

SECTION 6

Trunnion mounted valves
Reduced bore

BROEN
BALLOMAX®

Designed to last

Trunnion mounted valve - DN 200 - 700, PN 40/25/16

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.

Media

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

Surface treatment

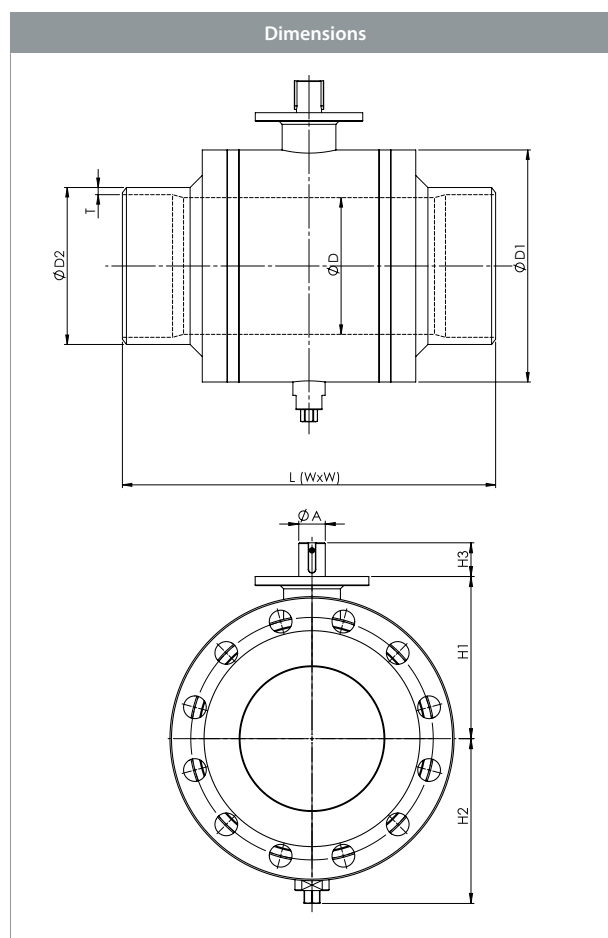
Eco-friendly protection finish against corrosion.

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 DN 200 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN 200 - 700 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.

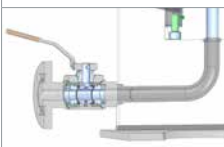
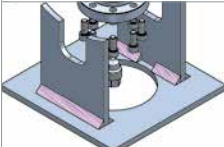


					All dimensions in mm
DN	BROEN No.	Bore	Kvs	net Weight kg	L
200	3/D200WW5D30	142	1800	76	521
250	3/D250WW5D30	190	3410	135	559
300	3/D300WW5D30	237	5101	213	635
350	3/D350WW5D30	285	7853	330	762
400	3/D400WW5D30	332	9257	518	838
500	3/D500WW5D30	375	12091	762	991
600	3/D600WW5D30	475	19239	1382	1143
700	3/D700WW5D30	588	27704	2201	1345

Trunnion mounted valve - DN 200 - 700, PN 40/25/16



Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN 200 - 700	BROEN-Gear.
	-	DN 200 - 700	BROEN-Gear, Electric gear.
	-	DN 200 - 700	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN 200 - 700	Base.

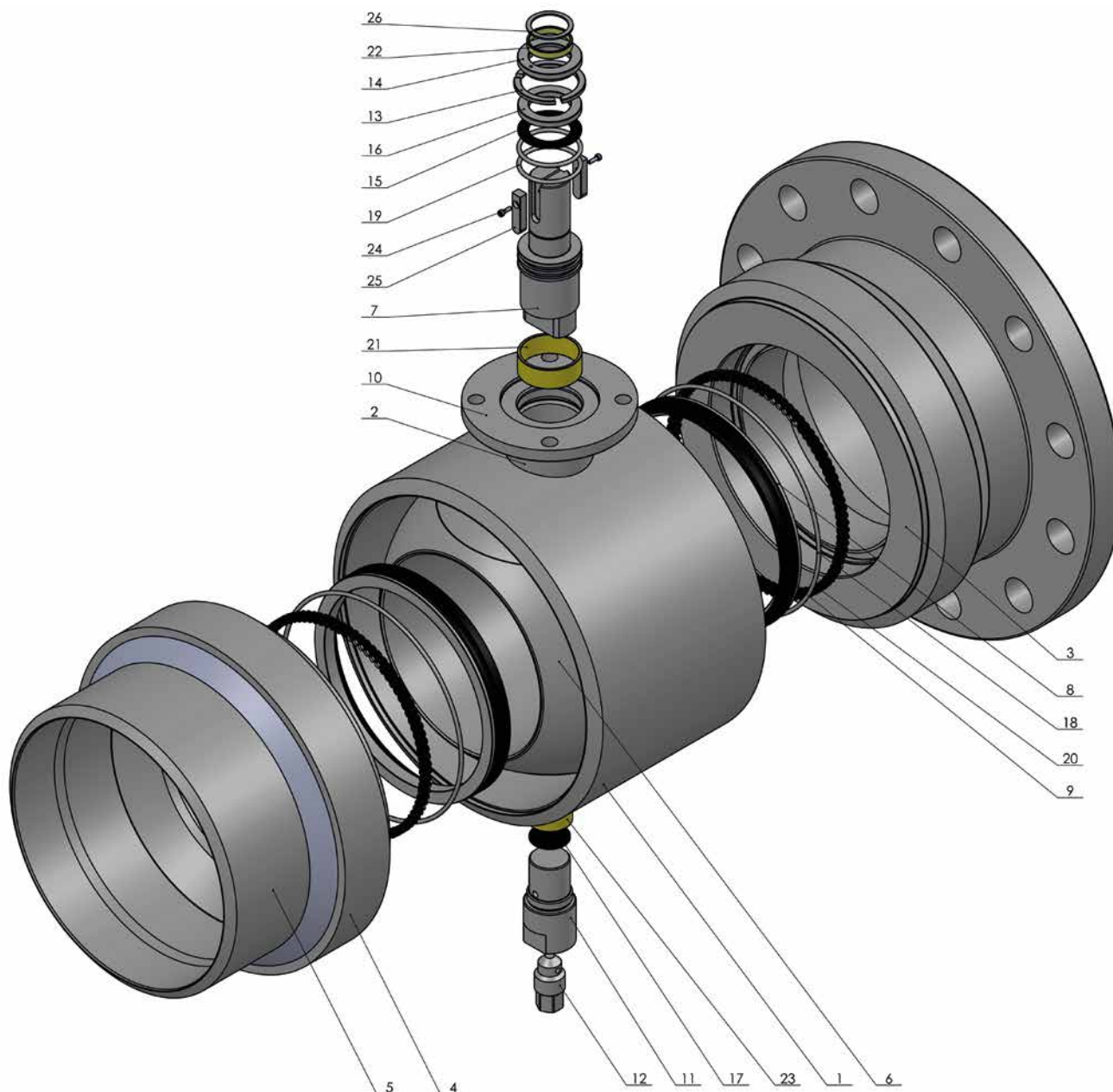
All dimensions in mm							
D1	D2	T	H1	H2	H3	A	ISO
254	219,1	8,8	185	183	45	35	F12
324	273	10	214	218	45	35	F12
394	323,9	10	258	255	61	50	F14
470	355,6	11	307	294	61	60	F14
546	406,4	12,5	351	528	57	60	F16
622	508	12,5	427	575	105	72	F25
785	610	12,5	504	793	105	72	F30
943	711	14,2	579	885	105	80	F30

Trunnion mounted valve - DN 200 - 700, PN 40/25/16

Type 3/D... - Reduced bore



Technical drawing



Trunnion mounted valve - DN 200 - 700, PN 40/25/16



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 - DN 800 - 1000, PN 40/25/16

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.

