

Steel ball valve - DN65-150, PN25

Type 64102 - Reduced bore

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

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

Surface treatment

Eco-friendly protection finish against corrosion.

Operation

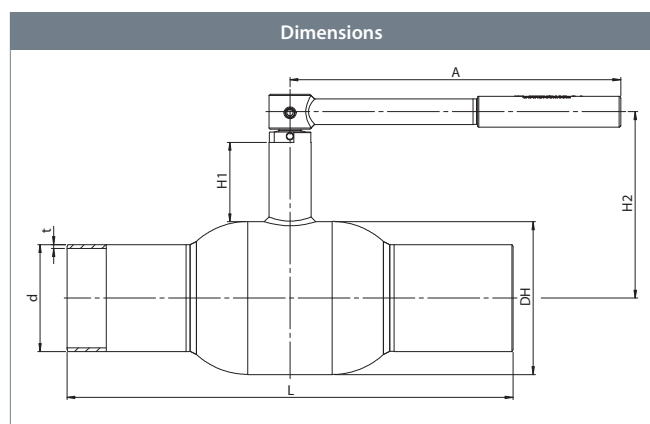
The standard handle is 180 degrees adjustable.

Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

ISO-flange can be mounted on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm						
					DH	d	t	L	H1	H2	A
65	64102065 010	50	180	5.0	108	76.1	2.9	360	66	144	275
80	64102080 010	65	288	6.5	127	88.9	3.2	370	66	154	275
100	64102100 010	85	470	9.8	152	114.3	3.6	390	81	193	365
125	64102125 010	100	699	12.4	178	139.7	3.6	390	91	211	365
150	64102150 010	125	1046	21.1	219	168.3	4.0	390	101	249	650

Steel ball valve - DN65-150, PN25

Type 64102 - Reduced bore

Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	20	Handle	Steel
	22	Bearing	Steel - PTFE

Accessories	BROEN No.	Dimension	Description
	167245	DN65-80	ISO-flange.
	169245	DN100	

Steel ball valve - DN65-100, PN25

Type 64902 - **Reduced bore** - FLOWOPTIMIZED

Welding × Welding

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

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

Surface treatment

Eco-friendly protection finish against corrosion.

Operation

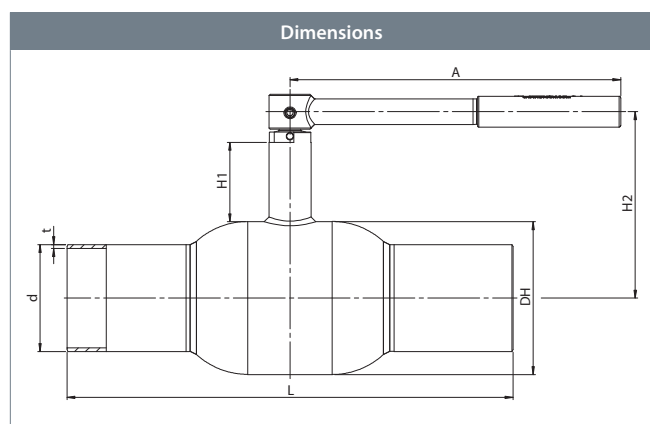
The standard handle is 180 degrees adjustable.

Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

ISO-flange can be mounted on request.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm						
					DH	d	t	L	H1	H2	A
65	64902065 010	50	180	5.0	108	76.1	2.9	360	66	144	275
80	64902080 010	65	288	6.5	127	88.9	3.2	370	66	154	275
100	64902100 010	85	470	9.8	152	114.3	3.6	390	81	193	365

Steel ball valve - DN65-100, PN25

Type 64902 - Reduced bore - FLOWOPTIMIZED

Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel - AISI304 / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	19	Pin	Steel - hardenat
	20	Handle	Steel
	22	Bearing	Steel - PTFE

Accessories	BROEN No.	Dimension	Description
	167245	DN65-80	ISO-flange.
	169245	DN100	

Steel ball valve - DN125-200, PN25

Type 61102 - Reduced bore

Welding × Welding with ISO-flange

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

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

Surface treatment

Eco-friendly protection finish against corrosion.

Operation

The standard handle is 180 degrees adjustable.

The following operating devices are available on request:

