

## **SECTION 3**

Steel ball valves

Full bore

**BROEN**  
BALLOMAX®

*Designed to last*

# Steel ball valve - DN 10 - 50, PN 25

## Type BBM 12031 - Full bore

### Female x Female with high or low stem

Steel ball valve.

### Materials

See next page.

### Applications

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

### Media

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

### Surface treatment

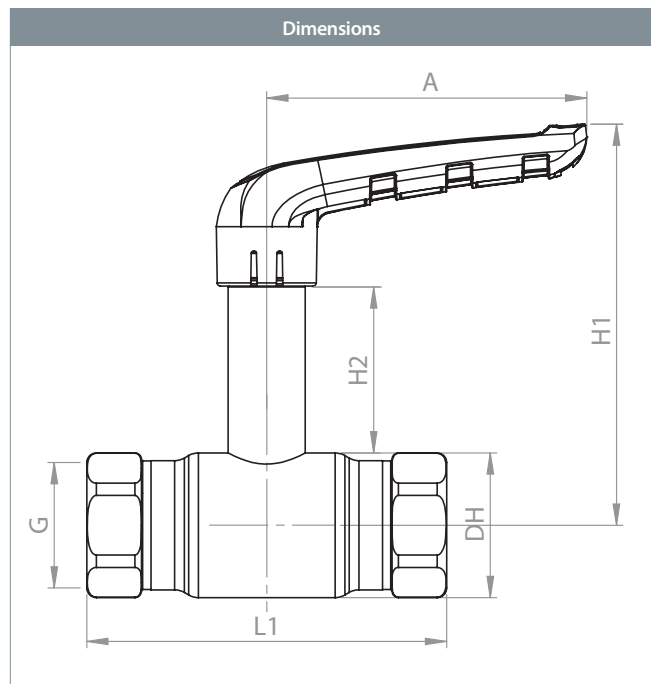
All BROEN BALLOMAX® valves are powder coated in black.

### Operation

The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 40 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	3/8"	Ø26.0	74	106	55	75
	15	1015002031-2101	15	26	0.35	1/2"	Ø30.0	94	108	55	75
	20	1020002031-2101	20	49	0.47	3/4"	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	1 1/4"	Ø56.5	134	131	52	100
	40	1040002031-2101	40	214	1.83	1 1/2"	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	1/2"	Ø30.0	94	68	15	75
	20	1020002030-2101	20	49	0.39	3/4"	Ø38.0	104	69	11	75
	25	1025002030-2101	25	75	0.67	1"	Ø45.0	112	87	14	100

# Steel ball valve - DN 10 - 50, PN 25

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 - PTFE
	10	Friction ring	Plastic - PTFE+C
	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 - DN 10 - 50, PN 25

## Type BBM 12031 - Full bore

### Female x Female with high stem and gearhandle

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

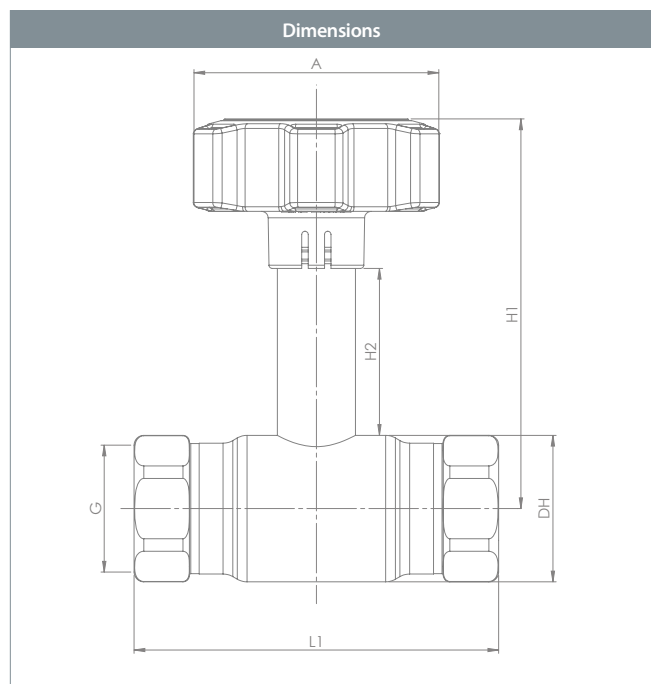
All BROEN BALLOMAX® valves are powder coated in black.

### Operation

The gearhandle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm					
					G	DH	L1	H1	H2	A
10	1010002031-2201	10	13	0,35	3/8"	Ø26.0	74	106	55	59
15	1015002031-2201	15	26	0,4	1/2"	Ø30.0	94	108	55	59
20	1020002031-2201	20	49	0,52	3/4"	Ø38.0	104	111	54	59
25	1025002031-2201	25	75	0,85	1"	Ø45.0	112	125	52	81
32	1032002031-2201	32	110	1,26	1 1/4"	Ø56.5	134	131	52	81
40	1040002031-2201	40	214	1,88	1 1/2"	Ø68.0	156	156	63	108
50	1050002031-2201	50	308	3,14	2"	Ø85.0	192	165	63	108

HIGH



# Steel ball valve - DN 10 - 50, PN 25

Type BBM 12031 - Full bore



Technical drawing		Material description	
	1	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	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 - PTFE
	10	Friction ring	Plastic - PTFE+C
	16	Female	Steel - P235GH / 1.0345 / EN 10217-2 / ISO 228-1
	17	Gearhandle	Fiberglass reinforced nylon - PA66

# Steel ball valve - DN 10 - 50, PN 25

## 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

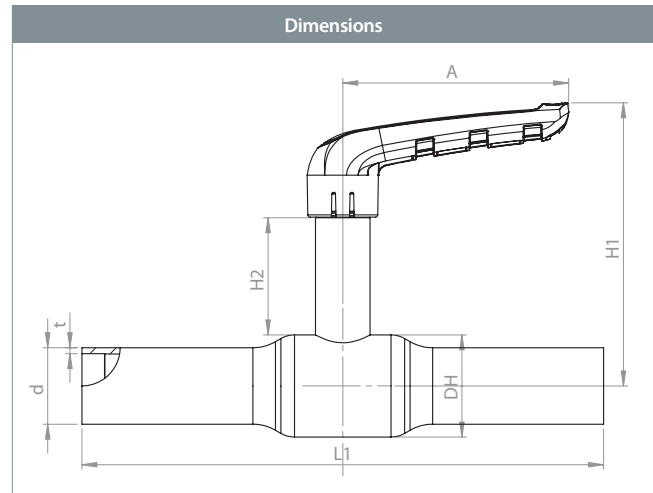
All BROEN BALLOMAX® valves are powder coated in black.

### 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 DN 40 are CE-marked. The 3.1 certificate is available upon request.



					Alle dimensioner i mm							
	DN	BROEN No.	Bore	Kvs	net Weight 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 - DN 10 - 50, PN 25

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 - PTFE
	10	Friction ring	Plastic - PTFE+C
	11	Handle core	Galvanized steel
	12	Handle	Fiberglass reinforced nylon - PA66

# Steel ball valve - DN 10 - 50, PN 25

## Type BBM 13001 - Full bore

### Welding × Welding with high stem and gearhandle

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

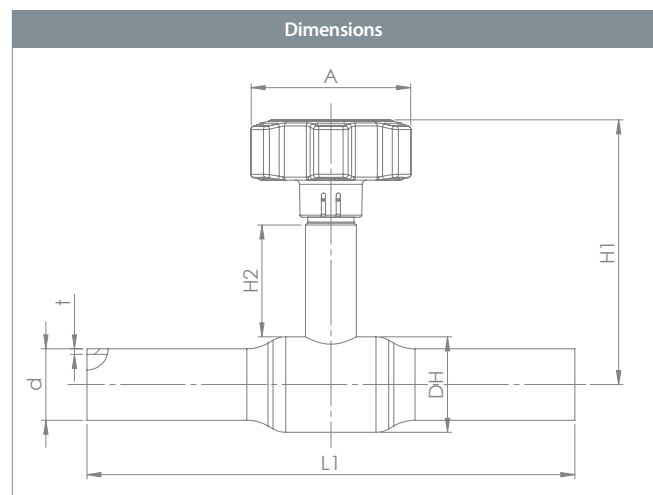
All BROEN BALLOMAX® valves are powder coated in black.

### Operation

The gearhandle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 40 are CE-marked. The 3.1 certificate is available upon request.



					Alle dimensioner i mm						
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L1	H1	H2	A
10	1010003001-2201	10	13	0,25	Ø26.0	17.2	1.8	210	106	55	59
15	1015003001-2201	15	26	0,27	Ø30.0	21.3	2.0	210	108	55	59
20	1020003001-2201	20	49	0,63	Ø38.0	26.9	2.3	230	111	54	59
25	1025003001-2201	25	75	0,96	Ø45.0	33.7	2.6	230	125	52	81
32	1032003001-2201	32	110	1,35	Ø56.5	42.4	2.6	260	131	52	81
40	1040003001-2201	40	214	1,91	Ø68.0	48.3	2.6	260	156	63	108
50	1050003001-2201	50	308	3,05	Ø85.0	60.3	2.9	290	165	63	108

HIGH

# Steel ball valve - DN 10 - 50, PN 25

Type **BBM 13001** - Full bore



Technical drawing		Material description	
	1	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	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 - PTFE
	10	Friction ring	Plastic - PTFE+C
17	Gearhandle	Fiberglass reinforced nylon - PA66	

# Steel ball valve - DN 10 - 50, PN 25

## 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

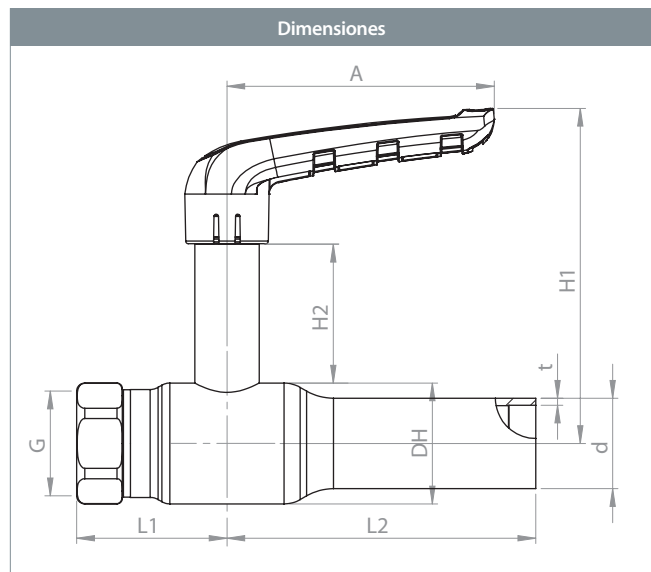
All BROEN BALLOMAX® valves are powder coated in black.

### 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 DN 40 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	
HIGH	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									
DN	BROEN No.	Bore	Kvs	net Weight kg	G	DH	d	t	L1	L2	H1	H2	A	
LOW	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 - DN 10 - 50, PN 25

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 - PTFE
	10	Friction ring	Plastic - PTFE+C
	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 - DN 10 - 50, PN 25

## Type BBM 13601 - Full bore

### Female x Welding with high stem and gearhandle

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

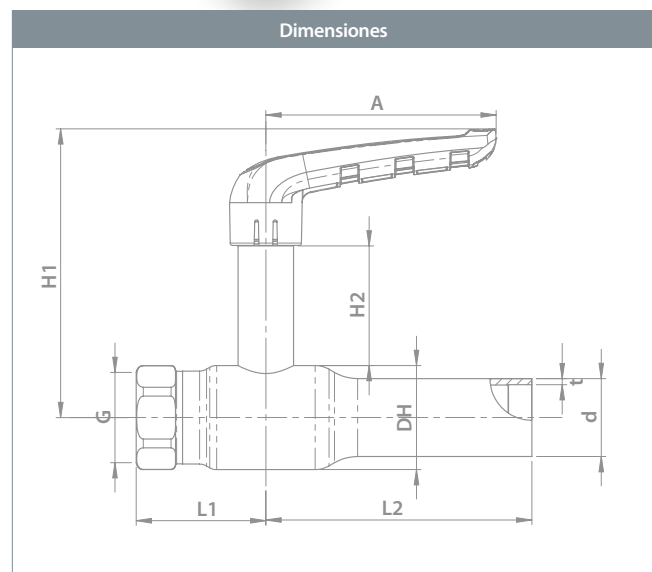
All BROEN BALLOMAX® valves are powder coated in black.

