

## **SECTION 5**

Trunnion mounted valves

Full bore

**BROEN**  
BALLOMAX®

*Designed to last*

# Trunnion mounted valve - DN 150 - 600, PN 40/25/16

## 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.

### Media

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

### Surface treatment

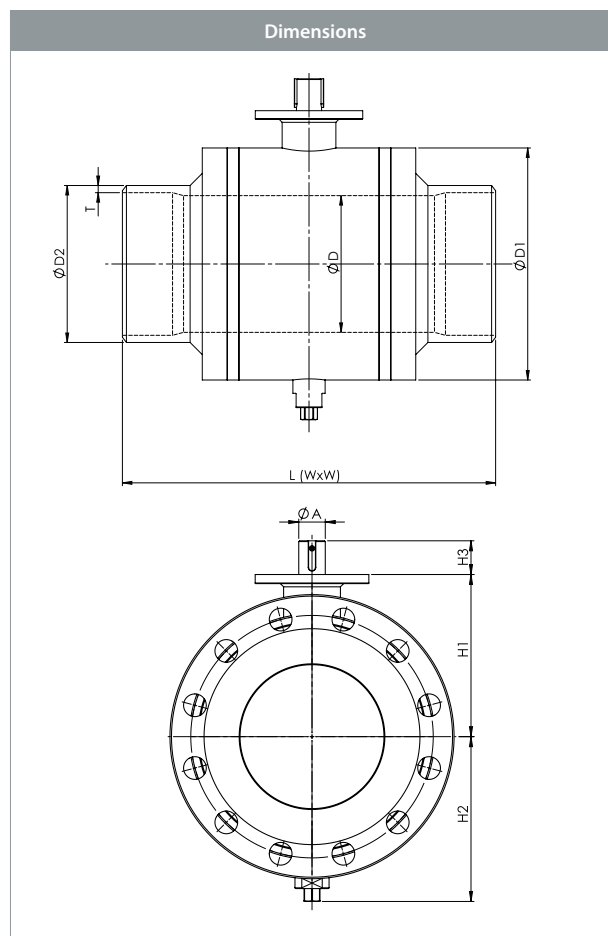
Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 150 are CE-marked. The 3.1 certificate is available upon request.

### Notice

As standard DN 150 - 600 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
350	3/A350WW5D30	332	28280	467		762
400	3/A400WW5D30	375	36937	724		838
500	3/A500WW5D30	475	57716	1329		991
600	3/A600WW5D30	588	101788	2119		1143

# Trunnion mounted valve - DN 150 - 600, PN 40/25/16



## Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN 150 - 600	BROEN-Gear.
	-	DN 150 - 600	BROEN-Gear, Electric gear.
	-	DN 150 - 600	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN 25 - 32 - 40 - 50.
	-	DN 150 - 600	Base.

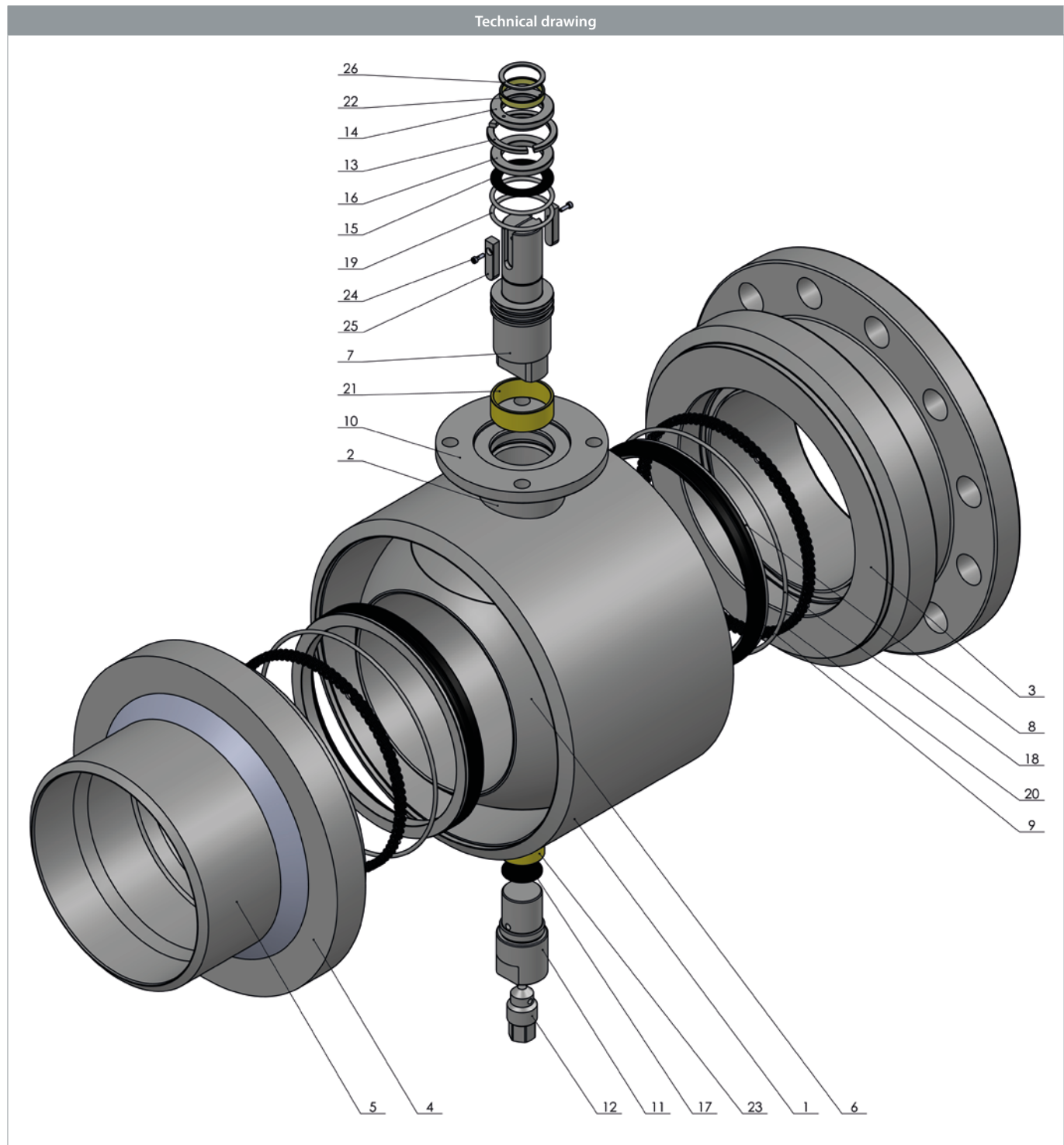
All dimensions in mm							
D1	D2	T	H1	H2	H3	A	ISO
254	168,3	7,1	185	183	45	35	F12
324	219,1	8,8	214	218	45	35	F12
394	273	10	258	255	61	50	F14
470	323,9	10	307	294	61	60	F14
546	355,6	11	351	528	57	60	F16
622	406,4	12,5	427	575	105	72	F25
785	508	12,5	504	793	105	72	F30
943	610	12,5	579	885	105	80	F30

# Trunnion mounted valve - DN 150 - 600, PN 40/25/16

Type 3/A... - Full bore



Technical drawing



# Trunnion mounted valve - DN 150 - 600, PN 40/25/16



## 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 - DN 700 - 1000, PN 40/25/16

**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.

**Media**

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

**Surface treatment**

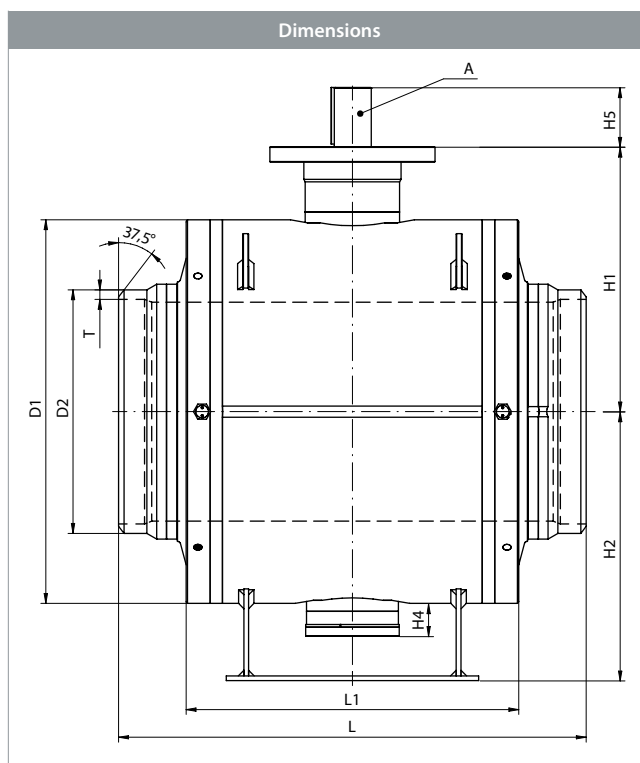
Eco-friendly protection finish against corrosion.

