



BROEN BALLOMAX® DN200-500
LEAPING FORWARD IN ENERGY EFFICIENCY
FOR DISTRICT HEATING AND DISTRICT COOLING





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 9001:2015 and ISO14001:2015 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.

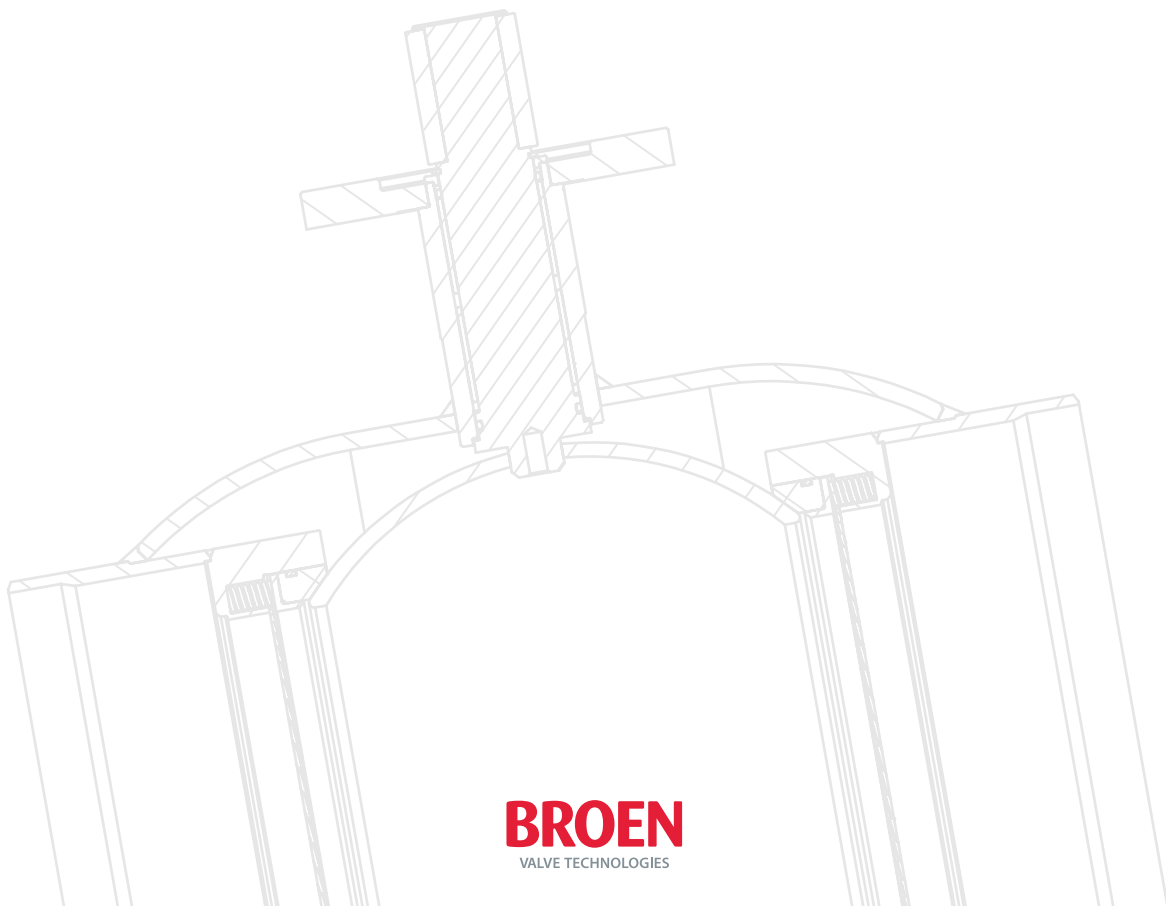
In 1982 the BROEN Ballomax® ball valve for district heating was launched. We strive to develop and improve products that use nature's resources as efficiently as possible.

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.





BROEN Ballomax® – our response. Energy efficiency – designed to last!

The new BROEN Ballomax® DN200-500 features a new design optimized for energy efficiency with several flow efficiency enhancing features. We now set a new standard in energy efficiency, but still deliver the same high BROEN Ballomax® quality.

The new DN200-500 valves are tested and subjected to a 100% quality control before leaving the factory.

BROEN Ballomax® – Energy efficiency designed to last.

- PED 2014/68/EU Module H
- EN 12266-I and -II



- Optimal flow with increased ball bore diameter
- Efficient Kvs values from modular design with ball flowguide and inlet flow guides
- New seat construction with reduced torque to operate
- Optimized stem allows for more insulation
- Compact build-in construction

DN200-500 | Full bore or reduced bore | PN16-25 | Flange or weld

BROEN Ballomax[®] DN200-500

Leaping forward in energy efficiency

Energy efficiency – leaping forward

Optimal flow with increased ball bore diameter and optional ball flow guide and inlet flow guides yield excellent Kvs values. This means reduced investments as the pump and actuation efforts needed to circulate media are reduced with less pressure drop.