### Operation

The gearhandle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 40 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	1010003601-2201	10	13	0,35	3/8"	Ø26.0	17,2	1,8	37	105	106	55	59	
15	1015003601-2201	15	26	0,43	1/2"	Ø30.0	21,3	2	40	105	108	55	59	
20	1020003601-2201	20	49	0,61	3/4"	Ø38.0	26,9	2,3	52	115	111	54	59	
25	1025003601-2201	25	75	0,91	1"	Ø45.0	33,7	2,6	56	115	125	52	81	
32	1032003601-2201	32	110	1,32	1 1/4"	Ø56.5	42,4	2,6	67	130	131	52	81	
40	1040003601-2201	40	214	1,95	1 1/2"	Ø68.0	48,3	2,6	78	134	156	63	108	
50	1050003601-2201	50	308	3,14	2"	Ø85.0	60,3	2,9	96	145	165	63	108	

HIGH



# Steel ball valve - DN 10 - 50, PN 25

Type **BBM 13601** - Full bore



Technical drawing		Material description	
	1	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	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 - PTFE
	10	Friction ring	Plastic - PTFE+C
	13	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	17	Gearhandle	Fiberglass reinforced nylon - PA66

# Steel ball valve - DN 10 - 50, PN 25

## Type BBM 13701 - Full bore

### Male × Welding with high stem

Steel ball valve.

### Materials

See next page.

### Applications

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

### Media

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

### Surface treatment

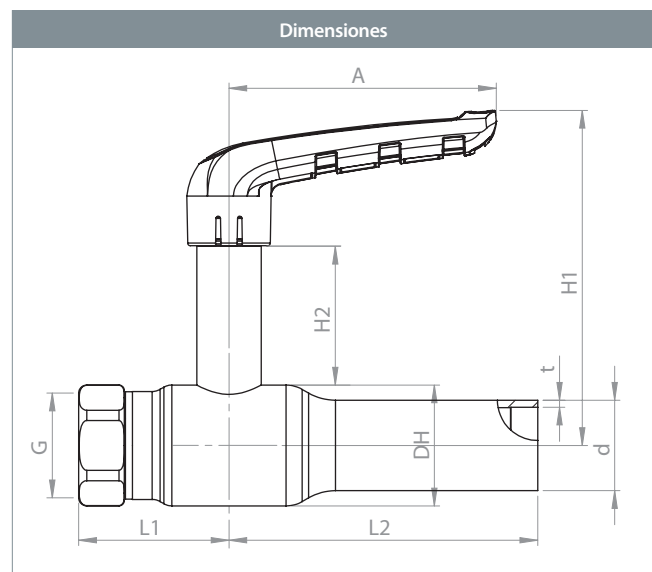
All BROEN BALLOMAX® valves are powder coated in black.

### Operation

The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					G	DH	d	t	L1	L2	H1	H2	A
10	1010003701-2101	10	13	0.30	3/8"	Ø26.0	17.2	1.8	37	105	106	55	75
15	1015003701-2101	15	26	0.38	1/2"	Ø30.0	21.3	2.0	40	105	108	55	75
20	1020003701-2101	20	49	0.52	3/4"	Ø38.0	26.9	2.3	52	115	111	54	75
25	1025003701-2101	25	75	0.87	1"	Ø45.0	33.7	2.6	56	115	125	52	100
32	1032003701-2101	32	110	1.30	1 1/4"	Ø56.5	42.4	2.6	67	130	131	52	100
40	1040003701-2101	40	214	1.93	1 1/2"	Ø68.0	48.3	2.6	78	134	156	63	120
50	1050003701-2101	50	308	3.18	2"	Ø85.0	60.3	2.9	96	145	165	63	120

# Steel ball valve - DN 10 - 50, PN 25

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 - PTFE
	10	Friction ring	Plastic - PTFE+C
	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 - DN 10 - 50, PN 25

## Type BBM 13701 - Full bore

### Male × Welding with high stem and gearhandle

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

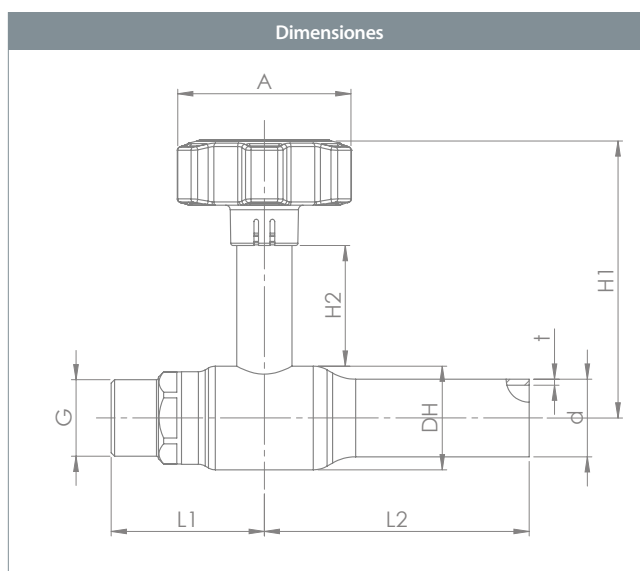
All BROEN BALLOMAX® valves are powder coated in black.

### Operation

The gearhandle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					G	DH	d	t	L1	L2	H1	H2	A
10	1010003701-2201	10	13	0,35	3/8"	Ø26.0	17,2	1,8	37	105	106	55	59
15	1015003701-2201	15	26	0,43	1/2"	Ø30.0	21,3	2	40	105	108	55	59
20	1020003701-2201	20	49	0,57	3/4"	Ø38.0	26,9	2,3	52	115	111	54	59
25	1025003701-2201	25	75	0,82	1"	Ø45.0	33,7	2,6	56	115	125	52	81
32	1032003701-2201	32	110	1,35	1 1/4"	Ø56.5	42,4	2,6	67	130	131	52	81
40	1040003701-2201	40	214	1,98	1 1/2"	Ø68.0	48,3	2,6	78	134	156	63	108
50	1050003701-2201	50	308	3,23	2"	Ø85.0	60,3	2,9	96	145	165	63	108

# Steel ball valve - DN 10 - 50, PN 25

Type **BBM 13701** - Full bore



Technical drawing		Material description	
	1	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	4	Stem guide	Steel - P235GH / 1.0345 / EN 10217-2
	6	Stem	Stainless steel - AISI316 / EN 1.4401
	7	Ball	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	8	Spring supporting ring	Stainless steel - AISI316 / EN 1.4401
	9	Seal	Plastic - PTFE
	10	Friction ring	Plastic - PTFE+C
	14	Male	Steel - P235GH / 1.0345 / EN 10217-2 / ISO 228-1
	17	Gearhandle	Fiberglass reinforced nylon - PA66

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

## Type BBM 13701S - Full bore

### Male × Welding with high stem and cap and chain

Steel ball valve.

### Materials

See next page.

### Applications

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

### Media

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

### Surface treatment

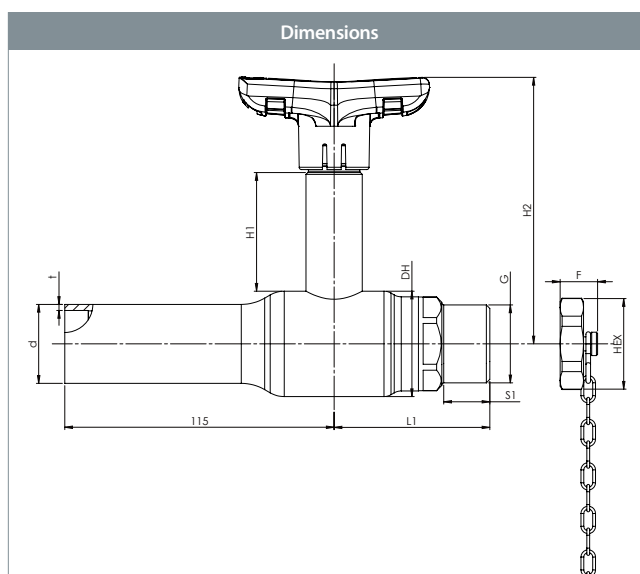
All BROEN BALLOMAX® valves are powder coated in black.

### Operation

The standard handle is 180 degrees adjustable.

### Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN BALLOMAX® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN 40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									
					G	DH	d	t	L1	L2	H1	H2	A	HEX
15	1015003711-S000	15	26	0,55	G3/4"A	30	21,3	2,0	58,5	105,5	104	55	75	30
20	1020003701-S001	20	49	0,65	G3/4"A	38	26,9	2,4	56	115	106,5	54	75	30
25	1025003701-S002	25	75	1,1	G1"A	45	33,7	2,6	66,5	115	114	52	100	36

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

Type **BBM 13701S** - 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 - PTFE
	10	Friction ring	Plastic - PTFE+C
	11	Handle core	Galvanized steel
	12	Handle	Fiberglass reinforced nylon - PA66
	14	Male	Steel - P235GH / 1.0345 / EN 10217-2 / ISO 228-1
33	Cap and chain		

# Steel ball valve - DN 10 - 50, PN 25

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

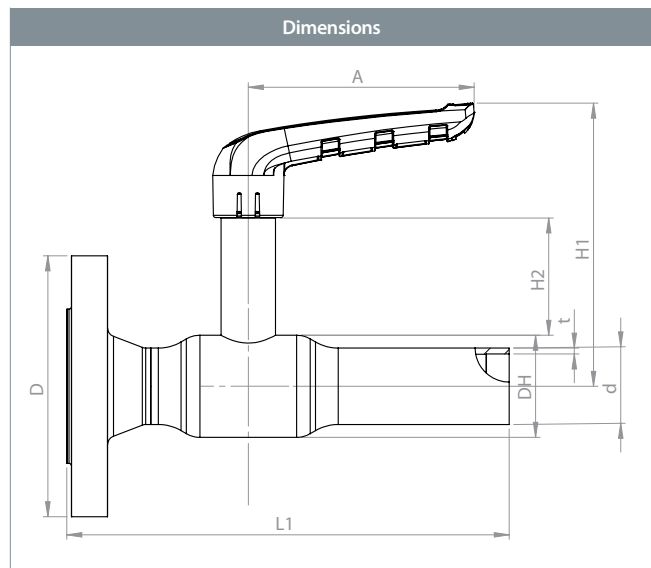
All BROEN BALLOMAX® valves are powder coated in black.

## 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 DN 40 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	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 - DN 10 - 50, PN 25

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 - PTFE
	10	Friction ring Plastic - PTFE+C
	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 - DN 10 - 50, PN 25

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

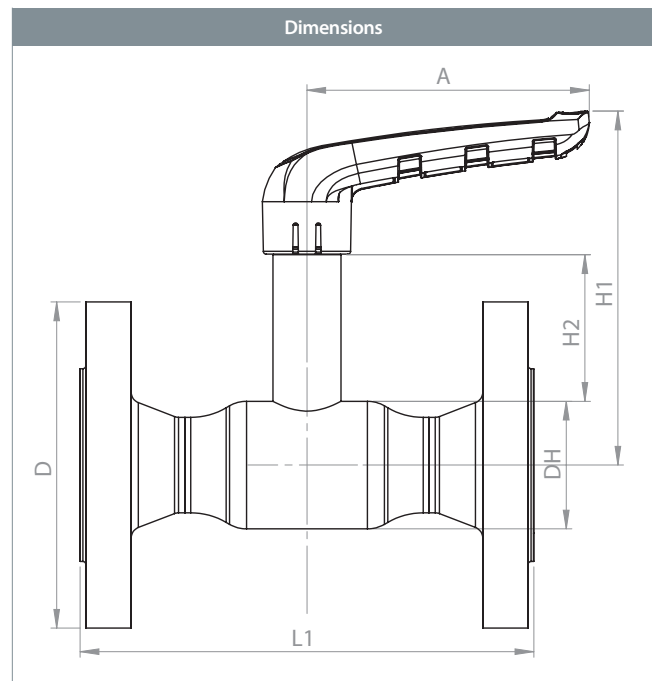
The standard handle is 180 degrees adjustable.

## 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 DN 40 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					
					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 - DN 10 - 50, PN 25

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 - PTFE
	10	Friction ring	Plastic - PTFE+C
	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 - DN 65 - 125, PN 25

## 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

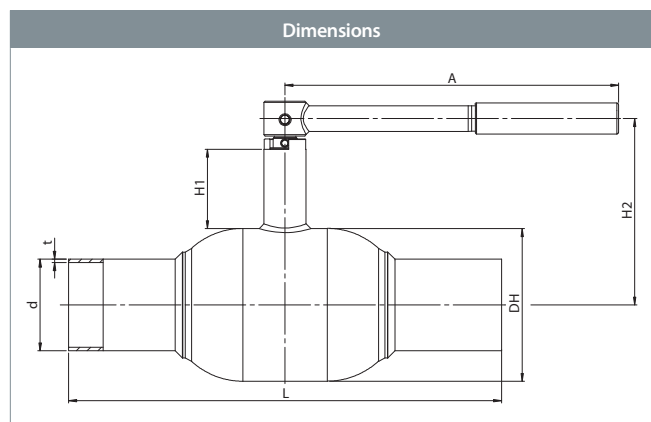
The standard handle is 180 degrees adjustable.