Media

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

Surface treatment

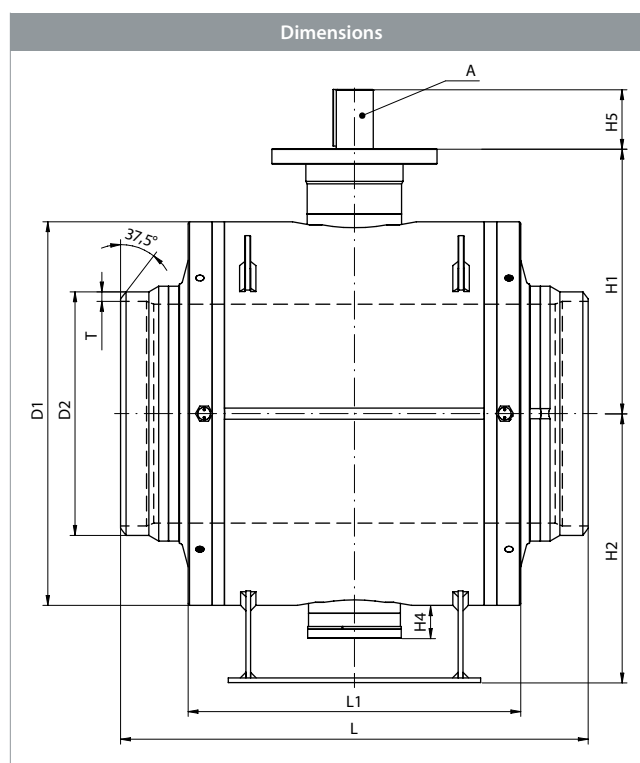
Eco-friendly protection finish against corrosion.

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 DN 400 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN 800 - 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.

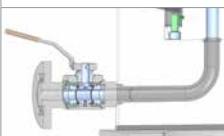


DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm	
					L	L1
800	3/D800WW5D30	684	43812	4900	1524	976
900	3/D900WW5D30	780	57223	6731	1727	1124
1000	3/D910WW5D30	874	72423	9052	1850	1214

Trunnion mounted valve - DN 800 - 1000, PN 40/25/16



Type 3/D... - Reduced bore

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

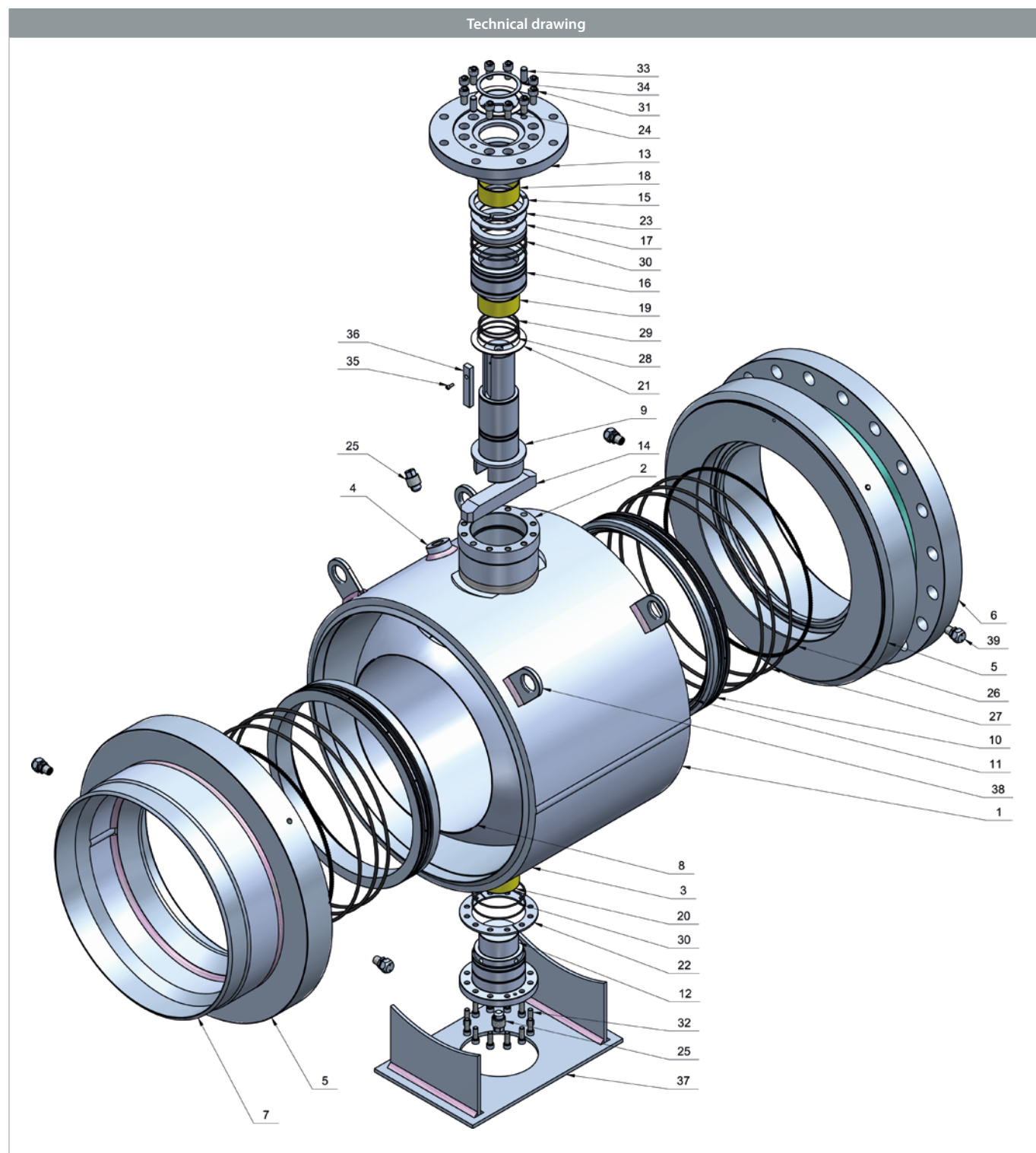
All dimensions in mm								ISO
D1	D2	T	H1	H2	H4	H5	A	
1126	813.0	16.0	806.0	790.0	109.0	200	Ø120	F35
1300	914.0	20.0	890.0	900.0	107.0	198	Ø120	F35
1450	1016.0	22.0	941.0	1000.0	117.0	183	Ø140	F40

Trunnion mounted valve - DN 800 - 1000, PN 40/25/16

Type 3/D... - Reduced bore



Technical drawing



Trunnion mounted valve - DN 800 - 1000, PN 40/25/16



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 - DN 200 - 700, PN 40

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.

Media

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

Surface treatment

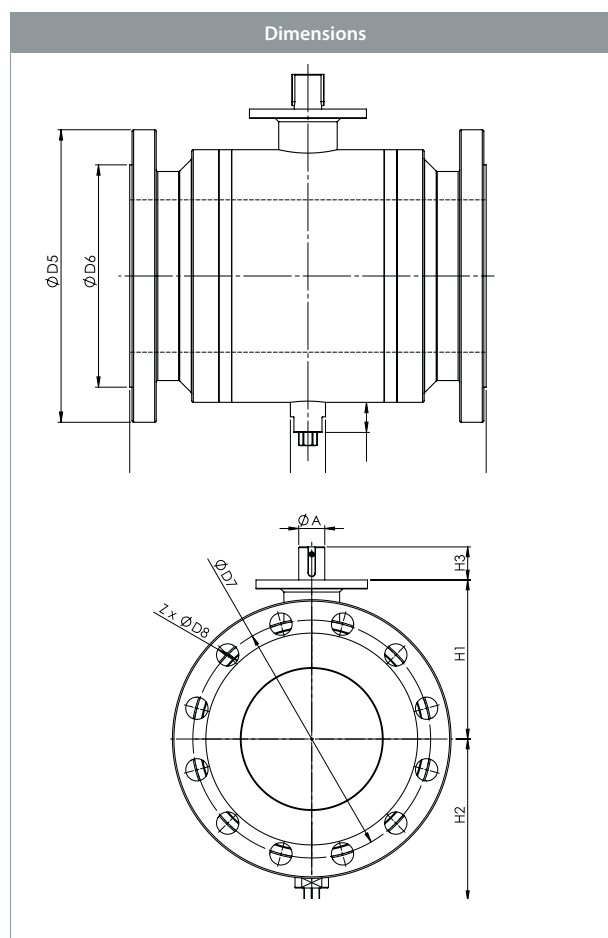
Eco-friendly protection finish against corrosion.

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 DN 200 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN 200 - 700 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.

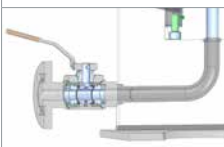
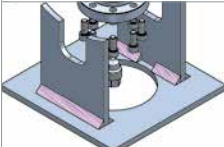


					All dimensions in mm
DN	BROEN No.	Bore	Kvs	net Weight kg	L
200	3/D200KK5D30	142	1800	127	457
250	3/D250KK5D30	190	3410	216	533
300	3/D300KK5D30	237	5101	345	610
350	3/D350KK5D30	285	7853	526	686
400	3/D400KK5D30	332	9257	764	762
500	3/D500KK5D30	375	12091	1202	914
600	3/D600KK5D30	475	19239	2102	1067
700	3/D700KK5D30	588	27704	3293	1245

Trunnion mounted valve - DN 200 - 700, PN 40



Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN200-700	BROEN-Gear.
	-	DN200-700	BROEN-Gear, Electric gear.
	-	DN200-700	Lubrication fitting NPT.
	-	DN200-700	Base.