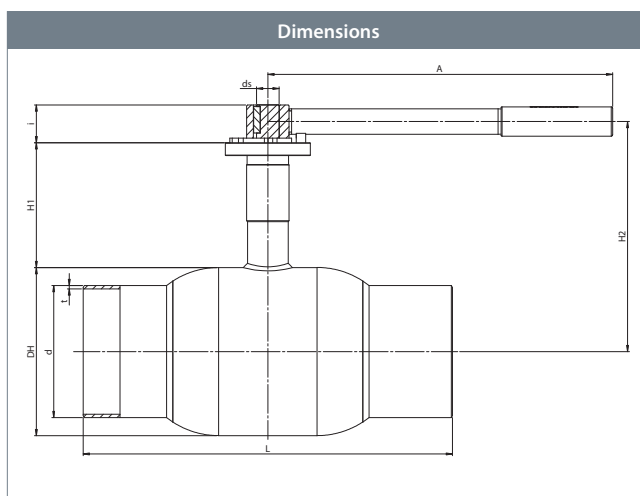
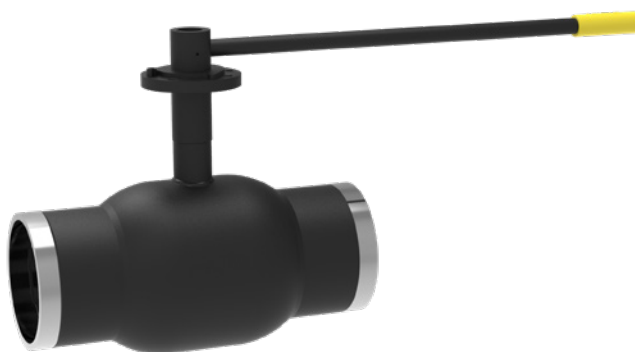
- BROEN-Gear.
- Electric actuator.

Approvals and certificates

BROEN is certified according to ISO 9001 and environmentally certified according to ISO 14001. BROEN Ballomax® is approved according to the requirements of Pressure Equipment Directive (PED). All ball valves as from DN40 are CE-marked. The 3.1 certificate is available upon request.

Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm									
					DH	d	t	L	H1	H2	ds	i	A	ISO
125	61102125 010	100	699	14.3	178	139.7	3.6	390	132	221	24	40	365	F07
150	61102150 010	125	1046	26.0	219	168.3	4.0	390	135	245	30	50	650	F10
200	61102200 010	150	1500	43.4	267	219.1	4.5	390	155	289	30	60	900	F12

Steel ball valve - DN125-200, PN25

Type 61102 - Reduced bore

Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	11	Stem guide	Steel - S355J2 / 1.0570 / EN 10025-2
	12	Stem	Stainless steel / 1.4021 / EN 10088-3
	13	Stem washer	Stainless steel / 1.4301 / EN 10088-3
	14	Friction washer	PTFE 20% Carbon
	15	O-ring	Rubber - EPDM70
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel / 1.4305 / EN 10088-3
	19	Stop pin (Unbraco)	Steel - hardenat
	20	Handle	Steel
	22	Bearing	Steel - PTFE
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	24	Pin	Steel - hardenat
	25	Friction gasket	PTFE 20% Carbon

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

Steel ball valve - DN125-200, PN25

Type 61102 - Reduced bore

Welding × Welding with ISO-flange and BROEN-Gear

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

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

Surface treatment

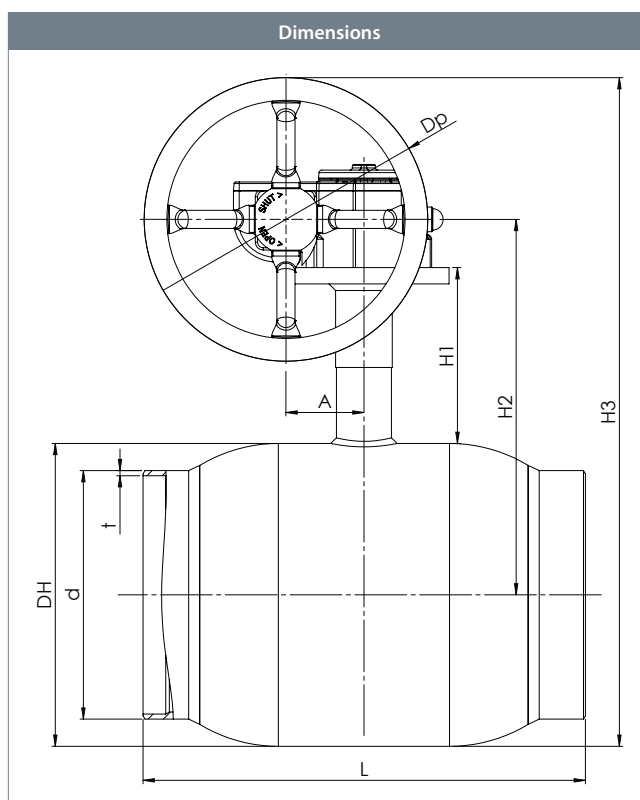
Eco-friendly protection finish against corrosion.

Operation

Optional column extension.

Approvals and certificates

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					All dimensions in mm								
DN	BROEN No.	Bore	Kvs	net Weight kg	DH	d	t	L	H1	H2	H3	Dp	A
125	6110225125 480	100	699	18.8	178	139.7	3.6	390	132	255	424	160	53
150	6110225150 480	125	1046	34.8	219	168.3	4.0	390	135	287	522	250	69
200	6110225200 480	150	1500	52.3	267	219.1	4.5	390	155	331	590	250	69

Steel ball valve - DN125-200, PN25

Type 61102 - Reduced bore

Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	8	Back-up ring	Steel - DC01 / 1.0330 / EN 10130
	9	Disc spring	Steel - C75S / 1.1248 / EN 10132-4
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	11	Stem guide	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	18	Intermediate ring	Stainless steel - AISI303 / 1.4305 / EN 10088-3
	22	Bearing	Steel - PTFE
23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2	
25	Friction gasket	PTFE 20% Carbon	
30	Circlip	Steel	
47	Gear	-	

Steel ball valve - DN250-500, PN25

Type 85002 - Reduced bore

Welding × Welding with low stem

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

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

Surface treatment

Eco-friendly protection finish against corrosion.

