

OMEGA



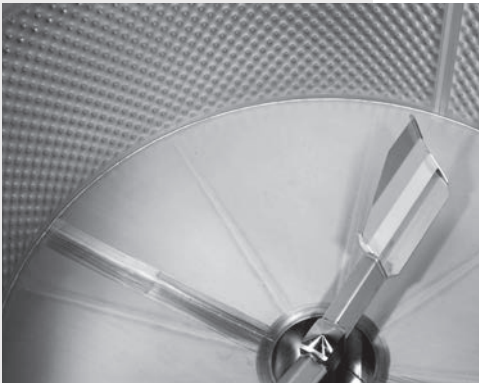
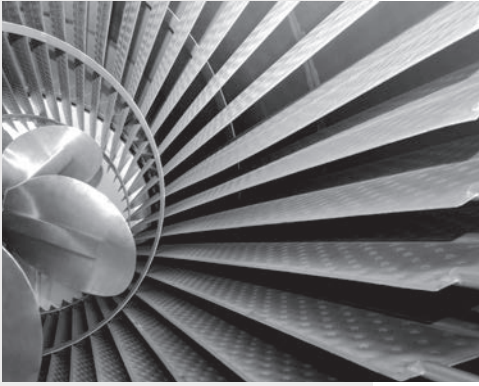
THERMO PRODUCTS

PILLOW PLATES

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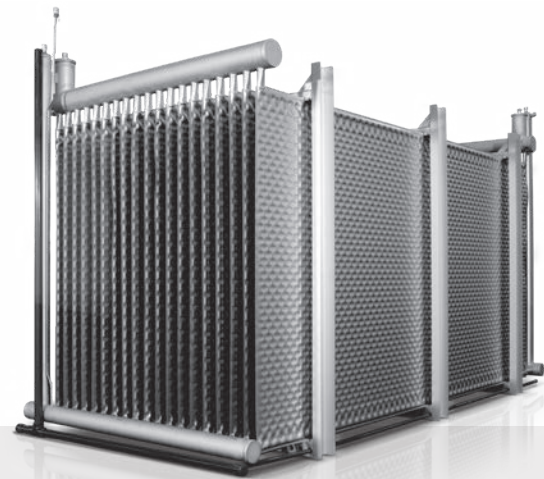
LEADING IN HEAT TRANSFER TECHNOLOGY



As the original developer of Pillow Plate Laser Welding machines and 50 years of combined global manufacturing experience, Omega Thermo Products is the market leader in Pillow Plate heat exchangers. Omega's Pillow Plates are used as integral tank construction, immersion or clamp-on applications. Our heat exchangers are widely used in the food and beverage industry, process industry, chemical industry, pharmaceutical industry and heat recovery applications.

- › Lower operating costs.
- › Superior heat transfer coefficient.
- › Improved control characteristics.
- › Even distribution of cooling and/or heating media.
- › Design not limited due to complex geometries.

OMEGA PILLOW PLATES



Omega Pillow Plates, the most effective way in heat exchange

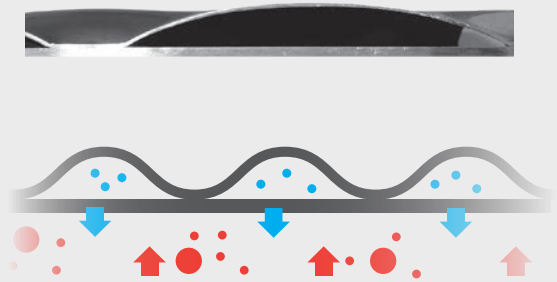
The Omega Pillow Plate consists of two stainless steel sheets that are laser welded together by welding a custom circle weld pattern. The outside perimeter of the pillow plate is fully laser welded to create a pressure boundary. The laser welding process is a fully autogenous welding process where the Omega laser welding machines melts the materials together, no filler materials are being used this process.

