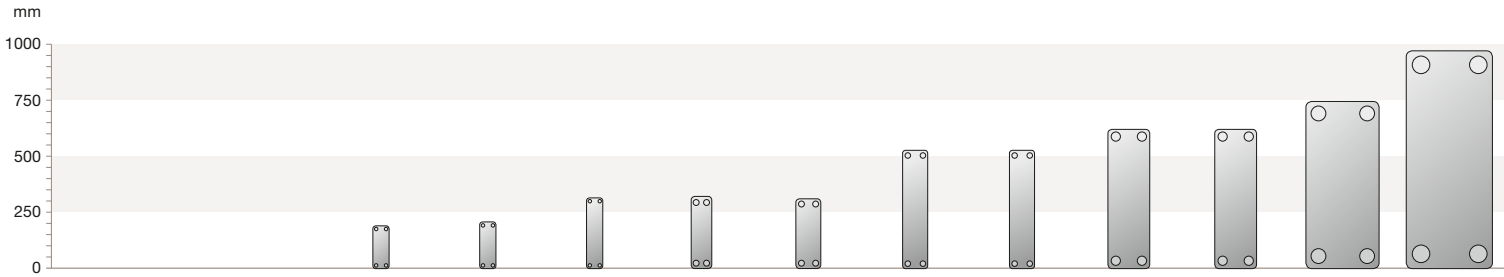
Residential heating and domestic hot water

Customized heat transfer solutions

The Alfa Laval adv

Alfa Laval offers a complete range of brazed heat exchangers (BHE). They are all pressure-tested and labelled to comply with all major industry approvals (PED, UL, Chinese PV, KHK, KRA, and CRN). BHEs designed for tap-water heating are also WRAS certified.



Boiler and solar	CB10	CB16	CB18	CB20	CB30	CB60	CB62	CB110	CB112	CB200	CB400
Secondary Heat Exchanger	x	x	x								
Recuperator											
Solar Heating			x	x	x	x	x	x	x	x	
Tap Water Heating	x	x	x	x	x	x	x	x	x	x	x
Intermediate Heat Exchanger	x	x	x	x	x	x	x	x	x	x	x
Dimensions, mm (width/height)	73.5/191.5	73.5/209.5	73.5/315.5	94/324	113/313	113/527	113/529	191/616	191/616	324/742	390/990
Design Pressure (BAR)	10/32	10/32	10/32	16	32	32	32	32	32	25	25
Design Pressure (PSI)	145/464	145/464	145/464	232	464	464	464	464	464	363	363
Single or Dual Circuit	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
Asymmetric plates available	x	x	x				x		x		
High Theta plates available	x	x	x	x	x	x	x	x	x	x	x
Low Theta plates available					x	x		x	x	x	x
Combination High & Low					x	x		x	x	x	
Integrated Sensor			x								
Water Kit**				(x)	(x)	(x)	(x)				
Hydroblock	x	x	x								
Multicircuit					x	x		x			
Multipass		x	x	x	x	x	x	x	x	x	x

** (x) = optional

vantage

For OEM customers, Alfa Laval can optimize the BHE according to specific applications and system requirements. Each optimized heat exchanger is unique to the customer, with a unique article number. Customers can be safe in the knowledge that Alfa Laval uses all its know-how to optimize their products.

Continuous innovation and product development are ensured by Alfa Laval's in-house laboratory. All developments and solutions are validated before being offered to customers.

All BHEs in this application area are available with symmetric or asymmetric plates to meet the requirements of primary and secondary circuits as well as varying operating conditions. They can be manufactured without connections (typically for O-ring Hydroblock connection) or with connections on front or back, as well as any other configuration. Multi-pass and multi-circuit versions are also available. They are able to handle one refrigerant circuit and two independent water circuits.

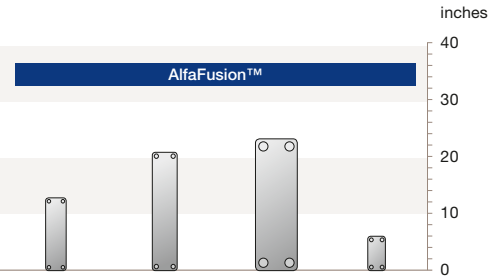
RECUPERATOR

Alfa Laval offers a special AlfaNova heat exchanger, the RM11, for transferring heat between water and hot flue gas. The typical application is the recovery of heat from bolier exhaust gases. This unit is 100% stainless steel and extremely resistant to the high temperatures and corrosion of flue gases.

Product scope, boilers

SECONDARY HEAT EXCHANGERS

Alfa Laval's BHEs used in boiler systems are designed for maximum performance and a minimum footprint. They have the same width but different heights to suit different boilers. These BHEs can also be used in a variety of other heating systems which are combined or integrated with the boiler.