Operation

The following operating devices are available on request:

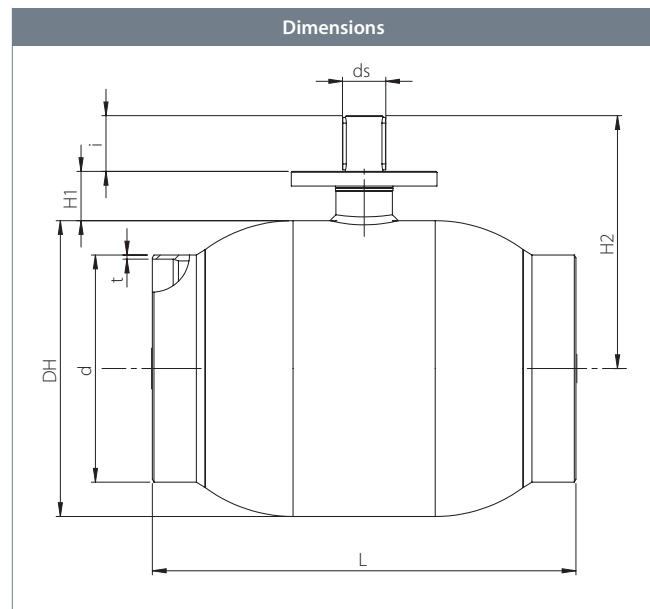
- BROEN-Gear.
- Electric actuator.

Approvals and certificates

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Notice

We recommend to add a BROEN-Gear.



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

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25

Type 85002 - Reduced bore

Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - EPDM70
	29	Key	Steel
	30	Circlip	Steel
	48	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
	49	Bearing	PTFE coated steel
	50	Friction ring	Gunmetal
51	Bottom end	Steel - S355J2H - EN 10210	
52	Back-up ring	Steel - S355J2H - EN 10210	
53	Springs	Stainless steel - AISI304 / 1.4301 / EN 10088-3	

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

Steel ball valve - DN250-500, PN25

Type 85002 - Reduced bore

Welding × Welding with low stem and BROEN-Gear

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

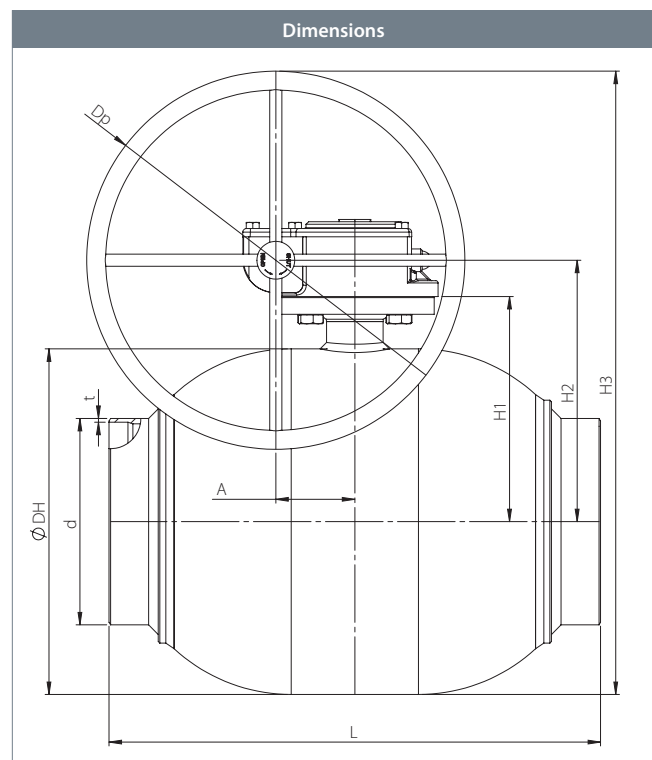
Water, air and other media not decomposing the steel. Not suitable for steam. If in doubt, please contact BROEN Ballomax® Sales Department.

Surface treatment

Eco-friendly protection finish against corrosion.

Approvals and certificates

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

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25

Type 85002 - Reduced bore

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

Steel ball valve - DN250-500, PN25

Type 85012 - Reduced bore

Welding × Welding with high stem

Fully welded steel ball valve.

Materials

See next page.

Applications

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

Media

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

Surface treatment

Eco-friendly protection finish against corrosion.

