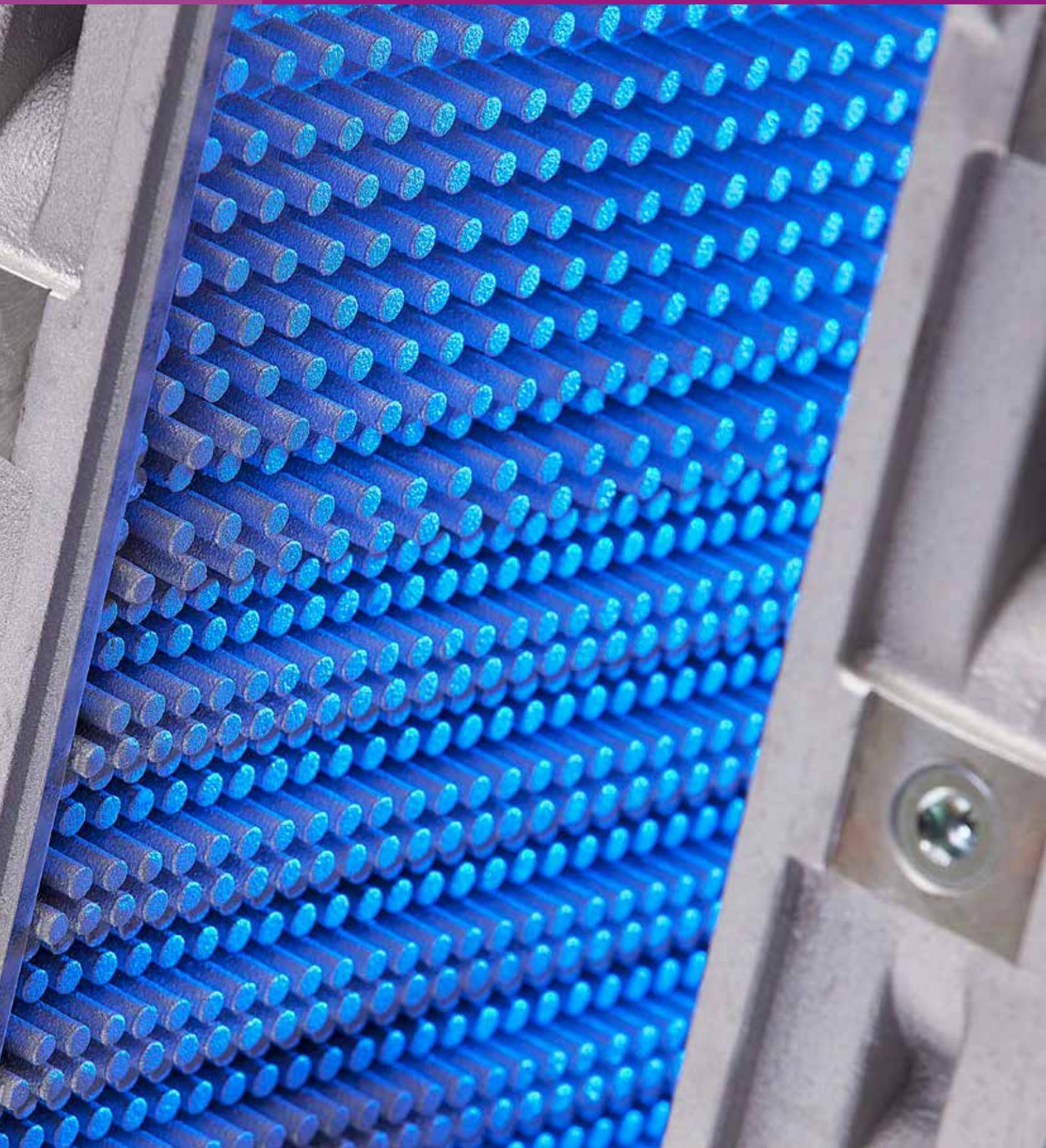


 **BEKAERT**

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 90 kBtu/h to more than 12 MBtu/h. 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 90 to 125 KBTU/h 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 (kBtu/h) | 90 | 125 |
| Modulation level (1 in) | 10 | 10 |
| Efficiency AFUE (%) | 94 | 94 |
| Maximum flow temperature (°F) | 195 | 195 |
| Maximum allowable working pressure (psi) | 50 | 50 |

*ASME approval pending

Small commercial heat exchangers

Alucento®

This compact monobloc heat exchanger is ideal for small commercial condensing boilers. Alucento® is available in capacities of 250 - 499 KBTU/h.

- 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 (kBtu/h) | 250 | 399 | 499 |
| Modulation level (1 in) | 10 | 10 | 10 |
| Efficiency AFUE standard 1500 (%) | | 94 | 94 |
| Efficiency AFUE (%) | 94 | | |
| Maximum flow temperature (°F) | 195 | 195 | 195 |
| Maximum allowable working pressure (psi) | 80 | 80 | 80 |

* 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.



Commercial heat exchangers

• WTB® series

This range of commercial sectional condensing heat exchangers is available in capacities of 300 to 1,000 kBtu/h. 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 (kBtu/h) | 300 | 450 | 600 | 750 | 900 | 1000 |
| Modulation level (1 to) | >10 | >10 | >10 | >10 | >10 | >10 |
| Efficiency** AHRI standard 1500 (%) | 95 | 95 | 95 | 95 | 95 | 95 |
| Maximum flow temperature (°F) | 195 | 195 | 195 | 195 | 195 | 195 |
| Maximum allowable working pressure (psi) | 125 | 125 | 125 | 125 | 125 | 125 |

*ASME approved/**Thermal efficiency

Alucom®/Alumega®

Alucom® and Alumega® (4 kBtu) 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® | | | | | |
|--|----------|------|------|------|------|------|
| Sections | 5 | 6 | 7 | 8 | 9 | 12 |
| Nominal input (kBtu) | 1400 | 1700 | 2100 | 2400 | 2800 | 4000 |
| Modulation level (1 to) | >10 | >10 | >10 | >10 | >10 | >10 |
| Efficiency** AHRI standard 1500 (%) | 96 | 96 | 96 | 96 | 97 | 97 |
| Maximum flow temperature (°F) | 195 | 195 | 195 | 195 | 195 | 195 |
| Maximum allowable working pressure (psi) | 160 | 160 | 160 | 160 | 160 | 160 |

* ASME approved

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.



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.

| Alupower* | 6 | 7 | 8 | 9 | 11 | 13 |
|--|-----|-----|-----|-----|-----|-----|
| Nominal input max load (MBtu/h) | 5 | 6 | 7 | 8 | 10 | 12 |
| Modulation level (1 to) | >10 | >10 | >10 | >10 | >10 | >10 |
| Efficiency AHRI 1500 100% load (%) | 95 | 95 | 95 | 95 | 95 | 95 |
| Maximum flow temperature (°F) | 203 | 203 | 203 | 203 | 203 | 203 |
| Maximum allowable working pressure (psi) | 160 | 160 | 160 | 160 | 160 | 160 |

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 industrial 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 up to 1 MBtu/h
- State-of-art equipment to measure emissions, temperature curves and fluid dynamics,
- Test lab equipment for burners and boilers up to 20 MBtu/h



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



We are
ready
when
you are.



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

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