



# PRODUCTS & SOLUTIONS



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## PRODUCTS & SOLUTIONS

### **Smart thinking & Smart Solutions**

For more than 35 years, W&O has focused on servicing the international maritime industry. W&O is one of the world's largest suppliers of pipes, valves, fittings, engineered solutions, automated valves and data management systems, and related services. Through the smart evolution of our company and products, we have moved far beyond being a mere supplier of parts.

We are a true strategic partner to those we serve. Our customers benefit from our many strategically located offices in Europe, U.S., Canada, Brazil and Far East.

We understand the unique needs of ship building as well as the repair and retro-fitting industry for all types of maritime vessels. Our global footprint of over 20 distribution points allows us to service your needs from anywhere in the world and provide exceptional customer service.

### **W&O Products and Partnership**

W&O's extensive product portfolio includes a full range of valves from leading manufacturers and fabricated to DIN, JIS, ANSI, SPACE and Mil-Spec standards. Body materials include steel, cast iron, bronze, stainless steel, aluminum and monel. This variety of materials allows us to support you on any enquiry.

Our extensive inventory of valves for marine and oil & gas applications supports day-to-day maintenance, newbuild and retrofit projects.

From manual to fully automated valves for all different systems onboard of your vessel or offshore unit.

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- 1 BUTTERFLY VALVES**
- 2 BALL VALVES**
- 3 GATE VALVES**
- 4 GLOBE VALVES**
- 5 STRAINERS**
- 6 ACTUATORS**
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- T TECHNICAL INFORMATION**





# 1 BUTTERFLY VALVES

## TECHNICAL DATA



57000

46010

60010

64010

96000

57016

46016

60016

64016

57150

46150

60150

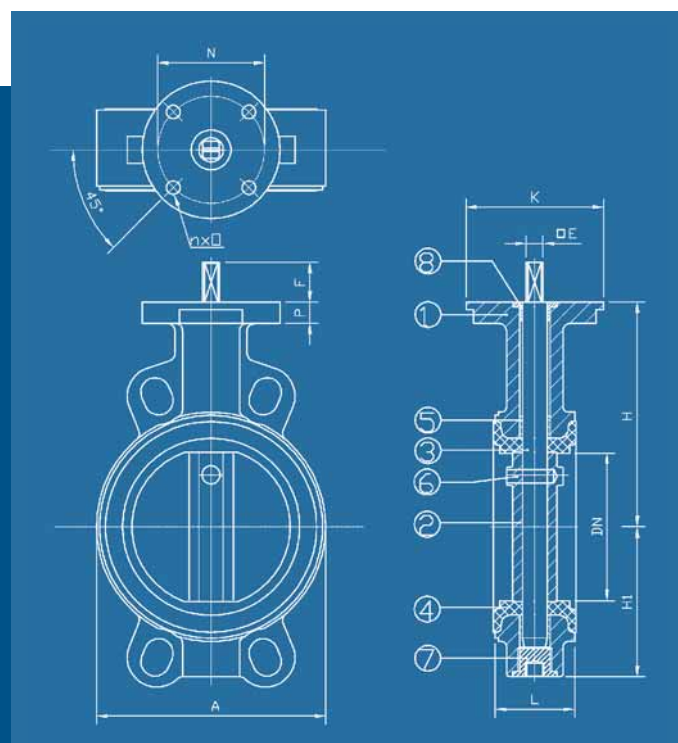
64150

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# TECHNICAL DATA

## WAFER TYPE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	16 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 10/PN 16/ANSI 150

NR	QTY	Part name	Material
8	1	Support bearing	PA66
7	1	Cover plug	PA66
6	1	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

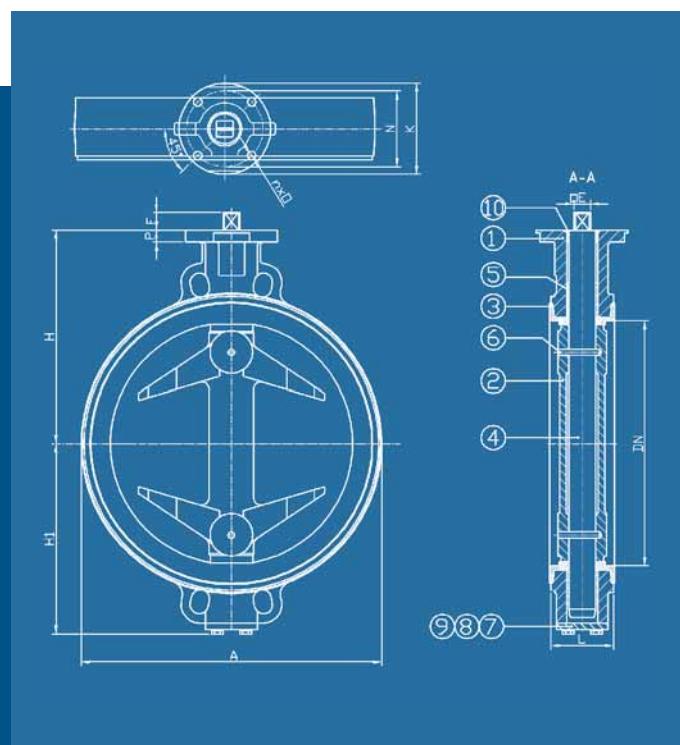
### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	N (mm)	n x □	P (mm)
50	90	11	25	118	67	90	43	70	4xØ9	12
65	105	11	25	126	74	90	46	70	4xØ9	12
80	124	11	25	133	82	90	46	70	4xØ9	14
100	150	11	25	147	100	90	52	70	4xØ9	14
125	182	14	28	160	112	90	56	70	4xØ9	14
150	210	14	28	180	134	90	56	70	4xØ9	14
200	265	17	28	204	159	90	60	70	4xØ9	14
250	315	22	30	245	195	125	68	102	4xØ11	15
300	371	22	30	270	220	125	78	102	4xØ11	15

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# TECHNICAL DATA

## WAFER TYPE BUTTERFLY VALVE



### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	N (mm)	n x □	P (mm)
350	434	27	29	315	282	150	78	125	4xØ14	20
400	488	27	29	350	307	150	102	125	4xØ14	20

### TECHNICAL FEATURES

Max. working pressure	16 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 10/PN 16/ANSI 150

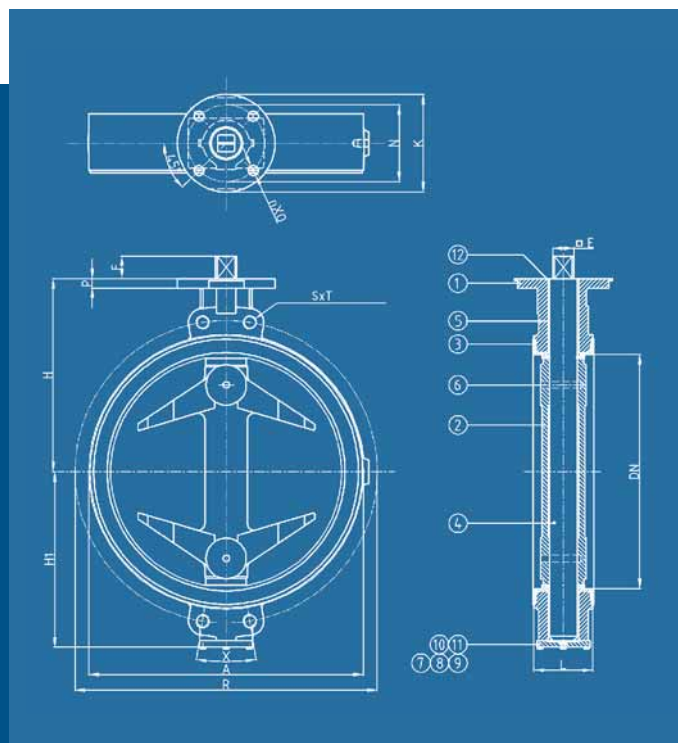
NR	QTY	Part name	Material
10	1	Support bearing	EN1982-CuSn5ZnPb
9	1	Bolt	St.88
8	1	Spring washer	St.88
7	1	Cover plate	WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB



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# TECHNICAL DATA

## WAFER TYPE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	10 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 10

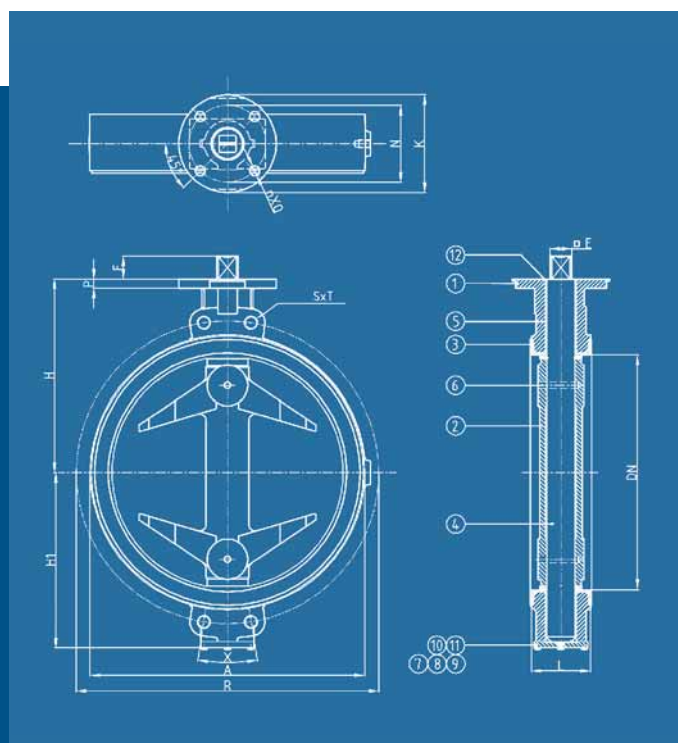
NR	QTY	Part name	Material
12	1	Support bearing	EN1982-CuSn5ZnPb
11	5	Spring washer	Spring st.
10	1	Bolt	St. 8.8
9	4	Bolt	St. 8.8
8	1	Trush bearing	EN1982-CuSn7ZnPb
7	1	Cover	ASTm A216-WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxØT	X
450	532	36	38	375	352	175	114	140	4xØ18	20	565	4xM24x36	18°
500	585	36	38	415	387	175	127	140	4xØ18	20	620	4xM24x36	18°
600	685	46	48	465	452	210	154	165	4xØ22	25	725	4xM27x40	18°

# TECHNICAL DATA

## WAFER TYPE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	16 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 16

NR	QTY	Part name	Material
12	1	Support bearing	EN1982-CuSn5ZnPb
11	5	Spring washer	Spring st.
10	1	Bolt	St. 8.8
9	4	Bolt	St. 8.8
8	1	Trush bearing	EN1982-CuSn7ZnPb
7	1	Cover	ASTm A216-WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxØT	X
450	532	36	38	375	352	175	114	140	4xØ18	20	585	4xM27x40	18°
500	585	36	38	415	387	175	127	140	4xØ18	20	650	4xM30x36	18°
600	685	46	48	465	452	210	154	165	4xØ22	25	770	4xM33x47	18°

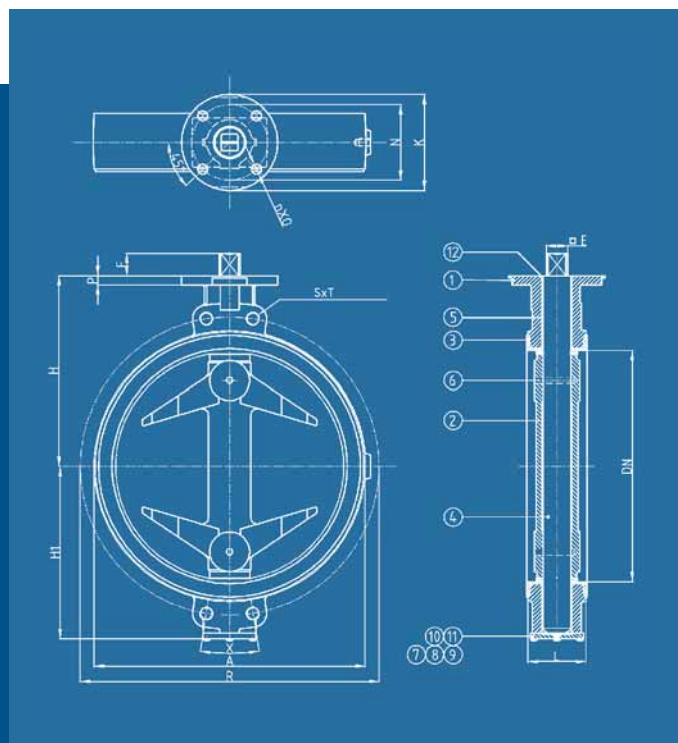


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# TECHNICAL DATA

## WAFER TYPE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	19.5 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	ANSI 150

NR	QTY	Part name	Material
12	1	Support bearing	EN1982-CuSn5ZnPb
11	5	Spring washer	Spring st.
10	1	Bolt	St. 8.8
9	4	Bolt	St. 8.8
8	1	Trush bearing	EN1982-CuSn7ZnPb
7	1	Cover	ASTm A216-WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

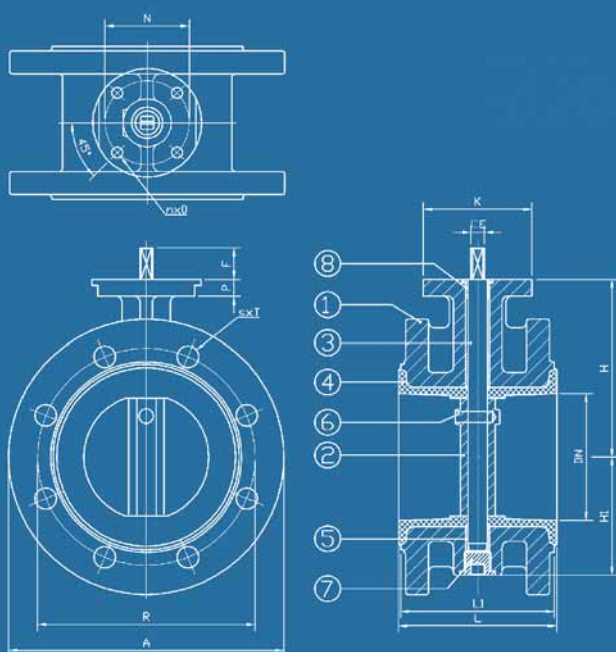
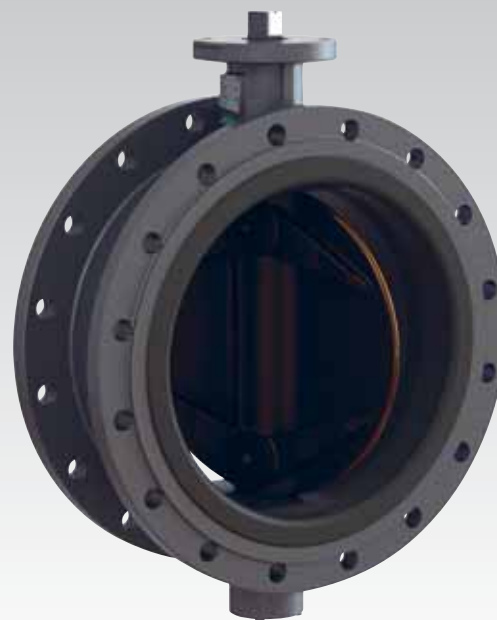
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxØT	X
450	532	36	38	375	352	175	114	140	4xØ18	20	577.8	4x1 1/8"UNC through	22.5°
500	585	36	38	415	387	175	127	140	4xØ18	20	635.0	4x1 1/8"UNCx40	18°
600	685	46	48	465	452	210	154	165	4xØ22	25	749.3	4x1 1/4"UNCx45	18°



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# TECHNICAL DATA

## DOUBLE FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	10 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 10

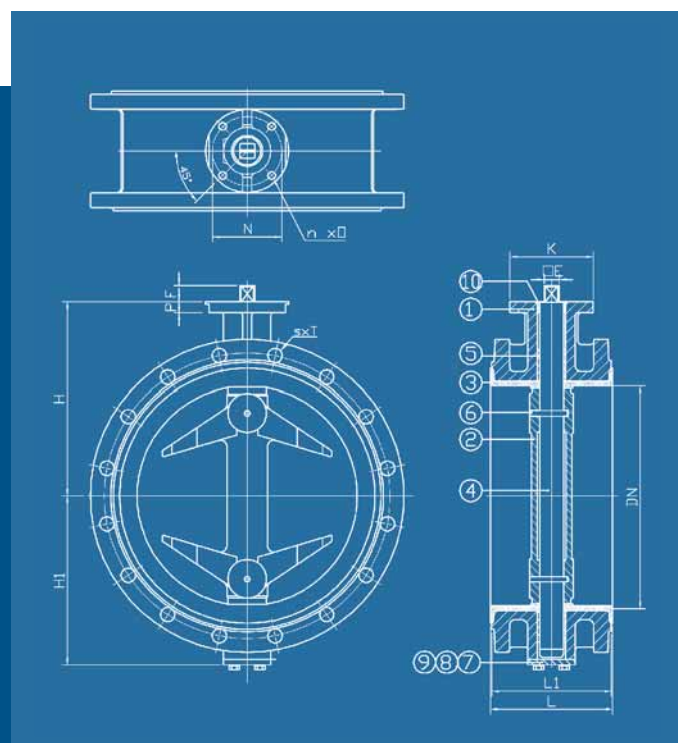
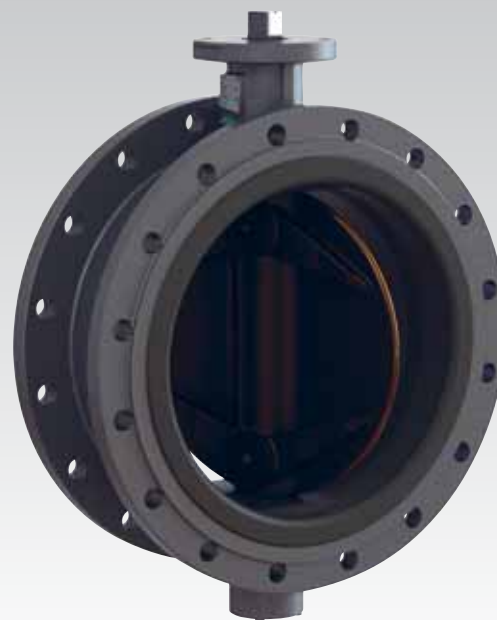
NR	QTY	Part name	Material
8	1	Support bearing	PA66
7	1	Cover plug	PA66
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
50	165	11	25	118	67	90	109.8	108	70	4xØ9	12	125	4xØ18
65	185	11	25	126	74	90	113.8	112	70	4xØ9	12	145	4xØ18
80	200	11	25	133	82	90	115.8	114	70	4xØ9	14	160	8xØ18
100	228	11	25	147	100	90	129.0	127	70	4xØ9	14	180	8xØ18
125	250	14	28	160	112	90	142.2	140	70	4xØ9	14	210	8xØ18
150	285	14	28	180	134	90	142.4	140	70	4xØ9	14	240	8xØ18
200	340	17	28	204	159	90	155.0	152	70	4xØ9	14	295	8xØ22
250	395	22	30	245	195	125	168.0	165	102	4xØ11	15	350	12xØ22
300	445	22	30	270	220	125	181.2	178	102	4xØ11	15	400	12xØ22

# TECHNICAL DATA

## DOUBLE FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	10 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 10

NR	QTY	Part name	Material
10	1	Support bearing	EN1982-CuSn5ZnPb
9	1	Bolt	St.88
8	1	Spring washer	St.88
7	1	Cover plate	WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

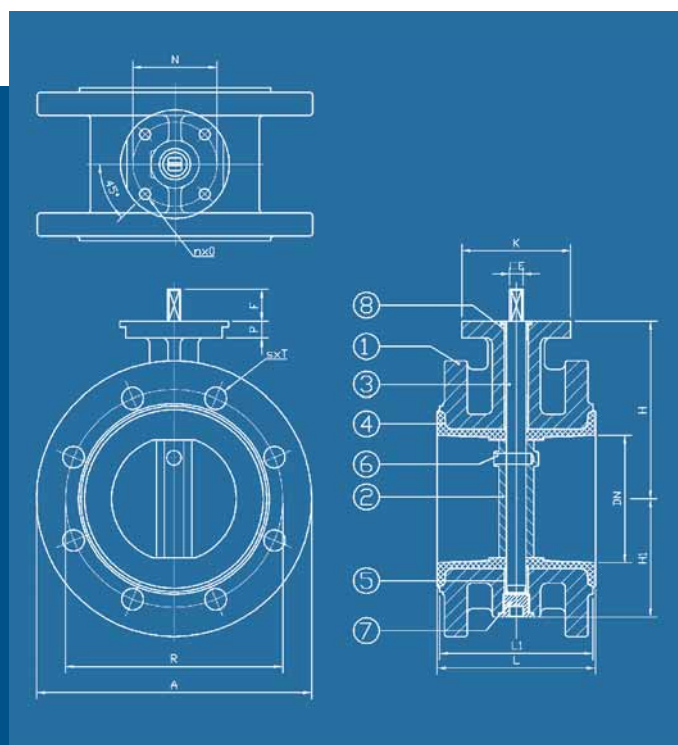
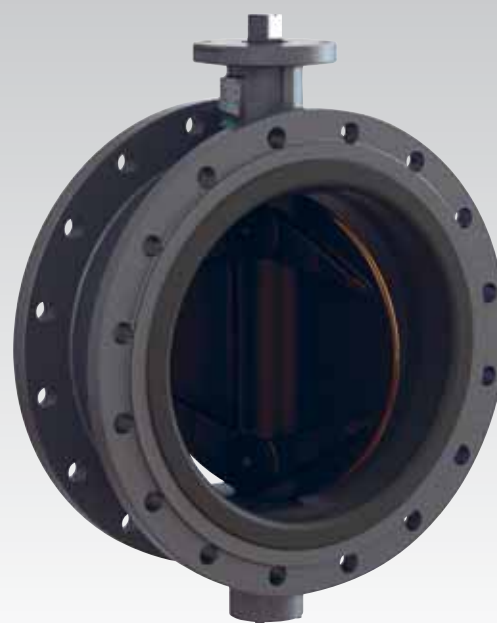
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
350	505	27	29	315	282	150	193.3	190	125	4xØ14	20	460	16xØ22
400	565	27	29	350	307	150	219.6	216	125	4xØ14	20	515	16xØ26
450	615	36	38	375	352	175	225.8	222	140	4xØ18	20	565	20xØ26
500	670	36	38	415	387	175	233.0	229	140	4xØ18	20	620	20xØ26
600	780	46	48	465	452	210	271.2	267	165	4xØ22	25	725	20xØ30