**Approvals and certificates**

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 350 are CE-marked. The 3.1 certificate is available upon request.

**Notice**

As standard DN 700 - 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
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 - DN 700 - 1000, PN 40/25/16



## Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN 700	BROEN-Gear
	-	DN 800	
	-	DN 700 - 1000	BROEN-Gear, Electric gear.
	-	DN 700 - 1000	Lubrication fitting NPT.
	-	DN 700 - 1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN 25 - 32 - 40 - 50.

All dimensions in mm

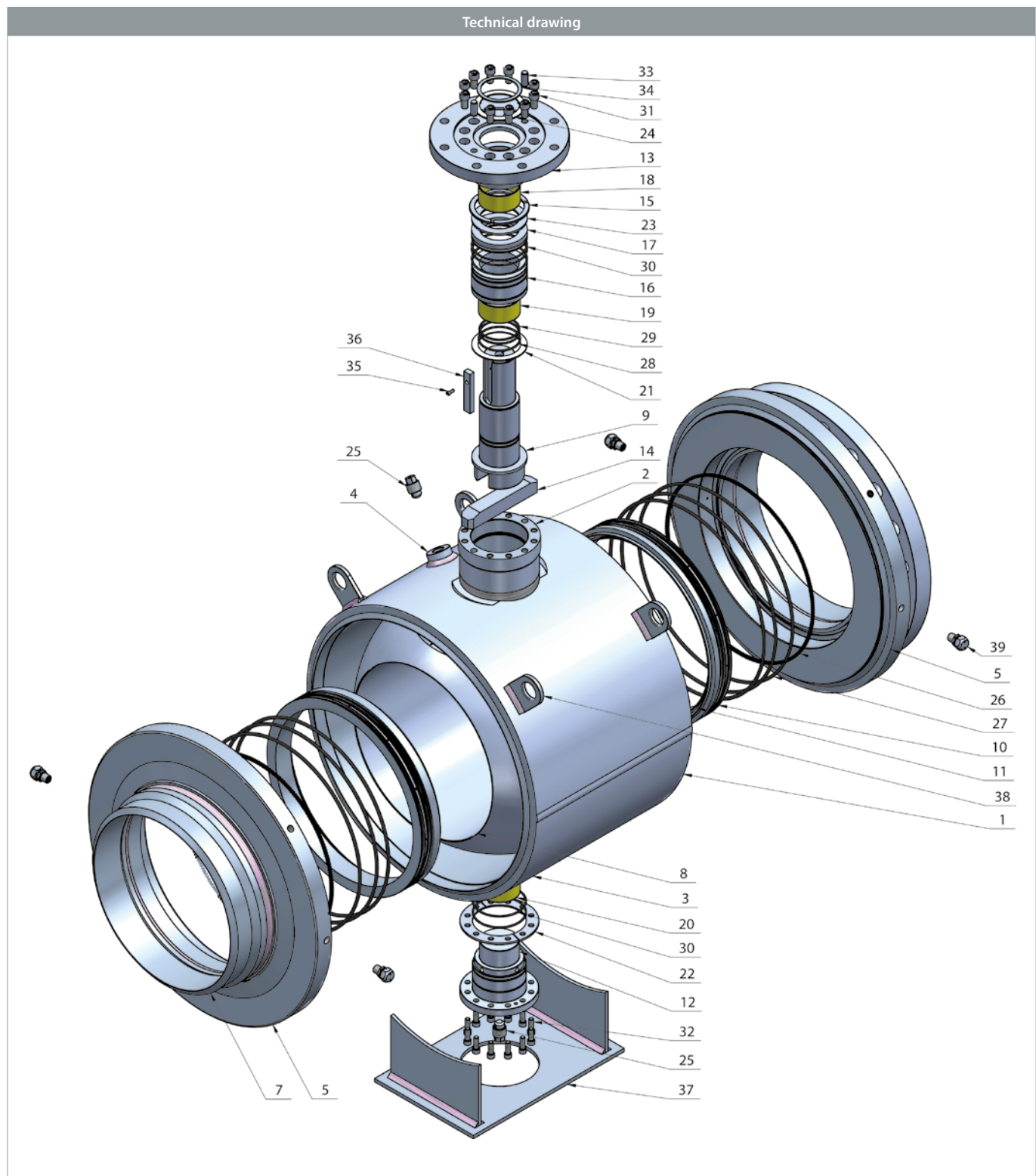
D1	D2	T	H1	H2	H4	H5	A	ISO
1126	711.0	14.2	806.0	790.0	109.0	200	Ø120	F35
1300	813.0	16.0	890.0	900.0	107.0	198	Ø120	F35
1450	914.0	20.0	941.0	1000.0	117.0	183	Ø140	F40
1650	1016.0	22.0	1121.0	1220.0	142.0	240	Ø190	F48

# Trunnion mounted valve - DN 700 - 1000, PN 40/25/16

Type 3/A... - Full bore



Technical drawing





# Trunnion mounted valve - DN 700 - 1000, PN 40/25/16



## 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 - DN 150 - 600, PN 40

## 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.

### Media

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

### Surface treatment

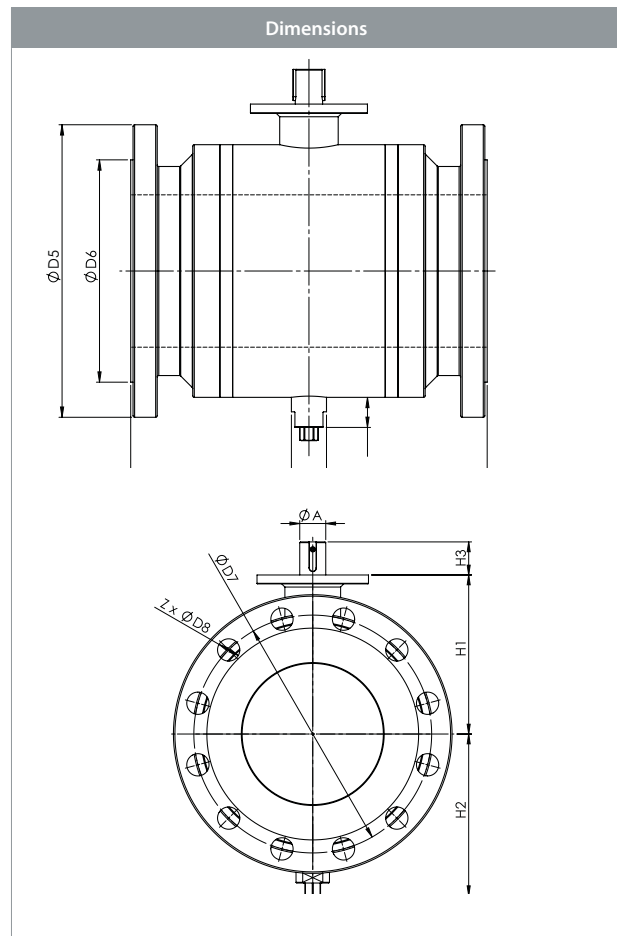
Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 150 are CE-marked. The 3.1 certificate is available upon request.

### Notice

As standard DN 150 - 600 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/A150KK5D30	142	4498	84		350
200	3/A200KK5D30	190	9234	167		457
250	3/A250KK5D30	237	14428	277		533
300	3/A300KK5D30	285	20777	426		610
350	3/A350KK5D30	332	28280	585		686
400	3/A400KK5D30	375	36937	918		762
500	3/A500KK5D30	475	57716	1625		914
600	3/A600KK5D30	588	101788	2519		1067

# Trunnion mounted valve - DN 150 - 600, PN 40



## Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
		DN 150 - 600	BROEN-Gear.
	-	DN 150 - 600	BROEN-Gear, Electric gear.
	-	DN 150 - 600	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN 25 - 32 - 40 - 50.
	-	DN 150 - 600	Base.

