

# BROEN

VALVE TECHNOLOGIES



**BALLOMAX<sup>®</sup>**  
DESIGNED TO LAST

**BROEN BALLOMAX<sup>®</sup> NG DN15-50**  
New generation district energy valves



# BROEN

VALVE TECHNOLOGIES

## Climate change is our common challenge

Energy efficiency is one of the greatest challenges of our times and for district energy BROEN delivers ready solutions to meet the globally rising demand for energy efficiency.

Based on the heritage from leading edge innovations in Danish district heating, BROEN BALLOMAX® offers the most comprehensive range of proven 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 A/S is ISO 9001:2015 and ISO 14001:2015 certified.

Our brand is our promise.

### ABOUT BROEN

In 1948 Poul Broen established the company BROEN, which was among the pioneers, when district heating took off in Denmark. In 1982 the BROEN BALLOMAX® DN10-50 ball valve for district heating was launched. We strive to develop and improve products, that use nature's resources as efficiently as possible.

In 1993 BROEN was acquired by Aalberts Industries and today we have more than 15,000 colleagues operating from more than 200 locations in more than 30 countries. Aalberts Industries (AALB) is listed at the EuroNext Stock Exchange, NL

### VISION AND VALUES

Our vision is simple: Be the best in valve technology. Strong values are the foundation for our business and with the same shared vision they link us together as one company across borders and time zones on 3 continents.

**BALLOMAX®**  
DESIGNED TO LAST







## BROEN BALLOMAX® – our response. Next generation valve technology

The design of the new BROEN BALLOMAX® DN15-50 with reduced bore was developed to offer a safe, modern and efficient shut-off valve for district heating networks.

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

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

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



### **BROEN now introduces the next generation valve technology for district energy**

- Energy efficiency – designed to last!
- Compact design
- Traceability – individual valve identification
- Patented Danish design – produced in Denmark