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# TECHNICAL DATA

## DOUBLE FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	10 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 16

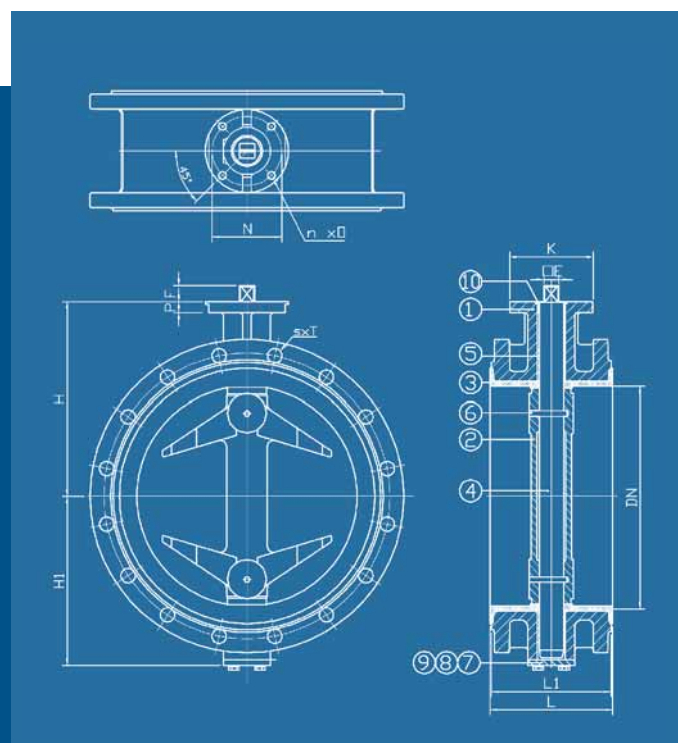
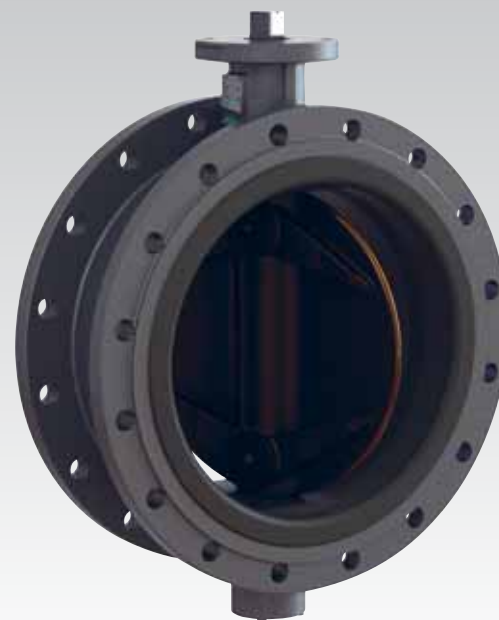
NR	QTY	Part name	Material
8	1	Support bearing	PA66
7	1	Cover plug	PA66
6	1	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
50	165	11	25	118	67	90	109.8	108	70	4xØ9	12	125	4xØ18
65	185	11	25	126	74	90	113.8	112	70	4xØ9	12	145	4xØ18
80	200	11	25	133	82	90	115.8	114	70	4xØ9	14	160	8xØ18
100	228	11	25	147	100	90	129.0	127	70	4xØ9	14	180	8xØ18
125	250	14	28	160	112	90	142.2	140	70	4xØ9	14	210	8xØ18
150	285	14	28	180	134	90	142.4	140	70	4xØ9	14	240	8xØ18
200	340	17	28	204	159	90	155.0	152	70	4xØ9	14	295	12xØ22
250	400	22	30	245	195	125	168.0	165	102	4xØ11	15	355	12xØ22
300	455	22	30	270	220	125	181.2	178	102	4xØ11	15	410	12xØ22

# TECHNICAL DATA

## DOUBLE FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	16 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 16

NR	QTY	Part name	Material
10	1	Support bearing	EN1982-CuSn5ZnPb
9	1	Bolt	St.88
8	1	Spring washer	St.88
7	1	Cover plate	WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

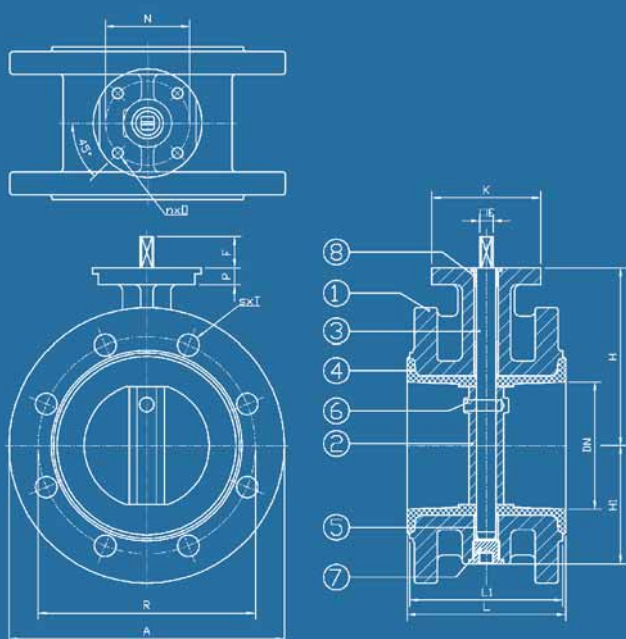
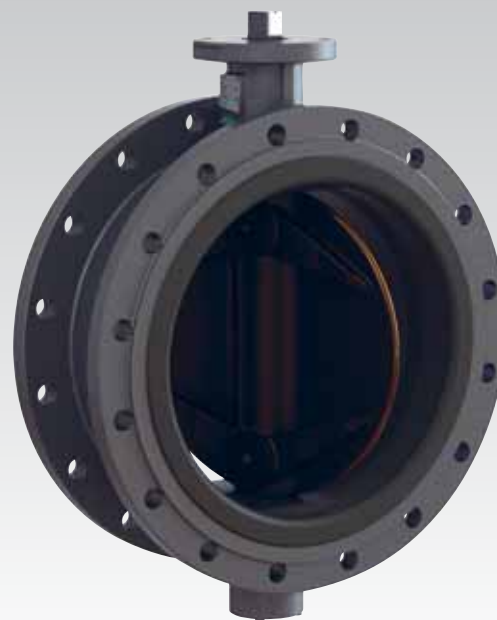
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
350	520	27	29	315	282	150	193.4	190	125	4xØ14	20	470	16xØ22
400	580	27	29	350	307	150	219.6	216	125	4xØ14	20	525	16xØ30
450	640	36	38	375	352	175	225.8	222	140	4xØ18	20	585	20xØ30
500	715	36	38	415	387	175	233.0	229	140	4xØ18	20	650	20xØ33
600	840	46	48	465	452	210	271.2	267	165	4xØ22	25	770	20xØ36



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# TECHNICAL DATA

## DOUBLE FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	19.5 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	ANSI 150

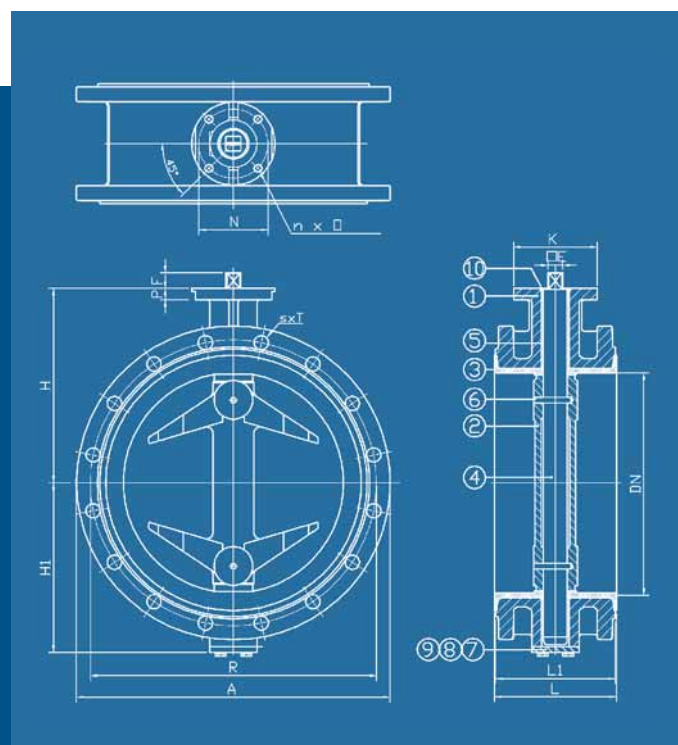
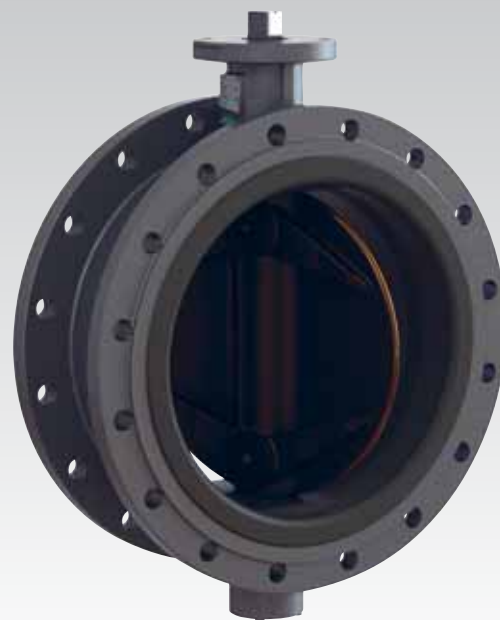
NR	QTY	Part name	Material
8	1	Support bearing	PA66
7	1	Cover plug	PA66
6	1	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
50	152.4	11	25	118	67	90	109.8	108	70	4xØ9	12	120.6	4xØ19
65	178	11	25	126	74	90	113.8	112	70	4xØ9	12	139.7	4xØ19
80	190.5	11	25	133	82	90	115.8	114	70	4xØ9	14	152.4	4xØ19
100	228.6	11	25	147	100	90	129.0	127	70	4xØ9	14	190.5	8xØ19
125	254	14	28	160	112	90	142.2	140	70	4xØ9	14	215.9	8xØ22
150	279	14	28	180	134	90	142.4	140	70	4xØ9	14	241.3	8xØ22
200	343	17	28	204	159	90	155.0	152	70	4xØ9	14	298.4	8xØ22
250	406	22	30	245	195	125	168.0	165	102	4xØ11	15	316.9	12xØ25
300	483	22	30	270	220	125	181.2	178	102	4xØ11	15	431.8	12xØ25

# TECHNICAL DATA

## DOUBLE FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	19.5 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	ANSI 150

NR	QTY	Part name	Material
10	1	Support bearing	EN1982-CuSn5ZnPb
9	1	Bolt	St.88
8	1	Spring washer	St.88
7	1	Cover plate	WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

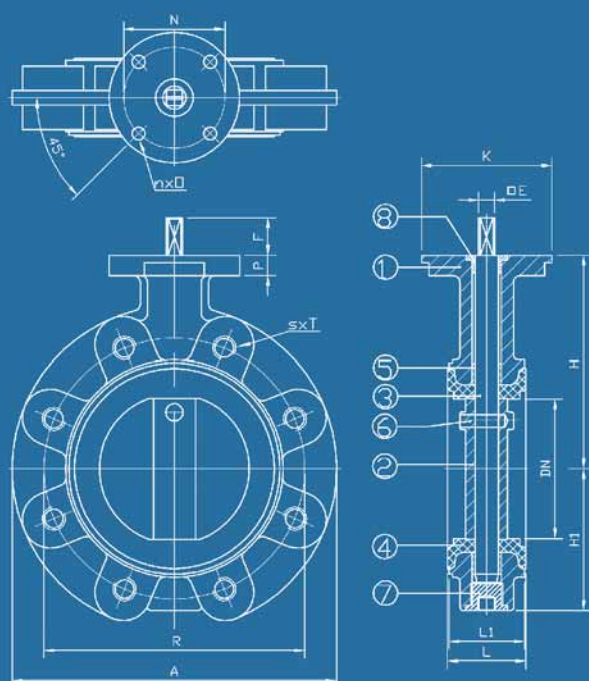
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
350	533	27	29	315	282	150	193.4	190	125	4xØ14	20	476.2	16xØ28
400	597	27	29	350	307	150	219.6	216	125	4xØ14	20	539.7	16xØ28
450	635	36	38	375	352	175	225.8	222	140	4xØ18	20	577.8	16xØ32
500	699	36	38	415	387	175	233.0	229	140	4xØ18	20	635.0	20xØ32
600	813	46	48	465	452	210	271.2	267	165	4xØ22	25	749.3	20xØ35



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# TECHNICAL DATA

## MONO FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	10 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 10

NR	QTY	Part name	Material
8	1	Support bearing	PA66
7	1	Cover plug	PA66
6	1	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

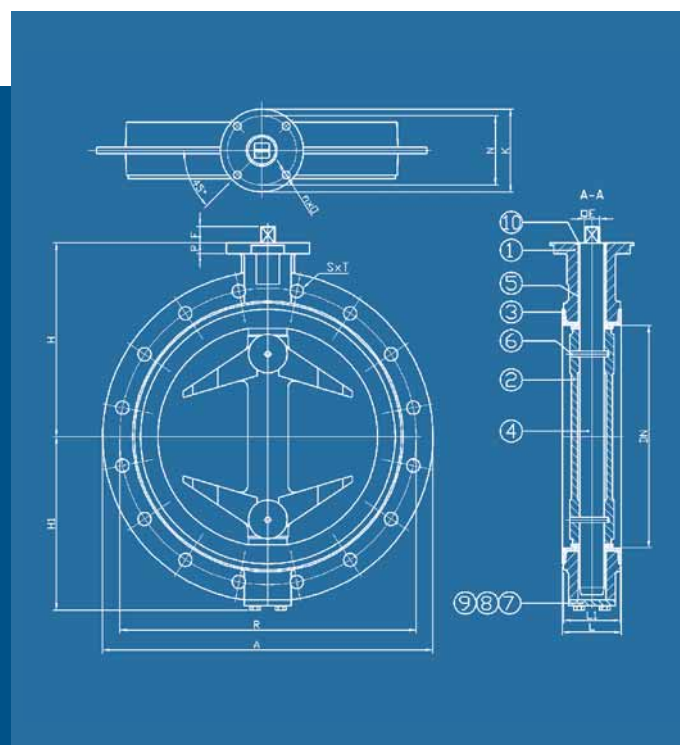
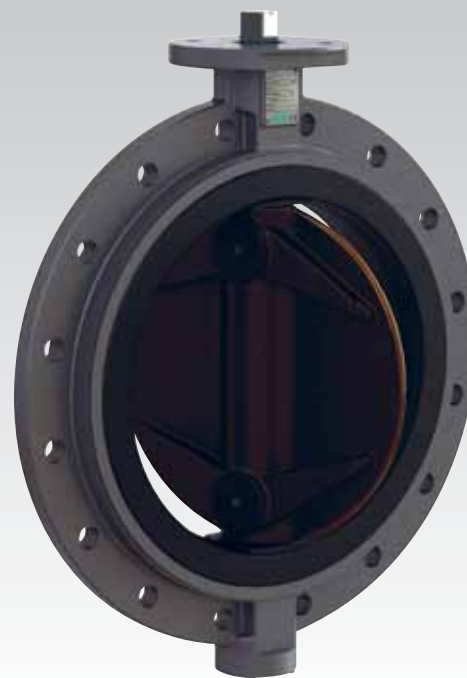
### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	S x T
50	165	11	25	118	67	90	44.8	43	70	4xØ9	12	125	4xØ18
65	185	11	25	126	74	90	47.8	46	70	4xØ9	12	145	4xØ18
80	195	11	25	133	82	90	47.8	46	70	4xØ9	14	160	8xØ18
100	224	11	25	147	100	90	54.0	52	70	4xØ9	14	180	8xØ18
125	254	14	28	160	112	90	58.2	56	70	4xØ9	14	210	8xØ18
150	285	14	28	180	134	90	58.4	56	70	4xØ9	14	240	8xØ22
200	337	17	28	204	159	90	63.0	60	70	4xØ9	14	295	8xØ22
250	405	22	30	245	195	125	71.0	68	102	4xØ11	15	350	12xØ22
300	460	22	30	270	220	125	81.5	78	102	4xØ11	15	400	12xØ22



# TECHNICAL DATA

## MONO FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	10 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 10

NR	QTY	Part name	Material
10	1	Support bearing	EN1982-CuSn5ZnPb
9	1	Bolt	St.88
8	1	Spring washer	St.88
7	1	Cover plate	WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

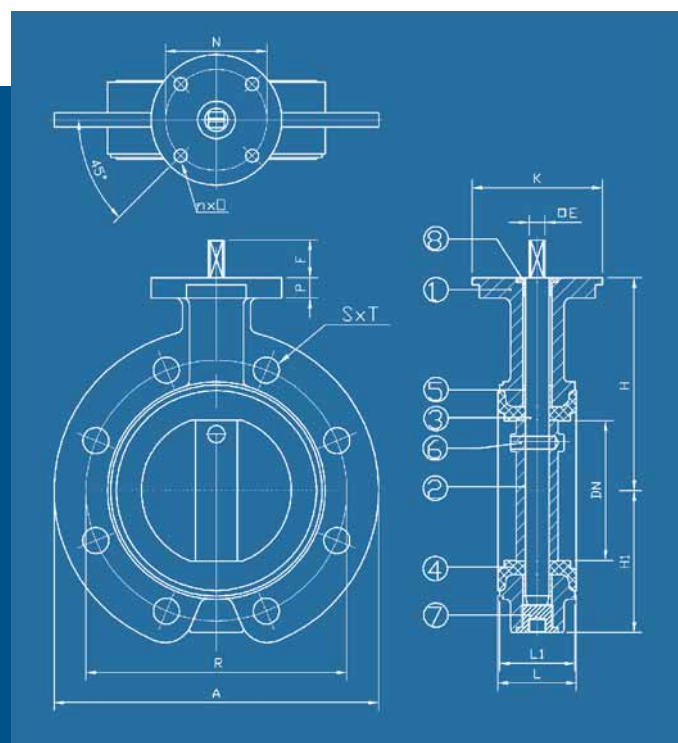
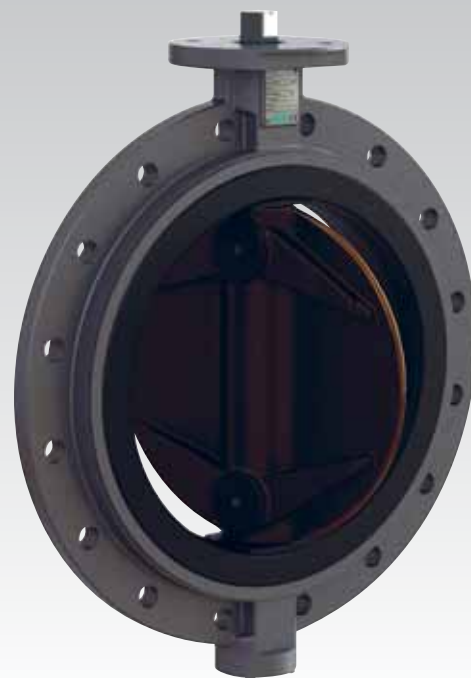
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
350	533	27	29	315	282	150	81.4	78	125	4xØ14	20	460	16xØ22
400	597	27	29	350	307	150	105.6	102	125	4xØ14	20	515	16xØ26



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# TECHNICAL DATA

## MONO FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	16 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 16

