

**BROEN**  
VALVE TECHNOLOGIES



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

**BROEN BALLOMAX<sup>®</sup> DN10-500**  
**Steel ball valves**

*Designed to last*



## Climate change is our common challenge

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

Based on the heritage and leading edge innovations of the Danish district heating sector, BROEN BALLOMAX® offers the most comprehensive range of proven ball valves for distribution and transmission of district energy in residential, commercial and industrial applications.

The BROEN BALLOMAX® products are 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® DN10-500 ball valve for district heating was launched. Until now, BROEN strives 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 co-workers operating from more than 200 locations in more than 30 countries. Aalberts Industries (AALB) is listed at the EuroNext Stock Exchange in the Netherlands.

### 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® – general purpose steel ball valves.

BROEN BALLOMAX® DN10-500 ball valves can be used in heating, air-conditioning and other industrial installations.

BROEN BALLOMAX® products are a guarantee of safety, high performance, security and durability within a scope of shut-off valves for district heating networks.

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



**PED 2014/68/EU - module H**  
**National Technical Assessment**  
**ITBKOT-2018/0617**

### **BROEN BALLOMAX guarantee:**

- High energy efficiency
- Robust and safe construction
- Quick installation and adaptation to the installation conditions
- Wide range of offered products and solutions
- Made in EU - designed and manufactured in Poland



DN10-400 full flow and DN10-500 reduced bore  
PN 16/25/40 | Flanged, welded version, with female thread.

# BROEN BALLOMAX® | STEEL BALL VALVES

## Manufacturing scope

Products from BROEN BALLOMAX® district heating valves product line are offered in a range of different variants:

- DN10-400 full bore / DN10-500 reduced bore
- PN16/PN25/PN40
- Flanged, welded version, with female thread.

## Application:

- Heating
- Cooling
- Industrial applications

## Energy efficiency

The construction requires less torque and actuation to operate, which at the same time means less wear on the sealing material.

The construction used secures a longer lifetime.