### 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 DN 40 are CE-marked. The 3.1 certificate is available upon request.

### Notice

ISO-flange can be mounted on request. We recommend to add a BROEN-Gear for DN 100 - 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 - DN 65 - 125, PN 25

Type 94102 - 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 - PTFE
	10	Friction ring	Plastic - PTFE+C
	11	Handle core	Galvanized steel
	12	Handle	Fiberglass reinforced nylon - PA66
	15	Flange	Steel - P235GH / 1.0345 / EN 10217-2 / ISO 1092-1
	54	O-ring	Rubber - AFLAS

Accessories	BROEN No.	Dimension	Description
	600584	DN 100	BROEN-Gear.
	600585	DN 125	
	167245	DN 65	ISO-flange.
	169245	DN 80	

# Steel ball valve - DN 100 - 150, PN 25

## 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:

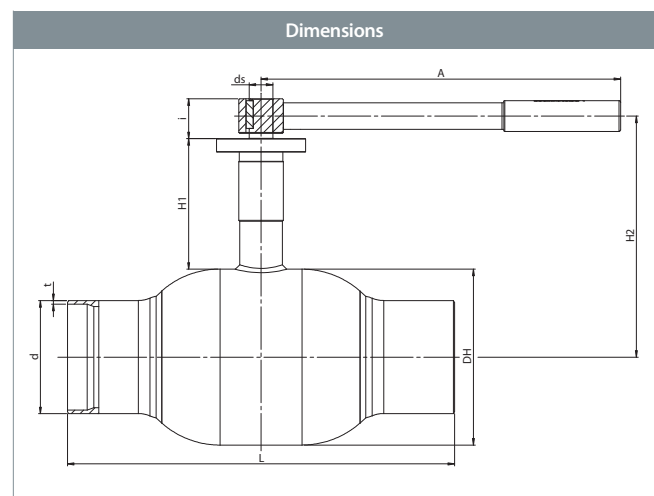
- BROEN-Gear.
- Electric actuator.

### 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 DN 40 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear for DN 125 - 150.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									
					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 - DN 100 - 150, PN 25

Type 91102 - Full bore



Technical drawing		Material description	
	1	Welding end	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	11	Stem guide	Steel - S355J2+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	
54	O-ring	Rubber - AFLAS	

Accessories	BROEN No.	Dimension	Description
	600584	DN 100	BROEN-Gear.
	600585	DN 125	
	600586	DN 150	

# Steel ball valve - DN 100 - 150, PN 25

## 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

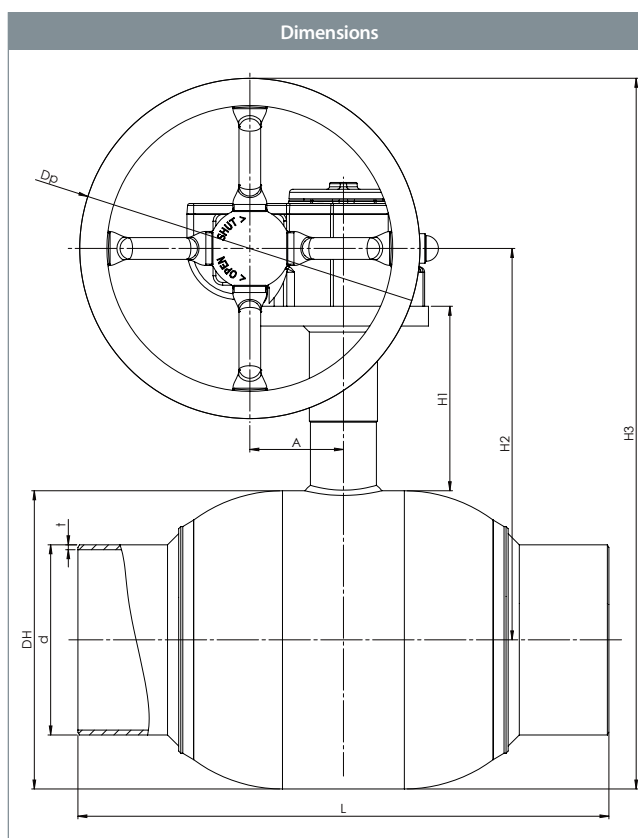
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

### Surface treatment

Eco-friendly protection finish against corrosion.

### 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 40 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 - DN 100 - 150, PN 25

Type 91102 - Full bore



Technical drawing		Material description	
	1	Welding end	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	11	Stem guide	Steel - S355J2+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 - DN 200 - 400, PN 25

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:

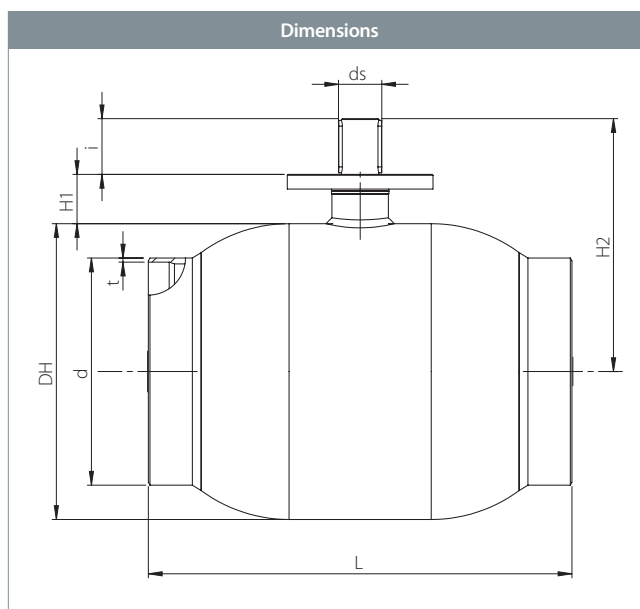
- BROEN-Gear.
- Electric actuator.

## 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 DN 40 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
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 - DN 200 - 400, PN 25



Type 86202 / 86002 - Full bore

Technical drawing		Material description	
	1	Welding end	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	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	DN 200	BROEN-Gear.
	600588	DN 250	
	600589	DN 300	
	600590	DN 400	

# Steel ball valve - DN 200 - 400, PN 25

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**

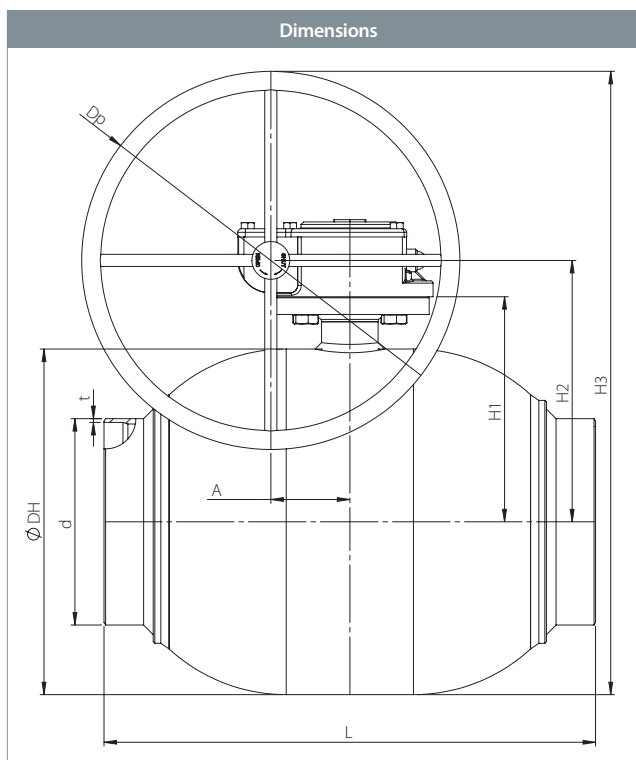
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**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 DN 40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	H3	Dp	A
200	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 - DN 200 - 400, PN 25

Type 86202 / 86002 - Full bore



Technical drawing		Material description	
	1	Welding end	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	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 - DN 200 - 400, PN 25

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:

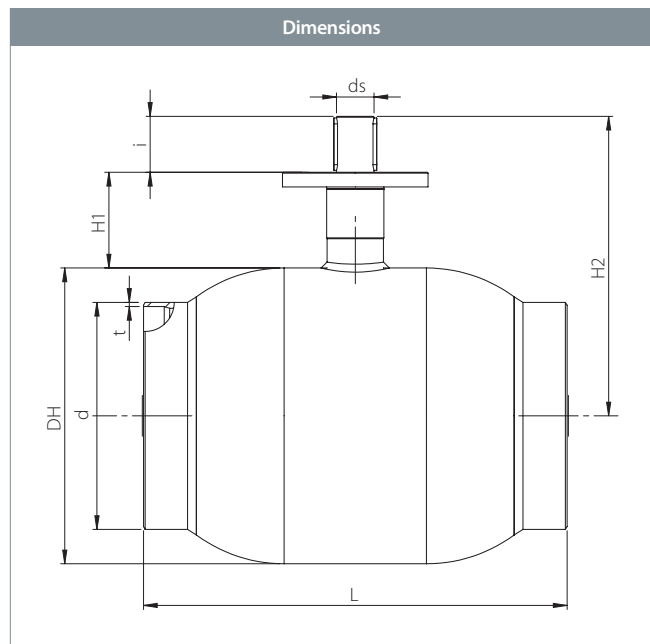
- BROEN-Gear.
- Electric actuator.

## 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 DN 40 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
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 - DN 200 - 400, PN 25

Type 86212 / 86012 - Full bore



Technical drawing		Material description	
	1	Welding end	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	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	DN 200	BROEN-Gear.
	600588	DN 250	
	600589	DN 300	
	600590	DN 400	

# Steel ball valve - DN 200 - 400, PN 25

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**

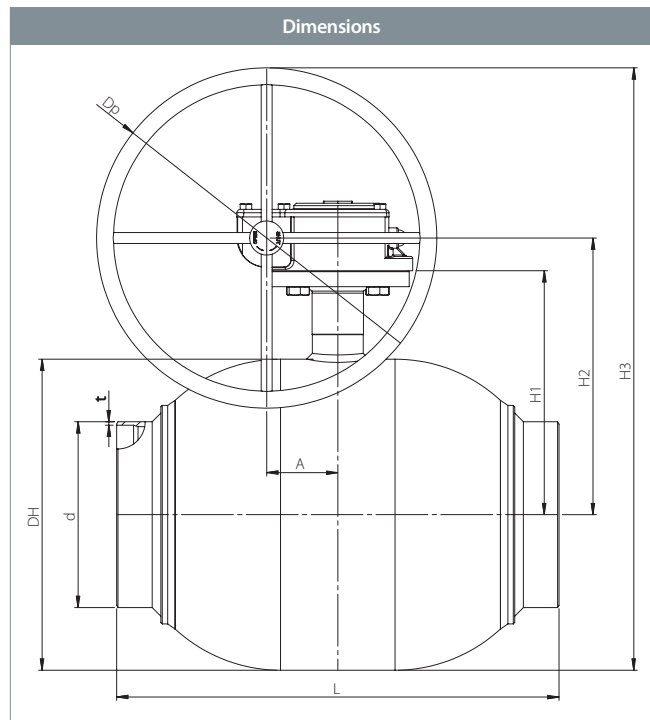
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**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 DN 40 are CE-marked. The 3.1 certificate is available upon request.



					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	H3	Dp	A
200	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 - DN 200 - 400, PN 25

Type 86212 / 86012 - Full bore



Technical drawing		Material description	
	1	Welding end	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	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 - DN 20 - 50, PN 40

## 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

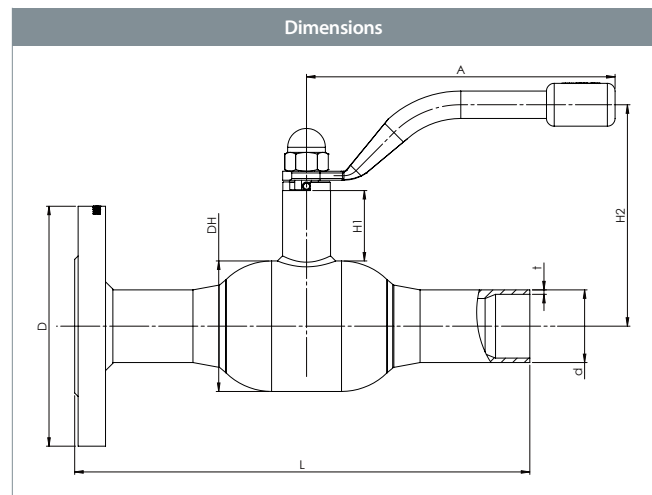
Eco-friendly protection finish against corrosion.

