BROEN

VALVE TECHNOLOGIES

BROEN BALLOMAX® DN 15 - 150
NEXT GENERATION VALVE TECHNOLOGY

For district heating, district cooling and industry

BROEN BALLOMAX® *Designed to last*

Pioneering valve solutions with advanced and sustainable technology for future installations

BROEN Valve Technologies was one of the pioneers when district heating took off in Denmark in the 1970s. Since the introduction of the BROEN BALLOMAX® in 1982, we have been at the forefront of innovation in the manufacture of ball valves for district energy.

With over four decades of experience and a reputation for reliability and quality, we continue to lead the way and shape the future of district energy solutions worldwide.

Based on the heritage from leading edge innovations in Danish district heating, BROEN BALLOMAX® offers the most comprehensive range of ball valves for distribution and transmission of district energy in residential, commercial and industrial applications and is today a key component in district heating and district cooling networks throughout the world.

BROEN ApS is ISO 45001:2018, ISO 9001:2015 and ISO 14001:2015 certified.

ABOUT BROEN

In 1948 Poul Broen established the company BROEN. For more than 75 years BROEN ApS has been the global leader in the development and production of valve technology for the control of water, air and gas. We operate on three continents across the world with key markets in Europe, China and USA. BROEN is headquartered in Assens, Denmark.

In 1993 BROEN was acquired by Aalberts Industries and today we have more than 13,000 colleagues operating from more than 125 locations in more than 30 countries. Aalberts Industries (AALB) is listed at the EuroNext Stock Exchange, NL.

VISION AND VALUES

Our vision is simple:
Excellent valve technology for niche applications.
We know that proven valve technology is something we must earn. To us quality is not just a key to market access – it goes far beyond that. It is the foundation of our house. We focus our approach and strive to continuously improve our customer offerings.

Our brand is our promise.

BROEN
VALVE TECHNOLOGIES

BROEN BALLOMAX®
Next generation valve technology

Unparalleled know-how benefits not only our customers but also the environment

When it comes to performance, every detail matters. That's why we do things differently. Our valves are crafted from seamless steel pipes. This isn't just about precision. It's about delivering a product that stays stronger, lasts longer, and performs flawlessly under pressure.

With decades of engineering know-how behind us, we don't just follow industry standards – we raise them. Our expertise in valve design allows us to create smarter, more efficient solutions that not only serve our customers better, but support a more sustainable future.

The proven range of BROEN BALLOMAX® now offers more solutions than ever.

BROEN BALLOMAX® *Designed to last*

Customer service and local sales force – supporting your success every step of the way

Quality is more than just a gateway to market access. It is the foundation of everything we do. Our goal is to ensure you feel confident and supported every time you engage with our customer service or technical support teams.

A key strength of our company is our local sales force. They not only have in-depth knowledge of our products, but also recognize the unique needs of your business. Whether you're looking for guidance on product selection, installation, or troubleshooting, our local experts are always ready to help.

We also recognize the importance of timely access to spare parts in maintaining operational efficiency. That's why we provide accurate lead-time estimates. This helps you plan effectively and keep things running smoothly. Our commitment to reliability and punctuality reflects our dedication to your continued success.

BROEN BALLOMAX® DN 15 - 65 Fit tomorrow's demands in district energy

BROEN BALLOMAX® DN 15 - 65 offer a safe, modern and efficient shut-off valve for district heating networks. The compact valve body in one piece offers the best opportunities for insulation in the market – matching requirements in modern efficient district heating systems.

Patended sealing system

The spring supported seat design secures optimal tightness and operation of the ball due to less torque and actuation required. This converts into less wear on the sealing material and a long lifetime.

The valves are tested and subjected to a 100% quality control before leaving the factory and it therefore requires minimal service for the rest of its life.

BROEN BALLOMAX® DN 15 - 65

- Full bore DN 15 - 50
- Reduced bore DN 15 - 65
- PN 25
- Weld, female, male or flange

PED 2014/68/EU - module H
EN 12266-1 and -2

BROEN BALLOMAX® DN 40 - 150 Revolutionizing valve technology for a greener future

BROEN BALLOMAX® DN 40 - 150 feature a two-piece body design. The result is a streamlined valve body with a single weld seam. This design is not only innovative but also benefits the environment*.

- 50% reduction in carbon footprint.
- 40% reduction in material consumption.
- 30% reduction in weight.
- 60% less material waste.

BROEN Valve Technologies is the first company in the world to introduce waterless testing and cleaning methods for valves. This underlines our commitment to environmentally friendly practices.

Patented laser weld technology

Our one-weld technology and patented robotic welders eliminate the need for filler material and ensure consistent quality, minimizing the risk of corrosion and reducing potential leak points. The precise, focused energy of laser beams delivers exceptionally clean welds and ensures strength in every joint.

BROEN BALLOMAX® DN 40 - 150

- Full bore DN 40 - 150
- Reduced bore DN 50 - 150
- PN 40, 25, 16
- Weld, Flange

PED 2014/68/EU - module H
EN 12266-1 and -2

** Calculations based on reference valve DN100 reduced bore weld x weld using GWP A1-A3 CO2e and EN 15804 (A2).*

BROEN BALLOMAX® DN 15 - 65
Technical data

Sizes:	DN 15 - 65
Media:	Water
Operating pressure:	Max 25 bar
Operating temperature:	-20°C to +150°C
Design temperature:	-20°C to +200°C

Kvs values - Full bore

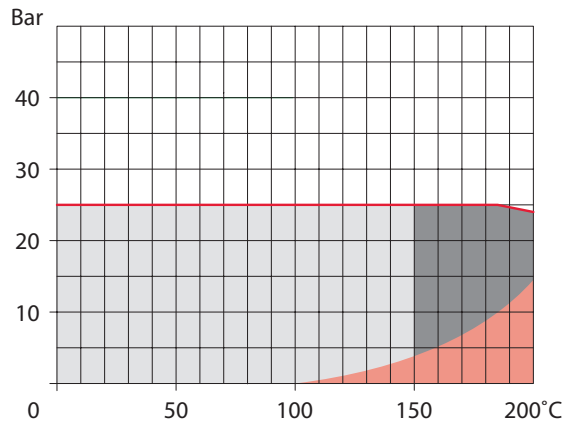
DN [mm]	15	20	25	32	40	50
Kvs [m3/h]	28	46	74	111	183	308

