

**SECTION 4**  
Steel ball valves  
Reduced bore

**BROEN**  
BALLOMAX®

*Designed to last*

# Steel ball valve - DN 50, PN 40

Type **BBM50241 / BBM52241** - **Reduced bore**

**Weld × Weld**

Fully welded steel ball valve.

**Materials**

See next page.

**Applications**

Isolating valve for heating systems, district heating, cooling and industrial purpose.

**Media**

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**Surface treatment**

Eco-friendly protection finish against corrosion.

**Operation**

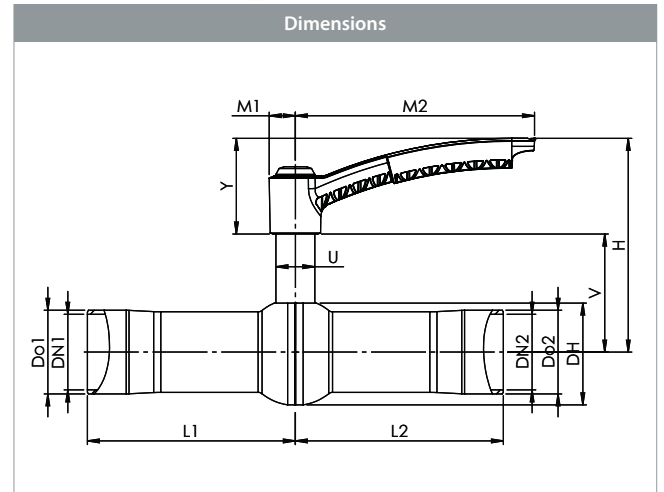
The standard handle is 180 degrees adjustable.

**Approvals and certificates**

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

**Notice**

ISO-flange can be mounted on request.



					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Do1	Do2	DN1	DN2	DH	V	H	U	Y	M1	M2
50	8500240050 010	40	112	2,35	150,0	150,0	60,3	60,3	54,5	54,5	73,4	85,1	154,1	28	69,0	18,9	172,4

FLOWOPTIMIZED					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Do1	Do2	DN1	DN2	DH	V	H	U	Y	M1	M2
50	8520240050 010	40	128	2,39	150,0	150,0	60,3	60,3	54,5	54,5	73,4	85,1	154,1	28	69,0	18,9	172,4

# Steel ball valve - DN 50, PN 40

Type **BBM50241 / BBM52241** - **Reduced bore**



Technical drawing		Material description	
	1	Handle	Fibreglass reinforced composite - PA6 GF30
	2	O-ring	FKM70
	3	O-ring	EPDM70
	4	Stem	Stainless steel - ASTM420 / 1.4021 - EN10088-3
	5	Friction ring	PTFE 20% carbon
	6	Neck ring	Steel - R St37-2 / DIN 17100
	7	Disc spring	Steel / EN 10132-4
	8	Ball*	Stainless steel - AISI304 / 1.4301 - EN10088-3
	9	Seat	PTFE 20% carbon
	10	Support ring	Steel - DC01 / EN 10130
	11	Housing	Carbon steel - P235GH / EN 10216-2
	12	Stem guide	P265GH / EN 10273
	13	Friction ring	PTFE 20% carbon
	14	Spacer ring	PTFE 20% carbon
	15	Locking washer	Distaloy HP+0,3%C
	16	Locking nut	Steel

*\*The product shown is flowoptimized*

Accessories	BROEN No.	Dimension	Description
	954245	DN 50 - 65	ISO-flange.

# Steel ball valve - DN 50, PN 40

Type **BBM50244 / BBM52244** - **Reduced bore**

**Weld x Weld with ISO-flange and BROEN-Gear**

Fully welded steel ball valve.

**Materials**

See next page.

**Applications**

Isolating valve for heating systems, district heating, cooling and industrial purpose.

**Media**

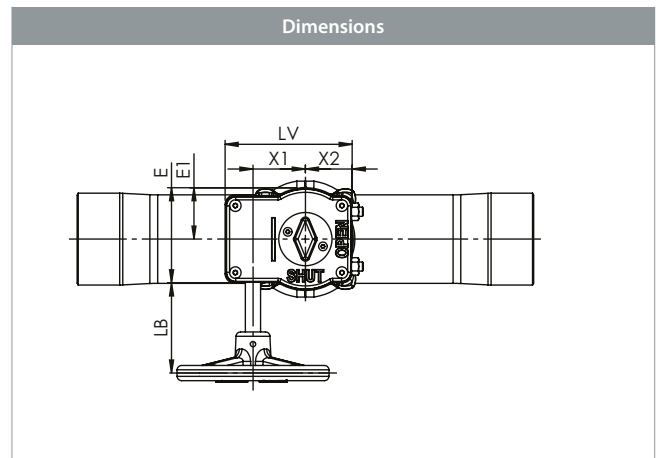
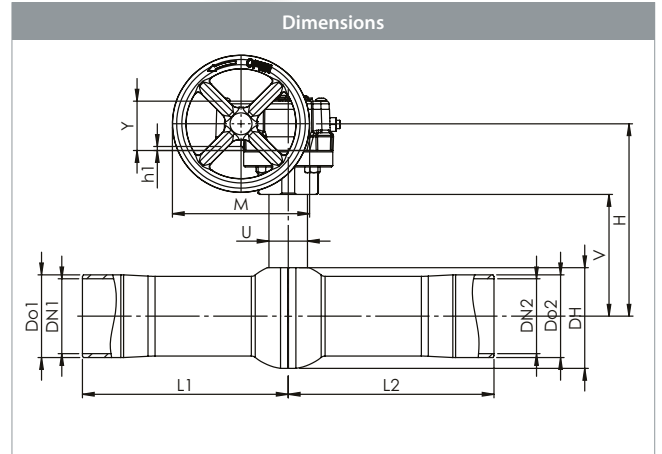
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**Surface treatment**

Eco-friendly protection finish against corrosion.

**Approvals and certificates**

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Do1	Do2	DN1	DN2	DH	V	H	U	Y	M	h1
50	8500240050 480	40	112	3,65	150	150	60.3	60.3	54.5	54.5	73.4	88.7	140.4	28	36	100	3

**FLOWOPTIMIZED**

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Do1	Do2	DN1	DN2	DH	V	H	U	Y	M	h1
50	8520240050 480	40	128	3,69	150	150	60.3	60.3	54.5	54.5	73.4	88.7	140.4	28	36	100	3

# Steel ball valve - DN 50, PN 40

Type **BBM50244 / BBM52244** - **Reduced bore**



Technical drawing		Material description	
	1	ISO flange	Steel - S355J2+A / EN 10025-2
	2	O-ring	FKM70
	3	O-ring	EPDM70
	4	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	5	Friction ring	PTFE 20% carbon
	6	Neck ring	Steel - R St37-2 / DIN 17100
	7	Disc spring	Steel / EN 10132-4
	8	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	9	Seat	PTFE 20% carbon
	10	Support ring	Steel - DC01 - EN 10130
	11	Housing	Carbon steel - P235GH - EN 10216-2
	12	Stem guide	P265GH - EN 10273
	13	Friction ring	PTFE 20% carbon
	14	Spacer ring	PTFE 20% carbon
	15	Stem-Gearbox adapter	Steel - S355J2 / EN 10025-2
	16	Gearbox	Cast Iron
	17	Screw	Steel
	18	Parallel key	Steel

*\*The product shown is flowoptimized*

All dimensions in mm

LB	E	E1	X1	X2	LV
59.2	62.5	33.8	34.4	30.8	83.5

All dimensions in mm

LB	E	E1	X1	X2	LV
59.2	62.5	33.8	34.4	30.8	83.5

# Steel ball valve - DN 15 - 20, PN 40

Type 61101 / 64101 - Reduced bore



## Female x Weld (long Weldend)

Fully welded steel ball valve.

## Materials

See next page.

## Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

## Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

## Surface treatment

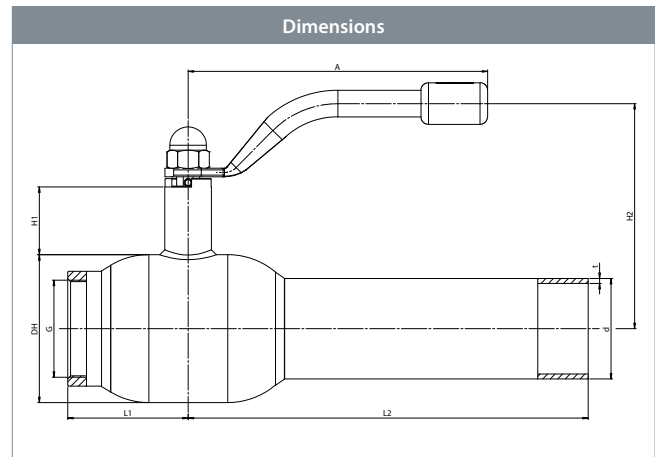
Eco-friendly protection finish against corrosion.

## Operation

The standard handle is 180 degrees adjustable.

## Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					G	DH	L1	d	t	L2	H1	H2	A
15	61101015S391801	10	8	0.7	½"	38	33	21.3	2.0	187	50	116	140
20	64101020S667101	15	15	0.8	¾"	42	38	26.9	2.3	189	47	115	140

# Steel ball valve - DN 15 - 20, PN 40

Type 61101 / 64101 - **Reduced bore**



Technical drawing		Material description	
	1	Weld end	Steel - P235GH / 1.0345 / EN 10217-2
	3	Female	Steel - S355J2 / 1.0570 / EN 10025-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	20	Handle	Steel
	21	Cap nut	Steel - galvanized

Accessories	BROEN No.	Dimension	Description
	66050010 000 - yellow	DN 15 - 20	T-handles in three different colors - yellow, blue and red. Factory fitted T-handle on request.
	66050010 003 - blue		
	66050010 004 - red		
	203245	DN 15 - 20	ISO-flange.
	66160010 000	DN 15 - 20	Hexagon for insertion key.

# Steel ball valve - DN 15 - 50, PN 25

## Type BBM 17031 - Reduced bore

### Female x Female with high or low stem

Steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

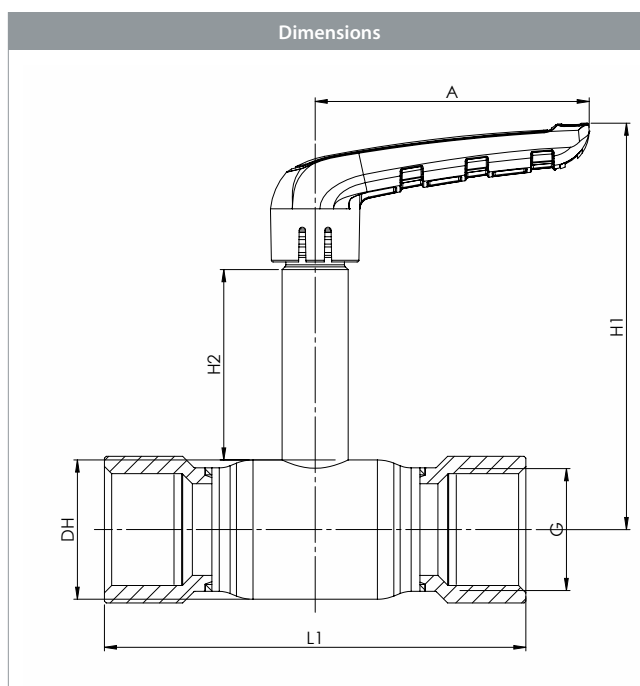
All BROEN BALLOMAX® valves are powder coated in black.

### Operation

The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm					
					G	DH	L1	H1	H2	A
15	1015007031 2101	10	13	0.32	1/2"	Ø26.0	82	107	55	75
20	1020007031 2101	15	26	0.42	3/4"	Ø30.0	109	109	55	75
25	1025007031 2101	20	49	0.49	1"	Ø38.0	115	112	55	75
32	1032007031 2101	25	75	0.98	1 1/4"	Ø45.0	136	128	52	100
40	1040007031 2101	32	110	1.31	1 1/2"	Ø56.5	148	131	52	100
50	1050007031 2101	40	214	2.22	2"	Ø68.0	184	156	63	120



# Steel ball valve - DN 15 - 50, PN 25

Type **BBM 17031** - **Reduced bore**



Technical drawing	Material description	
	1	Ball* Stainless steel - AISI304 / 1.4301 / EN 10088-3
	2	Spring supporting Stainless steel - AISI316 / EN 1.4401
	3	Seat PTFE
	4	Valve body Steel - P235GH / 1.0345 / EN 10217-2
	5	Stem guide Steel - P235GH / 1.0345 / EN 10217-2
	6	O-ring EPDM70
	7	Lock ring Steel
	8	Friction ring PTFE 20% carbon
	9	Stem Stainless steel - AISI316 / EN 1.4401
	10	Handle surface Fibreglass reinforced composite - PA66
	11	Handle core Galvanized steel
	12	Female Steel - P235GH / 1.0345 / EN 10217-2 / ISO 228-1

*\*DN 32 -50 has hollow ball*

# Steel ball valve - DN 15 - 65, PN 25

## Type BBM 17231 - Reduced bore

### Weld × Weld with high or low stem

Steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

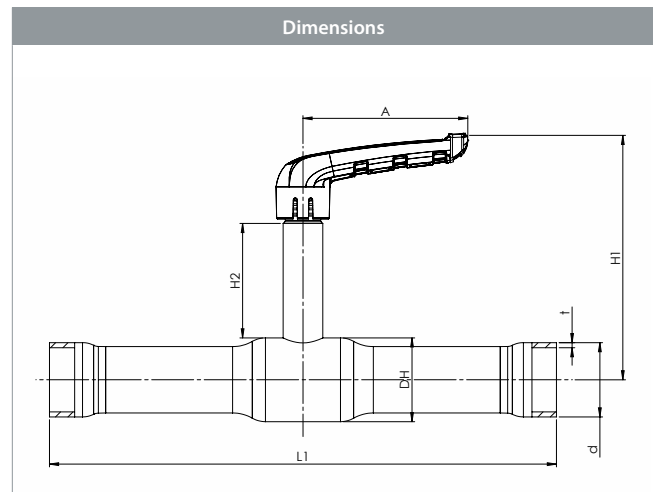
All BROEN BALLOMAX® valves are powder coated in black.

### Operation

The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	Alle dimensioner i mm						
					DH	d	t	L1	H1	H2	A
15	1015007231 2101	10	15	0.41	Ø26.0	21.3	2.0	214	107	55	75
20	1020007231 2101	15	28	0.51	Ø30.0	26.9	2.0	230	109	55	75
25	1025007231 2101	20	46	0.67	Ø38.0	33.7	2.3	234	112	55	75
32	1032007231 2101	25	74	1.12	Ø45.0	42.4	2.6	254	128	52	100
40	1040007231 2101	32	111	1.41	Ø56.5	48.3	2.6	260	134	52	119
50	1050007231 2101	40	183	2.30	Ø68.0	60.3	2.6	280	156	60	119
65	1050007231 2101	50	238	2.52	Ø85.0	76.1	2.9	300	165	60	119

# Steel ball valve - DN 15 - 65, PN 25

Type **BBM 17231** - **Reduced bore**



Technical drawing	Material description		
	1	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	2	Spring supporting	Stainless steel - AISI 316 / EN 1.4401
	3	Seat	PTFE
	4	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	5	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	6	O-ring	EPDM70
	7	Lock ring	Steel
	8	Friction ring	PTFE 20% carbon
	9	Stem	Stainless steel - AISI316 / EN 1.4401
	10	Handle surface	Fibreglass reinforced composite - PA66
	11	Handle core	Galvanized steel

*\*DN 32 - 65R has hollow ball*

# Steel ball valve - DN 80 - 150, PN 25

Type **BBM50251/ BBM52251** - **Reduced bore**

### Weld × Weld

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

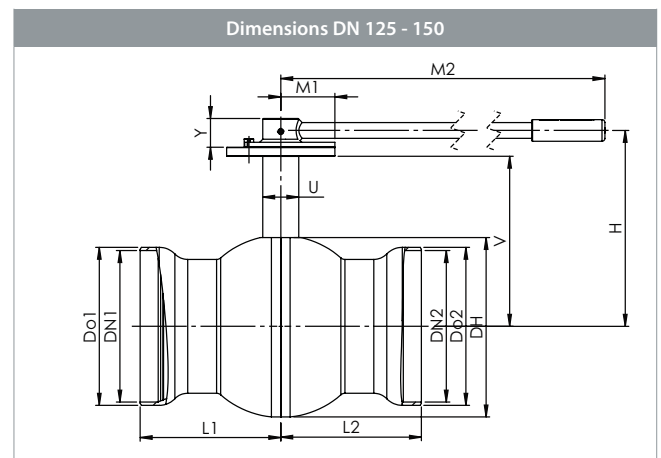
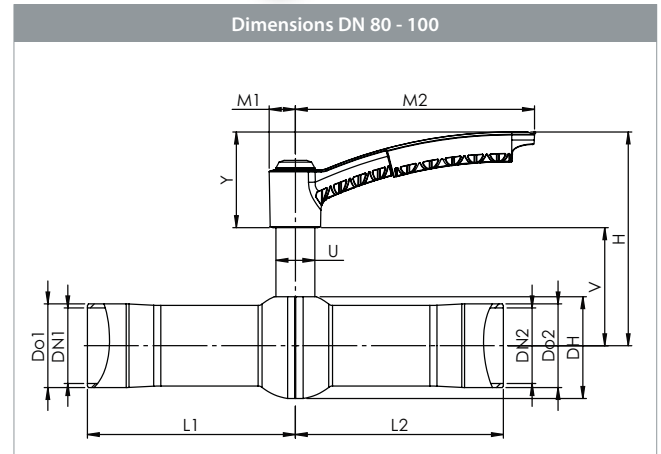
The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

ISO-flange can be mounted on request. We recommend to add a BROEN-Gear for DN 100 - 150.



					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Do1	Do2	DN1	DN2	DH	V	H	U	Y	M1	M2
80	8500225080 010	65	293	4.42	150.0	150.0	88.9	88.9	82.5	82.5	110.5	118.9	207.9	32	89.0	20.8	310.9
100	8500225100 010	80	471	6.55	162.5	162.5	114.3	114.3	107.1	107.1	137.1	132.5	221.5	32	89.0	20.8	310.9
125	8500225125 010	100	708	12.22	195.0	195.0	139.7	139.7	132.5	132.5	168.1	172.7	208.5	40	39.8	45.0	365.0
150	8500225150 010	125	1049	17.55	195.0	195.0	168.3	168.3	160.3	160.3	206.4	191.8	227.6	45	39.8	62.5	650.0

FLOWOPTIMIZED						All dimensions in mm												
	DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Do1	Do2	DN1	DN2	DH	V	H	U	Y	M1	M2
	80	8520225080 010	65	335	4.53	150.0	150.0	88.9	88.9	82.5	82.5	110.5	118.9	207.9	32	89.0	20.8	310.9
	100	8520225100 010	80	550	6.72	162.5	162.5	114.3	114.3	107.1	107.1	137.1	132.5	221.5	32	89.0	20.8	310.9
	125	8520225125 010	100	814	12.48	195.0	195.0	139.7	139.7	132.5	132.5	168.1	172.7	208.5	40	39.8	45.0	365.0
	150	8520225150 010	125	1194	17.95	195.0	195.0	168.3	168.3	160.3	160.3	206.4	191.8	227.6	45	39.8	62.5	650.0

# Steel ball valve - DN 80 - 150, PN 25

Type **BBM50251/BBM52251** - **Reduced bore**



Technical drawing DN 80 - 100	Material description		
	1	Handle	Fibreglass reinforced composite - PA6 GF30
	2	O-ring	FKM70
	3	O-ring	EPDM70
	4	Stem	Stainless steel - ASTM420 / 1.4021 - EN10088-3
	5	Friction ring	PTFE 20% carbon
	6	Neck ring	Steel - R St37-2 / DIN 17100
	7	Disc spring	Steel / EN 10132-4
	8	Ball*	Stainless steel - AISI304 / 1.4301 - EN10088-3
	9	Seat	PTFE 20% carbon
	10	Support ring	Steel - DC01 / EN 10130
	11	Housing	Carbon steel - P235GH / EN 10216-2
	12	Stem guide	P265GH / EN 10273
	13	Friction ring	PTFE 20% carbon
	14	Spacer ring	PTFE 20% carbon
	15	Locking washer	Distaloy HP+0,3%C
	16	Locking nut	Steel

\*The product shown is flowoptimized

Technical drawing DN 125 - 150	Material description		
	1	ISO flange	Steel - S355J2+A / EN 10025-2
	2	O-ring	FKM70
	3	O-ring	EPDM70
	4	Stem	Stainless steel ASTM420 / 1.4021 / EN 10088-3
	5	Friction ring	PTFE 20% carbon
	6	Neck ring	Steel - R St37-2 / DIN 17100
	7	Disc spring	Steel / EN 10132-4
	8	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	9	Seat	PTFE 20% carbon
	10	Support ring	Steel - DC01 / EN 10130
	11	Housing	Carbon steel - P235GH / EN 10216-2
	12	Stem guide	P265GH / EN 10273
	13	Friction ring	PTFE 20% carbon
	14	Spacer ring	PTFE 20% carbon
	15	Pin	Steel
	16	Handle	Carbon Steel
	17	Socket set screw	Steel

\*The product shown is flowoptimized

Accessories	BROEN No.	Dimension	Description
	600584	DN 100	BROEN-gear.
	600585	DN 125	
	600586	DN 150	
	958245	DN 80 - 100	ISO-flange.

# Steel ball valve - DN 65 - 150, PN 25

Type **BBM50254 / BBM52254** - **Reduced bore**

**Weld x Weld with ISO-flange and BROEN-Gear**

Fully welded steel ball valve.

**Materials**

See next page.

**Applications**

Isolating valve for heating systems, district heating, cooling and industrial purpose.