All dimensions in mm

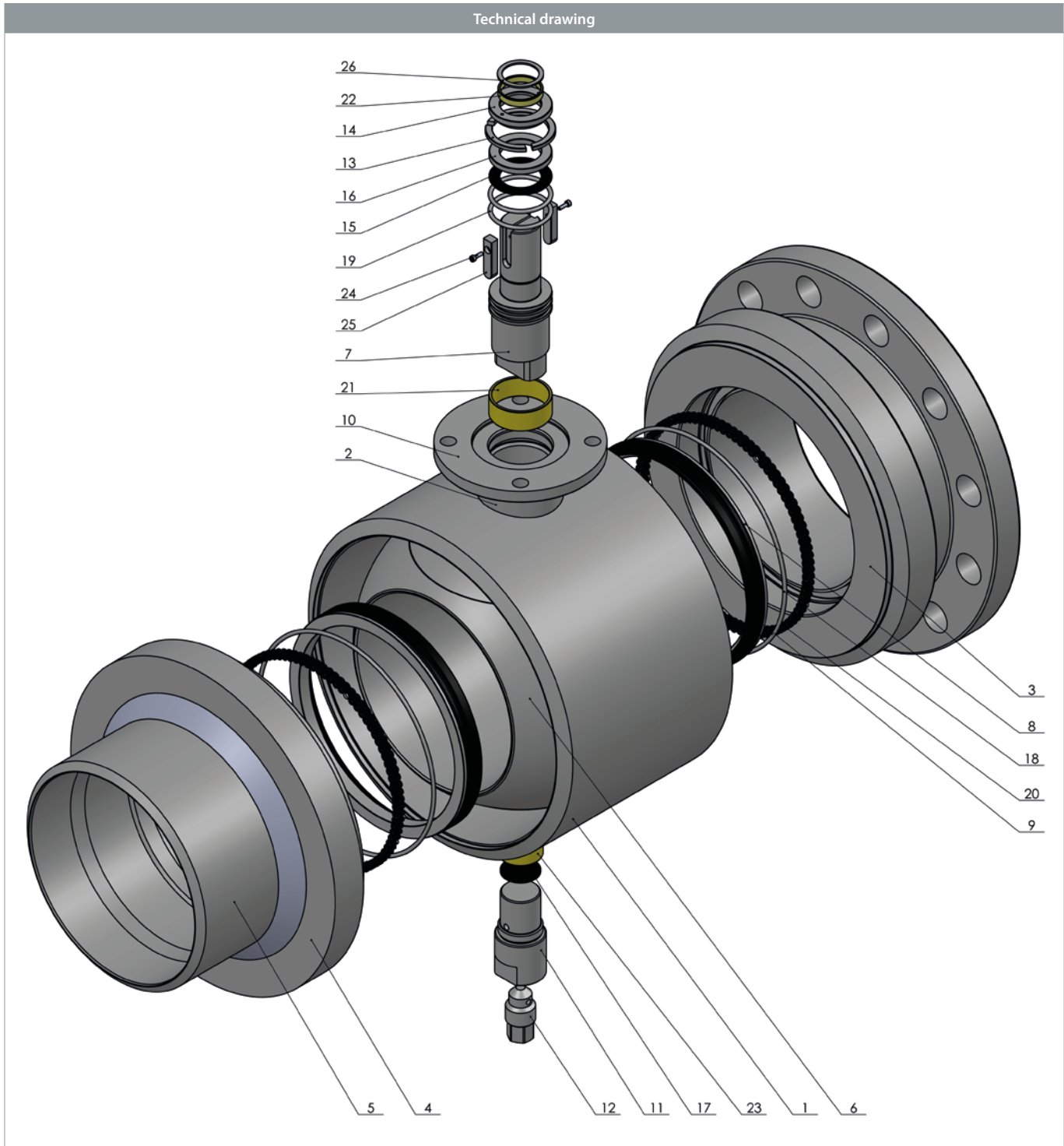
D5	D7	D8	H1	H2	H3	A	ISO
300	250	26	185	183	45	35	F12
375	320	30	214	218	45	35	F12
450	385	33	258	255	61	50	F14
515	450	33	307	294	61	60	F14
580	510	36	351	528	57	60	F16
580	585	39	427	575	105	72	F25
580	670	42	504	793	105	72	F30
580	795	48	579	885	105	80	F30

# Trunnion mounted valve - DN 150 - 600, PN 40

Type 3/A... - Full bore



Technical drawing



# Trunnion mounted valve - DN 150 - 600, PN 40



**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 - DN 700 - 1000, PN 40

## 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.

### Media

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

### Surface treatment

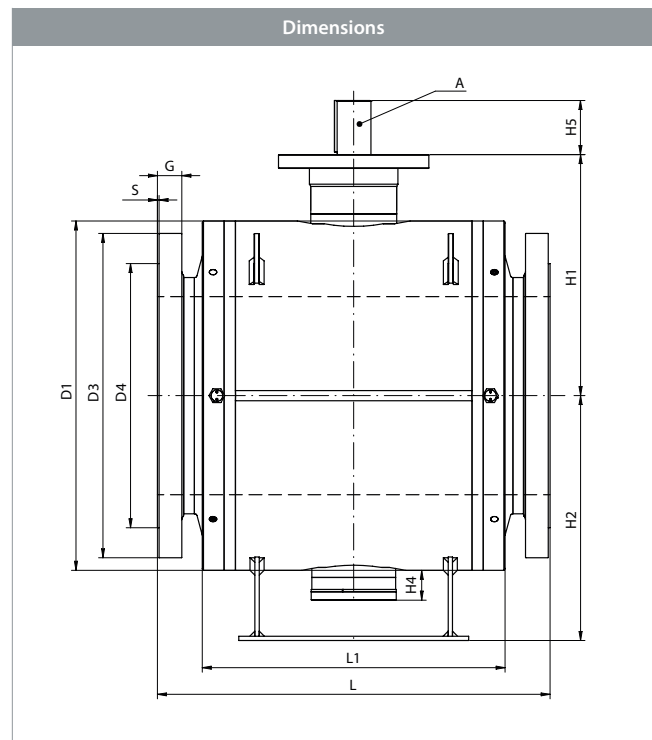
Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 350 are CE-marked. The 3.1 certificate is available upon request.

### Notice

As standard DN 700 - 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
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 - DN 700 - 1000, PN 40



## Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN 700	BROEN-Gear
	-	DN 800	
	-	DN 700 - 1000	BROEN-Gear, Electric gear.
	-	DN 700 - 1000	Lubrication fitting NPT.
	-	DN 700 - 1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN 25 - 32 - 40 - 50.