Kvs values - Reduced bore

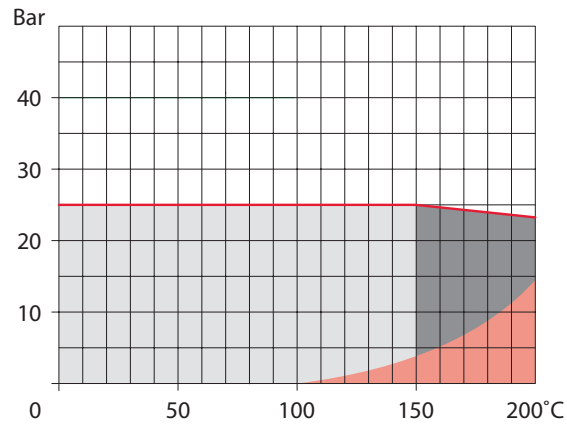
DN [mm]	15	20	25	32	40	50	65
Kvs [m3/h]	13	28	46	74	111	183	308

Pressure and temperature diagram

Weld × Weld - DN 15 - 65 - PN 25

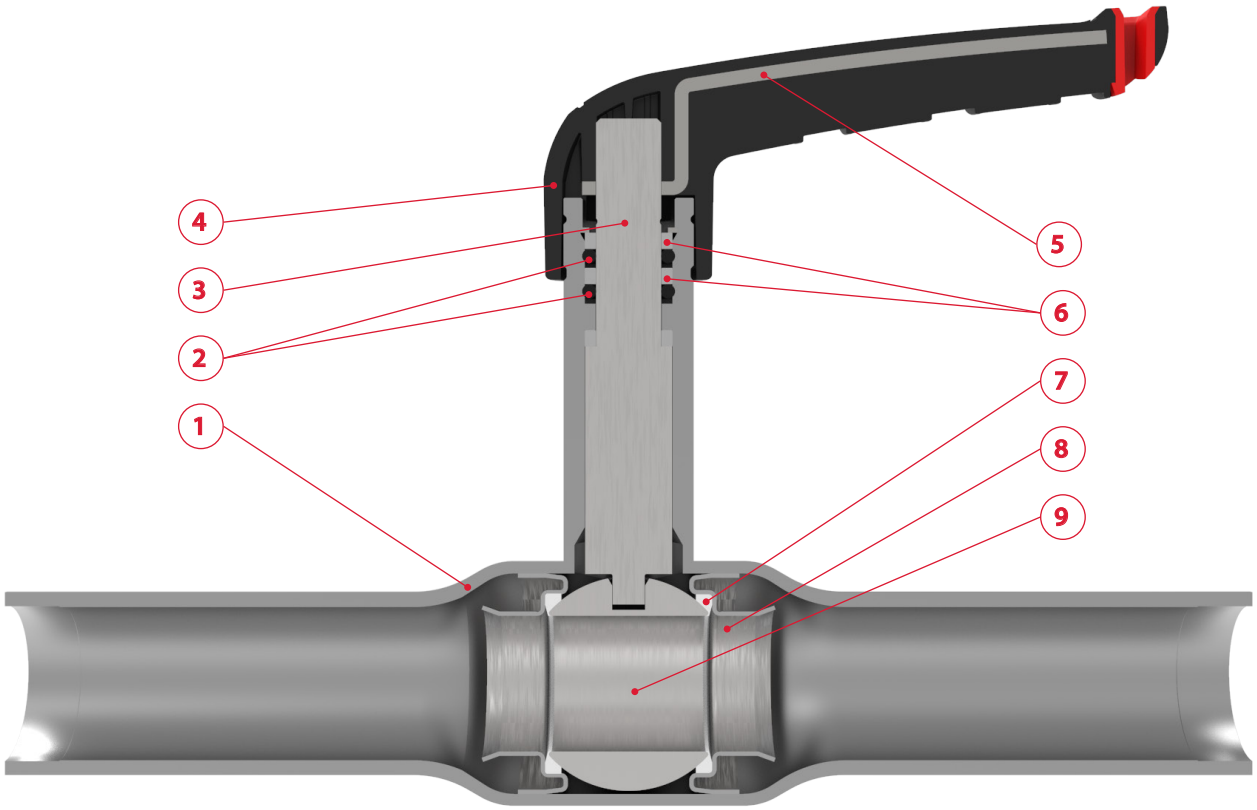


Flange × Flange - DN 15 - 65 - PN 25



Normal working area
Short-term working area
Steam area (see high temperature valves)

BROEN BALLOMAX® DN 15 - 65
Material specification



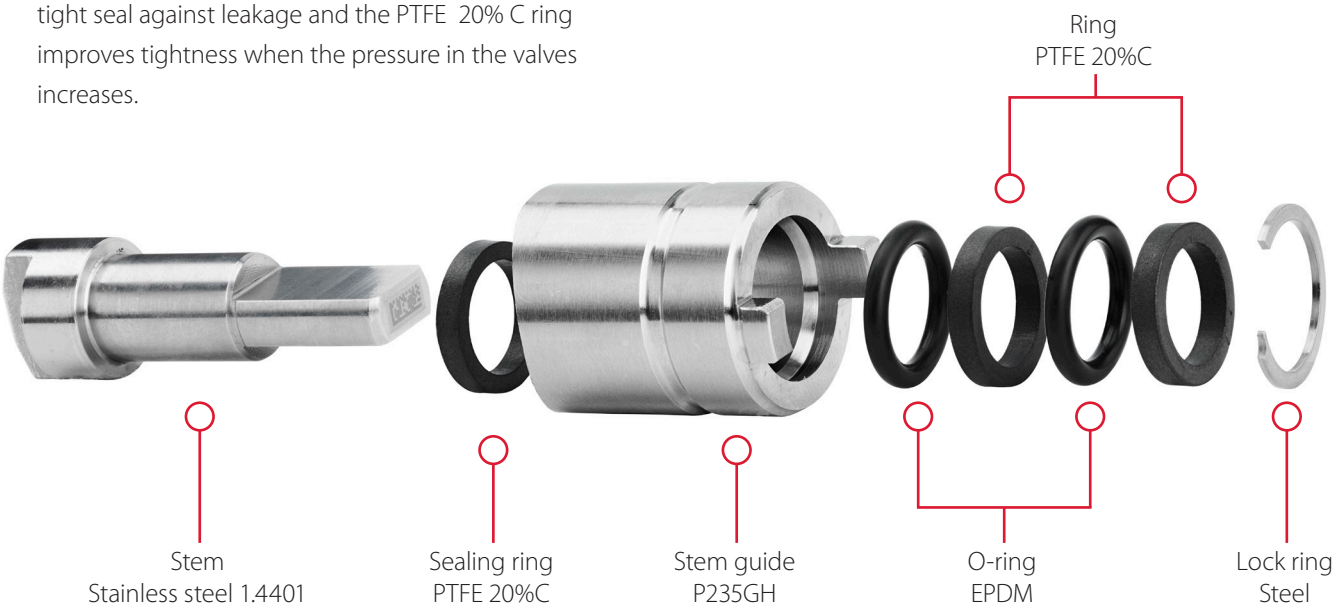
No.	Component	Material	Standard
1	Valve housing	Steel | P235GH	EN 10217-2
2	O-ring	EPDM70	
3	Stem	Stainless steel | 1.4401	EN 10088
4	Handle surface	Fibreglass reinforced composite	PA66
5	Handle core	Zinc plated carbon steel | S235 JR	EN10025-2

