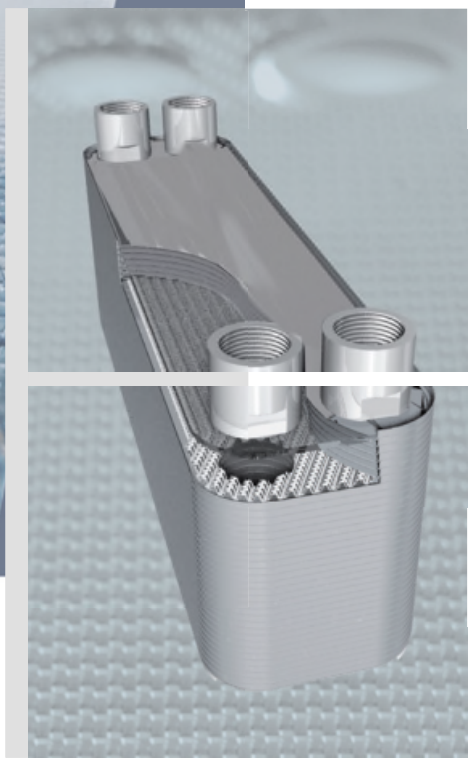
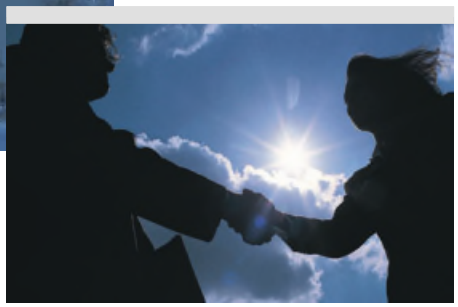
FUNKE



Brazed Plate Heat Exchangers

100% Stainless Steel – Cu-free brazed – Series TPLB

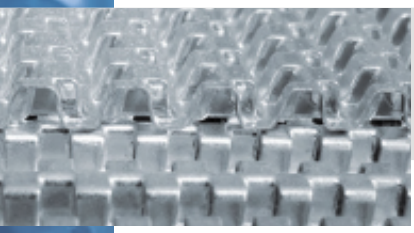
mdt



With partnership into the future

FUNKE is a leader in the development and production of quality heat exchangers with a heat transfer area of up to 2400 m². The range of products comprises shell-and-tube heat exchangers, bolted and brazed plate heat exchangers as well as oil/air cooling units and electrical oil pre-heaters. Thus, as one of the few producers worldwide, FUNKE offers solutions with optimum thermodynamic designs for different industries and virtually all applications.

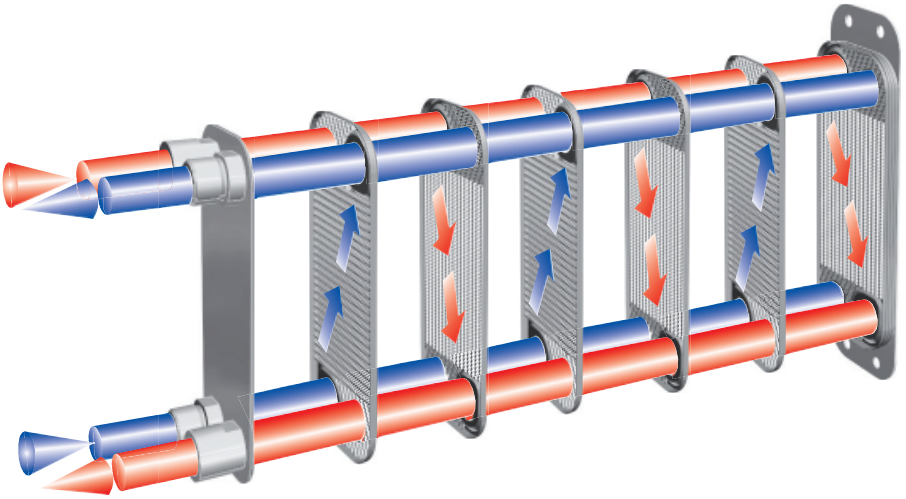
FUNKE focuses on customer orientation, highest quality standards, flexibility and advisory skills – important benefits a company of just the right size is able to offer.