All dimensions in mm

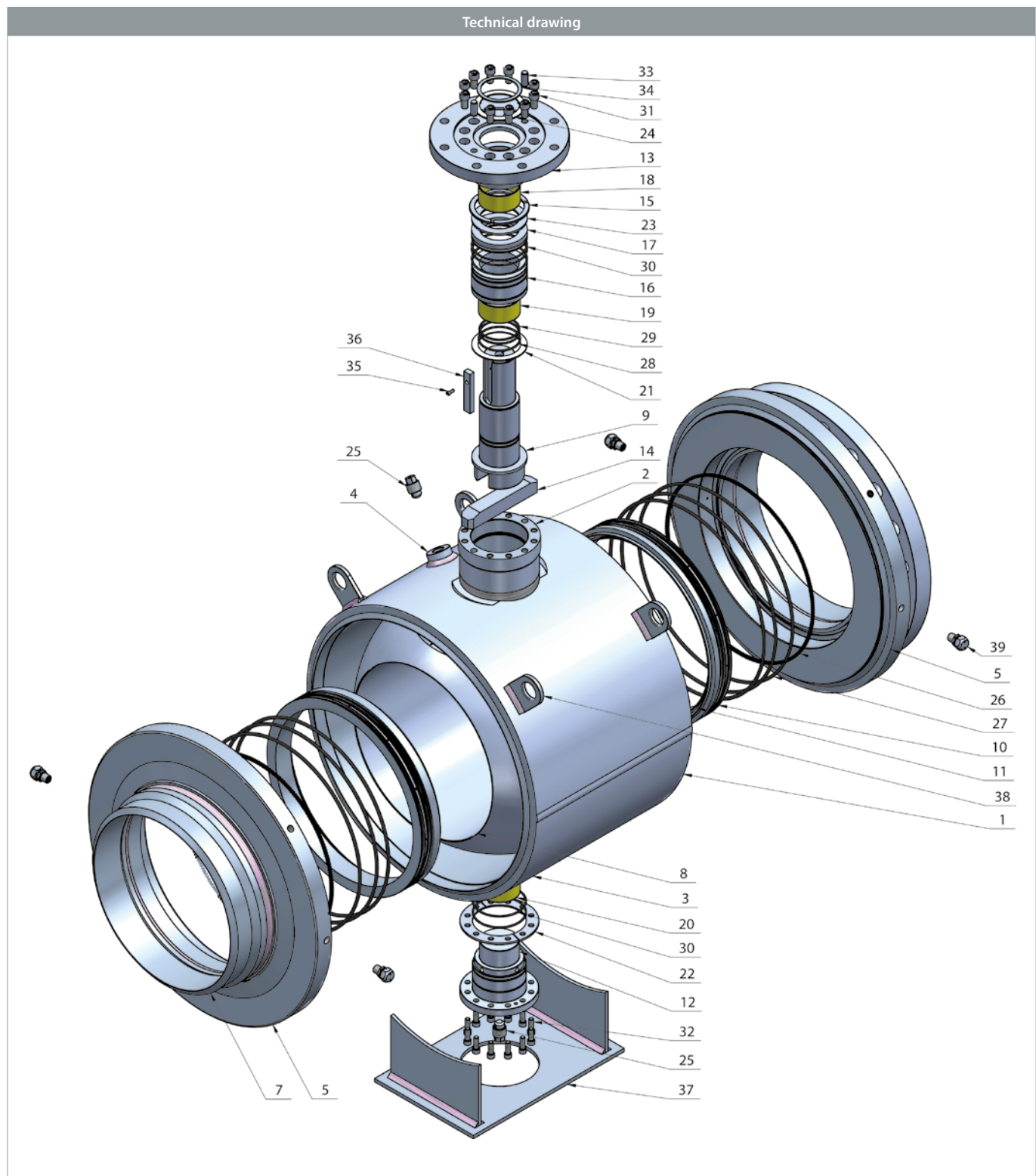
D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
1126	995	840	86	5	806.0	790.0	109.0	200	Ø120	F35
1300	1140	960	90	5	890.0	900.0	107.0	198	Ø120	F35
1450	1250	1070	95	5	941.0	1000.0	117.0	183	Ø140	F40
1650	1360	1180	100	5	1121.0	1220.0	142.0	240	Ø190	F48

# Trunnion mounted valve - DN 700 - 1000, PN 40

Type 3/A... - Full bore



Technical drawing





# Trunnion mounted valve - DN 700 - 1000, PN 40



## 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 - DN 150 - 600, PN 25

## 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.

### Media

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

### Surface treatment

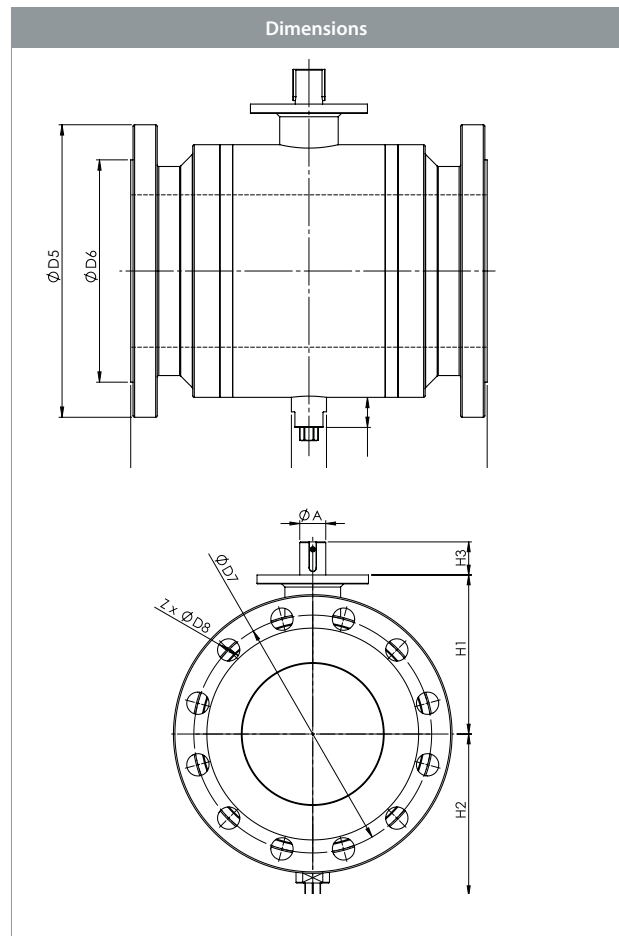
Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 150 are CE-marked. The 3.1 certificate is available upon request.

### Notice

As standard DN 150 - 600 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	142	4498	84	350
200	3/A200KK4D30	190	9234	161	457
250	3/A250KK4D30	237	14428	265	533
300	3/A300KK4D30	285	20777	410	610
350	3/A350KK4D30	332	28280	567	686
400	3/A400KK4D30	375	36937	874	762
500	3/A500KK4D30	475	57716	1611	914
600	3/A600KK4D30	588	101788	2537	1067

# Trunnion mounted valve - DN 150 - 600, PN 25



## Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
		DN 150 - 600	BROEN-Gear.
	-	DN 150 - 600	BROEN-Gear, Electric gear.
	-	DN 150 - 600	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN 25 - 32 - 40 - 50.
	-	DN 150 - 600	Base.

All dimensions in mm

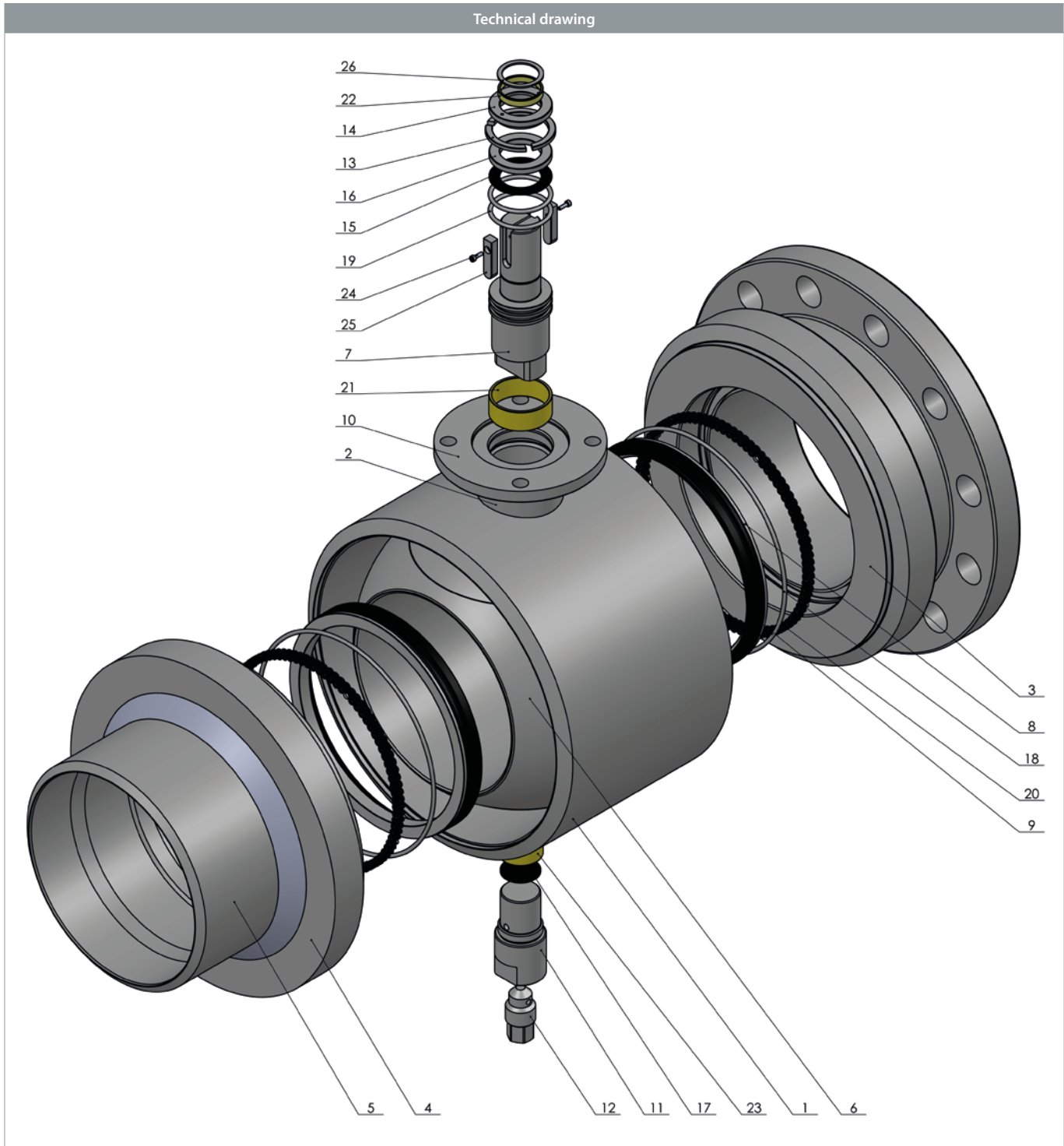
D5	D7	D8	H1	H2	H3	A	ISO
300	250	26	185	183	45	35	F12
360	310	26	214	218	45	35	F12
425	370	30	258	255	61	50	F14
485	430	30	307	294	61	60	F14
555	490	33	351	528	57	60	F16
620	550	36	427	575	105	72	F25
730	660	36	504	793	105	72	F30
845	770	39	579	885	105	80	F30

