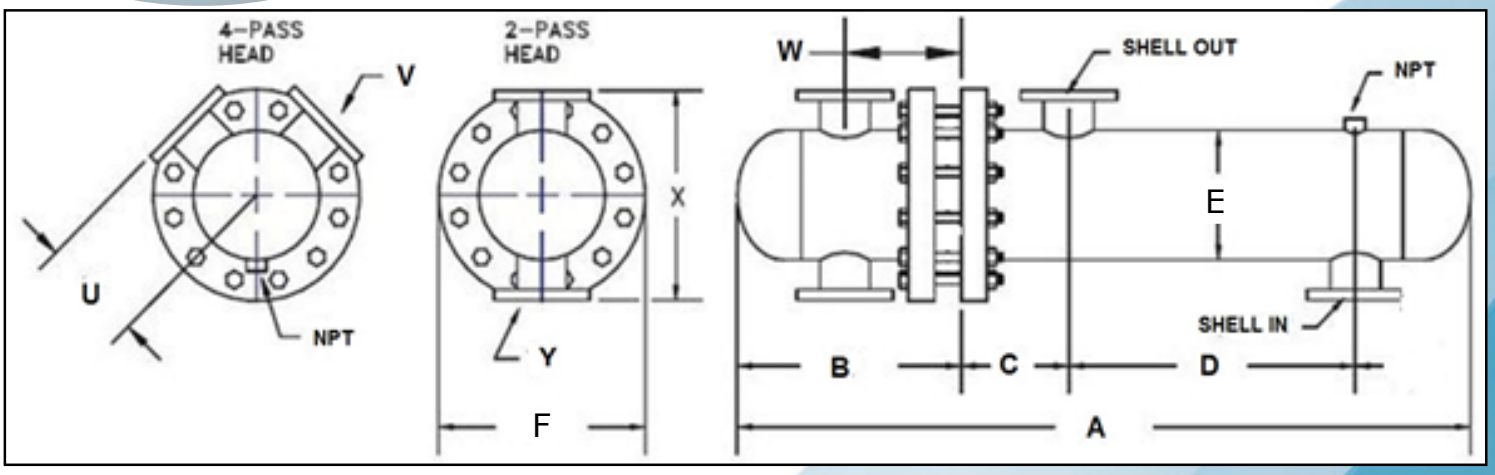


√	Size	Dimensions								-2 pass	Conn Size	-4 Pass	Conn Size	SHELL IN	SHELL OUT
		A	B	C	D	E	F	W	LBS	X	Y	U	V	ANSI	ANSI
	W-1403	54.4	16.4	7.0	23	14	18	8.1	695	23.0	6	11.5	4	6	6
	W-1404	66.4	16.4	7.0	35			8.1	815	23.0	6	11.5	4	6	6
	W-1405	78.4	16.4	7.0	47			8.1	935	23.0	6	11.5	4	6	6
	W-1406	90.4	16.4	7.0	59			8.1	1055	23.0	6	11.5	4	6	6
	W-1407	102.4	16.4	7.0	71			8.1	1180	23.0	6	11.5	4	6	6
	W-1408	114.4	16.4	7.0	83			8.1	1300	23.0	6	11.5	4	6	6
	W-1409	126.4	16.4	7.0	95			8.1	1420	23.0	6	11.5	4	6	6
	W-1410	138.4	16.4	7.0	107			8.1	1540	23.0	6	11.5	4	6	6
	W-1411	150.4	16.4	7.0	119			8.1	1661	23.0	6	11.5	4	6	6
	W-1412	162.4	16.4	7.0	131			8.1	1781	23.0	6	11.5	4	6	6
	W-16														
	W-1803	56.4	18.4	7.3	21.5	18	22	8.9	1050	27.0	6	13.5	4	6	6
	W-1804	68.4	18.4	7.3	33.5			8.9	1250	27.0	6	13.5	4	6	6
	W-1805	80.4	18.4	7.3	45.5			8.9	1450	27.0	6	13.5	4	6	6
	W-1806	92.4	18.4	7.3	57.5			8.9	1650	27.0	6	13.5	4	6	6
	W-1807	104.4	18.4	7.3	69.5			8.9	1850	27.0	6	13.5	4	6	6
	W-1808	116.4	18.4	7.3	81.5			8.9	2050	27.0	6	13.5	4	6	6
	W-1809	128.4	18.4	7.3	93.5			8.9	2250	27.0	6	13.5	4	6	6
	W-1810	140.4	18.4	7.3	105.5			8.9	2450	27.0	6	13.5	4	6	6
	W-1811	152.4	18.4	7.3	117.5			8.9	2650	27.0	6	13.5	4	6	6
	W-1812	164.4	18.4	7.3	129.5			8.9	2850	27.0	6	13.5	4	6	6
	W-1813	176.4	18.4	7.3	141.5			8.9	3050	27.0	6	13.5	4	6	6
	W-1814	188.4	18.4	7.3	153.5			8.9	3250	27.0	6	13.5	4	6	6
	W-1815	200.4	18.4	7.3	165.5			8.9	3450	27.0	6	13.5	4	6	6

This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

Typical W Dimensions

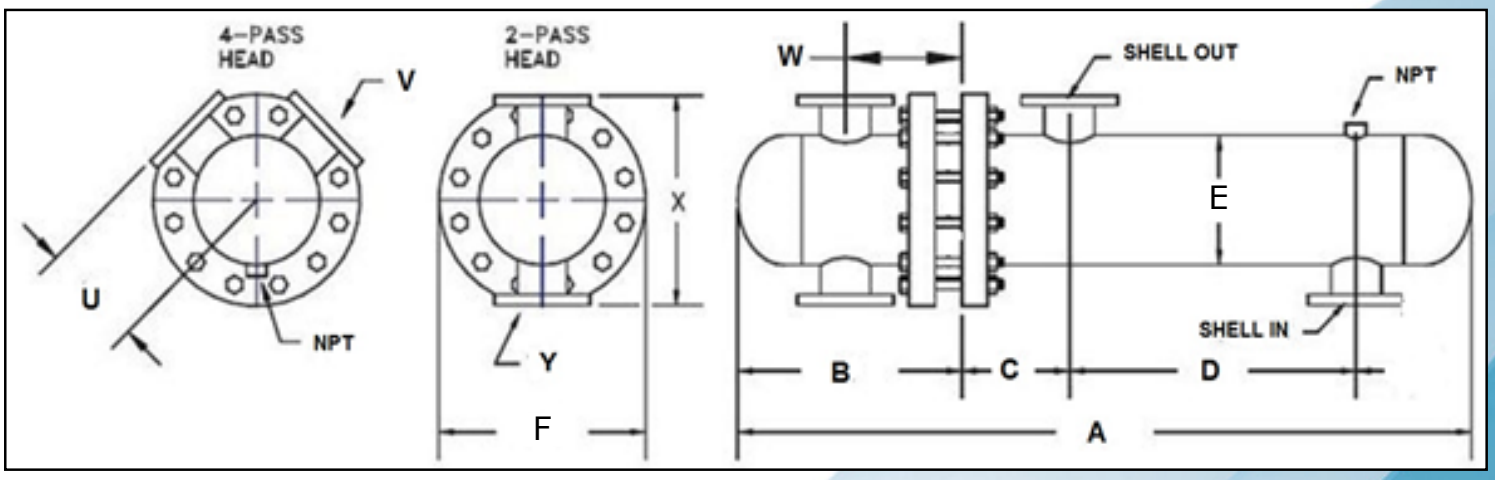


√	Size	Dimensions								-2 pass	Conn Size	-4 Pass	Conn Size	SHELL IN	SHELL OUT
		A	B	C	D	E	F	W	LBS	X	Y	U	V	ANSI	ANSI
	W-20														
	W-22														
	W-24														

This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

Typical W Dimensions



√	Size	Dimensions								-2 pass	Conn Size	-4 Pass	Conn Size	SHELL IN	SHELL OUT
		A	B	C	D	E	F	W	LBS	X	Y	U	V	ANSI	ANSI
	W-26														
	W-28														

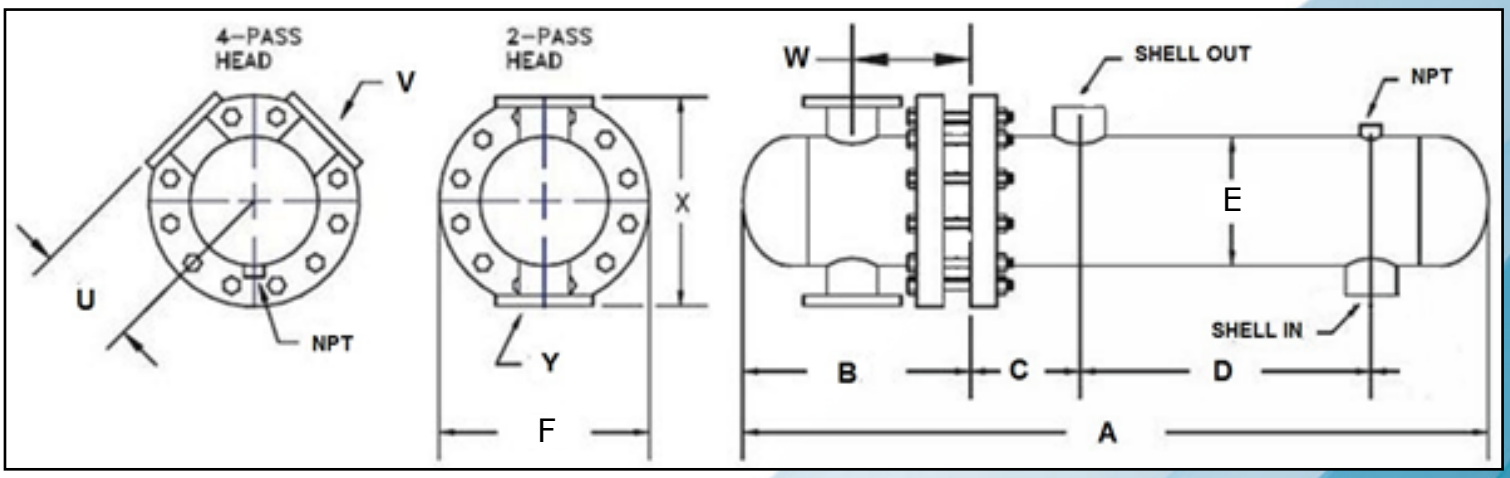
This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (W14 to W28)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	150 Psig	150 Psig
TEST PRESSURE	195 Psig	195 Psig
DESIGN TEMPERATURE	375 °F	375 °F
MIN METAL: TEMPERATURE	35 °F	35 °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical WF Dimensions