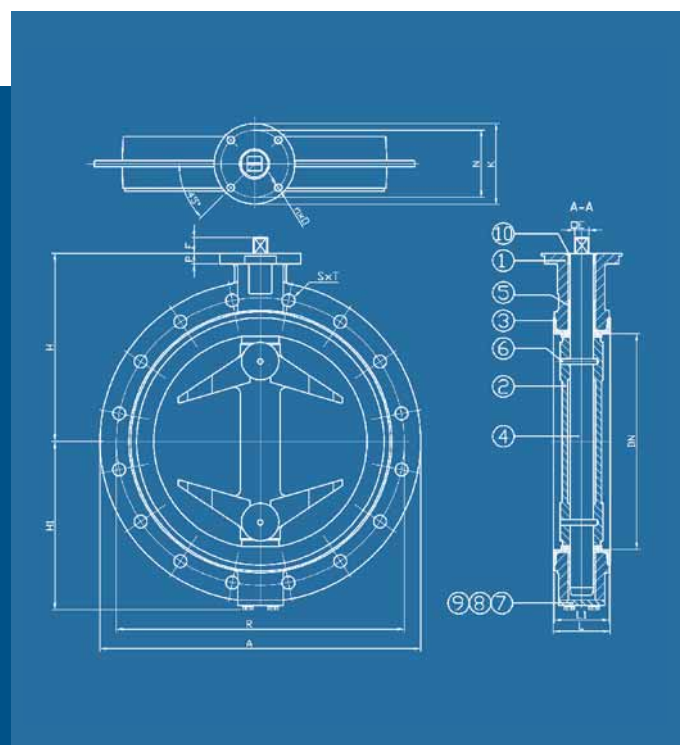
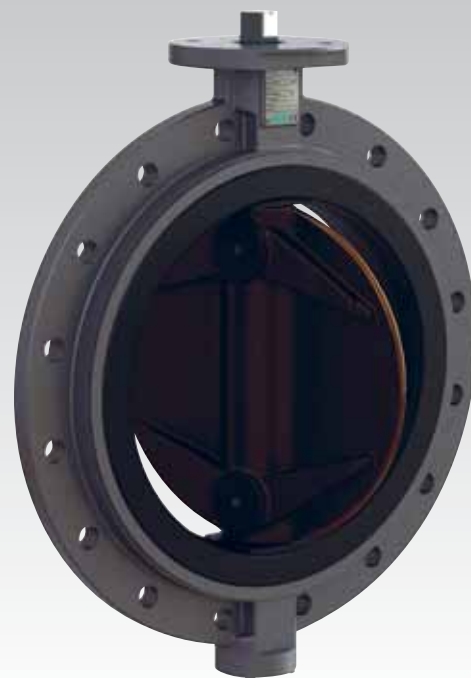
NR	QTY	Part name	Material
8	1	Support bearing	PA66
7	1	Cover plug	PA66
6	1	Oil Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	S x T
50	165	11	25	118	67	90	44.8	43	70	4xØ9	12	125	4xØ18
65	185	11	25	126	74	90	47.8	46	70	4xØ9	12	145	4xØ18
80	195	11	25	133	82	90	47.8	46	70	4xØ9	14	160	8xØ18
100	224	11	25	147	100	90	54.0	52	70	4xØ9	14	180	8xØ18
125	254	14	28	160	112	90	58.2	56	70	4xØ9	14	210	8xØ18
150	285	14	28	180	134	90	58.4	56	70	4xØ9	14	240	8xØ22
200	337	17	28	204	159	90	63.0	60	70	4xØ9	14	295	12xØ22
250	405	22	30	245	195	125	71.0	68	102	4xØ11	15	355	12xØ26
300	483	22	30	270	220	125	81.5	78	102	4xØ11	15	410	12xØ26

# TECHNICAL DATA

## MONO FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	16 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 16

NR	QTY	Part name	Material
10	1	Support bearing	EN1982-CuSn5ZnPb
9	1	Bolt	St.88
8	1	Spring washer	St.88
7	1	Cover plate	WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

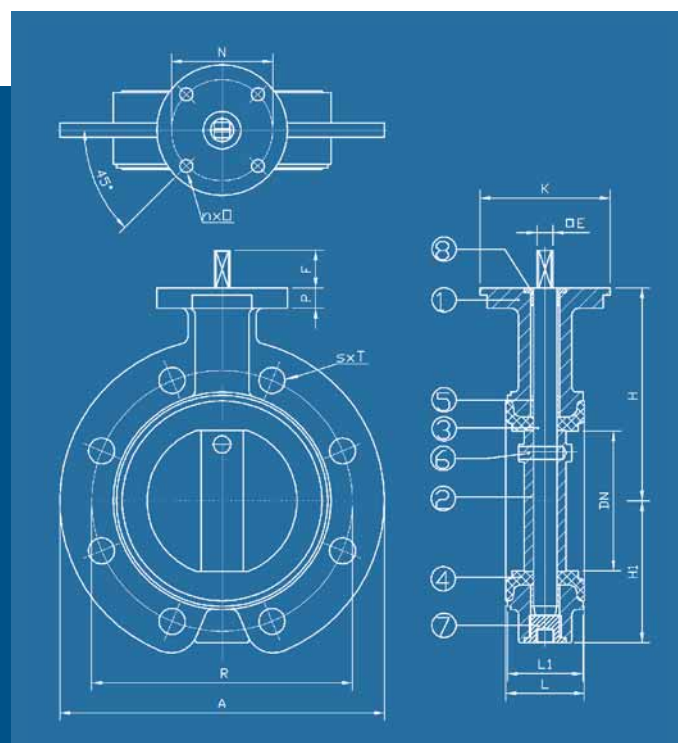
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
350	533	27	29	315	282	150	81.4	78	125	4xØ14	20	470	16xØ26
400	597	27	29	350	307	150	105.6	102	125	4xØ14	20	525	16xØ30



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# TECHNICAL DATA

## MONO FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	19.5 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	ANSI 150

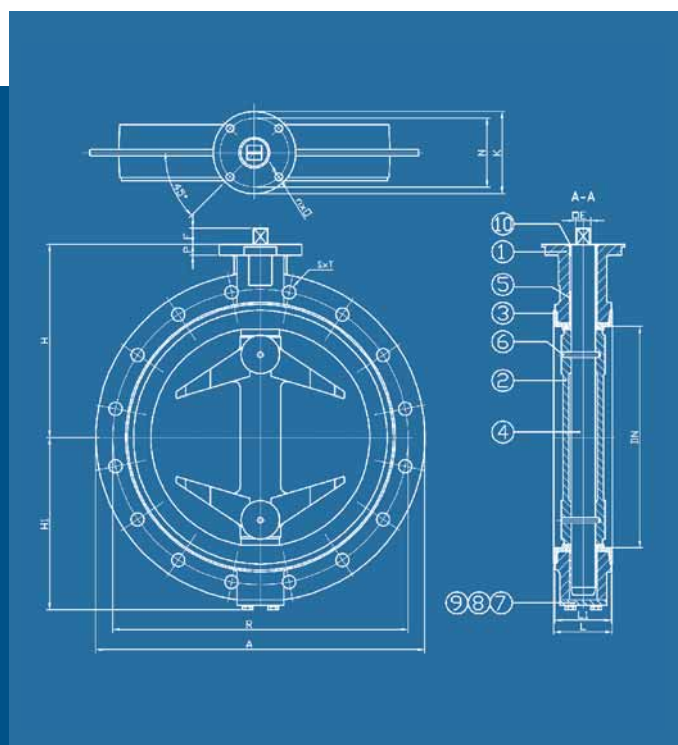
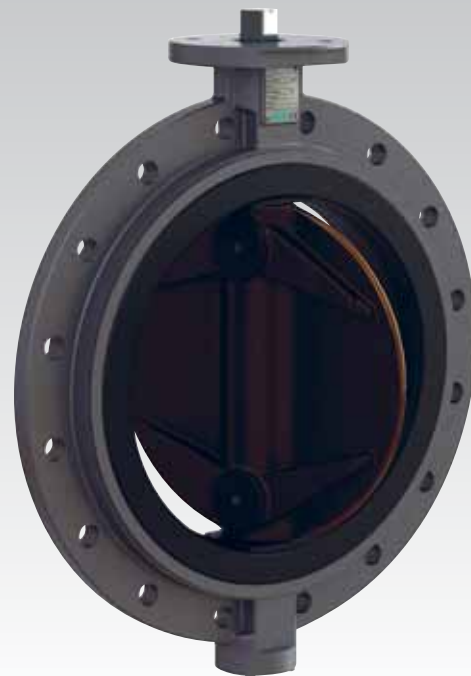
NR	QTY	Part name	Material
8	1	Support bearing	PA66
7	1	Cover plug	PA66
6	1	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB2 or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
50	165	11	25	118	67	90	44.8	43	70	4xØ9	12	120.6	4xØ19
65	185	11	25	126	74	90	47.8	46	70	4xØ9	12	139.7	4xØ19
80	195	11	25	133	82	90	47.8	46	70	4xØ9	14	152.4	4xØ19
100	224	11	25	147	100	90	54.0	52	70	4xØ9	14	190.5	8xØ19
125	254	14	28	160	112	90	58.2	56	70	4xØ9	14	215.9	8xØ22
150	285	14	28	180	134	90	58.4	56	70	4xØ9	14	241.3	8xØ22
200	337	17	28	204	159	90	63.0	60	70	4xØ9	14	298.4	8xØ22
250	405	22	30	245	195	125	71.0	68	102	4xØ11	15	316.9	12xØ25
300	483	22	30	270	220	125	81.5	78	102	4xØ11	15	431.8	12xØ25

# TECHNICAL DATA

## MONO FLANGE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	19.5 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	ANSI 150

NR	QTY	Part name	Material
10	1	Support bearing	EN1982-CuSn5ZnPb
9	1	Bolt	St.88
8	1	Spring washer	St.88
7	1	Cover plate	WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB2 or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

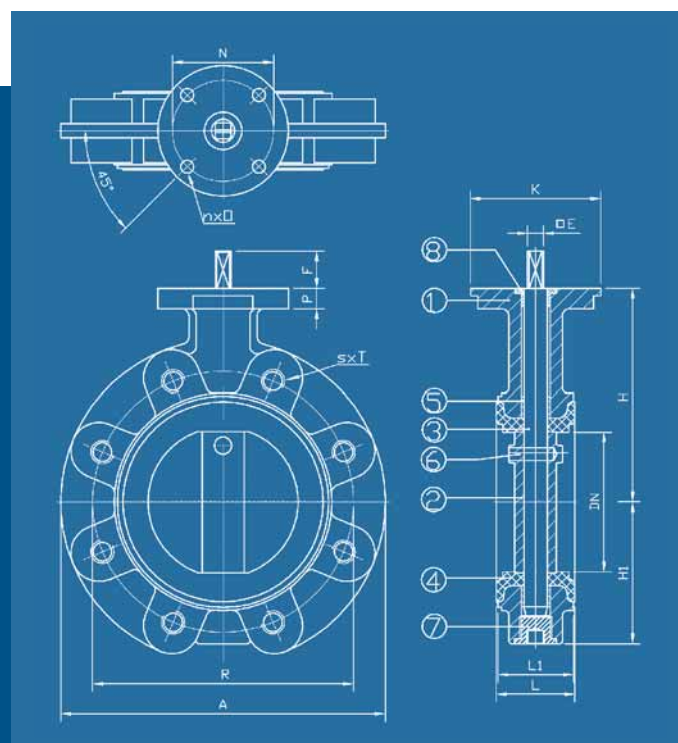
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
350	533	27	29	315	282	150	81.4	78	125	4xØ14	20	476.2	12xØ28
400	597	27	29	350	307	150	105.6	102	125	4xØ14	20	539.7	16xØ28



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# TECHNICAL DATA

## LUG TYPE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	10 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 10

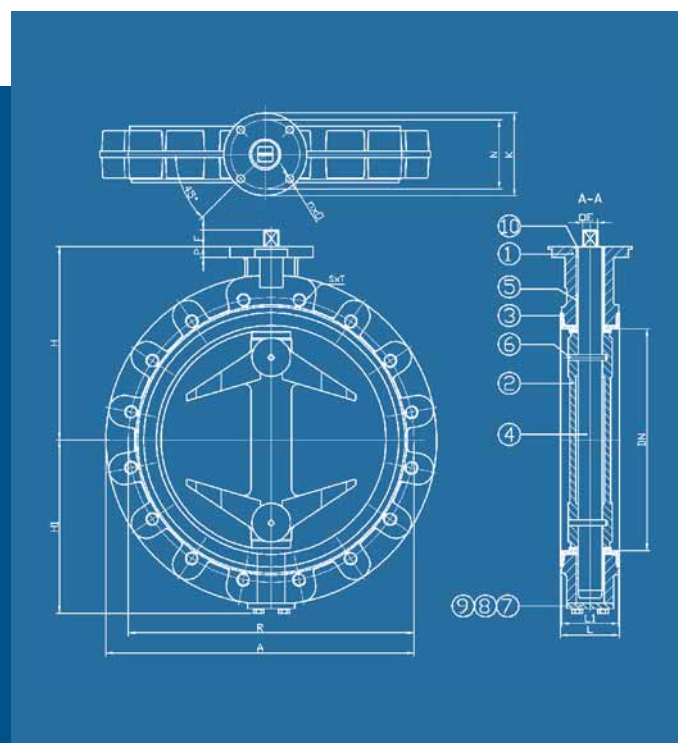
NR	QTY	Part name	Material
8	1	Support bearing	PA66
7	1	Cover plug	PA66
6	1	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

DN (mm)	ØA (mm)	□ E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	S x T
50	165	11	25	118	67	90	44.8	43	70	4xØ9	12	125	4xM16
65	185	11	25	126	74	90	47.8	46	70	4xØ9	12	145	4xM16
80	195	11	25	133	82	90	47.8	46	70	4xØ9	14	160	8xM16
100	224	11	25	147	100	90	54.0	52	70	4xØ9	14	180	8xM16
125	254	14	28	160	112	90	58.2	56	70	4xØ9	14	210	8xM16
150	285	14	28	180	134	90	58.4	56	70	4xØ9	14	240	8xM20
200	337	17	28	204	159	90	63.0	60	70	4xØ9	14	295	8xM20
250	405	22	30	245	195	125	71.0	68	102	4xØ11	15	350	12xM20
300	472	22	30	270	220	125	81.5	78	102	4xØ11	15	400	12xM20

# TECHNICAL DATA

## LUG TYPE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	10 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 10

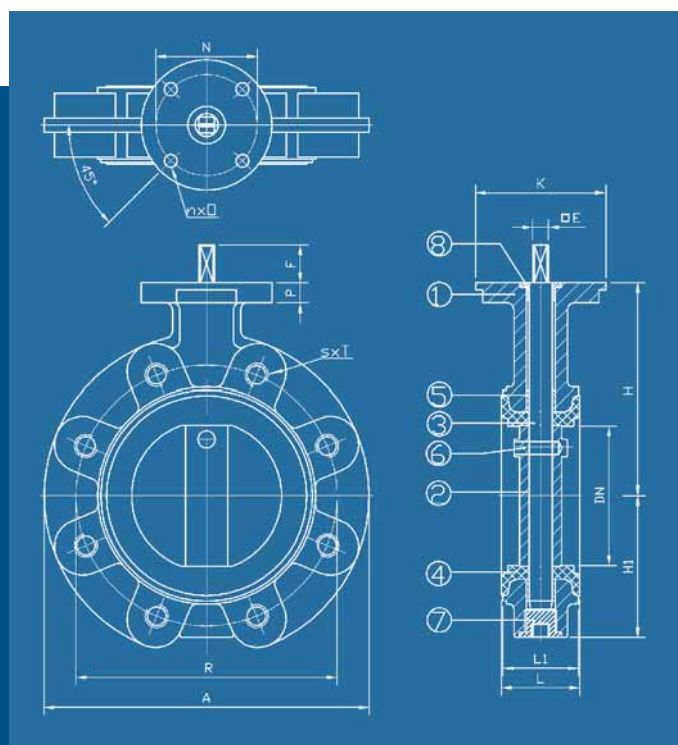
NR	QTY	Part name	Material
10	1	Support bearing	EN1982-CuSn5ZnPb
9	1	Bolt	St.88
8	1	Spring washer	St.88
7	1	Cover plate	WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
350	520	27	29	315	282	150	81.4	78	125	4xØ14	20	460	16xM20
400	597	27	29	350	307	150	105.6	102	125	4xØ14	20	515	16xM24
450	640	36	38	375	352	175	118	114	140	4xØ18	20	565	20xM24
500	715	36	38	415	387	175	131	127	140	4xØ18	20	620	20xM24x36
600	780	46	48	465	452	210	158	154	165	4xØ22	25	725	20xM27x40

# TECHNICAL DATA

## LUG TYPE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	16 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 16

NR	QTY	Part name	Material
8	1	Support bearing	PA66
7	1	Cover plug	PA66
6	1	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

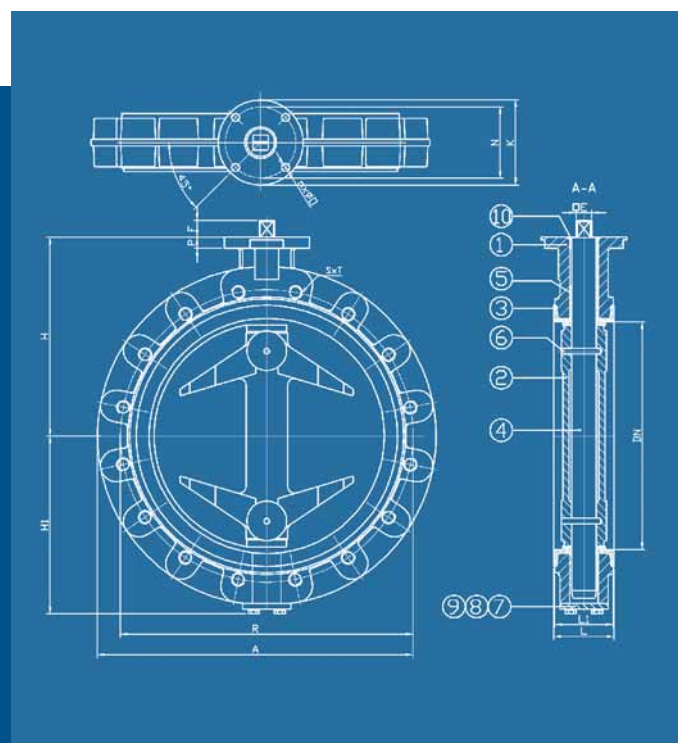
### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
50	165	11	25	118	67	90	44.8	43	70	4xØ9	12	125	4xM16
65	185	11	25	126	74	90	47.8	46	70	4xØ9	12	145	4xM16
80	195	11	25	133	82	90	47.8	46	70	4xØ9	14	160	8xM16
100	224	11	25	147	100	90	54.0	52	70	4xØ9	14	180	8xM16
125	254	14	28	160	112	90	58.2	56	70	4xØ9	14	210	8xM16
150	285	14	28	180	134	90	58.4	56	70	4xØ9	14	240	8xM20
200	337	17	28	204	159	90	63.0	60	70	4xØ9	14	295	12xM20
250	405	22	30	245	195	125	71.0	68	102	4xØ11	15	355	12xM24
300	472	22	30	270	220	125	81.5	78	102	4xØ11	15	410	12xM24



# TECHNICAL DATA

## LUG TYPE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	16 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	PN 16

NR	QTY	Part name	Material
10	1	Support bearing	EN1982-CuSn5ZnPb
9	1	Bolt	St.88
8	1	Spring washer	St.88
7	1	Cover plate	WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

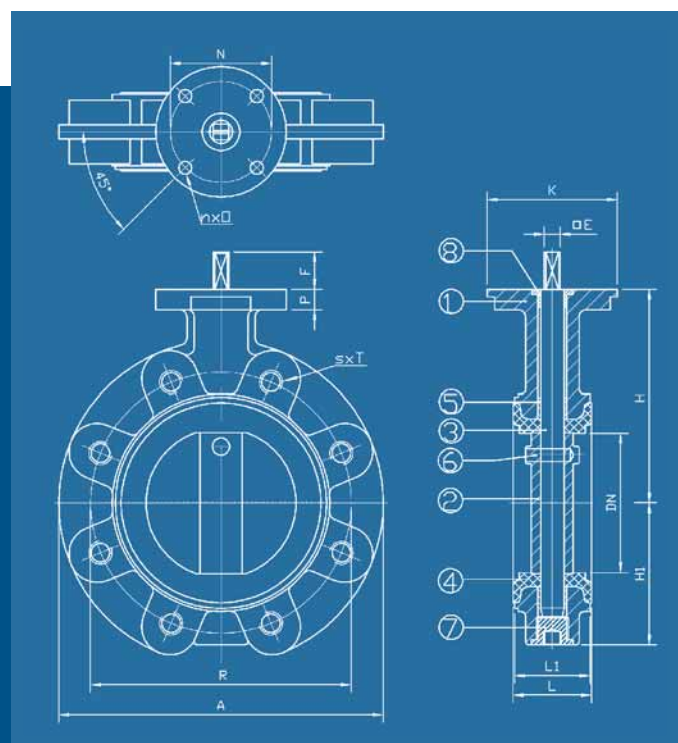
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
350	520	27	29	315	282	150	81.4	78	125	4xØ14	20	470	16xM24
400	597	27	29	350	307	150	105.6	102	125	4xØ14	20	525	16xM27
450	640	36	38	375	352	175	118	114	140	4xØ18	20	585	20xM27
500	715	36	38	415	387	175	131	127	140	4xØ18	20	650	20xM30x45
600	840	46	48	465	452	210	158	154	165	4xØ22	25	770	20xM33x47



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# TECHNICAL DATA

## LUG TYPE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	19.5 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	ANSI 150

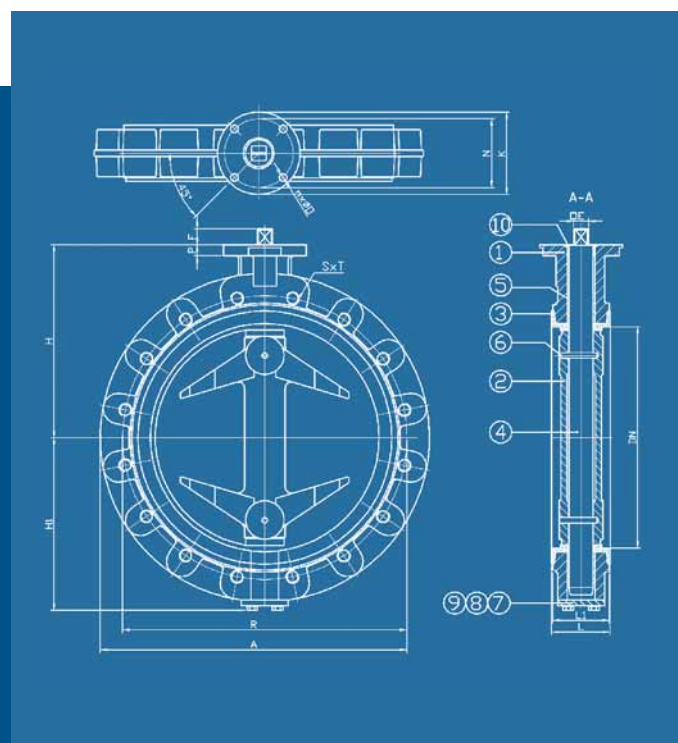
NR	QTY	Part name	Material
8	1	Support bearing	PA66
7	1	Cover plug	PA66
6	1	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