# Trunnion mounted valve - DN 150 - 600, PN 25

Type 3/A... - Full bore



Technical drawing



# Trunnion mounted valve - DN 150 - 600, PN 25



## 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 - DN 700 - 1000, PN 25

## 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.

### Media

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

### Surface treatment

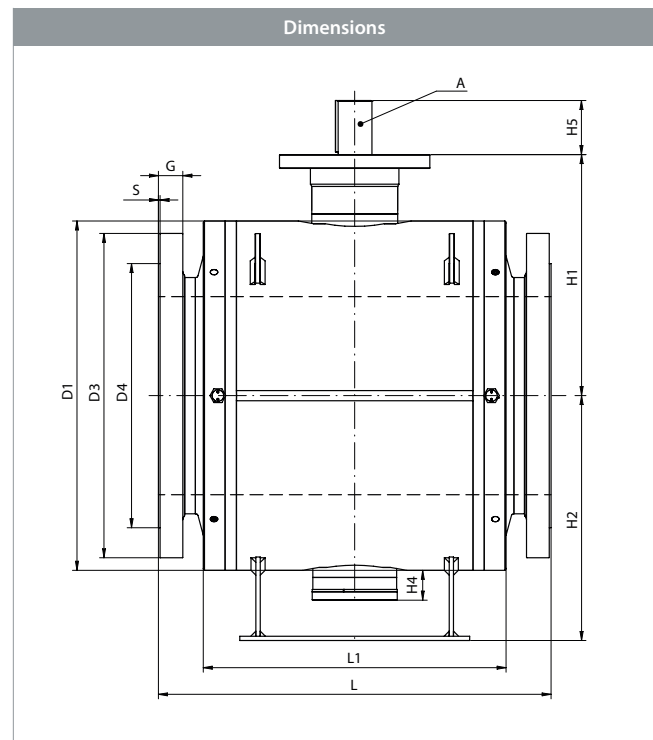
Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 350 are CE-marked. The 3.1 certificate is available upon request.

### Notice

As standard DN 700 - 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
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 - DN 700 - 1000, PN 25



## Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN 700	ROEN-Gear.
	-	DN 800	
	-	DN 700 - 1000	BROEN-Gear, Electric gear.
	-	DN 700 - 1000	Lubrication fitting NPT.
	-	DN 700 - 1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN 25 - 32 - 40 - 50.

All dimensions in mm

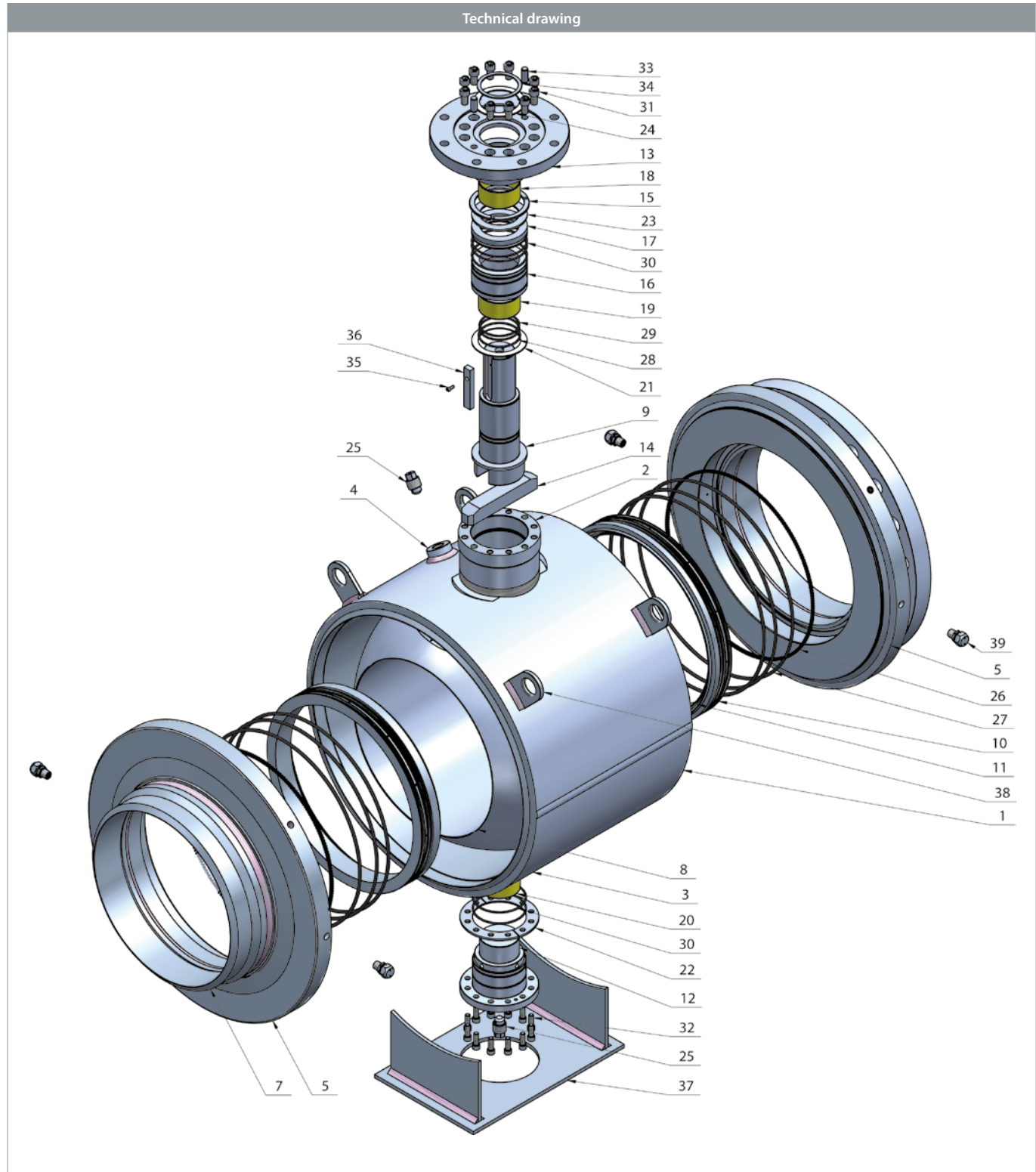
D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
1126	960	820	50	5	806.0	790.0	109.0	200	Ø120	F35
1300	1085	930	53	5	890.0	900.0	107.0	198	Ø120	F35
1450	1185	1030	53	5	941.0	1000.0	117.0	183	Ø140	F40
1650	1320	1140	63	5	1121.0	1220.0	142.0	240	Ø190	F48