**Media**

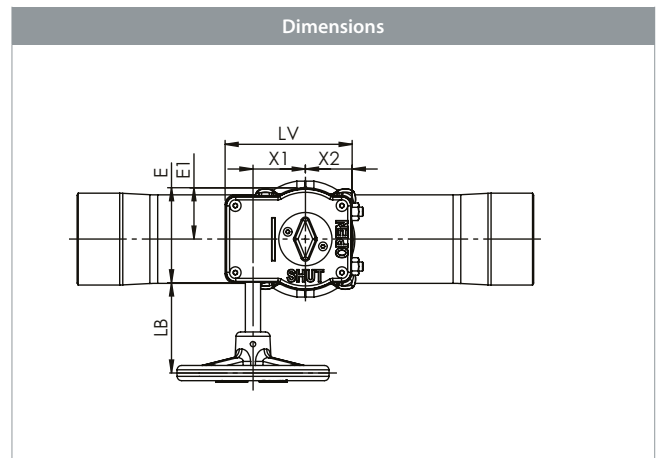
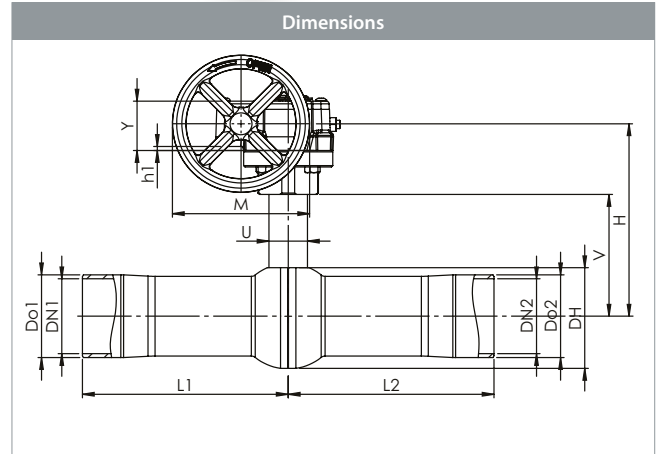
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**Surface treatment**

Eco-friendly protection finish against corrosion.

**Approvals and certificates**

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					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Do1	Do2	DN1	DN2	DH	V	H	U	Y	M	h1
65	8500225065 480	50	186	4.47	150.0	150.0	76.1	76.1	70.3	70.3	90.0	97.3	148.8	28	36.0	100	3
80	8500225080 480	65	293	6.20	150.0	150.0	88.9	88.9	82.5	82.5	110.5	123.9	177.4	32	39.5	100	2
100	8500225100 480	80	471	8.40	162.5	162.5	114.3	114.3	107.1	107.1	137.1	137.5	191.0	32	39.5	200	2
125	8500225125 480	100	708	16.87	195.0	195.0	139.7	139.7	132.5	132.5	168.1	172.7	212.7	40	50.0	200	2
150	8500225150 480	125	1049	21.38	195.0	195.0	168.3	168.3	160.3	160.3	206.4	191.8	237.8	45	62.0	300	2

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Do1	Do2	DN1	DN2	DH	V	H	U	Y	M	h1
65	8520225065 480	50	215	4.53	150.0	150.0	76.1	76.1	70.3	70.3	90.0	97.3	148.8	28	36.0	100	3
80	8520225080 480	65	335	6.30	150.0	150.0	88.9	88.9	82.5	82.5	110.5	123.9	177.4	32	39.5	100	2
100	8520225100 480	80	550	8.56	162.5	162.5	114.3	114.3	107.1	107.1	137.1	137.5	191.0	32	39.5	200	2
125	8520225125 480	100	814	17.13	195.0	195.0	139.7	139.7	132.5	132.5	168.1	172.7	212.7	40	50.0	200	2
150	8520225150 480	125	1194	21.77	195.0	195.0	168.3	168.3	160.3	160.3	206.4	191.8	237.8	45	62.0	300	2

FLOWOPTIMIZED

# Steel ball valve - DN 65 - 150, PN 25

Type **BBM50254 / BBM52254 - Reduced bore**



Technical drawing		Material description	
	1	ISO flange	Steel - S355J2+A / EN 10025-2
	2	O-ring	FKM70
	3	O-ring	EPDM70
	4	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	5	Friction ring	PTFE 20% carbon
	6	Neck ring	Steel - R St37-2 / DIN 17100
	7	Disc spring	Steel / EN 10132-4
	8	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	9	Seat	PTFE 20% carbon
	10	Support ring	Steel - DC01 - EN 10130
	11	Housing	Carbon steel - P235GH - EN 10216-2
	12	Stem guide	P265GH - EN 10273
	13	Friction ring	PTFE 20% carbon
	14	Spacer ring	PTFE 20% carbon
	15	Stem-Gearbox adapter	Steel - S355J2 / EN 10025-2
	16	Gearbox	Cast Iron
	17	Screw	Steel
	18	Parallel key	Steel

\*The product shown is flowoptimized

All dimensions in mm					
LB	E	E1	X1	X2	LV
59.2	62.5	33.8	34.4	30.8	83.8
73.1	73.9	39.9	41.3	37.9	99.9
105.1	73.9	39.9	41.3	37.9	99.9
112.9	96.7	53.6	55.0	48.1	131.2
178.6	118.7	67.4	68.8	59.4	162.7

All dimensions in mm					
LB	E	E1	X1	X2	LV
59.2	62.5	33.8	34.4	30.8	83.8
73.1	73.9	39.9	41.3	37.9	99.9
105.1	73.9	39.9	41.3	37.9	99.9
112.9	96.7	53.6	55.0	48.1	131.2
178.6	118.7	67.4	68.8	59.4	162.7

# Steel ball valve - DN 200, PN 25

## Type 61102 - Reduced bore

### Weld x Weld with ISO-flange

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The standard handle is 180 degrees adjustable.

The following operating devices are available on request:

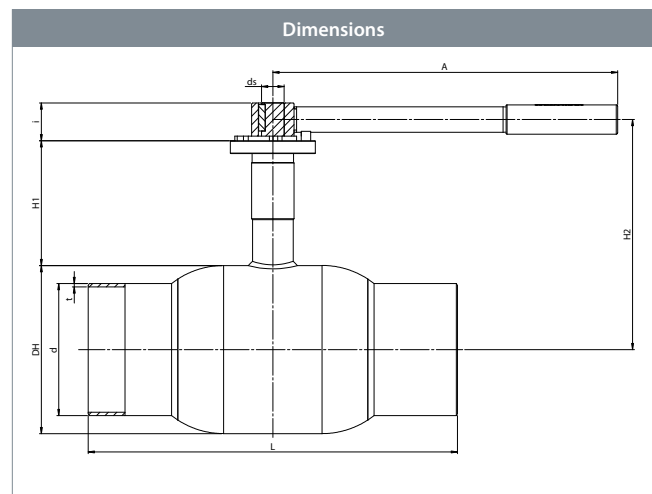
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear.



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	ds	i	A	ISO	
200	61102200 010	150	1500	43.4	267	219.1	4.5	390	155	289	30	60	900	F12	



# Steel ball valve - DN 200, PN 25

## Type 61102 - Reduced bore



Technical drawing		Material description	
	1	Weld end	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	11	Stem guide	Steel - S355J2 / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	17	O-ring	EPDM70
	18	Intermediate ring	Stainless steel / 1.4305 / EN 10088-3
	19	Stop pin (Unbraco)	Steel - hardenat
	20	Handle	Steel
	22	Bearing	Steel - PTFE
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	24	Pin	Steel - hardenat
	25	Friction gasket	PTFE 20% Carbon

Accessories	BROEN No.	Dimension	Description
	600586	DN 200	BROEN-Gear.

# Steel ball valve - DN 200, PN 25

## Type 61102 - Reduced bore

### Weld x Weld with ISO-flange and BROEN-Gear

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

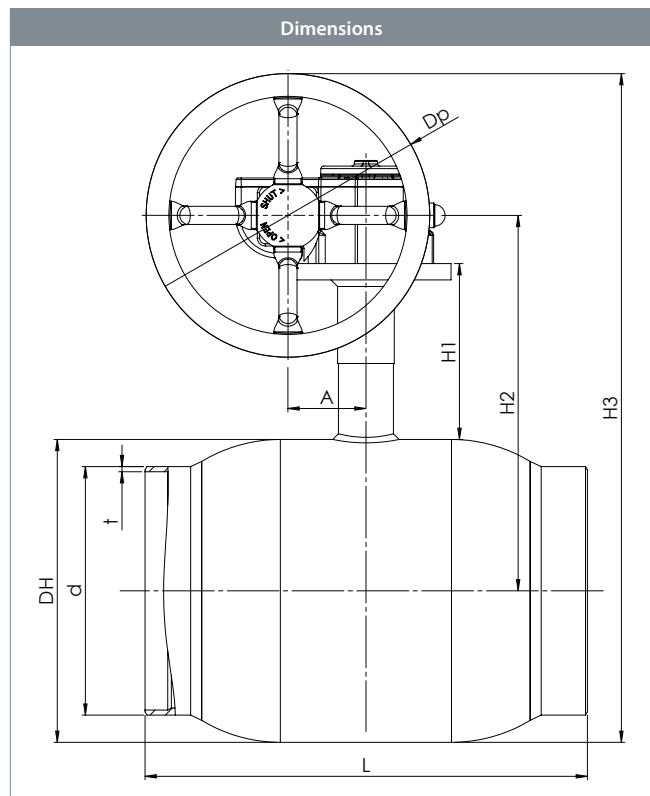
Eco-friendly protection finish against corrosion.

### Operation

Optional column extension.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	H3	Dp	A
200	6110225200 480	150	1500	52.3	267	219.1	4.5	390	155	331	590	250	69

# Steel ball valve - DN 200, PN 25

## Type 61102 - Reduced bore



Technical drawing		Material description	
	1	Weld end	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	22	Bearing	Steel - PTFE
23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2	
25	Friction gasket	PTFE 20% Carbon	
30	Circlip	Steel	
47	Gear	-	

# Steel ball valve - DN 250 - 500, PN 25

## Type 85002 - Reduced bore

### Weld × Weld with low stem

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The following operating devices are available on request:

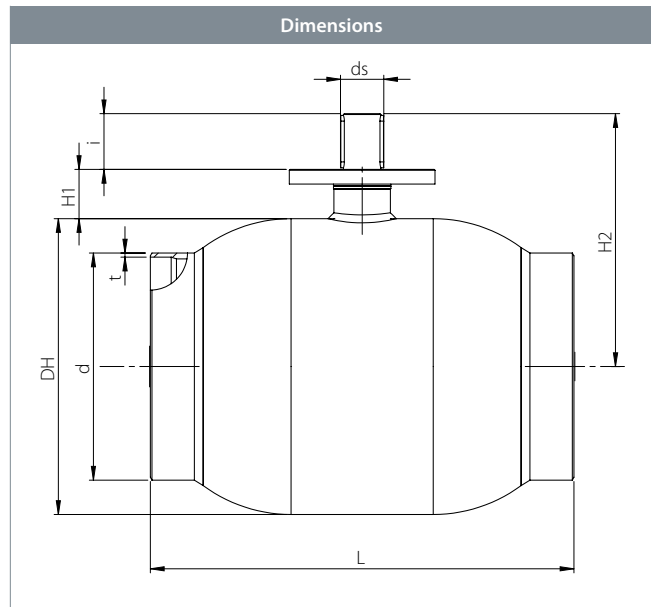
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	d	t	L	H1	H2	ds	i	ISO
250	8500225250 000	200	3200	66	356	273.0	5.0	509	59	304	45	67	F14
300	8500225300 000	250	4700	107	457	323.9	5.6	586	70	382	50	84	F16
350	8500225350 000	250	5500	125	457	355.6	5.6	662	70	382	50	84	F16
400	8500225400 000*	305	10600	187	508	406.4	6.3	734	83	437	60	100	F16
500	8500225500 000*	380	18150	368	660	508.0	6.3	889	105	547	80	112	F30

\* DN 400 - 500 - with ball flow guide.

# Steel ball valve - DN 250 - 500, PN 25



## Type 85002 - Reduced bore

Technical drawing		Material description	
	1	Weld end	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	EPDM70
	29	Key	Steel
	30	Circlip	Steel
	48	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	49	Bearing	PTFE coated steel
	50	Friction ring	Gunmetal
51	Bottom end	Steel - S355J2H - EN 10210	
52	Back-up ring	Steel - S355J2H - EN 10210	
53	Springs	Stainless steel - AISI304 / 1.4301 / EN 10088-3	

Accessories	BROEN No.	Dimension	Description
	600587	DN 250	BROEN-Gear.
	600588	DN 300	
	600588	DN 350	
	600589	DN 400	
	600590	DN 500	

# Steel ball valve - DN 250 - 500, PN 25

## Type 85002 - Reduced bore

### Weld x Weld with low stem and BROEN-Gear

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

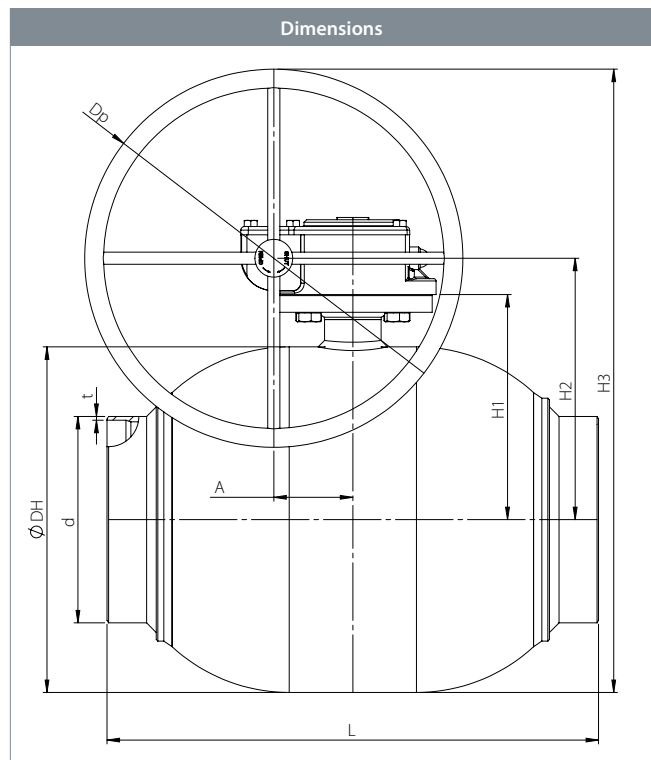
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	d	t	L	H1	H2	H3	Dp	A
250	8500225250 480	200	3200	68.5	356	273.0	5.0	509	59	275	500.0	450	68.8
300	8500225300 480	250	4700	111.9	457	323.9	5.6	586	70	346	596.0	500	104.5
350	8500225350 480	250	5500	130.6	457	355.6	5.6	662	70	346	596.0	500	104.5
400	8500225400 480*	305	10600	197.2	508	406.4	6.3	736	83	387	566.5	350	130.0
500	8500225500 480*	400	18150	435.9	660	508.0	6.3	889	105	494	719.0	450	182.0

\* DN 400 - 500 - with ball flow guide.

# Steel ball valve - DN 250 - 500, PN 25



## Type 85002 - Reduced bore

Technical drawing	Material description		
	1	Weld end	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	EPDM70
	48	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	50	Friction ring	Gunmetal
	51	Bottom end	Steel - S355J2H - EN 10210
	52	Back-up ring	Steel - S355J2H - EN 10210
	53	Springs	Stainless steel - AISI304 / 1.4301 / EN 10088-3

# Steel ball valve - DN 250 - 500, PN 25

## Type 85012 - Reduced bore

### Weld × Weld with high stem

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The following operating devices are available on request:

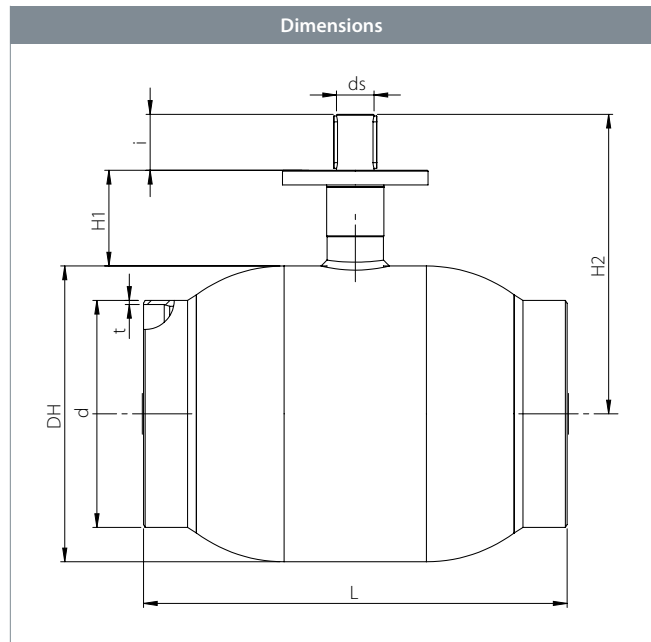
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	d	t	L	H1	H2	ds	i	ISO
250	8503225250 000	200	3200	68.0	356	273.0	5.0	509	115	349.8	45	67	F14
300	8503225300 000	250	4700	108.9	457	323.9	5.6	586	130	443.0	50	84	F16
350	8503225350 000	250	5500	127.8	457	355.6	5.6	662	130	443.0	50	84	F16
400	8503225400 000*	300	10600	192.2	508	406.4	6.3	734	155	506.5	60	100	F16
500	8503225500 000*	400	18150	374.0	660	508.0	6.3	889	180	622.0	80	112	F30

\* DN 400 - 500 - with ball flow guide.



# Steel ball valve - DN 250 - 500, PN 25

## Type 85012 - Reduced bore



Technical drawing		Material description	
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	5	Bearing	PTFE coated steel
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - 1.4021 / EN 10088-3
	9	Disc	Steel - S235JR / EN 10025-2
	11	Weld end	Steel - P265GH / EN10217-2
	12	Bottom end	Steel - P235GH / EN10216-2
	14	Back-up ring	Steel - S355J2H / EN 10210-1
	15	Seat	PTFE 20% Carbon
	16	O-ring	EPDM70
	17	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	18	Parallel key	Steel
	19	ISO-flange	P235GH / 1.0038 / EN 10028-2
	20	O-ring	VITON
	21	Back-up ring	PTFE 20% Carbon
	22	Locking ring	Steel
	23	O-ring	EPDM

Accessories	BROEN No.	Dimension	Description
	600587	DN 250	BROEN-Gear.
	600588	DN 300	
	600588	DN 350	
	600589	DN 400	
	600590	DN 500	

# Steel ball valve - DN 250 - 500, PN 25

## Type 85012 - Reduced bore

### Weld × Weld with high stem and BROEN-Gear

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

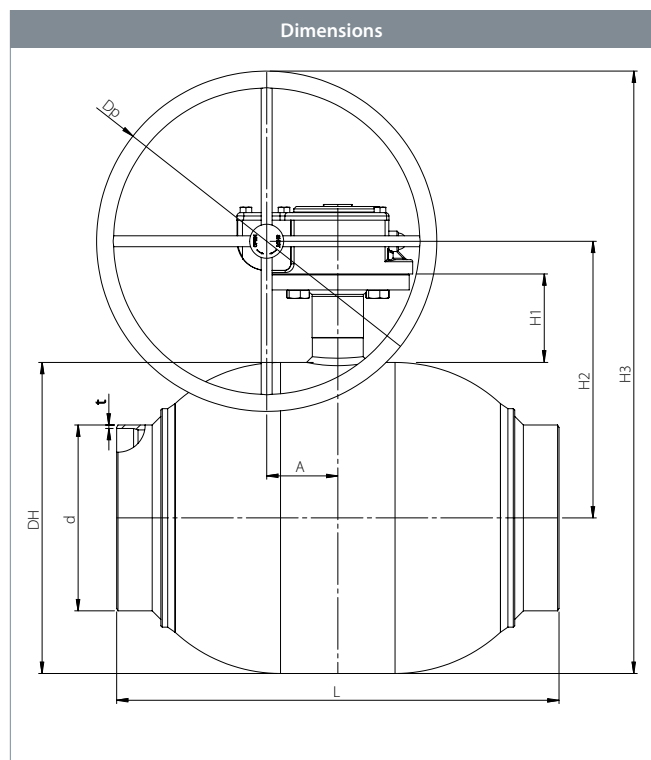
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	d	t	L	H1	H2	H3	Dp	A
250	8503225250 480	200	3200	70.1	356	273.0	5.0	509	115	330	555	450	68.8
300	8503225300 480	250	4700	114.0	457	323.9	5.6	586	130	407	657	500	104.5
350	8503225350 480	250	5500	132.7	457	355.6	5.6	662	130	407	657	500	104.5
400	8503225400 480*	300	10600	200.6	508	406.4	6.3	736	155	460	639	350	130.0
500	8503225500 480*	400	18150	442.2	660	508.0	6.3	889	180	569	794	450	182.0

\* DN 400 - 500 - with ball flow guide.

# Steel ball valve - DN 250 - 500, PN 25



## Type 85012 - Reduced bore

Technical drawing		Material description	
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Back-up ring	Steel - S355J2H / EN 10210-1
	15	Seat	PTFE 20% Carbon
	16	O-ring	EPDM70
	17	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	19	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2

# Steel ball valve - DN 250 - 500, PN 25

Type 85112 - **Reduced bore** - FLOWOPTIMIZED

## Weld × Weld with high stem

Fully welded steel ball valve.

## Materials

See next page.

## Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

## Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

## Surface treatment

Eco-friendly protection finish against corrosion.

## Operation

The following operating devices are available on request:

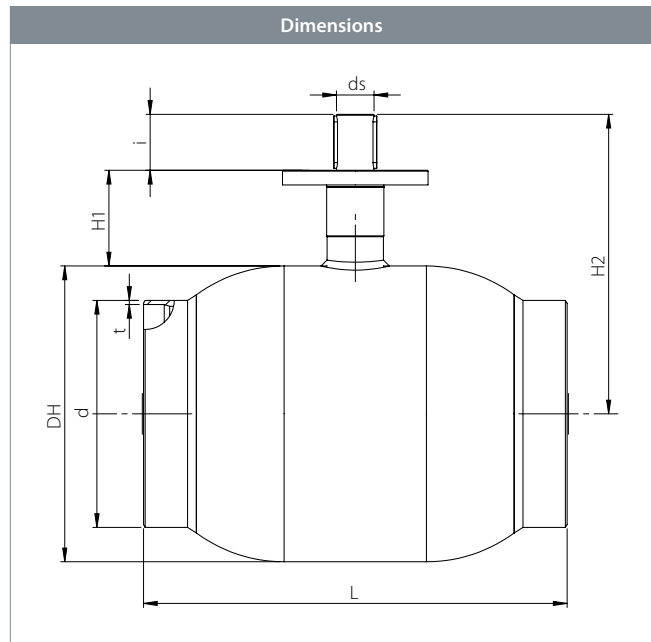
- BROEN-Gear.
- Electric actuator.

## Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

## Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	d	t	L	H1	H2	ds	i	ISO
250	8513225250 000	200	5300	69.8	356	273.0	5.0	509	115	349.8	45	67	F14
300	8513225300 000	250	8200	111.7	457	323.9	5.6	586	130	443.0	50	84	F16
350	8513225350 000	250	8900	130.6	457	355.6	5.6	662	130	443.0	50	84	F16
400	8513225400 000	300	13700	194.0	508	406.4	6.3	734	155	506.5	60	100	F16
500	8513225500 000	400	20300	376.4	660	508.0	6.3	889	180	622.0	80	112	F30

# Steel ball valve - DN 250 - 500, PN 25

Type 85112 - **Reduced bore** - FLOWOPTIMIZED



Technical drawing	Material description		
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	5	Bearing	PTFE coated steel
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	9	Disc	Steel - S235JR / EN 10025-2
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Flow Sleeve	Steel - P235GH / 1.0345 / EN 10217-2
	16	Back-up ring	Steel - S355J2H / EN 10210-1
	17	Seat	PTFE 20% Carbon
	18	O-ring	EPDM70
	19	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	20	Parallel Key	Steel
	21	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2
	22	O-ring	VITON
	23	Back-up ring	PTFE 20% Carbon
	24	Locking ring	Steel
	25	O-ring	EPDM

Accessories	BROEN No.	Dimension	Description
	600587	DN 250	BROEN-Gear.
	600588	DN 300	
	600588	DN 350	
	600589	DN 400	
	600590	DN 500	

# Steel ball valve - DN 250 - 500, PN 25

Type 85112 - **Reduced bore** - FLOWOPTIMIZED

**Weld x Weld with high stem and BROEN-Gear**

Fully welded steel ball valve.

**Materials**

See next page.

**Applications**

Isolating valve for heating systems, district heating, cooling and industrial purpose.

**Media**

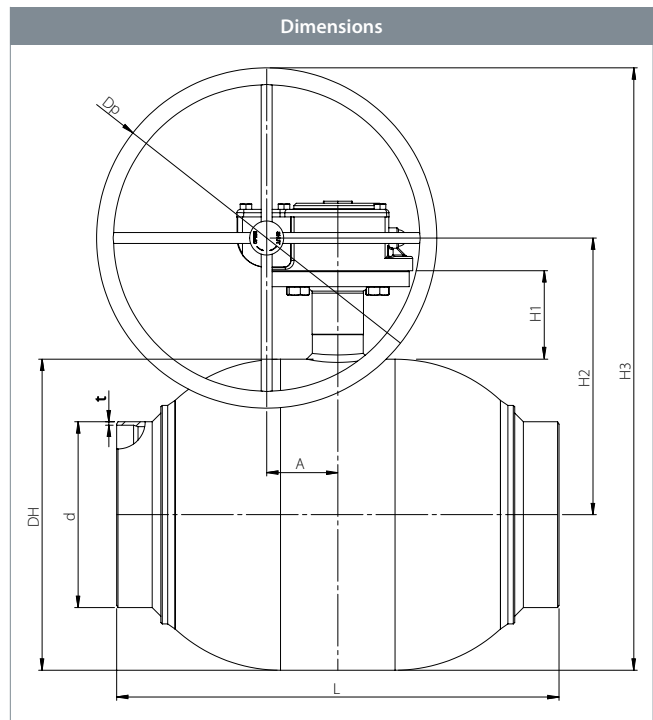
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**Surface treatment**

Eco-friendly protection finish against corrosion.

**Approvals and certificates**

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	d	t	L	H1	H2	H3	Dp	A
250	8513225250 480	200	5300	72.7	356	273.0	5.0	509	115	330	555	450	68.8
300	8513225300 480	250	8200	116.6	457	323.9	5.6	586	130	407	657	500	104.5
350	8513225350 480	250	8900	135.3	457	355.6	5.6	662	130	407	657	500	104.5
400	8513225400 480	300	13700	203.2	508	406.4	6.3	736	155	464	639	350	130.0
500	8513225500 480	400	20300	444.8	660	508.0	6.3	889	180	569	794	450	182.0

# Steel ball valve - DN 250 - 500, PN 25

Type 85112 - **Reduced bore** - FLOWOPTIMIZED



Technical drawing	Material description		
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Flow Sleeve	Steel - P235GH / EN 10217-2
	16	Back-up ring	Steel - S355J2H / EN 10210-1
	17	Seat	PTFE 20% Carbon
	18	O-ring	EPDM70
	19	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	21	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2

# Steel ball valve - DN 20 - 50, PN 40

## Type 64104 - Reduced bore

### Flange × Weld

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

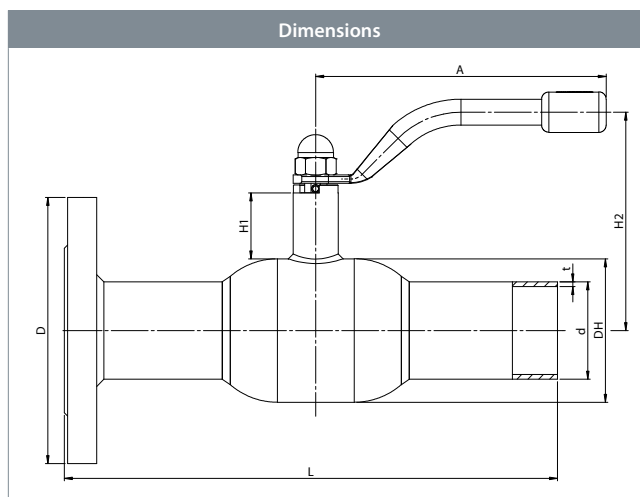
Eco-friendly protection finish against corrosion.

### Operation

The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	d	t	L	H1	H2	A
20	64104020S356700	15	15	1.8	42.0	105	26.9	2.3	235.0	47	116.0	140
25	64104025S271000	20	27	2.4	51.0	115	33.7	2.6	235.0	47	119.5	140
32	64104032S271100	25	40	3.3	57.0	140	42.4	2.6	265.0	48	124.0	140
40	64104040S271200	32	69	4.4	76.1	150	48.3	2.6	265.0	41	129.0	180
50	64104050S271300	40	110	5.5	88.9	165	60.3	2.9	306.0	41	135.0	180



# Steel ball valve - DN 20 - 50, PN 40

## Type 64104 - Reduced bore



Technical drawing		Material description	
	1	Weld end	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	20	Handle	Steel
	21	Cap nut	Steel - galvanized

Accessories	BROEN No.	Dimension	Description
	66050010 000 - yellow	DN 20 - 32	T-handles in three different colors - yellow, blue and red. Factory fitted T-handle on request.
	66050010 003 - blue		
	66050010 004 - red		
	66050040 000 - yellow	DN 40 - 50	
	66050040 003 - blue		
	66050040 004 - red		
	203245	DN 20 - 32	ISO-flange.
	208245	DN 40 - 50	
	66160010 000	DN 20 - 32	Hexagon for insertion key.
	66160040 000	DN 40 - 50	

# Steel ball valve - DN 65 - 100, PN 25

## Type 64104 - Reduced bore

### Flange × Weld

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

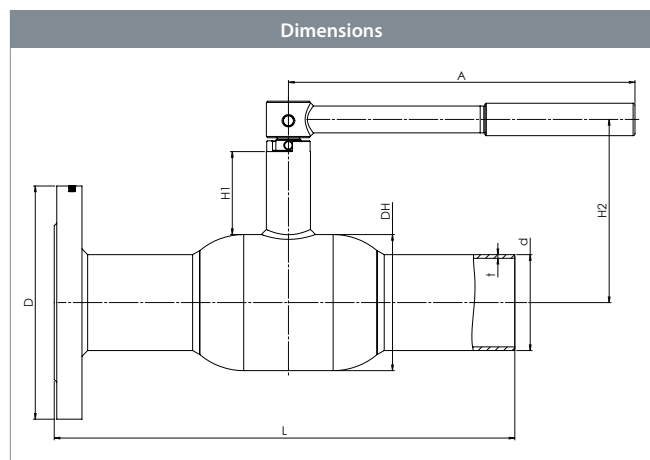
Eco-friendly protection finish against corrosion.

### Operation

The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	d	t	L	H1	H2	A
65	64104065S271400	50	180	8.7	108.0	185	76.1	2.9	366.0	65.8	145.0	275
80	64104080S233010	65	288	11.3	127.0	200	88.9	3.2	377.5	66.0	153.0	275
100	64104100S271500	80	470	16.3	152.4	235	114.3	3.6	397.5	80.9	192.0	365

# Steel ball valve - DN 65 - 100, PN 25

## Type 64104 - Reduced bore



Technical drawing		Material description	
	1	Weld end	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	20	Handle	Steel
	22	Bearing	Steel - PTFE

Accessories	BROEN No.	Dimension	Description
	167245	DN 65 - 80	ISO-flange.
	169245	DN 100	
	66160065 000	DN 65 - 80	Hexagon for insertion key.
	66164100 000	DN 100	

# Steel ball valve - DN 125 - 150, PN 25

## Type 61104 - Reduced bore

### Flange × Weld with ISO-flange

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

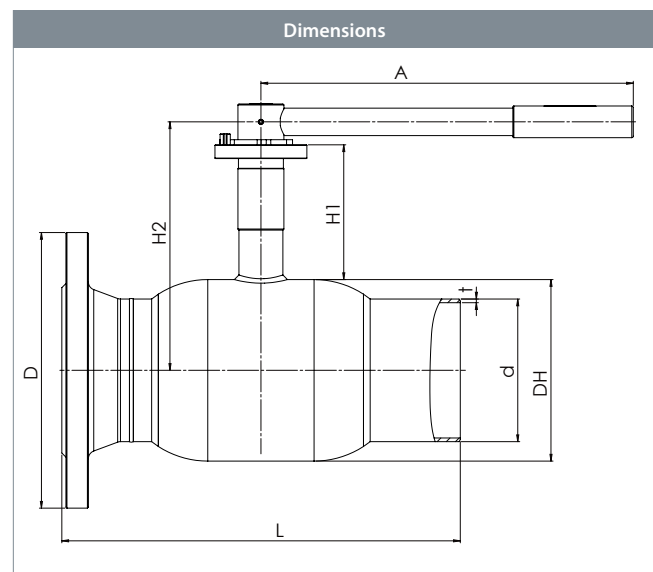
The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear. Larger dimensions DN 200-500, on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	d	t	L	H1	H2	A	ISO
125	61104125S188000	100	699	21.1	178	270	139.7	3.6	390	132	243	365	F07
150	61104150S188100	125	1046	31.2	219	300	168.3	4.0	390	135	276	650	F10

# Steel ball valve - DN 125 - 150, PN 25

## Type 61104 - Reduced bore



Technical drawing		Material description	
	1	Weld end	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
17	O-ring	EPDM70	
18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3	
20	Handle	Steel	
22	Bearing	Steel - PTFE	
23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2	

Accessories	BROEN No.	Dimension	Description
	600584	DN 125	BROEN-Gear.
	600585	DN 150	
	66161100 000	DN 125	Hexagon for insertion key.
	66161150 000	DN 150	

# Steel ball valve - DN 65 - 100, PN 16

## Type 64104 - Reduced bore

### Flange × Weld

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

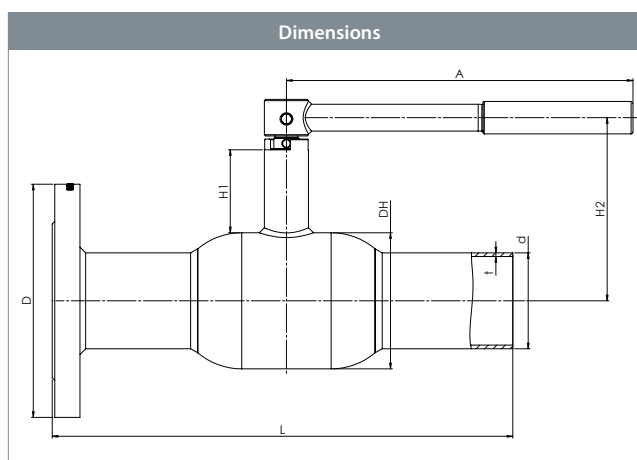
Eco-friendly protection finish against corrosion.

### Operation

The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	d	t	L	H1	H2	A
65	64104065S342500	50	180	8.7	108.0	185	76.1	2.9	360.0	65.8	145.0	275
80	64104080S226500	65	288	11.3	127.0	200	88.9	3.2	377.5	66.0	153.0	275
100	64104100S226600	80	470	16.3	152.4	220	114.3	3.6	397.5	80.9	192.0	365

# Steel ball valve - DN 65 - 100, PN 16

## Type 64104 - Reduced bore



Technical drawing		Material description	
	1	Weld end	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	20	Handle	Steel
	22	Bearing	Steel - PTFE

Accessories	BROEN No.	Dimension	Description
	167245	DN 65 - 80	ISO-flange.
	169245	DN 100	
	66160065 000	DN 65 - 80	Hexagon for insertion key.
	66164100 000	DN 100	

# Steel ball valve - DN 125 - 150, PN 16

## Type 61104 - Reduced bore

### Flange × Weld with ISO-flange

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

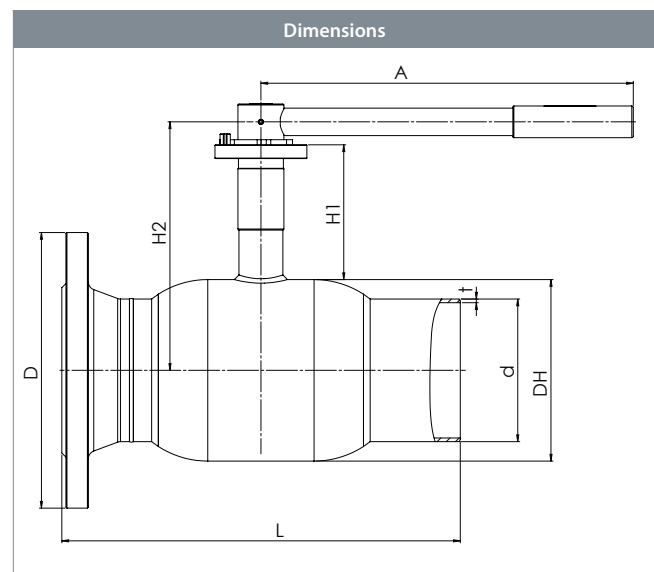
The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear. Larger dimensions DN 200-500, on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	d	t	L	H1	H2	A	ISO
125	61104125S226700	100	699	29.3	178	250	139.7	3.6	397.5	132	243	365	F07
150	61104150S208600	125	1046	32.5	219	285	168.3	4.0	338.0	135	276	650	F10



# Steel ball valve - DN 125 - 150, PN 16

## Type 61104 - Reduced bore



Technical drawing		Material description	
	1	Weld end	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
17	O-ring	EPDM70	
18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3	
20	Handle	Steel	
22	Bearing	Steel - PTFE	
23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2	

Accessories	BROEN No.	Dimension	Description
	600584	DN 125	BROEN-Gear.
	600585	DN 150	
	66161100 000	DN 125	Hexagon for insertion key.
	66161150 000	DN 150	

# Steel ball valve - DN 15 - 40, PN 40

## Type 61103 / 64103 - Reduced bore

### Flange × Flange

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

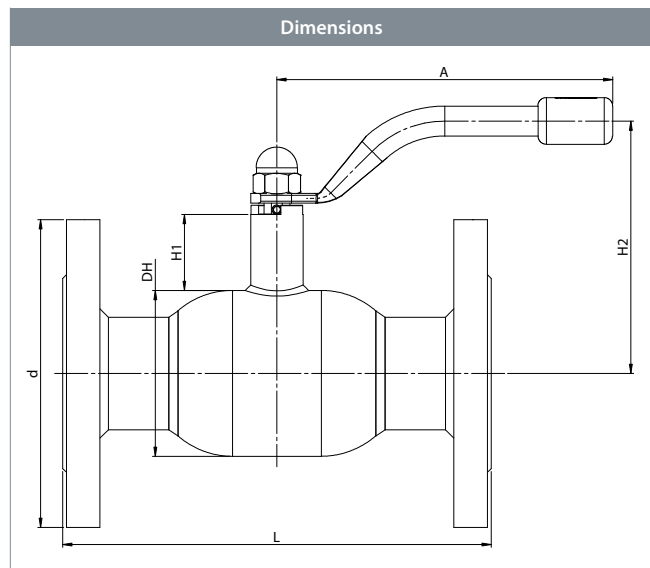
The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

Other lengths and special flanges available on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm					
					DH	d	L	H1	H2	A
15	61103015 010	10	8	1.5	38	95	130	50	116	140
20	64103020 010	15	15	2.9	42	105	150	47	85	140
25	64103025 010	20	27	3.5	51	115	160	47	89	140
32	64103032 010	25	40	4.8	57	140	180	48	93	140
40	64103040 010	32	69	6.2	76	150	200	41	108	180

# Steel ball valve - DN 15 - 40, PN 40



## Type 61103 / 64103 - Reduced bore

Technical drawing		Material description	
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	20	Handle	Steel
	21	Cap nut	Steel - galvanized

Accessories	BROEN No.	Dimension	Description
	66050010 000 - yellow	DN 15 - 32	T-handles in three different colors - yellow, blue and red. Factory fitted T-handle on request.
	66050010 003 - blue		
	66050010 004 - red		
	66050040 000 - yellow	DN 40	
	66050040 003 - blue		
	66050040 004 - red		
	203245	DN 15 - 32	ISO-flange.
	208245	DN 40	
	66160010 000	DN 15 - 32	Hexagon for insertion key.
	66160040 000	DN 40	

Special model: Minimum length - Flange x Flange - DN 15 - 40:

DN	Standard length - mm	Minimum length - mm
15	130	On request
20	150	118
25	160	130
32	180	135
40	200	150

# Steel ball valve - DN 50, PN 40

Type **BBM50441 / BBM52441** - **Reduced bore**

### Flange × Flange

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

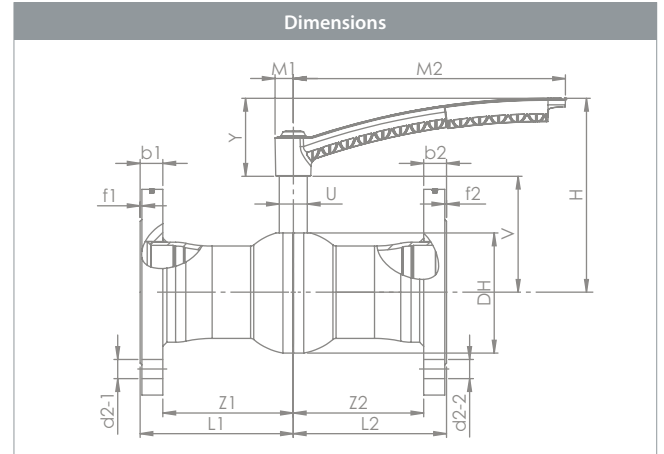
The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

ISO-flange available on request.



					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
50	8500440050 010	40	112	7.03	115	115	95	95	18	18	20	20	2	2	73.4	85.1	154.1

FLOWOPTIMIZED					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
50	8520440050 010	40	128	7.07	115	115	95	95	18	18	20	20	2	2	73.4	85.1	154.1

# Steel ball valve - DN 50, PN 40

Type **BBM50441 / BBM52441** - **Reduced bore**



Technical drawing	Material description		
	1	Handle	Fibreglass reinforced composite - PA6 GF30
	2	O-ring	FKM70
	3	O-ring	EPDM70
	4	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	5	Friction ring	PTFE 20% carbon
	6	Flange	Steel - S355J2H / EN 10210-2
	7	Neck ring	Steel - R St37-2 / DIN 17100
	8	Disc spring	Steel / EN 10132-4
	9	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	10	Seat	PTFE 20% carbon
	11	Support ring	Steel - DC01 / EN 10130
	12	Housing	Carbon steel - P235GH / EN 10216-2
	13	Stem guide	Steel - P265GH / EN 10273
	14	Friction ring	PTFE 20% carbon
	15	Spacer ring	PTFE 20% carbon
	16	Locking washer	Distaloy HP+0,3%C
	17	Locking nut	Steel

\*The product shown is flow optimized

Accessories	BROEN No.	Dimension	Description
	954245	DN 40 - 50	ISO-flange.

All dimensions in mm				
U	Y	M1	M2	
28	69	18,9	172,4	

All dimensions in mm				
U	Y	M1	M2	
28	69	18,9	172,4	

# Steel ball valve - DN 50, PN 40

Type **BBM50444 / BBM52444** - **Reduced bore**

**Flange × Flange with ISO-flange and BROEN-Gear**

Fully welded steel ball valve.

**Materials**

See next page.

**Applications**

Isolating valve for heating systems, district heating, cooling and industrial purpose.

**Media**

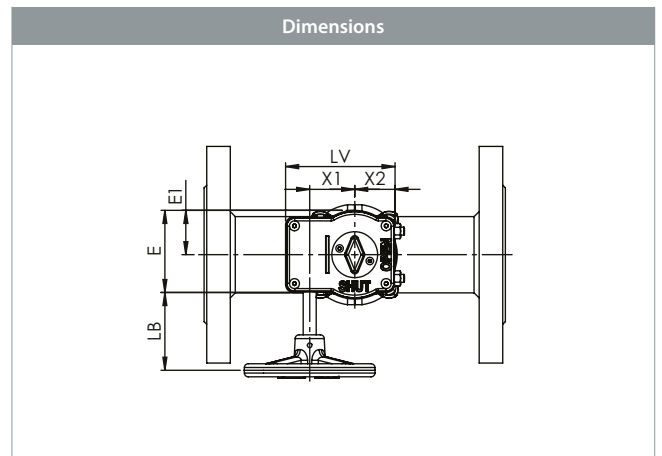
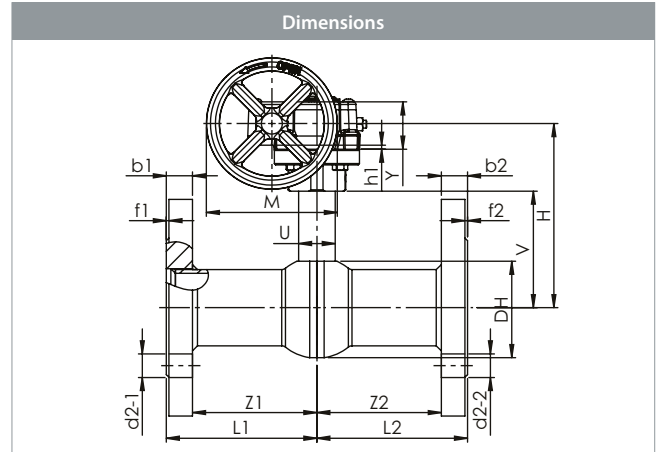
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**Surface treatment**

Eco-friendly protection finish against corrosion.