AN27	AN52	AN76	RM11
			x
x	x	x	
111/310	111/526	192/530	85/143
25	25	25	10
363	363	363	145
Single	Single	Single	Single
x	x	x	x
x	x	x	
x	x	x	
(x)	(x)		
x	x	x	

Heat transfer solutions that will help you break barriers

1.

Exhaust gas recuperator

2.

Secondary heat exchanger for tap water heating

3.

Intermediate heat exchanger, water to water

4.

Solar KIT, brine to water heat exchanger

5.

Heat exchanger for tap water heating

The hot tap water in the secondary circuit can be produced in either of two ways:

- *Instantaneous heating* – Hot water is produced only when requested. Instantaneous hot water can be produced by using either a secondary heat exchanger, often a brazed heat exchanger (BHE), or a bi-thermic heat exchanger.
- *Semi-instantaneous heating* – Hot water is not necessarily produced on demand. Instead, hot water from the primary circuit is stored in a tank at high temperature. It is used for space heating as needed and is also captured by a BHE for heating tap water.

Typical solar and water heating duties for Alfa Laval heat exchangers include:

- *Solar heating* – where heat collected by thermal solar panels is transferred to the water in the buffer tank through a heat exchanger.
- *Tap-water heating* – where heat from the hot water in the buffer tank is transferred to water taps.
- *Satellite systems* – where a centralized heating system provides heat to apartments in multifamily houses. Each apartment has a BHE module that delivers hot water for space heating and tap-water heating.
- *Charging kit* – where a heat exchanger is used as a circulation system to avoid stratification and stagnant water in the buffer tank, when bacteria and legionella are a concern.

The RM11 is designed to keep the pressure drop on the gas side very low, thanks to an open channel (without ports). The water flows in a closed and sealed channel. The modular plate design makes it easy to adapt the specification to the characteristics of the boiler.

GPHE
Alfa Laval also has an extensive range of gasketed plate heat exchangers in all sizes for both cooling and heating systems. These can for example be used in larger systems, closed loop systems and heat recovery systems.

Product scope, solar and satellites

By combining different corrugation angles, pressing depth and asymmetric channel plates, Alfa Laval's BHEs can be optimized for desired pressure drops. The variable pressing depth also enables a close temperature approach with minimal energy losses.

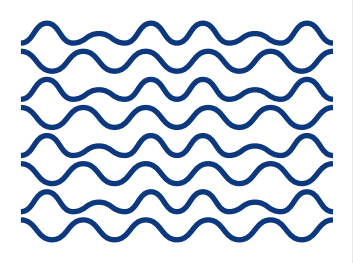
Integrated sensors provide a fast, accurate and cost-efficient way to regulate heating systems. Alfa Laval has a patented solution that is built into the frame of the BHE.

AlfaNova is a range of fusion-bonded, all stainless-steel heat exchangers. They are ideal in situations where no copper contamination is allowed or very high hygiene standards need to be met.

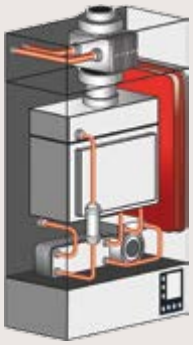
Three innovations that break barriers

FLEXFLOW DESIGN

Our range of asymmetrical flow patterns unlock new levels of efficiency. We don't believe in a one size fits all approach – we develop new asymmetrical patterns tailored by application allowing smaller refrigerant volumes and optimized water pressure drops.



ALFANOVA RECUPERATOR



The AlfaNova recuperator allows the boiler to exceed required efficiency levels and comply with new legislation, thereby making it a premium offering to the market.

WATER KIT

Water Kit is a series of rapid connections that minimize the time of assembly. They have integrated temperature sensors and safety valves.

Partner with Alfa Laval to become best in class

With our unique wealth of experience, our dedication to finding innovative new heat transfer OEM solutions with greater efficiency and lower energy consumption and our global manufacturing and distribution network, Alfa Laval is your ideal partner.

Don't get left behind in a competitive market, affected by a constant flow of new regulations and ever-changing trends. We support your need to drive performance to new levels as well as the need of cost-efficient solutions.

Join forces with Alfa Laval and be the best that you possibly can.

OEM applications

- Air Conditioning (Chillers, Absorption Chillers and VRF's)
- Heat Pumps
- Boilers
- Solar Heating
- Domestic Water Heating
- Domestic Hot Water
- Process Cooling
- Fuel Cells
- (Micro) Combined Heating and Power
- Air Dryers
- Air Compressors
- Oil Cooling
- Transport Refrigeration
- Wind Power
- Vending Machines
- Engine cooling (oil, air, lube)
- Engine oil and fuel filtration
- Transmission Oil Cooling
- Hydraulic oil cooling
- Heat recovery

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