DN (mm)	ØA (mm)	□ E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	S x T
50	165	11	25	118	67	90	44.8	43	70	4xØ9	12	120.6	4x5/8"UNC
65	185	11	25	126	74	90	47.8	46	70	4xØ9	12	139.7	4x5/8"UNC
80	195	11	25	133	82	90	47.8	46	70	4xØ9	14	152.4	4x5/8"UNC
100	224	11	25	147	100	90	54.0	52	70	4xØ9	14	190.5	8x5/8"UNC
125	254	14	28	160	112	90	58.2	56	70	4xØ9	14	215.9	8x3/4"UNC
150	285	14	28	180	134	90	58.4	56	70	4xØ9	14	241.3	8x3/4"UNC
200	337	17	28	204	159	90	63.0	60	70	4xØ9	14	298.4	8x3/4"UNC
250	405	22	30	245	195	125	71.0	68	102	4xØ11	15	316.9	12x7/8"UNC
300	472	22	30	270	220	125	81.5	78	102	4xØ11	15	431.8	12x7/8"UNC

# TECHNICAL DATA

## LUG TYPE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure	19.5 bar
Max. working temperature	80°C (NBR) 120°C (EPDM) 180°C (VITON)
Mounting flange acc. to	ISO 5211
Face to face dimension to	ISO 5752
Flange connection	ANSI 150

NR	QTY	Part name	Material
10	1	Support bearing	EN1982-CuSn5ZnPb
9	1	Bolt	St.88
8	1	Spring washer	St.88
7	1	Cover plate	WCB
6	2	Cil.Pin.	Monel K500
5	2	Bearingbush	EN1982-CuSn7ZnPb
4	1	Lining rubber	NBR or EPDM or Viton
3	1	Shaft	EN10088-3 -1.4122
2	1	Disc	BS1400-AB or EN10213-4 -1.4408
1	1	Body	EN1563-JS1030 or ASTM A216-WCB

### DIMENSIONS

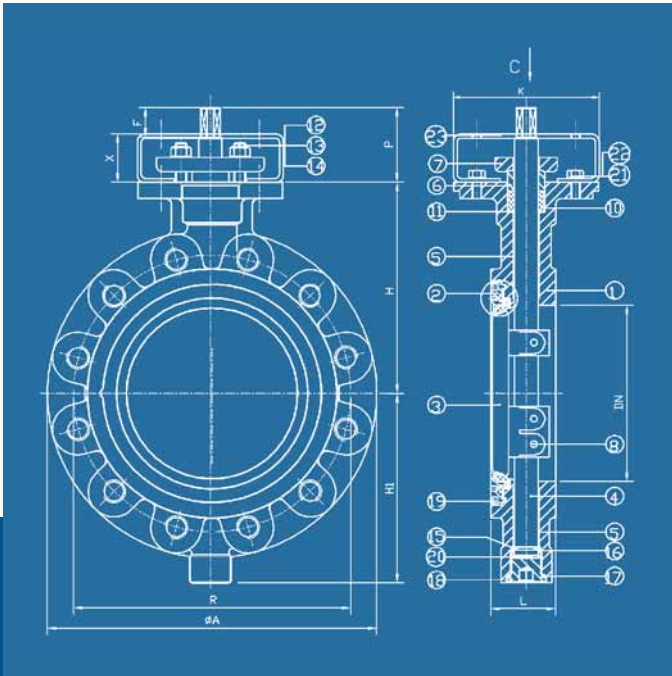
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	L1 (mm)	N (mm)	n x □	P (mm)	R (pcd)	SxT
350	520	27	29	315	282	150	81.4	78	125	4xØ14	20	476.2	12x1"UNC
400	597	27	29	350	307	150	105.6	102	125	4xØ14	20	539.7	16x1"UNC
450	640	36	38	375	352	175	118	114	140	4xØ18	20	577.8	16x1 1/8"UNC
500	715	36	38	415	387	175	131	127	140	4xØ18	20	635.0	20x1 1/8"UNC45
600	840	46	48	465	452	210	158	154	165	4xØ22	25	749.3	20x1 1/4"UNC48



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# TECHNICAL DATA

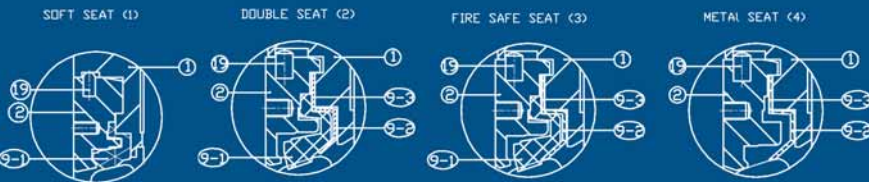
## HIGH PERFORMANCE BUTTERFLY VALVE



### TECHNICAL FEATURES

- Max. working pressure** PN 10 - 10 bar / PN 16 - 16 bar / ANSI150 - 19.6 bar
- Max. working temperature** 260°C
- Mounting flange acc. to** ISO 5211
- Face to face dimension to** ISO 5752
- Flange connection** PN 10 / PN 16 / ANSI 150 / JIS 5K/10K

### RING TYPE



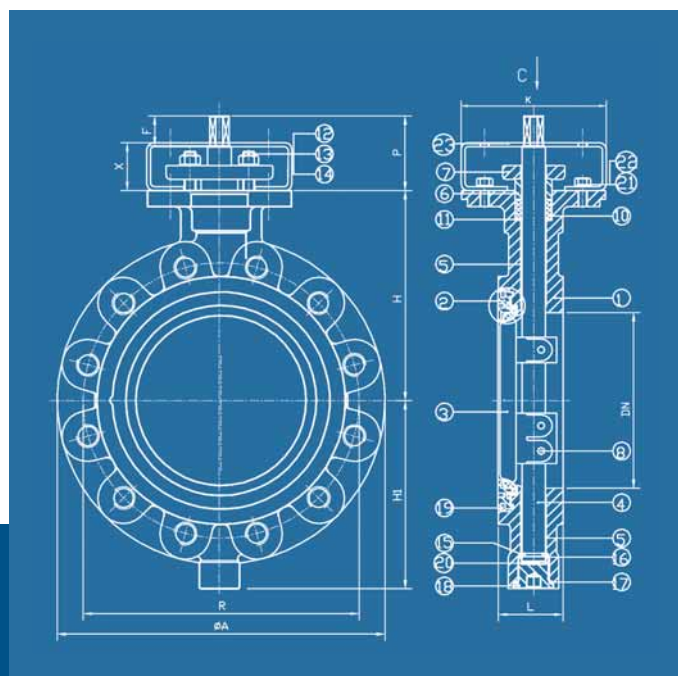
### DIMENSIONS

DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	N (mm)	n x □	P (mm)	PN 10 R(pcd)	PN 16 SxT	ANSI 150 R(pcd)	X
50	165	12	23	108	91	90	43	70	4xØ9	62	125	4xM16	125	4x5/8"UNC 40
65	185	12	23	123	102	90	46	70	4xØ9	62	145	4xM16	145	4x5/8"UNC 40
80	195	12	23	133	108	90	46	70	4xØ9	62	160	8xM16	160	8x5/8"UNC 40
100	224	12	23	155	116	90	52	70	4xØ9	62	180	8xM16	180	8x5/8"UNC 40
125	254	17	26	173	155	125	56	102	4xØ11	65	210	8xM16	210	8x3/4"UNC 40
150	285	17	26	183	164	125	56	102	4xØ11	65	240	8xM20	240	8x3/4"UNC 40
200	335	19	35	218	195	150	60	125	4xØ13	82	295	8xM20	295	12xM20 298.4 8x3/4"UNC 50
250	405	22	35	253	230	150	68	125	4xØ13	82	350	12xM20	355	12xM24 361.9 12x7/8"UNC 50
300	472	27	45	278	260	175	78	140	4xØ17	92	400	12xM20	410	12xM24 431.8 12x7/8"UNC 62

NR	QTY	Part name	Material
23	1	Bracket	304
22	4	Spring washer	304
21	4	Bolt	A2-70
20	1	Anti-static spring	304
19	2	Round pin	AISI 316
18	1	Bottom plug	1.4408/CF 8M
17	1	Sealing ring	PTFE/Graphite
16	3	Distance ring	AISI 316
15	1	Lock ring	AISI 316
14	2	Nut	304
13	2	Spring washer	304
12	2	Bolt	A2-70
11	1	Packing seat	AISI 316
10	4	Packing	PTFE/Graphite
9-3	2	Sealing ring	Graphite
9-2	1	Sealing seat	AISI 316
9-1	1	Sealing seat	PTFE
8	2	Taper pin	AISI 316
7	1	Packing gland	CF8
6	1	Gland sleeve	AISI 316
5	1	Bush bearing	AISI 316/R-PTFE
4	1	Shaft	AISI 316
3	1	Disc	1.4408/CF 8M
2	1	Seal cover	AISI 316
1	1	Body	1.4408/CF 8M

# TECHNICAL DATA

## HIGH PERFORMANCE BUTTERFLY VALVE



### TECHNICAL FEATURES

**Max. working pressure** PN 10 - 10 bar / PN 16 - 16 bar / ANSI150 - 19.6 bar

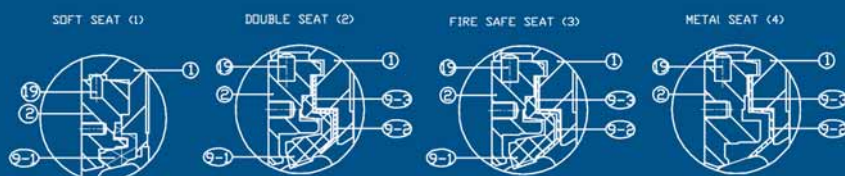
**Max. working temperature** 260°C

**Mounting flange acc. to** ISO 5211

**Face to face dimension to** ISO 5752

**Flange connection** PN 10 / PN 16 / ANSI 150 / JIS 5K/10K

### RING TYPE



### DIMENSIONS

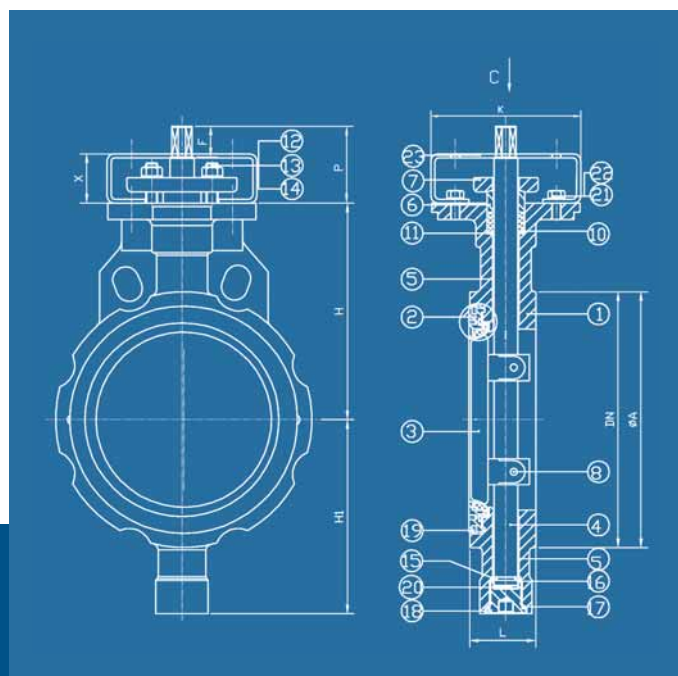
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	N (mm)	n x □	P (mm)	PN 10 R(pcd)	PN 16 R(pcd)	ANSI 150 R(pcd)	X
50	165	12	23	108	91	90	43	70	4xØ9	62	125	125	120.6	40
65	185	12	23	123	102	90	46	70	4xØ9	62	145	145	139.7	40
80	195	12	23	133	108	90	46	70	4xØ9	62	160	160	152.4	40
100	224	12	23	155	116	90	52	70	4xØ9	62	180	180	190.5	40
125	254	17	26	173	155	125	56	102	4xØ11	65	210	210	215.9	40
150	285	17	26	183	164	125	56	102	4xØ11	65	240	240	241.3	40
200	335	19	35	218	195	150	60	125	4xØ13	82	295	295	298.4	50
250	405	22	35	253	230	150	68	125	4xØ13	82	350	355	361.9	50
300	472	27	45	278	260	175	78	140	4xØ17	92	400	410	431.8	62



NR	QTY	Part name	Material
23	1	Bracket	304
22	4	Spring washer	304
21	4	Bolt	A2-70
20	1	Anti-static spring	304
19	2	Round pin	AISI 316
18	1	Bottom plug	WCB+Ni plate
17	1	Sealing ring	PTFE/Graphite
16	3	Distance ring	AISI 316
15	1	Lock ring	AISI 316
14	2	Nut	304
13	2	Spring washer	304
12	2	Bolt	A2-70
11	1	Packing seat	AISI 316
10	4	Packing	PTFE/Graphite
9-3	2	Sealing ring	Graphite
9-2	1	Sealing seat	SS304
9-1	1	Sealing seat	PTFE
8	2	Taper pin	AISI 316
7	1	Packing gland	WCB+Ni plate
6	1	Gland sleeve	SS304
5	1	Bush bearing	SS304/R-PTFE
4	1	Shaft	AISI 316
3	1	Disc	WCB+Ni plate
2	1	Seal cover	Steel
1	1	Body	JS1030/WCB

# TECHNICAL DATA

## HIGH PERFORMANCE BUTTERFLY VALVE



### TECHNICAL FEATURES

**Max. working pressure** PN 10 - 10 bar / PN 16 - 16 bar / ANSI150 - 19.6 bar

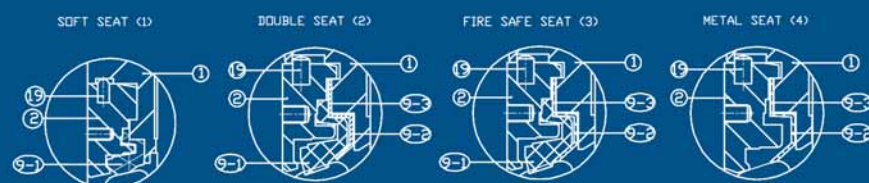
**Max. working temperature** 260°C

**Mounting flange acc. to** ISO 5211

**Face to face dimension to** ISO 5752

**Flange connection** PN 10 / PN 16 / ANSI 150 / JIS 5K/10K

### RING TYPE



### DIMENSIONS

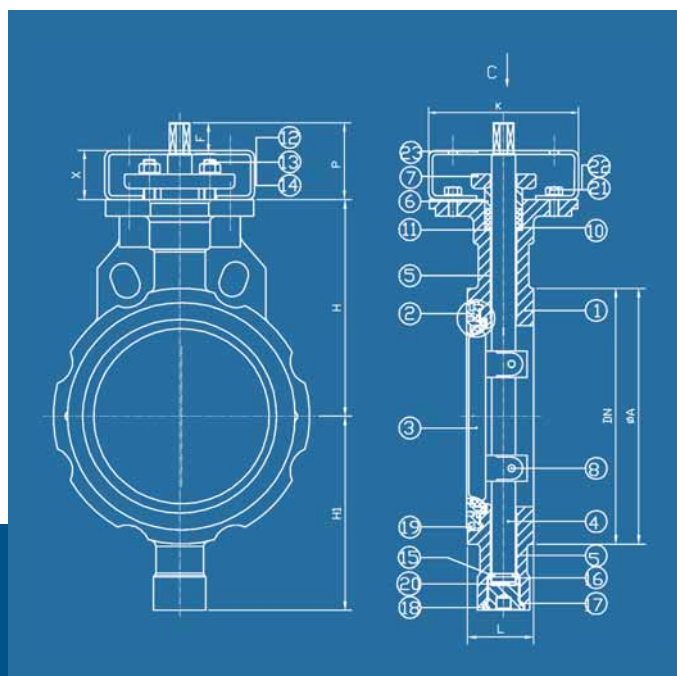
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	N (mm)	n x □	P (mm)	X
50	102	12	23	108	91	80	43	70	4xØ9	62	40
65	122	12	23	123	102	80	46	70	4xØ9	62	40
80	132	12	23	133	108	80	46	70	4xØ9	62	40
100	156	12	23	155	116	80	52	70	4xØ9	62	40
125	188	17	26	173	155	110	56	102	4xØ11	65	40
150	216	17	26	183	164	110	56	102	4xØ11	65	40
200	268	19	35	218	195	130	60	125	4xØ13	82	50
250	326	22	35	253	230	130	68	125	4xØ13	82	50
300	375	27	45	278	260	150	78	140	4xØ17	92	62

NR	QTY	Part name	Material
23	1	Bracket	304
22	4	Spring washer	304
21	4	Bolt	A2-70
20	1	Anti-static spring	304
19	2	Round pin	AISI 316
18	1	Bottom plug	1.8804/CF 8M
17	1	Sealing ring	PTFE/Graphite
16	3	Distance ring	AISI 316
15	1	Lock ring	AISI 316
14	2	Nut	304
13	2	Spring washer	304
12	2	Bolt	A2-70
11	1	Packing seat	AISI 316
10	4	Packing	PTFE/Graphite
9-3	2	Sealing ring	Graphite
9-2	1	Sealing seat	AISI 316
9-1	1	Sealing seat	PTFE
8	2	Taper pin	AISI 316
7	1	Packing gland	CF 8
6	1	Gland sleeve	AISI 316
5	1	Bush bearing	AISI 316/R-PTFE
4	1	Shaft	AISI 316
3	1	Disc	1.4408/CF 8M
2	1	Seal cover	AISI 316
1	1	Body	1.4408/CF 8M

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# TECHNICAL DATA

## HIGH PERFORMANCE BUTTERFLY VALVE



### TECHNICAL FEATURES

Max. working pressure PN 10 - 10 bar / PN 16 - 16 bar / ANSI150 - 19.6 bar

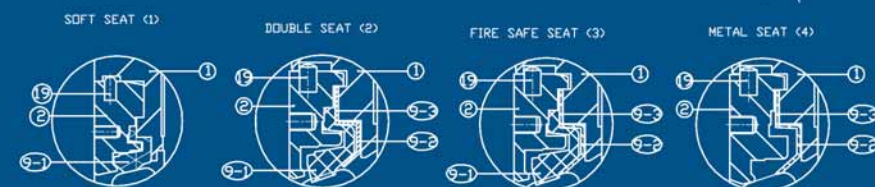
Max. working temperature 260°C

Mounting flange acc. to ISO 5211

Face to face dimension to ISO 5752

Flange connection PN 10 / PN 16 / ANSI 150 / JIS 5K/10K

### RING TYPE



### DIMENSIONS

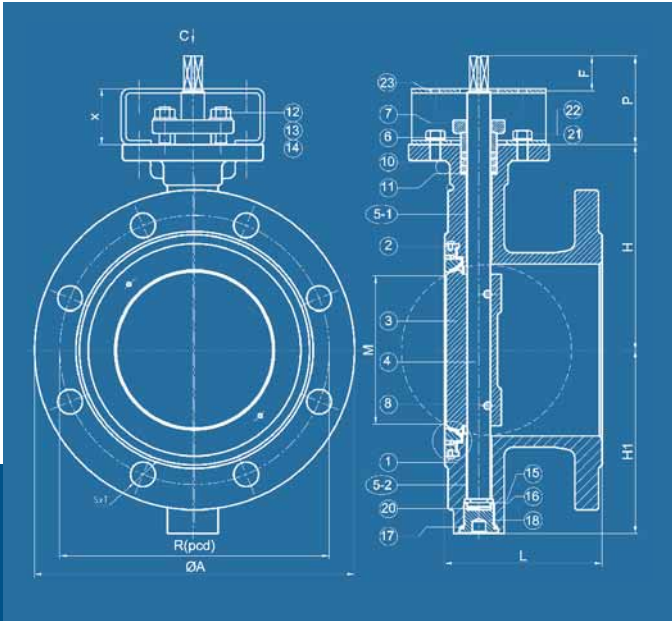
DN (mm)	ØA (mm)	□E (mm)	F (mm)	H (mm)	H1 (mm)	ØK (mm)	L (mm)	N (mm)	n x □	P (mm)	X
50	102	12	23	108	91	80	43	70	4xØ9	62	40
65	122	12	23	123	102	80	46	70	4xØ9	62	40
80	132	12	23	133	108	80	46	70	4xØ9	62	40
100	156	12	23	155	116	80	52	70	4xØ9	62	40
125	188	17	26	173	155	110	56	102	4xØ11	65	40
150	216	17	26	183	164	110	56	102	4xØ11	65	40
200	268	19	35	218	195	130	60	125	4xØ13	82	50
250	326	22	35	253	230	130	68	125	4xØ13	82	50
300	375	27	45	278	260	150	78	140	4xØ17	92	62