Operation

The following operating devices are available on request:

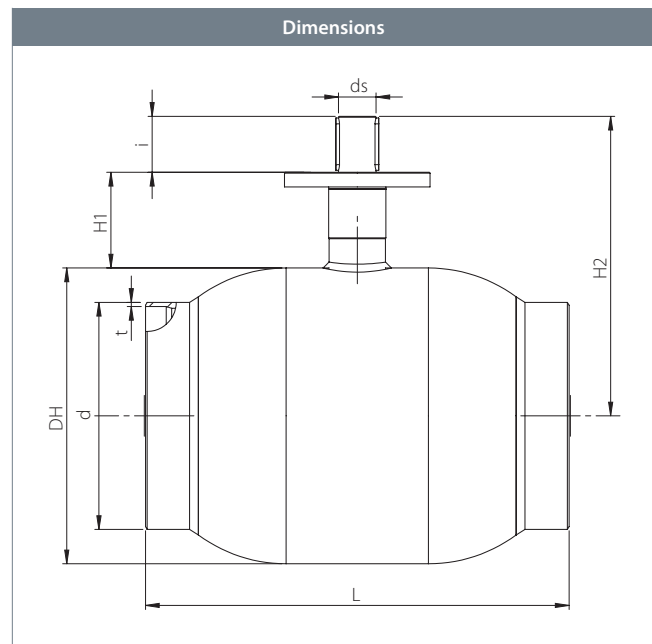
- BROEN-Gear.
- Electric actuator.

Approvals and certificates

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Notice

We recommend to add a BROEN-Gear.



DN	BROEN No.	Bore	Kvs	net Weight kg	All dimensions in mm								
					DH	d	t	L	H1	H2	ds	i	ISO
250	8501225250 000	200	3200	68.0	356	273.0	5.0	509	115	349.8	45	67	F14
300	8501225300 000	250	4700	108.9	457	323.9	5.6	586	130	443.0	50	84	F16
350	8501225350 000	250	5500	127.8	457	355.6	5.6	662	130	443.0	50	84	F16
400	8501225400 000*	305	10600	192.2	508	406.4	6.3	734	155	506.5	60	100	F16
500	8501225500 000*	400	18150	374.0	660	508.0	6.3	889	180	622.0	80	112	F30

* DN400-500 - with ball flow guide.

Steel ball valve - DN250-500, PN25

Type 85012 - Reduced bore

Technical drawing		Material description	
	1	Welding	Steel - P235GH / 1.0345 / EN 10217-2
	5	Valve body	Steel - P235GH / 1.0345 / EN 10217-2
	6	Ball	Stainless steel - AISI304L / 1.4306 / EN 10217-7
	7	Seat ring	PTFE 20% Carbon
	10	Neck ring	Steel - S355J2+N / 1.0570 / EN 10025-2
	12	Stem	Stainless steel - ASTM420 / 1.4021 / EN 10088-3
	15	O-ring	Rubber - EPDM70
	16	Back-up ring	PTFE 20% Carbon
	17	O-ring	Rubber - FPM70
	23	ISO-flange	Steel - S235JRG2 / 1.0038 / EN 10025-2
	27	O-ring	Rubber - EPDM70
	29	Key	Steel
	30	Circlip	Steel
	48	Stem guide	Steel - P235GH / 1.0345 / EN 10216-2
49	Bearing	PTFE coated steel	
50	Friction ring	Gunmetal	
51	Bottom end	Steel - S355J2H - EN 10210	
52	Back-up ring	Steel - S355J2H - EN 10210	
53	Springs	Stainless steel - AISI304 / 1.4301 / EN 10088-3	

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

BROEN-Gear - DN100-500

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

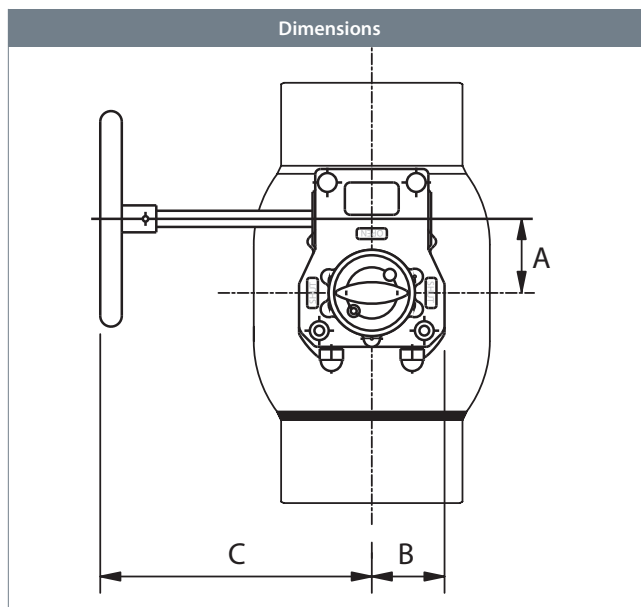
BROEN-Gear

Hand-operated gearbox.