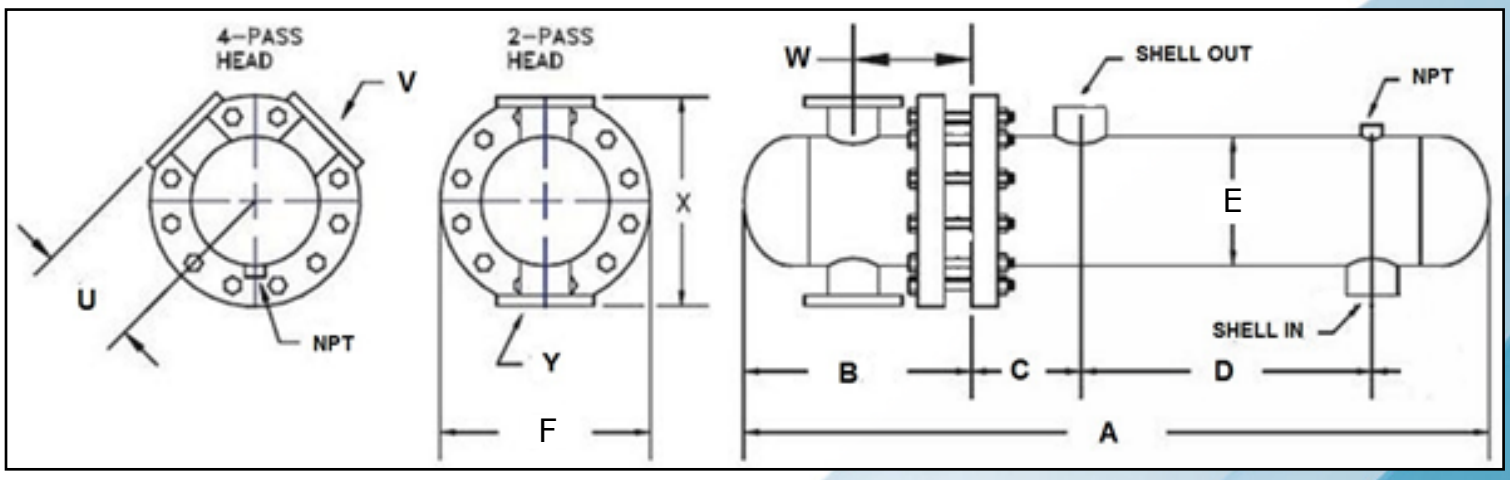


√	Size	Dimensions								-2 pass	Conn Size	-4 Pass	Conn Size	SHELL IN	SHELL OUT
		A	B	C	D	E	F	W	LBS	X	Y	U	V	NPT	NPT
	WF-04														
	WF-06														
	WF-0802	36.6	10.9	5.5	14.5	8.63	12.5		220	17.5	3	8.8	2	3	3
	WF-0803	48.6	10.9	5.5	26.5				260	17.5	3	8.8	2	3	3
	WF-0804	60.6	10.9	5.5	38.5				300	17.5	3	8.8	2	3	3
	WF-0805	72.6	10.9	5.5	50.5				340	17.5	3	8.8	2	3	3
	WF-0806	84.6	10.9	5.5	62.5				380	17.5	3	8.8	2	3	3
	WF-0807	96.6	10.9	5.5	74.5				420	17.5	3	8.8	2	3	3
	WF-0808	108.6	10.9	5.5	86.5				460	17.5	3	8.8	2	3	3
	WF-0809	120.6	10.9	5.5	98.5				500	17.5	3	8.8	2	3	3
	WF-0810	132.6	10.9	5.5	110.5				540	17.5	3	8.8	2	3	3
	WF-0811	144.6	10.9	5.5	122.5				580	17.5	3	8.8	2	3	3
	WF-0812	156.6	10.9	5.5	134.5				620	17.5	3	8.8	2	3	3

This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

Typical WF Dimensions

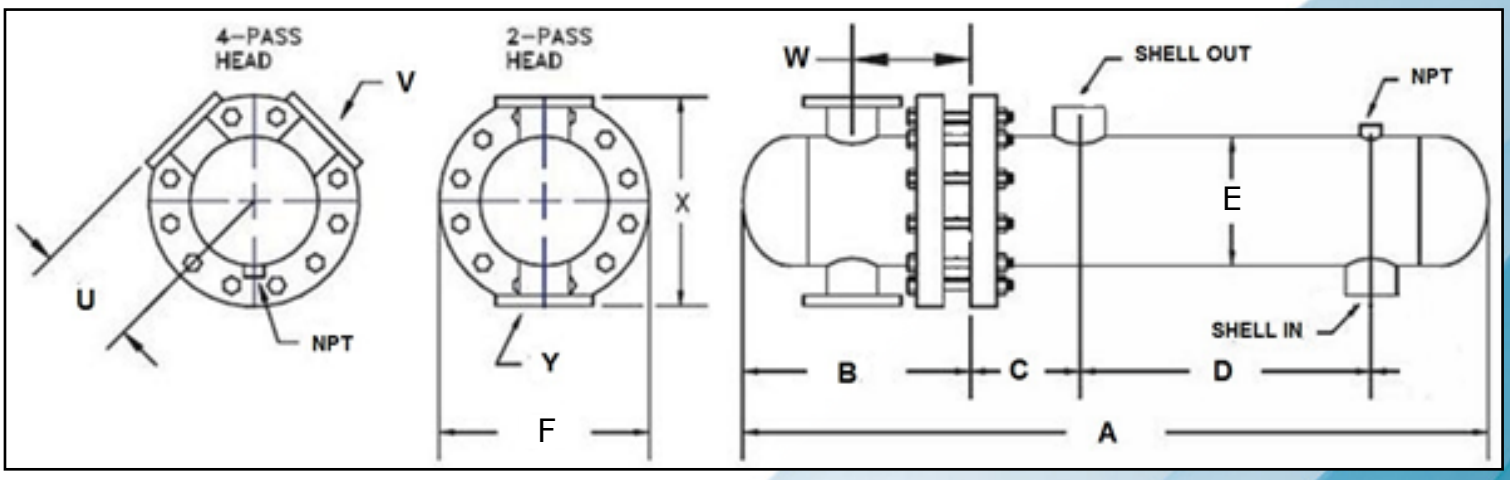


√	Size	Dimensions								-2 pass	Conn Size	-4 Pass	Conn Size	SHELL IN	SHELL OUT
		A	B	C	D	E	F	W	LBS	X	Y	U	V	NPT	NPT
	WF-10														
	WF-12														
	WF-14														

This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

Typical WF Dimensions



√	Size	Dimensions								-2 pass	Conn Size	-4 Pass	Conn Size	SHELL IN	SHELL OUT
		A	B	C	D	E	F	W	LBS	X	Y	U	V	NPT	NPT
	WF-16														
	WF-18														

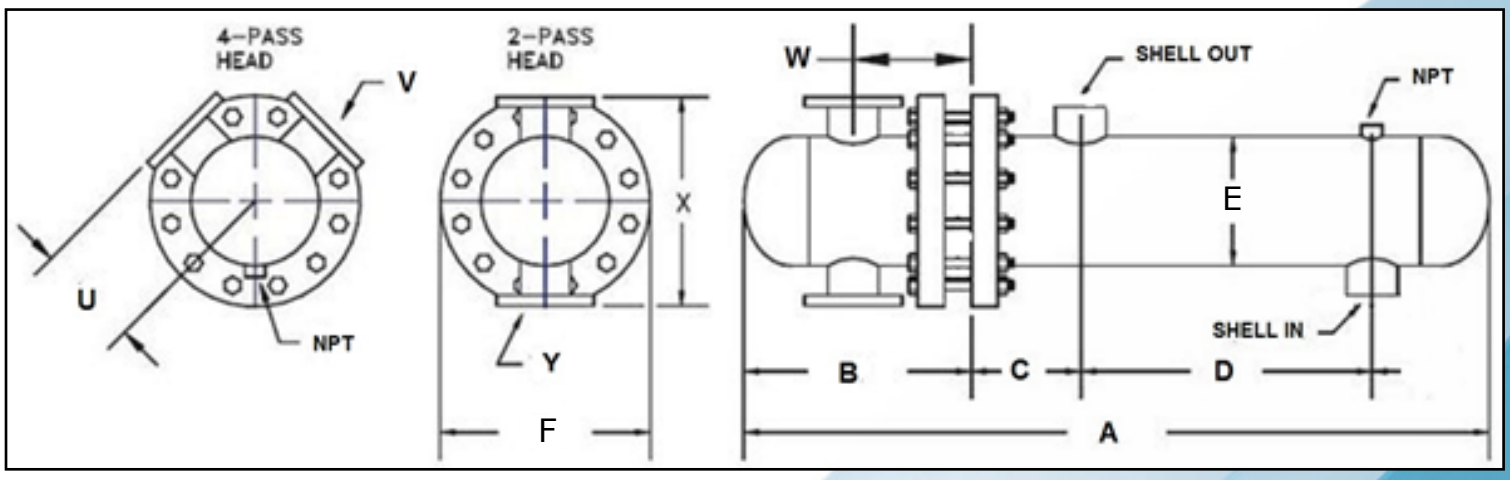
This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (WF04 to WF18)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	150 Psig	150 Psig
TEST PRESSURE	195 Psig	195 Psig
DESIGN TEMPERATURE	375 °F	375 °F
MIN METAL: TEMPERATURE	35 °F	35 °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

Typical WF Dimensions

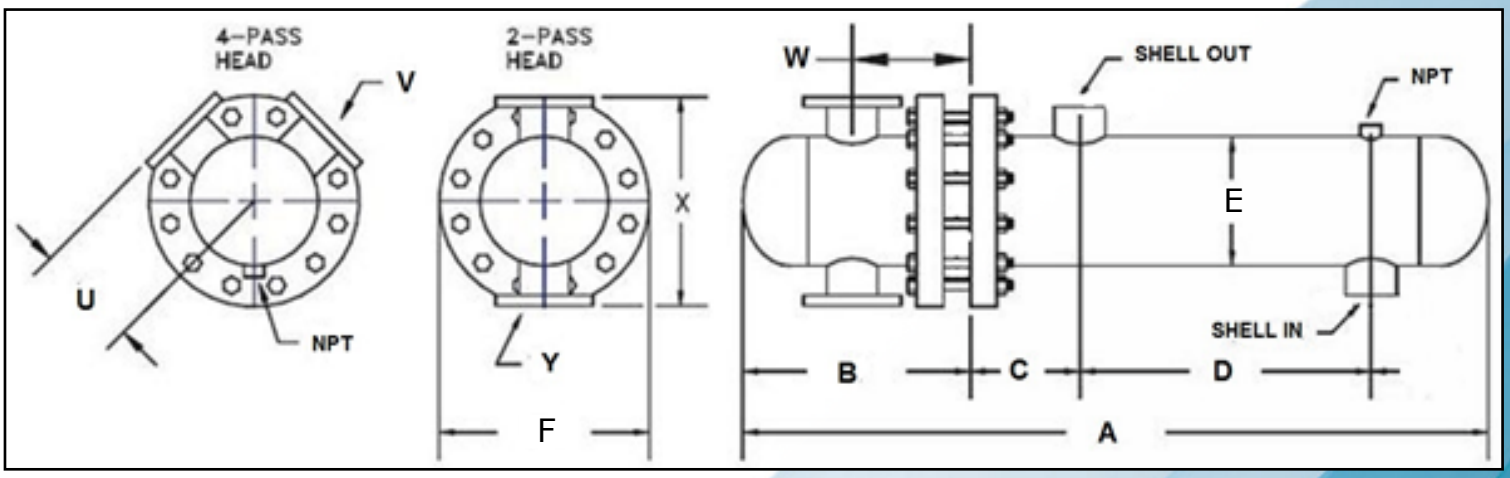


√	Size	Dimensions								-2 pass	Conn Size	-4 Pass	Conn Size	SHELL IN	SHELL OUT
		A	B	C	D	E	F	W	LBS	X	Y	U	V	NPT	NPT
	WF-20														
	WF-22														
	WF-24														

This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

Typical WF Dimensions



√	Size	Dimensions								-2 pass	Conn Size	-4 Pass	Conn Size	SHELL IN	SHELL OUT
		A	B	C	D	E	F	W	LBS	X	Y	U	V	NPT	NPT
	WF-26														
	WF-28														

