

BROEN

VALVE TECHNOLOGIES



DISTRICT ENERGY - CATALOGUE 2020



Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



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Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 2 **About BROEN** **and Ballomax[®]**

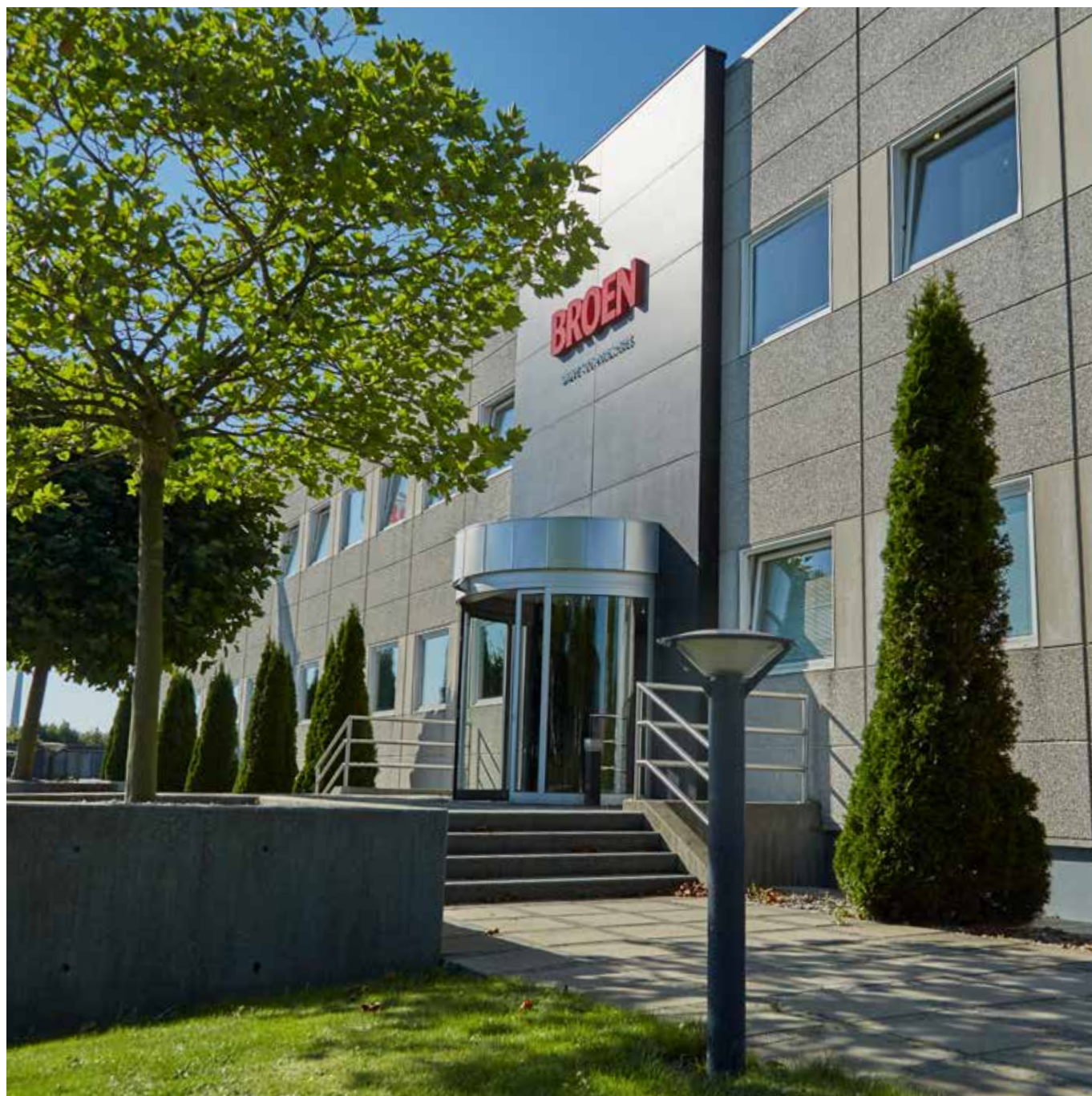
BROEN in brief

BROEN is a leading international manufacturer of valve technology and we operate on three continents across the world with key markets in Russia, Europe, China and US. BROEN is head quartered in Assens, Denmark and is part of Aalberts Industries listed on the EuroNext Stock Exchange (NL).

For more than 30 years the reliable design of BROEN Ballomax® has proven itself and it remains the best choice in district heating today. We know application and valve technology in depth and in close dialogue with our customers and partners all over the world we create value and reliability with proven valves offering full quality assurance.

To us quality is not just an access to a market – it stretches out far beyond this. It is the foundation for our business. BROEN has been ISO 9001 certified since 2001 and is today ISO9001:2015 and ISO14001 certified.

In 1993 BROEN was acquired by Aalberts Industries and we now have more than 15,000 colleagues in more than 30 countries - all over the world.



BROEN – Quality management

BROEN District Energy at BROEN A/S in Assens is producing ball valves and accessories for district heating and industrial applications all over the world. BROEN A/S is a certified ISO 9001 company. BROEN Ballomax® steel ball valves have been approved according to the requirements of Pressure Equipment Directive (PED) 2014/68/EU – Module H. Module H is the module for complete quality control.

The approvals comprise the types 40, 45, 46, 47, 60, 61, 62, 63, 64, 67, 68, 72, 82 and 97 in the dimensions DN40-500 as well as PN40, PN25 and PN16. Valves up to and including DN32 are produced according to Section 3.3 of the Directive and must not be CE marked.

Specific standards applied:

Directive PED 2014/68/EU – Module H, EN 488:2015 EHP 003, EN 10 204, EN 287-1, EN 1418, EN 288-8, EN 288-3, EN 12266. All products are tested according to EN 12266 Part 1 and 2 securing that all valves are tested before leaving the factory.

BROEN Ballomax® energy efficiency – designed to last

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

Safety is one of the concepts designed into a BROEN Ballomax®. The enormous power rushing through a district heating and cooling system puts great pressure on the components. Consequently, all components of a BROEN Ballomax® have been approved. The spindle is mounted from inside and cannot be ejected, and the water-based paint is harmless in the event of welding.

The maintenance of BROEN Ballomax® is minimal with no parts requiring replacement or lubrication. Everything has been made from the best raw materials and an annual activation of the ball ensures that it does not get stuck in the retainer. For the customer the BROEN Ballomax® means a minimum of work.

Long life is a very important feature of the BROEN Ballomax®. We know that the replacement of a defective valve involves great inconvenience and costs, and when you choose a BROEN Ballomax® you are beyond that. We manufacture under the highest quality standards of the market in modern production facilities.

BROEN Ballomax® is your certainty of energy efficiency, reliability and low operating costs.

Please find relevant updated product information in our online product catalogue on www.broen.com.

Do feel free to approach our internal technical support staff if you do not find what you are looking for in the catalogue or if you have any further inquiry. Drawings, measures and technical specifications are not binding and can be changed with no further notice.

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 3 **Steel ball valves** **Full bore**

Steel ball valve - DN10-50, PN25

Type BBM 12031 - Full bore

Female × 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

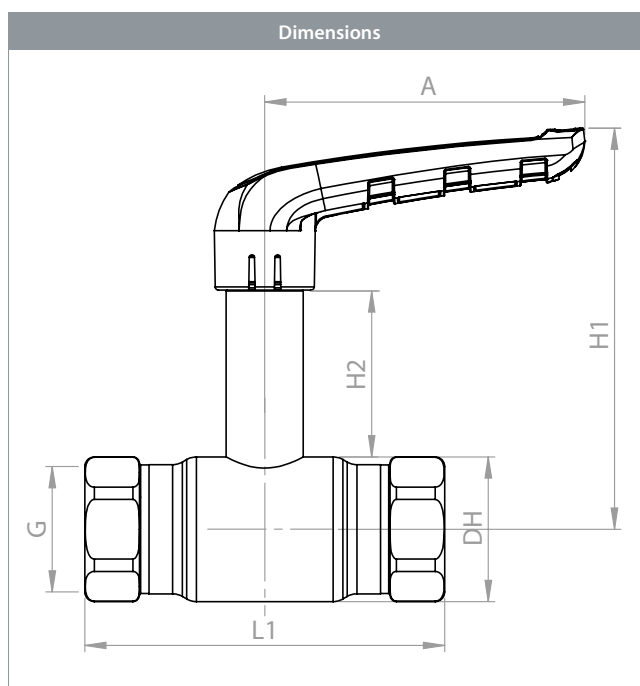
All BROEN Ballomax® valves are powder coated in black.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



						All dimensions in mm					
	DN	BROEN No.	Bore	Kvs	net Weight kg	G	DH	L1	H1	H2	A
HIGH	10	1010002031-2101	10	13	0.30	⅜"	Ø26.0	74	106	55	75
	15	1015002031-2101	15	26	0.35	½"	Ø30.0	94	108	55	75
	20	1020002031-2101	20	49	0.47	¾"	Ø38.0	104	111	54	75
	25	1025002031-2101	25	75	0.80	1"	Ø45.0	112	125	52	100
	32	1032002031-2101	32	110	1.21	1¼"	Ø56.5	134	131	52	100
	40	1040002031-2101	40	214	1.83	1½"	Ø68.0	156	156	63	120
	50	1050002031-2101	50	308	3.09	2"	Ø85.0	192	165	63	120
						All dimensions in mm					
	DN	BROEN No.	Bore	Kvs	net Weight kg	G	DH	L1	H1	H2	A
LOW	15	1015002030-2101	15	26	0.27	½"	Ø30.0	94	68	15	75
	20	1020002030-2101	20	49	0.39	¾"	Ø38.0	104	69	11	75
	25	1025002030-2101	25	75	0.67	1"	Ø45.0	112	87	14	100

Steel ball valve - DN10-50, PN25

Type BBM 12031 - Full bore



Technical drawing		Material description	
	1	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	2	Lock ring	Steel
	3	O-ring	Rubber - EPDM70
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	5	Ring	Plastic - PTFE 20% Carbon
	6	Stem	Stainless steel - AISI316 / EN 1.4401
	7	Ball	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	8	Spring supporting	Stainless steel - AISI316 / EN 1.4401
	9	Seal	Plastic - TFM™ PTFE
	10	Friction ring	Plastic - TFM™ PTFE
	11	Handle core	Galvanized steel
	12	Handle	Fiberglass reinforced nylon - PA66
	16	Female	Steel - P235GH / 1.0345 / EN 10217-2 / ISO 228-1

Steel ball valve - DN10-50, PN25

Type BBM 13001 - Full bore

Welding × Welding 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

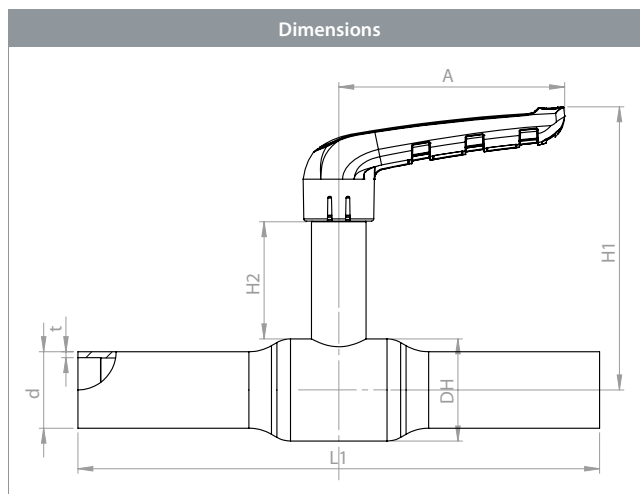
All BROEN Ballomax® valves are powder coated in black.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					Alle dimensioner i mm							
	DN	BROEN nr.	Boring	Kvs	Nettovægt - kg	DH	d	t	L1	H1	H2	A
HIGH	10	1010003001-2101	10	13	0.20	Ø26.0	17.2	1.8	210	106	55	75
	15	1015003001-2101	15	26	0.22	Ø30.0	21.3	2.0	210	108	55	75
	20	1020003001-2101	20	49	0.58	Ø38.0	26.9	2.3	230	111	54	75
	25	1025003001-2101	25	75	0.91	Ø45.0	33.7	2.6	230	125	52	100
	32	1032003001-2101	32	110	1.30	Ø56.5	42.4	2.6	260	131	52	100
	40	1040003001-2101	40	214	1.86	Ø68.0	48.3	2.6	260	156	63	120
	50	1050003001-2101	50	308	3.00	Ø85.0	60.3	2.9	290	165	63	120
					All dimensions in mm							
	DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L1	H1	H2	A
LOW	15	1015003000-2101	15	26	0.14	Ø30.0	21.3	2.0	210	66	15	75
	20	1020003000-2101	20	49	0.50	Ø38.0	26.9	2.3	230	68	11	75
	25	1025003000-2101	25	75	0.78	Ø45.0	33.7	2.6	230	87	14	100

Steel ball valve - DN10-50, PN25

Type BBM 13001 - Full bore



Technical drawing		Material description	
	1	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	2	Lock ring	Steel
	3	O-ring	Rubber - EPDM70
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	5	Ring	Plastic - PTFE 20% Carbon
	6	Stem	Stainless steel - AISI316 / EN 1.4401
	7	Ball	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	8	Spring supporting	Stainless steel - AISI316 / EN 1.4401
	9	Seal	Plastic - TFM™ PTFE
	10	Friction ring	Plastic - TFM™ PTFE
	11	Handle core	Galvanized steel
	12	Handle	Fiberglass reinforced nylon - PA66

Steel ball valve - DN10-50, PN25

Type BBM 13601 - Full bore

Female x Welding 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

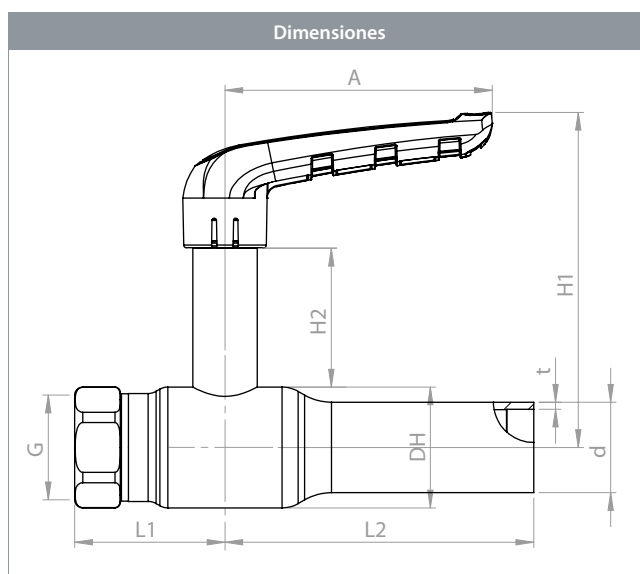
All BROEN Ballomax® valves are powder coated in black.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



						All dimensions in mm								
HIGH	DN	BROEN No.	Bore	Kvs	net Weight kg	G	DH	d	t	L1	L2	H1	H2	A
	10	1010003601-2101	10	13	0.30	3/8"	Ø26.0	17.2	1.8	37	105	106	55	75
	15	1015003601-2101	15	26	0.38	1/2"	Ø30.0	21.3	2.0	40	105	108	55	75
	20	1020003601-2101	20	49	0.56	3/4"	Ø38.0	26.9	2.3	52	115	111	54	75
	25	1025003601-2101	25	75	0.86	1"	Ø45.0	33.7	2.6	56	115	125	52	100
	32	1032003601-2101	32	110	1.27	1 1/4"	Ø56.5	42.4	2.6	67	130	131	52	100
	40	1040003601-2101	40	214	1.90	1 1/2"	Ø68.0	48.3	2.6	78	134	156	63	120
	50	1050003601-2101	50	308	3.09	2"	Ø85.0	60.3	2.9	96	145	165	63	120
						Alle dimensioner i mm								
LOW	DN	BROEN nr.	Boring	Kvs	Nettovægt - kg	G	DH	d	t	L1	L2	H1	H2	A
	15	1015003600-2101	15	26	0.30	1/2"	Ø30.0	21.3	2.0	40	105	66	15	75
	20	1020003600-2101	20	49	0.48	3/4"	Ø38.0	26.9	2.3	52	115	68	11	75
	25	1025003600-2101	25	75	0.73	1"	Ø45.0	33.7	2.6	56	115	87	14	100

Steel ball valve - DN10-50, PN25

Type BBM 13601 - Full bore



Technical drawing		Material description	
	1	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	2	Lock ring	Steel
	3	O-ring	Rubber - EPDM70
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	5	Ring	Plastic - PTFE 20% Carbon
	6	Stem	Stainless steel - AISI316 / EN 1.4401
	7	Ball	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	8	Spring supporting	Stainless steel - AISI316 / EN 1.4401
	9	Seal	Plastic - TFM™ PTFE
	10	Friction ring	Plastic - TFM™ PTFE
	11	Handle core	Galvanized steel
	12	Handle	Fiberglass reinforced nylon - PA66
	13	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	16	Female	Steel - P235GH / 1.0345 / EN 10217-2 / ISO 228-1

Steel ball valve - DN10-50, PN25

Type BBM 13701 - Full bore

Cap × Welding

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

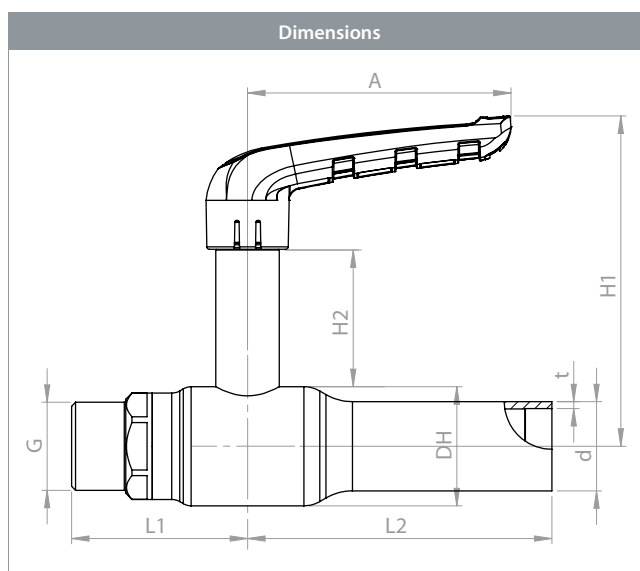
All BROEN Ballomax® valves are powder coated in black.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	G	DH	d	t	L1	L2	H1	H2	A
10	1010003701-2101	10	13	0.30	3/8"	Ø26.0	17.2	1.80	37	105	106	55	75
15	1015003701-2101	15	26	0.38	1/2"	Ø30.0	21.3	2.00	40	105	108	55	75
20	1020003701-2101	20	49	0.52	3/4"	Ø38.0	26.9	2.30	52	115	111	54	75
25	1025003701-2101	25	75	0.87	1"	Ø45.0	33.7	2.60	56	115	125	52	100
32	1032003701-2101	32	110	1.30	1 1/4"	Ø56.5	42.4	2.60	67	130	131	52	100
40	1040003701-2101	40	214	1.93	1 1/2"	Ø68.0	48.3	2.60	78	134	156	63	120
50	1050003701-2101	50	308	3.18	2"	Ø85.0	60.3	2.90	96	145	165	63	120

Steel ball valve - DN10-50, PN25

Type BBM 13701 - Full bore



Technical drawing		Material description	
	1	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	2	Lock ring	Steel
	3	O-ring	Rubber - EPDM70
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	5	Ring	Plastic - PTFE 20% Carbon
	6	Stem	Stainless steel - AISI316 / EN 1.4401
	7	Ball	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	8	Spring supporting	Stainless steel - AISI316 / EN 1.4401
	9	Seal	Plastic - TFM™ PTFE
	10	Friction ring	Plastic - TFM™ PTFE
	11	Handle core	Galvanized steel
	12	Handle	Fiberglass reinforced nylon - PA66
	14	Male	Steel - P235GH / 1.0345 / EN 10217-2 / ISO 228-1

Steel ball valve - DN10-50, PN25

Type BBM 14001 - Full bore

Flange × Welding

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

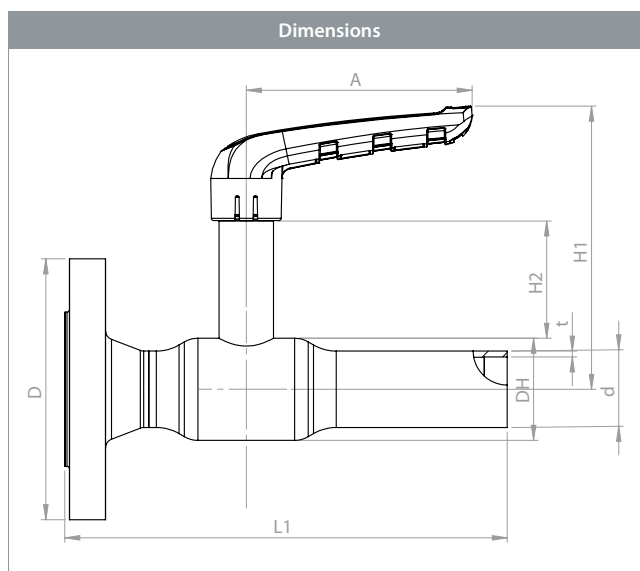
All BROEN Ballomax® valves are powder coated in black.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm							
DN	BROEN No.	Bore	Kvs	net Weight kg	D	DH	d	t	L	H1	H2	A
10	1010004001-2101	10	13	0.95	90	Ø26.0	17.2	1.8	170	106	55	75
15	1015004001-2101	15	26	1.07	95	Ø30.0	21.3	2.0	170	108	55	75
20	1020004001-2101	20	49	1.49	105	Ø38.0	26.9	2.3	190	111	54	75
25	1025004001-2101	25	75	2.04	115	Ø45.0	33.7	2.6	195	125	52	100
32	1032004001-2101	32	110	2.85	140	Ø56.5	42.4	2.6	220	131	52	100
40	1040004001-2101	40	214	3.64	150	Ø68.0	48.3	2.6	230	156	63	120
50	1050004001-2101	50	308	5.42	165	Ø85.0	60.3	2.9	260	165	63	120

Steel ball valve - DN10-50, PN25

Type BBM 14001 - Full bore



Technical drawing		Material description	
	1	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	2	Lock ring	Steel
	3	O-ring	Rubber - EPDM70
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	5	Ring	Plastic - PTFE 20% Carbon
	6	Stem	Stainless steel - AISI316 / EN 1.4401
	7	Ball	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	8	Spring supporting	Stainless steel - AISI316 / EN 1.4401
	9	Seal	Plastic - TFM™ PTFE
	10	Friction ring	Plastic - TFM™ PTFE
	11	Handle core	Galvanized steel
	12	Handle	Fiberglass reinforced nylon - PA66
	13	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	15	Flange	Steel - P235GH / 1.0345 / EN 10217-2 / ISO 1092-1

Steel ball valve - DN10-50, PN25

Type BBM 15001 - Full bore

Flange × Flange

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

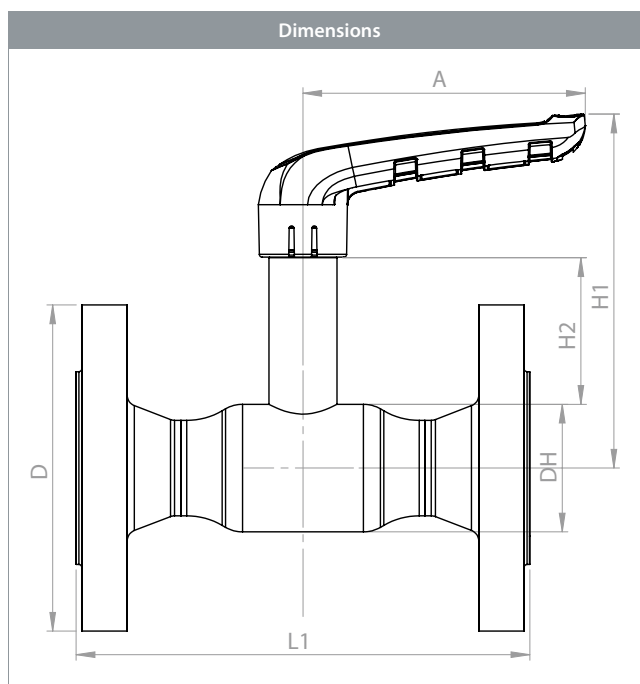
The standard handle is 180 degrees adjustable.

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 DN40 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	D	DH	L1	H1	H2	A
10	1010005001-2101	10	13	1.55	90	Ø26.0	130	106	55	75
15	1015005001-2101	15	26	1.72	95	Ø30.0	130	108	55	75
20	1020005001-2101	20	49	2.40	105	Ø38.0	150	111	54	75
25	1025005001-2101	25	75	3.16	115	Ø45.0	160	125	52	100
32	1032005001-2101	32	110	4.40	140	Ø56.5	180	131	52	100
40	1040005001-2101	40	214	5.43	150	Ø68.0	200	156	63	120
50	1050005001-2101	50	308	7.82	165	Ø85.0	230	165	63	120

Steel ball valve - DN10-50, PN25

Type BBM 15001 - Full bore



Technical drawing		Material description	
	1	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	2	Lock ring	Steel
	3	O-ring	Rubber - EPDM70
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	5	Ring	Plastic - PTFE 20% Carbon
	6	Stem	Stainless steel - AISI316 / EN 1.4401
	7	Ball	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	8	Spring supporting	Stainless steel - AISI316 / EN 1.4401
	9	Seal	Plastic - TFM™ PTFE
	10	Friction ring	Plastic - TFM™ PTFE
	11	Handle core	Galvanized steel
	12	Handle	Fiberglass reinforced nylon - PA66
	15	Flange	Steel - P235GH / 1.0345 / EN 10217-2 / ISO 1092-1

Steel ball valve - DN65-125, PN25

Type 94102 - Full bore

Welding × Welding

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

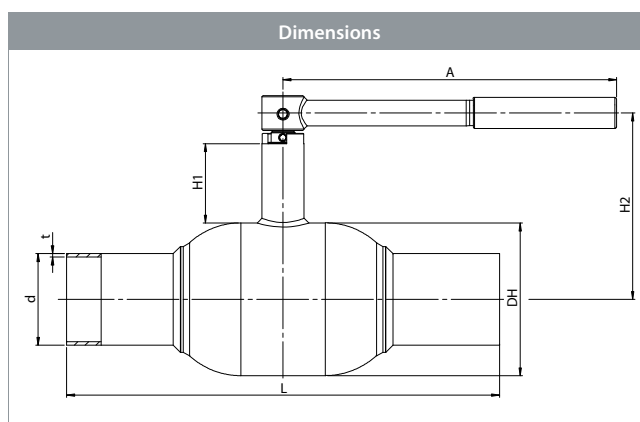
The standard handle is 180 degrees adjustable.

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 DN40 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 DN100-125.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm						
					DH	d	t	L	H1	H2	A
65	9410225065 010	65	498	6.70	127	76.1	2.9	360	66	155	275
80	9410225080 010	80	754	10.51	152	88.9	3.2	370	81	192	365
100	9410225100 010	100	1159	14.30	178	114.3	3.6	390	91	218	365
125	9410225125 010	125	1841	25.20	219	133.7	3.6	390	90	248	650

Steel ball valve - DN65-125, PN25

Type 94102 - Full bore



Technical drawing		Material description	
	1	Welding	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+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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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
	600584	DN100	BROEN-Gear.
	600585	DN125	
	167245	DN65	ISO-flange.
	169245	DN80	

Steel ball valve - DN100-150, PN25

Type 91102 - Full bore

Welding × Welding 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:

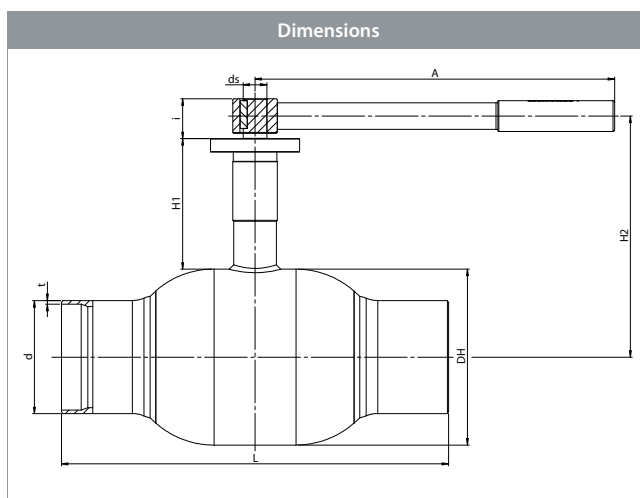
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

We recommend to add a BROEN-Gear for DN125-150.



					All dimensions in mm									
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	ds	i	A	ISO
100	9110225100 010	125	1159	15.1	178	114.3	3.6	390	132	240	24	40	365	F07
125	9110225125 010	125	1841	26.5	219	139.7	3.6	350	136	272	30	50	650	F10
150	9110225150 010	150	2652	31.4	267	168.3	4.0	390	156	321	30	60	900	F12

Steel ball valve - DN100-150, PN25

Type 91102 - Full bore



Technical drawing		Material description	
	1	Welding	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+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	Rubber - EPDM70
	17	O-ring	Rubber - FPM70
	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
	30	Circlip	Steel

Accessories	BROEN No.	Dimension	Description
	600584	DN100	BROEN-Gear.
	600585	DN125	
	600586	DN150	

Steel ball valve - DN100-150, PN25

Type 91102 - Full bore

Welding × Welding 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

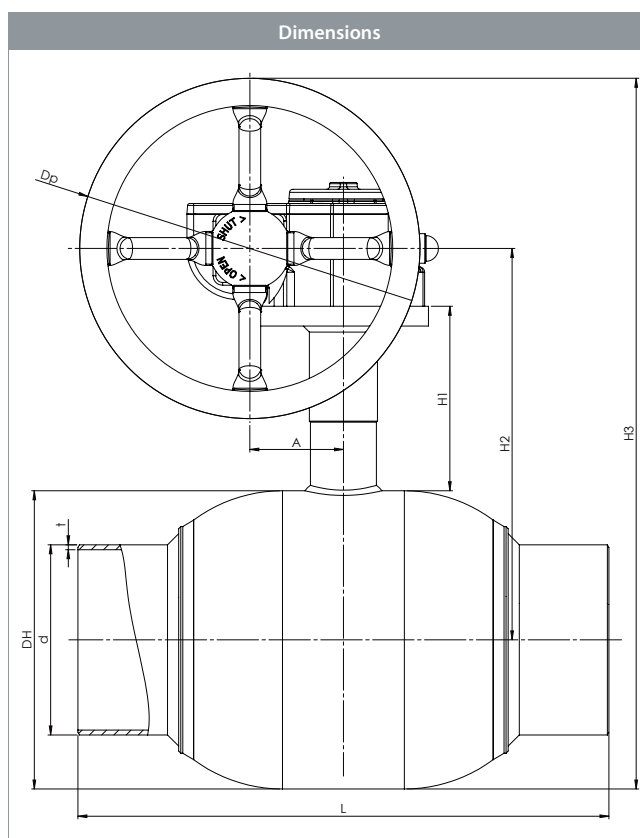
Eco-friendly protection finish against corrosion.

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 DN40 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
100	9110225100 480	100	1159	23.20	178	114.3	3.6	380	132	221	424	160	52.5
125	9110225125 480	125	1841	32.53	219	139.7	3.6	380	135	245	522	250	69.0
150	9110225150 480	150	2652	40.38	267	168.3	4.0	390	155	289	590	250	69.0

Steel ball valve - DN100-150, PN25

Type 91102 - Full bore



Technical drawing		Material description	
	1	Welding	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+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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 - DN200-400, PN25

Type 86202 / 86002 - Full bore

Welding × Welding 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:

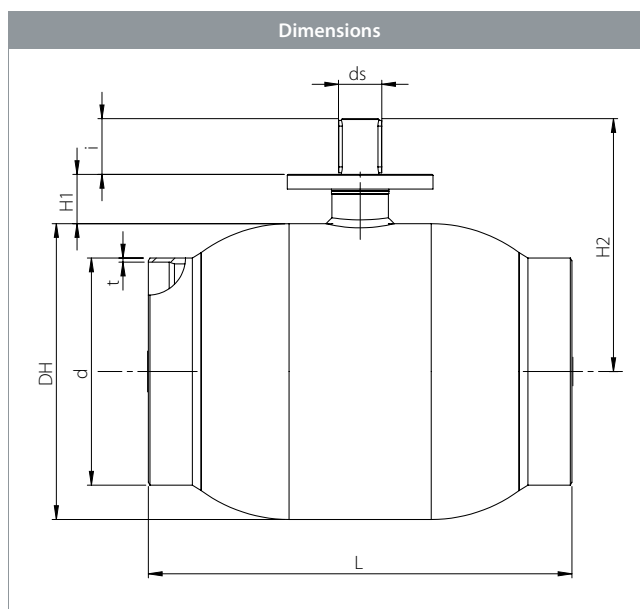
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

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



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	ds	i	ISO
200	8620225200 000	200	9200	82.1	356	219.1	6.3	533	60.2	304	45	67	F14
250	8620225250 000	250	13500	135.4	457	273.0	5.6	650	69.2	382	50	84	F16
300	8600225300 000	305	21600	249.7	508	323.9	5.6	819	82.5	437	60	100	F16
400	8600225400 000	400	35000	463.6	660	406.4	6.3	991	105.0	547	80	112	F30

Steel ball valve - DN200-400, PN25

Type 86202 / 86002 - Full bore



Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN200	BROEN-Gear.
	600588	DN250	
	600589	DN300	
	600590	DN400	

Steel ball valve - DN200-400, PN25

Type 86202 / 86002 - Full bore

Welding × Welding 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

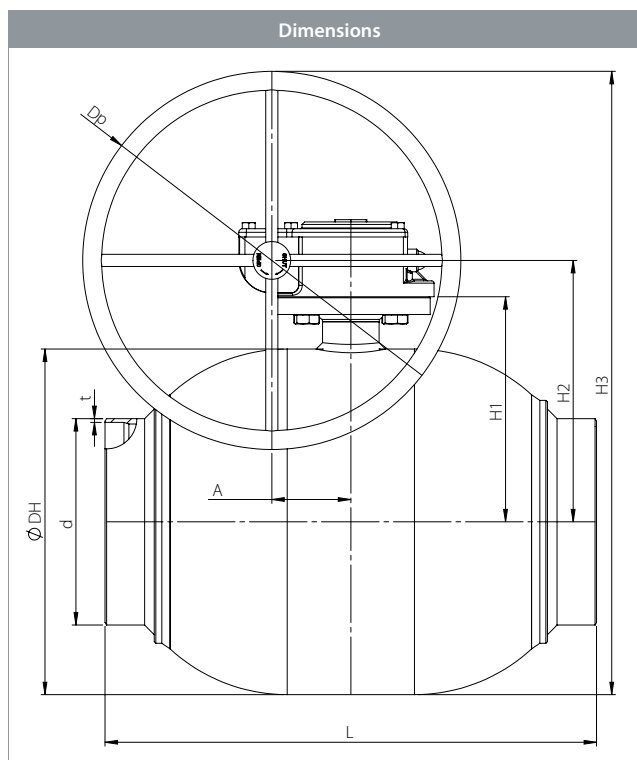
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	H3	Dp	A
200	8620225200 480	200	9200	84.2	356	219.1	6.3	533	60.2	275	500.0	450	68.8
250	8620225250 480	250	13500	140.3	457	273.0	5.6	650	69.2	346	596.0	500	104.5
300	8600225300 480	305	21600	258.1	508	323.9	5.6	819	82.5	387	566.5	350	130.0
400	8600225400 480	400	35000	531.7	660	406.4	6.3	991	105.0	494	719.0	450	182.0

Steel ball valve - DN200-400, PN25

Type 86202 / 86002 - Full bore



Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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 - DN200-400, PN25

Type 86212 / 86012 - Full bore

Welding × Welding 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:

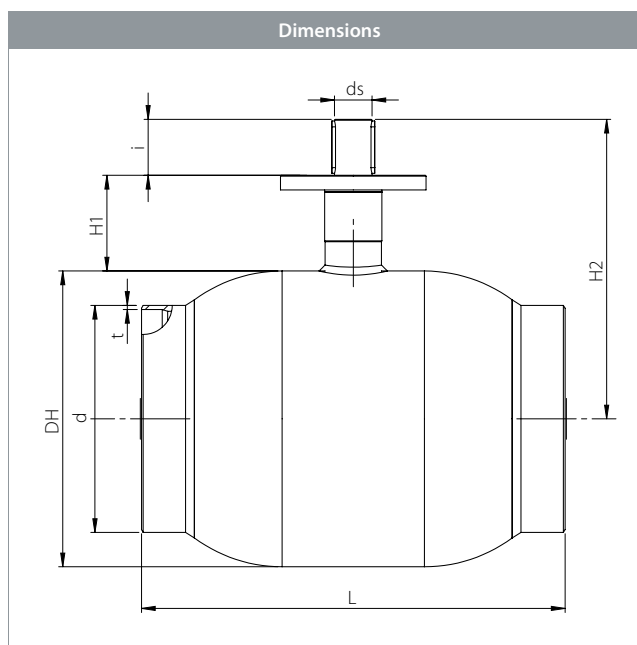
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

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



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	ds	i	ISO
200	8621225200 000	200	9200	82.7	356	219.1	5.0	533	115	365.0	45	67	F14
250	8621225250 000	250	13500	135.8	457	273.0	5.0	650	130	442.5	50	84	F16
300	8601225300 000	305	21600	253.1	508	323.9	5.6	819	155	506.5	60	100	F16
400	8601225400 000	400	35000	469.9	660	406.4	6.3	991	180	622.4	80	112	F30

Steel ball valve - DN200-400, PN25



Type 86212 / 86012 - Full bore

Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN200	BROEN-Gear.
	600588	DN250	
	600589	DN300	
	600590	DN400	

Steel ball valve - DN200-400, PN25

Type 86212 / 86012 - Full bore

Welding × Welding 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

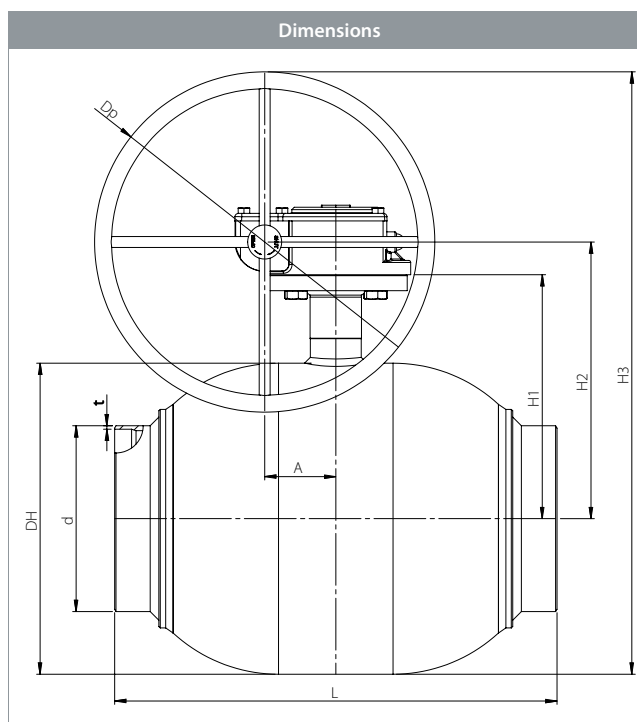
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	H3	Dp	A
200	8621225200 480	200	9200	85.8	356	219.1	5.0	533	115	330	555	450	68.8
250	8621225250 480	250	13500	142.4	457	273.0	5.0	650	130	407	657	500	104.5
300	8601225300 480	305	21600	261.5	508	323.9	5.6	819	155	460	640	350	130.0
400	8601225400 480	400	35000	538.0	660	406.4	6.3	991	180	569	794	450	182.0

Steel ball valve - DN200-400, PN25



Type 86212 / 86012 - Full bore

Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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 - DN20-50, PN40

Type 94104 - Full bore

Flange × Welding

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

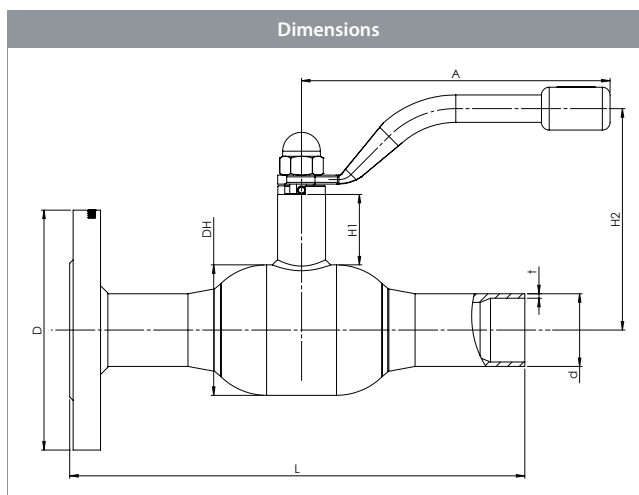
Eco-friendly protection finish against corrosion.

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 DN40 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	d	t	L	H1	H2	A
20	94104020S312400	20	57	2.4	51	105	26.9	2.0	235	47.2	119.5	140
25	94104025S312500	25	81	2.4	57	115	33.7	2.6	235	48.0	124.0	140
32	94104032S312600	32	133	4.1	76	140	42.4	2.6	265	41.0	127.0	140
40	94104040S312700	40	229	4.9	89	150	48.3	2.6	265	41.1	133.0	180
50	94104050S312800	50	295	6.8	108	165	60.3	2.9	306	66.0	145.0	180

Steel ball valve - DN20-50, PN40

Type 94104 - Full bore



Technical drawing	Material description		
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenit
	20	Handle	Steel
	21	Cap nut	Steel - galvanized

Accessories	BROEN No.	Dimension	Description
	66050010 000 - yellow	DN20-25	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	DN32-40	
	66050040 003 - blue		
	66050040 004 - red		
	203245	DN20-25	ISO-flange.
	208245	DN32-40	
	167245	DN50	
	66160010 000	DN20-25	Hexagon for insertion key.
	66160040 000	DN32-40	
	66160065 000	DN50	

Steel ball valve - DN65-100, PN25

Type 94104 - Full bore

Flange × Welding

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

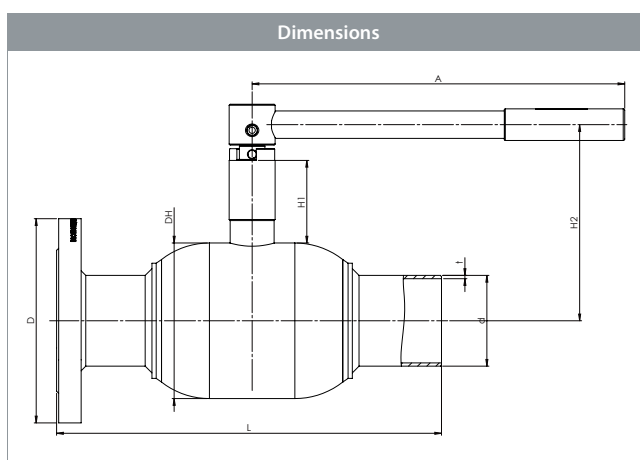
The standard handle is 180 degrees adjustable.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Larger dimensions DN125-400, on request.



					All dimensions in mm							
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	d	t	L	H1	H2	A
65	94104065S617800	65	498	9.8	127	185	76.1	2.9	366.0	66	155	275
80	94104080S344400	80	754	15.2	152	200	88.9	3.2	377.5	81	192	365
100	94104100S617900	100	1159	19.9	178	235	114.3	3.6	397.5	91	218	365

Steel ball valve - DN65-100, PN25

Type 94104 - Full bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenit
	20	Handle	Steel
	22	Bearing	Steel - PTFE

Accessories	BROEN No.	Dimension	Description
	167245	DN65	ISO-flange.
	169245	DN80	
	66160065 000	DN65	Hexagon for insertion key.
	66164100 000	DN80	
	66161100 000	DN100	

Steel ball valve - DN65-100, PN16

Type 94104 - Full bore

Flange × Welding

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

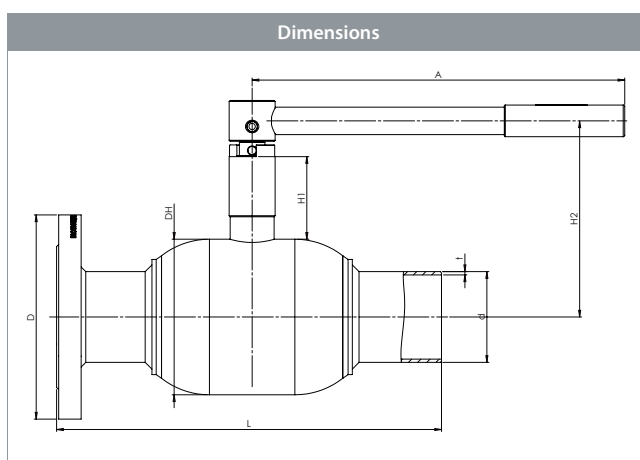
The standard handle is 180 degrees adjustable.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Larger dimensions DN125-400, on request.



					All dimensions in mm							
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	d	t	L	H1	H2	A
65	94104065S312900	65	498	9.8	127	185	76.1	2.9	366.0	66	155	275
80	94104080S313000	80	754	14.6	152	200	88.9	3.2	377.5	81	192	365
100	94104100S313100	100	1159	18.3	178	220	114.3	3.6	397.5	91	218	365

Steel ball valve - DN65-100, PN16

Type 94104 - Full bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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	DN65	ISO-flange.
	169245	DN80	
	66160065 000	DN65	Hexagon for insertion key.
	66164100 000	DN80	
	66161100 000	DN100	

Steel ball valve - DN15-50, PN40

Type 94103 - Full 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

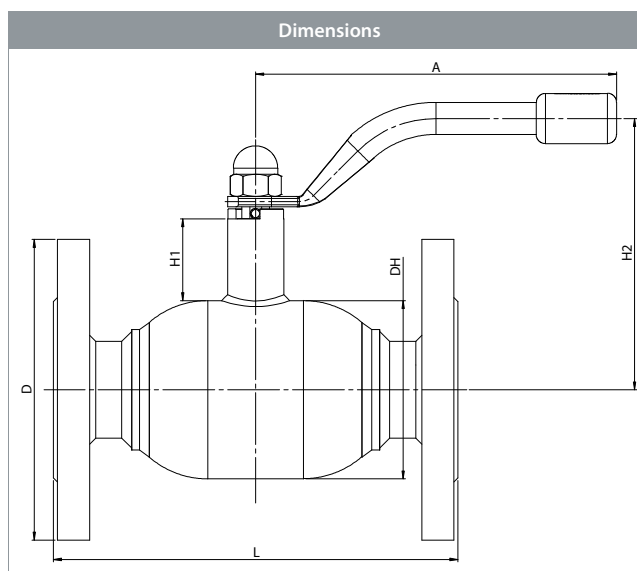
The standard handle is 180 degrees adjustable.

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 DN40 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	9410340015 010	15	32	1.9	42	95	130	47	115	140
20	9410340020 010	20	57	2.7	51	105	150	47	120	140
25	9410340025 010	25	81	3.5	57	115	160	48	124	140
32	9410340032 010	32	133	5.5	76	140	180	41	127	180
40	9410340040 010	40	229	6.8	89	150	200	41	133	180
50	9410340050 010	50	295	9.3	108	165	230	66	145	275

Steel ball valve - DN15-50, PN40

Type 94103 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	20	Handle	Steel
	21	Cap nut	Steel - galvanized
	34	Middle bush	Steel - P235GH / 1.0345 / EN 10217-2

Accessories	BROEN No.	Dimension	Description
	66050010 000 - yellow	DN20-25	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	DN32-40	
	66050040 003 - blue		
	66050040 004 - red		
	203245	DN20-25	ISO-flange.
	208245	DN32-40	
	167245	DN50	
	66160010 000	DN20-25	Hexagon for insertion key.
	66160040 000	DN32-40	
	66160065 000	DN50	

Special model: Minimum length - Flange x Flange - DN15-50:

DN	Standard length - mm	Minimum length - mm
15	130	On request
20	150	118
25	160	130
32	180	135
40	200	150
50	230	165

Steel ball valve - DN65-125, PN25

Type 94103 - Full 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

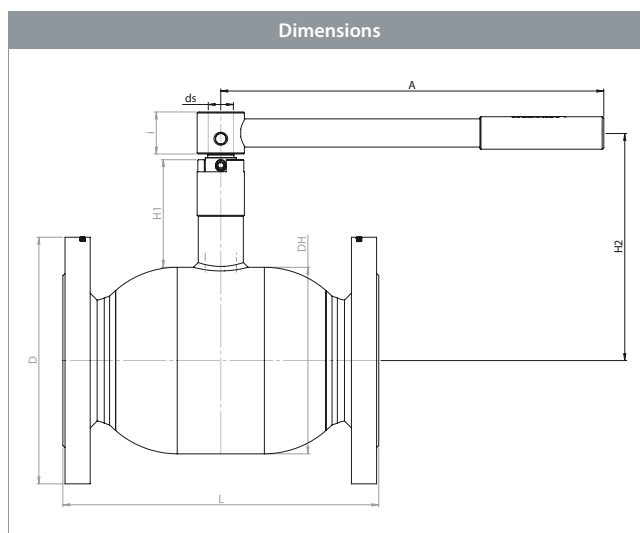
The standard handle is 180 degrees adjustable.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

We recommend to add a BROEN-Gear for DN100-125. Other pressure levels, lengths and special flanges available on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	L	H1	H2	ds	i	A	ISO
65	9410325065 010	65	498	13.2	127	185	290	66	155	18	31	275	-
80	9410325080 010	80	754	18.6	152	200	280	81	192	24	40	365	-
100	9410325100 010	100	1159	24.5	178	235	300	91	218	24	40	365	-
125	9410325125 010	125	1841	40.5	219	270	325	90	248	30	55	650	F10

Steel ball valve - DN65-125, PN25

Type 94103 - Full bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	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
	30	Circlip	Steel

Accessories	BROEN No.	Dimension	Description
	600584	DN100	BROEN-Gear.
	600585	DN125	
	167245	DN65	ISO-flange.
	169245	DN80	
	66160065 000	DN65	Hexagon for insertion key.
	66164100 000	DN80	
	66161100 000	DN100	
	66161150 000	DN125	

Special model: Minimum length - Flange x Flange - DN65-125:

DN	Standard length - mm	Minimum length - mm
65	270	206
80	280	224
100	300	244
125	325	272

Steel ball valve - DN125-150, PN25

Type 91103 - Full 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:

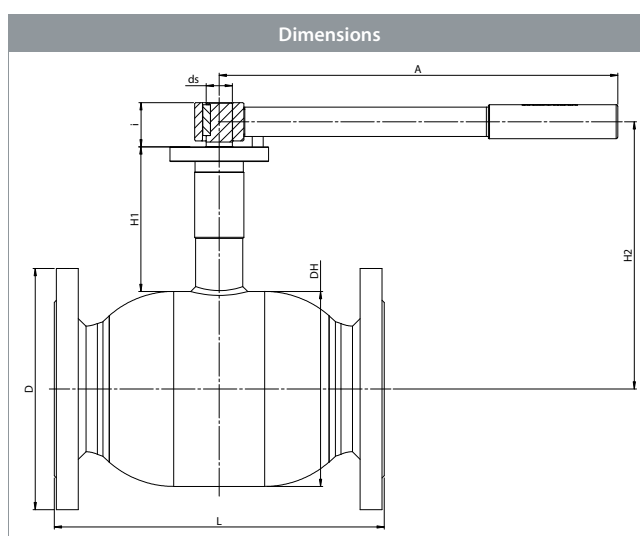
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

The DN150 is delivered with an ISO-flange, but without handle. We recommend to add a BROEN-Gear. Other pressure levels, lengths and special flanges available on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	L	H1	H2	ds	i	A	ISO
125	9110325125 010	125	1841	38.0	219	270	325	136	272	30	50	650	F10
150	9110325150 010	150	2652	47.7	267	300	350	156	321	30	60	-	F12

Steel ball valve - DN125-150, PN25

Type 91103 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	20	Handle	Steel
	22	Bearing	Steel - PTFE
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	25	Friction gasket	PTFE 20% Carbon
	30	Circlip	Steel

Accessories	BROEN No.	Dimension	Description
	600585	DN125	BROEN-Gear.
	600586	DN150	
	66161150 000	DN125	Hexagon for insertion key.

Special model: Minimum length - Flange × Flange - DN125-150:

DN	Standard length - mm	Minimum length - mm
125	325	272
150	350	300

Steel ball valve - DN100-150, PN25

Type 91103 - Full 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

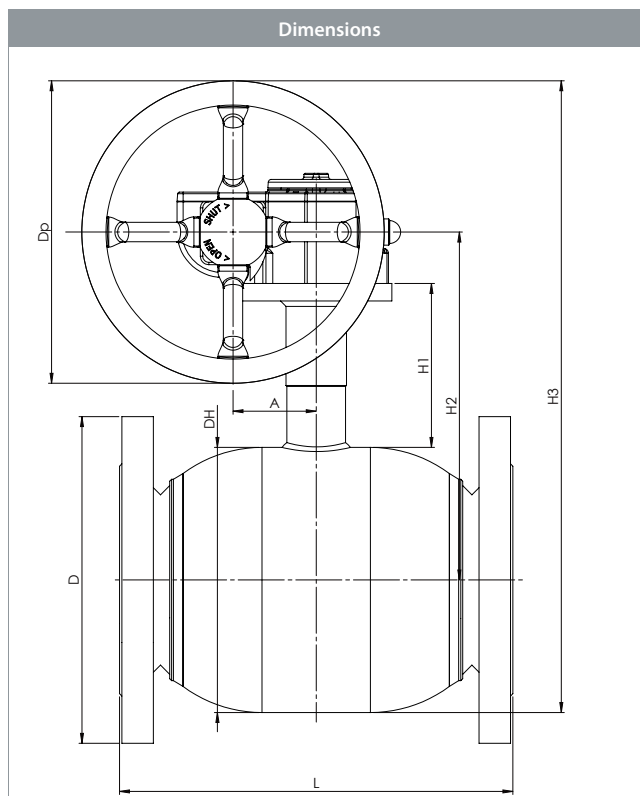
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, 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
100	9110325100 480	100	1159	29.4	178	235	300	132	255	335	160	52
125	9110325125 480	125	1841	45.6	219	270	325	136	272	522	250	69
150	9110325150 480	150	2652	56.3	267	300	350	156	321	590	250	69

Steel ball valve - DN100-150, PN25

Type 91103 - Full bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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 - DN100-150:

DN	Standard length - mm	Minimum length - mm
100	-	-
125	325	272
150	350	300

Steel ball valve - DN200-400, PN25

Type 86204 / 86004 - Full 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:

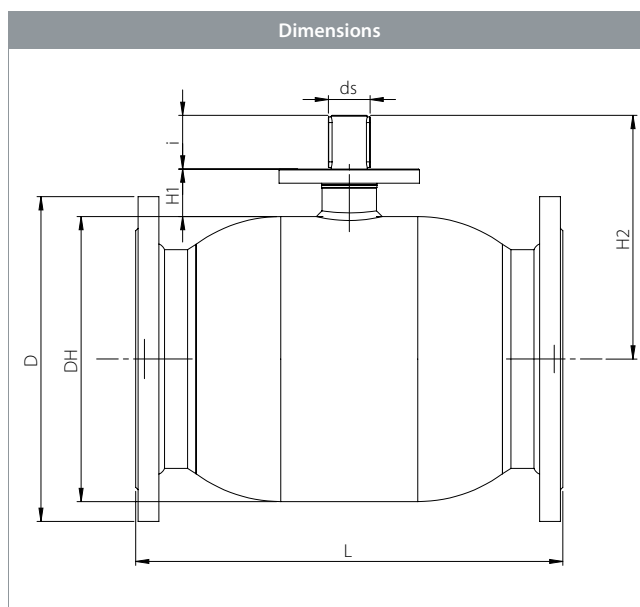
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

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



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	t	L	H1	H2	ds	i	ISO
200	8620425200 000	200	9200	101.4	356	340	-	550	60.2	304	45	67	F14
250	8620425250 000	250	13500	161.8	457	405	-	673	69.2	382	50	84	F16
300	8600425300 000	305	21600	284.8	508	460	-	850	82.5	437	60	100	F16
400	8600425400 000	400	35000	572.5	660	620	-	1016	105.0	547	80	112	F30

Steel ball valve - DN200-400, PN25

Type 86204 / 86004 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN200	BROEN-Gear.
	600588	DN250	
	600589	DN300	
	600590	DN400	

Steel ball valve - DN200-400, PN25

Type 86204 / 86004 - Full 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

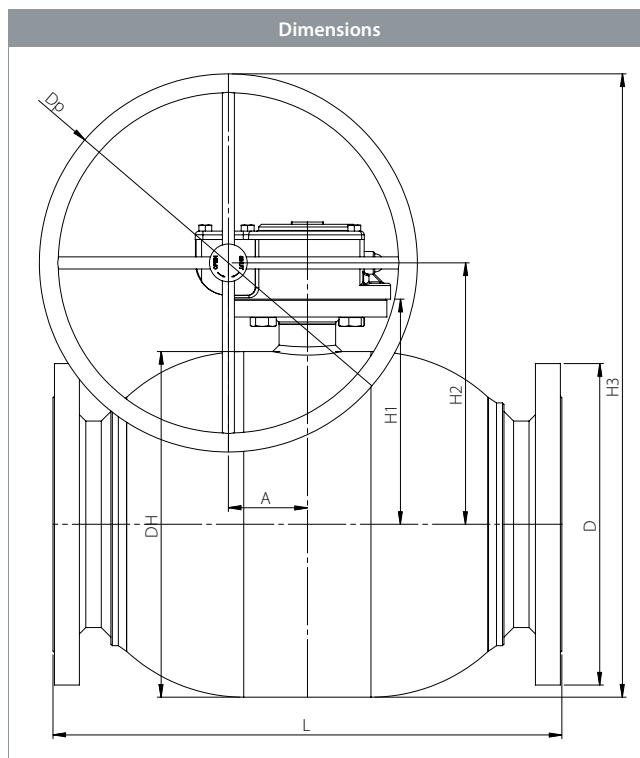
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	t	L	H1	H2	H3	Dp	A
200	8620425200 480	200	9200	103.5	356	340	-	550	60.2	275	500,0	450	68.8
250	8620425250 480	250	13500	166.8	457	405	-	673	69.2	346	596,0	500	104.5
300	8600425300 480	305	21600	293.2	457	460	-	850	82.5	346	566,5	350	130.0
400	8600425400 480	400	35000	640.6	508	620	-	1016	105.0	387	719,0	450	182.0

Steel ball valve - DN200-400, PN25

Type 86204 / 86004 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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 - DN200-400, PN25

Type 86214 / 86014 - Full 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:

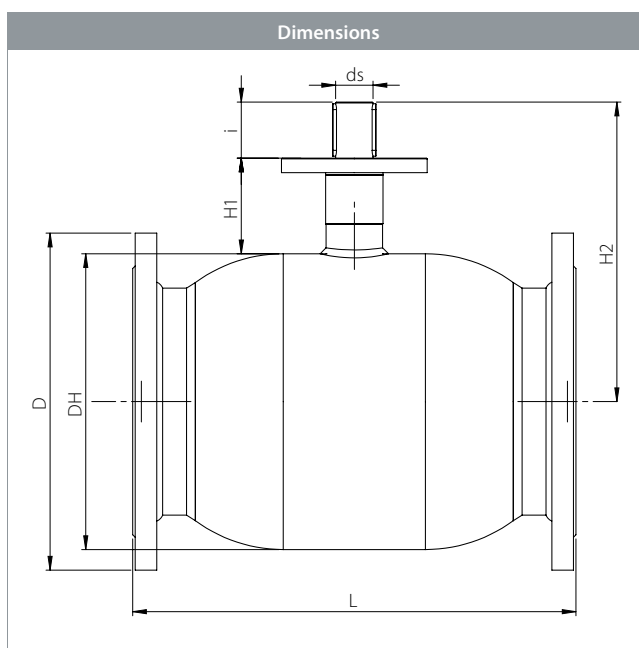
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request. 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	ISO
200	8621425200 000	200	9200	101.9	356	355.6	-	550	115	360	45	67	F14
250	8621425250 000	250	13500	163.9	457	405.0	-	673	130	386	50	84	F16
300	8601425300 000	305	21600	288.2	508	460.0	-	850	155	507	60	100	F16
400	8601425400 000	400	35000	578.8	660	620.0	-	1016	180	527	80	112	F30

Steel ball valve - DN200-400, PN25

Type 86214 / 86014 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN200	BROEN-Gear.
	600588	DN250	
	600589	DN300	
	600590	DN400	

Steel ball valve - DN200-400, PN25

Type 86214 / 86014 - Full 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

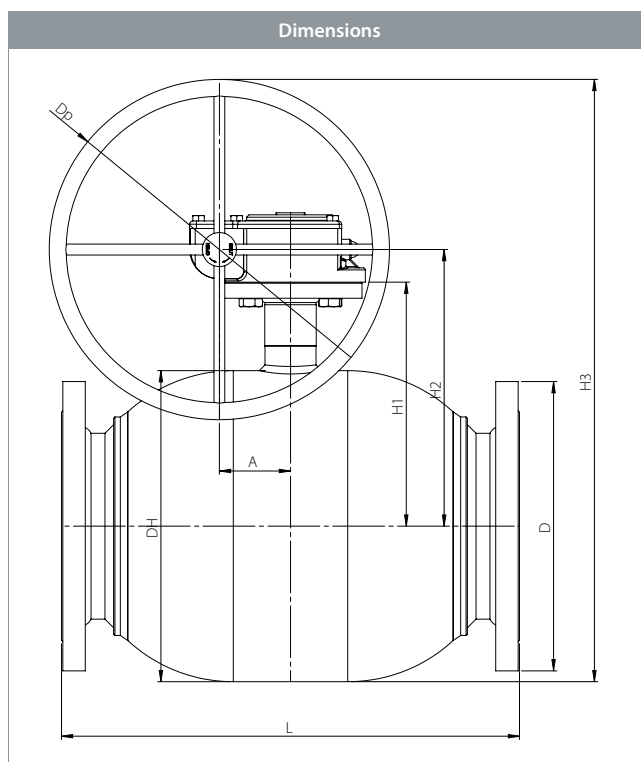
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	t	L	H1	H2	H3	Dp	A
200	8621425200 480	200	9200	105.0	356	355.6	-	550	115	330	555	450	68.8
250	8621425250 480	250	13500	168.9	457	405.0	-	673	130	407	657	500	104.5
300	8601425300 480	305	21600	296.6	457	460.0	-	850	155	464	639	350	130.0
400	8601425400 480	400	35000	646.9	508	620.0	-	1016	180	569	794	450	182.0

Steel ball valve - DN200-400, PN25

Type 86214 / 86014 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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 - DN65-125, PN16

Type 94103 - Full 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

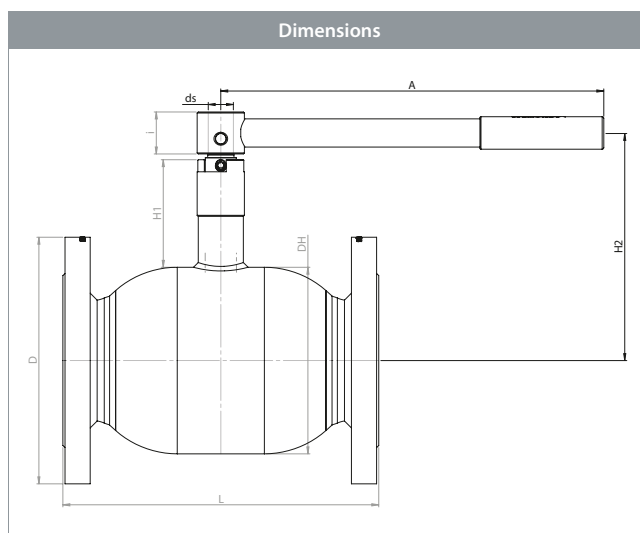
The standard handle is 180 degrees adjustable.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request. We recommend to add a BROEN-Gear for DN100-125.

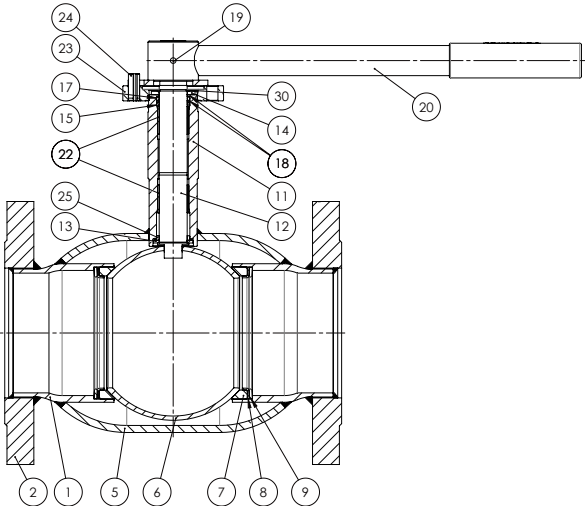


					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	L	H1	H2	ds	i	A	ISO
65	9410316065 010	65	498	13.2	127	185	290	66	155	18	31	275	-
80	9410316080 010	80	754	18.6	152	200	280	81	192	24	40	365	-
100	9410316100 010	100	1159	21.4	178	220	300	91	218	24	40	365	-
125	9410316125 010	125	1841	35.0	219	250	325	90	248	30	55	650	-

Steel ball valve - DN65-125, PN16

Type 94103 - Full bore



Technical drawing	Material description		
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - harden
	20	Handle	Steel
22	Bearing	Steel - PTFE	
23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2	
24	Pin	Steel - harden	
25	Friction gasket	PTFE 20% Carbon	
30	Circlip	Steel	

Accessories	BROEN No.	Dimension	Description
	600584	DN100	BROEN-Gear.
	600585	DN125	
	167245	DN65	ISO-flange.
	169245	DN80	
	66160065 000	DN65	Hexagon for insertion key.
	66164100 000	DN80	
	66161100 000	DN100	
	66161150 000	DN125	

Special model: Minimum length - Flange × Flange - DN65-125:

DN	Standard length - mm	Minimum length - mm
65	270	206
80	280	224
100	300	244
125	325	272

Steel ball valve - DN125-150, PN16

Type 91103 - Full 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:

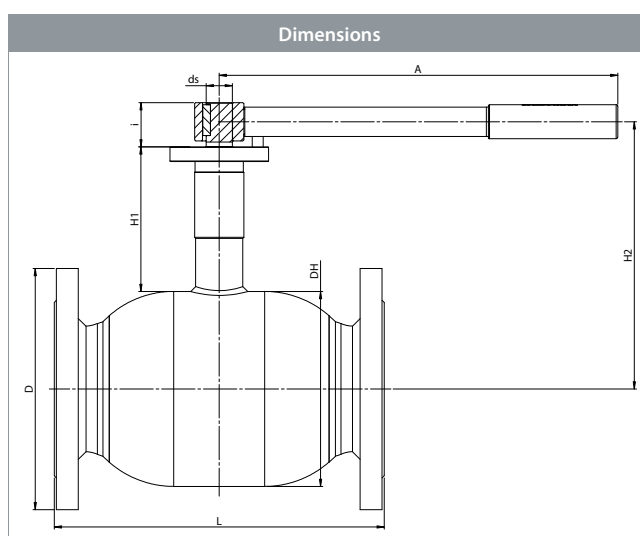
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

The DN150 is delivered with an ISO-flange, but without handle. We recommend to add a BROEN-Gear. Other pressure levels, lengths and special flanges available on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	L	H1	H2	ds	i	A	ISO
125	9110316125 010	125	1841	34.6	219	250	325	136	272	30	50	650	F10
150	9110316150 010	150	2652	41.4	267	285	350	156	321	30	60	900	F12

Steel ball valve - DN125-150, PN16

Type 91103 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	20	Handle	Steel
	22	Bearing	Steel - PTFE
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	25	Friction gasket	PTFE 20% Carbon
	30	Circlip	Steel

Accessories	BROEN No.	Dimension	Description
	600585	DN125	BROEN-Gear.
	600586	DN150	
	66161150 000	DN125	Hexagon for insertion key.

Special model: Minimum length - Flange × Flange - DN125-150:

DN	Standard length - mm	Minimum length - mm
125	325	272
150	350	300

Steel ball valve - DN125-150, PN16

Type 91103 - Full 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

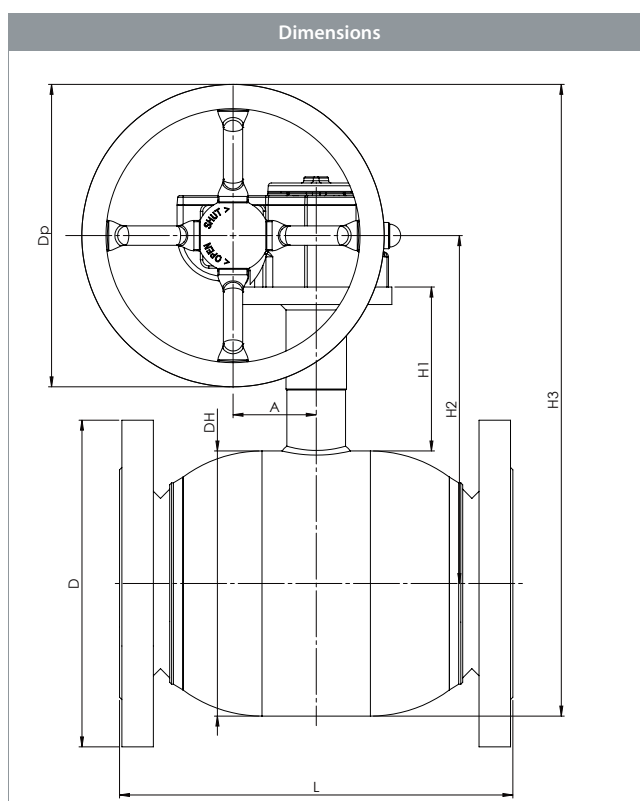
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, 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
125	9110316125 480	125	1841	43.2	219	250	325	136	272	522	250	69
150	9110316150 480	150	2652	50.0	267	285	350	156	321	590	250	69

Steel ball valve - DN125-150, PN16

Type 91103 - Full bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	11	Stem guide	Steel - S355J2 / 1.0570 / EN 10025-2
	12	Stem	Stainless steel / 1.4021 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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 - DN125-150:

DN	Standard length - mm	Minimum length - mm
125	325	272
150	350	300

Steel ball valve - DN200-400, PN16

Type 86204 / 86004 - Full 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:

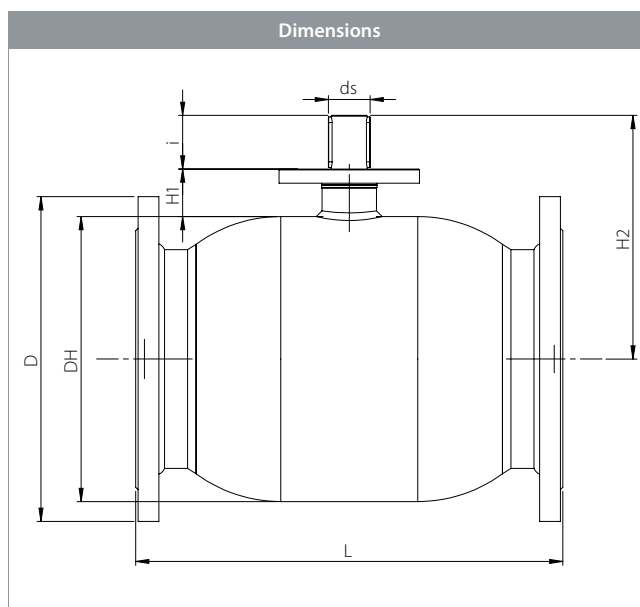
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request. 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	ISO
200	8620416200 000	200	9200	101.4	356	340	-	550	60.2	304	45	67	F14
250	8620416250 000	250	13500	161.8	457	405	-	673	69.2	382	50	84	F16
300	8600416300 000	305	21600	284.8	508	460	-	850	82.5	437	60	100	F16
400	8600416400 000	400	35000	572.5	660	620	-	1016	105.0	547	80	112	F30

Steel ball valve - DN200-400, PN16

Type 86204 / 86004 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN200	BROEN-Gear.
	600588	DN250	
	600589	DN300	
	600590	DN400	

Steel ball valve - DN200-400, PN16

Type 86204 / 86004 - Full 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

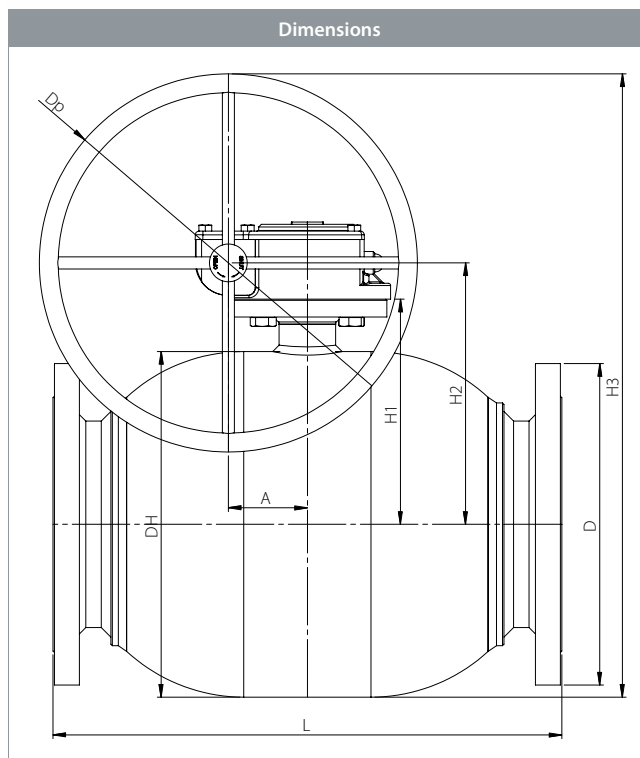
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	t	L	H1	H2	H3	Dp	A
200	8620416200 480	200	9200	103.5	356	340	-	550	60.2	275	500.0	450	68.8
250	8620416250 480	250	13500	166.8	457	405	-	673	69.2	346	596.0	500	104.5
300	8600416300 480	305	21600	293.2	457	460	-	850	82.5	346	566.5	350	130.0
400	8600416400 480	400	35000	640.6	508	620	-	1016	105.0	387	719.0	450	182.0

Steel ball valve - DN200-400, PN16

Type 86204 / 86004 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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 - DN200-400, PN16

Type 86214 / 86014 - Full 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:

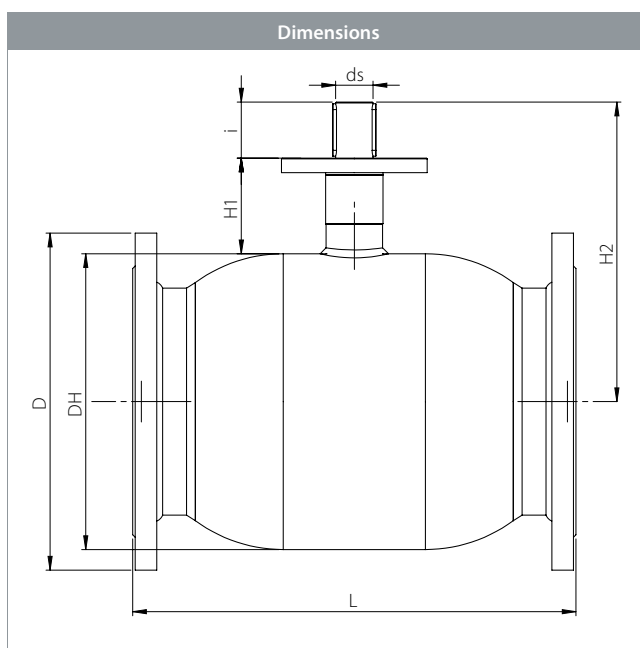
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request. 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	ISO
200	8621416200 000	200	9200	101.9	356	355.6	-	550	115	360	45	67	F14
250	8621416250 000	250	13500	163.9	457	405.0	-	673	130	386	50	84	F16
300	8601416300 000	305	21600	288.2	508	460.0	-	850	155	507	60	100	F16
400	8601416340 000	400	35000	578.8	660	620.0	-	1016	180	527	80	112	F30

Steel ball valve - DN200-400, PN16

Type 86214 / 86014 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN200	BROEN-Gear.
	600588	DN250	
	600589	DN300	
	600590	DN400	

Steel ball valve - DN200-400, PN16

Type 86214 / 86014 - Full 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

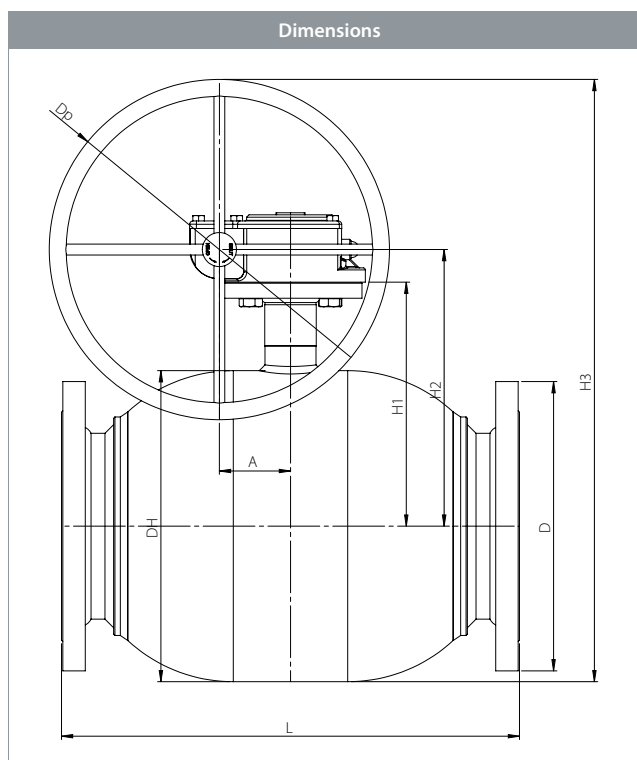
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	t	L	H1	H2	H3	Dp	A
200	8621416200 480	200	9200	105.0	356	355.6	-	550	115	330	555	450	68.8
250	8621416250 480	250	13500	168.9	457	405.0	-	673	130	407	657	500	104.5
300	8601416300 480	305	21600	296.6	457	460.0	-	850	155	464	639	350	130.0
400	8601416400 480	400	35000	646.9	508	620.0	-	1016	180	569	794	450	182.0

Steel ball valve - DN200-400, PN16

Type 86214 / 86014 - Full bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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

Handle, BBM Full Flow valves - DN10-50

Type 90... - Full bore

With red, blue and yellow clips



DN	BROEN No.	L - mm
10-20	9015500002	75
25-32	9032500002	100
40-50	9040500001	120

T-handle, BBM Full Flow valves - DN10-50

Type 90... - Full bore

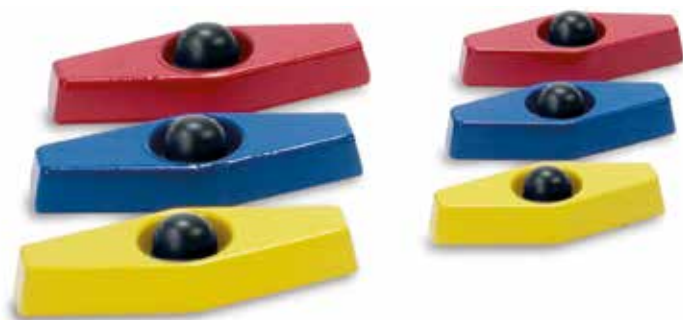
With red, blue and yellow clips



DN	BROEN No.	L - mm
10-50	9015550022	75

T-handle - DN15-40

Type 66050 - Full bore



DN	BROEN No.	Color	L - mm	B - mm
15-25	66050010 000	Yellow	85	34
15-25	66050010 003	Blue	85	34
15-25	66050010 004	Red	85	34
32-40	66050040 000	Yellow	120	44
32-40	66050040 003	Blue	120	44
32-40	66050040 004	Red	120	44

Handle - DN15-150

Type 66060 / 66064 / 66061 - Full bore



DN	BROEN No.	L - mm
15-25	66060010	140
32-40	66060040	180
50-65	66060065	275
80	66064100	365
100	66061100	365
125	66061150	650
150	66061200	900

ISO-flanges, mounting kit - DN15-80

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

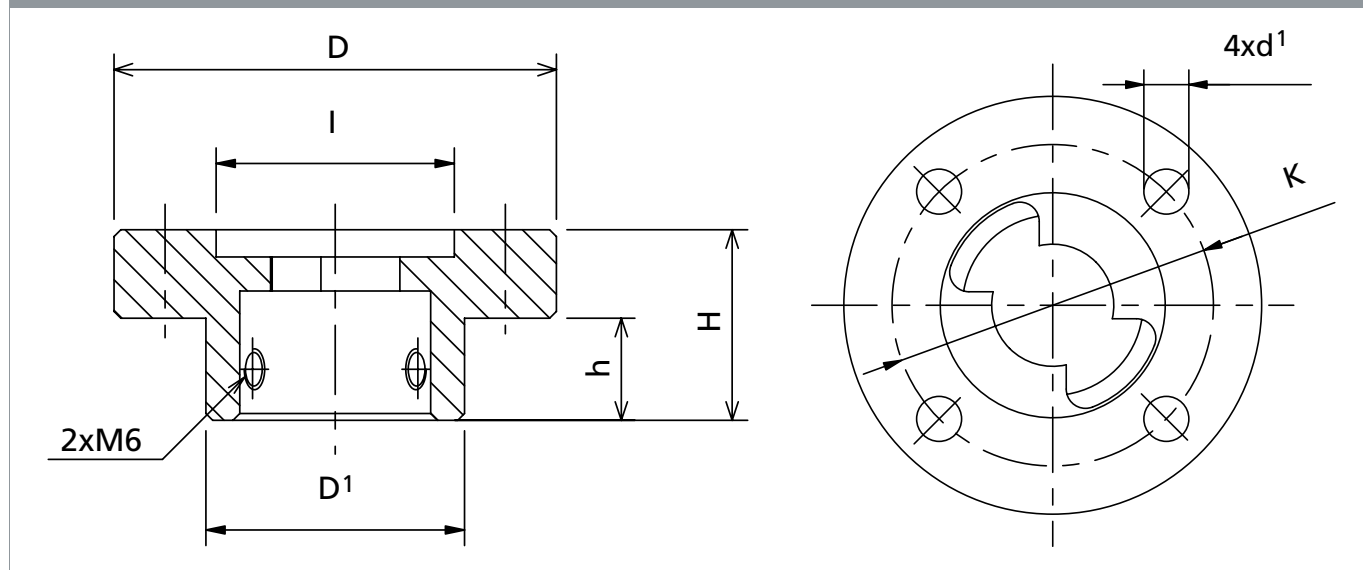
ISO-flanges, mounting kit

Mounting flange for later mounting of gear / actuator.