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

Operating torque

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

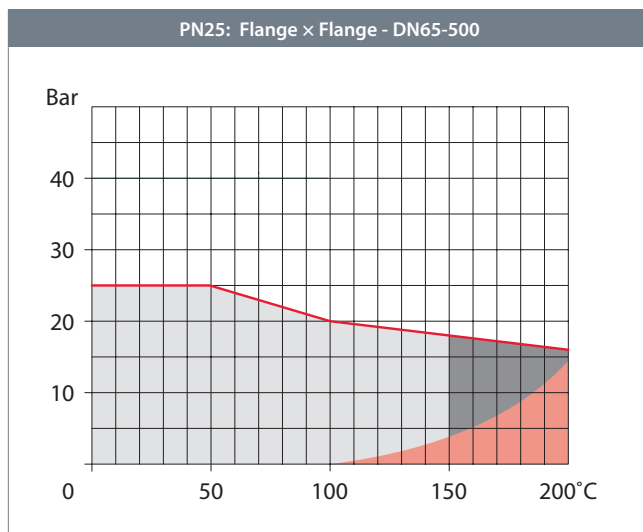
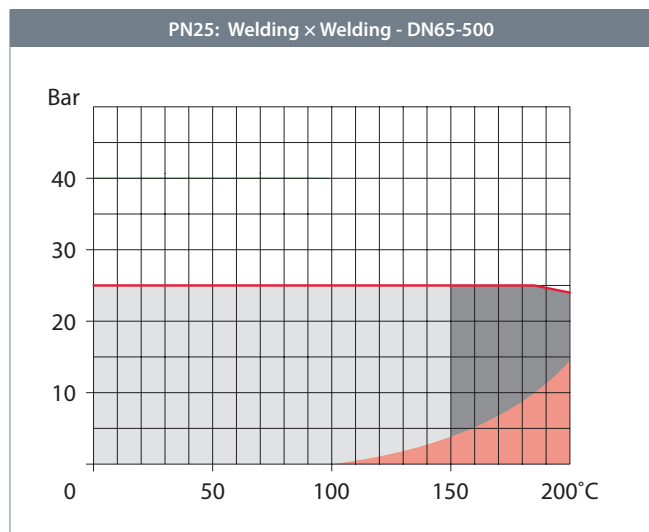
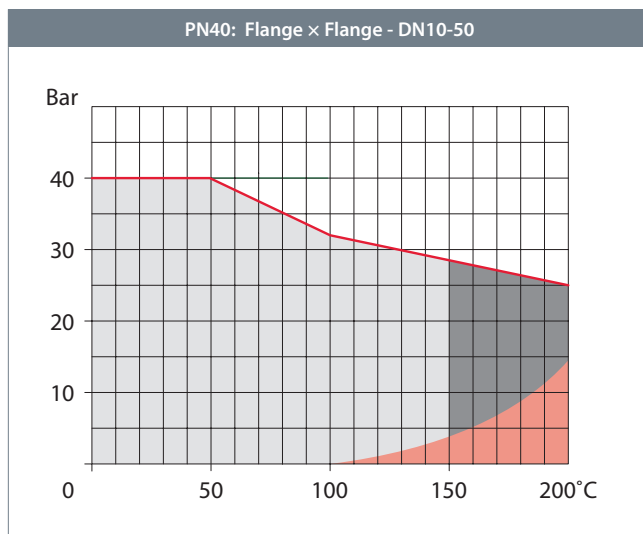
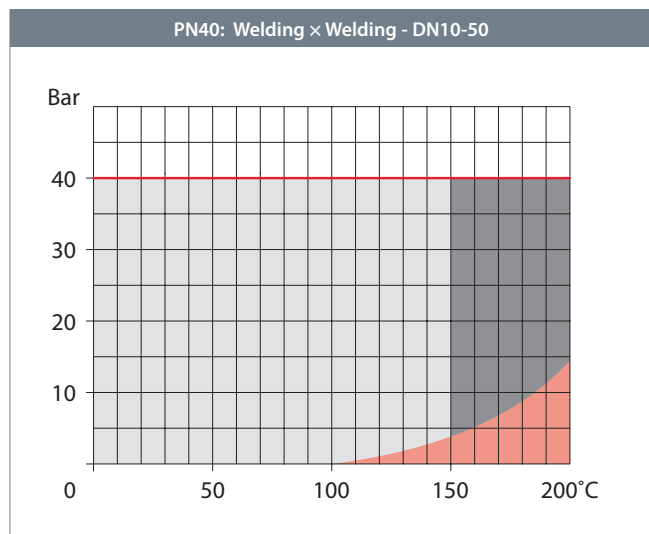


DN	BROEN No.	net Weight kg*	All dimensions in mm				
			A	B	C	Nm	Hand wheel
100	600583	2,5	41,3	40,0	145	650	200
125	600584	2,5	41,3	40,0	145	300	200
150	600585	7,8	68,8	67,5	240	1200	300
200	600586	8,6	68,8	67,5	245	1200	350
250	600587	9,5	68,8	67,5	275	1200	450
300-350	600588	26,0	104,5	110,0	346	3250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

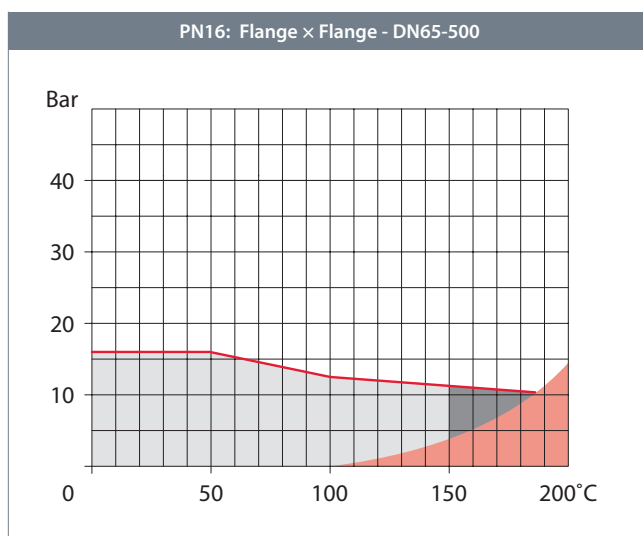
* Weight gearbox with hand wheel.