# Trunnion mounted valve - DN 700 - 1000, PN 25

Type 3/A... - Full bore



Technical drawing





# Trunnion mounted valve - DN 700 - 1000, PN 25



## 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 - DN 150 - 600, PN 16

## 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.

### Media

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

### Surface treatment

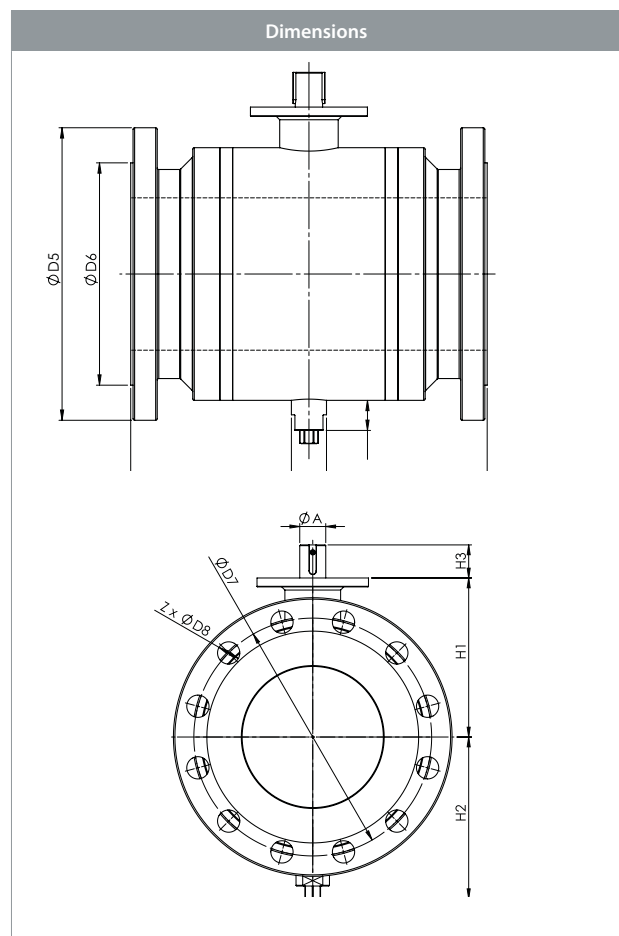
Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 150 are CE-marked. The 3.1 certificate is available upon request.

### Notice

As standard DN 150 - 600 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/A150KK3D30	142	4498	79	350
200	3/A200KK3D30	190	9234	155	457
250	3/A250KK3D30	237	14428	260	533
300	3/A300KK3D30	285	20777	395	610
350	3/A350KK3D30	332	28280	563	686
400	3/A400KK3D30	375	36937	866	762
500	3/A500KK3D30	475	57716	1607	914
600	3/A600KK3D30	588	101788	2519	1067

# Trunnion mounted valve - DN 150 - 600, PN 16



## Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
		DN 150 - 600	BROEN-Gear.
	-	DN 150 - 600	BROEN-Gear, Electric gear.
	-	DN 150 - 600	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN 25 - 32 - 40 - 50.
	-	DN 150 - 600	Base.

All dimensions in mm

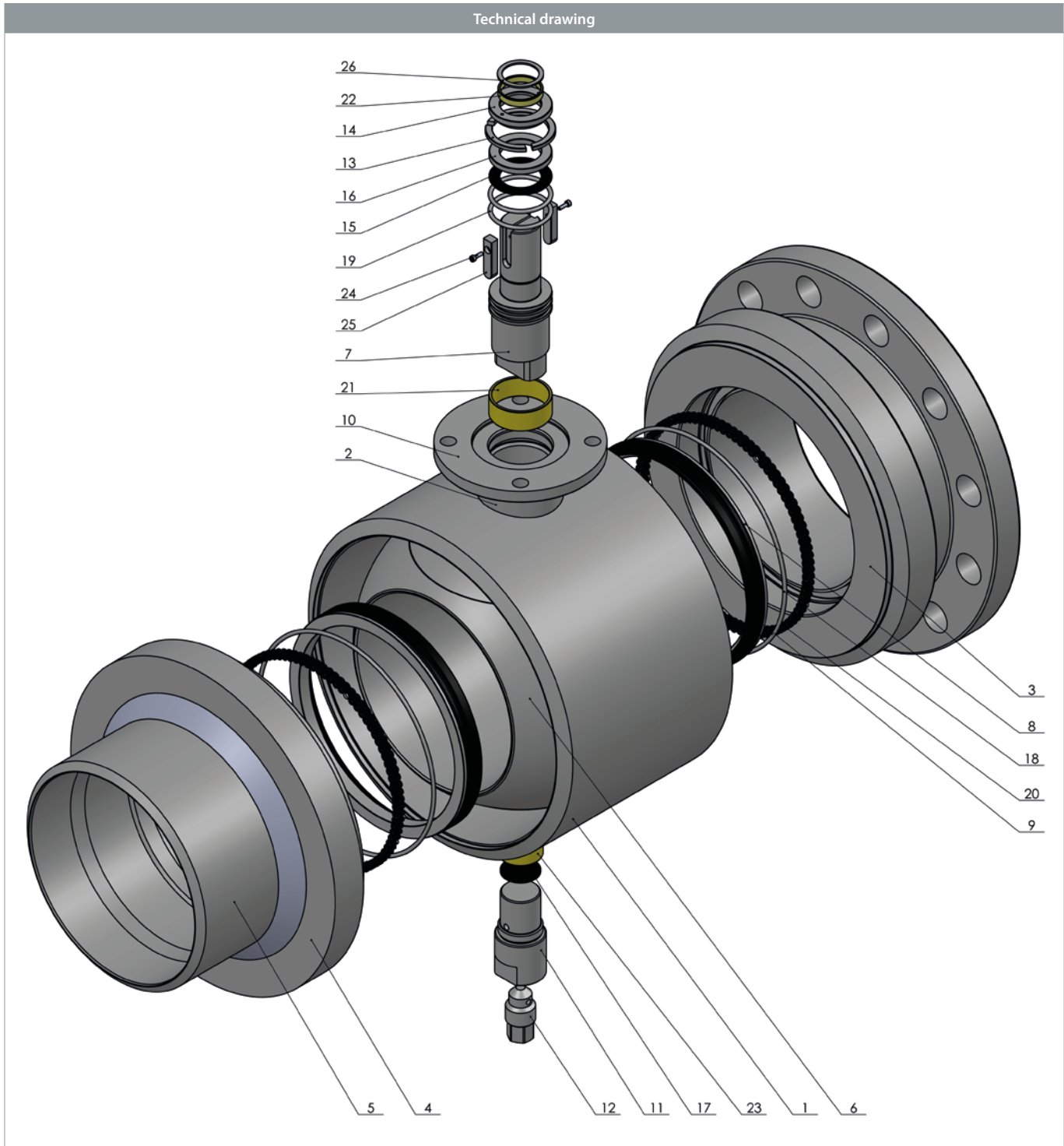
D5	D7	D8	H1	H2	H3	A	ISO
285	240	22	185	183	45	35	F12
340	295	22	214	218	45	35	F12
405	355	26	258	255	61	50	F14
460	410	26	307	294	61	60	F14
520	470	26	351	528	57	60	F16
580	525	30	427	575	105	72	F25
715	650	33	504	793	105	72	F30
840	770	36	579	885	105	80	F30

# Trunnion mounted valve - DN 150 - 600, PN 16

Type 3/A... - Full bore



Technical drawing



# Trunnion mounted valve - DN 150 - 600, PN 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 - DN 700 - 1000, PN 16

## 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.

### Media

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

### Surface treatment

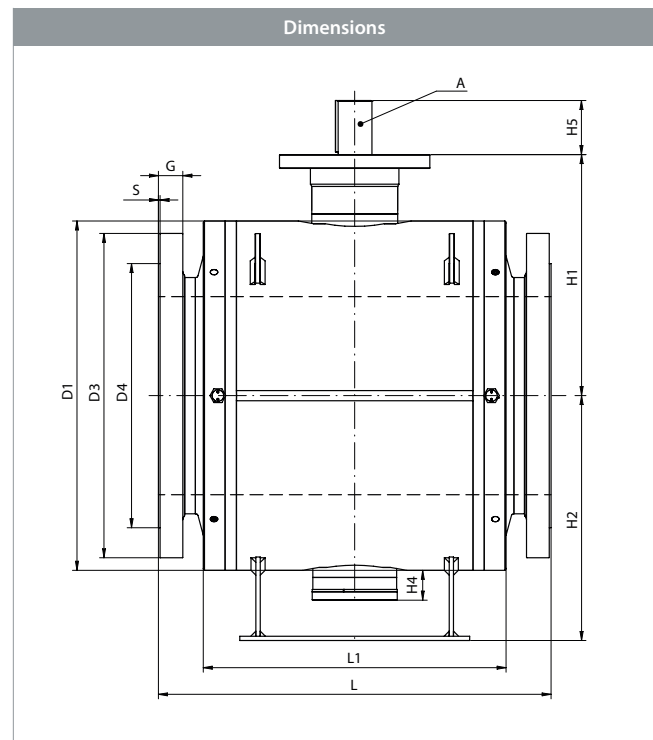
Eco-friendly protection finish against corrosion.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 350 are CE-marked. The 3.1 certificate is available upon request.