No mounting facing downwards.



Dimensions



			All dimensions in mm						
DN	BROEN No.	ISO-flange	D	D'	H	h	I	K	d'
15-25	203245	F05	65	34	28	15	35	50	7
32-40	208245	F05	65	38	28	15	35	50	7
50-65	167245	F05	65	47	33	20	35	50	7
80	169245	F07	90	57	35	20	55	70	9

Hexagon for insertion key - DN15-125

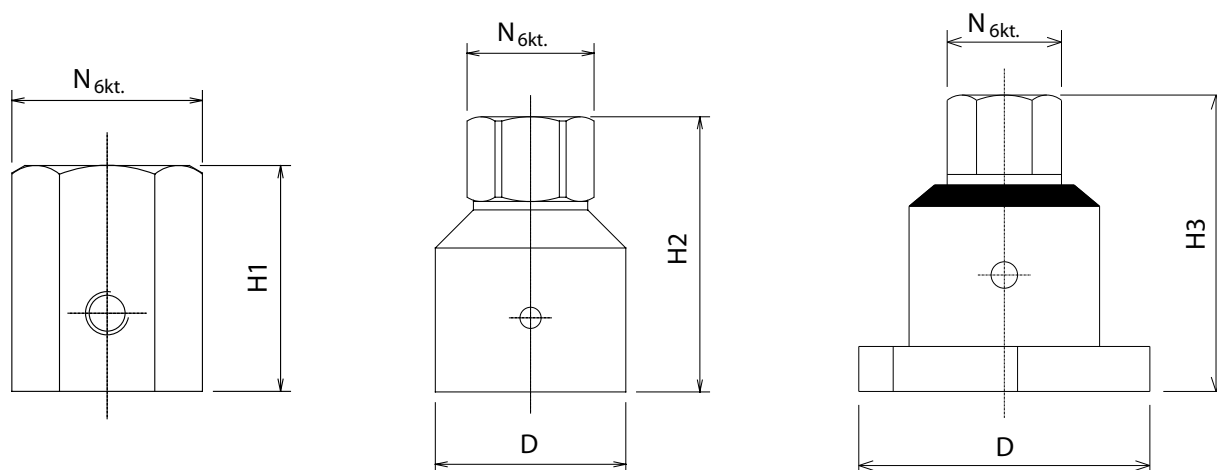
Type 66160 / 66164 / 66161 - Full bore

Hexagon for insertions key

To make thread end of spindle to hexagon.



Dimensions



DN	BROEN No.	All dimensions in mm				
		D	H1	H2	H3	N hex.
15-25	66160010 000	-	26	-	-	19
32-40	66160040 000	-	26	-	-	19
50-65	66160065 000	28	-	52	-	19
80	66164100 000	45	-	65	-	27
100	66161100 000	80	-	-	75	27
125	66161150 000	112	-	-	85	27

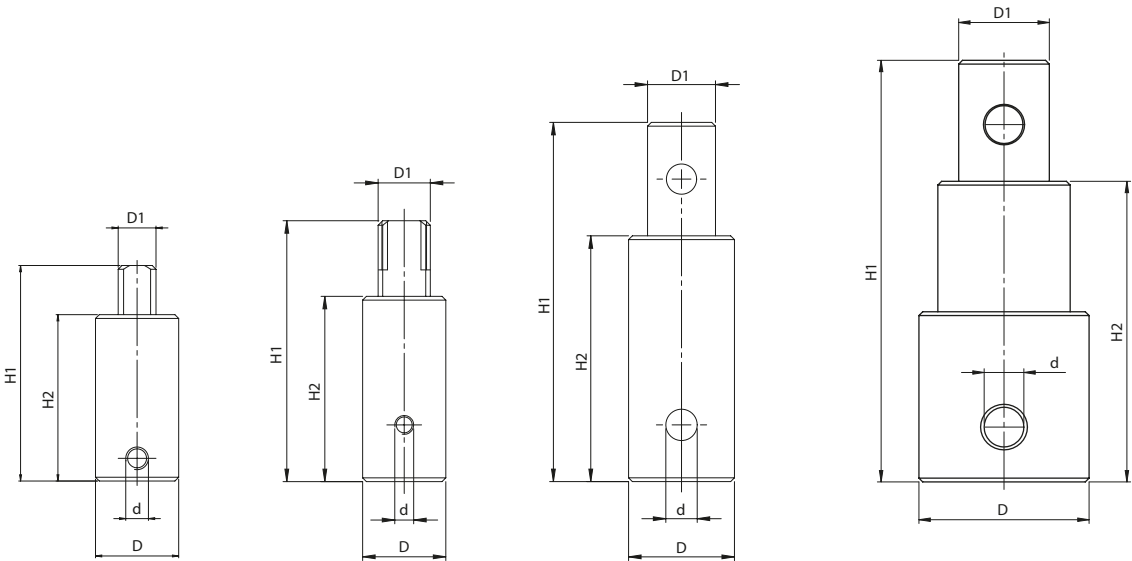
Spindle extension - DN15-100

Type 084... / 251... - Full bore

Spindle extension for type 94 valves



Dimensions



		All dimensions in mm				
DN	BROEN No.	D	H1	H2	d	D1
15-25	084600	22	57.0	44.0	-	10
32-40	084500	22	69.0	49.0	-	14
50-65	084800	28	95.0	65.0	8.3	18
80-100	251300	45	111.5	79.5	10.5	24

BROEN Ballomax® Repair set - DN10-500

Type 600... - Full bore



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

Repair set include tools and 5 gaskets for repair - not suitable for BROEN Ballomax® Full Flow valves (Type BBM).

BROEN-Gear - DN100-400

Type 600... - **Full bore**

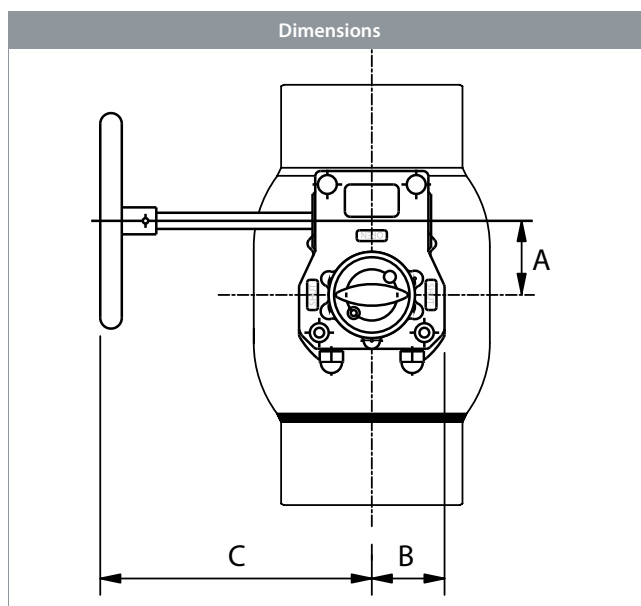
BROEN-Gear

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.

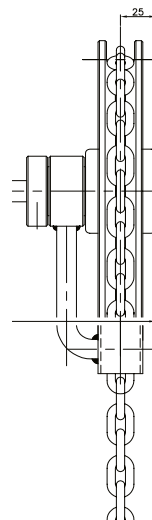


			All dimensions in mm				
DN	BROEN nr.	Nettovægt - kg*	A	B	C	Nm	Hand wheel
100	600584	2,5	41,3	40,0	145	300	200
125	600585	7,8	68,8	67,5	240	1200	300
150	600586	8,6	68,8	67,5	245	1200	350
200	600587	9,5	68,8	67,5	275	1200	450
250	600588	26,0	104,5	110,0	346	3250	500
300	600589	42,0	130,0	142,5	387	7000	350
400	600590	67,9	182,0	185,0	470	17000	450

* Weight gearbox with hand wheel.

BROEN-Gear with chain - DN40-300

Type CW... - Full bore



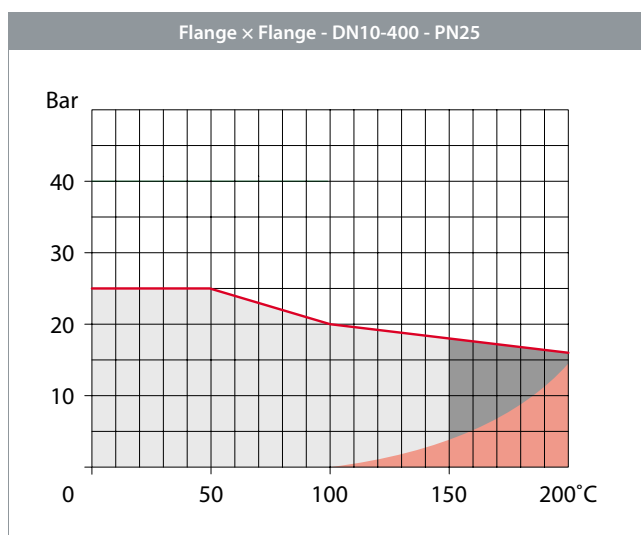
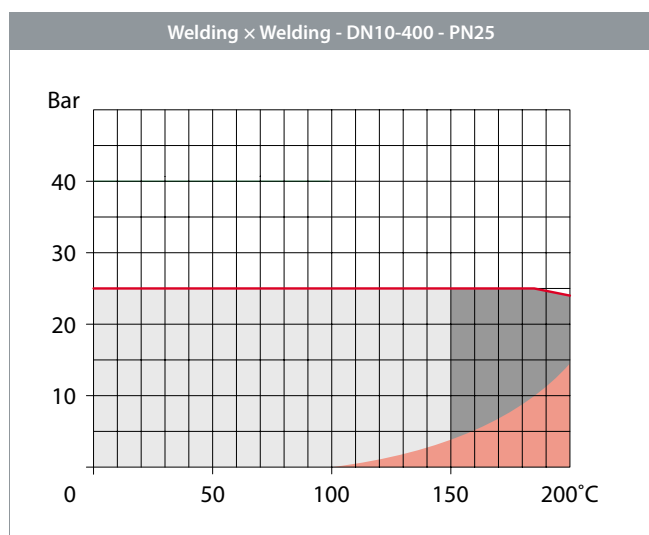
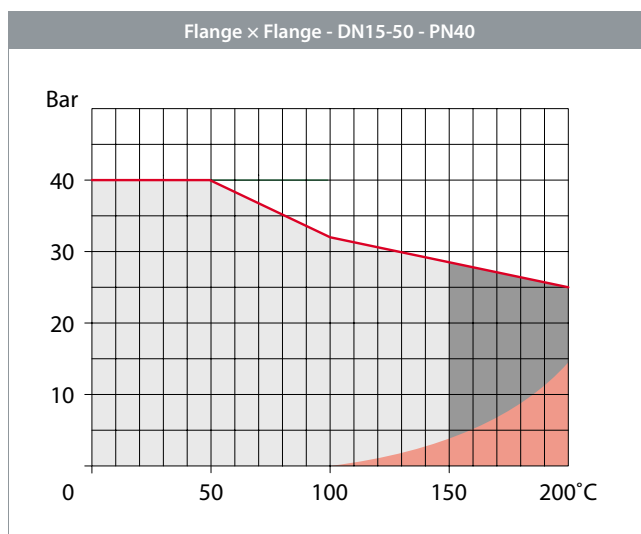
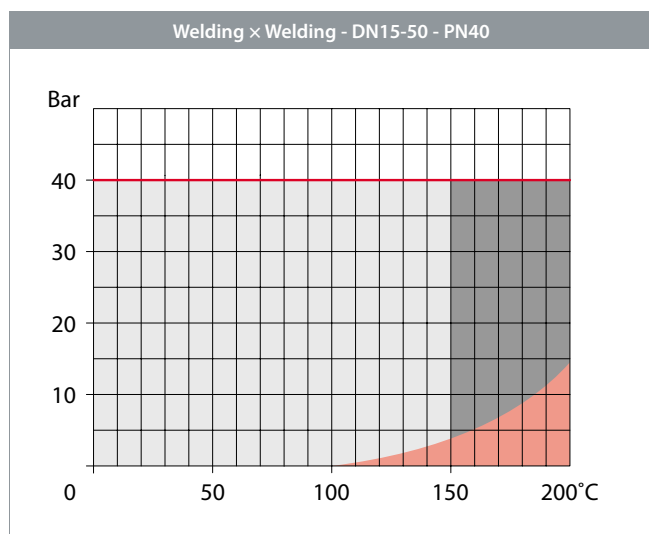
	Size	BROEN No.
	Ø15	CW 135
	Ø20	CW 215
	Ø25	CW 335
Accessory:		
Gear chain	1 meter - ZP chain (+ Splitlink)	
Gear chain	1 meter - SS chain (+ Splitlink)	

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.

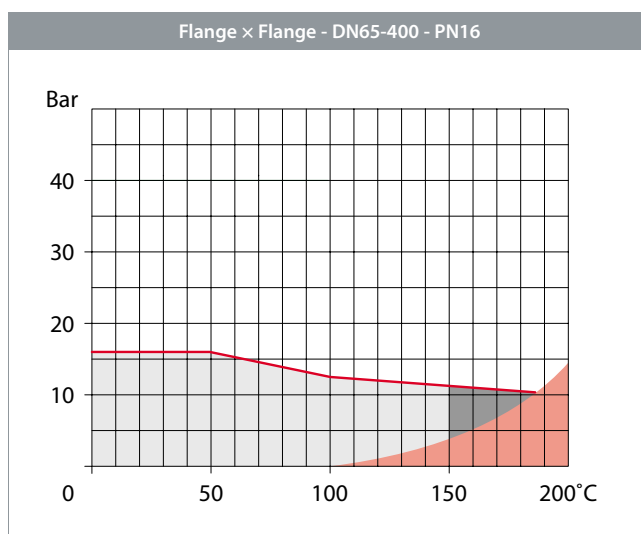
NOTICE: The length is the total length, not the height above ground of the gear.

Pressure and temperature graph - DN15-400 - PN40/25/16

Full bore



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



Pressure drop graph - DN15-400

Full bore

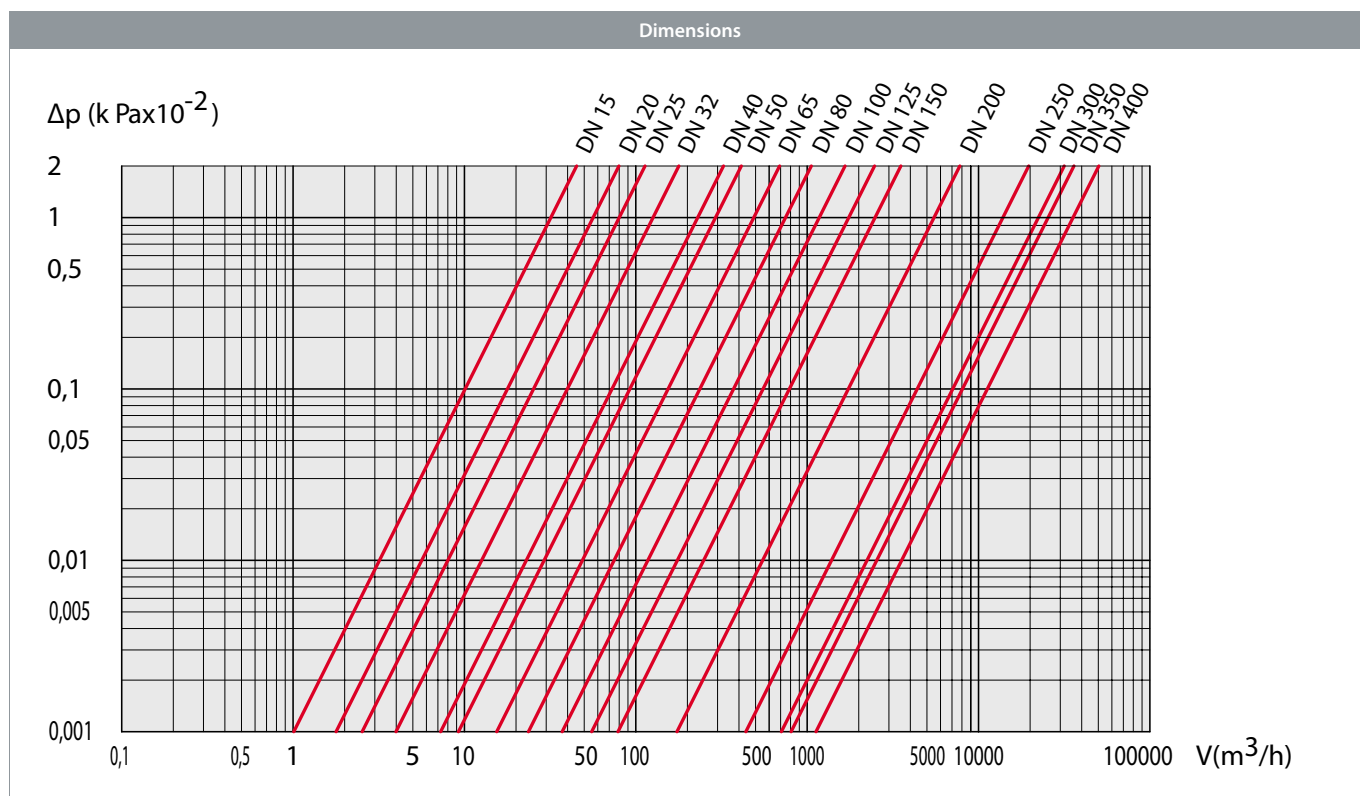
Pressure drop graph

Ball valve in fully open position.

Medium: water density in 1000 kg/m³

Definitions

Kvs: M³ water per hour at pressure drop 1 bar.



DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
Kvs	32	57	81	133	229	295	498	754	1159	1841	2652	5720	14790	22040	25400	36350

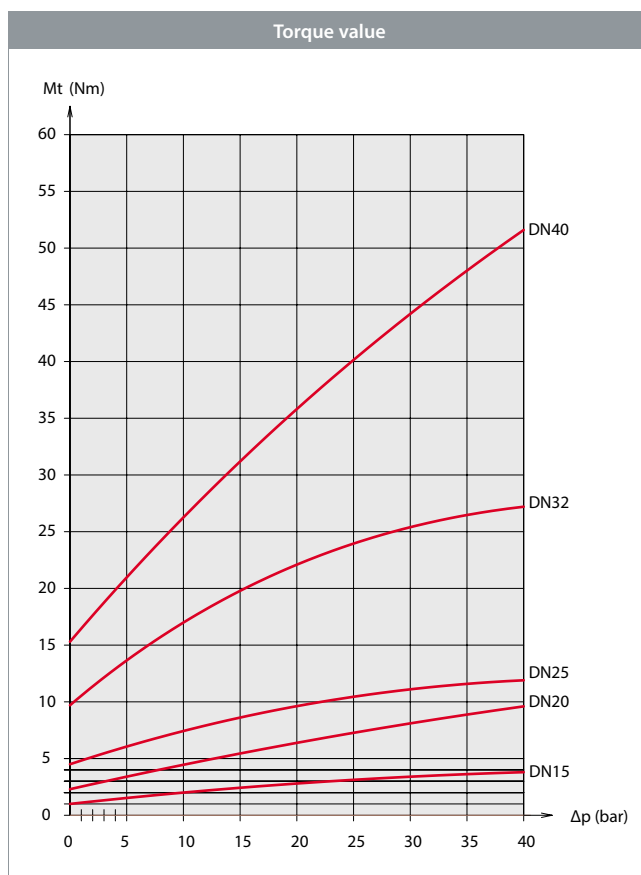
Operating torque - DN15-40, PN40

Full 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.



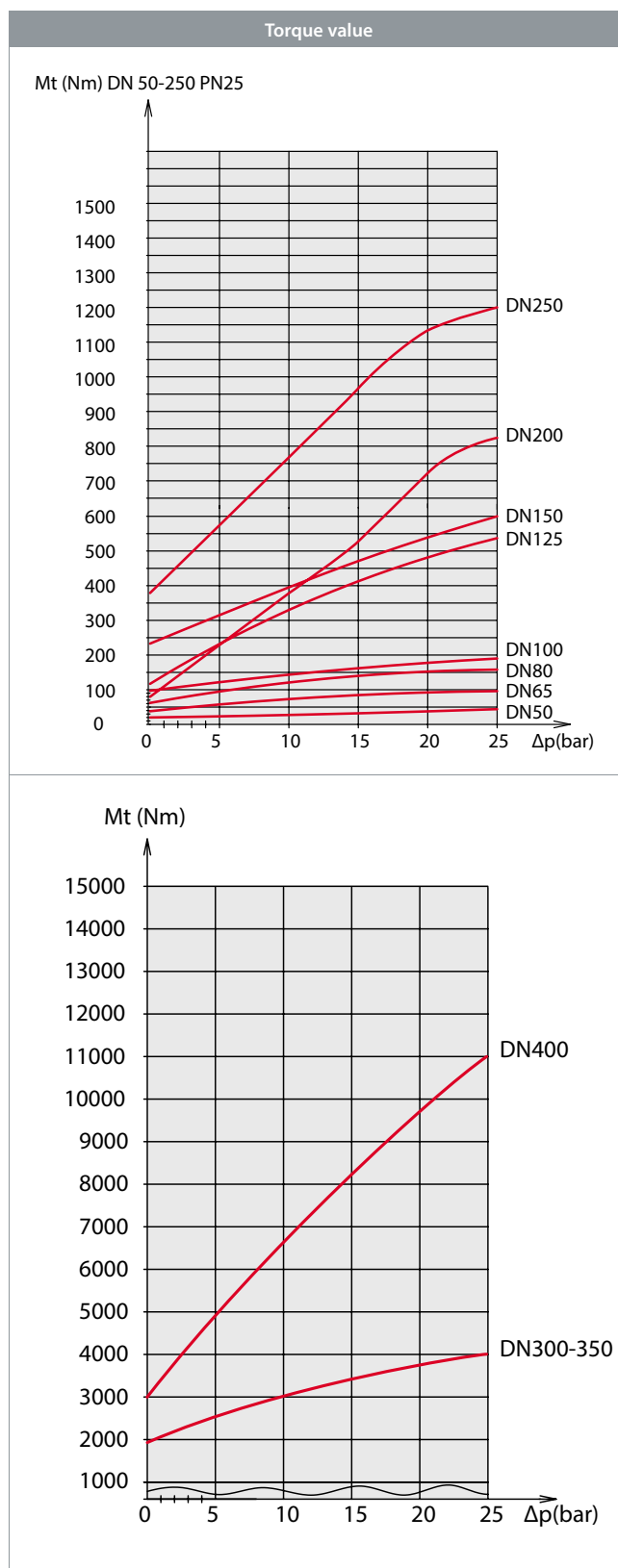
Operating torque - DN50-400, PN25

Full 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.

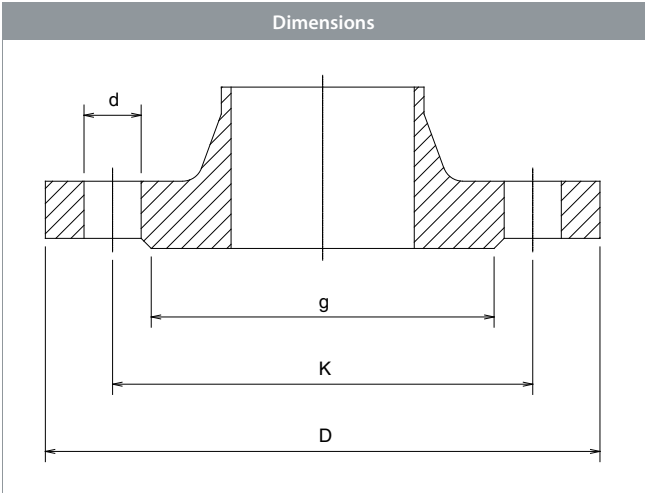


Connecting flange - DN15-50, PN40

EN 1092-1 - Full bore

Description

Flangestandard.



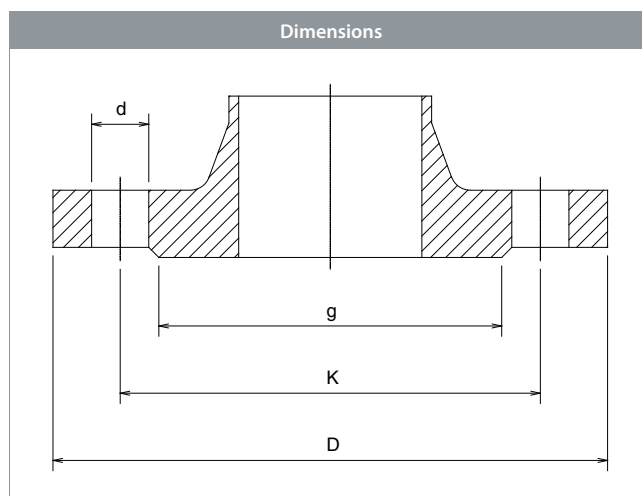
	All dimensions in mm				
DN	D	K	g	d	No. of bolt holes
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4

Connecting flange - DN15-400, PN25

EN 1092-1 - **Full bore**

Description

Flangestandard.



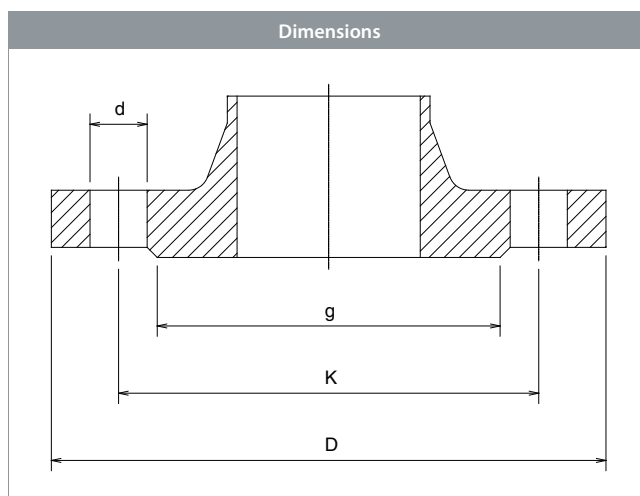
All dimensions in mm					
DN	D	K	g	d	No. of bolt holes
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	8
80	200	160	138	18	8
100	235	190	162	22	8
125	270	220	188	26	8
150	300	250	218	26	8
200	360	310	278	26	12
250	425	370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

Connecting flange - DN15-400, PN16

EN 1092-1 - Full bore

Description

Flangestandard.



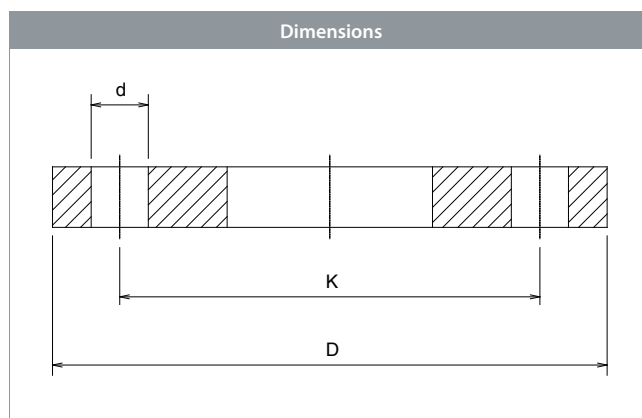
DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	4
80	200	160	138	18	8
100	220	180	158	18	8
125	250	210	188	18	8
150	285	240	212	22	8
200	340	295	268	22	12
250	405	355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

Connecting flange - DN15-400, PN10

EN 1092-1 - **Full bore**

Description

Flangestandard.



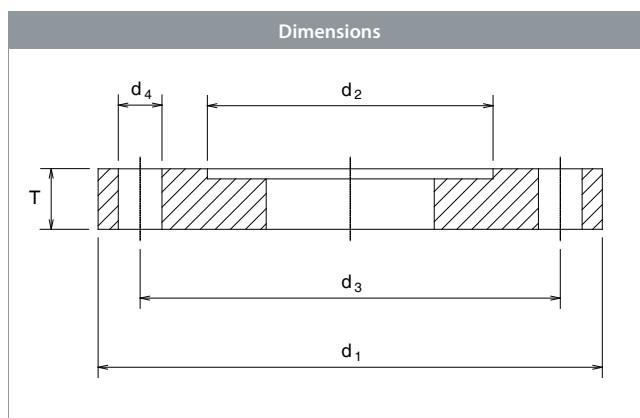
	All dimensions in mm			
DN	D	K	d	No. of bolt holes
15	95	65	14	4
20	105	75	14	4
25	115	85	14	4
32	140	100	18	4
40	150	110	18	4
50	165	125	18	4
65	185	145	18	4
80	200	160	18	8
100	220	180	18	8
125	250	210	18	8
150	285	240	22	8
200	340	295	22	8
250	395	350	22	12
300	445	400	22	12
350	505	460	22	16
400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

Valve actuator attachment - PN10

ISO 5210 / ISO 5211 - **Full bore**

Description

ISO-flange for gear.



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

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 4 **Steel ball valves** **Reduced bore**

Steel ball valve - DN15-20, PN40

Type 61101 / 64101 - Reduced bore

Female x Welding (long weldingend)

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

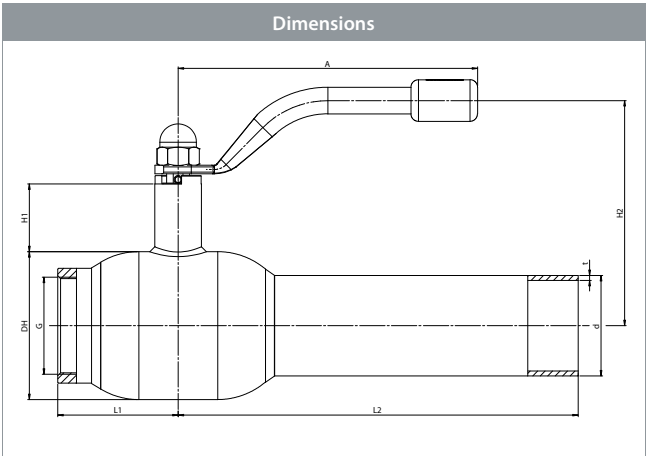
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	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 - DN15-20, PN40

Type 61101 / 64101 - Reduced bore



Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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 - gul	DN15-20	T-handles in three different colors - yellow, blue and red. Factory fitted T-handle on request.
	66050010 003 - blå		
	66050010 004 - rød		
	203245	DN15-20	ISO-flange.
	66160010 000	DN15-20	Hexagon for insertion key.

Steel ball valve - DN15-25, PN40

Type 61105 / 64105 - Reduced bore

Cap and Chain × Welding

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

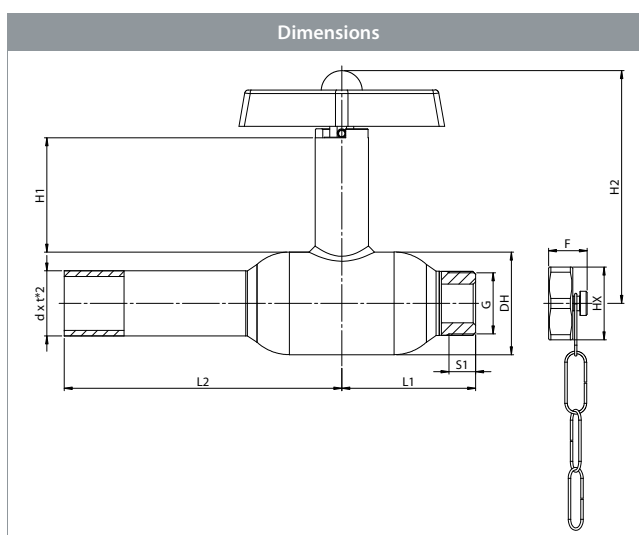
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	G	S1	DH	L1	d	t	L2	H1	H2	F	HX
15	61105015S268700	10	8	0.8	¾"	11	38	33	21.3	2.0	105	50	97.0	16	30
20	64105020S284900	15	15	0.9	¾"	11	42	55	26.9	2.3	115	47	97.0	16	30
25	64105025S268600	20	27	1.1	1"	14	51	65	33.7	2.6	115	47	119.6	16	36

Steel ball valve - DN15-25, PN40

Type 61105 / 64105 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	4	Male	Steel - S355J2+N / 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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	21	Cap nut	Steel - galvanized
	32	T-handle	Steel - ZL5 ZnAl4 CU1 / EN 1774
	33	Cap and chain end	Brass

Steel ball valve - DN65-150, PN25

Type 64102 - Reduced bore

Welding × Welding

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

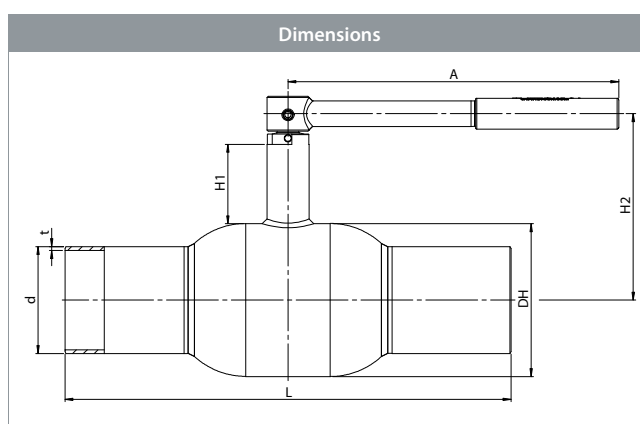
The standard handle is 180 degrees adjustable.

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 DN40 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	DH	d	t	L	H1	H2	A
65	64102065 010	50	180	5.0	108	76.1	2.9	360	66	144	275
80	64102080 010	65	288	6.5	127	88.9	3.2	370	66	154	275
100	64102100 010	85	470	9.8	152	114.3	3.6	390	81	193	365
125	64102125 010	100	699	12.4	178	139.7	3.6	390	91	211	365
150	64102150 010	125	1046	21.1	219	168.3	4.0	390	101	249	650

Steel ball valve - DN65-150, PN25

Type 64102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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	DN65-80	ISO-flange.
	169245	DN100	

Steel ball valve - DN65-100, PN25

Type 64102 - **Reduced bore** - **FLOWOPTIMIZED**

Welding × Welding

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

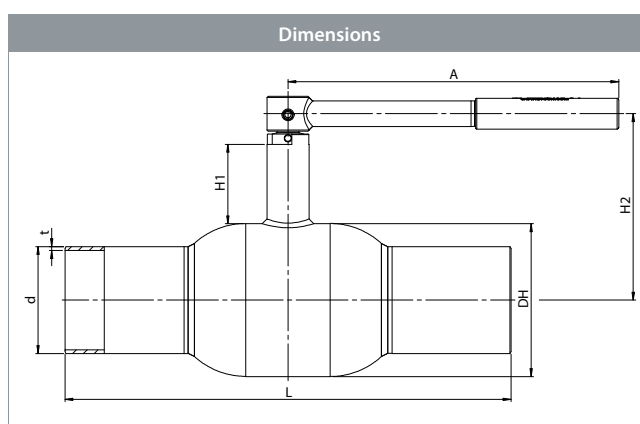
The standard handle is 180 degrees adjustable.

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 DN40 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	DH	d	t	L	H1	H2	A
65	64902065 010	50	180	5.0	108	76.1	2.9	360	66	144	275
80	64902080 010	65	288	6.5	127	88.9	3.2	370	66	154	275
100	64902100 010	85	470	9.8	152	114.3	3.6	390	81	193	365

Steel ball valve - DN65-100, PN25

Type 64102 - Reduced bore - **FLOWOPTIMIZED**



Technical drawing		Material description	
	1	Welding	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
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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	DN65-80	ISO-flange.
	169245	DN100	

Steel ball valve - DN125-200, PN25

Type 61102 - Reduced bore

Welding × Welding 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:

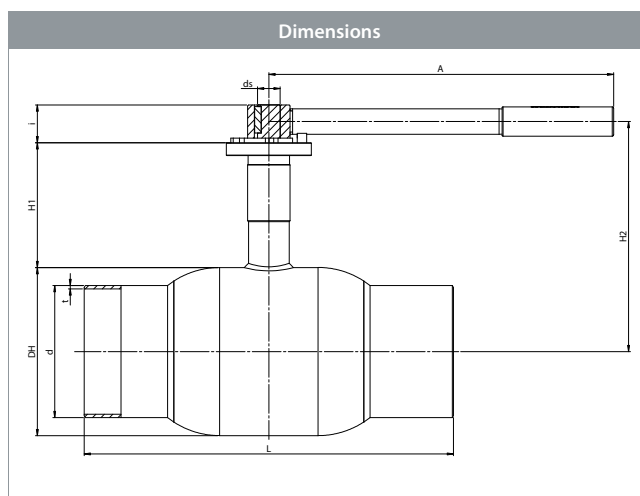
- BROEN-Gear.
- Electric actuator.

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 DN40 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
125	61102125 010	100	699	14.3	178	139.7	3.6	390	132	221	24	40	365	F07
150	61102150 010	125	1046	26.0	219	168.3	4.0	390	135	245	30	50	650	F10
200	61102200 010	150	1500	43.4	267	219.1	4.5	390	155	289	30	60	900	F12

Steel ball valve - DN125-200, PN25

Type 61102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel / 1.4305 / EN 10088-3
	19	Stop pin (Unbraco)	Steel - hardened
	20	Handle	Steel
	22	Bearing	Steel - PTFE
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	24	Pin	Steel - hardened
	25	Friction gasket	PTFE 20% Carbon

Accessories	BROEN No.	Dimension	Description
	600584	DN125	BROEN-Gear.
	600585	DN150	
	600586	DN200	

Steel ball valve - DN125-200, PN25

Type 61102 - Reduced bore

Welding × Welding 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

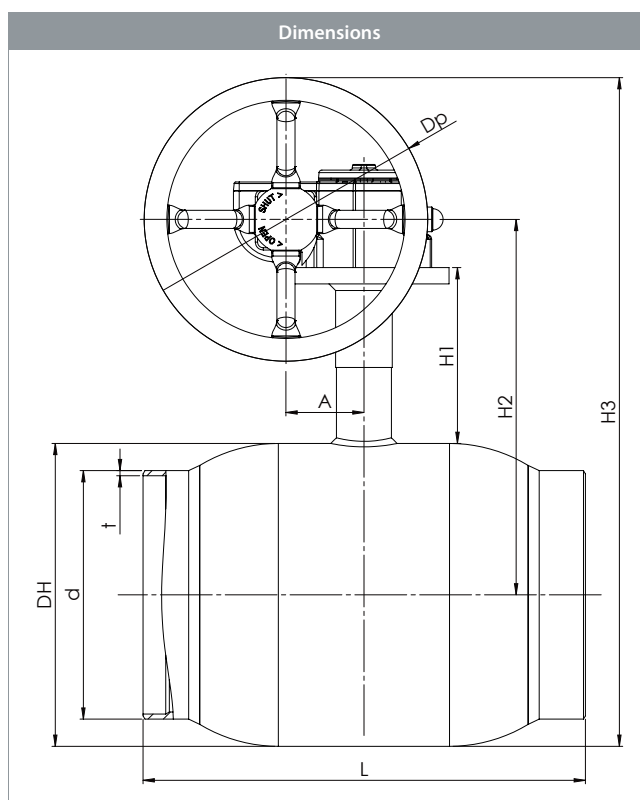
Eco-friendly protection finish against corrosion.

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 DN40 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
125	6110225125 480	100	699	18.8	178	139.7	3.6	390	132	255	424	160	53
150	6110225150 480	125	1046	34.8	219	168.3	4.0	390	135	287	522	250	69
200	6110225200 480	150	1500	52.3	267	219.1	4.5	390	155	331	590	250	69

Steel ball valve - DN125-200, PN25

Type 61102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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 - DN250-500, PN25

Type 85002 - Reduced bore

Welding × Welding 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:

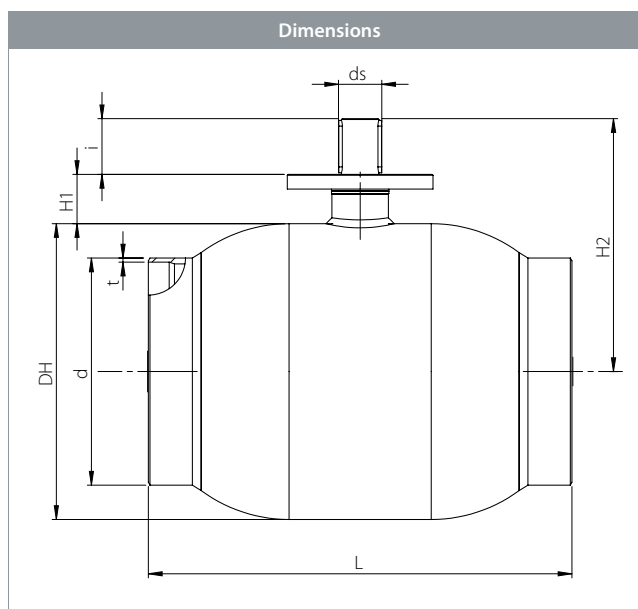
- BROEN-Gear.
- Electric actuator.

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 DN40 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

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25

Type 85002 - Reduced bore



Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN250	BROEN-Gear.
	600588	DN300	
	600588	DN350	
	600589	DN400	
	600590	DN500	

Steel ball valve - DN250-500, PN25

Type 85002 - Reduced bore

Welding × Welding 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

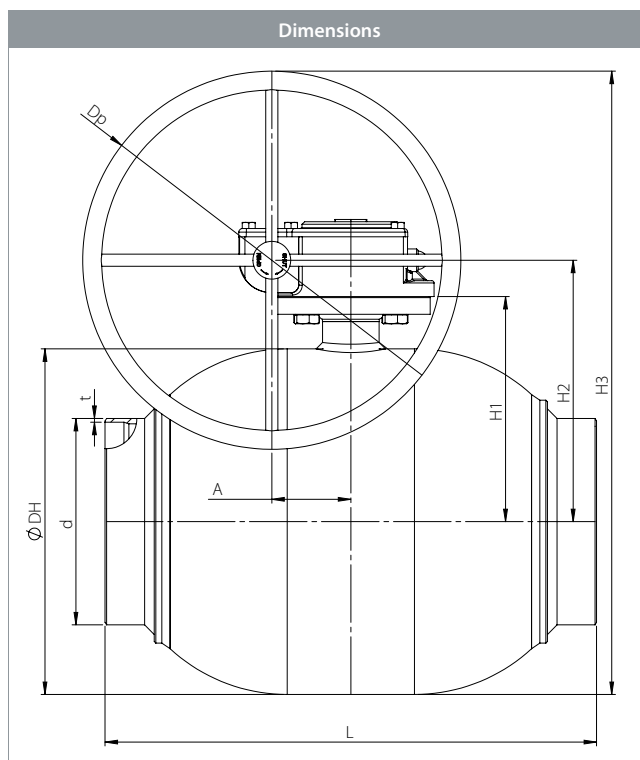
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 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
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

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25



Type 85002 - Reduced bore

Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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 - DN250-500, PN25

Type 85012 - Reduced bore

Welding × Welding 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:

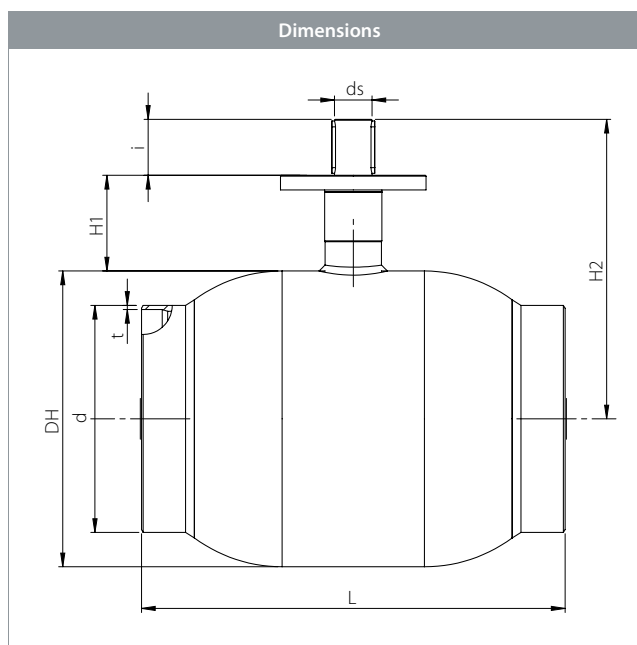
- BROEN-Gear.
- Electric actuator.

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 DN40 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	ISO
250	8501225250 000	200	3200	68.0	356	273.0	5.0	509	115	349.8	45	67	F14
300	8501225300 000	250	4700	108.9	457	323.9	5.6	586	130	443.0	50	84	F16
350	8501225350 000	250	5500	127.8	457	355.6	5.6	662	130	443.0	50	84	F16
400	8501225400 000*	305	10600	192.2	508	406.4	6.3	734	155	506.5	60	100	F16
500	8501225500 000*	400	18150	374.0	660	508.0	6.3	889	180	622.0	80	112	F30

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25

Type 85012 - Reduced bore



Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN250	BROEN-Gear.
	600588	DN300	
	600588	DN350	
	600589	DN400	
	600590	DN500	

Steel ball valve - DN250-500, PN25

Type 85012 - Reduced bore

Welding × Welding 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

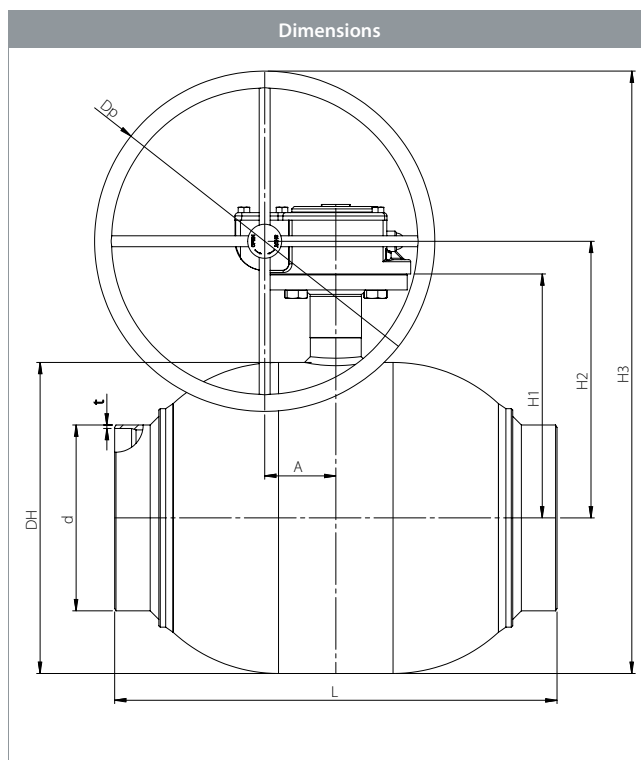
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



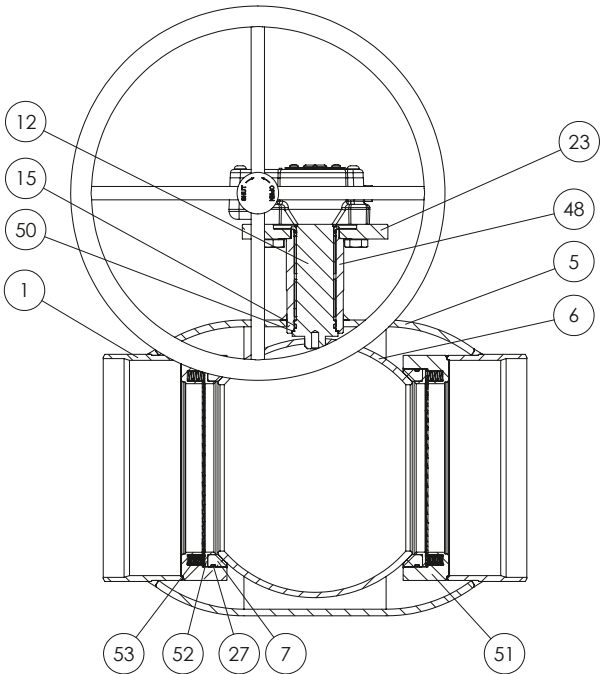
					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	H3	Dp	A
250	8501225250 480	200	3200	70.1	356	273.0	5.0	509	115	330	555	450	68.8
300	8501225300 480	250	4700	114.0	457	323.9	5.6	586	130	407	657	500	104.5
350	8501225350 480	250	5500	132.7	457	355.6	5.6	662	130	407	657	500	104.5
400	8501225400 480*	305	10600	200.6	508	406.4	6.3	736	155	460	639	350	130.0
500	8501225500 480*	400	18150	442.2	660	508.0	6.3	889	180	569	794	450	182.0

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25



Type 85012 - Reduced bore

Technical drawing	Material description		
	1	Welding	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	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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 - DN250-500, PN25

Type 85112 - **Reduced bore** - **FLOWOPTIMIZED**

Welding × Welding 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:

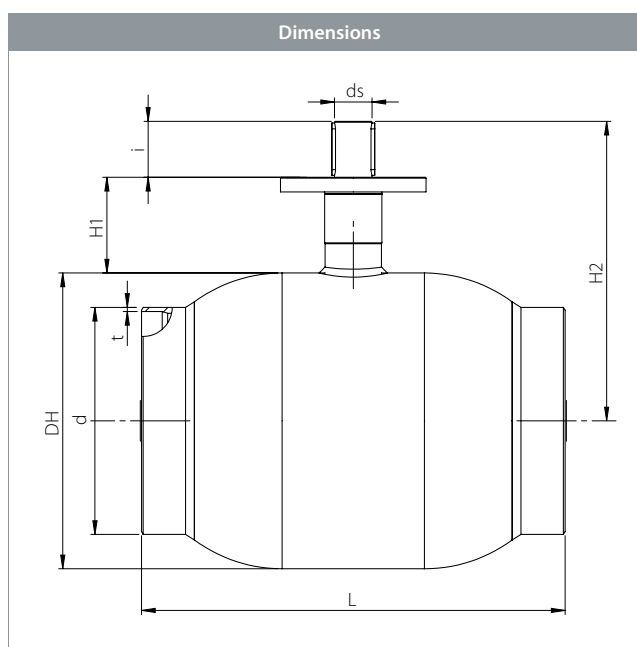
- BROEN-Gear.
- Electric actuator.

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 DN40 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	ISO
250	8511225250 000	200	5300	69.8	356	273.0	5.0	509	115	349.8	45	67	F14
300	8511225300 000	250	8200	111.7	457	323.9	5.6	586	130	443.0	50	84	F16
350	8511225350 000	250	8900	130.6	457	355.6	5.6	662	130	443.0	50	84	F16
400	8511225400 000	305	13700	194.0	508	406.4	6.3	734	155	506.5	60	100	F16
500	8511225500 000	400	20300	376.4	660	508.0	6.3	889	180	622.0	80	112	F30

Steel ball valve - DN250-500, PN25

Type 85112 - Reduced bore - FLOWOPTIMIZED


Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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
	54	Flowguides	Steel

Accessories	BROEN No.	Dimension	Description
	600587	DN250	BROEN-Gear.
	600588	DN300	
	600588	DN350	
	600589	DN400	
	600590	DN500	

Steel ball valve - DN250-500, PN25

Type 85112 - **Reduced bore** - **FLOWOPTIMIZED**

Welding × Welding 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

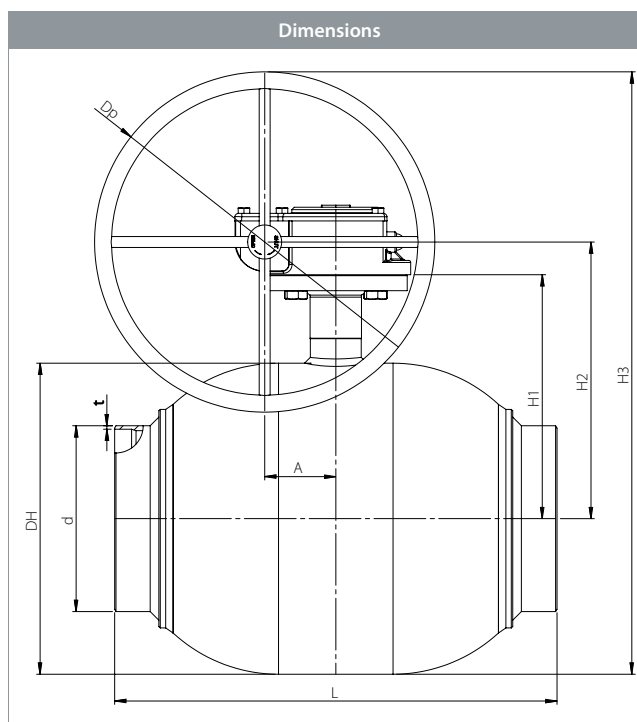
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 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
250	8511225250 480	200	5300	72.7	356	273.0	5.0	509	115	330	555	450	68.8
300	8511225300 480	250	8200	116.6	457	323.9	5.6	586	130	407	657	500	104.5
350	8511225350 480	250	8900	135.3	457	355.6	5.6	662	130	407	657	500	104.5
400	8511225400 480	305	13700	203.2	508	406.4	6.3	736	155	464	639	350	130.0
500	8511225500 480	400	20300	444.8	660	508.0	6.3	889	180	569	794	450	182.0

Steel ball valve - DN250-500, PN25

Type 85112 - **Reduced bore** - **FLOWOPTIMIZED**



Technical drawing		Material description	
	1	Welding	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	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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
	54	Flowguides	Steel

Steel ball valve - DN20-50, PN40

Type 64104 - Reduced bore

Flange × Welding

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

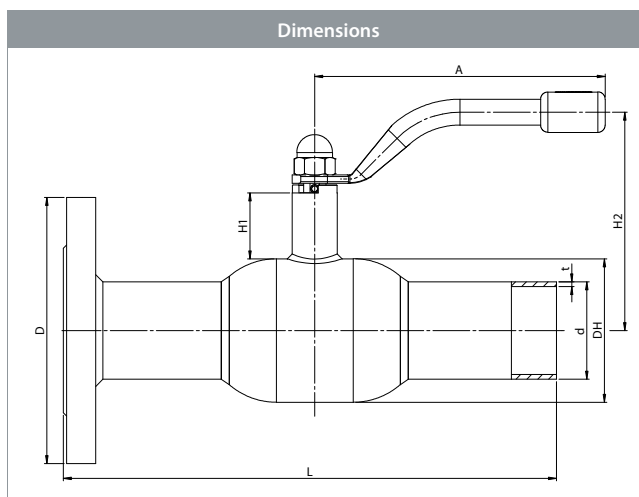
Eco-friendly protection finish against corrosion.

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 DN40 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	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 - DN20-50, PN40

Type 64104 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenit
	20	Handle	Steel
	21	Cap nut	Steel - galvanized

Accessories	BROEN No.	Dimension	Description
	66050010 000 - yellow	DN20-32	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	DN40-50	
	66050040 003 - blue		
	66050040 004 - red		
	203245	DN20-32	ISO-flange.
	208245	DN40-50	
	66160010 000	DN20-32	Hexagon for insertion key.
	66160040 000	DN40-50	

Steel ball valve - DN65-100, PN25

Type 64104 - Reduced bore

Flange × Welding

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

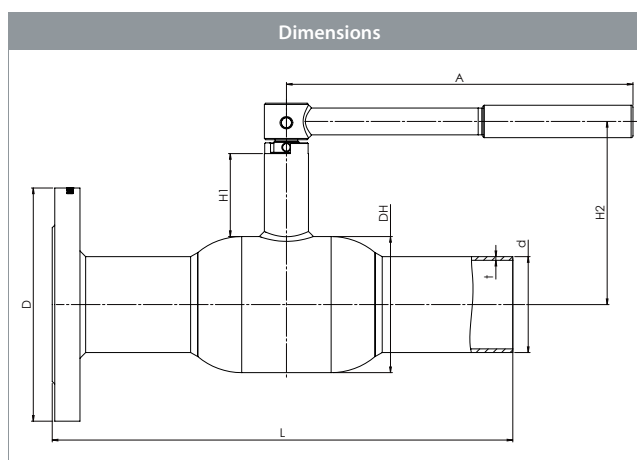
Eco-friendly protection finish against corrosion.

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 DN40 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	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 - DN65-100, PN25

Type 64104 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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	DN65-80	ISO-flange.
	169245	DN100	
	66160065 000	DN65-80	Hexagon for insertion key.
	66164100 000	DN100	

Steel ball valve - DN125-150, PN25

Type 61104 - Reduced bore

Flange × Welding 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

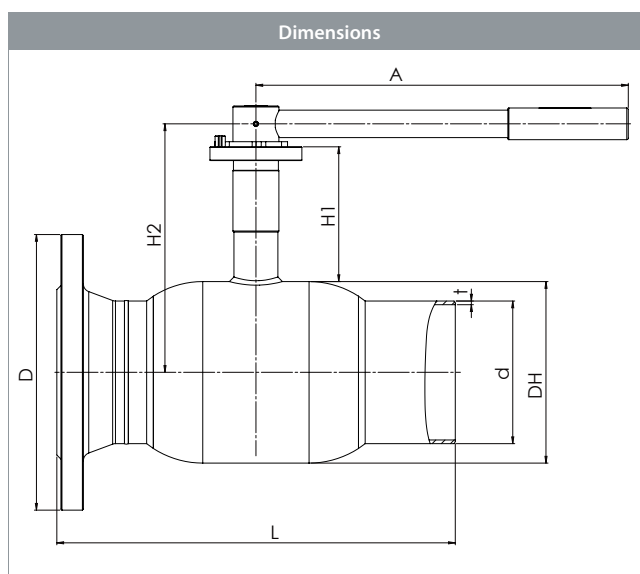
The standard handle is 180 degrees adjustable.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

We recommend to add a BROEN-Gear. Larger dimensions DN200-500, on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	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 - DN125-150, PN25

Type 61104 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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	DN125	BROEN-Gear.
	600585	DN150	
	66161100 000	DN125	Hexagon for insertion key.
	66161150 000	DN150	

Steel ball valve - DN65-100, PN16

Type 64104 - Reduced bore

Flange × Welding

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

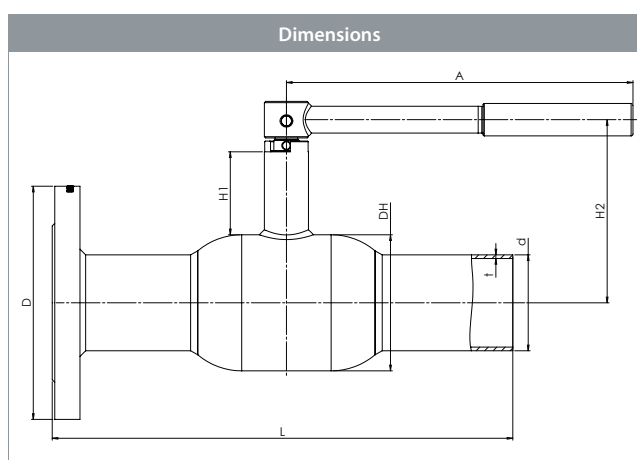
Eco-friendly protection finish against corrosion.

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 DN40 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	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 - DN65-100, PN16

Type 64104 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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	DN65-80	ISO-flange.
	169245	DN100	
	66160065 000	DN65-80	Hexagon for insertion key.
	66164100 000	DN100	

Steel ball valve - DN125-150, PN16

Type 61104 - Reduced bore

Flange × Welding 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

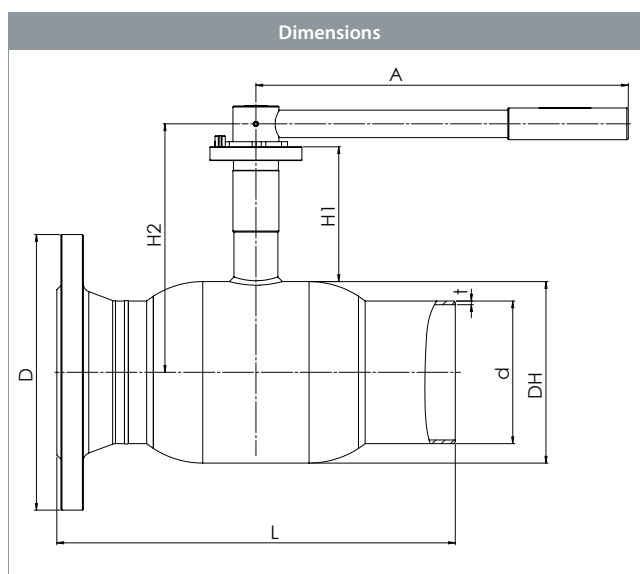
The standard handle is 180 degrees adjustable.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

We recommend to add a BROEN-Gear. Larger dimensions DN200-500, on request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	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 - DN125-150, PN16

Type 61104 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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	DN125	BROEN-Gear.
	600585	DN150	
	66161100 000	DN125	Hexagon for insertion key.
	66161150 000	DN150	

Steel ball valve - DN15-50, PN40

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

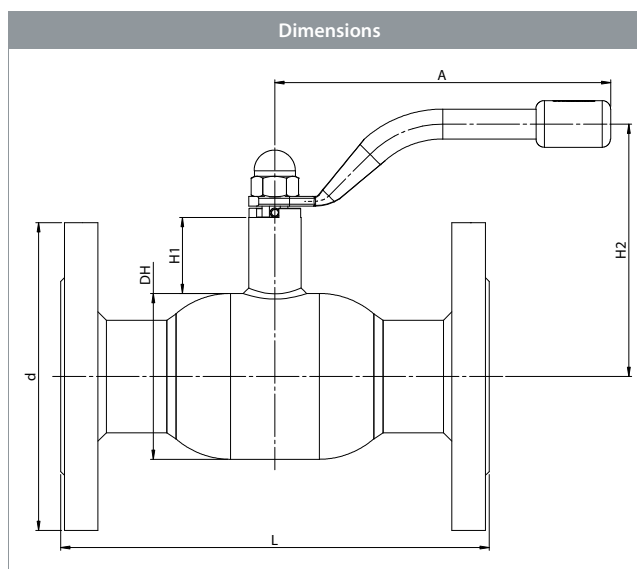
The standard handle is 180 degrees adjustable.

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 DN40 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
50	64103050 010	40	110	8.2	89	165	230	41	114	180

Steel ball valve - DN15-50, PN40

Type 61103 / 64103 - **Reduced bore**



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenit
	20	Handle	Steel
	21	Cap nut	Steel - galvanized

Accessories	BROEN No.	Dimension	Description
	66050010 000 - yellow	DN15-32	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	DN40-50	
	66050040 003 - blue		
	66050040 004 - red		
	203245	DN15-32	ISO-flange.
	208245	DN40-50	
	66160010 000	DN15-32	Hexagon for insertion key.
	66160040 000	DN40-50	

Special model: Minimum length - Flange x Flange - DN15-50:

DN	Standard length - mm	Minimum length - mm
15	130	On request
20	150	118
25	160	130
32	180	135
40	200	150
50	230	165

Steel ball valve - DN65-150, PN25

Type 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

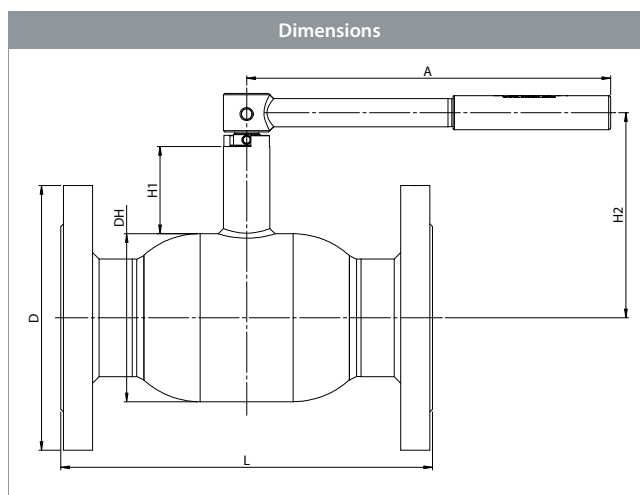
The standard handle is 180 degrees adjustable.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, lengths and special flanges available on request.

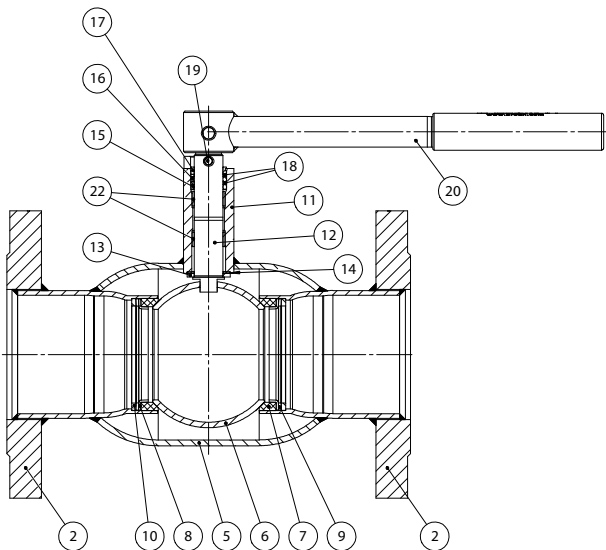


DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm					
					DH	D	L	H1	H2	A
65	6410325065 010	50	180	9,9	108	185	270	66	144	275
80	6410325080 010	65	288	13,2	127	200	280	66	154	275
100	6410325100 010	85	470	18,3	152	235	300	81	193	365
125	6410325125 010	100	699	27,1	178	270	325	91	211	365
150	6410325150 010	125	1046	36,2	219	300	350	101	249	650

Steel ball valve - DN65-150, PN25

Type 64103 - Reduced bore



Technical drawing	Material description		
	2	Flange	Steel - S235JRG2 / 1.0038 / 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	Rubber - EPDM70
16	Back-up ring	PTFE 20% Carbon	
17	O-ring	Rubber - FPM70	
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	DN65-80	ISO-flange.
	169245	DN100	
	66160065 000	DN65-80	Hexagon for insertion key.
	66164100 000	DN100	
	66161100 000	DN125	
	66161150 000	DN150	

Special model: Minimum length - Flange x Flange - DN65-150:

DN	Standard length - mm	Minimum length - mm
65	270	206
80	280	224
100	300	244
125	-	-
150	-	-

Steel ball valve - DN125-200, PN25

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

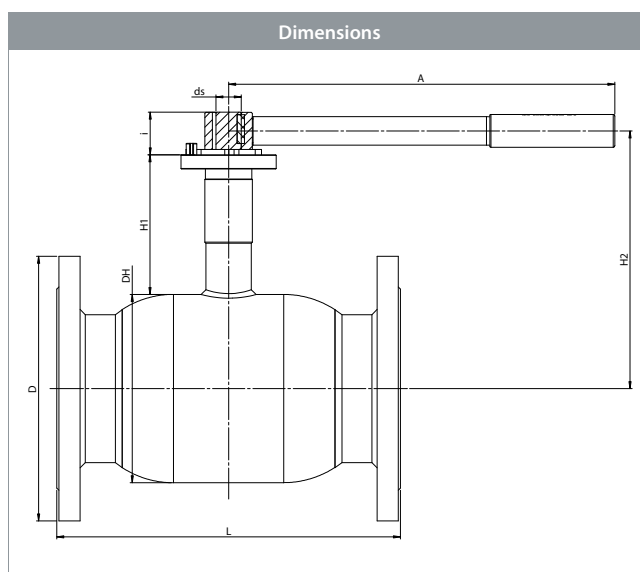
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

We recommend to add a BROEN-Gear. Other pressure levels, 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
125	6110325125 010	100	699	25.1	178	270	325	132	221	24	40	365	F07
150	6110325150 010	125	1046	38.2	219	300	350	135	245	30	50	650	F10
200	6110325200 010	150	1500	61.7	267	360	400	155	289	30	60	900	F12

Steel ball valve - DN125-200, PN25

Type 61103 - Reduced bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	17	O-ring	Rubber - FPM70
	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
	600584	DN125	BROEN-Gear.
	600585	DN150	
	600586	DN200	
	66161100 000	DN125	Hexagon for insertion key.
	66161150 000	DN150	

Special model: Minimum length - Flange x Flange - DN125-200:

DN	Standard length - mm	Minimum length - mm
125	325	272
150	350	300
200	400	385

Steel ball valve - DN125-200, PN25

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

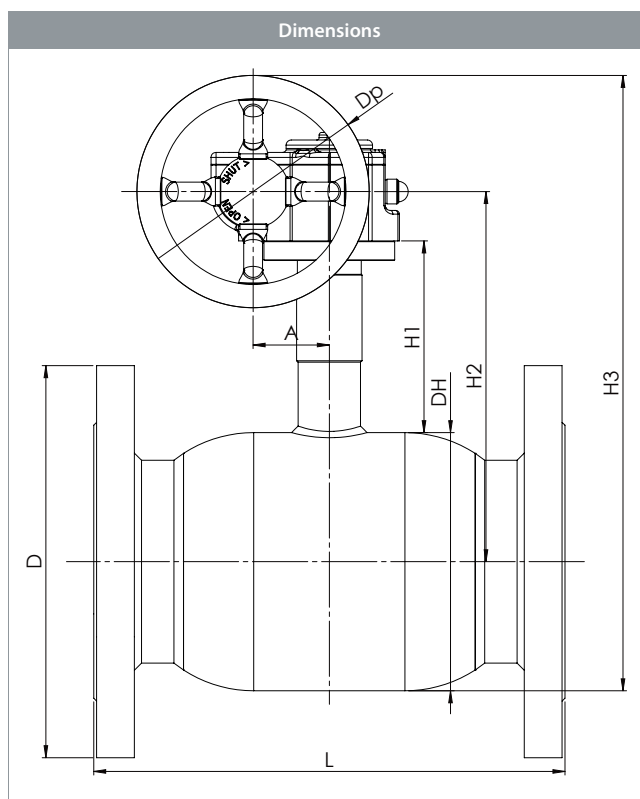
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, 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
125	6110325125 480	100	699	32.4	178	270	325	132	255	424	160	53
150	6110325150 480	125	1046	47.1	219	300	350	135	287	522	250	69
200	6110325200 480	150	1500	71.3	267	360	400	155	331	590	250	69

Steel ball valve - DN125-200, PN25

Type 61103 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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 - DN125-200:

DN	Standard length - mm	Minimum length - mm
125	325	272
150	350	300
200	400	385

Steel ball valve - DN250-500, PN25

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:

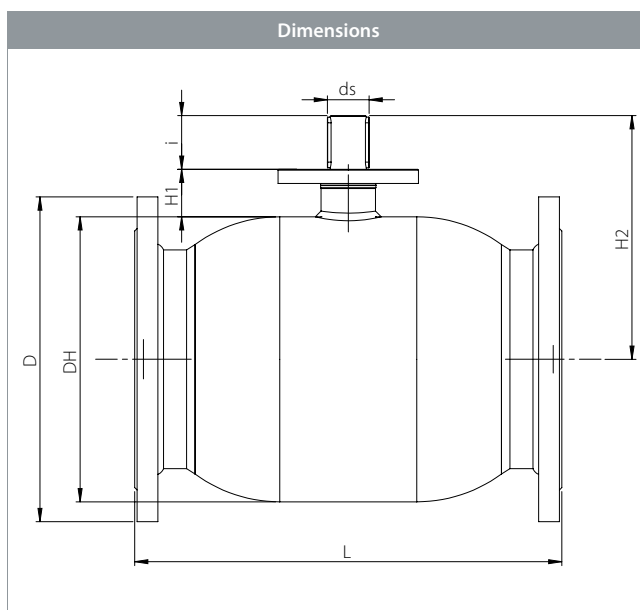
- BROEN-Gear.
- Electric actuator.

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 DN40 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	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

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25

Type 85004 - Reduced bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN250	BROEN-Gear.
	600588	DN300	
	600588	DN350	
	600589	DN400	
	600590	DN500	

Steel ball valve - DN250-500, PN25

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

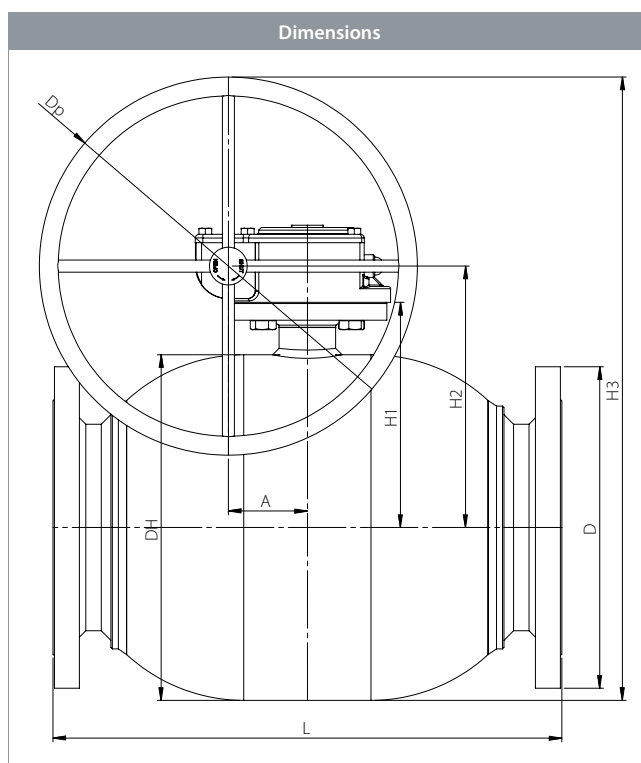
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 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
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

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25

Type 85004 - Reduced bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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 - DN250-500, PN25

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:

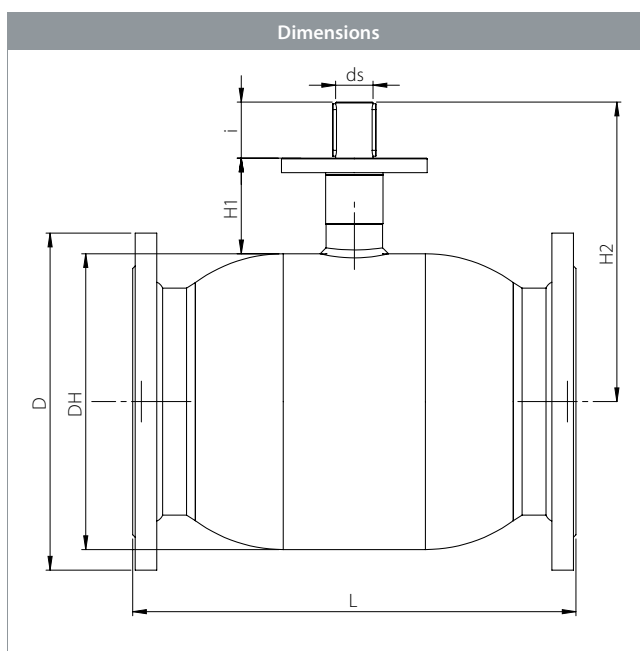
- BROEN-Gear.
- Electric actuator.

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 DN40 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	8501425250 000	200	3200	94.4	356	405	-	533	115	360.0	45	67	F14
300	8501425300 000	250	4700	143.9	457	460	-	610	130	443.0	50	84	F16
350	8501425350 000	250	5500	180.8	457	520	-	686	130	443.0	50	84	F16
400	8501425400 000*	305	10600	301.1	508	620	-	762	155	506.5	60	100	F16
500	8501425500 000*	400	18150	541.2	660	730	-	914	180	622.5	80	112	F30

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25



Type 85014 - Reduced bore

Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN250	BROEN-Gear.
	600588	DN300	
	600588	DN350	
	600589	DN400	
	600590	DN500	

Steel ball valve - DN250-500, PN25

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

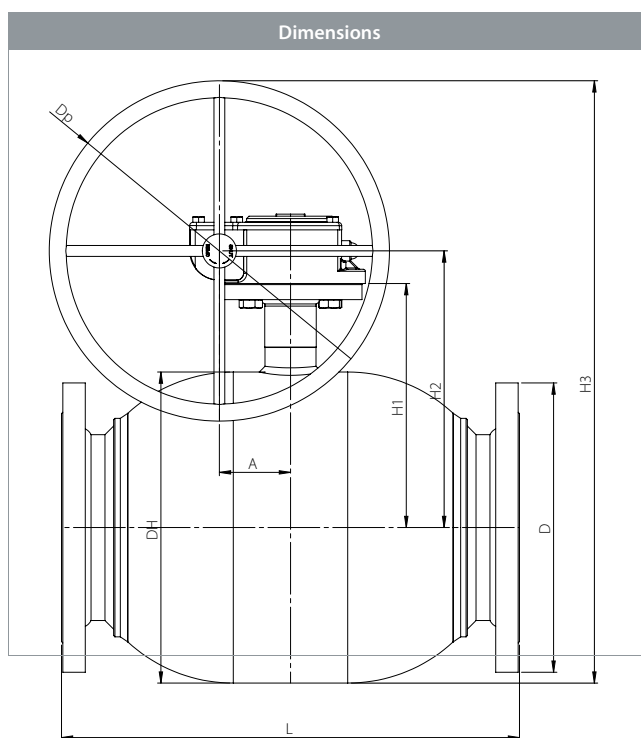
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 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
250	8501425250 480	200	3200	96.5	356	405	-	533	115	330	555	450	68.8
300	8501425300 480	250	4700	149.1	457	460	-	610	130	407	657	500	104.5
350	8501425350 480	250	5500	185.8	457	520	-	686	130	407	657	500	104.5
400	8501425400 480*	305	10600	309.6	508	620	-	762	155	464	639	350	130.0
500	8501425500 480*	400	18150	609.4	660	730	-	914	180	569	794	450	182.0

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25

Type 85014 - Reduced bore



Technical drawing	Material description		
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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

Steel ball valve - DN250-500, PN25

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:

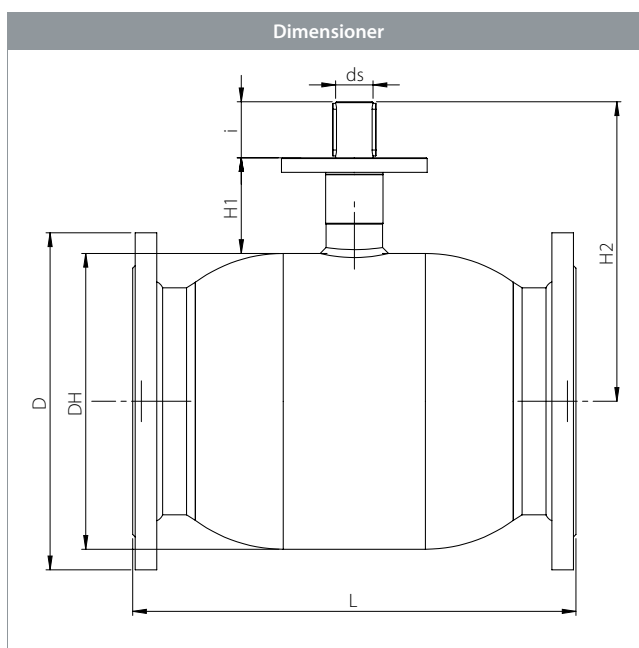
- BROEN-Gear.
- Electric actuator.