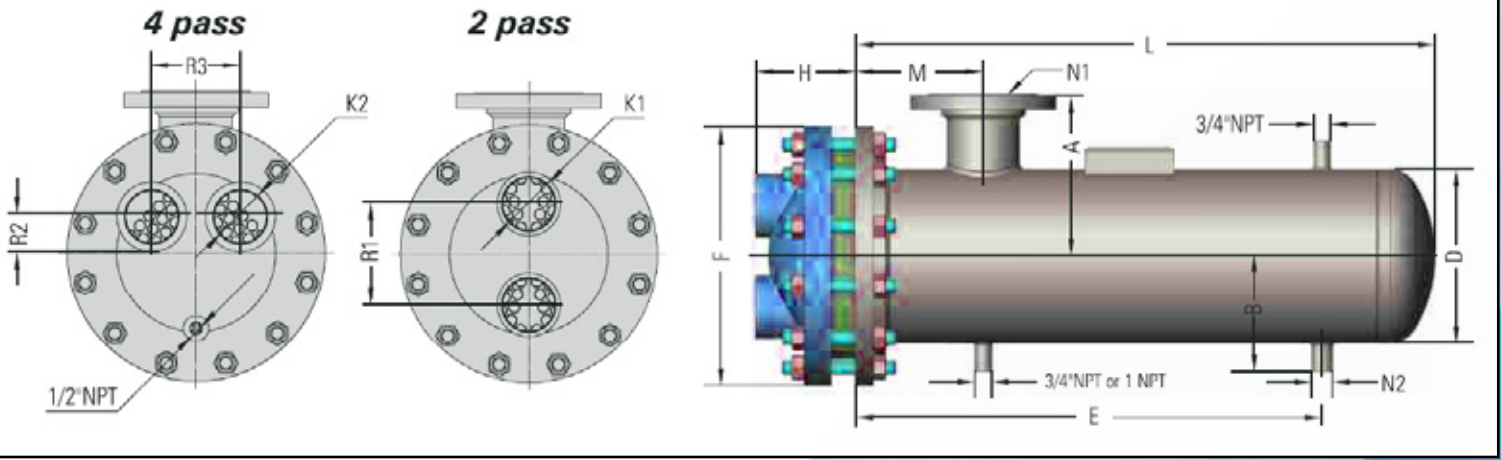
This Section is Intentionally Left Blank For Futur Data

Add 1/4 to dimension B for Double Wall

DESIGN CONDITIONS (WF20 to WF28)		
	TUBE SIDE	SHELL SIDE
DESIGN PRESSURE	150 Psig	150 Psig
TEST PRESSURE	195 Psig	195 Psig
DESIGN TEMPERATURE	375 °F	375 °F
MIN METAL: TEMPERATURE	35 °F	35 °F

Notes:
Units fabricated and tested in accordance with ASME Section VIII Division 1.
Heat exchanger supports provided separately.
All dimensions + / - 0.125".

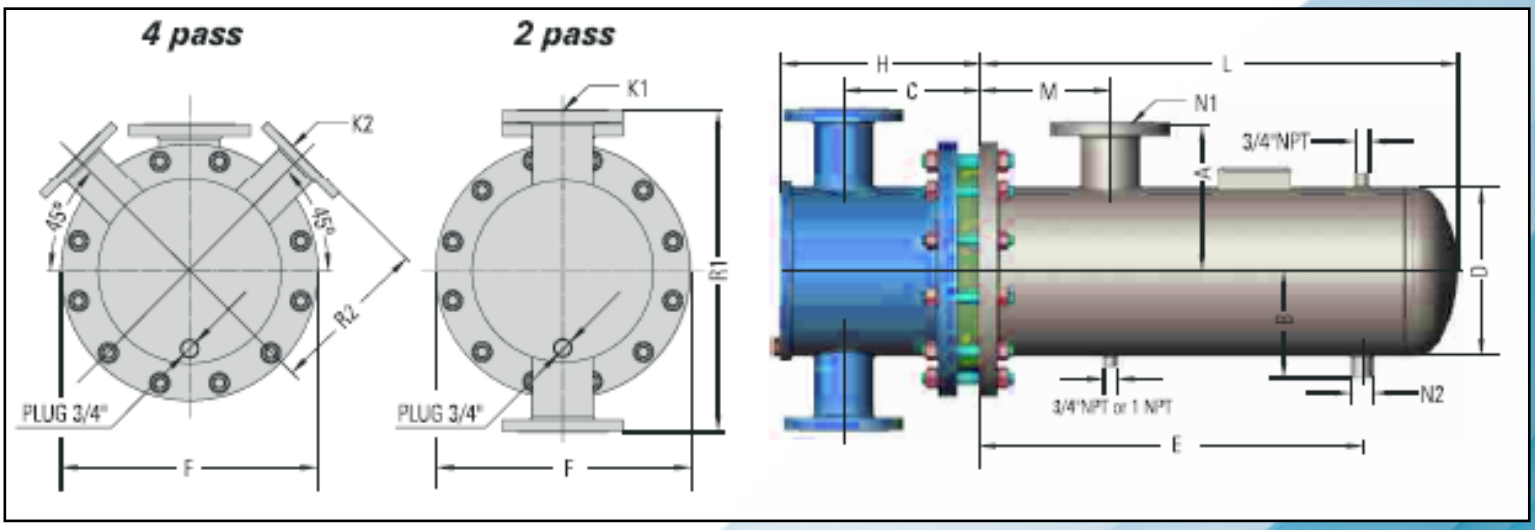
Typical S Dimensions
NEW GENERATION



√	Model #		Cast Iron Heads (in)						Dimensions (in) 2 Pass and 4 Pass									Htg. Surf.
	2 Pass	4 Pass	2 Pass		4 Pass													
	4 inch		R1	K1 FNTP	R3	K2	R2	H	D	F	M	E	B	A	L	N1	N2	(sq.ft)
	S042041	S044041										19 1/2		4	24 1/2			4.7
	S042042	S044042										31 1/2		4	36 1/2			6.9
	S042043	S044043										43 1/2		4	48 1/2			9.1
	S042044	S044044										55 1/2		4	60 1/2			11.3
	S042045	S044045	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
	S042046	S044046										79 1/2		3 3/4	84 1/2			15.8
	S042047	S044047										91 1/2		3 3/4	96 1/2			18
	S042048	S044048										103 1/2		3 3/4	108 1/2			20.3
	S042049	S044049										115 1/2		3 3/4	120 1/2			22.5
	6 inch																	
	S062061	S064061										18 1/2		4 7/8	25			10.7
	S062062	S064062										30 1/2		4 7/8	37			15.9
	S062063	S064063										42 1/2		5 3/4	49			21.1
	S062064	S064064										54 1/2		5 3/4	61			26.3
	S062065	S064065	4	2	3 3/4	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
	S062066	S064066										78 1/2		5 9/16	85			36.7
	S062067	S064067										90 1/2		5 9/16	97			41.9
	S062068	S064068										102 1/2		5 9/16	109			47.1
	S062069	S064069										114 1/2		5 9/16	121			52.3
	8 inch																	
	S082081	S084081										18		6	24	3"NPT	1"NPT	14.7
	S082082	S084082										30		6 7/8	36	3"NPT	1"NPT	22.7
	S082083	S084083										42		6 13/16	48	3"NPT	1"NPT	30.7
	S082084	S084084										54		8 7/8	60	4" Flange	1"NPT	38.7
	S082085	S084085	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
	S082086	S084086										78		8 7/8	84	4" Flange	1 1/4"NPT	54.6
	S082087	S084087										90		8 7/8	96	6" Flange	1 1/4"NPT	62.6
	S082088	S084088										102		8 7/8	108	6" Flange	1 1/4"NPT	70.6
	S082089	S084089										114		8 7/8	120	6" Flange	1 1/4"NPT	78.6
	10 inch																	
	S102101	S104101										17		7 15/16	24	4" Flange	1"NPT	23.7
	S102102	S104102										29		10	36	4" Flange	1"NPT	37.7
	S102103	S104103										41		10	48	4" Flange	1 1/4"NPT	51.5
	S102104	S104104										53		10	60	6" Flange	1 1/4"NPT	65.5
	S102105	S104105	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
	S102106	S104106										77		10	84	6" Flange	1 1/2"NPT	93.3
	S102107	S104107										88 1/2		10	96	6" Flange	2"NPT	107.2
	S102108	S104108										100 1/2		10	108	6" Flange	2"NPT	121.1
	S102109	S104109										112 1/2		10	120	6" Flange	2"NPT	135.1

Not Available for Double Wall

Typical S Dimensions
NEW GENERATION



√	Model #		Heads (in)						Dimensions (in) 2 Pass and 4 Pass									Htg. Surf.
	2 Pass	4 Pass	2 Pass		4 Pass													
	12 inch		R1	K1 FNTP	R2	K2	C	H	D	F	M	E	B	A	L	N1	N2	(sq.ft)
	S122121	S124121	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	58.6
	S122122	S124122										41	8 1/8		48 1/4	6" Flange	1 1/4"NPT	79
	S122123	S124123										53	8 1/8		60 1/4	6" Flange	1 1/2"NPT	99.5
	S122124	S124124										65	8 1/8		72 1/4	6" Flange	2"NPT	119.9
	S122125	S124125										77	8 1/8		84 1/4	8" Flange	2"NPT	140.3
	S122126	S124126										88	9		96 1/4	8" Flange	2 1/2"NPT	160.8
	S122127	S124127										100	9		108 1/4	8" Flange	2 1/2"NPT	181.2
	S122128	S124128										112	9		120 1/4	8" Flange	2 1/2"NPT	201.6
	14 inch																	
	S142141	S144141	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	75.7
	S142142	S144142										40 1/2	8 3/4		49 1/4	6" Flange	2"NPT	102.4
	S142143	S144143										52 1/2	8 3/4		61 1/4	6" Flange	2"NPT	129.1
	S142144	S144144										64 1/2	8 3/4		73 1/4	8" Flange	2"NPT	155.8
	S142145	S144145										76	9 5/8		85 1/4	8" Flange	2 1/2"NPT	182.5
	S142146	S144146										88	9 5/8		97 1/4	8" Flange	2 1/2"NPT	209.2
	S142147	S144147										100	9 5/8		109 1/4	10" Flange	2 1/2"NPT	236
	S142148	S144148										112	9 5/8		121 1/4	10" Flange	3"NPT	262.7
	16 inch																	
	S162161	S164161	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	104.5
	S162162	S164162										40	9 3/4		49	6" Flange	2"NPT	141.4
	S162163	S164163										52	10 5/8		61	8" Flange	2 1/2"NPT	178.4
	S162164	S164164										64	10 5/8		73	8" Flange	2 1/2"NPT	215.3
	S162165	S164165										76	10 5/8		85	10" Flange	2 1/2"NPT	252.2
	S162166	S164166										87 1/2	10 5/8		97	10" Flange	3"NPT	289.1
	S162167	S164167										99 1/2	10 5/8		109	10" Flange	3"NPT	326
	S162168	S164168										111 1/2	10 5/8		121	10" Flange	3"NPT	363
	18 inch																	
	S182181	S184181	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	130.7
	S182182	S184182										39 1/2	10 3/4		48 1/2	8" Flange	2"NPT	177
	S182183	S184183										51	11 5/8		60 1/2	8" Flange	2 1/2"NPT	223.4
	S182184	S184184										62 1/2	11 5/8		72 1/2	10" Flange	3"NPT	269.7
	S182185	S184185										74 1/2	11 5/8		84 1/2	10" Flange	3"NPT	316.1
	S182186	S184186										86 1/2	11 5/8		96 1/2	10" Flange	3"NPT	362.4
	S182187	S184187										98 1/2	11 5/8		108 1/2	10" Flange	3"NPT	408.8
	S182188	S184188										110 1/2	12		120 1/2	10" Flange	4"Flange	455.1

