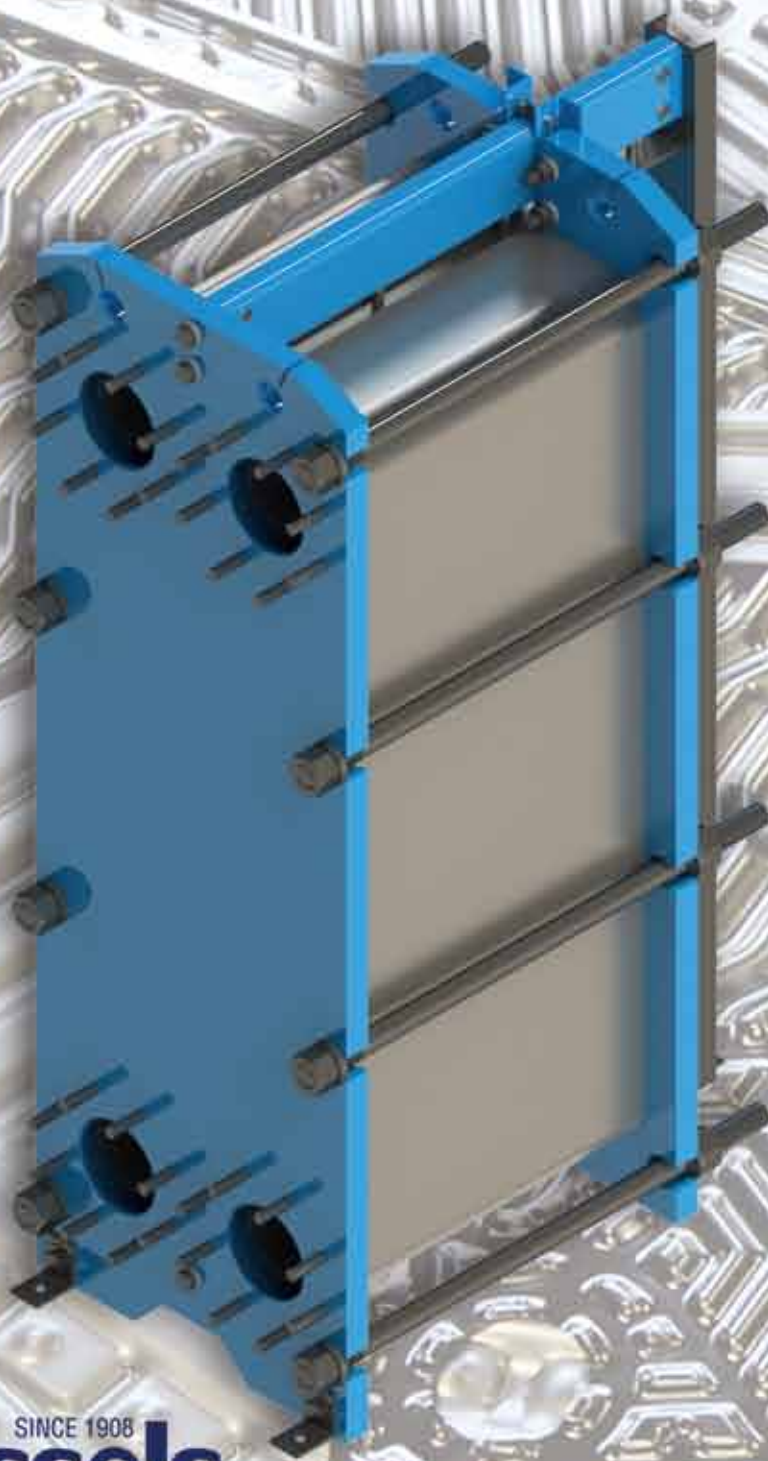


WesPlate® Heat Exchangers



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company

PLATE TYPE HEAT EXCHANGERS

WesPlate®

PLATE HEAT EXCHANGERS WITH GASKETS

Water is the most 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 serve 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.

