

 **BEKAERT**

better together

Premix gas burner solutions

Increase your efficiency. Lower your emissions





Why choose Bekaert?

The industry standard for premix burners

For more than two decades, Bekaert has been the world's leading supplier of innovative premix gas burners in the range of 3.5 KBtu/h to 12 MBtu/h. With an installed base of more than 22 million burners, we have the experience to create the highest quality products.

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.

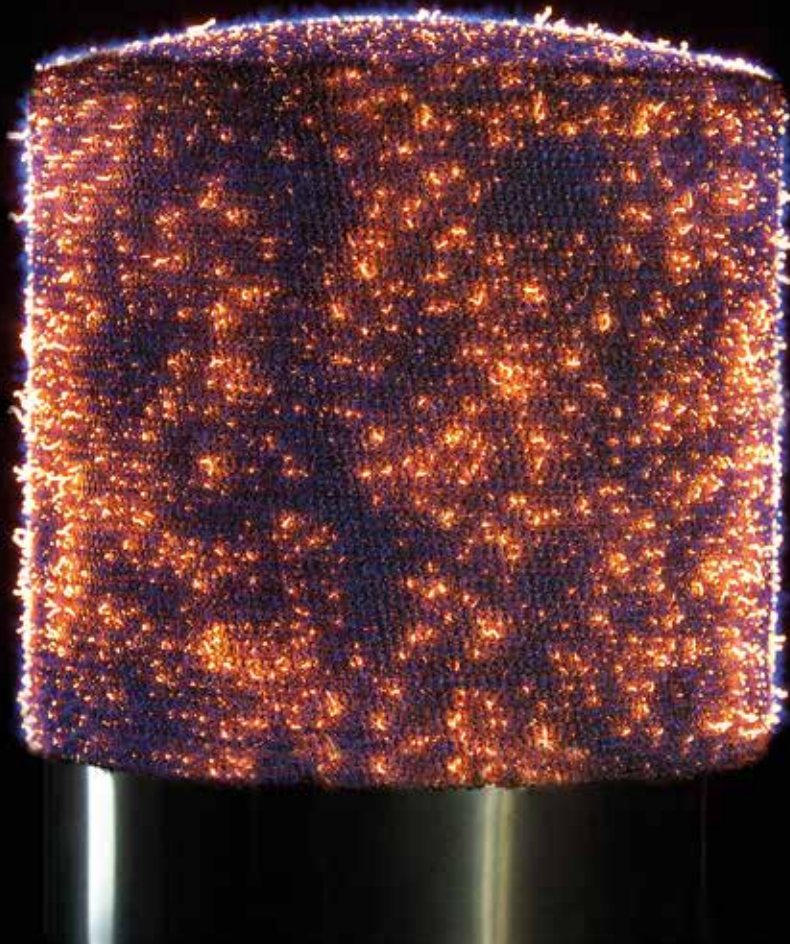
Your strategic supply partner

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.



Your partner in high efficiency combustion technology

The main challenge of the heating industry is to increase efficiency and lower NOx emissions. As every application is unique, Bekaert uses model processes to create optimized solutions. We produce all our burners in-house. This gives us full control over the manufacturing process; from knitting the material, to the punching, forming, welding and assembly of the burners.



Creating the perfect solution together

We work closely with our customers. For each new project, a dedicated team of qualified engineers assists with the development of the gas burners and their application. We are able to provide proto-types and pre-production samples at any time during development.

We can also investigate the possibilities of upgrading your existing design together, resulting in innovative, customized solutions.

FORWARD THINK TECHNOLOGY

All our burners comply with the highest local, national and global standards and demands. Trends for more stringent demands are monitored and considered when creating new developments.

Proven technology

High modulating premix burners are exposed to much higher temperatures than conventional gas burners. This results in low NOx emissions but it requires higher temperature resistance and careful consideration on temperature induced stresses.

To create a reliable product, we test numerous functions in the lab. Then we expose new burner designs to accelerated life-tests to prove durability of design and material on any type of gas. This streamlines your time to market and retains the quality you expect from Bekaert.

Our testing facilities include:

- An acoustics test room
- A temperature controlled test room
- Life-time test equipment for burners and boilers up to 4 MBtu/h
- State-of-art equipment to measure emissions, temperature curves and fluid dynamics

INNOVATIVE TECHNOLOGIES

Every new burner design is made with one goal in mind: achieving the highest efficiency and cost effectiveness. To make this possible, Bekaert developed new and innovative technologies.

Low NOx premix technology

Burners that use premix technology in combination with a condensing heat exchanger maximize the efficiency of the heat cell and limit their emission of NOx, CO and CO2. With the recent enforcement of new emission standards for gas boilers in Europe, the US and Asia, premix technology offers the perfect solution to manufactures who need to conform to the new regulations.

Combined with gas adaptive control electronics, Bekaert premix burners offer the highest efficiency at lowest emissions. Bekaert premix burners support high modulation ranges. Innovative features in the burner provide a stable flame signal, even at very low outputs.