### 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 DN 40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					DH	D	d	t	L	H1	H2	A
20	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 - DN 20 - 50, PN 40

Type 94104 - Full bore



Technical drawing		Material description	
	1	Welding end	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
	21	Cap nut	Steel - galvanized

Accessories	BROEN No.	Dimension	Description
	66050010 000 - yellow	DN 20 - 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	DN 32 - 40	
	66050040 003 - blue		
	66050040 004 - red		
	203245	DN 20 - 25	ISO-flange.
	208245	DN 32 - 40	
	167245	DN 50	
	66160010 000	DN 20 - 25	Hexagon for insertion key.
	66160040 000	DN 32 - 40	
	66160065 000	DN 50	

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

**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**

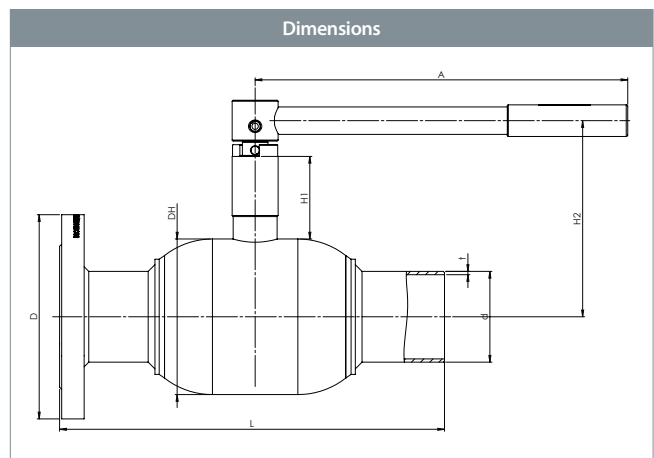
The standard handle is 180 degrees adjustable.

**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 DN 40 are CE-marked. The 3.1 certificate is available upon request.

**Notice**

Larger dimensions DN 125 - 400, on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					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 - DN 65 - 100, PN 25

Type 94104 - Full bore



Technical drawing		Material description	
	1	Welding end	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	DN 65	ISO-flange.
	169245	DN 80	
	66160065 000	DN 65	Hexagon for insertion key.
	66164100 000	DN 80	
	66161100 000	DN 100	

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

## 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

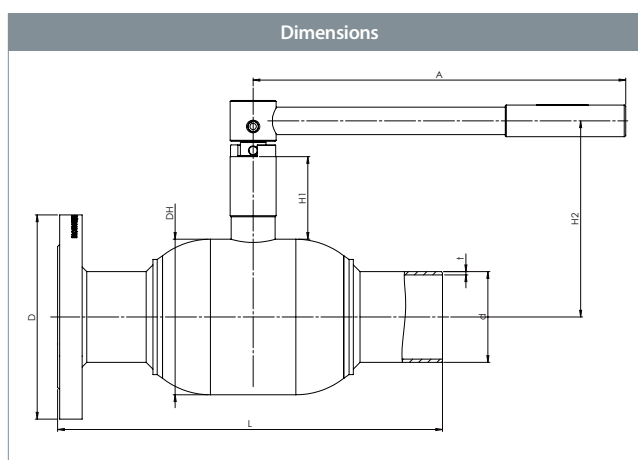
The standard handle is 180 degrees adjustable.

### 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 DN 40 are CE-marked. The 3.1 certificate is available upon request.

### Notice

Larger dimensions DN 125 - 400, on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm							
					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 - DN 65 - 100, PN 16

Type 94104 - Full bore



Technical drawing		Material description	
	1	Welding end	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	DN 65	ISO-flange.
	169245	DN 80	
	66160065 000	DN 65	Hexagon for insertion key.
	66164100 000	DN 80	
	66161100 000	DN 100	

# Steel ball valve - DN 15 - 50, PN 40

## 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

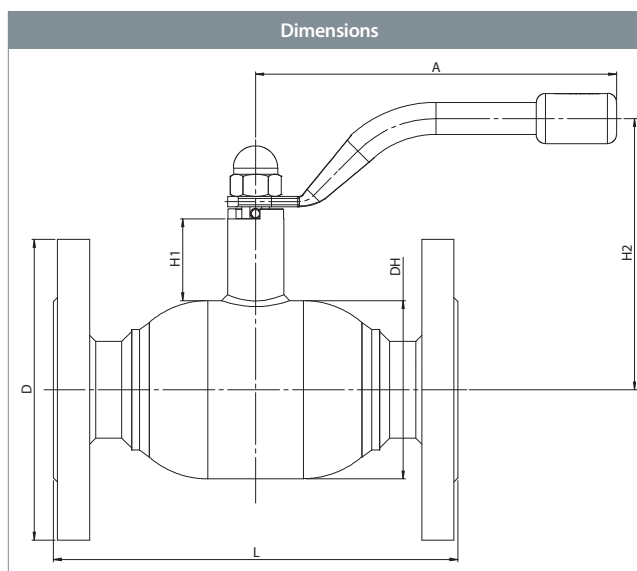
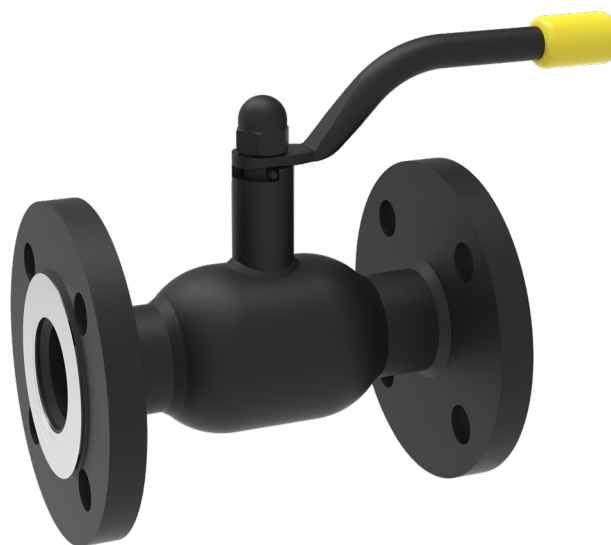
The standard handle is 180 degrees adjustable.

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

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	DN 20 - 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	DN 32 - 40	
	66050040 003 - blue		
	66050040 004 - red		
	203245	DN 20 - 25	ISO-flange.
	208245	DN 32 - 40	
	167245	DN 50	
	66160010 000	DN 20 - 25	Hexagon for insertion key.
	66160040 000	DN 32 - 40	
	66160065 000	DN 50	

Special model: Minimum length - Flange x Flange - DN 15 - 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 - DN 65 - 125, PN 25

## 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

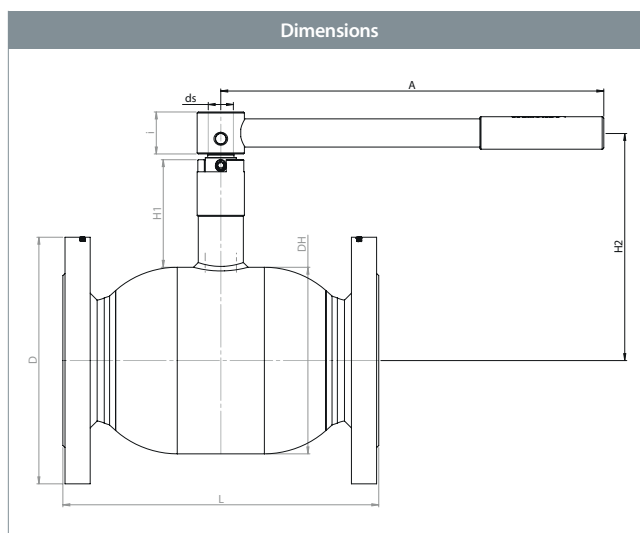
The standard handle is 180 degrees adjustable.

### 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 DN 40 are CE-marked. The 3.1 certificate is available upon request.

### Notice

We recommend to add a BROEN-Gear for DN 100 - 125. Other lengths and special flanges available on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	L	H1	H2	ds	i	A	ISO
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 - DN 65 - 125, PN 25

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	
54	O-ring	Rubber - AFLAS	

Accessories	BROEN No.	Dimension	Description
	600584	DN 100	BROEN-Gear.
	600585	DN 125	
	167245	DN 65	ISO-flange.
	169245	DN 80	
	66160065 000	DN 65	Hexagon for insertion key.
	66164100 000	DN 80	
	66161100 000	DN 100	
	66161150 000	DN 125	

Special model: Minimum length - Flange x Flange - DN 65 - 125:

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

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

## 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:

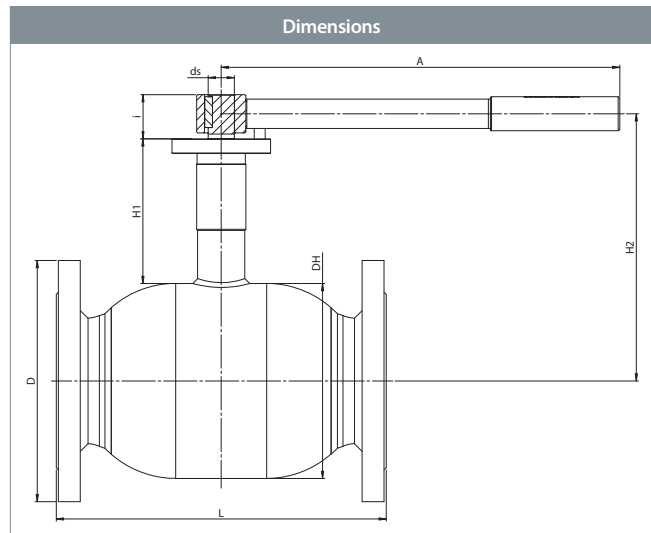
- BROEN-Gear.
- Electric actuator.

### 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 DN 40 are CE-marked. The 3.1 certificate is available upon request.

### Notice

The DN 150 is delivered with an ISO-flange, but without handle. We recommend to add a BROEN-Gear. Other lengths and special flanges available on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	L	H1	H2	ds	i	A	ISO
125	9110325125 010	125	1841	38.0	219	270	325	136	272	30	50	650	F10
150	9110325150 000	150	2652	47.7	267	300	350	156	321	30	60	-	F12

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



## 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	
54	O-ring	Rubber - AFLAS	

Accessories	BROEN No.	Dimension	Description
	600585	DN 125	BROEN-Gear.
	600586	DN 150	
	66161150 000	DN 125	Hexagon for insertion key.

Special model: Minimum length - Flange x Flange - DN 125 - 150:

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

# Steel ball valve - DN 100 - 150, PN 25

## 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

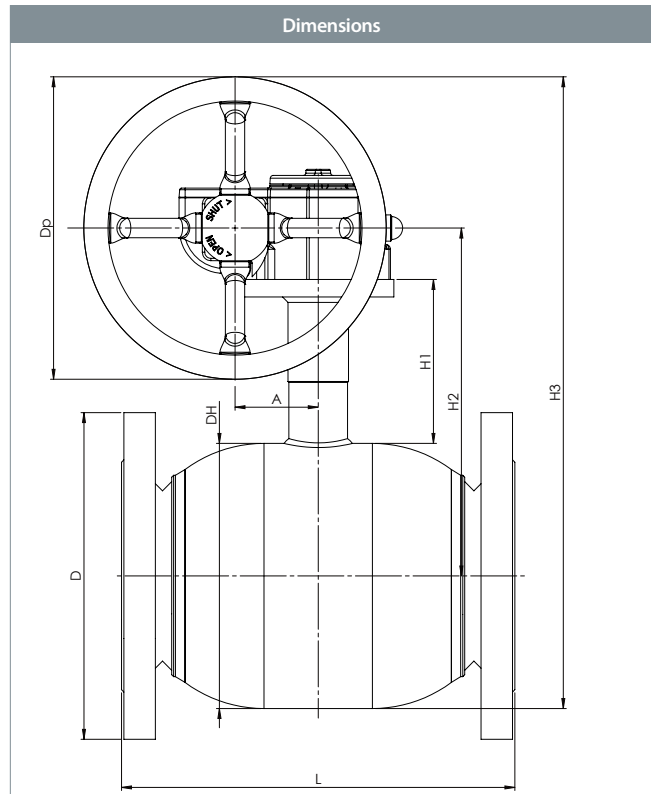
Eco-friendly protection finish against corrosion.

### 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 DN 40 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	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 - DN 100 - 150, PN 25

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 - DN 100 - 150:

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

# Steel ball valve - DN 200 - 400, PN 25

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:

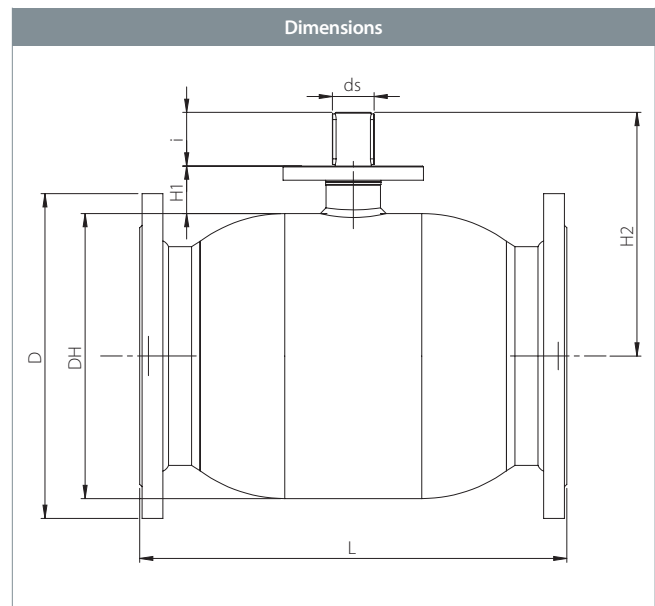
- BROEN-Gear.
- Electric actuator.