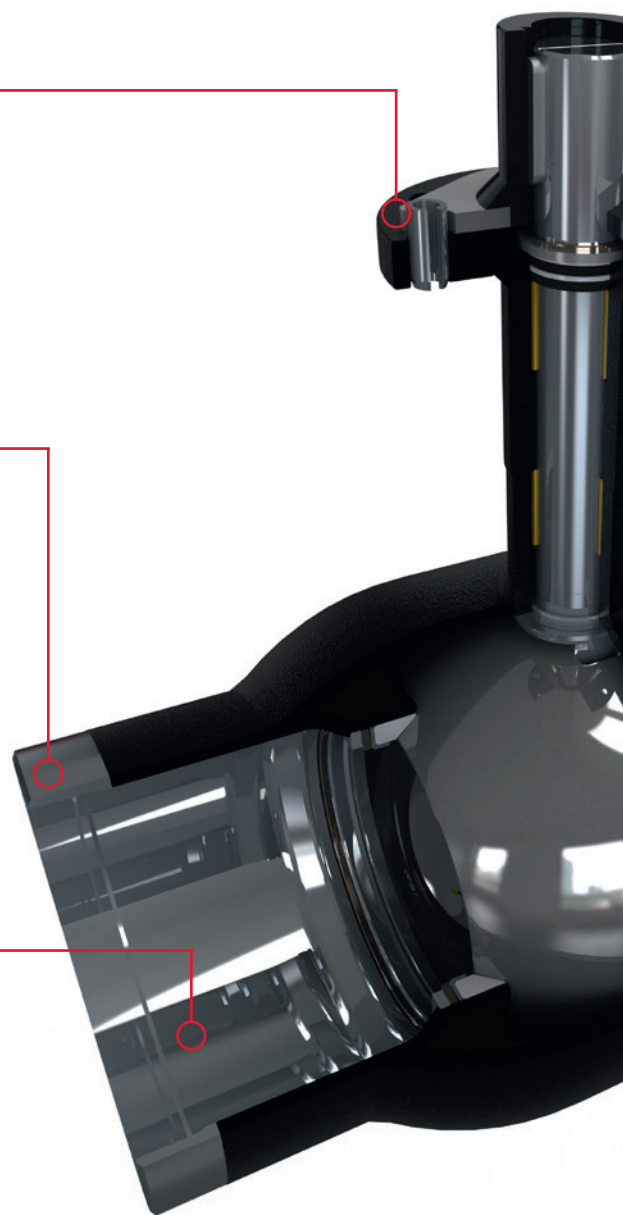
## Connection technology

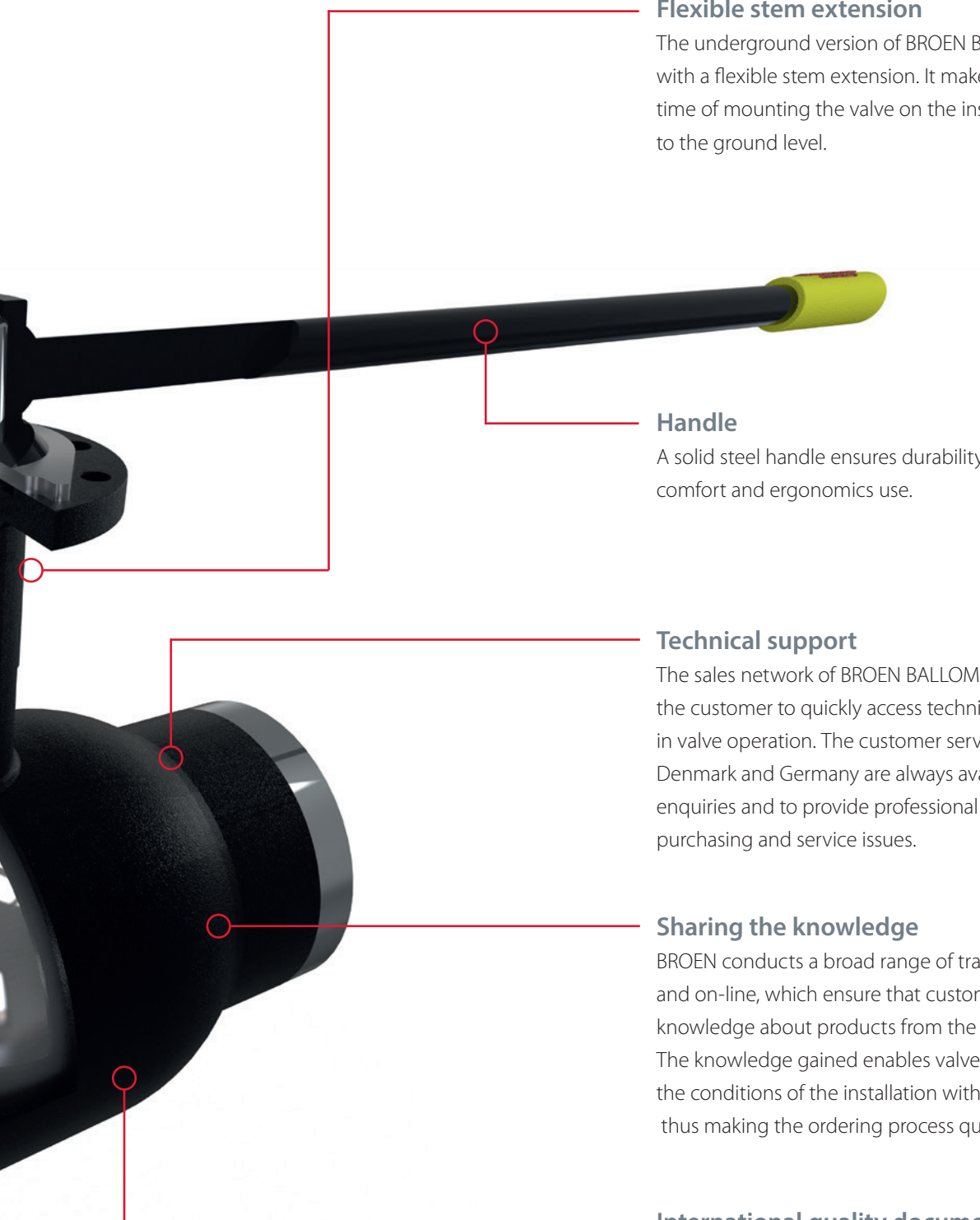
The valve is available with either flanged, welded, female thread connections ends.

## Made in EU

The entire manufacturing process of BROEN BALLOMAX valves takes place in the manufacturing plant of BROEN POLAND in Dzierzoniów.

The history of valve manufacturing dates back to 1993, when in the Zakład Obróbki Mechanicznej in Bystrzyca Górna near Świdnica, which is a part of Dolnośląski Zakład Termoeenergetyczny S.A. in Wałbrzych, the manufacturing of valves with diameters from DN 15 to DN 100 began.





### **Flexible stem extension**

The underground version of BROEN BALLOMAX valves is equipped with a flexible stem extension. It makes it possible to reduce the time of mounting the valve on the installation by easy adjustment to the ground level.

### **Handle**

A solid steel handle ensures durability, comfort and ergonomics use.

### **Technical support**

The sales network of BROEN BALLOMAX products enables the customer to quickly access technical information and support in valve operation. The customer service offices located in Poland, Denmark and Germany are always available to answer customer enquiries and to provide professional technical support for both purchasing and service issues.

### **Sharing the knowledge**

BROEN conducts a broad range of training courses, both stationary and on-line, which ensure that customers acquire essential knowledge about products from the BROEN BALLOMAX offer. The knowledge gained enables valves to be selected to suit the conditions of the installation without advice from BROEN, thus making the ordering process quicker and easier.