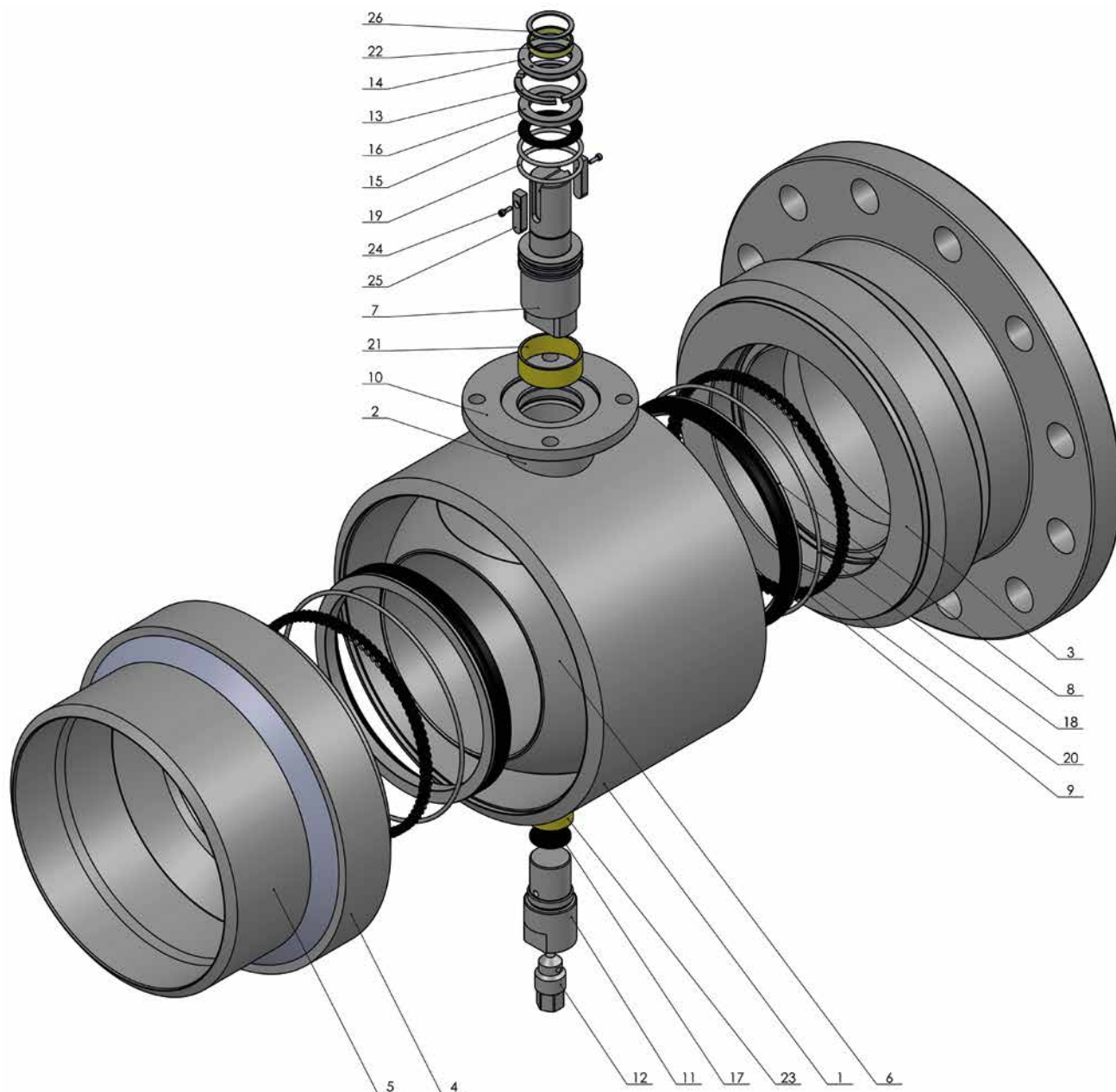
All dimensions in mm							
D5	D7	D8	H1	H2	H3	A	ISO
375	320	30	185	183	45	35	F12
450	385	33	214	218	45	35	F12
515	450	33	258	255	61	50	F14
580	510	36	307	294	61	60	F14
660	585	39	351	528	57	60	F16
755	670	42	427	575	105	72	F25
890	795	48	504	793	105	72	F30
995	900	48	579	885	105	80	F30

Trunnion mounted valve - DN 200 - 700, PN 40

Type 3/D... - Reduced bore



Technical drawing



Trunnion mounted valve - DN 200 - 700, PN 40



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 - DN 800 - 1000, PN 40

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.

Media

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

Surface treatment

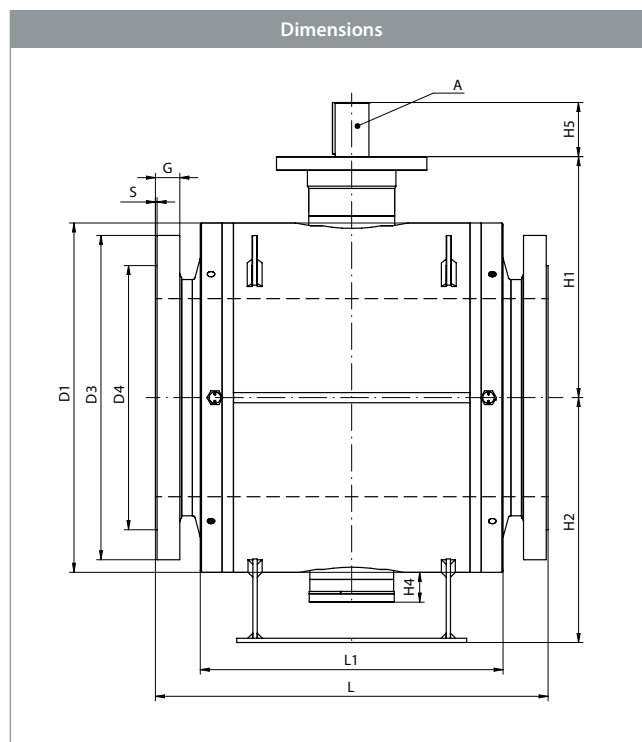
Eco-friendly protection finish against corrosion.

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 DN 400 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN 800 - 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.

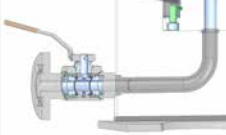


DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm	
					L	L1
800	3/D800KK5D30	684	43812	5044	1372	936
900	3/D900KK5D30	780	57223	6924	1524	1054
1000	3/D910KK5D30	874	72423	10584	2050	1214

Trunnion mounted valve - DN 800 - 1000, PN 40



Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN 500 - 800	Columns.
	-	DN 800	BROEN-Gear.
	-	DN 800 - 1000	BROEN-Gear, Electric gear.
	-	DN 800 - 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