**Approvals and certificates**

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
50	8500440050 480	40	112	8.34	115	115	95	95	18	18	20	20	2	2	73.4	88.7	161.0

FLOWOPTIMIZED					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
50	8520440050 480	40	128	8.38	115	115	95	95	18	18	20	20	2	2	73.4	88.7	161.0

# Steel ball valve - DN 50, PN 40

Type **BBM50444** / **BBM52444** - **Reduced bore**



Technical drawing		Material description	
	1	ISO flange	Steel - S355J2+A / EN 10025-2
	2	O-ring	FKM70
	3	O-ring	EPDM70
	4	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	5	Friction ring	PTFE 20% carbon
	6	Neck ring	Steel - R St37-2 / DIN 17100
	7	Disc spring	Steel / EN 10132-4
	8	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	9	Seat	PTFE 20% carbon
	10	Support ring	Steel - DC01 - EN 10130
	11	Flange	Steel - S355J2H / EN 10210-2
	12	Housing	Carbon steel - P235GH - EN 10216-2
	13	Stem guide	P265GH - EN 10273
	14	Friction ring	PTFE 20% carbon
	15	Spacer ring	PTFE 20% carbon
	16	Stem-Gearbox adapter	Steel - S355J2 / EN 10025-2
	17	Gearbox	Cast Iron
	18	Screw	Steel
	19	Parallel key	Steel

\*The product shown is flowoptimized

All dimensions in mm

U	Y	h1	M	LB	E	E1	X1	X2	LV
28	36	3	100	59.2	62.5	33.8	34.4	30.8	83.5

All dimensions in mm

U	Y	h1	M	LB	E	E1	X1	X2	LV
28	36	3	100	59.2	62.5	33.8	34.4	30.8	83.5

# Steel ball valve - DN 65 - 150, PN 25

Type **BBM50451/ BBM52451** - **Reduced bore**

## Flange × Flange

Fully welded steel ball valve.

## Materials

See next page.

## Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

## Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

## Surface treatment

Eco-friendly protection finish against corrosion.

## Operation

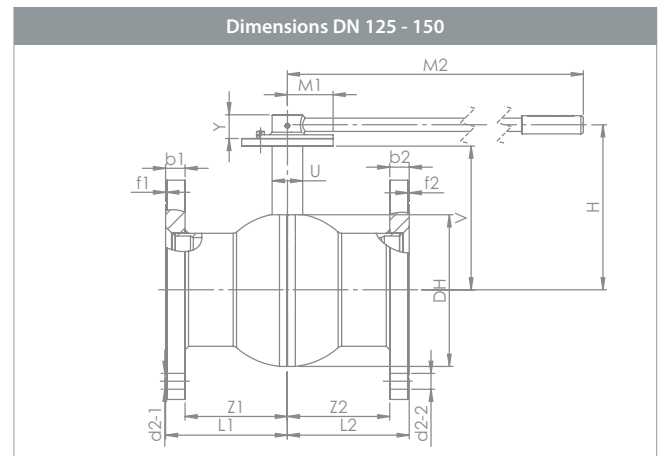
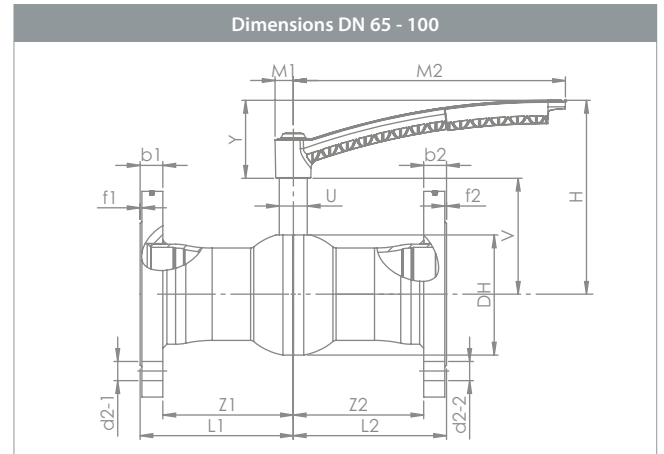
The standard handle is 180 degrees adjustable.

## Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

## Notice

We recommend to add a BROEN-Gear for DN 125 - 150. Other lengths and special flanges available on request.



					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
65	8500425065 010	50	186	9.74	145.0	145.0	123.0	123.0	18	18	22	22	2	2	90.0	93.7	162.7
80	8500425080 010	65	293	12.58	155.0	155.0	131.0	131.0	18	18	24	24	2	2	110.5	118.9	207.9
100	8500425100 010	80	471	18.04	175.0	175.0	149.0	149.0	22	22	26	26	2	2	137.1	132.5	221.5
125	8500425125 010	100	708	27.37	162.5	162.5	134.5	134.5	26	26	28	28	2	2	168.1	172.7	207.7
150	8500425150 010	125	1049	37.56	175.0	175.0	145.0	145.0	26	26	30	30	2	2	206.4	191.8	226.8

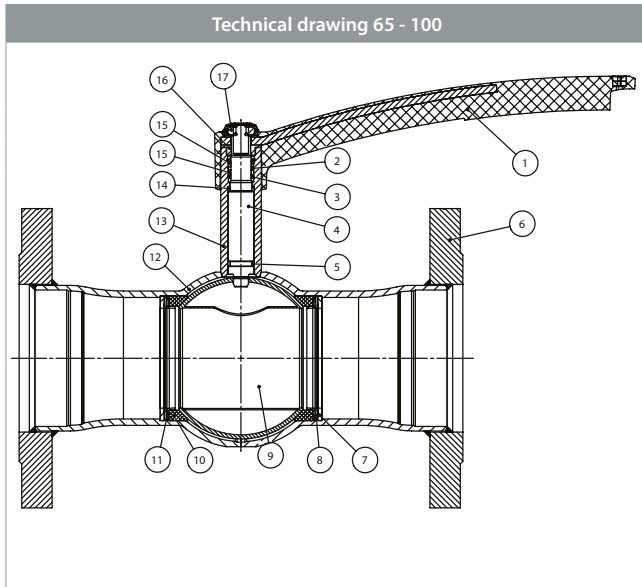
					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
65	8520425065 010	50	215	9.80	145.0	145.0	123.0	123.0	18	18	22	22	2	2	90.0	93.7	162.7
80	8520425080 010	65	335	12.69	155.0	155.0	131.0	131.0	18	18	24	24	2	2	110.5	118.9	207.9
100	8520425100 010	80	550	18.20	175.0	175.0	149.0	149.0	22	22	26	26	2	2	137.1	132.5	221.5
125	8520425125 010	100	814	27.63	162.5	162.5	134.5	134.5	26	26	28	28	2	2	168.1	172.7	207.7
150	8520425150 010	125	1194	37.96	175.0	175.0	145.0	145.0	26	26	30	30	2	2	206.4	191.8	226.8

FLOWOPTIMIZED

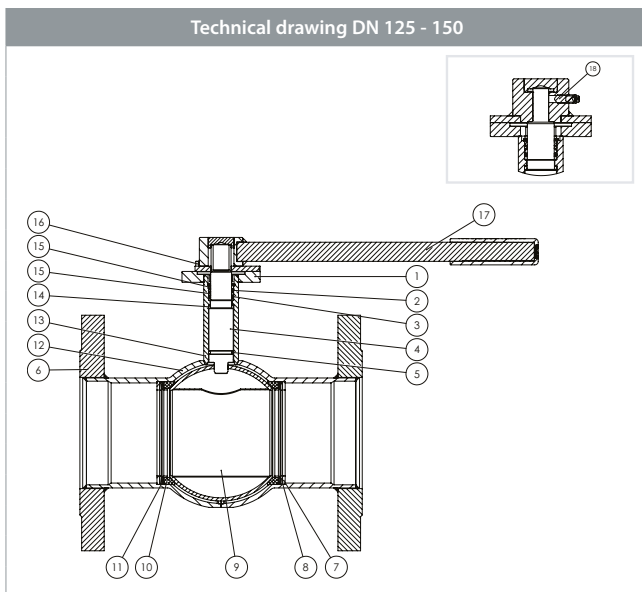


# Steel ball valve - DN 65 - 150, PN 25

Type **BBM50451/BBM52451** - **Reduced bore**



Technical drawing 65 - 100		Material description
1	Handle	Fibreglass reinforced composite - PA6 GF30
2	O-ring	FKM70
3	O-ring	EPDM70
4	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
5	Friction ring	PTFE 20% carbon
6	Flange	Steel - S355J2H / EN 10210-2
7	Neck ring	Steel - R St37-2 / DIN 17100
8	Disc spring	Steel / EN 10132-4
9	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
10	Seat	PTFE 20% carbon
11	Support ring	Steel - DC01 / EN 10130
12	Housing	Carbon steel - P235GH / EN 10216-2
13	Stem guide	Steel - P265GH / EN 10273
14	Friction ring	PTFE 20% carbon
15	Spacer ring	PTFE 20% carbon
16	Locking washer	Distaloy HP+0,3%C
17	Locking nut	Steel



Technical drawing DN 125 - 150		Material description
1	ISO flange	Steel - S355J2+A / EN 10025-2
2	O-ring	FKM70
3	O-ring	EPDM70
4	Stem	Stainless steel ASTM420 / 1.4021 / EN 10088-3
5	Friction ring	PTFE 20% carbon
6	Flange	Steel - S355J2H / EN 10210-2
7	Neck ring	Steel - R St37-2 / DIN 17100
8	Disc spring	Steel / EN 10132-4
9	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
10	Seat	PTFE 20% carbon
11	Support ring	Steel - DC01 / EN 10130
12	Housing	Carbon steel - P235GH / EN 10216-2
13	Stem guide	P265GH / EN 10273
14	Friction ring	PTFE 20% carbon
15	Spacer ring	PTFE 20% carbon
16	Pin	Steel
17	Handle	Carbon Steel
18	Socket set screw	Steel

\*The product shown is flowoptimized

All dimensions in mm			
U	Y	M1	M2
28	69	18.9	172.4
32	89	20.8	310.9
32	89	20.8	310.9
40	39	45.0	365.0
45	39	62.5	650.0

All dimensions in mm			
U	Y	M1	M2
28	69	18.9	172.4
32	89	20.8	310.9
32	89	20.8	310.9
40	39	45.0	365.0
45	39	62.5	650.0

Accessories	BROEN No.	Dimension	Description
	600584	DN 100	BROEN-gear.
	600585	DN 125	
	600586	DN 150	
	954245	DN 65	ISO-flange.
	958245	DN 80 - 100	

Special model: Minimum length - Flange x Flange. Only applicable for variants without optimized flow.

DN	Standard length - mm	Minimum length - mm
65	290	270
80	310	280
100	350	300

# Steel ball valve - DN 65 - 150, PN 25

Type **BBM50454 / BBM52454** - **Reduced bore**

**Flange × Flange with ISO-flange and BROEN-Gear**

Fully welded steel ball valve.

**Materials**

See next page.

**Applications**

Isolating valve for heating systems, district heating, cooling and industrial purpose.

**Media**

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**Surface treatment**

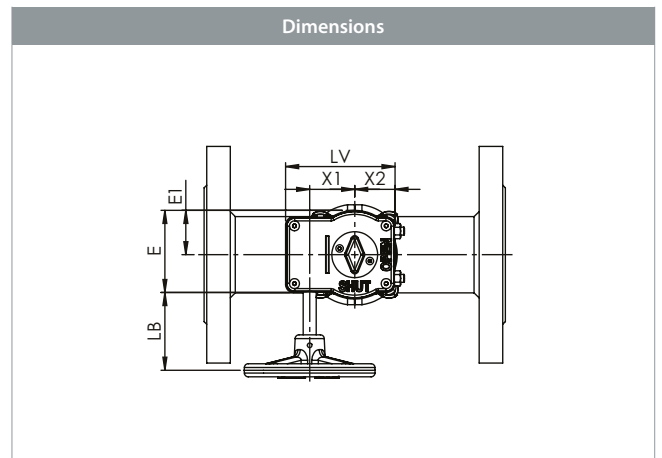
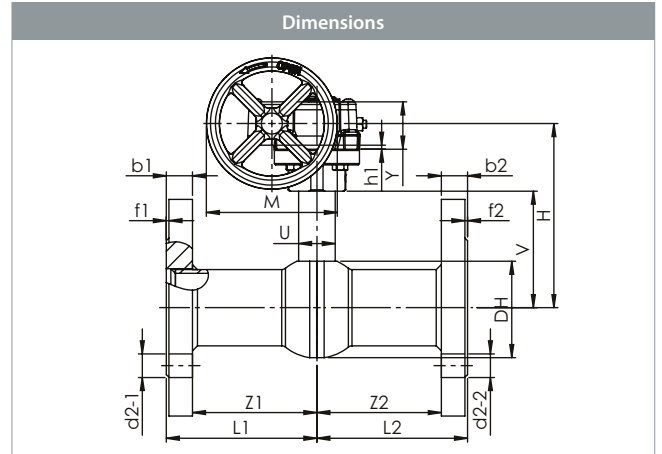
Eco-friendly protection finish against corrosion.

**Approvals and certificates**

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

**Notice**

Other lengths available on request.



					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
65	8500425065 480	50	186	11.05	145.0	145.0	123.0	123.0	18	18	22	22	2	2	90.0	97.3	148.8
80	8500425080 480	65	293	14.36	155.0	155.0	131.0	131.0	18	18	24	24	2	2	110.5	123.9	177.4
100	8500425100 480	80	471	19.89	175.0	175.0	149.0	149.0	22	22	26	26	2	2	137.1	137.5	191.0
125	8500425125 480	100	708	29.47	162.5	162.5	134.5	134.5	26	26	28	28	2	2	168.1	172.7	212.7
150	8500425150 480	125	1049	41.39	175.0	175.0	145.0	145.0	26	26	30	30	2	2	206.4	191.8	237.8

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
65	8520425065 480	50	215	11.69	145.0	145.0	123.0	123.0	18	18	22	22	2	2	90.0	97.3	148.8
80	8520425080 480	65	335	14.46	155.0	155.0	131.0	131.0	18	18	24	24	2	2	110.5	123.9	177.4
100	8520425100 480	80	550	20.05	175.0	175.0	149.0	149.0	22	22	26	26	2	2	137.1	137.5	191.0
125	8520425125 480	100	814	29.73	162.5	162.5	134.5	134.5	26	26	28	28	2	2	168.1	172.7	212.7
150	8520425150 480	125	1194	41.78	175.0	175.0	145.0	145.0	26	26	30	30	2	2	206.4	191.8	237.8

FLOWOPTIMIZED

# Steel ball valve - DN 65 - 150, PN 25



Type **BBM50454 / BBM52454** - **Reduced bore**

Technical drawing	Material description		
	1	ISO flange	Steel - S355J2+A / EN 10025-2
	2	O-ring	FKM70
	3	O-ring	EPDM70
	4	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	5	Friction ring	PTFE 20% carbon
	6	Neck ring	Steel - R St37-2 / DIN 17100
	7	Disc spring	Steel / EN 10132-4
	8	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	9	Seat	PTFE 20% carbon
	10	Support ring	Steel - DC01 - EN 10130
	11	Flange	Steel - S355J2H / EN 10210-2
	12	Housing	Carbon steel - P235GH - EN 10216-2
	13	Stem guide	P265GH - EN 10273
	14	Friction ring	PTFE 20% carbon
	15	Spacer ring	PTFE 20% carbon
	16	Stem-Gearbox adapter	Steel - S355J2 / EN 10025-2
	17	Gearbox	Cast Iron
	18	Screw	Steel
	19	Parallel key	Steel

\*The product shown is flow optimized

Special model: Minimum length - Flange x Flange. Only applicable for variants without optimized flow.

DN	Standard length - mm	Minimum length - mm
65	290	135
80	310	140
100	350	150

All dimensions in mm									
U	Y	h1	M	LB	E	E1	X1	X2	LV
28	36.0	3	100	59.2	62.5	33.8	34.4	30.8	83.5
32	39.5	2	100	73.1	73.9	39.9	41.3	37.9	99.9
32	39.5	2	200	105.1	73.9	39.9	41.3	37.9	99.9
40	50.0	2	200	112.9	96.7	53.6	55.0	48.1	131.2
45	62.0	2	300	178.6	118.7	67.4	68.8	59.4	162.7

All dimensions in mm									
U	Y	h1	M	LB	E	E1	X1	X2	LV
28	36.0	3	100	59.2	62.5	33.8	34.4	30.8	83.5
32	39.5	2	100	73.1	73.9	39.9	41.3	37.9	99.9
32	39.5	2	200	105.1	73.9	39.9	41.3	37.9	99.9
40	50.0	2	200	112.9	96.7	53.6	55.0	48.1	131.2
45	62.0	2	300	178.6	118.7	67.4	68.8	59.4	162.7

# Steel ball valve - DN 200, PN 25

## Type 61103 - Reduced bore

### Flange × Flange with ISO-flange

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The standard handle is 180 degrees adjustable.

The following operating devices are available on request

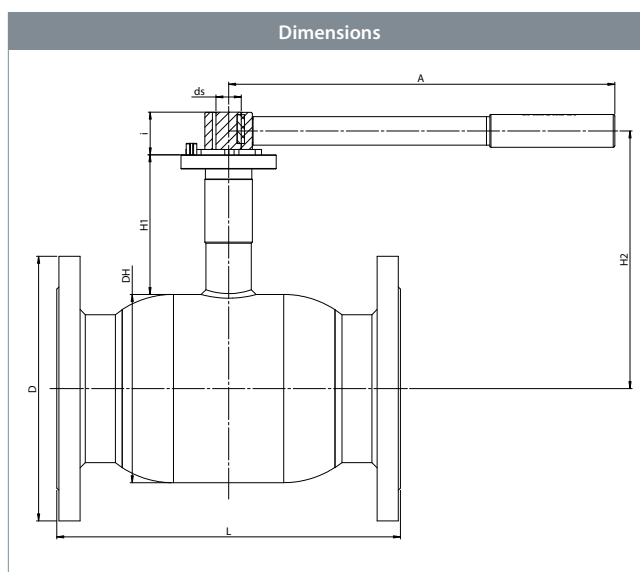
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear. Other lengths and special flanges available on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	L	H1	H2	ds	i	A	ISO
200	6110325200 010	150	1500	61.7	267	360	400	155	289	30	60	900	F12

# Steel ball valve - DN 200, PN 25

## Type 61103 - Reduced bore



Technical drawing		Material description	
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	17	O-ring	EPDM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	20	Handle	Steel
	22	Bearing	Steel - PTFE
23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2	
25	Friction gasket	PTFE 20% Carbon	

Accessories	BROEN No.	Dimension	Description
	600586	DN 200	BROEN-Gear.

Special model: Minimum length - Flange x Flange:

DN	Standard length - mm	Minimum length - mm
200	400	385

# Steel ball valve - DN 200, PN 25

## Type 61103 - Reduced bore

### Flange × Flange with ISO-flange and BROEN-Gear

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

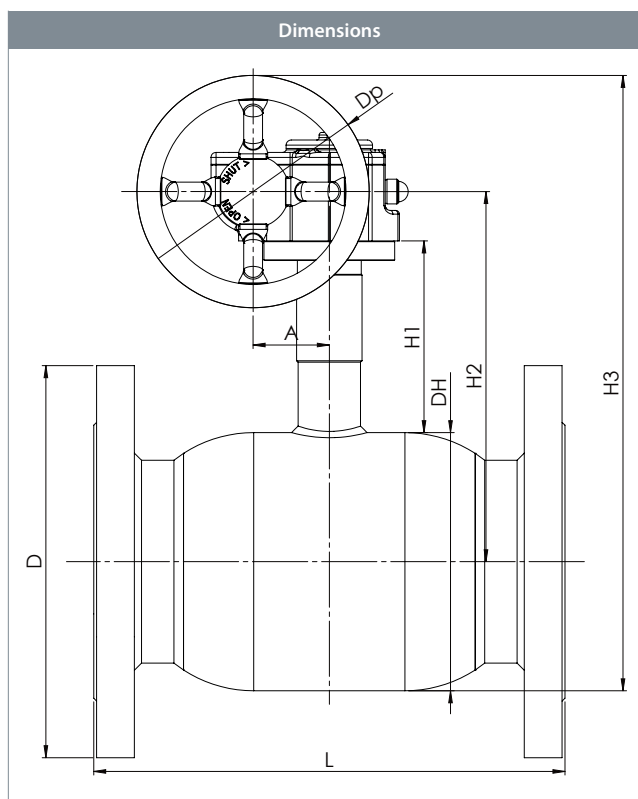
Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

Other lengths and special flanges available on request.