**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 DN 40 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
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 - DN 200 - 400, PN 25

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	DN 200	BROEN-Gear.
	600588	DN 250	
	600589	DN 300	
	600590	DN 400	

# Steel ball valve - DN 200 - 400, PN 25

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**

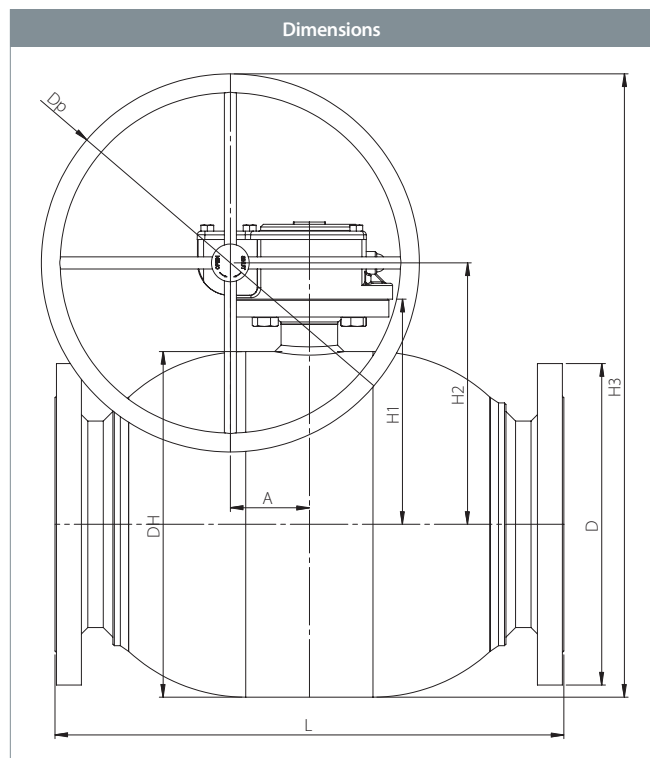
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**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 DN 40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	t	L	H1	H2	H3	Dp	A
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 - DN 200 - 400, PN 25

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 - DN 200 - 400, PN 25

Tyyppi 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:

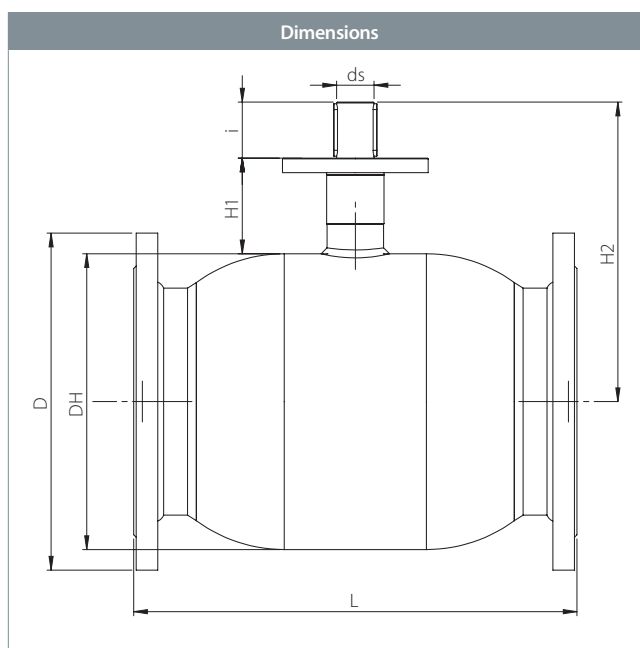
- BROEN-Gear.
- Electric actuator.

## 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 DN 40 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
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 - DN 200 - 400, PN 25

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	DN 200	BROEN-Gear.
	600588	DN 250	
	600589	DN 300	
	600590	DN 400	

# Steel ball valve - DN 200 - 400, PN 25

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**

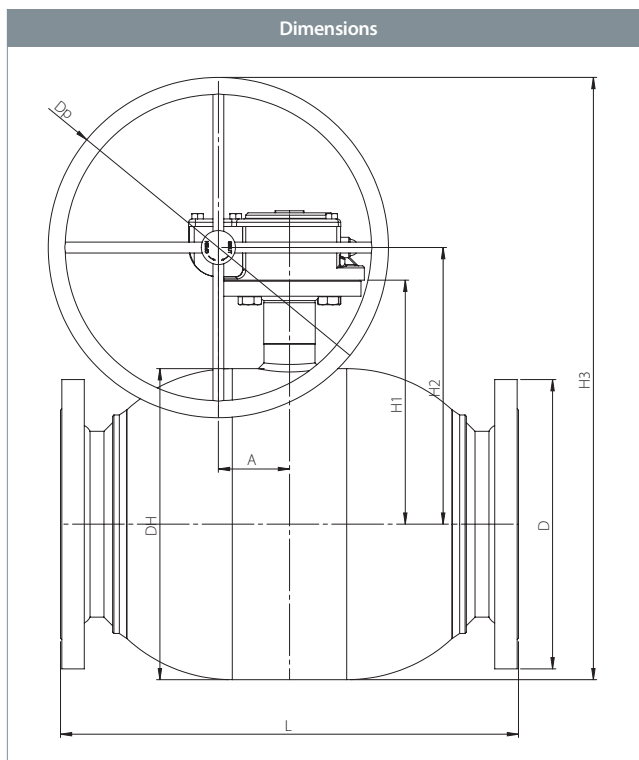
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**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 DN 40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	t	L	H1	H2	H3	Dp	A
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 - DN 200 - 400, PN 25

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 - DN 65 - 125, PN 16

## 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

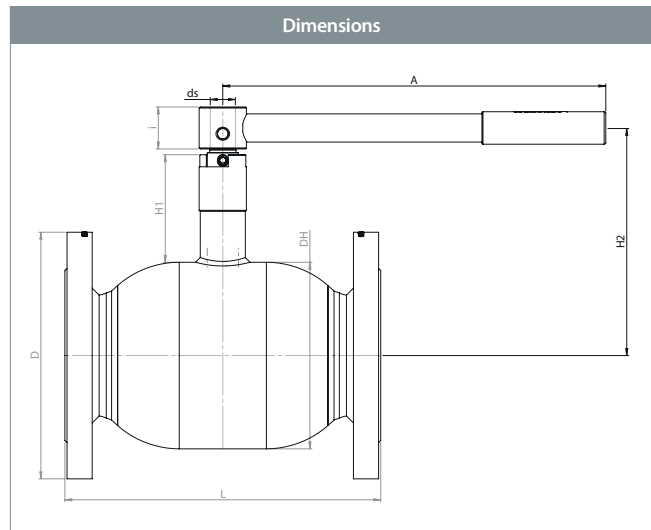
The standard handle is 180 degrees adjustable.

### 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 DN 40 are CE-marked. The 3.1 certificate is available upon request.

### Notice

Other lengths and special flanges available on request. We recommend to add a BROEN-Gear for DN 100 - 125.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					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 - DN 65 - 125, PN 16



## 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	
54	O-ring	Rubber - AFLAS	

Accessories	BROEN No.	Dimension	Description
	600584	DN 100	BROEN-Gear.
	600585	DN 125	
	167245	DN 65	ISO-flange.
	169245	DN 80	
	66160065 000	DN 65	Hexagon for insertion key.
	66164100 000	DN 80	
	66161100 000	DN 100	
	66161150 000	DN 125	

Special model: Minimum length - Flange x Flange - DN 65 - 125:

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

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

## 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:

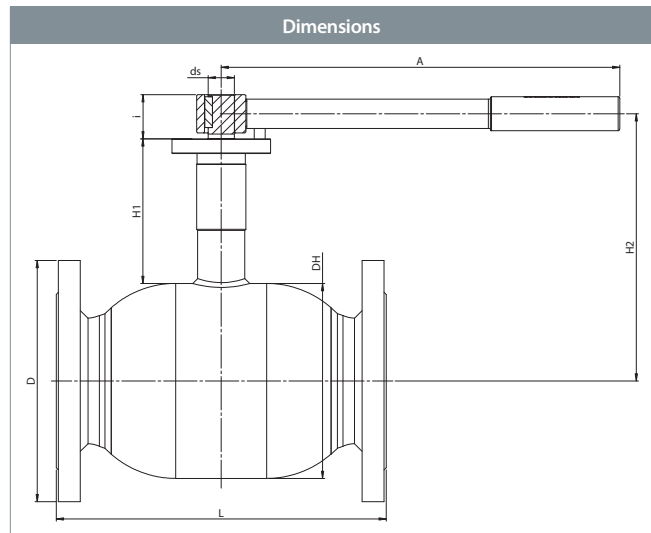
- BROEN-Gear.
- Electric actuator.

### 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 DN 40 are CE-marked. The 3.1 certificate is available upon request.

### Notice

The DN 150 is delivered with an ISO-flange, but without handle. We recommend to add a BROEN-Gear. Other lengths and special flanges available on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	L	H1	H2	ds	i	A	ISO
125	9110316125 010	125	1841	34.6	219	250	325	136	272	30	50	650	F10
150	9110316150 000	150	2652	41.4	267	285	350	156	321	30	60	900	F12

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



## 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	
54	O-ring	Rubber - AFLAS	

Accessories	BROEN No.	Dimension	Description
	600585	DN 125	BROEN-Gear.
	600586	DN 150	
	66161150 000	DN 125	Hexagon for insertion key.

Special model: Minimum length - Flange x Flange - DN 125 - 150:

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

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

## 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

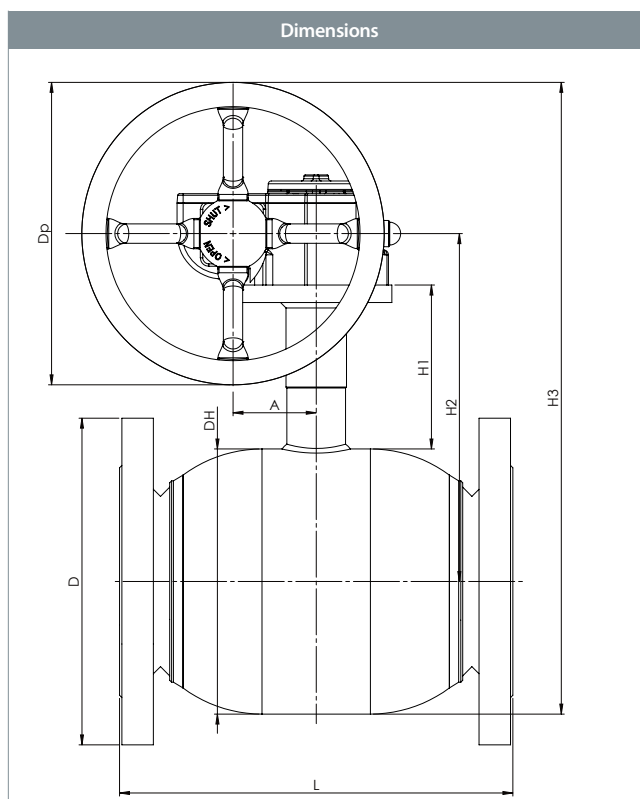
Eco-friendly protection finish against corrosion.

### 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 DN 40 are CE-marked. The 3.1 certificate is available upon request.

### Notice

Other lengths and special flanges available on request.



					All dimensions in mm							
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	D	L	H1	H2	H3	Dp	A
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 - DN 125 - 150, PN 16



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 - DN 125 - 150:

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

# Steel ball valve - DN 200 - 400, PN 16

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:

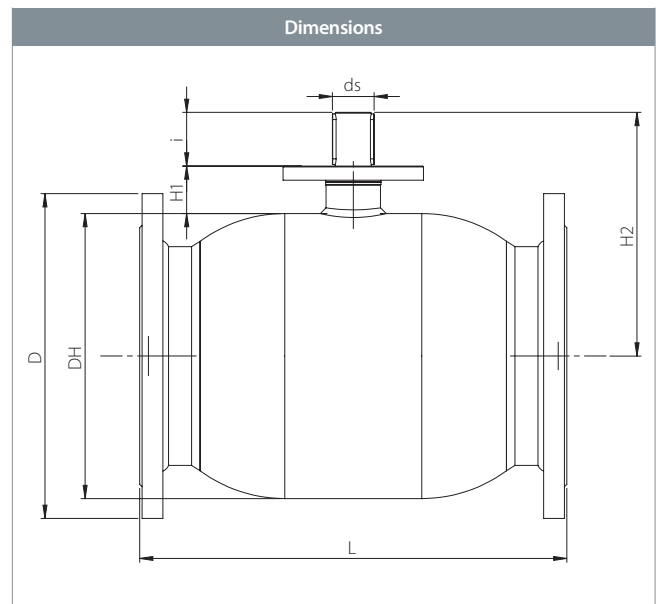
- BROEN-Gear.
- Electric actuator.