No.	Component	Material	Standard
6	Ring	PTFE 20%C	
7	Seal	PTFE	
8	Spring supported ring	Stainless steel | 1.4301	EN 10088
9	Ball*	Stainless steel | 1.4301	EN 10088

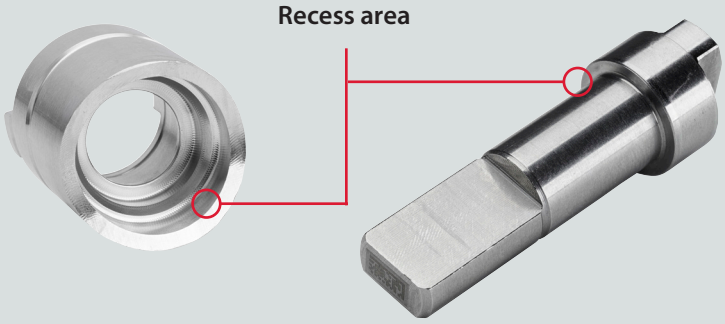
Same construction applies for other types of connections. *DN 32 - 65R has hollow ball.

Built for safe and simple servicing

More than four decades of valve know-how are behind the improved stem design. The stem design, together with the O-rings and PTFE 20% C rings, provides a very tight seal against leakage and the PTFE 20% C ring improves tightness when the pressure in the valves increases.



Blow-out proofed stem design



A recess in the stem guide secures the stem from blow-out and also make it possible to change both O-rings on the stem.

Patended sealing system

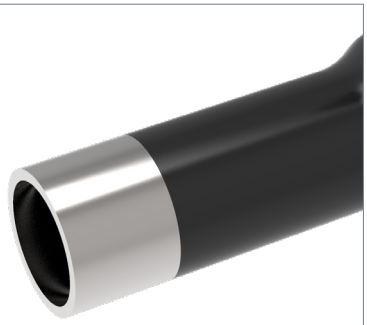
The BROEN BALLOMAX® DN 15 - 65 features a patented spring supported seat design. This new design ensures an optimal tightness and operation of the ball. This contributes to a longer lifetime with less wear on the sealing material.

The design of the seat support allows for a certain movement and work as a spring. This means a simple durable design with less components in the sealing area.

BROEN BALLOMAX® DN 15 - 65 allows for flow in both directions as there is a spring supported seat on both sides of the ball.

Valve connecetion overview

Weld:
EN 10217-2



Female thread:
ISO 228-1

Male thread:
ISO 228-1

Seat design materials

Materials:
Stainless steel EN 1.4301
PTFE

Flange:
EN 1092-1 Type 01 / B

Individual valve identification

All valves are individually marked with a unique valve number and a data matrix on the stem underneath the handle with information about process-, quality- and distribution data – for each individual valve.

Lasermarking

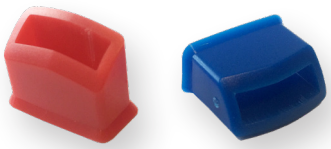
On top of practical installation information, the laser marking on the outside of the valve body includes a unique individual valve ID number enabling us to provide proces and manufacturing data to customers.

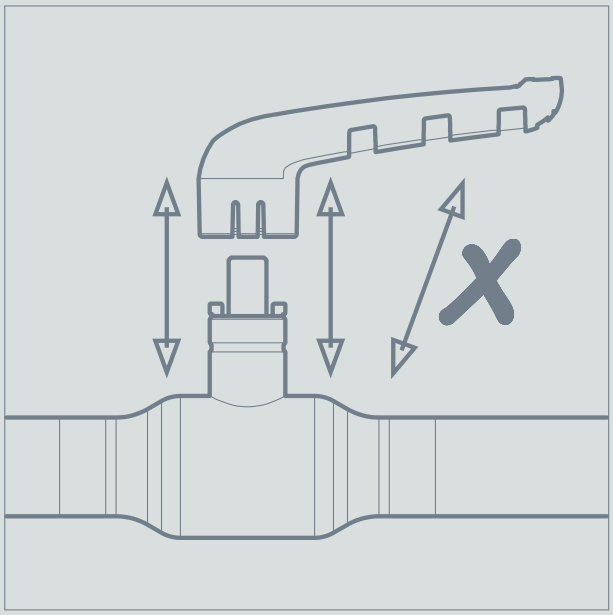
All BROEN BALLOMAX® has a laser marking written in the black coating – not penetrating it – hence keeping a full corrosion protection.