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

Reduced bore



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



Pressure drop graph - DN10-500

Reduced bore

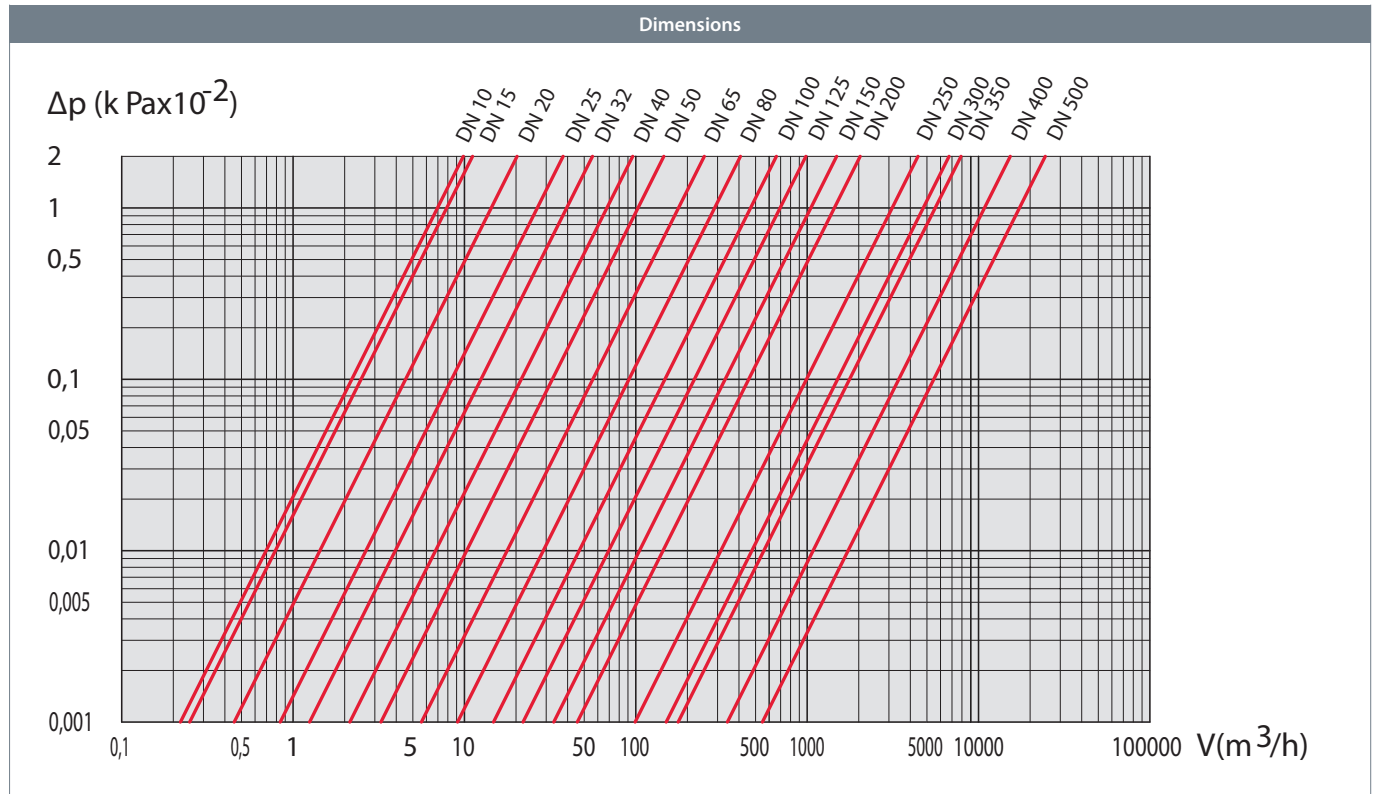
Pressure drop graph

Ball valve in fully open position.