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 DN40 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	ISO
250	8511425250 000	200	5300	96.2	356	405	-	533	115	360.0	45	67	F14
300	8511425300 000	250	8200	146.7	457	460	-	610	130	443.0	50	84	F16
350	8511425350 000	250	8900	183.6	457	520	-	686	130	443.0	50	84	F16
400	8511425400 000	305	13700	302.9	508	620	-	762	155	506.5	60	100	F16
500	8511425500 000	400	20300	543.6	660	730	-	914	180	622.5	80	112	F30

Steel ball valve - DN250-500, PN25



Type 85114 - **Reduced bore** - **FLOWOPTIMIZED**

Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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
	54	Flowguides	Steel

Accessories	BROEN No.	Dimension	Description
	600587	DN250	BROEN-Gear.
	600588	DN300	
	600588	DN350	
	600589	DN400	
	600590	DN500	

Steel ball valve - DN250-500, PN25

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

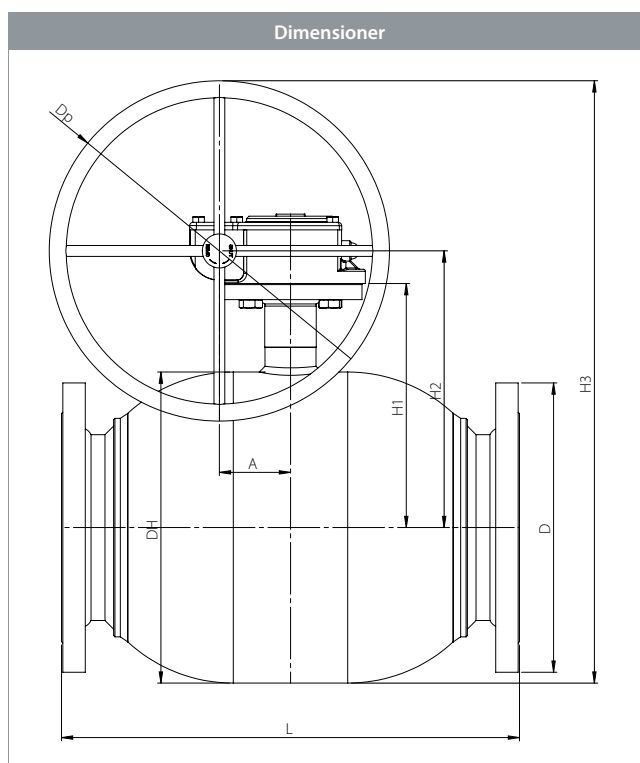
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 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
250	8511425250 480	200	5300	99.1	356	405	-	533	115	330	555	450	68.8
300	8511425300 480	250	8200	151.7	457	460	-	610	130	407	657	500	104.5
350	8511425350 480	250	8900	188.4	457	460	-	686	130	407	657	500	104.5
400	8511425400 480	305	13700	312.2	508	620	-	762	155	464	639	350	130.0
500	8511425500 480	400	20300	612.0	660	730	-	914	180	569	794	450	182.0

Steel ball valve - DN250-500, PN25

Type 85114 - **Reduced bore** - **FLOWOPTIMIZED**



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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
	54	Flowguides	Steel

Steel ball valve - DN65-150, PN16

Type 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

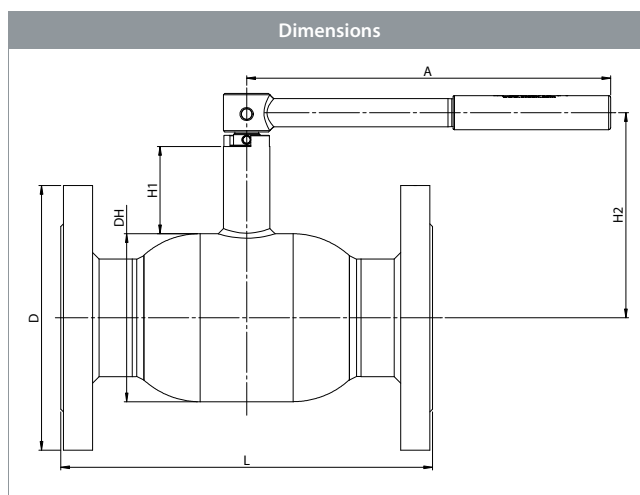
The standard handle is 180 degrees adjustable.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, 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
65	64103065 010	50	180	9.9	108.0	185	270	66	144	275
80	64103080 010	65	288	13.2	127.0	200	280	66	154	275
100	64103100 010	85	470	18.3	152.0	220	300	81	193	365
125	64103125 010	100	699	24.3	177.8	250	325	91	212	365
150	64103150 010	125	1046	32.2	219.1	285	350	90	250	650

Steel ball valve - DN65-150, PN16

Type 64103 - Reduced bore



Technical drawing	Material description		
	2	Flange	Steel - S235JRG2 / 1.0038 / 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	Rubber - EPDM70
16	Back-up ring	PTFE 20% Carbon	
17	O-ring	Rubber - FPM70	
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	DN65-80	ISO-flange.
	169245	DN100	
	66160065 000	DN65-80	Hexagon for insertion key.
	66164100 000	DN100	
	66161100 000	DN125	
	66161150 000	DN150	

Special model: Minimum length - Flange x Flange - DN65-150:

DN	Standard length - mm	Minimum length - mm
65	270	206
80	280	224
100	300	244
125	-	-
150	-	-

Steel ball valve - DN125-200, PN16

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:

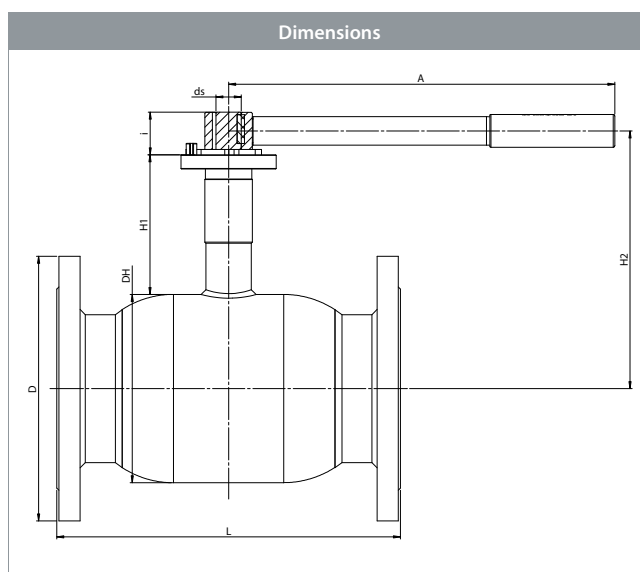
- BROEN-Gear.
- Electric actuator.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

We recommend to add a BROEN-Gear. Other pressure levels, 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
125	61103125 010	100	699	25.1	178	250	325	132	221	24	40	365	F07
150	61103150 010	125	1046	38.2	219	285	350	135	245	30	50	650	F10
200	61103200 000	150	1500	61.7	267	340	400	155	289	30	60	900	F12

Steel ball valve - DN125-200, PN16

Type 61103 - Reduced bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	17	O-ring	Rubber - FPM70
	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
	600584	DN125	BROEN-Gear.
	600585	DN150	
	600586	DN200	
	66161100 000	DN125	Hexagon for insertion key.
	66161150 000	DN150	

Special model: Minimum length - Flange x Flange - DN125-200:

DN	Standard length - mm	Minimum length - mm
125	325	272
150	350	300
200	400	385

Steel ball valve - DN125-200, PN16

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

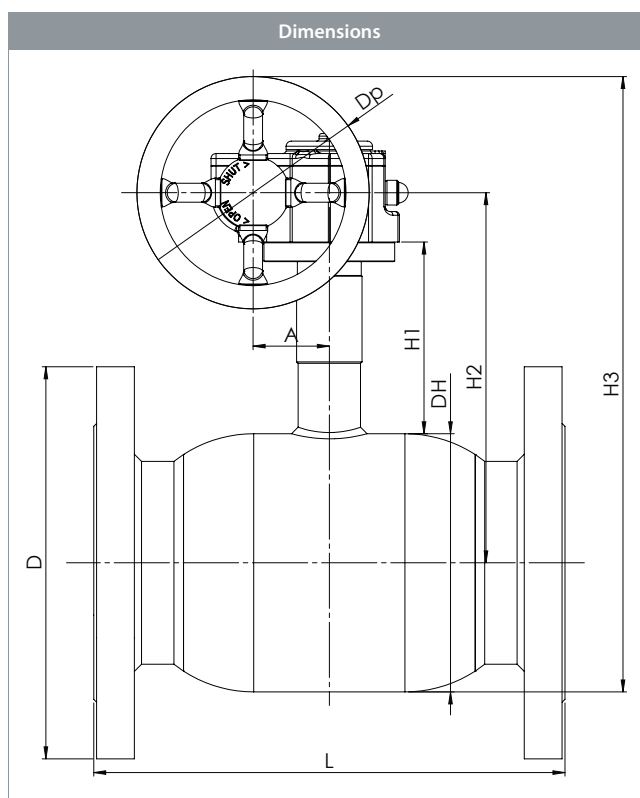
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Other pressure levels, 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
125	6110316125 480	100	699	29.7	178	250	325	132	221	424	160	53
150	6110316150 480	125	1046	46.8	219	285	350	135	245	522	250	69
200	6110316200 480	150	1500	69.7	267	340	400	155	289	590	250	69

Steel ball valve - DN125-200, PN16

Type 61103 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	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	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	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 - DN125-200:

DN	Standard length - mm	Minimum length - mm
125	325	272
150	350	300
200	400	385

Steel ball valve - DN250-500, PN16

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:

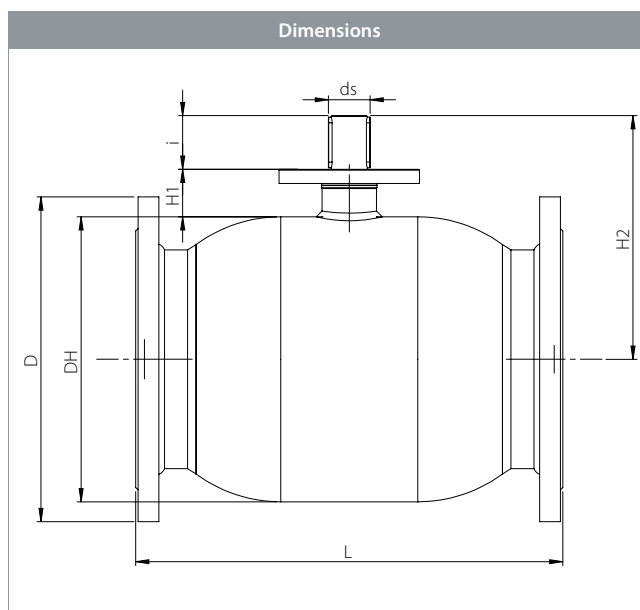
- BROEN-Gear.
- Electric actuator.

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 DN40 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	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 - DN250-500, PN16



Type 85004 - Reduced bore

Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN250	BROEN-Gear.
	600588	DN300	
	600588	DN350	
	600589	DN400	
	600590	DN500	

Steel ball valve - DN250-500, PN16

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

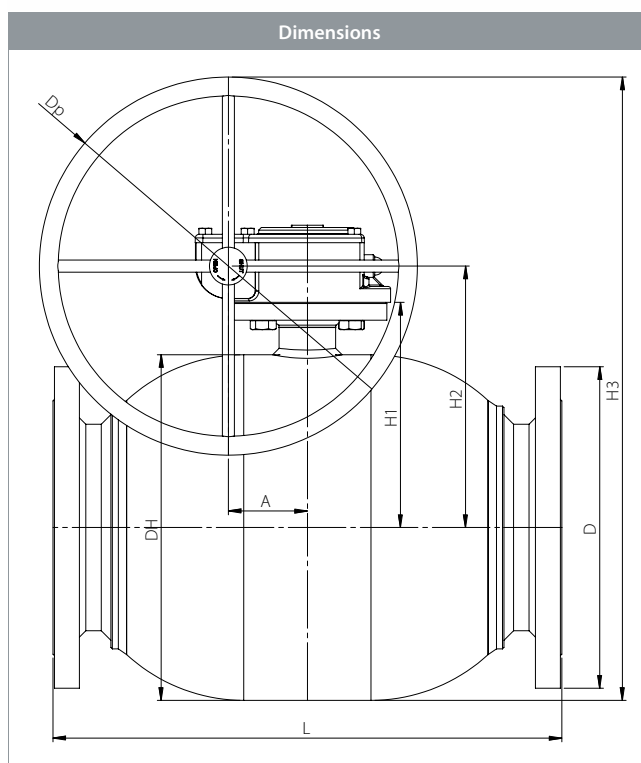
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 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
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 - DN250-500, PN16

Type 85004 - Reduced bore



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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 - DN250-500, PN16

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:

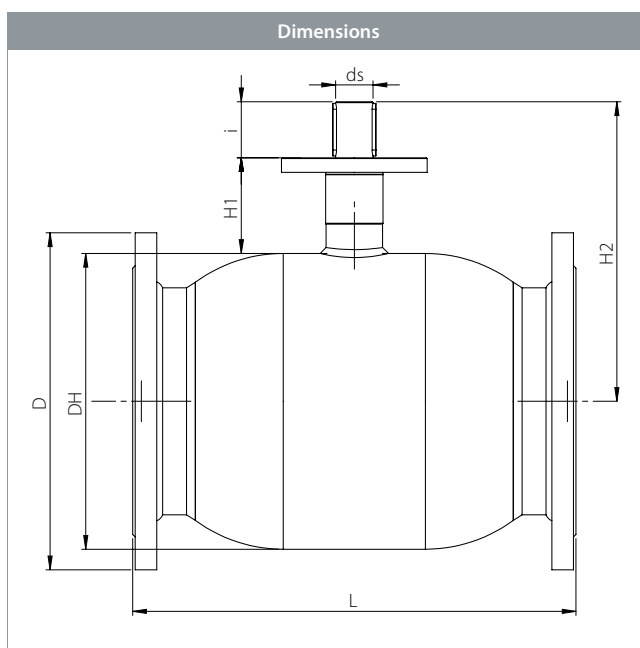
- BROEN-Gear.
- Electric actuator.

Approvals and certificates

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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	8501416250 000	200	3200	94.4	356	405	-	533	115	360.0	45	67	F14
300	8501416300 000	250	4700	143.9	457	460	-	610	130	443.0	50	84	F16
350	8501416350 000	250	5500	180.8	457	520	-	686	130	443.0	50	84	F16
400	8501416400 000	305	10600	301.1	508	620	-	762	155	506.5	60	100	F16
500	8501416500 000	400	18150	541.2	660	730	-	914	180	622.5	80	112	F30

Steel ball valve - DN250-500, PN16



Type 85014 - Reduced bore

Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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	DN250	BROEN-Gear.
	600588	DN300	
	600588	DN350	
	600589	DN400	
	600590	DN500	

Steel ball valve - DN250-500, PN16

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

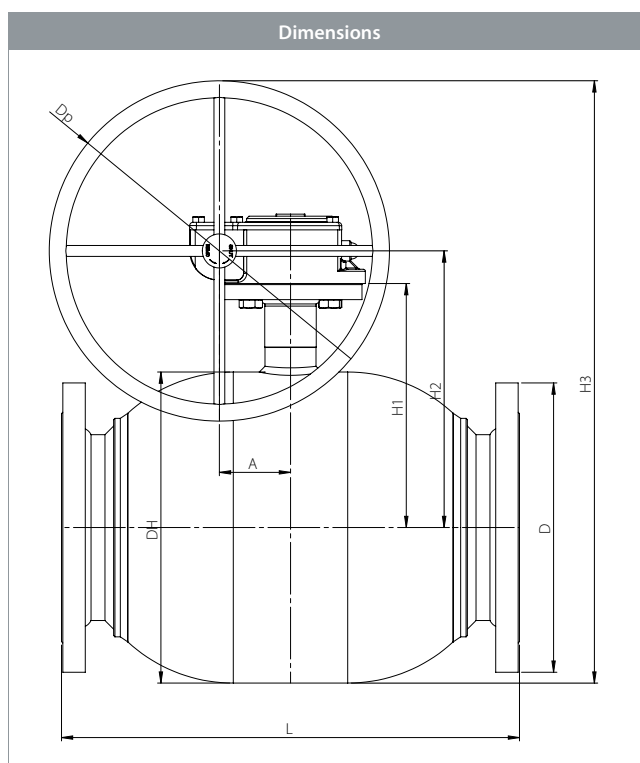
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Surface treatment

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	DH	D	t	L	H1	H2	H3	Dp	A
250	8501416250 480	200	3200	96.5	356	405	-	533	115	330	555	450	68.8
300	8501416300 480	250	4700	149.1	457	460	-	610	130	407	657	500	104.5
350	8501416350 480	250	5500	185.8	457	520	-	686	130	407	657	500	104.5
400	8501416400 480	305	10600	309.6	508	620	-	762	155	464	639	350	130.0
500	8501416500 480	400	18150	609.4	660	730	-	914	180	569	794	450	182.0

Steel ball valve - DN250-500, PN16



Type 85014 - Reduced bore

Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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 - DN250-500, PN16

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:

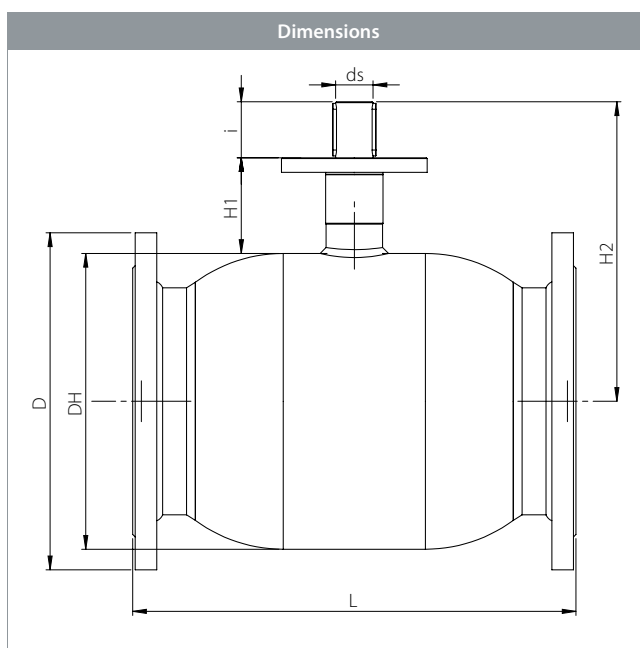
- BROEN-Gear.
- Electric actuator.

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 DN40 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	8511416250 000	200	5300	96.2	356	405	-	533	115	360.0	45	67	F14
300	8511416300 000	250	8200	146.7	457	460	-	610	130	443.0	50	84	F16
350	8511416350 000	250	8900	183.6	457	520	-	686	130	443.0	50	84	F16
400	On request	305	13700	302.9	508	620	-	762	155	506.5	60	100	F16
500	On request	400	20300	543.6	660	730	-	914	180	622.5	80	112	F30

Steel ball valve - DN250-500, PN16



Type 85114 - **Reduced bore** - **FLOWOPTIMIZED**

Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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
	54	Flowguides	Steel

Accessories	BROEN No.	Dimension	Description
	600587	DN250	BROEN-Gear.
	600588	DN300	
	600588	DN350	
	600589	DN400	
	600590	DN500	

Steel ball valve - DN250-500, PN16

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

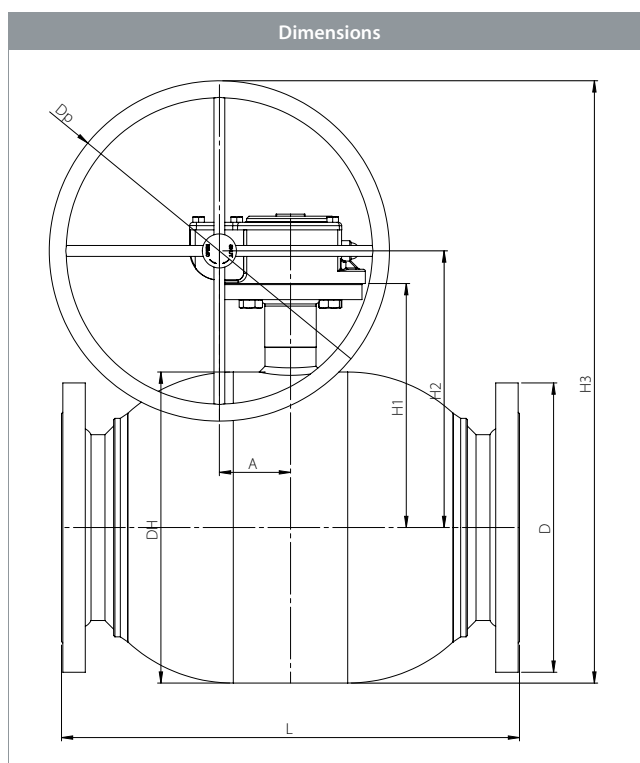
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

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 DN40 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
250	8511416250 480	200	5300	99,1	356	405	-	533	115	330	555	450	68,8
300	8511416300 480	250	8200	151,7	457	460	-	610	130	407	657	500	104,5
350	8511416350 480	250	8900	188,4	457	460	-	686	130	407	657	500	104,5
400	8511416400 480	305	13700	312,2	508	620	-	762	155	464	639	350	130,0
500	8511416500 480	400	20300	612,0	660	730	-	914	180	569	794	450	182,0

Steel ball valve - DN250-500, PN16

Type 85114 - **Reduced bore** - **FLOWOPTIMIZED**



Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - 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
	54	Flowguides	Steel

T-handle - DN10-50

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 - DN10-200

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 - DN10-100

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

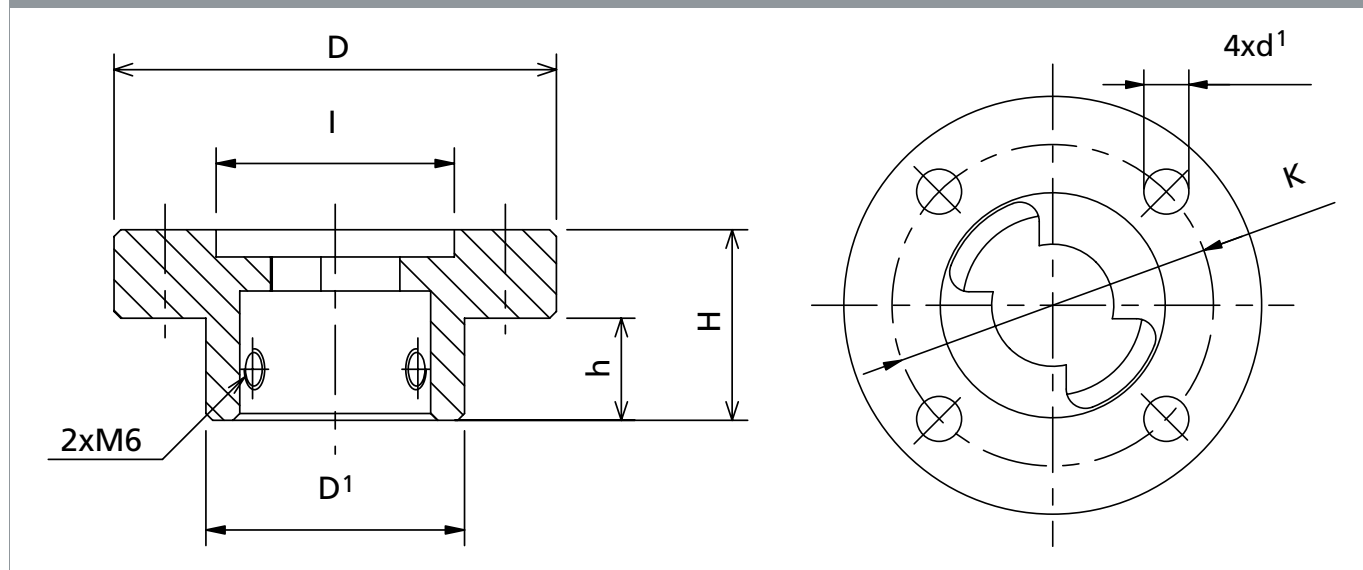
ISO-flanges, mounting kit

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 - DN10-150

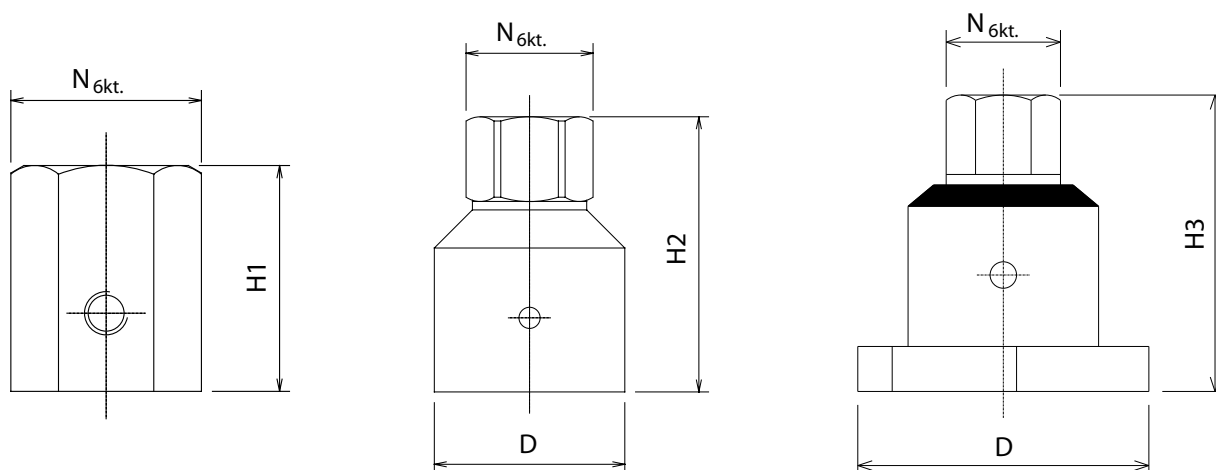
Type 66160 / 66164 / 66161 - Reduced bore

Hexagon for insertions key

To make thread end of spindle to hexagon.



Dimensions



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

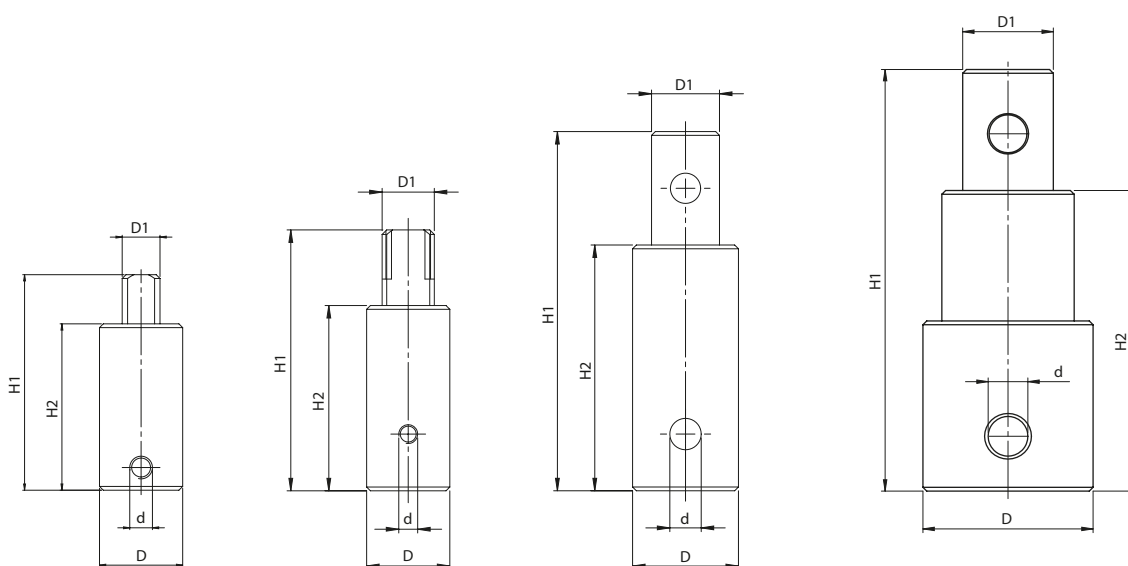
Spindle extension - DN10-125

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 - DN10-500

Type 600... - Reduced bore



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

Repair set include tools and 5 gaskets for repair.

BROEN-Gear - DN100-500

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

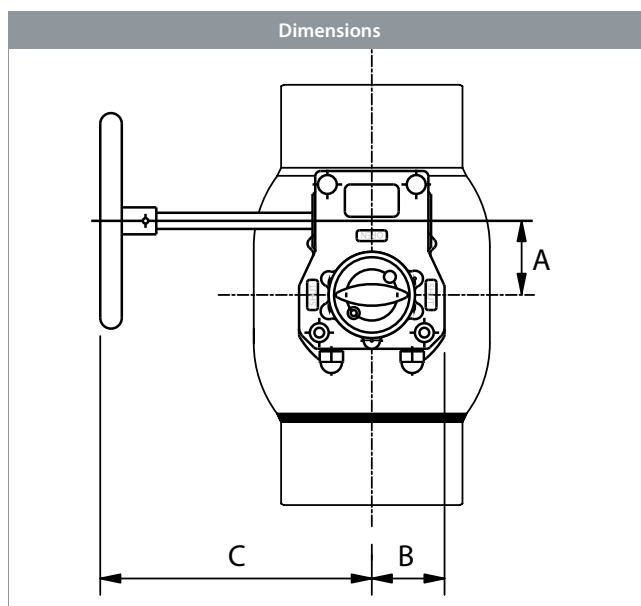
BROEN-Gear

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.

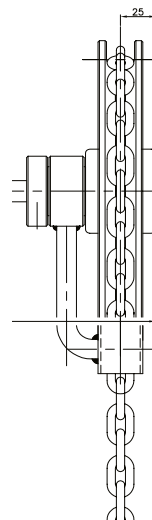


			All dimensions in mm				
DN	BROEN No.	net Weight kg*	A	B	C	Nm	Hand wheel
100	600583	2,5	41,3	40,0	145	650	200
125	600584	2,5	41,3	40,0	145	300	200
150	600585	7,8	68,8	67,5	240	1200	300
200	600586	8,6	68,8	67,5	245	1200	350
250	600587	9,5	68,8	67,5	275	1200	450
300-350	600588	26,0	104,5	110,0	346	3250	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 - DN40-300

Type CW... - Full bore



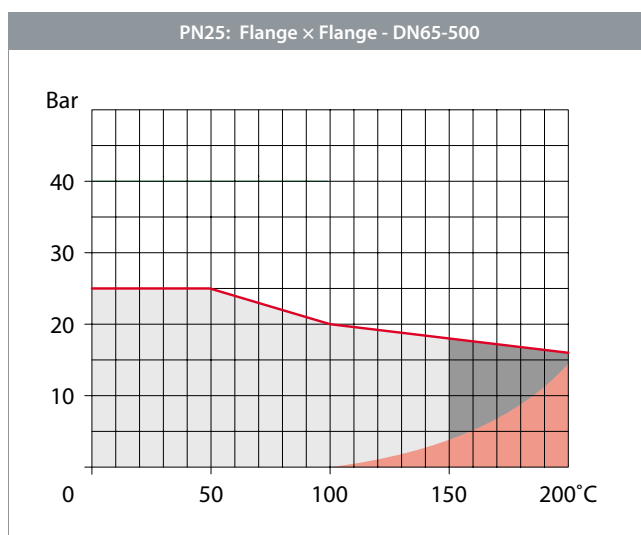
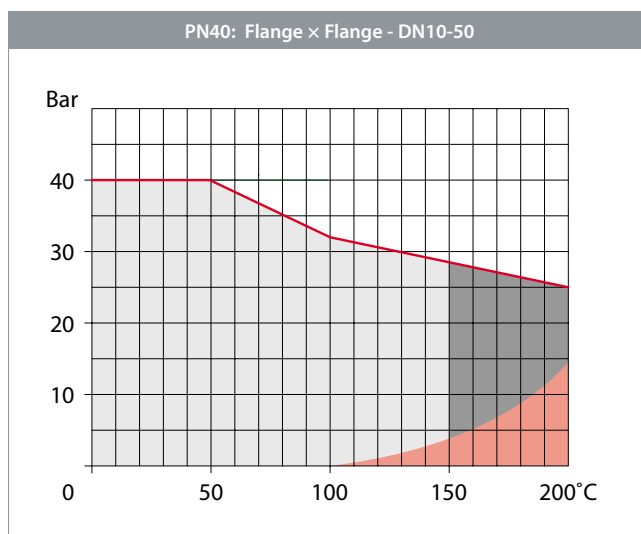
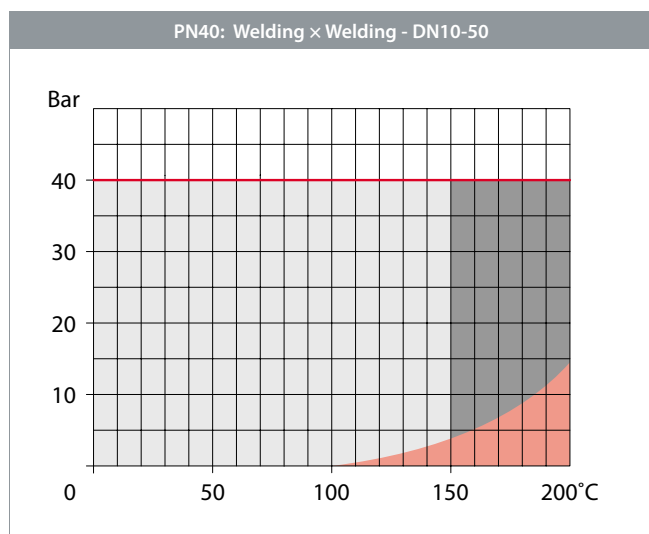
	Size	BROEN No.
	Ø15	CW 135
	Ø20	CW 215
	Ø25	CW 335
Accessory:		
Gear chain	1 meter - ZP chain (+ Splitlink)	
Gear chain	1 meter - SS chain (+ Splitlink)	

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.

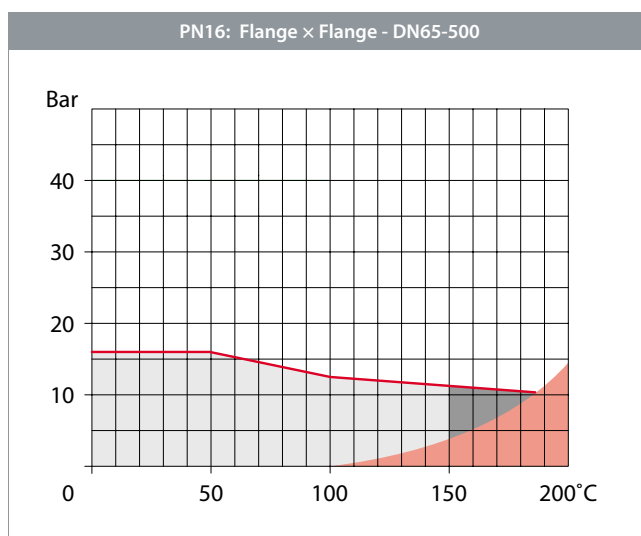
NOTICE: The length is the total length, not the height above ground of the gear.

Pressure and temperature graph - DN10-500 - PN40/25/16

Reduced bore



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



Pressure drop graph - DN10-500

Reduced bore

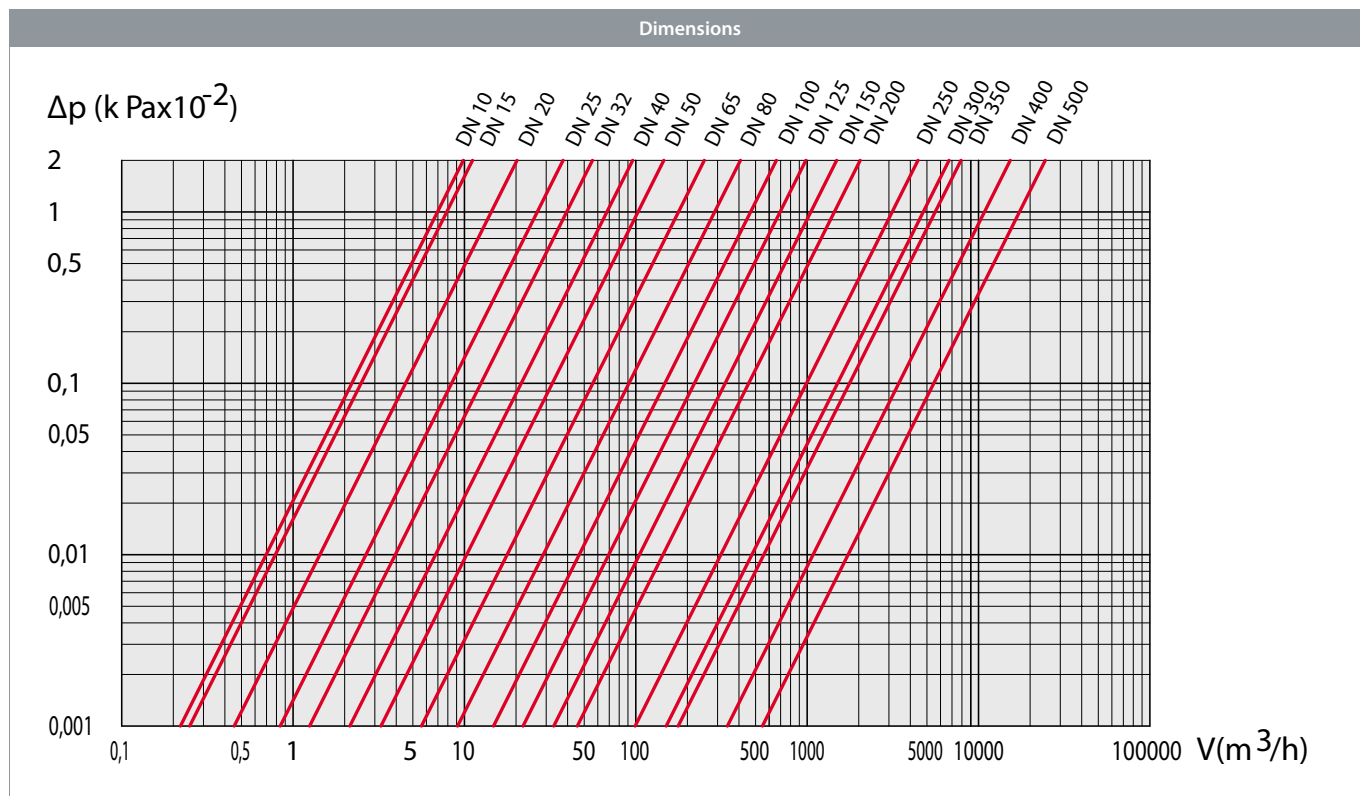
Pressure drop graph

Ball valve in fully open position.

Medium: water density in 1000 kg/m³

Definitions

Kvs: M³ 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	3200	4700	5500	10600	18150

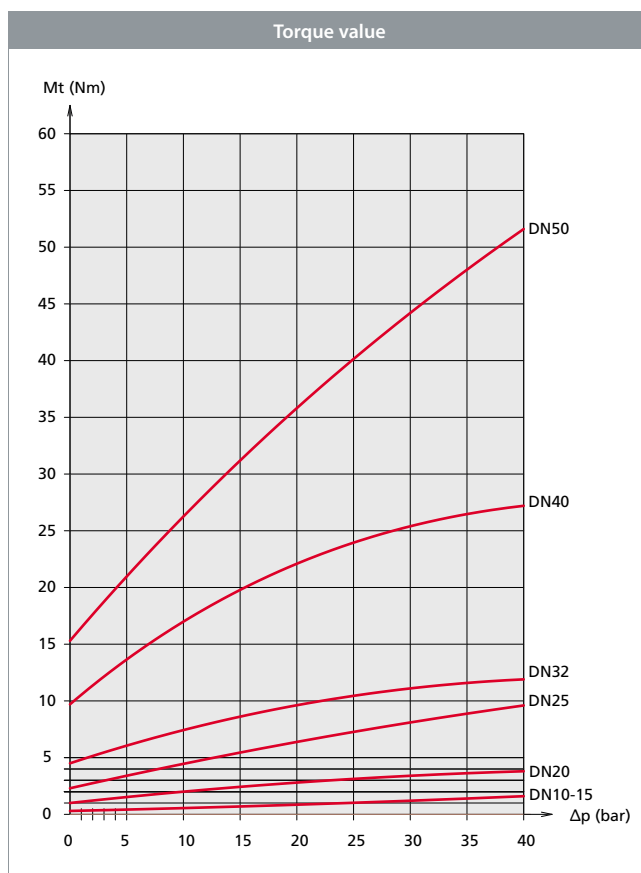
Operating torque - DN10-50, PN40

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.



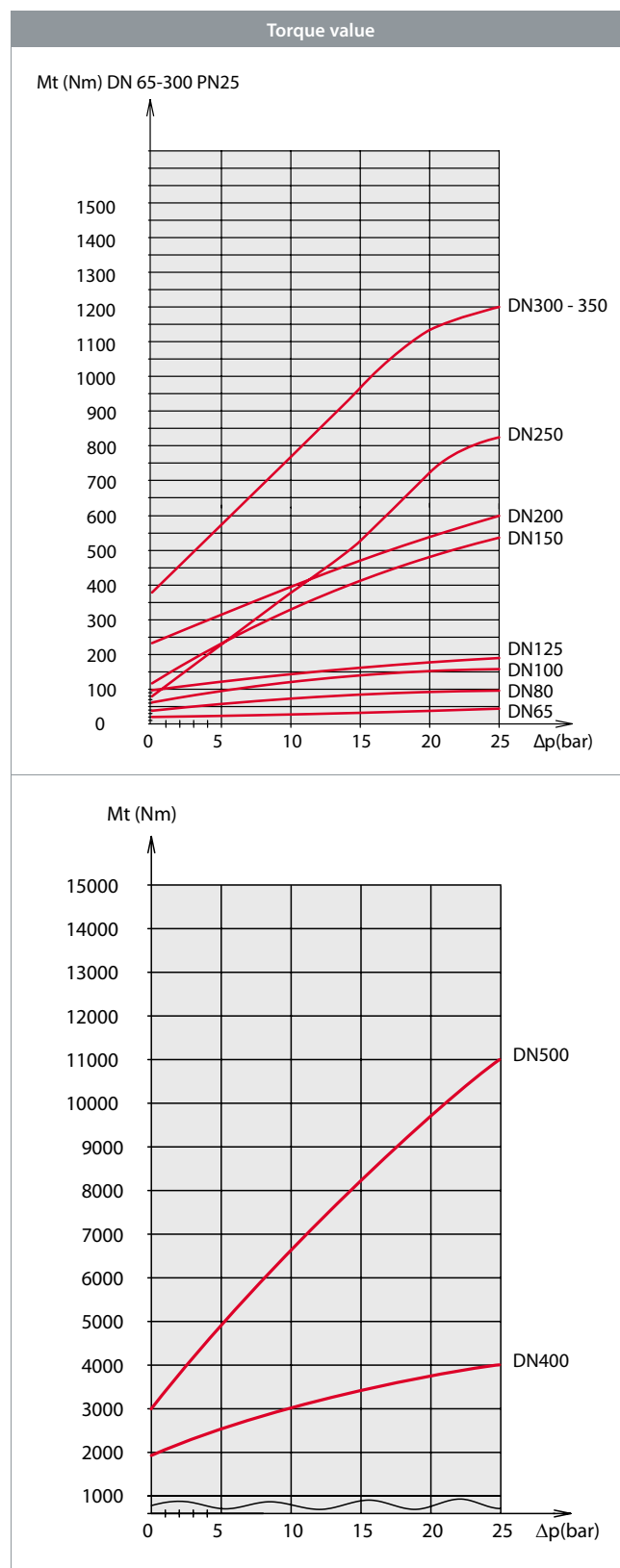
Operating torque - DN65-500, PN25

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.

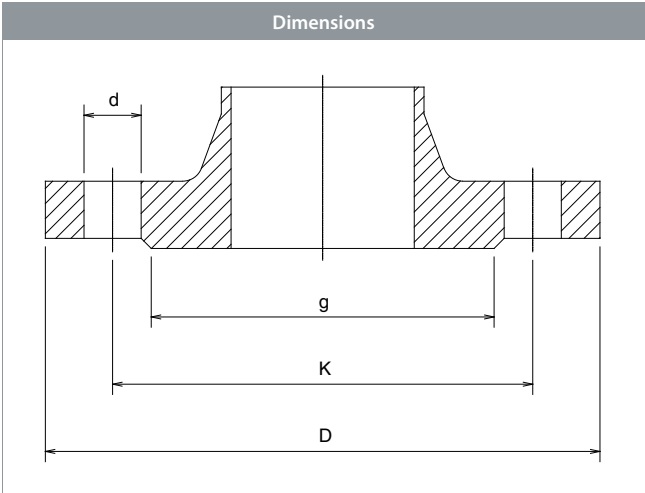


Connecting flange - DN15-50, PN40

EN 1092-1 - Reduced bore

Description

Flangestandard.



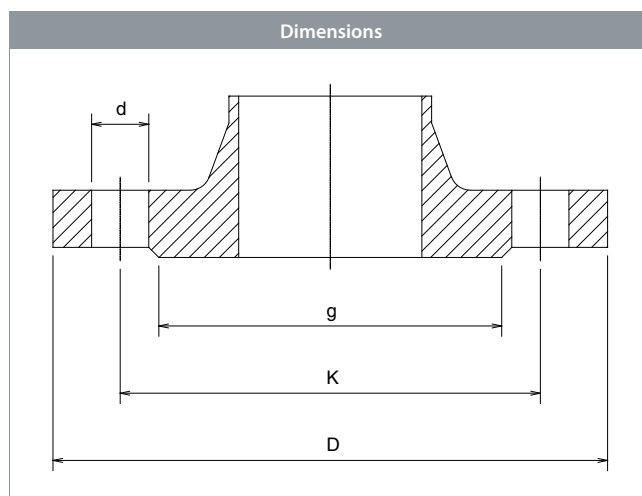
	All dimensions in mm				
DN	D	K	g	d	No. of bolt holes
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4

Connecting flange - DN15-500, PN25

EN 1092-1 - **Reduced bore**

Description

Flangestandard.



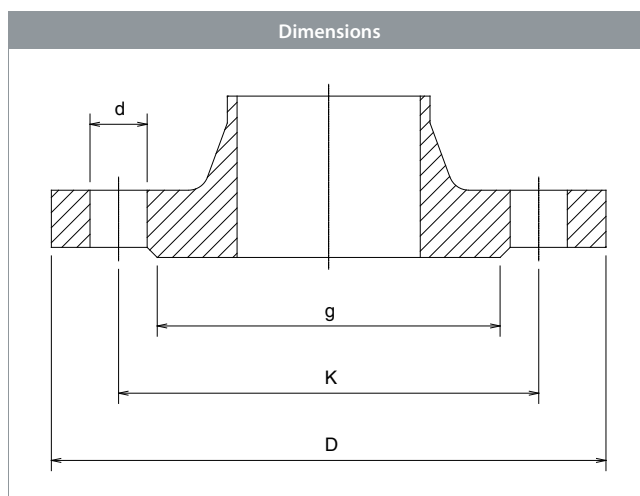
DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	8
80	200	160	138	18	8
100	235	190	162	22	8
125	270	220	188	26	8
150	300	250	218	26	8
200	360	310	278	26	12
250	425	370	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 - DN15-500, PN16

EN 1092-1 - Reduced bore

Description

Flangestandard.



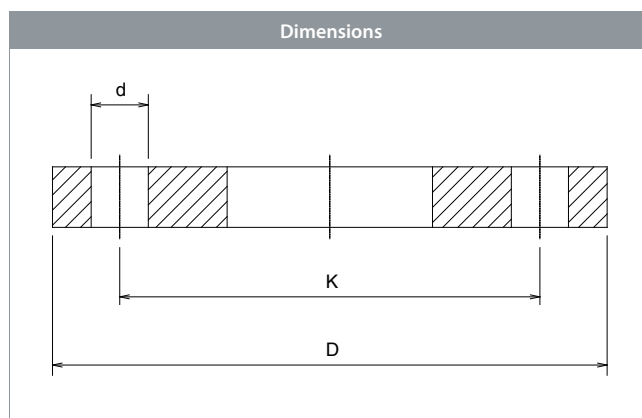
DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	4
80	200	160	138	18	8
100	220	180	158	18	8
125	250	210	188	18	8
150	285	240	212	22	8
200	340	295	268	22	12
250	405	355	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 - DN15-500, PN10

EN 1092-1 - Reduced bore

Description

Flangestandard.



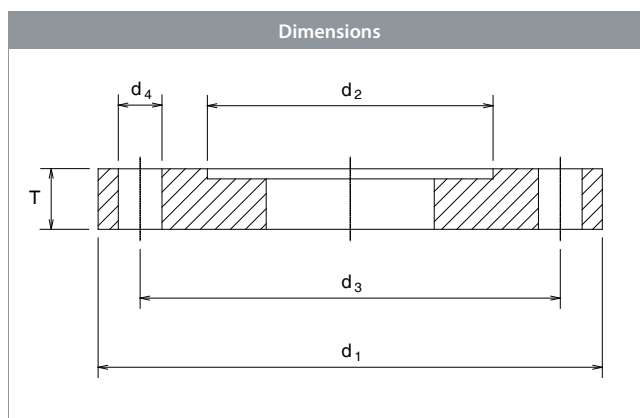
	All dimensions in mm			
DN	D	K	d	No. of bolt holes
15	95	65	14	4
20	105	75	14	4
25	115	85	14	4
32	140	100	18	4
40	150	110	18	4
50	165	125	18	4
65	185	145	18	4
80	200	160	18	8
100	220	180	18	8
125	250	210	18	8
150	285	240	22	8
200	340	295	22	8
250	395	350	22	12
300	445	400	22	12
350	505	460	22	16
400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

Valve actuator attachment - DN65-500, 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
DN65-80	F05	12.5	65	35	50	7	4
DN100-125	F07	13.5	90	55	70	9	4
DN150	F10	14.5	125	70	102	11	4
DN200	F12	14.5	150	85	125	13	4
DN250	F14	17.6	175	100	140	17	4
DN300	F16	23.5	210	130	165	21	4
DN350	F16	23.5	210	130	165	21	4
DN400	F25	27.5	300	200	254	17	8
DN500	F30	28.5	350	230	298	21	8

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 5

Trunnion mounted valves

Full bore

Trunnion mounted valve - DN150-300, PN40/25/16

Type 3/A... - Full bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next pages.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN400 are trunnion mounted as standard.

Media

Water, gas and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

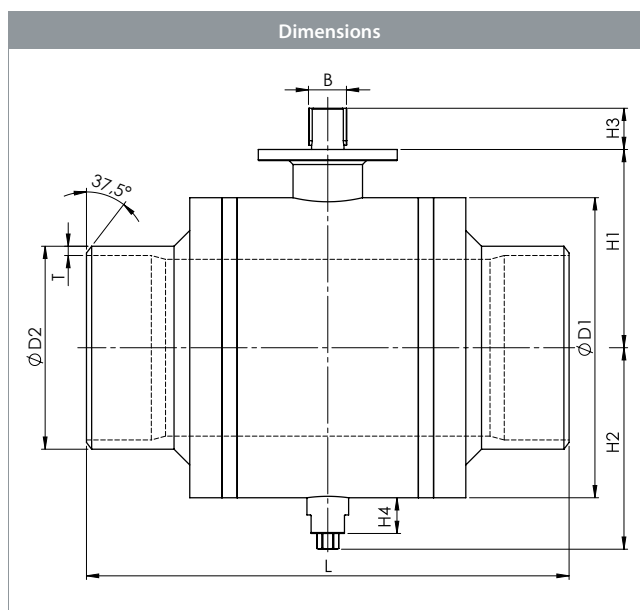
Eco-friendly protection finish against corrosion.

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 DN150 are CE-marked. The 3.1 certificate is available upon request.

Notice

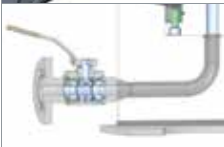
As standard DN150-30 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm	
					L	
150	3/A150WW5D30	142	4498	67	457	
200	3/A200WW5D30	190	9234	120	521	
250	3/A250WW5D30	237	14428	193	559	
300	3/A300WW5D30	285	20777	300	635	

Trunnion mounted valve - DN150-300, PN40/25/16

Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN150-300	Columns.
	-	DN150-300	BROEN-Gear.
	-	DN150-300	BROEN-Gear, Electric gear.
	-	DN150-300	Lubrication fitting NPT.
	-	DN150-300	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN150-300	Base.

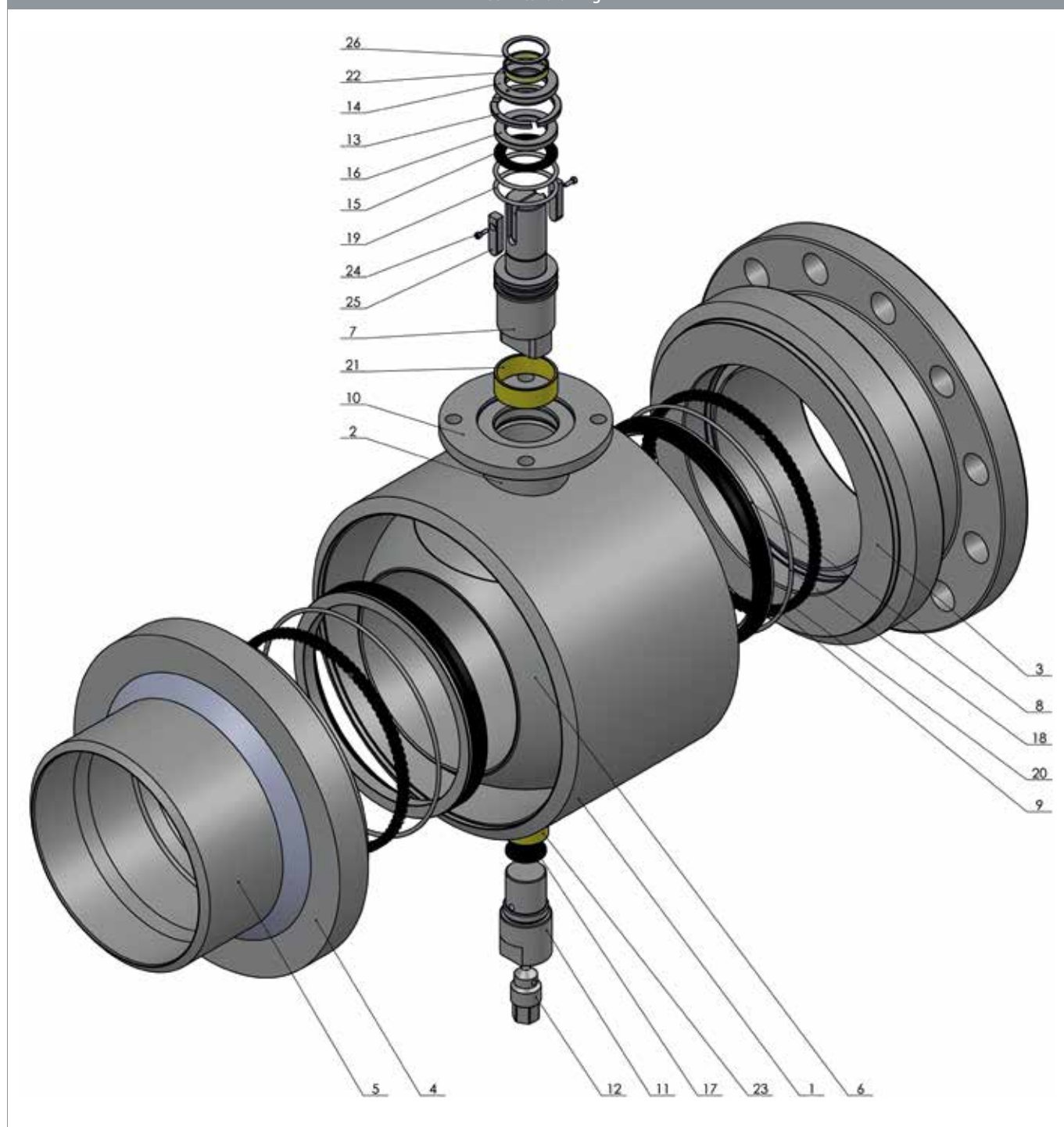
All dimensions in mm

D1	D2	T	H1	H2	H3	H4	B	ISO
254	168.3	7.1	184	183	46	39	41	F12
324	219.1	8.8	214	218	45	39	41	F12
394	273.0	10.0	253	255	59	39	57	F14
470	323.9	10.0	300	294	58	39	68	F14

Trunnion mounted valve - DN150-300, PN40/25/16

Type 3/A... - Full bore

Technical drawing



Trunnion mounted valve - DN150-300, PN40/25/16

Type 3/A... - Full bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
4	Flange	Steel - P355NH / 1.0565 / EN 10028-3
5	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
6	Ball	Steel - A350LF2 Class 1, EN coated
7	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
8	Seat	Steel - P355NH / 1.0565 / EN 10028-3
9	Seal	PTFE+C
10	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
11	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
12	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
13	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
14	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
15	Washer	PTFE+C
16	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Washer	PTFE+C
18	O-ring	EPDM
19	O-ring	EPDM
20	Spring	Stainless steel - X10CrNi18-8 / AISI302 / 1.4301
21	Bearing	CS + PTFE
22	Bearing	CS + PTFE
23	Bearing	CS + PTFE
24	Screw	Steel - 8.8
25	Key	Steel - C45 / 1.0503 / EN 10277-2
26	Lock ring	Steel - 65G

Trunnion mounted valve - DN350-1000, PN40/25/16

Type 3/A... - Full bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next pages.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN350 are trunnion mounted as standard.

Media

Water, gas and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

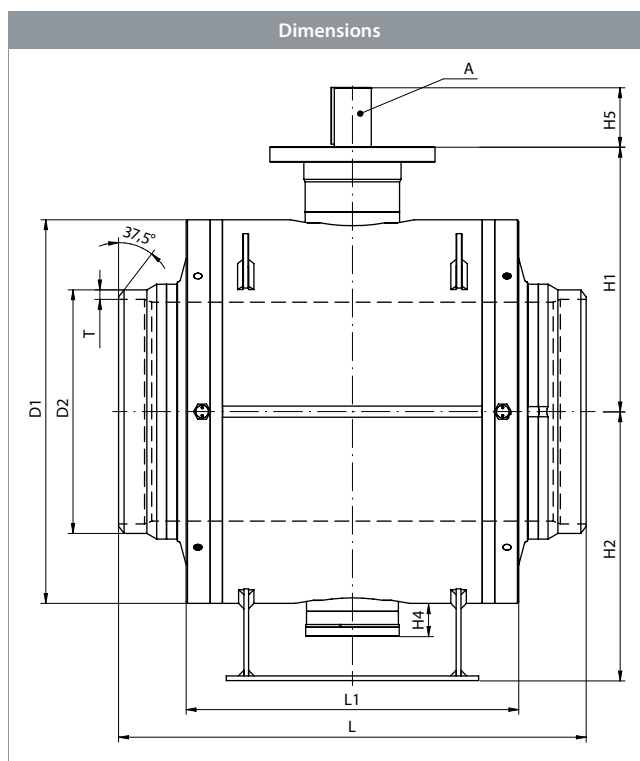
Approvals and certificates

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 DN350 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN350-1000 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.

Larger dimensions on request.



					All dimensions in mm	
DN	BROEN No.	Bore	Kvs	net Weight kg	L	L1
350	3/A350WW5D30	336	28280	557	762	475
400	3/A400WW5D30	386	36937	900	838	562
500	3/A500WW5D30	488	57715	1610	991	705
600	3/A600WW5D30	588	101788	2570	1143	819
700	3/A700WW5D30	684	138544	4126	1346	976
800	3/A800WW5D30	780	180956	6145	1524	1124
900	3/A900WW5D30	874	229023	8230	1727	1214
1000	3/A910WW5D30	976	282744	12365	1850	1346

Trunnion mounted valve - DN350-1000, PN40/25/16



Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN350-800	Columns.
	-	DN400	BROEN-Gear.
	-	DN500	
	-	DN600	
	-	DN700	
	-	DN800	
	-	DN350-1000	BROEN-Gear, Electric gear.
	-	DN350-1000	Lubrication fitting NPT.
	-	DN350-1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.

All dimensions in mm

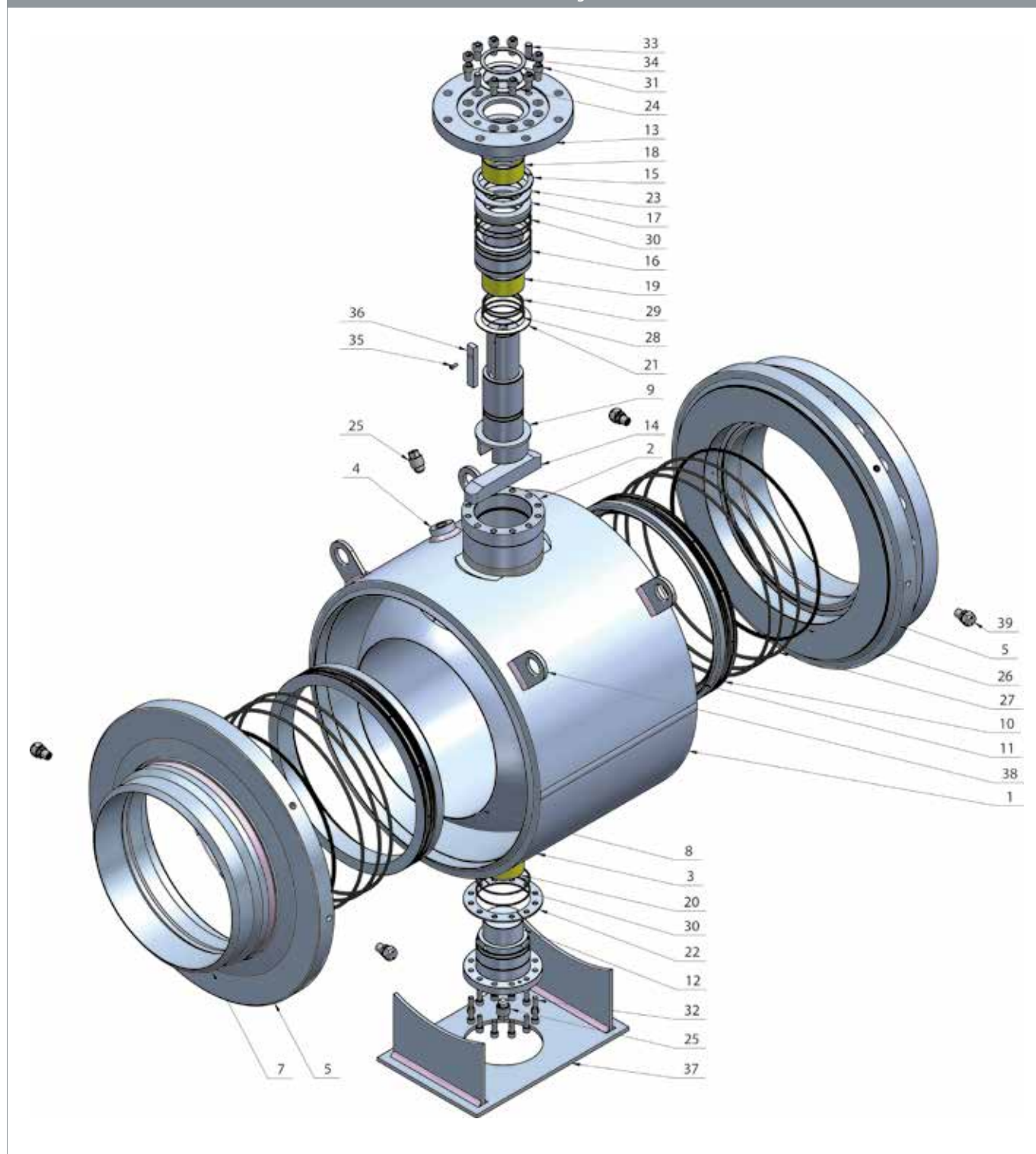
D1	D2	T	H1	H2	H4	H5	A	ISO
558	355.6	11.0	377.5	420.5	31.5	75 / 82	Ø60	F16
660	406.4	12.5	433.0	480.0	60.0	110	Ø72	F25
813	508.0	12.5	561.0	570.0	70.0	130	Ø80	F30
988	610.0	12.5	654.0	682.0	81.0	130	Ø100	F30
1126	711.0	14.2	806.0	790.0	109.0	200	Ø120	F35
1300	813.0	16.0	890.0	900.0	107.0	198	Ø120	F35
1450	914.0	20.0	941.0	1000.0	117.0	183	Ø140	F40
1650	1016.0	22.0	1121.0	1220.0	142.0	240	Ø190	F48

Trunnion mounted valve - DN350-1000, PN40/25/16

Type 3/A... - Full bore



Technical drawing



Trunnion mounted valve - DN350-1000, PN40/25/16



Type 3/A... - Full bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Trunnion guide	Steel - P355NH / 1.0565 / EN 10028-3
4	Plug guide	Steel - P355NH / 1.0565 / EN 10028-3
5	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
6	Flange	Steel - P355NH / 1.0565 / EN 10028-3
7	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
8	Ball	ASTM A350 LF2
9	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
10	Seat	Steel - P355NH / 1.0565 / EN 10028-3
11	Seal	PTFE / PTFE+C (PTFE+C - 200°C)
12	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
13	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
14	Ball key	Steel - C45 / 1.0503 / EN 10277-2
15	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
16	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Packing	PTFE / PTFE+C
18	Bearing	CS + PTFE
19	Bearing	CS + PTFE
20	Bearing	CS + PTFE
21	Washer	PTFE+C
22	Washer	Steel - S235JR / 1.0038 / EN 10025-2
23	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
24	Washer	PTFE
25	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
26	Spring	Stainless steel - X10CrNi18-9 / AISI302 / 1.4310
27	O-ring	EPDM (AFLAS - 200°C)
28	O-ring	EPDM (AFLAS - 200°C)
29	O-ring	EPDM (AFLAS - 200°C)
30	O-ring	EPDM (AFLAS - 200°C)
31	Screw	Steel - 8.8
32	Screw	Steel - 8.8
33	Parallel pin	Steel - 8.8
34	Lock ring	Steel - 65G
35	Screw	Steel - 8.8
36	Key	Steel - C45 / 1.0503 / EN 10277-2
37	Base	Steel - S235JR / 1.0038 / EN 10025-2
38	Lifting eye	Steel - S235JR / 1.0038 / EN 10025-2
39	Lubrication fitting NPT	Steel - P355NH / 1.0565 / EN 10028-3

Trunnion mounted valve - DN150-300, PN40

Type 3/A... - Full bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next pages.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN150 are trunnion mounted as standard.

Media

Water, gas and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

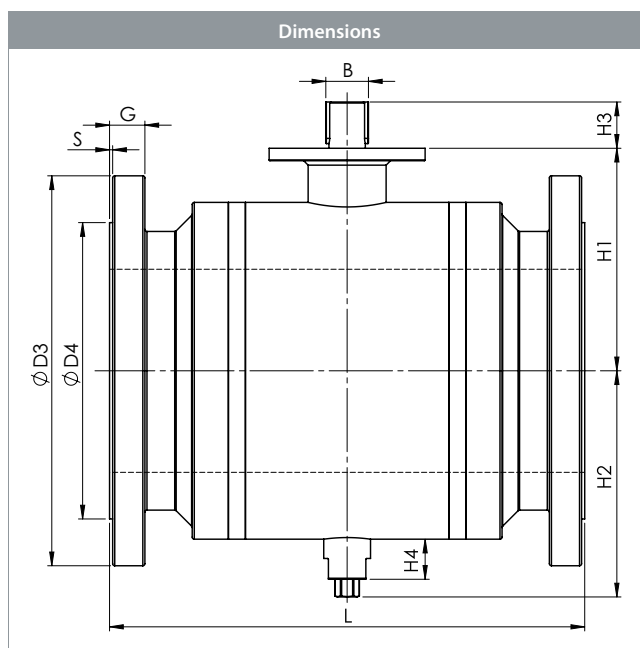
Eco-friendly protection finish against corrosion.

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 DN150 are CE-marked. The 3.1 certificate is available upon request.

Notice

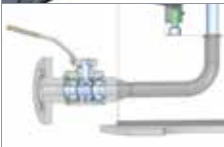
As standard DN150-300 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.



					All dimensions in mm
DN	BROEN No.	Bore	Kvs	net Weight kg	L
150	3/A150KK5D30	152.0	4498	87	350
200	3/A200KK5D30	201.5	9234	157	457
250	3/A250KK5D30	253.0	14428	293	533
300	3/A300KK5D30	304.0	20777	487	610

Trunnion mounted valve - DN150-300, PN40

Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN150-300	Columns.
		DN150-300	BROEN-Gear.
	-	DN150-300	BROEN-Gear, Electric gear.
	-	DN150-300	Lubrication fitting NPT.
	-	DN150-300	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN150-300	Base.

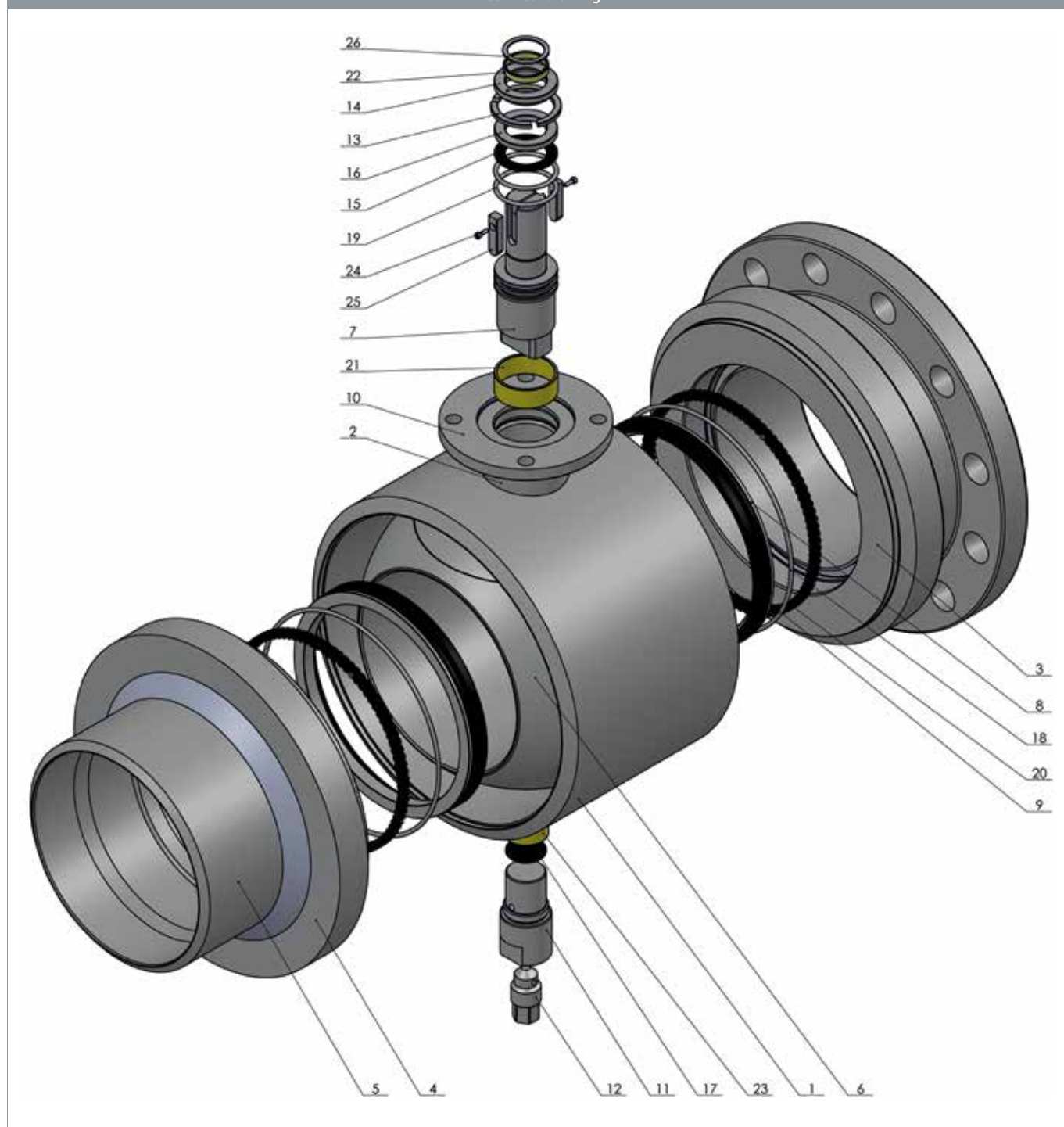
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H3	H4	A	ISO
273.0	300	218	28	3	214.0			37	SQ36	F14
323.9	375	285	34	3	252.5	202.0	40.0	37	SQ36	F14
406.4	450	345	38	3	315.0	360.0	44.8	75 / 82	SQ36 / Ø60	F16
508.0	515	410	42	4	355.5	400.0	34.2	82	Ø60	F16

Trunnion mounted valve - DN150-300, PN40

Type 3/A... - Full bore

Technical drawing



Trunnion mounted valve - DN150-300, PN40

Type 3/A... - Full bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
4	Flange	Steel - P355NH / 1.0565 / EN 10028-3
5	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
6	Ball	Steel - A350LF2 Class 1, EN coated
7	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
8	Seat	Steel - P355NH / 1.0565 / EN 10028-3
9	Seal	PTFE+C
10	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
11	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
12	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
13	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
14	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
15	Washer	PTFE+C
16	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Washer	PTFE+C
18	O-ring	EPDM
19	O-ring	EPDM
20	Spring	Stainless steel - X10CrNi18-8 / AISI302 / 1.4301
21	Bearing	CS + PTFE
22	Bearing	CS + PTFE
23	Bearing	CS + PTFE
24	Screw	Steel - 8.8
25	Key	Steel - C45 / 1.0503 / EN 10277-2
26	Lock ring	Steel - 65G

Trunnion mounted valve - DN350-1000, PN40

Type 3/A... - Full bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next pages.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN350 are trunnion mounted as standard.

Media

Water, gas and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

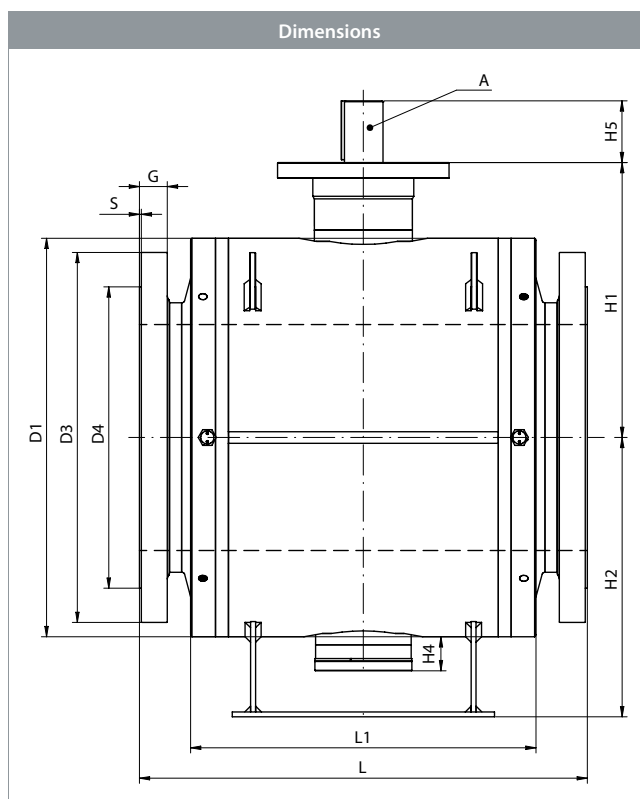
Approvals and certificates

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 DN350 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN350-1000 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.

Larger dimensions on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm	
					L	L1
350	3/A350KK5D30	336	28280	631	686	475
400	3/A400KK5D30	386	36937	1030	762	565
500	3/A500KK5D30	488	57715	1770	914	705
600	3/A600KK5D30	588	101788	2890	1067	819
700	3/A700KK5D30	684	138544	4427	1245	936
800	3/A800KK5D30	780	180956	6295	1372	1054
900	3/A900KK5D30	874	229023	9230	1524	1214
1000	3/A910KK5D30	976	282744	13725	2050	1346

Trunnion mounted valve - DN350-1000, PN40

Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN350-800	Columns.
	-	DN400	BROEN-Gear.
	-	DN500	
	-	DN600	
	-	DN700	
	-	DN800	
	-	DN350-1000	BROEN-Gear, Electric gear.
	-	DN350-1000	Lubrication fitting NPT.
	-	DN350-1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.

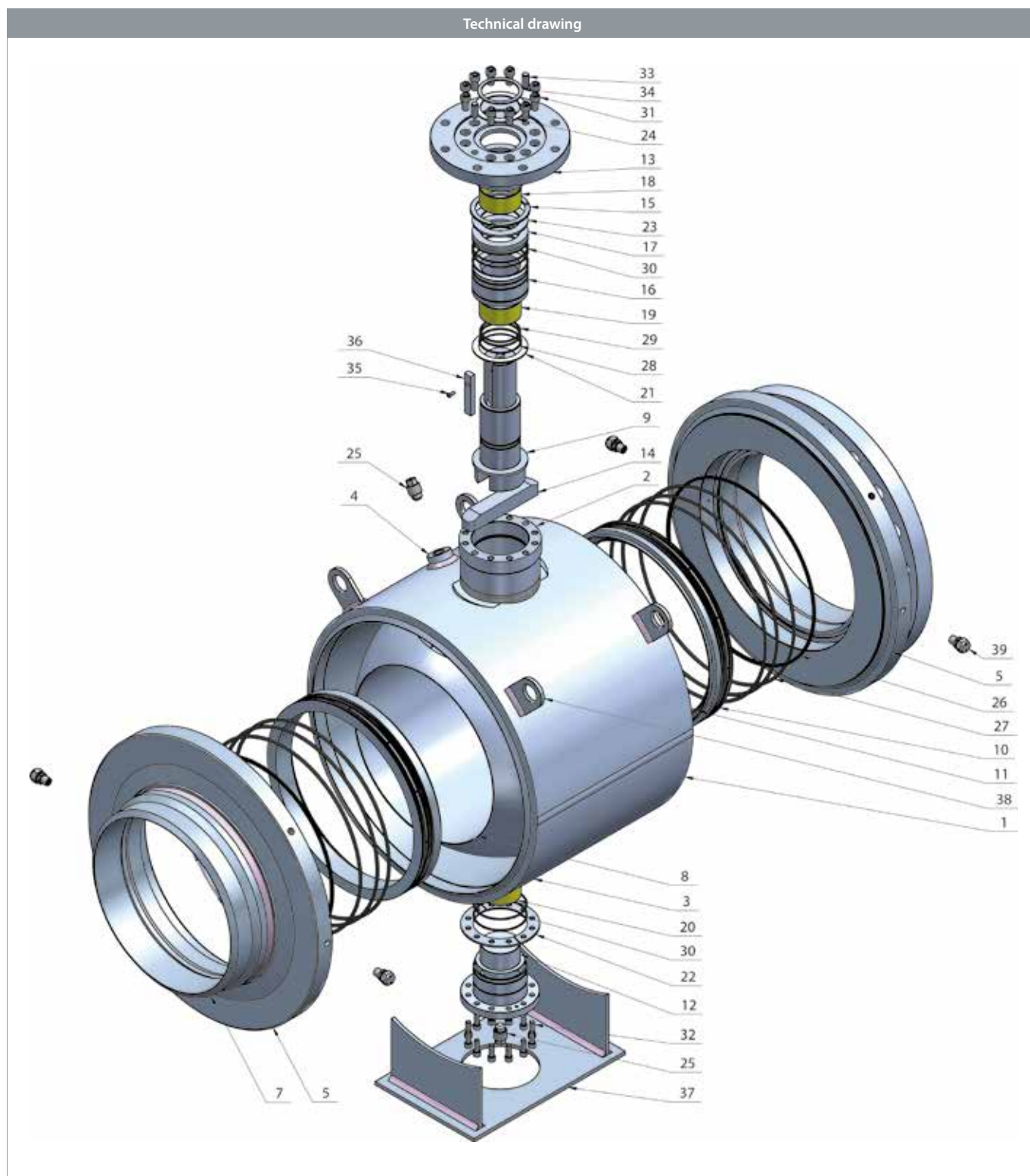
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
558	580	465	46	4	377.5	420.5	31.5	82	Ø60	F16
660	660	535	50	4	433.0	480.0	60.0	110	Ø72	F25
813	755	615	57	4	561.0	570.0	70.0	130	Ø80	F30
988	890	735	72	5	654.0	682.0	81.0	130	Ø100	F30
1126	995	840	86	5	806.0	790.0	109.0	200	Ø120	F35
1300	1140	960	90	5	890.0	900.0	107.0	198	Ø120	F35
1450	1250	1070	95	5	941.0	1000.0	117.0	183	Ø140	F40
1650	1360	1180	100	5	1121.0	1220.0	142.0	240	Ø190	F48

Trunnion mounted valve - DN350-1000, PN40

Type 3/A... - Full bore

Technical drawing



Trunnion mounted valve - DN350-1000, PN40

Type 3/A... - Full bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Trunnion guide	Steel - P355NH / 1.0565 / EN 10028-3
4	Plug guide	Steel - P355NH / 1.0565 / EN 10028-3
5	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
6	Flange	Steel - P355NH / 1.0565 / EN 10028-3
7	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
8	Ball	ASTM A350 LF2
9	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
10	Seat	Steel - P355NH / 1.0565 / EN 10028-3
11	Seal	PTFE / PTFE+C (PTFE+C - 200°C)
12	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
13	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
14	Ball key	Steel - C45 / 1.0503 / EN 10277-2
15	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
16	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Packing	PTFE / PTFE+C
18	Bearing	CS + PTFE
19	Bearing	CS + PTFE
20	Bearing	CS + PTFE
21	Washer	PTFE+C
22	Washer	Steel - S235JR / 1.0038 / EN 10025-2
23	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
24	Washer	PTFE
25	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
26	Spring	Stainless steel - X10CrNi18-9 / AISI302 / 1.4310
27	O-ring	EPDM (AFLAS - 200°C)
28	O-ring	EPDM (AFLAS - 200°C)
29	O-ring	EPDM (AFLAS - 200°C)
30	O-ring	EPDM (AFLAS - 200°C)
31	Screw	Steel - 8.8
32	Screw	Steel - 8.8
33	Parallel pin	Steel - 8.8
34	Lock ring	Steel - 65G
35	Screw	Steel - 8.8
36	Key	Steel - C45 / 1.0503 / EN 10277-2
37	Base	Steel - S235JR / 1.0038 / EN 10025-2
38	Lifting eye	Steel - S235JR / 1.0038 / EN 10025-2
39	Lubrication fitting NPT	Steel - P355NH / 1.0565 / EN 10028-3

Trunnion mounted valve - DN150-300, PN25

Type 3/A... - Full bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next pages.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN150 are trunnion mounted as standard.

Media

Water, gas and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

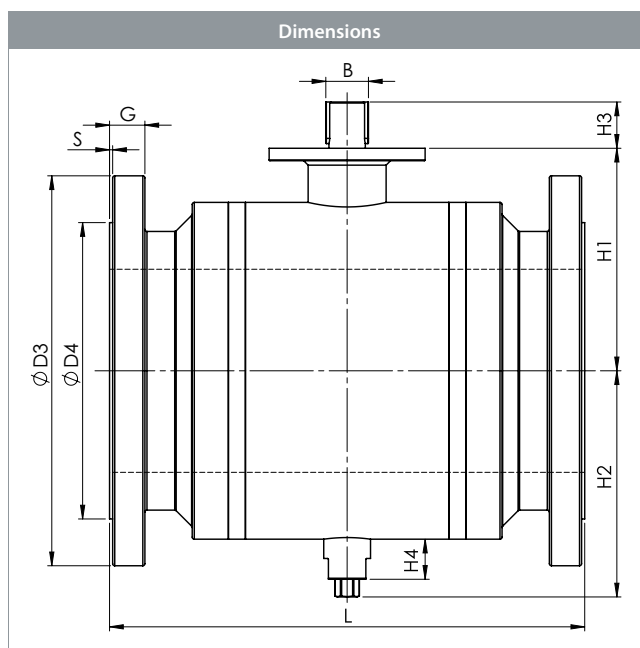
Eco-friendly protection finish against corrosion.

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 DN150 are CE-marked. The 3.1 certificate is available upon request.

Notice

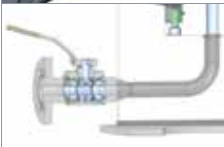
As standard DN150-300 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm
					L
150	3/A150KK4D30	152.0	4498	87	350
200	3/A200KK4D30	201.5	9234	148	457
250	3/A250KK4D30	253.0	14428	276	533
300	3/A300KK4D30	304.0	20777	463	610

Trunnion mounted valve - DN150-300, PN25

Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN150-300	Columns.
		DN150-300	BROEN-Gear.
	-	DN150-300	BROEN-Gear, Electric gear.
	-	DN150-300	Lubrication fitting NPT.
	-	DN150-300	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN150-300	Base.