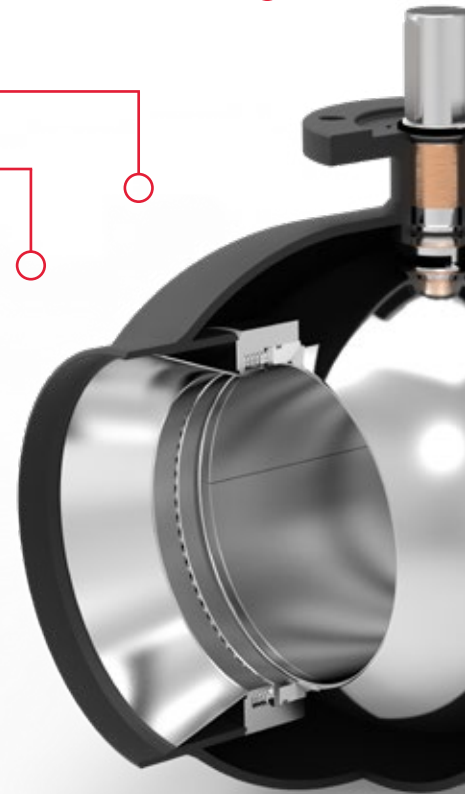
Optimized stem and compact construction allows for more insulation.

New seat construction with reduced torque to operate – hence reduced investments and efforts needed and a more efficient operation.

Increased performance with high temperature media.

Safety – designed to last!

100% safety against stem blow out: Built-in safety construction prevents the risk of a stem blow out.



Kvs optimizing flow guides



Steel ball



Kvs optimizing ball flowguide





Low cost of ownership – designed to last!

ISO 5211 flange.

Exchangeable O-ring on top of stem construction made from FKM material in order to avoid entrance of grease and oil.

Robust design built on 30 years of application know-how.

Easy installation – designed to last!

Designed to last - Easy installation with minimum maintenance required.

Compact design with compact build-in measures fits in more applications and offers more retrofit opportunities.

- CE PED 2014/68/EU – Module H
- EN 12266-1 and -2
- ISO 5211 flanges – mounting flange for actuators
- EN 10204 Certification for steel plates

Scope of supply

DN200-500

Low spindle or high spindle

PN25 | PN16 | Heating - Cooling - Steam



BROEN Ballomax®
Reduced bore | Weld x weld |
High or low stem.

Option:

With ball flowguide and inlet
flow guides.

DN250-500 PN25



BROEN Ballomax®
Reduced bore | Flange x flange |
High or low stem.

Option:

With ball flowguide and inlet
flow guides.

DN250-500 PN16 and PN25



BROEN Ballomax®
DN200-500 ball valves
with optional modular ball
flowguide and flow optimized
inlet for superior Kvs values
and optimized energy
efficiency.



BROEN Ballomax®
Full bore | Weld x weld |
High or low stem.

Standard:

Ball flowguide.

DN200-400 PN25



BROEN Ballomax®
Full bore | Flange x flange
High or low stem.

Standard:

Ball flowguide.

DN200-400 PN16 and PN25



Together with our compre-
hensive range of BROEN
Ballomax® gears, BROEN offers
complete solutions for district
energy.