Medium: water density in 1000 kg/m³

Definitions

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



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

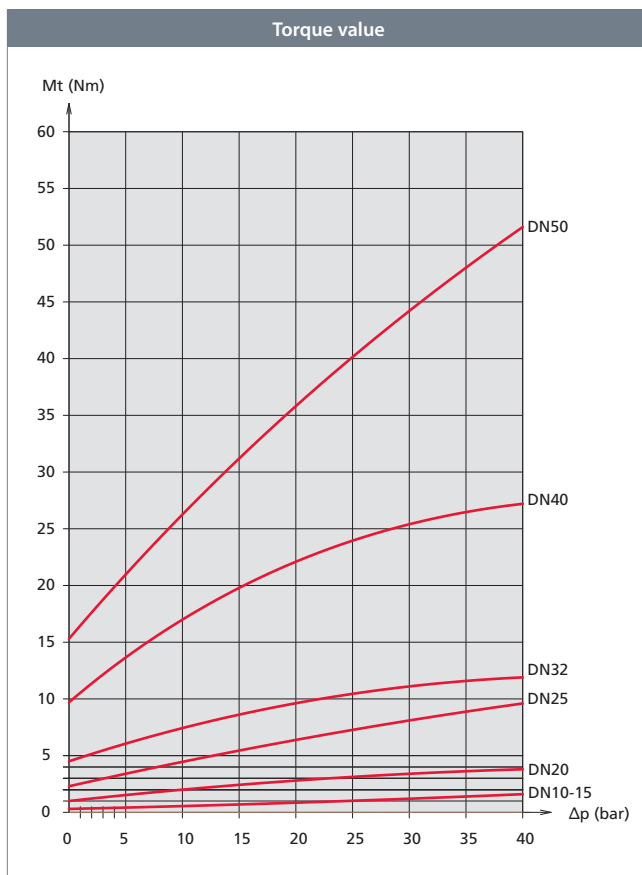
Operating torque - DN10-50, PN40

Reduced bore

Operating torque

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

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



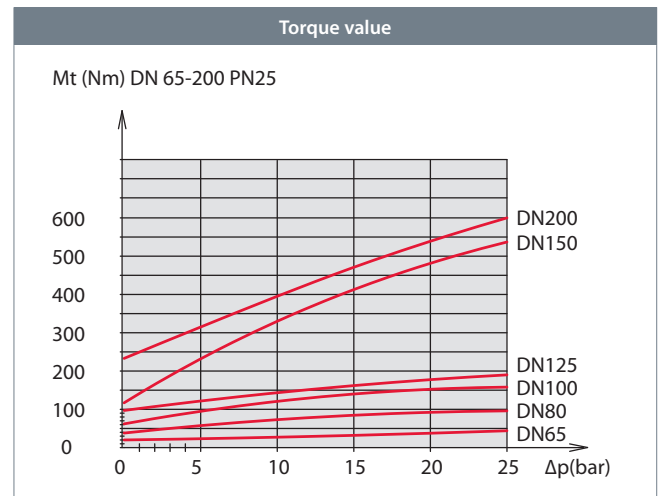
Operating torque - DN65-500, PN25

Reduced bore

Operating torque

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

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



Torque Nm

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

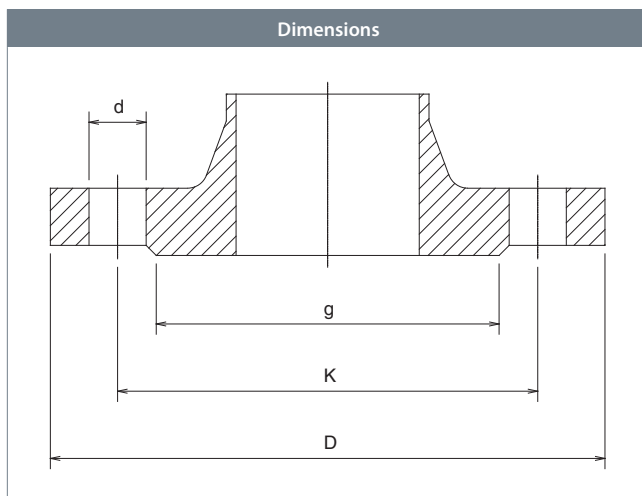
Torque Nm				
RB	DN250	DN300/350	DN400	DN500
Δ16 bar	570	1460	2670	5665
Δ25 bar	610	1620	3325	6205

Connecting flange - DN15-50, PN40

EN 1092-1 - Reduced bore

Description

Flangestandard.



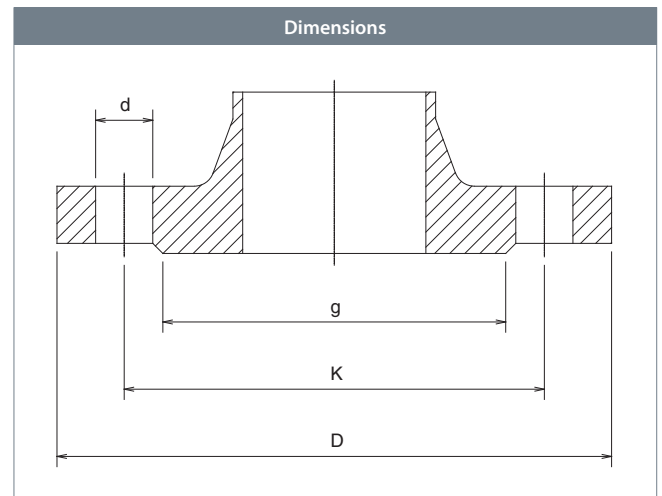
DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4

Connecting flange - DN15-500, PN25

EN 1092-1 - **Reduced bore**

Description

Flangestandard.