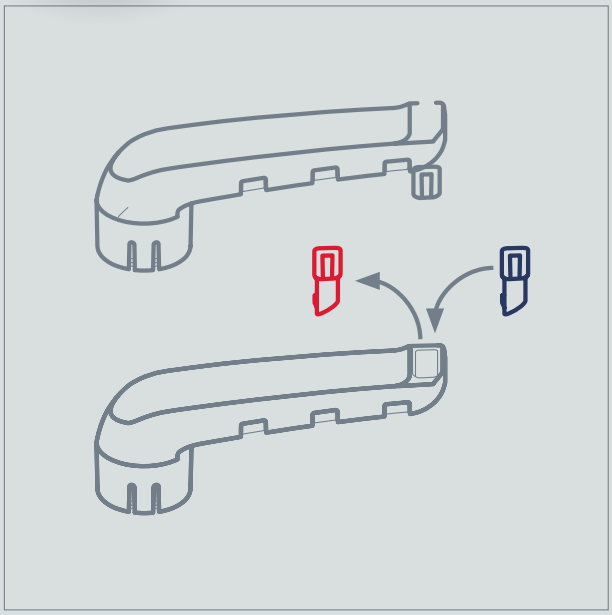
Ergonomic handle for comfort and control

The solid steel handle is manufatured with fibreglass reinforced nylon around it, in order to create a both durable but also comfortable and ergonomic handle, which does not easily transfer heat.

The handle can be removed and mounted in both flow directions without any use of tools. The handle can be supplied with coloured clips to indicate media characteristics.







BROEN BALLOMAX® DN 15 - 65
Next generation valve technology

The next addition to the proven line of BROEN BALLOMAX® valves is offered in a range of different variants:

- Full bore DN 15 - 50
- Reduced bore DN 15 - 65
- PN 25
- Weld, female, male or flange

Applications:

- Heating
- Cooling
- Industrial applications

Compact valve design

The compact valve body in one piece offers the best opportunities for insulation in the market – matching requirements in modern efficient district heating systems.

Optimized full bore valve

The high Kvs value secures optimal flow. A full bore construction means a minimum of pressure drop, less noise and less energy consumption.

Energy efficiency – designed to last

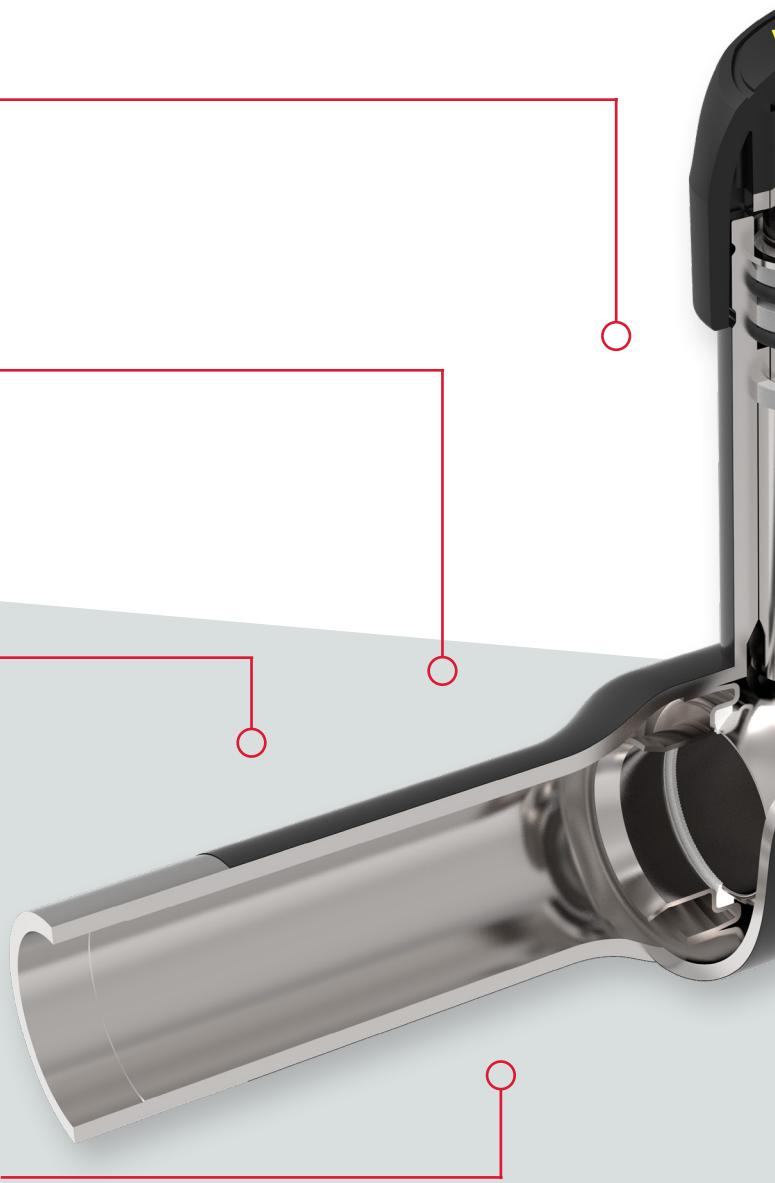
The construction requires less torque and actuation to operate, which again means less wear on the sealing material. This construction secures a longer lifetime.