Specifications and design

Full bore or reduced bore

-20°C to +200°C

Weld or flange

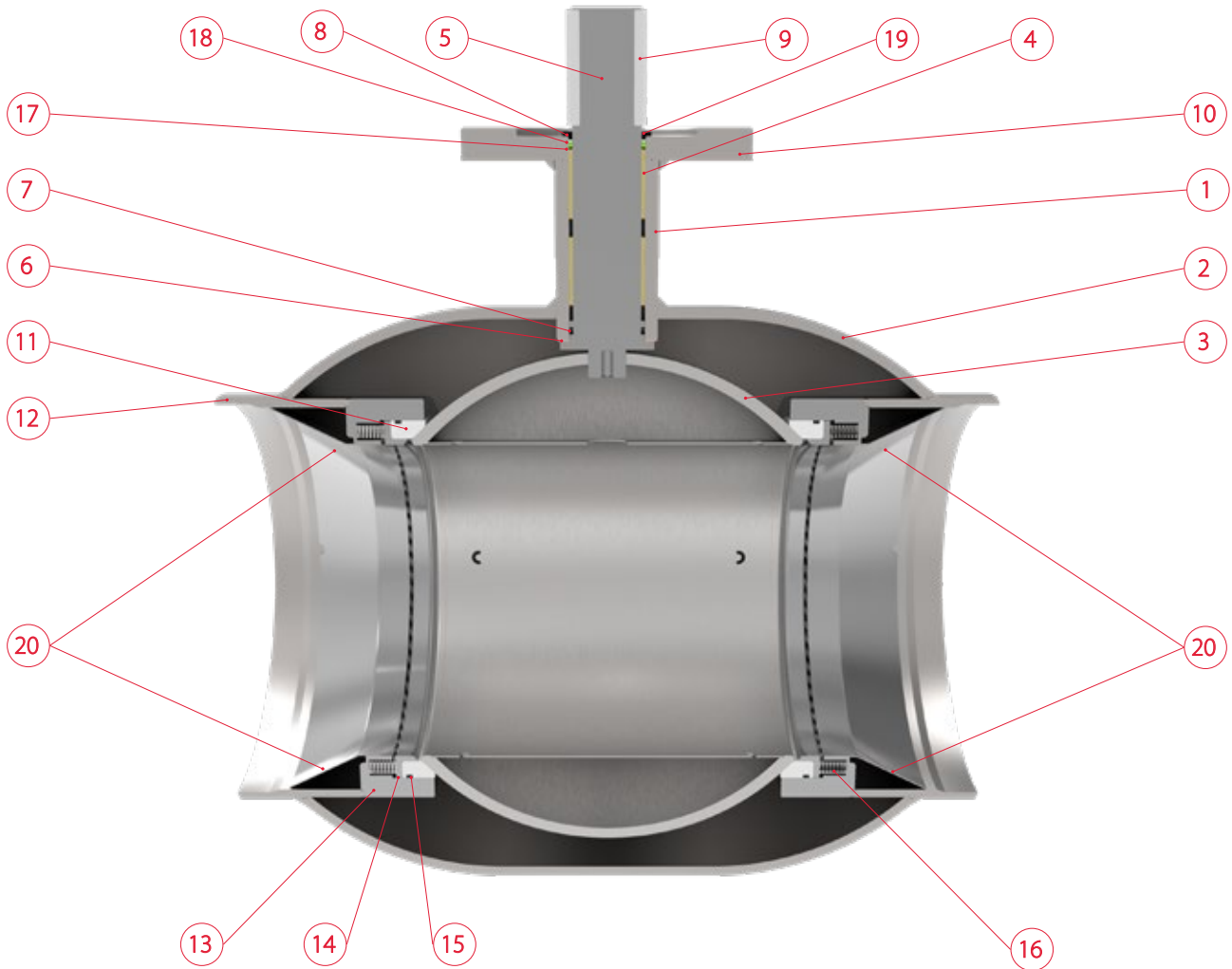