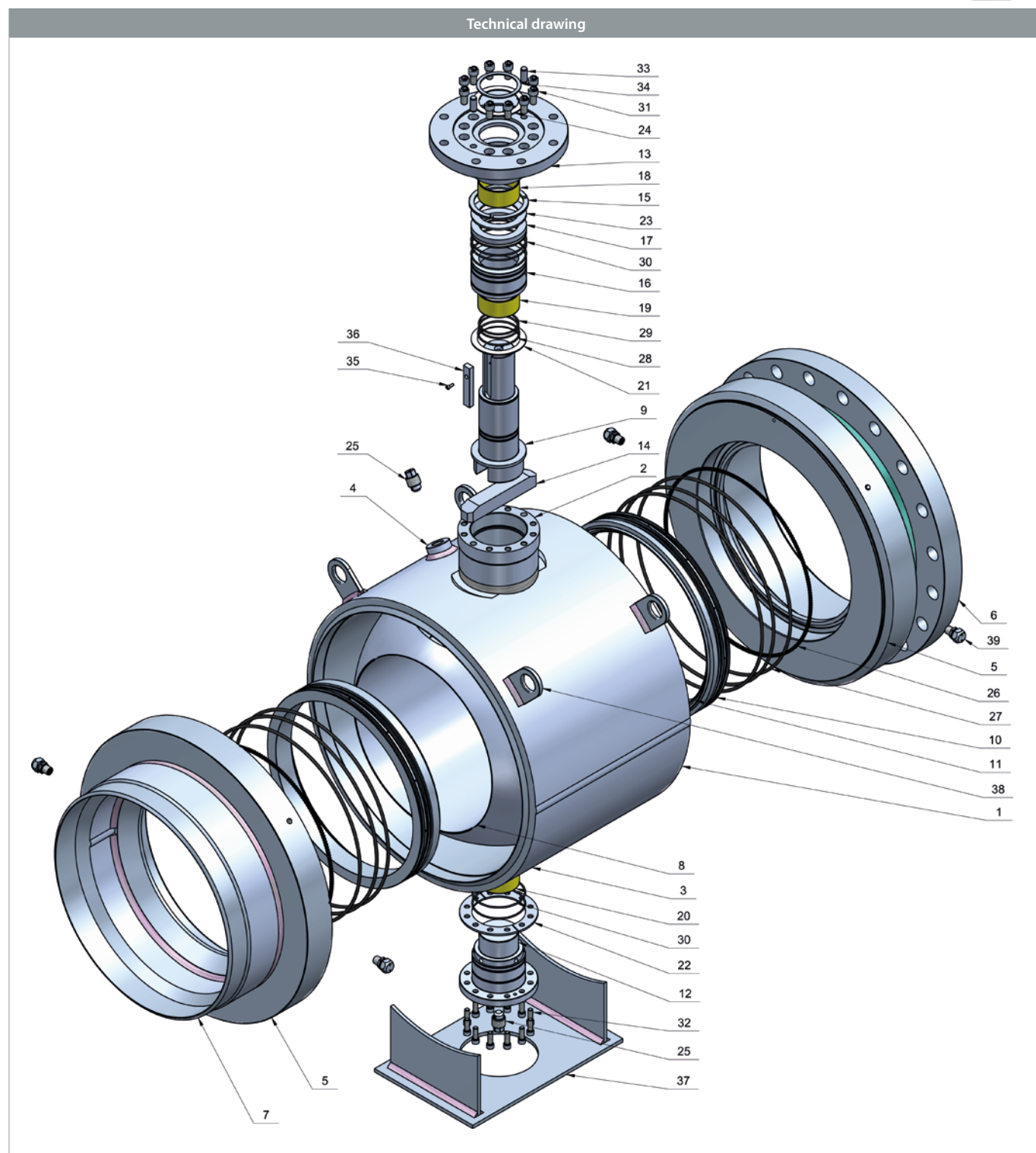
D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
1126	1140	960	90	5	806.0	790.0	109.0	200	Ø120	F35
1300	1250	1070	95	5	890.0	900.0	107.0	198	Ø120	F35
1450	1360	1180	100	5	941.0	1000.0	117.0	183	Ø140	F40

Trunnion mounted valve - DN 800 - 1000, PN 40

Type 3/D... - Reduced bore



Technical drawing



Trunnion mounted valve - DN 800 - 1000, PN 40



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 - DN 200 - 700, PN 25

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.

Media

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

Surface treatment

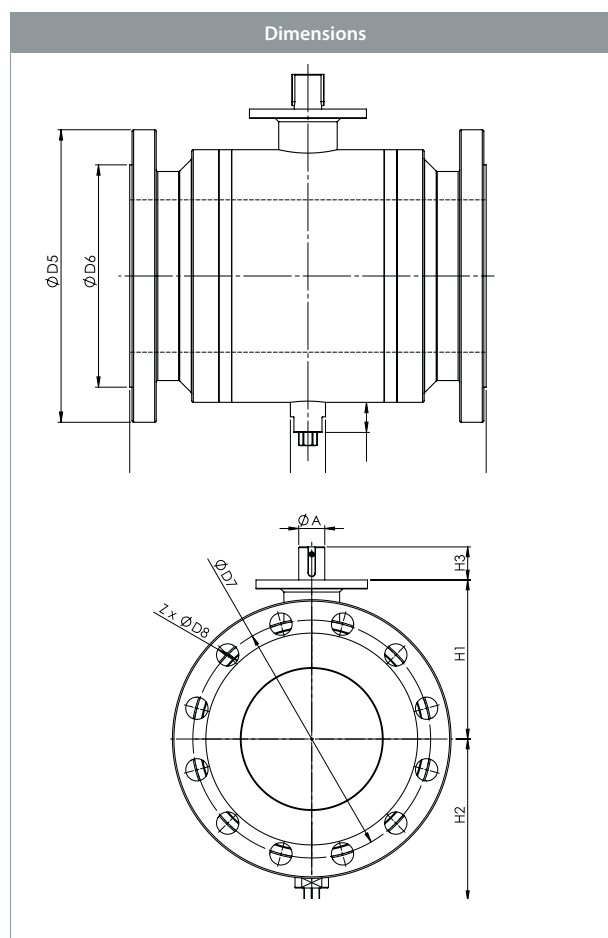
Eco-friendly protection finish against corrosion.

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 DN 200 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN 200 - 700 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.

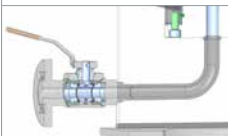
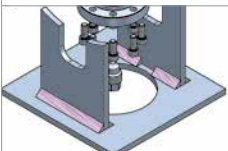


					All dimensions in mm
DN	BROEN No.	Bore	Kvs	net Weight kg	L
200	3/D200KK4D30	142	1800	120	457
250	3/D250KK4D30	190	3410	203	533
300	3/D300KK4D30	237	5101	322	610
350	3/D350KK4D30	285	7853	502	686
400	3/D400KK4D30	332	9257	708	762
500	3/D500KK4D30	375	12091	1174	914
600	3/D600KK4D30	475	19239	2022	1067
700	3/D700KK4D30	588	27704	3207	1245

Trunnion mounted valve - DN 200 - 700, PN 25



Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN 200 - 700	BROEN-Gear.
	-	DN 200 - 700	BROEN-Gear, Electric gear.
	-	DN 200 - 700	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN 200 - 700	Base.

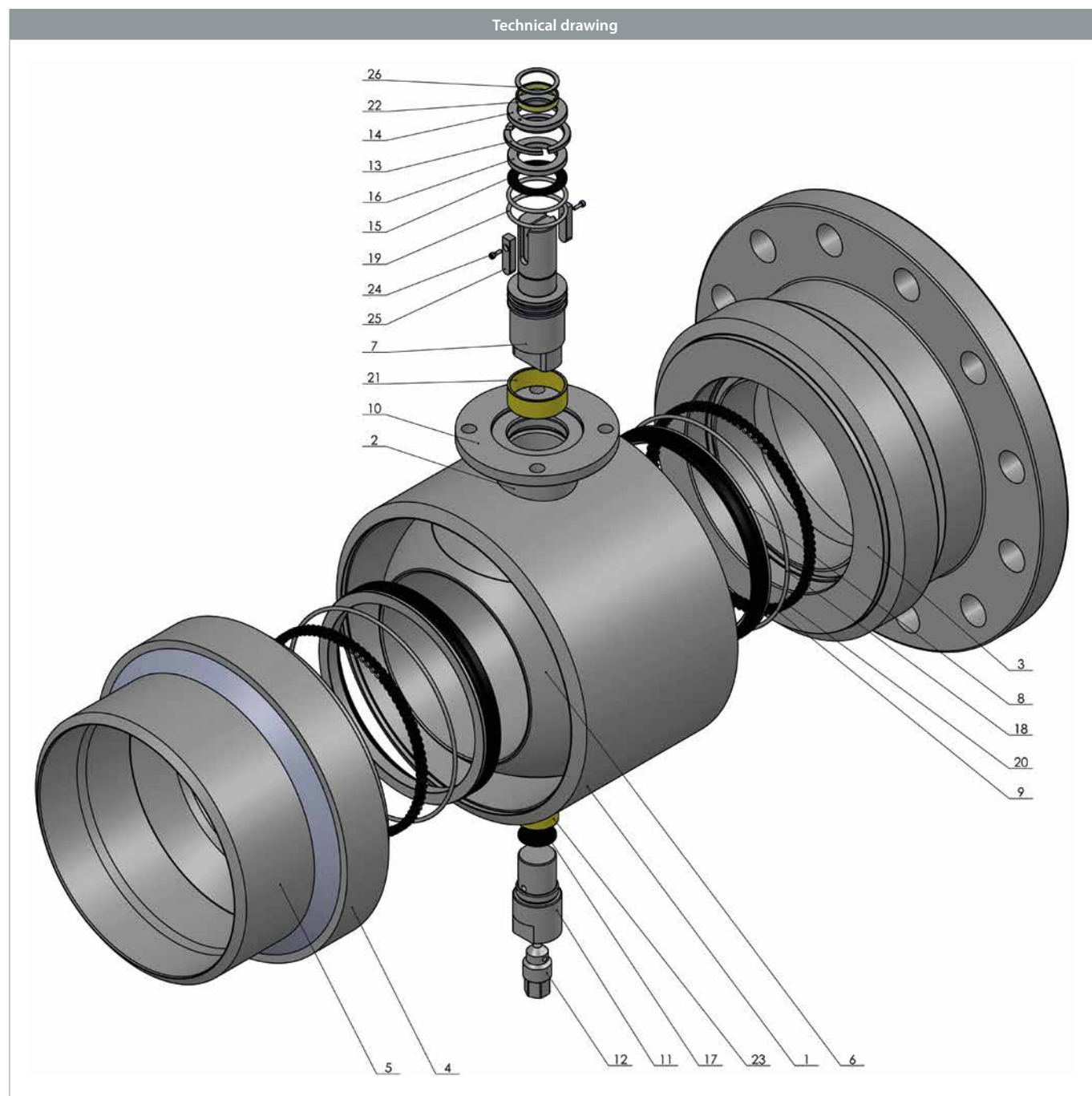
All dimensions in mm							
D5	D7	D8	H1	H2	H3	A	ISO
360	310	26	185	183	45	35	F12
425	370	30	214	218	45	35	F12
485	430	30	258	255	61	50	F14
555	490	33	307	294	61	60	F14
620	550	36	351	528	57	60	F16
730	660	36	427	575	105	72	F25
845	770	39	504	793	105	72	F30
960	875	42	579	885	105	80	F30