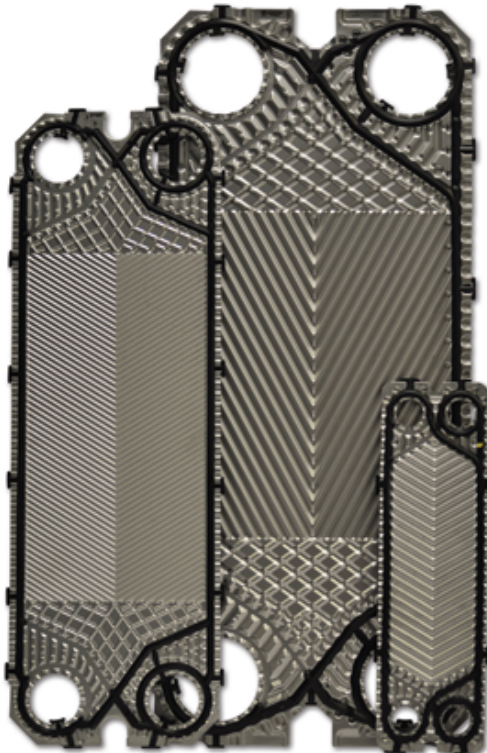
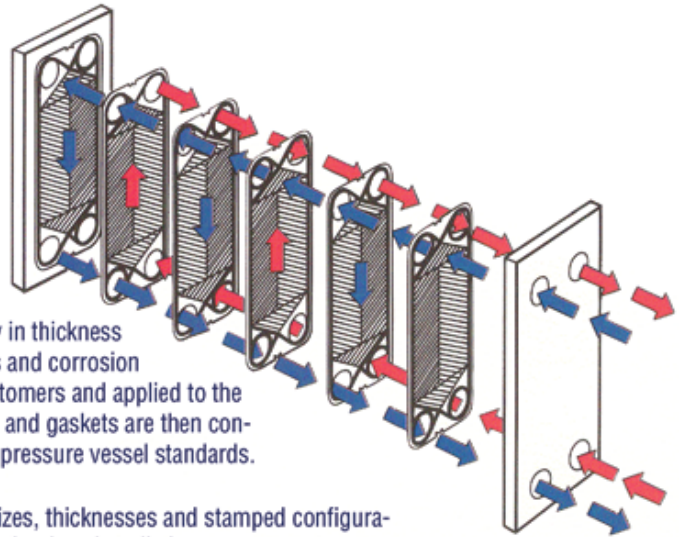
HOW IT WORKS

The **WesPlate® 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 increases 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. Glue-less 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. **WesPlate® sizing software** will calculate the optimum heat transfer plate and plate sequencing for any application.



MATERIALS OF CONSTRUCTION

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

CERTIFICATION

SAFETY:
ASME for pressure vessels
CRN for Canadian Registration

TYPICAL SPECIFICATIONS

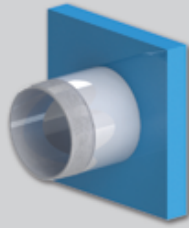
Furnish and install, as shown on plans, a Wessels model _____ to heat or cool with the capacity and pressure/temperature rating as detailed in the schedule. The heat exchanger must be constructed with most recent addendum of Section VIII of the ASME Boiler and Pressure Vessel Code.

Each heat exchanger shall be Wessels' Model _____ or approved equal.

CONNECTION TYPES



NPT – Steel (Internal)



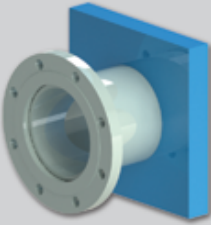
NPT – Alloy (External)