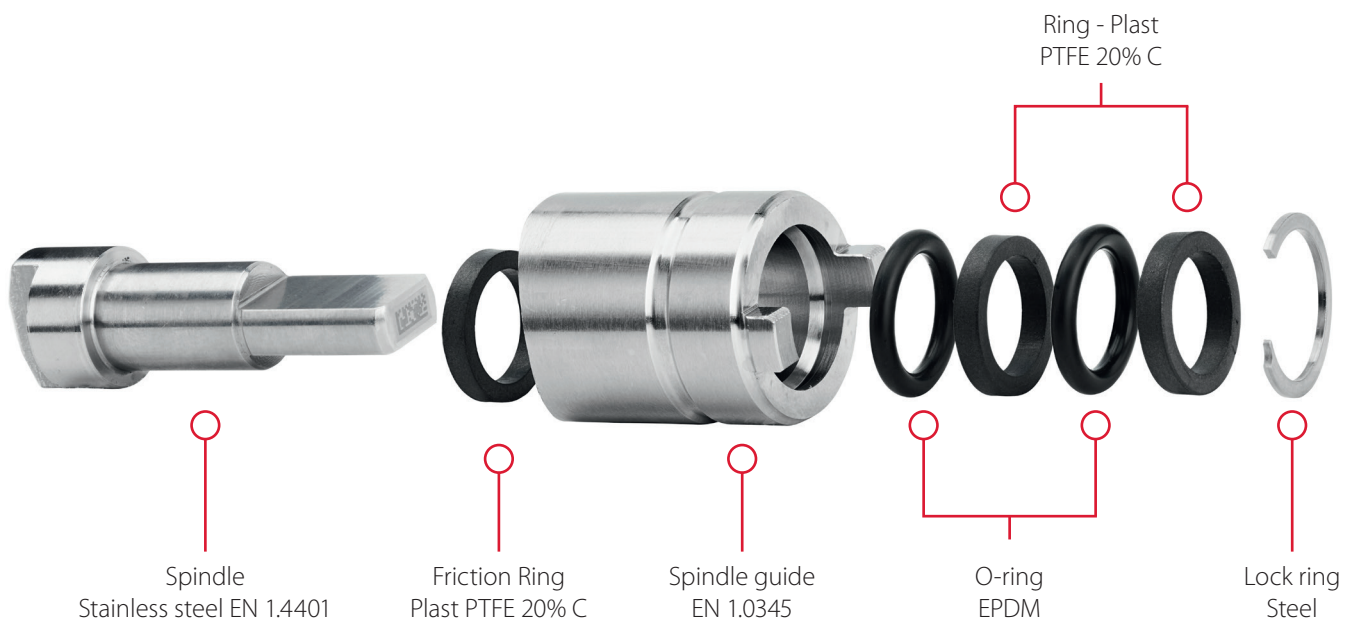


DN15-50 reduced bore | PN25 | Flange, weld, female thread

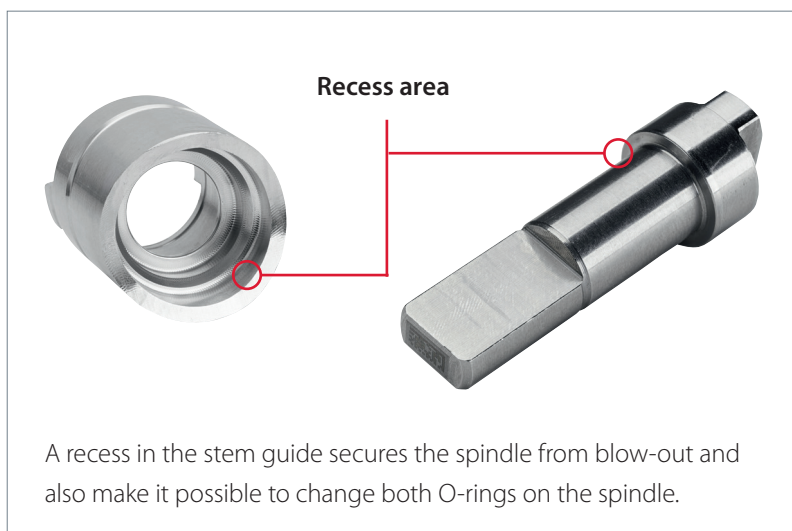
## Compact design

### Stem design

The O-rings can be replaced and spare O-rings come in a special spare part kit with tools.



### Blow-out proofed stem design





## Optimized reduced bore valve

### Seat design

The new BROEN BALLOMAX<sup>®</sup> NG DN15-50 features a new patented spring supported seat design. This new design ensures an optimal tightness and operation of the ball. This contributes to a longer life time with less wear on the sealing material.

The design of the profile 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.

The new BROEN BALLOMAX<sup>®</sup> NG DN15-50 allows for flow in both directions as there is a spring supported seat on both sides of the ball.



### Valve connection overview



## Traceability – individual valve identification

### Traceability – Individual valve identification

Each unique valve ID number is linked to a unique data matrix on the top of the spindle. With this we can trace information from our manufacturing process of each individual valve such as quality and process-, test- and distribution data. This information is traceable back to BROEN.



### Surface treatment

All BROEN BALLOMAX® NG DN15-50 valves are powder coated with a laser marking written in the black coating – not penetrating it – hence keeping a full corrosion protection.



### 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 process and manufacturing data to customers.

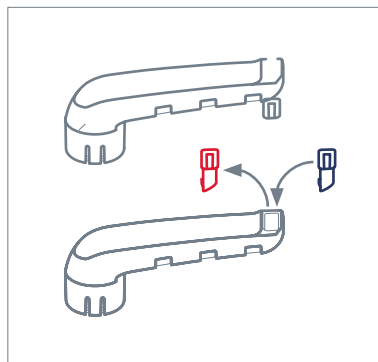
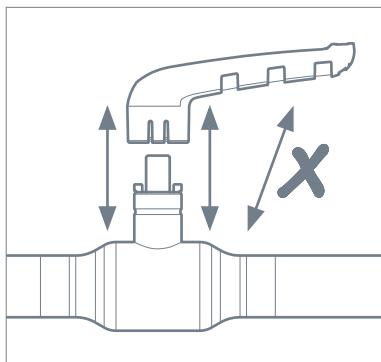


Patented Danish design – produced in Denmark

**Handle**

The solid steel handle is manufactured 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® NG DN15-50 range

The new addition to the proven line of BROEN BALLOMAX® NG DN15-50 district heating valves is offered in a range of different variants:

