Aluminum heat exchangers

Quality and service tailored to your needs
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Partners in development
Whether you are looking for a standard or custom-made heat exchanger for your residential, commercial or industrial boiler design, you can rely on Bekaert. Your knowledge and our technological expertise enable us to develop boiler designs based on your specifications and conforming to local regulations.

Innovative condensing technology
Bekaert is a pioneer and technology leader in creating combustion solutions. Over the last three decades we have designed more than 50 different cast aluminum condensing heat exchanger models in capacities ranging from 75,000 BTU/h to more than 4,000 MBTU/h. Our innovative products and processes support our customers in improving their boiler design in several important ways:

• increasing efficiency
• minimizing environmental impact
• improving reliability
• extending lifetime

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

Bekaert’s monobloc and sectional aluminum heat exchangers are produced by a sand-casting process. This means there are no welds and less heat stress areas that could compromise the structure of the heat exchanger.
Why choose Bekaert?

We co-create
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.

We simulate
Bekaert has developed specialized simulation models to measure 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. Our advanced computer model predicts unstable frequencies in full 3D geometry. These accurate models allow us to go from design to prototype phase much faster than ever before.

We test
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 4,000 MBTU/h
- state-of-art equipment to measure emissions, temperature curves and fluid dynamics.

We deliver
Our heat exchangers comply with the highest local, national and global standards and demands. Trends for more stringent demands are monitored and taken into consideration with new developments.
Our portfolio

RESIDENTIAL HEAT EXCHANGERS

Alumini®

This very compact monobloc aluminum heat exchanger is available in capacities of 70,000 to 130,000 BTU/h and has a 1:10 modulation range. Its design features large and simple fluid ducts resulting in low hydraulic resistance.

Benefits
• 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

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<tr>
<th>Alumini®</th>
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* ASME approval pending

SMALL COMMERCIAL HEAT EXCHANGERS

Alucento®

The compact monobloc heat exchanger is ideal for small commercial condensing boilers. Alucento® is available in capacities of 225,000 - 340,000 and 450,000 BTU/h.

Benefits
• requires little maintenance
• efficient heat transfer
• competitive pricing
• small footprint
• designed as a complete heat solution with our Aconit® burner

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* ASME approved
COMMERCIAL HEAT EXCHANGERS

WTB® series

This range of commercial sectional condensing heat exchangers is available in capacities of 300 to 1,000 MBTU/h. A WTB® heat exchanger only needs one cylindrical burner and one fan and has a fully water cooled combustion chamber.

Benefits
- 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

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* Thermal Efficiency
** ASME approved
COMMERCIAL HEAT EXCHANGERS

Alucom®/Alumega®

Alucom® and Alumega® (4 MBTU) are highly efficient aluminum condensing heat exchangers. 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. Bekaert is the only independent industry proven supplier of commercial aluminum heat exchangers of this size.

Benefits
- 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

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Discover the benefits of Bekaert aluminum heat exchangers

Find out how you can produce a safer, more efficient and more durable boiler or water heater by upgrading your combustion technology.

For more information, please visit our website or contact your local sales office. Our people will be happy to discuss the possibilities for your specific project in detail.

www.bekaert.com/heating
bct@bekaert.com

Bekaert is a world market and technology leader in steel wire transformation and coating technologies. To be the preferred supplier of steel wire products and solutions, we consistently deliver superior value to our customers worldwide. Bekaert (Euronext Brussels: BEKB) was established in 1880 and is a global company with approximately 30 000 employees worldwide.

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