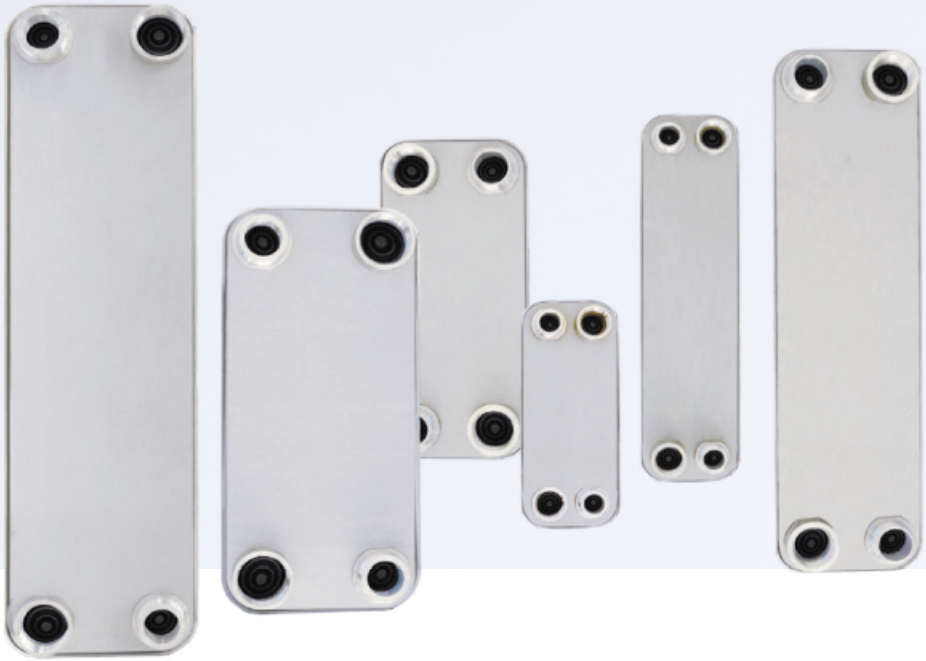


Construction

The Cu-free brazed plate heat exchangers series TPLB is basically made of non-corrugated stainless steel plates. In the flow gaps special stainless steel turbulence sheets with high thermal efficiency are inserted. These are brazed to the basic plates to create a firm and pressure-resistant unit.

Variable designs of the inserts and the thermodynamically highly efficient diagonal media flow in the flow gaps allow for optimal adaptation to different applications. By special request, the connections can be on the end plate or on the front- and endplate.





Advantages

With the FUNKE brazed plate heat exchangers TPLB a high heat transfer rate at a low pressure loss can be obtained. The thermodynamically and hydraulically optimized alignment of the turbulence sheets generates high turbulent flow rates even at low volume flows.