- DN10-50 reduced bore
- PN25
- Flange, weld, female

### 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.

## 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.

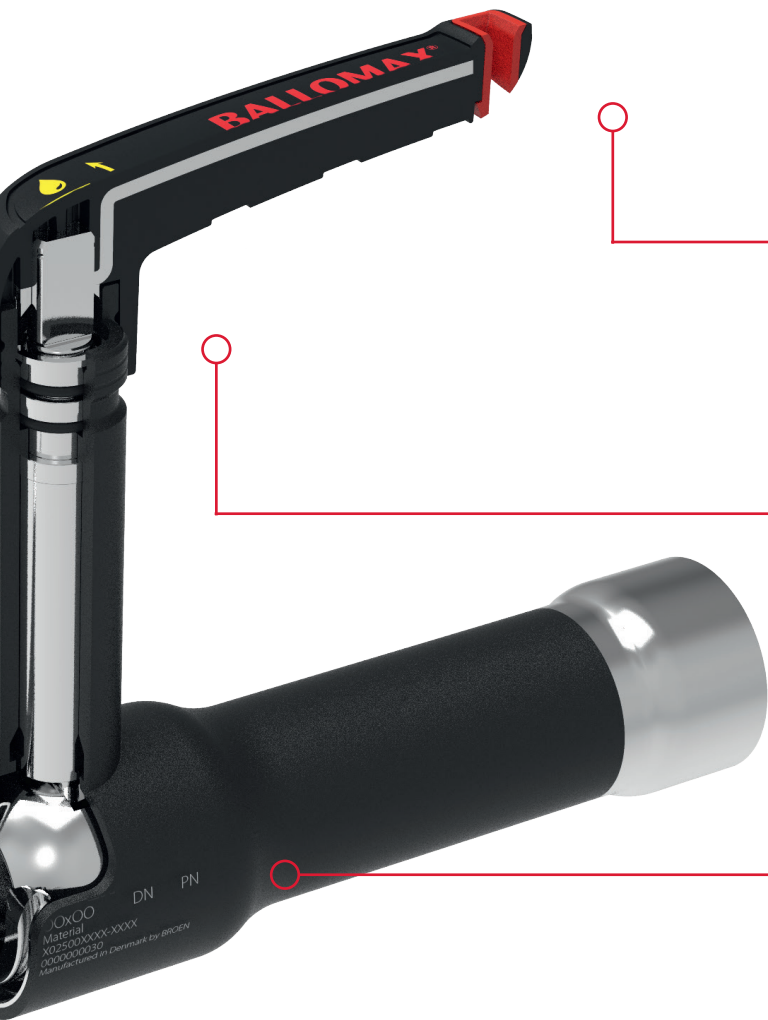
## Connection technologies

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

## Patented Danish design – produced in Denmark

The patented 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.





**Handle**

The solid steel handle is manufactured 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 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 available 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.