Connection technologies

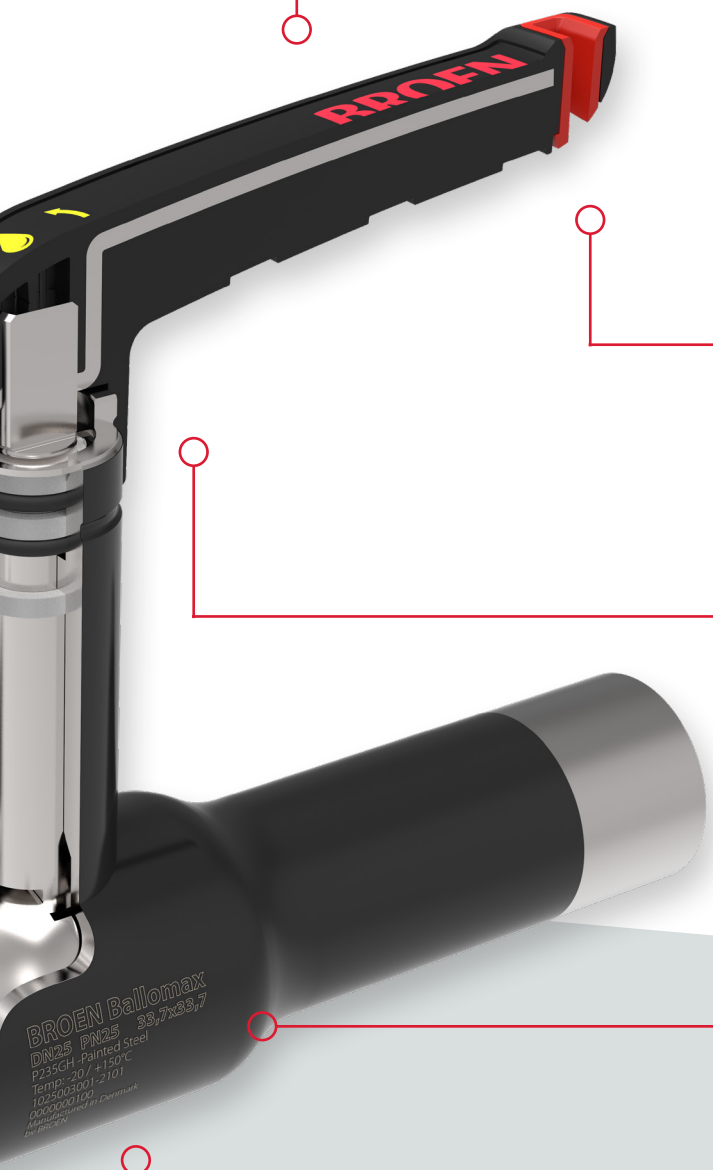
The valve is available with either weld, male, female or flange connections.

Danish design – manufactured in Denmark

The spring supported seat design secures optimal tightness and operation of the ball due to less torque and actuation required. This converts into less wear on the sealing material and a longer lifetime.



BROEN BALLOMAX® Designed to last



Handle

The solid steel handle is manufatured with a fiberglass reinforced composite around it, in order to create a both durable but also comfortable and ergonomic handle, which does not easily transfer heat. The handle can be mounted in both flow directions with no tools required.

Clips

With interchangeable color clips you can easily visualize forward and return or hot and cold water flows. Furthermore the clips are designed so that a label can be attached to the handle.

Stem

All valves are availalable with a high stem, which is an integrated part of the valve ensuring proper insulation. The stem is laser welded to the body.

Laser marking

All valves are clearly marked with information about size, material and pressure class.

Proces traceability – unique valve identification

All valves are individually marked with a unique valve number and a data matrix on the stem underneath the handle with information about process-, quality- and distribution data – for each individual valve.

reddot design award

BROEN BALLOMAX® DN 40 - 150
Technical data

Sizes:	DN 40 - 150
Media:	Water
Operating pressure:	DN 40 - 50 Max 40 bar / DN 65 - 150 Max 25 bar
Operating temperature:	-20°C to +150°C
Design temperature:	-20°C to +200°C

Kvs values - Full bore, flowoptimized

DN [mm]	40	50	65	80	100	125	150
Kvs [m3/h]	266	345	578	842	1271	1963	2856

Kvs values - Full bore

DN [mm]	40	50	65	80	100	125	150
Kvs [m3/h]	230	298	501	755	1167	1848	2664

Kvs values - Reduced bore, flowoptimized

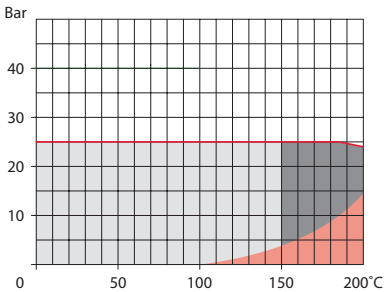
DN [mm]	50	65	80	100	125	150
Kvs [m3/h]	128	215	335	550	814	1194

Kvs values - Reduced bore

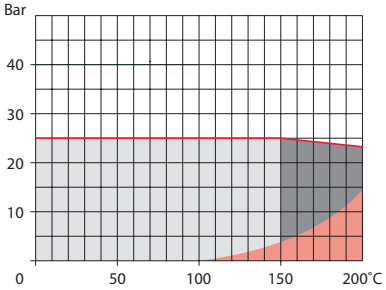
DN [mm]	50	65	80	100	125	150
Kvs [m3/h]	112	186	293	471	708	1049