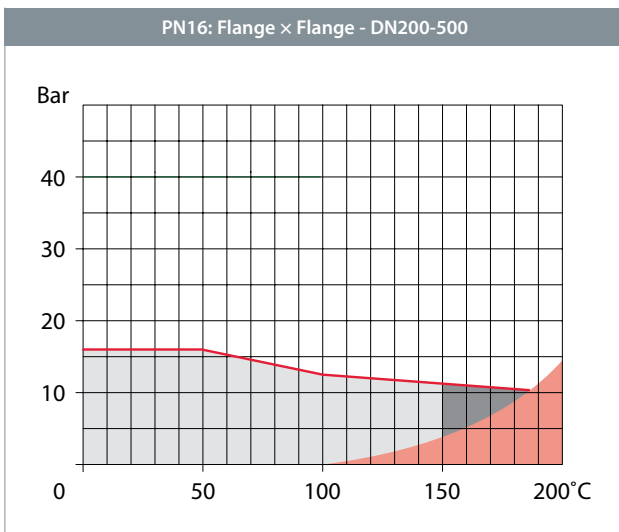
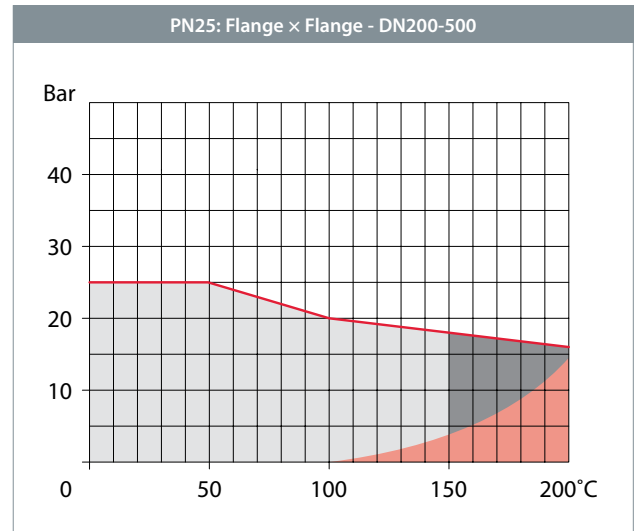
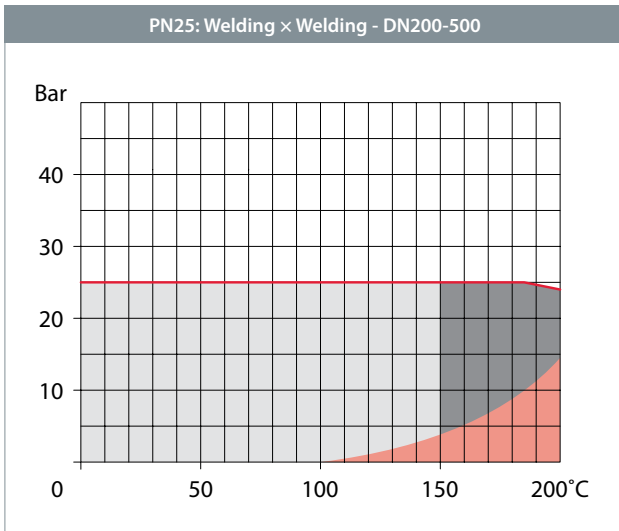
Illustration shows reduced bore value.

