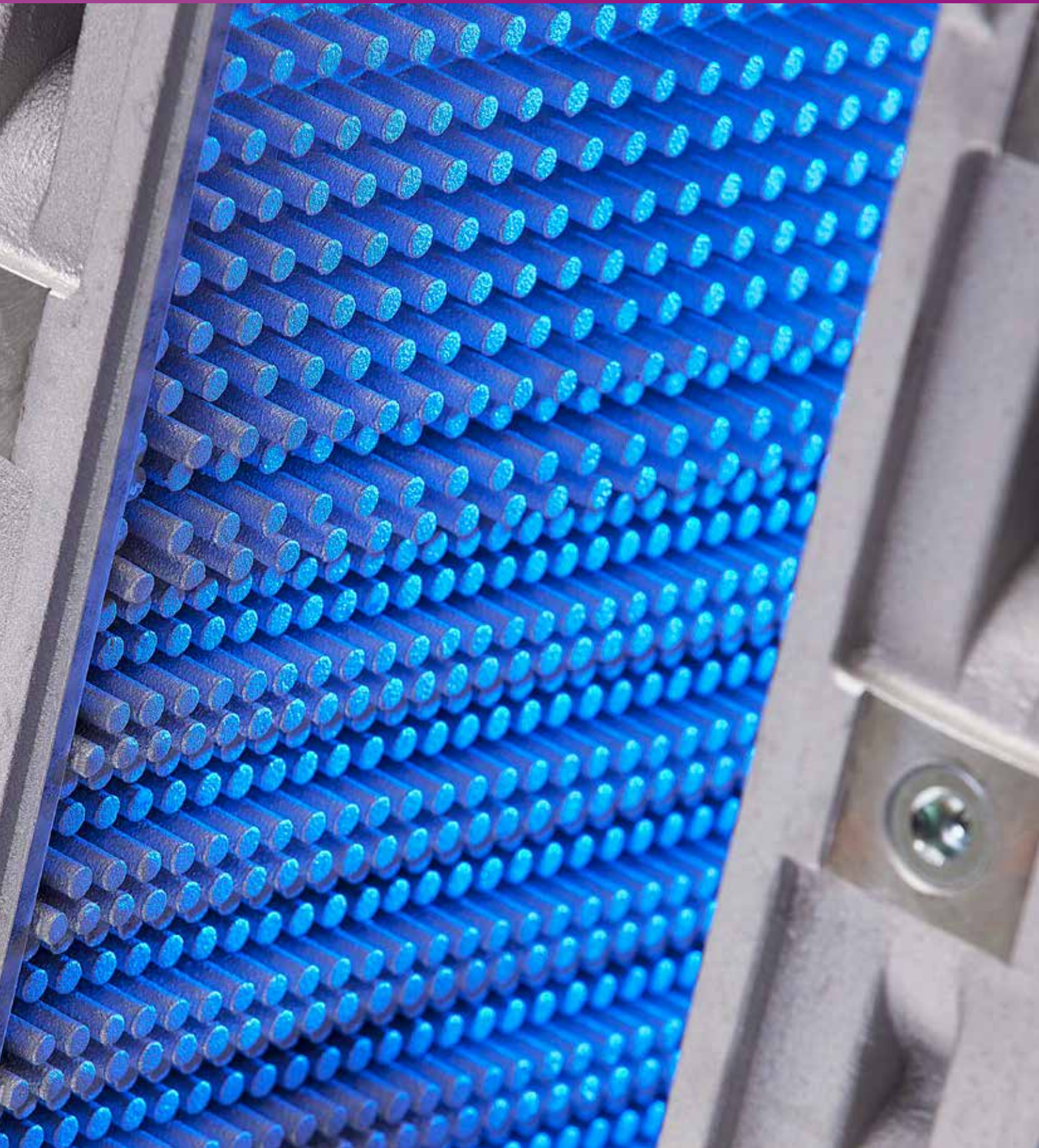


 **BEKAERT**

better together

## Aluminum heat exchangers

Quality and service tailored to your needs





# Why choose Bekaert?

## The industry standard for aluminum heat exchangers

Over the last three decades, Bekaert has designed more than 50 different cast aluminum condensing heat exchanger models in capacities ranging from 20kW to more than 3MW. Our innovative products and processes support our customers in delivering industry leading residential and commercial boilers.

## Proven partners in development

From standard to custom-made heaters for residential, commercial or industrial boilers, Bekaert has a solution for you. Our knowledge and technological expertise enable us to develop product designs and solutions based on your specifications and conforming to local regulations.