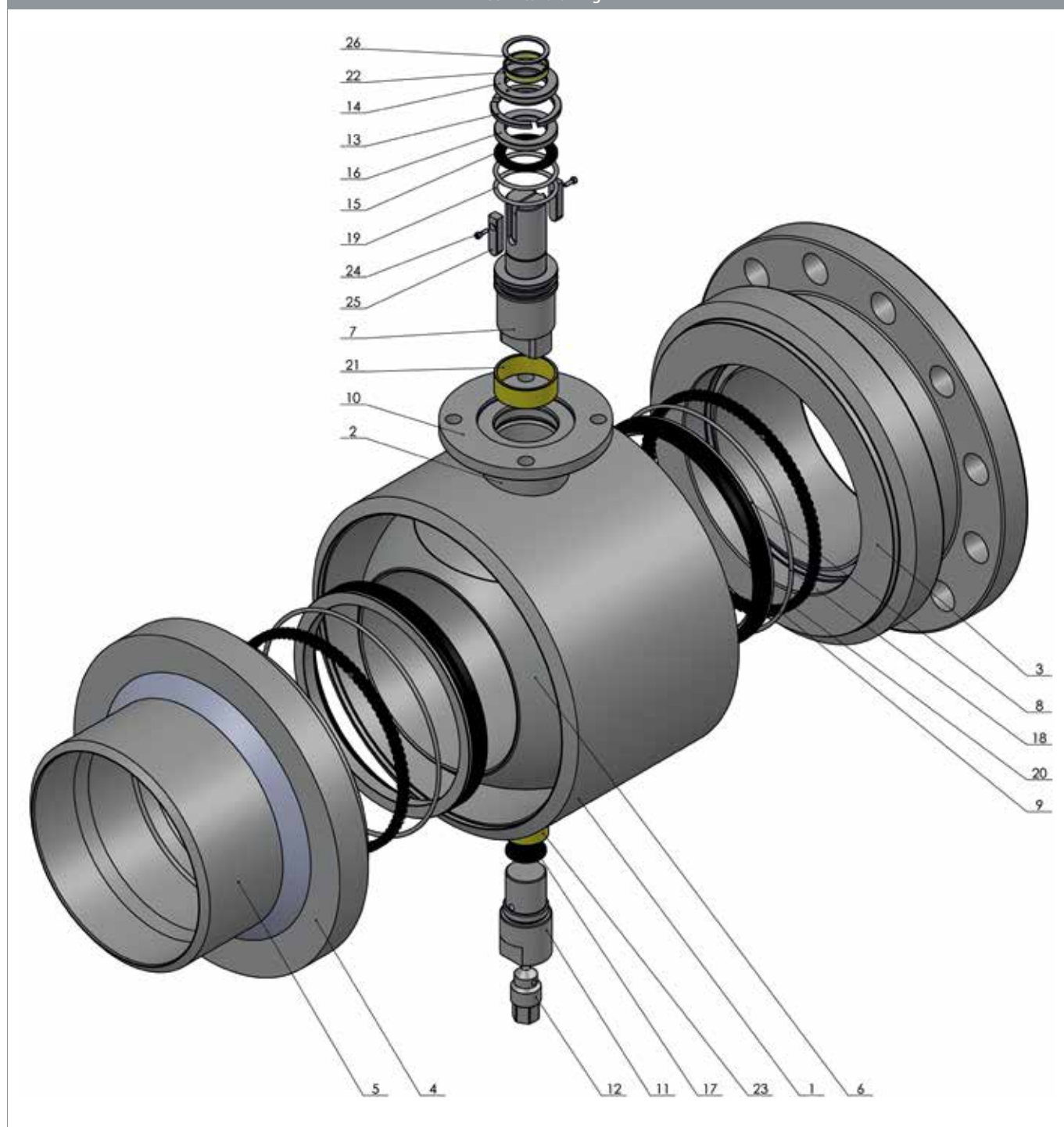
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H3	H4	A	ISO
273.0	300	218	28	3	214.0			37	SQ36	F14
323.9	360	278	30	3	252.5	202.0	40.0	37	SQ36	F14
406.4	425	335	32	3	315.0	360.0	44.8	75 / 82	SQ36 / Ø60	F16
508.0	485	395	34	4	355.5	400.0	34.2	75 / 82	SQ36 / Ø60	F16

Trunnion mounted valve - DN150-300, PN25

Type 3/A... - Full bore

Technical drawing



Trunnion mounted valve - DN150-300, PN25

Type 3/A... - Full bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
4	Flange	Steel - P355NH / 1.0565 / EN 10028-3
5	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
6	Ball	Steel - A350LF2 Class 1, EN coated
7	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
8	Seat	Steel - P355NH / 1.0565 / EN 10028-3
9	Seal	PTFE+C
10	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
11	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
12	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
13	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
14	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
15	Washer	PTFE+C
16	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Washer	PTFE+C
18	O-ring	EPDM
19	O-ring	EPDM
20	Spring	Stainless steel - X10CrNi18-8 / AISI302 / 1.4301
21	Bearing	CS + PTFE
22	Bearing	CS + PTFE
23	Bearing	CS + PTFE
24	Screw	Steel - 8.8
25	Key	Steel - C45 / 1.0503 / EN 10277-2
26	Lock ring	Steel - 65G

Trunnion mounted valve - DN350-1000, PN25

Type 3/A... - Full bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next pages.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN350 are trunnion mounted as standard.

Media

Water, gas and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

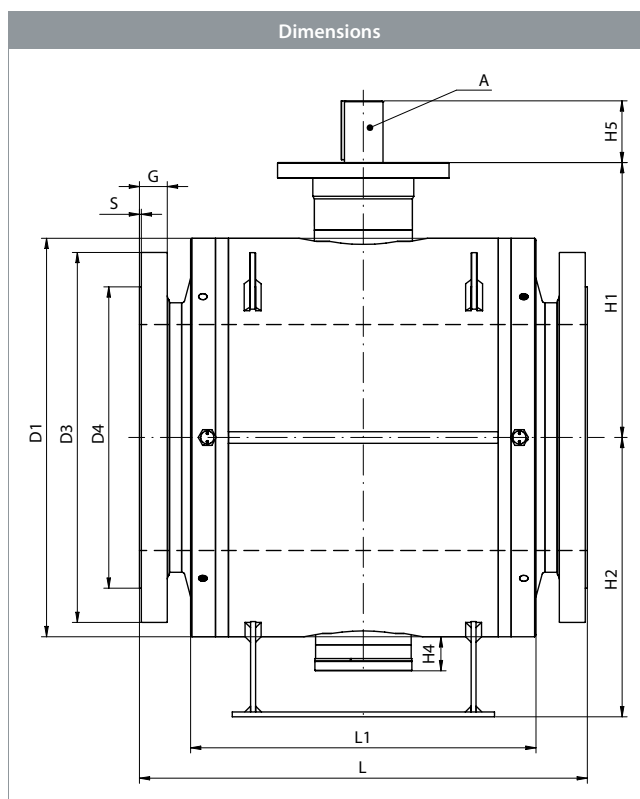
Approvals and certificates

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 DN350 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN350-1000 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.

Larger dimensions on request.



					All dimensions in mm	
DN	BROEN No.	Bore	Kvs	net Weight kg	L	L1
350	3/A350KK4D30	336	28280	617	686	491
400	3/A400KK4D30	386	36937	980	762	565
500	3/A500KK4D30	488	57715	1730	914	705
600	3/A600KK4D30	588	101788	2645	1067	819
700	3/A700KK4D30	684	138544	4318	1245	976
800	3/A800KK4D30	780	180956	6460	1372	1138
900	3/A900KK4D30	874	229023	8728	1524	1214
1000	3/A910KK4D30	976	282744	13041	2050	1346

Trunnion mounted valve - DN350-1000, PN25

Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN350-800	Columns.
	-	DN400	BROEN-Gear.
	-	DN500	
	-	DN600	
	-	DN700	
	-	DN800	
	-	DN350-1000	BROEN-Gear, Electric gear.
	-	DN350-1000	Lubrication fitting NPT.
	-	DN350-1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.

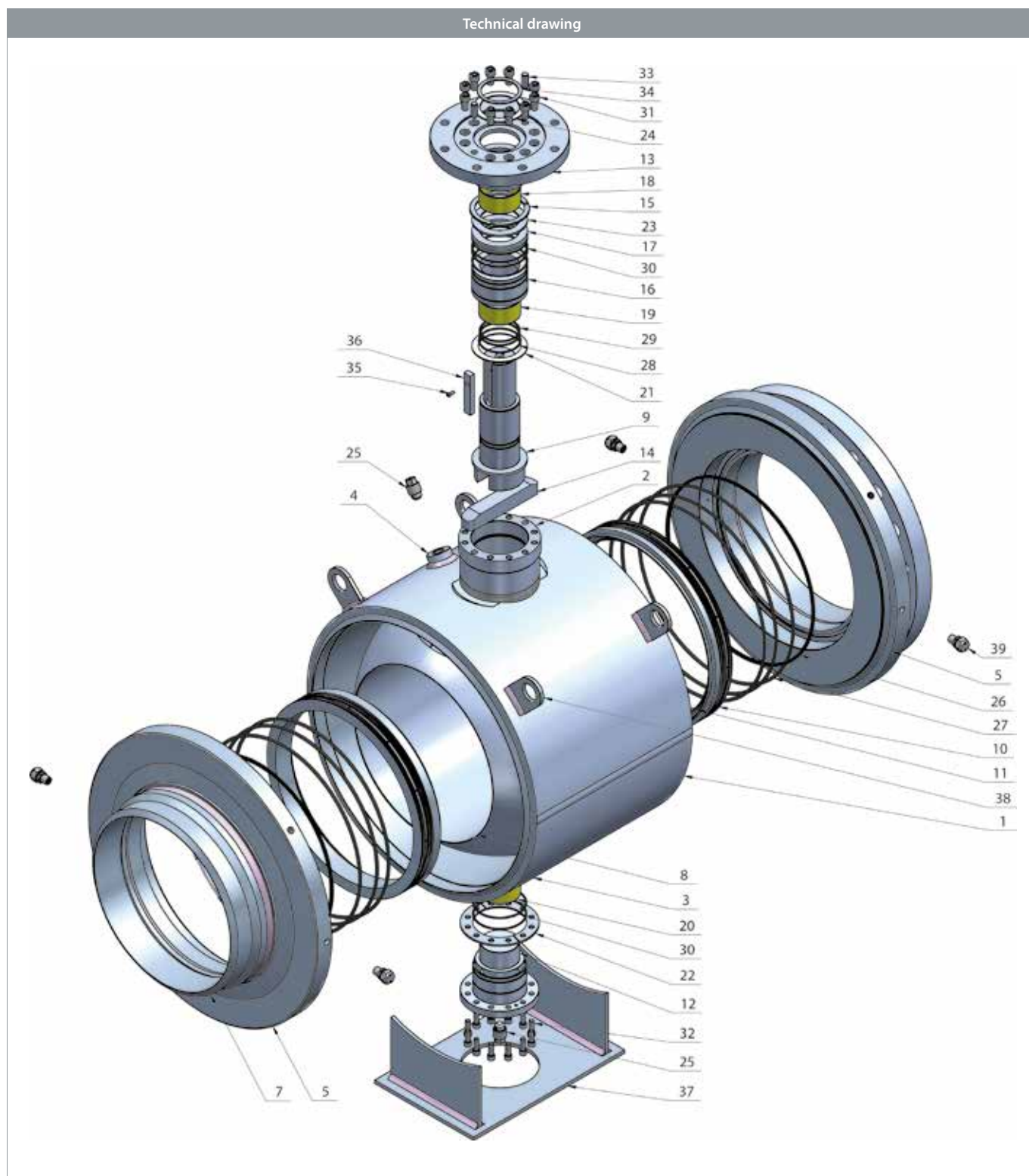
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
558	555	450	38	4	377.5	420.5	31.5	75 / 82	Ø60	F16
660	620	505	40	4	433.0	480.0	60.0	110	Ø72	F25
813	730	615	48	4	561.0	570.0	70.0	130	Ø80	F30
988	845	720	48	5	654.0	682.0	81.0	130	Ø100	F30
1126	960	820	50	5	806.0	790.0	109.0	200	Ø120	F35
1300	1085	930	53	5	890.0	900.0	107.0	198	Ø120	F35
1450	1185	1030	53	5	941.0	1000.0	117.0	183	Ø140	F40
1650	1320	1140	63	5	1121.0	1220.0	142.0	240	Ø190	F48

Trunnion mounted valve - DN350-1000, PN25

Type 3/A... - Full bore

Technical drawing



Trunnion mounted valve - DN350-1000, PN25

Type 3/A... - Full bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Trunnion guide	Steel - P355NH / 1.0565 / EN 10028-3
4	Plug guide	Steel - P355NH / 1.0565 / EN 10028-3
5	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
6	Flange	Steel - P355NH / 1.0565 / EN 10028-3
7	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
8	Ball	ASTM A350 LF2
9	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
10	Seat	Steel - P355NH / 1.0565 / EN 10028-3
11	Seal	PTFE / PTFE+C (PTFE+C - 200°C)
12	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
13	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
14	Ball key	Steel - C45 / 1.0503 / EN 10277-2
15	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
16	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Packing	PTFE / PTFE+C
18	Bearing	CS + PTFE
19	Bearing	CS + PTFE
20	Bearing	CS + PTFE
21	Washer	PTFE+C
22	Washer	Steel - S235JR / 1.0038 / EN 10025-2
23	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
24	Washer	PTFE
25	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
26	Spring	Stainless steel - X10CrNi18-9 / AISI302 / 1.4310
27	O-ring	EPDM (AFLAS - 200°C)
28	O-ring	EPDM (AFLAS - 200°C)
29	O-ring	EPDM (AFLAS - 200°C)
30	O-ring	EPDM (AFLAS - 200°C)
31	Screw	Steel - 8.8
32	Screw	Steel - 8.8
33	Parallel pin	Steel - 8.8
34	Lock ring	Steel - 65G
35	Screw	Steel - 8.8
36	Key	Steel - C45 / 1.0503 / EN 10277-2
37	Base	Steel - S235JR / 1.0038 / EN 10025-2
38	Lifting eye	Steel - S235JR / 1.0038 / EN 10025-2
39	Lubrication fitting NPT	Steel - P355NH / 1.0565 / EN 10028-3

Trunnion mounted valve - DN150-300, PN16

Type 3/A... - Full bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next pages.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN150 are trunnion mounted as standard.

Media

Water, gas and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

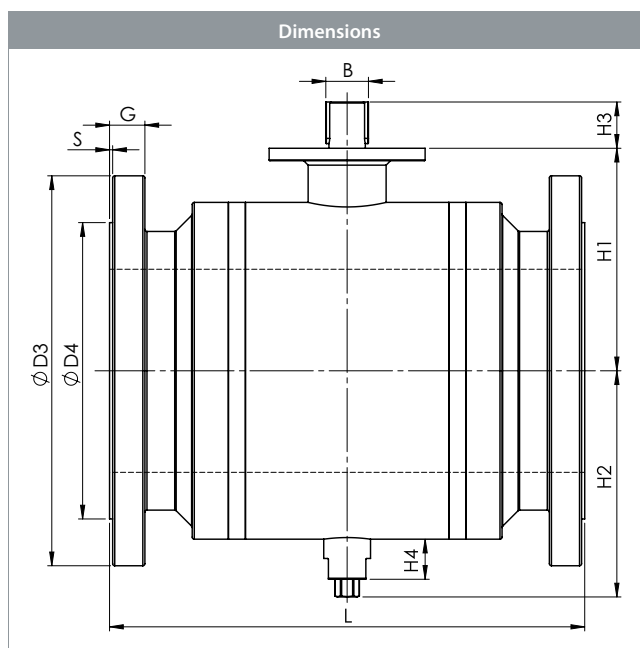
Eco-friendly protection finish against corrosion.

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 DN150 are CE-marked. The 3.1 certificate is available upon request.

Notice

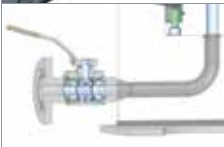
As standard DN150-300 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.



					All dimensions in mm
DN	BROEN No.	Bore	Kvs	net Weight kg	L
150	3/A150KK3D30	152.0	4498	85	350
200	3/A200KK3D30	201.5	9234	145	457
250	3/A250KK3D30	253.0	14428	264	533
300	3/A300KK3D30	304.0	20777	448	610

Trunnion mounted valve - DN150-300, PN16

Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN150-300	Columns.
		DN150-300	BROEN-Gear.
	-	DN150-300	BROEN-Gear, Electric gear.
	-	DN150-300	Lubrication fitting NPT.
	-	DN150-300	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN150-300	Base.

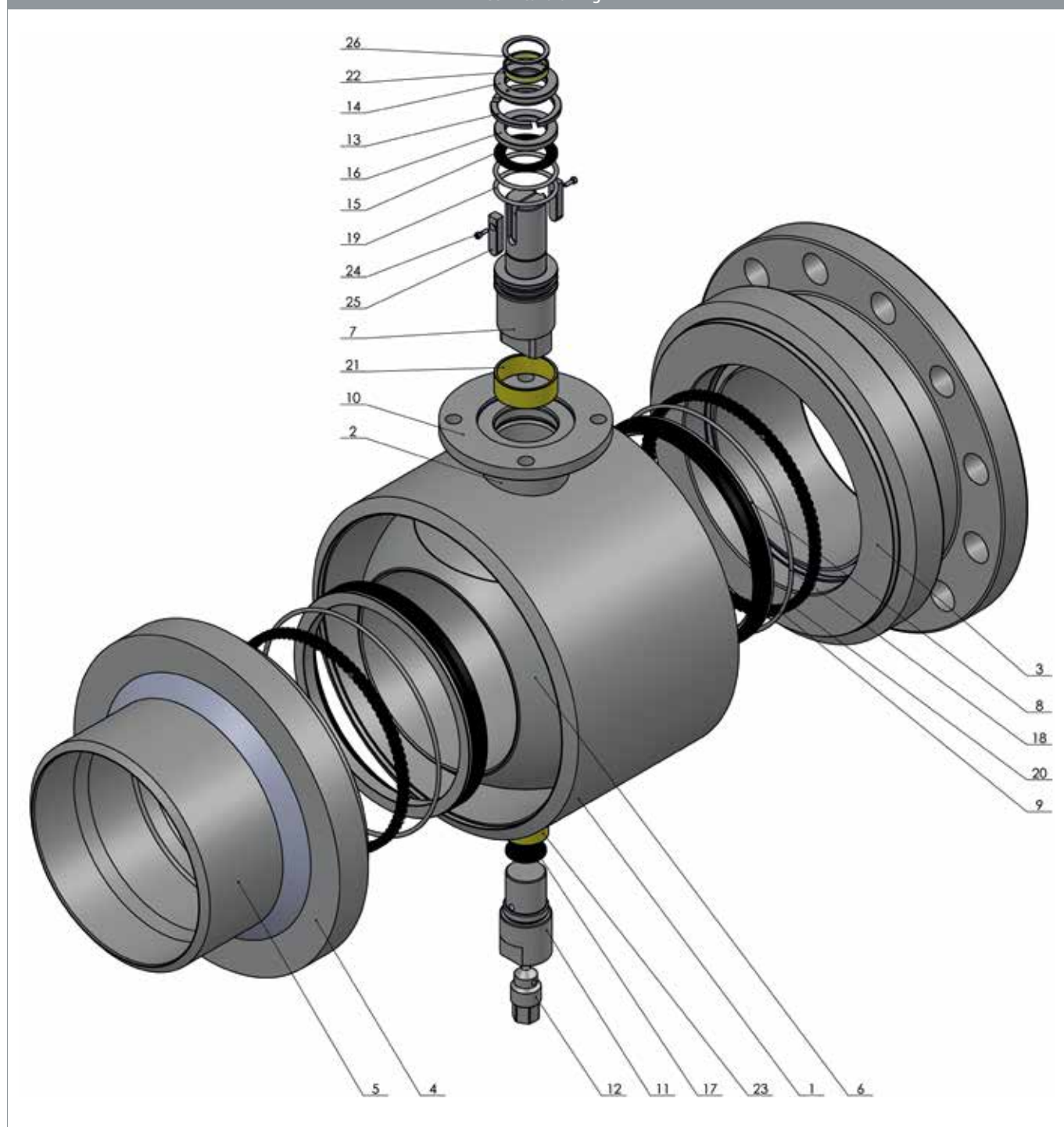
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H3	H4	A	ISO
273.0	285	212	22	3	214.0			37	SQ36	F14
323.9	340	268	24	3	252.5	202.0	40.0	37	SQ36	F14
406.4	405	320	26	3	315.0	360.0	44.8	75 / 82	SQ36 / Ø60	F16
508.0	460	378	28	4	355.5	400.0	34.2	75 / 82	SQ36 / Ø60	F16

Trunnion mounted valve - DN150-300, PN16

Type 3/A... - Full bore

Technical drawing



Trunnion mounted valve - DN150-300, PN16

Type 3/A... - Full bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
4	Flange	Steel - P355NH / 1.0565 / EN 10028-3
5	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
6	Ball	Steel - A350LF2 Class 1, EN coated
7	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
8	Seat	Steel - P355NH / 1.0565 / EN 10028-3
9	Seal	PTFE+C
10	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
11	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
12	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
13	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
14	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
15	Washer	PTFE+C
16	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Washer	PTFE+C
18	O-ring	EPDM
19	O-ring	EPDM
20	Spring	Stainless steel - X10CrNi18-8 / AISI302 / 1.4301
21	Bearing	CS + PTFE
22	Bearing	CS + PTFE
23	Bearing	CS + PTFE
24	Screw	Steel - 8.8
25	Key	Steel - C45 / 1.0503 / EN 10277-2
26	Lock ring	Steel - 65G

Trunnion mounted valve - DN350-1000, PN16

Type 3/A... - Full bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next pages.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN350 are trunnion mounted as standard.

Media

Water, gas and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

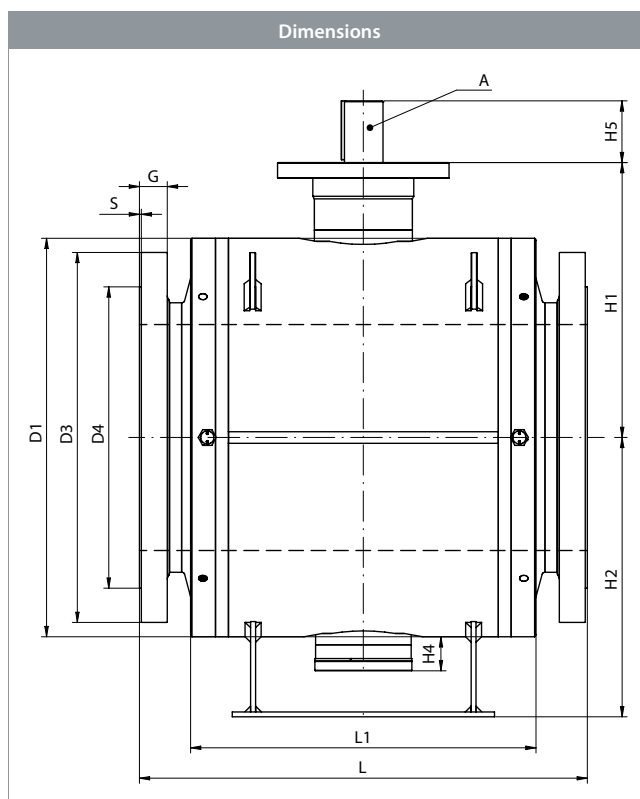
Approvals and certificates

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Notice

As standard DN350-1000 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.

Larger dimensions on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm	
					L	L1
350	3/A350KK3D30	336	28280	589	686	491
400	3/A400KK3D30	386	36937	980	762	565
500	3/A500KK3D30	488	57715	1730	914	705
600	3/A600KK3D30	588	101788	2645	1067	819
700	3/A700KK3D30	684	138544	4318	1245	976
800	3/A800KK3D30	780	180956	6460	1372	1184
900	3/A900KK3D30	874	229023	8728	1524	1214
1000	3/A910KK3D30	976	282744	13041	2050	1346

Trunnion mounted valve - DN350-1000, PN16

Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN350-800	Columns.
	-	DN400	BROEN-Gear.
	-	DN500	
	-	DN600	
	-	DN700	
	-	DN800	
	-	DN350-1000	BROEN-Gear, Electric gear.
	-	DN350-1000	Lubrication fitting NPT.
	-	DN350-1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.

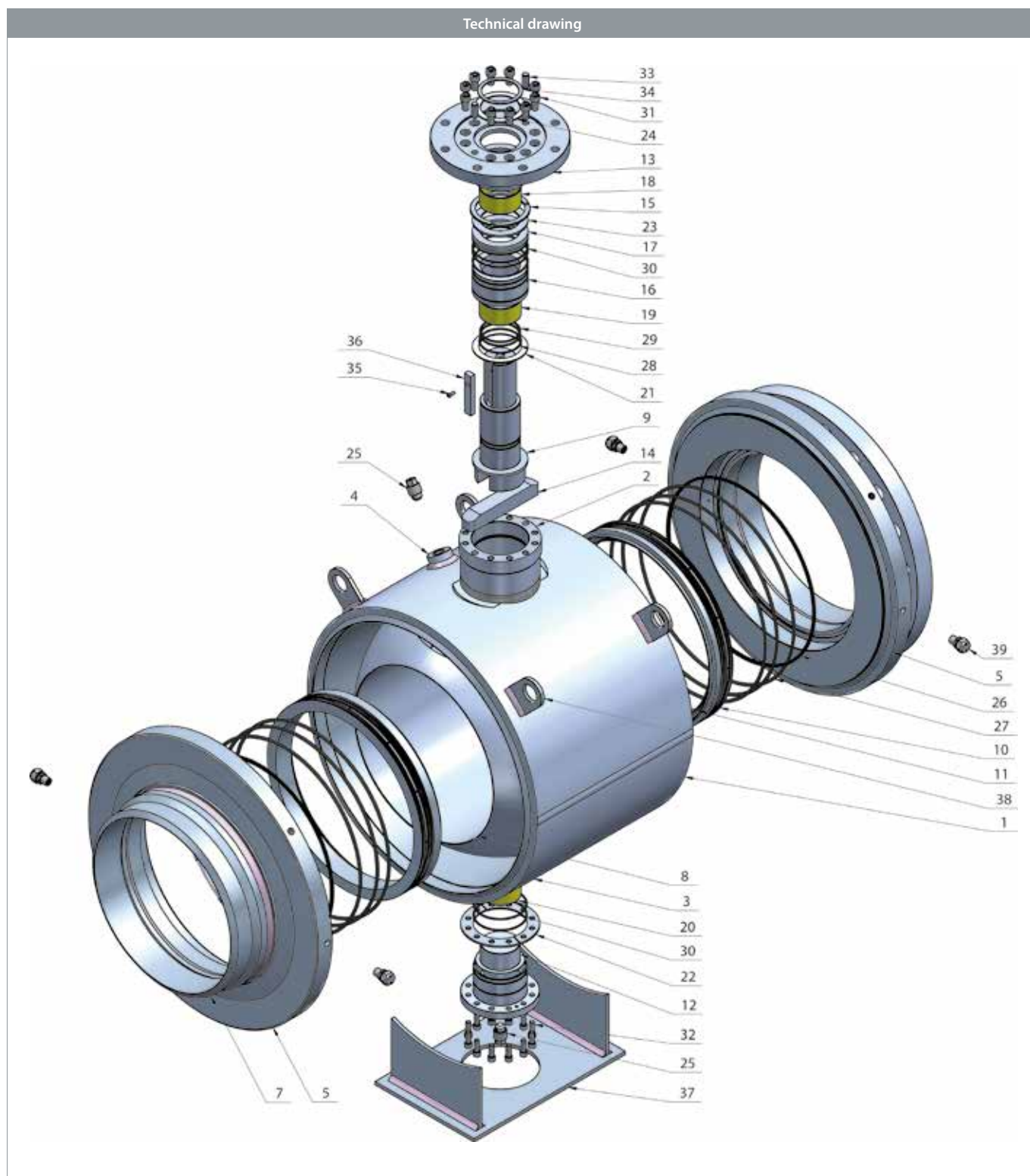
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
558	520	438	30	4	377.5	420.5	31.5	75 / 82	Ø60	F16
660	580	490	32	4	433.0	480.0	60.0	110	Ø72	F25
813	715	610	36	4	561.0	570.0	70.0	130	Ø80	F30
988	840	725	40	5	654.0	682.0	81.0	130	Ø100	F30
1126	910	795	40	5	806.0	790.0	109.0	200	Ø120	F35
1300	1025	900	41	5	890.0	900.0	107.0	198	Ø120	F35
1450	1125	1000	48	5	941.0	1000.0	117.0	183	Ø140	F40
1650	1255	1115	59	5	1121.0	1220.0	142.0	240	Ø190	F48

Trunnion mounted valve - DN350-1000, PN16

Type 3/A... - Full bore

Technical drawing



Trunnion mounted valve - DN350-1000, PN16

Type 3/A... - Full bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Trunnion guide	Steel - P355NH / 1.0565 / EN 10028-3
4	Plug guide	Steel - P355NH / 1.0565 / EN 10028-3
5	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
6	Flange	Steel - P355NH / 1.0565 / EN 10028-3
7	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
8	Ball	ASTM A350 LF2
9	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
10	Seat	Steel - P355NH / 1.0565 / EN 10028-3
11	Seal	PTFE / PTFE+C (PTFE+C - 200°C)
12	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
13	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
14	Ball key	Steel - C45 / 1.0503 / EN 10277-2
15	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
16	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Packing	PTFE / PTFE+C
18	Bearing	CS + PTFE
19	Bearing	CS + PTFE
20	Bearing	CS + PTFE
21	Washer	PTFE+C
22	Washer	Steel - S235JR / 1.0038 / EN 10025-2
23	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
24	Washer	PTFE
25	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
26	Spring	Stainless steel - X10CrNi18-9 / AISI302 / 1.4310
27	O-ring	EPDM (AFLAS - 200°C)
28	O-ring	EPDM (AFLAS - 200°C)
29	O-ring	EPDM (AFLAS - 200°C)
30	O-ring	EPDM (AFLAS - 200°C)
31	Screw	Steel - 8.8
32	Screw	Steel - 8.8
33	Parallel pin	Steel - 8.8
34	Lock ring	Steel - 65G
35	Screw	Steel - 8.8
36	Key	Steel - C45 / 1.0503 / EN 10277-2
37	Base	Steel - S235JR / 1.0038 / EN 10025-2
38	Lifting eye	Steel - S235JR / 1.0038 / EN 10025-2
39	Lubrication fitting NPT	Steel - P355NH / 1.0565 / EN 10028-3

Columns - DN150-800

Type - Full bore

Columns

The columns are the extension of the stem thereby allowing control of the fittings installed in underground systems or places requiring control from a strictly set height. In addition to the standard height columns, BROEN also recommends the rigid columns, the telescope columns with a regulated height and columns made to the individual order of the customer according to predefined parameters. A lever, planetary gear or any type of drive (electric, pneumatic, hydraulic etc.) installed at the top of the column could be an element enabling control of the valve. The type of the valve control (lever, planetary gear) and the height of the column measuring from the valve axis to the top part of the column (size "A") should be stated in the order.

BROEN-Gear - DN200-800

Type 3-TPA... - Full bore

BROEN-Gear

Hand-operated gearbox.

BROEN-Gear - supports control of the fittings when the high opening torque of the valve prevents the use of a lever.

The gear is used for manual control of the fittings between the OPEN - CLOSED end positions (30° rotation angle), substantially reducing the force required for its operation. The end positions are enforced by stops that are adjusted during the installation of the gear on the fittings and then protected against regulation.

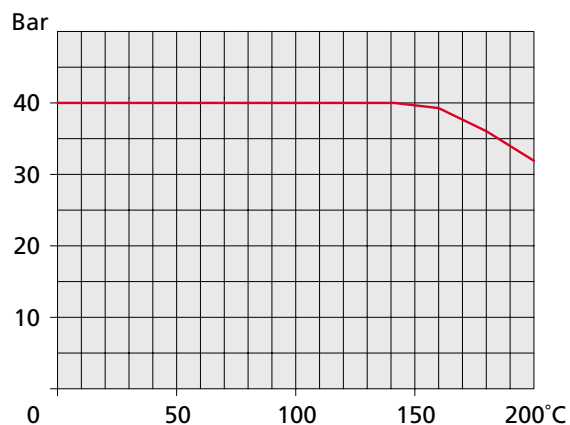


DN	BROEN No.	PN
200-300	3-TPA023	40
350-400	3-TPA025	40
500-600	3-TPA035	40
700	3-TPA064	40
800	3-TPA065	40
200-400	3-TPA023	25
500	3-TPA031	25
600	3-TPA035	25
700	3-TPA067	25
800	3-TPA064	25
200-400	3-TPA023	16
500	3-TPA031	16
600	3-TPA035	16
700	3-TPA067	16
800	3-TPA064	16

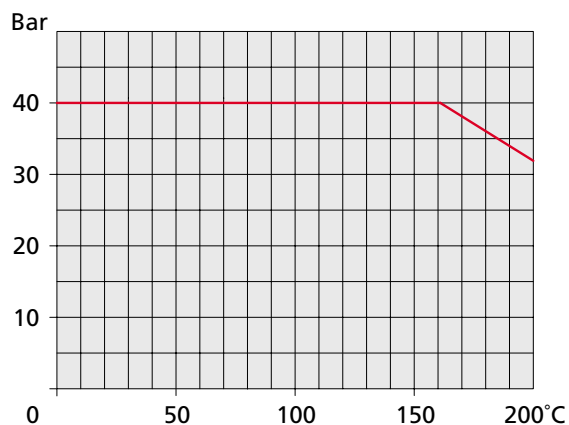
Pressure and temperature graph - DN200-1000, PN40/25/16

Full bore

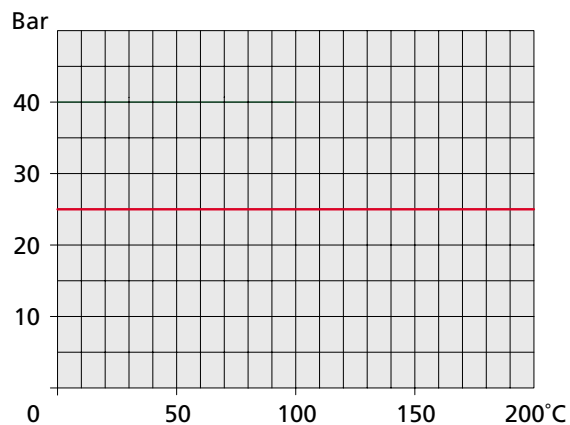
PN40: Welding × Welding / Flange × Flange - DN200-350



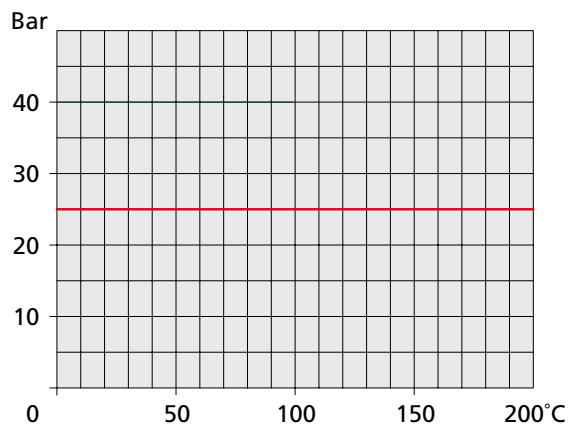
PN40: Welding × Welding / Flange × Flange - DN400-1000



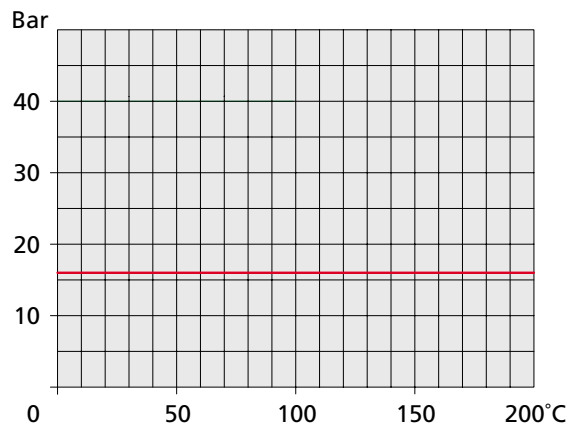
PN25: Welding × Welding / Flange × Flange - DN200-350



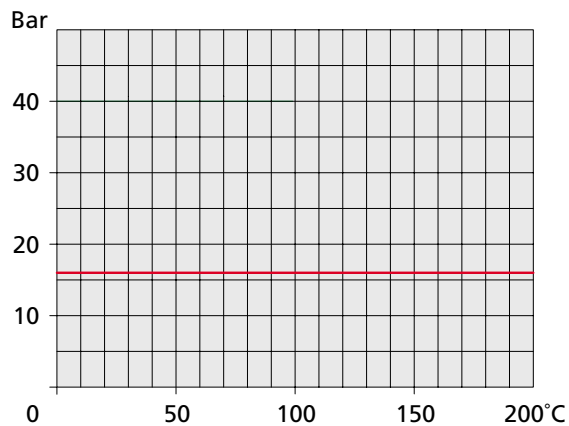
PN25: Welding × Welding / Flange × Flange - DN400-1000



PN25: Welding × Welding / Flange × Flange - DN200-350



PN16: Welding × Welding / Flange × Flange - DN400-1000



Pressure drop graph - DN200-1000

Full bore

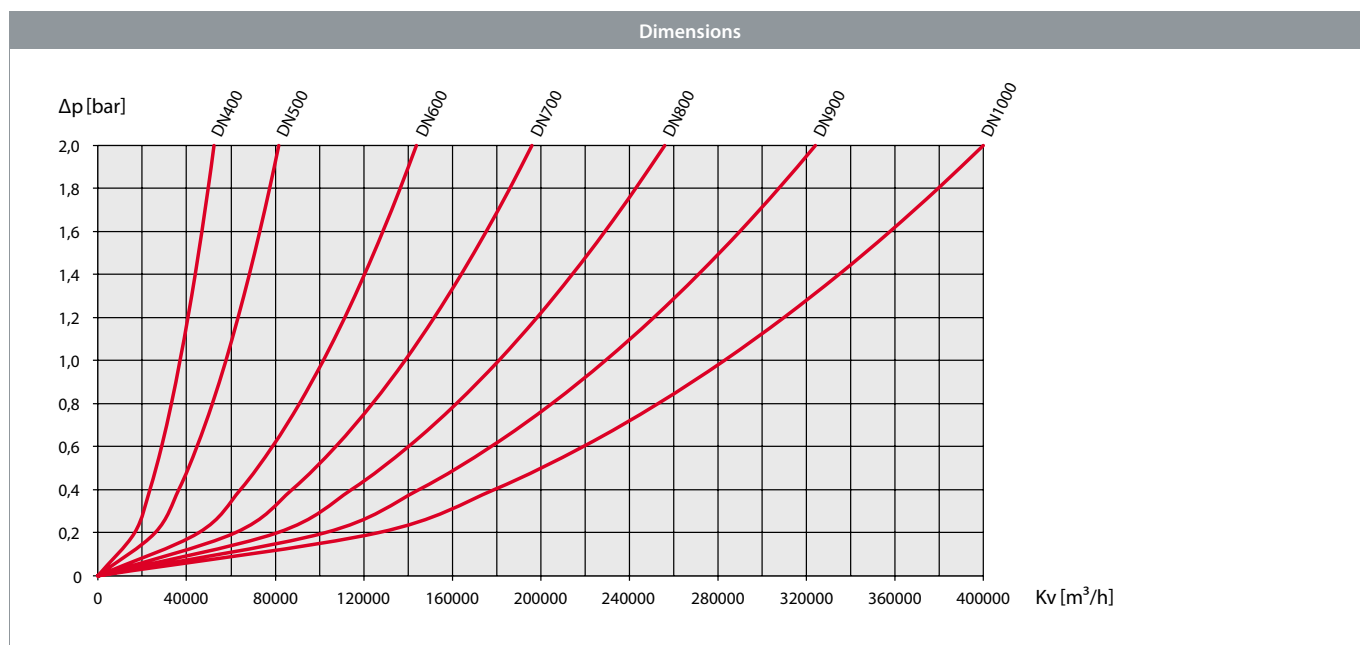
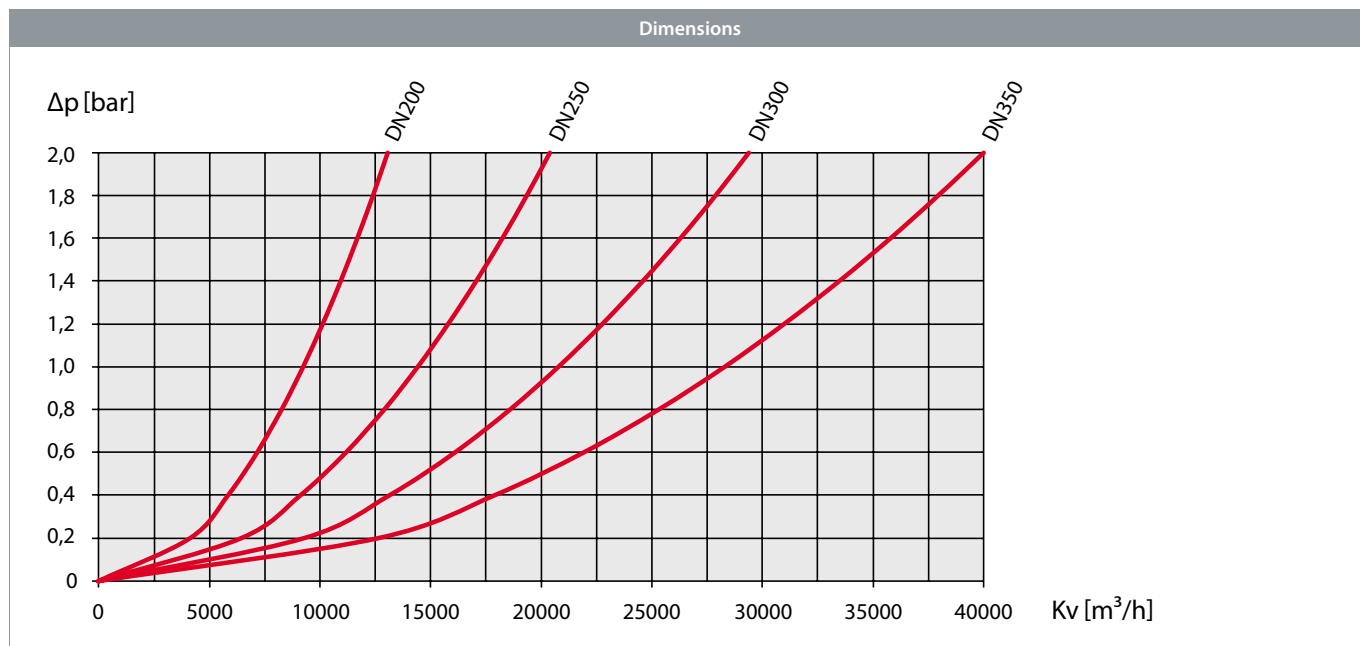
Pressure drop graph

Ball valve in fully open position.

Medium: water density in 1000 kg/m³

Definitions

Kvs: M³ water per hour at pressure drop 1 bar.



DN	200	250	300	350	400	500	600	700	800	900	1000
Kvs	9234	14428	20777	28280	36937	57715	101788	138544	180956	229023	282744

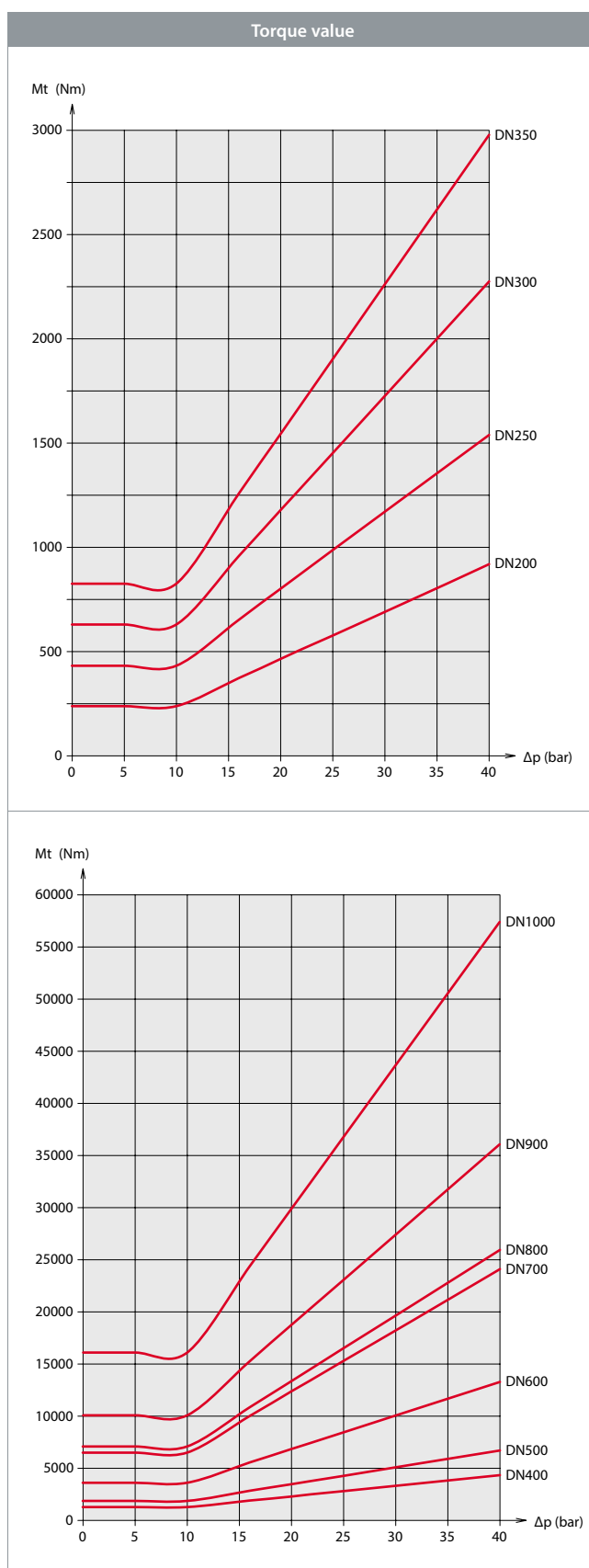
Operating torque - DN200-1000, PN40/25/16

Full 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.



Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 6

Trunnion mounted valves
Reduced bore

Trunnion mounted valve - DN200-350, PN40/25/16

Type 3/D... - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN200 are trunnion mounted as standard.

Media

Water, gas, oil and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

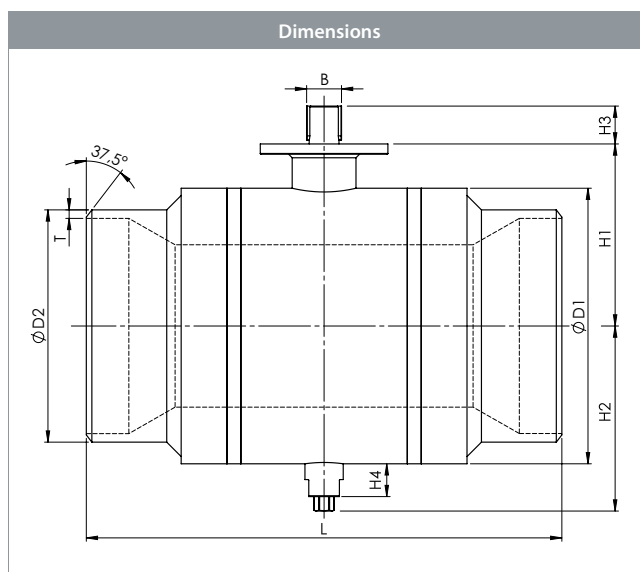
Eco-friendly protection finish against corrosion.

Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN200 are CE-marked. The 3.1 certificate is available upon request.

Notice

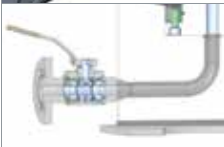
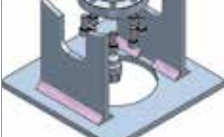
As standard DN200-350 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm
					L
200	3/D200WW5D30	152.0	1800	107	521
250	3/D250WW5D30	201.5	3410	152	559
300	3/D300WW5D30	253.0	5101	255	635
350	3/D350WW5D30	304.0	7853	442	762

Trunnion mounted valve - DN200-350, PN40/25/16

Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN200-350	Columns.
	-	DN200-350	BROEN-Gear.
	-	DN200-350	BROEN-Gear, Electric gear.
	-	DN200-350	Lubrication fitting NPT.
	-	DN200-350	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN200-350	Base.

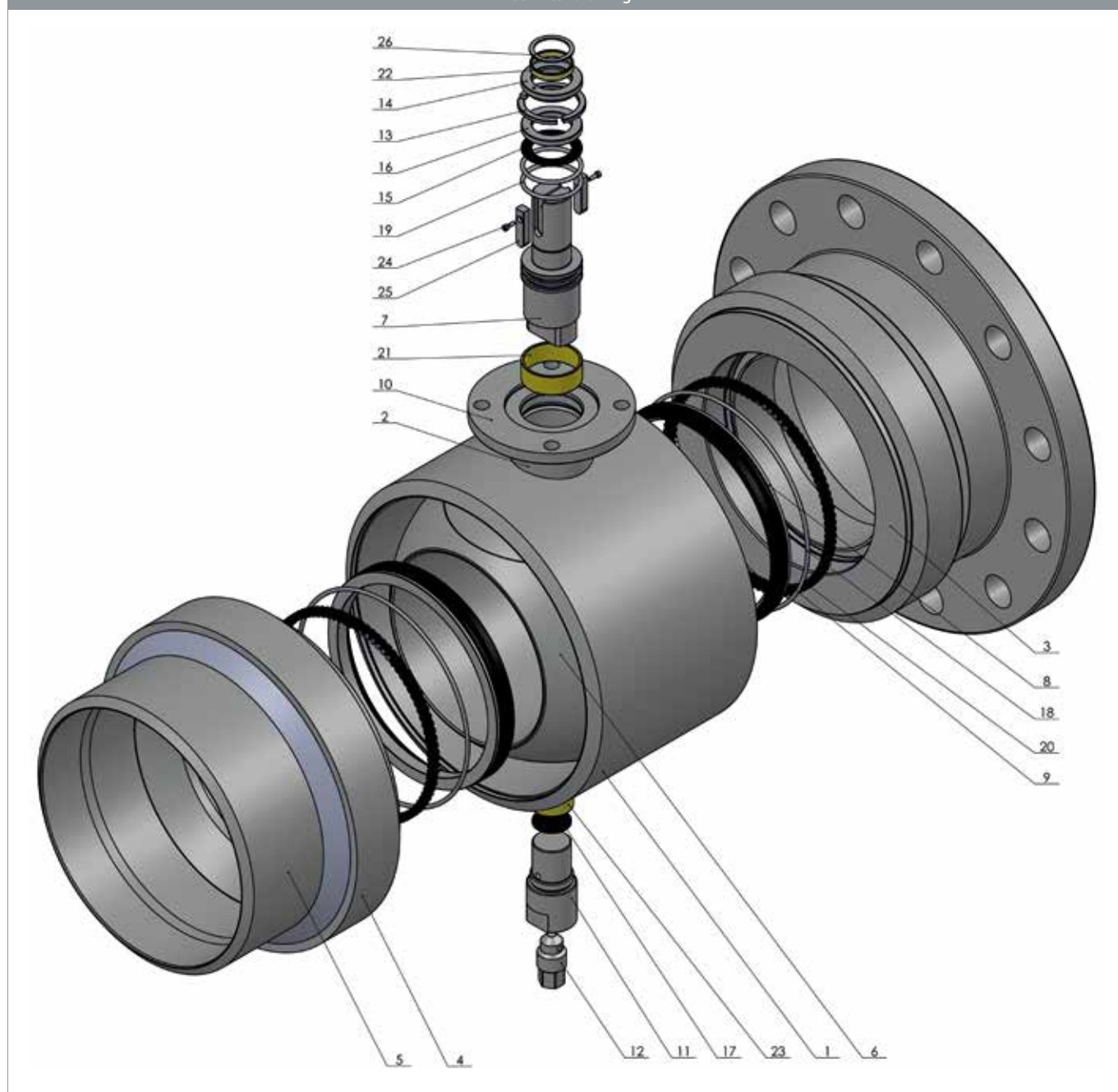
All dimensions in mm

D1	D2	T	H1	H2	H3	H4	A	ISO
273.0	219.1	8.8	214.0			37	SQ36	F14
323.9	273.0	10.0	252.5	202.0	40.0	37	SQ36	F14
406.4	323.9	10.0	315.0	360.0	44.8	75 / 82	SQ36 / Ø60	F16
508.0	355.6	11.0	355.5	400.0	34.2	82	Ø60	F16

Trunnion mounted valve - DN200-350, PN40/25/16

Type 3/D... - Reduced bore

Technical drawing



Trunnion mounted valve - DN200-350, PN40/25/16

Type 3/D... - Reduced bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
4	Flange	Steel - P355NH / 1.0565 / EN 10028-3
5	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
6	Ball	Steel - A350LF2 Class 1, EN coated
7	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
8	Seat	Steel - P355NH / 1.0565 / EN 10028-3
9	Seal	PTFE+C
10	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
11	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
12	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
13	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
14	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
15	Washer	PTFE+C
16	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Washer	PTFE+C
18	O-ring	EPDM
19	O-ring	EPDM
20	Spring	Stainless steel - X10CrNi18-8 / AISI302 / 1.4301
21	Bearing	CS + PTFE
22	Bearing	CS + PTFE
23	Bearing	CS + PTFE
24	Screw	Steel - 8.8
25	Key	Steel - C45 / 1.0503 / EN 10277-2
26	Lock ring	Steel - 65G

Trunnion mounted valve - DN400-1000, PN40/25/16

Type 3/D... - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN400 are trunnion mounted as standard.

Media

Water, gas, oil and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

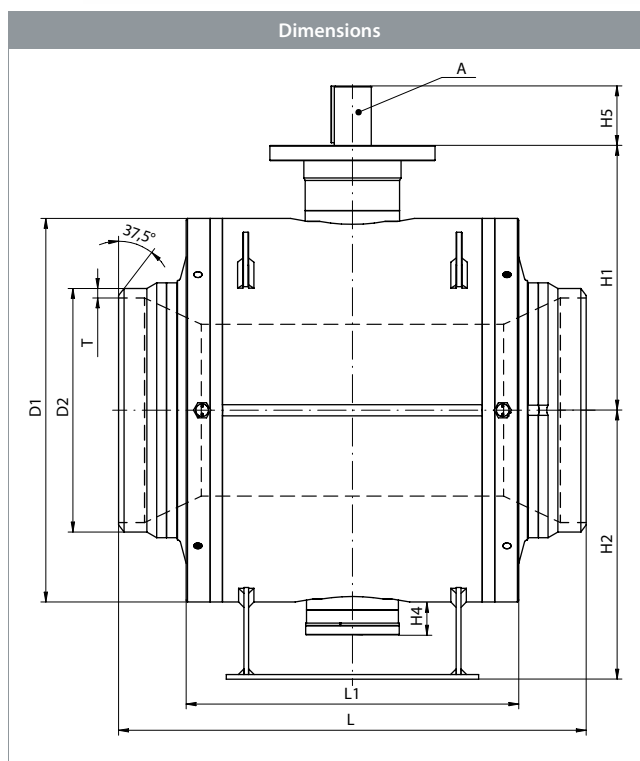
Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN400 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN400-1000 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.

Larger dimensions on request.



					All dimensions in mm	
DN	BROEN No.	Bore	Kvs	net Weight kg	L	L1
400	3/D400WW5D30	336	10443	583	838	475
500	3/D500WW5D30	386	14306	1230	991	562
600	3/D600WW5D30	488	22354	1985	1143	705
700	3/D700WW5D30	588	32188	3398	1345	819
800	3/D800WW5D30	684	43812	4900	1524	976
900	3/D900WW5D30	780	57223	6731	1727	1124
1000	3/D910WW5D30	874	72423	9052	1850	1214

Trunnion mounted valve - DN400-1000, PN40/25/16



Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN400-800	Columns.
		DN400	BROEN-Gear.
	-	DN500	
	-	DN600	
	-	DN700	
	-	DN800	
	-	DN400-1000	BROEN-Gear, Electric gear.
	-	DN400-1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.

All dimensions in mm

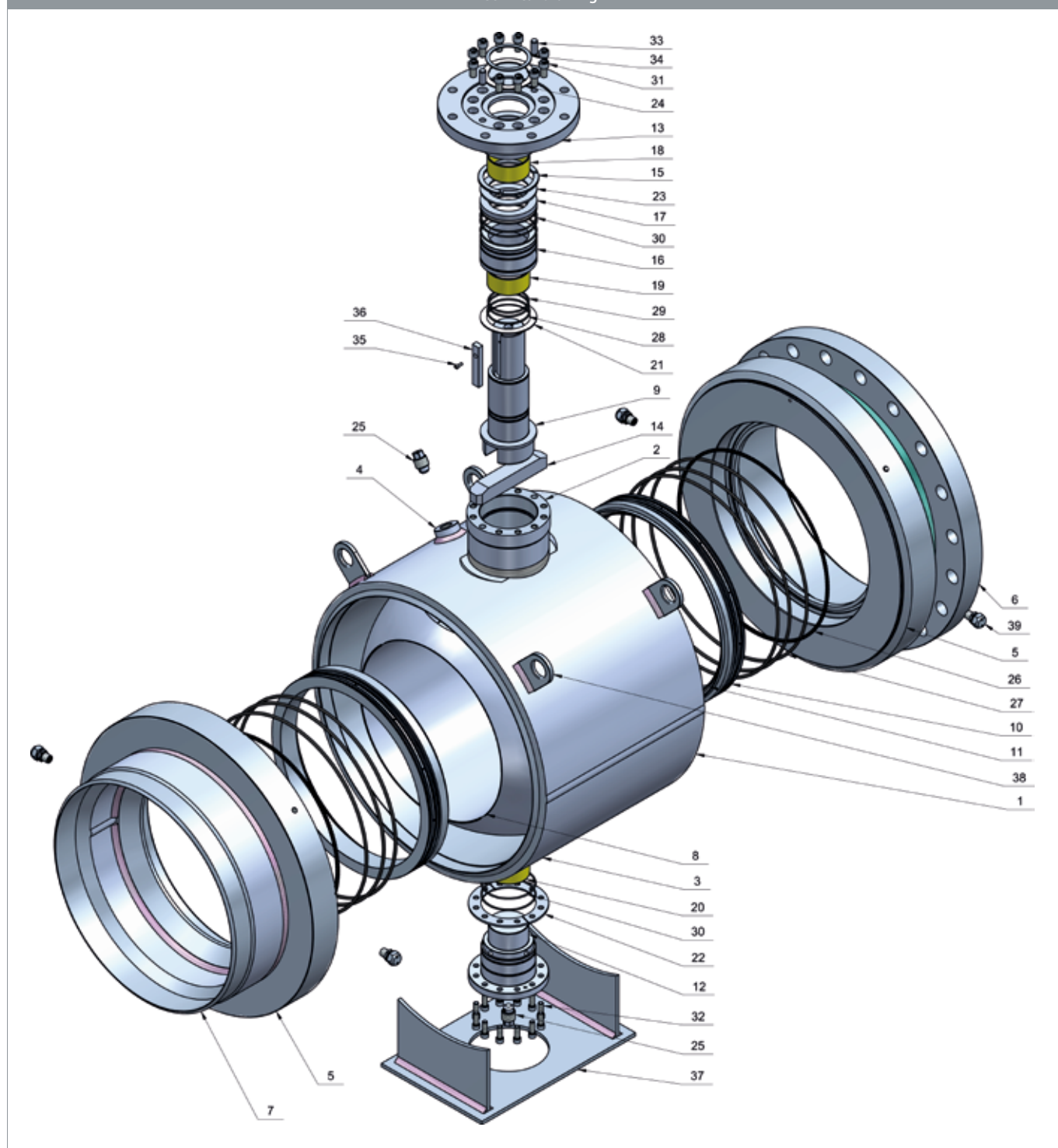
D1	D2	T	H1	H2	H4	H5	A	ISO
558	406.4	12.5	377.5	420.5	31.5	75 / 82	Ø60	F16
660	508.0	12.5	433.0	480.0	60.0	110	Ø72	F25
813	610.0	12.5	561.0	570.0	70.0	130	Ø80	F30
988	711.0	14.2	654.0	682.0	81.0	130	Ø100	F30
1126	813.0	16.0	806.0	790.0	109.0	200	Ø120	F35
1300	914.0	20.0	890.0	900.0	107.0	198	Ø120	F35
1450	1016.0	22.0	941.0	1000.0	117.0	183	Ø140	F40

Trunnion mounted valve - DN400-1000, PN40/25/16

Type 3/D... - Reduced bore



Technical drawing



Trunnion mounted valve - DN400-1000, PN40/25/16



Type 3/D... - Reduced bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Trunnion guide	Steel - P355NH / 1.0565 / EN 10028-3
4	Plug guide	Steel - P355NH / 1.0565 / EN 10028-3
5	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
6	Flange	Steel - P355NH / 1.0565 / EN 10028-3
7	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
8	Ball	ASTM A350 LF2
9	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
10	Seat	Steel - P355NH / 1.0565 / EN 10028-3
11	Seal	PTFE / PTFE+C (PTFE+C - 200°C)
12	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
13	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
14	Ball key	Steel - C45 / 1.0503 / EN 10277-2
15	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
16	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Packing	PTFE / PTFE+C
18	Bearing	CS + PTFE
19	Bearing	CS + PTFE
20	Bearing	CS + PTFE
21	Washer	PTFE+C
22	Washer	Steel - S235JR / 1.0038 / EN 10025-2
23	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
24	Washer	PTFE
25	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
26	Spring	Stainless steel - X10CrNi18-9 / AISI302 / 1.4310
27	O-ring	EPDM (AFLAS - 200°C)
28	O-ring	EPDM (AFLAS - 200°C)
29	O-ring	EPDM (AFLAS - 200°C)
30	O-ring	EPDM (AFLAS - 200°C)
31	Screw	Steel - 8.8
32	Screw	Steel - 8.8
33	Parallel pin	Steel - 8.8
34	Lock ring	Steel - 65G
35	Screw	Steel - 8.8
36	Key	Steel - C45 / 1.0503 / EN 10277-2
37	Base	Steel - S235JR / 1.0038 / EN 10025-2
38	Lifting eye	Steel - S235JR / 1.0038 / EN 10025-2
39	Lubrication fitting NPT	Steel - P355NH / 1.0565 / EN 10028-3

Trunnion mounted valve - DN200-350, PN40

Type 3/D... - Reduced bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN200 are trunnion mounted as standard.

Media

Water, gas, oil and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

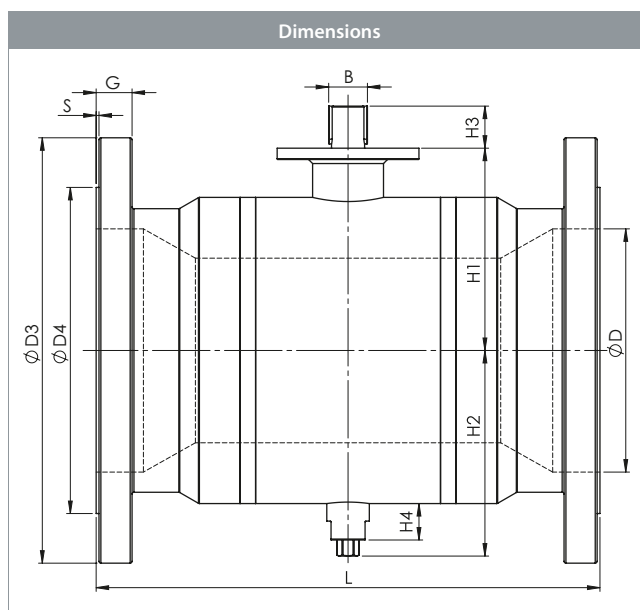
Eco-friendly protection finish against corrosion.

Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN200 are CE-marked. The 3.1 certificate is available upon request.

Notice

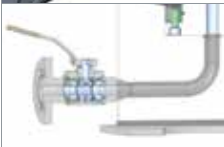
As standard DN200-350 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.



					All dimensions in mm
DN	BROEN No.	Bore	Kvs	net Weight kg	L
200	3/D200KK5D30	152.0	1800	120	457
250	3/D250KK5D30	201.5	3410	207	533
300	3/D300KK5D30	253.0	5101	336	610
350	3/D350KK5D30	304.0	7853	541	686

Trunnion mounted valve - DN200-350, PN40

Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN200-350	Columns.
	-	DN200-350	BROEN-Gear.
	-	DN200-350	BROEN-Gear, Electric gear.
	-	DN200-350	Lubrication fitting NPT.
	-	DN200-350	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN200-350	Base.

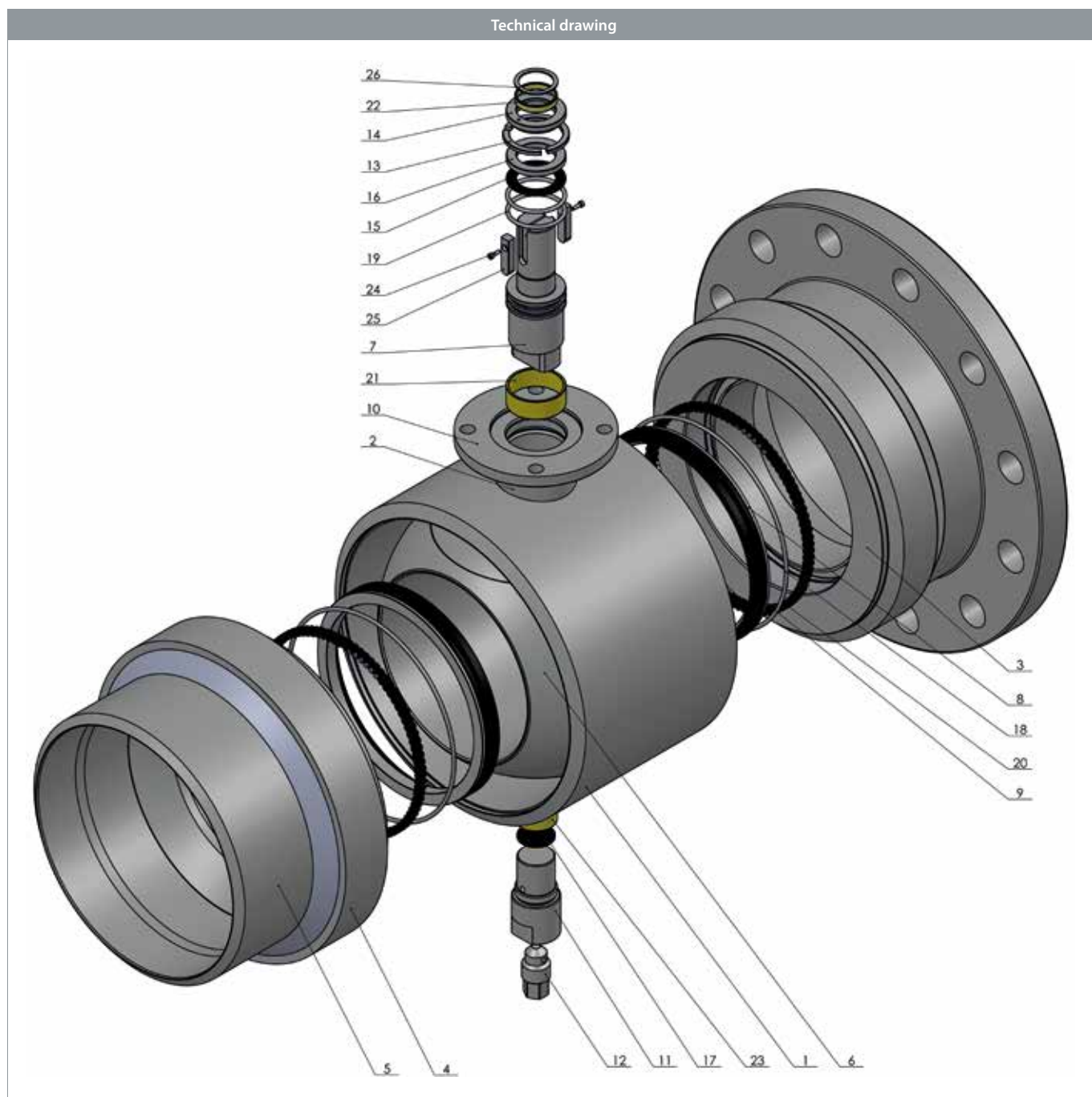
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H3	H4	A	ISO
273.0	375	285	34	3	214.0			37	SQ36	F14
323.9	450	345	38	3	252.5	202.0	40.0	37	SQ36	F14
406.4	515	410	42	4	315.0	360.0	44.8	75 / 82	SQ36 / Ø60	F16
508.0	580	465	46	4	355.5	400.0	34.2	82	Ø60	F16

Trunnion mounted valve - DN200-350, PN40

Type 3/D... - Reduced bore

Technical drawing



Trunnion mounted valve - DN200-350, PN40

Type 3/D... - Reduced bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
4	Flange	Steel - P355NH / 1.0565 / EN 10028-3
5	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
6	Ball	Steel - A350LF2 Class 1, EN coated
7	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
8	Seat	Steel - P355NH / 1.0565 / EN 10028-3
9	Seal	PTFE+C
10	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
11	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
12	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
13	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
14	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
15	Washer	PTFE+C
16	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Washer	PTFE+C
18	O-ring	EPDM
19	O-ring	EPDM
20	Spring	Stainless steel - X10CrNi18-8 / AISI302 / 1.4301
21	Bearing	CS + PTFE
22	Bearing	CS + PTFE
23	Bearing	CS + PTFE
24	Screw	Steel - 8.8
25	Key	Steel - C45 / 1.0503 / EN 10277-2
26	Lock ring	Steel - 65G

Trunnion mounted valve - DN400-1000, PN40

Type 3/D... - Reduced bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN400 are trunnion mounted as standard.

Media

Water, gas, oil and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

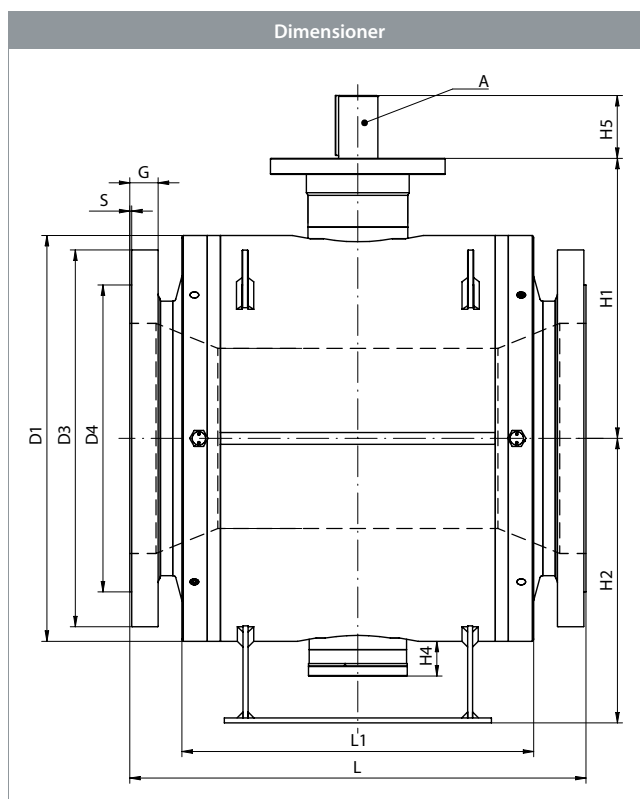
Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN400 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN400-1000 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.

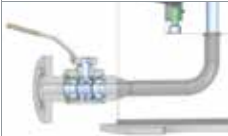
Larger dimensions on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm	
					L	L1
400	3/D400KK5D30	336	10443	731	762	475
500	3/D500KK5D30	386	14306	1485	914	565
600	3/D600KK5D30	488	22354	2566	1067	705
700	3/D700KK5D30	588	32188	3505	1245	819
800	3/D800KK5D30	684	43812	5044	1372	936
900	3/D900KK5D30	780	57223	6924	1524	1054
1000	3/D910KK5D30	874	72423	10584	2050	1214

Trunnion mounted valve - DN400-1000, PN40

Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN500-800	Columns.
	-	DN500	BROEN-Gear.
	-	DN600	
	-	DN700	
	-	DN800	
	-	DN500-1000	BROEN-Gear, Electric gear.
	-	DN500-1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.

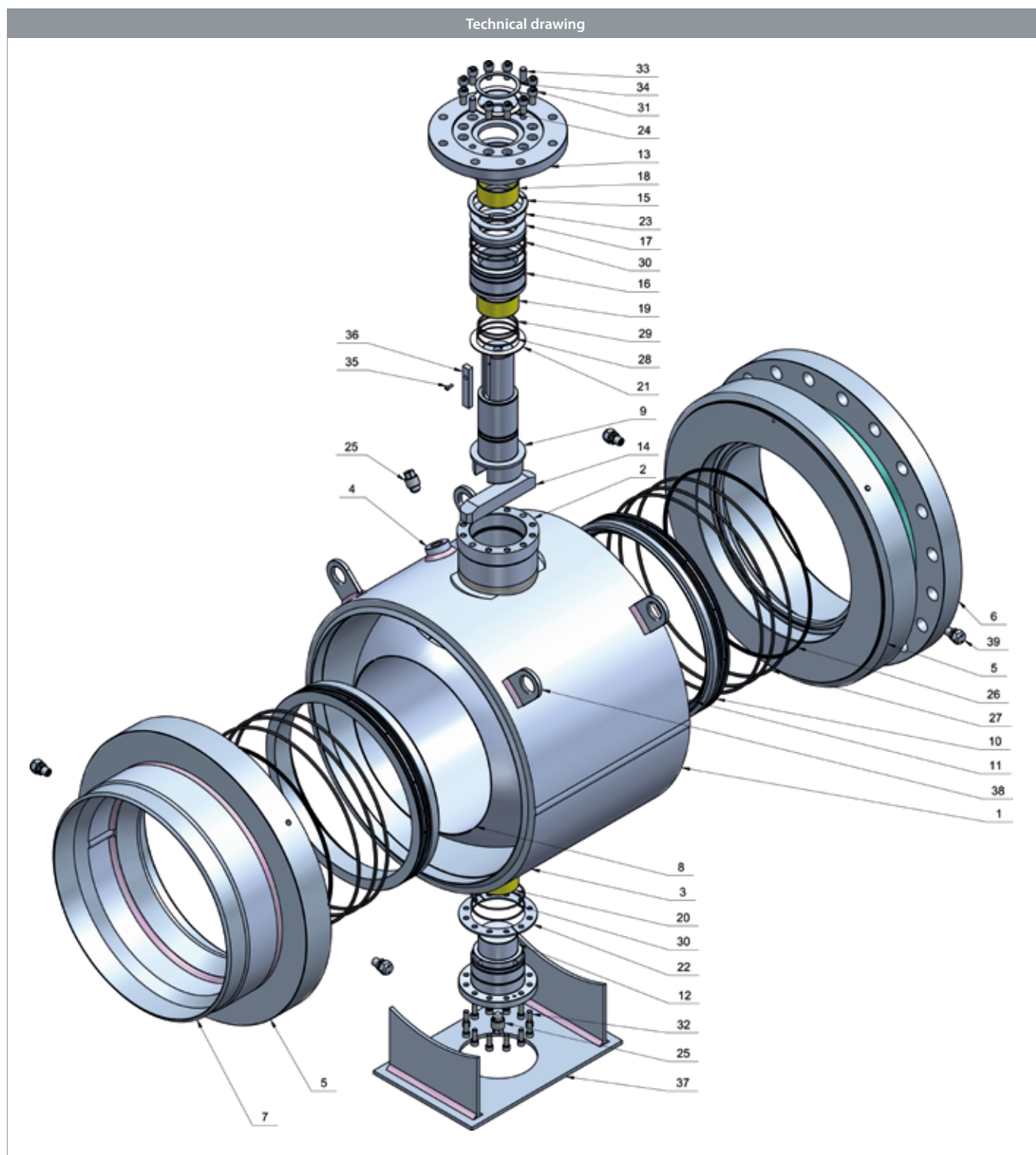
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
558	660	535	50	4	377.5	420.5	31.5	75 / 82	Ø60	F16
660	755	615	57	4	433.0	480.0	60.0	110	Ø72	F25
813	890	735	72	5	561.0	570.0	70.0	130	Ø80	F30
988	995	840	86	5	654.0	682.0	81.0	130	Ø100	F30
1126	1140	960	90	5	806.0	790.0	109.0	200	Ø120	F35
1300	1250	1070	95	5	890.0	900.0	107.0	198	Ø120	F35
1450	1360	1180	100	5	941.0	1000.0	117.0	183	Ø140	F40

Trunnion mounted valve - DN400-1000, PN40

Type 3/D... - Reduced bore

Technical drawing



Trunnion mounted valve - DN400-1000, PN40

Type 3/D... - Reduced bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Trunnion guide	Steel - P355NH / 1.0565 / EN 10028-3
4	Plug guide	Steel - P355NH / 1.0565 / EN 10028-3
5	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
6	Flange	Steel - P355NH / 1.0565 / EN 10028-3
7	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
8	Ball	ASTM A350 LF2
9	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
10	Seat	Steel - P355NH / 1.0565 / EN 10028-3
11	Seal	PTFE / PTFE+C (PTFE+C - 200°C)
12	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
13	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
14	Ball key	Steel - C45 / 1.0503 / EN 10277-2
15	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
16	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Packing	PTFE / PTFE+C
18	Bearing	CS + PTFE
19	Bearing	CS + PTFE
20	Bearing	CS + PTFE
21	Washer	PTFE+C
22	Washer	Steel - S235JR / 1.0038 / EN 10025-2
23	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
24	Washer	PTFE
25	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
26	Spring	Stainless steel - X10CrNi18-9 / AISI302 / 1.4310
27	O-ring	EPDM (AFLAS - 200°C)
28	O-ring	EPDM (AFLAS - 200°C)
29	O-ring	EPDM (AFLAS - 200°C)
30	O-ring	EPDM (AFLAS - 200°C)
31	Screw	Steel - 8.8
32	Screw	Steel - 8.8
33	Parallel pin	Steel - 8.8
34	Lock ring	Steel - 65G
35	Screw	Steel - 8.8
36	Key	Steel - C45 / 1.0503 / EN 10277-2
37	Base	Steel - S235JR / 1.0038 / EN 10025-2
38	Lifting eye	Steel - S235JR / 1.0038 / EN 10025-2
39	Lubrication fitting NPT	Steel - P355NH / 1.0565 / EN 10028-3

Trunnion mounted valve - DN200-350, PN25

Type 3/D... - Reduced bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN200 are trunnion mounted as standard.

Media

Water, gas, oil and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

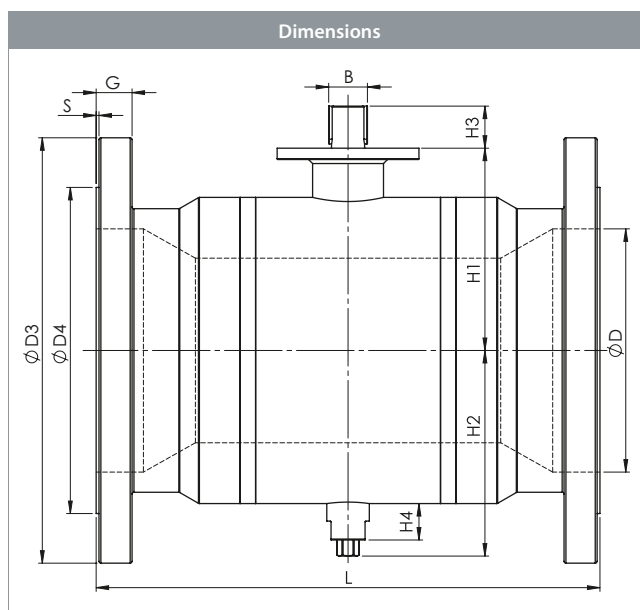
Eco-friendly protection finish against corrosion.

Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN200 are CE-marked. The 3.1 certificate is available upon request.

Notice

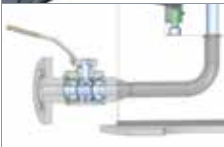
As standard DN200-350 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm
					L
200	3/D200KK4D30	152.0	1800	115	457
250	3/D250KK4D30	201.5	3410	195	533
300	3/D300KK4D30	253.0	5101	312	610
350	3/D350KK4D30	304.0	7853	512	686

Trunnion mounted valve - DN200-350, PN25

Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN200-350	Columns.
	-	DN200-350	BROEN-Gear.
	-	DN200-350	BROEN-Gear, Electric gear.
	-	DN200-350	Lubrication fitting NPT.
	-	DN200-350	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN200-350	Base.

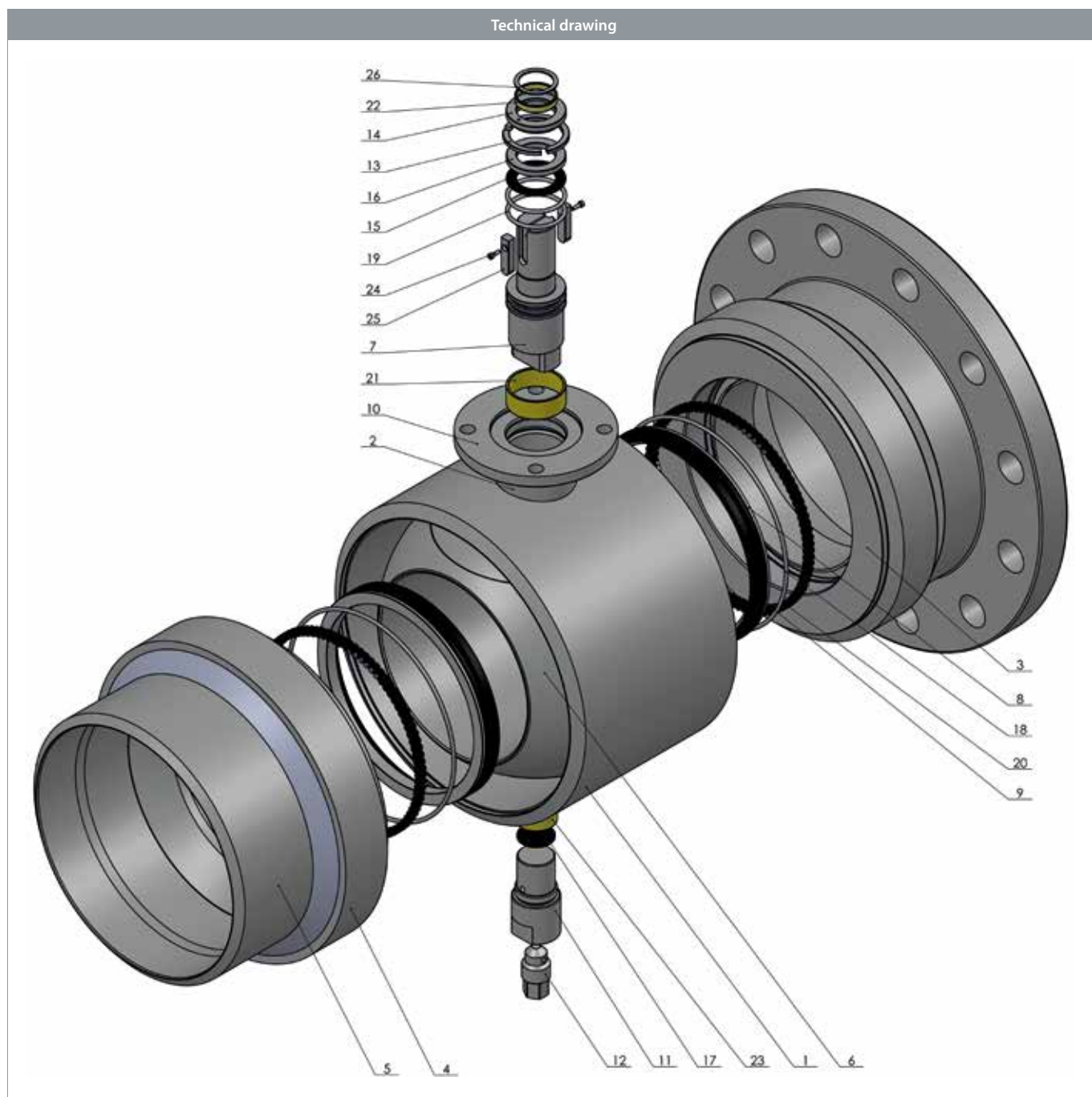
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H3	H4	A	ISO
273.0	360	278	34	3	214.0			37	SQ36	F14
323.9	425	335	32	3	252.5	202.0	40.0	37	SQ36	F14
406.4	485	395	34	4	315.0	360.0	44.8	75 / 82	SQ36 / Ø60	F16
508.0	555	450	38	4	355.5	400.0	34.2	75 / 82	SQ36 / Ø60	F16

Trunnion mounted valve - DN200-350, PN25

Type 3/D... - Reduced bore

Technical drawing



Trunnion mounted valve - DN200-350, PN25

Type 3/D... - Reduced bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
4	Flange	Steel - P355NH / 1.0565 / EN 10028-3
5	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
6	Ball	Steel - A350LF2 Class 1, EN coated
7	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
8	Seat	Steel - P355NH / 1.0565 / EN 10028-3
9	Seal	PTFE+C
10	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
11	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
12	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
13	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
14	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
15	Washer	PTFE+C
16	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Washer	PTFE+C
18	O-ring	EPDM
19	O-ring	EPDM
20	Spring	Stainless steel - X10CrNi18-8 / AISI302 / 1.4301
21	Bearing	CS + PTFE
22	Bearing	CS + PTFE
23	Bearing	CS + PTFE
24	Screw	Steel - 8.8
25	Key	Steel - C45 / 1.0503 / EN 10277-2
26	Lock ring	Steel - 65G

Trunnion mounted valve - DN400-1000, PN25

Type 3/D... - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN400 are trunnion mounted as standard.