No.	Component	Material
1	Stem guide	P235GH - EN 10216-2
2	Valve body	P235GH - EN 10217-2
3	Ball 304L	Stainless steel - AISI 304L - 1.4307
4	Bearing	PTFE Coated steel
5	Stem	Stainless steel - ASTM 420 - 1.4021
6	Friction ring	Gunmetal - DIN 1705
7	O-Ring	EPDM
8	Disc top	S355J2+AR EN 10025-2
9	Parallel key	Steel
10	Flange	EN ISO 5210 / 5211

No.	Component	Material
11	Seat	PTFE 20% C
12	Weld end	P235GH - EN 10028-2
13	Bottom end	S355J2H - EN 10210
14	Back up ring	S355J2H - EN 10210
15	O-Ring	EPDM
16	Springs	AISI 304
17	O-ring	FPM
18	Back up ring	PTFE 20% C
19	Circlip DIN 471	
20	Optional flowguides	Steel

Pressure temperature curves

Weldings or flanges

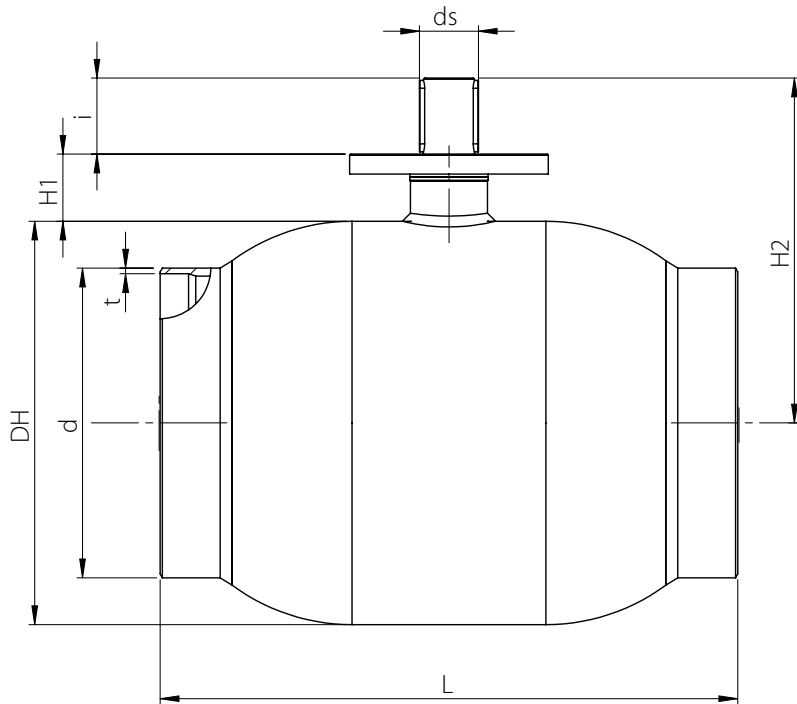


- Normal working area
- Short-term working area
- Steam area



Dimensions and Weights

Weldings | Full bore or reduced bore | Low spindle



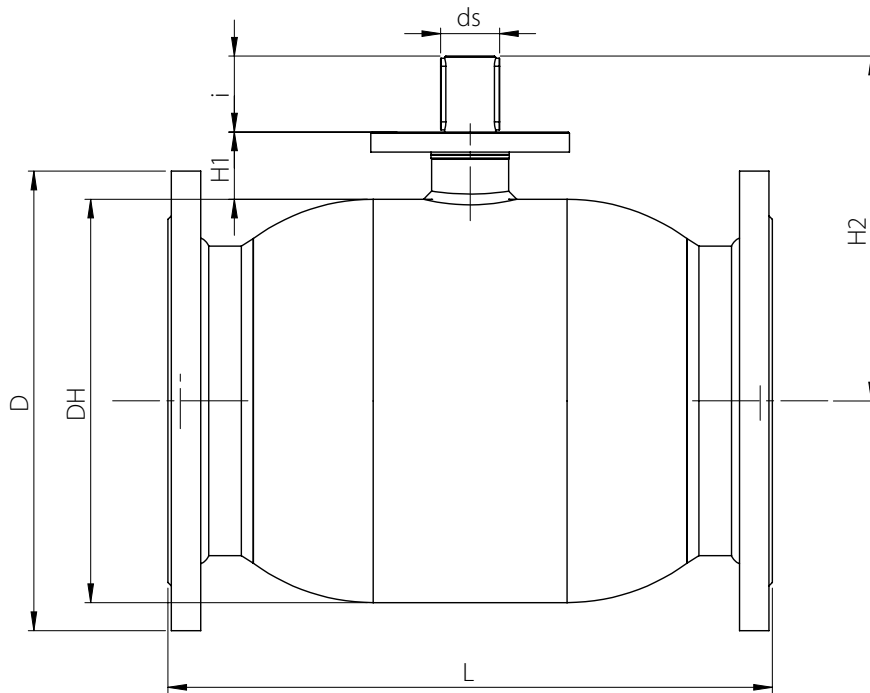
Full bore - with ball flowguide						All dimensions in mm								
DN	BROEN no.	Bore ø mm	Kvs in m3/h	PN	Net weight in Kg	DH	d	t	L	H1	H2	ds	i	ISO
200	8620225200 000	200	9,200	25	82.1	356	219.1	6.3	533	60.2	304	45	67	F14
250	8620225250 000	250	13,500	25	135.4	457	273.0	5.0	650	69.2	382	50	84	F16
300	8600225300 000	305	21,600	25	249.7	508	323.9	5.6	819	82.5	437	60	100	F16
400	8600225400 000	400	35,000	25	463.6	660	406.4	6.3	991	105.0	547	80	112	F30

Reduced bore						All dimensions in mm								
DN	BROEN no.	Bore ø mm	Kvs in m3/h	PN	Net weight in Kg	DH	d	t	L	H1	H2	ds	i	ISO
250	8500225250 000	200	3,200	25	66	356	273.0	5.0	509	59	304	45	67	F14
300	8500225300 000	250	4,700	25	107	457	323.9	5.6	586	70	382	50	84	F16
350	8500225350 000	250	5,500	25	125	457	355.6	5.6	662	70	382	50	84	F16
400	8500225400 000*	305	10,600	25	187	508	406.4	6.3	734	83	437	60	100	F16
500	8500225500 000*	400	18,150	25	368	660	508.0	6.3	889	105	547	80	112	F30

*DN400-500 with ball flowguide.