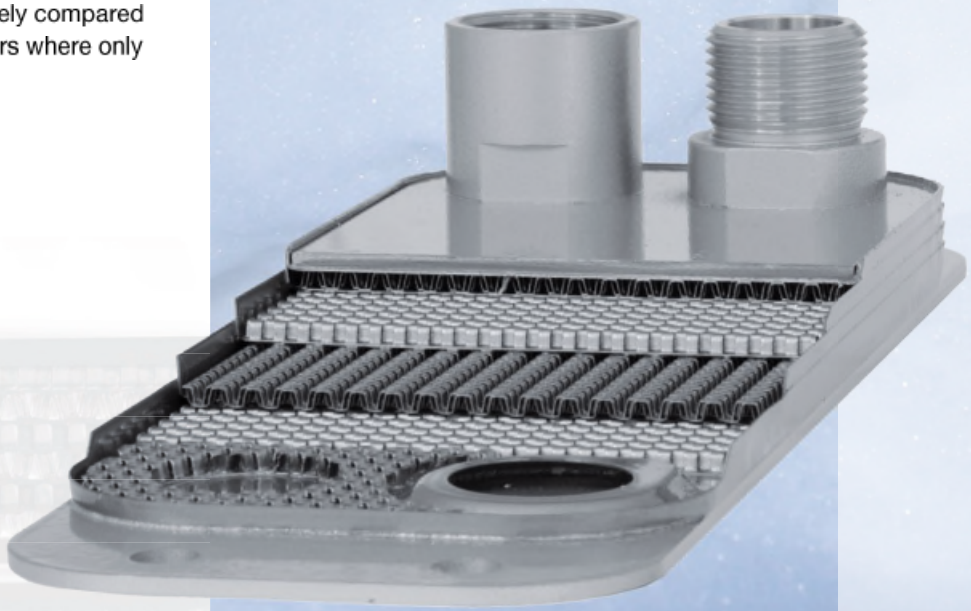
This allows for efficient use of the heat exchange area available and leads to a perfectly optimised heat transfer. The high turbulent flow also results in an efficient self-cleaning effect, which greatly reduces maintenance and time-out. FUNKE TPLB have a compact design and are used for high pressures and temperatures. As the whole surface of the plates is coated with solder, the resulting brazing allows for a higher integrity joint.

Thus, stresses arising from e.g. variations in pressure or temperature can be absorbed more effectively compared to conventional brazed plate heat exchangers where only single dots of solder are applied.

Applications

Typical applications for brazed plate heat exchangers are heating, cooling, condensing

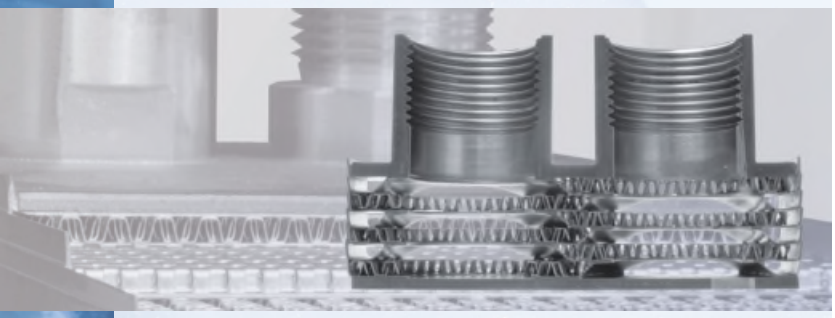
- HVACR
- Tap water
- Heat pumps
- Solar technology
- Distant heating
- Combined heating and power stations
- Chemical plants
- Refrigeration engineering



The new TPLB complete our yet existing wide range of brazed plate heat exchangers. The devices are made of 100% stainless steel.

Along with the copper and nickel brazed devices the TPLB distinguish themselves through exceptional quality, superior thermodynamic performance and long-life cycle.

Applications for TPLB are manifold, they can even be used with highly corrosive media or heat-transfer oil in special applications e.g. in chemical plants or laboratories.



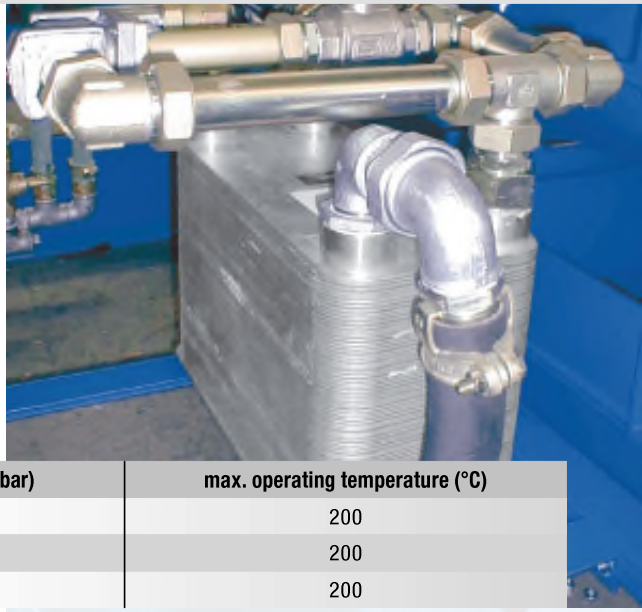
Cross-section: TPLB with turbulence sheets