					All dimensions in mm							
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	L	H1	H2	H3	Dp	A
200	6110325200 480	150	1500	71.3	267	360	400	155	331	590	250	69

# Steel ball valve - DN 200, PN 25



## Type 61103 - Reduced bore

Technical drawing		Material description	
	1	Weld	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3	
22	Bearing	Steel - PTFE	
23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2	
47	Gear	-	

Special model: Minimum length - Flange x Flange:

DN	Standard length - mm	Minimum length - mm
200	400	385

# Steel ball valve - DN 250 - 500, PN 25

## Type 85004 - Reduced bore

### Flange × Flange with low stem

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The following operating devices are available on request:

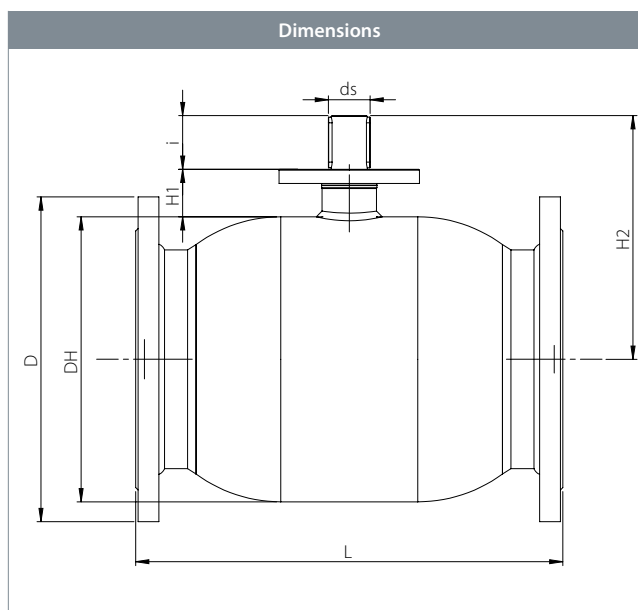
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	t	L	H1	H2	ds	i	ISO
250	8500425250 000	200	3200	92.8	356	405	-	533	60.2	304	45	67	F14
300	8500425300 000	250	4700	141.8	457	460	-	610	69.2	382	50	84	F16
350	8500425350 000	250	5500	178.7	457	520	-	686	69.2	382	50	84	F16
400	8500425400 000*	305	10600	297.8	508	620	-	762	82.5	437	60	100	F16
500	8500425500 000*	400	18150	535.0	660	730	-	914	105.0	547	80	112	F30

\* DN 400 - 500 - with ball flow guide.



# Steel ball valve - DN 250 - 500, PN 25



## Type 85004 - Reduced bore

Technical drawing		Material description	
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	EPDM70
	29	Key	Steel
	30	Circlip	Steel
	48	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	49	Bearing	PTFE coated steel
	50	Friction ring	Gunmetal
51	Bottom end	Steel - S355J2H - EN 10210	
52	Back-up ring	Steel - S355J2H - EN 10210	
53	Springs	Stainless steel - AISI304 / 1.4301 / EN 10088-3	

Accessories	BROEN No.	Dimension	Description
	600587	DN 250	BROEN-Gear.
	600588	DN 300	
	600588	DN 350	
	600589	DN 400	
	600590	DN 500	

# Steel ball valve - DN 250 - 500, PN 25

## Type 85004 - Reduced bore

### Flange × Flange with low stem and BROEN-Gear

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

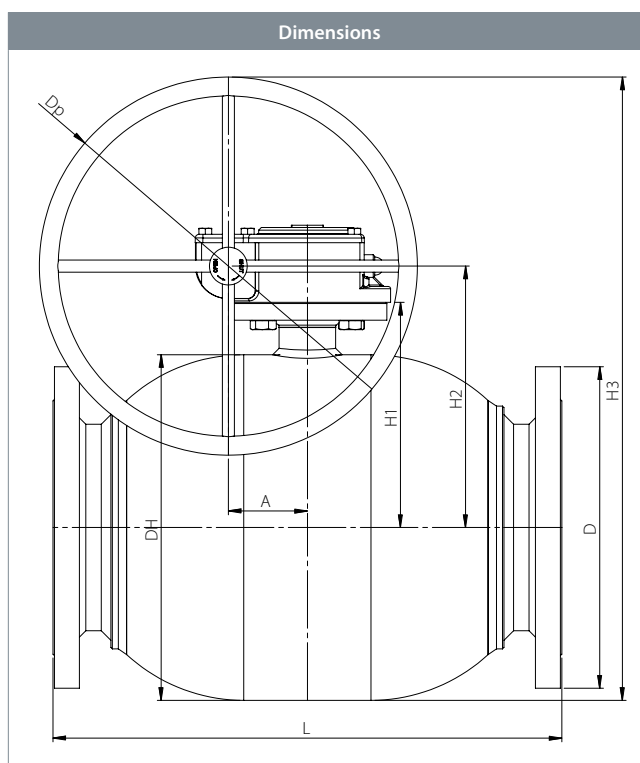
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	t	L	H1	H2	H3	Dp	A
250	8500425250 480	200	3200	107.2	356	405	-	533	60.2	275	500.0	450	68.8
300	8500425300 480	250	4700	147.0	457	460	-	610	69.2	346	596.0	500	104.5
350	8500425350 480	250	5500	183.7	457	520	-	686	69.2	346	596.0	500	104.5
400	8500425400 480*	305	10600	306.1	508	620	-	762	82.5	387	566.5	350	130.0
500	8500425500 480*	400	18150	603.1	660	730	-	914	105.0	494	719.0	450	182.0

\* DN 400 - 500 - with ball flow guide.

# Steel ball valve - DN 250 - 500, PN 25

## Type 85004 - Reduced bore



Technical drawing	Material description	
	2 Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5 Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6 Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7 Seat ring	PTFE 20% Carbon
	12 Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15 O-ring	EPDM70
	23 ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27 O-ring	EPDM70
	48 Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	50 Friction ring	Gunmetal
	51 Bottom end	Steel - S355J2H - EN 10210
	52 Back-up ring	Steel - S355J2H - EN 10210
	53 Springs	Stainless steel - AISI304 / 1.4301 / EN 10088-3

# Steel ball valve - DN 250 - 500, PN 25

## Type 85014 - Reduced bore

### Flange × Flange with high stem

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The following operating devices are available on request:

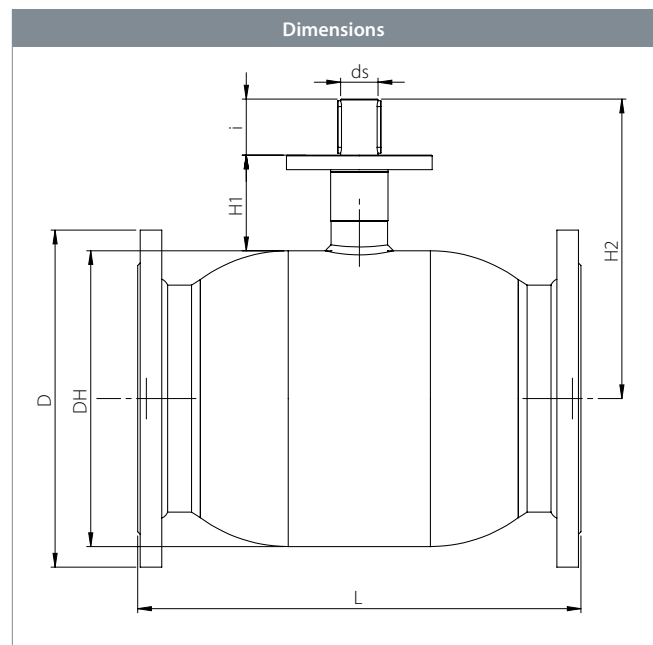
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	L	H1	H2	ds	i	ISO
250	8503425250 000	200	3200	94.4	356	405	533	115	360.0	45	67	F14
300	8503425300 000	250	4700	143.9	457	460	610	130	443.0	50	84	F16
350	8503425350 000	250	5500	180.8	457	520	686	130	443.0	50	84	F16
400	8503425400 000*	300	10600	301.1	508	620	762	155	506.5	60	100	F16
500	8503425500 000*	400	18150	541.2	660	730	914	180	622.5	80	112	F30

\* DN 400 - 500 - with ball flow guide.

# Steel ball valve - DN 250 - 500, PN 25



## Type 85014 - Reduced bore

Technical drawing	Material description		
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	5	Bearing	PTFE coated steel
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	9	Disc	Steel - S235JR / EN 10025-2
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Back-up ring	Steel - S355J2H / EN 10210-1
	15	Seat	PTFE 20% Carbon
	16	O-ring	EPDM70
	17	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	18	Parallel Key	Steel
	19	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2
	20	O-ring	VITON
	21	Back-up ring	PTFE 20% Carbon
	22	Locking ring	Steel
	23	O-ring	EPDM
	24	Flange	Steel - P265GH / 1.0038 / EN 10028-2

Accessories	BROEN No.	Dimension	Description
	600587	DN 250	BROEN-Gear.
	600588	DN 300	
	600588	DN 350	
	600589	DN 400	
	600590	DN 500	

# Steel ball valve - DN 250 - 500, PN 25

## Type 85014 - Reduced bore

### Flange × Flange with high stem and BROEN-Gear

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

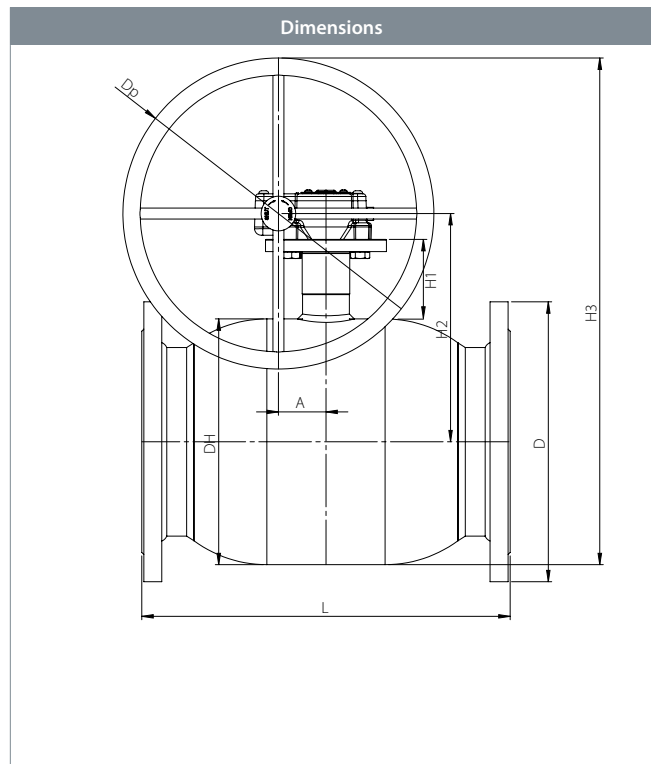
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	L	H1	H2	H3	Dp	A
250	8503425250 480	200	3200	96.5	356	405	533	115	330	555	450	68.8
300	8503425300 480	250	4700	149.1	457	460	610	130	407	657	500	104.5
350	8503425350 480	250	5500	185.8	457	520	686	130	407	657	500	104.5
400	8503425400 480*	300	10600	309.6	508	620	762	155	464	639	350	130.0
500	8503425500 480*	400	18150	609.4	660	730	914	180	569	794	450	182.0

\* DN 400 - 500 - with ball flow guide.

# Steel ball valve - DN 250 - 500, PN 25



## Type 85014 - Reduced bore

Technical drawing	Material description		
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Back-up ring	Steel - S355J2H / EN 10210-1
	15	Seat	PTFE 20% Carbon
	16	O-ring	EPDM70
	17	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	19	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2
	24	Flange	Steel - P265GH / 1.0038 / EN 10028-2

# Steel ball valve - DN 250 - 500, PN 25

## Type 85114 - Reduced bore - FLOWOPTIMIZED

### Flange × Flange with high stem

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The following operating devices are available on request:

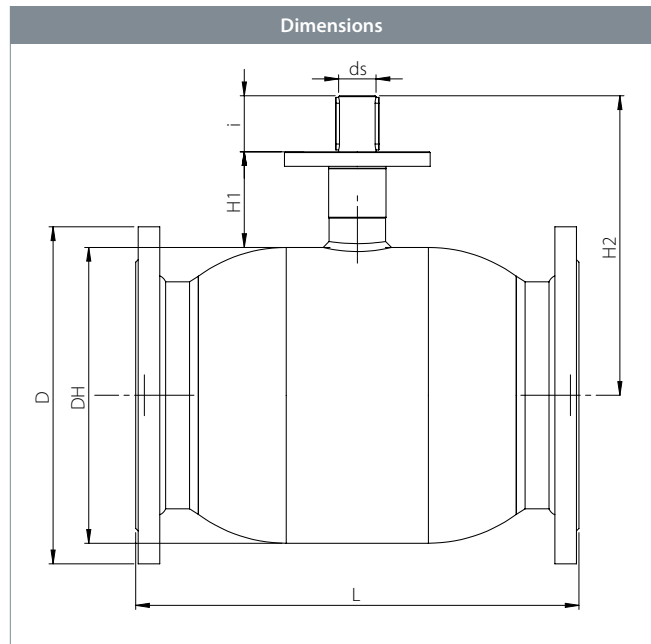
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	L	H1	H2	ds	i	ISO
250	8513425250 000	200	5300	96.2	356	405	533	115	360.0	45	67	F14
300	8513425300 000	250	8200	146.7	457	460	610	130	443.0	50	84	F16
350	8513425350 000	250	8900	183.6	457	520	686	130	443.0	50	84	F16
400	8513425400 000	300	13700	302.9	508	620	762	155	506.5	60	100	F16
500	8513425500 000	400	20300	543.6	660	730	914	180	622.5	80	112	F30



# Steel ball valve - DN 250 - 500, PN 25



Type 85114 - **Reduced bore** - FLOWOPTIMIZED

Technical drawing	Material description		
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	5	Bearing	PTFE coated steel
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	9	Disc	Steel - S235JR / EN 10025-2
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Flow Sleeve	Steel - P235GH / EN 10217-2
	16	Back-up ring	Steel - S355J2H / EN 10210-1
	17	Seat	PTFE 20% Carbon
	18	O-ring	EPDM70
	19	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	20	Parallel Key	Steel
	21	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2
	22	O-ring	VITON
	23	Back-up ring	PTFE 20% Carbon
	24	Locking ring	Steel
	25	O-ring	EPDM
	26	Flange	Steel - P265GH / 1.0038 / EN 10028-2

Accessories	BROEN No.	Dimension	Description
	600587	DN 250	BROEN-Gear.
	600588	DN 300	
	600588	DN 350	
	600589	DN 400	
	600590	DN 500	

# Steel ball valve - DN 250 - 500, PN 25

Type 85114 - **Reduced bore** - FLOWOPTIMIZED

**Flange × Flange with high stem and BROEN-Gear**

Fully welded steel ball valve.

**Materials**

See next page.

**Applications**

Isolating valve for heating systems, district heating, cooling and industrial purpose.

**Media**

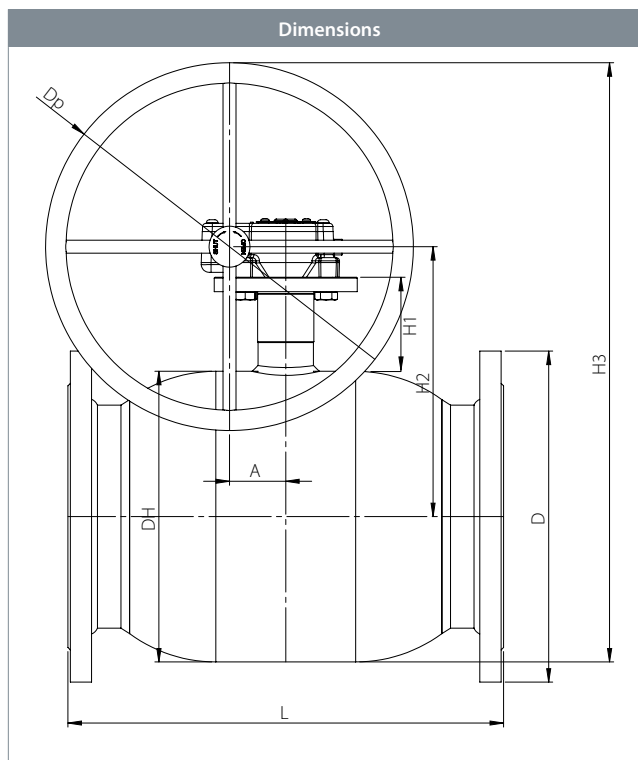
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**Surface treatment**

Eco-friendly protection finish against corrosion.

**Approvals and certificates**

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	L	H1	H2	H3	Dp	A
250	8513425250 480	200	5300	99.1	356	405	533	115	330	555	450	68.8
300	8513425300 480	250	8200	151.7	457	460	610	130	407	657	500	104.5
350	8513425350 480	250	8900	188.4	457	460	686	130	407	657	500	104.5
400	8513425400 480	300	13700	312.2	508	620	762	155	464	639	350	130.0
500	8513425500 480	400	20300	612.0	660	730	914	180	569	794	450	182.0

# Steel ball valve - DN 250 - 500, PN 25

Type 85114 - **Reduced bore** - FLOWOPTIMIZED



Technical drawing	Material description		
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Flow Sleeve	Steel - P235GH / EN 10217-2
	16	Back-up ring	Steel - S355J2H / EN 10210-1
	17	Seat	PTFE 20% Carbon
	18	O-ring	EPDM70
	19	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	21	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2
26	Flange	Steel - P265GH / 1.0038 / EN 10028-2	

# Steel ball valve - DN 65 - 150, PN 16

Type **BBM50461 / BBM52461** - **Reduced bore**

## Flange × Flange

Fully welded steel ball valve.

## Materials

See next page.

## Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

## Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

## Surface treatment

Eco-friendly protection finish against corrosion.

## Operation

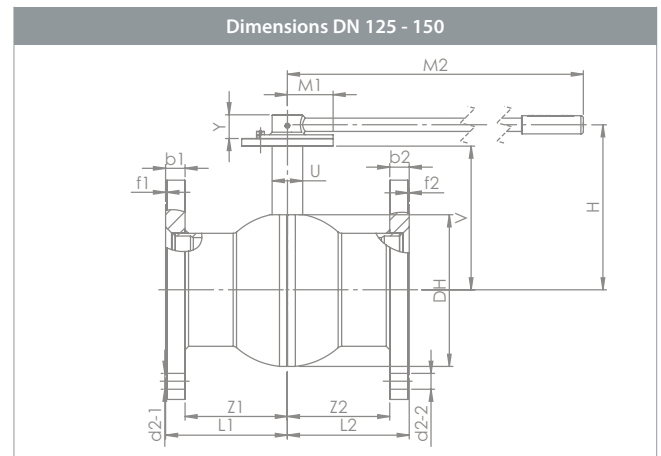
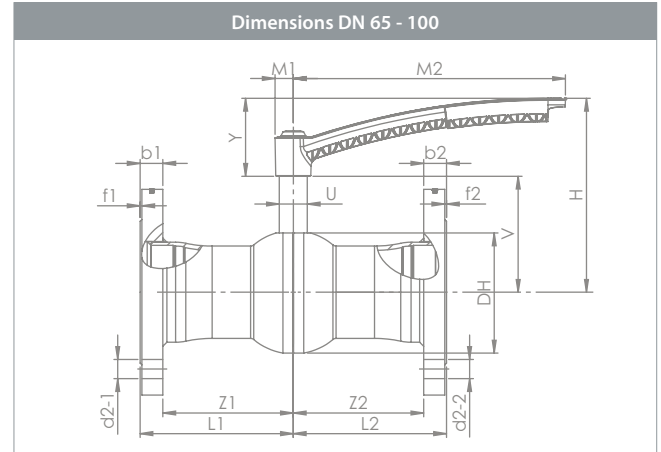
The standard handle is 180 degrees adjustable.

## Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

## Notice

We recommend to add a BROEN-Gear for DN 125 - 150. Other lengths and special flanges available on request.