Dimensions and Weights

Flanges | Full bore or reduced bore | Low spindle



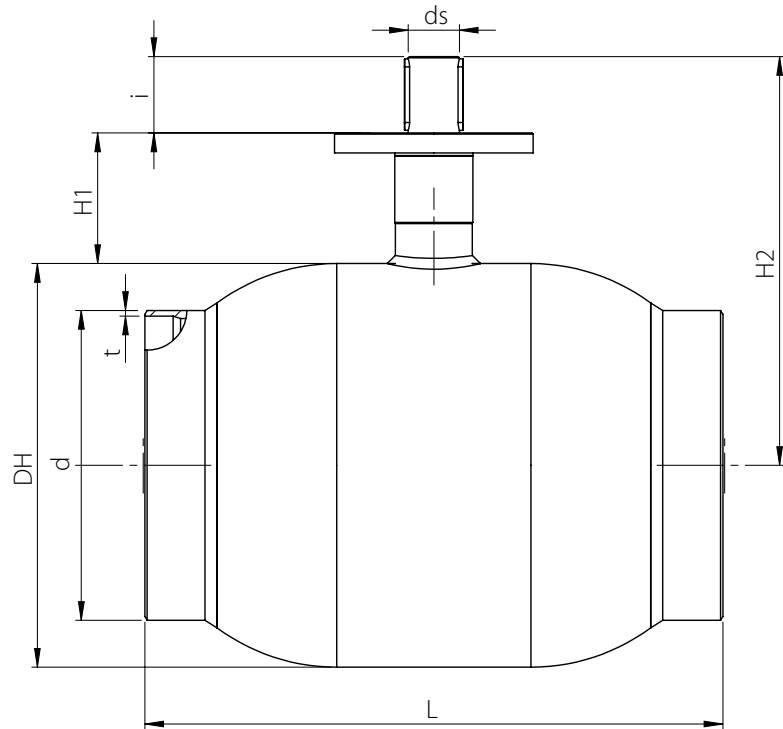
Full bore - with ball flowguide						All dimensions in mm								
DN	BROEN no.	Bore ϕ mm	Kvs in m ³ /h	PN	Net weight in Kg	DH	D	t	L	H1	H2	ds	i	ISO
200	8620416200 000	200	9,200	16	101.4	356	340	-	550	60.2	304	45	67	F14
250	8620416250 000	250	13,500	16	161.8	457	405	-	673	69.2	382	50	84	F16
300	8600425300 000	305	21,600	16	284.8	508	460	-	850	82.5	437	60	100	F16
400	8600425400 000	400	35,000	25	572.5	660	620	-	1016	105.0	547	80	112	F30

Reduced bore						All dimensions in mm								
DN	BROEN no.	Bore ϕ mm	Kvs in m ³ /h	PN	Net weight in Kg	DH	D	t	L	H1	H2	ds	i	ISO
250	8500416250 000	200	3,200	16	92.8	356	405	-	533	60.2	304	45	67	F14
300	8500416300 000	250	4,700	16	141.8	457	460	-	610	69.2	382	50	84	F16
350	8500416350 000	250	5,500	16	178.7	457	520	-	686	69.2	382	50	84	F16
400	8500425400 000*	305	10,600	25	297.8	508	620	-	762	82.5	437	60	100	F16
500	8500425500 000*	400	18,150	25	535.0	660	730	-	914	105.0	547	80	112	F30

*DN400-500 with ball flowguide.

Dimensions and Weights

Weldings | Full bore or reduced bore | High spindle



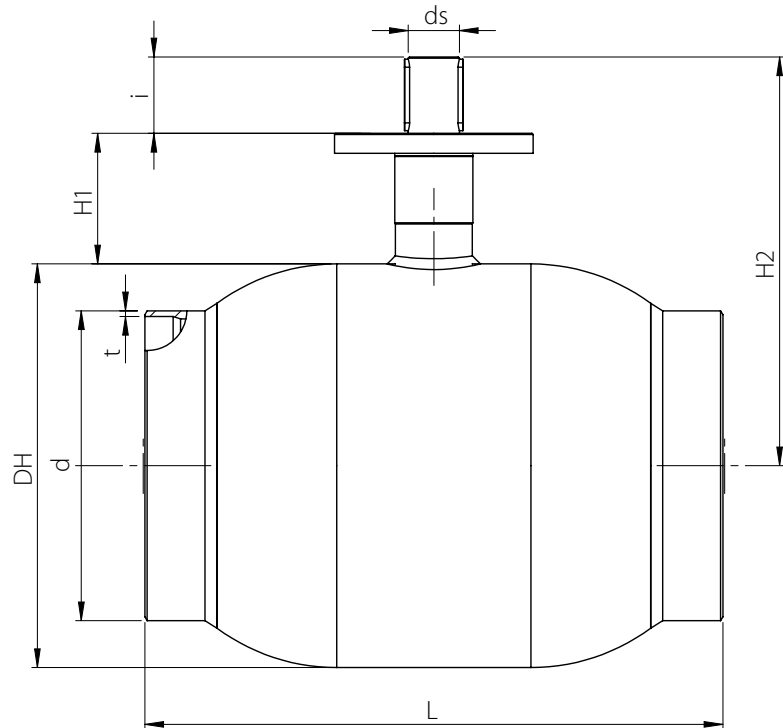
Full bore - with ball flowguide						All dimensions in mm								
DN	BROEN no.	Bore ϕ mm	Kvs in m ³ /h	PN	Net weight in Kg	DH	d	t	L	H1	H2	ds	i	ISO
200	8621225200 000	200	9,200	25	82.7	356	219.1	5.0	533	115	365.0	45	67	F14
250	8621225250 000	250	13,500	25	135.8	457	273.0	5.0	650	130	442.5	50	84	F16
300	8601225300 000	305	21,600	25	253.1	508	323.9	5.6	819	155	506.5	60	100	F16
400	8601225400 000	400	35,000	25	469.9	660	406.4	6.3	991	180	622.4	80	112	F30