Media

Water, gas, oil and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

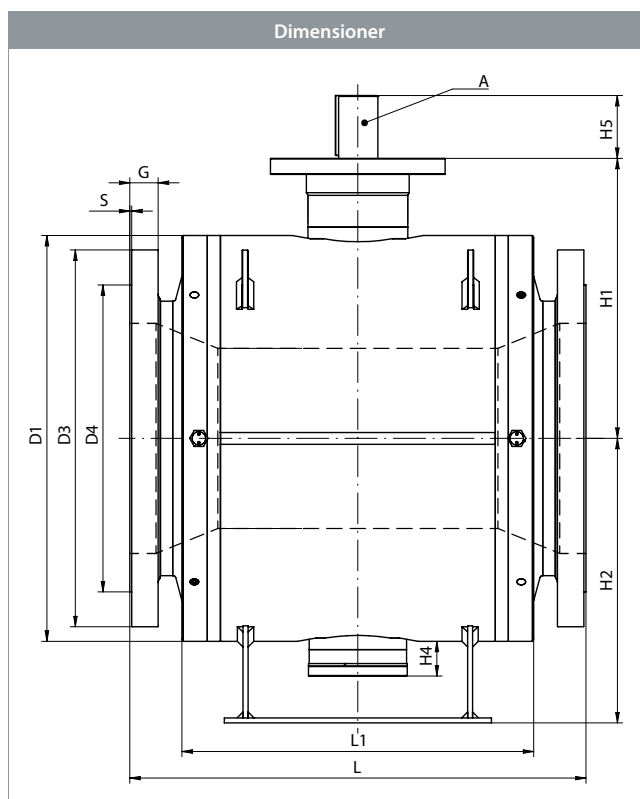
Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN400 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN400-1000 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.

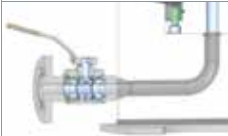
Larger dimensions on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm	
					L	L1
400	3/D400KK4D30	336	10443	679	762	491
500	3/D500KK4D30	386	14306	1422	914	565
600	3/D600KK4D30	488	22354	2380	1067	705
700	3/D700KK4D30	588	32188	3299	1245	819
800	3/D800KK4D30	684	43812	4757	1372	976
900	3/D900KK4D30	780	57223	7232	1524	1138
1000	3/D910KK4D30	874	72423	10012	2050	1214

Trunnion mounted valve - DN400-1000, PN25

Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN400-800	Columns.
		DN400	BROEN-Gear.
	-	DN500	
	-	DN600	
	-	DN700	
	-	DN800	
	-	DN400-1000	BROEN-Gear, Electric gear.
	-	DN400-1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.

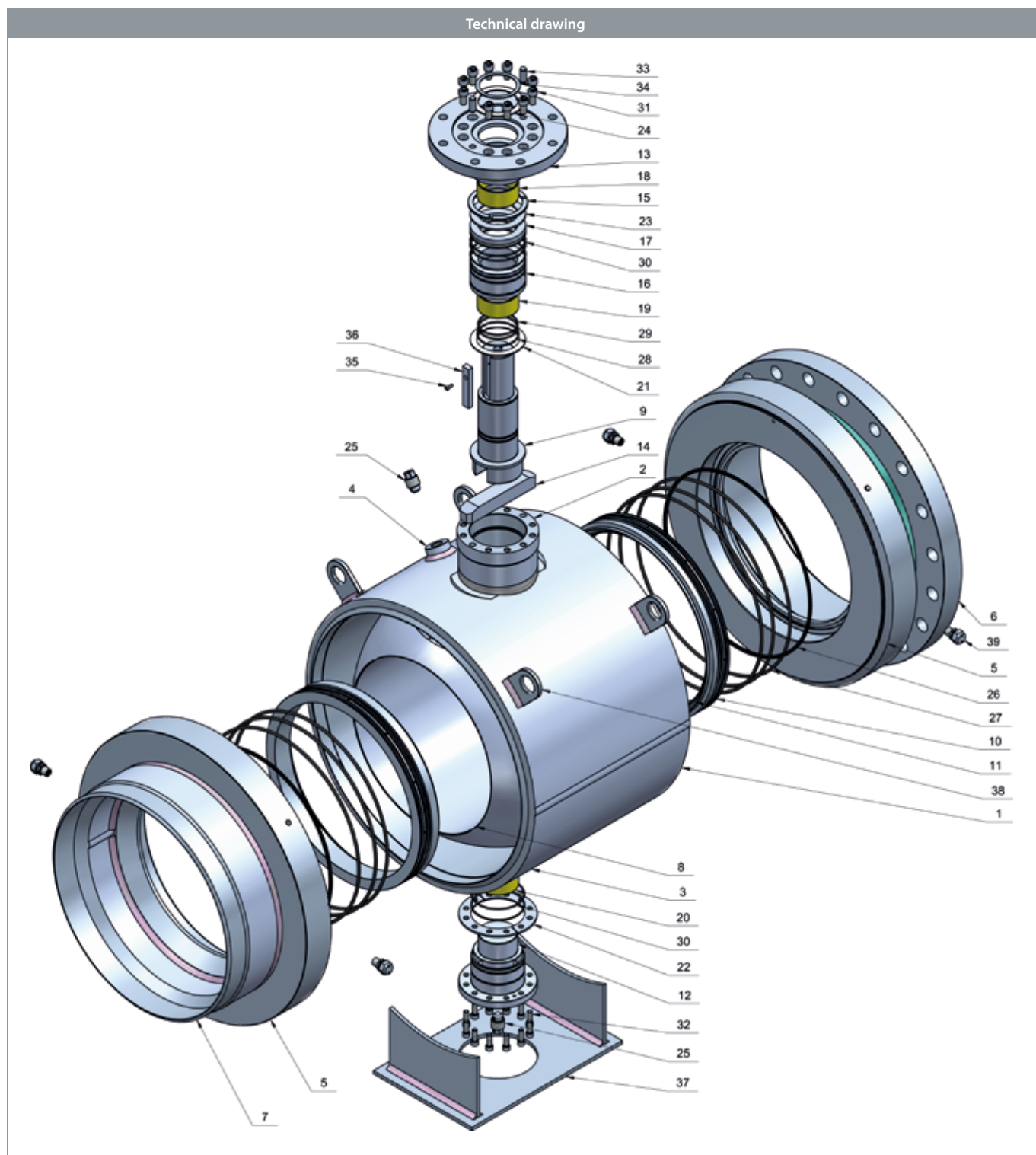
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
558	620	505	40	4	377.5	420.5	31.5	75 / 82	Ø60	F16
660	730	615	48	4	433.0	480.0	60.0	110	Ø72	F25
813	845	720	48	5	561.0	570.0	70.0	130	Ø80	F30
988	960	820	50	5	654.0	682.0	81.0	130	Ø100	F30
1126	1085	930	53	5	806.0	790.0	109.0	200	Ø120	F35
1300	1185	1030	53	5	890.0	900.0	107.0	198	Ø120	F35
1450	1320	1140	63	5	941.0	1000.0	117.0	183	Ø140	F40

Trunnion mounted valve - DN400-1000, PN25

Type 3/D... - Reduced bore

Technical drawing



Trunnion mounted valve - DN400-1000, PN25

Type 3/D... - Reduced bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Trunnion guide	Steel - P355NH / 1.0565 / EN 10028-3
4	Plug guide	Steel - P355NH / 1.0565 / EN 10028-3
5	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
6	Flange	Steel - P355NH / 1.0565 / EN 10028-3
7	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
8	Ball	ASTM A350 LF2
9	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
10	Seat	Steel - P355NH / 1.0565 / EN 10028-3
11	Seal	PTFE / PTFE+C (PTFE+C - 200°C)
12	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
13	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
14	Ball key	Steel - C45 / 1.0503 / EN 10277-2
15	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
16	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Packing	PTFE / PTFE+C
18	Bearing	CS + PTFE
19	Bearing	CS + PTFE
20	Bearing	CS + PTFE
21	Washer	PTFE+C
22	Washer	Steel - S235JR / 1.0038 / EN 10025-2
23	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
24	Washer	PTFE
25	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
26	Spring	Stainless steel - X10CrNi18-9 / AISI302 / 1.4310
27	O-ring	EPDM (AFLAS - 200°C)
28	O-ring	EPDM (AFLAS - 200°C)
29	O-ring	EPDM (AFLAS - 200°C)
30	O-ring	EPDM (AFLAS - 200°C)
31	Screw	Steel - 8.8
32	Screw	Steel - 8.8
33	Parallel pin	Steel - 8.8
34	Lock ring	Steel - 65G
35	Screw	Steel - 8.8
36	Key	Steel - C45 / 1.0503 / EN 10277-2
37	Base	Steel - S235JR / 1.0038 / EN 10025-2
38	Lifting eye	Steel - S235JR / 1.0038 / EN 10025-2
39	Lubrication fitting NPT	Steel - P355NH / 1.0565 / EN 10028-3

Trunnion mounted valve - DN200-350, PN16

Type 3/D... - Reduced bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN200 are trunnion mounted as standard.

Media

Water, gas, oil and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

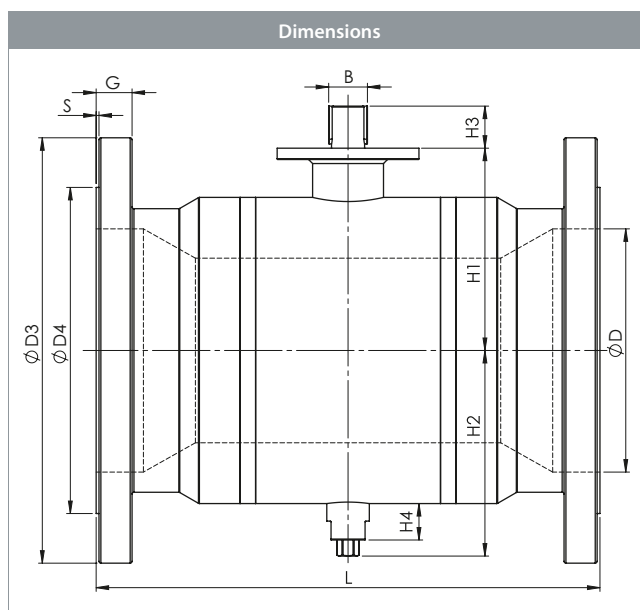
Eco-friendly protection finish against corrosion.

Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN200 are CE-marked. The 3.1 certificate is available upon request.

Notice

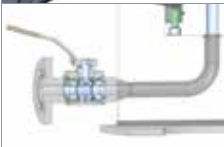
As standard DN200-350 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.



					All dimensions in mm
DN	BROEN No.	Bore	Kvs	net Weight kg	L
200	3/D200KK3D30	152.0	1800	111	457
250	3/D250KK3D30	201.5	3410	185	533
300	3/D300KK3D30	253.0	5101	299	610
350	3/D350KK3D30	304.0	7853	486	686

Trunnion mounted valve - DN200-350, PN16

Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN200-350	Columns.
	-	DN200-350	BROEN-Gear.
	-	DN200-350	BROEN-Gear, Electric gear.
	-	DN200-350	Lubrication fitting NPT.
	-	DN200-350	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN200-350	Base.

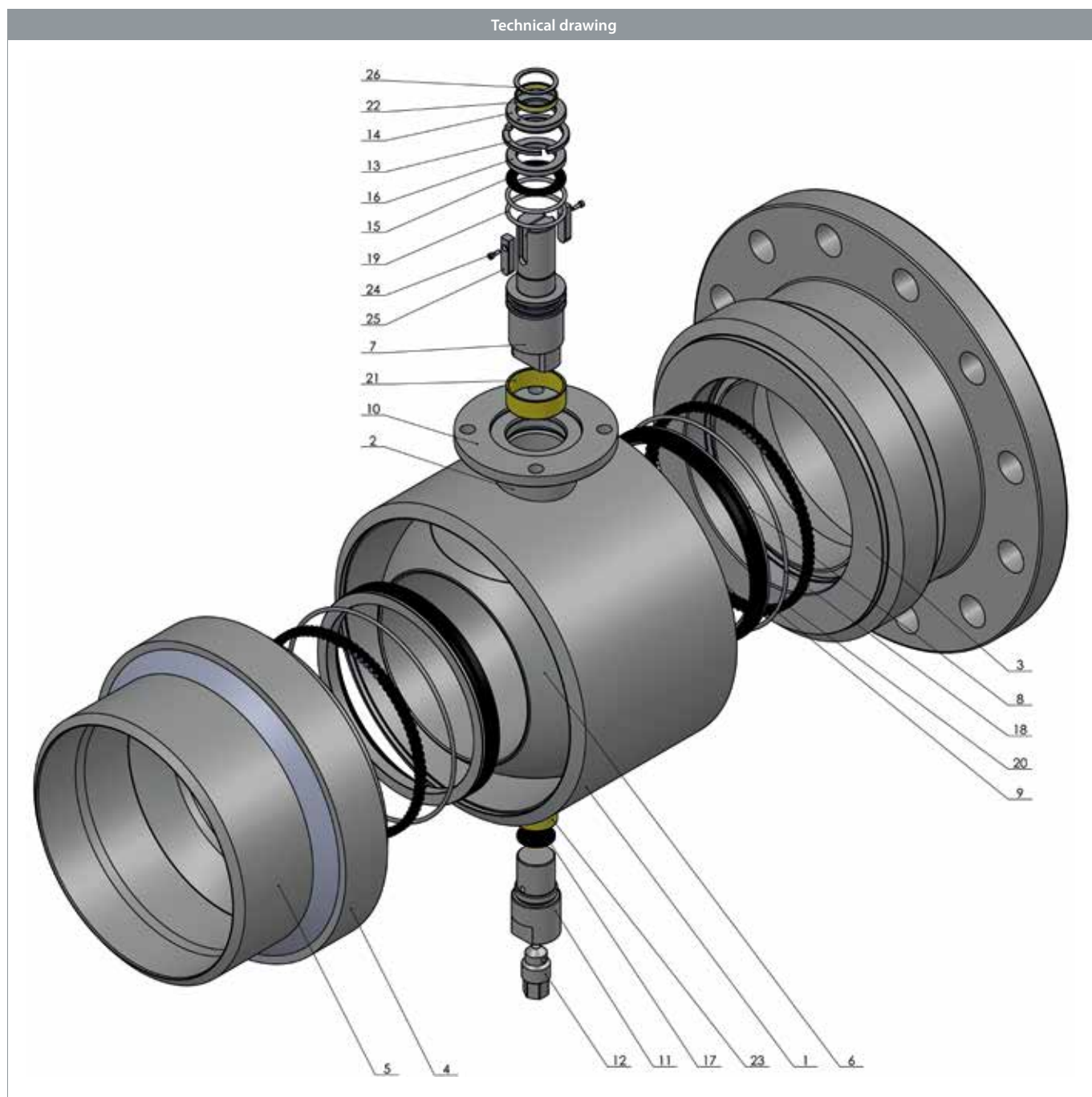
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H3	H4	A	ISO
273.0	340	268	24	3	214.0			37	SQ36	F14
323.9	405	320	26	3	252.5	202.0	40.0	37	SQ36	F14
406.4	460	378	28	4	315.0	360.0	44.8	75 / 82	SQ36 / Ø60	F16
508.0	520	438	30	4	355.5	400.0	34.2	75 / 82	SQ36 / Ø60	F16

Trunnion mounted valve - DN200-350, PN16

Type 3/D... - Reduced bore

Technical drawing



Trunnion mounted valve - DN200-350, PN16

Type 3/D... - Reduced bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
4	Flange	Steel - P355NH / 1.0565 / EN 10028-3
5	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
6	Ball	Steel - A350LF2 Class 1, EN coated
7	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
8	Seat	Steel - P355NH / 1.0565 / EN 10028-3
9	Seal	PTFE+C
10	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
11	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
12	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
13	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
14	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
15	Washer	PTFE+C
16	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Washer	PTFE+C
18	O-ring	EPDM
19	O-ring	EPDM
20	Spring	Stainless steel - X10CrNi18-8 / AISI302 / 1.4301
21	Bearing	CS + PTFE
22	Bearing	CS + PTFE
23	Bearing	CS + PTFE
24	Screw	Steel - 8.8
25	Key	Steel - C45 / 1.0503 / EN 10277-2
26	Lock ring	Steel - 65G

Trunnion mounted valve - DN400-1000, PN16

Type 3/D... - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

Stop valve for heating systems, district heating, cooling and industrial purposes. In order to achieve lowest possible torque all valves bigger than DN400 are trunnion mounted as standard.

Media

Water, gas, oil and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

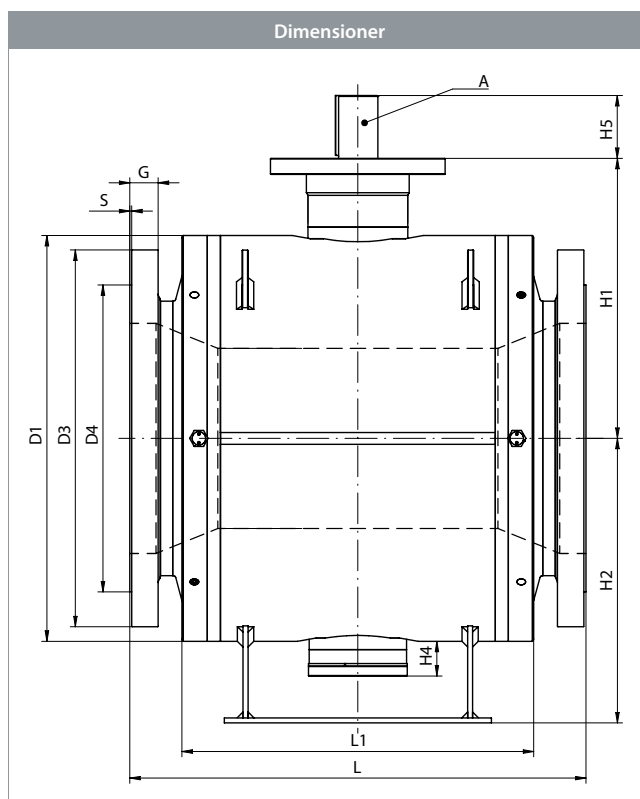
Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN400 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN400-1000 is delivered with Double Block and Bleed (DBB) with normal temperature range up to 150°. Temperature range up to 200° on request. We recommend to add a BROEN-Gear.

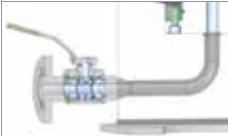
Larger dimensions on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm	
					L	L1
400	3/D400KK3D30	336	10443	644	762	491
500	3/D500KK3D30	386	14306	1396	914	565
600	3/D600KK3D30	488	22354	2355	1067	705
700	3/D700KK3D30	588	32188	3217	1245	819
800	3/D800KK3D30	684	43812	4652	1372	936
900	3/D900KK3D30	780	57223	6212	1524	1054
1000	3/D910KK3D30	874	72423	9822	2050	1214

Trunnion mounted valve - DN400-1000, PN16

Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN400-800	Columns.
		DN400	BROEN-Gear.
	-	DN500	
	-	DN600	
	-	DN700	
	-	DN800	
	-	DN400-1000	BROEN-Gear, Electric gear.
	-	DN400-1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.

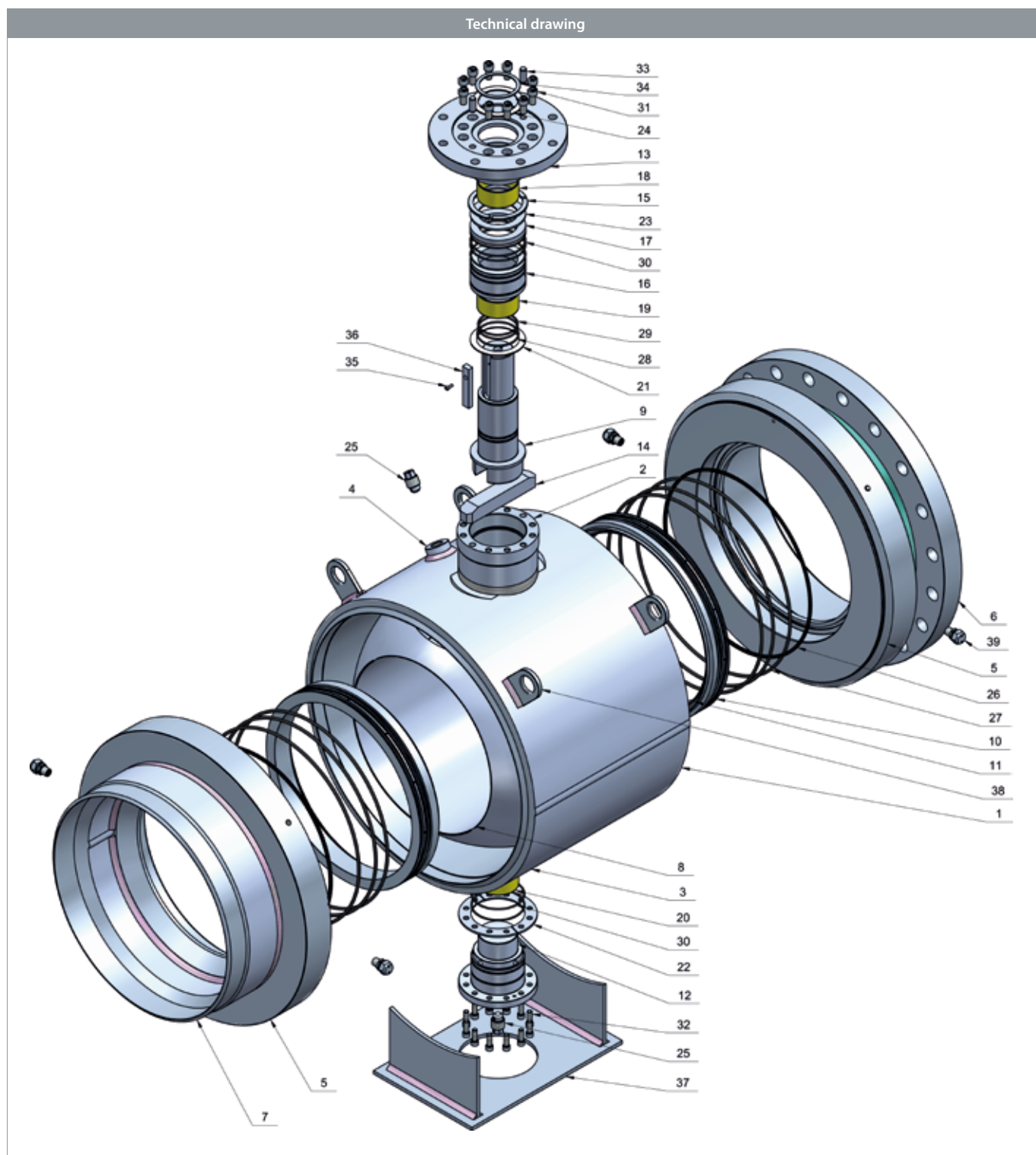
All dimensions in mm

D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
558	580	490	32	4	377.5	420.5	31.5	75 / 82	Ø60	F16
660	715	610	36	4	433.0	480.0	60	110	Ø72	F25
813	840	725	40	5	561.0	570.0	70	130	Ø80	F30
988	910	795	40	5	654.0	682.0	81	130	Ø100	F30
1126	1025	900	41	5	806.0	790.0	109	200	Ø120	F35
1300	1125	1000	48	5	890.0	900.0	107	198	Ø120	F35
1450	1255	1115	59	5	941.0	1000.0	117	183	Ø140	F40

Trunnion mounted valve - DN400-1000, PN16

Type 3/D... - Reduced bore

Technical drawing



Trunnion mounted valve - DN400-1000, PN16

Type 3/D... - Reduced bore

Material description		
1	Valve body	Steel - P355NH / 1.0565 / EN 10028-3
2	Stem guide	Steel - P355NH / 1.0565 / EN 10028-3
3	Trunnion guide	Steel - P355NH / 1.0565 / EN 10028-3
4	Plug guide	Steel - P355NH / 1.0565 / EN 10028-3
5	Inner part	Steel - P355NH / 1.0565 / EN 10028-3
6	Flange	Steel - P355NH / 1.0565 / EN 10028-3
7	Pipe	Steel - P355NH / 1.0565 / EN 10028-3
8	Ball	ASTM A350 LF2
9	Stem	Stainless steel - X20Cr13 / AISI420 / 1.4021
10	Seat	Steel - P355NH / 1.0565 / EN 10028-3
11	Seal	PTFE / PTFE+C (PTFE+C - 200°C)
12	Trunnion	Steel - P355NH / 1.0565 / EN 10028-3
13	ISO-flange	Steel - S235JR / 1.0038 / EN 10025-2
14	Ball key	Steel - C45 / 1.0503 / EN 10277-2
15	Split ring	Stainless steel - X20Cr13 / AISI420 / 1.4021
16	Sleeve	Stainless steel - X20Cr13 / AISI420 / 1.4021
17	Packing	PTFE / PTFE+C
18	Bearing	CS + PTFE
19	Bearing	CS + PTFE
20	Bearing	CS + PTFE
21	Washer	PTFE+C
22	Washer	Steel - S235JR / 1.0038 / EN 10025-2
23	Washer	Stainless steel - X20Cr13 / AISI420 / 1.4021
24	Washer	PTFE
25	Plug	Stainless steel - X20Cr13 / AISI420 / 1.4021
26	Spring	Stainless steel - X10CrNi18-9 / AISI302 / 1.4310
27	O-ring	EPDM (AFLAS - 200°C)
28	O-ring	EPDM (AFLAS - 200°C)
29	O-ring	EPDM (AFLAS - 200°C)
30	O-ring	EPDM (AFLAS - 200°C)
31	Screw	Steel - 8.8
32	Screw	Steel - 8.8
33	Parallel pin	Steel - 8.8
34	Lock ring	Steel - 65G
35	Screw	Steel - 8.8
36	Key	Steel - C45 / 1.0503 / EN 10277-2
37	Base	Steel - S235JR / 1.0038 / EN 10025-2
38	Lifting eye	Steel - S235JR / 1.0038 / EN 10025-2
39	Lubrication fitting NPT	Steel - P355NH / 1.0565 / EN 10028-3

Columns - DN250-800

Type - Reduced bore

Columns

The columns are the extension of the stem thereby allowing control of the fittings installed in underground systems or places requiring control from a strictly set height. In addition to the standard height columns, BROEN also recommends the rigid columns, the telescope columns with a regulated height and columns made to the individual order of the customer according to predefined parameters. A lever, planetary gear or any type of drive (electric, pneumatic, hydraulic etc.) installed at the top of the column could be an element enabling control of the valve. The type of the valve control (lever, planetary gear) and the height of the column measuring from the valve axis to the top part of the column (size "A") should be stated in the order.

BROEN-Gear - DN250-800

Type 3-TPA... - Reduced bore

BROEN-Gear

Hand-operated gearbox.

BROEN-Gear - supports control of the fittings when the high opening torque of the valve prevents the use of a lever.

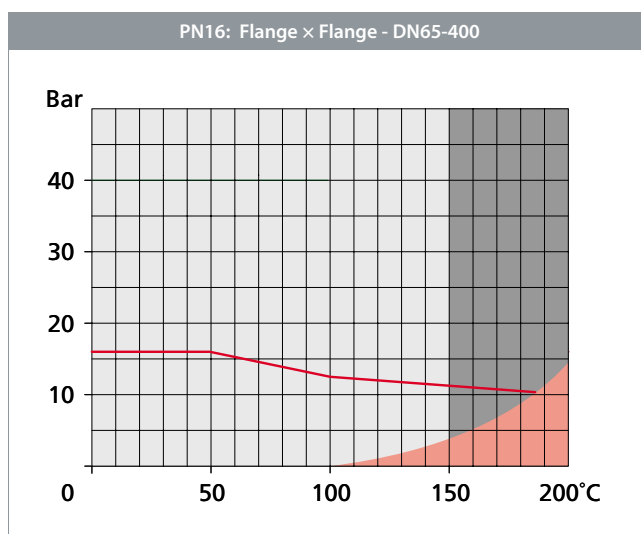
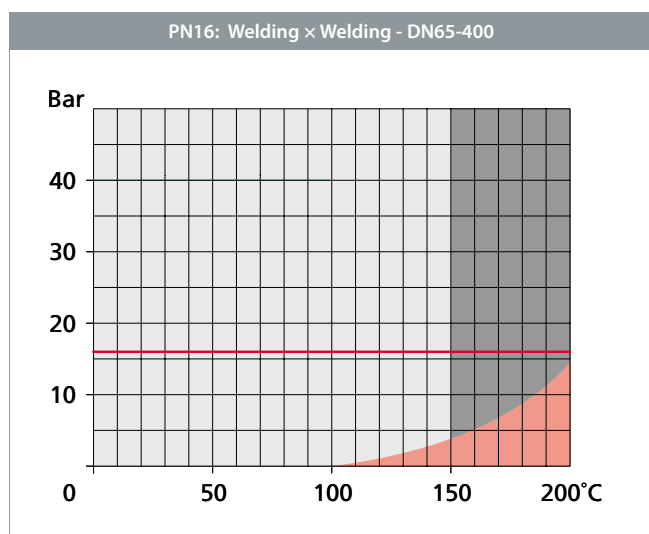
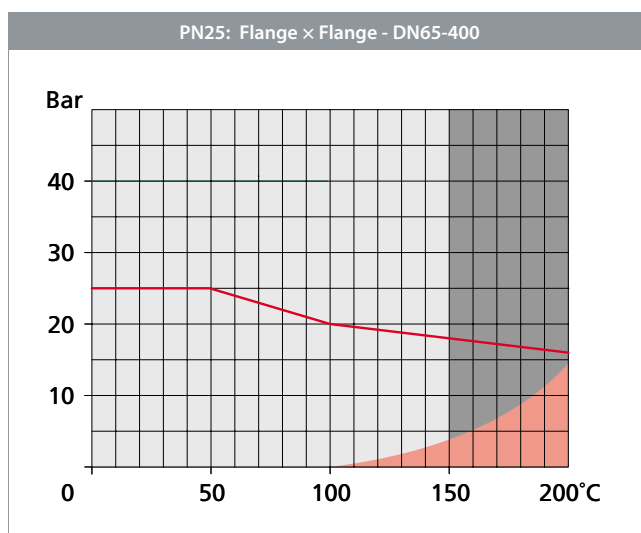
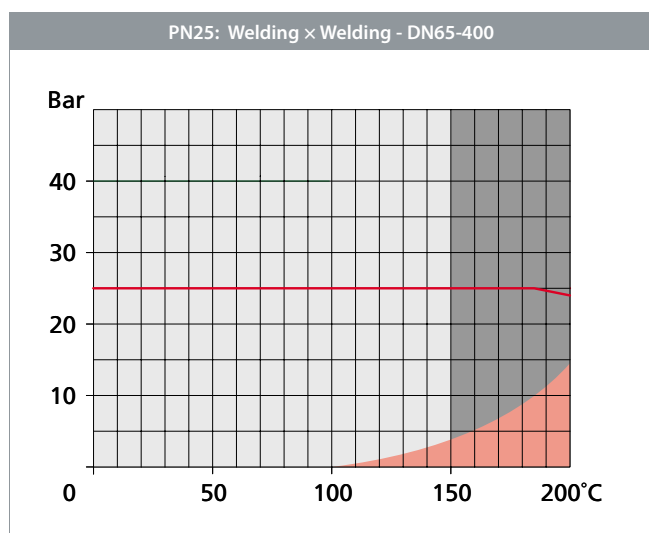
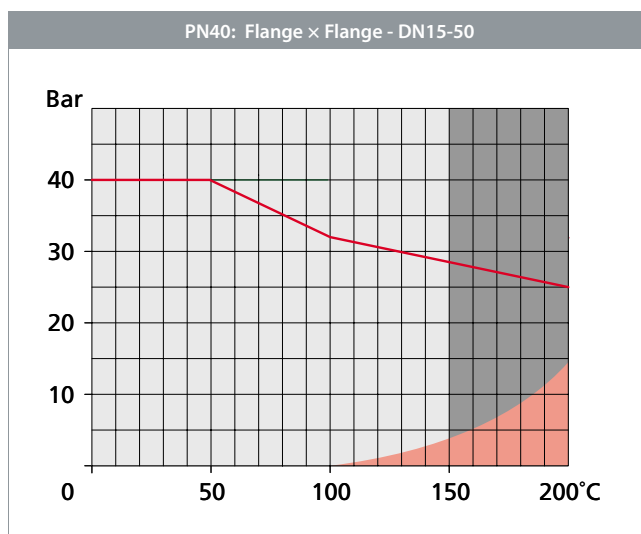
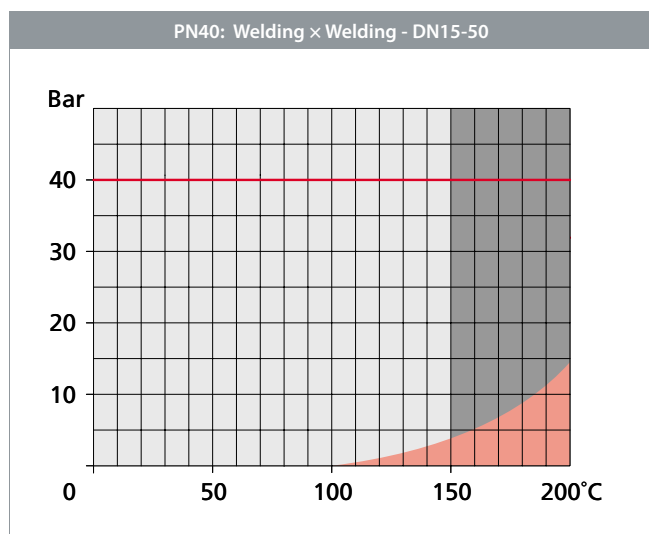
The gear is used for manual control of the fittings between the OPEN - CLOSED end positions (30° rotation angle), substantially reducing the force required for its operation. The end positions are enforced by stops that are adjusted during the installation of the gear on the fittings and then protected against regulation.



DN	BROEN No.	PN
250-300	3-TPA023	40
350-400	3-TPA025	40
500-600	3-TPA035	40
700	3-TPA064	40
800	3-TPA065	40
250-400	3-TPA023	25
500	3-TPA031	25
600	3-TPA035	25
700	3-TPA067	25
800	3-TPA064	25
250-400	3-TPA023	16
500	3-TPA031	16
600	3-TPA035	16
700	3-TPA067	16
800	3-TPA064	16

Pressure and temperature graph - DN250-1000 - PN40/25/16

Reduced bore



Pressure drop graph - DN250-1000

Reduced bore

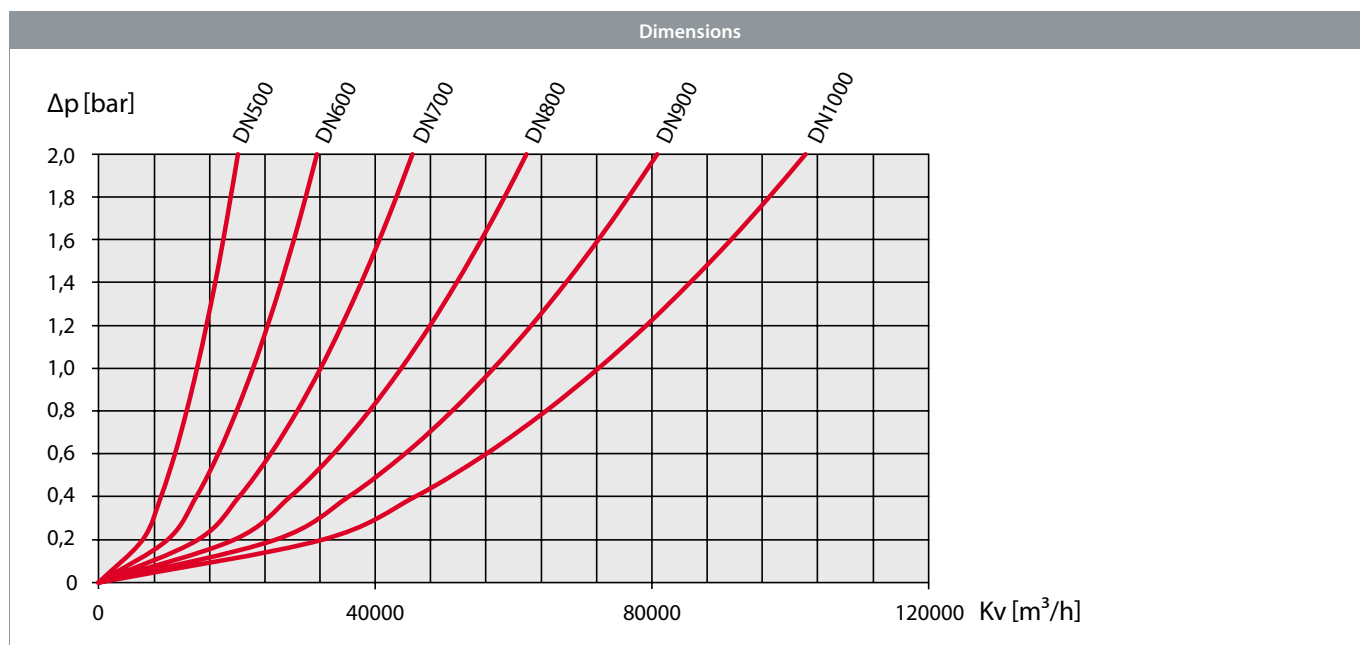
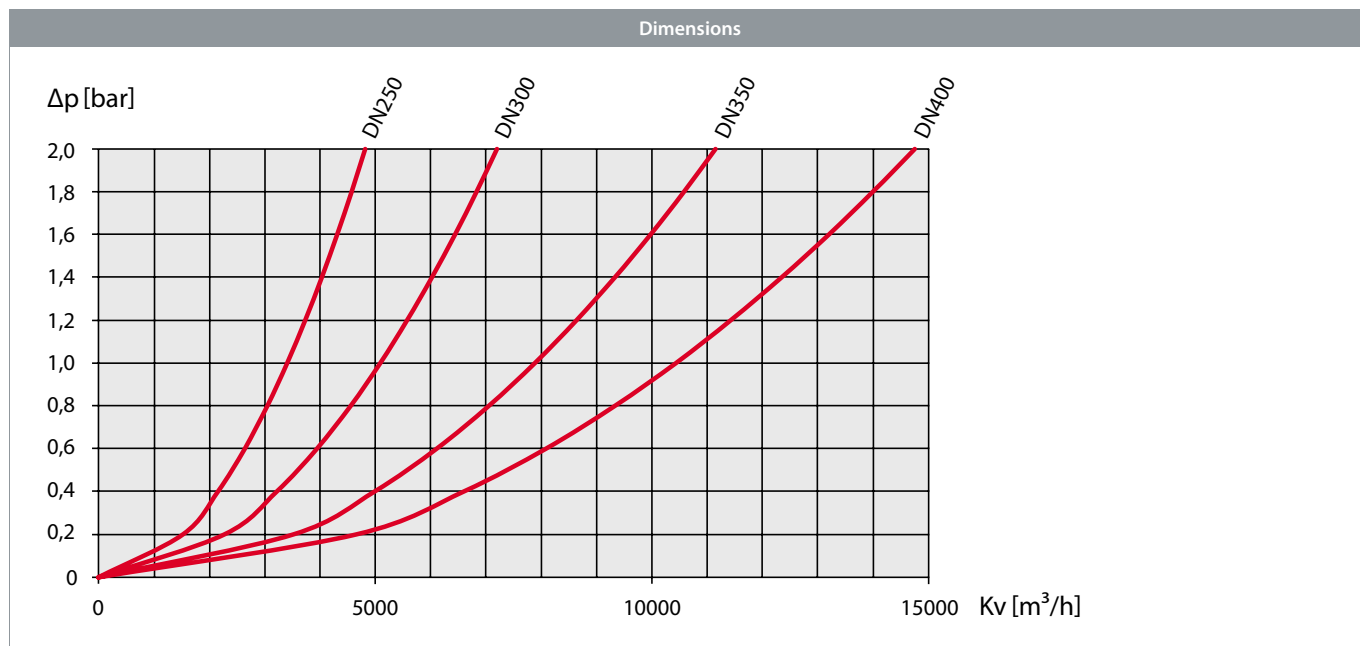
Pressure drop graph

Ball valve in fully open position.

Medium: water density in 1000 kg/m³

Definitions

Kvs: M³ water per hour at pressure drop 1 bar.



DN	250	300	350	400	500	600	700	800	900	1000
Kvs	3410	5101	7853	10443	14306	22354	32188	43812	57223	72423

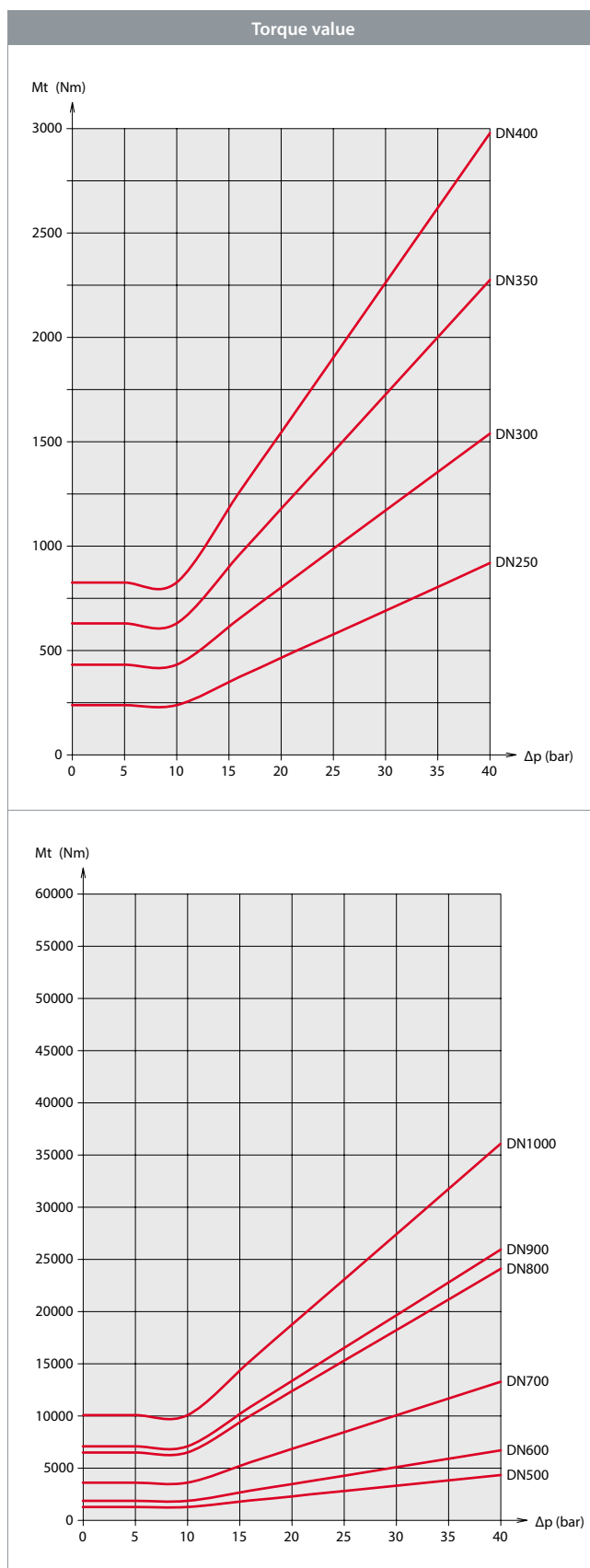
Operating torque - DN250-1000, PN40/25/16

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.



Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 7

Flexible main stop valves

Full bore

Flexible main stop valve - DN15-20, PN25

Type 69600 - Full bore

Female x Female

Flexible main stop valve.

Materials

Fully welded ball valve with weldign ends.

Applications

Heating systems and district heating.

Surface treatment

Eco-friendly protection finish against corrosion.

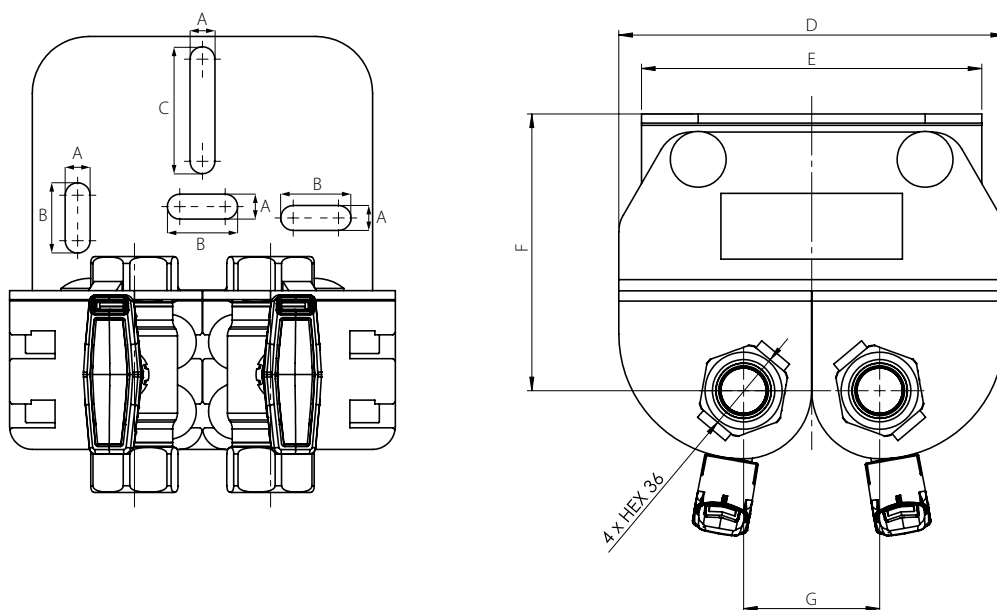
Notice

Delivered with insulation shells as standard. DN25 on request.

Fits both twinpipe and singlepipe.



Dimensions



		All dimensions in mm							
DN	BROEN No.	A	B	C	RG	D	E	F	G
15	69600015 025I	11	31	56	1/2"	170	150	122-143	60-225
20	69600020 025I	11	31	56	3/4"	170	150	122-143	60-225

Flexible main stop valve - DN15-20, PN25

Type 69601 - Full bore

Welding × Female

Flexible main stop valve.

Materials

Fully welded ball valve with weldign ends.

Applications

Heating systems and district heating.

Surface treatment

Eco-friendly protection finish against corrosion.

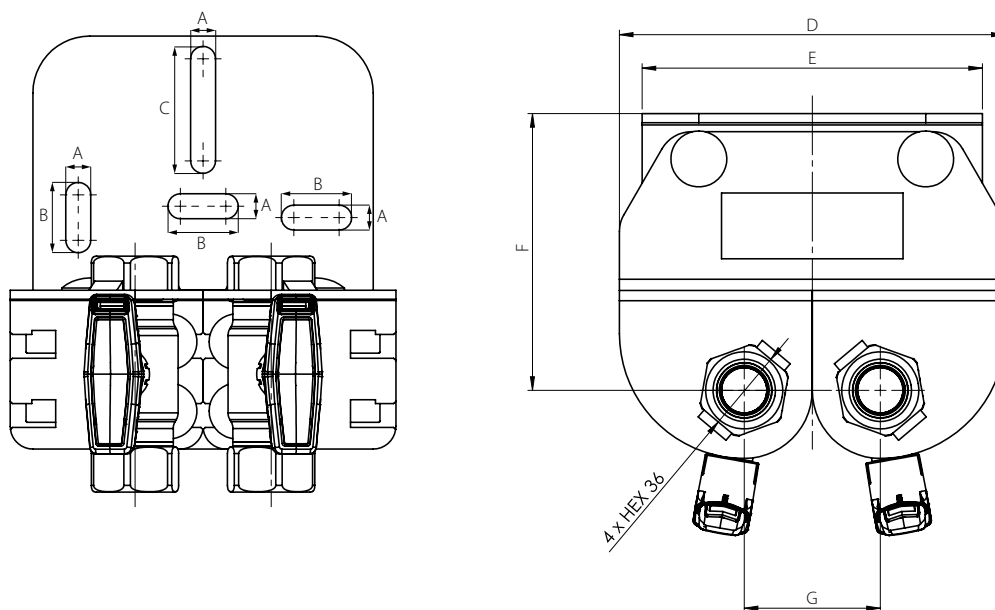
Notice

Delivered with insulation shells as standard. DN25 on request.

Fits both twinpipe and singlepipe.



Dimensions



		All dimensions in mm							
DN	BROEN No.	A	B	C	RG	D	E	F	G
15	69601015 025I	11	31	56	1/2"	170	150	122-143	60-225
20	69601020 025I	11	31	56	3/4"	170	150	122-143	60-225

Flexible main stop valve - DN15-20, PN25

Type 69602 - Full bore

Welding × Welding

Flexible main stop valve.

Materials

Fully welded ball valve with weldign ends.

Applications

Heating systems and district heating.

Surface treatment

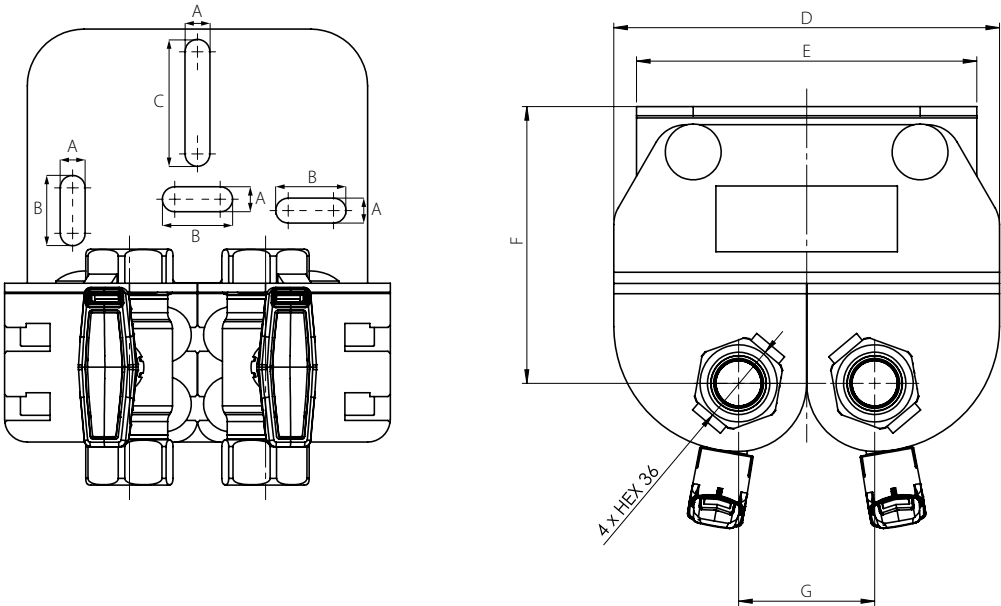
Eco-friendly protection finish against corrosion.

Notice

Delivered with insulation shells as standard. DN25 on request.
Fits both twinpipe and singlepipe.



Dimensions



		All dimensions in mm							
DN	BROEN No.	A	B	C	RG	D	E	F	G
15	69602015 025I	11	31	56	½"	170	150	122-143	60-225
20	69602020 025I	11	31	56	¾"	170	150	122-143	60-225

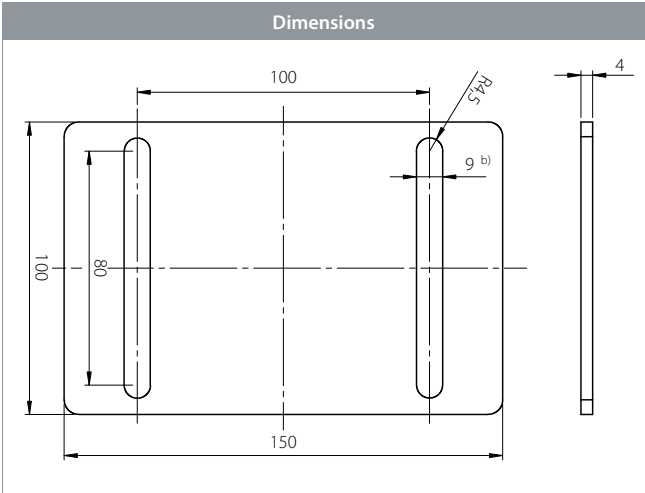
Bracket for extention - DN15-32

Type 316... - Full bore

Bracket for extention

Surface treatment

Eco-friendly protection finish against corrosion.



DN	BROEN No.	Width - mm	Height - mm	Depth - mm
15-32	316800	150	100	4

Insulation shells - DN15-20

Type 600... - **Full bore**

Insulation shells for flexible main stop valves

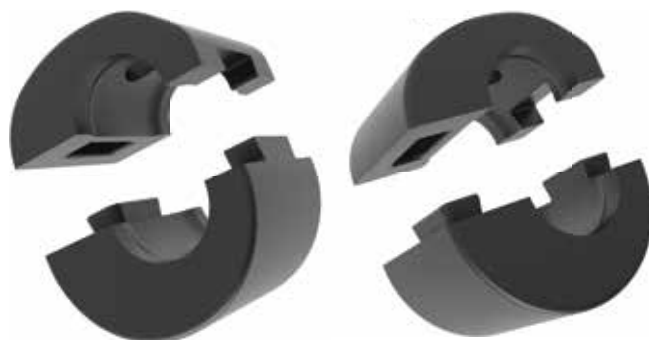
Materials

Materials:	Polyuretan - black
Class:	B2 iht. DIN 4102
Weight:	55-60 kg/m ²
Thermal conductivity:	0,029 W7mK
Temperature:	Max. 130°C (short term 140°C)

Applications

For insulation of BROEN flexible main stop valves DN15-20.

Set consisting of 2 +2 polyurethan half shells for assembly on flexible main stop valves.



DN	BROEN No.
15	600825
20	600826

T-handle - DN15-50

Type 66050 - Full bore



DN	BROEN No.	H - mm	L - mm	B - mm
10-50	9015550022	33	70	24.5

Lock fitting - DN15-20

Type 600749 - Full bore



DN	BROEN No.
15-20	600749

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 8

High temperature valves
Reduced bore

High temperature valve - DN10-50, PN40

Type 55100 - Reduced bore

Female x Female

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

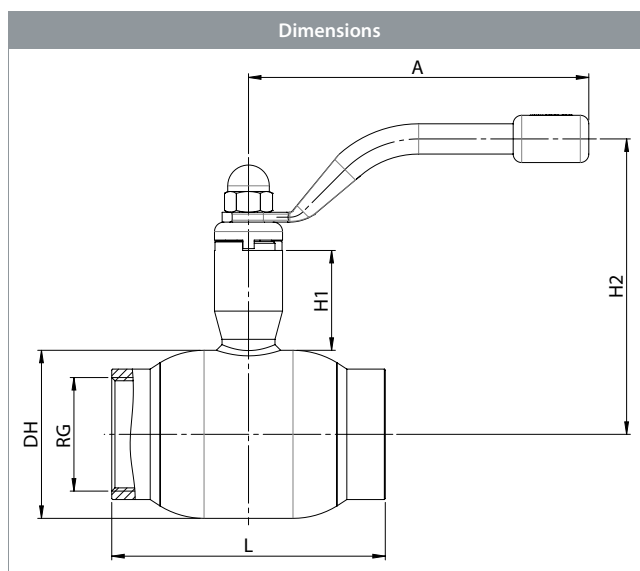
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm					
DN	BROEN No.	Bore	Kvs	net Weight kg	RG	DH	L	H1	H2	A
10	5510040010 010	10	7	0.6	3/8"	38.0	65	42	104	140
15	5510040015 010	10	8	0.6	1/2"	38.0	65	42	104	140
20	5510040020 010	15	15	0.7	3/4"	42.4	75	44	107	140
25	5510040025 010	20	27	0.8	1"	51.0	90	44	112	140
32	5510040032 010	25	40	1.2	1 1/4"	57.0	105	45	116	140
40	5510040040 010	32	69	2.1	1 1/2"	76.1	120	68	150	180
50	5510040050 010	40	110	2.9	2"	88.9	145	68	156	180

High temperature valve - DN10-50, PN40

Type 55100 - Reduced bore



Technical drawing		Material description	
	3	Female	Steel - S355J2+N / 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
	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
	20	Handle	Steel
	21	Cap nut	Steel - galvanized
	43	Endplate	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN10-50, PN40

Type 55100 - Reduced bore

Female x Female with ISO-flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

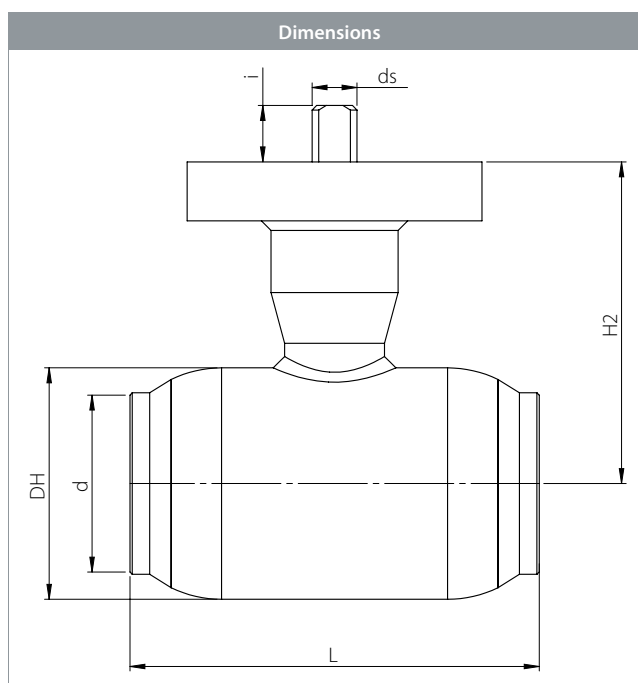
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm						
					d	DH	L	H2	ds	i	ISO
10	5510040010 300	10	7	0.7	3/8"	38.0	65	63	10	12.5	F5
15	5510040015 300	10	8	0.7	1/2"	38.0	65	63	10	12.5	F5
20	5510040020 300	15	15	0.8	3/4"	42.4	75	67	10	12.5	F5
25	5510040025 300	20	27	0.9	1"	51.0	90	71	10	12.5	F5
32	5510040032 300	25	40	1.3	1 1/4"	57.0	105	75	10	12.5	F5
40	5510040040 300	32	69	2.2	1 1/2"	76.1	120	106	14	18.0	F7
50	5510040050 300	40	110	3.0	2"	88.9	145	112	14	18.0	F7

High temperature valve - DN10-50, PN40

Type 55100 - Reduced bore



Technical drawing		Material description	
	3	Female	Steel - S355J2+N / 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
	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
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN10-50, PN40

Type 55102 - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

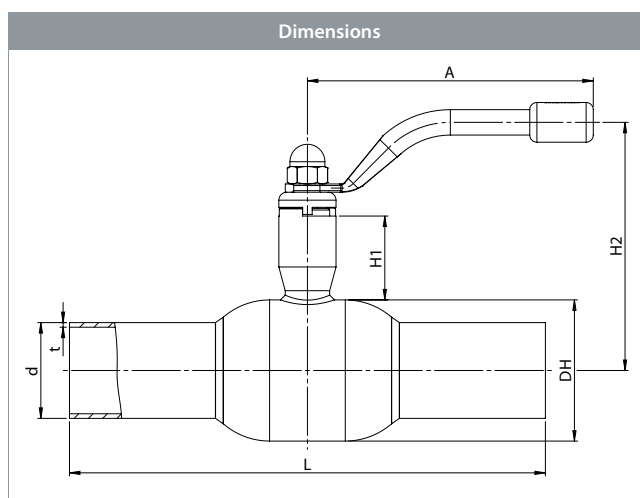
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm						
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	L	d	t	H1	H2	A
10	5510240010 010	10	7	0.8	38.0	210	17.2	1.8	42	104	140
15	5510240015 010	10	8	0.8	38.0	210	21.3	2.0	42	104	140
20	5510240020 010	15	15	0.8	42.4	230	26.9	2.3	44	107	140
25	5510240025 010	20	27	1.0	51.0	230	33.7	2.6	44	112	140
32	5510240032 010	25	40	1.4	57.0	260	42.4	2.6	45	116	140
40	5510240040 010	32	69	2.2	76.1	260	48.3	2.6	68	150	180
50	5510240050 010	40	110	2.9	88.9	300	60.3	2.9	68	156	180

High temperature valve - DN10-50, PN40

Type 55102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	20	Handle	Steel
	21	Cap nut	Steel - galvanized
	43	Endplate	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN10-50, PN40

Type 55102 - Reduced bore

Welding × Welding with ISO-flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

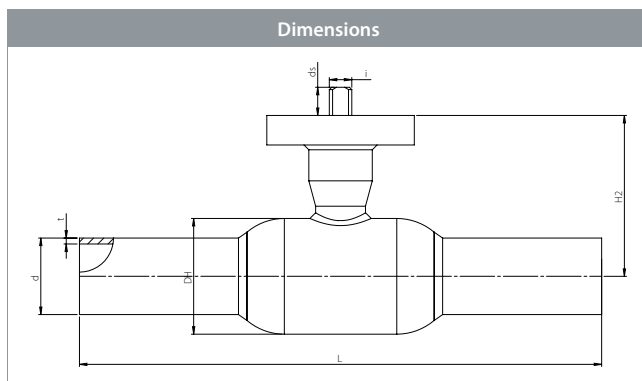
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm							
DN	BROEN No.	Bore	Kvs	net Weight kg	d	DH	L	t	H2	ds	i	ISO
10	5510240010 300	10	7	0.9	17.2	38.0	210	1.8	63	10	12.5	F5
15	5510240015 300	10	8	0.9	21.3	38.0	210	2.0	63	10	12.5	F5
20	5510240020 300	15	15	0.9	26.9	42.4	230	2.3	67	10	12.5	F5
25	5510240025 300	20	27	1.1	33.7	51.0	230	2.6	71	10	12.5	F5
32	5510240032 300	25	40	1.5	42.4	57.0	260	2.6	75	10	12.5	F5
40	5510240040 300	32	69	2.3	48.3	76.1	260	2.6	106	14	18.0	F7
50	5510240050 300	40	110	3.0	60.3	88.9	300	2.9	112	14	18.0	F7

High temperature valve - DN10-50, PN40

Type 55102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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+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
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN65-200, PN25

Type 55102 - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

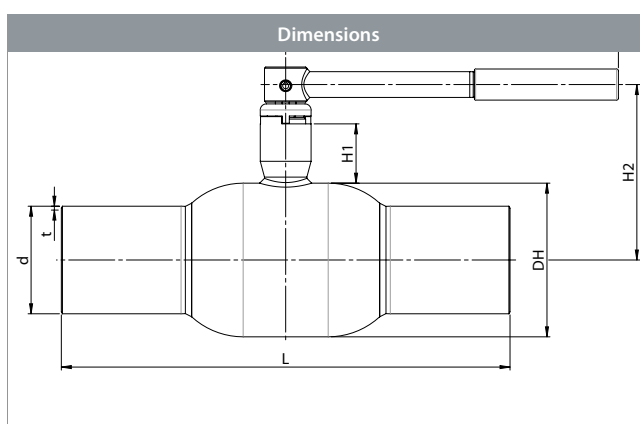
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm						
					DH	L	d	t	H1	H2	A
65	5510225065 010	50	180	4.5	108.0	360	76.1	2.9	65	135	275
80	5510225080 010	65	288	5.9	127.0	370	88.9	3.2	66	145	275
100	5510225100 010	80	417	9.4	152.4	390	114.3	3.6	81	178	365
125	5510225125 010	100	699	13.0	177.8	390	139.7	3.6	104	217	365
150	5510225150 010	125	1046	19.9	219.1	390	168.3	4.0	103	240	650
200	5510225200 010	150	1500	35.2	267.0	390	219.1	4.5	153	318	900

High temperature valve - DN65-200, PN25

Type 55102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	20	Handle	Steel
	39	Spring pin	Steel
	43	Endplate	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN65-200, PN25

Type 55102 - Reduced bore

Welding × Welding with ISO-flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

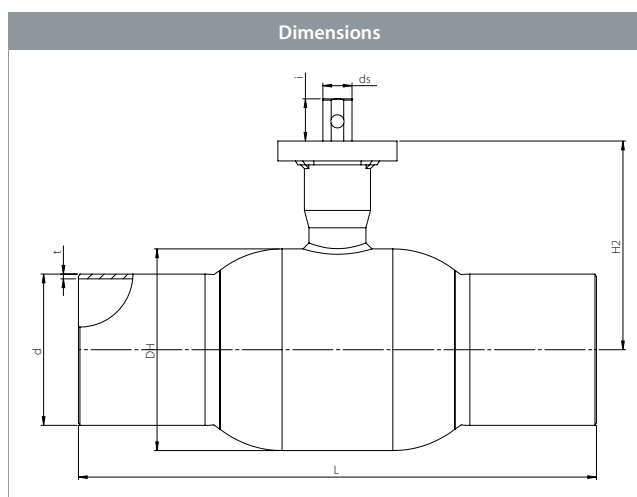
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					d	DH	L	t	H2	ds	i	ISO
65	5510225065 300	50	180	4.5	76.1	108.0	360	2.9	149	17	29.5	F7
80	5510225080 300	65	288	5.9	88.9	127.0	370	3.2	159	17	29.5	F7
100	5510225100 300	80	417	8.9	114.3	152.4	390	3.6	190	22	31.9	F7
125	5510225125 300	100	699	13.8	139.7	177.8	390	3.6	229	24	32.0	F10
150	5510225150 300	125	1046	18.7	168.3	219.1	390	4.0	269	30	53.3	F10
200	5510225200 300	150	1500	31.4	219.1	267.0	390	4.5	349	30	62.8	F14

High temperature valve - DN65-200, PN25

Type 55102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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+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
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN125-200, PN25

Type 55102 - Reduced bore

Welding × Welding with ISO-flange and BROEN-Gear

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

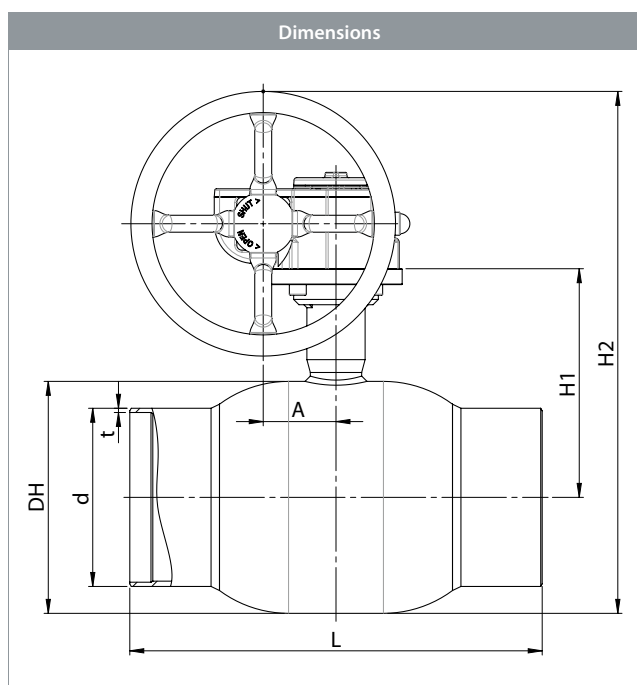
Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm							
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	L	d	t	H1	H2	dp	A
125	5510225125 480	100	699	18.2	177.8	390	139.7	3.6	197	224	200	55
150	5510225150 480	125	1046	26.5	219.1	390	168.3	4.0	216	250	300	69
200	5510225200 480	150	1500	39.2	267.0	390	219.1	4.5	286	320	300	69

High temperature valve - DN125-200, PN25

Type 55102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	25	Friction gasket	PTFE 20% Carbon
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN15-50, PN40

Type 55103 - Reduced bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

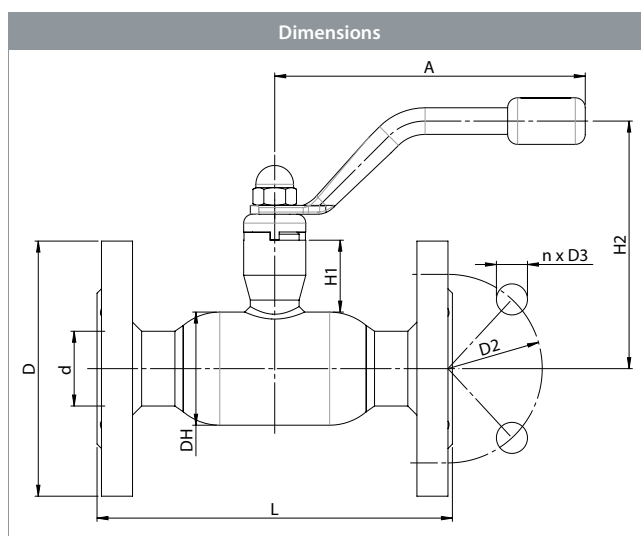
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	L	DH	H1	H2	D1	D2	A	n	D3
15	5510340015 010	10	8	1.8	130	38.0	43	104	95	65	140	4	14
20	5510340020 010	15	15	2.4	150	42.4	44	107	105	75	140	4	14
25	5510340025 010	20	27	2.9	160	51.0	44	112	115	85	140	4	14
32	5510340032 010	25	40	4.5	180	57.0	45	116	140	100	140	4	18
40	5510340040 010	32	69	5.8	200	76.1	68	150	150	110	180	4	18
50	5510340050 010	40	110	7.6	230	88.9	68	156	165	125	180	4	18

High temperature valve - DN15-50, PN40

Type 55103 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	20	Handle	Steel
	21	Cap nut	Steel - galvanized
	43	Endplate	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN15-50, PN40

Type 55103 - Reduced bore

Flange × Flange with ISO-flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

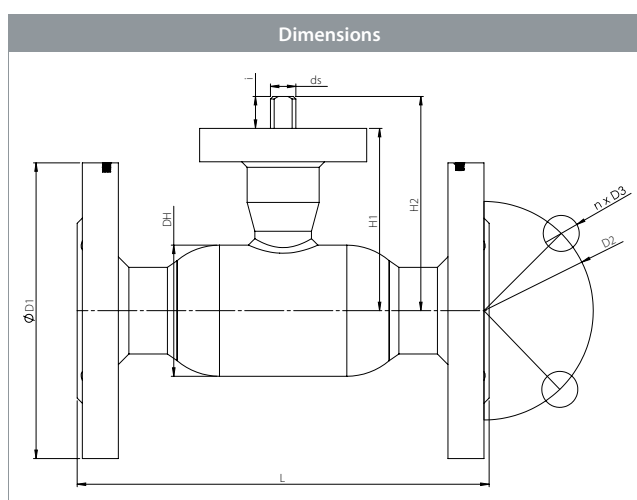
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	L	DH	H1	H2	D1	D2	n	D3	ds	i	ISO
15	5510340015 300	10	8	1,9	130	38,0	63	75,5	95	65	4	14	10	12,5	F5
20	5510340020 300	15	15	2,5	150	42,4	67	80,0	105	75	4	14	10	12,5	F5
25	5510340025 300	20	27	3,0	160	51,0	71	83,0	115	85	4	14	10	12,5	F5
32	5510340032 300	25	40	4,6	180	57,0	75	87,5	140	100	4	18	10	12,5	F5
40	5510340040 300	32	69	5,9	200	76,1	106	124,0	150	110	4	18	14	18,0	F7
50	5510340050 300	40	110	7,8	230	88,9	112	130,0	165	125	4	18	14	18,0	F7

High temperature valve - DN15-50, PN40



Type 55103 - Reduced bore

Technical drawing		Material description	
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	14	Friction washer	PTFE 20% Carbon
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN65-200, PN25

Type 55103 - Reduced bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

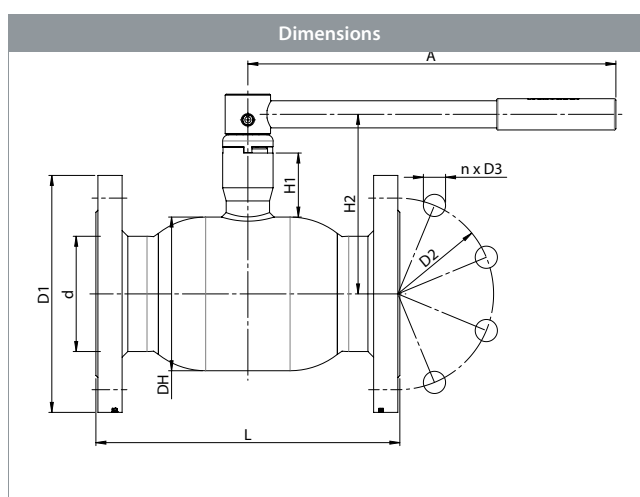
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	L	DH	H1	H2	D1	D2	A	n	D3
65	5510325065 010	50	180	10.7	290	108.0	65	135	185	145	275	8	18
80	5510325080 010	65	288	13.4	280	127.0	65	145	200	160	275	8	18
100	5510325100 010	80	417	20.0	300	152.0	81	178	235	190	365	8	22
125	5510325125 010	100	699	27.9	325	177.8	103	217	270	220	365	8	26
150	5510325150 010	125	1046	38.7	350	219.1	103	240	300	250	650	8	26
200	5510325200 010	150	1500	63.0	400	267.0	153	318	360	310	900	12	26

High temperature valve - DN65-200, PN25

Type 55103 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	20	Handle	Steel
	39	Spring pin	Steel
	43	Endplate	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN65-200, PN25

Type 55103 - Reduced bore

Flange × Flange with ISO-flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

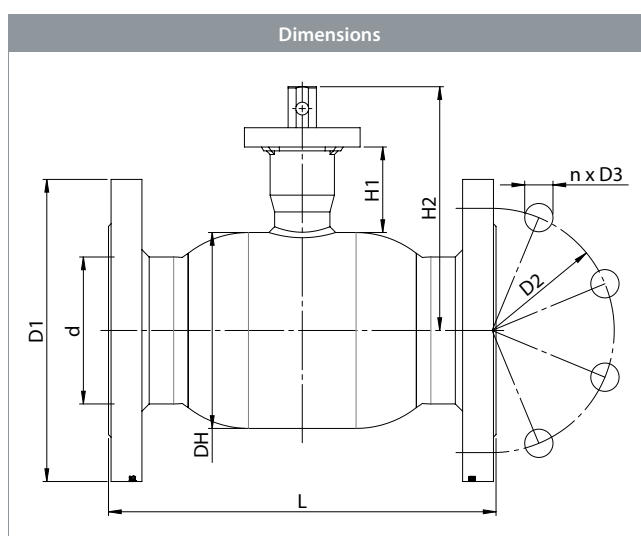
Operation

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	L	DH	H1	H2	D1	D2	n	D3	ds	i	ISO
65	5510325065 300	50	180	10,7	290	108,0	120	149	185	145	8	18	17	29,5	F7
80	5510325080 300	65	288	13,4	280	127,0	130	159	200	160	8	18	17	29,5	F7
100	5510325100 300	80	417	19,5	300	152,0	158	190	235	160	8	22	22	31,9	F7
125	5510325125 300	100	699	28,4	325	177,8	197	229	270	220	8	26	24	32,0	F10
150	5510325150 300	125	1046	37,5	350	219,1	216	269	300	250	8	26	30	53,3	F10
200	5510325200 300	150	1500	59,2	400	267,0	286	349	360	310	12	26	36	62,8	F14

High temperature valve - DN65-200, PN25

Type 55103 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

Accessories	BROEN No.	Dimension	Description
	600583	DN100	BROEN-Gear.
	600584	DN125	
	600585	DN150	
	600586	DN200	

High temperature valve - DN125-200, PN25

Type 55103 - Reduced bore

Welding × Welding with ISO-flange and BROEN-Gear

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

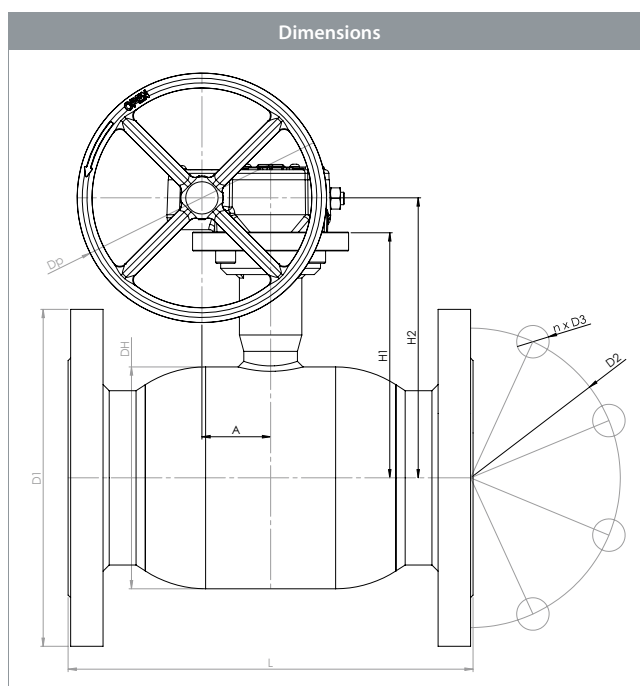
Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm									
DN	BROEN No.	Bore	Kvs	net Weight kg	L	DH	H1	H2	D1	D2	n	D3	p	A
125	5510325125 480	100	699	32.8	325	177.8	197	224	270	220	8	26	200	55
150	5510325150 480	125	1046	45.3	350	219.1	216	250	300	250	8	26	300	69
200	5510325200 480	150	1500	67.0	400	267.0	286	320	360	310	12	26	300	69

High temperature valve - DN125-200, PN25



Type 55103 - Reduced bore

Technical drawing		Material description	
	3	Female	Steel - S355J2+N / 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
	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
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite
	47	Gear	-

High temperature valve - DN65-200, PN16

Type 55103 - Reduced bore

Flange × Flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

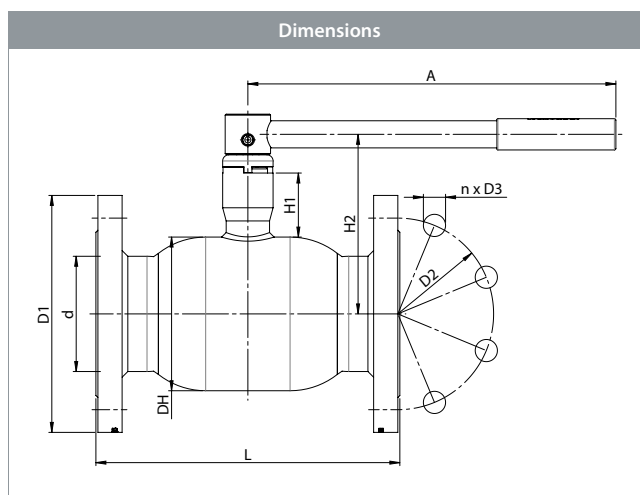
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	L	DH	H1	H2	D1	D2	A	n	D3
65	5510316065 010	50	180	11.0	290	108.0	65	135	185	145	275	4	18
80	5510316080 010	65	288	12.0	280	127.0	65	145	200	160	275	8	18
100	5510316100 010	80	417	16.7	300	152.0	81	178	220	180	365	8	18
125	5510316125 010	100	699	22.4	325	177.8	103	217	250	210	365	8	18
150	5510316150 010	125	1046	32.4	350	219.1	103	240	285	240	650	8	22
200	5510316200 010	150	1500	54.9	400	267.0	153	318	340	295	900	8	22

High temperature valve - DN65-200, PN16

Type 55103 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	20	Handle	Steel
	39	Spring pin	Steel
	43	Endplate	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

High temperature valve - DN65-200, PN16

Type 55103 - Reduced bore

Flange × Flange with ISO-flange

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

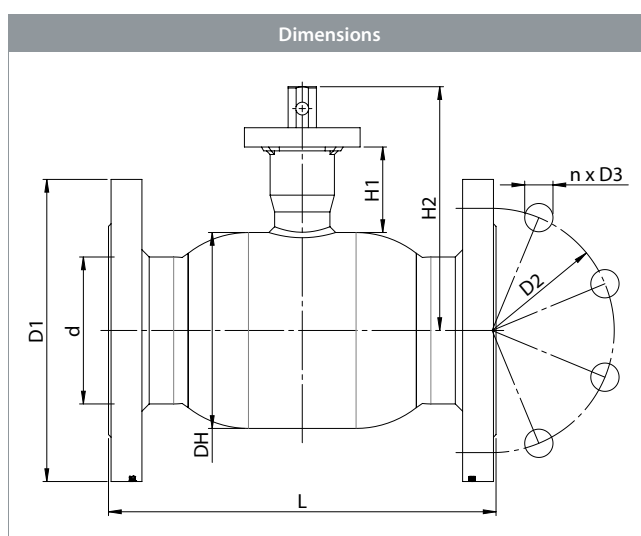
Operation

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	L	DH	H1	H2	D1	D2	n	D3	ds	i	ISO
65	5510316065 300	50	180	11,0	290	108,0	120	149	185	145	4	18	17	29,5	F7
80	5510316080 300	65	288	12,0	280	127,0	130	159	200	160	8	18	17	29,5	F7
100	5510316100 300	80	417	16,9	300	152,0	158	190	220	180	8	18	22	31,9	F7
125	5510316125 300	100	699	22,8	325	177,8	197	229	250	210	8	18	24	32,0	F10
150	5510316150 300	125	1046	32,6	350	219,1	216	269	285	240	8	22	30	53,3	F10
200	5510316200 300	150	1500	55,1	400	267,0	286	349	340	295	8	22	36	62,8	F14

High temperature valve - DN65-200, PN16



Type 55103 - Reduced bore

Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	2	Flange	Steel - S235JRG2 / 1.0038 / 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
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite

Accessories	BROEN No.	Dimension	Description
	600583	DN100	BROEN-Gear.
	600584	DN125	
	600585	DN150	
	600586	DN200	

High temperature valve - DN125-200, PN25

Type 55103 - Reduced bore

Welding × Welding with ISO-flange and BROEN-Gear

Fully welded steel ball valve.