### Notice

As standard DN 700 - 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
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 - DN 700 - 1000, PN 16



## Type 3/A... - Full bore

Accessories	BROEN No.	Dimension	Description
	-	DN 700	BROEN-Gear.
	-	DN 800	
	-	DN 700 - 1000	BROEN-Gear, Electric gear.
	-	DN 700 - 1000	Lubrication fitting NPT.
	-	DN 700 - 1000	Drain ball valve and pipe for Double Block and Bleed (DBB) with the following valve options DN 25 - 32 - 40 - 50.

All dimensions in mm

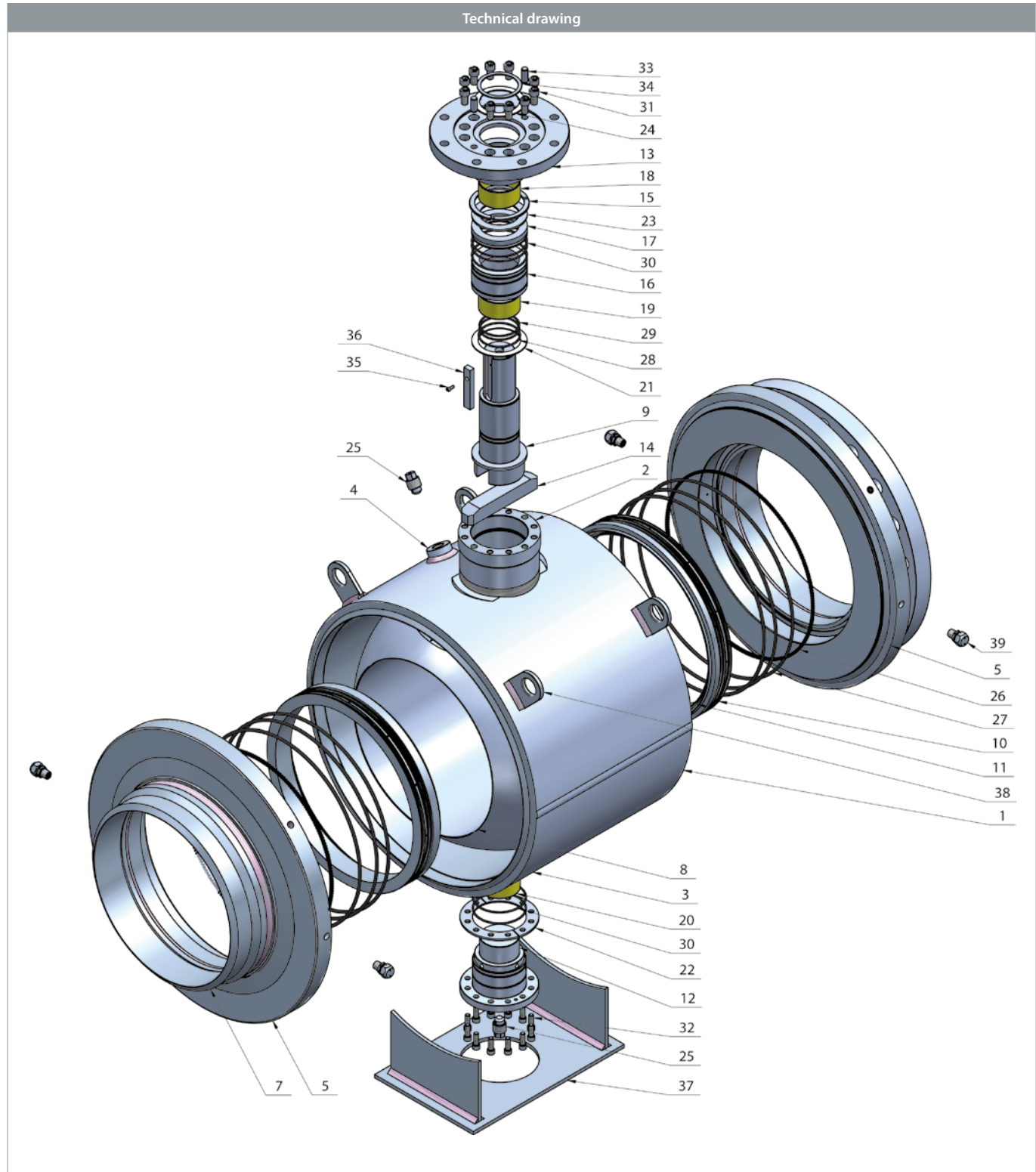
D1	D3	D4	G	S	H1	H2	H4	H5	A	ISO
1126	910	795	40	5	806.0	790.0	109.0	200	Ø120	F35
1300	1025	900	41	5	890.0	900.0	107.0	198	Ø120	F35
1450	1125	1000	48	5	941.0	1000.0	117.0	183	Ø140	F40
1650	1255	1115	59	5	1121.0	1220.0	142.0	240	Ø190	F48

# Trunnion mounted valve - DN 700 - 1000, PN 16

Type 3/A... - Full bore



Technical drawing





# Trunnion mounted valve - DN 700 - 1000, PN 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

## BROEN-Gear - DN 200 - 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.

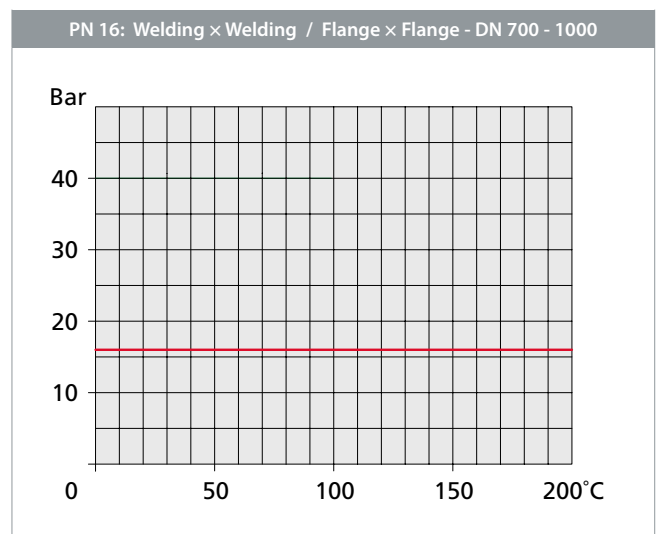
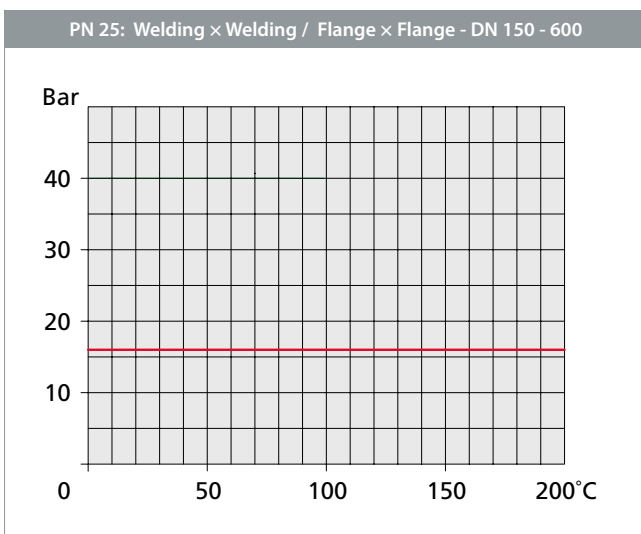
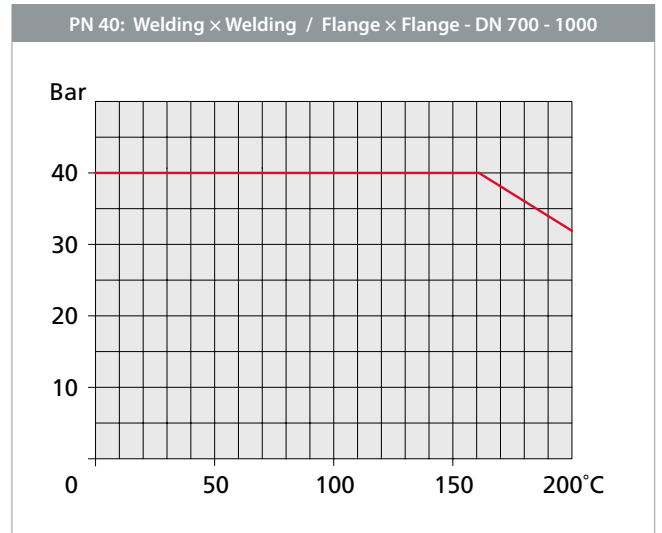
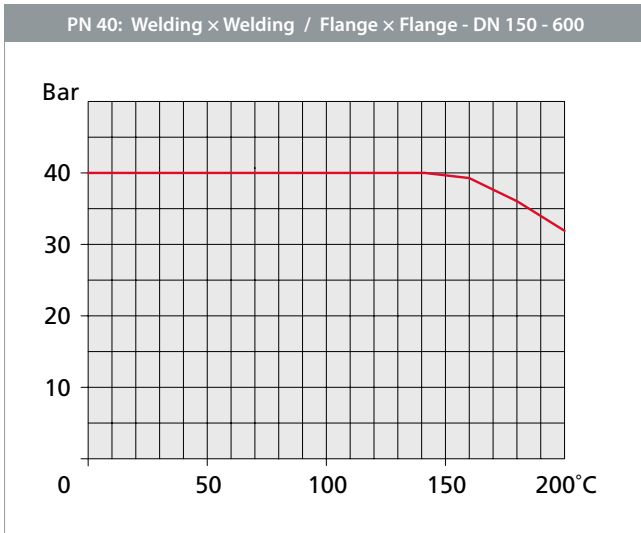
The gear is used for manual control of the fittings between the OPEN - CLOSED end positions (30° rotation angle), substantially reducing the force required for its operation. The end positions are enforced by stops that are adjusted during the installation of the gear on the fittings and then protected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