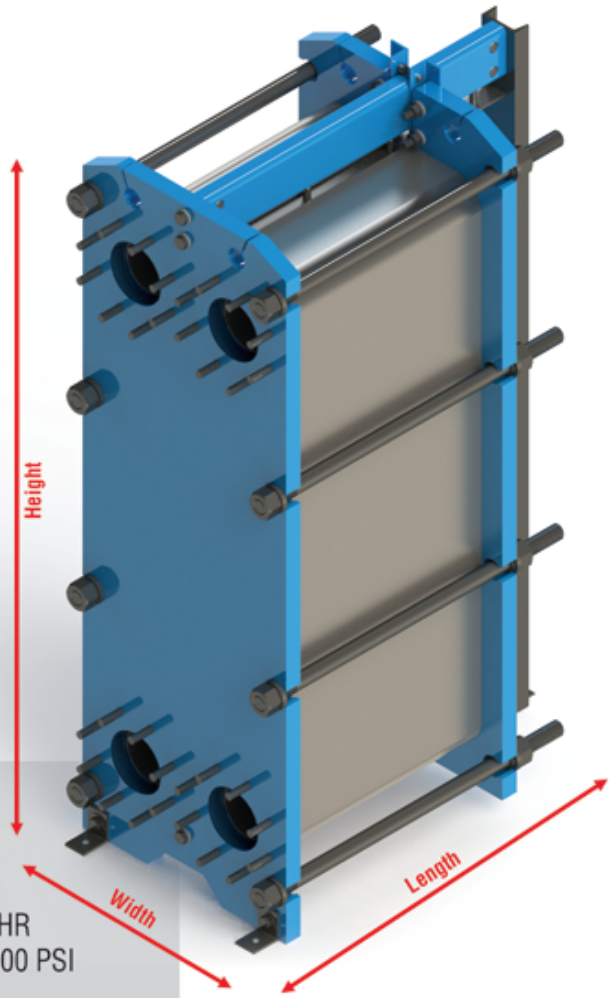
ANSI – Studded Steel



ANSI – Studded Alloy Lined



ANSI – Flanged (Optional)



DESIGN LIMITS

Max Flow: 10,000 GPM
 Duty Max: 50,000,000 BTU/HR
 Max Pressure: 150 / 300 / 400 PSI
 Max Temperature: 320° F

SPECIFICATION & DIMENSIONS BY MODEL

Model	Maximum Flowrate (GPM)	Height (in.)	Width (in.)	Maximum Length (in.)	Conn. Size (in.)	Area Maximum (ft ²)	Weight (lbs.)	
							Base	Per Plate
WP10	60	21	8	18	1	30	150	0.5
WP20	250	35	14	60	2	400	500	2.0
WP21	250	35	14	60	2	500	500	1.5
WP40	1,000	44	19	84	4	600	1,000	3.5
WP41	1,000	44	19	84	4	1,000	1,000	3.0
WP45	1,000	74	19	96	4	2,000	1,600	6.0
WP60	2,200	75	25	108	6	2,400	3,000	8.0
WP61	2,200	75	25	108	6	4,200	3,000	7.0
WP80	4,000	88	30	192	8	4,500	3,000	11.0
WP81	4,000	88	30	192	8	5,000	3,000	10.0
WP101	5,000	109	35	216	10	11,000	5,500	16.0
WP140	10,000	112	45	240	14	12,500	8,000	20.0
Double Wall Models								
WP10DW	60	21	8	18	1	30	150	0.5
WP20DW	250	35	14	60	2	400	500	2.0
WP21DW	250	35	14	60	2	500	500	2.0
WP41DW	1,000	44	19	84	4	1,000	1,000	3.5
WP45DW	1,000	74	19	96	4	2,000	1,600	6.0
WP61DW	2,200	75	25	108	6	4,200	3,000	7.0



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

THE **WesPlate**[®] ADVANTAGE

Lower Air Conditioning Costs

The **WesPlate**[®] heat exchanger can result in **30% annual energy savings** for 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

WesPlate[®] uses only the most efficient heat transfer plate designs to maximize temperature cross and allow the closest approach temperatures that ensure the greatest percentage of heat recovery. The shape of the corrugation in **WesPlate**[®] heat transfer 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 serving 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

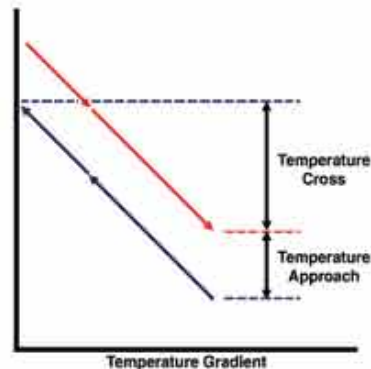
WesPlate[®] heat exchangers are less expensive, more compact, and easier to install because they utilize only the most efficient heat transfer plate designs. Connections are on the fixed end to reduce first cost installation and increase serviceability. The units are fully assembled and ASME hydrostatically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

Low Risk

All units come certified by the appropriate safety code (ASME, CRN, etc.). Every **WesPlate**[®] 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 if 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. **WesPlate**[®] exchangers are designed for easy serviceability. All plate hanging surfaces are stainless steel so plates slide easily. Heat transfer plates have either corner inter-locking tabs or a five point alignment system to make closing and sealing the unit consistent. Glue-free gaskets secure around the outer edge of the heat transfer plate. This design allows for the ability to perform a visual check to confirm the gasket is in the proper location for best sealing and trouble free operation.



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