**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 DN 40 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
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 - DN 200 - 400, PN 16

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	DN 200	BROEN-Gear.
	600588	DN 250	
	600589	DN 300	
	600590	DN 400	

# Steel ball valve - DN 200 - 400, PN 16

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**

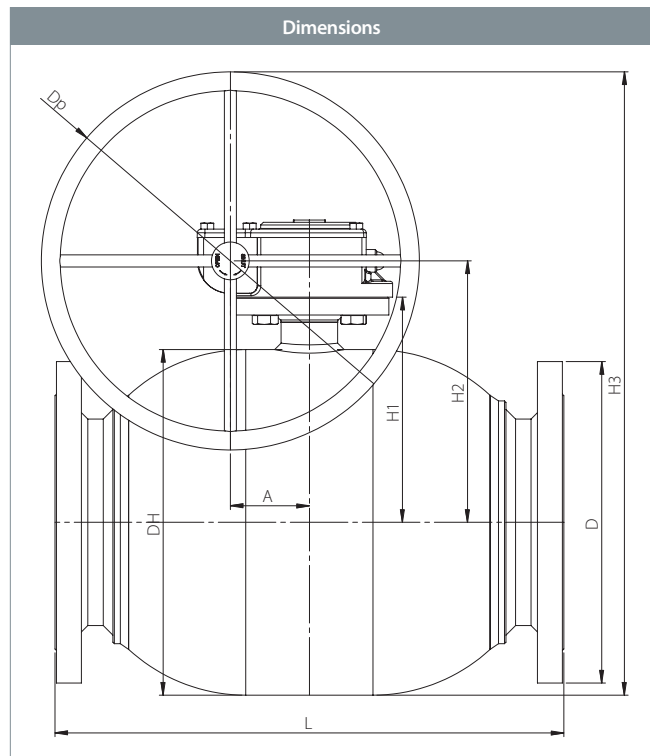
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**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 DN 40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	t	L	H1	H2	H3	Dp	A
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 - DN 200 - 400, PN 16

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 - DN 200 - 400, PN 16

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:

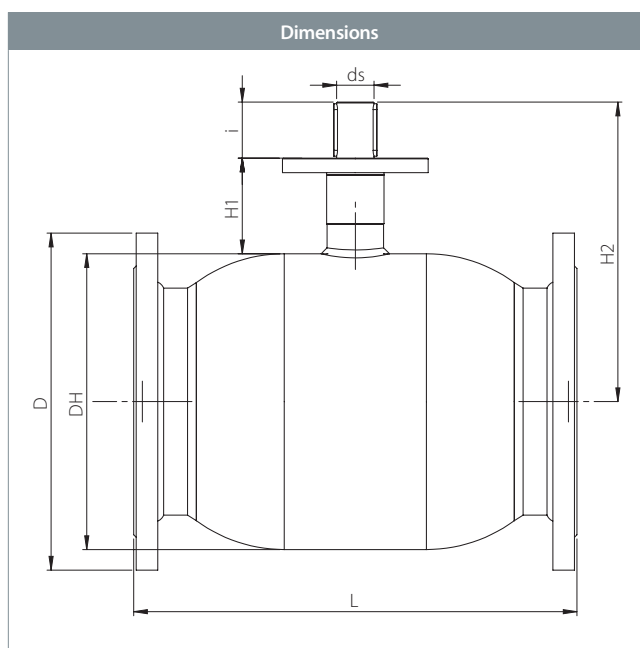
- BROEN-Gear.
- Electric actuator.

**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 DN 40 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
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 - DN 200 - 400, PN 16



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	DN 200	BROEN-Gear.
	600588	DN 250	
	600589	DN 300	
	600590	DN 400	

# Steel ball valve - DN 200 - 400, PN 16

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**

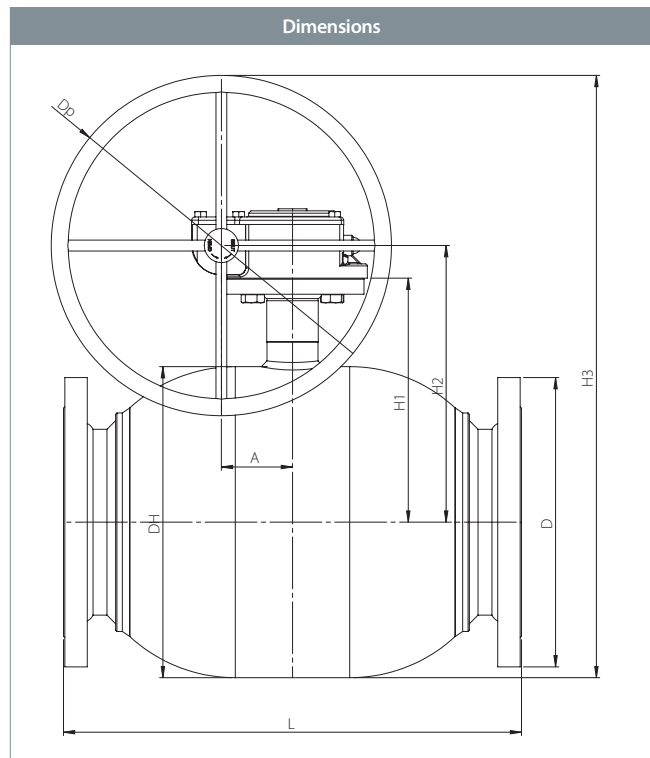
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN BALLOMAX® Sales Department.

**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 DN 40 are CE-marked. The 3.1 certificate is available upon request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	D	t	L	H1	H2	H3	Dp	A
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 - DN 200 - 400, PN 16

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 - DN 10 - 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 - DN 10 - 32

Type 90... - Full bore

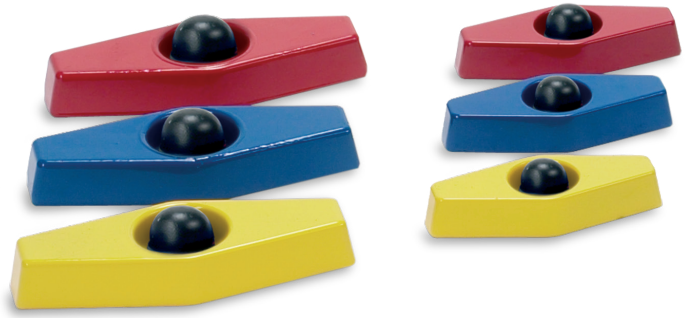
With red, blue and yellow clips



DN	BROEN No.	L - mm
10 - 20	9015550022	70
25 - 32	9032550002	81

## T-handle - DN 15 - 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 - DN 15 - 150

Type 66060 / 66064 / 66061 - Full bore



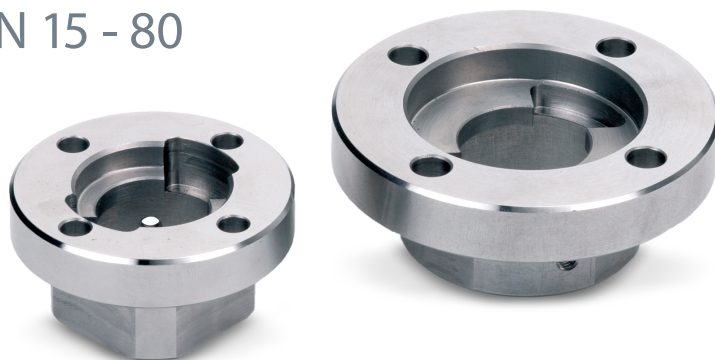
DN	BROEN No.	L - mm
15 - 25	66060010	140
32 - 40	66060040	180
50 - 65	66060065	275
80	66064100	365
100	66061100	365
125	66061150	650
150	66061200	900

## ISO-flanges, mounting kit - DN 15 - 80

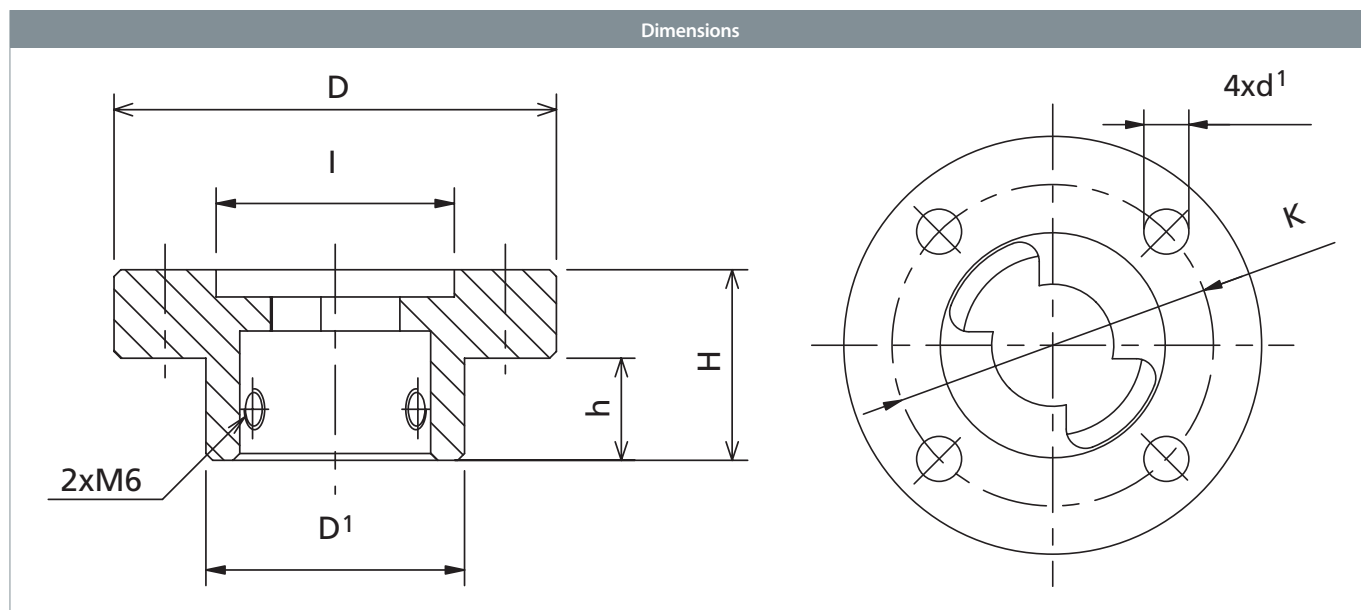
Type 203... / 208... / 167... / 169... - Full bore

### ISO-flanges, mounting kit

Mounting flange for later mounting of gear / actuator.  
No mounting facing downwards.



Dimensions



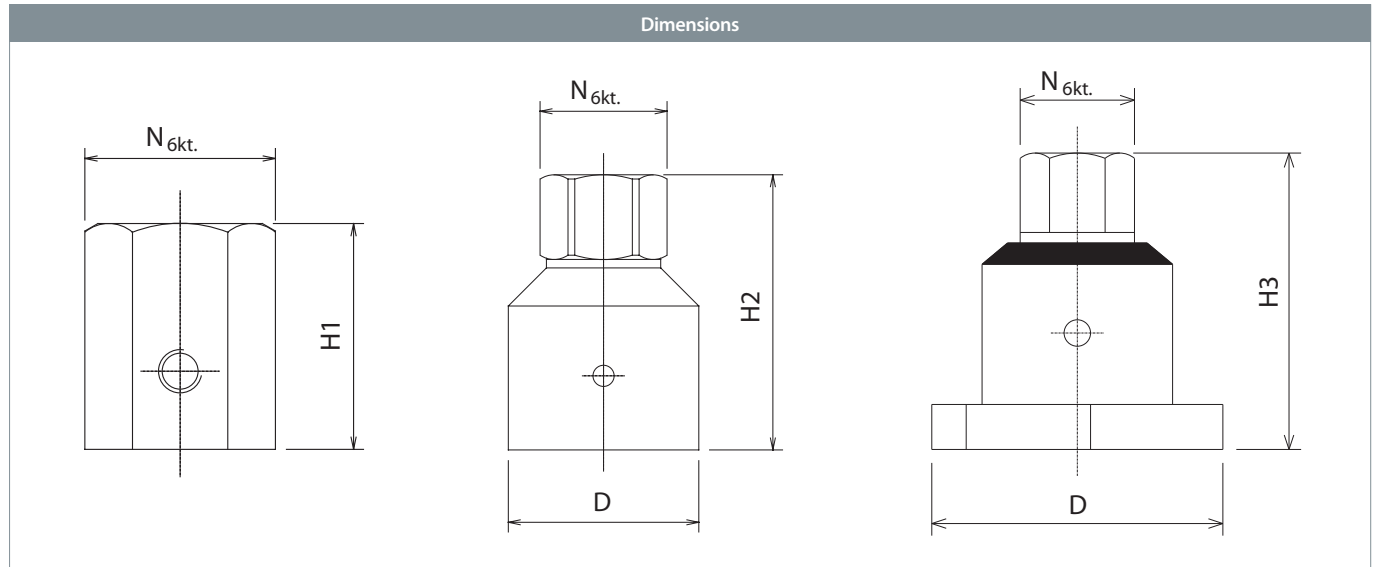
DN	BROEN No.	ISO-flange	All dimensions in mm						
			D	D'	H	h	I	K	d'
15 - 25	203245	F05	65	34	28	15	35	50	7
32 - 40	208245	F05	65	38	28	15	35	50	7
50 - 65	167245	F05	65	47	33	20	35	50	7
80	169245	F07	90	57	35	20	55	70	9

# Hexagon for insertion key - DN 15 - 125

Type 66160 / 66164 / 66161 - Full bore

## Hexagon for insertions key

To make thread end of spindle to hexagon.