### **International quality documentation**

Technical and quality documentation for BROEN BALLOMAX products is available in a wide variety of languages.

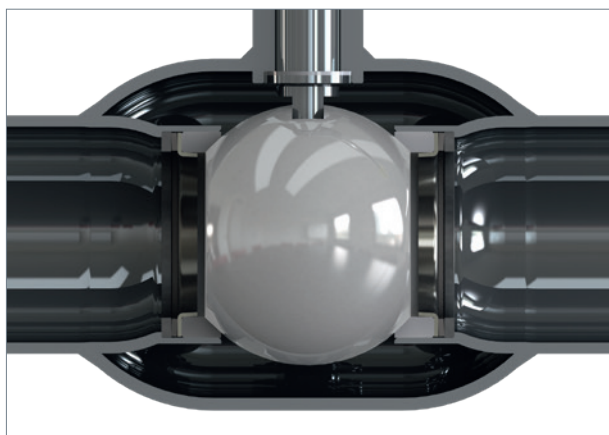
## Compact design

### Double spindle seal



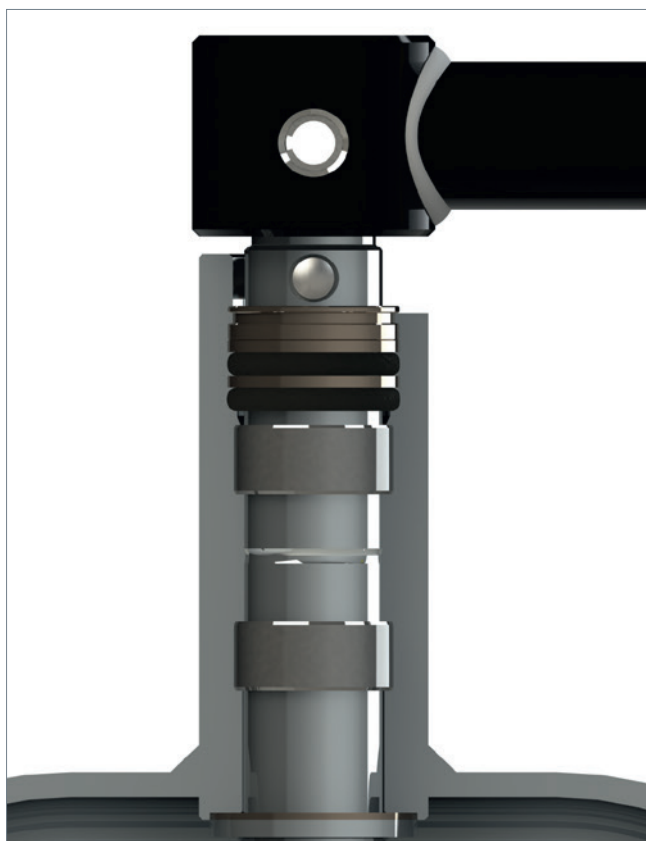
The spindle sealing consists of a package of two seals: O-ring (EPDM), Viton. There is a possibility to replace the seals without dismantling the valve.

### Linear compensation system



The compensation system is based on two springs discs located on both sides of the ball, ensuring constant pressure of the seals to the ball at different medium temperatures.

### Stem bearing



The valves from DN65 are equipped with a double bearing spindle. It is based on two stainless steel plain bearings between the spindle and the neck. It ensures torque reduction and maintenance correct position of spindle in relation to the ball.

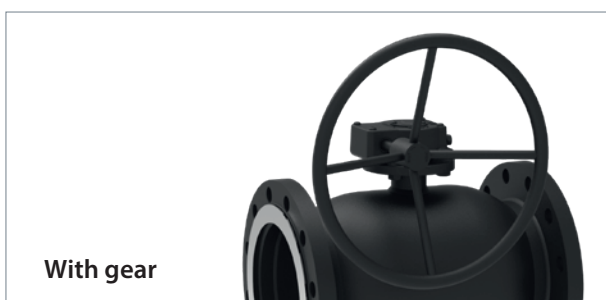
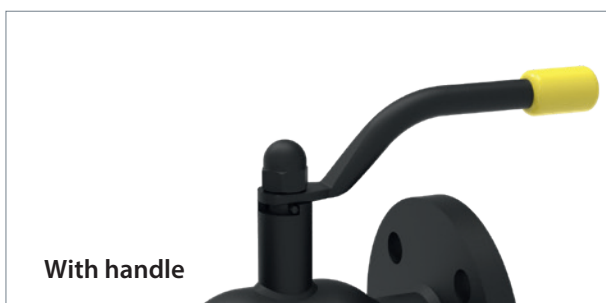
## Wide range of offered solutions