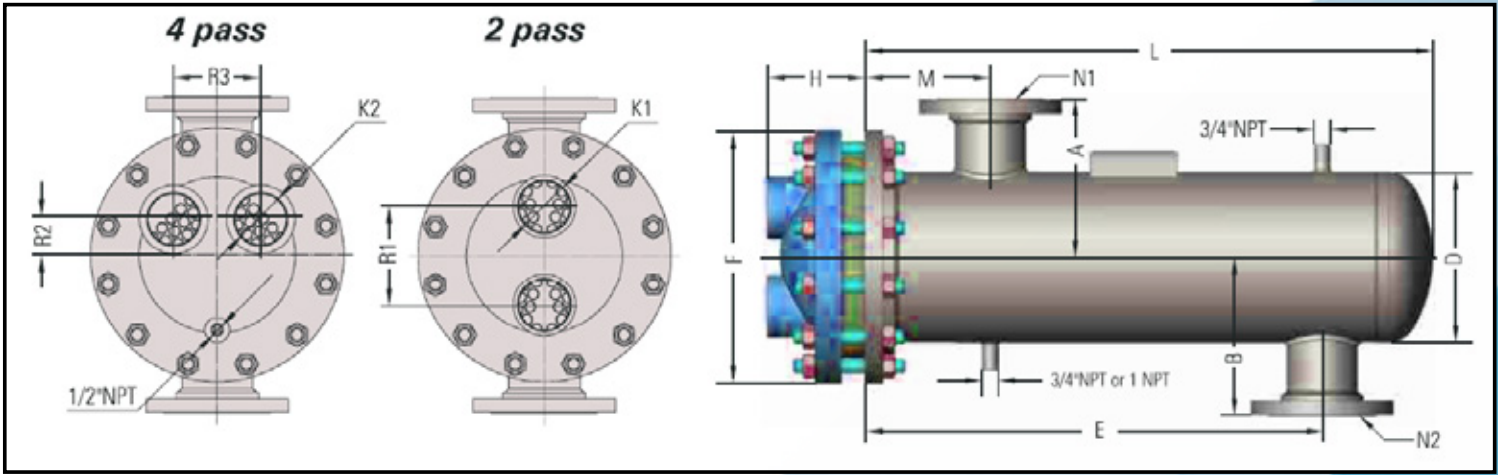
Not Available for Double Wall

Typical S Dimensions
NEW GENERATION

√	Model #		Heads (in)						Dimensions (in) 2 Pass and 4 Pass									Htg. Surf.
	2 Pass	4 Pass	2 Pass		4 Pass													
	20 inch		R1	K1 FNTP	R2	K2	C	H	D	F	M	E	B	A	L	N1	N2	(sq.ft)
	S202201	S204201	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
	S202202	S204202										39	15	15	48 3/4	8″ Flange	8″ Flange	223.6
	S202203	S204203										50 1/2	15	15	60 3/4	10″ Flange	10″ Flange	283.3
	S202204	S204204										62 1/2	15	15	72 3/4	10″ Flange	10″ Flange	343
	S202205	S204205										74 1/2	15	15	84 3/4	12″ Flange	12″ Flange	402.7
	S202206	S204206										86 1/2	15	15	96 3/4	12″ Flange	12″ Flange	462.4
	S202207	S204207										98 1/2	15	15	108 3/4	12″ Flange	12″ Flange	522.2
	S202208	S204208										110 1/2	17	17	120 3/4	14″ Flange	14″ Flange	581.9
	22 inch																	
	S222221	S224221	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
	S222222	S224222										37 3/8	17	17	50 3/8	12″ Flange	12″ Flange	265
	S222223	S224223										49 3/8	17	17	62 3/8	12″ Flange	12″ Flange	336.5
	S222224	S224224										61 3/8	17	17	74 3/8	12″ Flange	12″ Flange	408
	S222225	S224225										73 3/8	17	17	86 3/8	12″ Flange	12″ Flange	479.5
	S222226	S224226										85 3/8	17	17	98 3/8	12″ Flange	12″ Flange	551
	S222227	S224227										97 3/8	18	18	110 3/8	14″ Flange	14″ Flange	622.5
	S222228	S224228										109 3/8	18	18	122 3/8	14″ Flange	14″ Flange	694
	24 inch																	
	S242241	S244241	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
	S242242	S244242										37	18	18	50	12″ Flange	12″ Flange	324
	S242243	S244243										49	18	18	62	12″ Flange	12″ Flange	412
	S242244	S244244										61	18	18	74	12″ Flange	12″ Flange	500
	S242245	S244245										73	18	18	86	12″ Flange	12″ Flange	588
	S242246	S244246										85	18	18	98	12″ Flange	12″ Flange	676
	S242247	S244247										97	19	19	110	14″ Flange	14″ Flange	764
	S242248	S244248										109	19	19	122	14″ Flange	14″ Flange	852
	26 inch																	
	S262261	S264261	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
	S262262	S264262										25 3/4	20	20	48	14″ Flange	14″ Flange	393.4
	S262263	S264263										47 3/4	20	20	60	14″ Flange	14″ Flange	500.2
	S262264	S264264										59 3/4	20	20	72	14″ Flange	14″ Flange	607
	S262265	S264265										71 3/4	20	20	84	14″ Flange	14″ Flange	713.8
	S262266	S264266										83 3/4	20	20	96	14″ Flange	14″ Flange	820.6
	S262267	S264267										95 3/4	21	21	108	16″ Flange	16″ Flange	927.4
	S262268	S264268										107 3/4	21	21	120	16″ Flange	16″ Flange	1034.4
	30 inch																	
	S302301	S304301	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
	S302302	S304302										35	22	22	50 1/2	16″ Flange	16″ Flange	520.5
	S302303	S304303										47	22	22	62 1/2	16″ Flange	16″ Flange	663.4
	S302304	S304304										59	22	22	74 1/2	16″ Flange	16″ Flange	806.3
	S302305	S304305										71	22	22	86 1/2	16″ Flange	16″ Flange	949.2
	S302306	S304306										83	22	22	98 1/2	16″ Flange	16″ Flange	1092
	S302307	S304307										95	22	22	110 1/2	18″ Flange	18″ Flange	1235
	S302308	S304308										107	22	22	122 1/2	18″ Flange	18″ Flange	1378

Not Available for Double Wall

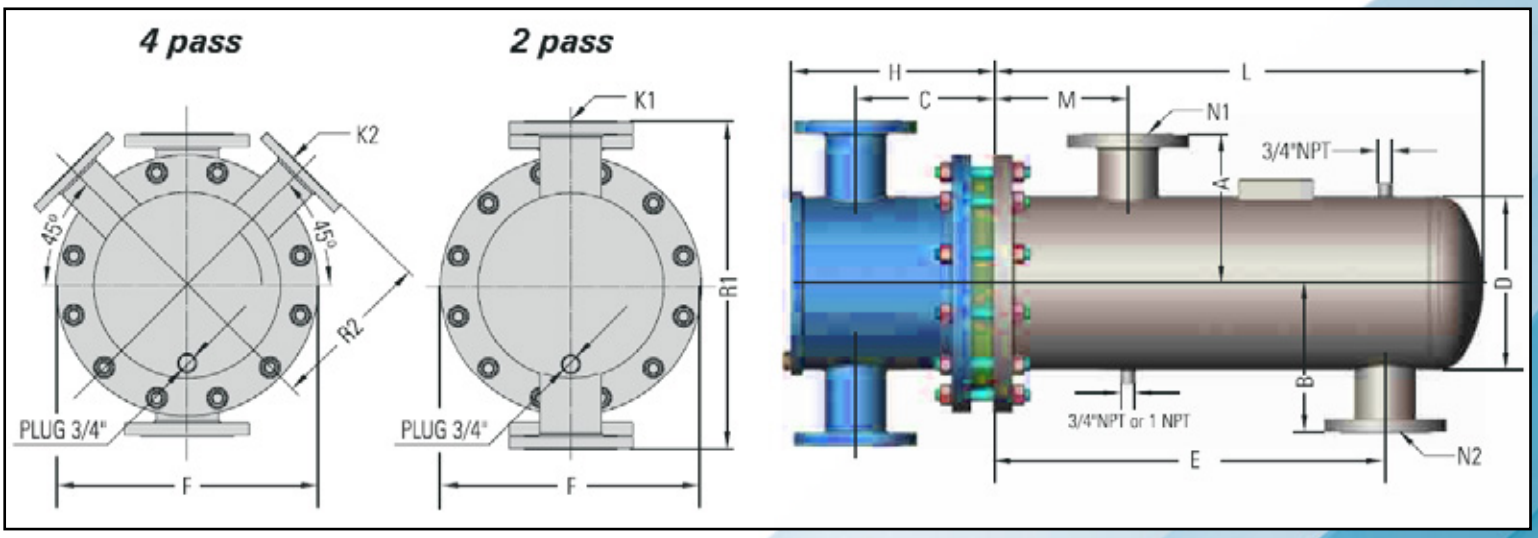
Typical W Dimensions
NEW GENERATION



√		Model #		Cast Iron Heads (in)						Dimensions (in) 2 Pass and 4 Pass								Htg. Surf.
		2 Pass	4 Pass	2 Pass		4 Pass												
		4 inch		R1	K1 FNTP	R3	K2	R2	H	D	F	M	E	B	A	L	N1	N2	(sq.ft)
		W042041	W044041										19 1/2			24 1/2			4.7
		W042042	W044042										31 1/2			36 1/2			6.9
		W042043	W044043										43 1/2			48 1/2			9.1
		W042044	W044044										55 1/2			60 1/2			11.3
		W042045	W044045	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
		W042046	W044046										79 1/2			84 1/2			15.8
		W042047	W044047										91 1/2			96 1/2			18
		W042048	W044048										103 1/2			108 1/2			20.3
		W042049	W044049										115 1/2			120 1/2			22.5
		6 inch																	
		W062061	W064061										18 1/2			25			10.7
		W062062	W064062										30 1/2			37			15.9
		W062063	W064063										42 1/2			49			21.1
		W062064	W064064										54 1/2			61			26.3
		W062065	W064065	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
		W062066	W064066										78 1/2			85			36.7
		W062067	W064067										90 1/2			97			41.9
		W062068	W064068										102 1/2			109			47.1
		W062069	W064069										114 1/2			121			52.3
		8 inch																	
		W082081	W084081										18			24			14.7
		W082082	W084082										30			36			22.7
		W082083	W084083										42			48			30.7
		W082084	W084084										54			60			38.7
		W082085	W084085	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	40.6
		W082086	W084086										78			84			54.6
		W082087	W084087										90			96			62.6
		W082088	W084088										102			108			70.6
		W082089	W084089										114			120			78.6
		10 inch																	
		W102101	W104101										17			24			23.7
		W102102	W104102										29			36			37.7
		W102103	W104103										41			48			51.5
		W102104	W104104										53			60			65.5
		W102105	W104105	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
		W102106	W104106										77			84			93.3
		W102107	W104107										88 1/2			96			107.2
		W102108	W104108										100 1/2			108			121.1
		W102109	W104109										112 1/2			120			135.1