Technical Data

- 100% stainless steel
- Operating pressure max.: 14 bar (standard), higher pressure available on request
- Operating temperatures max.: -196°C to +200°C (standard)
- CE-certified

Main field of application is HVACR (heating, ventilation, air conditioning and refrigeration). The brazed PHE guarantee maintenance-free operation as system separation in cycles such as distant heating, solar engineering and heat pumps as well as in floor heating or domestic water heating.

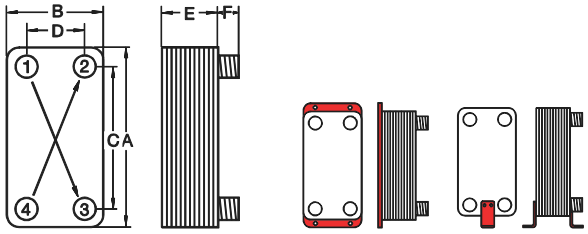
These stainless steel brazed plate heat exchangers are suitable for drinking water. The special state of the art brazing method of our TPLB prevents from undesired reactions to copper or nickel ions dissolved in the water, thus limiting the contents of these non-ferrous-metals in drinking water. In addition, our TPLB are suitable for the application with special cooling media in which Cu-content is not allowed.



Technical Data

Application conditions

Overview series TPLB	max. operating pressure (bar)	max. operating temperature (°C)
TPLB 00	14	200
TPLB 01	14	200
TPLB 02	14	200



Overview series TPLB

1: hot side IN
2: cold side OUT
3: hot side OUT
4: cold side IN

Optional: extended end plate with holes for fastening, angular feet respectively

Type		Dimensions								Volume
	No. of plates	Overall			Diststance Connections		Connection	Volumetric flowrate	Empty weight	Volume/ Channel
Stainless Steel	(N) (max)	A (mm)	B (mm)	E (mm)	C (mm)	D (mm)	(standard)	(m^3/h)	(kg)	(ltr./Channel)
TPLB 00-K	60	274	111	6+4xN	213	50	G 1“	13	1,7+0,23xN	0,098
TPLB 00-L	60	439	111	6+4xN	378	50	G 1“	13	2,4+0,40xN	0,134
TPLB 01-K	90	383	168	6+4xN	309	94	G 1 1/2“	45	2,9+0,48xN	0,206
TPLB 01-L	90	631	168	6+4xN	557	94	G 1 1/2“	45	4,8+0,87xN	0,321
TPLB 02-K	120	488	225	6+4xN	403	140	G 2“	70	5,0+0,83xN	0,351
TPLB 02-L	120	818	225	6+4xN	733	140	G 2“	70	8,3+1,50xN	0,574

N = Number of plates

Quality means safety. Each unit built by FUNKE is design and pressure tested. Additional approvals are also available in accordance with quality authorities such as:

- American Bureau of Shipping (ABS)
- Bureau Veritas (BV)
- Det Norske Veritas (DNV)
- Germanischer Lloyd (GL)
- Lloyds Register of Shipping (LRS)
- Schweizerischer Verein für technische Inspektionen (SVTI)
- Technischer Überwachungsverein (TÜV)

as well as customers' test and inspection regulations.

FUNKE has been certified according to DIN EN ISO 9001:2008 and is an approved manufacturer according to:

- EU Pressure Equipment Directive 97/23/EC (PED), Module H/H1
- HP0 in connection with DIN EN 729-2
- ASME U-Stamp
- GOST R (incl. RTN & hygiene certificate)
- China Certificate

FUNKE

Funke industrial - Türkiye

mdt mühendislik sistemleri - mdt co.
T: +90 212 4829003
F: +90 212 4829004
info@funke-tr.com
www.funke-tr.com

mdt FUNKE