## Your strategic supply partner

We are ready when you are. With four production facilities in strategic locations across the world, we are able to meet your logistic and supply needs quickly and efficiently.

## Residential heat exchangers

### Alumini®

This very compact monobloc aluminum heat exchanger is available in capacities of 20 and 30 kW and has a 1:10 modulation range. Its design features large and simple fluid ducts resulting in low hydraulic resistance.

- High output range in a very compact housing
- High flame stability over the whole capacity range
- High modulation range and low pneumatic resistance
- Designed as a complete heat solution with our Furinit® burner

Alumini® *		20	30
Nominal input CH	kW	20	30
Nominal input DHW	kW	28	38
Modulation level	1 to	10	10
Efficiency nominal load 80/60 °C	%	97	97
Maximum flow temperature	°C	90	90
Maximum allowable working pressure	bar	0,8-3	0,8-3

\*ASME approval pending

## Small commercial heat exchangers

### Alucento® 2.0

This improved compact monobloc heat exchanger is ideal for small commercial condensing boilers. Alucento® is available in capacities of 60 kW, 90 kW and 120 kW.

- Requires little maintenance
- Efficient heat transfer
- Competitive pricing
- Small footprint
- Designed as a complete heat solution with our Aconit® burner

Alucento® *		60	90	120
Nominal input max load	kW	60	90	120
Modulation level	1 to	10	10	10
Efficiency 30% load 36/30 °C	%	108	108	108
Maximum flow temperature	°C	90	90	90
Maximum allowable working pressure	bar	1-6	1-6	1-6

\* ASME approved

## FORWARD THINK TECHNOLOGY

All our heat exchangers comply with the highest local, national and global standards and demands. New developments keep up with new trends for stringent demands.



Alumini®



Alucento®

## Commercial heat exchangers

### • WTB® series

This range of commercial sectional condensing heat exchangers is available in capacities of 80 kW to 280 kW. A WTB® heat exchanger only needs one cylindrical burner and one fan and has a fully water-cooled combustion chamber.

- Modular flexibility within capacity range
- No ceramic insulation required
- Low weight and small footprint
- Easy access on all sides for maintenance
- Designed as a complete heat solution with our Aconit® burner

WTB*		3	4	5	6	7	8
Nominal input max load	kW	80	120	160	200	240	280
Modulation level	1 to	>10	>10	>10	>10	>10	>10
Efficiency 30% load 36/30 °C	%	108	108	108	108	108	108
Maximum flow temperature	°C	90	90	90	90	90	90
Maximum allowable working pressure	bar	0,8-6	0,8-6	0,8-6	0,8-6	0,8-6	0,8-6

\*ASME approved

### Aluflow®

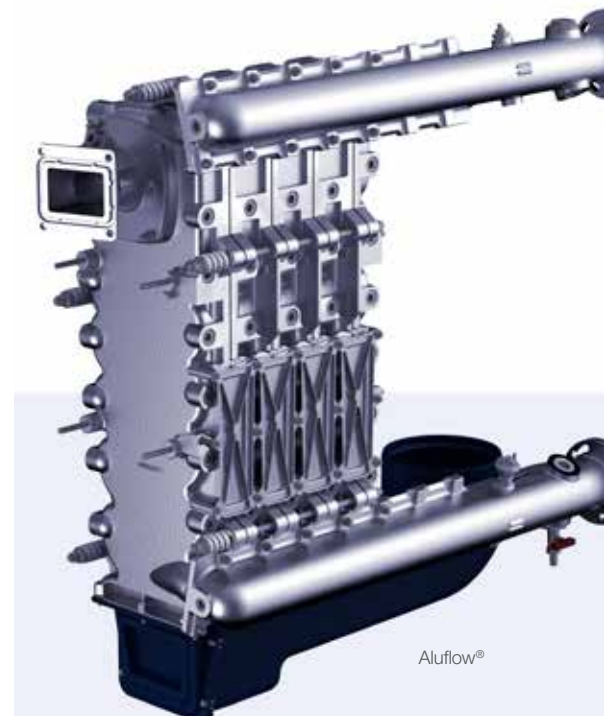
Aluflow is a highly efficient commercial aluminium condensing heat exchanger with revolutionary hydraulic properties. Needing only one cylindrical burner and one fan, the heat exchangers have a fully water cooled combustion chamber and require no ceramic insulation. The high thermal conductivity of the sectional casting design results in a very high efficiency in an extremely compact geometry.