Trunnion mounted valve - DN 200 - 700, PN 25

Type 3/D... - Reduced bore



Technical drawing



Trunnion mounted valve - DN 200 - 700, PN 25



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 - DN 800 - 1000, PN 25

Type 3/D... - Reduced bore

Flange x Flange

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

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

Surface treatment

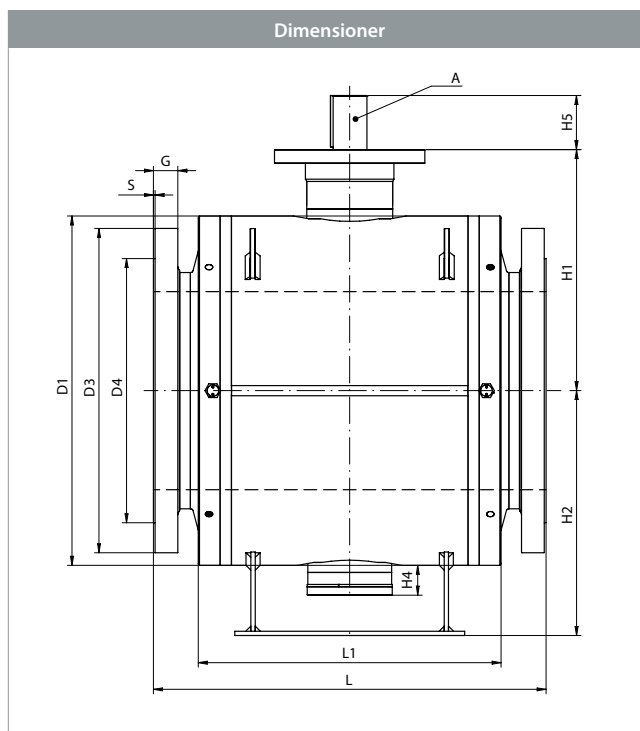
Eco-friendly protection finish against corrosion.

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 DN 400 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN 800 - 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.

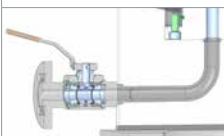


DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm	
					L	L1
800	3/D800KK4D30	684	43812	4757	1372	976
900	3/D900KK4D30	780	57223	7232	1524	1138
1000	3/D910KK4D30	874	72423	10012	2050	1214

Trunnion mounted valve - DN 800 - 1000, PN 25



Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN 800	BROEN-Gear.
	-	DN 800 - 1000	BROEN-Gear, Electric gear.
	-	DN 800 - 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

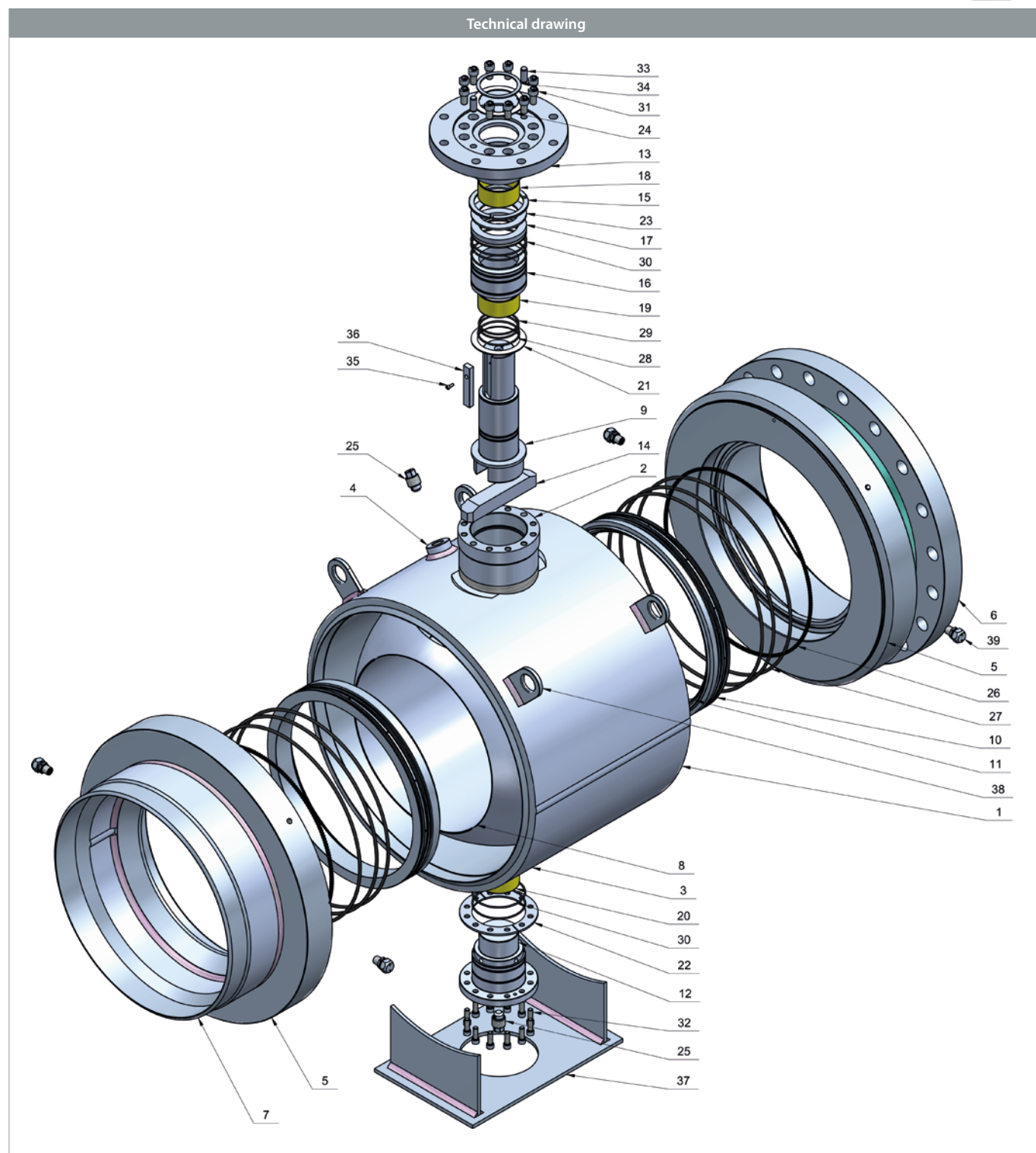
D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
1126	1085	930	53	5	806.0	790.0	109.0	200	Ø120	F35
1300	1185	1030	53	5	890.0	900.0	107.0	198	Ø120	F35
1450	1320	1140	63	5	941.0	1000.0	117.0	183	Ø140	F40

Trunnion mounted valve - DN 800 - 1000, PN 25

Type 3/D... - Reduced bore



Technical drawing



Trunnion mounted valve - DN 800 - 1000, PN 25



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 - DN 200 - 700, PN 16

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.