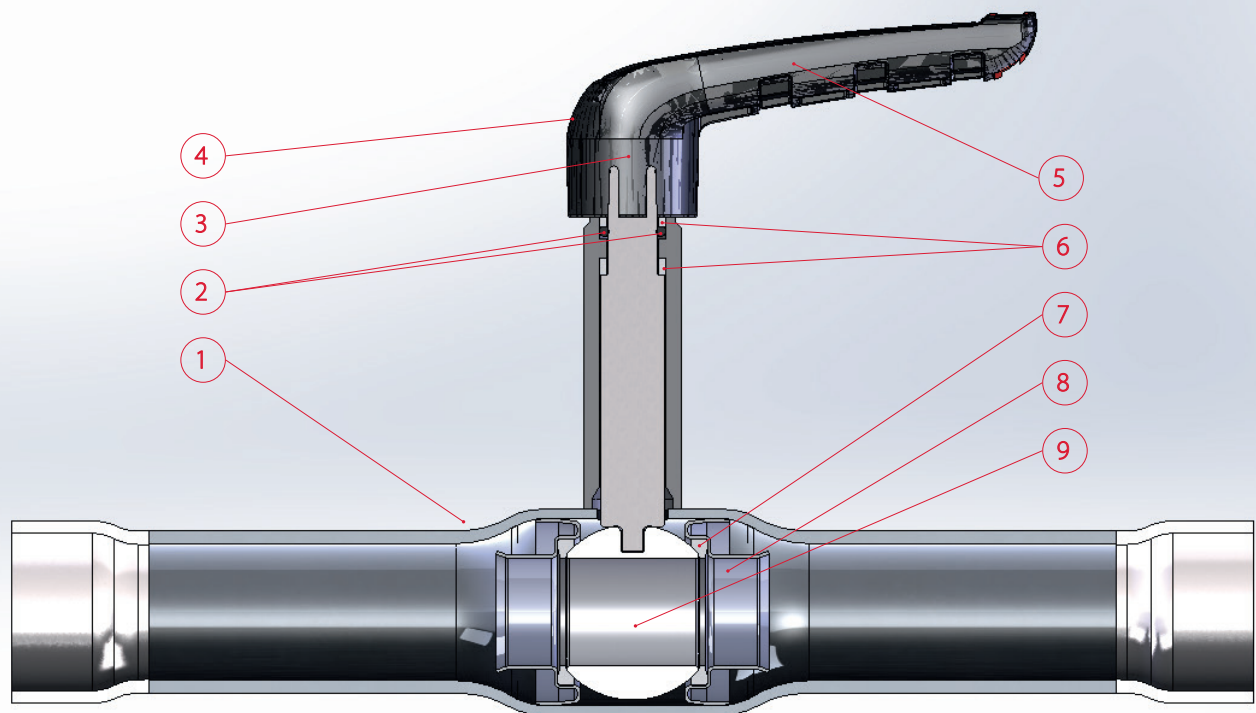


**Proces traceability – unique valve identification**

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

## BROEN BALLOMAX® NG DN15-50

### Product description



No.	Component	Material	Standard
1	Valve housing	Carbon steel	P235GH / EN 10217-2
2	O-ring	Elastomer - EPDM	
3	Stem	Stainless steel	EN 1.4401 / AISI 316
4	Handle	Fibreglass reinforced nylon	PA66
5	Metal reinforcement	Galvanized steel	

No.	Component	Material	Standard
6	Ring	PTFE, modified 20% C	
7	Seal	TFM™ PTFE	EN 1.4401 / AISI 316
8	Spring supported ring	Stainless steel	EN 1.4301 / AISI 304
9	Ball	Stainless steel	

The same construction applies for other types of connections.



## BROEN BALLOMAX<sup>®</sup> NG DN15-50

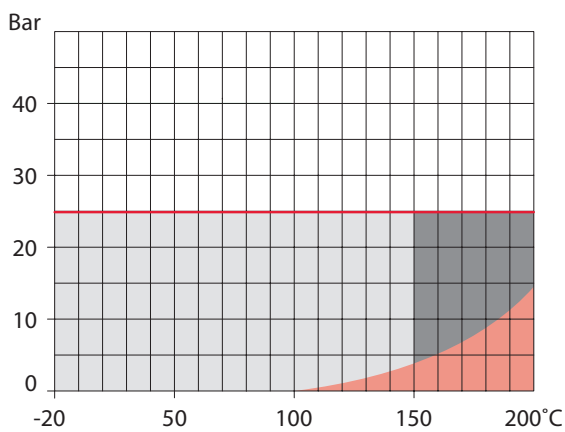
### Technical data

Material, valve housing:	P235GH / EN 10217-2
Material, handle:	Fibreglass reinforced nylon with metal insert
Sizes:	DN15-50
Seals:	TFM™ PTFE (Polytetrafluorethylene)
O-ring:	Elastomer - EPDM (Ethylene Propylene Diene Monomer)
Medium:	Water
Operating pressure:	Max 25 bar
Operating temperature:	-20°C to +150°C
Design temperature:	-20°C to +200°C