### Connection types overview



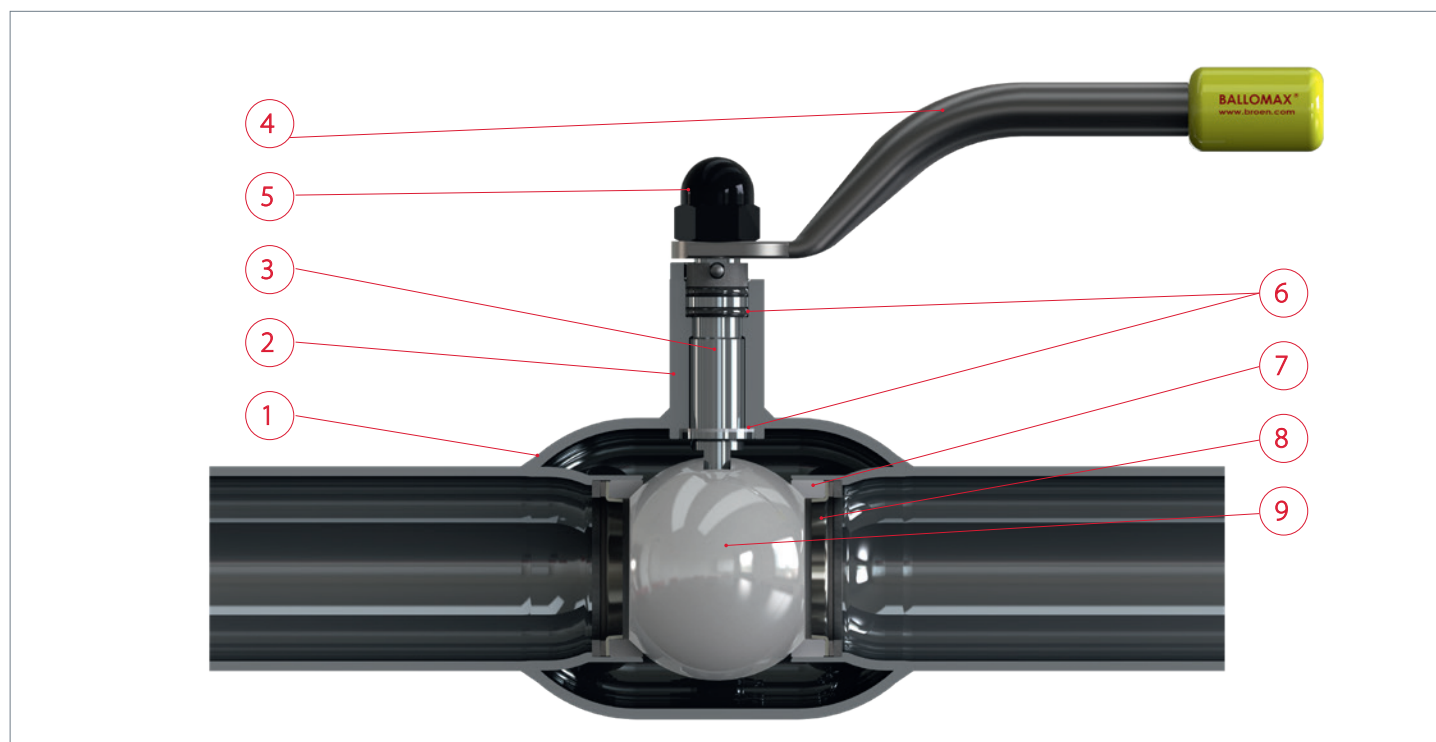
\*other types for request.

### BROEN BALLOMAX valves are supplied in the following versions:



## BROEN BALLOMAX® DN10-50

### Product data



No.	Part	Material	Standard
1	Body	Carbon steel	P235GH / EN 10217-2
2	Neck	Carbon steel	S355J2/EN 10025
3	Spindle	Stainless steel	1.4021/EN10088
4	Handle	Carbon steel	P235GH / EN10217-2
5	Cup nut	Steel	DIN 1587

No.	Part	Material	Standard
6	Sliding ring	PTFE + 20% C	
7	Seal	PTFE + 20% C	
8	Seal seat	Hard-rusting steel	DC01/ EN 10130
9	Ball	Stainless steel	AISI 304