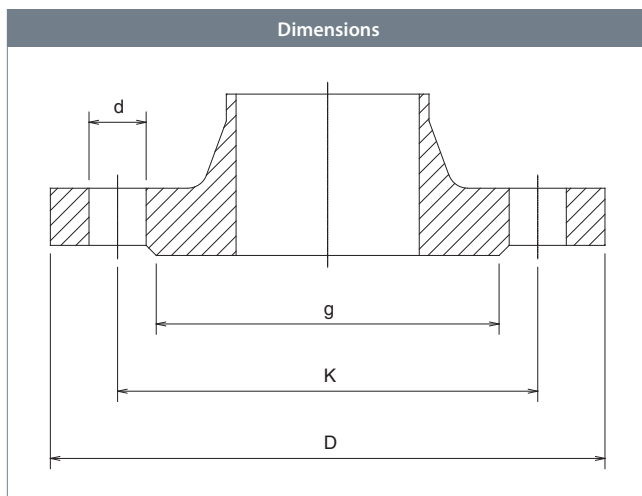
All dimensions in mm					
DN	D	K	g	d	No. of bolt holes
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	8
80	200	160	138	18	8
100	235	190	162	22	8
125	270	220	188	26	8
150	300	250	218	26	8
200	360	310	278	26	12
250	425	370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

Connecting flange - DN15-500, PN16

EN 1092-1 - Reduced bore

Description

Flangestandard.



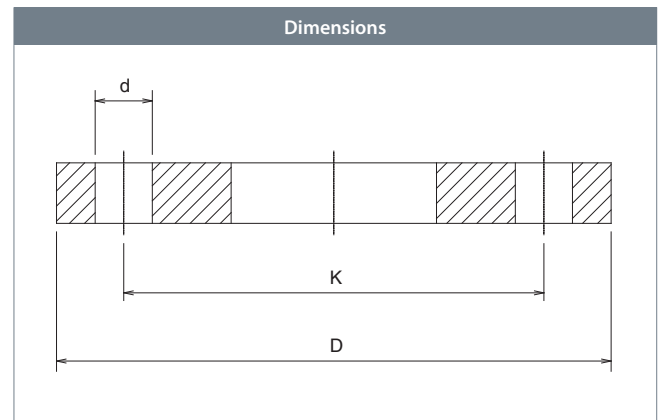
DN	All dimensions in mm				No. of bolt holes
	D	K	g	d	
15	95	65	45	14	4
20	105	75	58	14	4
25	115	85	68	14	4
32	140	100	78	18	4
40	150	110	88	18	4
50	165	125	102	18	4
65	185	145	122	18	4
80	200	160	138	18	8
100	220	180	158	18	8
125	250	210	188	18	8
150	285	240	212	22	8
200	340	295	268	22	12
250	405	355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

Connecting flange - DN15-500, PN10

EN 1092-1 - **Reduced bore**

Description

Flangestandard.



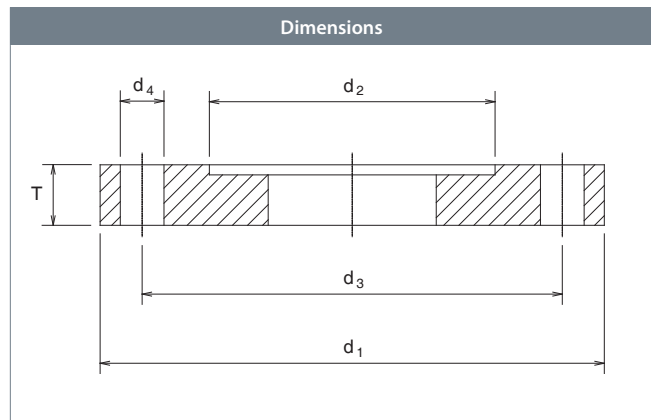
DN	All dimensions in mm			No. of bolt holes
	D	K	d	
15	95	65	14	4
20	105	75	14	4
25	115	85	14	4
32	140	100	18	4
40	150	110	18	4
50	165	125	18	4
65	185	145	18	4
80	200	160	18	8
100	220	180	18	8
125	250	210	18	8
150	285	240	22	8
200	340	295	22	8
250	395	350	22	12
300	445	400	22	12
350	505	460	22	16
400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

Valve actuator attachment - DN65-500, PN10

ISO 5210 / ISO 5211 - Reduced bore

Description

ISO-flange for gear.



		All dimensions in mm					
To be used with	Flange type	T	d_1	d_2	d_3	d_4	No. of bolt holes
DN65-80	F05	12.5	65	35	50	7	4
DN100-125	F07	13.5	90	55	70	9	4
DN150	F10	14.5	125	70	102	11	4
DN200	F12	14.5	150	85	125	13	4
DN250	F14	17.6	175	100	140	17	4
DN300	F16	23.5	210	130	165	21	4
DN350	F16	23.5	210	130	165	21	4
DN400	F25	27.5	300	200	254	17	8
DN500	F30	28.5	350	230	298	21	8