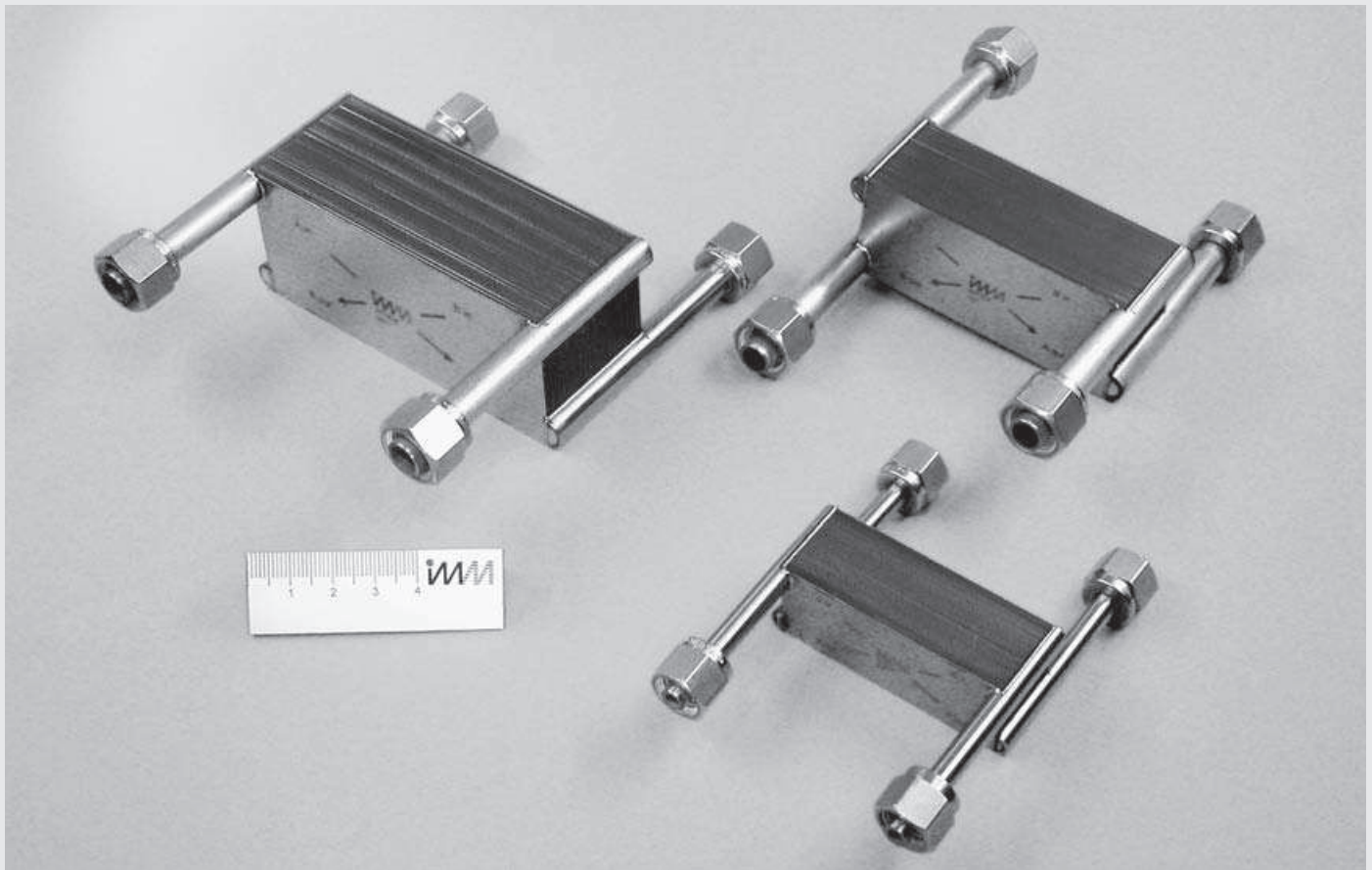


LASER-WELDED MICRO HEAT EXCHANGER

WT-SERIES

76

03



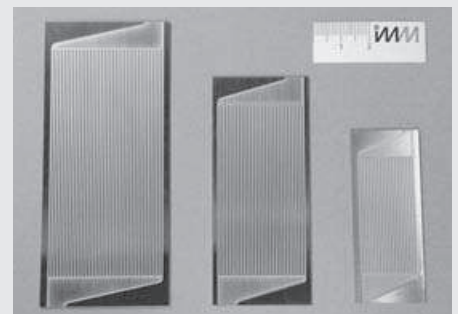
Laser-welded micro heat exchanger group class (WT-series), WT-404, WT-304, WT-204 (from left to right)