DN	BROEN No.	All dimensions in mm				
		D	H1	H2	H3	N hex.
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

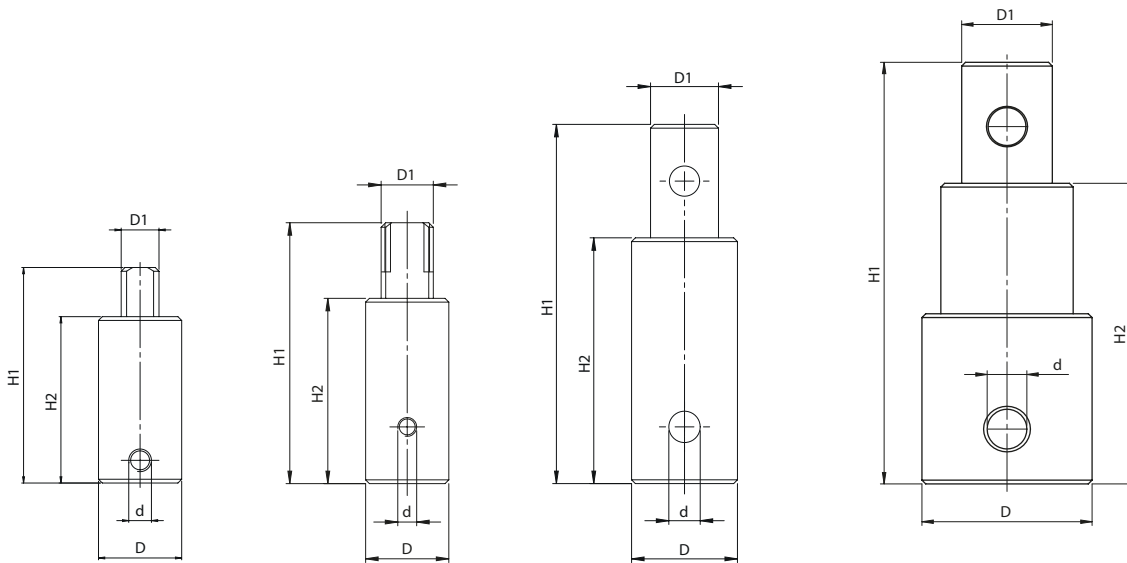
# Spindle extension - DN 15 - 100

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

Spindle extension for type 94 valves



Dimensions



DN	BROEN No.	All dimensions in mm				
		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 - DN 10 - 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
10 - 20	600940	BBM Full Flow
25 - 32	600941	BBM Full Flow
40 - 50	600942	BBM Full Flow

## BROEN-Gear - DN 100 - 400

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

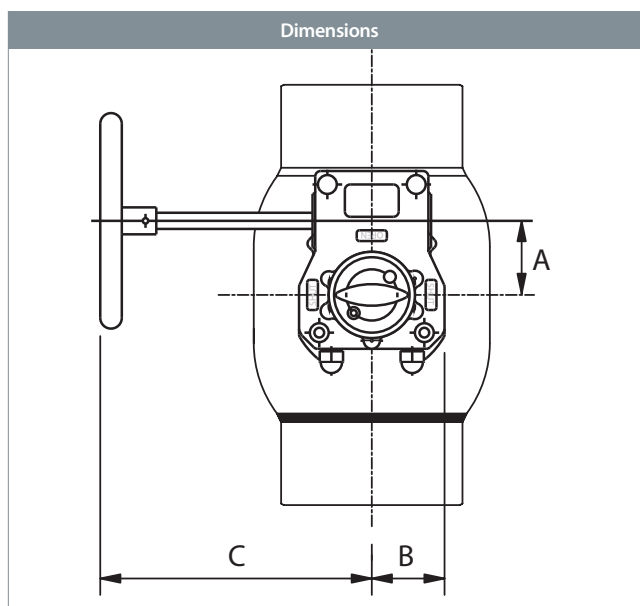
### BROEN-Gear

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.

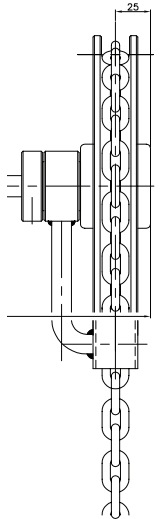


DN	BROEN nr.	Weight - kg*	All dimensions in mm				
			A	B	C	Nm	Hand wheel
100	600584	2,5	41,3	40,0	145	300	200
125	600585	7,8	68,8	67,5	240	1200	300
150	600586	8,6	68,8	67,5	245	1200	350
200	600587	9,5	68,8	67,5	275	1200	450
250	600588	26,0	104,5	110,0	346	3250	500
300	600589	42,0	130,0	142,5	387	7000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

\* Weight gearbox with hand wheel.

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

Type CW... - Full bore



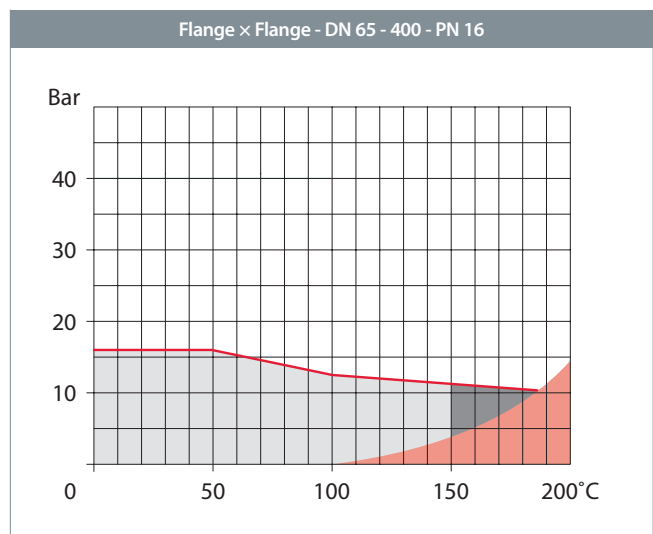
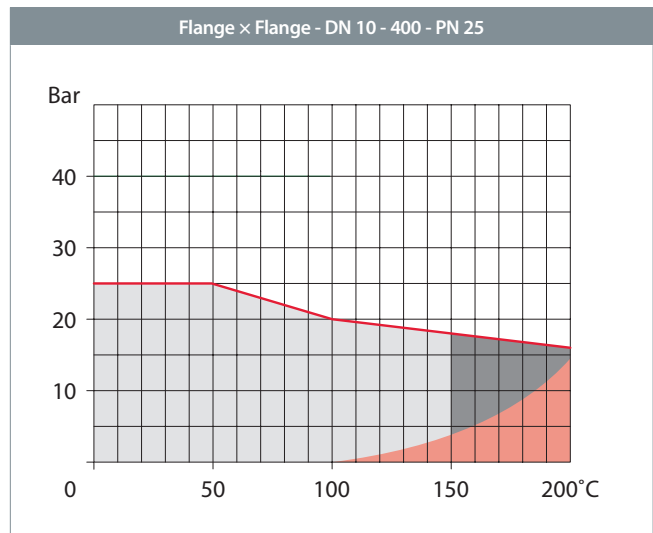
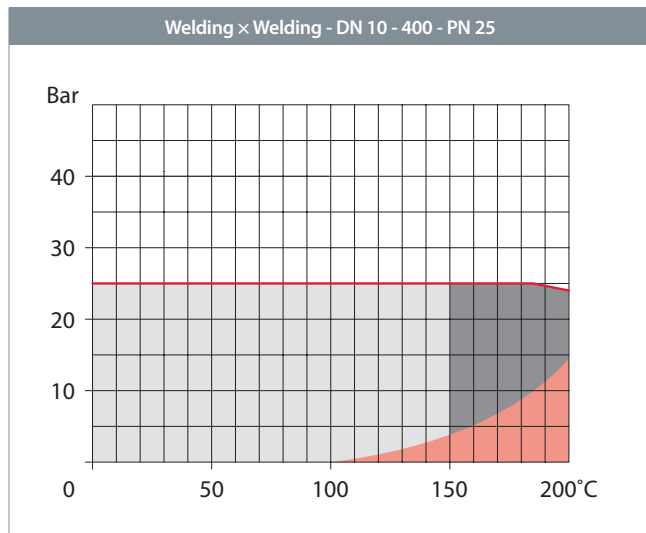
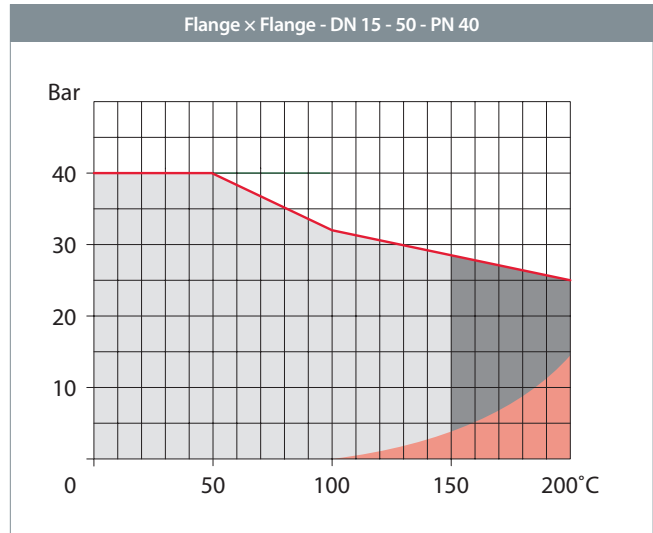
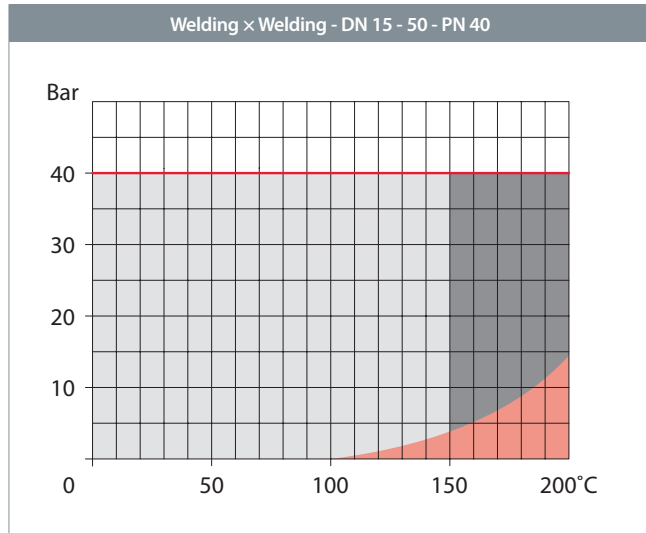
	Size	BROEN No.
	Ø15	CW 135
	Ø20	CW 215
	Ø25	CW 335
<b>Accessory:</b>		
<b>Gear chain</b>	1 meter - ZP chain (+ Splitlink)	
<b>Gear chain</b>	1 meter - SS chain (+ Splitlink)	