NR	QTY	Part name	Material
23	1	Bracket	304
22	4	Spring washer	304
21	4	Bolt	A2-70
20	1	Anti-static spring	304
19	2	Round pin	AISI 316
18	1	Bottom plug	WCB+Ni plate
17	1	Sealing ring	PTFE/Graphite
16	3	Distance ring	AISI 316
15	1	Lock ring	AISI 316
14	2	Nut	304
13	2	Spring washer	304
12	2	Bolt	A2-70
11	1	Packing seat	AISI 316
10	4	Packing	PTFE/Graphite
9-3	2	Sealing ring	Graphite
9-2	1	Sealing seat	SS304
9-1	1	Sealing seat	PTFE
8	2	Taper pin	AISI 316
7	1	Packing gland	WCB+Ni plate
6	1	Gland sleeve	SS304
5	1	Bush bearing	SS304/R-PTFE
4	1	Shaft	AISI 316
3	1	Disc	WCB+Ni plate
2	1	Seal cover	Steel
1	1	Body	JS1030/WCB

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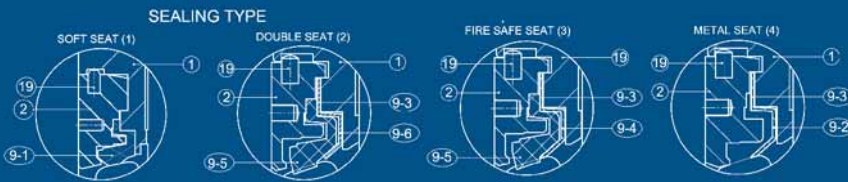
# TECHNICAL DATA

## HIGH PERFORMANCE BUTTERFLY VALVE



### TECHNICAL FEATURES

- Max. working pressure** PN 10 - 10 bar / PN 16 - 16 bar / PN 25 - 20 bar
- Mounting flange acc. to** ISO 5211
- Face to face dimension to** ISO 5752
- Flange connection** PN 10 / PN 16 / PN 25
- W.T. Range (°C)**
  - PTFE (-20~180°C)
  - RPTFE (-40°C~230°C)
  - Metal (-40°~450°C)



### DIMENSIONS

DN (mm)	ANSI 150	□E (mm)	F (mm)	P (mm)	H (mm)	H1 (mm)	K1 (mm)	K2 (mm)	L (mm)	N1 (mm)	N2 (mm)	N1x01	N2x02	ØA PN 10	ØA PN 16	ØA PN 25
50	152	12	26	65	108	91	80	70	108	70	50	4xØ9	4xØ7	165	165	165
65	178	12	26	65	123	101	80	70	112	70	50	4xØ9	4xØ7	185	185	185
80	191	12	26	65	133	107	80	70	114	70	50	4xØ9	4xØ7	200	200	200
100	229	12	26	65	155	115	80	70	127	70	50	4xØ9	4xØ7	220	220	220
125	254	17	26	65	173	155	110	100	140	102	70	4xØ11	4xØ9	250	250	250
150	279	17	26	65	183	164	110	100	140	102	70	4xØ11	4xØ9	285	285	285
200	343	19	36	85	218	195	130	120	152	125	102	4xØ13	4xØ11	340	340	340
250	406	22	36	85	253	230	130	120	165	125	102	4xØ13	4xØ11	395	395	395
300	483	27	41	90	278	260	150	140	178	140	102	4xØ17	4xØ11	445	445	445

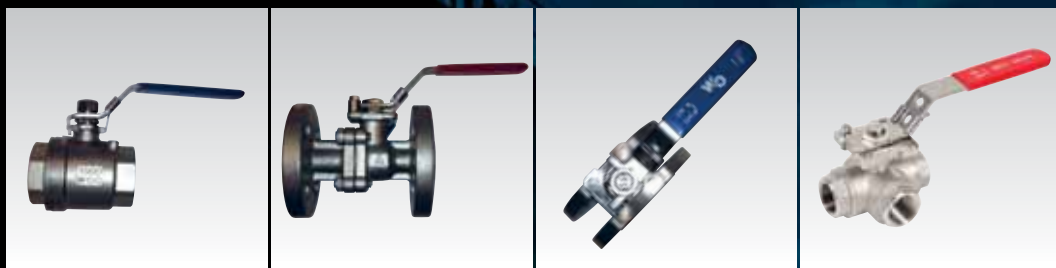
NR	QTY	Part name	Material
23	1	Bracket	SS304/SS316
22	4	Spring washer	SS304
21	4	Bolt	A2-A4
20	1	Anti-static spring	SS304/SS316
19	2	Stop pin	AISI 316
18	1	Bottom plug	.4408(CF8M)
17	1	Packing ring	PTFE/Graphite
16	3	Distance ring	AISI 316
15	1	Lock ring	AISI 316
14	2	Nut	304
13	2	Spring washer	304
12	2	Stud	A2-A4
11	1	Packing rester	AISI 316
10	4	Packing	PTFE/Graphite
9-6	1	Support seat	Metal (AISI 316/Inconel)
9-5	1	Fire safe soft seat	PTFE/RPTFE
9-4	1	Fire safe seat	Metal (AISI 316/Inconel)
9-3	2	Graphite ring	Graphite
9-2	1	Metal seat	Metal (AISI 316/Inconel)
9-1	1	Soft seat	PTFE/RPTFE
8	2	Taper pin	AISI 316/K-500/17-4PH
7	1	Packing gland	CF8M/CF8
6	1	Packing sleeve	AISI 316/AISI 304
5-2	1	Bearing bush (down)	AISI 316/AISI 304 (treated)
5-1	1	Bearing bush (up)	AISI 316/AISI 304 (treated)
4	1	Shaft	AISI 316/17-4PH/C63000
3	1	Disc	1.4408(CF8M)/AB2
2	1	Seal ring	AISI 316/AISI 1025
1	1	Body	1.4408(CF8M)/WCB/JS1030
0	0	Assembly	0





## 2 BALL VALVES

### TECHNICAL DATA



5011

5310

5401

5501

5012

5311

5013

5312

5111

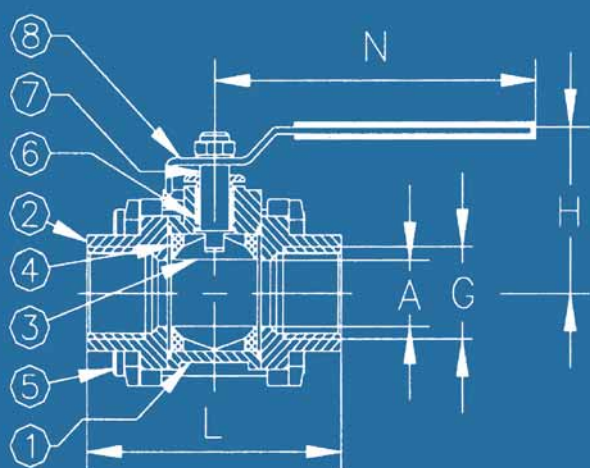


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# TECHNICAL DATA

## BALL VALVE

### FULL BORE - SCREWED END



### TECHNICAL FEATURES

1 Body	Cast steel GSC25 / Stainless steel SS316
2 Screwed end	Cast steel GSC25 / Stainless steel SS316
3 Ball	Stainless steel SS304 / Stainless steel SS316
4 Seating	PTFE 15% glasfibre
5 Bolt	Stainless steel SS304
6 Stem packing	PTFE
7 Stem	Stainless steel SS316
8 Lever	Stainless steel SS304

#### Variants:

- Various actuators
- Seating Carbon filled PTFE

### DIMENSIONS Other dimensions/materials on request

DN (mm)	G (")	A (mm)	N (mm)	L (mm)	H (mm)	Weight (kg)
8	1/4	11,6	100	64	45	0,4
10	3/8	12,7	100	64	45	0,5
15	1/2	15,0	115	66	49	0,6
20	3/4	20,0	115	84	52	0,9
25	1	25,4	152	100	72	1,2
32	1 1/4	32,0	152	116	78	2,1
40	1 1/2	38,0	186	131	86	2,8
50	2	50,8	186	151	95	4,4
65	2 1/2	65,0	234	187	130	8,4
80	3	80,0	234	213	142	13,3
100	4	100,0	280	240	173	19,5

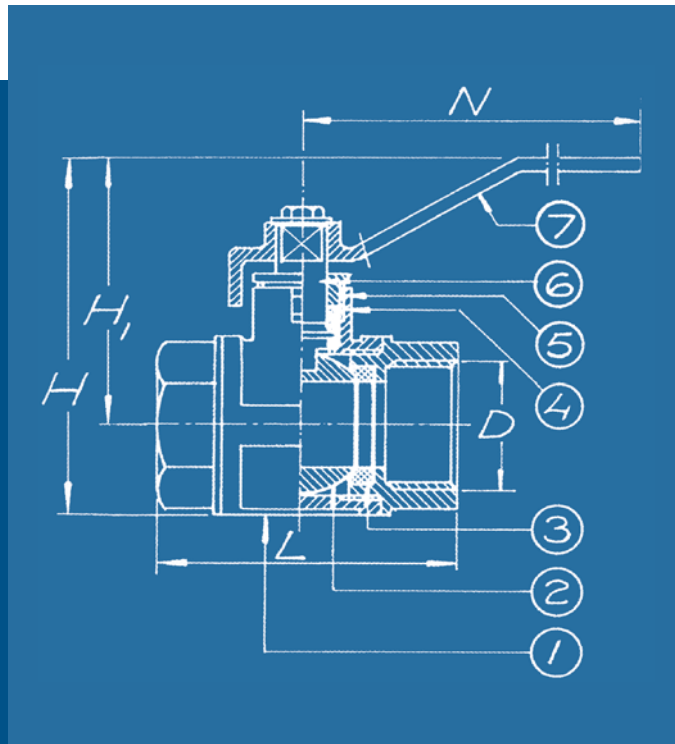


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# TECHNICAL DATA

## BALL VALVE

### FULL BORE - SCREWED END



#### TECHNICAL FEATURES

1 Body	Bronze Rg5 / Brass
2 Ball	Brass, Handchrome
3 Seating	PTFE
4 Stem packing	PTFE
5 Gland	Brass
6 Stem	Brass
7 Lever DN8-50	AISI 430
8 Lever DN65-100	AISI 430

#### Variants:

- Seating carbon filled PTFE
- Stainless steel lever

#### DIMENSIONS Other dimensions/materials on request

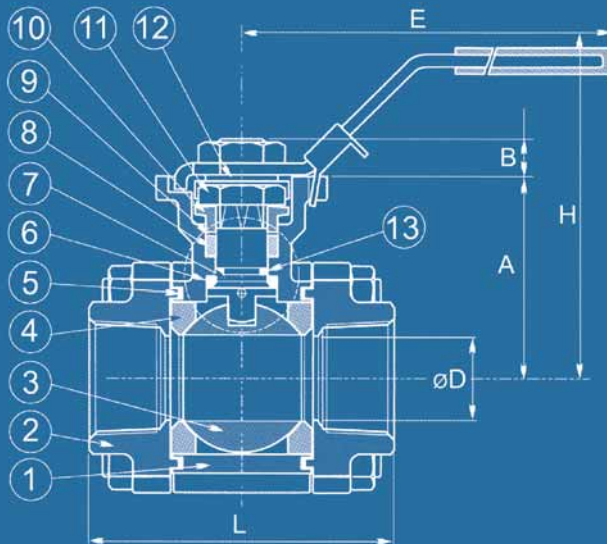
DN (mm)	D (")	N (mm)	L (mm)	H1 (mm)	H (mm)	Max. working pressure		Weight (kg)
						Mpa 100°C	Mpa 185°C	
8	1/4	88	51	41	55	2,5	2,0	0,2
10	3/8	88	51	41	56	2,5	2,0	0,2
15	1/2	88	62	43	60	2,5	2,0	0,3
20	3/4	105	70	50	67	2,5	2,0	0,4
25	1	105	85	55	78	2,5	2,0	0,7
32	1 1/4	140	100	70	105	2,5	2,0	1,1
40	1 1/2	140	110	85	120	2,5	2,0	1,4
50	2	155	134	96	140	2,5	2,0	2,4
65	2 1/2	200	142	120	175	2,5	2,0	3,3
80	3	285	180	134	197	2,5	2,0	3,7
100	4	285	210	147	175	2,5	2,0	4,5

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# TECHNICAL DATA

## BALL VALVE

SCREWED OR WELDED END  
FIRE SAFE



### TECHNICAL FEATURES

1 Body	CF8M
2 Cap	CF8M
3 Ball	SS316
4 Seat	25% Carbon filled PTFE
5 Joint gasket	PTFE standard version
Joint gasket	Graphite fine save version
6 Stem seal	TTFE
7 Stem	SS316
8 Gland packing	Graphite
9 Gland packing	25% glass fiber filled PTFE
10 Gland	SS304
11 Stem nut	SS304
12 Stem washer	SS 304
13 O-ring	Viton

### DIMENSIONS Other dimensions/materials on request

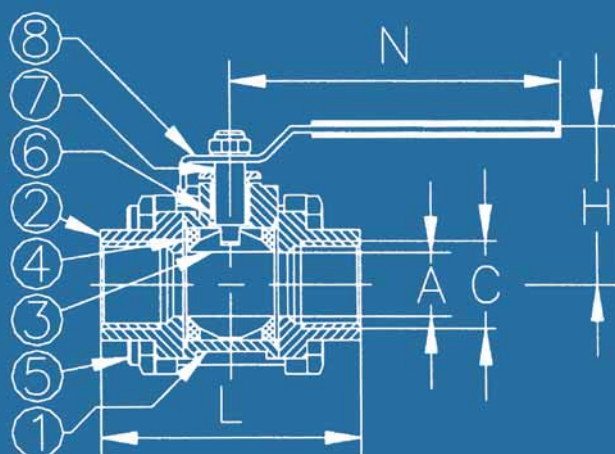
DN (mm)	D (mm)	L (mm)	H (mm)	K (mm)	F (mm)	Max. working pressure		Weight (kg)
						Mpa 100°C	Mpa 180°C	
8	11,5	75	77	6,4	9	12,5	4,0	0,9
10	12,6	75	77	6,4	9	12,5	4,0	0,9
15	15	72,5	77	6,6	9	12,5	4,0	1,0
20	20	85,4	82	8,5	9	12,5	4,0	1,3
25	25	105,3	98,5	10,4	11	12,5	4,0	1,3
32	32	111	102	10,4	11	10,0	3,0	2,0
40	38	127,3	128	13,4	14	10,0	3,0	2,8
50	50	142,8	137	13,4	14	10,0	3,0	4,2
65	65	185	167	16,8	17	6,5	1,8	6,9
80	80	205	176	17,8	17	6,5	1,8	12,0
100	100	240	192	17,8	17	6,5	1,8	16,2

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# TECHNICAL DATA

## BALL VALVE

### FULL BORE - BUTT WELD END



### TECHNICAL FEATURES

1 Body	Cast steel GSC25 / Stainless steel
2	
3 Ball	Stainless steel SS304
4 Seating	PTFE 15% glasfibre
5 Bolt	Stainless steel SS304
6 Stem packing	PTFE
7 Stem	Stainless steel SS316
8 Lever	Stainless steel SS304
9 Butt weld end	Cast steel GSC25

#### Variants:

- Various actuators
- Seating Carbon filled PTFE

### DIMENSIONS Other dimensions/materials on request

DN (mm)	A (mm)	C (mm)	N (mm)	L (mm)	H (mm)	Weight (kg)
8	11,5	17,5	117	64,5	57	0,4
10	12,7	17,5	117	64,5	57	0,5
15	15,0	22,0	117	66	57	0,6
20	20,0	27,0	137	83	69	0,9
25	25,0	34,0	157	95	80	1,2
32	32,0	42,5	157	111	85	2,1
40	38,0	48,5	185	131	95	2,8
50	50,0	61,0	200	151	110	4,4
65	65,0	73,0	285	186	135	8,4
80	80,0	92,0	285	212	148	13,3
100	100,0	115,0	315	235	170	19,5

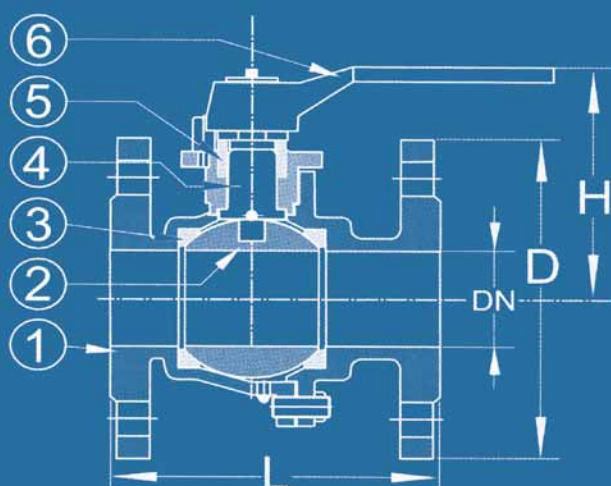
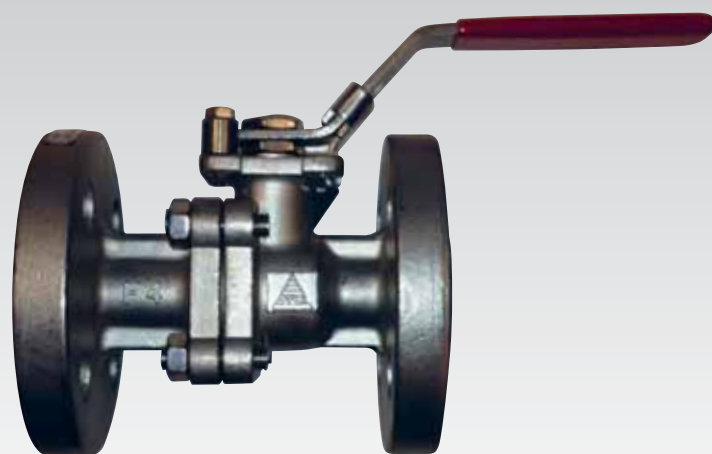
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# TECHNICAL DATA

## BALL VALVE

### FULL BORE - FLANGED END



#### TECHNICAL FEATURES

1 Body	Nodular cast iron GGG40
2 Ball	Hardchromed brass
3 Seating	PTFE
4 Stem	Stainless steel SS304
5 Lever	Cast iron Fe360C
6 Stem packing	NBR

#### Variants:

- Various actuators
- Seating Carbon filled PTFE
- Ball Stainless steel SS304

#### DIMENSIONS Other dimensions/materials on request

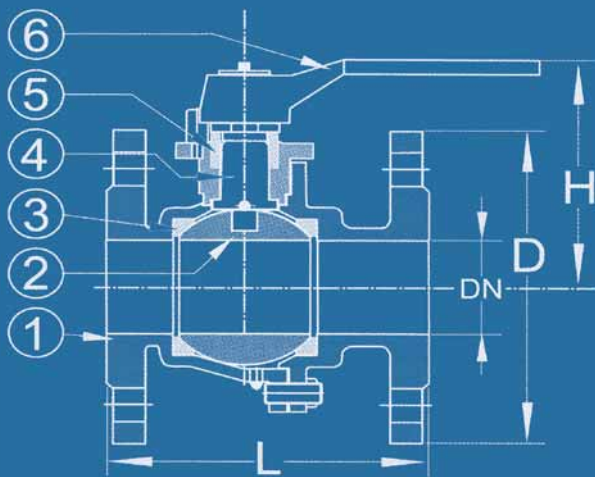
DN (mm)	D (mm)	n	Hcd	d	L (mm)	H (mm)	Weight (kg)
20	105	4	75	14	120	85	2,5
25	115	4	85	14	125	95	3,2
32	140	4	100	18	130	100	4,4
40	150	4	110	18	140	118	5,5
50	165	4	125	18	150	125	8,5
65	185	4	145	18	170	152	11,5
80	200	8	160	18	180	166	15,5
100	220	8	180	18	190	180	20,2
125	250	8	210	18	200	225	30,0
150	285	8	240	22	210	242	36,0
200	340	8	295	22	400	320	93,0

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# TECHNICAL DATA

## BALL VALVE

### FULL BORE - FLANGED END



#### TECHNICAL FEATURES

1 Body	Cast steel GSC25 / Stainless steel
2 Ball	Stainless steel SS304
3 Seating	PTFE
4 Stem	Stainless steel SS304
5 Lever	Cast iron
6 Stem packing	PTFE

#### Variants:

- Various actuators
- Seating Carbon filled PTFE

#### DIMENSIONS Other dimensions/materials on request

DN (mm)	D (mm)	n	Hcd	d	L (mm)	H (mm)	Weight (kg)
15	95	4	65	14	115	84	1,8
20	105	4	75	14	120	84	2,6
25	115	4	85	14	125	93	4,0
32	140	4	100	18	130	102	5,3
40	150	4	110	18	140	135	6,2
50	165	4	125	18	150	145	9,0
65	185	4	145	18	170	174	13,5
80	200	8	160	18	180	188	17,2
100	220	8	180	18	190	203	24,0
125	250	8	210	18	325	247	46,0
150	285	8	240	22	350	261	60,0
200	340	8	295	22	400	400	150,0
250	395	12	350	22	450	450	210,0

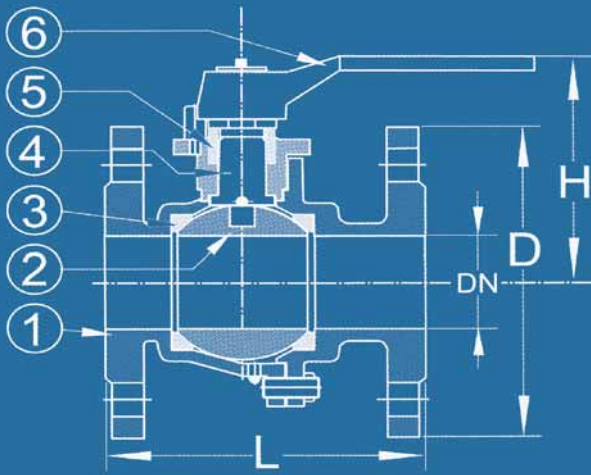


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# TECHNICAL DATA

## BALL VALVE

### FULL BORE - FLANGED END



#### TECHNICAL FEATURES

1 Body	Bronze Rg5
2 Ball	Stainless steel SS316
3 Seating	PTFE
4 Stem	Stainless steel SS316
5 Lever	Cast iron Fe360C
6 Stem packing	Viton