Pressure and temperature diagram

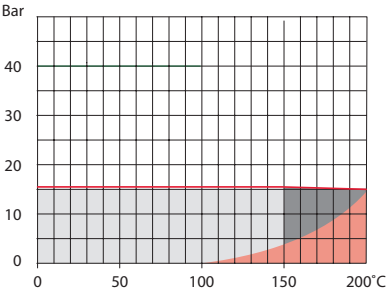
Weld × Weld - DN 40 - 150 - PN 25



Flange × Flange - DN 40 - 150 - PN 25

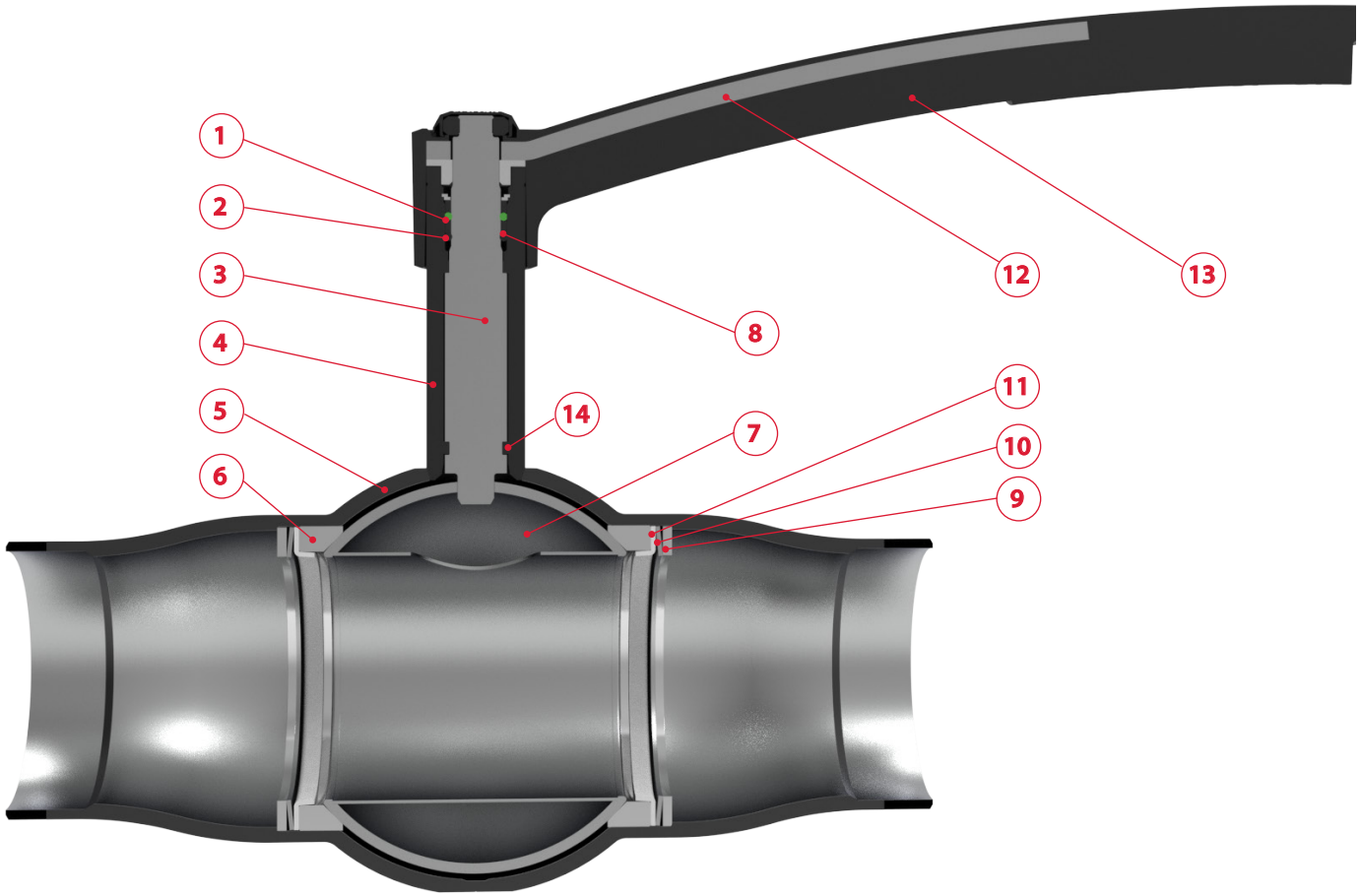


Flange × Flange - DN 40 - 150 - PN 16



Normal working area
Short-term working area
Steam area (see high temperature valves)

BROEN BALLOMAX® DN 40 - 150
Material specification



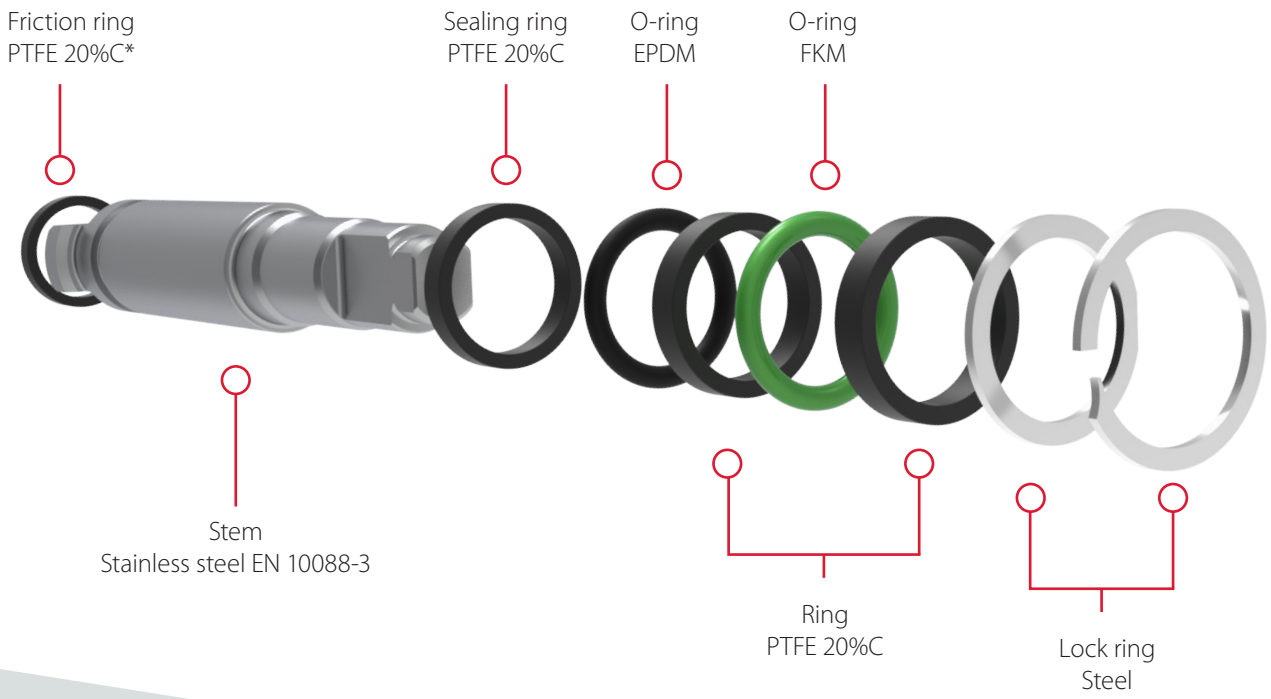
No.	Component	Material	Standard
1	O-ring	FKM70	
2	O-ring	EPDM70	
3	Stem	Stainless steel | EN1.4021	EN10088-3
4	Stem guide	Carbon steel | S355J2+N	EN10025-2
5	Valve housing	Carbon steel | P235GH+N	EN10216-2
6	Seat	PTFE 20%C	
7	Ball	Stainless steel | 1.4301	EN 10088

No.	Component	Material	Standard
8	Friction ring	PTFE 20%C	
9	Neck ring	Carbon steel | S235 JR	EN10025
10	Disc spring	Steel | 51CrV4	EN10132-4
11	Back-up ring	Carbon steel | DC01	EN10130
12	Handle core	Zinc plated carbon steel | S235 JR	EN10025-2
13	Handle surface	Fibreglass reinforced composite	PA6 GF30
14	Friction ring*	PTFE 20%C	

Same construction applies for other types of connections. *The fiction ring is not utilized in DN 40 - 50 Full bore and DN 50 - 65 reduced bore.