DN	BROEN No.	PN
150	3-TRA042	40, 25, 16
200	3-TRA043	40, 25, 16
250	3-TRA044	40, 25, 16
300	3-TRA045	40, 25, 16
350	3-TRA003	40, 25, 16
400	3-TRA060	40, 25, 16
500	3-TRA059	40, 25, 16
600	3-TRA062	40, 25, 16

Pressure and temperature graph - DN 150 - 1000, PN 40/25/16

**Full bore**



# Pressure drop graph - DN 150 - 1000

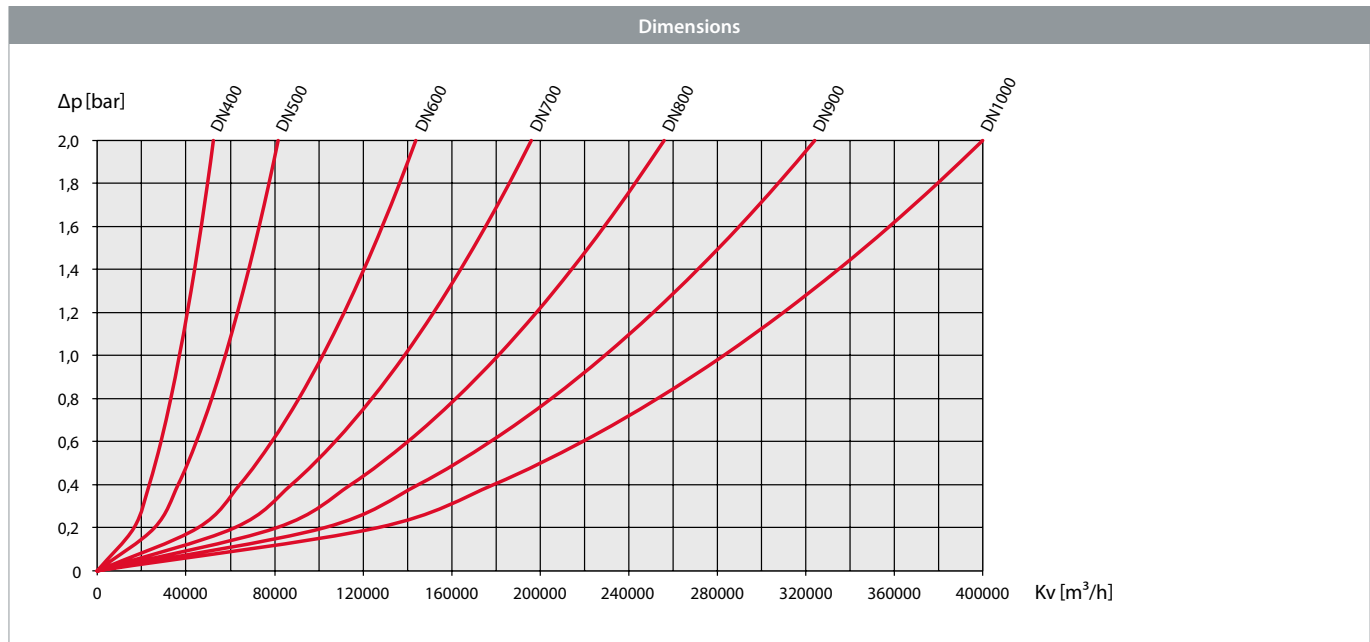
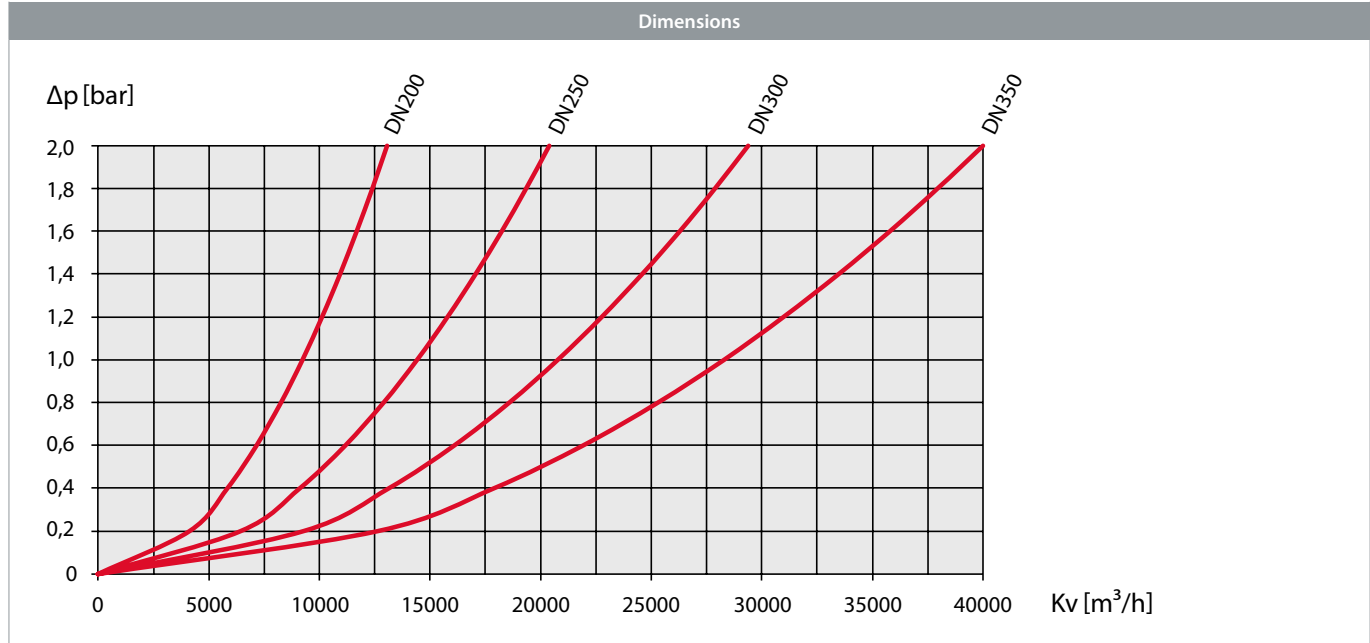
**Full bore**

**Pressure drop graph**

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

**Definitions**

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



DN	150	200	250	300	350	400	500	600	700	800	900	1000
Kvs	4498	9234	14428	20777	28280	36937	57715	101788	138544	180956	229023	282744

# Operating torque - DN 150 - 1000, PN 40/25/16

## 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.