- Extremely low hydraulic resistance
- Suitable for very high flow temperatures and high delta T's (difference between flow and return temperature)
- Modular flexibility within capacity range
- No ceramic insulation required
- Small footprint
- Easy access for maintenance
- Designed as a complete heat solution with our Aconit burner

Aluflow®		3	4	5	6	7
Nominal input max load	kW	100	150	200	250	300
Modulation level	1 to	>10	>10	>10	>10	>10
Efficiency 100% load 80/60 °C	%	98	98	98	98	98
Efficiency 30% load 36/30 °C	%	109	109	109	109	109
Maximum flow temperature	°C	95	95	95	95	95
Hydraulic resistance 100% input and delta T 20°C	mbar	30	30	30	30	30
Maximum allowable temp difference	°C	50	50	50	50	50
Maximum allowable working pressure	bar	0,8-6	0,8-6	0,8-6	0,8-6	0,8-6

## SOLID CONSTRUCTION

Bekaert produces monobloc and sectional aluminum heat exchangers using a sand-casting process. This means there are no welds and less heat stress areas that could compromise the structure of the heat exchanger.



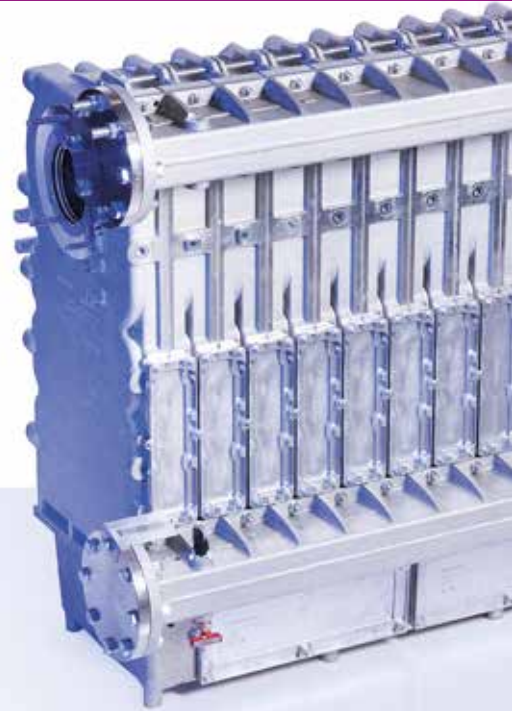
## Alucom®/Alumega®

Alucom® and Alumega® (1MW) aluminum condensing heat exchangers only need one cylindrical burner and one fan. The heat exchangers have a fully water cooled combustion chamber and require no ceramic insulation. The high thermal conductivity of the sectional casting design results in a very high efficiency and the most compact dimensions for this type of heat exchanger.

