

NB14-76

Nickel Brazed Plate Heat Exchanger

Working principles

The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, always in counter-current flow. The media are kept in the unit by a brazed seal around the edge of the plates. The contact points of the plates are also brazed to withstand the pressure of the media handled.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. The channel plates are corrugated to improve heat transfer efficiency and to make them rigid.

Standard materials

Cover plates

Stainless steel AISI 316

Connections

Stainless steel AISI 316

Plates

Stainless steel AISI 316

Brazing material

Nickel

Advantages of nickel brazed plate heat exchangers in Industry and HVAC&R

The Alfa Laval nickel brazed plate heat exchangers NBHE have several advantages over traditional heat exchangers in Industrial and HVAC&R applications.

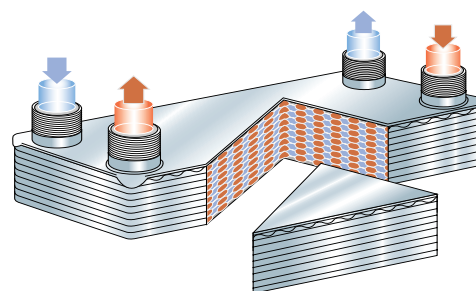
- The high heat transfer efficiency of the NBHE makes it extremely compact and also easy to install in places where space is limited.
- The unit has no gaskets and is therefore suitable in applications where temperature and/or pressure is high.
- The Alfa Laval supply system reassures that, no matter where you are on the globe, the NBHE units are available with a very short delivery time.



Particulars required for quotation

To enable Alfa Laval's representative to make a specific quotation, enquiries should be accompanied by the following particulars:

- flow rates or heat load required
- temperature program
- physical properties of liquids in question
- desired working pressure
- maximum permitted pressure drop



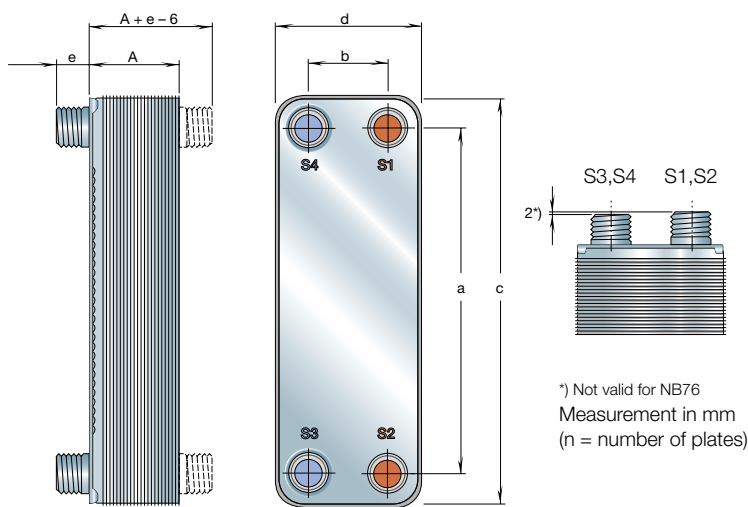
Flow principle of a nickel brazed plate heat exchanger

Standard data

	NB14	NB26	NB51	NB76	NB76FS
Min. working temperature **)	-160°C	-160°C	-160°C	-160°C	-10°C
Max. working temperature **)	225°C	225°C	225°C	225°C	175°C
Min. working pressure **)	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
Max. working pressure, S3S4/S1S2 **)	20/18 bar	21/18 bar	21/18 bar	13/13 bar	27/27 bar
Test pressure, S3S4/S1S2 **)	26/24 bar	36/31 bar	36/31 bar	22/22 bar	45/45 bar
Volume per channel, litres	0.02	0.05	0.095	0.25	0.25
Max. flowrate *)	3.6 m³/h	8.1 m³/h	8.1 m³/h	39 m³/h	39 m³/h

*) Water at 5 m/s (connection velocity) **) According to European pressure vessel Directive (PED) (CE-Approval)

Standard dimensions



Type	a	b	c	d	e	A	Weight kg
NB14	172	42	208	78	24	$8 + n \times 2.35$	$0.7 + n \times 0.06$
NB26	250	50	310	111	24-45	$9 + n \times 2.40$	$1.2 + n \times 0.13$
NB51	466	50	526	111	24-45	$10 + n \times 2.40$	$1.9 + n \times 0.23$
NB76	519	92	618	191	40-48	$10 + n \times 2.85$ H channels $10 + n \times 2.50$ A channels $10 + n \times 2.20$ E channels	$7.0 + n \times 0.44$

Standard connections

NB14	NB26	NB51	NB76	NB76FS
A21	V22	H21	B23	J24
E21	B21	B21	F22	B24
H26	F21	F21	D21	F24