Reduced bore						All dimensions in mm								
DN	BROEN no.	Bore ϕ mm	Kvs in m ³ /h	PN	Net weight in Kg	DH	d	t	L	H1	H2	ds	i	ISO
250	8501225250 000	200	3,200	25	68.0	356	273.0	5.0	509	115	349.8	45	67	F14
300	8501225300 000	250	4,700	25	108.9	457	323.9	5.6	586	130	443.0	50	84	F16
350	8501225350 000	250	5,500	25	127.8	457	355.6	5.6	662	130	443.0	50	84	F16
400	8501225400 000*	305	10,600	25	192.2	508	406.4	6.3	736	155	506.5	60	100	F16
500	8501225500 000*	400	18,150	25	374.0	660	508.0	6.3	889	180	622.0	80	112	F30

*DN400-500 with ball flowguide.

Dimensions and Weights

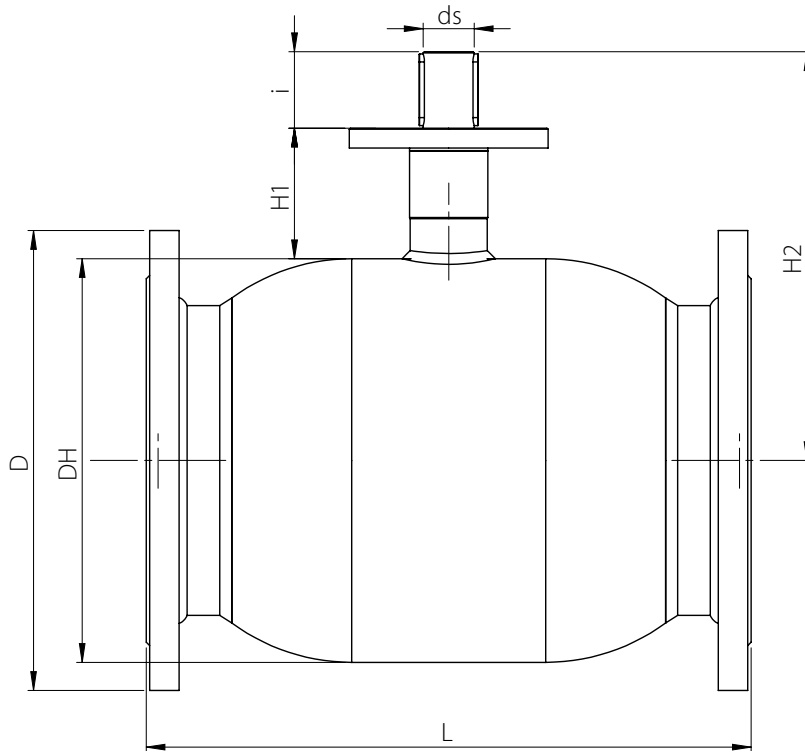
Weldings | Reduced bore | High spindle



Reduced bore - with ball flowguide and inlet flowguides						All dimensions in mm								
DN	BROEN no.	Bore ϕ mm	Kvs in m ³ /h	PN	Net weight in Kg	DH	d	t	L	H1	H2	ds	i	ISO
250	8511225250 000	200	5,300	25	69.8	356	273.0	5.0	509	115	349.8	45	67	F14
300	8511225300 000	250	8,200	25	111.7	457	323.9	5.6	586	130	443.0	50	84	F16
350	8511225350 000	250	8,900	25	130.6	457	355.6	5.6	662	130	443.0	50	84	F16
400	8511225400 000	305	13,700	25	194.0	508	406.4	6.3	736	155	506.5	60	100	F16
500	8511225500 000	400	20,300	25	376.4	660	508.0	6.3	889	180	622.0	80	112	F30