Media

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

Surface treatment

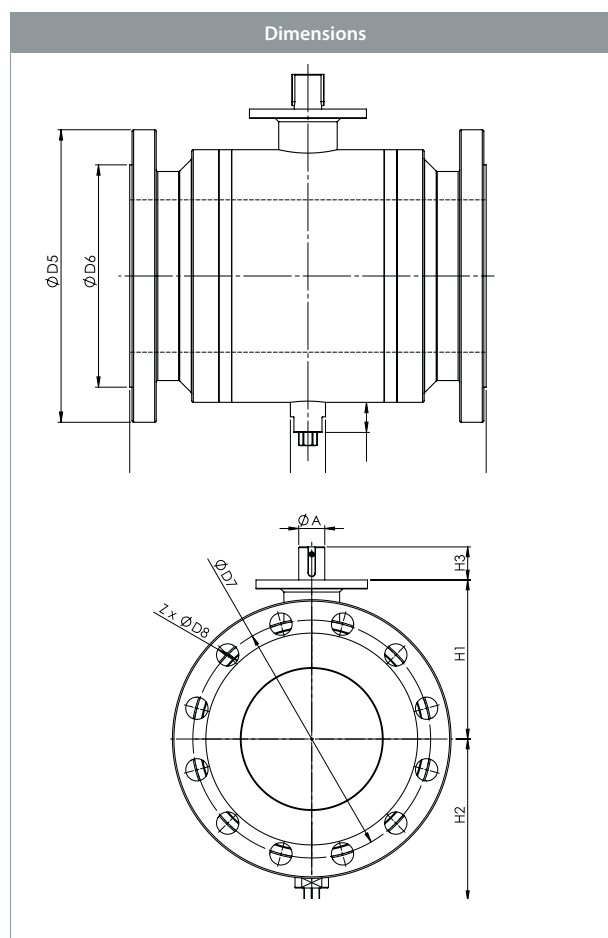
Eco-friendly protection finish against corrosion.

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 DN 200 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN 200 - 700 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	142	1800	112	457
250	3/D250KK3D30	190	3410	194	533
300	3/D300KK3D30	237	5101	309	610
350	3/D350KK3D30	285	7853	483	686
400	3/D400KK3D30	332	9257	688	762
500	3/D500KK3D30	375	12091	1148	914
600	3/D600KK3D30	475	19239	2016	1067
700	3/D700KK3D30	588	27704	3167	1245

Trunnion mounted valve - DN 200 - 700, PN 16



Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN 200 - 700	BROEN-Gear.
	-	DN 200 - 700	BROEN-Gear, Electric gear.
	-	DN 200 - 700	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN25 - 32 - 40 - 50.
	-	DN 200 - 700	Base.

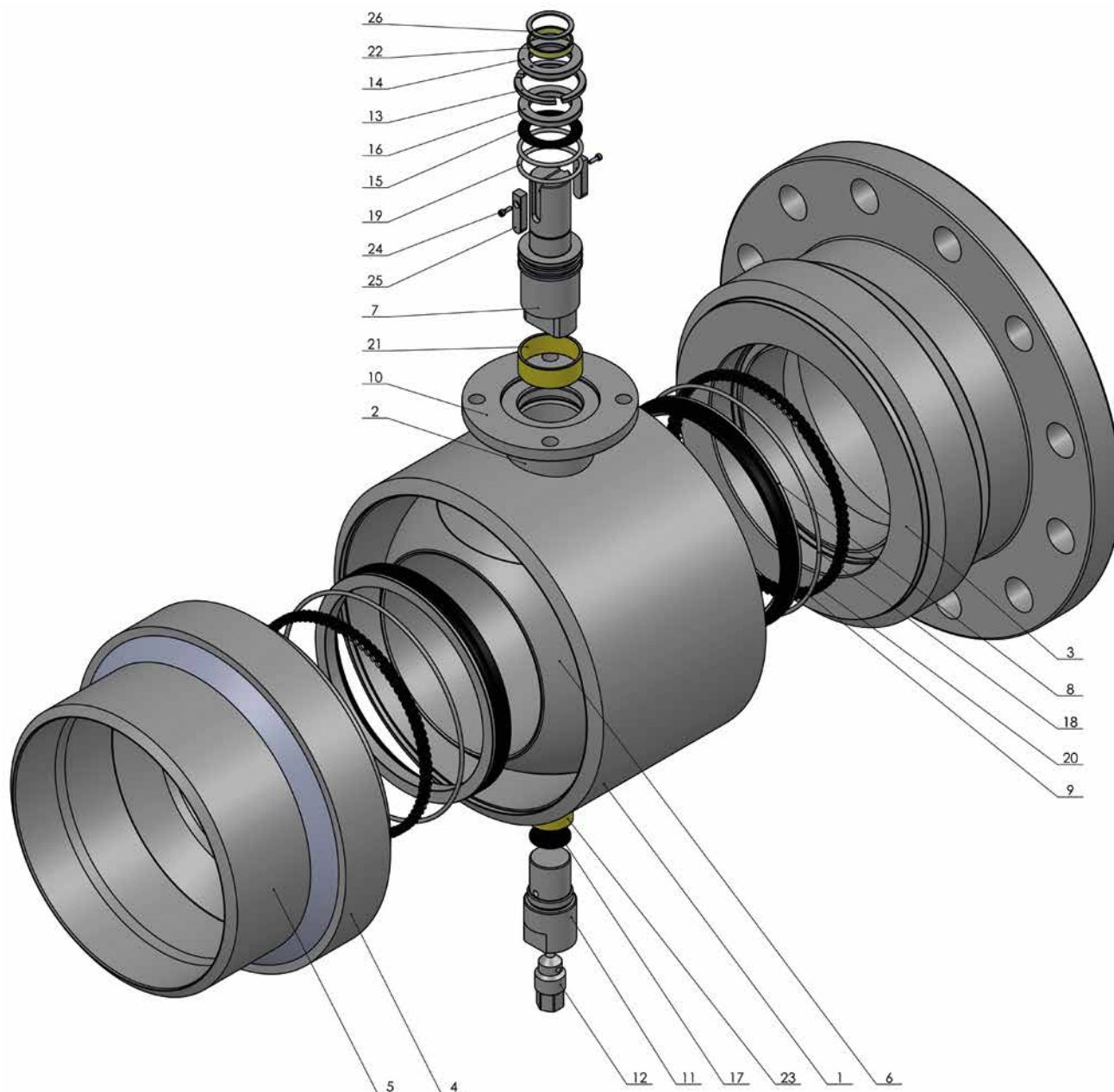
All dimensions in mm							
D5	D7	D8	H1	H2	H3	A	ISO
340	295	22	185	183	45	35	F12
405	355	26	214	218	45	35	F12
460	410	26	258	255	61	50	F14
520	470	26	307	294	61	60	F14
580	525	30	351	528	57	60	F16
715	650	33	427	575	105	72	F25
840	770	36	504	793	105	72	F30
910	840	36	579	885	105	80	F30

Trunnion mounted valve - DN 200 - 700, PN 16

Type 3/D... - Reduced bore



Technical drawing



Trunnion mounted valve - DN 200 - 700, PN 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 - DN 800 - 1000, PN 16

Type 3/D... - Reduced bore

Flange x Flange

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

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

Surface treatment

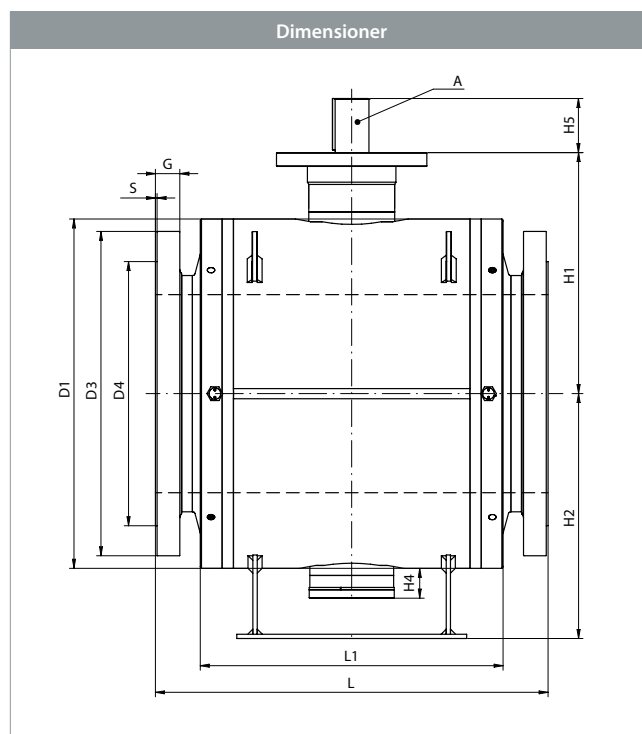
Eco-friendly protection finish against corrosion.

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 DN 400 are CE-marked. The 3.1 certificate is available upon request.