## BROEN BALLOMAX® DN10-50

### Technical information

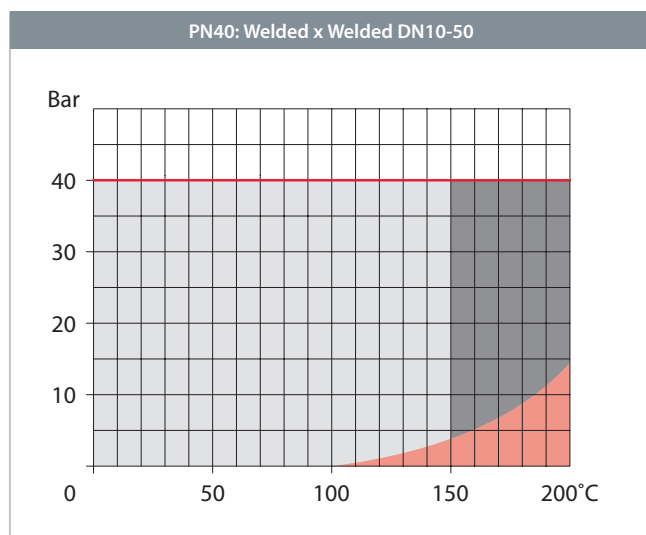
Material, valve body:	P235GH / EN 10217-2
Material, handle:	E235 / EN10305
Dimensions:	DN10-50
Seal:	PTFE+20%C
O-rings:	Elastomer - EPDM (Ethylene Propylene Diene Monomer)
Medium:	Water
Working pressure:	Max 40 bar
Working temperature:	-20°C to +150°C
Temperature range:	-20°C to +200°C