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

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

# Pressure and temperature graph - DN 15 - 400 - PN 40/25/16

**Full bore**



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



## Pressure drop graph - DN 15 - 400

**Full bore**

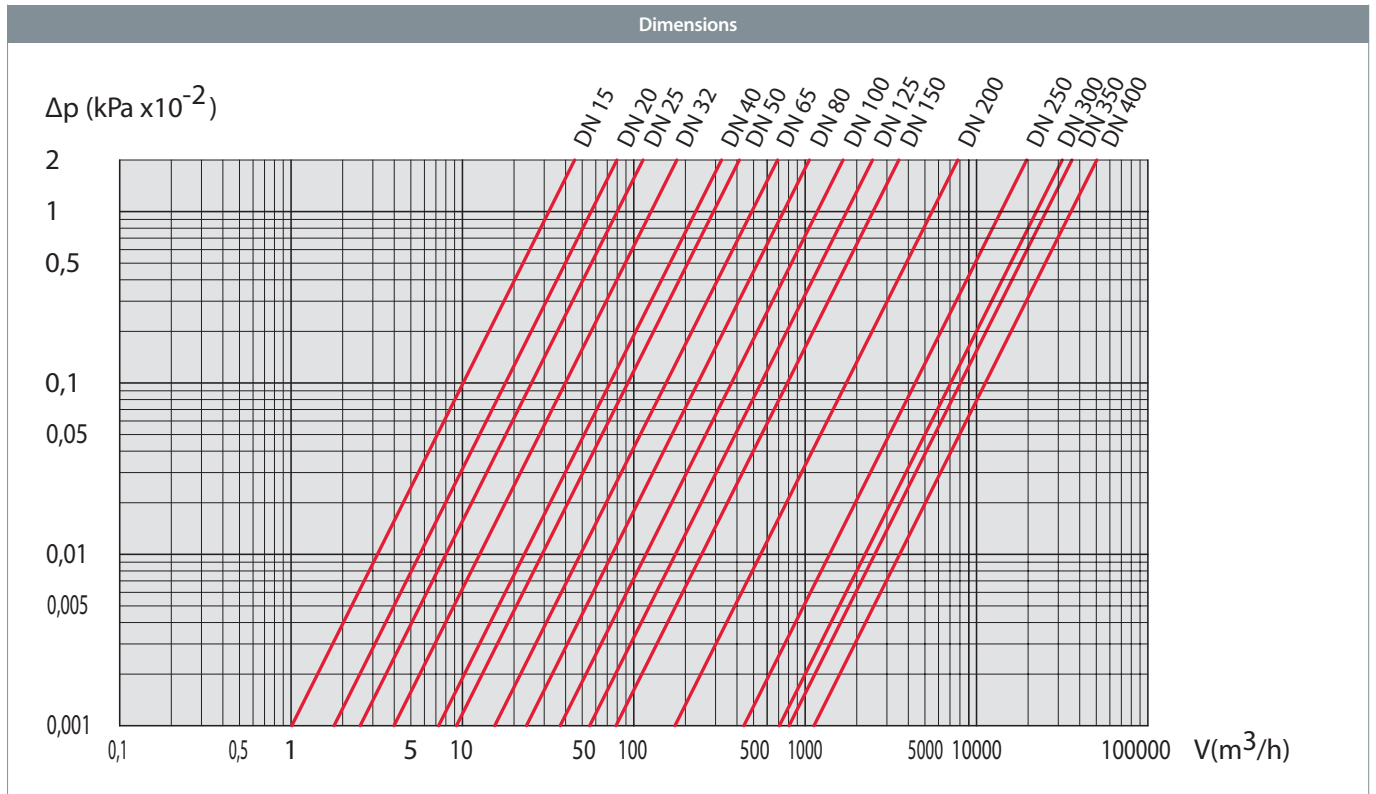
**Pressure drop graph**

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	15	20	25	32	40	50	65	80	100	125	150	200	250	300	400
Kvs	32	57	81	133	229	295	498	754	1159	1841	2652	9200	13500	21600	35000

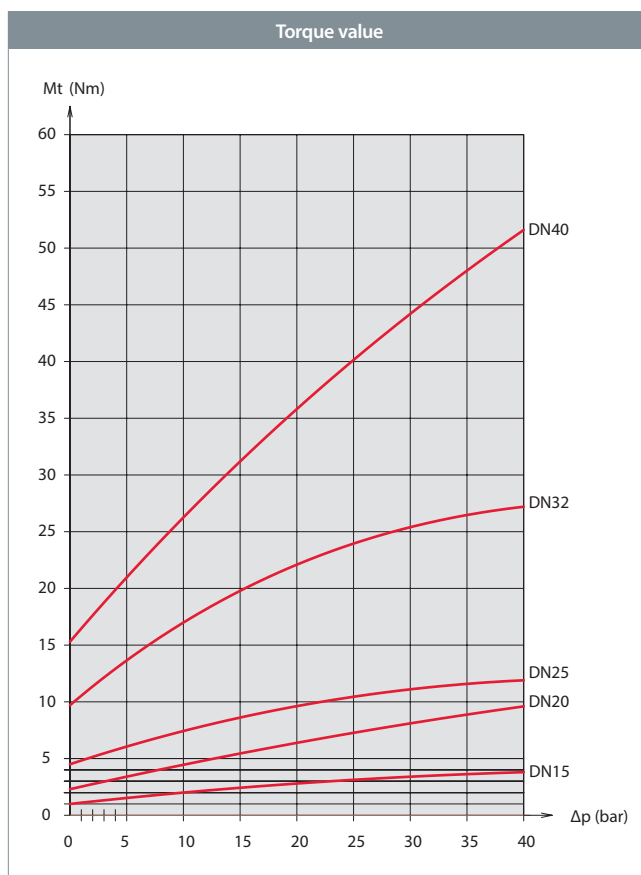
## Operating torque - DN 15 - 40, PN 40

### 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.



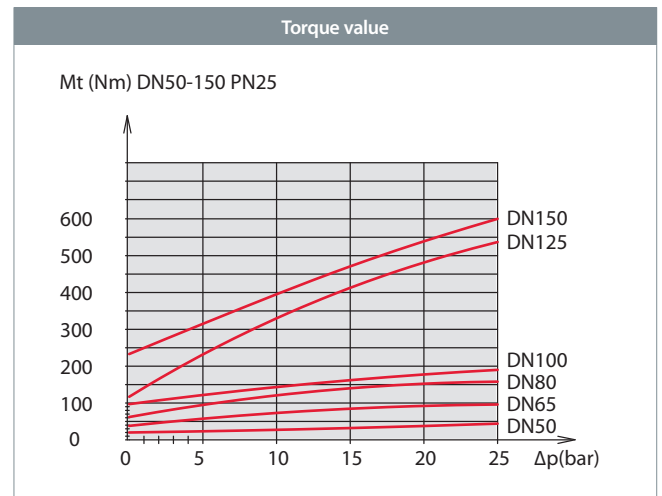
## Operating torque - DN 50 - 400, PN 25

### 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.



#### Torque Nm

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

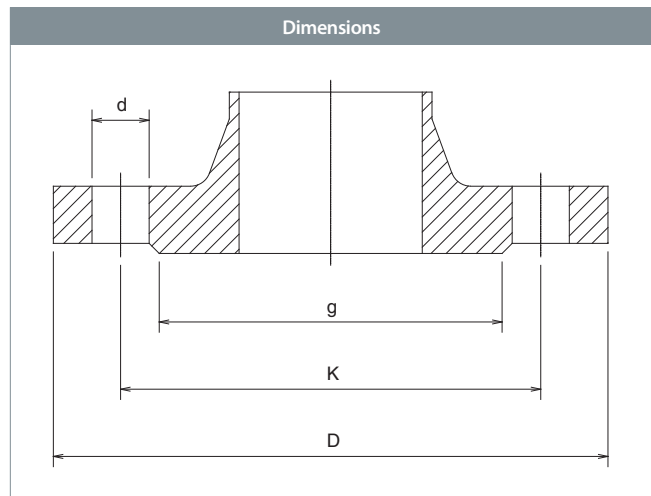
Torque Nm				
FB	DN 200	DN 250	DN 300	DN 400
Δ16 bar	570	1460	2670	5665
Δ25 bar	610	1620	3325	6205

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

EN 1092-1 - Full bore

### Description

Flangestandard.



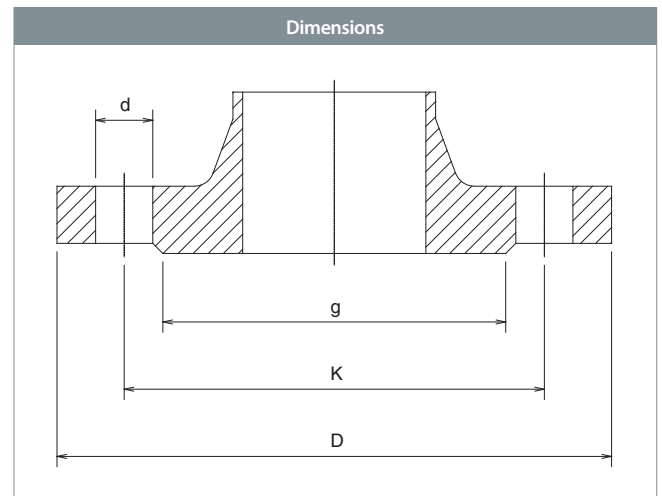
DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4

## Connecting flange - DN 15 - 400, PN 25

EN 1092-1 - Full bore

### Description

Flangestandard.



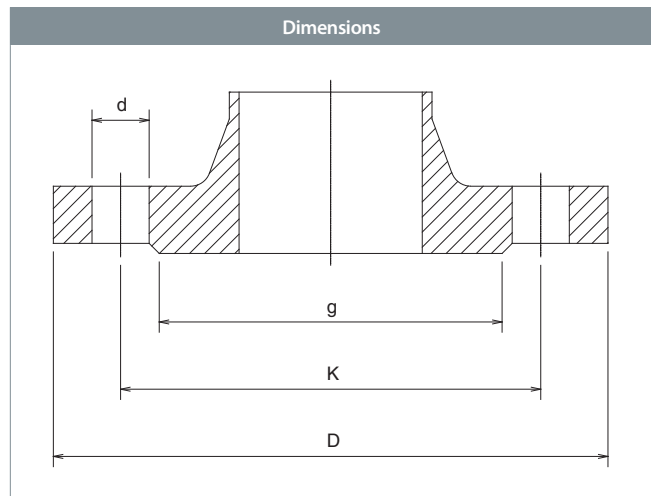
DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	8
80	200	160	138	18	8
100	235	190	162	22	8
125	270	220	188	26	8
150	300	250	218	26	8
200	360	310	278	26	12
250	425	370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

## Connecting flange - DN 15 - 400, PN 16

EN 1092-1 - Full bore

### Description

Flangestandard.



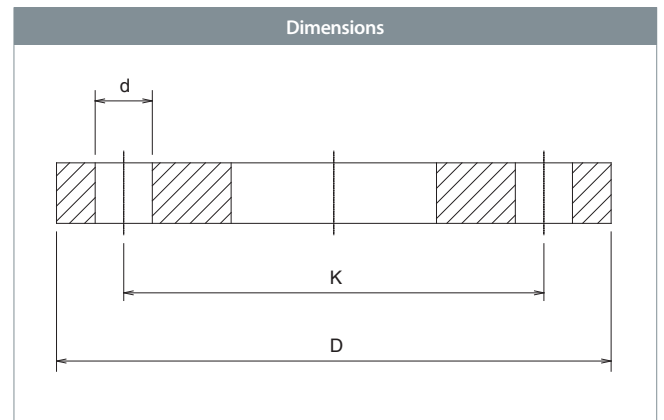
DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	4
80	200	160	138	18	8
100	220	180	158	18	8
125	250	210	188	18	8
150	285	240	212	22	8
200	340	295	268	22	12
250	405	355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

# Connecting flange - DN 15 - 400, PN10

EN 1092-1 - Full bore

**Description**

Flangestandard.



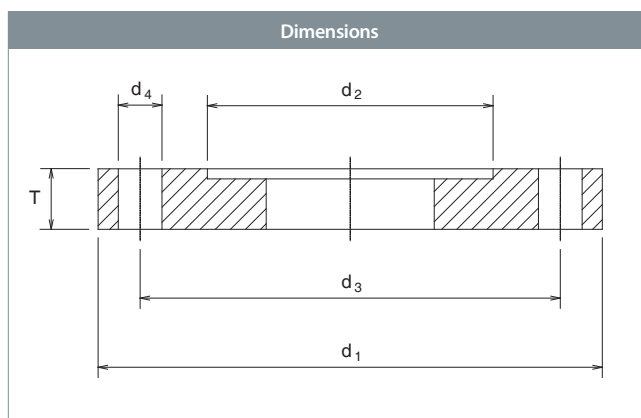
DN	All dimensions in mm			No. of bolt holes
	D	K	d	
15	95	65	14	4
20	105	75	14	4
25	115	85	14	4
32	140	100	18	4
40	150	110	18	4
50	165	125	18	4
65	185	145	18	4
80	200	160	18	8
100	220	180	18	8
125	250	210	18	8
150	285	240	22	8
200	340	295	22	8
250	395	350	22	12
300	445	400	22	12
350	505	460	22	16
400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

## Valve actuator attachment - DN 65 - 400, 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