					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
65	8500416065 010	50	186	9.37	145.0	145.0	125.0	125.0	18	18	20	20	2	2	90.0	93.7	162.7
80	8500416080 010	65	293	11.17	155.0	155.0	135.0	135.0	18	18	20	20	2	2	110.5	118.9	207.9
100	8500416100 010	80	471	14.79	175.0	175.0	153.0	153.0	18	18	22	22	2	2	137.1	132.5	221.5
125	8500416125 010	100	708	21.74	162.5	162.5	140.5	140.5	18	18	22	22	2	2	168.1	172.7	207.7
150	8500416150 010	125	1049	31.08	175.0	175.0	151.0	151.0	22	22	24	24	2	2	206.4	191,8	226,8

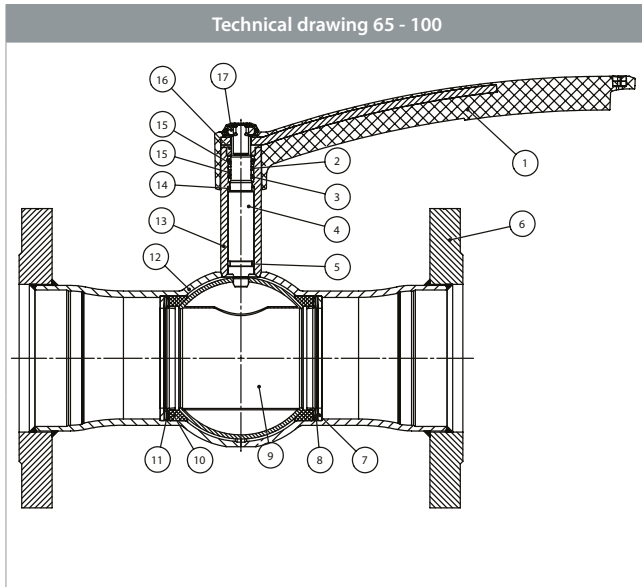
  

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
65	8520416065 010	50	215	9.44	145.0	145.0	125.0	125.0	18	18	20	20	2	2	90.0	93.7	162.7
80	8520416080 010	65	335	11.28	155.0	155.0	135.0	135.0	18	18	20	20	2	2	110.5	118.9	207.9
100	8520416100 010	80	550	14.96	175.0	175.0	153.0	153.0	18	18	22	22	2	2	137.1	132.5	221.5
125	8520416125 010	100	814	22.00	162.5	162.5	140.5	140.5	18	18	22	22	2	2	168.1	172.7	207.7
150	8520416150 010	125	1194	31.48	175.0	175.0	151.0	151.0	22	22	24	24	2	2	206.4	191,8	226,8

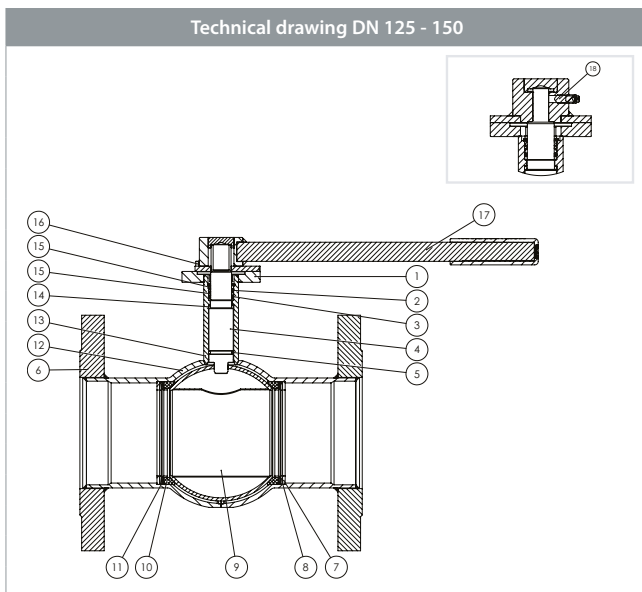
FLOWOPTIMIZED

# Steel ball valve - DN 65 - 150, PN 16

Type **BBM50461 / BBM52461** - **Reduced bore**



Technical drawing 65 - 100		Material description
1	Handle	Fibreglass reinforced composite - PA6 GF30
2	O-ring	FKM70
3	O-ring	EPDM70
4	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
5	Friction ring	PTFE 20% carbon
6	Flange	Steel - S355J2H / EN 10210-2
7	Neck ring	Steel - R St37-2 / DIN 17100
8	Disc spring	Steel / EN 10132-4
9	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
10	Seat	PTFE 20% carbon
11	Support ring	Steel - DC01 / EN 10130
12	Housing	Carbon steel - P235GH / EN 10216-2
13	Stem guide	Steel - P265GH / EN 10273
14	Friction ring	PTFE 20% carbon
15	Spacer ring	PTFE 20% carbon
16	Locking washer	Distaloy HP+0,3%C
17	Locking nut	Steel



Technical drawing DN 125 - 150		Material description
1	ISO flange	Steel - S355J2+A / EN 10025-2
2	O-ring	FKM70
3	O-ring	EPDM70
4	Stem	Stainless steel ASTM420 / 1.4021 / EN 10088-3
5	Friction ring	PTFE 20% carbon
6	Flange	Steel - S355J2H / EN 10210-2
7	Neck ring	Steel - R St37-2 / DIN 17100
8	Disc spring	Steel / EN 10132-4
9	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
10	Seat	PTFE 20% carbon
11	Support ring	Steel - DC01 / EN 10130
12	Housing	Carbon steel - P235GH / EN 10216-2
13	Stem guide	P265GH / EN 10273
14	Friction ring	PTFE 20% carbon
15	Spacer ring	PTFE 20% carbon
16	Pin	Steel
17	Handle	Carbon Steel
18	Socket set screw	Steel

\*The product shown is flowoptimized

All dimensions in mm			
U	Y	M1	M2
28	69	18.9	172.4
32	89	20.8	310.9
32	89	20.8	310.9
40	39	45.0	365.0
45	39	62.5	650.0

All dimensions in mm			
U	Y	M1	M2
28	69	18.9	172.4
32	89	20.8	310.9
32	89	20.8	310.9
40	39	45.0	365.0
45	39	62.5	650.0

Accessories	BROEN No.	Dimension	Description
	600584	DN 100	BROEN-gear.
	600585	DN 125	
	600586	DN 150	
	954245	DN 65	ISO-flange.
	958245	DN 80 - 100	

Special model: Minimum length - Flange x Flange. Only applicable for variants without optimized flow.

DN	Standard length - mm	Minimum length - mm
65	290	270
80	310	280
100	350	300

# Steel ball valve - DN 65 - 150, PN 16

Type **BBM50464 / BBM52464** - **Reduced bore**

**Flange × Flange with ISO-flange and BROEN-Gear**

Fully welded steel ball valve.

**Materials**

See next page.

**Applications**

Isolating valve for heating systems, district heating, cooling and industrial purpose.

**Media**

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**Surface treatment**

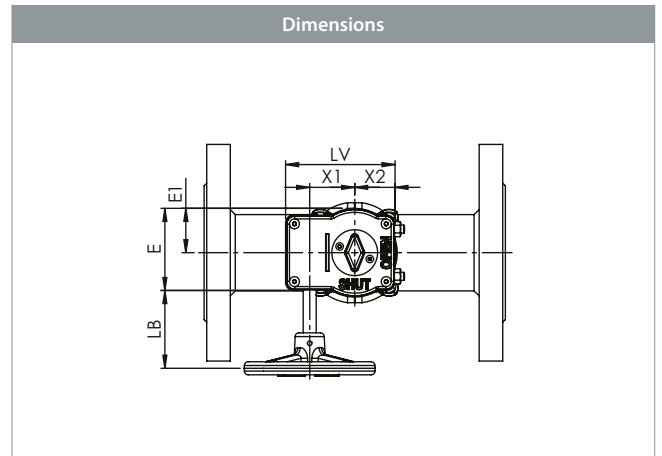
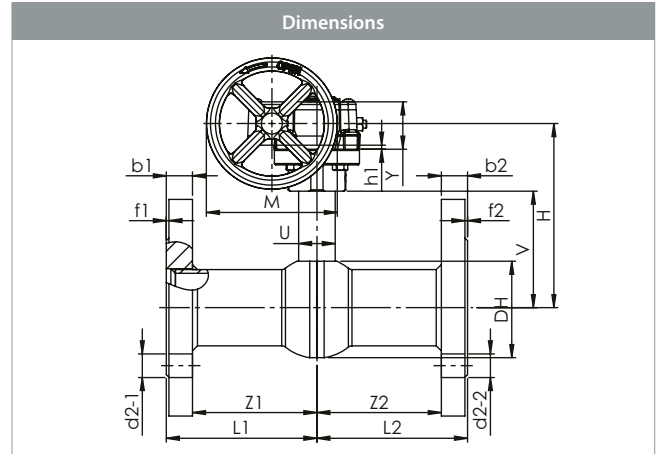
Eco-friendly protection finish against corrosion.

**Approvals and certificates**

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

**Notice**

Other lengths available on request.



					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
65	8500416065 480	50	186	10.68	145.0	145.0	125.0	125.0	18	18	20	20	2	2	90.0	97.3	148.8
80	8500416080 480	65	293	12.95	155.0	155.0	135.0	135.0	18	18	20	20	2	2	110.5	123.9	177.4
100	8500416100 480	80	471	16.64	175.0	175.0	153.0	153.0	18	18	22	22	2	2	137.1	137.5	191.0
125	8500416125 480	100	708	23.84	162.5	162.5	140.5	140.5	18	18	22	22	2	2	168.1	172.7	212.7
150	8500416150 480	125	1049	34.91	175.0	175.0	151.0	151.0	22	22	24	24	2	2	206.4	191.8	237.8

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L1	L2	Z1	Z2	d2-1	d2-2	b1	b2	f1	f2	DH	V	H
65	8520416065 480	50	215	10.74	145.0	145.0	125.0	125.0	18	18	20	20	2	2	90.0	97.3	148.8
80	8520416080 480	65	335	13.05	155.0	155.0	135.0	135.0	18	18	20	20	2	2	110.5	123.9	177.4
100	8520416100 480	80	550	16.80	175.0	175.0	153.0	153.0	18	18	22	22	2	2	137.1	137.5	191.0
125	8520416125 480	100	814	24.10	162.5	162.5	140.5	140.5	18	18	22	22	2	2	168.1	172.7	212.7
150	8520416150 480	125	1194	35.30	175.0	175.0	151.0	151.0	22	22	24	24	2	2	206.4	191.8	237.8

FLOWOPTIMIZED

# Steel ball valve - DN 65 - 150, PN 16

Type **BBM50464 / BBM52464** - **Reduced bore**



Technical drawing	Material description		
	1	ISO flange	Steel - S355J2+A / EN 10025-2
	2	O-ring	FKM70
	3	O-ring	EPDM70
	4	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	5	Friction ring	PTFE 20% carbon
	6	Neck ring	Steel - R St37-2 / DIN 17100
	7	Disc spring	Steel / EN 10132-4
	8	Ball*	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	9	Seat	PTFE 20% carbon
	10	Support ring	Steel - DC01 - EN 10130
	11	Flange	Steel - S355J2H / EN 10210-2
	12	Housing	Carbon steel - P235GH - EN 10216-2
	13	Stem guide	P265GH - EN 10273
	14	Friction ring	PTFE 20% carbon
	15	Spacer ring	PTFE 20% carbon
	16	Stem-Gearbox adapter	Steel - S355J2 / EN 10025-2
	17	Gearbox	Cast Iron
	18	Screw	Steel
	19	Parallel key	Steel

\*The product shown is flowoptimized

Special model: Minimum length - Flange × Flange. Only applicable for variants without optimized flow.

DN	Standard length - mm	Minimum length - mm
65	290	135
80	310	140
100	350	150

All dimensions in mm									
U	Y	h1	M	LB	E	E1	X1	X2	LV
28	36.0	3	100	59.2	62.5	33.8	34.4	30.8	83.5
32	39.5	2	100	73.9	73.9	39.9	41.3	37.9	99.9
32	39.5	2	200	105.1	73.9	39.9	41.3	37.9	99.9
40	50.0	2	200	112.9	96.7	53.6	55.0	48.1	131.2
45	62.0	2	300	178.6	118.7	67.4	68.8	59.4	162.7

All dimensions in mm									
U	Y	h1	M	LB	E	E1	X1	X2	LV
28	36.0	3	100	59.2	62.5	33.8	34.4	30.8	83.5
32	39.5	2	100	73.9	73.9	39.9	41.3	37.9	99.9
32	39.5	2	200	105.1	73.9	39.9	41.3	37.9	99.9
40	50.0	2	200	112.9	96.7	53.6	55.0	48.1	131.2
45	62.0	2	300	178.6	118.7	67.4	68.8	59.4	162.7

# Steel ball valve - DN 200, PN 16

## Type 61103 - Reduced bore

### Flange × Flange with ISO-flange

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The standard handle is 180 degrees adjustable.

The following operating devices are available on request:

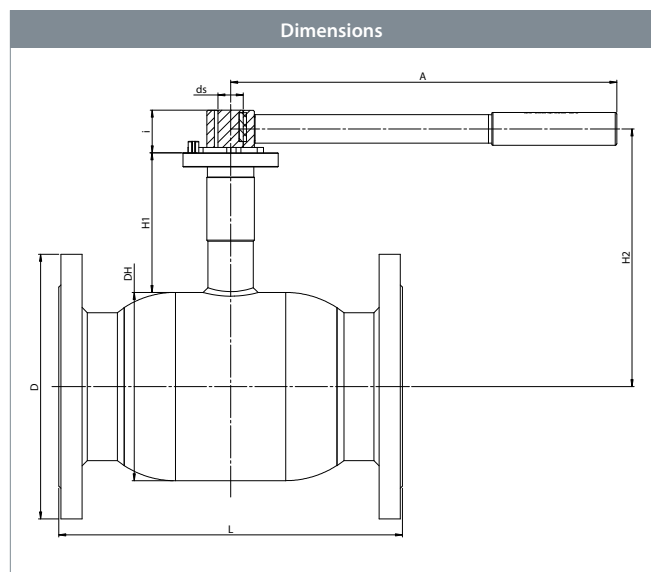
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear. Other lengths and special flanges available on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	L	H1	H2	ds	i	A	ISO
200	61103200 000	150	1500	61.7	267	340	400	155	289	30	60	900	F12



# Steel ball valve - DN 200, PN 16

## Type 61103 - Reduced bore



Technical drawing		Material description	
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	17	O-ring	EPDM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	20	Handle	Steel
	22	Bearing	Steel - PTFE
23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2	
25	Friction gasket	PTFE 20% Carbon	

Accessories	BROEN No.	Dimension	Description
	600586	DN 200	BROEN-Gear.

Special model: Minimum length - Flange x Flange:

DN	Standard length - mm	Minimum length - mm
200	400	385

# Steel ball valve - DN 200, PN 16

## Type 61103 - Reduced bore

### Flange × Flange with ISO-flange and BROEN-Gear

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

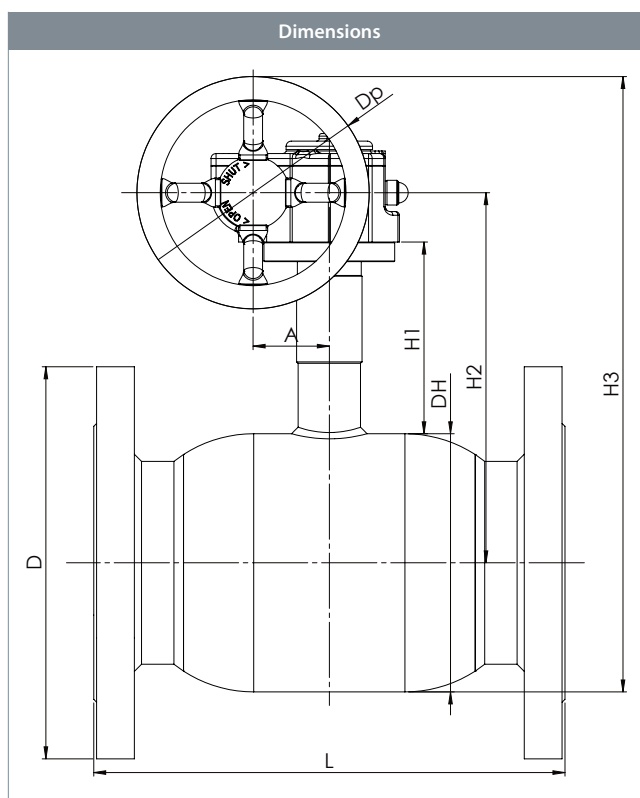
Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

Other lengths and special flanges available on request.



					All dimensions in mm							
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	L	H1	H2	H3	Dp	A
200	6110316200 480	150	1500	69.7	267	340	400	155	289	590	250	69

# Steel ball valve - DN 200, PN 16



## Type 61103 - Reduced bore

Technical drawing		Material description	
	1	Weld	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3	
22	Bearing	Steel - PTFE	
23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2	
47	Gear	-	

Special model: Minimum length - Flange x Flange:

DN	Standard length - mm	Minimum length - mm
200	400	385

# Steel ball valve - DN 250 - 500, PN 16

## Type 85004 - Reduced bore

### Flange × Flange with low stem

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The following operating devices are available on request:

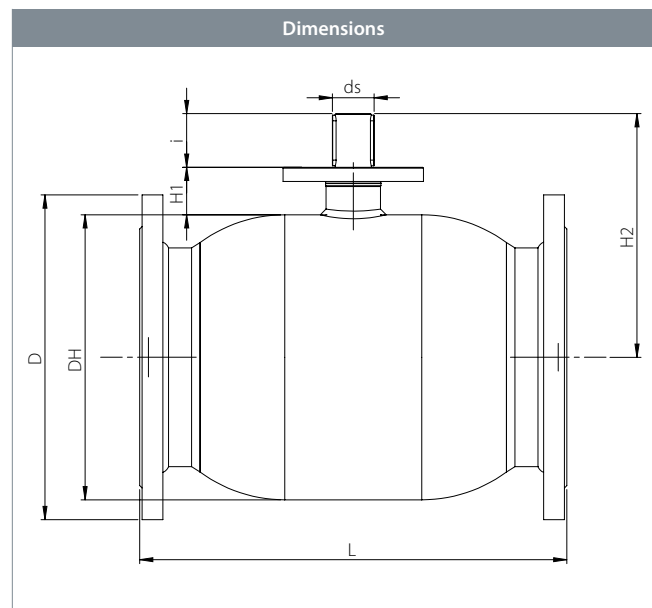
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	t	L	H1	H2	ds	i	ISO
250	8500416250 000	200	3200	92.8	356	405	-	533	60.2	304	45	67	F14
300	8500416300 000	250	4700	141.8	457	460	-	610	69.2	382	50	84	F16
350	8500416350 000	250	5500	178.7	457	520	-	686	69.2	382	50	84	F16
400	On request	305	10600	297.8	508	620	-	762	82.5	437	60	100	F16
500	On request	400	18150	535.0	660	730	-	914	105.0	547	80	112	F30

# Steel ball valve - DN 250 - 500, PN 16



## Type 85004 - Reduced bore

Technical drawing		Material description	
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	EPDM70
	29	Key	Steel
	30	Circlip	Steel
	48	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	49	Bearing	PTFE coated steel
	50	Friction ring	Gunmetal
51	Bottom end	Steel - S355J2H - EN 10210	
52	Back-up ring	Steel - S355J2H - EN 10210	
53	Springs	Stainless steel - AISI304 / 1.4301 / EN 10088-3	

Accessories	BROEN No.	Dimension	Description
	600587	DN 250	BROEN-Gear.
	600588	DN 300	
	600588	DN 350	
	600589	DN 400	
	600590	DN 500	

# Steel ball valve - DN 250 - 500, PN 16

## Type 85004 - Reduced bore

### Flange × Flange with low stem and BROEN-Gear

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

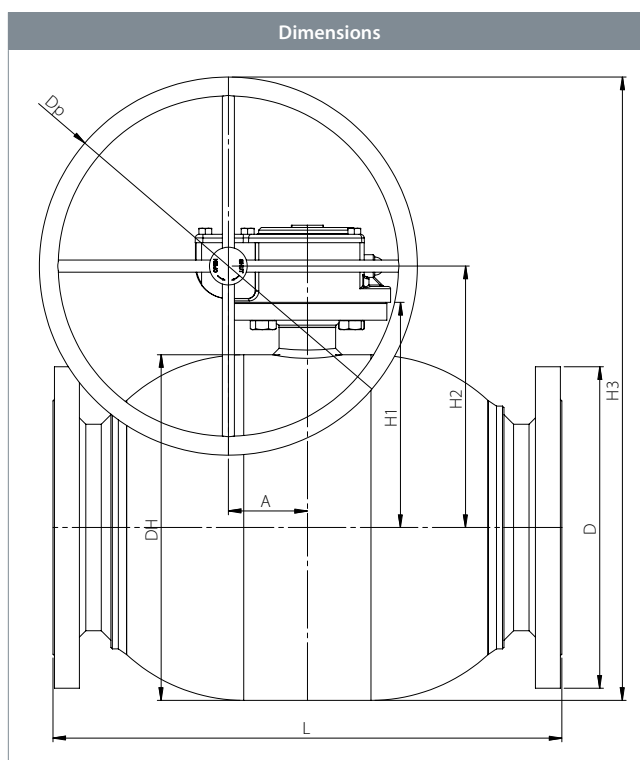
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	t	L	H1	H2	H3	Dp	A
250	8500416250 480	200	3200	94.9	356	405	-	533	60.2	275	500.0	450	68.8
300	8500416300 480	250	4700	147.0	457	460	-	610	69.2	346	596.0	500	104.5
350	8500416350 480	250	5500	183.7	457	520	-	686	69.2	346	596.0	500	104.5
400	8500416400 480	305	10600	302.8	508	620	-	762	82.5	387	566.5	350	130.0
500	8500416500 480	400	18150	597.5	660	730	-	914	105.0	494	719.0	450	182.0

# Steel ball valve - DN 250 - 500, PN 16

## Type 85004 - Reduced bore



Technical drawing		Material description	
	2	Flange	Steel - P265GH / 1.0038 / EN 10028-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	EPDM70
	48	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	50	Friction ring	Gunmetal
	51	Bottom end	Steel - S355J2H - EN 10210
	52	Back-up ring	Steel - S355J2H - EN 10210
	53	Springs	Stainless steel - AISI304 / 1.4301 / EN 10088-3

# Steel ball valve - DN 250 - 500, PN 16

## Type 85014 - Reduced bore

### Flange × Flange with high stem

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The following operating devices are available on request:

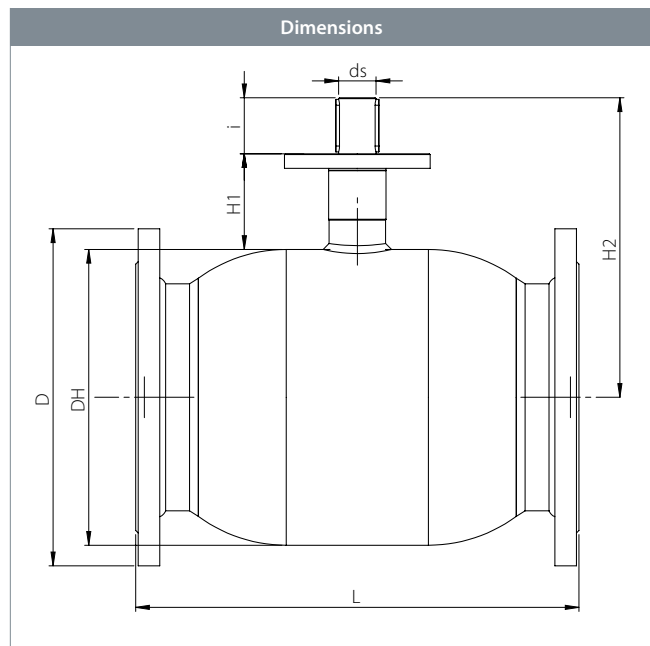
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	L	H1	H2	ds	i	ISO
250	8503416250 000	200	3200	94.4	356	405	533	115	360.0	45	67	F14
300	8503416300 000	250	4700	143.9	457	460	610	130	443.0	50	84	F16
350	8503416350 000	250	5500	180.8	457	520	686	130	443.0	50	84	F16
400	8503416400 000	300	10600	301.1	508	620	762	155	506.5	60	100	F16
500	8503416500 000	400	18150	541.2	660	730	914	180	622.5	80	112	F30



# Steel ball valve - DN 250 - 500, PN 16

## Type 85014 - Reduced bore



Technical drawing		Material description	
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	5	Bearing	PTFE coated steel
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	9	Disc	Steel - S235JR / EN 10025-2
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Back-up ring	Steel - S355J2H / EN 10210-1
	15	Seat	PTFE 20% Carbon
	16	O-ring	EPDM70
	17	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	18	Parallel Key	Steel
	19	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2
	20	O-ring	VITON
	21	Back-up ring	PTFE 20% Carbon
	22	Locking ring	Steel
	23	O-ring	EPDM
	24	Flange	Steel - P265GH / 1.0038 / EN 10028-2

Accessories	BROEN No.	Dimension	Description
	600587	DN 250	BROEN-Gear.
	600588	DN 300	
	600588	DN 350	
	600589	DN 400	
	600590	DN 500	

# Steel ball valve - DN 250 - 500, PN 16

## Type 85014 - Reduced bore

### Flange × Flange with high stem and BROEN-Gear

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

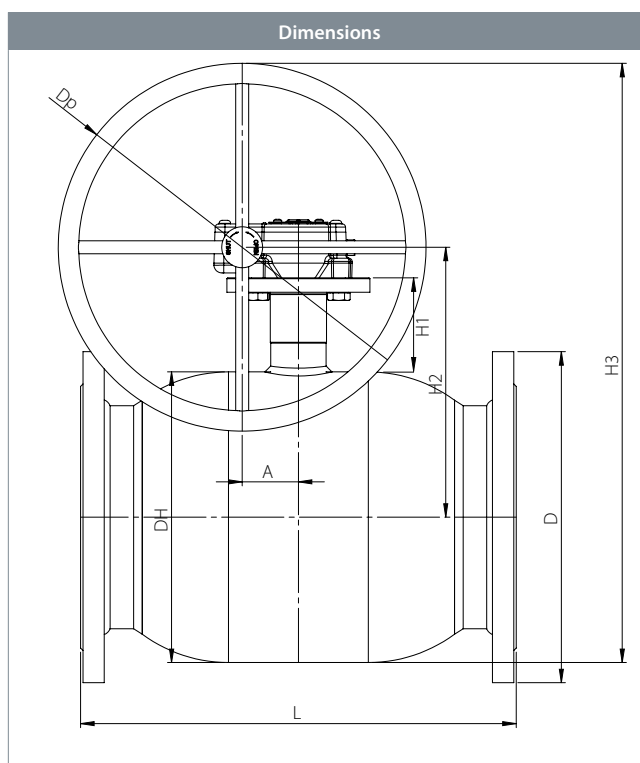
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	L	H1	H2	H3	Dp	A
250	8503416250 480	200	3200	96.5	356	405	533	115	330	555	450	68.8
300	8503416300 480	250	4700	149.1	457	460	610	130	407	657	500	104.5
350	8503416350 480	250	5500	185.8	457	520	686	130	407	657	500	104.5
400	8503416400 480	300	10600	309.6	508	620	762	155	464	639	350	130.0
500	8503416500 480	400	18150	609.4	660	730	914	180	569	794	450	182.0

# Steel ball valve - DN 250 - 500, PN 16

## Type 85014 - Reduced bore



Technical drawing	Material description		
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Back-up ring	Steel - S355J2H / EN 10210-1
	15	Seat	PTFE 20% Carbon
	16	O-ring	EPDM70
	17	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	19	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2
24	Flange	Steel - P265GH / 1.0038 / EN 10028-2	

# Steel ball valve - DN 250 - 500, PN 16

## Type 85114 - Reduced bore - FLOWOPTIMIZED

### Flange × Flange with high stem

Fully welded steel ball valve.