#### Variants:

- Various actuators
- Seating Carbon filled PTFE
- Ball Chromed brass

#### DIMENSIONS Other dimensions/materials on request

DN (mm)	D (mm)	n	Hcd	d	L (mm)	H (mm)	Weight (kg)
15	105	4	65	M12	120	85	2,5
20	105	4	75	14	120	85	2,5
25	115	4	85	14	125	95	3,2
32	140	4	100	18	130	100	4,4
40	150	4	110	18	140	118	5,5
50	165	4	125	18	150	125	8,5
65	185	4	145	18	170	152	11,5
80	200	8	160	18	180	166	15,5
100	220	8	180	18	190	180	20,0
125	250	8	210	18	200	225	30,0
150	285	8	240	22	210	242	36,0
200	340	8	295	22	400	320	93,0



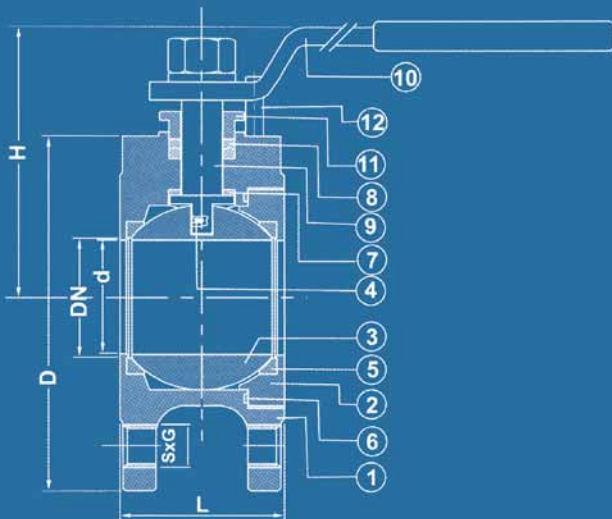
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# TECHNICAL DATA

## BALL VALVE

### FULL BORE - COMPACT



#### TECHNICAL FEATURES

1 Body	Stainless steel SS316 / Cast steel
2 Retainer	Stainless steel SS316
3 Ball	Stainless steel SS316
4 Anti-static device	Stainless steel SS316
5 Ball seat	PTFE
6 Body seal	PTFE
7 Trust washer	PTFE
8 Packing	PTFE
9 Stem	Stainless steel SS316
10 Handle	Stainless steel SS304
11 Gland nut	Stainless steel SS304
12 Stop pin	Stainless steel SS304

#### Variants:

- Seating Carbon filled PTFE

#### DIMENSIONS Other dimensions/materials on request

DN (mm)	D (mm)	d	SxG	L (mm)	H (mm)	Weight (kg)
15	88	15	4xM12	36	68	1,28
20	98	20	4xM12	38	72	1,61
25	108	25	4xM12	43	75	2,4
32	128	32	4xM16	51	88,5	3,25
40	150	38	4xM16	63	110	4,62
50	165	50	4xM16	70	118,5	6,6
65	185	65	4xM16	107	140	9,5
80	200	76	8xM16	120	152	12,5
100	220	96	8xM16	152	168	19,5

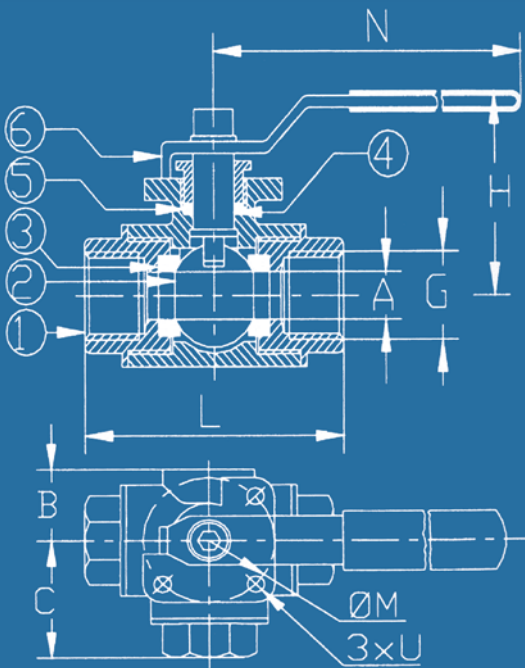


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# TECHNICAL DATA

## 3-WAY BALL VALVE

### SCREWED END



### TECHNICAL FEATURES

1 Body	Stainless steel SS316
2 Ball	Stainless steel SS316
3 Seating	PTFE 15% glasfibre
4 Stem	Stainless steel SS316
5 Lever	Stainless steel SS304
6 Stem packing	PTFE

#### Variants:

- Seating Carbon filled PTFE
- L-port or T-port

### DIMENSIONS Other dimensions/materials on request

DN (mm)	G (")	A (mm)	B (mm)	C (mm)	L (mm)	H (mm)	Weight (kg)
8	1/4	9,5	22	39,5	79	63	0,8
10	3/8	9,5	22	39,5	79	63	0,8
15	1/2	12,0	22	39,5	79	63	0,8
20	3/4	15,0	28	44,0	88	75	1,2
25	1	20,0	31	54,0	108	82	1,7
32	1 1/4	25,0	34	62,0	108	89	2,8
40	1 1/2	32,0	40	67,0	135	90	4,0
50	2	40,0	48	82,0	164	100	6,8



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## 3 GATE VALVES

### TECHNICAL DATA



2000

2030

2100

2130

2202

2302

2001

2031

2101

2401

2010

2032

2110

2011

2111

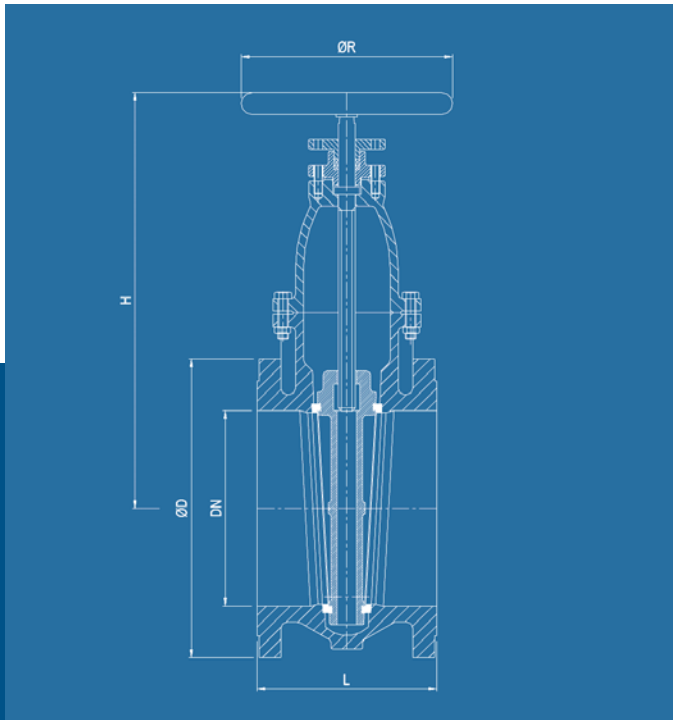


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM - WITHOUT INDICATOR

### SHORT TYPE - F4



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	140	235	140	11
50	165	165	150	235	140	13
65	185	185	170	255	160	17
80	200	200	180	280	160	20
100	220	220	190	305	200	28
125	250	250	200	390	200	40
150	285	285	210	435	200	50
175	315	315	220	490	200	65
200	340	340	230	530	250	85
250	395	405	250	630	315	135
300	445	460	270	720	315	180
350	505	520	290	840	400	225
400	565	580	310	890	400	295
450	615	640	330	985	400	350
500	670	715	350	1120	500	480
600	780	840	390	1290	500	590
700	895	910	430	1500	630	780



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN EN 1171 (DIN 3352 T2)
<b>Face to Face</b>	EN 558 Series 14 (DIN 3202 F4)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 - PN 10
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, double threaded stem, chainwheel, gearbox, electrical actuator, top flange for actuator assembly
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN, bolted bonnet and adjustable gland and short face to face. Inside screwed stem, non-rising stem and handwheel.
- Application: Cold and hot water, fresh water, seawater, lubricating oil.

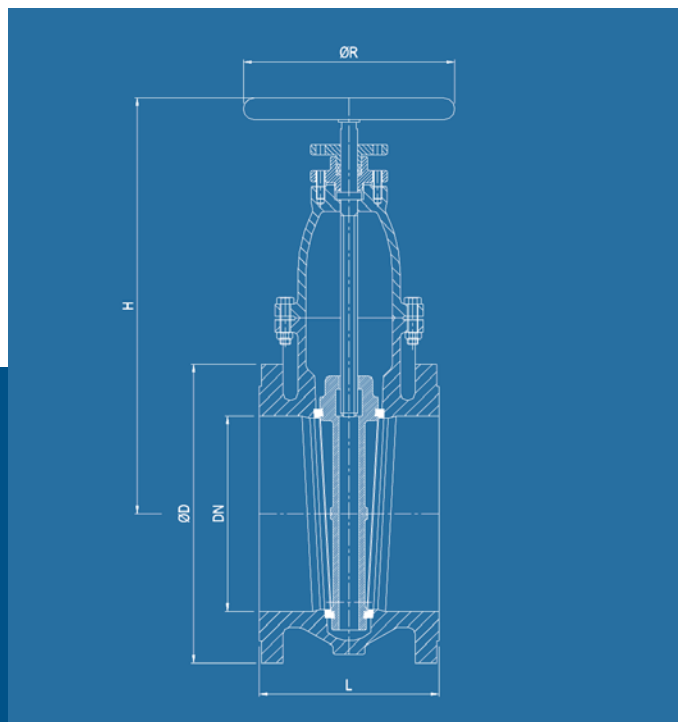


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM - WITHOUT INDICATOR

### SHORT TYPE - F4



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	140	235	140	15
50	165	165	150	235	140	17
65	185	185	170	255	160	20
80	200	200	180	280	160	27
100	220	220	190	305	200	34
125	250	250	200	390	200	45
150	285	285	210	435	200	55
175	315	315	220	490	200	70
200	340	340	230	530	250	90
250	395	405	250	630	315	145
300	445	460	270	720	315	210
350	505	520	290	840	400	260
400	565	580	310	890	400	330
450	615	640	330	985	400	370
500	670	715	350	1120	500	520
600	780	840	390	1290	500	630
700	895	910	430	1500	630	810



### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	DIN EN 1984 (DIN 3352 T2)
<b>Face to Face</b>	EN 558 Series 14 (DIN 3202 F4)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, double threaded stem, chainwheel, gearbox, electrical actuator, top flange for actuator assembly
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN PN 10/16, bolted bonnet and adjustable gland and short face to face. Inside screwed stem, non-rising stem and handwheel.
- Application: Cold and hot water, fresh water, seawater, lubricating oil.

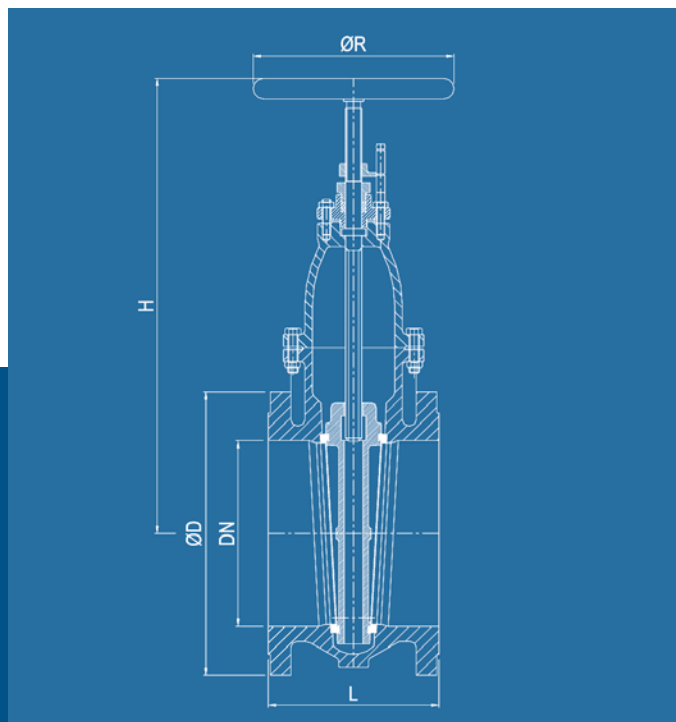


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM

### SHORT TYPE - F4 WITH INDICATOR



#### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	140	270	140	11
50	165	165	150	270	140	13
65	185	185	170	295	160	17
80	200	200	180	325	160	20
100	220	220	190	360	200	28
125	250	250	200	450	200	40
150	285	285	210	500	200	50
175	315	315	220	560	200	65
200	340	340	230	620	250	85
250	395	405	250	730	315	135
300	445	460	270	845	315	180
350	505	520	290	930	400	225
400	565	580	310	1015	400	295
450	615	640	330	1125	400	350
500	670	715	350	1275	500	480
600	780	840	390	1460	500	590
700	895	910	430	1650	630	780



#### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN EN 1171 (DIN 3352 T2) - with indicator
<b>Face to Face</b>	EN 558 Series 14 (DIN 3202 F4)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 - PN 10 / PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, double threaded stem, locking device chainwheel
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN, bolted bonnet and adjustable gland and short face to face. Inside screwed stem, non-rising stem and handwheel.
- Application: Cold and hot water, fresh water, seawater, lubricating oil.

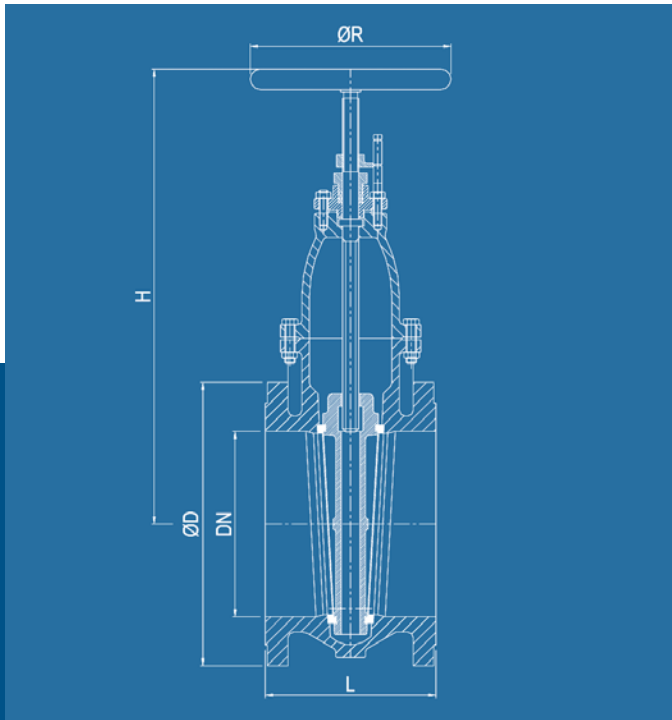


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM

### SHORT TYPE - F4 WITH INDICATOR



#### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	140	270	140	15
50	165	165	150	270	140	17
65	185	185	170	295	160	20
80	200	200	180	325	160	27
100	220	220	190	360	200	34
125	250	250	200	450	200	45
150	285	285	210	500	200	55
175	315	315	220	560	200	70
200	340	340	230	620	250	90
250	395	405	250	730	315	145
300	445	460	270	845	315	210
350	505	520	290	930	400	260
400	565	580	310	1015	400	330
450	615	640	330	1125	400	370
500	670	715	350	1275	500	520
600	780	840	390	1460	500	630
700	895	910	430	1650	630	810

#### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN EN 1984 (DIN 3352 T2) - with indicator
<b>Face to Face</b>	EN 558 Series 14 (DIN 3202 F4)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1091-1/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, double threaded stem, locking device chainwheel
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

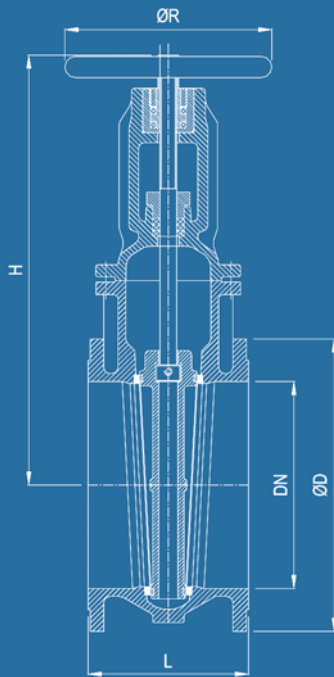
- Gate valves with raised face flanges acc. to DIN PN 10/16, bolted bonnet and adjustable gland and short face to face. Inside screwed stem, non-rising stem and handwheel.
- Application: Cold and hot water, fresh water, seawater, lubricating oil.



# TECHNICAL DATA

## GATE VALVE - OS&Y - RISING STEM - NON RISING HANDWHEEL

### SHORT TYPE - F4



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	140	410	180	18
50	165	165	150	470	180	19
65	185	185	170	560	225	25
80	200	200	180	580	225	32
100	220	220	190	690	280	40
125	250	250	200	790	320	55
150	285	285	210	895	320	68
175	315	315	220	950	320	93
200	340	340	230	1030	360	113
250	395	405	250	1220	400	139
300	445	460	270	1405	500	220
350	505	520	290	1595	500	282
400	565	580	310	1810	640	347
450	615	640	330	2000	640	443
500	670	715	350	2195	720	532
600	780	840	390	2575	720	740
700	895	910	430	3000	800	870



### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3352 T3
<b>Face to Face</b>	EN 558 Series 14 (DIN 3202 F4)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Double threaded stem, drain plug, gearbox, actuator extension spindle, rising handwheel
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN PN 10/16, bolted bonnet and with grease nipple. Outside screwed stem and yoke, rising stem and non rising handwheel. Low operation torque, due to bearing support,
- Application: Cold and hot fresh water, lubricating oil.



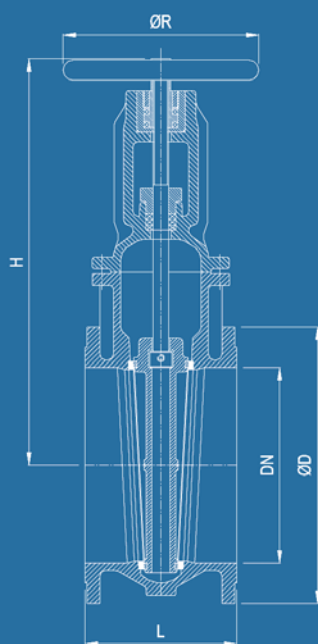
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# TECHNICAL DATA

## GATE VALVE - RISING STEM - OS&Y NON RISING HANDWHEEL

### SHORT TYPE - F4



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	140	410	180	19
50	165	165	150	470	180	20
65	185	185	170	560	225	30
80	200	200	180	580	225	34
100	220	220	190	690	280	42
125	250	250	200	790	320	58
150	285	285	210	895	320	70
175	315	315	220	950	320	95
200	340	340	230	1030	360	120
250	395	405	250	1220	400	165
300	445	460	270	1405	500	220
350	505	520	290	1595	500	260
400	565	580	310	1810	640	350
450	615	640	330	2000	640	410
500	680	715	350	2195	720	540
600	780	840	390	2575	720	650
700	895	910	430	3000	800	840



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	EN 1171 (DIN 3352 T3), rising stem - non rising handwheel
<b>Face to Face</b>	EN 558 series 14 (DIN 3202 F4)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 - 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, flat faced flanges, double threaded stem
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS
	<ul style="list-style-type: none"> <li>• Gate valves with raised face flanges acc. to DIN PN 10/16, bolted bonnet, with outside screw and yoke. Rising stem and non rising handwheel. Low operation torque, due to bearing support.</li> <li>• Application: Especially suitable for hot and cold water in shipbuilding.</li> </ul>

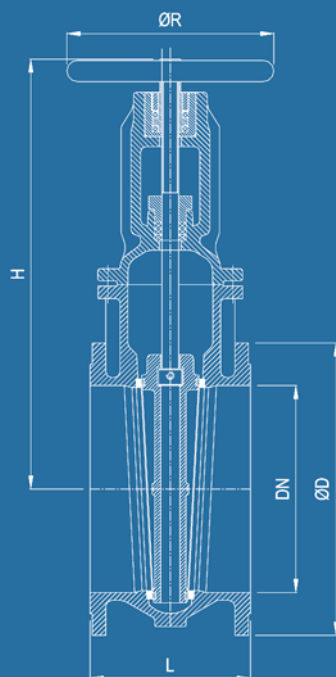


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# TECHNICAL DATA

## GATE VALVE - OS&Y - RISING STEM - RISING HANDWHEEL

### SHORT TYPE - F4



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	140	410	180	17
50	165	165	150	470	180	18
65	185	185	170	560	225	26
80	200	200	180	580	225	30
100	220	220	190	690	280	38
125	250	250	200	790	320	52
150	285	285	210	895	320	65
175	315	315	220	950	320	85
200	340	340	230	1030	360	108
250	395	405	250	1220	400	155
300	445	460	270	1405	500	210
350	505	520	290	1595	500	250
400	565	580	310	1810	640	340
450	615	640	330	2000	640	400
500	670	715	350	2195	720	520
600	780	840	390	2575	720	630
700	895	910	430	3000	800	820



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	EN 1171 (DIN 3352 T3)
<b>Face to Face</b>	EN 558 Series 14 (DIN 3202 F4)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 - PN 10
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Double threaded stem, drain plug, gearbox, actuator extension spindle, rising handwheel
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN PN 10/16, bolted bonnet and with grease nipple. Outside screwed stem and yoke, rising stem and non rising handwheel. Low operation torque, due to bearing support,
- Application: Cold and hot fresh water, lubricating oil.