Dimensions and Weights

Flanges | Full bore or reduced bore | High spindle



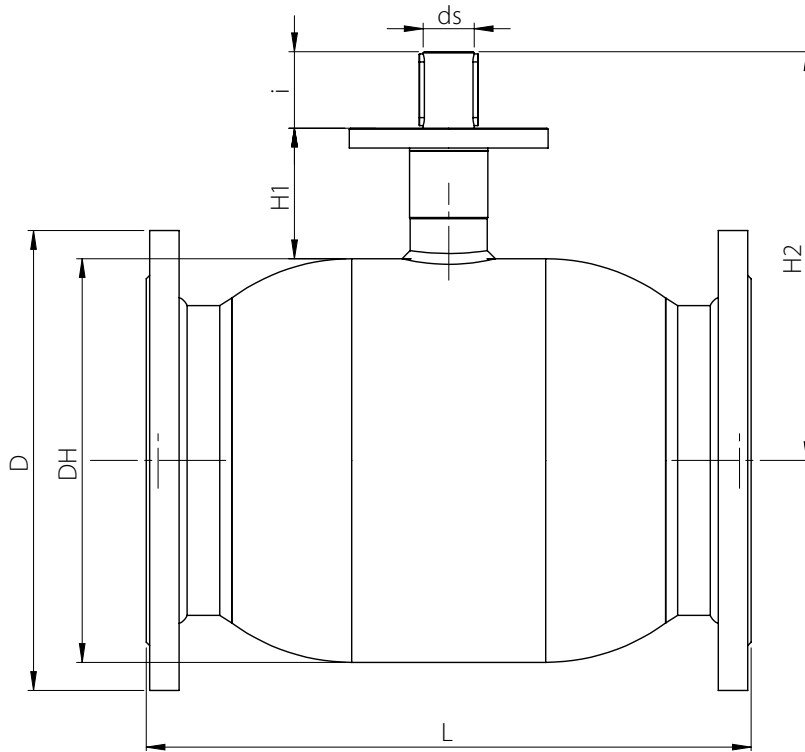
Full bore - with ball flowguide						All dimensions in mm								
DN	BROEN no.	Bore ϕ mm	Kvs in m ³ /h	PN	Net weight in Kg	DH	d	t	L	H1	H2	ds	i	ISO
200	8621416200 000	200	9,200	16	101.9	356	355.6	-	550	115	360	45	67	F14
250	8621416250 000	250	13,500	16	163.9	457	405.0	-	673	130	386	50	84	F16
300	8601416300 000	305	21,600	16	288.2	508	460.0	-	850	155	507	60	100	F16
400	8601425400 000	400	35,000	25	578.8	660	620.0	-	1016	180	527	80	112	F30

Reduced bore						All dimensions in mm								
DN	BROEN no.	Bore ϕ mm	Kvs in m ³ /h	PN	Net weight in Kg	DH	d	t	L	H1	H2	ds	i	ISO
250	8501416250 000	200	3,200	16	94.4	356	405	-	533	115	360.0	45	67	F14
300	8501416300 000	250	4,700	16	143.9	457	460	-	610	130	443.0	50	84	F16
350	8501416350 000	250	5,500	16	180.8	457	520	-	686	130	443.0	50	84	F16
400	8501425400 000*	305	10,600	25	301.1	508	620	-	762	155	506.5	60	100	F16
500	8501425500 000*	400	18,150	25	541.2	660	730	-	914	180	622.5	80	112	F30

*DN400-500 with ball flowguide.

Dimensions and Weights

Flanges | Reduced bore | High spindle



Reduced bore - with ball flowguide and inlet flowguides						All dimensions in mm								
DN	BROEN no.	Bore ϕ mm	Kvs in m ³ /h	PN	Net weight in Kg	DH	d	t	L	H1	H2	ds	i	ISO
250	8511416250 000	200	5,300	16	96.2	356	405	-	533	115	360.0	45	67	F14
300	8511416300 000	250	8,200	16	146.7	457	460	-	610	130	443.0	50	84	F16
350	8511416350 000	250	8,900	16	183.6	457	520	-	686	130	443.0	50	84	F16
400	8511425400 000	305	13,700	25	302.9	508	620	-	762	155	506.5	60	100	F16
500	8511425500 000	400	20,300	25	543.6	660	730	-	914	180	622.5	80	112	F30

Ever since BROEN was established
our passion for valve technology has been
a major part of our core competences.

Our brand is our promise.

BROEN Engineered Valve Group

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 oil. BROEN delivers complete solutions for HVAC building installations and is a leading supplier of district energy valves.

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 Industries NL.

Read more on: www.broen.com

BROEN Group locations

Headquarters in Assens, DK

Sales- and productions sites ●

BROEN A/S, Assens (DK)
BROEN SA, Dzierżoniów (PL)
BROEN LLC, Kolomna (RU)
BROEN INC., Houston (US)
BROEN OIL & GAS, Suchy Las & Rogoźno (PL)
BSM Valves B.V., Breda (NL)
Clorius Controls, Dzierżoniów (PL)

Sales companies and offices ○

BROEN, Assens
BROEN, Stockholm
BROEN, Helsinki
BROEN SEI, Romania
BROEN, Beijing
BROEN, Singapore
BROEN, Dusseldorf
BROEN, Moscow
Clorius Controls, Copenhagen
Clorius Controls, Shanghai



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