### Materials

See next page.

### Applications

Isolating valve for heating systems, district heating, cooling and industrial purpose.

### Media

Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### Operation

The following operating devices are available on request:

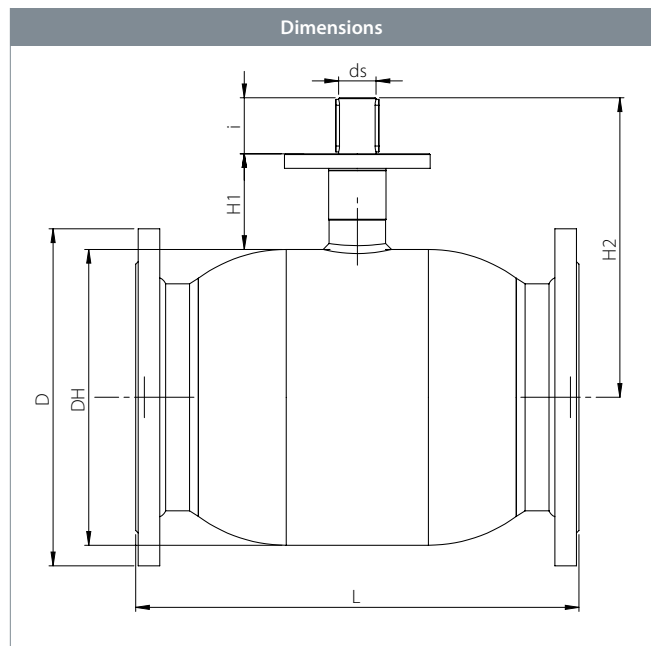
- BROEN-Gear.
- Electric actuator.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	L	H1	H2	ds	i	ISO
250	8513416250 000	200	5300	96.2	356	405	533	115	360.0	45	67	F14
300	8513416300 000	250	8200	146.7	457	460	610	130	443.0	50	84	F16
350	8513416350 000	250	8900	183.6	457	520	686	130	443.0	50	84	F16
400	8513416400 000	300	13700	302.9	508	620	762	155	506.5	60	100	F16
500	8513416500 000	400	20300	543.6	660	730	914	180	622.5	80	112	F30

# Steel ball valve - DN 250 - 500, PN 16



Type 85114 - **Reduced bore** - FLOWOPTIMIZED

Technical drawing	Material description		
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	5	Bearing	PTFE coated steel
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	9	Disc	Steel - S235JR / EN 10025-2
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Flow Sleeve	Steel - P235GH / EN 10217-2
	16	Back-up ring	Steel - S355J2H / EN 10210-1
	17	Seat	PTFE 20% Carbon
	18	O-ring	EPDM70
	19	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	20	Parallel Key	Steel
	21	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2
	22	O-ring	VITON
	23	Back-up ring	PTFE 20% Carbon
	24	Locking ring	Steel
	25	O-ring	EPDM
	26	Flange	Steel - P265GH / 1.0038 / EN 10028-2

Accessories	BROEN No.	Dimension	Description
	600587	DN 250	BROEN-Gear.
	600588	DN 300	
	600588	DN 350	
	600589	DN 400	
	600590	DN 500	

# Steel ball valve - DN 250 - 500, PN 16

Type 85114 - **Reduced bore** - FLOWOPTIMIZED

**Flange × Flange with high stem and BROEN-Gear**

Fully welded steel ball valve.

**Materials**

See next page.

**Applications**

Isolating valve for heating systems, district heating, cooling and industrial purpose.

**Media**

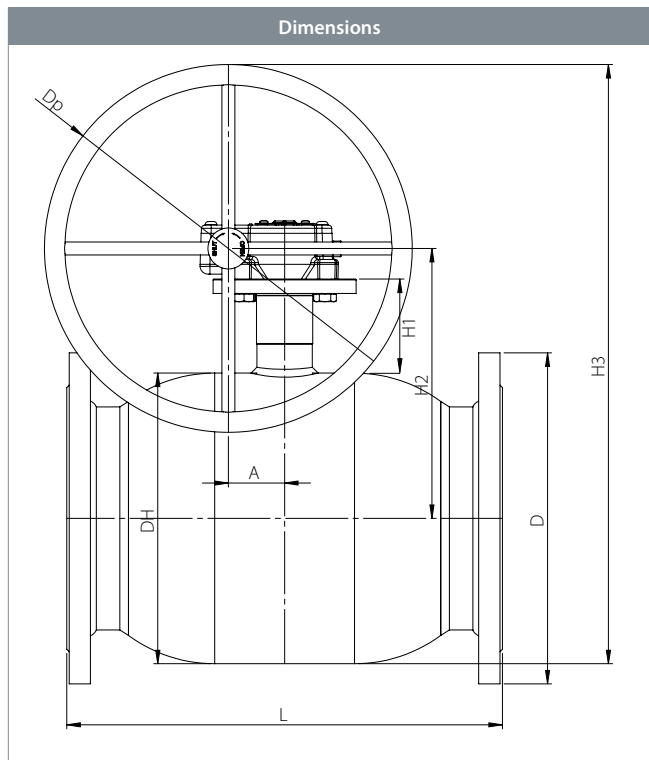
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**Surface treatment**

Eco-friendly protection finish against corrosion.

**Approvals and certificates**

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 50 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	L	H1	H2	H3	Dp	A
250	8513416250 480	200	5300	99,1	356	405	533	115	330	555	450	68,8
300	8513416300 480	250	8200	151,7	457	460	610	130	407	657	500	104,5
350	8513416350 480	250	8900	188,4	457	460	686	130	407	657	500	104,5
400	8513416400 480	300	13700	312,2	508	620	762	155	464	639	350	130,0
500	8513416500 480	400	20300	612,0	660	730	914	180	569	794	450	182,0

# Steel ball valve - DN 250 - 500, PN 16

Type 85114 - **Reduced bore** - FLOWOPTIMIZED



Technical drawing	Material description		
	1	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	3	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	6	Friction ring	Gunmetal
	7	O-ring	AFLAS
	8	Stem	Stainless steel - ASTM 420 / 1.4021 / EN 10088-3
	11	Weld end	Steel - P235GH / EN 10217-2
	12	Bottom end	Steel - P265GH / EN 10216-2
	14	Flow Sleeve	Steel - P235GH / EN 10217-2
	16	Back-up ring	Steel - S355J2H / EN 10210-1
	17	Seat	PTFE 20% Carbon
	18	O-ring	EPDM70
	19	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	21	ISO-flange	Steel - P235GH / 1.0038 / EN 10028-2
26	Flange	Steel - P265GH / 1.0038 / EN 10028-2	

## L-Handle, DN 15 - 65

Type 90... - Full bore

With red and blue clips



DN	BROEN No.	L - mm
15 - 20	901550002	75
25 - 32	903250002	100
40 - 65	904050001	120

## T-handle, DN 15 - 32

Type 90... - Full bore

With red and blue clips



DN	BROEN No.	L - mm
15 - 20	9015550022	70
25 - 32	9032550002	81



## Gear-Handle, DN 15 - 65

Type 90... - Full bore

With red and blue clips



DN	BROEN No.	L - mm
15 - 20	9015560009	59
25 - 32	9032560009	81
40 - 65	9040560009	108

## T-handle - DN 10 - 50

Type 66050 - Reduced bore



DN	BROEN No.	Color	L - mm	B - mm
10 - 32	66050010 000	Yellow	85	34
10 - 32	66050010 003	Blue	85	34
10 - 32	66050010 004	Red	85	34
40 - 50	66050040 000	Yellow	120	44
40 - 50	66050040 003	Blue	120	44
40 - 50	66050040 004	Red	120	44

## Handle - DN 10 - 200

Type 66060 / 66064 / 66061 - Reduced bore



DN	BROEN No.	L - mm
10 - 32	66060010	140
40 - 50	66060040	180
65 - 80	66060065	275
100	66064100	365
125	66061100	365
150	66061150	650
200	66061200	900

## ISO-flanges, mounting kit - DN 10 - 100

Type 203... / 208... / 167... / 169... - Reduced bore

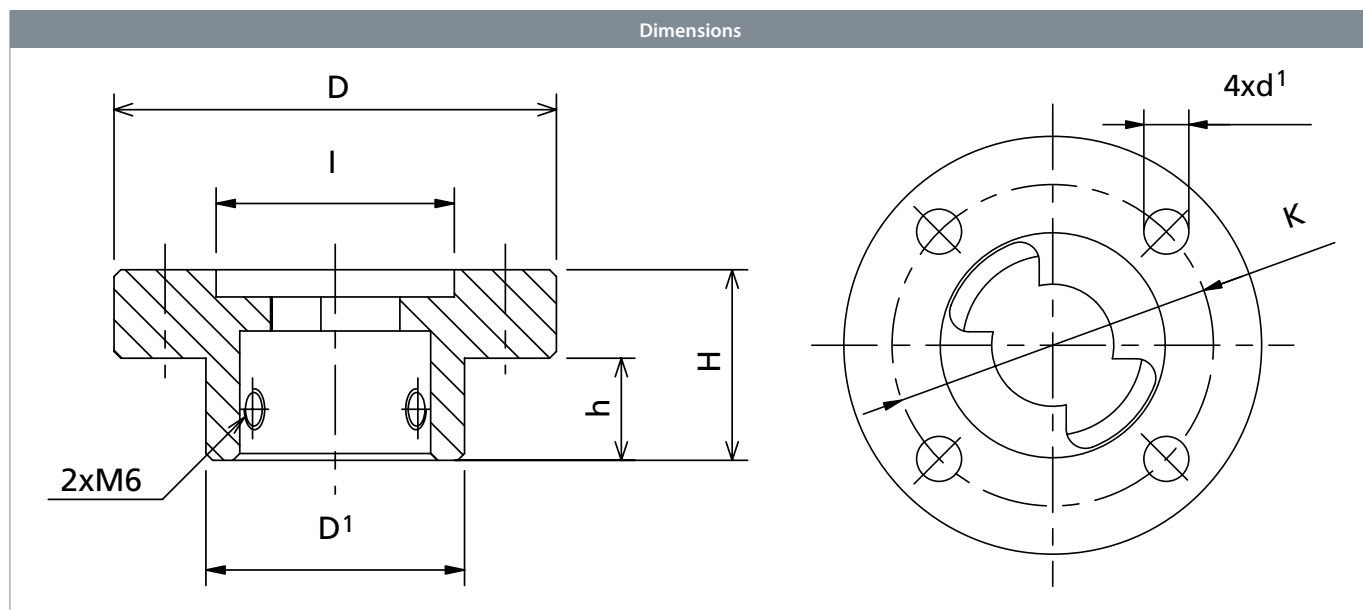
### ISO-flanges, mounting kit

Mounting flange for later mounting of gear / actuator.

No mounting facing downwards.



Dimensions



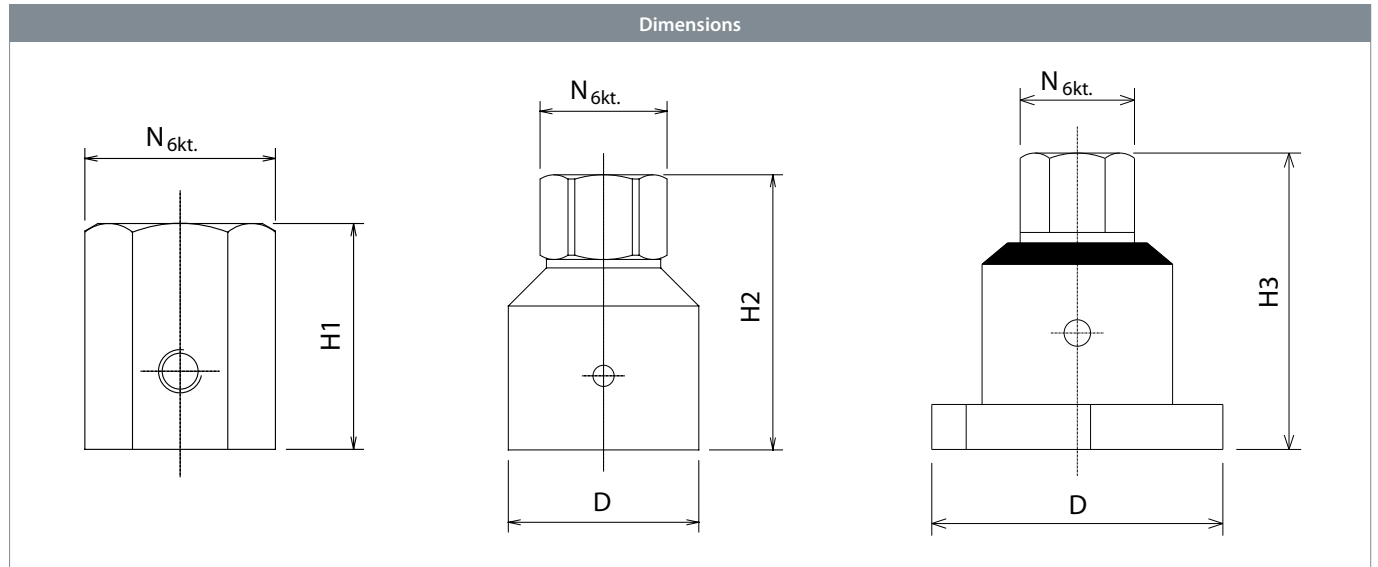
DN	BROEN No.	ISO-flange	All dimensions in mm						
			D	D'	H	h	I	K	d'
10 - 32	203245	F05	65	34	28	15	35	50	7
40 - 50	208245	F05	65	38	28	15	35	50	7
65 - 80	167245	F05	65	47	33	20	35	50	7
100	169245	F07	90	57	35	20	55	70	9

# Hexagon for insertion key - DN 10 - 150

Type 66160 / 66164 / 66161 - Reduced bore

## Hexagon for insertions key

To make thread end of spindle to hexagon.



DN	BROEN No.	All dimensions in mm				
		D	H1	H2	H3	N hex.
10 - 32	66160010 000	-	26	-	-	19
40 - 50	66160040 000	-	26	-	-	19
65 - 80	66160065 000	28	-	52	-	19
100	66164100 000	45	-	65	-	27
125	66161100 000	80	-	-	75	27
150	66161150 000	112	-	-	85	27

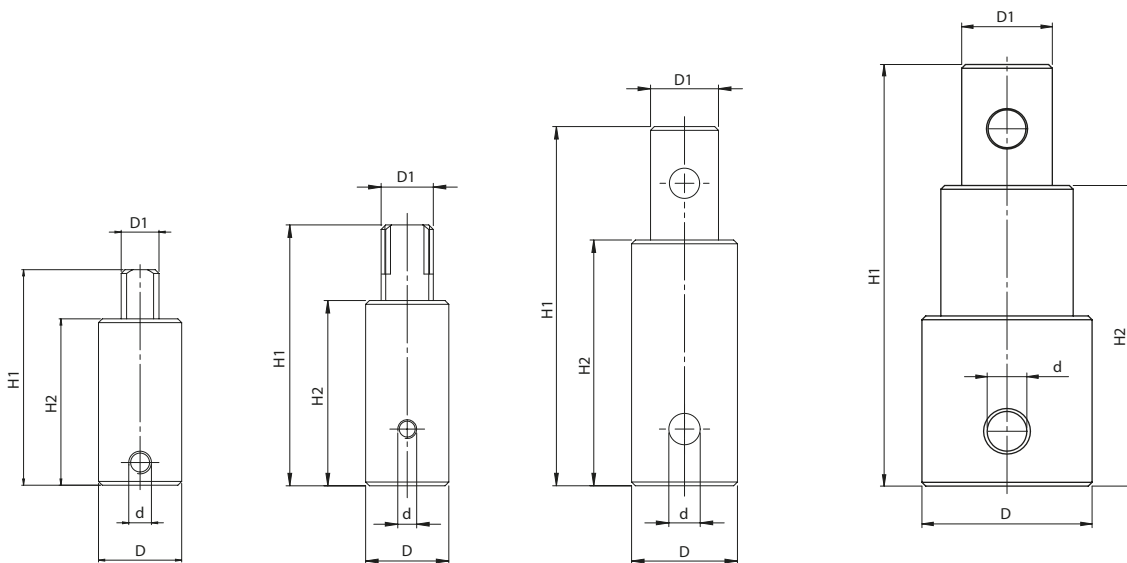
# Spindle extension - DN 10 - 125

Type 084... / 251... - Reduced bore

Spindle extension for type 61-64 valves



Dimensions



		All dimensions in mm				
DN	BROEN No.	D	H1	H2	d	D1
10 - 32	084600	22	57.0	44.0	M 5 × 5	10
40 - 50	084500	22	69.0	49.0	M 5 × 5	14
65 - 80	084800	28	95.0	65.0	8.3	18
100 - 125	251300	45	111.5	79.5	10.5	24

BROEN BALLOMAX® Repair set - DN 10 - 500



DN	BROEN No.	Type
10 - 32	600040	60-61-64
40 - 50	600041	60-61-64
65 - 80	600042	60-64
65 - 80	600043	61
100	600044	60-64
100	600045	61
125	600046	64
150	600048	64
150 - 200	600049	61
250	600050	40
300 - 350	600051	40
400	600052	40
450 - 500	600053	40
250	600568	85
300 - 350	600600	85
400	600601	85
500	600602	85
15 - 20	600940	12031,13001,13601,13701,13701S,14001,15001
25 - 32	600941	12031,13001,13601,13701,13701S,14001,15001
40 - 50	600942	12031,13001,13601,13701,13701S,14001,15001
50 - 65	601625	BBM 602, BBM 622, BBM 604, BBM624
80 - 100	601626	BBM 602, BBM 622, BBM 604, BBM624
125 - 150	601627	BBM 602, BBM 622, BBM 604, BBM624

## BROEN-Gear - DN 100 - 500

Type 500... / 300... - **Reduced bore**

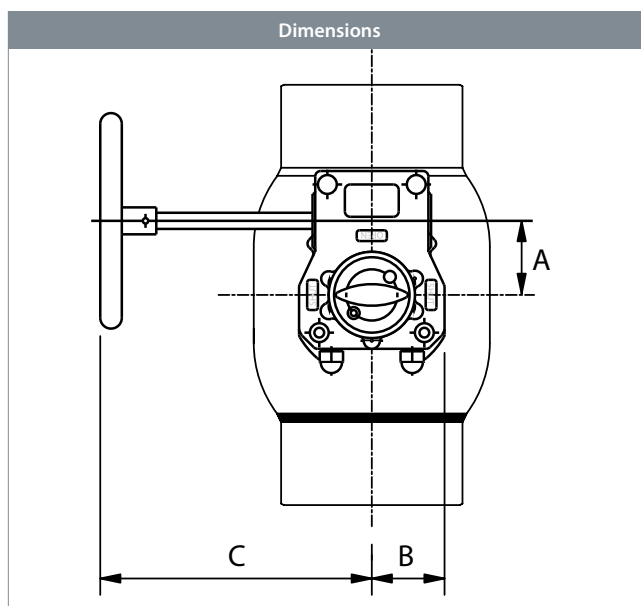
### BROEN-Gear

Hand-operated gearbox.

BROEN-Gear is a strong high quality hand-operated gearbox. The hand wheel is ergonomically designed.

### Operating torque

Operating torque of handwheel (Nm) - see below table.