Materials

See next page.

Applications

Isolating valve for steam systems. In case of demand for valves for systems with pressure and temperature outside defined range - please contact BROEN.

Media

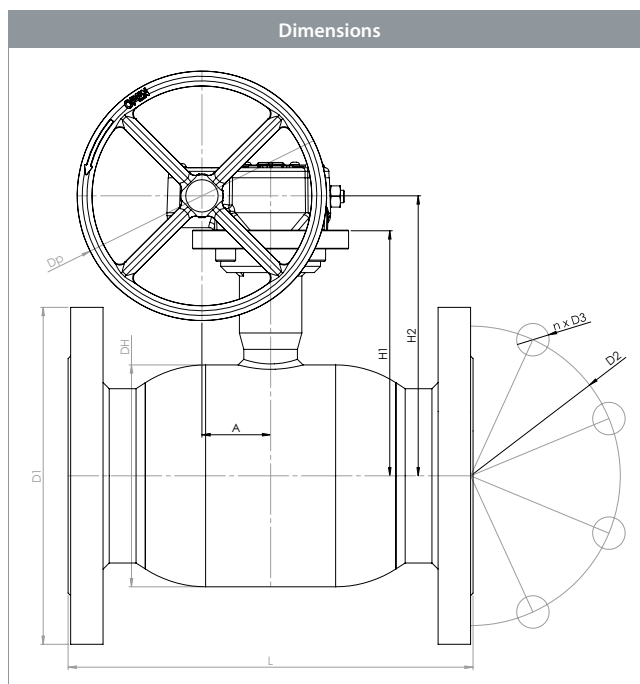
Water and steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm									
DN	BROEN No.	Bore	Kvs	net Weight kg	L	DH	H1	H2	D1	D2	n	D3	p	A
125	5510316125 480	100	699	27.2	325	177.8	197	224	250	210	8	18	200	55
150	5510316150 480	125	1046	39.0	350	219.1	216	250	285	240	8	22	300	69
200	5510316200 480	150	1500	63.8	400	267.0	286	320	340	295	8	22	300	69

High temperature valve - DN125-200, PN25



Type 55103 - Reduced bore

Technical drawing		Material description	
	3	Female	Steel - S355J2+N / 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
	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
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	44	Threaded bush	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	45	Brass ring	Brass B10
	46	Stem gasket	Graphite
	47	Gear	-

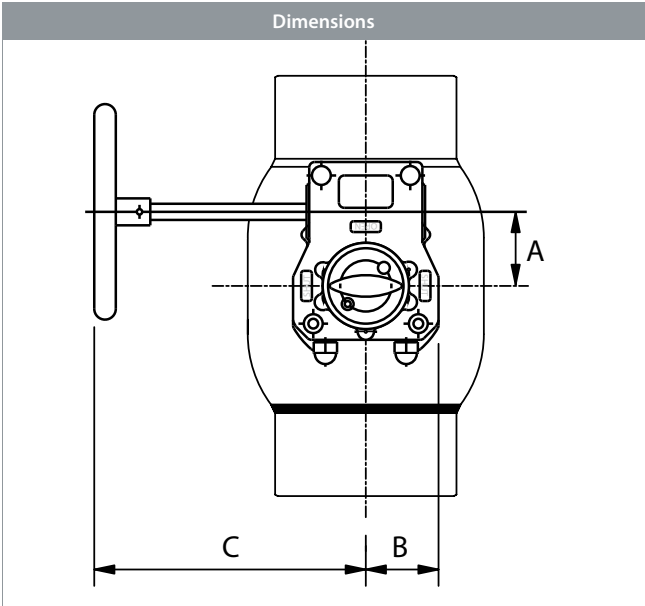
BROEN-Gear - DN100-200

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.

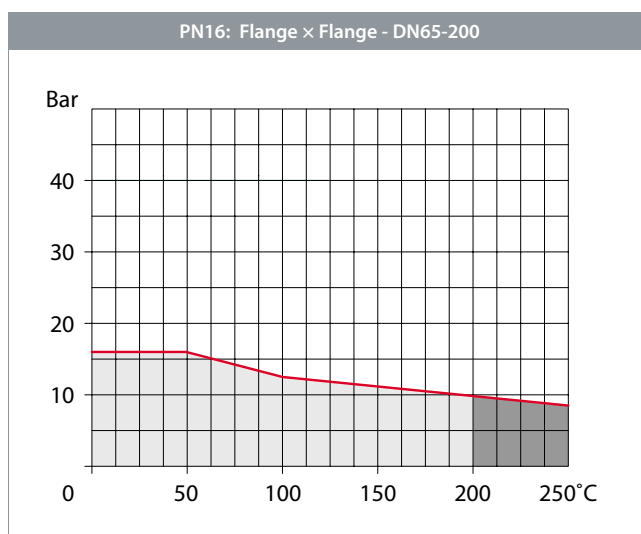
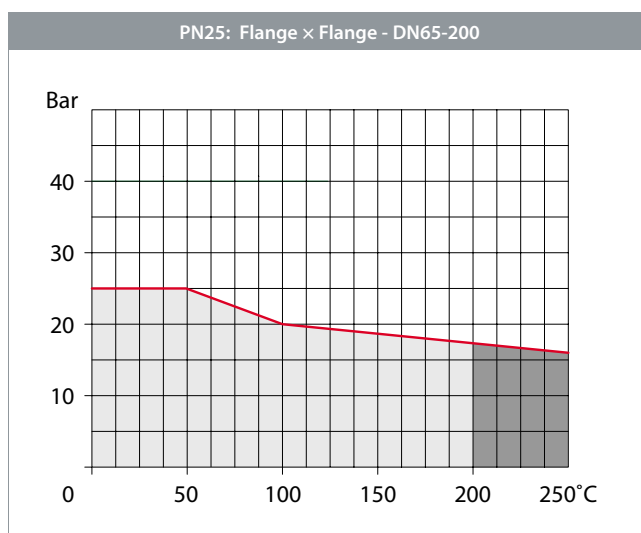
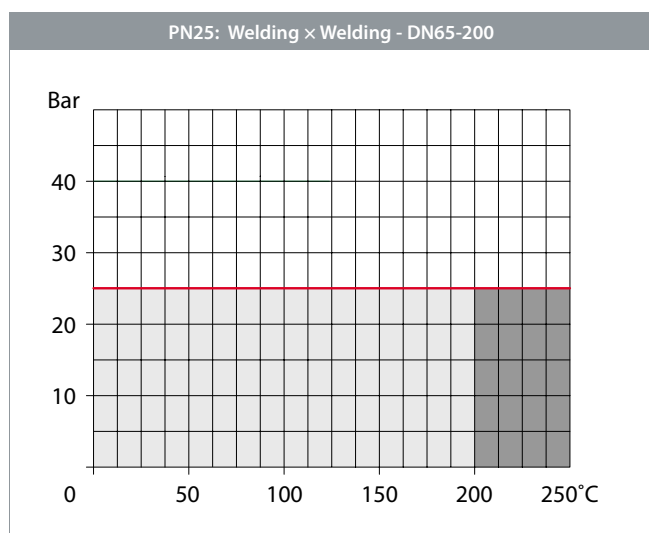
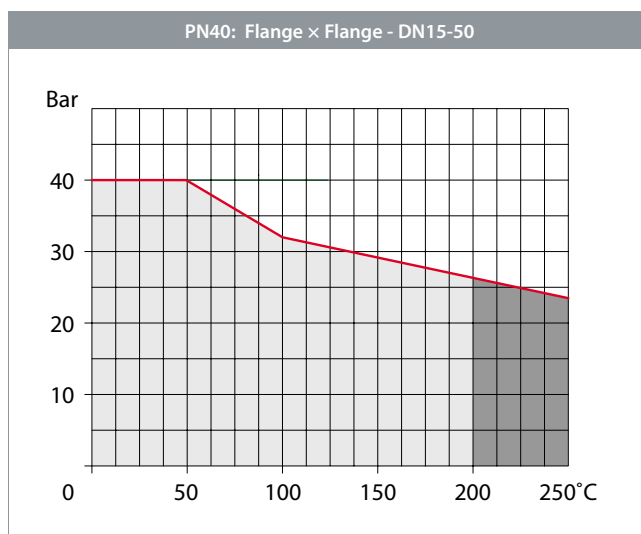
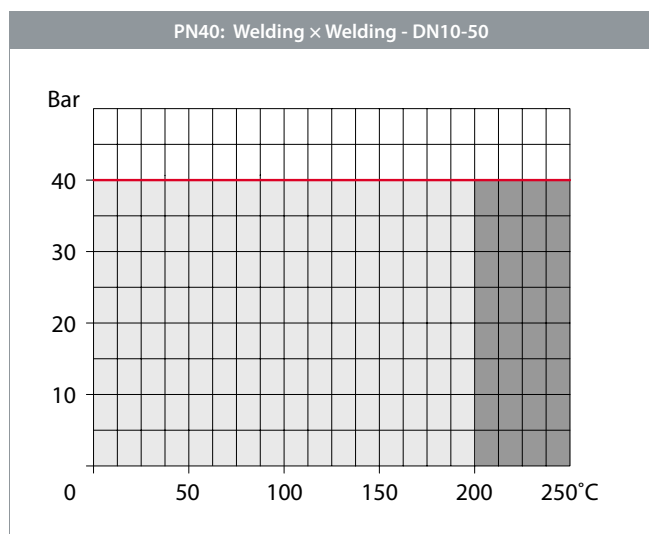


			All dimensions in mm				
DN	BROEN No.	net Weight kg*	A	B	C	Nm	Hand wheel
100	600583	4,4	55,0	53,5	162	650	200
125	600584	2,5	41,3	40,0	145	300	200
150	600585	7,8	68,8	67,5	240	1200	300
200	600586	8,6	68,8	67,5	245	1200	350

* Weight gearbox with hand wheel.

Pressure and temperature graph - DN10-200 - PN40/25/16

Reduced bore



Pressure drop graph - DN10-200

Reduced bore

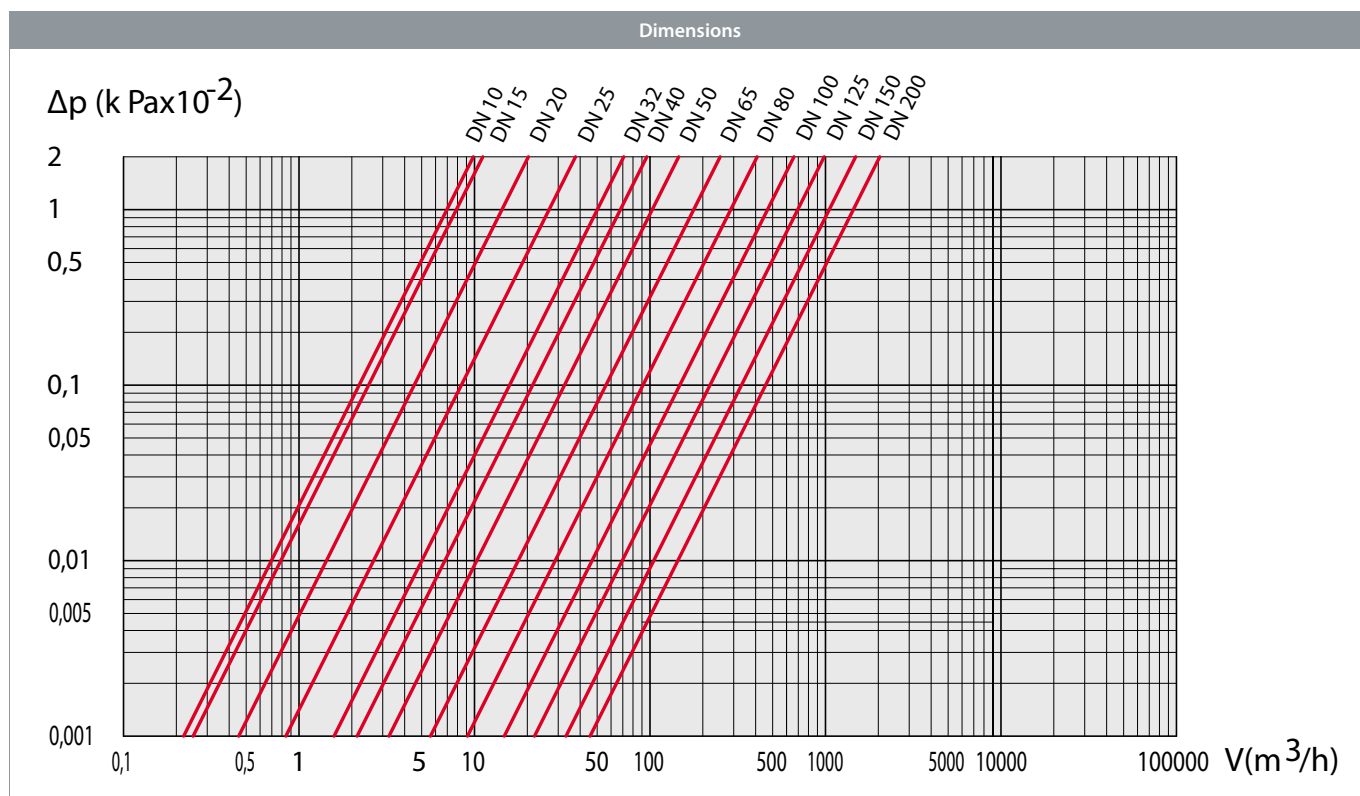
Pressure drop graph

Ball valve in fully open position.

Medium: water density in 1000 kg/m³

Definitions

Kvs: M³ water per hour at pressure drop 1 bar.



DN	10	15	20	25	32	40	50	65	80	100	125	150	200
Kvs	7	8	15	27	40	69	110	180	288	470	699	1046	1500

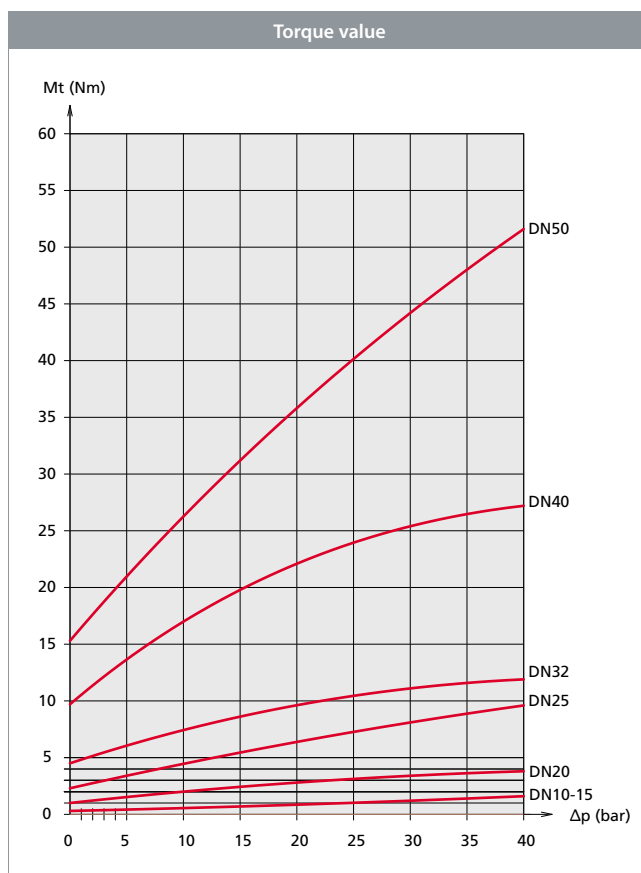
Operating torque - DN10-50, PN40

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.



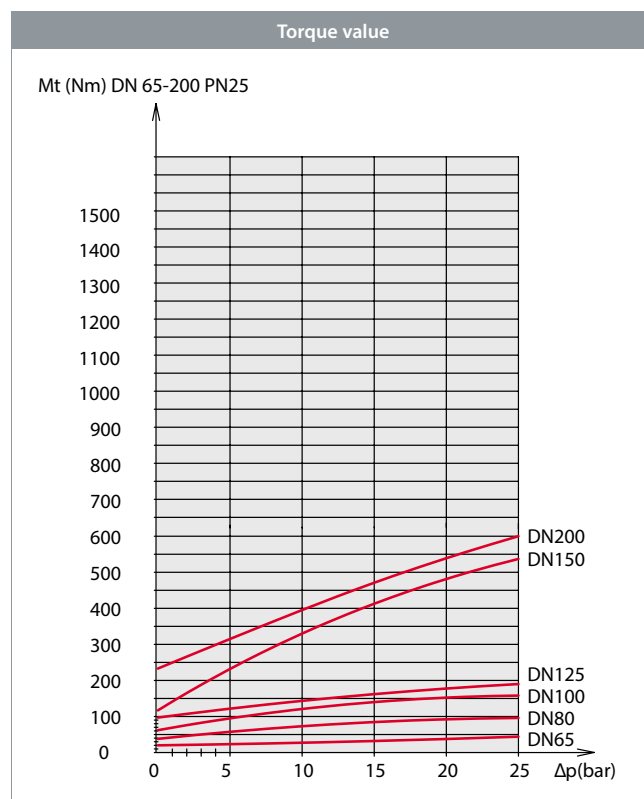
Operating torque - DN65-200, PN25

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.

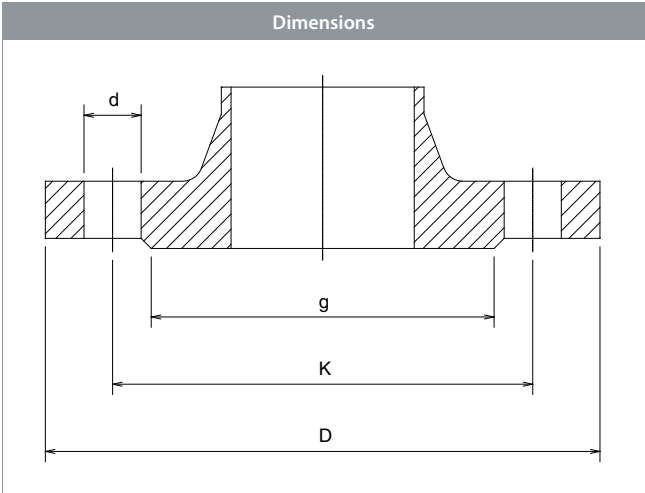


Connecting flange - DN15-50, PN40

EN 1092-1 - Type 11 B1 - Reduced bore

Description

Flangestandard.



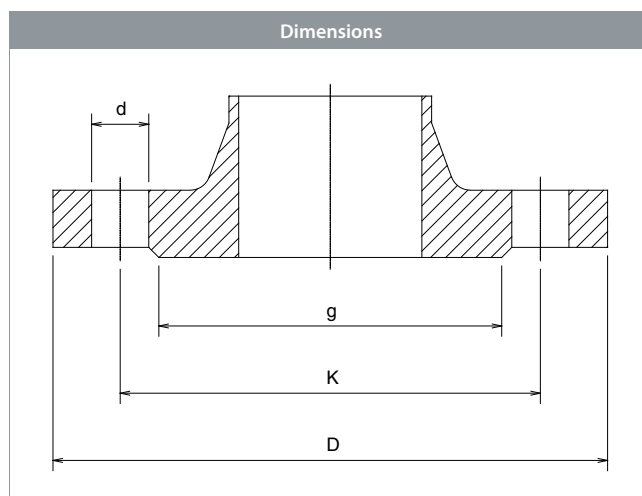
	All dimensions in mm				
DN	D	K	g	d	No. of bolt holes
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4

Connecting flange - DN15-200, PN25

EN 1092-1 - Type 11 B1 - Reduced bore

Description

Flangestandard.



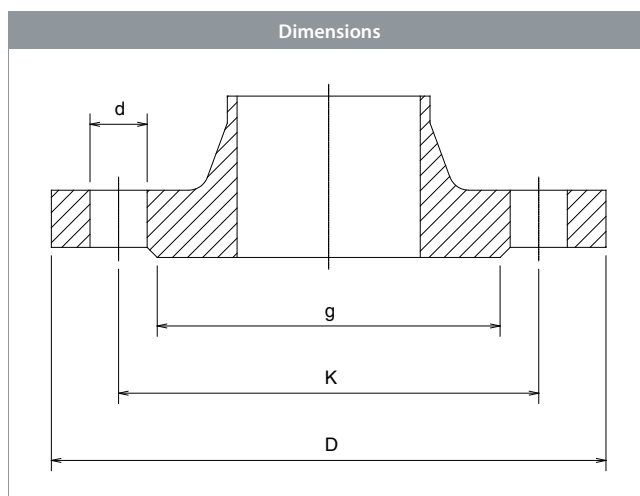
DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	8
80	200	160	138	18	8
100	235	190	162	22	8
125	270	220	188	26	8
150	300	250	218	26	8
200	360	310	278	26	12

Connecting flange - DN15-200, PN16

EN 1092-1 - Type 11 B1 - Reduced bore

Description

Flangestandard.



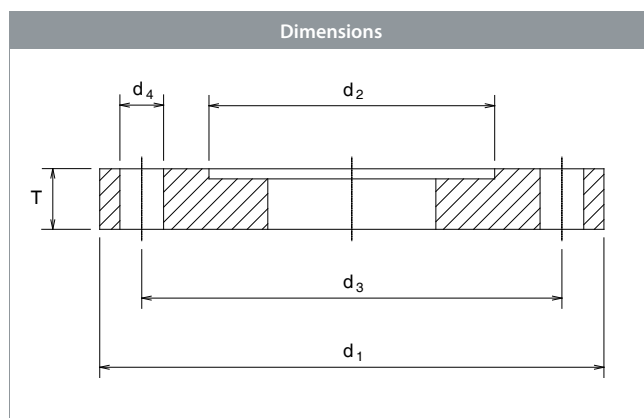
All dimensions in mm					
DN	D	K	g	d	No. of bolt holes
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	4
80	200	160	138	18	8
100	220	180	158	18	8
125	250	210	188	18	8
150	285	240	212	22	8
200	340	295	268	22	12

Valve actuator attachment - DN-65-200, 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
DN65-80	F05	12.5	65	35	50	7	4
DN100-125	F07	13.5	90	55	70	9	4
DN150	F10	14.5	125	70	102	11	4
DN200	F12	14.5	150	85	125	13	4

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 9 **Monoblock and** **short valves** **Full bore**

Monoblock and short valve - DN15-32, PN40/25/16

Type 94103 - Full bore

Monoblok single - Wafer type

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

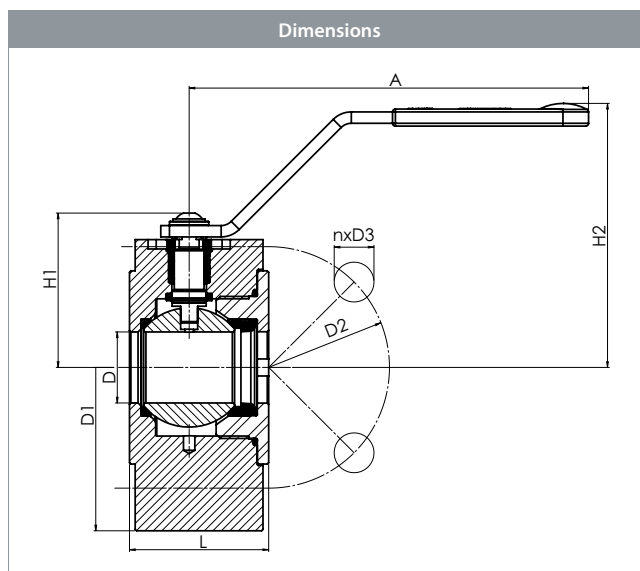
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm							
DN	BROEN No.	D = Bore	Kvs	net Weight kg	L	D1	D2	A	H1	H2	D3	n
15	9410340015WZ	15	32	1.8	40	95	65	140	46	85	14	4
20	9410340020WZ	20	57	2.8	46	105	75	140	50	88	14	4
25	9410340025WZ	25	81	3.2	49	115	85	140	54	93	14	4
32	9410340032WZ	32	133	5.5	62	140	100	167	71	109	18	4

Monoblock and short valve - DN15-32, PN40/25/16



Type 94103 - Full bore

Technical drawing		Material description	
	1	Ball	Steel - SA351Gr CF8
	2	Valve body	Steel - S355J2C
	3	Seat ring	PTFE 20% Carbon
	4	Back-up ring	PTFE 20% Carbon
	5	O-ring	EPDM
	6	O-ring	FKM (Viton)
	7	Handle	Steel

Monoblock and short valve - DN15-32, PN40/25/16

Type 94103 - Full bore

Monoblok single - Wafer type 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 and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

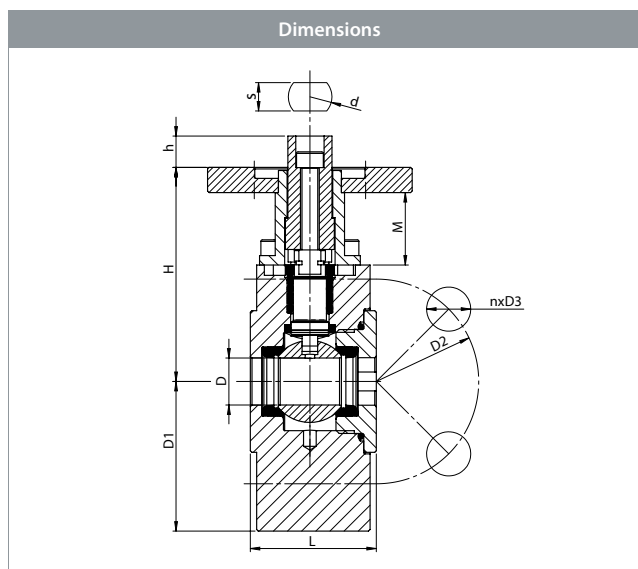
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm									
DN	BROEN No.	D = Bore	Kvs	net Weight kg	L	D1	D2	d/s	h	H	M	D3	n	ISO
15	9410340015WZ 90	15	32	1.9	40	95	65	14/10	10	68	23	14	4	F5
20	9410340020WZ 90	20	57	2.6	46	105	75	14/10	10	71	23	14	4	F5
25	9410340025WZ 90	25	81	3.3	49	115	85	14/10	10	76	23	14	4	F5
32	9410340032WZ 90	32	133	5.9	62	140	100	16/11	10	91	23	18	4	F5

ISO-flange acc. ISO5211.

Monoblock and short valve - DN15-32, PN40/25/16

Type 94103 - Full bore



Technical drawing		Material description	
	1	Ball	Steel - SA351Gr CF8
	2	Valve body	Steel - S355J2C
	3	Seat ring	PTFE 20% Carbon
	4	Back-up ring	PTFE 20% Carbon
	5	O-ring	EPDM
	6	O-ring	FKM (Viton)
	8	ISO-flange	Steel - S355J2C

Monoblock and short valve - DN40-80, PN16

Type 94103 - Full 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 and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

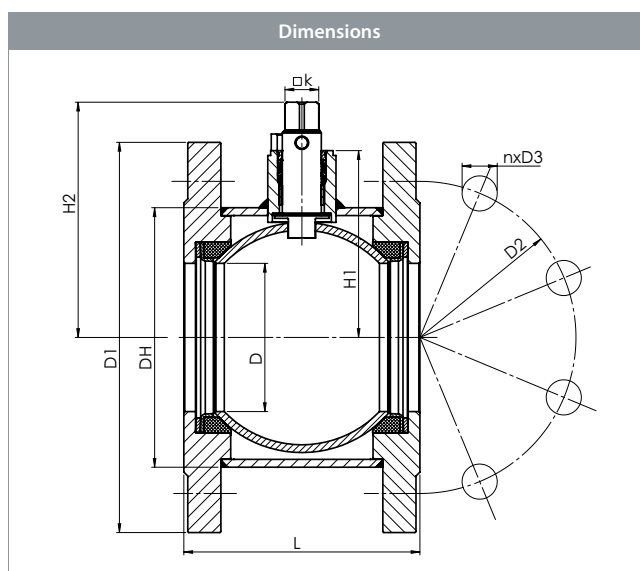
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	D = Bore	Kvs	net Weight kg	All dimensions in mm								D3	n
					L	DH	D1	D2	□ k	H1	H2			
40	9410316040WZ	39	229	4.3	77	76	150	110	11	70	87	18	4	
50	9410316050WZ	49	295	5.6	86	89	165	125	11	77	94	18	4	
65	9410316065WZ	63	498	7.6	106	114	185	145	14	88	113	18	8	
80	9410316080WZ	76	754	9.2	121	133	200	160	14	96	121	18	8	

Monoblock and short valve - DN40-80, PN16



Type 94103 - Full bore

Technical drawing		Material description	
	1	Ball	Steel - SA351Gr CF8
	2	Valve body	Steel - S355J2C
	3	Seat ring	PTFE 20% Carbon
	4	Back-up ring	PTFE 20% Carbon
	5	O-ring	EPDM
	6	O-ring	FKM (Viton)
	9	Flange	Steel - S355J2C

Monoblock and short valve - DN40-80, PN16

Type 94103 - Full 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 and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

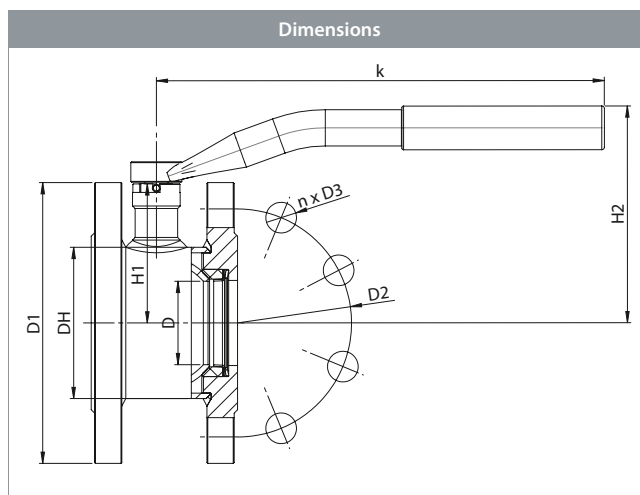
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	D = Bore	Kvs	net Weight kg	All dimensions in mm								D3	n
					L	DH	D1	D2	□ k	H1	H2			
40	9410316040WZ 01	39	229	4.5	77	76	150	110	177	70	127	18	4	
50	9410316050WZ 01	49	295	5.7	86	89	165	125	177	77	134	18	4	
65	9410316065WZ 01	63	498	8.0	106	114	185	145	190	88	158	18	8	
80	9410316080WZ 01	76	754	9.6	121	133	200	160	190	96	166	18	8	

Monoblock and short valve - DN40-80, PN16



Type 94103 - Full bore

Technical drawing		Material description	
	1	Ball	Steel - SA351Gr CF8
	2	Valve body	Steel - S355J2C
	3	Seat ring	PTFE 20% Carbon
	4	Back-up ring	PTFE 20% Carbon
	5	O-ring	EPDM
	6	O-ring	FKM (Viton)
	7	Handle	Steel
	9	Flange	Steel - S355J2C

Monoblock and short valve - DN40-80, PN16

Type 94103 - Full 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 and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

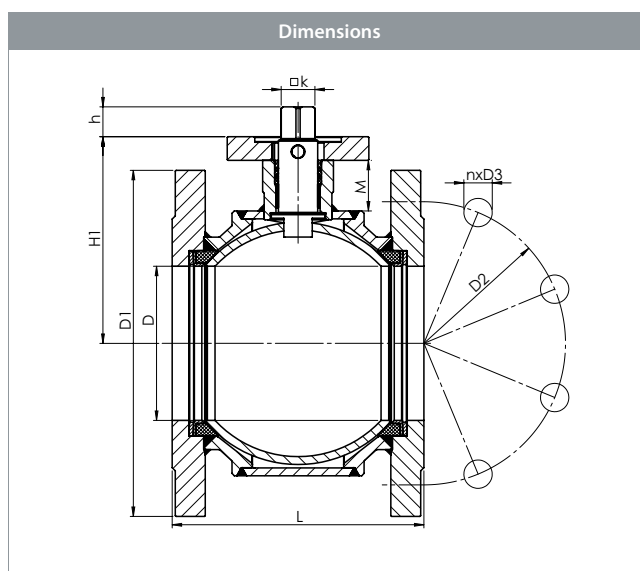
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	D = Bore	Kvs	net Weight kg	All dimensions in mm									
					L	D1	D2	□ k	h	H	M	D3	n	ISO
40	9410316040WZ 90	39	229	4.6	77	150	110	11	11.5	100	52	18	4	F5
50	9410316050WZ 90	49	295	5.9	86	165	125	11	11.5	108	53	18	4	F5
65	9410316065WZ 90	63	498	7.9	106	185	145	14	15.5	118	50	18	8	F5
80	9410316080WZ 90	76	754	9.5	121	200	160	14	15.5	125	49	18	8	F5

ISO-flange acc. ISO5211.

Monoblock and short valve - DN40-80, PN16



Type 94103 - Full bore

Technical drawing		Material description	
	6	Ball	Steel - SA351Gr CF8
	2	Valve body	Steel - S355J2C
	3	Seat ring	PTFE 20% Carbon
	4	Back-up ring	PTFE 20% Carbon
	5	O-ring	EPDM
	6	O-ring	FKM (Viton)
	8	ISO-flange	Steel - S355J2C
	9	Flange	Steel - S355J2C
	1		

Monoblock and short valve - DN100-150, PN16

Type 94103 - Full 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 and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

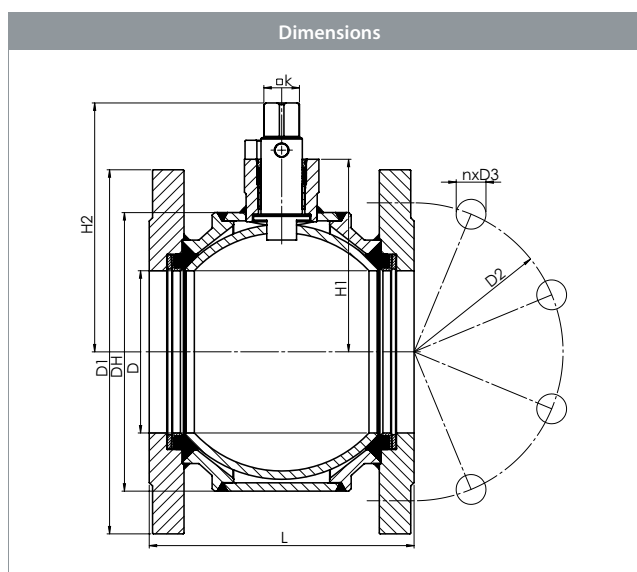
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	D = Bore	Kvs	net Weight kg	All dimensions in mm								
					L	DH	D1	D2	□ k	H1	H2	D3	n
100	9410316100WZ	98	1159	14.6	160	168.0	220	180	17	117.0	151.0	18	8
125	9410316125WZ	125	1841	22.6	186	219.0	250	210	17	147.0	183.0	18	8
150	9410316150WZ	150	2652	35.2	236	267.0	285	240	22	167.5	203.5	22	8
200	9410316200WZ	200	5720	61.3	292	323.9	340	295	22	200.0	237.0	22	12

Monoblock and short valve - DN100-150, PN16



Type 94103 - Full bore

Technical drawing		Material description	
	1	Ball	Steel - SA351Gr CF8
	2	Valve body	Steel - S355J2C
	3	Seat ring	PTFE 20% Carbon
	4	Back-up ring	PTFE 20% Carbon
	5	O-ring	EPDM
	6	O-ring	FKM (Viton)
	9	Flange	Steel - S355J2C

Monoblock and short valve - DN100-150, PN16

Type 94103 - Full 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 and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

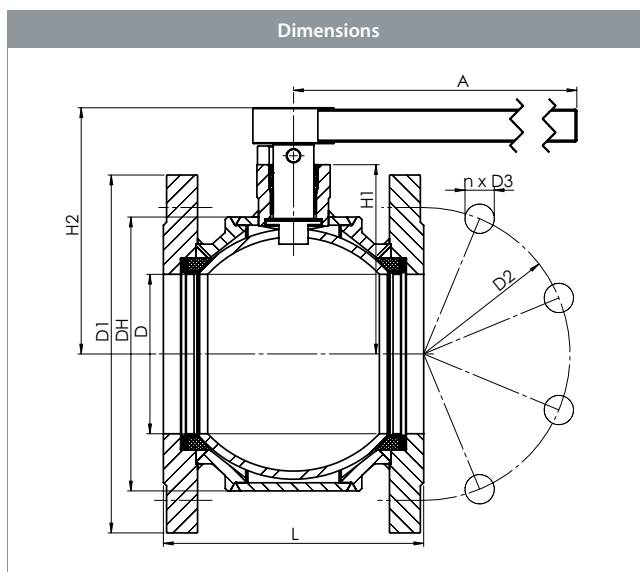
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm								
DN	BROEN No.	D = Bore	Kvs	net Weight kg	L	DH	D1	D2	A	H1	H2	D3	n
100	9410316100WZ 01	98	1159	16.0	160	168.0	220	180	500	117	151	18	8
125	9410316125WZ 01	125	1841	24.1	186	219.0	250	210	500	147	183	18	8
150	9410316150WZ 01	150	2652	37.2	236	267.0	285	240	600	168	204	22	8
200	9410316200WZ 01	200	5720	62.4	292	323.9	340	295	600	200	237	22	12

Monoblock and short valve - DN100-150, PN16

Type 94103 - Full bore



Technical drawing		Material description	
	1	Ball	Steel - SA351Gr CF8
	2	Valve body	Steel - S355J2C
	3	Seat ring	PTFE 20% Carbon
	4	Back-up ring	PTFE 20% Carbon
	5	O-ring	EPDM
	6	O-ring	FKM (Viton)
	7	Handle	Steel
	8	ISO-flange	Steel - S355J2C
	9	Flange	Steel - S355J2C

Monoblock and short valve - DN100-200, PN16

Type 94103 - Full 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 and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

Operation

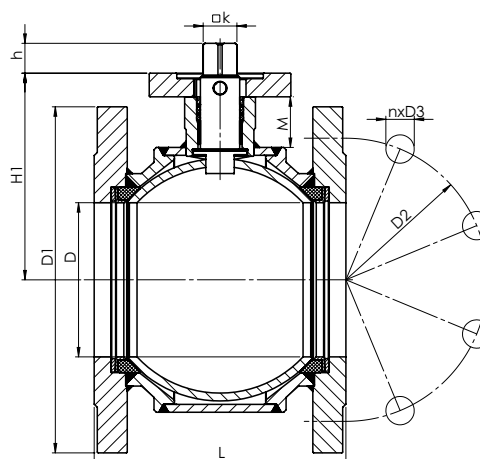
The standard handle is 180 degrees adjustable.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



Dimensions



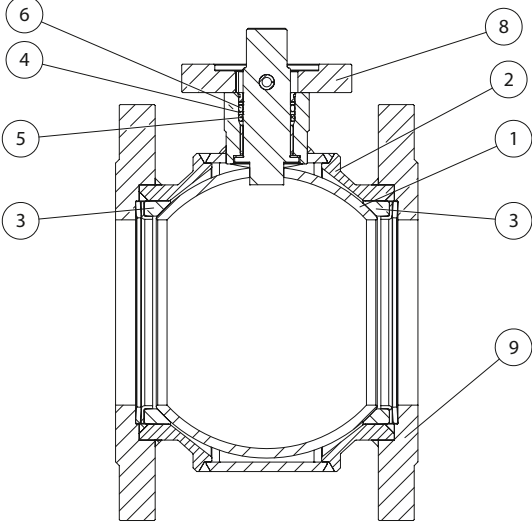
					All dimensions in mm									
DN	BROEN No.	D = Bore	Kvs	net Weight kg	L	D1	D2	□ k	h	H	M	D3	n	ISO
100	9410316100WZ 90	98	1159	15.0	160	220	180	17	22	128	34	18	8	F7
125	9410316125WZ 90	125	1841	24.4	186	270	220	17	20	163	39	18	8	F12
150	9410316150WZ 90	150	2652	36.9	236	285	240	22	21	203	35	22	8	F12
200	9410316200WZ 90	195	5720	93.5	292	340	295	22	21	237	40	22	12	F12

ISO-flange acc. ISO5211.

Monoblock and short valve - DN100-200, PN16



Type 94103 - Full bore

Technical drawing		Material description	
	1	Ball	Steel - SA351Gr CF8
	2	Valve body	Steel - S355J2C
	3	Seat ring	PTFE 20% Carbon
	4	Back-up ring	PTFE 20% Carbon
	5	O-ring	EPDM
	6	O-ring	FKM (Viton)
	8	ISO-flange	Steel - S355J2C
	9	Flange	Steel - S355J2C

Monoblock and short valve - DN100-200, PN16

Type 94103 - Full 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 and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

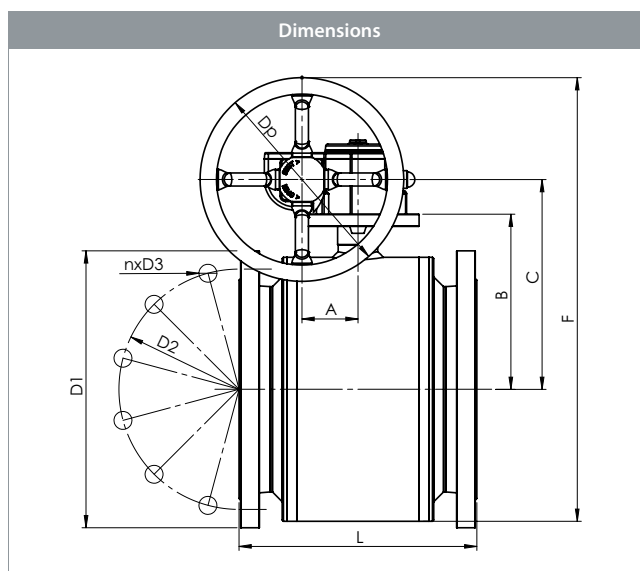
Eco-friendly protection finish against corrosion.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm										
DN	BROEN No.	D = Bore	Kvs	net Weight kg	L	D1	D2	DP	A	B	C	F	D3	n	ISO
100	9410316100WZ 99	98	1159	19.8	160	220	180	160	53	132	165	329	18	8	F7
125	9410316125WZ 99	125	1841	33.0	186	270	220	250	69	162	205	439	18	8	F12
150	9410316150WZ 99	150	2652	45.5	236	285	240	250	69	182	225	484	22	8	F12
200	9410316200WZ 99	195	5720	102.1	292	340	295	250	69	215	258	545	22	12	F12

Valve with gear is tested and prepared for use.

Monoblock and short valve - DN100-200, PN16



Type 94103 - Full bore

Technical drawing		Material description	
	1	Ball	Steel - SA351Gr CF8
	2	Valve body	Steel - S355J2C
	3	Seat ring	PTFE 20% Carbon
	9	Flange	Steel - S355J2C
	10	BROEN gearbox	-

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 10

Butterfly valves

Butterfly valve - DN80-450, PN25

Type 65102

Welding × Welding with BROEN-Gear

Butterfly ventil.

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. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

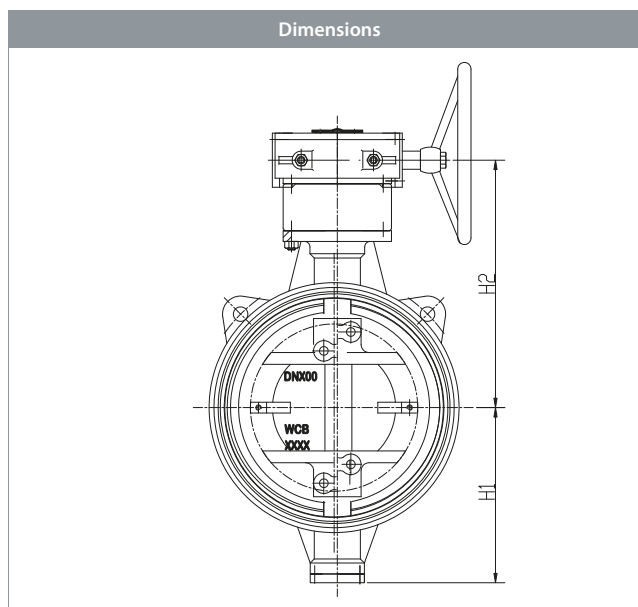
Eco-friendly protection finish against corrosion.

Operation

BROEN-Gear.

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). The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm				ISO
					D1	L	H1	H2	
80	6510225080GBPSS	82	164	12	89	180	85	205	F07
100	6510225100GBPSS	106	250	22	114	190	100	225	F07
125	6510225125GBPSS	132	414	25	140	200	110	276	F10
150	6510225150GBPSS	159	682	32	168	210	180	296	F10
200	6510225200GBPSS	206	1300	55	219	230	220	357	F12
250	6510225250GBPSS	259	2200	66	273	250	240	392	F12
300	6510225300GBPSS	308	3370	95	324	270	270	422	F14
350	6510225350GBPSS	340	4432	150	356	290	305	473	F16
400	6510225400GBPSS	388	6411	180	406	310	335	518	F16
450	6510225450GBPSS	439	8660	250	457	330	365	548	F25

Butterfly valve - DN80-450, PN25

Type 65102



Technical drawing		Material description	
	1	Bottom Cover	ASTM A216 Gr. WCB
	2	Screws	ASTM A193 Gr. B7
	3	Gasket	304 + Graphite
	4	Valve body	ASTM A216 Gr. WCB
	5	Disc seat	304 + Graphite
	6	Retaining ring	ASTM A105
	7	Disc	ASTM216 Gr. WCB
	8	Stem	ASTM A564 Gr. 630 (17-4PH)
	9	Taper pin	ASTM A276 Gr. 410
	10	Screws	ASTM A193 Gr. B7
	11	Body seat	D507Mo (surfacing)
	12	Bushing	SF-1
	13	Packing	Graphite
	14	Gland	ASTM A216 Gr. WCB
	15	Gland Studs	ASTM A193 Gr. B7
	16	Gland Nuts	ASTM A194 Gr. 2H
	17	Yoke Studs	ASTM A193 Gr. B7
	18	Yoke Nuts	ASTM A194 Gr. 2H
	19	Yoke	ASTM A216 Gr. WCB
	20	Wormgear	Assembly set
	21	Handwheel	ASTM A216 Gr. WCB

Butterfly valve - DN500-1000, PN25

Type 65102

Welding × Welding with BROEN-Gear

Butterfly ventil.

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. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

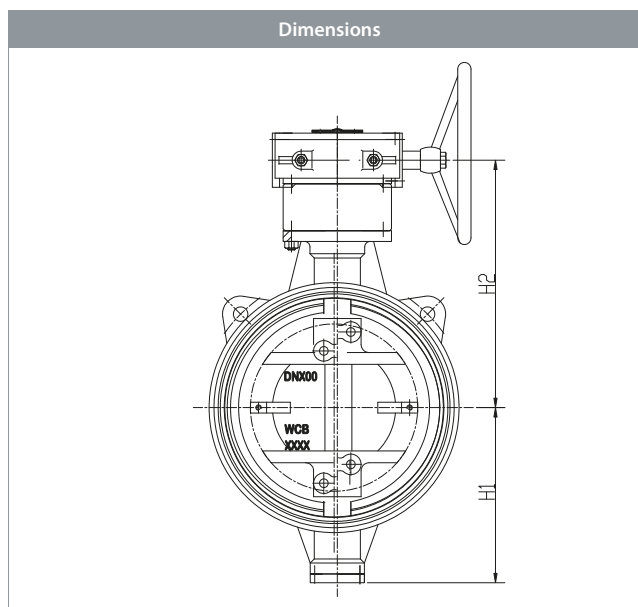
Eco-friendly protection finish against corrosion.

Operation

BROEN-Gear.

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). The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm				ISO
					D1	L	H1	H2	
500	6510225500GBPSS	488	10320	400	508	350	400	680	F25
600	6510225600GBPSS	589	16012	640	610	390	485	730	F30
700	6510225700GBPSS	683	25235	820	711	430	530	862	F30
800	6510225800GBPSS	781	31771	1200	813	470	640	972	F35
900	6510225900GBPSS	879	37594	1650	914	510	690	1040	F35
1000	6510225001GBPSS	976	54201	1800	1016	550	760	1135	F40

Butterfly valve - DN500-1000, PN25

Type 65102



Technical drawing		Material description	
	1	Bottom Cover	ASTM A216 Gr. WCB
	2	Screws	ASTM A193 Gr. B7
	3	Gasket	304 + Graphite
	4	Thrust ring	ASTM A29 Gr. 1035
	5	Valve body	ASTM A216 Gr. WCB
	6	Disc seat	304 + Graphite
	7	Retaining ring	ASTM A105
	8	Disc	ASTM216 Gr. WCB
	9	Stem	ASTM A564 Gr. 630 (17-4PH)
	10	Taper pin	ASTM A276 Gr. 410
	11	Screws	ASTM A193 Gr. B7
	12	Body seat	D507Mo (surfacing)
	13	Bushing	SF-1
	14	Packing	Graphite
	15	Gland	ASTM A216 Gr. WCB
	16	Gland Studs	ASTM A193 Gr. B7
	17	Gland Nuts	ASTM A194 Gr. 2H
	18	Yoke Studs	ASTM A193 Gr. B7
	19	Yoke Nuts	ASTM A194 Gr. 2H
	20	Yoke	ASTM A216 Gr. WCB
	21	Wormgear	Assembly set
	22	Handwheel	ASTM A216 Gr. WCB

Butterfly valve - DN80-450, PN25

Type 65103

Flange × Flange with BROEN-Gear

Butterfly ventil.

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. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

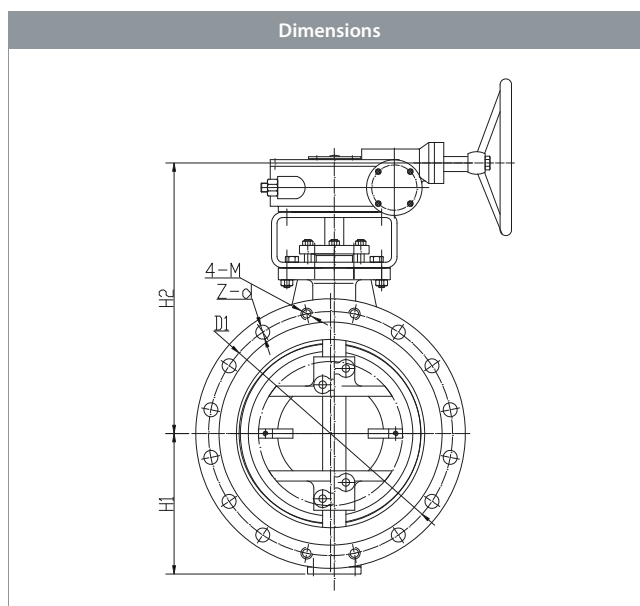
Eco-friendly protection finish against corrosion.

Operation

BROEN-Gear.

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). The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm				ISO
					D	L	H1	H2	
80	6510325080GBPSS	80	164	22	200	114	100	205	F07
100	6510325100GBPSS	105	250	32	235	127	118	225	F07
125	6510325125GBPSS	125	414	39	270	140	135	276	F10
150	6510325150GBPSS	155	682	45	300	140	175	296	F10
200	6510325200GBPSS	205	1300	77	360	152	185	370	F12
250	6510325250GBPSS	255	2200	100	425	165	220	400	F12
300	6510325300GBPSS	305	3370	156	485	178	250	455	F14
350	6510325350GBPSS	355	4432	200	555	190	283	515	F16
400	6510325400GBPSS	405	6411	290	620	216	325	540	F16
450	6510325450GBPSS	455	8660	350	670	222	345	570	F25

Butterfly valve - DN80-450, PN25

Type 65103



Technical drawing		Material description	
	1	Bottom Cover	ASTM A216 Gr. WCB
	2	Screws	ASTM A193 Gr. B7
	3	Gasket	304 + Graphite
	4	Valve body	ASTM A216 Gr. WCB
	5	Disc seat	304 + Graphite
	6	Retaining ring	ASTM A105
	7	Disc	ASTM216 Gr. WCB
	8	Stem	ASTM A564 Gr. 630 (17-4PH)
	9	Taper pin	ASTM A276 Gr. 410
	10	Screws	ASTM A193 Gr. B7
	11	Body seat	D507Mo (surfacing)
	12	Bushing	SF-1
	13	Packing	Graphite
	14	Gland	ASTM A216 Gr. WCB
	15	Gland Studs	ASTM A193 Gr. B7
	16	Gland Nuts	ASTM A194 Gr. 2H
	17	Yoke Studs	ASTM A193 Gr. B7
	18	Yoke Nuts	ASTM A194 Gr. 2H
	19	Yoke	ASTM A216 Gr. WCB
	20	Wormgear	Assembly set
	21	Handwheel	ASTM A216 Gr. WCB

Butterfly valve - DN500-1000, PN25

Type 65103

Flange × Flange with BROEN-Gear

Butterfly ventil.

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. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

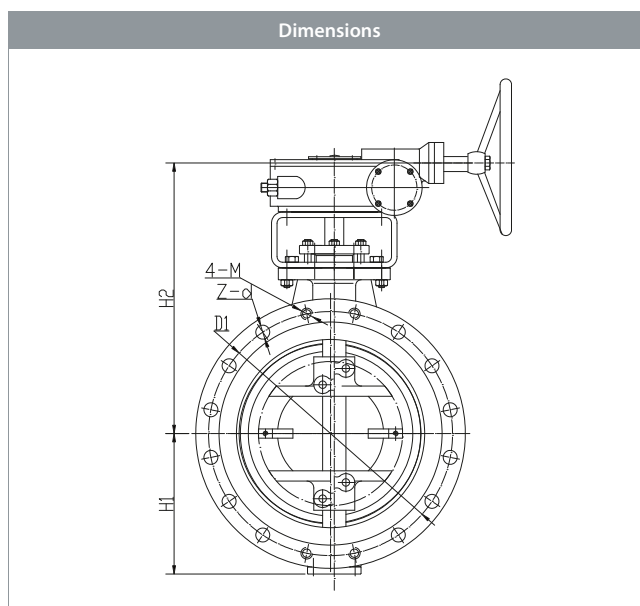
Eco-friendly protection finish against corrosion.

Operation

BROEN-Gear.

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). The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm				ISO
					D	L	H1	H2	
500	6510325500GBPSS	505	10320	370	730	229	375	690	F25
600	6510325600GBPSS	605	16012	530	845	267	435	750	F30
700	6510325700GBPSS	705	25235	900	960	292	545	905	F30
800	6510325800GBPSS	805	31771	1100	1085	318	625	975	F35
900	6510325900GBPSS	900	37594	1250	1185	330	645	1020	F35
1000	6510325001GBPSS	1000	54201	1900	1320	410	725	1130	F40

Butterfly valve - DN500-1000, PN25



Type 65103

Technical drawing		Material description	
	1	Bottom Cover	ASTM A216 Gr. WCB
	2	Screws	ASTM A193 Gr. B7
	3	Gasket	304 + Graphite
	4	Thrust ring	ASTM A29 Gr. 1035
	5	Valve body	ASTM A216 Gr. WCB
	6	Disc seat	304 + Graphite
	7	Retaining ring	ASTM A105
	8	Disc	ASTM216 Gr. WCB
	9	Stem	ASTM A564 Gr. 630 (17-4PH)
	10	Taper pin	ASTM A276 Gr. 410
	11	Screws	ASTM A193 Gr. B7
	12	Body seat	D507Mo (surfacing)
	13	Bushing	SF-1
	14	Packing	Graphite
	15	Gland	ASTM A216 Gr. WCB
	16	Gland Studs	ASTM A193 Gr. B7
	17	Gland Nuts	ASTM A194 Gr. 2H
	18	Yoke Studs	ASTM A193 Gr. B7
	19	Yoke Nuts	ASTM A194 Gr. 2H
	20	Yoke	ASTM A216 Gr. WCB
	21	Wormgear	Assembly set
	22	Handwheel	ASTM A216 Gr. WCB

Butterfly valve - DN80-450, PN25

Type 65124

Wafer type with BROEN-Gear

Butterfly ventil.

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. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

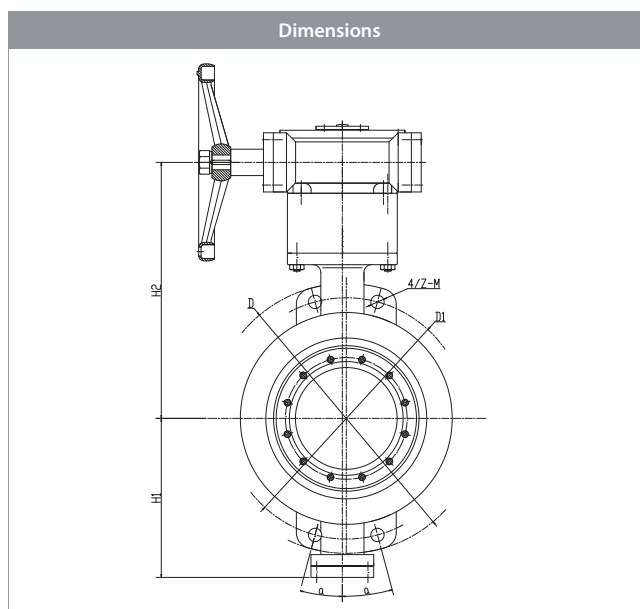
Eco-friendly protection finish against corrosion.

Operation

BROEN-Gear.

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). The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm						ISO
					D	D1	D2	L	H1	H2	
80	6512425080GBPSS	80	164	10	200	160	138	64	100	195	F07
100	6512425100GBPSS	100	250	18	235	190	162	64	110	215	F07
125	6512425125GBPSS	125	414	25	270	220	188	70	135	270	F10
150	6512425150GBPSS	150	682	30	300	250	218	76	175	290	F10
200	6512425200GBPSS	200	1300	38	360	310	278	89	185	330	F12
250	6512425250GBPSS	250	2200	60	425	370	335	114	215	375	F12
300	6512425300GBPSS	300	3370	88	485	430	395	114	250	440	F14
350	6512425350GBPSS	350	4432	140	555	490	450	127	285	455	F16
400	6512425400GBPSS	400	6411	185	620	550	505	140	325	510	F16
450	6512425450GBPSS	450	8660	240	670	600	555	152	345	550	F25

Butterfly valve - DN80-450, PN25



Type 65124

Technical drawing		Material description	
	1	Bottom Cover	ASTM A216 Gr. WCB
	2	Screws	ASTM A193 Gr. B7
	3	Gasket	304 + Graphite
	4	Valve body	ASTM A216 Gr. WCB
	5	Disc seat	304 + Graphite
	6	Retaining ring	ASTM A105
	7	Disc	ASTM216 Gr. WCB
	8	Stem	ASTM A564 Gr. 630 (17-4PH)
	9	Taper pin	ASTM A276 Gr. 410
	10	Screws	ASTM A193 Gr. B7
	11	Body seat	D507Mo (surfacing)
	12	Bushing	SF-1
	13	Packing	Graphite
	14	Gland	ASTM A216 Gr. WCB
	15	Gland Studs	ASTM A193 Gr. B7
	16	Gland Nuts	ASTM A194 Gr. 2H
	17	Yoke Studs	ASTM A193 Gr. B7
	18	Yoke Nuts	ASTM A194 Gr. 2H
	19	Yoke	ASTM A216 Gr. WCB
	20	Wormgear	Assembly set
	21	Handwheel	ASTM A216 Gr. WCB

Butterfly valve - DN500-1000, PN25

Type 65124

Wafer type with BROEN-Gear

Butterfly ventil.

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. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

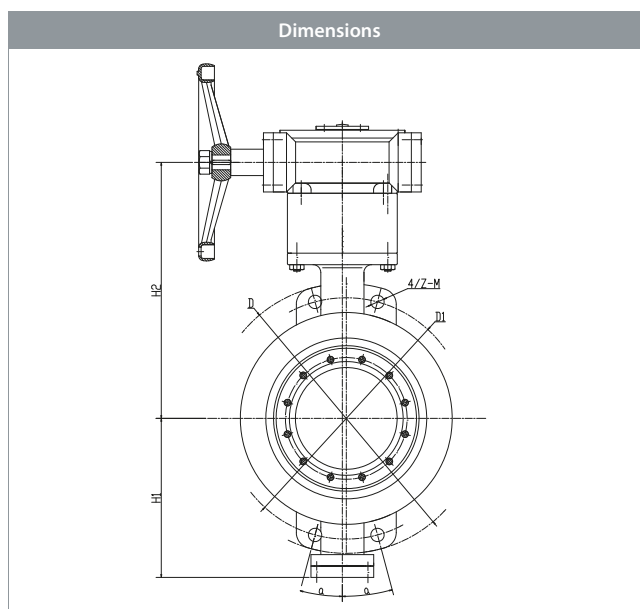
Eco-friendly protection finish against corrosion.

Operation

BROEN-Gear.

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). The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm						ISO
					D	D1	D2	L	H1	H2	
500	6512425500GBPSS	500	10320	295	730	660	615	152	375	635	F25
600	6512425600GBPSS	600	16012	395	845	770	720	178	430	685	F30
700	6512425700GBPSS	700	25235	470	960	875	820	229	540	735	F30
800	6512425800GBPSS	800	31771	710	1085	990	930	241	710	850	F35
900	6512425900GBPSS	900	37594	840	1185	1090	1030	241	650	890	F35
1000	6512425001GBPSS	1000	54201	1200	1320	1210	1140	300	720	920	F40

Butterfly valve - DN500-1000, PN25



Type 65124

Technical drawing	Material description		
Technical drawing of a butterfly valve assembly in cross-section. The drawing includes a handwheel (22) connected to a wormgear (21) which meshes with a yoke (20). The yoke is connected to a stem (9) via a taper pin (10). The stem passes through a disc (8) and a disc seat (6). The assembly is housed in a valve body (5) with a body seat (12). The valve is sealed with a gasket (3) and a thrust ring (4). The stem is supported by a retaining ring (7) and a disc seat (6). The assembly is mounted on a base (1) with gland studs (16) and gland nuts (17). A circular inset shows a magnified view of the yoke (20) and disc (8) connection, highlighting the taper pin (10) and the yoke studs (18) and yoke nuts (19).	1	Bottom Cover	ASTM A216 Gr. WCB
	2	Screws	ASTM A193 Gr. B7
	3	Gasket	304 + Graphite
	4	Thrust ring	ASTM A29 Gr. 1035
	5	Valve body	ASTM A216 Gr. WCB
	6	Disc seat	304 + Graphite
	7	Retaining ring	ASTM A105
	8	Disc	ASTM216 Gr. WCB
	9	Stem	ASTM A564 Gr. 630 (17-4PH)
	10	Taper pin	ASTM A276 Gr. 410
	11	Screws	ASTM A193 Gr. B7
	12	Body seat	D507Mo (surfacing)
	13	Bushing	SF-1
	14	Packing	Graphite
	15	Gland	ASTM A216 Gr. WCB
	16	Gland Studs	ASTM A193 Gr. B7
	17	Gland Nuts	ASTM A194 Gr. 2H
	18	Yoke Studs	ASTM A193 Gr. B7
	19	Yoke Nuts	ASTM A194 Gr. 2H
	20	Yoke	ASTM A216 Gr. WCB
	21	Wormgear	Assembly set
	22	Handwheel	ASTM A216 Gr. WCB

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 11
Hot tap valve
Full bore

Hot tap valve - DN20-40, PN25

Type 68602 - Full bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

Hot tap valve for heating systems, district heating, cooling and industrial purpose.

Media

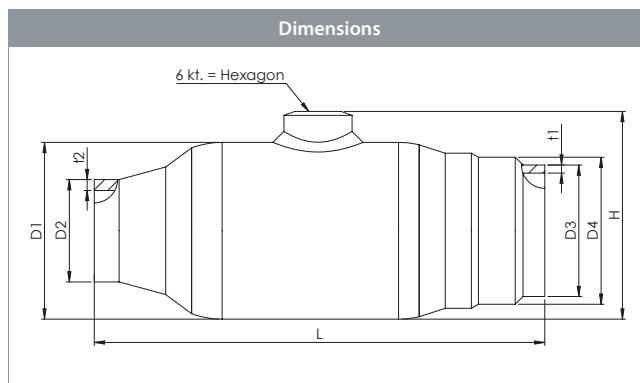
Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

Hot tap valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® hot tap tool".



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	Hex.	Drill size	Rec. RPM	L	H	t1	t2	D1	D2	D3	D4
20	68602020 000	20	57	1.1	5	19	300	143	60	2.3	3.5	51.2	28	26.9	G 1 1/8
25	68602025 000	25	81	1.5	5	24	300	145	67	2.6	3.5	56.0	33	33.7	G 1 1/2
32	68602032 000	32	133	2.2	5	30	250	178	92	2.6	4.0	76.0	42	42.4	G 1 3/4
40	68602040 000	39	229	3.5	7	37	200	198	103	2.6	5.0	88.0	52	48.3	G 2 1/4

Hot tap valve - DN20-40, PN25

Type 68602 - Full bore



Technical drawing		Material description	
	1	Welding	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
	17	O-ring	Rubber - FPM70
	37	Pipe plug	Steel - 11SMnPb30 / 1.0718 / EN 10277-3

Hot tap tool - DN20-40, PN25

Type 68500 - Full bore

Hot tap tool

BROEN Ballomax® hot tap valves from DN20 to DN40 make it very simple and economical to connect new district heating consumers to the existing network quite without causing any inconvenience and/or disconnection of supply.

The procedure is very simple:

- 1) The main pipe is stripped where the branch is requested.
- 2) The hot tap valve is welded on to the pipe with the ball in open position.
- 3) The hot tap tool is mounted on the valve and connected to a drilling machine.
- 4) You drill directly through the valve and into the heating pipe.
- 5) Having drilled the hole, you pull back the bore, close the valve, remove the tool and the consumer can be connected to the network.

Content

See next pages.

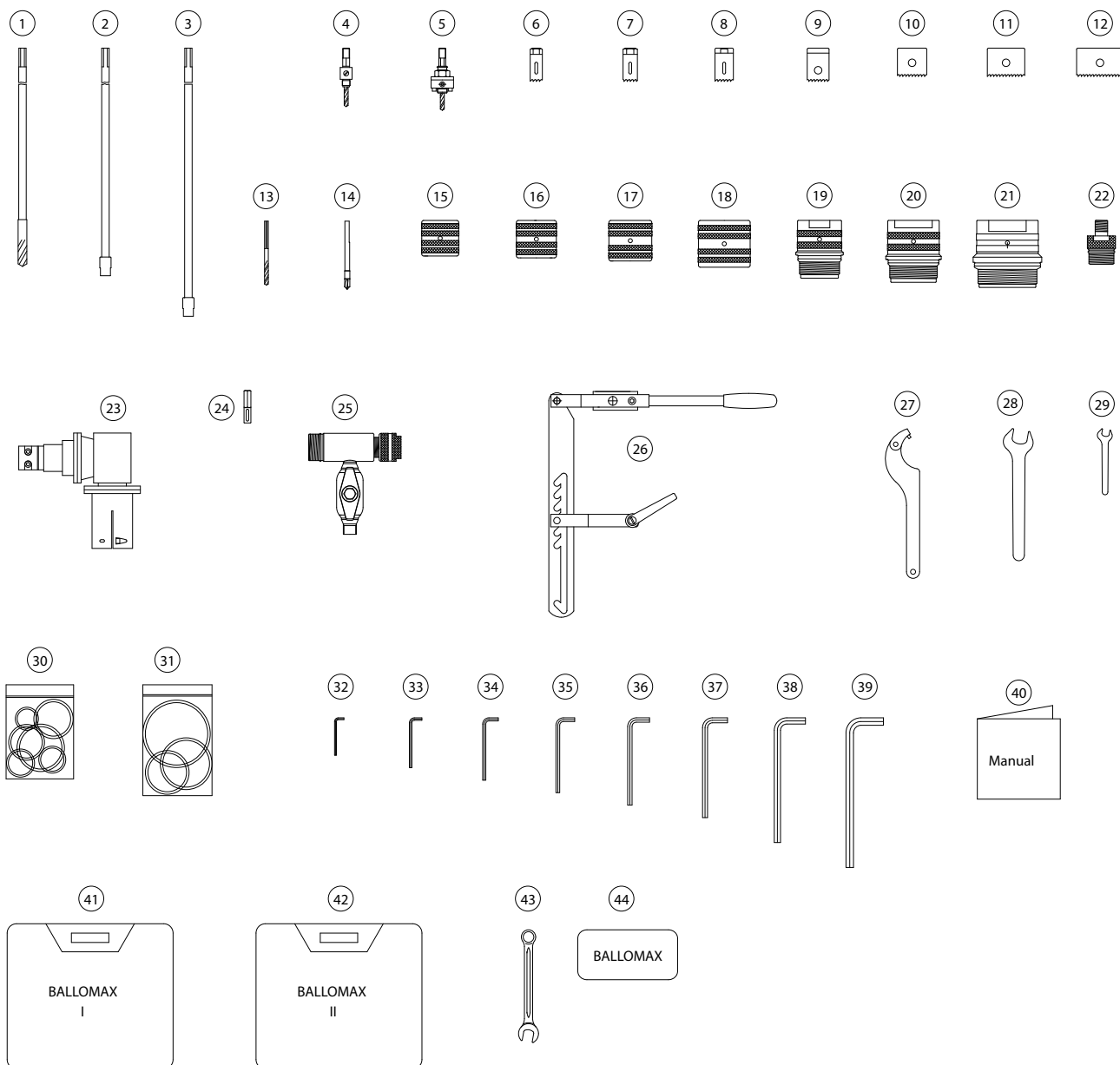


DN	BROEN No.	Description
20-40	68500015 000	Hot tap tool with case

Hot tap tool - DN20-40, PN25

 Type 68500 - Full bore


Technical drawing



Hot tap tool - DN20-40, PN25

Type 68500 - Full bore



No.	Description	Material	BROEN No.
1	Drill with handle Ø14	Stainless steel W 1.4305	491385
2	Spoon bit drilling stem	Stainless steel W 1.4305	491394
4	Small spoon bit holder		491388
5	Holder, spoon bit with driver		491389
6	Spoon bit 19 mm		100845
7	Spoon bit 24 mm		100846
8	Spoon bit 30 mm		100847
9	Spoon bit 37 mm		100848
13	Centre drill Ø6,4 mm		100842
14	Centre drill Ø7 mm with jump ring		500058
15	Coupling for DN25	Chromium-plated brass	491380
16	Coupling for DN32	Chromium-plated brass	491381
17	Coupling for DN40	Chromium-plated brass	491382
22	Test cap	Chromium-plated brass	491384
25	Hot tap valve	Stainless steel	491375
	T-handle		66050010 000
	Nut		100113
	Valve		60105020
	Packings, a set of three	Ramilon 4586	491379
	Bearing	Brass	491378
	Union nut	Chromium-plated brass	491377
27	Hook spanner 6 mm		100841
28	Fork spanner M24		300091
29	Fork spanner M11		300090
30	Set of O-rings Ø31×3	NBR	100824
	Set of O-rings Ø37,2×3	NBR	100825
	Set of O-rings Ø39×3	NBR	100820
	Set of O-rings Ø50,39×3,53	NBR	100646
	Set of O-rings Ø55×4	NBR	100821
	Set of O-rings Ø68×4	NBR	100822
32	Hexagon key 1/8"		500147
33	Hexagon key 4 mm		100959
34	Hexagon key 5 mm		100960
36	Hexagon key 7 mm		500701
40	User's manual		
41	Suitcase with lining		100851
43	Closed spanner		300162
44	Label		491117

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 12
Hot tap valve
Reduced bore

Hot tap valve - DN15-100, PN25

Type 68102 - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

Hot tap valve for heating systems, district heating, cooling and industrial purpose.

Media

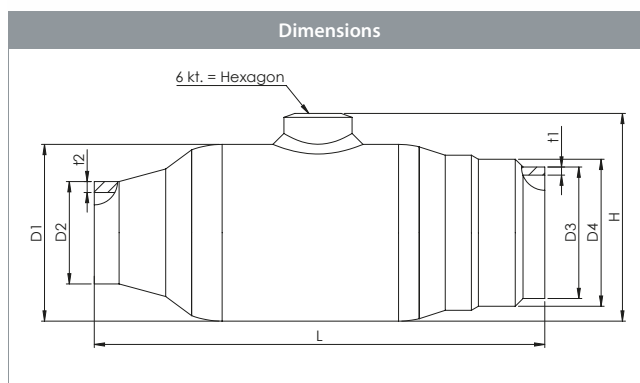
Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

Hot tap valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for Ballomax® hot tap tool".



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	Hex.	Drill size	Rec. RPM	L	H	t1	t2	D1	D2	D3	D4
15	68102015 000	15	8	0.6	5	14	400	127	53	2.0	3.5	42.4	23	21.3	G 7/8
20	68102020 000	15	15	0.6	5	14	400	127	53	2.3	3.5	42.4	23	26.9	G 7/8
25	68102025 000	20	27	0.9	5	19	300	143	63	2.6	3.5	51.0	28	33.7	G 1 1/8
32	68102032 000	25	40	1.2	5	24	300	145	68	2.6	3.5	57.0	33	42.4	G 1 1/2
40	68102040 000	32	69	1.8	7	30	250	178	96	2.6	4.0	76.1	42	48.3	G 1 3/4
50	68102050 000	39	110	3.2	7	37	200	198	107	2.9	5.0	88.9	52	60.3	G 2 1/4
65	68102065 000	49	180	3.8	8	48	200	205	118	2.9	7.5	108	64	76.1	M 64×2
80	68102080 000	63	288	5.2	8	60	150	200	137	3.2	8.0	127	80	88.9	M 76×2
100	68102100 000	78	470	9.3	10/12*	76	125	225	163	3.6	9.0	152	97	114.3	M 95×2

* 10 mm hex. key to operate pipe plug, 12 mm key to operate valve.

Hot tap valve - DN15-100, PN25

Type 68102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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
	17	O-ring	Rubber - FPM70
	37	Pipe plug	Steel - 11SMnPb30 / 1.0718 / EN 10277-3
	1		
	7		

Hot tap tool - DN15-50 - DN65-100, PN25

Type 68500 - Reduced bore

Hot tap tool

BROEN Ballomax® hot tap valves from DN15 to DN100 make it very simple and economical to connect new district heating consumers to the existing network quite without causing any inconvenience and/or disconnection of supply.

The procedure is very simple:

- 1) The main pipe is stripped where the branch is requested.
- 2) The hot tap valve is welded on to the pipe with the ball in open position.
- 3) The hot tap tool is mounted on the valve and connected to a drilling machine.
- 4) You drill directly through the valve and into the heating pipe.
- 5) Having drilled the hole, you pull back the bore, close the valve, remove the tool and the consumer can be connected to the network.

For Ballomax® hot tap valves DN65, DN80 and DN100 we recommend to use a specially developed reduction gear with a drill pressure unit to be connected between the hot tap tool and the drilling machine.

Content

See next pages.



DN15-50



DN65-100

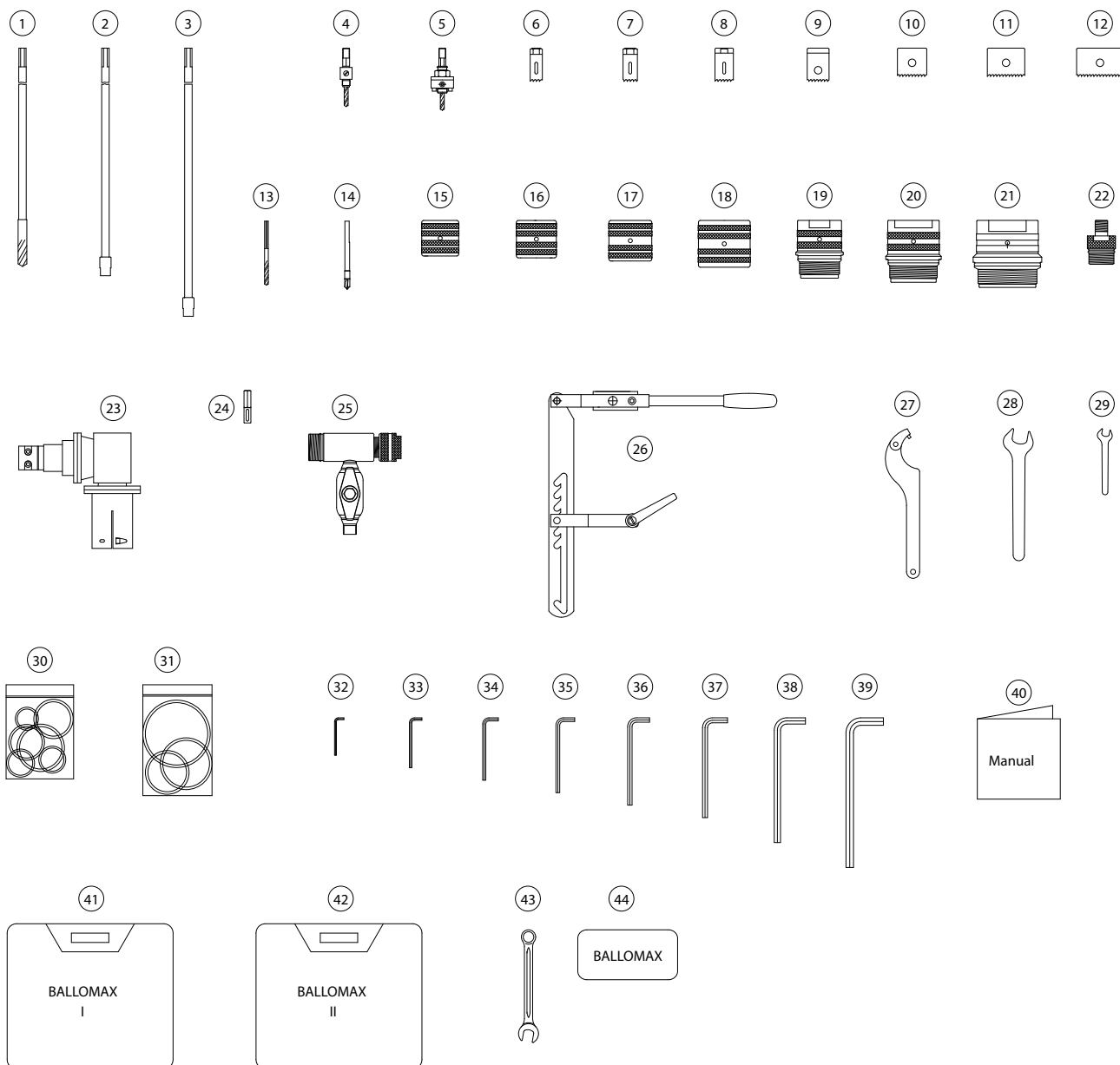
DN	BROEN No.	Description
15-50	68500015 000	Hot tap tool with case
65-100	68500100 000	Supplementary set

Hot tap tool - DN15-50 - DN65-100, PN25

Type 68500 - Reduced bore



Technical drawing



Hot tap tool - DN15-50, PN25



Type 68500 - Reduced bore

No.	Description	Material	BROEN No.
1	Drill with handle Ø14	Stainless steel W 1.4305	491385
2	Spoon bit drilling stem	Stainless steel W 1.4305	491394
4	Small spoon bit holder		491388
5	Holder, spoon bit with driver		491389
6	Spoon bit 19 mm		100845
7	Spoon bit 24 mm		100846
8	Spoon bit 30 mm		100847
9	Spoon bit 37 mm		100848
13	Centre drill Ø6,4 mm		100842
14	Centre drill Ø7 mm with jump ring		500058
15	Coupling for DN25	Chromium-plated brass	491380
16	Coupling for DN32	Chromium-plated brass	491381
17	Coupling for DN40	Chromium-plated brass	491382
18	Coupling for DN50	Chromium-plated brass	491383
22	Test cap	Chromium-plated brass	491384
25	Hot tap valve	Stainless steel	491375
	T-handle		66050010 000
	Nut		100113
	Valve		60105020
	Packings, a set of three	Ramilon 4586	491379
	Bearing	Brass	491378
	Union nut	Chromium-plated brass	491377
27	Hook spanner 6 mm		100841
28	Fork spanner M24		300091
29	Fork spanner M11		300090
30	Set of O-rings Ø31×3	NBR	100824
	Set of O-rings Ø37,2×3	NBR	100825
	Set of O-rings Ø39×3	NBR	100820
	Set of O-rings Ø50,39×3,53	NBR	100646
	Set of O-rings Ø55×4	NBR	100821
	Set of O-rings Ø68×4	NBR	100822
32	Hexagon key 1/8"		500147
33	Hexagon key 4 mm		100959
34	Hexagon key 5 mm		100960
36	Hexagon key 7 mm		500701
40	User's manual		
41	Suitcase with lining		100851
43	Closed spanner		300162
44	Label		491117

Hot tap tool - DN65-100, PN25



Type 68500 - Reduced bore

No.	Description	Material	BROEN No.
3	Spoon bit drilling stem	Stainless steel W 1.4305	497394
10	Spoon bit 48 mm		100940
11	Spoon bit 60 mm		100941
12	Spoon bit 76 mm		100942
19	Coupling for DN65	Chromium-plated brass	497380
20	Coupling for DN80	Chromium-plated brass	498380
21	Coupling for DN100	Chromium-plated brass	499380
23	Reduction gear		100943
24	Driver unit	Stainless steel	300100
26	Attachment unit		100944
31	Set of O-rings Ø62x4	NBR	100931
	Set of O-rings Ø75x4	NBR	100932
	Set of O-rings Ø100x4	NBR	100933
34	Hexagon key 5 mm		100960
35	Hexagon key 6 mm		100961
37	Hexagon key 8 mm		100962
38	Hexagon key 10 mm		100963
39	Hexagon key 12 mm		100964
40	User's manual		
42	Suitcase with lining		100965
44	Label		491117

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 13 **Branching valves** **Full bore**

Branching valve - DN15-50, PN40

Type 63601 - Full bore

Female × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

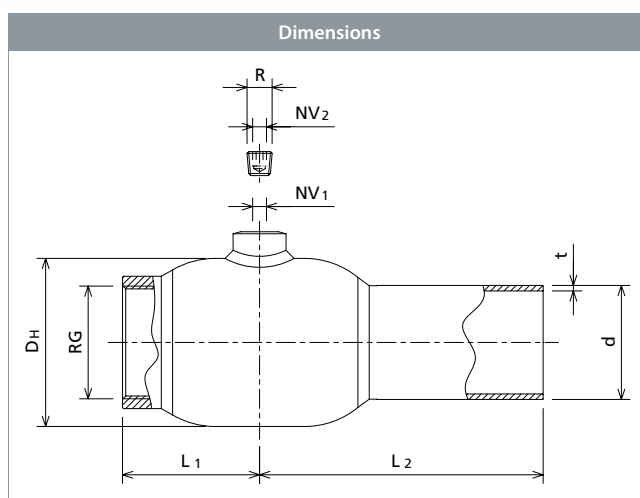
Eco-friendly protection finish against corrosion.

Operation

Branching valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® branching valves".



