

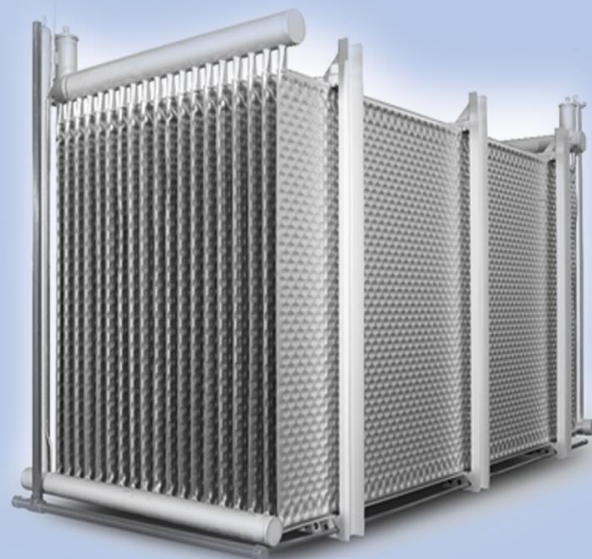
Prime Surface Heat Exchanger Technology



Versatile and Efficient DESCO-COILTM Plate Type Heat Exchangers

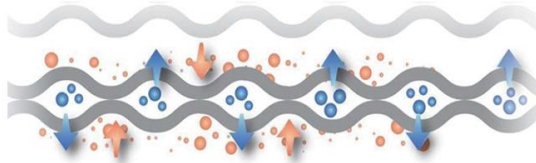


- Single-inflated
- Double-inflated
- Variable pass size and design
- Wide application range



DESCO-COIL™ is effectively & economically used in a wide range of industries and applications, including but not limited to, Chemical Processing, Oil & Gas Production/ Processing, Power Generation, Marine, Renewable Fuels and Power, HVAC, Refrigeration, Food Processing and Manufacturing.

Taking into account the flow rates and allowable pressure drops, DESCO-COIL™, with its variable pass configurations, creates optimum turbulence resulting in excellent heat transfer properties. The design provides maximum wetted surface and minimizes 'dead' spots.



DESCO-COIL™ consists of (2) metal sheets, of equal or unequal thickness, which will eventually form the heat transfer panels.

These are seal-welded along the perimeter and spot-welded intermittently across the entire heat transfer surface using an automatic state of the art laser welder.

The position and number of welds are computer designed, based on the flow, operating pressure and allowable pressure drop of the fluid flowing through the coils.

DESCO-COIL™ Heat Transfer Surfaces



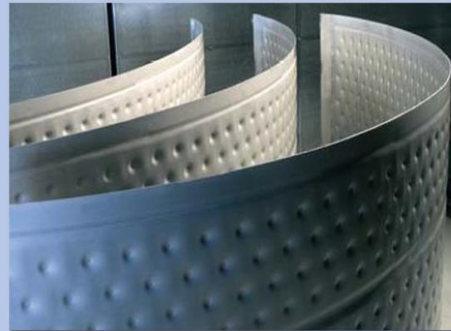
The coils are then hydrostatically or pneumatically inflated, to the required dimensions.

a. If (2) identical thickness plates are used, they will expand symmetrically to form a "pillow" like product, with inflation on both plates. (Double inflated).

b. If un-equal thickness' are used, only the thinner of the (2) sheets will expand, providing a single pillow effect on the thinner side, while the thicker sheet will remain flat. (Single inflated)



Depending on the application, flow rates and allowable pressure drops, additional seam welds can be introduced to form a 'series' pattern which would increase the velocity inside the coils for optimum heat transfer.



DESCO-COIL™ can be manufactured in virtually any size and shape, making it a versatile product that can be used externally on tanks and columns (Single-inflated), or internally as immersed coils or banks (Double inflated).

DESCO-COIL™ can be banked to provide high heat transfer surfaces in a compact area if needed. The banks can be designed, to channel internal and external flows in a counter, parallel, or cross-flow configuration, to give the best design for the customer's application.

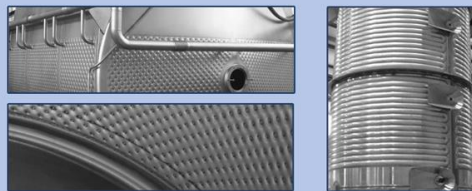
Product Versatility



Clamp-On DESCO-COIL™, single or double inflated, can be mounted onto existing tanks to compensate for heat loss or gain and to maintain fluid temperatures inside the tank.

DESCO-COIL™ can also be used to provide moderate heating or cooling, using heat transfer mastic to improve performance. For heavier duties, immersion coils or integral jacketing are preferred.

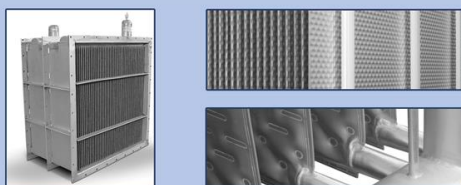
Clamp-On coils can be mounted without welding to the tank and are supplied with all necessary mounting materials and mastic, if required.



Vessels with "Integral" DESCO-COIL™ jacketing, reduces the vessel wall thickness as compared to conventional double wall jackets or split pipe jacketing due to the shorter unsupported span.



"Bayonet" Heater for bulk storage tank heating. Shrouds and suction pipes can be added to make a Suction Heater for viscous products for rapid draw of the fluid when needed.



Banks of DESCO-COILs™, (DESCO-BANK™) for heat recovery in paper-mills and breweries, fluidized beds, falling-film heat exchangers and as evaporators with various refrigerants combining high efficiency, light weight and ease of cleaning.

DESCO-COIL™ and DESCO-BANK™ compared to other types of heat exchangers.

	DESCO-COIL™ and DESCO-BANK™ Heat Exchanger	Shell and Tube Heat Exchanger	Gasketed Plate and Frame	Spiral Heat Exchanger
Temperature range	Upto 800°C	>800°C	<200°C	<350°C
Maximum Pressure	Upto 60 bar	Upto 200 bar	Upto 25 bar	Upto 25 bar
Relative K-values in water (W/m ² K)	3,500	2,700	5,600	2,000
Air/Gas applications vs. liquids	suitable	suitable	suitable with restrictions	suitable with restrictions
Can be inserted in tanks/flowing liquids	yes	limited	no	no
Can be clamped onto shell	yes	no	no	no
Can be integrally welded as shell component	yes	no	no	no
Fully welded design	yes	yes	no	no
Suitable for use with dirty fluids	yes	yes	limited	yes

Diversified Engineered Solutions Company

Based in the USA, our company provides consultation and engineered solutions through the design and supply of specialty heat exchangers for a global market and customer base.....

- with manufacturing, design and parts & service capabilities in the Americas, Europe and Asia.
- while marketing its engineering expertise and consultation, systems, products and technical services and support worldwide.

Industries Served

- Oil & Gas Production and Processing
- Renewable Fuels and Power
- Chemical Processing
- Power Generation
- Marine
- HVAC
- Refrigeration



“Engineered-to-Order” Equipment

- Specialty Heat Exchangers
 - Welded Prime Surface
 - Gasketed Plate & Frame
 - Semi-Welded Plate & Frame
 - Shell & Plate
 - Brazed



- Modular Cooling Towers
- Axial Flow FRP Fans
- Condensers
- Air Coolers
- Evaporators
- Spare Parts



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