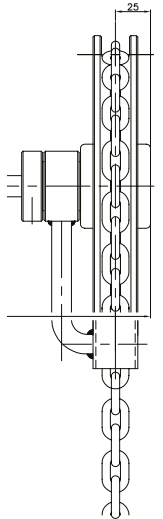
DN	BROEN No.	net Weight kg*	All dimensions in mm				
			A	B	C	Nm	Hand wheel
100	600583	2,5	41,3	40,0	145	650	200
125	600584	2,5	41,3	40,0	145	300	200
150	600585	7,8	68,8	67,5	240	1200	300
200	600586	8,6	68,8	67,5	245	1200	350
250	600587	9,5	68,8	67,5	275	1200	450
300 - 350	600588	26,0	104,5	110,0	346	3250	500
400	600589	42,0	130,0	142,5	387	7000	350
500	600590	67,9	182,0	185,0	470	17000	450

\* Weight gearbox with hand wheel.



## BROEN-Gear with chain - DN 40 - 300

Type CW... - Reduced bore



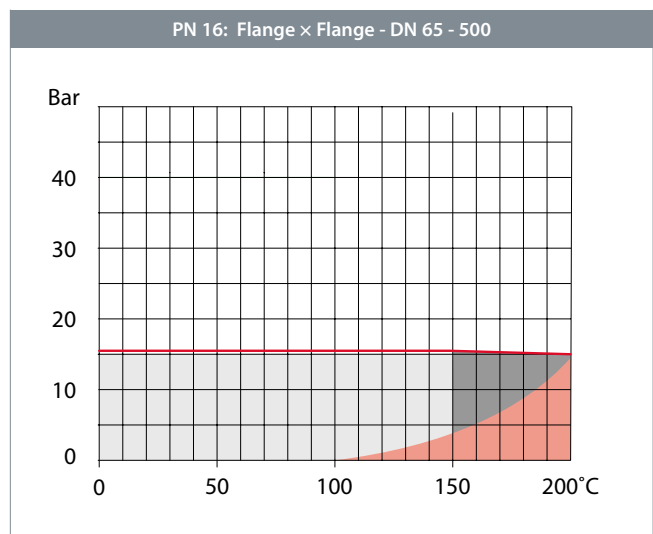
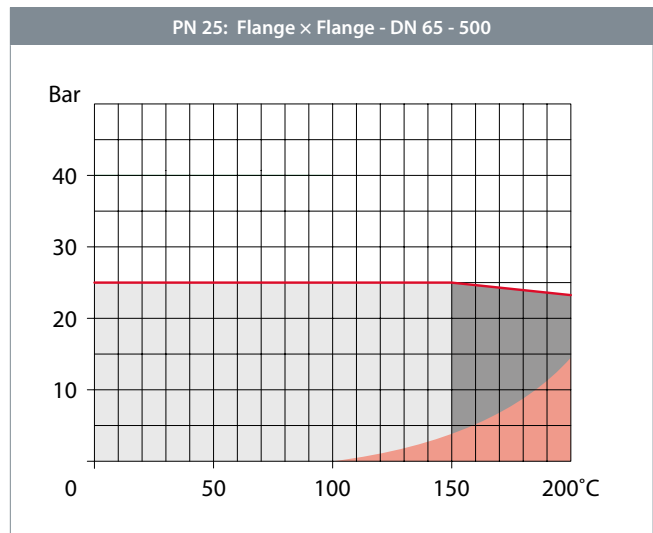
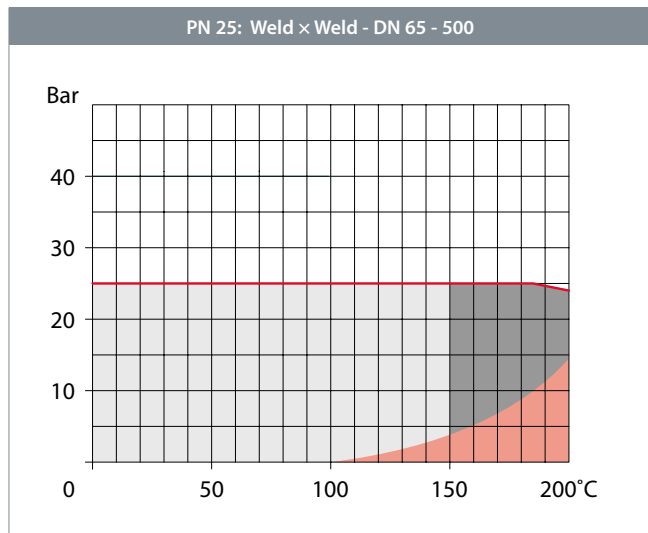
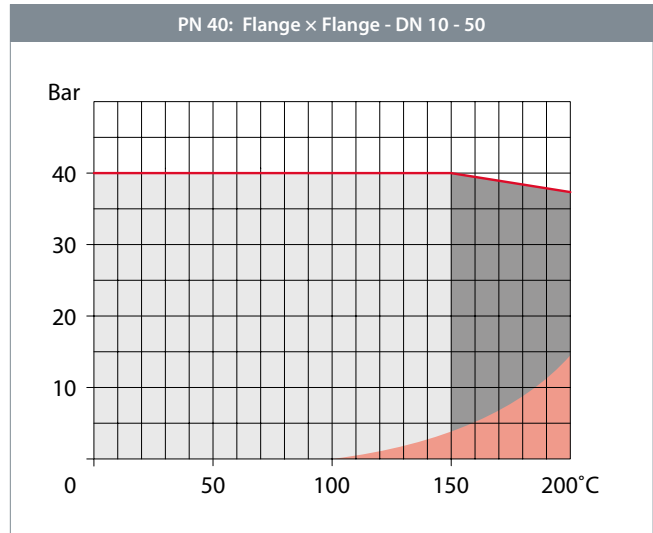
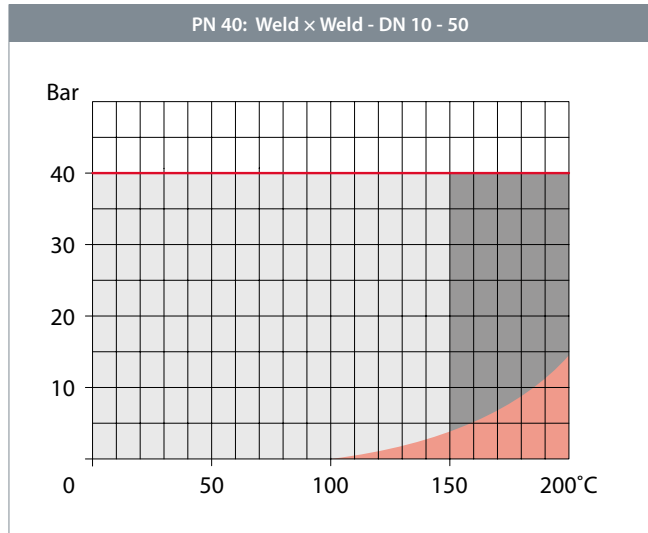
	Size	BROEN No.
	Ø15	CW 135
	Ø20	CW 215
	Ø25	CW 335
<b>Accessory:</b>		
<b>Gear chain</b>	1 meter - ZP chain (+ Splitlink)	
<b>Gear chain</b>	1 meter - SS chain (+ Splitlink)	

BROEN manual gear, mounting and adjustment are customers responsibility. Possible to operate with chain, for gear mounted high above ground.  
Galvanized chain, price per meter.

**NOTICE:** The length is the total length, not the height above ground of the gear.

# Pressure and temperature graph - DN 10 - 500 - PN 40/25/16

**Reduced bore**



- Normal working area
- Short-term working area
- Steam area  
(see high temperature valves  
- section 8)

# Pressure drop graph - DN 10 - 500

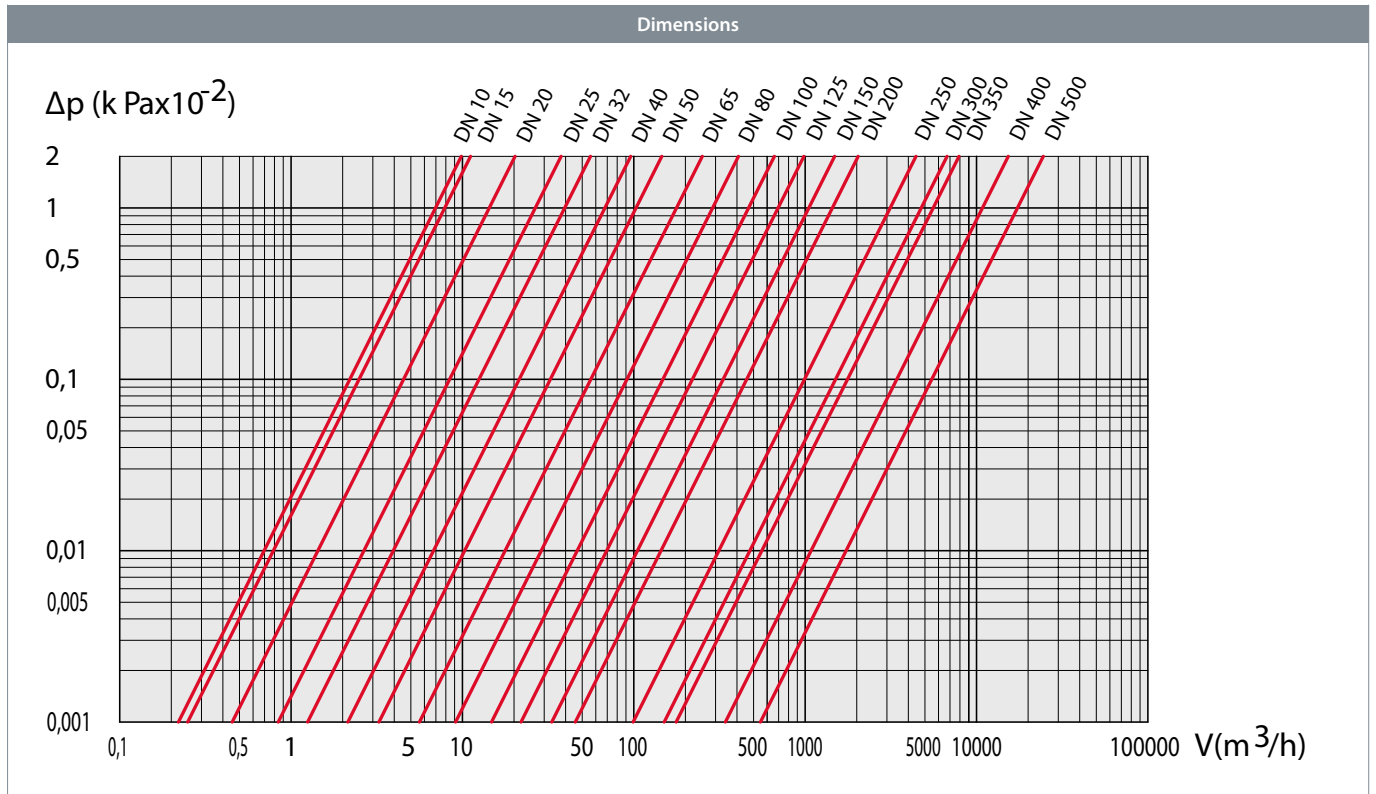
**Reduced bore**

**Pressure drop graph**

Ball valve in fully open position.  
Medium: water density in 1000 kg/m<sup>3</sup>

**Definitions**

Kvs: M<sup>3</sup> water per hour at pressure drop 1 bar.



DN	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	500
Kvs	7	8	15	27	40	69	110	180	288	470	699	1046	1500	5300	8200	8900	13700	20300

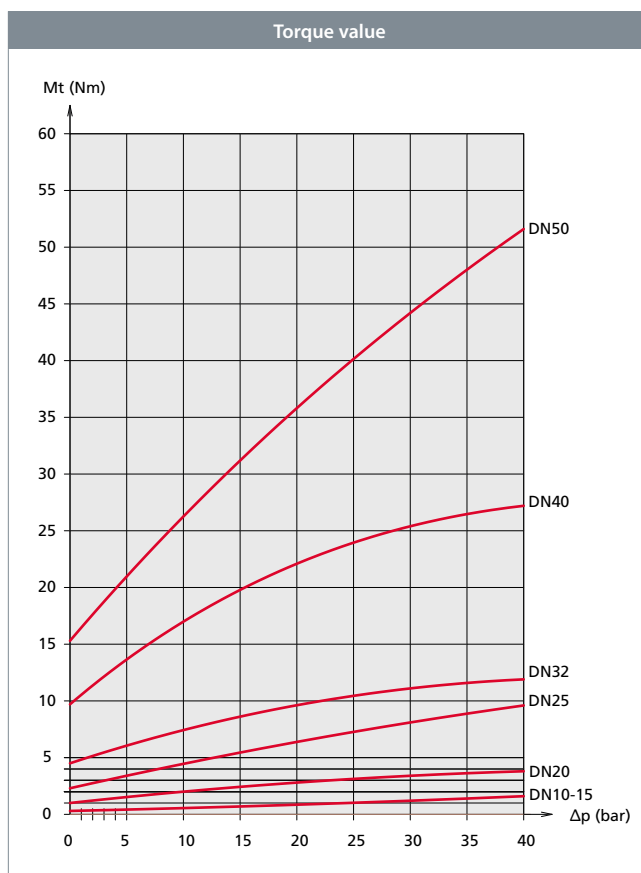
## Operating torque - DN 10 - 50, PN 40

### Reduced bore

#### Operating torque

The torque stated is for guidance only; it has been obtained by measuring on new ball valves. The torque is to be understood as the pull-off torque applicable for a closed, but recently activated ball valve.

The value stated may rise to a factor of 1.5 after a long period of inactivity.



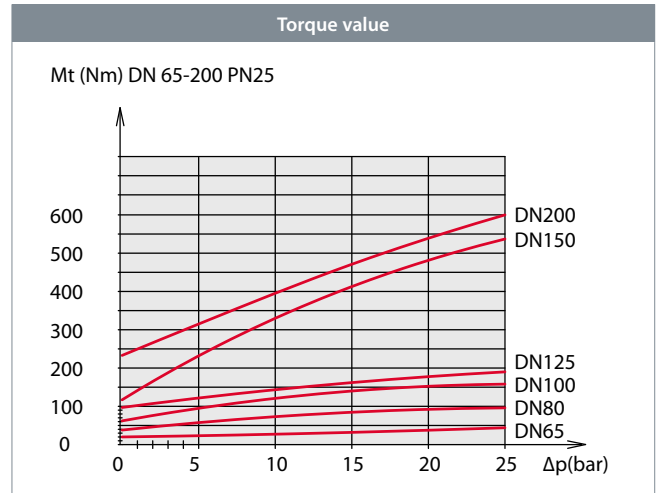
## Operating torque - DN 65 - 500, PN 25

### Reduced bore

#### Operating torque

The torque stated is for guidance only; it has been obtained by measuring on new ball valves. The torque is to be understood as the pull-off torque applicable for a closed, but recently activated ball valve.

The value stated may rise to a factor of 1.5 after a long period of inactivity.



#### Torque Nm

The value stated may rise to a factor of 2 after a long period of inactivity.

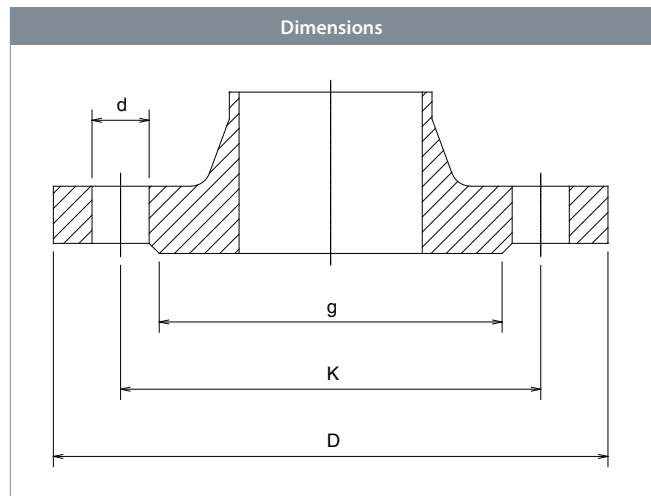
Torque Nm				
RB	DN 250	DN 300/350	DN 400	DN 500
Δ16 bar	570	1460	2670	5665
Δ25 bar	610	1620	3325	6205

## Connecting flange - DN 15 - 50, PN 40

EN 1092-1 - Reduced bore

### Description

Flangestandard.



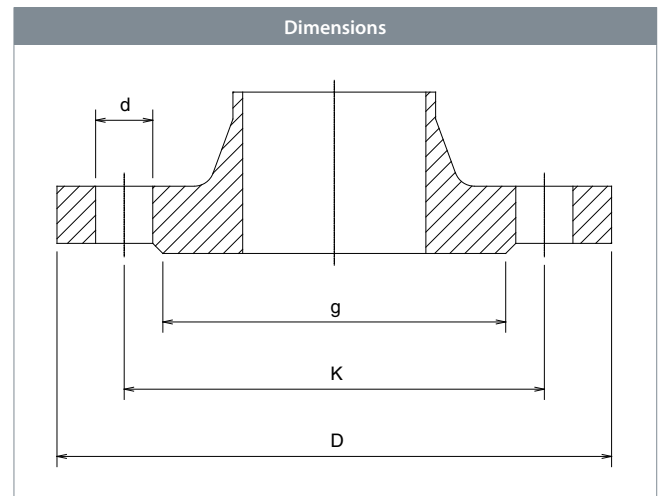
DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4

## Connecting flange - DN 15 - 500, PN 25

EN 1092-1 - **Reduced bore**

### Description

Flangestandard.



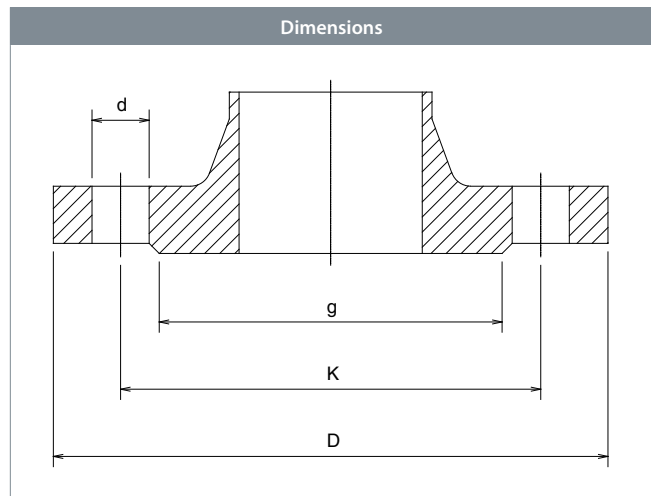
All dimensions in mm					
DN	D	K	g	d	No. of bolt holes
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	8
80	200	160	138	18	8
100	235	190	162	22	8
125	270	220	188	26	8
150	300	250	218	26	8
200	360	310	278	26	12
250	425	370	335	30	12
300	485	430	395	30	16
350	555	490	450	33	16
400	620	550	505	36	16
500	730	660	615	36	20

## Connecting flange - DN 15 - 500, PN 16

EN 1092-1 - Reduced bore

### Description

Flangestandard.



DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	4
80	200	160	138	18	8
100	220	180	158	18	8
125	250	210	188	18	8
150	285	240	212	22	8
200	340	295	268	22	12
250	405	355	320	26	12
300	460	410	378	26	12
350	520	470	438	26	16
400	580	525	490	30	16
500	715	650	610	33	20

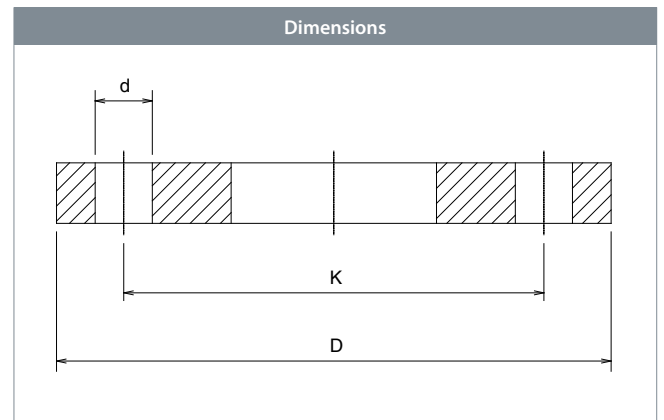


# Connecting flange - DN 15 - 500, PN10

## EN 1092-1 - Reduced bore

### Description

Flangestandard.



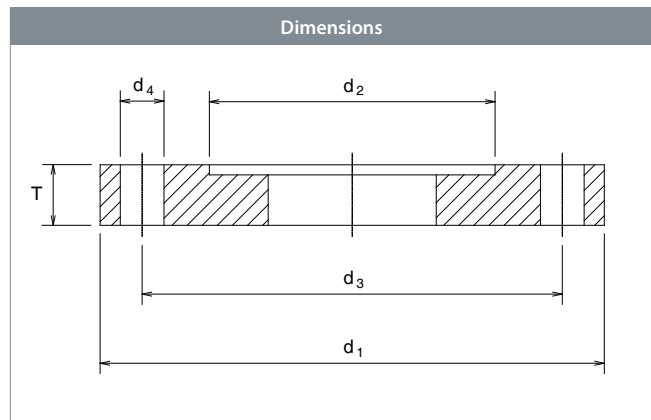
DN	All dimensions in mm			No. of bolt holes
	D	K	d	
15	95	65	14	4
20	105	75	14	4
25	115	85	14	4
32	140	100	18	4
40	150	110	18	4
50	165	125	18	4
65	185	145	18	4
80	200	160	18	8
100	220	180	18	8
125	250	210	18	8
150	285	240	22	8
200	340	295	22	8
250	395	350	22	12
300	445	400	22	12
350	505	460	22	16
400	565	515	26	16
500	670	620	26	20

## Valve actuator attachment - DN 65 - 500, PN10

ISO 5210 / ISO 5211 - Reduced bore

### Description

ISO-flange for gear.



		All dimensions in mm					
To be used with	Flange type	T	$d_1$	$d_2$	$d_3$	$d_4$	No. of bolt holes
DN 65 - 80	F05	12.5	65	35	50	7	4
DN 100 - 125	F07	13.5	90	55	70	9	4
DN 150	F10	14.5	125	70	102	11	4
DN 200	F12	14.5	150	85	125	13	4
DN 250	F14	17.6	175	100	140	17	4
DN 300	F16	23.5	210	130	165	21	4
DN 350	F16	23.5	210	130	165	21	4
DN 400	F25	27.5	300	200	254	17	8
DN 500	F30	28.5	350	230	298	21	8