Bekinit® 3D metal fiber material

Bekinit® is a uniquely knitted 3D burner material made of refractory stainless steel fibers. This industry proven flexible medium can be used for both cylindrical and flat burner surfaces. It allows a reliable heat transfer, minimizes thermal stresses and allows for high modulation ranges.

Benefits

- ① Increased output at equal burner dimensions
- ② High turn down ratios (>1:20)
- ③ Extended lifetime
- ④ Superior resistance to rapid and extreme temperature fluctuations



PORTFOLIO

Depending on the heating application, Bekaert offers various types of burners. All products in our portfolio can be customized to the geometry and performance of any type of heat exchanger. Our products meets all NA standards and regulations.

Refractory stainless steel cylindrical burners

• Furipat®

Furipat® is the industry standard for premix steel gas burners used in residential condensing combi boilers. Its cylindrical shape suits a wide range of residential heat exchangers. Furipat® has been on the market for over a decade and enjoys a good reputation with major boiler manufacturers worldwide.

Benefits

- ① Longer product life
- ② Higher efficiency
- ③ Lower CO2 emission

• Multipat®

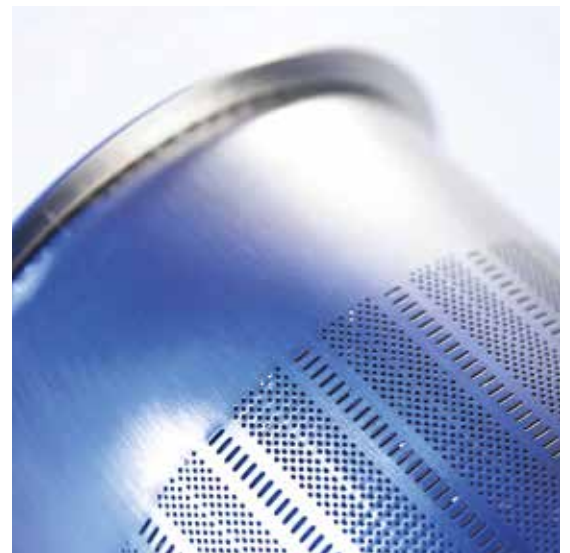
Multipat® is the cost-effective alternative to Furipat®. Its durable and efficient design offers superior performance at the lowest cost. The burner offers good flame distribution and is available in different sizes and with different burner partners. Multipat® is ideally suited for small size wall-hung boilers.

Benefits

- ① Excellent cost-performance ratio
- ② Better control over modulation range
- ③ Customizable for optimal efficiency

Diameter (inch)	Typical length (mm)	Nominal input (MBTU/h)
2.0	1.6 – 5.9	25 – 200
2.5	1.6 – 9.8	30 – 400
2.8	1.6 – 15.7	40 – 750

CO: 1 - 60 ppm - Nox: <20 ppm - Modulation: < 1:10/ other dimension available upon request



Furipat®



Multipat®

Compact metal fiber based burner

• Furinit®

Furinit® is the most compact gas burner using Bekinit® in our range. Suitable for all major gas adaptive control systems, this burner is mostly used in residential and small commercial boilers and water heaters. Furinit® features a patented shaped burner deck that combines mesh and Bekinit®.

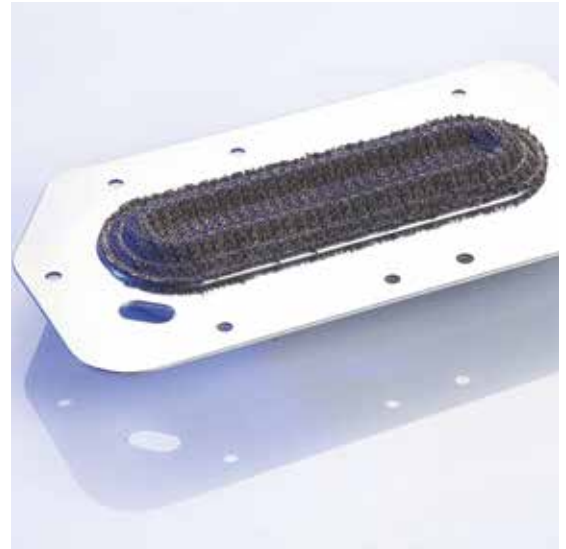
Benefits

- ① Wide modulation range
- ② Excellent flame stability
- ③ High outputs at minimal dimensions

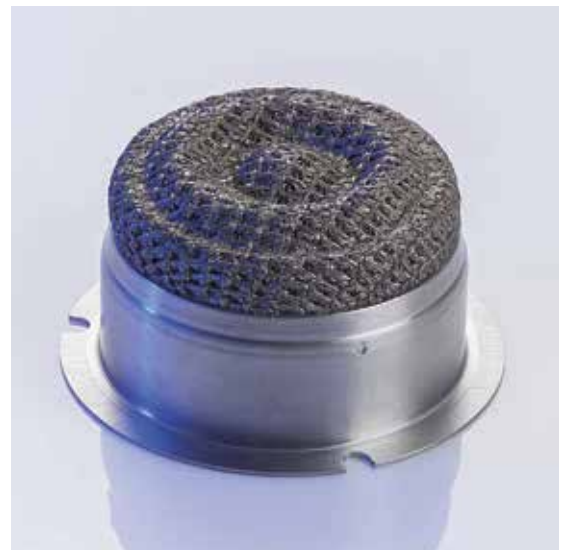
Length (inch)	Wide (inch)	Nominal input (MBTU/h)
3.9	1.8	61
7.9	1.1	121
7.9	1.8	144
11.8	1.8	159