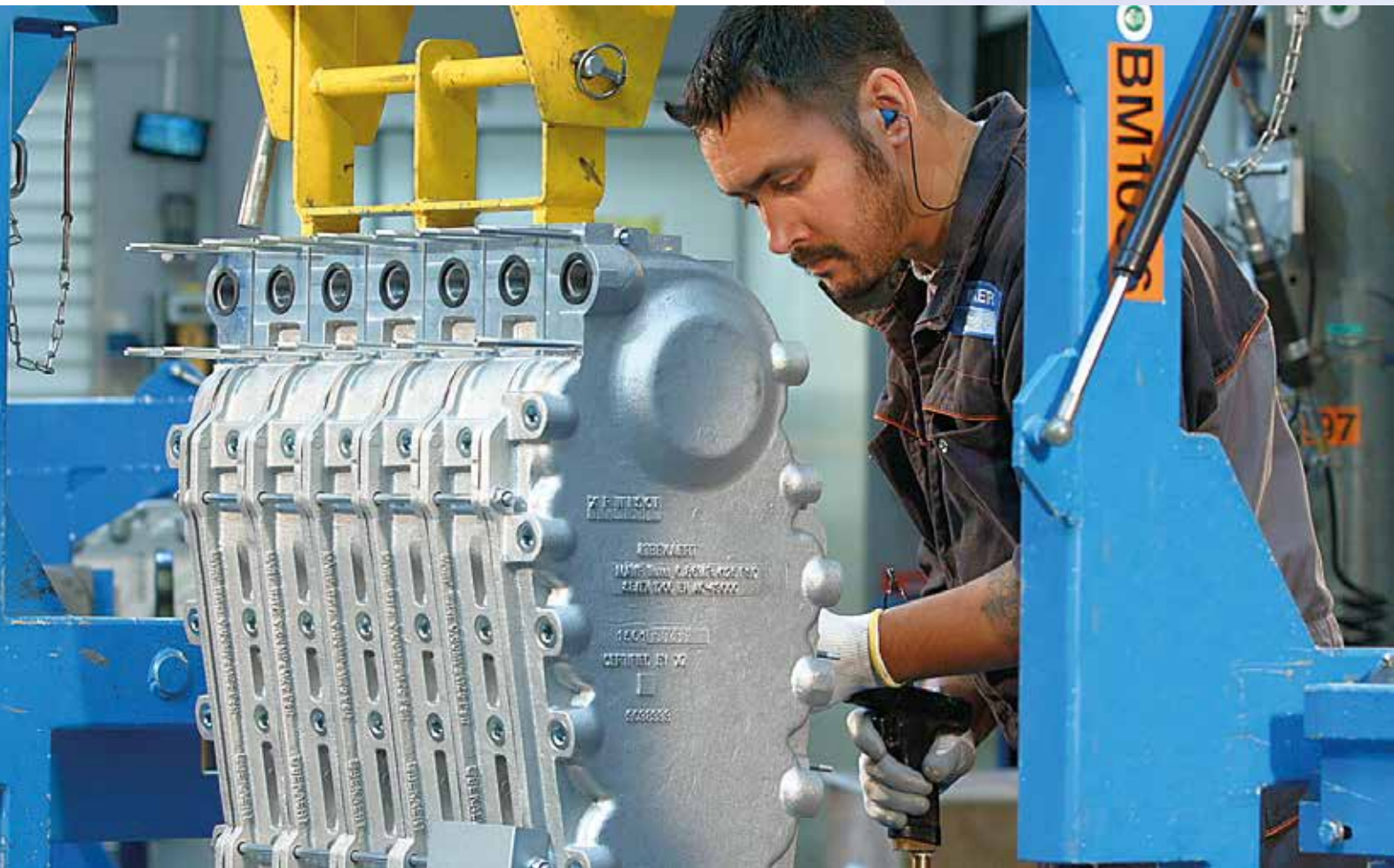
- Modular flexibility within capacity range
- No ceramic insulation required
- Low electrical consumption
- Small footprint
- Easy access for maintenance
- Designed as a complete heat solution with our Aconit® burner

Alucom® / Alumega®		5	6	7	8	9	12
Nominal input max load	kW	360	450	540	630	720	1000
Modulation level	1 to	>10	>10	>10	>10	>10	>10
Efficiency 30% load 36/30 °C	%	108	108	108	108	108	108
Maximum flow temperature	°C	90	90	90	90	90	90
Maximum allowable working pressure	bar	0,8-6	0,8-6	0,8-6	0,8-6	0,8-6	0,8-6

\*ASME approved



Alucom®/Alumega®



## Large commercial condensing heat exchanger

### ► Alupower®

Alupower® is revolutionary in terms of size and efficiency. Measuring approximately 25% smaller and weighing 60% lighter than cast iron boilers, this commercial heat exchanger easily fits through doors and elevators and into narrow boiler rooms. Alupower® also needs fewer components compared to cascaded systems with a similar output, resulting in lower installation and maintenance costs.

- Excellent performance / weight ratio
- Exceptional efficiency
- Compact size for easy installation and maintenance
- Small footprint

### Optimal heat supply

Alupower® is at least 10% more efficient than boilers with the same output, which leads to more optimal heat supply and lower expected-running-costs. As you can see in the table below, Alupower® offers high efficiencies at different flow temperature settings.

Type of heat exchanger	
Input per section	250 kW
Heat cell range	1 MW - 3 MW
Maximum length of 3 MW heat cell	2,5 meter
Maximum width of heat cell (width of door)	838 mm
Maximum height of heat cell (height of container)	2 meter
Maximum height of section	1,6 meter
Maximum width of section	800 mm
Water side connections	varies per input 3MW: flange DN200
Flue aide connection	varies per input 3MW: flue gas pipe DN400
Weight of heat exchanger	+/- 2000 kg

### CUSTOMIZED SERVICE

To make your processes run as smooth as possible Bekaert also offers customized services. Should your production flow unexpectedly change, we can offer lead times of less than a day.

To provide you with a superior service level at optimal cost, we offer you a variety of solutions:

- KANBAN
- Consignment stocks
- Electronic Data Interchange (EDI)
- Vendor-managed inventory (VMI)
- Customer specific solutions

If needed, our supply chain specialists can visit your facility to see how we can maximize efficiency.