### Kvs values

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

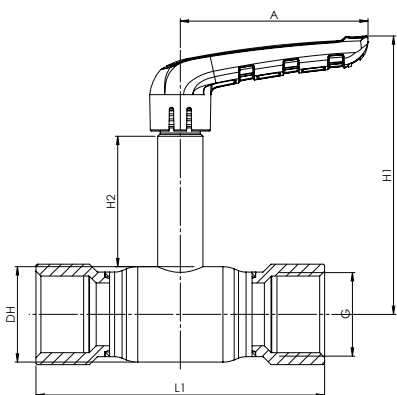
### Pressure and temperature diagram



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

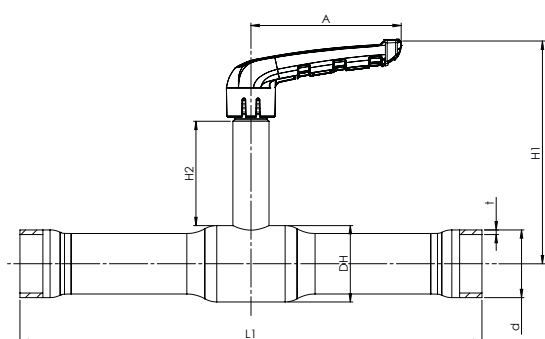


# BROEN BALLOMAX® NG DN15-50 - BBM17031 Female x Female



DN	BROEN No.	Bore	Net weight [kg]	Material	Stem	G	DH	L1	d	t	L2	H1	H2	A
15	1015007031-2101	10	0,32	Steel	Long	1/2"	ø26	82	-	-	-	107	55	75
20	1020007031-2101	15	0,42	Steel	Long	3/4"	ø30	109	-	-	-	109	55	75
25	1025007031-2101	20	0,49	Steel	Long	1"	ø38	115	-	-	-	112	55	75
32	1032007031-2101	25	0,98	Steel	Long	1 1/4"	ø45	136	-	-	-	128	52	100
40	1040007031-2101	32	1,31	Steel	Long	1 1/2"	ø56,5	148	-	-	-	131	52	100
50	1050007031-2101	39	2,22	Steel	Long	2"	ø68	184	-	-	-	156	63	120

# BROEN BALLOMAX® NG DN15-50 - BBM17231 Welding x Welding



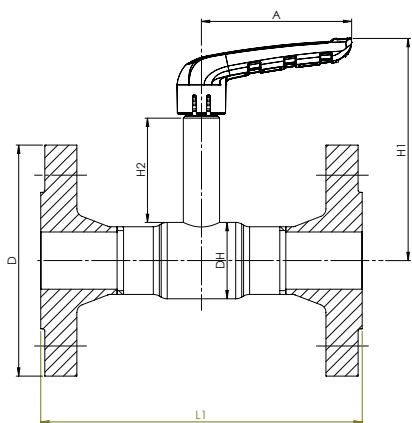
24,4



DN	BROEN No.	Bore	Net weight [kg]	Material	Stem	G	DH	L1	d	t	L2	H1	H2	A
15	1015007231-2101	10	0,41	Steel	Long	-	ø26	210	21,3	2	-	107	55	75
20	1020007231-2101	15	0,51	Steel	Long	-	ø30	230	26,9	2,3	-	109	55	75
25	1025007231-2101	20	0,67	Steel	Long	-	ø38	230	33,7	2,3	-	112	55	75
32	1032007231-2101	25	1,12	Steel	Long	-	ø45	260	42,4	2,6	-	128	52	100
40	1040007231-2101	32	1,41	Steel	Long	-	ø56,5	260	48,3	2,6	-	131	52	100
50	1050007231-2101	39	2,3	Steel	Long	-	ø68	300	60,3	2,9	-	156	63	120

# BROEN BALLOMAX® NG DN15-50 - BBM17531

## Flange × Flange



DN	BROEN No.	Bore	Net weight [kg]	Material	Stem	D	DH	L1	d	t	L2	H1	H2	A
15	1015007531-2101	10	1,52	Steel	Long	95	ø26	130	-	-	-	107	55	75
20	1020007531-2101	15	2,1	Steel	Long	105	ø30	150	-	-	-	109	55	75
25	1025007531-2101	20	2,9	Steel	Long	115	ø38	160	-	-	-	112	55	75
32	1032007531-2101	25	4,3	Steel	Long	140	ø45	180	-	-	-	128	52	100
40	1040007531-2101	32	5,2	Steel	Long	150	ø56,5	200	-	-	-	131	52	100
50	1050007531-2101	39	7,2	Steel	Long	165	ø68	230	-	-	-	156	63	120







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**BROEN**  
VALVE TECHNOLOGIES

### BROEN Valve Technologies

BROEN is a leader in valve technology and manufacturing. We have developed a wide range of valve technologies for the power, petrochemical, and industrial sectors. Our products are used in a wide range of applications, from residential heating and cooling to large-scale industrial processes. BROEN is a global leader in the development and production of valve technology for the power, petrochemical, and industrial sectors. Our products are used in a wide range of applications, from residential heating and cooling to large-scale industrial processes. BROEN is a global leader in the development and production of valve technology for the power, petrochemical, and industrial sectors. Our products are used in a wide range of applications, from residential heating and cooling to large-scale industrial processes.

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

Read more at: [www.broen.com](http://www.broen.com)

#### Sales and production sites ●

BROEN A/S, Assens (DK)  
BROEN POLAND, Dzierżonów (PL)  
BROEN POLAND, Rogoźno (PL)  
BROEN LLC, Kolomna (RU)  
BROEN INC., Houston (US)  
BROEN Clorius, Dzierżonów (PL)

#### Sales companies and offices ○

BROEN Assens (DK)  
BROEN Helsinki (FI)  
BROEN SEI, Bucharest (RO)  
BROEN Beijing (CN)  
BROEN Moscow (RU)  
BROEN Clorius, Shanghai (CN)