Diameter (inch)	Nominal input (MBTU/h)
2.0	<5 – 70
2.8	<5 – 160
3.9	10 – 300
5.5	40 – 100
7.9	75 – 2000
9.6	100 – 3000

CO: 1 - 60 ppm - NOx: <20 ppm - Modulation: < 1:40/ other dimension available upon request



Furinit®



Furinit®

CUSTOMIZED SOLUTIONS

Bekaert also offers customized burners that are tailored to your specific needs and local regulations. These solutions enable your company to access new markets and consolidate your position with your existing customer base. Go to our website to get in touch with your local Bekaert representative for more information.

Cylindrical or flat metal fiber based burners

● Aconit®

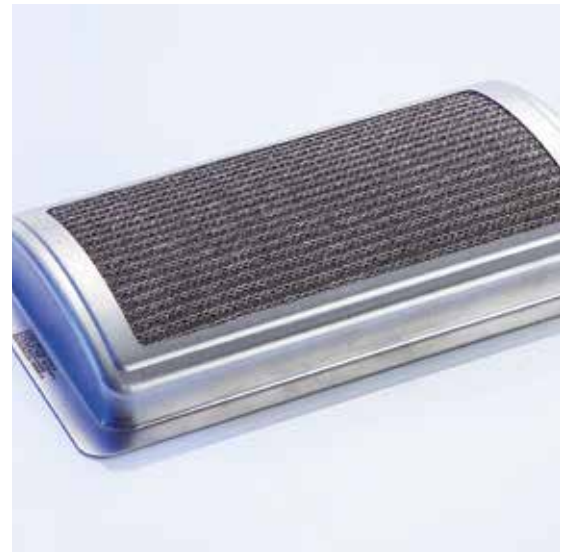
Cylindrical Aconit® burners are the best option for commercial boilers and water heaters as it has a high turndown ratio and assures the highest efficiency and lowest NOx emissions. Flat Aconit® burners, on the other hand, are able to operate at continuously high temperatures in infrared mode without affecting the lifetime of the burner.

Benefits

- ① Can be shaped to meet all heat exchanger lay-outs
- ② Reduced surface temperature thanks to excellent heat transfer
- ③ High efficiency thanks to high turn-down ratio

Length (inch)	Wide (inch)	Nominal input (MBTU/h)
2.6	2.6	40
3.9	3.9	90
3.9	4.3	105
3.9	5.1	120
3.9	5.9	145
4.7	5.5	160
4.7	6.7	190
4.7	7.9	225
5.5	11.8	380
6.3	19.7	7540

Diameter (inch)	Typical length (inch)	Nominal input (MBTU/h)
1.4	1.6 – 11.4	25 – 200
2.0	1.6 – 11.4	25 – 250
2.5	1.6 – 15.7	50 – 550
2.8	1.6 – 19.7	50 – 800
3.25	1.5 – 24	50 – 1000
3.9	2.4 – 27.6	175 – 2000
5.5	2.4 – 39.4	250 – 4200
7.9	2.4 – 55.1	375 – 8000
9.6	2.4 – 63.0	425 – 11000
11.8	3.9 – 78.7	850 – 17000
13.8	3.9 – 78.7	1000 – 20000
18.9	3.9 – 78.7	1400 – 28000



Aconit®



Aconit®

Metal fiber based cylindrical burner with active burner head

• Duonit®

Duonit® burners combine a cylindrical Aconit® burner design with a round active Furinit® burner head. As result, it is the most compact premix burner in its class. Duonit® performs best at the highest output within tight combustion chamber dimensions.

Benefits

- ① Optimized performance in relation to dimensions
- ② High output
- ③ Many size options in height and diameter

Diameter (inch)	Typical length (inch)	Nominal input (MBTU/h)
1.4	1.6 – 11.4	70 – 225
2.0	1.6 – 11.4	100 – 350
2.8	1.6 – 19.7	175 – 1000
3.2	1.6 – 23.6	275 – 1600
3.9	2.4 – 27.6	475 – 2250
5.5	2.4 – 39.4	850 – 5000
7.9	2.4 – 55.1	1500 – 9500
9.6	2.4 – 63.0	2250 – 13500

CO: 1 - 60 ppm - NOx: <20 ppm - Modulation: < 1:40/ other dimension available upon request



Duonit®



Duonit®

From residential to various heating solutions, Bekaert premix gas burners enable the highest efficiency in terms of performance and cost



Some applications

- High efficient condensing residential combi boilers
- Gas instantaneous water heaters
- Gas storage commercial water heaters
- Condensing commercial boilers
- High temperature applications such as industrial ovens and steamers
- Specialized one-off heating

And many other applications.





Discover the benefit of Bekaert
high efficiency premix gas burners

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>

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