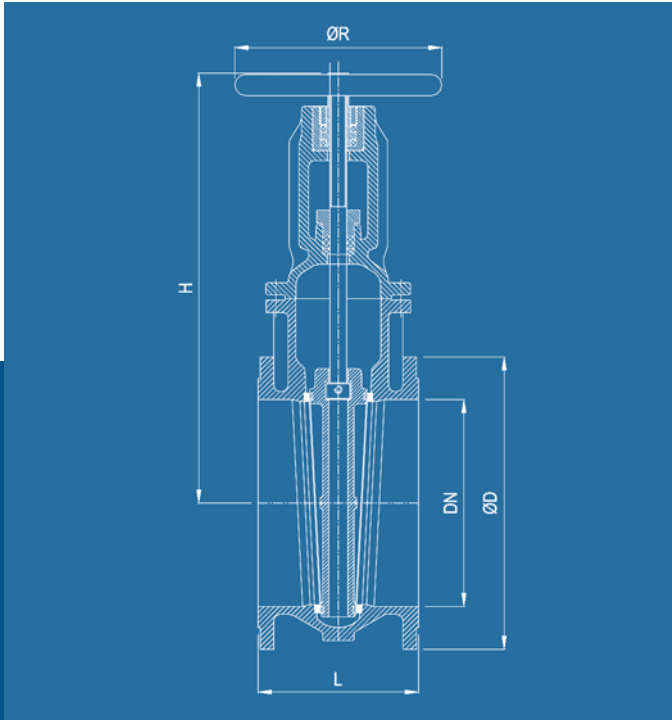


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# TECHNICAL DATA

## GATE VALVE - OS&Y - RISING STEM - NON RISING HANDWHEEL

### SHORT TYPE - F4



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	140	410	180	18
50	165	165	150	470	180	19
65	185	185	170	560	225	25
80	200	200	180	580	225	32
100	220	220	190	690	280	40
125	250	250	200	790	320	55
150	285	285	210	895	320	68
175	315	315	220	950	320	93
200	340	340	230	1030	360	113
250	395	405	250	1220	400	139
300	445	460	270	1405	500	220
350	505	520	290	1595	500	282
400	565	580	310	1810	640	347
450	615	640	330	2000	640	443
500	670	715	350	2195	720	532
600	780	840	390	2575	720	740
700	895	910	430	3000	800	870

### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Stainless steel
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3352 T3
<b>Face to Face</b>	EN 558 Series 14 (DIN 3202 F4)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Double threaded stem, drain plug, gearbox, actuator extension spindle, rising handwheel
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN PN 10/16, bolted bonnet and with grease nipple. Outside screwed stem and yoke, rising stem and non rising handwheel. Low operation torque, due to bearing support,
- Application: Cold and hot fresh water, lubricating oil.

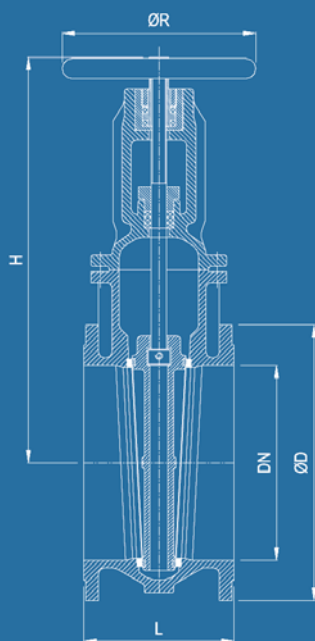


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# TECHNICAL DATA

## GATE VALVE - RISING STEM - OS&Y RISING HANDWHEEL

### SHORT TYPE - F4



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	140	410	180	19
50	165	165	150	470	180	20
65	185	185	170	560	225	30
80	200	200	180	580	225	34
100	220	220	190	690	280	42
125	250	250	200	790	320	58
150	285	285	210	895	320	70
175	315	315	220	950	320	95
200	340	340	230	1030	360	120
250	395	405	250	1220	400	165
300	445	460	270	1405	500	220
350	505	520	290	1595	500	260
400	565	580	310	1810	640	350
450	615	640	330	2000	640	410
500	680	715	350	2195	720	540
600	780	840	390	2575	720	650
700	895	910	430	3000	800	840



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	EN 1171 (DIN 3352 T3), rising stem - rising handwheel
<b>Face to Face</b>	EN 558 series 14 (DIN 3202 F4)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 - 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, flat faced flanges, double threaded stem
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS
	<ul style="list-style-type: none"> <li>Gate valves with raised face flanges acc. to DIN PN 10/16, bolted bonnet, with outside screw and yoke. Rising stem and rising handwheel. Low operation torque, due to bearing support.</li> <li>Application: Especially suitable for hot and cold water in shipbuilding.</li> </ul>

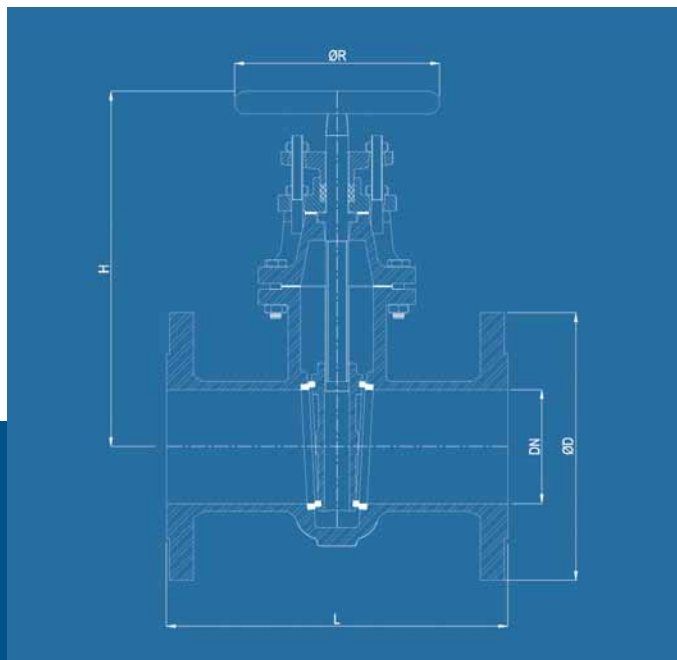


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM

### LONG TYPE - F5



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	240	240	200	13
50	165	165	250	250	200	14
65	185	185	270	275	250	19
80	200	200	280	285	250	25
100	220	220	300	315	315	30
125	250	250	325	415	315	48
150	285	285	350	435	315	60
200	340	340	400	580	400	97
250	395	405	450	715	500	165
300	445	460	500	770	500	235
350	505	520	550	870	500	330
400	565	580	600	950	630	440
450	615	640	650	1066	630	585
500	670	715	700	1210	800	787
600	780	840	800	1340	800	1060
700	895	910	900	1560	800	1330
800	1015	1025	1000	1690	800	2300
900	1115	1125	1100	2010	1000	3400
1000	1230	1255	1200	2190	1000	4300
1500	1785	1820	1700	2880	1200	8400



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN EN 1171 (DIN 3352 T2)
<b>Face to Face</b>	EN 558 Series 15 (DIN 3202 F5)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, double threaded stem, chainwheel, gearbox, electrical actuator, top flange for actuator assembly
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN, bolted bonnet and adjustable gland and long face to face length. Inside screwed stem, non-rising stem and handwheel.
- Application: Warm and cold water. Higher pressure applications.

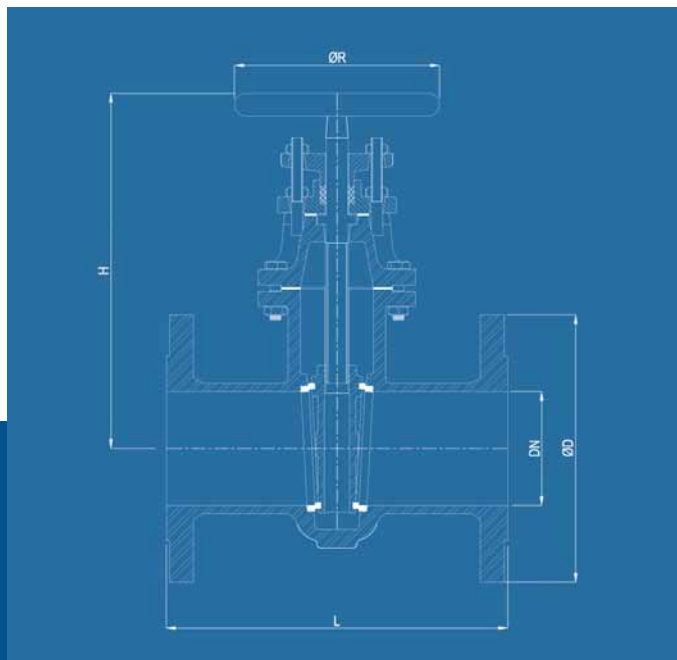


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM

### LONG TYPE - F5 - PN25



#### DIMENSIONS

DN (mm)	ØD PN25	ØD PN40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	240	240	200	13
50	165	165	250	250	200	14
65	185	185	270	275	250	19
80	200	200	280	285	250	25
100	235	235	300	315	315	32
125	270	270	325	415	315	50
150	300	300	350	435	315	62
200	360	375	400	580	400	110
250	425	450	450	715	500	170
300	485	515	500	770	500	240
350	555	580	550	870	500	340
400	620	660	600	950	630	450
450	675	685	650	1066	630	590
500	730	755	700	1210	800	790
600	845	890	800	1340	800	1070
700	960	995	900	1560	800	1350
800	1085	1140	1000	1690	800	2300
900	1185	1250	1100	2010	1000	3300
1000	1320	1360	1200	2190	1000	4330



#### TECHNICAL FEATURES

<b>Body</b>	Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3352 T2
<b>Face to Face</b>	EN 558 Series 15 (DIN 3202 F5)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-B (DIN 2501)
<b>Pressure Rating</b>	PN 25 / PN 40
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, double threaded stem, chainwheel, gearbox, electrical actuator, top flange for actuator assembly
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN, bolted bonnet and adjustable gland and long face to face length. Inside screwed stem, non-rising stem and handwheel.
- Application: Warm and cold water. Higher pressure applications.

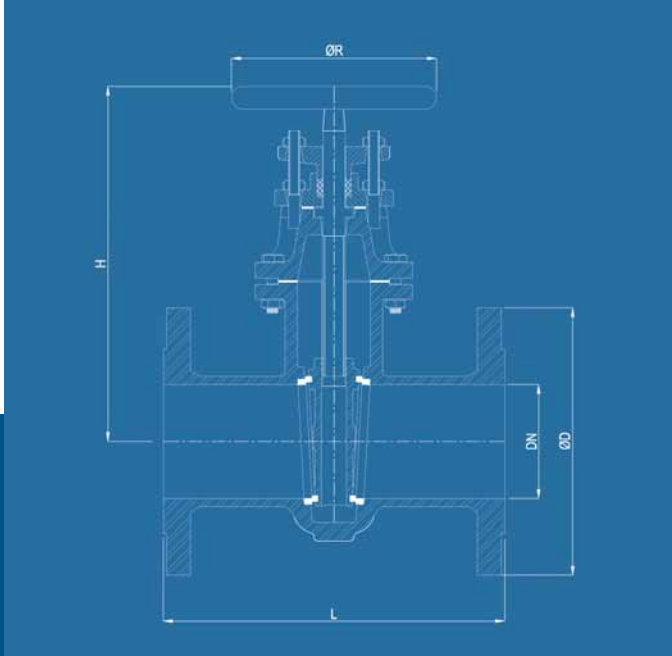


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM

### LONG TYPE - F5 - PN25



#### DIMENSIONS

DN (mm)	ØD PN25	ØD PN40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	240	240	200	13
50	165	165	250	250	200	14
65	185	185	270	275	250	19
80	200	200	280	285	250	25
100	235	235	300	315	315	32
125	270	270	325	415	315	50
150	300	300	350	435	315	62
200	360	375	400	580	400	110
250	425	450	450	715	500	170
300	485	515	500	770	500	240
350	555	580	550	870	500	340
400	620	660	600	950	630	450
450	675	685	650	1066	630	590
500	730	755	700	1210	800	790
600	845	890	800	1340	800	1070
700	960	995	900	1560	800	1350
800	1085	1140	1000	1690	800	2300
900	1185	1250	1100	2010	1000	3300
1000	1320	1360	1200	2190	1000	4330



#### TECHNICAL FEATURES

<b>Body</b>	Cast steel
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3352 T2
<b>Face to Face</b>	EN 558 Series 15 (DIN 3202 F5)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-B (DIN 2501)
<b>Pressure Rating</b>	PN 25 / PN 40
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, double threaded stem, chainwheel, gearbox, electrical actuator, top flange for actuator assembly
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN, bolted bonnet and adjustable gland and long face to face length. Inside screwed stem, non-rising stem and handwheel.
- Application: Warm and cold water. Higher pressure applications.

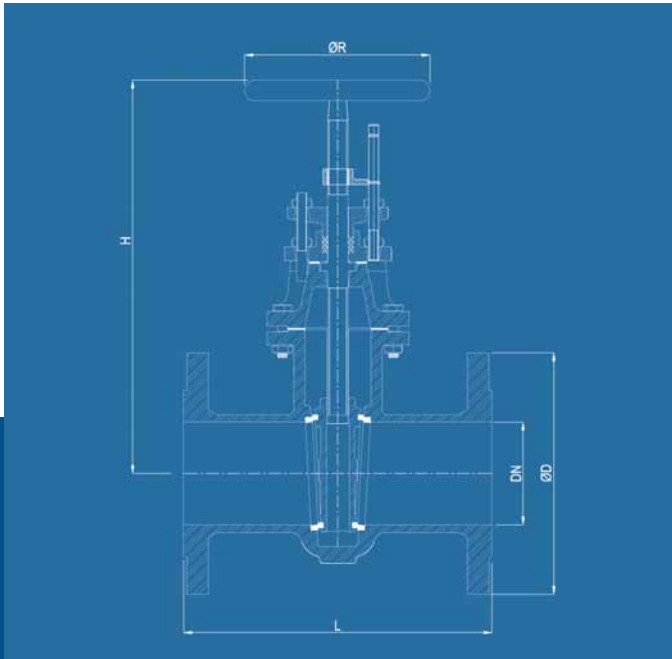


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM

### LONG TYPE - F5 - WITH INDICATOR



#### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	240	310	200	13
50	165	165	250	310	200	14
65	185	185	270	360	250	19
80	200	200	280	380	250	25
100	220	220	300	430	315	30
125	250	250	325	495	315	48
150	285	285	350	545	315	60
200	340	340	400	625	400	97
250	395	405	450	680	500	165
300	445	460	500	900	500	235
350	505	520	550	995	500	330
400	565	580	600	1060	630	440
450	615	640	650	1225	630	585
500	670	715	700	1320	800	787
600	780	840	800	1485	800	1060
700	895	910	900	1685	800	1330
800	1015	1025	1000	1900	800	2300
900	1115	1125	1100	2125	1000	3400
1000	1230	1255	1200	2400	1000	4300
1500	1785	1820	1700	3300	1200	8400



#### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN EN 1171 (DIN 3352 T2) - with Indicator
<b>Face to Face</b>	EN 558 Series 15 (DIN 3202 F5)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, double threaded stem, o-ring sealing, stem extension, chain wheel, gearbox
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN, bolted bonnet and adjustable gland and long face to face. Inside screwed stem, non-rising stem and handwheel.
- Application: Cold and hot water, fresh water, seawater, lubricating oil.



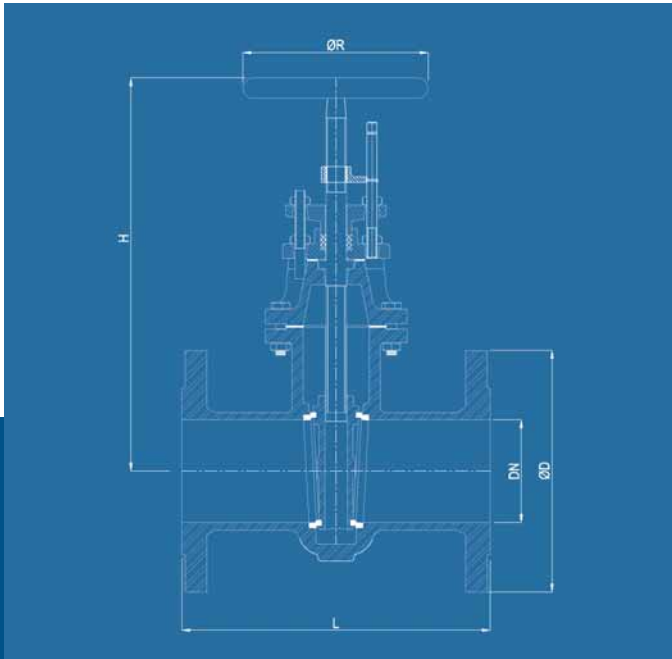
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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM

### LONG TYPE - F5 - PN25 WITH INDICATOR



#### DIMENSIONS

DN (mm)	ØD PN25	ØD PN40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	240	310	200	13
50	165	165	250	310	200	14
65	185	185	270	360	250	19
80	200	200	280	380	250	25
100	235	235	300	430	315	32
125	270	270	325	495	315	50
150	300	300	350	545	315	62
200	360	375	400	625	400	110
250	425	450	450	680	500	170
300	485	515	500	900	500	240
350	555	580	550	995	500	340
400	620	660	600	1060	630	450
450	670	685	650	1225	630	590
500	730	755	700	1320	800	790
600	845	890	800	1485	800	1070
700	960	995	900	1685	800	1350
800	1085	1140	1000	1900	800	2300
900	1185	1250	1100	2125	1000	3300
1000	1320	1360	1200	2400	1000	4330



#### TECHNICAL FEATURES

<b>Body</b>	Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3352 T2 - with Indicator
<b>Face to Face</b>	EN 558 Series 15 (DIN 3202 F5)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 25 / PN 40
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, double threaded stem, o-ring sealing, stem extension , c hain wheel, gearbox
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN, bolted bonnet and adjustable gland and long face to face. Inside screwed stem, non-rising stem and handwheel.
- Application: Warm and cold water. Higher pressure applications.

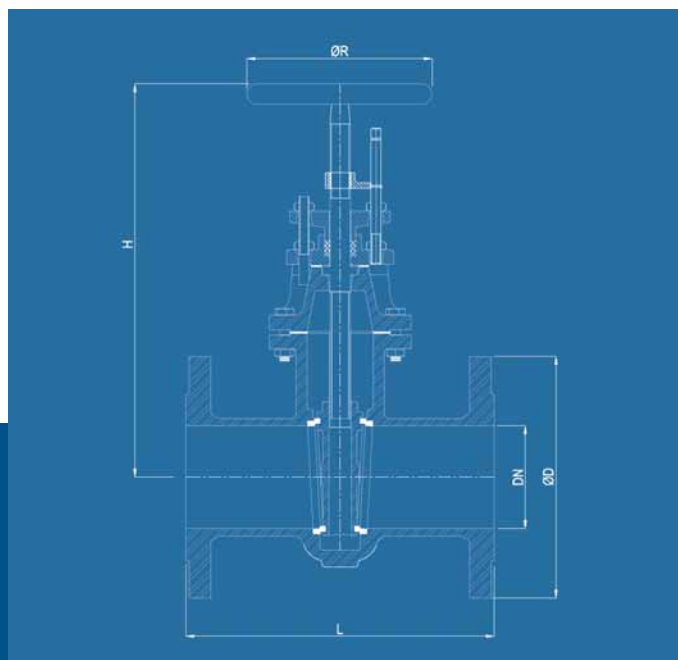


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM

### LONG TYPE - F5 - PN25 WITH INDICATOR



#### DIMENSIONS

DN (mm)	ØD PN25	ØD PN40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	240	310	200	13
50	165	165	250	310	200	14
65	185	185	270	360	250	19
80	200	200	280	380	250	25
100	235	235	300	430	315	32
125	270	270	325	495	315	50
150	300	300	350	545	315	62
200	360	375	400	625	400	110
250	425	450	450	680	500	170
300	485	515	500	900	500	240
350	555	580	550	995	500	340
400	620	660	600	1060	630	450
450	670	685	650	1225	630	590
500	730	755	700	1320	800	790
600	845	890	800	1485	800	1070
700	960	995	900	1685	800	1350
800	1085	1140	1000	1900	800	2300
900	1185	1250	1100	2125	1000	3300
1000	1320	1360	1200	2400	1000	4330



#### TECHNICAL FEATURES

<b>Body</b>	Cast steel
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3352 T2 - with Indicator
<b>Face to Face</b>	EN 558 Series 15 (DIN 3202 F5)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 25 / PN 40
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Drain plug, double threaded stem, o-ring sealing, stem extension , c hain wheel, gearbox
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN, bolted bonnet and adjustable gland and long face to face. Inside screwed stem, non-rising stem and handwheel.
- Application: Warm and cold water. Higher pressure applications.