Not Available for Double Wall

Typical W Dimensions
NEW GENERATION



√		Model #		Heads (in)						Dimensions (in) 2 Pass and 4 Pass									Htg. Surf.
		2 Pass	4 Pass	2 Pass		4 Pass													
		12 inch		R1	K1 FNTP	R2	K2	C	H	D	F	M	E	B	A	L	N1	N2	(sq.ft)
		W122121	W124121	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
		W122122	W124122										41			48 1/4	6"Flange	6"Flange	79
		W122123	W124123										53			60 1/4	6"Flange	6"Flange	99.5
		W122124	W124124										65			72 1/4	6"Flange	6"Flange	119.9
		W122125	W124125										77			84 1/4	8"Flange	8"Flange	140.3
		W122126	W124126										88			96 1/4	8"Flange	8"Flange	160.8
		W122127	W124127										100			108 1/4	8"Flange	8"Flange	181.2
		W122128	W124128										112			120 1/4	8"Flange	8"Flange	201.6
		14 inch																	
		W142141	W144141	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
		W142142	W144142										40 1/2			49 1/4	6"Flange	6"Flange	102.4
		W142143	W144143										52 1/2			61 1/4	6"Flange	6"Flange	129.1
		W142144	W144144										64 1/2			73 1/4	8"Flange	8"Flange	155.8
		W142145	W144145										76			85 1/4	8"Flange	8"Flange	182.5
		W142146	W144146										88			97 1/4	8"Flange	8"Flange	209.2
		W142147	W144147										100			109 1/4	10"Flange	10"Flange	236
		W142148	W144148										112			121 1/4	10"Flange	10"Flange	262.7
		16 inch																	
		W162161	W164161	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
		W162162	W164162										40			49	6"Flange	6"Flange	141.4
		W162163	W164163										52			61	8"Flange	8"Flange	178.4
		W162164	W164164										64			73	8"Flange	8"Flange	215.3
		W162165	W164165										76			85	10"Flange	10"Flange	252.2
		W162166	W164166										87 1/2			97	10"Flange	10"Flange	289.1
		W162167	W164167										99 1/2			109	10"Flange	10"Flange	326
		W162168	W164168										111 1/2			121	10"Flange	10"Flange	363
		18 inch																	
		W182181	W184181	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
		W182182	W184182										39 1/2			48 1/2	8"Flange	8"Flange	177
		W182183	W184183										51			60 1/2	8"Flange	8"Flange	223.4
		W182184	W184184										62 1/2			72 1/2	10"Flange	10"Flange	269.7
		W182185	W184185										74 1/2			84 1/2	10"Flange	10"Flange	316.1
		W182186	W184186										86 1/2			96 1/2	10"Flange	10"Flange	362.4
		W182187	W184187										98 1/2			108 1/2	12"Flange	12"Flange	408.8
		W182188	W184188										110 1/2			120 1/2	12"Flange	12"Flange	455.1

Not Available for Double Wall

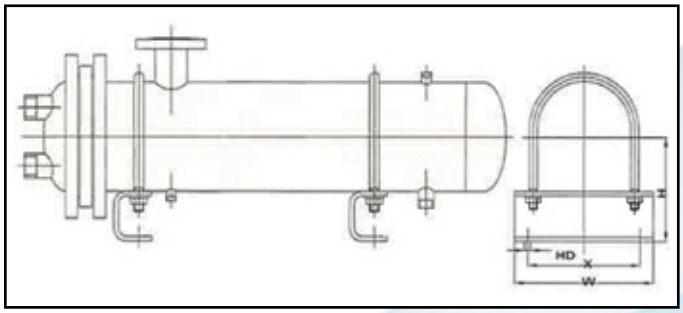
Typical W Dimensions
NEW GENERATION

√	Model #		Heads (in)						Dimensions (in) 2 Pass and 4 Pass									Htg. Surf.
	2 Pass	4 Pass	2 Pass		4 Pass													
	20 inch		R1	K1 FNTP	R2	K2	C	H	D	F	M	E	B	A	L	N1	N2	(sq.ft)
	W202201	W204201	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
	W202202	W204202										39	15	15	48 3/4	8″ Flange	8″ Flange	223.6
	W202203	W204203										50 1/2	15	15	60 3/4	10″ Flange	10″ Flange	283.3
	W202204	W204204										62 1/2	15	15	72 3/4	10″ Flange	10″ Flange	343
	W202205	W204205										74 1/2	15	15	84 3/4	12″ Flange	12″ Flange	402.7
	W202206	W204206										86 1/2	15	15	96 3/4	12″ Flange	12″ Flange	462.4
	W202207	W204207										98 1/2	15	15	108 3/4	12″ Flange	12″ Flange	522.2
	W202208	W204208										110 1/2	17	17	120 3/4	14″ Flange	14″ Flange	581.9
	22 inch																	
	W222221	W224221	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
	W222222	W224222										37 3/8	17	17	50 3/8	12″ Flange	12″ Flange	265
	W222223	W224223										49 3/8	17	17	62 3/8	12″ Flange	12″ Flange	336.5
	W222224	W224224										61 3/8	17	17	74 3/8	12″ Flange	12″ Flange	408
	W222225	W224225										73 3/8	17	17	86 3/8	12″ Flange	12″ Flange	479.5
	W222226	W224226										85 3/8	17	17	98 3/8	12″ Flange	12″ Flange	551
	W222227	W224227										97 3/8	18	18	110 3/8	14″ Flange	14″ Flange	622.5
	W222228	W224228										109 3/8	18	18	122 3/8	14″ Flange	14″ Flange	694
	24 inch																	
	W242241	W244241	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
	W242242	W244242										37	18	18	50	12″ Flange	12″ Flange	324
	W242243	W244243										49	18	18	62	12″ Flange	12″ Flange	412
	W242244	W244244										61	18	18	74	12″ Flange	12″ Flange	500
	W242245	W244245										73	18	18	86	12″ Flange	12″ Flange	588
	W242246	W244246										85	18	18	98	12″ Flange	12″ Flange	676
	W242247	W244247										97	19	19	110	14″ Flange	14″ Flange	764
	W242248	W244248										109	19	19	122	14″ Flange	14″ Flange	852
	26 inch																	
	W262261	W264261	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
	W262262	W264262										25 3/4	20	20	48	14″ Flange	14″ Flange	393.4
	W262263	W264263										47 3/4	20	20	60	14″ Flange	14″ Flange	500.2
	W262264	W264264										59 3/4	20	20	72	14″ Flange	14″ Flange	607
	W262265	W264265										71 3/4	20	20	84	14″ Flange	14″ Flange	713.8
	W262266	W264266										83 3/4	20	20	96	14″ Flange	14″ Flange	820.6
	W262267	W264267										95 3/4	21	21	108	16″ Flange	16″ Flange	927.4
	W262268	W264268										107 3/4	21	21	120	16″ Flange	16″ Flange	1034.4
	30 inch																	
	W302301	W304301	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
	W302302	W304302										35	22	22	50 1/2	16″ Flange	16″ Flange	520.5
	W302303	W304303										47	22	22	62 1/2	16″ Flange	16″ Flange	663.4
	W302304	W304304										59	22	22	74 1/2	16″ Flange	16″ Flange	806.3
	W302305	W304305										71	22	22	86 1/2	16″ Flange	16″ Flange	949.2
	W302306	W304306										83	22	22	98 1/2	16″ Flange	16″ Flange	1092
	W302307	W304307										95	22	22	110 1/2	18″ Flange	18″ Flange	1235
	W302308	W304308										107	22	22	122 1/2	18″ Flange	18″ Flange	1378

Not Available for Double Wall

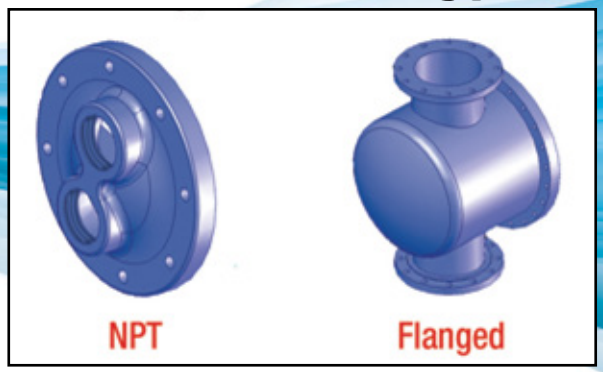
Design Parameters					
	Standard			Optional	
	Design Pressure (PSI)	Test Pressure (PSI)	Design Temperature (oF)	Design Pressure (PSI)	Design Temperature (oF)
Shell	150	300	375	300	421
Tubes	150	300	375	400	448

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



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

Connection Types



Typical S Connection Sizes

Model-Size	Tube Side -2 pass	-4 pass	Shell Side Inlet	Drain	Model-Size	Tube Side -2 pass	-4 pass	Shell Side Inlet	Drain
S-04	1.25	1	2	1	S-18	6	4	10	4
S-06	2	1.5	3	1	S-20	8	6	12	4
S-08	3	2	3	1	S-22	10	8	12	4
S-10	4	3	6	2	S-24	10	8	14	4
S-12	4	4	8	2	S-26	12	8	16	6
S-14	4	4	8	2.5	S-28	12	10	18	6
S-16	6	4	10	3	S-30	14	10	20	6

Please note that the model W is available upon request.

Transfer Solutions

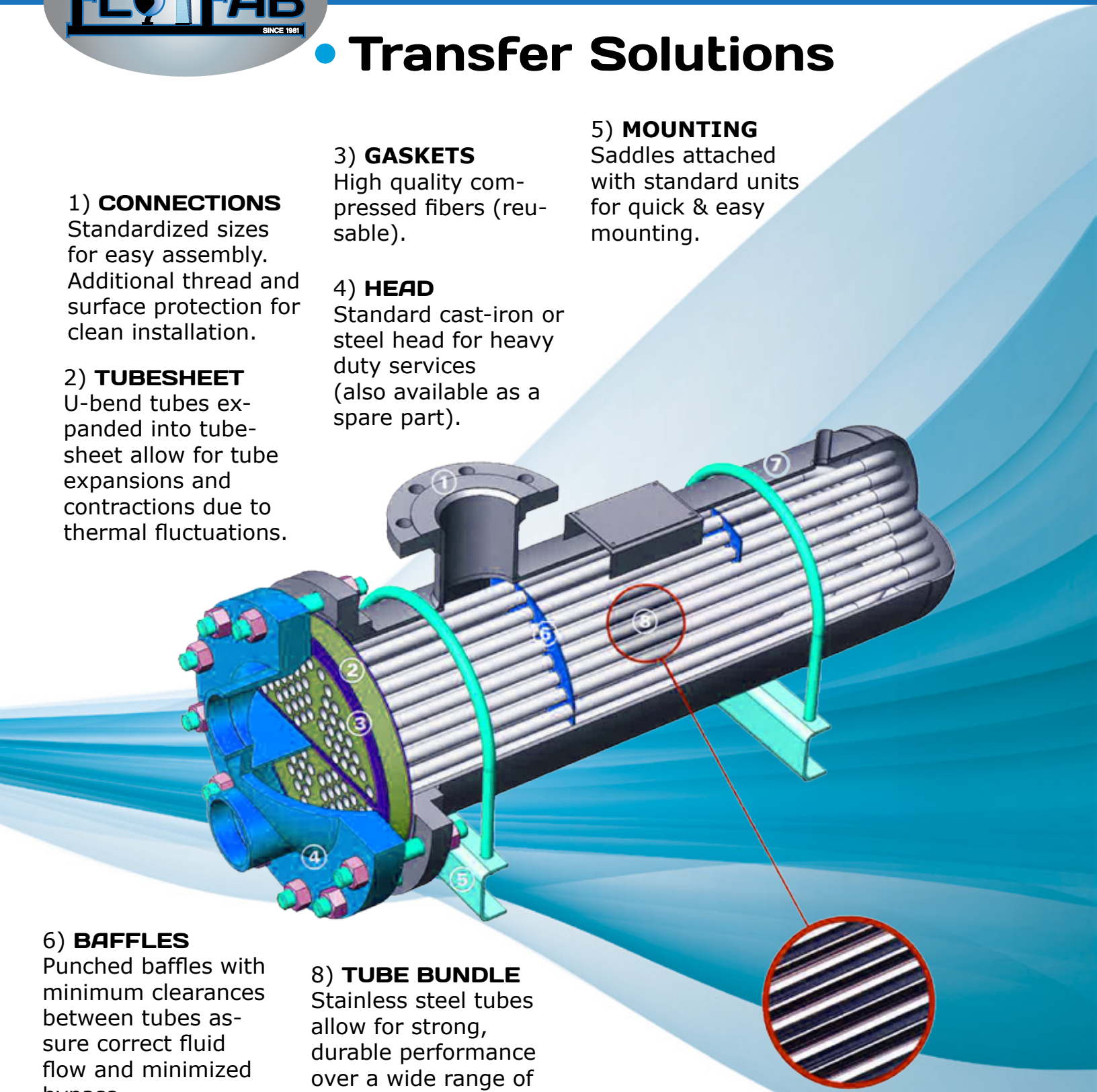
1) **CONNECTIONS**
Standardized sizes for easy assembly. Additional thread and surface protection for clean installation.