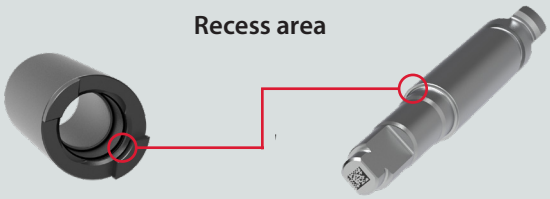
Improved stem design

More than four decades of valve know-how are behind the improved stem design.
The stem design, together with the O-rings and PTFE 20% C rings, provides a very tight seal against leakage and the PTFE 20% C ring improves tightness when the pressure in the valves increases.



*The fiction ring is not utilized in DN 40 - 50 Full bore and DN 50 - 65 reduced bore.

Blow-out proofed stem design



A recess in the stem guide secures the stem from blow-out and also make it possible to change the top O-ring on the stem.

Innovative seat spring design

BROEN BALLOMAX® DN 40 - 150 is equipped with a seat design supported by an integrated spring mechanism. This innovative solution ensures reliable sealing and smooth ball operation over time, significantly reducing wear on the sealing surfaces and extending service life.

The specially contoured seat support allows controlled flexibility, acting like a spring to absorb movement and maintain consistent pressure. This results in a simplified, robust construction with fewer parts in the sealing area.

The spring-supported seats on both sides of the ball, allows for flow in both directions.

Valve connecetion overview

Weld:
EN 10217-2

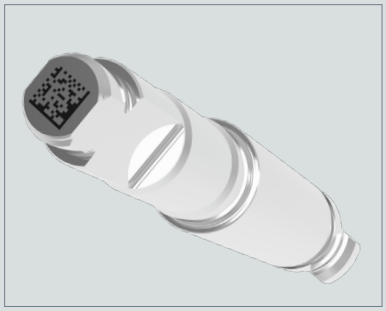
Seat design materials

Materials:
Carbon steel EN 10025
PTFE 20% C

Flange:
EN 1092-1 Typ 01 / B

Easy access to traceability

Each valve is produced as part of a one-piece serial production process and is individually marked with a unique ID matrice engraved on the stem. This code provides full traceability and links to production, testing, and distribution data, offering unmatched product security and documentation. All valves undergo thorough pressure testing before leaving our factory in Denmark.



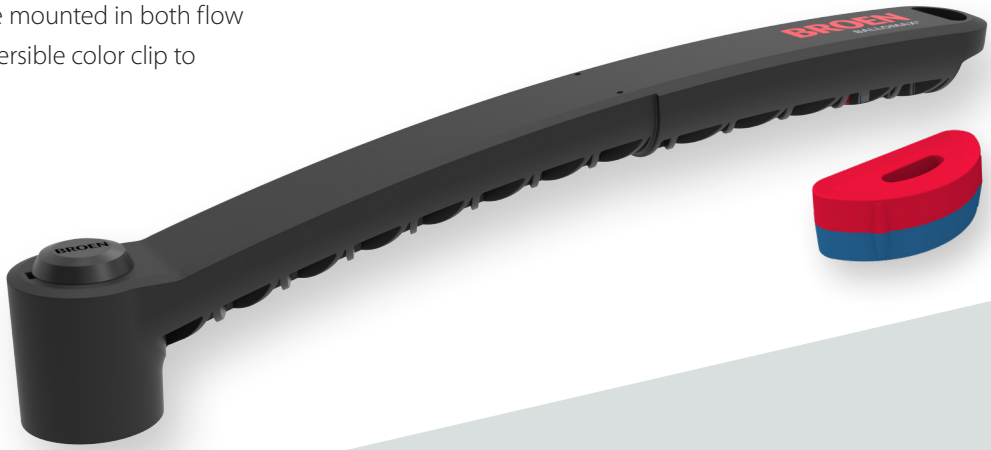
Label example

BROEN BALLOMAX®
Flange × Flange | DN150R PN25 | P235GH
Temp: -20/+200°C | Fluid group 2 | 123456789
2024 CE 0062 Manufactured in Denmark by BROEN

2423060707
Batch no.: xxx xxx xxx

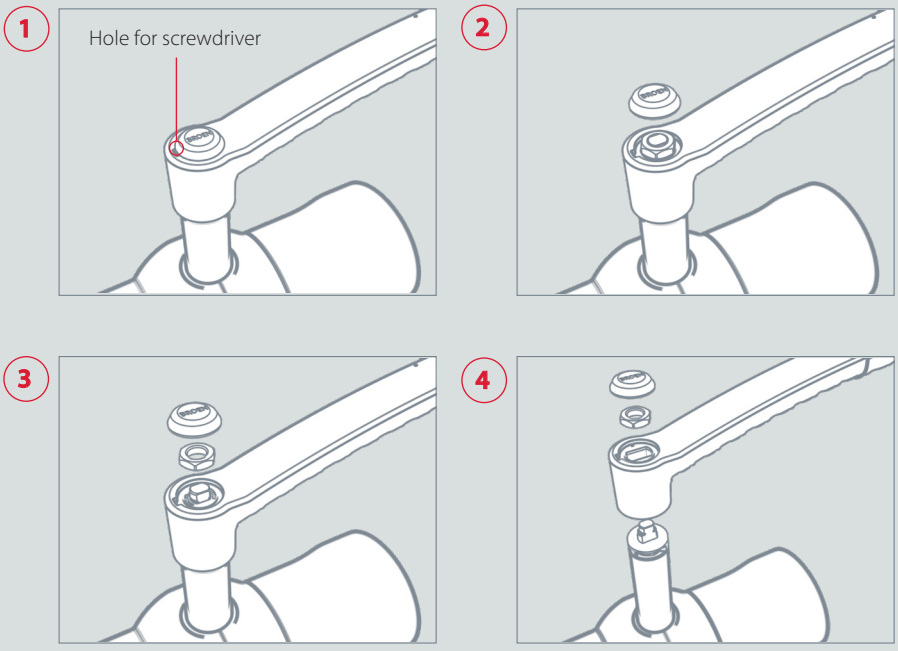
Ergonomic handle – Easy to operate

The ergonomic handle is specially designed for easy operation. The metal handle is with a fiber-glass reinforced composite moulded around it, which resists heat transfer. The handle can be mounted in both flow directions. The handle has a reversible color clip to indicate media characteristics.