Notice

As standard DN 800 - 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.

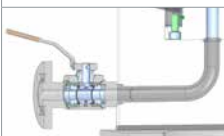


DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm	
					L	L1
800	3/D800KK3D30	684	43812	4652	1372	936
900	3/D900KK3D30	780	57223	6212	1524	1054
1000	3/D910KK3D30	874	72423	9822	2050	1214

Trunnion mounted valve - DN 800 - 1000, PN 16



Type 3/D... - Reduced bore

Accessories	BROEN No.	Dimension	Description
	-	DN 800	BROEN-Gear.
	-	DN 800 - 1000	BROEN-Gear, Electric gear.
	-	DN 800 - 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

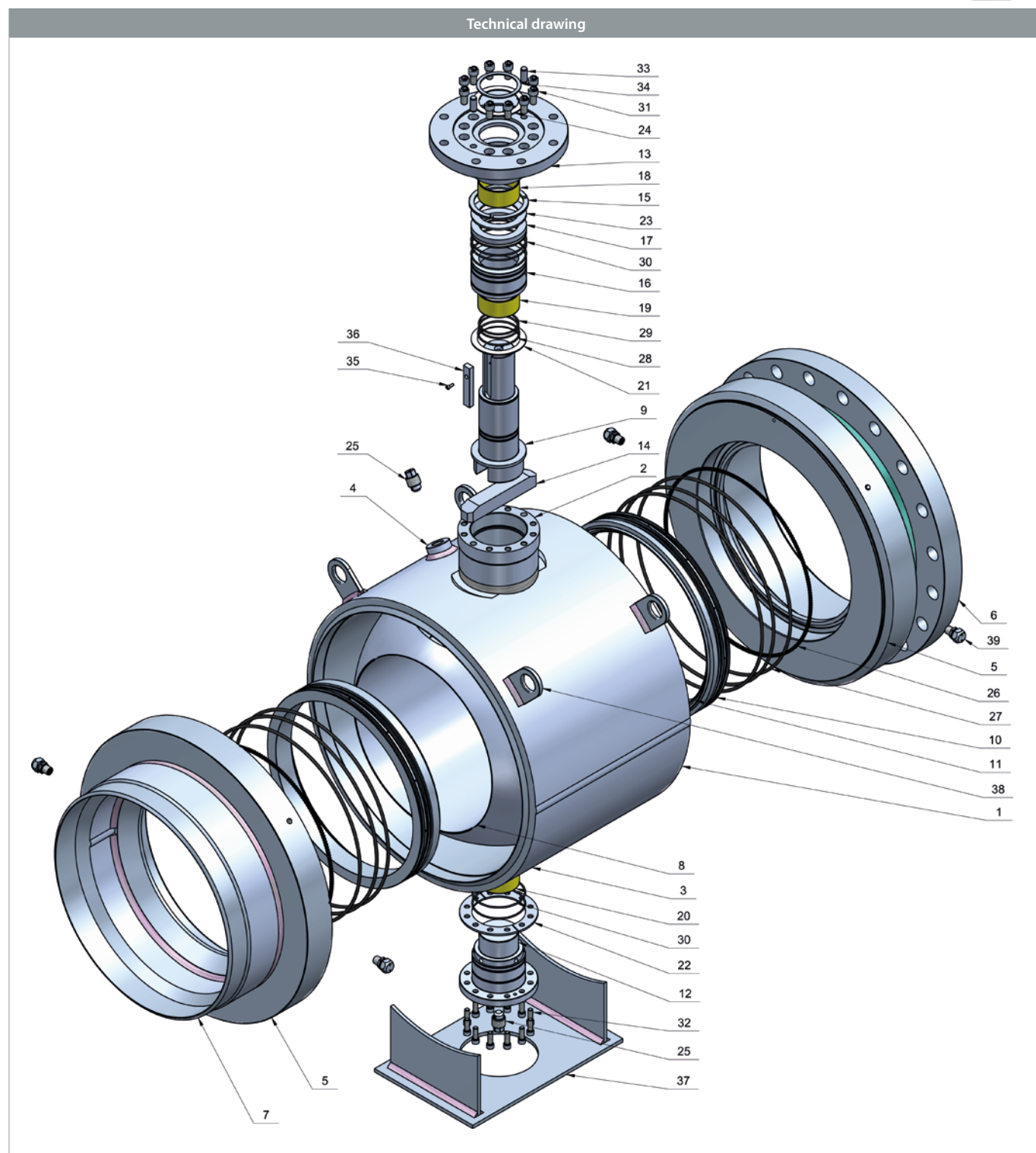
D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
1126	1025	900	41	5	806.0	790.0	109	200	Ø120	F35
1300	1125	1000	48	5	890.0	900.0	107	198	Ø120	F35
1450	1255	1115	59	5	941.0	1000.0	117	183	Ø140	F40

Trunnion mounted valve - DN 800 - 1000, PN 16

Type 3/D... - Reduced bore



Technical drawing



Trunnion mounted valve - DN 800 - 1000, PN 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

BROEN-Gear - DN 250 - 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.

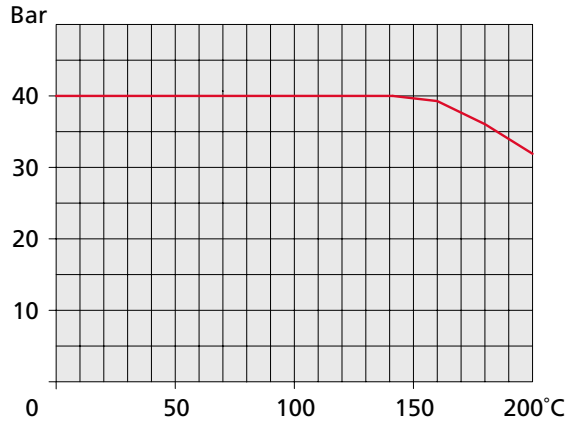


DN	BROEN No.	PN
250 - 300	3-TPA023	40
350 - 400	3-TPA025	40
500 - 600	3-TPA035	40
700	3-TPA064	40
800	3-TPA065	40
250 - 400	3-TPA023	25
500	3-TPA031	25
600	3-TPA035	25
700	3-TPA067	25
800	3-TPA064	25
250 - 400	3-TPA023	16
500	3-TPA031	16
600	3-TPA035	16
700	3-TPA067	16
800	3-TPA064	16

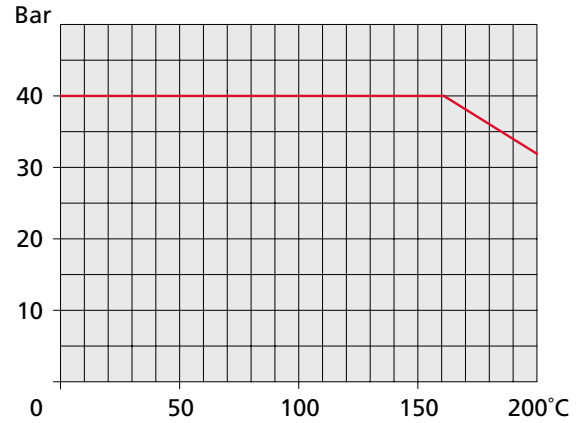
Pressure and temperature graph - DN 200 - 1000 - PN 40/25/16

Reduced bore

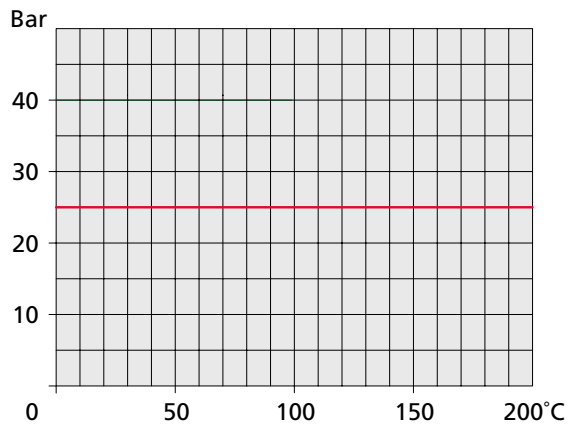
PN40: Welding × Welding / Flange × Flange - DN150-600



