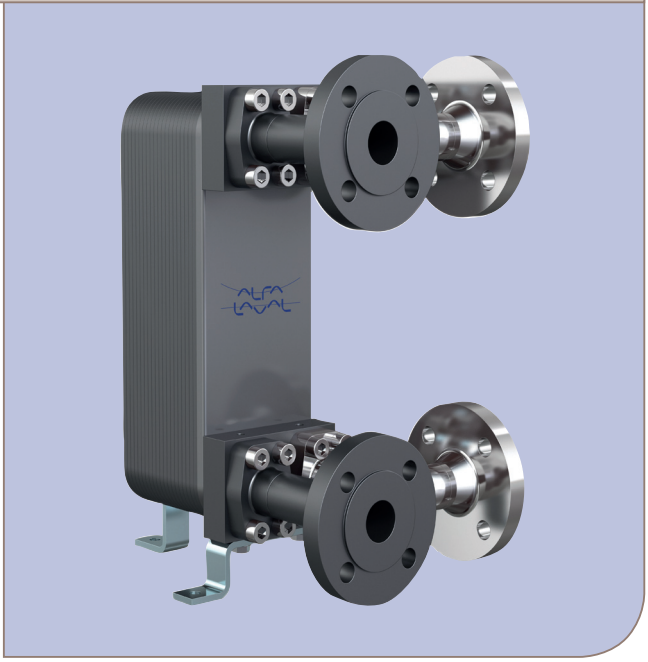
TA30 Tantalum line

Brazed plate heat exchanger with tantalum for highly corrosive media



The Alfa Laval TA line is an excellent choice for handling hot, highly corrosive media.
Compact and highly reliable, TA heat exchangers are characterized by low investment costs and minimum maintenance requirements, which results in exceptionally low total cost of ownership.

Our TA line consists of brazed, stainless steel heat exchangers that have undergone a unique treatment where a thin layer of tantalum is metallurgically bonded to all surfaces exposed to corrosive media. Combining a stainless steel core with a tantalum surface maximizes corrosion resistance and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service lifetime.

Typical applications

- Specialty chemicals
- Agrochemicals
- Inorganic acids
- Chlorinated hydrocarbons
- Fluid batteries
- Other processes where hot strong acids are used

Working principles

The heating surface consists of corrugated metal plates. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in counter current flow for the most efficient heat transfer. The process side of the heat exchanger is treated with tantalum on the entire surface. The utility side is untreated.

Standard design

The heat exchanger is equipped with flanges in either DIN or ANSI standard. The connections with a straight pipe are treated with tantalum and should therefore be used on the process side. Connections with a 90° bend are untreated. The heat exchanger is also equipped with feet for safe, easy installation.

Particulars required for quotation

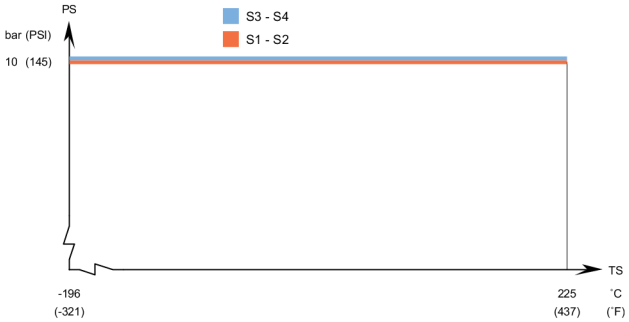
To enable an Alfa Laval representative to make a specific quotation, please specify the following your enquiry:

- Required flow rate or heat load
- Temperature program (inlet and outlet)
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop
- Connection standard

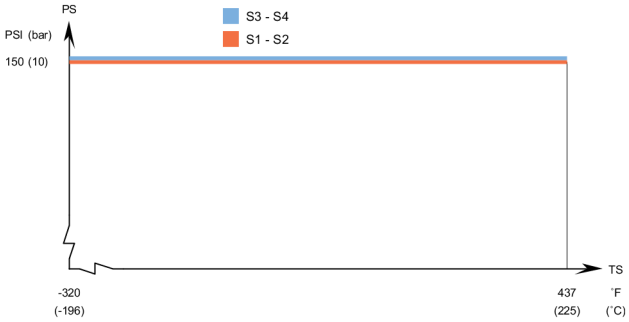
Benefits

- Low lifecycle cost due to
  - Long lifetime
  - Minimal maintenance
  - Low installation cost
- Exceptional resistance to hot, strong and corrosive media
- Compact, robust design with a small footprint

TA30- PED approval pressure/temperature graph



TA30- ASME 437 degr F approval pressure/temperature graph



Standard data

Min. working temperature	see graph
Max. working temperature	see graph
Min. working pressure	vacuum
Max. working pressure	see graph
Volume per channel, litres (ga) Process side (Ta side)	0.051(0.013)
Volume per channel, litres (ga) Utility side	0.054(0.014)
Max. particle size mm (inch)	1(0.04)
Max. flowrate* m^3/h (gpm)	8.8 (38.7)
Min. nbr of plates	4
Max. nbr of plates	100

* Water at 5 m/s (16.4 ft/s) (connection velocity)

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper
Surface treatment, process side (S3,S4)	Tantalum

Standard dimensions and weight

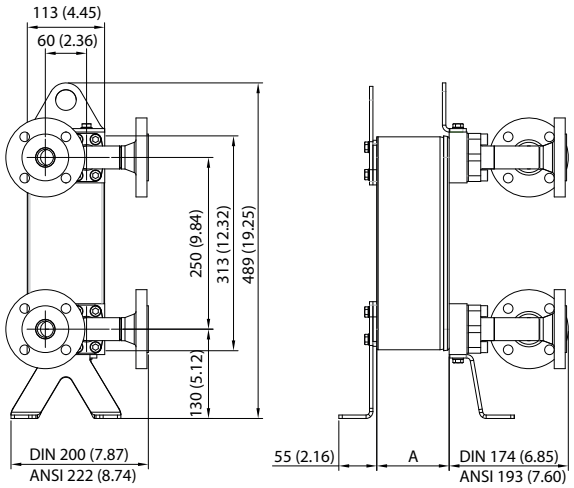
TA30

A measure mm	=	13 + (2.31 * n) (±2 mm or ±1.5 %)
A measure inch	=	0.51 + (0.09 * n) (±0.08 inch or ±1.5 %)
Weight** kg	=	1.2 + (0.14 * n)
Weight** lb	=	2.65 + (0.31 * n)

(n = number of plates)
** Excluding connections

Standard dimensions

mm (inch)



For exact values please contact your local Alfa Laval representative

How to contact Alfa Laval
Up-to-date AlfaLaval contact details for all countries are always available on our website on www.alfalaval.com