### Kvs values

DN [mm]	10	15	20	25	32	40	50
Kvs [m <sup>3</sup> /h]	7	7	15	27	40	69	110

\*KVS values for valves with full bore available in the main technical catalogue

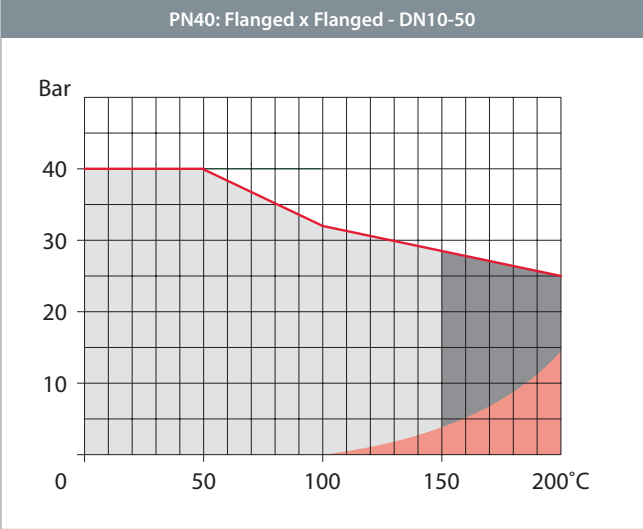
### Pressure and temperature graph



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



## Pressure and temperature graph

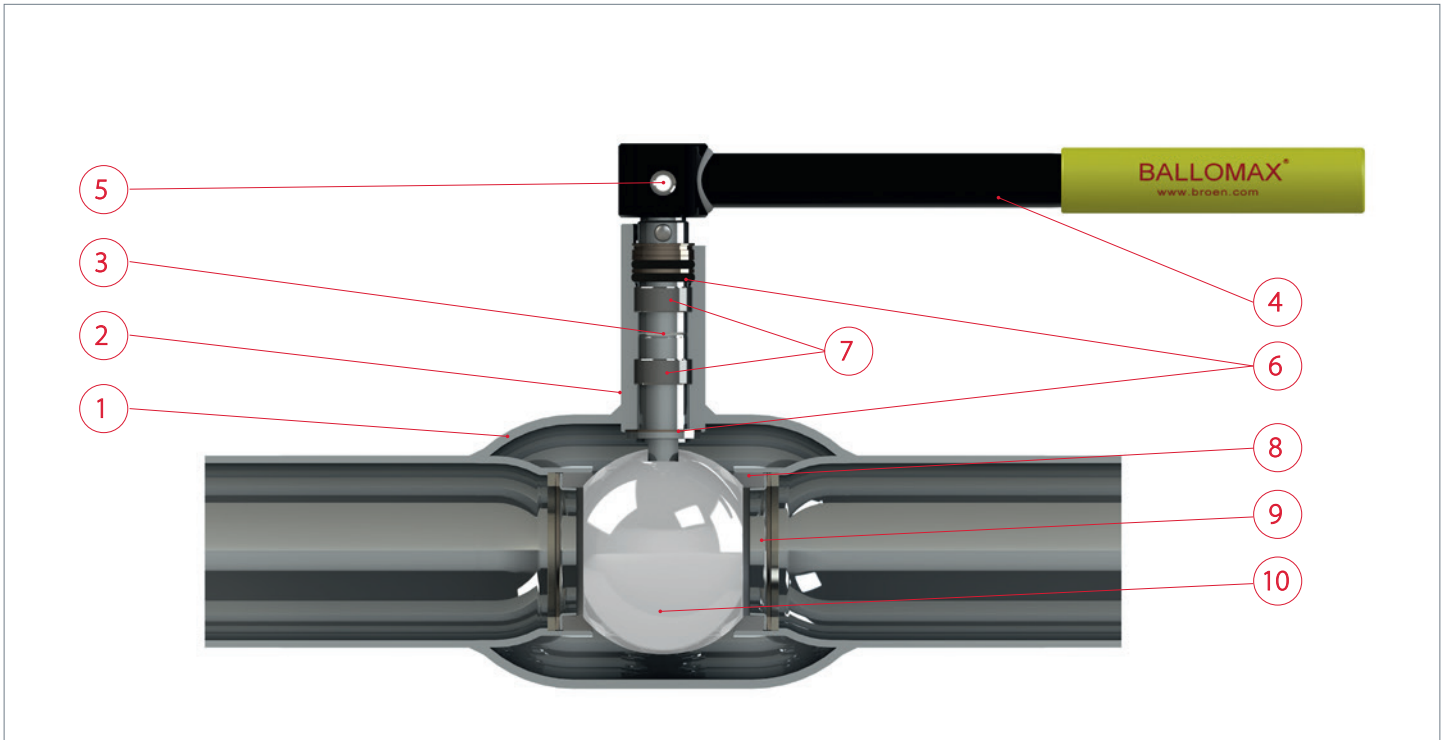


- Normal working area
- Short-term working area
- Steam area (see high temperature valves)



## BROEN BALLOMAX® DN65-500

### Product data



No.	Part	Material	Standard
1	Body	Carbon steel	P235GH / EN 10217-2
2	Valve	Carbon steel	S355J2/EN 10025
3	Spindle	Stainless steel	1.4021/EN10088
4	Handle	Carbon steel	P235GH / EN10217-2
5	Spring pin	Steel	ISO 8752

No.	Part	Material	Standard
6	Sliding ring	PTFE + 20% C	
7	Sliding bearing	Stainless steel + PTFE	
8	Seal	PTFE + 20% C	
9	Seal seat	Hard-rusting steel	DC01/ EN 10130
10	Ball	Stainless steel	AISI 304

## BROEN BALLOMAX® DN65-500

### Technical information:

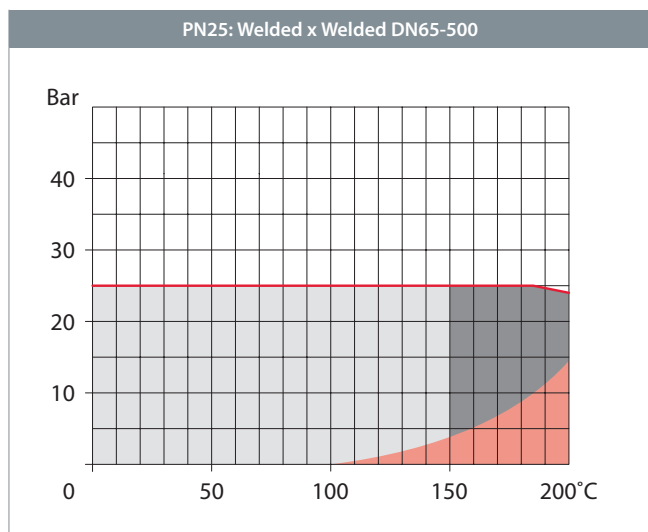
Material, valve body:	P235GH / EN 10217-2
Material, handle:	P235GH / EN10217-2
Dimensions:	DN65-500
Seal:	PTFE+20%C
O-rings:	Elastomer - EPDM (Ethylene Propylene Diene Monomer)
Medium:	Water
Working pressure:	Max 25 bar
Working temperature:	-20°C to +150°C
Temperature range:	-20°C to +200°C

### Kvs values

DN [mm]	65	80	100	125	150	200	250	300	350	400	500
Kvs [m <sup>3</sup> /h]	168	288	417	699	1046	1500	3200	4700	5500	10600	18150

\*KVS values for valves with full bore available in the main technical catalogue.

### Pressure and temperature graph

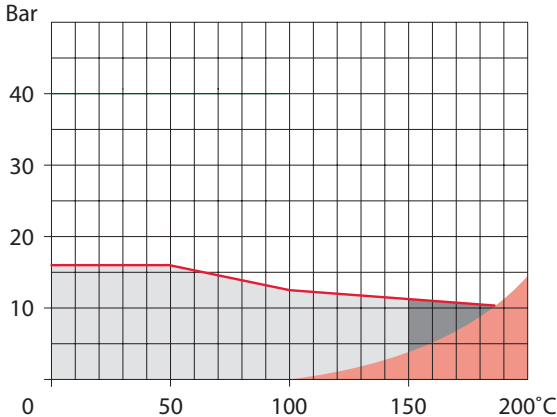


- Normal working area
- Short-term working area
- Steam area (see high temperature valves)



## Pressure and temperature graph

PN16: Flanged x Flanged - DN65-500

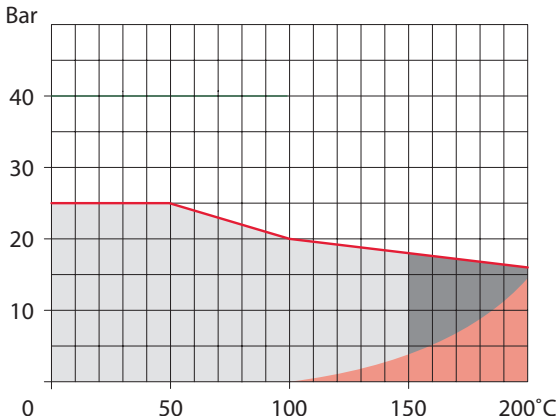


- Normal working area
- Short-term working area
- Steam area (see high temperature valves)