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

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.



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.

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.

"With over 35 years of experience in pressure vessel design and manufacture, our goal is to provide sustainable **energy saving solutions** that help make a greener HVAC world."

Heavy Duty Construction
The Flo Fab heat exchanger is one of the most rugged heavy duty heat exchangers on the market. The circular shaped shell and tubes withstand greater pressures than flat plate designs with thinner materials. In accordance with safety codes, corrosion allowances are added to the carbon steel parts for added girth. The tubes are made of various corrosion resistant materials with thicknesses ranging from 20 BWG or 0.035" to 16 BWG or 0.065" making them at least 50% thicker than other heat transfer surfaces. With fewer gaskets, Flo Fab can withstand higher operating pressures and temperatures than other heat transfer devices.

Human Comfort
SDW and WDW double wall designs prevent potable water contact with chemically altered boiler water. The double wall construction provides a positive leak path between the potable water and the heating media should a leak occur in a tube wall. This design conforms to all US building code requirements.

Long Life Expectancy
Flo Fab utilizes U shaped tubes that are anchored at only one end. The tubes are allowed to expand freely in one direction when subject to changing operating temperatures and heat loads. This allows the heat exchanger to cycle with no risk of damage, which ensures a long, trouble-free lite for the product.

Low Risk
Heavy duty construction, freely expanding corrosion resistant tubes and minimized use of gaskets make WesTube° a low risk investment All units come certified by the appropriate safety code (ASME, CRN, etc).

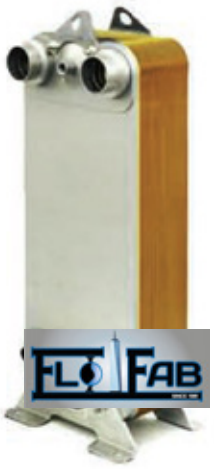
Low Maintenance
FloFab heat exchangers are designed with fewer gaskets, which leads to less maintenance For installations where hard water and scaling may occur, Flo Fab uses larger diameter tubes that can continue to operate and can be easily cleaned. If necessary, a bundle can be swapped out while the other is being serviced.

Lower Pumping Costs
The heat transfer surface in Flo Fab is smooth, resulting in less turbulent flow inside the tubes. This design maximizes heat transfer with reduced pressure drop, which lowers pumping costs.

Application Friendly
Flo Fab is used for heating domestic water, snow melting, pool heating, condensate cooling, district heating, radiant heating, comfort heating and other heat transfer systems where pressure separation is needed.

Brazed - Heat Exchangers

BL Series

			
BL14	**BL20**	**BL26**	**BL26C**
			
BL50	**BL95**	**BL120**	**BL190**
			
BL200	**BL600**	**BL100**	**BL210**

Product Dimensions

BL Series

Millimeters (mm)				
√				
Model	**BL14**	**BL20**	**BL26**	**BL26C**
Width	78	76	111	124
Height	206	310	310	304
Length	9+2.3n	9+2.3n	10+2.36n	13+2.4n
Horizontal Port Distance	42	42	50	70
Vertical Port Distance	172	282	250	250
Max Pressure (Mpa)	3	3	3/4.5	3
Max Flowrate (M3/h)	3.6	3.6	8.1	8.1
Weight(kg)	0.6+0.6n	1.0+0.08n	1.3+0.12n	2.2+0.16n
√				
Model	**BL50**	**BL95**	**BL120**	**BL190**
Width	111	191	246	307
Height	525	616	528	696
Length	10+2.35n	11+2.35n	13+2.36n	13+2.75n
Horizontal Port Distance	50	92	174	179
Vertical Port Distance	466	519	456	567
Max Pressure (Mpa)	3/4.5	3/4.5	3	3
Max Flowrate (M3/h)	12.7	39	42	100
Weight(kg)	2.6+0.19n	7.8+0.36n	7.2+0.52	12.5+0.72n
√				
Model	**BL200**	**BL600**	**BL100***	**BL210***
Width	321	429	248	322
Height	738	1398	495	739
Length	13+2.7n	22+2.78n	10+2.15n	13+2.55n
Horizontal Port Distance	188	220	157	205,2
Vertical Port Distance	603	1190	405	631
Max Pressure (Mpa)	2.1	1.5	3/4.5	3/4.5
Max Flowrate (M3/h)	100	300	42	100
Weight(kg)	13+0.75n	31.8+1.73	6.5+0.37n	13+0.78n

Inches (in)				
√				
Model	**BL14**	**BL20**	**BL26**	**BL26C**
Width	3,07	2,99	4,37	4,88
Height	8,11	12,20	12,20	11,97
Length	0.35+0.09n	0.35+0.09n	0.39+0.09n	0.51+0.09!
Horizontal Port Distance	1,65	1,65	1,97	2,76
Vertical Port Distance	6,77	11,10	9,84	9,84
Max Pressure (PSI)	435.11	435.11	435.11/ 652.66	435.11
Max Flowrate (USGPM)	15,85	15,85	35,67	35,67
Weight(lbs)	1.32+1.32n	2.20+0.18	2.87+0.26	4.85+0.35
√				
Model	**BL50**	**BL95**	**BL120**	**BL190**
Width	4,37	7,52	9,69	12,09
Height	20,67	24,25	20,79	27,40
Length	0.39+0.09n	0.43+0.09n	0.51+0.09n	0.51+0.11n
Horizontal Port Distance	1,97	3,62	6,85	7,05
Vertical Port Distance	18,35	20,43	17,95	22,32
Max Pressure (PSI)	435.11/ 652.66	435.11/ 652.66	435.11	435.11
Max Flowrate (USGPM)	55,92	171,74	184,95	44,35
Weight(lbs)	5.73+0.42n	17.19+0.79n	15.87+1.15n	27.56+1.59n
√				
Model	**BL200**	**BL600**	**BL100***	**BL210***
Width	12,64	16,89	9,76	12,68
Height	29,06	55,04	19,49	29,09
Length	0.51+0.11n	0.87+0.11n	0.39+0.09n	0.51+0.11n
Horizontal Port Distance	7,40	8,66	6,18	8,08
Vertical Port Distance	23,74	46,85	15,94	24,84
Max Pressure (PSI)	304.58	217.56	435.11/ 652.66	435.11/ 652.66
Max Flowrate (USGPM)	440,35	1321,05	184,95	44,35
Weight(lbs)	27.56+1.65n	70.11+3.81n	14.33+0.82n	28.66+1.72n

Product Specifications

BL14 Brazed Plate Heat Exchanger

General information

The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications

- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

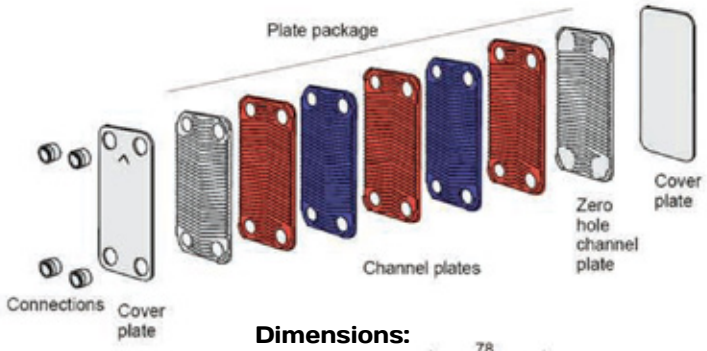
Working principles

The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Component blow-up drawings:



Particulars required for quotation

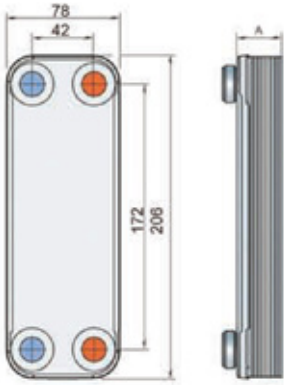
To enable to make a specific quotation, specify the following particulars in your enquiry:

- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials

Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:



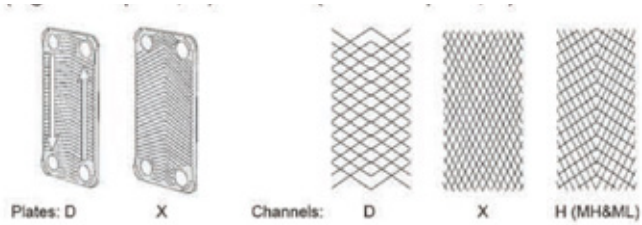
A measure mm = 9 + (2.3 * n) (+/-2 %)
Weight** kg = 0.6 + (0.06 * n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types

BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).



Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-30 bar
MAX FLOWRATE M3/H (GPM)	3.62(15.93)
MIN. NBR OF PLATES	4
MAX. NBR OF PLATES	100

FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL20 Brazed Plate Heat Exchanger

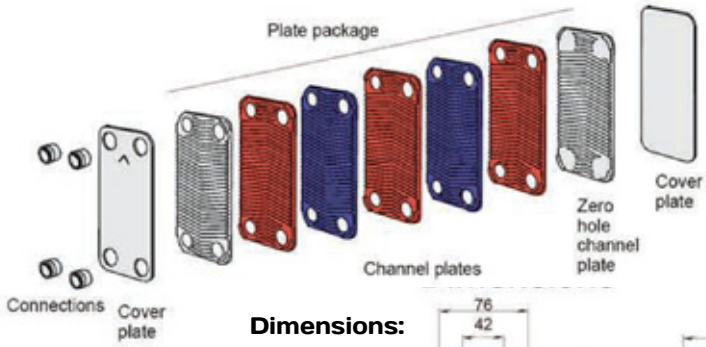
General information
The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications
- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

Working principles
The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design
The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

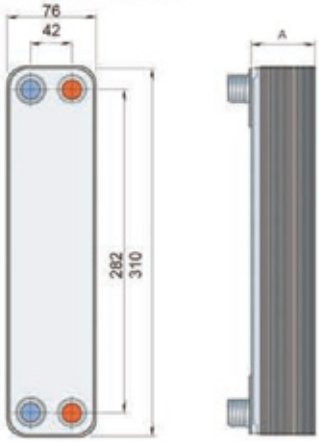
Component blow-up drawings:



Particulars required for quotation
To enable to make a specific quotation, specify the following particulars in your enquiry:
- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials
Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:

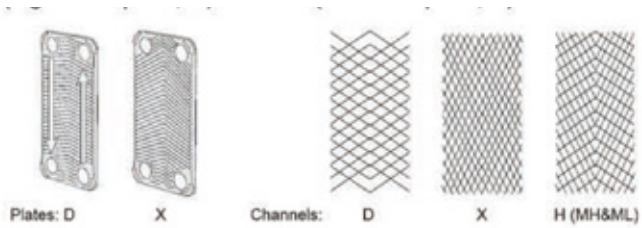


A measure mm = 9 + (2.3 * n) (+/-2 %)
Weight** kg = 1 + (0.08 * n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types
BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).



Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-30 bar
MAX FLOWRATE M3/H (GPM)	3.6(15.93)
MIN. NBR OF PLATES	4
MAX. NBR OF PLATES	100

FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL26 Brazed Plate Heat Exchanger

General information

The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications

- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

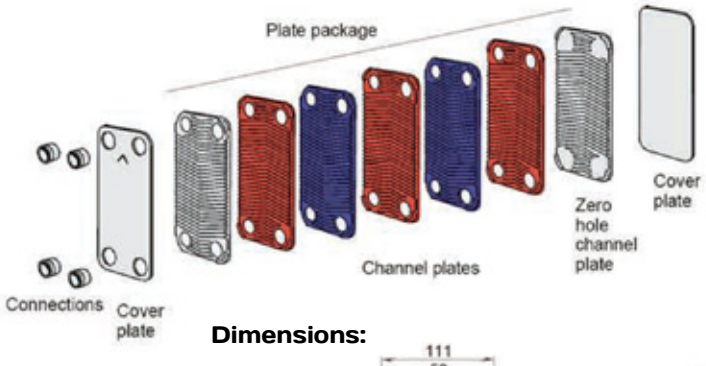
Working principles

The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Component blow-up drawings:



Particulars required for quotation

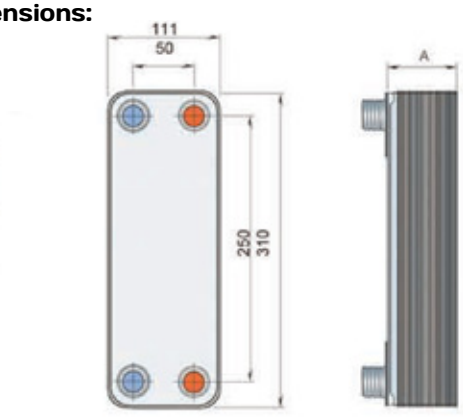
To enable to make a specific quotation, specify the following particulars in your enquiry:

- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials

Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:



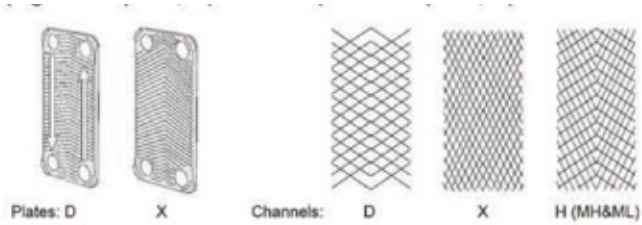
A measure mm = 10 + (2.36 * n) (+/-2 %)
Weight** kg = 1.3 + (0.12 * n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types

BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).



Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-30 bar
MAX FLOWRATE M3/H (GPM)	8.1(35.84)
MIN. NBR OF PLATES	4
MAX. NBR OF PLATES	100

FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL26C Brazed Plate Heat Exchanger

General information

The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications

- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

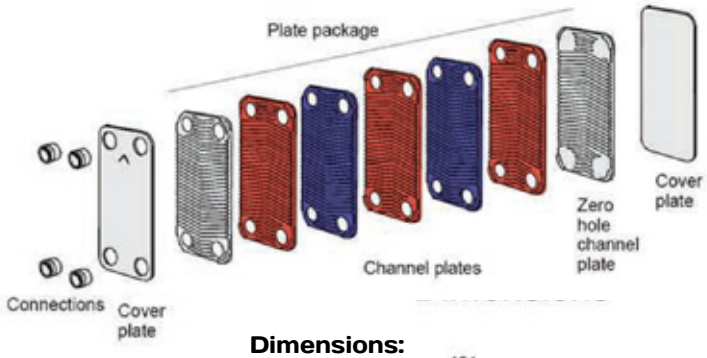
Working principles

The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Component blow-up drawings:



Particulars required for quotation

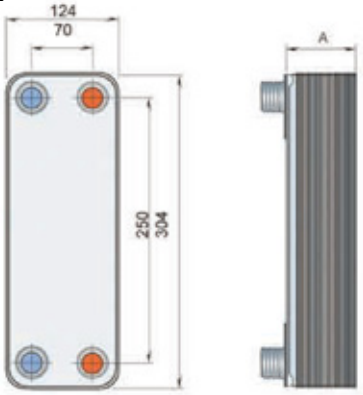
To enable to make a specific quotation, specify the following particulars in your enquiry:

- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials

Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:



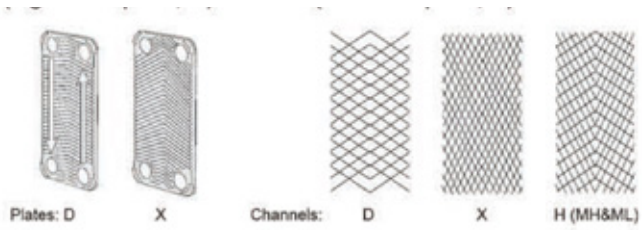
A measure mm = 13 + (2.4 * n) (+/-2 %)
Weight** kg = 2.2 + (0.16* n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types

BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).



Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-30 bar
MAX FLOWRATE M3/H (GPM)	8.1(35.84)
MIN. NBR OF PLATES	4
MAX. NBR OF PLATES	100

FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL50 Brazed Plate Heat Exchanger

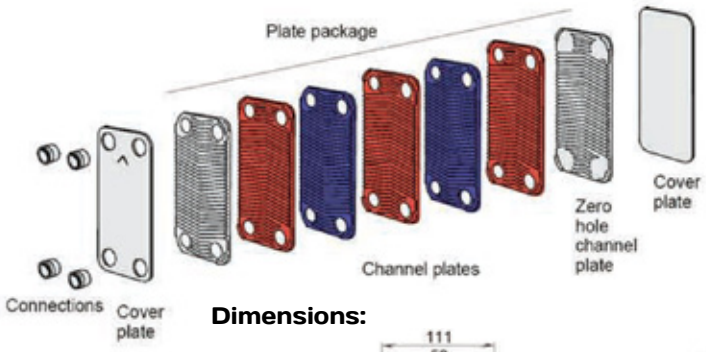
General information
The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications
- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

Working principles
The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design
The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

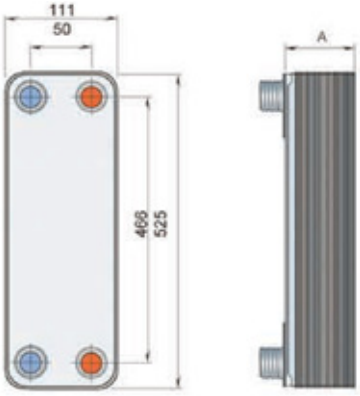
Component blow-up drawings:



Particulars required for quotation
To enable to make a specific quotation, specify the following particulars in your enquiry:
- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials
Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:

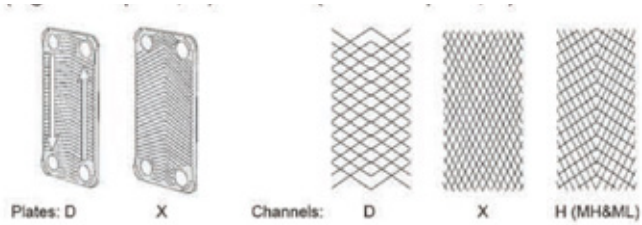


A measure mm = 10 + (2.35 * n) (+/-2 %)
Weight** kg = 2.6 + (0.19* n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types
BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).



Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-30/45 bar
MAX FLOWRATE M3/H (GPM)	12.7(56.10)
MIN. NBR OF PLATES	4
MAX. NBR OF PLATES	150

FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL95 Brazed Plate Heat Exchanger

General information

The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications

- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

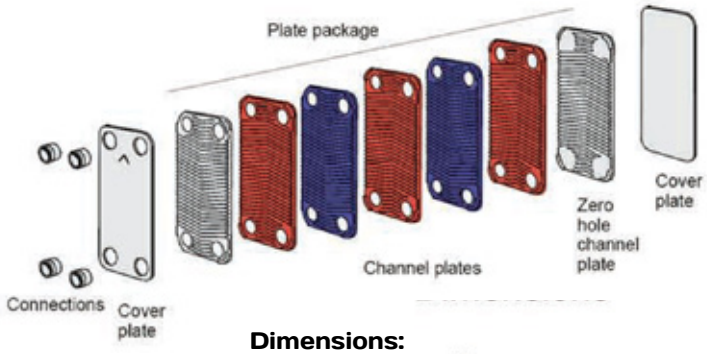
Working principles

The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Component blow-up drawings:



Particulars required for quotation

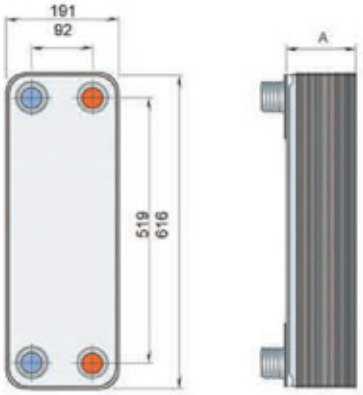
To enable to make a specific quotation, specify the following particulars in your enquiry:

- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials

Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:



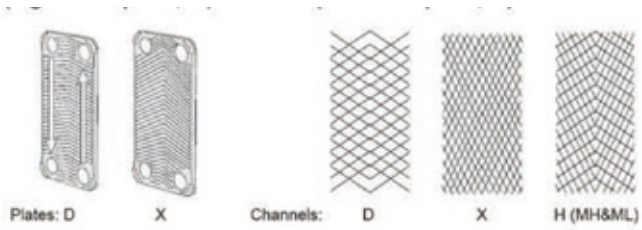
A measure mm = 11 + (2.35 * n) (+/-2 %)
Weight** kg = 7.0 + (0.36* n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types

BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).



Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-30/45 bar
MAX FLOWRATE M3/H (GPM)	34(150)
MIN. NBR OF PLATES	4
MAX. NBR OF PLATES	190

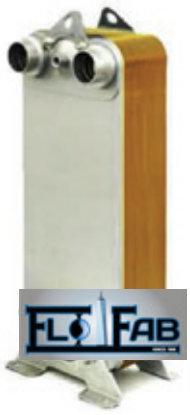
FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL100 Brazed Plate Heat Exchanger

General information

The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,



Typical applications

- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

Working principles

The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Particulars required for quotation

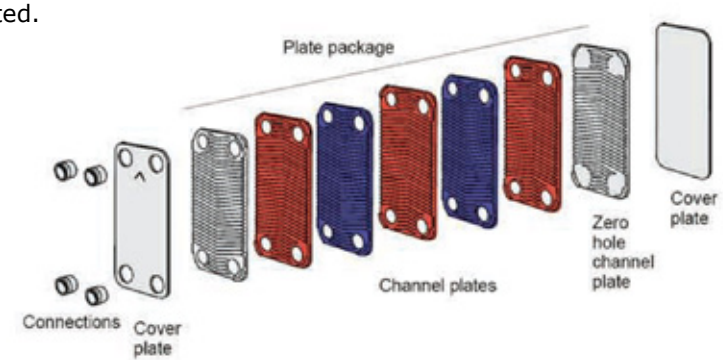
To enable to make a specific quotation, specify the following particulars in your enquiry:

- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials

Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

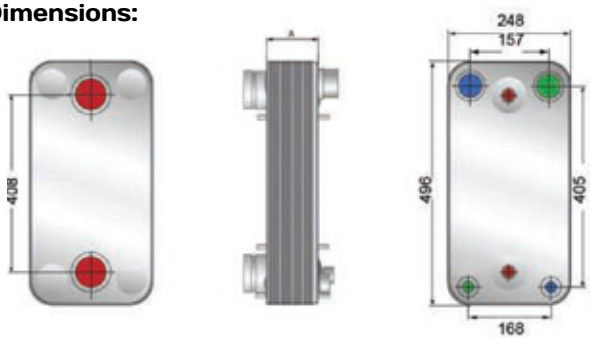
Component blow-up drawings:



Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

Dimensions:



A measure mm = 10+ (2.15 * n) (+/-2 %)
Weight** kg = 6.5 + (0.37* n)
(n = number of plates) * Excluding connections

BPHE Plates and Channel Types

BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).

Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-30/45 bar
MAX FLOWRATE M3/H (GPM)	42(185)
MIN. NBR OF PLATES	10
MAX. NBR OF PLATES	150

FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL120 Brazed Plate Heat Exchanger

General information

The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications

- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

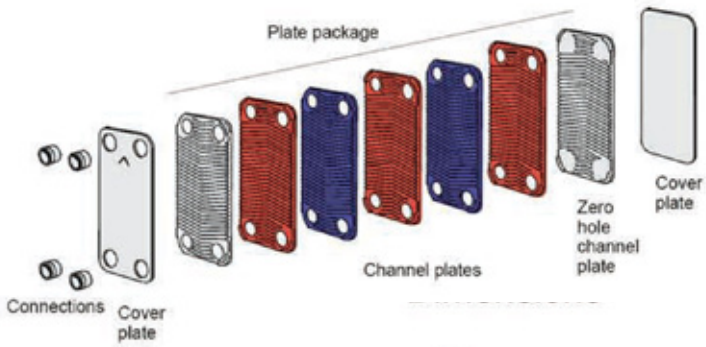
Working principles

The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Component blow-up drawings:



Particulars required for quotation

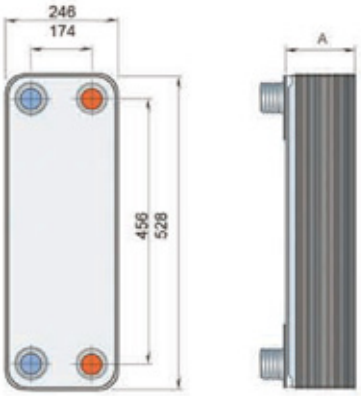
To enable to make a specific quotation, specify the following particulars in your enquiry:

- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials

Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:



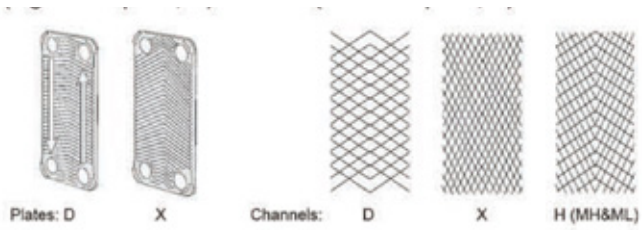
A measure mm = 13 + (2.36 * n) (+/-2 %)
Weight** kg = 7.2 + (0.52* n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types

BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).



Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-30/45 bar
MAX FLOWRATE M3/H (GPM)	42(185)
MIN. NBR OF PLATES	4
MAX. NBR OF PLATES	150

FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL190 Brazed Plate Heat Exchanger

General information

The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications

- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

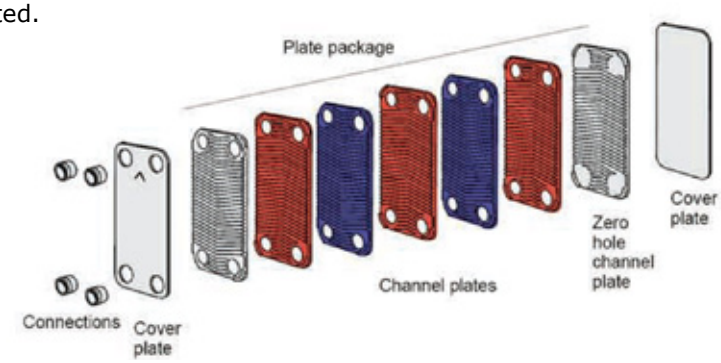
Working principles

The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Component blow-up drawings:



Particulars required for quotation

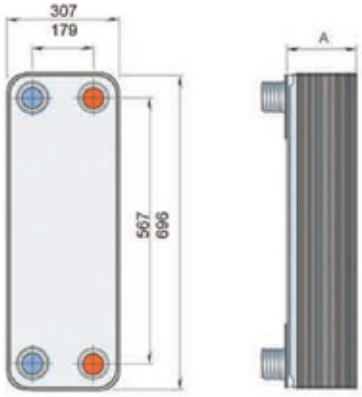
To enable to make a specific quotation, specify the following particulars in your enquiry:

- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials

Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:



A measure mm = 13 + (2.75 * n) (+/-2 %)
Weight** kg = 12.5 + (0.72* n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types

BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).

Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-30bar
MAX FLOWRATE M3/H (GPM)	100(440)
MIN. NBR OF PLATES	4
MAX. NBR OF PLATES	150

FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL200 Brazed Plate Heat Exchanger

General information

The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications

- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

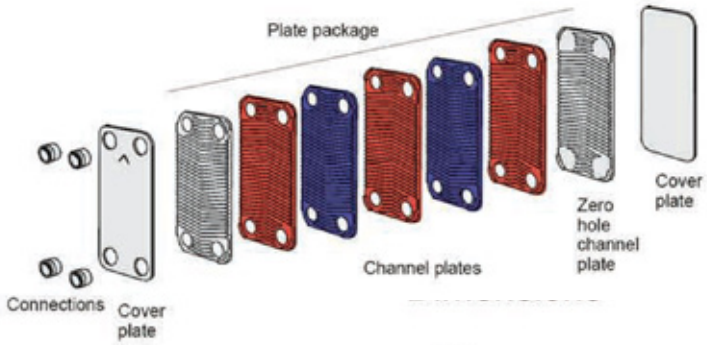
Working principles

The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Component blow-up drawings:



Particulars required for quotation

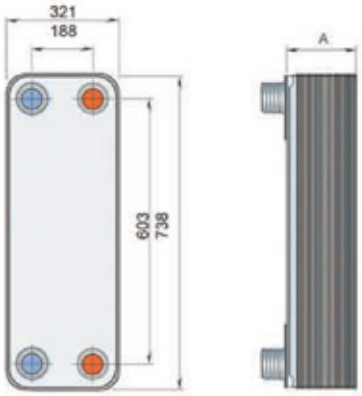
To enable to make a specific quotation, specify the following particulars in your enquiry:

- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials

Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:



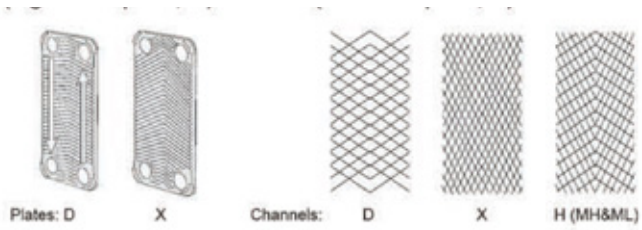
A measure mm = 13 + (2.7 * n) (+/-2 %)
Weight** kg = 13 + (0.75* n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types

BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).



Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-21 bar
MAX FLOWRATE M3/H (GPM)	100(440)
MIN. NBR OF PLATES	10
MAX. NBR OF PLATES	200

FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL210 Brazed Plate Heat Exchanger

General information

The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications

- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

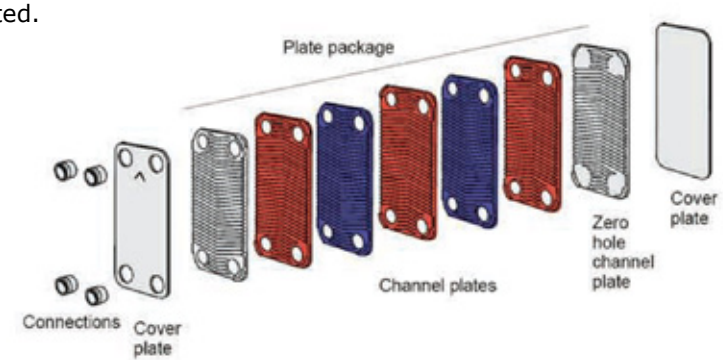
Working principles

The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Component blow-up drawings:



Particulars required for quotation

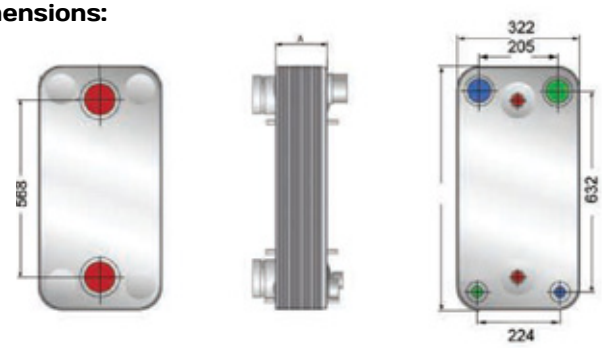
To enable to make a specific quotation, specify the following particulars in your enquiry:

- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials

Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:



A measure mm = 13+ (2.55 * n) (+/-2 %)
Weight** kg = 13 + (0.78* n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types

BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).

Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-30/45bar
MAX FLOWRATE M3/H (GPM)	42(185)
MIN. NBR OF PLATES	100
MAX. NBR OF PLATES	190

FloFab reserves the right to change specifications without prior notification.

Product Specifications

BL600 Brazed Plate Heat Exchanger

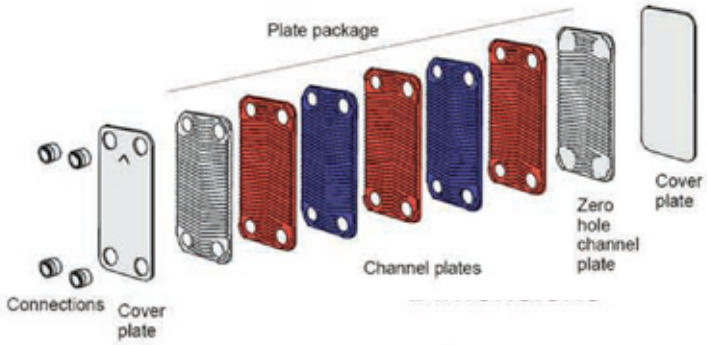
General information
The BPHE is in principle built up by a plate package of corrugated channel plates between front and rear cover-plate packages. The cover plate packages consist of sealing plates, blind rings and cover plates. During the vacuum-brazing process, a brazed joint is formed at every contact point between two plates. The design creates a heat exchanger that consists of two separate circuits. The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours,

Typical applications
- HVAC heating/cooling
- Refrigerant applications
- Industrial cooling/heating
- Oil cooling

Working principles
The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design
The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

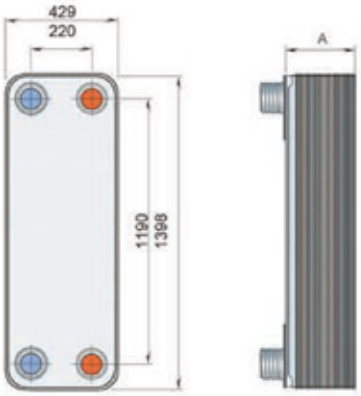
Component blow-up drawings:



Particulars required for quotation
To enable to make a specific quotation, specify the following particulars in your enquiry:
- Required flow rates or heat load
- Temperature program
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop

Standard materials
Cover plates: 304 Stainless steel
Connections: 304 Stainless steel
Plates: 316L Stainless steel
Brazing material: 99.99% Copper

Dimensions:

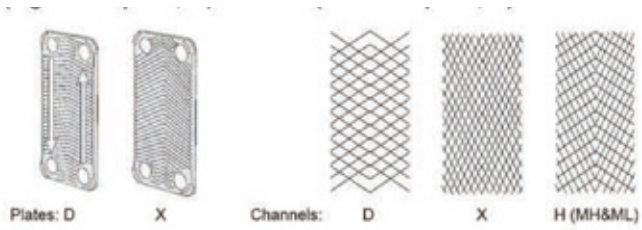


A measure mm = 22+ (2.78 * n) (+/-2 %)
Weight** kg = 31.8 + (1.73* n)
(n = number of plates) * Excluding connections

Connections:

*Thread NPT / BST standard are all available.
*More connections are available on request.

BPHE Plates and Channel Types
BPHEs are available with different types of channel plates were the herringbone pattern varies. The chevrons can be obtuse (high theta plate, D) or acute (low theta plate, X).



Standard Data

MAX WORKING TEMPERATURE	225ºC
WORKING PRESSURE	0-20 bar
MAX FLOWRATE M3/H (GPM)	300(1,320)
MIN. NBR OF PLATES	10
MAX. NBR OF PLATES	150

FloFab reserves the right to change specifications without prior notification.

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