

Your reliable partner in the world of heat exchangers

Servicing of plate heat exchangers of all brands Spare parts for plate heat exchangers New plate and tube heat exchangers Hydrogen leak diagnostics of heat exchangers and tanks





About Us

Our company was established in 2006 as an exclusively Czech company based in České Budějovice. On the basis of our many years of experience in the field, we supply plate heat exchangers and spare parts for plate heat exchangers, particularly for the following fields: brewing, dairy industry, heating, pharmaceutical industry, sugar production, chemical industry, energy industry, etc.

We supply spare parts for all types of plate heat exchangers, such as those by the following manufacturers:

- Alfa Laval
 API Schmidt Bretten (Sigma)
 APV
 APV
 Danfoss
 Cetetherm
 Cipriani
 Fischer
 Funke
 Vi
 GEA
 Kelvion
 Nagema
- Reheat Sondex SPX Tetra Pack Thermowave Tranter Swep Vicarb Zilmet etc.

We supply directly from OEM production. Our main idea is based on deliveries of materials "online" from production, which allows us to not only ensure high flexibility supported by expertise, but especially to achieve exceptional terms of delivery, all the while achieving the highest quality standards. The expert employees in our design and development centre will gladly design material optimisations for specific applications through our trained representatives. As a matter of course, we provide our food industry components with "FDA" food contact certification, or certification according to Regulation (EC) No. 1935/2004 on request. Warranty and post-warranty services, including pressure testing or hydrogen testing, are carried out based on the requirements of our customers by a team authorised for such activities.



Servicing of plate heat exchangers

Our primary business activity is the plate heat exchangers service. Servicing can either be carried out on site at the customer (the so-called "CIP" or Cleaning In Place), or by bringing the plates into our service centre for further treatment, which is a proven standard for many years. The supplied gasket and plate materials corresponds to the application and customer requirements in order to achieve the longest possible service life. We supply mechanical gaskets or glued gaskets directly from OEM production in all known materials including: NBR, NBR HT, EPDM, EPDM HT or UHT, Viton, PTFE, CR, FKM, etc., with applicable food contact certification. In the case of damaged plates, we replace them with plates of all materials used for plate heat exchangers, for example: AISI 304, AISI 316, titanium, Hastelloy, tantalum, nickel, etc.

We can provide:

- Cleaning In Place (CIP)
- Cleaning of plates with hot water/steam
- Chemical cleaning, i.e., cleaning plates in an acidic or alkaline solution
- Capillary testing of plates

Regasketing

- UV light exposure of plates to check for microcracks
- Curing of glued gaskets in a special chamber at the right temperature and pressure



CIP cleaning – experts know it as "Arnoshting"











Hydrogen leak diagnostics

Diagram of the H2 method



Heat exchanger inspection



Detection of heat exchangers

Hydrogen method

The hydrogen method is based on the testing gas, also called the forming gas, which consists of H2 hydrogen molecules (the smallest molecule in the world!) and N2 nitrogen molecules. This gas is absolutely safe (ISO 101569), it is used as a shielding gas against ignition during welding – it is non-flammable and non-explosive. Using this gas, it is possible to detect leaks and carry out leak tests. Examples of use: pharmaceutical industry (bioreactor checks), automotive industry (engine block checks), aircraft industry (checks of fuel and brake lines), medical science (checks of artificial hearts and blood pumps), telecommunications (checks of underground cables), chemical industry (checks of transport piping), etc. Hydrogen detection of cracks on the plate



Report evaluating a leaktest of a plate heat exchange

Project: Leak test of an APVN N35 heat exchanger, Paster KEG

Quick results





Osmotic pressure

To put it simply, it is defined as the pressure which needs to be applied to a solution separated from its pure solvent by a semi-permeable membrane to equalise their levels. After thorough examination, it is certain that, despite the positive pressure gradient, the products can mix in both sides. This is caused by the aforementioned osmotic pressure, which is the driving force in case of very small cracks in the plate, so-called pin holes or microscopic cracks. In other words, despite the positive pressure gradient in the area of the leak, there is always two-way exchange of mediums due to turbulent flow.



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New plate and tube heat exchangers

We can offer and provide the design and delivery of new plate heat exchangers of all types. From brazed to semi-welded, welded, standard gasketed plate exchangers, tube heat exchangers, spiral heat exchangers, shell and plate type, etc. Feel free to contact us!



Design, recalculations, optimisation of heat exchangers

Quotation no.: 427 **Item no.:** 4

Att:		Ref:										
PHE-Type	E-Type S37-FS16-85-TM-LIQUID		Hot side					Cold side				
Flowrate (kg/h)			20000,00					20000.00				
Inlet temperature (°C)		(°C)	67,00					23,00				
Outlet temperature (°C)		30.55					59,45					
Velocity connection (m/s)		0,98					0,98					
Pressure drop (bar)		(bar)	0,49					0,49				
Heat exchanged (kW)		763						-,				
							,					
Thermodynamic properties:			Lait 10					Lait 10				
Density		(kg/m³)		1 000,00					1 000,00			
Specific heat		(kJ/kg*K)	3,77						3,77			
Thermal conductivit	IV.	(W/m*K)		0,45					0,45			
Mean viscosity	ean viscosity (mPa*s)			1,50						1,50		
Wall viscosity	Vall viscosity (mPa*s)			1.50					1.50			
Fouling factors		(m ² *K/kW)			_,				-,			
Dimensioning factor	r	(%)			0.0							
Inlet branch	alet branch			B1					F3			
Outlet branch			E4						гэ ро			
				F4						DZ		
	/ Pidles:	`	3	v	14	т	0	v	0			
Plate arrangement (passes*channe)	3	~	14		0	~	0			
Plate arrangement (passes*channel)			5	X	14	т	0	~	0			
Number of plates			85									
Effective heat surfa	ce	(m²)	33,12									
Overall K-value Duty/Clean (W/m ² *K)		3054	/ 305	54								
Plate material			0.6 mm	AISI 31	6							
Gasket material / Max. temp. (°C)			NITRIL	NITRIL HT SONDER LOCK (S)						140		
Max. design temperature (°C)		(°C)	130,00									
Max. Working/test	ax. Working/test pressure (bar)		16,00	/ 20),80							
Max. Differential pr	Max. Differential pressure (bar)		16,00									
Frame type / Paint Specification			FS No 2 /									
Connections HOT side (B1->F4)			3" SMS	union								
Connections COLD	side	(F3->B2)	3" SMS	union								
Liquid volume		(liter)	101									
Frame length (mm)			1123			Max	. No. c	of Plate	es 99			
Net weight		(kg)	698									
PRICE EACH												
TERMS OF DELIVER	λΥ											
TERMS OF PAYMEN	Т											
DELIVERY TIME												
VALIDITY OF QUOTATION												
DESIGNED BY												
Skid Base (1600x7)												
SKIG BUSE (1000X/	,											
			_									
Accesories:												





Contact information

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