### EASY TO TRANSPORT AND INSTALL

Alupower® is designed with a fully integrated transportation frame that allows easy transportation and safe lifting.



Alupower®  
heat exchanger



Aconit® burner

The market of heat exchangers is evolving. Output requirements keep growing and efficiency standards are becoming more challenging. To answer the need for higher quality, more cost-effective boilers, Bekaert keeps introducing innovative condensing solutions.

## Creating the perfect solution together

We pursue a close cooperation to develop heating solutions that benefit you and your end-customers. We think along with you with one goal in mind: improving your processes and the quality of your products.

Bekaert has developed specialized simulation models to simulate the actual performance of a new design under different circumstances. With these models we can study phenomena such as:

- Heat transfer behavior
- Combustion chamber and water channel gas and water flows
- Fluid to metal interaction (gas to metal and metal to water)
- Optimum peripheral design
- Thermo-acoustic behavior and measures

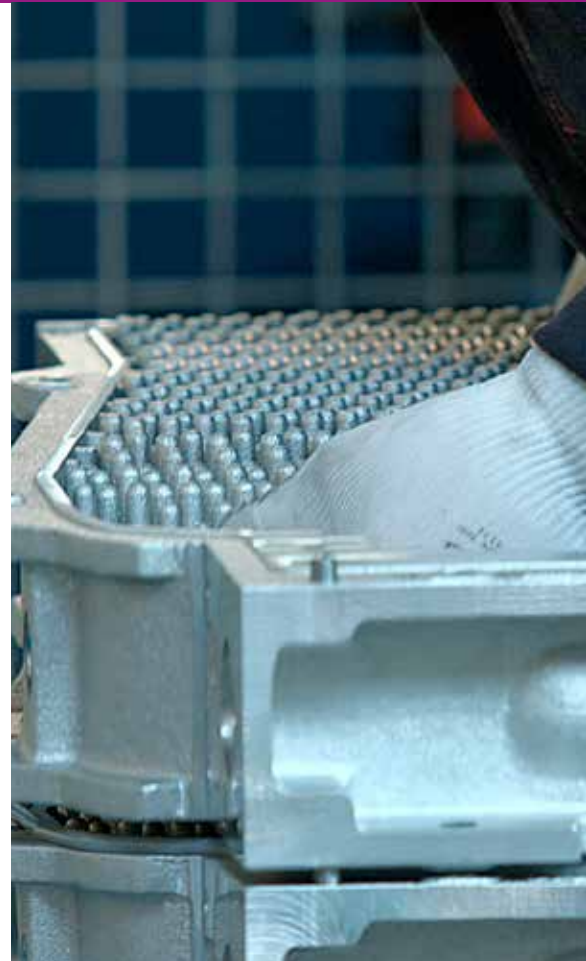
Efficiencies, temperatures and pressure drops can be calculated as well as stresses due to thermal expansion and contraction. Our advanced computer model predicts unstable sound frequencies in full 3D geometry. These accurate models allow us to go from design to prototype phase much faster than ever before

## Proven technology

A team of dedicated specialists assesses the performance of the heat exchanger by analyzing heat transfer, boiler efficiency, flame stabilization, emissions of pollutants and thermo-acoustics. To prove the durability and efficiency of our heat exchangers each new design is exposed to accelerated life-tests.

Our testing facilities include:

- An acoustics test room,
- A temperature controlled test room,
- Life-time test equipment for burners and boilers
- State-of-art equipment to measure emissions, temperature curves and fluid dynamics,
- Test lab equipment for burners and boilers



### HIGH QUALITY MATERIALS

Bekaert heat exchangers consist of high-grade aluminum supplied by a global network of top suppliers.

This material has several essential benefits to the design:

- Greater freedom of design
- Excellent thermal conductivity (10 times higher than stainless steel)
- High corrosion resistance
- Significantly lighter and more efficient than stainless steel heat exchangers of similar capacity



DISCOVER THE BENEFIT OF BEKAERT ALUMINUM HEAT EXCHANGERS

Find how you can produce a safer, more efficient and more durable boiler

or water heater by upgrading your combustion technology. For more

information, visit our website or contact your local sales office. Our people

will be happy to discuss the possibilities for your specific project in detail.

Contact us

More  
Information?

<https://heating.bekaert.com>

[bct@bekaert.com](mailto:bct@bekaert.com)

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