## Pressure and temperature graph

PN25: Flanged x Flanged - DN65-500



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



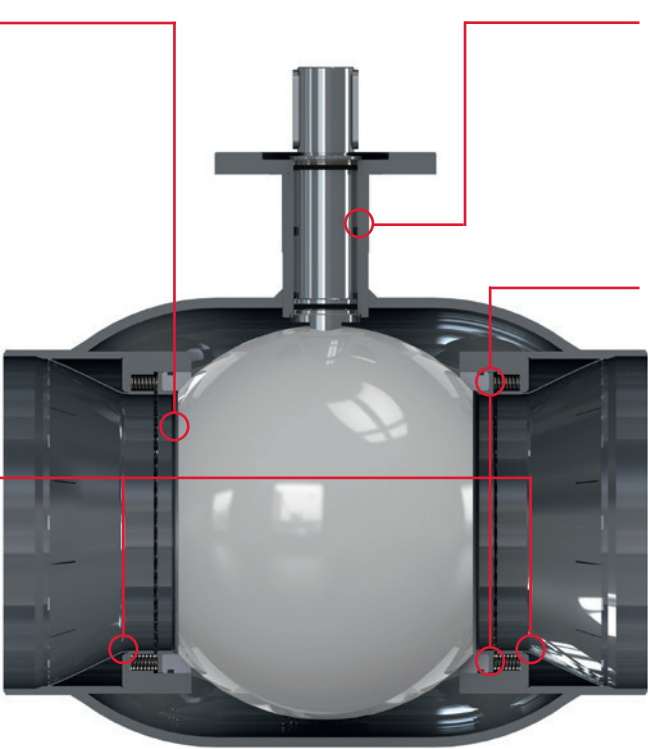
**BROEN BALLOMAX® DN250+**  
Programme 250+ (optimised bore)

The sleeve in the ball improves the flow rate

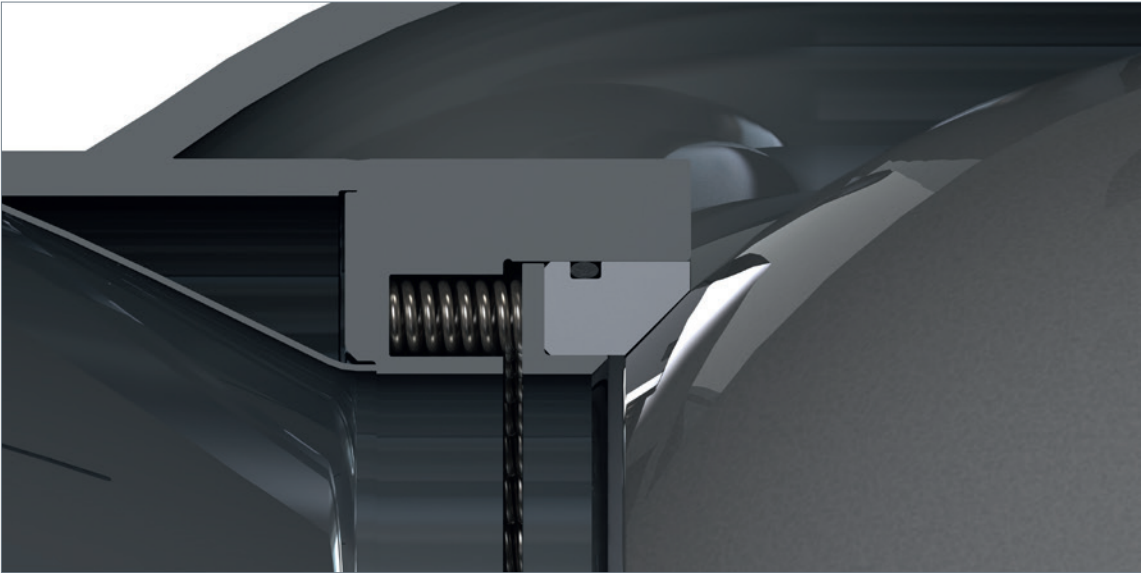
The new valve stem and neck construction with bronze bearings.

Spiral springs in linear compensation

Diffusers on the inlet and outlet



The spring force on the ball is constant throughout the valve operation. Increase in pressure inside the valve does not increase the pressure of springs/seal on the ball.





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**BROEN**  
VALVE TECHNOLOGIES

### **BROEN Valve Technologies**

For more than 70 years BROEN has been the global leader in the development and production of valve technology for the control of water, air, gas and fuels. BROEN delivers complete Solutions for HVAC building installations and is a leading supplier of district energy valves.