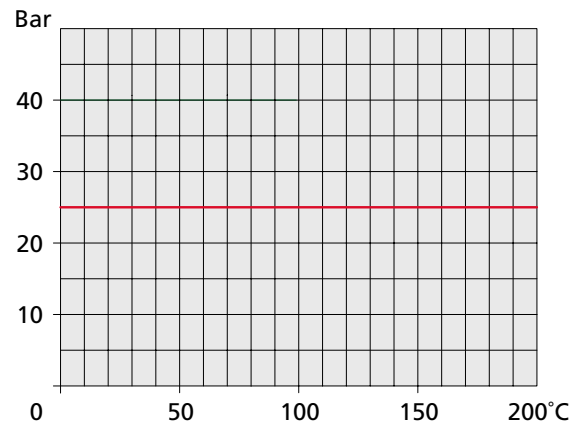
PN40: Welding × Welding / Flange × Flange - DN700-1000



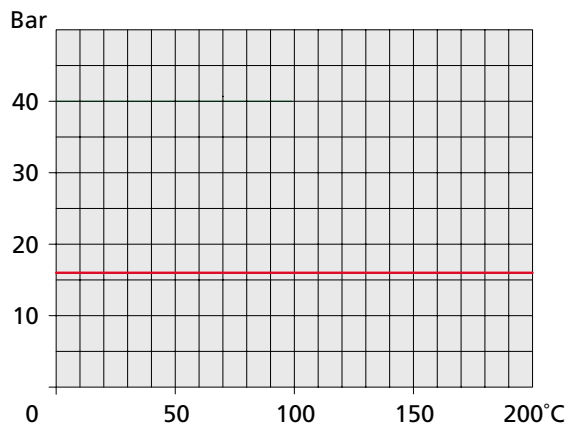
PN25: Welding × Welding / Flange × Flange - DN150-600



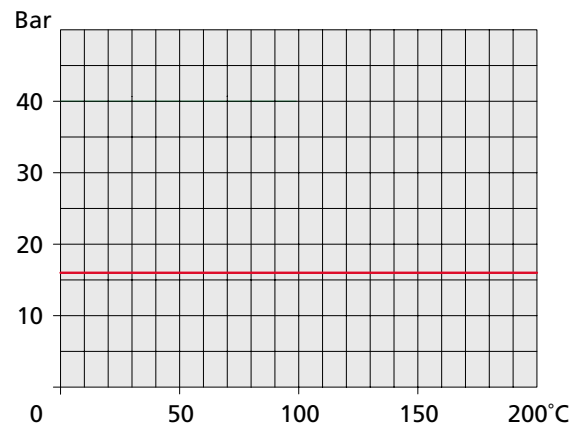
PN25: Welding × Welding / Flange × Flange - DN700-1000



PN25: Welding × Welding / Flange × Flange - DN150-600



PN16: Welding × Welding / Flange × Flange - DN700-1000



Pressure drop graph - DN 200 - 1000

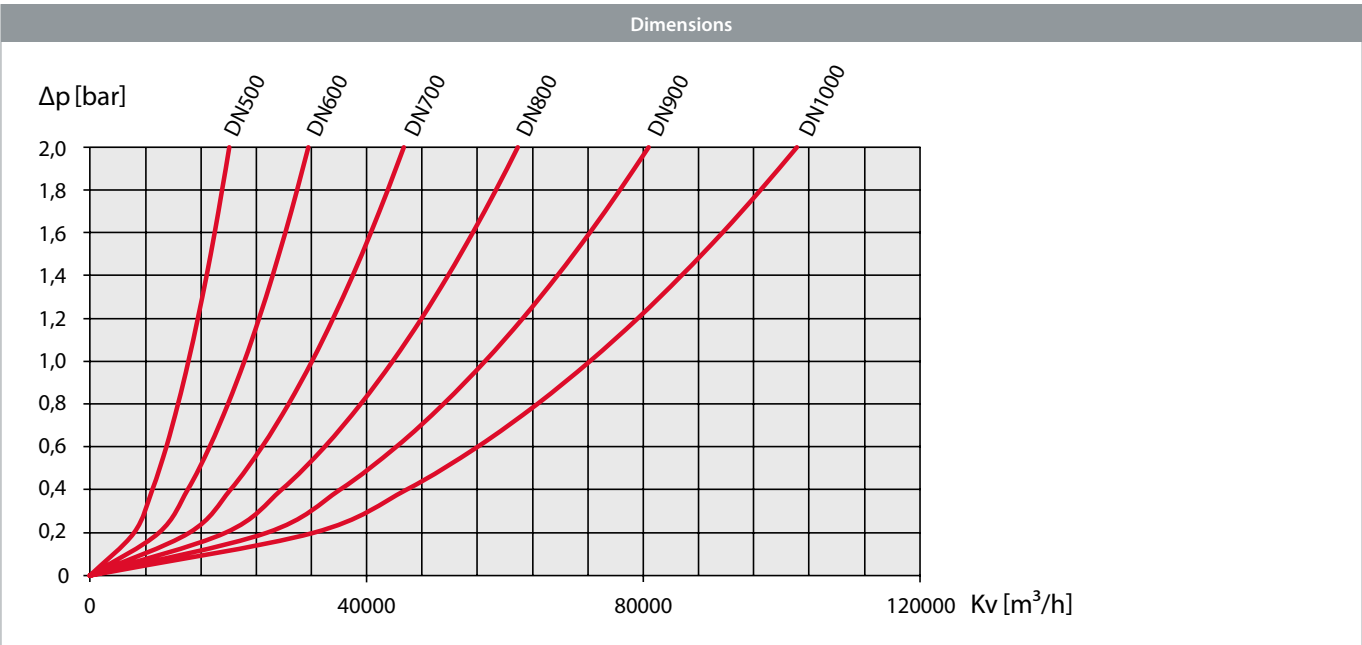
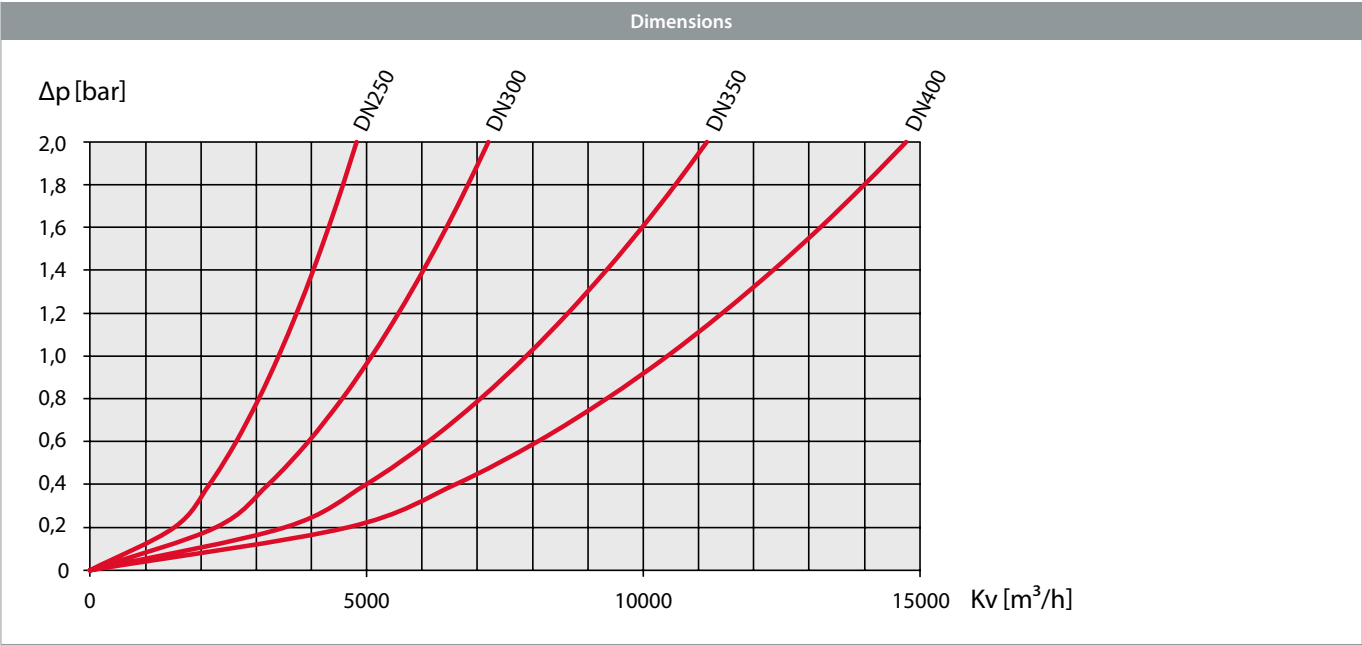
Reduced bore

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	200	250	300	350	400	500	600	700	800	900	1000
Kvs	1800	3410	5101	7853	10443	14306	22354	32188	43812	57223	72423

Operating torque - DN 200 - 1000, PN 40/25/16

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.