The Pillow Plate is hydraulically inflated by using water through a hydrostatic pump. Hydraulically inflating will guarantee for a safe inflation process. Other inflation processes can be used depending on the application.

The inflation process pressurizes the two sheets which allows the material to deform, a cavity will be created for use of a heat transfer medium. The Omega Pillow Plate can be used with either liquids, steam or refrigerants.

Single embossed

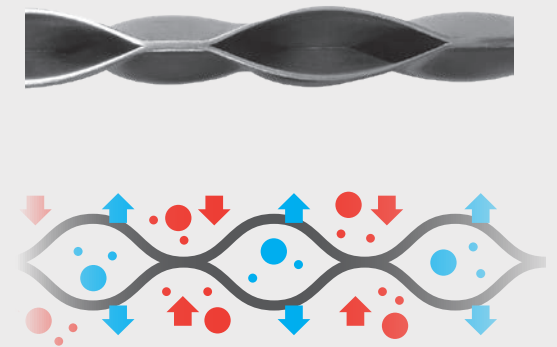
Single embossed Pillow Plates are composed of two stainless steel sheets with a different material thickness. We require a material thickness ratio of 1:3 to maintain flatness on the product side. The flat product side of the single embossed heat exchanger are used for sanitary product applications. Due to the precise welding process we can guarantee that no heat tint will occur after welding, the material is welded with the protective PVC in place. Single embossed heat exchangers are mainly used as vessel shell, bottom plates and components for different applications used in the process industry.



Single Embossed OMEGA-plate
(SE OMEGA-plate)

Double embossed

Double embossed Pillow Plates are plates that exist of two sheets with similar material thicknesses. This product will deform on both sides after inflation as no flat side is required for the application. The double embossed product is used for immersion applications, clamp-on applications, other process equipment like heat recover banks and refrigeration applications.



Double Embossed OMEGA-plate
(DE OMEGA-plate)

Applications

The potential applications for Pillow Plate implementations are endless. Below you will find an overview of some of the applications and markets Omega Thermo Products is currently serving. Please let us know if you have an application that is not indicated below and we will gladly look into this.

Single embossed:

- › Cooling and heating of beer tanks
- › Cooling and heating of wine tanks
- › Cooling and heating of milk tanks
- › Cooling and heating process tanks
- › Cooling and heating machinery food industry.
- › Cooling and heating of conveyors
- › Cooling and heating of all required flat heat transfer surfaces
- › Cooling and heating of custom made Stainless Steel constructions

Double embossed

- › Immersion plates
- › Plate banks
- › Falling Film Chillers
- › Immersion Chillers
- › Ice banks
- › Ice machines
- › Clamp-on plates
- › Cooling and heating plates
- › Heat recovery banks
- › Custom assemblies

Specifications

Materials

- › Austenitic materials (304, 304L, 316, 316L, 316Ti, 317, 321)
- › (Super) duplex materials (2205, 2507, 2304, LDX-2101)
- › High nickel alloys (Nickel, Hastelloy, Alloy, Inconel)
- › Titanium
- › 254-SMO
- › 904L

Pressure

Omega's Pillow Plates can handle pressures of more than 100 bar, this is depending on the required design temperature and material thicknesses. Don't hesitate contacting us if you have specific requirements.

Omega Thermo products B.V. qualifications



ASME U-stamp, PED, AD Merkblätter

Thickness single embossed



Flat side	Inflated side
2,0	+ 0,8 mm
2,5	+ 0,8 mm
3,0	+ 0,8,1,0 mm
4,0 tot 6,0	+ 0,8/1,0/1,25/1,5 mm
> 8,0 tot 30	+ 1,25/1,5/2,0/2,5 mm

Thickness double embossed



Inflated side	Inflated side
0,8	+ 0,80 mm
1,00	+ 1,00 mm
1,25	+ 1,25 mm
1,50	+ 1,50 mm
> 2,00 tot 2,50	+ 2,00 tot 2,50 mm

THE NETHERLANDS

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