Handle removal

1) Use a screwdriver to lift off the plastic cap
2) Remove plastic cap
3) Loosen nut
4) Lift handle off the stem



BROEN BALLOMAX® DN 40 - 150
Next generation valve technology

The next addition to the proven line of BROEN BALLOMAX® valves is offered in a range of different variants:

- Full bore DN 40 - 150
- Reduced bore DN 50 - 150
- PN 40, 25 & 16
- Weld, Flange

Applications:

- Heating
- Cooling
- Industrial applications

Compact spherical design

The worlds most compact and spherical valve body offers the best opportunity in the market to insulate the whole pipe system and at the same time reduces the valve cavity by up to 30 %*. This design is not only innovative but also benefits the environment.

Patented Danish design – manufactured in Denmark

The valves are manufactured in Denmark in a DGNB Gold certified building. The factory is equipped with state-of-the-art production equipment to ensure that the entire manufacturing process for the valves is as sustainable as possible. BROEN Valve Technologies is certified according to ISO 9001, ISO 14001 & ISO 45001.

Connection technologies

The valve is available with either weld or flange connections.

Reduced Carbon foot-print | Reduced weight | No use of auxillary materials

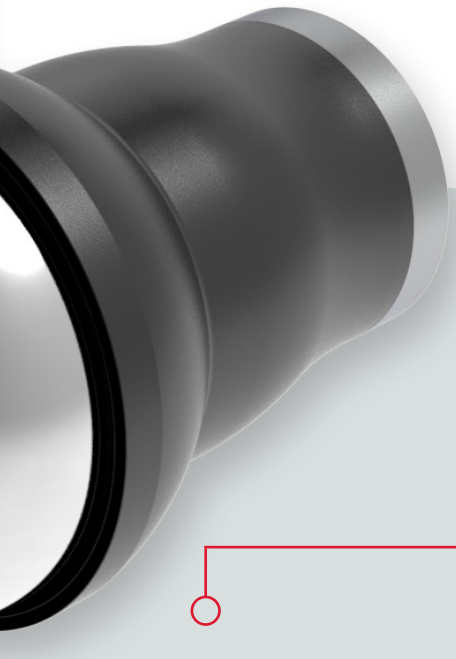
*Based on reference valve DN 150 R

Handle

The ergonomic handle is specially designed for easy operation. The solid steel handle is manufatured with a fiberglass reinforced composite around it, which resists heat transfer. The handle can be mounted in both flow directions.

Clips

With reversible color clips you can easily visualize forward and return or hot and cold water flows. Furthermore the clips are designed so that a label can be attached to the handle.



Stem

All valves are available with blow-out proofed stem design. The stem is laser welded to the body.

One-weld laser technology – designed to last!

Our one-weld technology with advanced robotic welders, ensures precision and consistency in terms of integrity and strength. That means fewer potential areas for corrosion.

BROEN BALLOMAX® DN 15 - 65
Product overview

High stem **PN 25**

	Full bore						Reduced bore	
DN	Weld × Weld	Female × Female	Female × Weld	Male × Weld	Flange × Weld	Flange × Flange	Weld × Weld	Female × Female
15	●	●	●	●*	●	●	●	●
20	●	●	●	●*	●	●	●	●
25	●	●	●	●*	●	●	●	●
32	●	●	●	●	●	●	●	●
40	●	●	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
65							●	

Low stem **PN 25**

	Full bore		
DN	Weld × Weld	Female × Female	Female × Weld
15	●	●	●
20	●	●	●
25	●	●	●

*All variants are available with L-handle, T-handle or Gear-handle.*DN 15 - 25 is available in a cap and chain version.*

BROEN BALLOMAX® DN 40 - 150
Product overview

PN 40

	Full bore				Reduced bore			
	L-Handle		BROEN-Gear		L-Handle		BROEN-Gear	
DN	Weld × Weld	Flange × Flange	Weld × Weld	Flange × Flange	Weld × Weld	Flange × Flange	Weld × Weld	Flange × Flange
40	●	●	●	●				
50	●	●	●	●	●	●	●	●

PN 25

	Full bore				Reduced bore			
	L-Handle		BROEN-Gear		L-Handle		BROEN-Gear	
DN	Weld × Weld	Flange × Flange	Weld × Weld	Flange × Flange	Weld × Weld	Flange × Flange	Weld × Weld	Flange × Flange
65	●	●	●	●		●	●	●
80	●	●	●	●	●	●	●	●
100	●	●	●	●	●	●	●	●
125	●	●	●	●	●	●	●	●
150	●	●	●	●	●	●	●	●

PN 16

	Full bore				Reduced bore			
	L-Handle		BROEN-Gear		L-Handle		BROEN-Gear	
DN	Weld × Weld	Flange × Flange	Weld × Weld	Flange × Flange	Weld × Weld	Flange × Flange	Weld × Weld	Flange × Flange
65		●		●		●		●
80		●		●		●		●
100		●		●		●		●
125		●		●		●		●
150		●		●		●		●

All variants are available in a flowoptimized version with sleeve.

Our braud is our promise

BROEN
VALVE TECHNOLOGIES

BROEN VALVE TECHNOLOGIES

BROEN is a leading international manufacturer of valve technology and we operate on three continents across the world with key markets in Europe, China and USA.

For more than 75 years BROEN has been the global leader in the development and production of valve technology for the control of water, air and gas. BROEN delivers complete solutions for HVAC building installations and is a leading supplier of district energy valves and valve technology for natural gas.

We know application and valve technology in depth and in close dialogue with our customers and partners all over the world we create value and reliability with proven valves offering full quality assurance.

BROEN is headquartered in Assens, Denmark and is part of Aalberts N.V. listed on the EuroNext Stock Exchange (NL).

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