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	Internal NV1	6-kt. NV2	R	RG	DH	L1	L2	d	t
15	63601015 000	15	32	0.5	5	5	1/8	1/2"	42	43	105	21.3	2.0
20	63601020 000	20	57	1.0	5	5	1/8	3/4"	51	68	115	26.9	2.0
25	63601025 000	25	81	1.5	5	5	1/8	1"	57	71	115	33.7	2.6
32	63601032 000	32	133	2.1	8	8	3/8	1 1/4"	76	80	130	42.4	2.6
40	63601040 000	40	229	3.1	8	8	3/8	1 1/2"	88	88	130	48.3	2.6
50	63601050 000	50	295	5.5	8	8	3/8	2"	108	110	150	60.3	2.9

Branching valve - DN15-50, PN40

Type 63601 - Full bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	3	Female	Steel - S355J2+N / 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
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	17	O-ring	Rubber - FPM70
	37	Pipe plug	Steel - 11SMnPb30 / 1.0718 / EN 10277-3

Branching valve - DN15-50, PN40

Type 63602 - Full bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

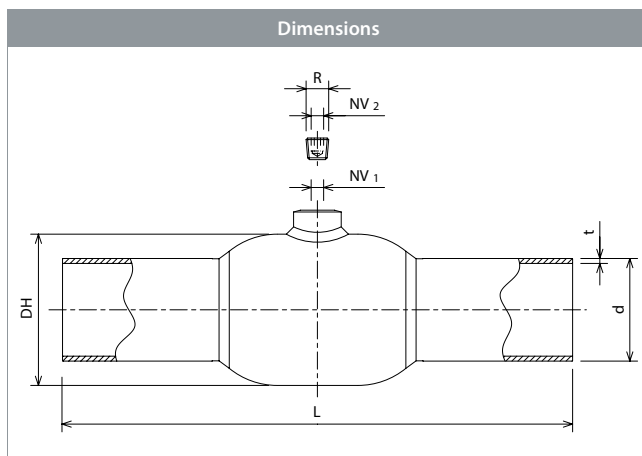
Eco-friendly protection finish against corrosion.

Operation

Branching valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® branching valves".



					All dimensions in mm						
DN	BROEN No.	Bore	Kvs	net Weight kg	Internal NV1	6-kt. NV2	R	DH	L	d	t
15	63602015 000	15	32	0.6	5	5	1/8	42	210	21.3	2.0
20	63602020 000	20	57	1.1	5	5	1/8	51	230	26.9	2.0
25	63602025 000	25	81	1.5	5	5	1/8	57	230	33.7	2.6
32	63602032 000	32	133	2.4	8	8	3/8	76	260	42.4	2.6
40	63602040 000	40	229	3.1	8	8	3/8	89	260	48.3	2.6
50	63602050 000	50	295	5.4	8	8	3/8	108	300	60.3	2.9

Branching valve - DN15-50, PN40

Type 63602 - Full bore



Technical drawing		Material description	
	1	Welding	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+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	17	O-ring	Rubber - FPM70
	37	Pipe plug	Steel - 11SMnPb30 / 1.0718 / EN 10277-3

Branching valve - DN65-80, PN25

Type 63602 - Full bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

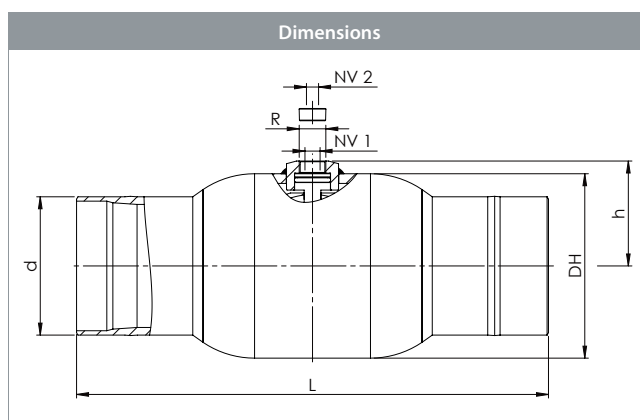
Eco-friendly protection finish against corrosion.

Operation

Branching valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® branching valves".



					All dimensions in mm							
DN	BROEN No.	Bore	Kvs	net Weight kg	Internal NV1	6-kt. NV2	R	DH	L	h	d	t
65	63602065 000	65	498	7.0	8	8	3/8	127	360	80.5	76.1	2.9
80	63602080 000	80	754	11.9	12	10	M 22×1.5	152	370	87.0	88.9	3.2

Branching valve - DN65-80, PN25

Type 63602 - Full bore



Technical drawing		Material description	
	1	Welding	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+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	17	O-ring	Rubber - FPM70
	38	Pipe plug	Steel

Branching valve - DN100-150, PN25

Type 63602 - Full bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

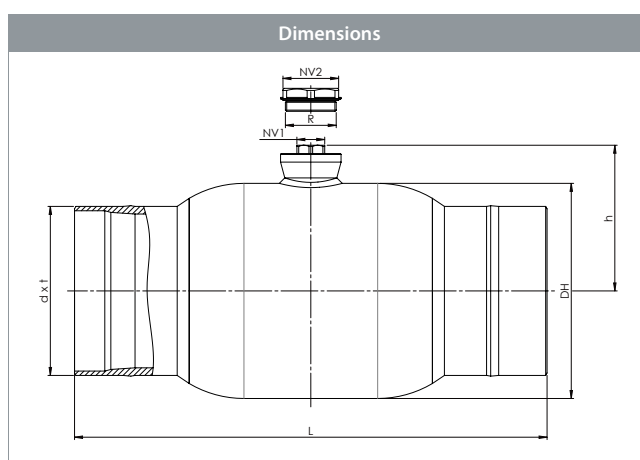
Eco-friendly protection finish against corrosion.

Operation

Branching valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® branching valves".



					All dimensions in mm							
DN	BROEN No.	Bore	Kvs	net Weight kg	Internal NV1	6-kt. NV2	R	DH	L	h	d	t
100	63602100 000	100	1159	15.7	HEX 23	HEX 46	M 42×2	178	390	120.4	114.3	3.6
125	63602125 000	125	1841	22.6	HEX 27	HEX 50	M 48×2	219	390	147.5	139.7	3.6
150	63602150 000	150	2652	28.4	HEX 27	HEX 55	M 55×2	267	390	169.0	168.3	4.0

Branching valve - DN100-150, PN25

Type 63602 - Full bore



Technical drawing		Material description	
	1	Welding	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+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
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	25	Friction gasket	PTFE 20% Carbon
	30	Circlip	Steel
	35	Branching washer	PTFE 20% Carbon
	36	Branching plug	Steel - S355J2+N / 1.0570 / EN 10025-2

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 14

Branching valves

Reduced bore

Branching valve - DN15-50, PN40

Type 63101 - Reduced bore

Female x Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

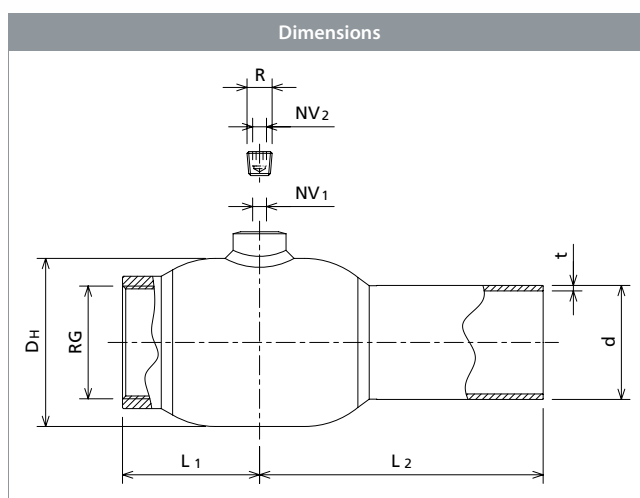
Eco-friendly protection finish against corrosion.

Operation

Branching valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® branching valves".



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	Internal NV1	6-kt. NV2	R	RG	DH	L1	L2	d	t
20	63101020 000	15	15	0.4	5	5	1/8	3/4"	42	38	115	26.9	2.3
25	63101025 000	20	27	1.1	5	5	1/8	1"	51	65	115	33.7	2.6
32	63101032 000	25	40	1.5	5	5	1/8	1 1/4"	57	65	130	42.4	2.6
40	63101040 000	32	69	2.2	7	7	1/4	1 1/2"	76	75	130	48.3	2.6
50	63101050 000	40	110	3.2	7	7	1/4	2"	89	84	150	60.3	2.9

Branching valve - DN15-50, PN40

Type 63101 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	3	Female	Steel - S355J2+N / 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
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	17	O-ring	Rubber - FPM70
	37	Pipe plug	Steel - 11SMnPb30 / 1.0718 / EN 10277-3

Branching valve - DN15-50, PN40

Type 63102 - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

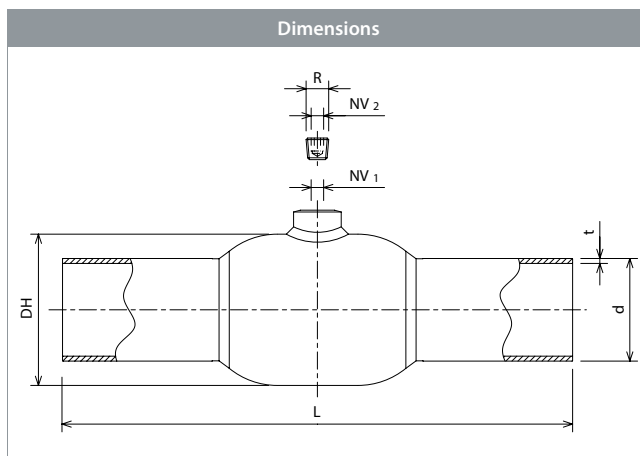
Eco-friendly protection finish against corrosion.

Operation

Branching valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® branching valves".



					All dimensions in mm						
DN	BROEN No.	Bore	Kvs	net Weight kg	Internal NV1	6-ket. NV2	R	DH	L	d	t
15	63102015 000	10	8	0.5	5	5	1/8	38	210	21.3	2.0
20	63102020 000	15	15	0.55	5	5	1/8	42	230	26.9	2.3
25	63102025 000	20	27	1.1	5	5	1/8	51	230	33.7	2.6
32	63102032 000	25	40	1.6	5	5	1/8	57	260	42.4	2.6
40	63102040 000	32	69	2.4	7	7	1/4	76	260	48.3	2.6
50	63102050 000	40	110	3.5	7	7	1/4	89	300	60.3	2.9

Branching valve - DN15-50, PN40

Type 63102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	17	O-ring	Rubber - FPM70
	37	Pipe plug	Steel - 11SMnPb30 / 1.0718 / EN 10277-3

Branching valve - DN40-50, PN40

Type 63902 - **Reduced bore** - **FLOWOPTIMIZED**

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

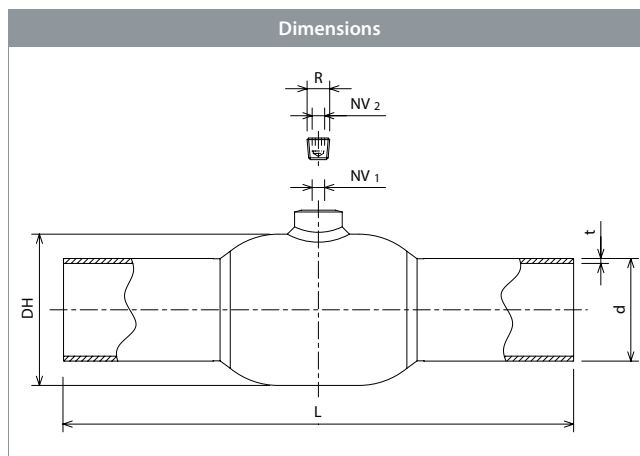
Eco-friendly protection finish against corrosion.

Operation

Branching valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® branching valves".



					All dimensions in mm						
DN	BROEN No.	Bore	Kvs	net Weight kg	Internal NV1	6-ket. NV2	R	DH	L	d	t
40	63902040 000	32	78	2,5	7	7	¼	76	260	48,3	2,6
50	63902050 000	40	124	3,7	7	7	¼	89	300	60,3	2,9

Branching valve - DN40-50, PN40

Type 63902 - Reduced bore - **FLOWOPTIMIZED**



Technical drawing		Material description	
	1	Welding	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+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	17	O-ring	Rubber - FPM70
	37	Pipe plug	Steel - 11SMnPb30 / 1.0718 / EN 10277-3

Branching valve - DN65-100, PN25

Type 63102 - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

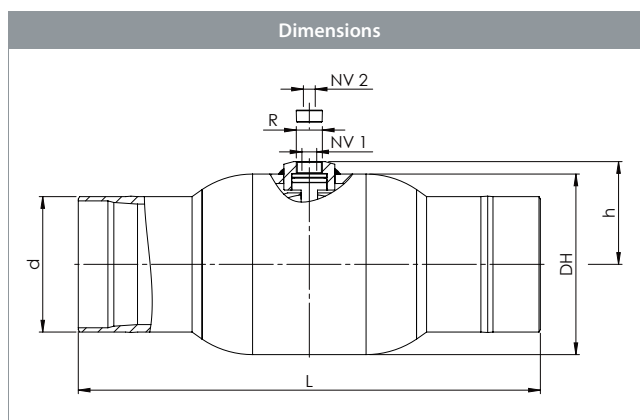
Eco-friendly protection finish against corrosion.

Operation

Branching valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® branching valves".



					All dimensions in mm						
DN	BROEN No.	Bore	Kvs	net Weight kg	Internal NV1	6-kt. NV2	R	DH	L	h	d
65	63102065 000	50	180	5.3	8	8	3/8	108.0	360	71.0	76.1
80	63102080 000	65	288	7.3	8	8	3/8	127.0	370	80.5	88.9
100	63102100 000	80	470	11.1	12	10	M 22×1.5	152.4	390	87.0	114.3

Branching valve - DN65-100, PN25

Type 63102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	17	O-ring	Rubber - FPM70
	38	Pipe plug	Steel

Branching valve - DN65-100, PN25

Type 63902 - **Reduced bore** - **FLOWOPTIMIZED**

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

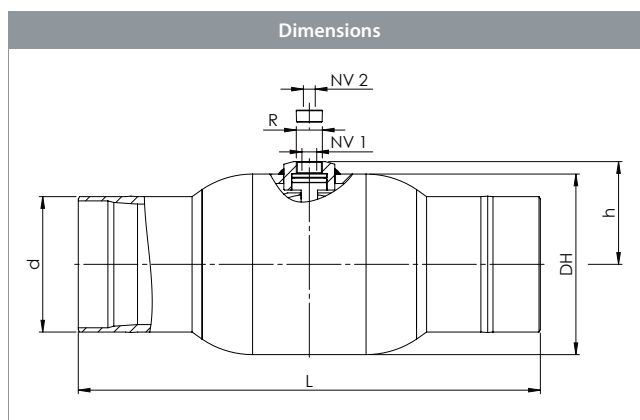
Eco-friendly protection finish against corrosion.

Operation

Branching valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® branching valves".



					All dimensions in mm						
DN	BROEN No.	Bore	Kvs	net Weight kg	Internal NV1	6-kt. NV2	R	DH	L	h	d
65	63902065 000	50	202	6.0	8	8	3/8"	108	360	71.0	76.1
80	63902080 000	65	311	7.5	8	8	3/8"	127	370	80.5	88.9
100	63902100 000	80	523	11.5	12	12	M 22×1.5	152	390	87.0	114.3

Branching valve - DN65-100, PN25

Type 63902 - Reduced bore - **FLOWOPTIMIZED**



Technical drawing		Material description	
	1	Welding	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+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	17	O-ring	Rubber - FPM70
	38	Pipe plug	Steel

Branching valve - DN125-200, PN25

Type 63102 - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

Water. Not suitable for steam. Other media on request. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

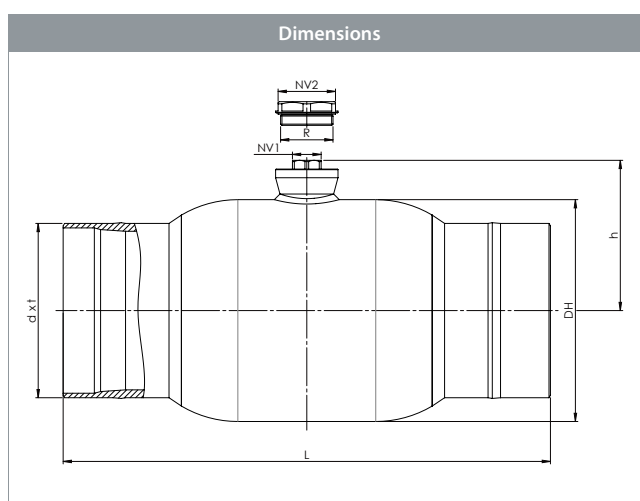
Eco-friendly protection finish against corrosion.

Operation

Branching valve with a cap screw and a hexagon recess for inserting an Allen key. The spindle has a notch for indication of position.

Notice

It is recommended that you read the "User manual for BROEN Ballomax® branching valves".



					All dimensions in mm						
DN	BROEN No.	Bore	Kvs	net Weight kg	Internal NV1	6-k. NV2	R	DH	L	h	d
125	63102125 000	100	699	14.0	HEX 23	HEX 46	M 42×2	178.0	390	120.4	139.7
150	63102150 000	125	1046	19.9	HEX 27	HEX 50	M 48×2	219.0	390	142.5	168.3
200	63102200 000	150	1500	33.3	HEX 27	HEX 55	M 55×2	267.0	390	169.0	219.1

Branching valve - DN125-200, PN25

Type 63102 - Reduced bore



Technical drawing		Material description	
	1	Welding	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+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
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	25	Friction gasket	PTFE 20% Carbon
	30	Circlip	Steel
	35	Branching washer	PTFE 20% Carbon
	36	Branching plug	Steel - S355J2+N / 1.0570 / EN 10025-2

Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 15

Underground valves

- EN 488

Full bore

Steel ball valve, High stress - DN25-150, PN25

Type 97102 - Full bore

Welding × Welding

Fully welded steel ball valve for underground service acc. to EN 488.

Materials

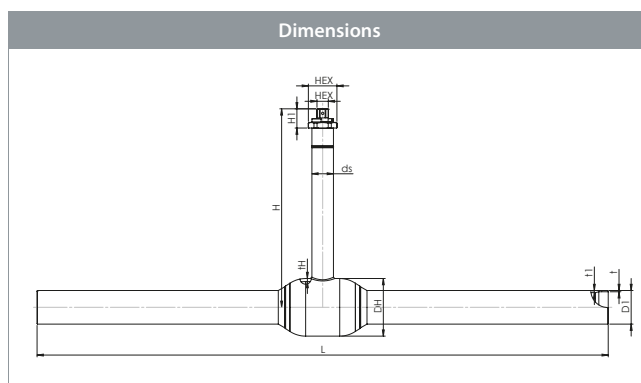
See next page.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.



					All dimensions in mm									
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	H1	D1	t	t1	DH	tH	ds	HEX
25	9710225025 000	25	81	7.8	1510	485.0	22.0	33.7	2.6	4.0	57.0	5.6	38.0	19
32	9710225032 000	32	133	9.6	1510	495.0	22.0	42.4	3.2	4.0	76.1	5.6	38.0	19
40	9710225040 000	40	229	13.5	1510	501.0	22.0	48.3	3.2	5.6	88.9	6.3	38.0	19
50	9710225050 000	50	295	17.8	1510	505.0	22.0	60.3	3.2	5.6	108.0	6.3	38.0	19
65	9710225065 000	65	498	20.6	1510	515.0	22.0	76.1	3.2	5.0	127.0	7.1	38.0	19
80	9710225080 000	80	754	31.1	1510	525.0	22.0	88.9	3.2	5.6	152.4	8.0	57.0	27/70
100	9710225100 000	100	1159	44.5	1510	545.0	24.0	114.3	3.6	6.3	177.8	8.0	76.1	27/70
125	9710225125 000	125	1841	56.5	1510	565.0	24.0	139.7	3.6	6.3	219.1	8.0	76.1	27/70
150	9710225150 000	150	2652	78.5	1510	585.0	49.0	168.3	4.0	7.1	267.0	8.8	76.1	50/90

Steel ball valve, High stress - DN25-150, PN25

Type 97102 - Full bore



Technical drawing	Material description	
	1 Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5 Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6 Ball	Stainless steel - AISI 304L / 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
	15 O-ring	Rubber - EPDM70
	16 Back-up ring	PTFE 20% Carbon
	54 Flowguides	Steel
	55 Stem guide	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	56 Stem stop	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	57 Intermediate ring	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	58 Stop pin	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	59 Bearing	Gunmetal
	60 Stem top	Stainless steel - AISI 303 / 1.4307 / EN 10217-7

Steel ball valve, High stress - DN200-300, PN25

Type 88242 / 88042 - Full bore

Welding × Welding

Fully welded steel ball valve for underground service acc. to EN 488.

Materials

See next page.

Applications

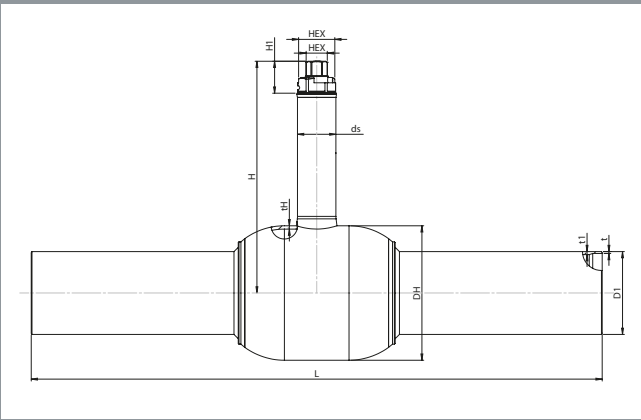
Isolating valve for heating systems, district heating, cooling and industrial purposes.

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.



Dimensions



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	H1	D1	t	t1	DH	tH	ds	HEX	
200	8824225200 070	200	9200	133.5	1510	560	84.5	219.1	5.0	8.0	355.6	8.0	101.6	50/90	
250	8824225250 070	250	13500	197.2	1510	610	84.5	273.0	5.0	8.0	457.0	10.0	101.6	50/90	
300	8804225300 070	300	21600	322.0	1810	793	84.5	323.9	5.6	8.8	508.0	12.5	133.0	50/90	

Steel ball valve, High stress - DN200-300, PN25

Type 88242 / 88042 - Full bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	27	O-ring	Rubber - EPDM70
	51	Bottom end	Steel - S355J2H / EN 10210
	52	Back-up ring	Steel - S355J2H / EN 10210
	53	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	54	Flowguides	Steel
	55	Stem guide	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	56	Stem stop	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	57	Intermediate ring	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	58	Stop pin	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	59	Bearing	Gunmetal
	60	Stem top	Stainless steel - AISI 303 / 1.4307 / EN 10217-7

Steel ball valve, High stress - DN125-400, PN25

Type 97102 / 88242 / 88042 - Full bore

Welding × Welding with ISO-flange

Fully welded steel ball valve for underground service acc. to EN 488.

Materials

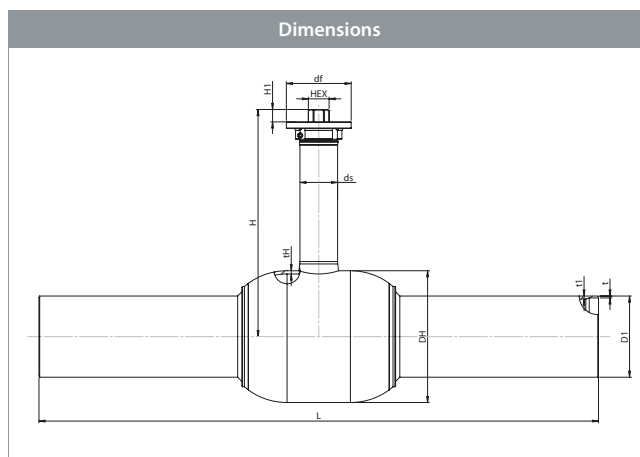
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Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	H1	D1	t	t1	DH	tH	ds	HEX	ISO
125	9710225125S3426	125	1841	56.1	1510	526	49.5	139.7	3.6	6.3	219.1	8.0	76.1	Ø30	F10
150	9710225150S3427	150	2652	76.8	1510	560	61.0	168.3	4.0	7.1	267.0	8.8	76.1	Ø30	F12
200	8824225200 300	200	9200	138.0	1510	560	32.5	219.1	5.0	8.0	355.6	8.8	101.6	HEX50	F14
250	8824225250 300	250	13500	202.9	1510	610	32.5	273.0	5.0	8.0	457.0	10.0	101.6	HEX50	F16
300	8804225300 300	300	21600	330.2	1810	767	99.0	323.9	5.6	8.8	508.0	12.5	133.0	Ø60	F16
400	8804225400 300	400		531.0	1810	790	109.0	406.4	6.3	10.0	660.0	12.5	219.1	Ø80	F30

Steel ball valve, High stress - DN125-400, PN25

Type 97102 / 88242 / 88042 - Full bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - EPDM70
	51	Bottom end	Steel - S355J2H / EN 10210
	52	Back-up ring	Steel - S355J2H / EN 10210
	53	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	54	Flowguides	Steel
	55	Stem guide	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	56	Stem stop	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	57	Intermediate ring	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	58	Stop pin	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	59	Bearing	Gunmetal
	60	Stem top	Stainless steel - AISI 303 / 1.4307 / EN 10217-7

Steel ball valve, High stress, Pre-insulated, class 2 - DN25-400, PN25

Type 97102 - Full bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

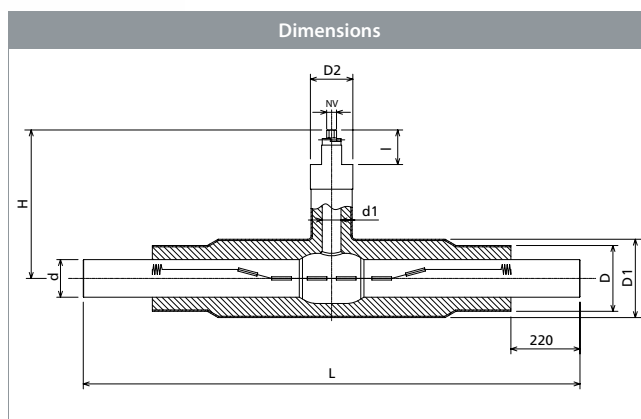
Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN80-250
- Planetary gear for DN80-350

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



Notice

Valves operated with gear for DN80-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	d	L	H	D	D1	D2	d1	I	Hx
25	9710225025 0090	25	81	12	33.7	1510	485.0	110	140	110	38.0	80	19
32	9710225032 0090	32	133	17	42.4	1510	495.0	125	160	110	38.0	80	19
40	9710225040 0090	40	229	20	48.3	1510	500.0	125	160	110	38.0	80	19
50	9710225050 0090	50	295	24	60.3	1510	505.0	140	180	110	38.0	80	19
65	9710225065 0090	65	498	30	76.1	1510	514.5	160	200	110	38.0	80	19
80*	9710225080 0790	80	754	44	88.9	1510	526.0	180	225	125	57.0	85	27/70
100*	9710225100 0790	100	1159	57	114.3	1510	545.0	225	280	125	76.1	105	27/70
125*	9710225125 0790	125	1841	84	139.7	1510	565.0	250	315	125	76.1	105	27/70
150**	9710225150 0790	150	2652	123	168.3	1510	585.0	280	355	125	76.1	130	50/90
200**	On request												
250**	On request												
300**	On request												
350**	On request												
400**	On request												

Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 2 - DN25-400, PN25



Type 97102 - Full bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN80-125	BROEN-Gear - Mobile actuator.
	66361250 070	DN150-250	
	66062020S314200 (0,5 m)	DN25-65	Flex extender - Steel + PVC protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN80-125	Flex extender - Steel + Stainless steel protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN150-250	
	1897S02	DN25-65	Square adaptor plug for mounting on hexagon.
	1903S02	DN80-125	
	500249	DN80-125	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN150-250	
	3/PP05002KS02	DN300-350	

Steel ball valve, High stress, Pre-insulated, class 2, 1 Service valve - DN40-400, PN25

Type 97102 - Full bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488, with one DN40 service valve.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

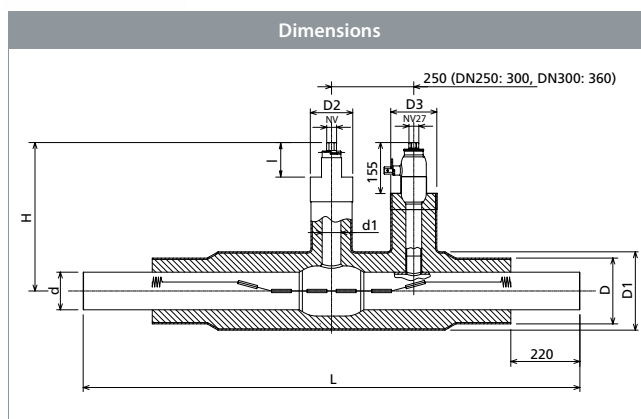
- Universal allen key
- Mobile actuator for DN80-250
- Planetary gear for DN80-350

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear for DN80-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									
					d	L	H	D	D1	D2	D3	d1	I	Hx
40	9710225040 0091	40		23	48.3	1510	500.0	125	160	110	140	38.0	80	19
50	9710225050 0091	50		27	60.3	1510	505.0	140	180	110	140	38.0	80	19
65	9710225065 0091	65		33	76.1	1510	514.5	160	200	110	140	38.0	80	19
80*	9710225080 0791	80		48	88.9	1510	526.0	180	225	125	140	57.0	85	27/70
100*	9710225100 0791	100		60	114.3	1510	545.0	225	280	125	140	76.1	105	27/70
125*	9710225125 0791	125		87	139.7	1510	565.0	250	315	125	140	76.1	105	27/70
150**	9710225150 0791	150		125	168.3	1510	585.0	280	355	125	140	76.1	130	50/90
200**	On request													
250**	On request													
300**	On request													
350**	On request													
400**	On request													

Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 2, 1 Service valve - DN40-400, PN25



Type 97102 - Full bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN80-125	BROEN-Gear - Mobile actuator.
	66361250 070	DN150-250	
	66062020S314200 (0,5 m)	DN25-65	Flex extender - Steel + PVC protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN80-125	Flex extender - Steel + Stainless steel protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN150-250	
	1897S02	DN25-65	Square adaptor plug for mounting on hexagon.
	1903S02	DN80-125	
	500249	DN80-125	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN150-250	
	3/PP05002KS02	DN300-350	

Steel ball valve, High stress, Pre-insulated, class 2, 2 Service valves - DN40-400, PN25

Type 97102 - Full bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN4 88, with two DN40 service valves.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

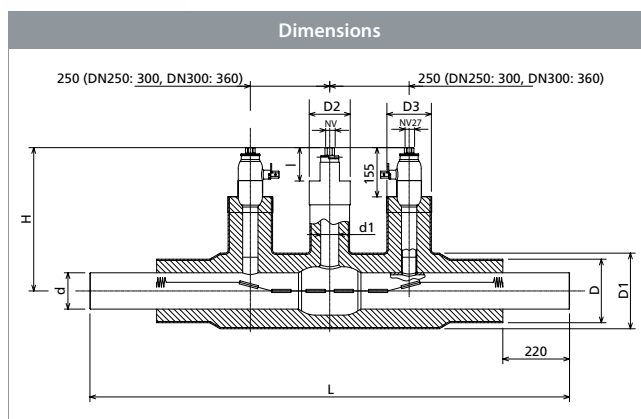
- Universal allen key
- Mobile actuator for DN80-250
- Planetary gear for DN80-350

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear for DN80-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	d	L	H	D	D1	D2	D3	d1	l	Hx	
40	9710225040 0092	40		27	48.3	1510	500.0	125	160	110	140	38.0	80	19	
50	9710225050 0092	50		30	60.3	1510	505.0	140	180	110	140	38.0	80	19	
65	9710225065 0092	65		36	76.1	1510	514.5	160	200	110	140	38.0	80	19	
80*	9710225080 0792	80		51	88.9	1510	526.0	180	225	125	140	57.0	85	27/70	
100*	9710225100 0792	100		63	114.3	1510	545.0	225	280	125	140	76.1	105	27/70	
125*	9710225125 0792	125		89	139.7	1510	565.0	250	315	125	140	76.1	105	27/70	
150**	9710225150 0792	150		125	168.3	1510	585.0	280	355	125	140	76.1	130	50/90	
200**	On request														
250**	On request														
300**	On request														
350**	On request														
400**	On request														

Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 2, 2 Service valves - DN40-400, PN25



Type 97102 - Full bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN80-125	BROEN-Gear - Mobile actuator.
	66361250 070	DN150-250	
	66062020S314200 (0,5 m)	DN25-65	Flex extender - Steel + PVC protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN80-125	Flex extender - Steel + Stainless steel protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN150-250	
	1897S02	DN25-65	Square adaptor plug for mounting on hexagon.
	1903S02	DN80-125	
	500249	DN80-125	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN150-250	
	3/PP05002KS02	DN300-350	

Steel ball valve, High stress, Pre-insulated, class 2 - DN150-400, PN25

Type - Full bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	d	L	H	D	D1	D2	d1	I	Hx
150	On request												
200	On request												
250	On request												
300	On request												
350	On request												
400	On request												

Steel ball valve, High stress, Pre-insulated, class 2 - DN150-400, PN25

Type - Full bore

Accessories	BROEN No.	Dimension	Description
	600651	DN150	BROEN-Gear - Bevel gear (square).
	600652	DN200	
	600653	DN250	
	600654	DN300-350	
	600655	DN400	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN150	BROEN-Gear - Bevel gear (HEX).
	600592	DN200	
	600593	DN250	
	600594	DN300-350	
	600595	DN400	

Steel ball valve, High stress, Pre-insulated, class 2, 1 Service valve - DN150-400, PN25

Type - Full bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488, with one DN40 service valve.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									Hx
					d	L	H	D	D1	D2	D3	d1	I	
150	On request													
200	On request													
250	On request													
300	On request													
350	On request													
400	On request													

Steel ball valve, High stress, Pre-insulated, class 2, 1 Service valve - DN150-400, PN25

Type - Full bore

Accessories	BROEN No.	Dimension	Description
	600651	DN150	BROEN-Gear - Bevel gear (square).
	600652	DN200	
	600653	DN250	
	600654	DN300-350	
	600655	DN400	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN150	BROEN-Gear - Bevel gear (HEX).
	600592	DN200	
	600593	DN250	
	600594	DN300-350	
	600595	DN400	

Steel ball valve, High stress, Pre-insulated, class 2, 2 Service valves - DN150-400, PN25

Type - Full bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488, with two DN40 service valves.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									Hx
					d	L	H	D	D1	D2	D3	d1	I	
150	On request													
200	On request													
250	On request													
300	On request													
350	On request													
400	On request													

Steel ball valve, High stress, Pre-insulated, class 2, 2 Service valves - DN150-400, PN25

Type - Full bore

Accessories	BROEN No.	Dimension	Description
	600651	DN150	BROEN-Gear - Bevel gear (square).
	600652	DN200	
	600653	DN250	
	600654	DN300-350	
	600655	DN400	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN150	BROEN-Gear - Bevel gear (HEX).
	600592	DN200	
	600593	DN250	
	600594	DN300-350	
	600595	DN400	

Steel ball valve, High stress, Pre-insulated, class 3 - DN25-400, PN25

Type 97102 - Full bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

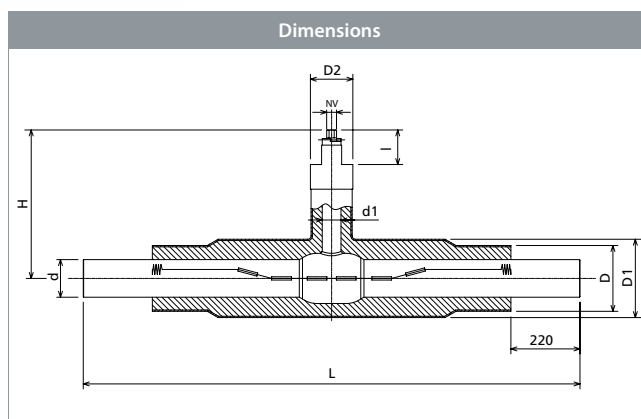
Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN80-250
- Planetary gear for DN80-350

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



Notice

Valves operated with gear for DN80-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	d	L	H	D	D1	D2	d1	I	Hx
25	9710225025 0070	25		12	33.7	1510	485.0	110	140	110	38.0	80	19
32	9710225032 0070	32		17	42.4	1510	495.0	125	160	110	38.0	80	19
40	9710225040 0070	40		20	48.3	1510	500.0	125	160	110	38.0	80	19
50	9710225050 0070	50		24	60.3	1510	505.0	140	180	110	38.0	80	19
65	9710225065 0070	65		30	76.1	1510	514.5	160	200	110	38.0	80	19
80*	9710225080 0770	80		44	88.9	1510	526.0	180	225	125	57.0	85	27/70
100*	9710225100 0770	100		57	114.3	1510	545.0	225	280	125	76.1	105	27/70
125*	9710225125 0770	125		84	139.7	1510	565.0	250	315	125	76.1	105	27/70
150**	9710225150 0770	150		123	168.3	1510	585.0	280	355	125	76.1	130	50/90
200**	On request												
250**	On request												
300**	On request												
350**	On request												
400**	On request												

Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 3 - DN25-400, PN25



Type 97102 - Full bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN80-125	BROEN-Gear - Mobile actuator.
	66361250 070	DN150-250	
	66062020S314200 (0,5 m)	DN25-65	Flex extender - Steel + PVC protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN80-125	Flex extender - Steel + Stainless steel protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN150-250	
	1897S02	DN25-65	Square adaptor plug for mounting on hexagon.
	1903S02	DN80-125	
	500249	DN80-125	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN150-250	
	3/PP05002KS02	DN300-350	

Steel ball valve, High stress, Pre-insulated, class 3, 1 Service valve - DN40-400, PN25

Type 97102 - Full bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488, with one DN40 service valve.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

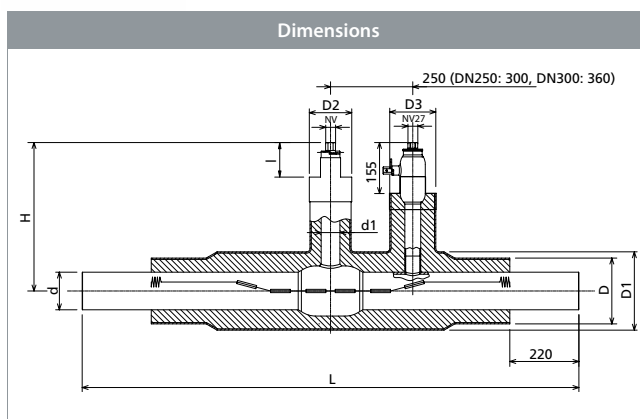
- Universal allen key
- Mobile actuator for DN80-250
- Planetary gear for DN80-350

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear for DN150-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									
					d	L	H	D	D1	D2	D3	d1	I	Hx
40	9710225040 0071	40		23	48.3	1510	500.0	125	160	110	140	38.0	80	19
50	9710225050 0071	50		27	60.3	1510	505.0	140	180	110	140	38.0	80	19
65	9710225065 0071	65		33	76.1	1510	514.5	160	200	110	140	38.0	80	19
80*	9710225080 0771	80		48	88.9	1510	526.0	180	225	125	140	57.0	85	27/70
100*	9710225100 0771	100		60	114.3	1510	545.0	225	280	125	140	76.1	105	27/70
125*	9710225125 0771	125		87	139.7	1510	565.0	250	315	125	140	76.1	105	27/70
150**	9710225150 0771	150		125	168.3	1510	585.0	280	355	125	140	76.1	130	50/90
200**	On request													
250**	On request													
300**	On request													
350**	On request													
400**	On request													

Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 3, 1 Service valve - DN40-400, PN25



Type 97102 - Full bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN80-125	BROEN-Gear - Mobile actuator.
	66361250 070	DN150-250	
	66062020S314200 (0,5 m)	DN25-65	Flex extender - Steel + PVC protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN80-125	Flex extender - Steel + Stainless steel protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN150-250	
	1897S02	DN25-65	Square adaptor plug for mounting on hexagon.
	1903S02	DN80-125	
	500249	DN80-125	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN150-250	
	3/PP05002KS02	DN300-350	

Steel ball valve, High stress, Pre-insulated, class 3, 2 Service valves - DN40-400, PN25

Type 97102 - Full bore

Welding × Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488, with two DN40 service valves.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

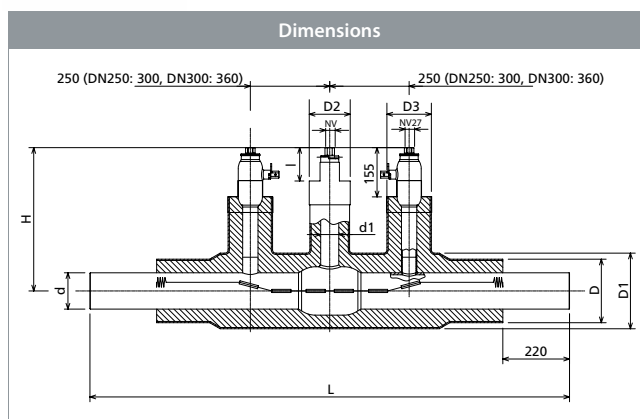
- Universal allen key
- Mobile actuator for DN80-250
- Planetary gear for DN80-350

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear for DN150-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.



					All dimensions in mm									
DN	BROEN No.	Bore	Kvs	net Weight kg	d	L	H	D	D1	D2	D3	d1	I	Hx
40	9710225040 0072	40		27	48.3	1510	500.0	125	160	110	140	38.0	80	19
50	9710225050 0072	50		30	60.3	1510	505.0	140	180	110	140	38.0	80	19
65	9710225065 0072	65		36	76.1	1510	514.5	160	200	110	140	38.0	80	19
80*	9710225080 0772	80		51	88.9	1510	526.0	180	225	125	140	57.0	85	27/70
100*	9710225100 0772	100		63	114.3	1510	545.0	225	280	125	140	76.1	105	27/70
125*	9710225125 0772	125		89	139.7	1510	565.0	250	315	125	140	76.1	105	27/70
150**	9710225150 0772	150		125	168.3	1510	585.0	280	355	125	140	76.1	130	50/90
200**	On request													
250**	On request													
300**	On request													
350**	On request													
400**	On request													

Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 3, 2 Service valves - DN40-400, PN25



Type 97102 - Full bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN80-125	BROEN-Gear - Mobile actuator.
	66361250 070	DN150-250	
	66062020S314200 (0,5 m)	DN25-65	Flex extender - Steel + PVC protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN80-125	Flex extender - Steel + Stainless steel protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN150-250	
	1897S02	DN25-65	Square adaptor plug for mounting on hexagon.
	1903S02	DN80-125	
	500249	DN80-125	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN150-250	
	3/PP05002KS02	DN300-350	

Steel ball valve, High stress, Pre-insulated, class 3 - DN150-400, PN25

Type - Full bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	d	L	H	D	D1	D2	d1	I	Hx
150	On request												
200	On request												
250	On request												
300	On request												
350	On request												
400	On request												

Steel ball valve, High stress, Pre-insulated, class 3 - DN150-400, PN25

Type - Full bore

Accessories	BROEN No.	Dimension	Description
	600651	DN150	BROEN-Gear - Bevel gear (square).
	600652	DN200	
	600653	DN250	
	600654	DN300-350	
	600655	DN400	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN150	BROEN-Gear - Bevel gear (HEX).
	600592	DN200	
	600593	DN250	
	600594	DN300-350	
	600595	DN400	

Steel ball valve, High stress, Pre-insulated, class 3, 1 Service valve - DN150-400, PN25

Type - Full bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488, with one DN40 service valve.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									Hx
					d	L	H	D	D1	D2	D3	d1	I	
150	On request													
200	On request													
250	On request													
300	On request													
350	On request													
400	On request													

Steel ball valve, High stress, Pre-insulated, class 3, 1 Service valve - DN150-400, PN25

Type - Full bore

Accessories	BROEN No.	Dimension	Description
	600651	DN150	BROEN-Gear - Bevel gear (square).
	600652	DN200	
	600653	DN250	
	600654	DN300-350	
	600655	DN400	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN150	BROEN-Gear - Bevel gear (HEX).
	600592	DN200	
	600593	DN250	
	600594	DN300-350	
	600595	DN400	

Steel ball valve, High stress, Pre-insulated, class 3, 2 Service valves - DN150-400, PN25

Type - Full bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN 488, with two DN40 service valves.

Materials

See page 15.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									Hx
					d	L	H	D	D1	D2	D3	d1	I	
150	On request													
200	On request													
250	On request													
300	On request													
350	On request													
400	On request													

Steel ball valve, High stress, Pre-insulated, class 3, 2 Service valves - DN150-400, PN25

Type - Full bore

Accessories	BROEN No.	Dimension	Description
	600651	DN150	BROEN-Gear - Bevel gear (square).
	600652	DN200	
	600653	DN250	
	600654	DN300-350	
	600655	DN400	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN150	BROEN-Gear - Bevel gear (HEX).
	600592	DN200	
	600593	DN250	
	600594	DN300-350	
	600595	DN400	

Service valve - DN50, PN25

Type 60101 - Full bore

Female x Welding

Service valve for pre-insulated valves and pipes.

Materials

Service valve, valvehouse in stainless steel, AISI316 Ti (EN 1.4571), welding end in carbon steel, glassblasted.

Applications

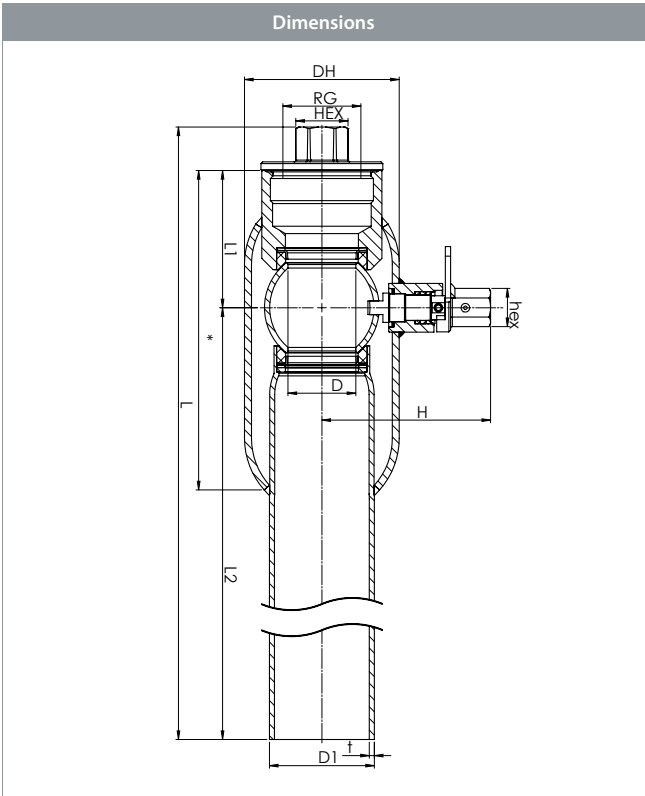
Service valve to be welded on to existing pipe installations.

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm						
DN	BROEN No.	Bore	Kvs	net Weight kg	L	D	d x t	H	G	NV1	NV2
50	60101050S335100	50		7.0	500	108	60.3 x 2.9	135	2"	19	27

Flex extension - DN25-125

Type 66062 - Full bore

Flex extension

Flex extension without back stop for high stress valves.

Materials

Steel and PVC protective pipe.

Applications

The adapter of the inner hexagon part (Stainless steel) will be connected with the stem of the ball valve. The protection tube is made of plastic and will be crimped on to the valve neck.

Notice

All flex extenders can be shortened when needed.



DN	BROEN No.	Length - mm	Nv
25-65	66062020S314200	500	19
25-65	66062020S205900	1000	19
25-65	66062020S306800	2000	19
80-125	66062100S314300	500	27
80-125	66062100S206000	1000	27
80-125	66062100S306700	2000	27

Flex extension - DN25-250

Type 66062 - Full bore

Flex extension

Flex extension with back stop for high stress valves.

Materials

Steel and PVC protective pipe.

Applications

The adapter of the inner hexagon part (Stainless steel) will be connected with the stem of the ball valve. The protection tube consists of hexagonal stainless steel.

Notice

All flex extenders can be shortened when needed.



DN	BROEN No.	Length - mm	Nv
80-125	66062150S314000	500	27/70
80-125	66062150 250	1000	27/70
80-125	66062150 260	2000	27/70
150-250	66062250S314100	500	50/90
150-250	66062250 250	1000	50/90
150-250	66062250 260	2000	50/90

Universal allen key

Type 3723S60 - Reduced bore

Universal allen key

For both isolating and service valves.



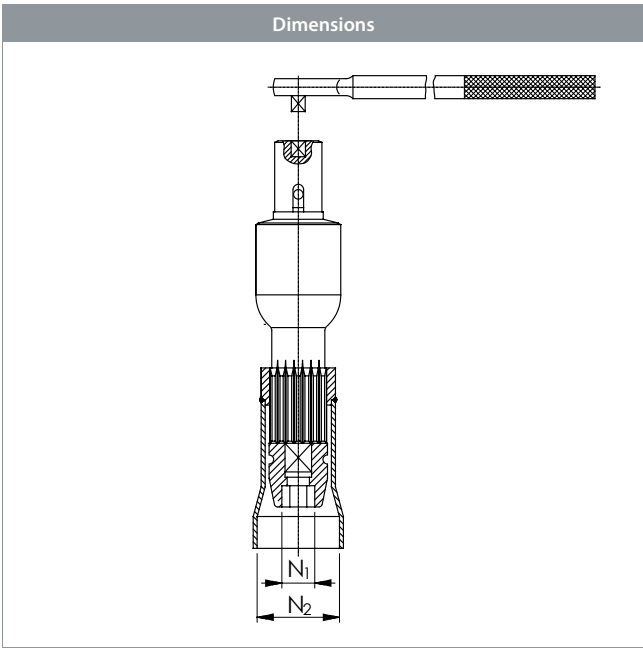
BROEN No.	
	3723S60

BROEN-Gear, Mobile actuator - DN80-250

Type 66361 - Full bore

BROEN-Gear, Mobile actuator

Can be used together with flexible extension with stainless steel protective pipe.



DN	Type	BROEN No.	N1 - mm	N2 - mm	Max. moment - Nm
80-125	MP II	66361100 060	27	70	800
150-200	MP II	66361250 070	50	90	1800
150-250	MP III	66361400 080	50	90	6000

BROEN-Gear, Planetary gear - DN80-350

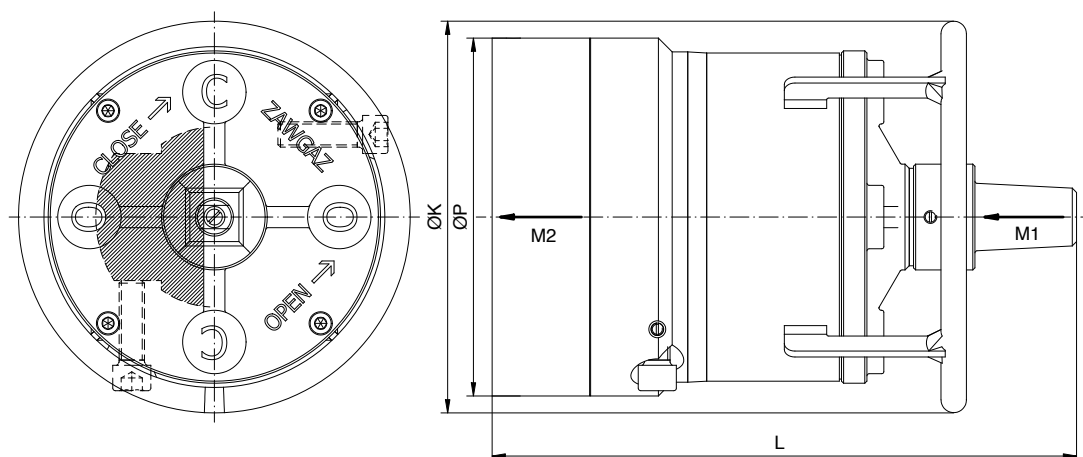
Type 500249 / 3/PP0... - Full bore

BROEN-Gear, Planetary gear

Can be used together with flexible extension with stainless steel protective pipe. * Operated with a SQ key.



Dimensions



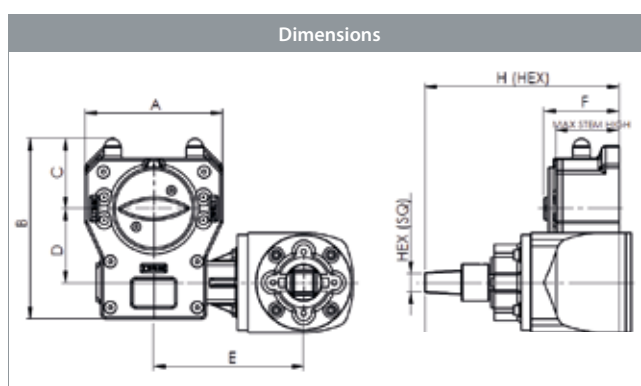
DN	BROEN No.	All dimensions in mm					Square
		M1	M2	L	ØK	ØP	
80-125	500249	50	1000	267	185	169	27/32
150-250	3/PP06001KS02	100	2000	276	185	169	27/32
300-350	3/PP05002KS02	200	6000	331	258	198	27/32

BROEN-Gear, Bevel gear - DN150-400

Type 60059 - Full bore

BROEN-Gear, Bevel gear

BROEN-Gear is a strong high quality bevel-gearbox. The gear is equipped with an angle that makes top operation possible and this makes it well suited for well valves.



DN	BROEN No.	net Weight kg	All dimensions in mm						H (HEX)	HEX
			A	B	C	D	E	F		
150	600591	13.0	138	205	100	71	171	88	217	36
200	600592	17.0	200	242	116	86	181	93	219	36
250	600593	26.0	220	270	122	105	197	102	225	36
300	600594	43.0	285	323	143	130	336	123	323	36
400	600595	68.2	370	408	170	182	388	139	236	36

BROEN-Gear, Bevel gear - DN150-400

Type 60065 - Full bore

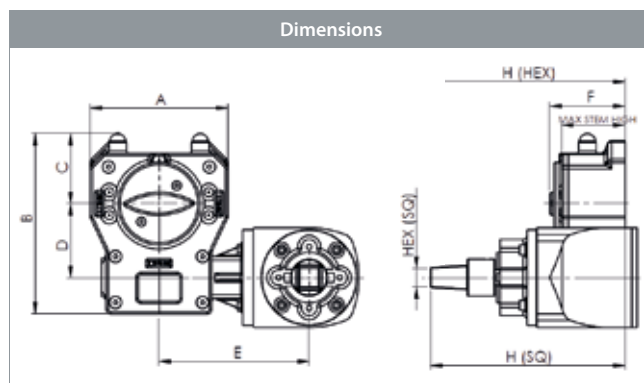
BROEN-Gear, Bevel gear with telescopic extender

BROEN-Gear is a strong high quality bevel-gearbox. The gear is equipped with an angle that makes top operation possible and this makes it well suited for well valves.

If the valve is located very deep in the ground, a telescopic extender can be mounted. This extender is available in three lengths that can be combined with all gear boxes.

Telescopic extender in three sizes:

500-850 mm, 851-1500 mm and 1501-2500 mm.



DN	BROEN No.	net Weight kg	All dimensions in mm						H (SQ)	SQ
			A	B	C	D	E	F		
150	600651	13.0	138	205	100	71	171	88	214.5	27/32
200	600652	17.0	200	242	116	86	181	93	214.5	27/32
250	600653	26.0	220	270	122	105	197	102	214.5	27/32
300	600654	49.5	285	323	143	130	336	123	214.5	27/32
400	600655	68.2	370	408	170	182	388	139	214.5	27/32

Telescopic extension for Bevel gear - DN200-500

Type - **Full bore**

Telescopic extension

BROEN telescopic extension for bevel gear, only for gears with SQ operation.



DN	BROEN No.	Lenght - cm	Operation - square
200-500	-	500-850	27/32
200-500	-	851-1500	27/32
200-500	-	1501-2500	27/32

BROEN Ballomax® Repair set - DN25-150

Type 600... - Full bore

BROEN Ballomax® Repair set

Repair set, contains packing set for stem and tools.



DN - HEX with backstop.	BROEN No.
25-65	600262
80	600263
100-125	600264
150	600269

BROEN Ballomax® Repair set - DN150-400

Type 600... - Full bore

BROEN Ballomax® Repair set

Repair set, contains packing set for stem and tools.



DN - ISO-flange	BROEN No.
150	600266
200-250	600265
300	600267
400	600268

Pressure and temperature graph - DN10-500

Full bore

Pressure drop graph - DN10-500

Full bore

Pressure drop graph

Ball valve in fully open position.

Medium: water density in 1000 kg/m³

Definitions

Kv: M³ water per hour at pressure drop 1 bar.

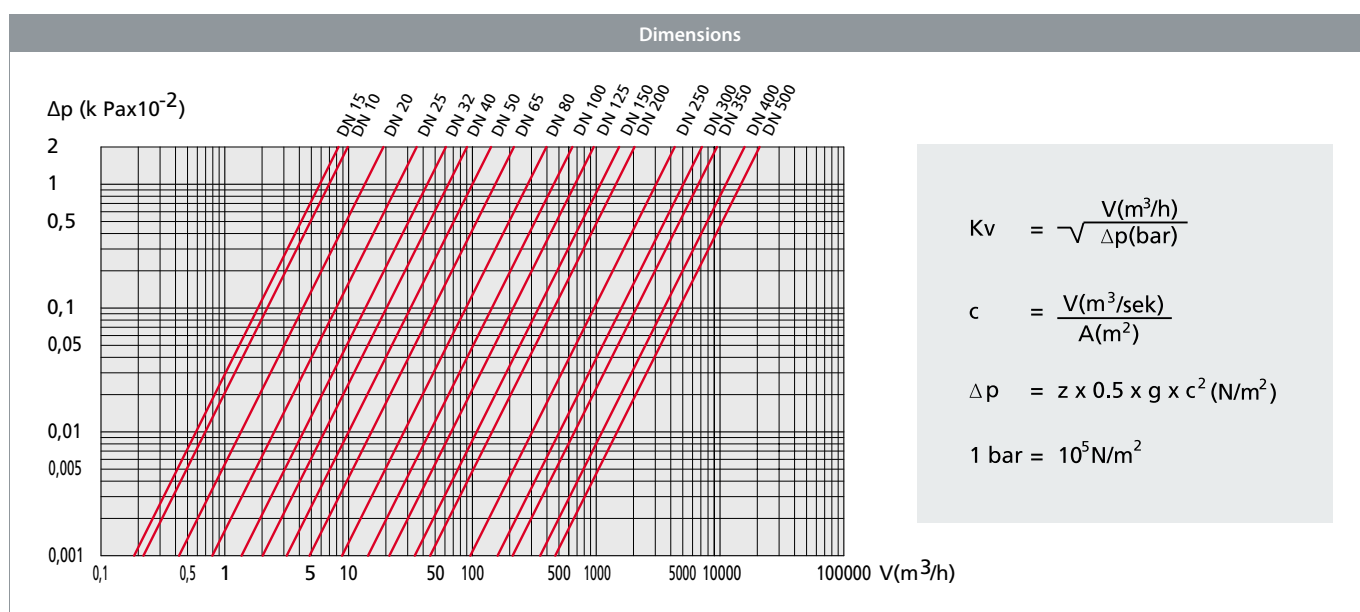
c: Flow rate of the media in m/sec.

V: Actual flow volume.

A: The area of flow in m² of the ball valve in question.

z: Coefficient of resistance.

g: Density in kg/m³.



DN	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	500
Kv	7	6	14	26	43	64	100	160	280	450	690	1100	1500	3047	5082	6800	11450	15098
A x 10 ⁻⁴	0,79	0,79	1,77	3,14	4,90	8,04	12,56	19,63	33,18	50,27	78,54	122,72	176,71	314,16	490,87	490,87	730,62	1134,11
z	0,32	0,44	0,41	0,37	0,33	0,40	0,40	0,39	0,36	0,32	0,33	0,32	0,35	0,28	0,24	0,19	0,11	0,15

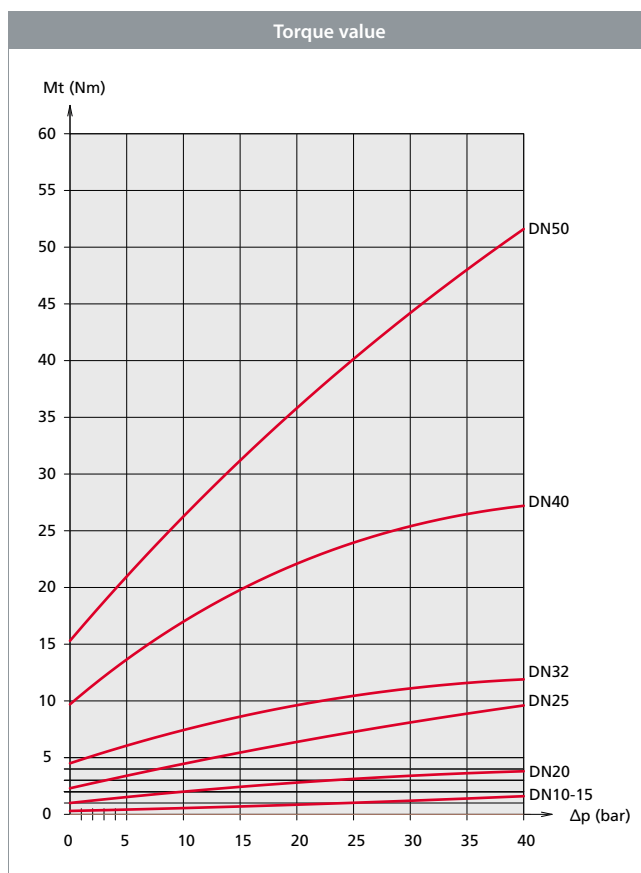
Operating torque - DN10-50, PN40

Full 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.



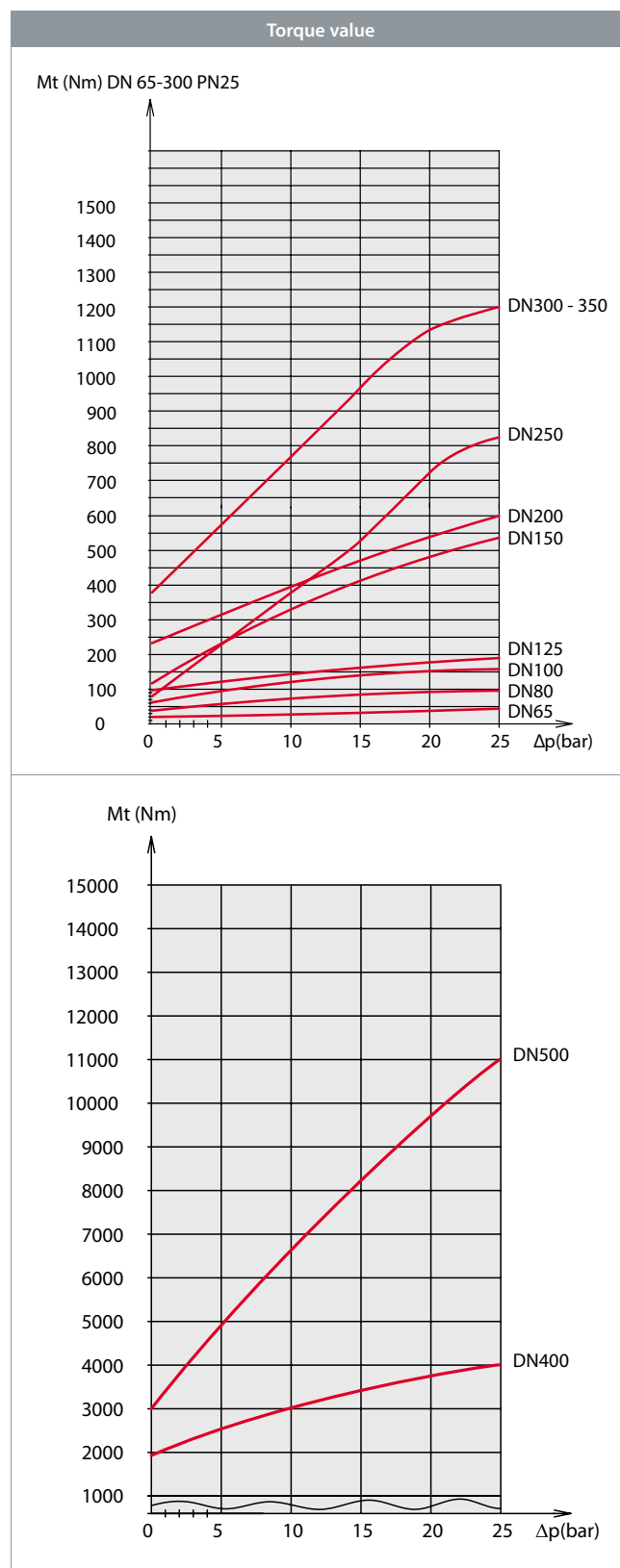
Operating torque - DN65-500, PN25

Full 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.



Ballomax[®]

ENERGY EFFICIENCY - DESIGNED TO LAST



SECTION 16

Underground valves

- EN 488

Reduced bore

Steel ball valve, High stress - DN25-100, PN25

Type 67102 - Reduced bore

Welding × Welding

Fully welded steel ball valve for underground service acc. to EN488.

Materials

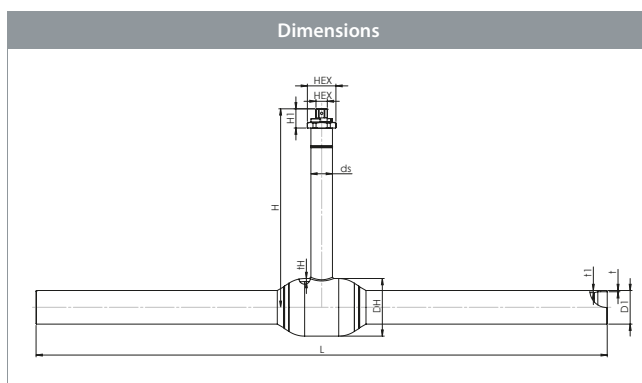
See next page.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.



					All dimensions in mm									
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	H1	D1	t	t1	DH	tH	ds	HEX
25	67102025S696800	20	27	5.6	1510	480.0	29.0	33.7	2.6	4.0	51.0	5.0	38.0	19.0
32	67102032S696900	25	40	6.7	1510	485.0	29.0	42.4	3.2	4.0	57.0	5.6	38.0	19.0
40	67102040S697000	32	69	12.7	1510	495.0	29.0	48.3	3.2	5.6	76.1	5.6	38.0	19.0
50	67102050S697100	40	110	14.3	1510	500.0	29.0	60.3	3.2	5.0	88.9	6.3	38.0	19.0
65	67102065S697200	50	180	19.0	1510	505.0	29.0	76.1	3.2	5.0	108.0	6.3	38.0	19.0
80	67102080S604000	65	288	25.5	1510	515.0	29.0	88.9	3.2	5.6	127.0	7.1	38.0	19.0
100	67102100S604100	80	470	37.0	1510	525.0	29.0	114.3	3.6	6.3	152.4	8.0	57.0	27/70

Steel ball valve, High stress - DN25-100, PN25

Type 67102 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI 304L / 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
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	54	Flowguides	Steel
	55	Stem guide	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	56	Stem stop	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	57	Intermediate ring	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	58	Stop pin	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	59	Bearing	Gunmetal

Steel ball valve, High stress - DN125-350, PN25

Type 67102 / 87042 - Reduced bore

Welding × Welding

Fully welded steel ball valve for underground service acc. to EN488.

Materials

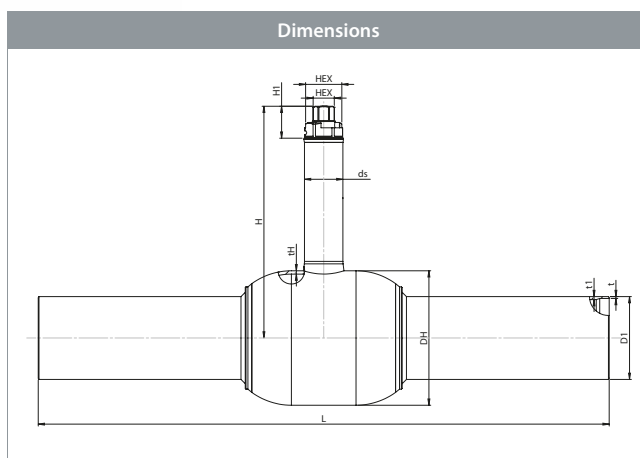
See next page.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.



					All dimensions in mm									
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	H1	D1	t	t1	DH	tH	ds	HEX
125	67102125S604200	100	699	45.0	1510	545.0	63.0	139.7	3.6	6.3	177.8	8.0	76.1	27/70
150	67102150S604300	125	1046	65.0	1510	565.0	63.0	168.3	4.0	7.1	219.1	8.0	76.1	27/70
200	67102200S604400	150	1500	99.0	1510	586.0	88.0	219.1	4.5	8.0	267.0	8.8	76.1	50/90
250	8704225250 070	200	3200	133.2	1510	560.0	84.5	273.0	5.0	8.0	355.6	8.8	101.6	50/90
300	8704225300 070	250	4700	215.3	1810	610.0	84.5	323.9	5.6	8.8	457.0	10.0	101.6	50/90
350	8704225350 070	250	5500	222.7	1810	610.0	84.5	355.6	5.6	8.8	457.0	10.0	101.6	50/90

Steel ball valve, High stress - DN125-350, PN25

Type 67102 / 87042 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	27	O-ring	Rubber - EPDM70
	51	Bottom end	Steel - S355J2H / EN 10210
	52	Back-up ring	Steel - S355J2H / EN 10210
	53	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	55	Stem guide	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	56	Stem stop	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	57	Intermediate ring	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	58	Stop pin	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	59	Bearing	Gunmetal
	60	Stem top	Stainless steel - AISI 303 / 1.4307 / EN 10217-7

Steel ball valve, High stress - DN250-500, PN25

Type 67102 / 87042 - Reduced bore

Welding × Welding

Fully welded steel ball valve for underground service acc. to EN488.

Materials

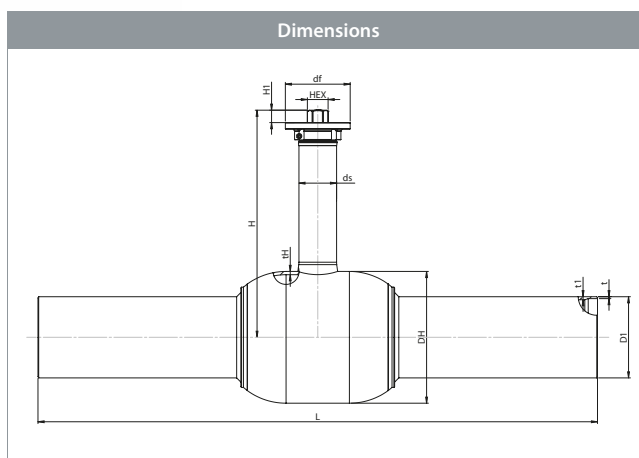
See next page.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	H1	D1	t	t1	DH	tH	ds	HEX	ISO
125	67102125S707200	100	699	45.0	1510	545.0	49.0	139.7	3.6	6.3	177.8	8.0	76.1	Ø30	F10
150	67102150S707300	125	1046	59.0	1510	526.0	49.0	168.3	4.0	7.1	219.1	8.0	76.1	Ø30	F10
200	67102200S707400	150	1500	95.0	1510	559.5	67.0	219.1	4.5	8.0	267.0	8.8	76.1	Ø30	F12
250	8704225250 300	200	3200	133.0	1510	560.0	33.5	273.0	5.0	8.0	355.6	8.8	101.6	HEX50	F14
300	8704225300 300	250	4700	213.0	1810	664.0	32.5	323.9	5.6	8.8	457.0	10.0	101.6	HEX50	F16
350	8704225350 300	250	5500	226.0	1810	664.0	32.5	355.6	5.6	8.0	457.0	10.0	101.6	HEX50	F16
400	8704225400 300	300	10600	343.6	1810	887.2	99.2	406.4	6.3	10.0	508.0	12.5	133.0	Ø60	F16
500	8704225500 300	400	18150	442.4	1125	926.0	109.0	508.0	6.3	11.0	660.0	12.5	219.1	Ø80	F30

Steel ball valve, High stress - DN250-500, PN25

Type 67102 / 87042 - Reduced bore



Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI 304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	27	O-ring	Rubber - EPDM70
	51	Bottom end	Steel - S355J2H / EN 10210
	52	Back-up ring	Steel - S355J2H / EN 10210
	53	Springs	Stainless steel - AISI 304 / 1.4301 / EN 10088-3
	55	Stem guide	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	56	Stem stop	Stainless steel - AISI 304L / 1.4307 / EN 10217-7
	57	Intermediate ring	Stainless steel - AISI 303 / 1.4305 / EN 10088-3
	58	Stop pin	Stainless steel - AISI 303 / 1.4305 / EN10088-3
	59	Bearing	Gunmetal
	60	Stem top	Stainless steel - AISI 303 / 1.4307 / EN 10217-7

Steel ball valve, High stress, Pre-insulated, class 1 - DN25-400, PN25

Type 67102 / 87042 - Reduced bore

Welding × Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN488.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

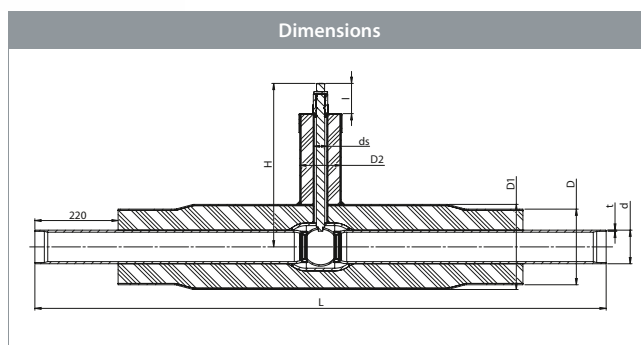
Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN100-350
- Planetary gear for DN100-400

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



Notice

Valves operated with gear for DN100-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm									
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	ds	l	Hx
25	67102025 0080	20	27	10	1510	480	33.7	2.6	90	125	110	38.0	80	19
32	67102032 0080	25	40	12	1510	485	42.4	2.6	110	140	110	38.0	80	19
40	67102040 0080	32	69	17	1510	493	48.3	2.6	110	140	110	38.0	87	19
50	67102050 0080	40	110	20	1510	500	60.3	2.9	125	160	110	38.0	87	19
65	67102065 0080	50	180	24	1510	423	76.1	2.9	160	200	110	38.0	78	19
80	67102080 0080	65	288	30	1510	432	88.9	3.2	160	200	110	38.0	80	19
100*	67102100 0080	80	470	44	1510	451	114.3	3.6	200	250	125	57.0	85	27/70
125*	67102125 0080	100	699	57	1510	491	139.7	3.6	225	280	125	76.0	103	27/70
150*	67102150 0080	125	1046	84	1510	565	168.3	4.0	250	315	125	76.0	157	27/70
200**	67102200 0780	150	1500	123	1510	563	219.1	4.5	315	400	125	76.0	132	50/90
250**	8704225250 0780	200	3200	202	1510	613	273.0	5.0	400	500	160	101.6	138	50/90
300**	8704225300 0780	250	4700	320	1810	664	323.9	5.6	450	560	160	101.6	140	50/90
350**	8704225350 0780	250	5500	-	1810	664	355.6	5.6	500	630	160	101.6	140	50/90
400**	8704225400 0780	305	10600	-	1810	793	406.4	6.3	560	710	225	133.0	190	Ø60

Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 1 - DN25-400, PN25



Type 67102 / 87042 - Reduced bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN100-150	BROEN-Gear - Mobile actuator.
	66361250 070	DN200-350	
	66062020S314200 (0,5 m)	DN25-80	Flex extender - Steel + PVC proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN100-150	Flex extender - Steel + Stainless steel proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN200-350	
	1897S02	DN20-80	Square adaptor plug for mounting on hexagon.
	1903S02	DN100-150	
	500249	DN100-150	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN200-350	
	3/PP05002KS02	DN400	

Steel ball valve, High stress, Pre-insulated, class 1, 1 Service valve - DN25-400, PN25

Type 67102 / 87042 - Reduced bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with one DN40 service valve.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

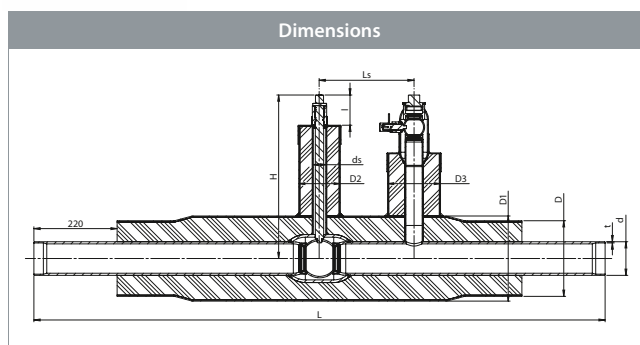
Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN100-350
- Planetary gear for DN100-400

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). The 3.1 certificate is available upon request.



Notice

Valves operated with gear for DN100-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx	
25*	67102025 0081	20	27	10	1510	480	33.7	2.6	90	125	110	110	38.0	80	250	19	
32*	67102032 0081	25	40	12	1510	485	42.4	2.6	110	140	110	110	38.0	80	250	19	
40	67102040 0081	32	69	20	1510	493	48.3	2.6	110	140	110	140	38.0	80	250	19	
50	67102050 0081	40	110	23	1510	500	60.3	2.9	125	160	110	125	38.0	80	250	19	
65	67102065 0081	50	180	27	1510	423	76.1	2.9	160	200	110	140	38.0	80	250	19	
80	67102080 0081	65	288	33	1510	432	88.9	3.2	160	200	110	140	38.0	80	250	19	
100**	67102100 0081	80	470	48	1510	451	114.3	3.6	200	250	125	140	57.0	85	250	27/70	
125**	67102125 0081	100	699	60	1510	491	139.7	3.6	225	280	125	140	76.0	103	250	27/70	
150**	67102150 0081	125	1046	87	1510	565	168.3	4.0	250	315	125	140	76.0	105	-	27/70	
200***	67102200 0781	150	1500	125	1510	585	219.1	4.5	315	400	125	140	76.0	130	-	50/90	
250***	8704225250 0781	200	3200	204	1510	613	273.0	5.0	400	500	160	140	101.6	138	245	50/90	
300***	8704225300 0781	250	4700	323	1810	664	323.9	5.6	450	560	160	140	101.6	140	295	50/90	
350***	8704225350 0781	250	5500	-	1810	664	355.6	5.6	500	630	160	140	101.6	140	300	50/90	
400***	8704225400 0781	305	10600	-	1810	793	406.4	6.3	560	710	225	140	133.0	190	350	Ø60	

* Delivered with one DN25 service valve (Ø33,7). Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 1, 1 Service valve - DN25-400, PN25



Type 67102 / 87042 - Reduced bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN100-150	BROEN-Gear - Mobile actuator.
	66361250 070	DN200-350	
	66062020S314200 (0,5 m)	DN25-80	Flex extender - Steel + PVC proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN100-150	Flex extender - Steel + Stainless steel proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN200-350	
	1897S02	DN20-80	Square adaptor plug for mounting on hexagon.
	1903S02	DN100-150	
	500249	DN100-150	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN200-350	
	3/PP05002KS02	DN400	

Steel ball valve, High stress, Pre-insulated, class 1, 2 Service valves - DN25-400, PN25

Type 67102 / 87042 - Reduced bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with two DN40 service valves.

Materials

See page 16.1 - 2.

Applications

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

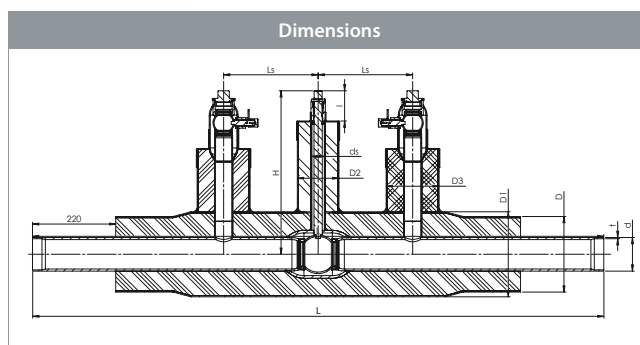
Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN100-350
- Planetary gear for DN100-400



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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear for DN100-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx	
25*	67102025 0082	20	27	10	1510	480	33,7	2,6	90	125	110	110	38,0	80	250	19	
32*	67102032 0082	25	40	12	1510	485	42,4	2,6	110	140	110	110	38,0	80	250	19	
40	67102040 0082	32	69	20	1510	493	48,3	2,6	110	140	110	140	38,0	80	250	19	
50	67102050 0082	40	110	23	1510	500	60,3	2,9	125	160	110	140	38,0	80	250	19	
65	67102065 0082	50	180	27	1510	505	76,1	2,9	160	200	110	140	38,0	80	250	19	
80	67102080 0082	65	288	33	1510	515	88,9	3,2	160	200	110	140	38,0	80	250	19	
100**	67102100 0082	80	470	48	1510	525	114,3	3,6	200	250	125	140	57,0	85	250	27/70	
125**	67102125 0082	100	699	60	1510	545	139,7	3,6	225	280	125	140	76,0	105	250	27/70	
150**	67102150 0082	125	1046	87	1510	565	168,3	4,0	250	315	125	140	76,0	105	-	27/70	
200***	67102200 0782	150	1500	125	1510	585	219,1	4,5	315	400	125	140	76,0	130	-	50/90	
250***	8704225250 0782	200	3200	204	1510	613	273,0	5,0	400	500	160	140	101,6	138	245	50/90	
300***	8704225300 0782	250	4700	323	1810	664	323,9	5,6	450	560	160	140	101,6	140	295	50/90	
350***	8704225350 0782	250	5500	-	1810	664	355,6	5,6	500	630	160	140	101,6	140	300	50/90	
400***	8704225400 0782	305	10600	-	1810	793	406,4	6,3	560	710	225	140	133,0	190	350	Ø60	

* Delivered with two DN25 service valves (Ø33,7). Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 1, 2 Service valves - DN25-400, PN25



Type 67102 / 87042 - Reduced bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN100-150	BROEN-Gear - Mobile actuator.
	66361250 070	DN200-350	
	66062020S314200 (0,5 m)	DN25-80	Flex extender - Steel + PVC proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN100-150	Flex extender - Steel + Stainless steel proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN200-350	
	1897S02	DN20-80	Square adaptor plug for mounting on hexagon.
	1903S02	DN100-150	
	500249	DN100-150	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN200-350	
	3/PP05002KS02	DN400	

Steel ball valve, High stress, Pre-insulated, class 1 - DN150-500, PN25

Type - Reduced bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN488.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									Hx
					L	H	d	t	D	D1	D2	ds	I	
150	On request													
200	On request													
250	On request													
300	On request													
350	On request													
400	On request													
500	On request													

Steel ball valve, High stress, Pre-insulated, class 1 - DN150-500, PN25

Type - Reduced bore

Accessories	BROEN No.	Dimension	Description
	600651	DN200	BROEN-Gear - Bevel gear (square).
	600652	DN250	
	600653	DN300-350	
	600654	DN400	
	600655	DN500	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN200	BROEN-Gear - Bevel gear (HEX).
	600592	DN250	
	600593	DN300-350	
	600594	DN400	
	600595	DN500	

Steel ball valve, High stress, Pre-insulated, class 1, 1 Service valve - DN150-500, PN25

Type - Reduced bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with one DN40 service valve.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm											
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx
150	On request															
200	On request															
250	On request															
300	On request															
350	On request															
400	On request															
500	On request															

Steel ball valve, High stress, Pre-insulated, class 1, 1 Service valve - DN150-500, PN25

Type - Reduced bore

Accessories	BROEN No.	Dimension	Description
	600651	DN200	BROEN-Gear - Bevel gear (square).
	600652	DN250	
	600653	DN300-350	
	600654	DN400	
	600655	DN500	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN200	BROEN-Gear - Bevel gear (HEX).
	600592	DN250	
	600593	DN300-350	
	600594	DN400	
	600595	DN500	

Steel ball valve, High stress, Pre-insulated, class 1, 2 Service valves - DN150-500, PN25

Type - Reduced bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with two DN40 service valves.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm											
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx
150	On request															
200	On request															
250	On request															
300	On request															
350	On request															
400	On request															
500	On request															

Steel ball valve, High stress, Pre-insulated, class 1, 2 Service valves - DN150-500, PN25

Type - Reduced bore

Accessories	BROEN No.	Dimension	Description
	600651	DN200	BROEN-Gear - Bevel gear (square).
	600652	DN250	
	600653	DN300-350	
	600654	DN400	
	600655	DN500	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN200	BROEN-Gear - Bevel gear (HEX).
	600592	DN250	
	600593	DN300-350	
	600594	DN400	
	600595	DN500	

Steel ball valve, High stress, Pre-insulated, class 2 - DN25-400, PN25

Type 67102 / 87042 - **Reduced bore**

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN488.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

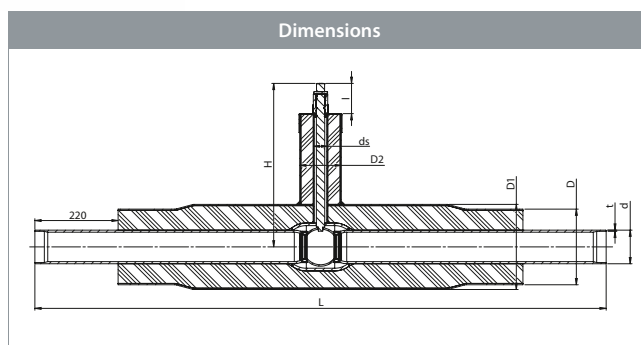
Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN100-350
- Planetary gear for DN100-400

Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BRPEM Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN40 are CE-marked. The 3.1 certificate is available upon request.