Principle

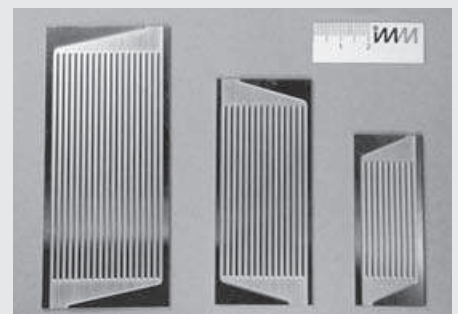
The WT-series was developed as a heat exchanger for liquid/liquid, gas/liquid or gas/gas applications and can also serve for evaporation or condensation. They comprise a laser welded stack of arranged microstructured plates enabling a counter- or co-current flow scheme. Being assembled with conventional 1/4" or 3/8" tubes, easy integration into the existing tubing system of pilot- or small-scale production plants is possible.

The core elements are chemically etched microstructured plates, sealed by high-precision laser welding. These heat exchangers are normally designed for flow rates between 1 l/h up to 400 l/h; higher flow rates of up to 1000 l/h are possible at moderate pressure drops. The high efficiency and heat transfer coefficients of the micro channels are even more enhanced compared to conventional heat exchangers due to the low material thickness (low heat resistance) and high inner specific surface.

Additionally, the channels of plates can be coated with catalyst using the heat exchanger as reactor for heterogeneously catalysed reactions, typically gas-phase reactions, like e.g. steam reforming.



Single plates of the WT...04-series



Single plates of the WT...08-series

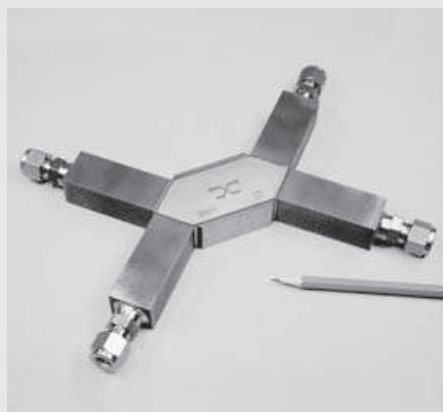
Technical Data

Name	Laser-Welded Micro Heat Exchanger Series		
Order number	WT 204	WT 304	WT 404
Size (L x B x H)	60 x 24 x 23	80 x 34 x 32	100 x 44 x 42
Connectors (Inlet/Outlet)	1/4" / 1/4"	3/8" / 3/8"	3/8" / 3/8"
Material	316 Ti, others on request		
Dimensions of heating channels (μm)	800 x 400, others on request		

Operating Conditions

Temperature ($^{\circ}\text{C}$)	up to 1000 @ 1 bar		
Pressure stability (bar)	5 @ 25 $^{\circ}\text{C}$ (higher upon request, max. 20 bar)		
Flowrate (water, l/h)	0.5 – 50	2.5 – 250	6 – 600

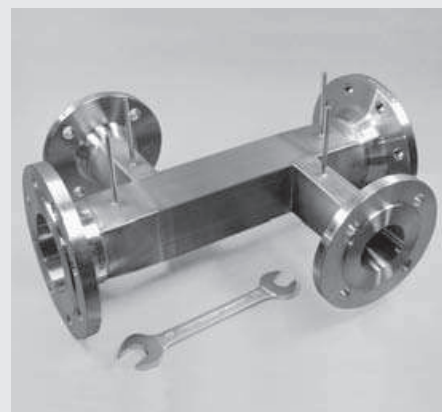
Other examples of laser-welded micro heat exchangers



Special type HxA



Special Heat Exchanger, also for condensing



HCOMH