We have an in-depth knowledge of installation and valve technology based on many years of experience. In dialogue with our customers and partners all over the world, we produce valves that offer excellent and reliable quality.

BROEN is headquartered in Assens, Denmark and is part of Aalberts N.V. The Netherlands

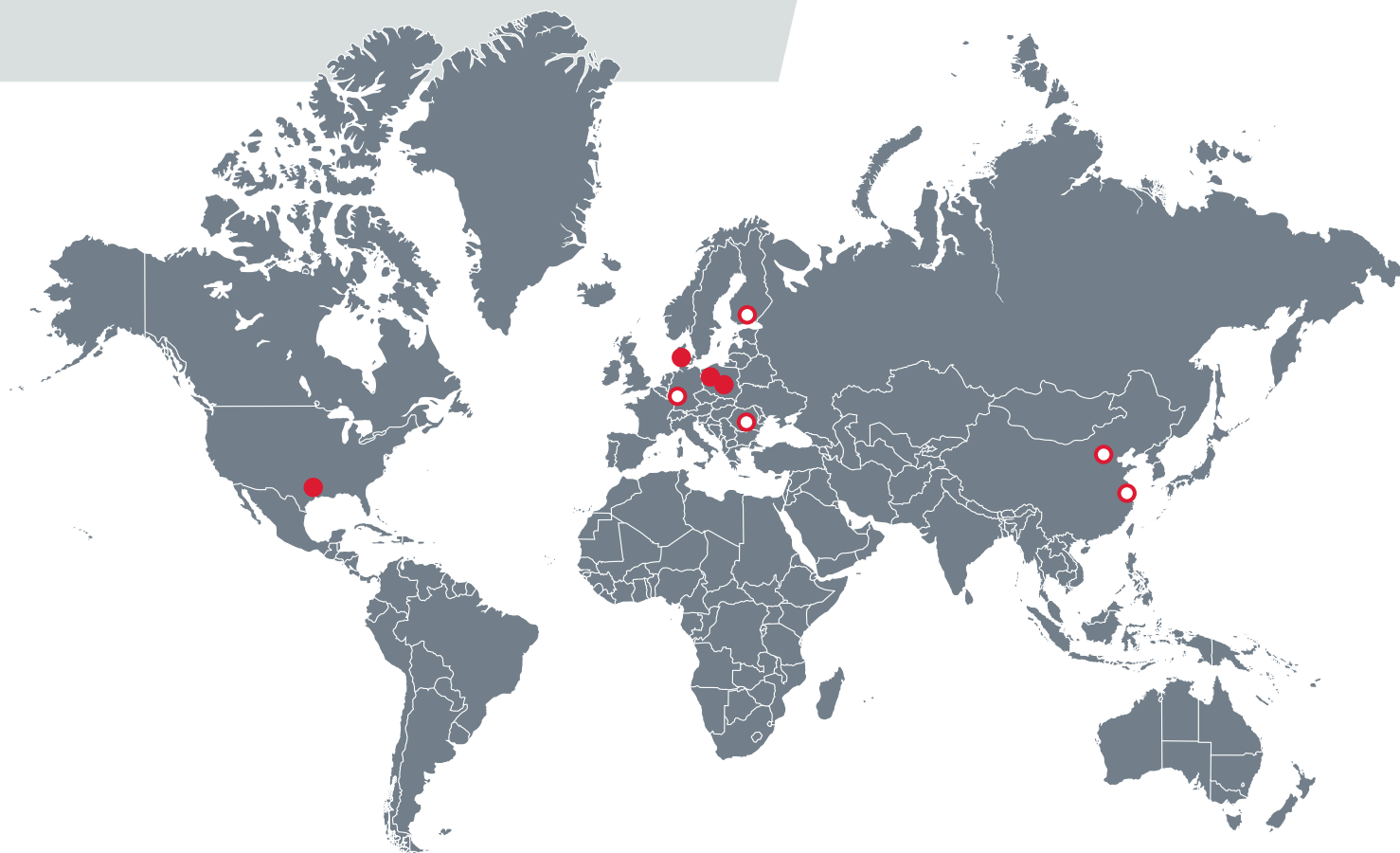
Read more: [www.broen.com](http://www.broen.com)

#### **Sales and manufacturing companies ●**

BROEN A/S, Assens (DK)  
BROEN POLAND, Dzierżoniów (PL)  
BROEN POLAND, Rogoźno (PL)  
BROEN INC., Houston (US)  
BROEN Clorius, Dzierżoniów (PL)

#### **Sales companies and offices ○**

BROEN Assens (DK)  
BROEN Helsinki (FI)  
BROEN SEI, Bucharest (RO)  
BROEN Beijing (CN)  
BROEN Clorius, Szanghaj (CN)



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