Notice

Valves operated with gear for DN100-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm									
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	ds	l	Hx
25	67102025 0090	20	27	10	1510	480	33.7	2.6	110	140	110	38.0	80	19
32	67102032 0090	25	40	12	1510	485	42.4	2.6	125	160	110	38.0	80	19
40	67102040 0090	32	69	17	1510	493	48.3	2.6	125	160	110	38.0	87	19
50	67102050 0090	40	110	20	1510	500	60.3	2.9	140	180	110	38.0	87	19
65	67102065 0090	50	180	24	1510	423	76.1	2.9	160	200	110	38.0	78	19
80	67102080 0090	65	288	30	1510	432	88.9	3.2	180	225	110	38.0	80	19
100*	67102100 0090	80	470	44	1510	451	114.3	3.6	225	280	125	57.0	85	27/70
125*	67102125 0090	100	699	57	1510	491	139.7	3.6	250	315	125	76.0	103	27/70
150*	67102150 0090	125	1046	84	1510	565	168.3	4.0	280	355	140	76.0	157	27/70
200**	67102200 0790	150	1500	123	1510	563	219.1	4.5	355	450	140	76.0	132	50/90
250**	8704225250 0790	200	3200	202	1510	613	273.0	5.0	450	500	160	101.6	138	50/90
300**	8704225300 0790	250	4700	320	1810	664	323.9	5.6	500	560	160	101.6	140	50/90
350**	8704225350 0790	250	5500	-	1810	664	355.6	5.6	560	630	160	101.6	140	50/90
400**	8704225400 0790	305	10600	-	1810	793	406.4	6.3	630	710	225	133.0	190	Ø60

Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 2 - DN25-400, PN25



Type 67102 / 87042 - Reduced bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN100-150	BROEN-Gear - Mobile actuator.
	66361250 070	DN200-350	
	66062020S314200 (0,5 m)	DN25-80	Flex extender - Steel + PVC proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN100-150	Flex extender - Steel + Stainless steel proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN200-350	
	1897S02	DN20-80	Square adaptor plug for mounting on hexagon.
	1903S02	DN100-150	
	500249	DN100-150	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN200-350	
	3/PP05002KS02	DN400	

Steel ball valve, High stress, Pre-insulated, class 2, 1 Service valve - DN25-400, PN25

Type 67102 / 87042 - Reduced bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with one DN40 service valve.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air, oil and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

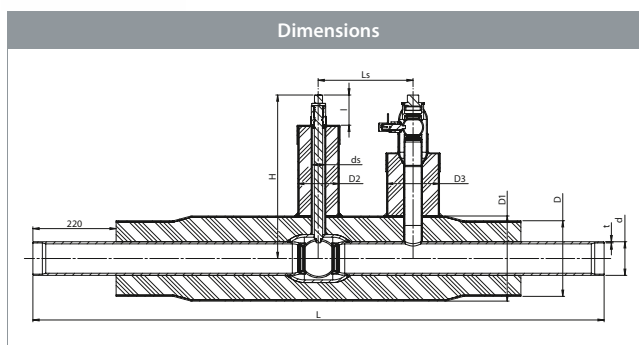
Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN100-350
- Planetary gear for DN100-400

Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). The 3.1 certificate is available upon request.



Notice

Valves operated with gear for DN100-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx	
25*	67102025 0091	20	27	10	1510	480	33.7	2.6	110	140	110	110	38.0	80	250	19	
32*	67102032 0091	25	40	12	1510	485	42.4	2.6	125	160	110	110	38.0	80	250	19	
40	67102040 0091	32	69	20	1510	493	48.3	2.6	125	160	110	140	38.0	80	250	19	
50	67102050 0091	40	110	23	1510	500	60.3	2.9	140	180	110	140	38.0	80	250	19	
65	67102065 0091	50	180	27	1510	423	76.1	2.9	160	200	110	140	38.0	80	250	19	
80	67102080 0091	65	288	33	1510	432	88.9	3.2	180	225	110	140	38.0	80	250	19	
100**	67102100 0091	80	470	48	1510	451	114.3	3.6	225	280	125	140	57.0	85	250	27/70	
125**	67102125 0091	100	699	60	1510	491	139.7	3.6	250	315	125	140	76.0	103	250	27/70	
150**	67102150 0091	125	1046	87	1510	565	168.3	4.0	280	355	140	140	76.0	105	265	27/70	
200***	67102200 0791	150	1500	125	1510	585	219.1	4.5	355	450	140	140	76.0	130	265	50/90	
250***	8704225250 0791	200	3200	204	1510	613	273.0	5.0	450	500	160	140	101.6	138	245	50/90	
300***	8704225300 0791	250	4700	323	1810	664	323.9	5.6	500	560	160	140	101.6	140	295	50/90	
350***	8704225350 0791	250	5500	-	1810	664	355.6	5.6	560	630	160	140	101.6	140	300	50/90	
400***	8704225400 0791	305	10600	-	1810	793	406.4	6.3	630	710	225	140	133.0	190	350	Ø60	

* Delivered with one DN25 service valve (Ø33,7). Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 2, 1 Service valve - DN25-400, PN25



Type 67102 / 87042 - Reduced bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN100-150	BROEN-Gear - Mobile actuator.
	66361250 070	DN200-350	
	66062020S314200 (0,5 m)	DN25-80	Flex extender - Steel + PVC proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN100-150	Flex extender - Steel + Stainless steel proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN200-350	
	1897S02	DN20-80	Square adaptor plug for mounting on hexagon.
	1903S02	DN100-150	
	500249	DN100-150	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN200-350	
	3/PP05002KS02	DN400	

Steel ball valve, High stress, Pre-insulated, class 2, 2 Service valves - DN25-400, PN25

Type 67102 / 87042 - Reduced bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with two DN40 service valves.

Materials

See page 16.1 - 2.

Applications

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

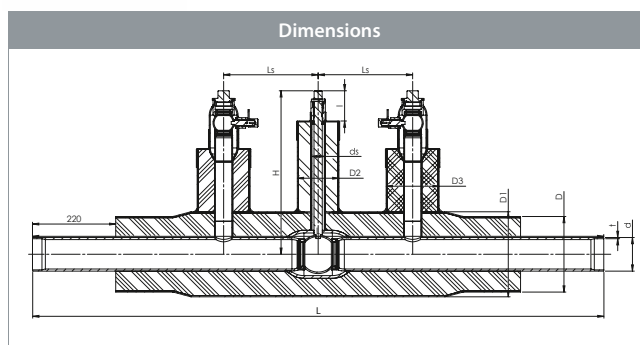
Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN100-350
- Planetary gear for DN100-400



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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear for DN150-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx	
25*	67102025 0092	20	27	10	1510	480	33.7	2.6	110	140	110	110	38.0	80	250	19	
32*	67102032 0092	25	40	12	1510	485	42.4	2.6	125	160	110	110	38.0	80	250	19	
40	67102040 0092	32	69	20	1510	493	48.3	2.6	125	160	110	140	38.0	80	250	19	
50	67102050 0092	40	110	23	1510	500	60.3	2.9	140	180	110	140	38.0	80	250	19	
65	67102065 0092	50	180	27	1510	505	76.1	2.9	160	200	110	140	38.0	80	250	19	
80	67102080 0092	65	288	33	1510	515	88.9	3.2	180	225	110	140	38.0	80	250	19	
100**	67102100 0092	80	470	48	1510	525	114.3	3.6	225	280	125	140	57.0	85	250	27/70	
125**	67102125 0092	100	699	60	1510	545	139.7	3.6	250	315	125	140	76.0	105	250	27/70	
150**	67102150 0092	125	1046	87	1510	565	168.3	4.0	280	355	140	140	76.0	105	265	27/70	
200***	67102200 0792	150	1500	125	1510	585	219.1	4.5	355	450	140	140	76.0	130	265	50/90	
250***	8704225250 0792	200	3200	204	1510	613	273.0	5.0	450	500	160	140	101.6	138	245	50/90	
300***	8704225300 0792	250	4700	323	1810	664	323.9	5.6	500	560	160	140	101.6	140	295	50/90	
350***	8704225350 0792	250	5500	-	1810	664	355.6	5.6	560	630	160	140	101.6	140	300	50/90	
400***	8704225400 0792	305	10600	-	1810	793	406.4	6.3	630	710	225	140	133.0	190	350	Ø60	

* Delivered with two DN25 service valves (Ø33,7). Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 2, 2 Service valves - DN25-400, PN25



Type 67102 / 87042 - Reduced bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN100-150	BROEN-Gear - Mobile actuator.
	66361250 070	DN200-350	
	66062020S314200 (0,5 m)	DN25-80	Flex extender - Steel + PVC protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN100-150	Flex extender - Steel + Stainless steel protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN200-350	
	1897S02	DN20-80	Square adaptor plug for mounting on hexagon.
	1903S02	DN100-150	
	500249	DN100-150	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN200-350	
	3/PP05002KS02	DN400	

Steel ball valve, High stress, Pre-insulated, class 2 - DN150-500, PN25

Type - Reduced bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN488.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									Hx
					L	H	d	t	D	D1	D2	ds	I	
150	On request													
200	On request													
250	On request													
300	On request													
350	On request													
400	On request													
500	On request													

Steel ball valve, High stress, Pre-insulated, class 2 - DN150-500, PN25

Type - Reduced bore

Accessories	BROEN No.	Dimension	Description
	600651	DN200	BROEN-Gear - Bevel gear (square).
	600652	DN250	
	600653	DN300-350	
	600654	DN400	
	600655	DN500	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN200	BROEN-Gear - Bevel gear (HEX).
	600592	DN250	
	600593	DN300-350	
	600594	DN400	
	600595	DN500	

Steel ball valve, High stress, Pre-insulated, class 2, 1 Service valve - DN150-500, PN25

Type - Reduced bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with one DN40 service valve.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm											
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx
150	On request															
200	On request															
250	On request															
300	On request															
350	On request															
400	On request															
500	On request															

Steel ball valve, High stress, Pre-insulated, class 2, 1 Service valve - DN150-500, PN25

Type - Reduced bore

Accessories	BROEN No.	Dimension	Description
	600651	DN200	BROEN-Gear - Bevel gear (square).
	600652	DN250	
	600653	DN300-350	
	600654	DN400	
	600655	DN500	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN200	BROEN-Gear - Bevel gear (HEX).
	600592	DN250	
	600593	DN300-350	
	600594	DN400	
	600595	DN500	

Steel ball valve, High stress, Pre-insulated, class 2, 2 Service valves - DN150-500, PN25

Type - Reduced bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with two DN40 service valves.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm											
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx
150	On request															
200	On request															
250	On request															
300	On request															
350	On request															
400	On request															
500	On request															

Steel ball valve, High stress, Pre-insulated, class 2, 2 Service valves - DN150-500, PN25

Type - Reduced bore

Accessories	BROEN No.	Dimension	Description
	600651	DN200	BROEN-Gear - Bevel gear (square).
	600652	DN250	
	600653	DN300-350	
	600654	DN400	
	600655	DN500	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN200	BROEN-Gear - Bevel gear (HEX).
	600592	DN250	
	600593	DN300-350	
	600594	DN400	
	600595	DN500	

Steel ball valve, High stress, Pre-insulated, class 3 - DN25-400, PN25

Type 67102 / 87042 - Reduced bore

Welding × Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN488.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

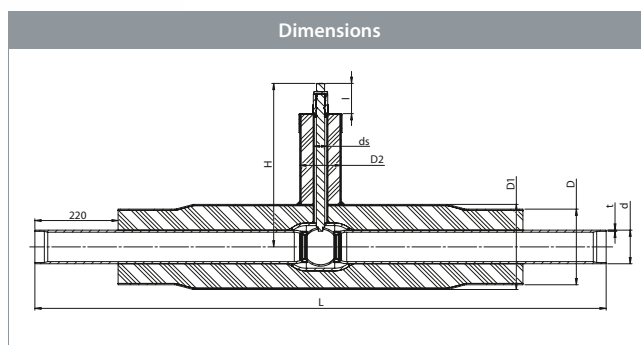
Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN100-350
- Planetary gear for DN100-400

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



Notice

Valves operated with gear for DN100-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	ds	l	Hx	
25	67102025 0070	20	27	10	1510	480	33.7	2.6	125	140	110	38.0	80	19	
32	67102032 0070	25	40	12	1510	485	42.4	2.6	140	160	110	38.0	80	19	
40	67102040 0070	32	69	17	1510	493	48.3	2.6	140	160	110	38.0	87	19	
50	67102050 0070	40	110	20	1510	500	60.3	2.9	160	180	110	38.0	87	19	
65	67102065 0070	50	180	24	1510	423	76.1	2.9	180	200	110	38.0	78	19	
80	67102080 0070	65	288	30	1510	432	88.9	3.2	200	225	110	38.0	80	19	
100*	67102100 0070	80	470	44	1510	451	114.3	3.6	250	280	125	57.0	85	27/70	
125*	67102125 0070	100	699	57	1510	491	139.7	3.6	280	315	125	76.0	103	27/70	
150*	67102150 0070	125	1046	84	1510	565	168.3	4.0	315	355	125	76.0	157	27/70	
200**	67102200 0770	150	1500	123	1510	563	219.1	4.5	400	450	125	76.0	132	50/90	
250**	8704225250 0770	200	3200	202	1510	613	273.0	5.0	500	500	160	101.6	138	50/90	
300**	8704225300 0770	250	4700	320	1810	664	323.9	5.6	560	560	160	101.6	140	50/90	
350**	8704225350 0770	250	5500	-	1810	664	355.6	5.6	630	630	160	101.6	140	50/90	
400**	8704225400 0770	305	10600	-	1810	793	406.4	6.3	710	710	225	133.0	190	Ø60	

Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 3 - DN25-400, PN25



Type 67102 / 87042 - Reduced bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN100-150	BROEN-Gear - Mobile actuator.
	66361250 070	DN200-350	
	66062020S314200 (0,5 m)	DN25-80	Flex extender - Steel + PVC protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN100-150	Flex extender - Steel + Stainless steel protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN200-350	
	1897S02	DN20-80	Square adaptor plug for mounting on hexagon.
	1903S02	DN100-150	
	500249	DN100-150	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN200-350	
	3/PP05002KS02	DN400	

Steel ball valve, High stress, Pre-insulated, class 3, 1 Service valve - DN25-400, PN25

Type 67102 / 87042 - Reduced bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with one DN40 service valve.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

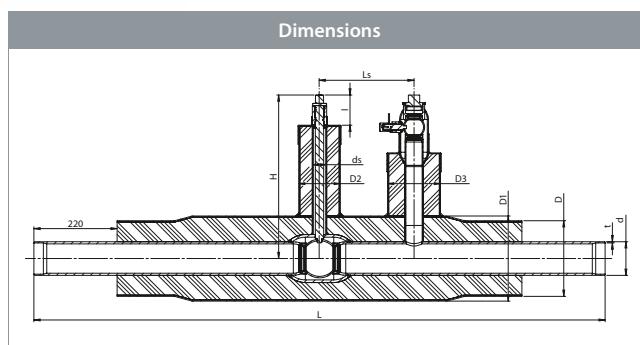
Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN100-350
- Planetary gear for DN100-400

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). The 3.1 certificate is available upon request.



Notice

Valves operated with gear for DN100-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx	
25*	67102025 0071	20	27	10	1510	480	33.7	2.6	125	140	110	110	38.0	80	250	19	
32*	67102032 0071	25	40	12	1510	485	42.4	2.6	140	160	110	110	38.0	80	250	19	
40	67102040 0071	32	69	20	1510	493	48.3	2.6	140	160	110	140	38.0	80	250	19	
50	67102050 0071	40	110	23	1510	500	60.3	2.9	160	180	110	125	38.0	80	250	19	
65	67102065 0071	50	180	27	1510	423	76.1	2.9	180	200	110	140	38.0	80	250	19	
80	67102080 0071	65	288	33	1510	432	88.9	3.2	200	225	110	140	38.0	80	250	19	
100**	67102100 0071	80	470	48	1510	451	114.3	3.6	250	280	125	140	57.0	85	250	27/70	
125**	67102125 0071	100	699	60	1510	491	139.7	3.6	280	315	125	140	76.0	103	250	27/70	
150**	67102150 0071	125	1046	87	1510	565	168.3	4.0	315	355	125	140	76.0	105	-	27/70	
200***	67102200 0771	150	1500	125	1510	585	219.1	4.5	400	450	125	140	76.0	130	-	50/90	
250***	8704225250 0771	200	3200	204	1510	613	273.0	5.0	500	500	160	140	101.6	138	245	50/90	
300***	8704225300 0771	250	4700	323	1810	664	323.9	5.6	560	560	160	140	101.6	140	295	50/90	
350***	8704225350 0771	250	5500	-	1810	664	355.6	5.6	630	630	160	140	101.6	140	300	50/90	
400***	8704225400 0771	305	10600	-	1810	793	406.4	6.3	710	710	225	140	133.0	190	350	Ø60	

* Delivered with one DN25 service valve (Ø33,7). Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 3, 1 Service valve - DN25-400, PN25



Type 67102 / 87042 - Reduced bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN100-150	BROEN-Gear - Mobile actuator.
	66361250 070	DN200-350	
	66062020S314200 (0,5 m)	DN25-80	Flex extender - Steel + PVC proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN100-150	Flex extender - Steel + Stainless steel proction tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN200-350	
	1897S02	DN20-80	Square adaptor plug for mounting on hexagon.
	1903S02	DN100-150	
	500249	DN100-150	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN200-350	
	3/PP05002KS02	DN400	

Steel ball valve, High stress, Pre-insulated, class 3, 2 Service valves - DN25-400, PN25

Type 67102 / 87042 - Reduced bore

Welding x Welding

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with two DN40 service valves.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

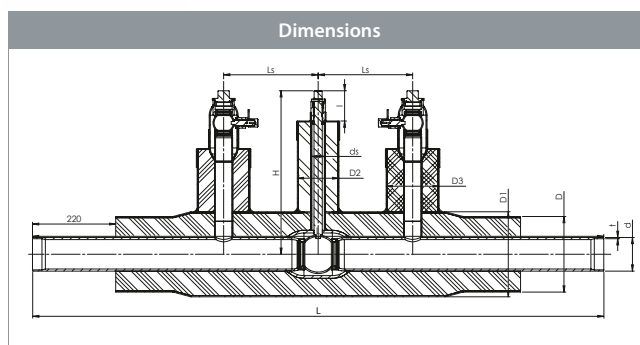
Operation

The following operating devices are available to order:

- Universal allen key
- Mobile actuator for DN100-350
- Planetary gear for DN100-400

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). The 3.1 certificate is available upon request.



Notice

Valves operated with gear for DN100-400. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm												
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx	
25*	67102025 0072	20	27	10	1510	480	33.7	2.6	125	140	110	110	38.0	80	250	19	
32*	67102032 0072	25	40	12	1510	485	42.4	2.6	140	160	110	110	38.0	80	250	19	
40	67102040 0072	32	69	20	1510	493	48.3	2.6	140	160	110	140	38.0	80	250	19	
50	67102050 0072	40	110	23	1510	500	60.3	2.9	160	180	110	125	38.0	80	250	19	
65	67102065 0072	50	180	27	1510	505	76.1	2.9	180	200	110	140	38.0	80	250	19	
80	67102080 0072	65	288	33	1510	515	88.9	3.2	200	225	110	140	38.0	80	250	19	
100**	67102100 0072	80	470	48	1510	525	114.3	3.6	250	280	125	140	57.0	85	250	27/70	
125**	67102125 0072	100	699	60	1510	545	139.7	3.6	280	315	125	140	76.0	105	250	27/70	
150**	67102150 0072	125	1046	87	1510	565	168.3	4.0	315	355	125	140	76.0	105	265	27/70	
200***	67102200 0772	150	1500	125	1510	585	219.1	4.5	400	450	125	140	76.0	130	265	50/90	
250***	8704225250 0772	200	3200	204	1510	613	273.0	5.0	500	500	160	140	101.6	138	245	50/90	
300***	8704225300 0772	250	4700	323	1810	664	323.9	5.6	560	560	160	140	101.6	140	295	50/90	
350***	8704225350 0772	250	5500	-	1810	664	355.6	5.6	630	630	160	140	101.6	140	300	50/90	
400***	8704225400 0772	305	10600	-	1810	793	406.4	6.3	710	710	225	140	133.0	190	350	Ø60	

* Delivered with two DN25 service valves (Ø33,7). Vales *can / **should be operated with gearbox.

Steel ball valve, High stress, Pre-insulated, class 3, 2 Service valves - DN25-400, PN25



Type 67102 / 87042 - Reduced bore

Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361100 060	DN100-150	BROEN-Gear - Mobile actuator.
	66361250 070	DN200-350	
	66062020S314200 (0,5 m)	DN25-80	Flex extender - Steel + PVC protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062020S314300 (0,5 m)	DN80-125	
	66062150S314000 (0,5 m)	DN100-150	Flex extender - Steel + Stainless steel protection tube - also available in 1,0 mtr and 2,0 mtr - see accessories, can be shortened as needed.
	66062250S314000 (0,5 m)	DN200-350	
	1897S02	DN20-80	Square adaptor plug for mounting on hexagon.
	1903S02	DN100-150	
	500249	DN100-150	BROEN-Gear - Planetary gear.
	3/PP06001KS02	DN200-350	
	3/PP05002KS02	DN400	

Steel ball valve, High stress, Pre-insulated, class 3 - DN150-500, PN25

Type - Reduced bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN488.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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 DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									Hx
					L	H	d	t	D	D1	D2	ds	I	
150	On request													
200	On request													
250	On request													
300	On request													
350	On request													
400	On request													
500	On request													

Steel ball valve, High stress, Pre-insulated, class 3 - DN150-500, PN25

Type - Reduced bore

Accessories	BROEN No.	Dimension	Description
	600651	DN200	BROEN-Gear - Bevel gear (square).
	600652	DN250	
	600653	DN300-350	
	600654	DN400	
	600655	DN500	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN200	BROEN-Gear - Bevel gear (HEX).
	600592	DN250	
	600593	DN300-350	
	600594	DN400	
	600595	DN500	

Steel ball valve, High stress, Pre-insulated, class 3, 1 Service valve - DN150-500, PN25

Type - Reduced bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with one DN40 service valve.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm											
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx
150	On request															
200	On request															
250	On request															
300	On request															
350	On request															
400	On request															
500	On request															

Steel ball valve, High stress, Pre-insulated, class 3, 1 Service valve - DN150-500, PN25

Type - Reduced bore

Accessories	BROEN No.	Dimension	Description
	600651	DN200	BROEN-Gear - Bevel gear (square).
	600652	DN250	
	600653	DN300-350	
	600654	DN400	
	600655	DN500	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN200	BROEN-Gear - Bevel gear (HEX).
	600592	DN250	
	600593	DN300-350	
	600594	DN400	
	600595	DN500	

Steel ball valve, High stress, Pre-insulated, class 3, 2 Service valves - DN150-500, PN25

Type - Reduced bore

Welding × Welding with ISO-flange

Pre-insulated fully welded steel ball valve for underground service acc. to EN488, with two DN40 service valves.

Materials

See page 16.1 - 2.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

Valves operated with gear, see accessories. All pre-insulated ball valves are delivered with alarm wire. Outlet for alarm available on request.

					All dimensions in mm											
DN	BROEN No.	Bore	Kvs	net Weight kg	L	H	d	t	D	D1	D2	D3	ds	l	Ls	Hx
150	On request															
200	On request															
250	On request															
300	On request															
350	On request															
400	On request															
500	On request															

Steel ball valve, High stress, Pre-insulated, class 3, 2 Service valves - DN150-500, PN25

Type - Reduced bore

Accessories	BROEN No.	Dimension	Description
	600651	DN200	BROEN-Gear - Bevel gear (square).
	600652	DN250	
	600653	DN300-350	
	600654	DN400	
	600655	DN500	
	500114 (L=500-850 cm)	DN200-500	BROEN telescopic extender for Bevel gear, only for square.
	500115 (L=851-1500 cm)	DN200-500	
	500152 (L=1501-2500 cm)	DN200-500	
	600591	DN200	BROEN-Gear - Bevel gear (HEX).
	600592	DN250	
	600593	DN300-350	
	600594	DN400	
	600595	DN500	

Twin valve, Pre-insulated, class 2 - DN25-200, PN25

Type 67102 - Reduced bore

Welding × Welding

Pre-insulated isolating valve for twin pipes, for underground service acc. to EN488, with four DN40 service valves.

Materials

See next page.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

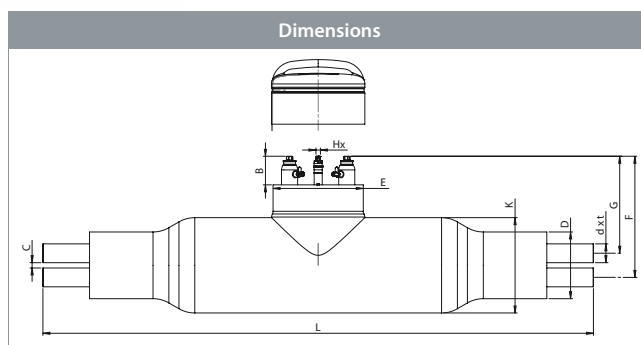
- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

All twin valves are delivered with alarm wire. Outlet for alarm available on request.



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	d × t	B	C	D	E	F	G	K	L	Hx	
25*	67102025 669922	20		35	33.7 × 2.6	124	20	160	348	508	455	355	2150	19	
32*	67102032 669922	25		40	42.4 × 2.9	127	20	180	348	515	454	355	2150	19	
40	67102040 669922	32		55	48.3 × 2.9	144	20	180	348	528	460	355	2150	19	
50	67102050 669922	40		65	60.3 × 2.9	142	20	225	348	460	500	355	2150	19	
65	67102065 669922	50		85	76.1 × 2.9	146	20	250	426	458	554	450	2350	19	
80	67102080 669922	65		105	88.9 × 3.2	135	25	280	426	572	458	450	2600	19	
100	67102100 669922	80		160	114.3 × 3.6	142	25	355	527	596	457	560	2900	27	
125	67102125 669922	100		230	139.7 × 3.6	142	30	450	533	631	461	560	3300	27	
150	67102150 669922	125		335	168.3 × 4.0	142	40	500	595	669	461	630	4200	27/70	
200	67102200 669922	150		350	219.1 × 4.5	135	45	630	665	882	618	800	5900	50/90	

* Delivered with four DN25 service valves (Ø33,7).

Twin valve, Pre-insulated, class 2 - DN25-200, PN25

Type 67102 - Reduced bore



Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361250 070	DN200	BROEN-Gear - Mobile actuator.

Twin valve, Pre-insulated, class 3 - DN25-200, PN25

Type 67102 - Reduced bore

Welding × Welding

Pre-insulated isolating valve for twin pipes, for underground service acc. to EN488, with four DN40 service valves.

Materials

See next page.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Operation

The following operating devices are available to order:

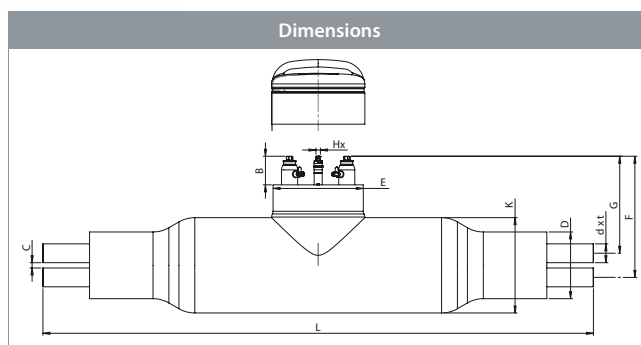
- Bevel gear (square)
- Telescopic extender for Bevel gear, only for square
- Bevel gear (HEX)

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). The 3.1 certificate is available upon request.

Notice

All twin valves are delivered with alarm wire. Outlet for alarm available on request.



					All dimensions in mm										
DN	BROEN No.	Bore	Kvs	net Weight kg	d × t	B	C	D	E	F	G	K	L	Hx	
25*	67102025 667722	20		35	33,7 × 2,6	124	20	180	348	508	455	355	2150	19	
32*	67102032 667722	25		40	42,4 × 2,9	128	20	200	348	516	454	355	2150	19	
40	67102040 667722	32		55	48,3 × 2,9	144	20	200	348	528	460	355	2150	19	
50	67102050 667722	40		65	60,3 × 2,9	143	20	250	348	540	460	355	2150	19	
65	67102065 667722	50		85	76,1 × 2,9	145	20	280	426	554	458	450	2350	19	
80	67102080 667722	65		105	88,9 × 3,2	135	25	315	426	572	458	450	2600	19	
100	67102100 667722	80		160	114,3 × 3,6	142	25	400	527	596	457	560	2900	27	
125	67102125 667722	100		230	139,7 × 3,6	137	30	500	533	631	461	560	3300	27	
150	67102150 667722	125		335	168,3 × 4,0	142	40	560	595	669	461	630	4200	27/70	
200	67102200 667722	150		350	219,1 × 4,5	155	45	630	665	882	618	800	5900	50/90	

* Delivered with four DN25 service valves (Ø33,7).

Twin valve, Pre-insulated, class 3 - DN25-200, PN25

Type 67102 - Reduced bore



Accessories	BROEN No.	Dimension	Description
	3723S60		Universal allen key for both isolating and service valves.
	66361250 070	DN200	BROEN gear - Mobile actuator.

Well valve, Pre-insulated - DN32-250, PN25

Type 67102 - Reduced bore

Welding × Welding

Pre-insulated well valve for underground service acc. to EN488, with four DN40 service valves.

Materials

See next page.

Applications

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

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

Approvals and certificates

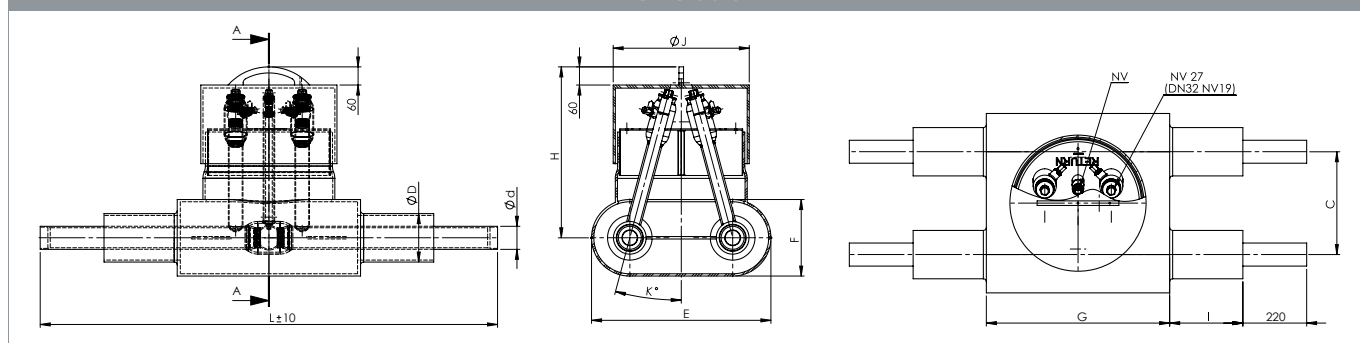
BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN40 are CE-marked. The 3.1 certificate is available upon request.



Notice

All well valves are delivered with alarm wire. Outlet for alarm available on request.

Dimensions

[illegible]

* Delievered with four DN25 service valves (Ø33,7).

Well valve, Pre-insulated - DN32-250, PN25

Type 67102 - Reduced bore



Service valve - DN25-50, PN25

Type 60101 - Reduced bore

Female × Welding

Service valve for pre-insulated valves and pipes.

Materials

Service valve, valve house in stainless steel, AISI304 (EN 1.4301), welding end in carbon steel - supplied as standard in DK.

Applications

Service valve to be welded on to existing pipe installations.

Media

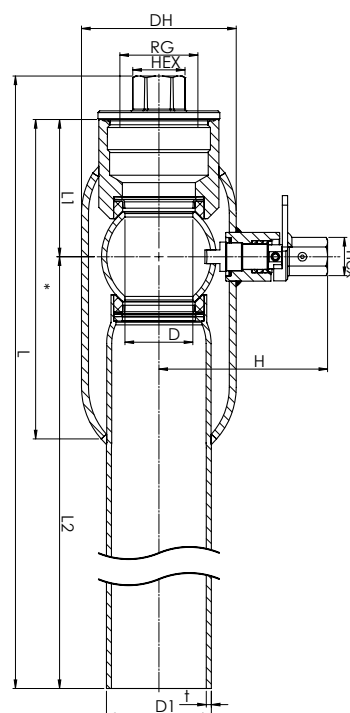
Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



Dimensions



			All dimensions in mm								
DN	BROEN No.	net Weight kg	D	L	L1	L2	DH	D1	t	RG	H
25	60101025S141800	1.4	20	345	45.0	275.0	51.0	33.7	2.6	1"	73
32	60101032S141900	2.3	25	345	52.5	267.5	57.0	42.4	2.6	1¼"	77
40	60101040S092900	2.5	32	345	60.0	260.0	76.1	48.3	2.6	1½"	90
50	60101050S093000	3.5	39	362	72.5	264.5	88.9	60.3	2.9	2"	97

Service valve - DN25-80, PN25

Type 60101 - Reduced bore

Female × Welding

Service valve for pre-insulated valves and pipes.

Materials

Service valve, valve house in stainless steel, AISI316Ti (EN1.4571), welding end in carbon steel, glassblasted.

Applications

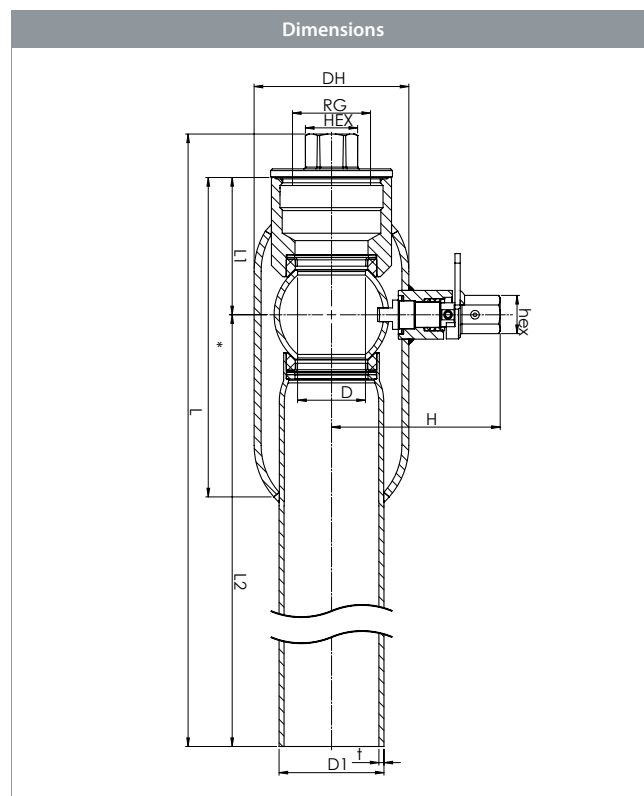
Service valve to be welded on to existing pipe installations.

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



			All dimensions in mm								
DN	BROEN No.	net Weight kg	D	L	L1	L2	DH	D1	t	RG	H
25	60101025S338300	1.8	20	363	62.0	275	51.0	33.7	2.6	1"	73
50	60101050S338400	5.2	39	368	62.6	264	88.9	60.3	2.9	2"	97
80	60101080S319600	5.5	63	387	106.1	350	133.0	88.9	3.2	3"	145

Service valve - DN25-80, PN25

Type 60101 - Reduced bore

Female x Welding

Service valve for pre-insulated valves and pipes.

Materials

Service valve, valve house in stainless steel, AISI316Ti (EN1.4571), welding end in carbon steel, glassblasted. **Length 1000 mm.**

Applications

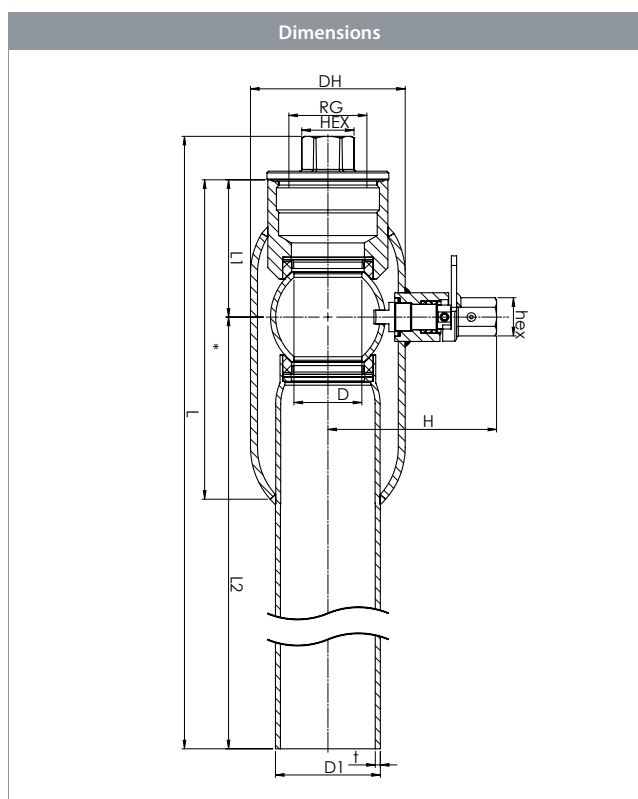
Service valve to be welded on to existing pipe installations.

Media

Water, air and other media not decomposing the steel. If in doubt, please contact BROEN Ballomax® Sales Department.

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 DN40 are CE-marked. The 3.1 certificate is available upon request.



			All dimensions in mm								
DN	BROEN No.	net Weight kg	D	L	L1	L2	DH	D1	t	RG	H
25	60101025S384000	3.2	20	1025	62.6	937	51.0	33.7	2.6	1"	73
50	60101050S384100	7.8	39	1025	78.8	921	88.9	60.3	2.9	2"	97
80	60101080S384200	9.2	63	1031	106.1	894	133.0	88.9	3.2	3"	145

Flex extension - DN20-150

Type 66062 - Reduced bore

Flex extension

Flex extension without back stop for high stress valves.

Materials

Steel and PVC protective pipe.

Applications

The adapter of the inner hexagon part (Stainless steel) will be connected with the stem of the ball valve. The protection tube is made of plastic and will be crimped on to the valve neck.

Notice

All flex extenders can be shortened when needed.



DN	BROEN No.	Length - mm	Nv
20-80	66062020S314200	500	19
20-80	66062020S205900	1000	19
20-80	66062020S306800	2000	19
100-150	66062100S314300	500	27
100-150	66062100S206000	1000	27
100-150	66062100S306700	2000	27

Flex extension - DN25-350

Type 66062 - Reduced bore

Flex extension

Flex extension with back stop for high stress valves.

Materials

Steel and PVC protective pipe.

Applications

The adapter of the inner hexagon part (Stainless steel) will be connected with the stem of the ball valve. The protection tube consists of hexagonal stainless steel.

Notice

All flex extenders can be shortened when needed.



DN	BROEN No.	Length - mm	Nv
100-150	66062150S314000	500	27/70
100-150	66062150 250	1000	27/70
100-150	66062150 260	2000	27/70
200-350	66062250S314100	500	50/90
200-350	66062250 250	1000	50/90
200-350	66062250 260	2000	50/90

Universal allen key

Type 3723S60 - Reduced bore

Universal allen key

For both isolating and service valves.



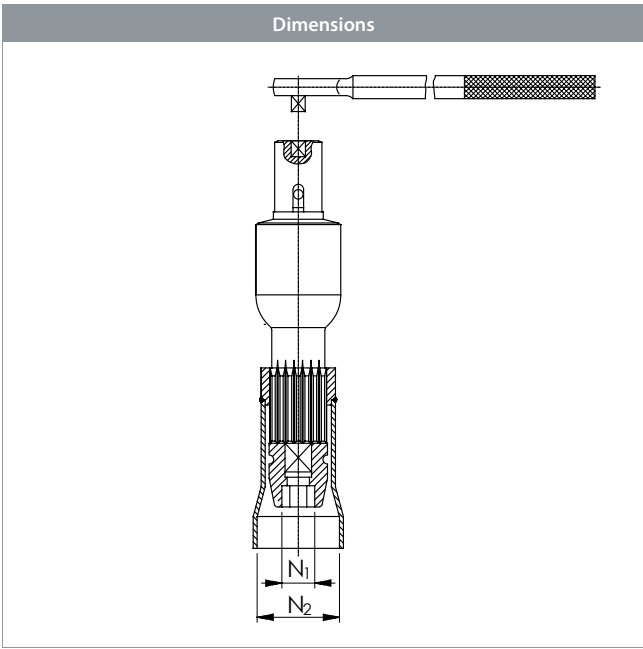
BROEN No.
3723S60

BROEN-Gear, Mobile actuator - DN100-350

Type 66361 - Reduced bore

BROEN-Gear,Mobile actuator

Can be used together with flexible extension with stainless steel protective pipe.



DN	Type	BROEN No.	N1 - mm	N2 - mm	Max. moment - Nm
100-125	MP II	66361100 060	27	70	800
150-250	MP II	66361250 070	50	90	1800
150-350	MP III	66361400 080	50	90	6000

BROEN-Gear, Planetary gear - DN100-400

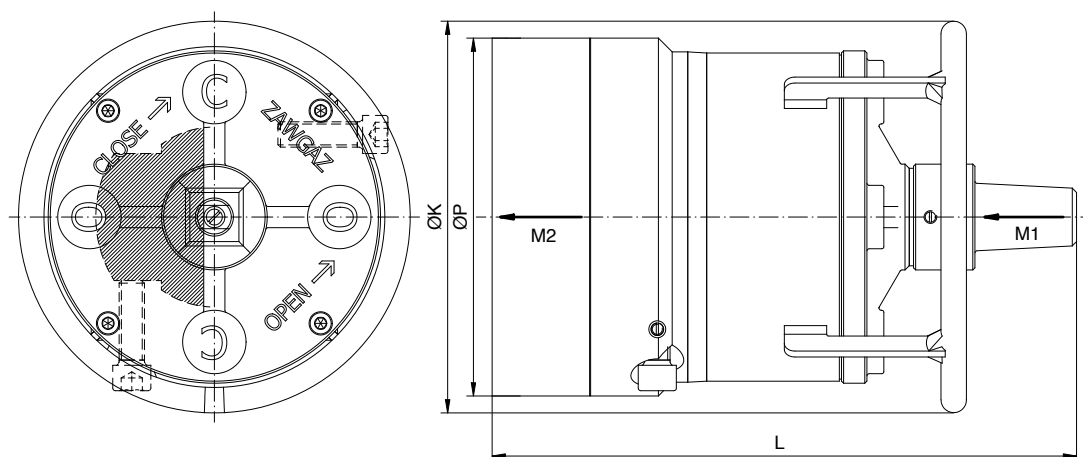
Type 500249 / 3/PP0... - Reduced bore

BROEN-Gear, Planetary gear

Can be used together with flexible extension with stainless steel protective pipe. * Operated with a SQ key.



Dimensions



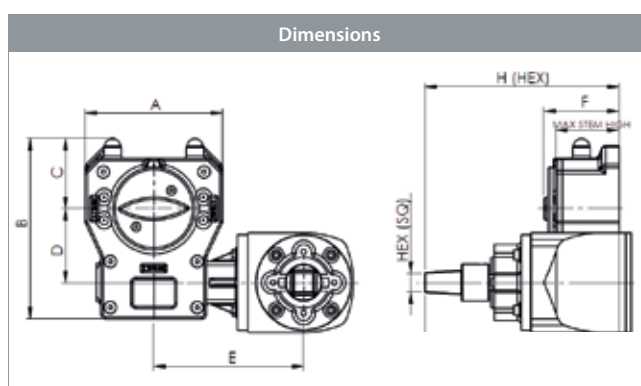
DN	BROEN No.	All dimensions in mm					Square
		M1	M2	L	ØK	ØP	
100-150	500249	50	1000	267	185	169	27/32
200-350	3/PP06001KS02	100	2000	276	185	169	27/32
400	3/PP05002KS02	200	6000	331	258	198	27/32

BROEN-Gear, Bevel gear - DN200-500

Type 60059 - Reduced bore

BROEN-Gear, Bevel gear

BROEN-Gear is a strong high quality bevel-gearbox. The gear is equipped with an angle that makes top operation possible and this makes it well suited for well valves.



DN	BROEN No.	net Weight kg	All dimensions in mm						H (HEX)	HEX
			A	B	C	D	E	F		
200	600591	13.0	138	205	100	71	171	88	217	36
250	600592	17.0	200	242	116	86	181	93	219	36
300	600593	26.0	220	270	122	105	197	102	225	36
350	600593	26.0	220	270	122	105	197	102	225	36
400	600594	43.0	285	323	143	130	336	123	323	36
500	600595	68.2	370	408	170	182	388	139	236	36

BROEN-Gear, Bevel gear - DN200-500

Type 60065 - Reduced bore

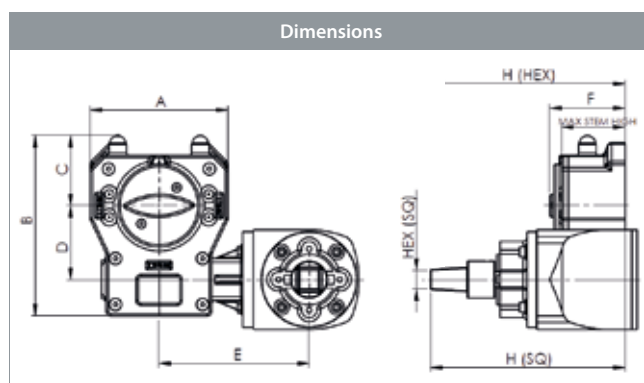
BROEN-Gear, Bevel gear with telescopic extender

BROEN-Gear is a strong high quality bevel-gearbox. The gear is equipped with an angle that makes top operation possible and this makes it well suited for well valves.

If the valve is located very deep in the ground, a telescopic extender can be mounted. This extender is available in three lengths that can be combined with all gear boxes.

Telescopic extender in three sizes:

500-850 mm, 851-1500 mm and 1501-2500 mm.



DN	BROEN No.	net Weight kg	All dimensions in mm						H (SQ)	SQ
			A	B	C	D	E	F		
200	600651	13.0	138	205	100	71	171	88	214.5	27/32
250	600652	17.0	200	242	116	86	181	93	214.5	27/32
300	600653	26.0	220	270	122	105	197	102	214.5	27/32
350	600653	26.0	220	270	122	105	197	102	214.5	27/32
400	600654	49.5	285	323	143	130	336	123	214.5	27/32
500	600655	68.2	370	408	170	182	388	139	214.5	27/32

Telescopic extension for Bevel gear - DN200-500

Type - **Reduced bore**

Telescopic extension

BROEN telescopic extension for bevel gear, only for gears with SQ operation.



DN	BROEN No.	Length - cm	Operation - square
200-500	-	500-850	27/32
200-500	-	851-1500	27/32
200-500	-	1501-2500	27/32

Type 600... - Reduced bore

Repair set, contains packing set for stem and tools.



DN - HEX with backstop.	BROEN No.
20-80	600262
100	600263
125-150	600264
200	600269

BROEN Ballomax® Repair set - DN200-500

Type 600... - Reduced bore

BROEN Ballomax® Repair set

Repair set, contains packing set for stem and tools.



DN - ISO-flange	BROEN No.
200	600266
250-300	600265
400	600267
500	600268

Pressure and temperature graph - DN10-500

Reduced bore

Pressure drop graph - DN10-500

Reduced bore

Pressure drop graph

Ball valve in fully open position.

Medium: water density in 1000 kg/m³

Definitions

Kv: M³ water per hour at pressure drop 1 bar.

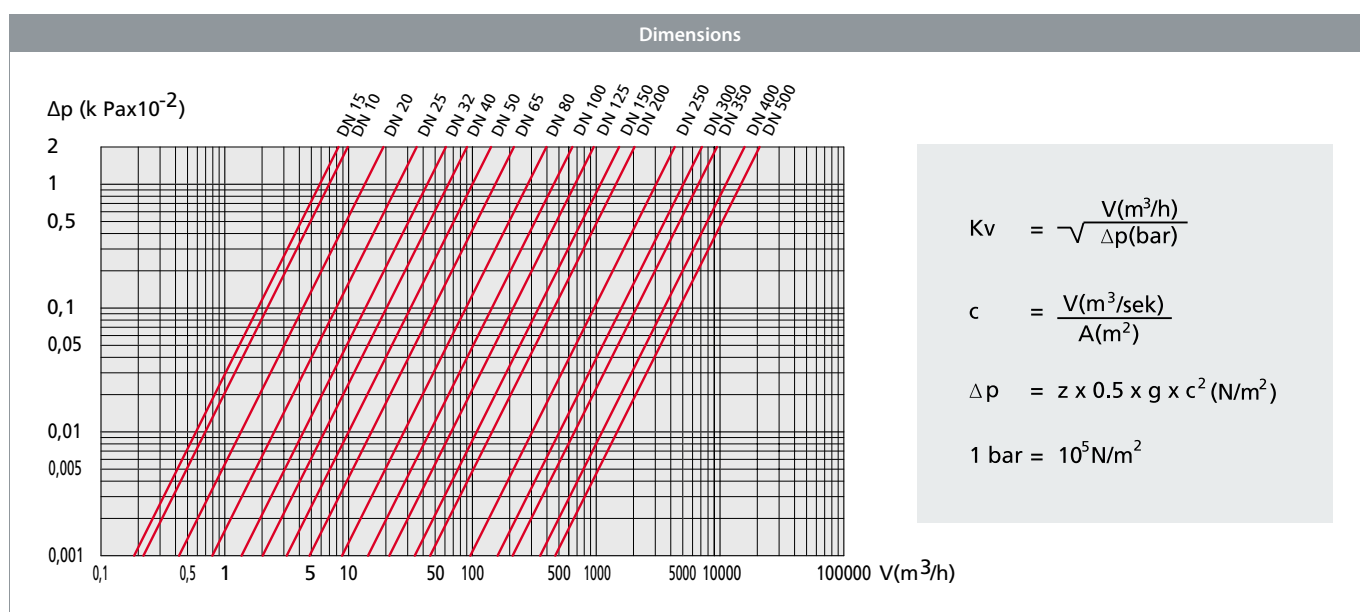
c: Flow rate of the media in m/sec.

V: Actual flow volume.

A: The area of flow in m² of the ball valve in question.

z: Coefficient of resistance.

g: Density in kg/m³.



DN	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	500
Kv	7	6	14	26	43	64	100	160	280	450	690	1100	1500	3047	5082	6800	11450	15098
A x 10 ⁻⁴	0,79	0,79	1,77	3,14	4,90	8,04	12,56	19,63	33,18	50,27	78,54	122,72	176,71	314,16	490,87	490,87	730,62	1134,11
z	0,32	0,44	0,41	0,37	0,33	0,40	0,40	0,39	0,36	0,32	0,33	0,32	0,35	0,28	0,24	0,19	0,11	0,15

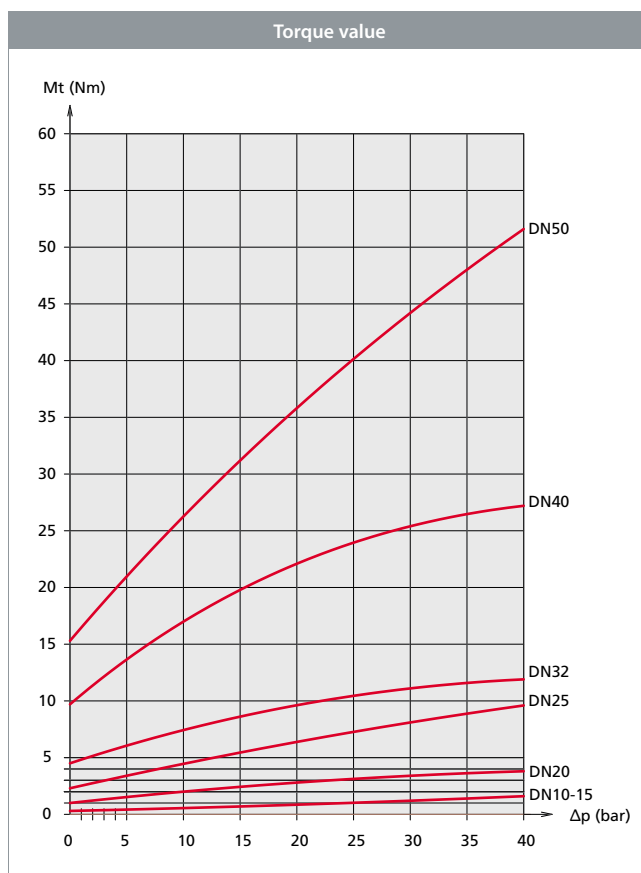
Operating torque - DN10-50, PN40

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.



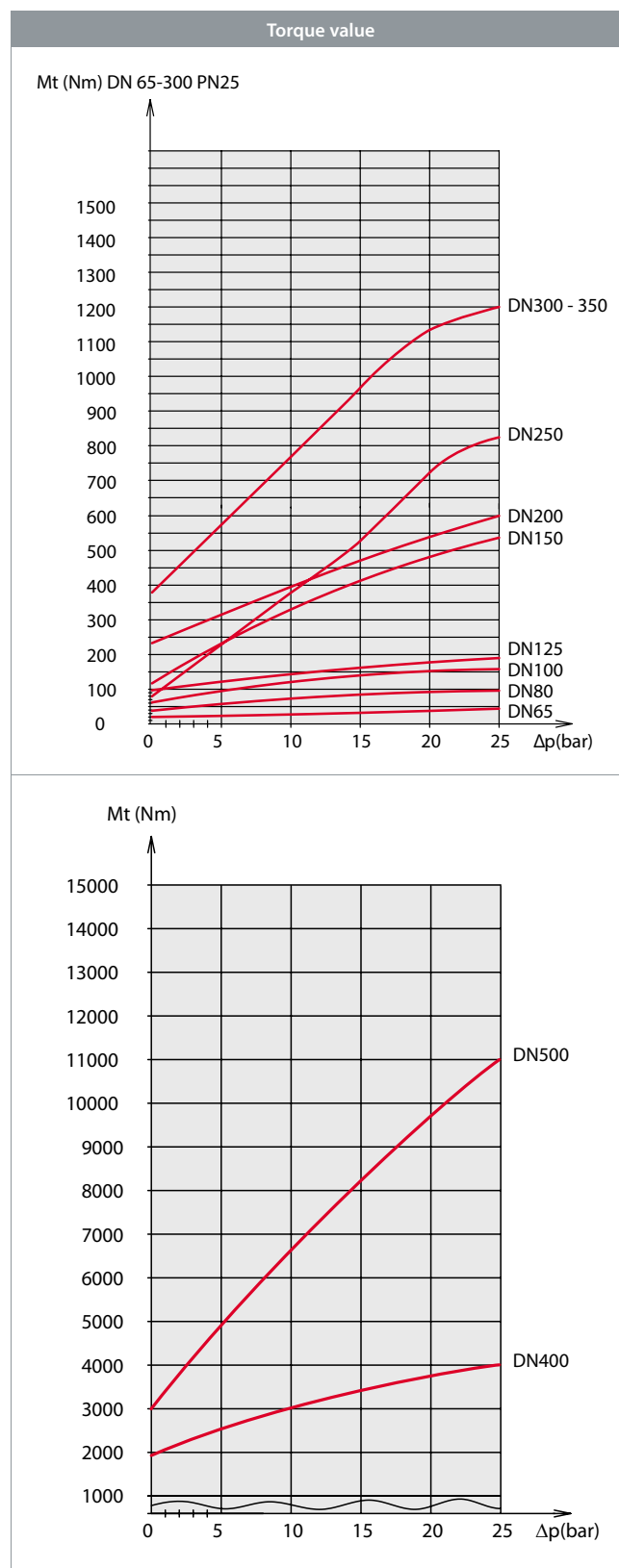
Operating torque - DN65-500, PN25

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.



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SECTION 19
**General terms of
sale and delivery**

1. Application of terms of sale and delivery

- 1.1 The below general terms of sale and delivery shall apply for any quotation, order confirmation, sale and delivery by BROEN in the absence of any other agreement in writing between the parties.

2. Product information, price lists, etc.

- 2.1 Information in catalogues, price lists and any other product documentation provided by BROEN shall be binding on BROEN only where the agreement with the purchaser makes specific reference to such information. BROEN shall reserve the right to change information without notice.
- 2.2 All drawings and technical descriptions supplied to the purchaser shall remain the property of BROEN and may be used only for the operation and maintenance of the products supplied by BROEN. The material may not be copied, reproduced, passed on to or in any other way communicated to any unauthorized third party.

3. Prices and terms of delivery

- 3.1 Unless otherwise stated all prices in BROEN's quotations, order confirmations and other references are in Danish kroner (DKK) exclusive of VAT, customs duties, taxes, etc. Unless otherwise stated in the above material BROEN shall reserve the right to adjust prices until delivery in the event of changes in currency rates, customs duties, taxes or raw material prices.
- 3.2 Unless special terms of delivery have been agreed upon in writing, delivery shall be made in conformity with the Incoterms 2010, EXW. The prices stated by BROEN are in conformity with these terms of delivery.
- 3.3 The prices stated by BROEN are exclusive of the costs of packaging, including special packaging to ensure that the products are not exposed to damage in transit to the final destination. Unless otherwise agreed in writing, Euro pallets and pallet frames used will be invoiced the Purchaser. Return of Euro pallets and frames is not accepted.
- 3.4 For orders below Euro 300 net invoice value, or equivalent converted currency value, a handling fee of Euro 30 net, or equivalent converted currency value, applies.

4. Export

- 4.1 Unless otherwise agreed in writing it shall solely be the responsibility of the purchaser to ensure that the products sold can be legally applied in the purchaser's country and for the purposes intended, including their approval, if any, by public authorities or private persons for importation and application.
- 4.2 Unless otherwise agreed in writing, all costs of Irrevocable Letters of Credit (L/C) and costs of external produced verification documentation is to be carried by the purchaser.

5. Acceptance of quotations

- 5.1 Where BROEN makes a quotation that contains no stipulated date of acceptance, the quotation shall lapse in the event it is not accepted by the purchaser 30 days after the date of the quotation.

6. Time of delivery

- 6.1 Unless otherwise stated in writing in BROEN's quotation or order confirmation or in the agreement between the parties the time of delivery indicated by BROEN shall be indicated to the best of BROEN's judgment. In the event that the date of delivery is exceeded, the purchaser can by notification in writing to BROEN demand delivery and set a reasonable date not less than three weeks away. In the event that BROEN does not deliver within this extended period and where the non-delivery is not caused by circumstances attributable to the purchaser, the purchaser can by written notification to BROEN cancel the agreement with regard to the part consignment that has not been delivered. The purchaser shall not be entitled to make any claim vis-à-vis BROEN as a consequence of the delay.
- 6.2 In the event of strikes, lockouts, import restrictions, acts of God or other causes beyond BROEN's control, BROEN's time of delivery shall be extended by a period identical to the duration of the obstacle in question. Non-delivery or delayed delivery of raw materials from BROEN's sub-suppliers shall be considered acts of God and shall thus extend BROEN's time of delivery. In the event that the obstacle means that delivery cannot be effected or only at unreasonably high costs, BROEN shall retain the right to cancel the agreement.

7. Terms of payment

- 7.1 Provided credit is approved, BROEN's terms of payment are current month from the date of invoice plus 30 days.
- 7.2 In the event of payment after the due date BROEN shall be entitled to charge interest on overdue payments, at present 1% per month, to be calculated from the due date. In addition to this there will be an administration fee for reminders of minimum Euro 30 net, or equivalent converted currency value (or the maximum amount allowed by law at any time).
- 7.3 Payment can only be effected to BROEN's address unless stated otherwise on the invoice.
- 7.4 The purchaser shall not be entitled to off-set any claim he may have against BROEN (unless this claim has been accepted by BROEN in writing) and shall not be entitled to retain part of the purchase amount on account of such counterclaims.

8. Retention of ownership

- 8.1 BROEN shall retain ownership of the products sold until payment in full has been effected with the addition of interest and possible costs. The purchaser shall not be entitled to make arrangements that limit BROEN's retention of ownership.

9. Invoicing

- 9.1 BROEN will issue and forward invoices electronically. In the event of purchaser requirement for printed and posted invoicing, a handling and postal fee of Euro 2 net, or equivalent converted currency value, applies.

10. Liability for defects and product liability

- 10.1 Immediately after delivery the purchaser shall examine the products received. Defects that are found or should have been found during this examination or defects that are found later shall without delay and not later than seven days after the defect is found or should have been found be communicated in writing to BROEN. The purchaser shall under no circumstances be entitled to claim compensation for defects from BROEN later than one year after the date of delivery.
- 10.2 BROEN shall be entitled to decide whether the defects can be repaired or the defective products must be replaced. Such replacement and/or repair of defects will be made as soon as possible after the return of the product to BROEN.
- 10.3 The purchaser shall only be entitled to return sellable standard products and only following prior acceptance in writing from BROEN. BROEN reserves the right to refuse return of products at BROEN's sole discretion. The freight costs of the returned products shall be paid by the purchaser. The reimbursement for returned products shall be calculated on the basis of the original sales price with a deduction reflecting the costs of preparing the products for a new sale. This deduction will be fixed after the receipt of the products and after an assessment of the state of the products, the deduction will, however, amount to minimum 30% of the sales price.
- 10.4 Apart from the stipulations of clause 10.1/10.2 the purchaser shall not be entitled to make any claims to BROEN on account of defective products.
- 10.5 BROEN shall be liable for injuries to persons and damage to property as a result of defects in the products supplied (product liability) solely to the extent laid down in non-dispensable rules of law. BROEN shall not be liable for damage to the purchaser's real or personal property or to any other real or personal property belonging to a third party intended for commercial use.
- 10.6 Particularly for brass products it must be emphasized that BROEN shall not be liable for damage to the products or damage attributable to the products as a result of stress corrosion, dezincification and galvanic corrosion unless BROEN has in writing taken on such liability. In the event that BROEN has taken on such liability these general terms of sale and delivery shall apply with the exception of this clause.

11. Exemption from liability

- 11.1 BROEN shall be exempt from liability to the purchaser in the event of circumstances that prevent the fulfilment of the agreement or that make the fulfilment unreasonably burdensome, such as labour conflicts and any other circumstances beyond the control of BROEN, e.g. fire, war, mobilisation or similar military measures, seizures, currency restrictions, riots and civil unrest, lack of means of transportation, general scarcity of goods, restrictions regarding motive power as well as defective or delayed deliveries from sub-suppliers due to any of the circumstances mentioned in this clause.
- 11.2 BROEN shall under no circumstances be liable for trading losses, losses of profit or other indirect losses or other consequential losses, including the costs of establishing or localizing defective products or damage.

12. Settlement of disputes - venue

- 12.1 Any dispute between BROEN and the purchaser in relation to an agreement between the parties or in relation to the interpretation of these general terms of sale and delivery shall be settled in accordance with Danish law and at BROEN's venue. BROEN shall be entitled to demand that any dispute is settled by arbitration in accordance with the rules and stipulations of the Danish Institute of Arbitration (Det Danske Voldgiftsinstitut).

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SECTION 20
References and
case stories

Sustainable and energy efficient Danish district heating solution.

BROEN Ballomax® delivers a proven solution to the energy challenge.



Aabybro district heating plant (Denmark).

District heating plays an important part in Danish energy supply and is part of a balanced national energy plan to reduce carbon emissions and the use of finite resources in Denmark.

A small town in the Northern part of Denmark sets a high standard for efficient district heating and presents a sustainable and efficient solution distributing clean and efficient energy to around 2,000 private households in the town of Aabybro.

In 1986 the plant Aabybro Fjernvarme (Aabybro District Heating Plant) switched from oil to wood chips based heating and in April 2016 a brand new energy efficient plant was inaugurated. The plant is established as a co-operative, where the customers are also the owners of the plant.

The significant design of the new plant included functionality and process flow as key design parameters. The building follows the shape of the main boiler – technical dimensions have determined the architecture, which adds a significant profile to the otherwise surrounding flat landscape.

Danish District Heating and the Danish cooperative movement

The concept of district heating was invented in Denmark as part of the cooperative movement. The members were all owners and shared the economic stress of producing goods or buying capital investments and then divided the financial surplus. This created synergies beyond the sum of individual investments. During the 1980s Danish energy operators started connecting the individual networks. A shared transmission grid connected all the local district heating networks to share excess capacity and level out production peaks.

Kathrine – an energy efficient lady getting the job done.

Aabybro Fjernvarme transforms wood chips to energy. The chips come from national forestry and local farmers thinning the vegetation around their fields.

The main component in the heat station in Aabybro is the boiler called Kathrine – named after a famous Danish TV character. She is a solid, sturdy and practical hard working character, who gets the job done.



Main boiler – Kathrine and close-up of wooden chips

During the combustion the temperature in Kathrine drops from more than 1,000°C in the combustion chamber to 180°C and as the final step a condensation process is added bringing down the temperature to 38°C. The heat from the combustion process is used to heat up the water for the town of Aabybro. As yet another gain some of the ashes produced from the combustion are re-circulated and sold as an ingredient for fertilizer materials. Kathrine processes chips with a humidity between 35% - 55%. With a nominal capacity of 8.4 MW she has plenty of power and volume to get the job done.

The boiler was installed by the company Weiss - a Danish plant construction company, who delivered a complete key solution for Aabybro District Heating Plant - also including pumps, valves and pipes. Weiss is a recognized specialist in district heating plant constructions – and very well familiar with the valves from BROEN. John Myrup from Weiss A/S says: “Many customers ask for fully welded ball valves for shut off applications instead of butterfly valves, because the ball valves are more reliable. Over the years Weiss has built up a good experience using BROENs ball valves for district heating plants and it is a brand that customers trust – the valves are long lasting and operate with no problems. BROEN Ballomax® still proves itself among the most efficient and reliable district heating valves on the market today”.

BROEN Ballomax® - designed to last.

The plates of a large heat exchanger is where the heat from Kathrine is transferred to the outside circuit distributing heated water for the town and the connected local industrial plants. In a closed loop the water circulates back to the plant, where it is again heated up in the heat exchanger, distributed to the households and then the re-circulation continues – driven by the pump station of the heating plant.



BROEN Ballomax® ball valves controlling the flow of district heating water

In the pump station the BROEN Ballomax® ball valves play an important role as reliable and efficient shut off valves for controlling the flow through the different pipelines, where a valuable stream of hot water supplies the town of Aabybro with hot water. Giant amounts of water push through the components every day and long lasting reliability is required for any opening and closing mechanism. With temperatures around 165°C shutting the valves tightly and efficiently on and off in order to direct the flow efficiently is very important and no downtime or leakages are accepted.

All BROEN Ballomax® ball valves are tested according to PED module H to secure they will perform satisfactorily over their entire lifetime. Each and every component has been carefully designed. The spindle of a BROEN Ballomax® valve is mounted from the inside and cannot be ejected and there is minimal maintenance of a BROEN Ballomax valve body as no parts require replacement or lubrication. Only a yearly activation is recommended to secure that the ball does not get stuck in the retainer – this means a minimum of work for the customer.

Inside the valve the control of the media is provided by a stainless steel ball closing against self-lubricating seats to secure superior sealing and low friction – which again means that closing and opening require relatively little torque and small dimensioning of gears and activation. The floating ball is self-centering and the seats are backed up with springs and retainers to ensure constant contact pressure between the ball and the seat. BROEN Ballomax® allows a maximal handle turn of 90°.

BROEN – complete offerings for district heating.

BROEN Ballomax® valves are used in the distribution system towards the town and Plant Manager at Aabybro Fjernvarme, Torben Stenbroen explains: "I want to have the same quality of valves in the distribution to the town, as I have in the plant and here quality was a deciding parameter in the construction phase. In general we aim for one supplier- and service interface for all valves. With BROEN Ballomax® we hope to get long lasting quality and reliability in our distribution system too". For the town of Aabybro BROEN has supplied valves for installation both above and below ground, isolated flexible main stop valves for house inlets as well as well-valves - combining two valves in one well.

BROEN can supply a comprehensive range of valves for district heating distribution grids and plants: installation above or below ground, floating or trunnion mounted balls, valves for steam, installation in wells or twin valves, gears, actuation and extensions.

For further information and relevant contact information please see: www.broen.com

BROEN Ballomax® - Designed to last

Fully welded steel ball valve
Heating | Cooling | Steam
Temperatures up to 200°C
DN10 – DN500
PN16 | PN 25 | PN 40
Full bore | Reduced bore



Climate-friendly combined heat and power station in Elsinore.

BROEN Ballomax® with double bearing valve ball securing effective shut-off and correct flow.



Helsingør Forsyning (Denmark).

Kronborg Castle – effective control in the 1420s

From time immemorial the Kronborg Fortress located just outside Elsinore controlled the ships passing through the Sound and protected the infrastructure and values of the Danish kingdom to ensure that no enemy ships passed through the Sound and that correct tax was paid for passage.

Identically the heating supply in Elsinore in 2017 is a central element in today's infrastructure and must operate optimally to ensure that the large quantities of hot water circulated daily are used, where the heat is required – and not lost en route.

Green transition and renovation

Forsyning Helsingør, the local public utilities company in Elsinore, is planning to renovate district heating and make it future-proof. A reliable solution at competitive prices is requested, a solution also supporting the green transition from 2019 – this is both a local target and a national issue. In order to meet this target, the power station is in the process of replacing natural gas as fuel by sustainable wooden chips – and commence a future that is no longer based on fossil fuels.

Forsyning Helsingør intends to be one of Denmark's leading public utilities companies promoting a well-functioning and eco-conscious local society and supplying electricity, water and heating as well as making sure that waste and waste water are handled correctly.

Forsyning Helsingør – the peak load station remains an asset.

Today the heat and power station primarily produces electricity and as a secondary, run-off product district heating can be circulated in the district heating system of the town. With an output of 55 MW the existing heat and power station is to remain active as a reliable back-up and peak load station. The boiler of the station is fired by natural gas and produces steam to a steam turbine that in turn produces power.

The peak load station will be put into operation if the price of electricity is high and the price of natural gas low – and if electricity prices are favorable and it is operationally sound, heat is also produced to a storage tank holding 16,000m³ – approx. 700 MW. The peak load station is renovated to effectively secure a correct flow, effective shut-off and to optimize the synergy with the new wooden chip plant.



BROEN Ballomax® DN500 – Double bearing valve ball with Double Block and Bleed – DBB – outlet under the valve body

Consequently, in the spring of 2017 Forsyning Helsingør had four new BROEN Ballomax® DN500 Trunnion valves with DBB outlet valves welded into the existing power station (all four valves are 150°C / PN25). Two BROEN Ballomax® valves function as main shut-off valves between the new biomass plant and the combined heat and power station. Two other BROEN Ballomax® valves with AUMA gear function as bypass valves, that can direct the supply pipe water from the biomass plant into the steam boiler for further heating, if the temperature is not sufficiently high, before it is circulated to the users. With a maximum flow capacity of 2,400m³/h, temperatures of up to 120°C and a pressure of up to 25 bar, it is important that the valves function correctly.

Forsyning Helsingør has chosen to renovate the combined heat and power station with a sustainable fuel in the form of wooden chips. The existing station will be upgraded to function as a reliable peak load station and the components must also here function safely and optimally. Therefore BROEN Ballomax® valves have been chosen with functionalities providing additional reliability as a non-planned shut-down would be a disaster. Great importance has been attached to buying from a proven supplier, that backs up his product – and that will also be around tomorrow.

BROEN Ballomax® Trunnion with Double Block and Bleed

The new valves welded into the station have a special job to do and are so-called Trunnion valves – i.e. double bearing valves which means that the ball is anchored both at the top and at the bottom. This reduces friction and torque considerably, when the valve is activated. Valves fitted with a relief valve - popularly called a "tell-tale valve" - ensure, that the chamber between the ball and the body can be completely emptied, so that it is possible to ascertain, if the valve closes 100% tightly – hence the name Double Block and Bleed.



BROEN Ballomax® DN50 – Double bearing valve ball with Double Block and Bleed – DBB – outlet under the valve body

Green energy solutions to district heating construction projects.

BROEN Ballomax® valves – active players in the transition to renewable energy.



Hobro District Heating Station – a new district heating station with BROEN Ballomax® valves.

Denmark towards 2030 – green energy transition

According to the Danish Council on Climate Change Denmark's transition towards 2030 requires the proper building bricks to be put together correctly so that the vision of a society with low greenhouse gas emissions is fulfilled. One of Denmark's climatic targets is that 50 per cent of energy consumption in 2030 must be covered by renewable energy – and that is an import milestone with great signalling value in relation to the future vision of a low emission society in 2050.

Green components in Danish construction projects

Right now the Danish district heating sector is going through a transition to meet the requirements of a green and renewable energy production and that in turn imposes requirements as to how production in existing district heating stations is changed most effectively. The heart of the district heating system is a production station that centrally ensures that supply and demand are balanced and adjusted according to Denmark's fluctuating energy consumption - 24/7. The green transition to renewable energy production involves major complex building projects that make great demands on the construction of the stations and the components chosen.

BROEN A/S in Assens works together with and supplies well proven and thoroughly tested valve solutions and valve technology to energy companies and leading constructors in the entire district heating sector. Reliability and flow characteristics are important to ensure the green transition. The innovative heritage from Danish district heating and BROEN's long-standing experience with the development and manufacture of valves for district heating and cooling make BROEN Ballomax® a key component in district heating stations worldwide.

Tjærborg Industri – a constructor with a proven record

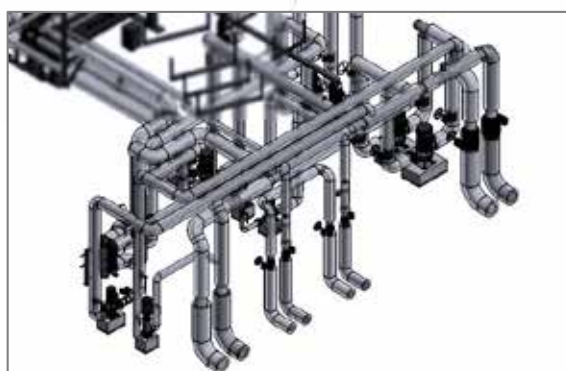
For many years BROEN has been working closely together with Tjærborg Industri that supplies complete turnkey contracts to the entire district heating sector – with subsequent service to the stations constructed.

The reliability of the components chosen is therefore of great importance to Tjærborg Industri and downtime has severe consequences – particularly in a changing climate with many cold degree days like Denmark.

Tjærborg Industri, today Denmark's leading supplier of complete solutions to the district heating sector, also supplies BROEN valves to many other types of projects in addition to the chip burning district heating stations.



Hobro District Heating Station: Booster station with BROEN Ballomax® valves

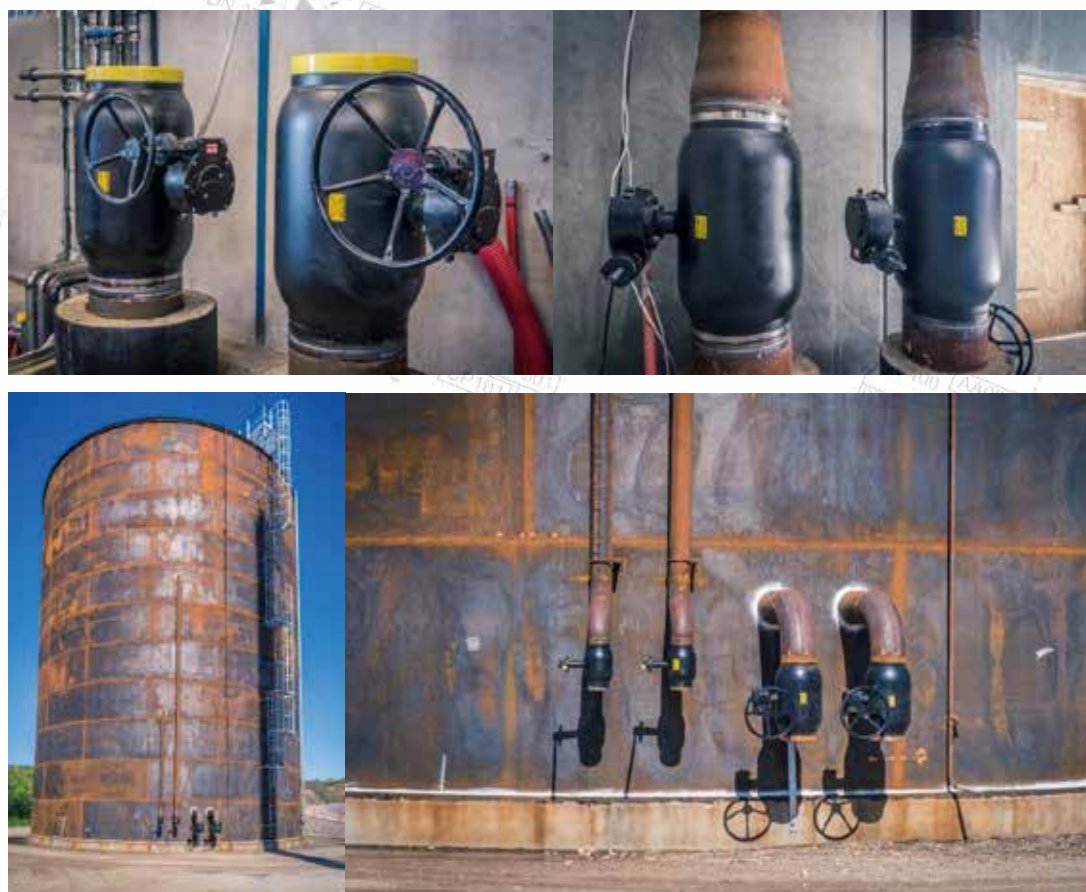


Tjærborg Industri: 3D layout drawing from heating station.

In the spring of 2017 Tjæreborg Industri started the construction of a new chip burning station for Hobro District Heating Station – a station with a nominal effect of up to 13 MW.

The installation has a budget of approx. 45 million DKK and boiler line 1 is expected to come into operation late October 2017, phase 2 with yet another boiler line will be initiated.

With temperatures of up to 155°C and a pressure of up to 10 bar it is important that all valves installed operate correctly – each time they are activated over the next many years. Tjæreborg Industri has chosen BROEN Ballomax® valves from BROEN A/S in Assens as safety, reliability and a supplier of long standing backing his product were of utmost importance.



Hobro District Heating Station: BROEN Ballomax® valves DN250-400 – Designed to last.

BROEN Ballomax® Trunnion with Double Block and Bleed

Morten Krammer, Tjæreborg Industri, "We have decided to install BROEN Ballomax® valves as we have many years of really good experience with this valve. We need components that help us build the stations that will form the basis for Denmark's green transition and we look particularly for flow characteristics and the reliability of the components over time when we pick components for our stations. Our experience with BROEN's products has always been good so it was a natural thing for us to include them in this project."

BROEN Ballomax® trunnion valves DN250 have been installed in the station in Hobro as well as standard DN400 BROEN Ballomax® valves and valves smaller than DN100 provided with draining outlets.



BROEN Ballomax® DN250 – DN400 valves – Double bearing valve balls with Double Block and Bleed and outlet – during welding at Hobro District Heating Station.

Trunnion mounted valves are double bearing valves which means that the ball is anchored at the top and at the bottom. That reduces friction and torque considerably when the valve is activated. BROEN Trunnion valves are as standard fitted with a relief valve - popularly called a "tell-tale valve" - that ensures that the chamber between the ball and the body can be completely emptied so that it is possible to ascertain if the valve closes 100% tightly – hence the name Double Block and Bleed. The DBB outlet can be fitted with an additional pipe and ball valve to ease accessibility and operation.

For more information on BROEN and BROEN Ballomax® go to www.broen.com.

BROEN Valve Technologies

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

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

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

Read more at: www.broen.com

BROEN Group locations

Headquarters in Assens, DK

Sales- and productions sites ●

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

Sales companies and offices ○

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



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