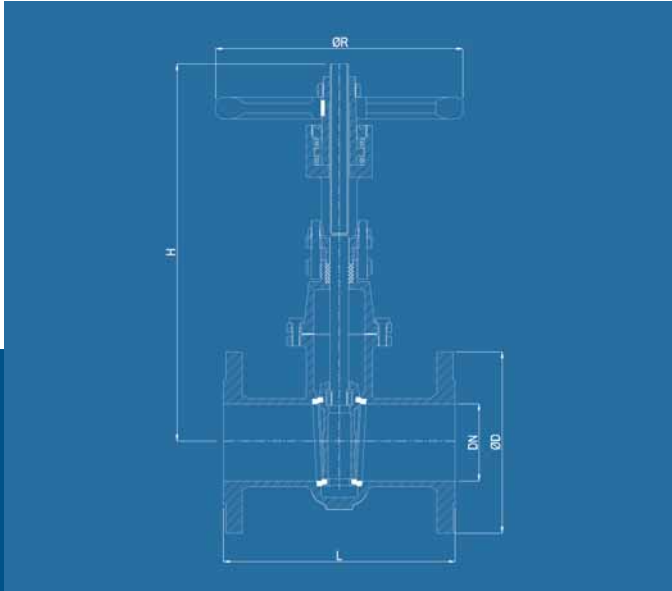


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# TECHNICAL DATA

## GATE VALVE - OS&Y - RISING STEM - NON RISING HANDWHEEL

### LONG TYPE - F5



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	240	410	225	19
50	165	165	205	470	225	20
65	185	185	270	560	280	28
80	200	200	280	580	280	34
100	220	220	300	690	320	42
125	250	250	325	790	360	58
150	285	285	350	895	360	73
200	340	340	400	1030	400	120
250	395	405	450	1220	500	180
300	445	460	500	1405	500	260
350	505	520	550	1595	500	350
400	565	580	600	1810	640	460
450	615	640	650	2000	640	625
500	670	715	700	2195	720	845
600	780	840	800	2575	720	1170
700	895	910	900	3000	720	1480
800	1015	1025	1000	3345	800	2500
900	1115	1125	1100	3740	800	3700
1000	1230	1255	1200	4075	800	4500
1500	1785	1820	1700	6200	1200	8700



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	EN 1171 (DIN 3352 T3)
<b>Face to Face</b>	EN 558 Series 15 (DIN 3202 F5)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Double threaded stem, drain plug, gearbox, actuator extension spindle, rising handwheel
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN PN 10/16, bolted bonnet and with grease nipple. Outside screwed stem and yoke, rising stem and non rising handwheel. Low operation torque, due to bearing support.
- Application: Cold and hot fresh water, lubricating oil.

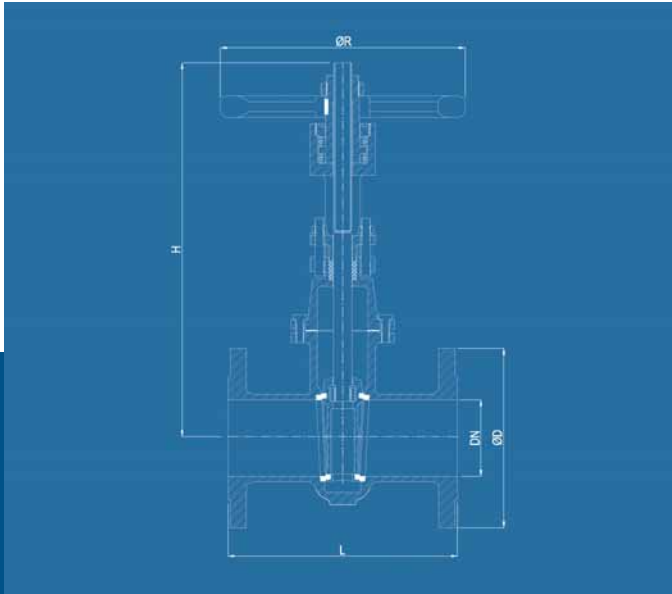


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# TECHNICAL DATA

## GATE VALVE - OS&Y - RISING STEM - NON RISING HANDWHEEL

### LONG TYPE - F5 - PN25



### DIMENSIONS

DN (mm)	ØD PN25	ØD PN40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	240	410	225	19
50	165	165	205	470	225	20
65	185	185	270	560	280	28
80	200	200	280	580	280	34
100	235	235	300	690	320	42
125	270	270	325	790	360	58
150	300	300	350	895	360	73
200	360	375	400	1030	400	120
250	425	450	450	1220	500	180
300	485	515	500	1405	500	260
350	555	580	550	1595	500	350
400	620	660	600	1810	640	460
450	670	685	650	2000	640	625
500	730	755	700	2195	720	845
600	845	890	800	2575	720	1170
700	960	995	900	3000	720	1480
800	1085	1140	1000	3345	800	2500
900	1185	1250	1100	3740	800	3700
1000	1320	1360	1200	4075	800	4500



### TECHNICAL FEATURES

<b>Body</b>	Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3352 T3
<b>Face to Face</b>	EN 558 Series 15 (DIN 3202 F5)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 25 / PN 40
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Double threaded stem, drain plug, gearbox, actuator extension spindle, rising handwheel
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN PN 16/40, bolted bonnet and with grease nipple. Outside screwed stem and yoke, rising stem and non rising handwheel. Low operation torque, due to bearing support
- Application: Cold and hot fresh water, lubricating oil.

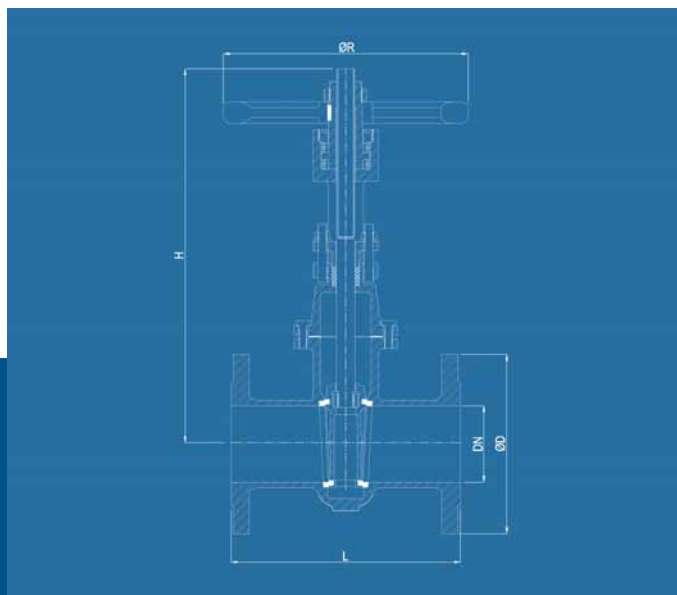


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# TECHNICAL DATA

## GATE VALVE - OS&Y - RISING STEM - NON RISING HANDWHEEL

### LONG TYPE - F5 - PN25



### DIMENSIONS

DN (mm)	ØD PN25	ØD PN40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
40	150	150	240	410	225	19
50	165	165	205	470	225	20
65	185	185	270	560	280	28
80	200	200	280	580	280	34
100	235	235	300	690	320	42
125	270	270	325	790	360	58
150	300	300	350	895	360	73
200	360	375	400	1030	400	120
250	425	450	450	1220	500	180
300	485	515	500	1405	500	260
350	555	580	550	1595	500	350
400	620	660	600	1810	640	460
450	670	685	650	2000	640	625
500	730	755	700	2195	720	845
600	845	890	800	2575	720	1170
700	960	995	900	3000	720	1480
800	1085	1140	1000	3345	800	2500
900	1185	1250	1100	3740	800	3700
1000	1320	1360	1200	4075	800	4500



### TECHNICAL FEATURES

<b>Body</b>	Cast steel
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3352 T3
<b>Face to Face</b>	EN 558 Series 15 (DIN 3202 F5)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 25 / PN 40
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Double threaded stem, drain plug, gearbox, actuator extension spindle, rising handwheel
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS, flat faced flanges

- Gate valves with raised face flanges acc. to DIN PN 16/40, bolted bonnet and with grease nipple. Outside screwed stem and yoke, rising stem and non rising handwheel. Low operation torque, due to bearing support
- Application: Cold and hot fresh water, lubricating oil.

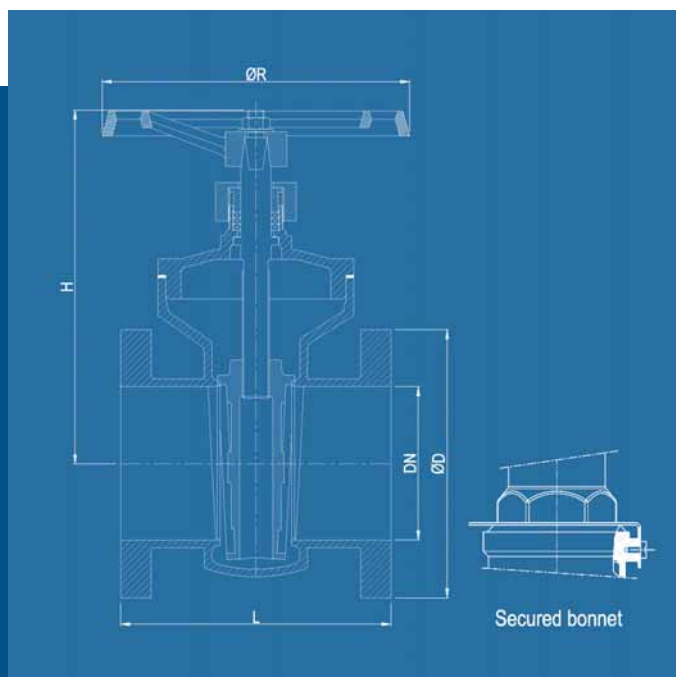


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM

### SCREWED BONNET - FLANGED ENDS



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	PN 16	95	75	90	63	1.8
20	PN 16	105	75	105	63	2.4
25	PN 16	115	80	115	80	2.8
32	PN 16	140	90	130	90	4.7
40	PN 16	150	100	150	90	5.8
50	PN 16	165	110	180	125	7.9
65	PN 16	185	130	220	140	11.7
80	PN 16	200	150	250	160	17.2
100	PN 16	220	160	315	160	23.6

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	DIN 86720 (DIN 3552 T11) - flat flanges
<b>Face to Face</b>	EN 558 series 47 (DIN 3202 F19)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Drain plug, raised faced flanges, secured bonnet
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Gate valves with pressure rating PN 16, flat faced flanges acc. to DIN PN 10/16 and screwed bonnet. Inside screwed stem, non-rising stem and handwheel. Heavy duty construction with flat faced flanges.
- Application: Cold and hot water, saturated steam and other neutral media.

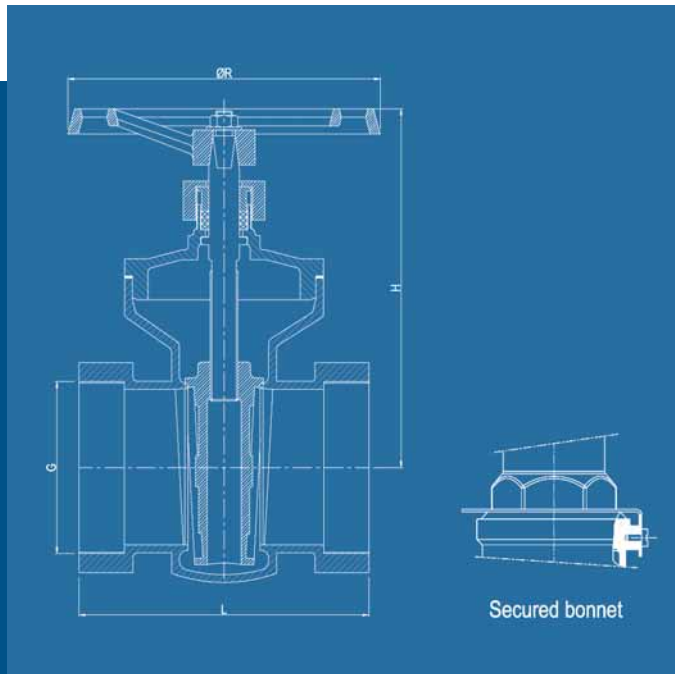


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# TECHNICAL DATA

## GATE VALVE - NON RISING STEM

### SCREWED BONNET - THREADED ENDS



#### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	DIN 3352 T12
<b>Face to Face</b>	DIN 3202 M14
<b>Threaded Ends</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Secured bonnet

- Gate valves with BSP female threaded ends connection, solid wedge, screwed bonnet and acc. to DIN standards.
- Inside screwed stem, non-rising stem and handwheel.
- Application: Cold water, hot water and other neutral media.

#### DIMENSIONS

DN (mm)	G (")	L (mm)	L(Long) (mm)	H (mm)	ØR (mm)	Weight (kg)
15	1/2	55	63	85	63	0.55
20	3/4	60	65	105	63	0.71
25	1	68	75	115	80	1.13
32	1¼	76	90	130	90	1.68
40	1½	80	97	150	90	2.3
50	2	93	105	180	125	2.5
65	2½	110	-	220	140	4.0
80	3	120	-	250	160	6.0
100	4	160	-	320	160	9.0



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## 4 GLOBE VALVES

### TECHNICAL DATA



3100  
3101  
3102

3200  
3201  
3202

3112

3212

3122



3130  
3131

3230  
3231

3222

3142

3242



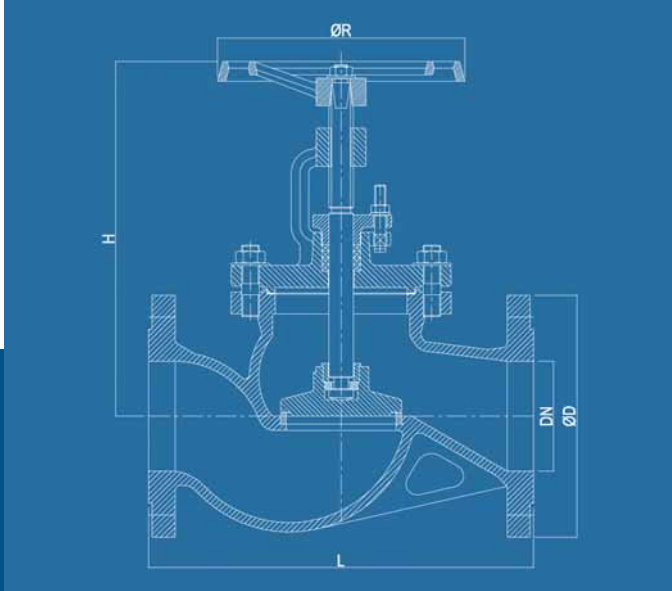
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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT - BOLTED BONNET

### DIN LENGTH - STOP TYPE



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	165	120	3.8
20	105	105	150	165	120	4.0
25	115	115	160	175	140	5.0
32	140	140	180	180	140	7.0
40	150	150	200	220	160	11
50	165	165	230	230	160	13
65	185	185	290	245	180	18
80	200	200	310	295	200	25
100	220	220	350	330	225	35
125	250	250	400	365	250	55
150	285	285	480	420	300	75
175	315	315	550	500	400	115
200	340	340	600	510	400	135
250	395	405	730	600	520	215
300	445	460	850	670	520	305
350	505	520	980	755	640	405
400	565	580	1100	835	640	550
450	615	640	1200	920	640	690
500	670	715	1250	970	640	835
600	780	840	1450	1200	640	1050



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 86251 STOP Type (DIN 3356)
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16 (as mentioned in DIN 86251)
<b>Temperature Range</b>	-10 °C...+180 °C (as mentioned in DIN 86251)
<b>Options</b>	Regulating disc, drain plug
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 4/6/10/16, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: Aboard ships for hot and cold water, oil and steam.

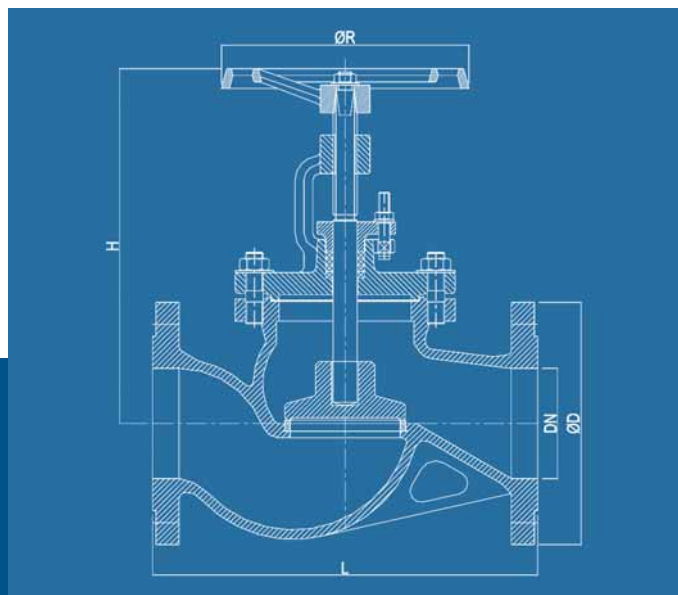


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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT - BOLTED BONNET

### DIN LENGTH - SDNR TYPE



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	165	120	4.0
20	105	105	150	165	120	4.5
25	115	115	160	175	140	5.0
32	140	140	180	180	140	7.0
40	150	150	200	215	160	11
50	165	165	230	225	160	13
65	185	185	290	245	180	19
80	200	200	310	290	200	25
100	220	220	350	330	225	35
125	250	250	400	360	250	58
150	285	285	480	420	300	80
175	315	315	550	495	400	125
200	340	340	600	505	400	145
250	395	405	730	600	520	230
300	445	460	850	670	520	330
350	505	520	980	755	640	440
400	565	580	1100	830	640	605
450	615	640	1200	920	640	750
500	670	715	1250	970	640	900
600	780	840	1450	1200	640	1130



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 86252 SDNR Type (DIN 3356)
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16 (as mentioned in DIN 86252)
<b>Temperature Range</b>	-10 °C...+180 °C (as mentioned in DIN 86252)
<b>Options</b>	Spring loaded, drain plug
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 4/6/10/16, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: Steam, cold and hot water, oil and gases.

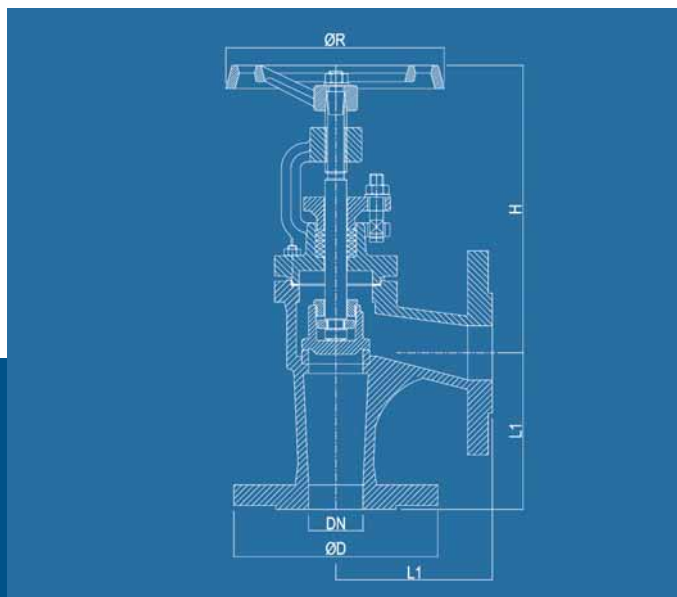


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE - BOLTED BONNET

### DIN LENGTH - STOP TYPE



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	90	160	120	3.8
20	105	105	95	155	120	4.0
25	115	115	100	165	140	5.0
32	140	140	105	170	140	7.0
40	150	150	115	215	160	10
50	165	165	125	215	160	12
65	185	185	145	225	180	17
80	200	200	155	265	200	23
100	220	220	175	305	225	33
125	250	250	200	310	250	50
150	285	285	225	355	300	70
175	315	315	250	420	400	90
200	340	340	275	420	400	110
250	395	405	325	485	520	155
300	445	460	375	535	520	215
350	505	520	425	610	640	275
400	565	580	475	660	640	360
450	615	640	500	700	640	395
500	670	715	525	765	640	485
600	780	840	450+550	810	640	650



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 86251 STOP Type (DIN 3356)
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16 (as mentioned in DIN 86251)
<b>Temperature Range</b>	-10 °C...+180 °C (as mentioned in DIN 86251)
<b>Options</b>	Regulating disc, drain plug
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 4/6/10/16, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: Aboard ships for hot and cold water, oil and steam.

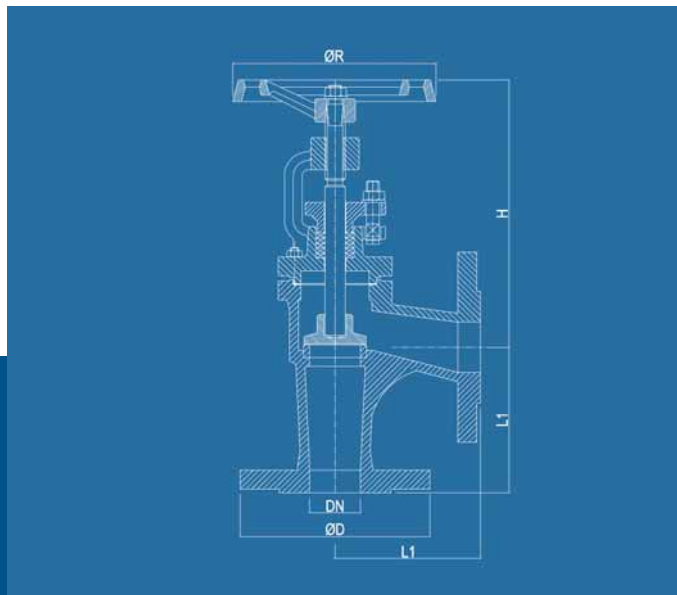


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE - BOLTED BONNET

### DIN LENGTH - SDNR TYPE



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	90	155	120	3.8
20	105	105	95	155	120	4.0
25	115	115	100	160	140	5.0
32	140	140	105	170	140	7.0
40	150	150	115	210	160	10
50	165	165	125	210	160	12
65	185	185	145	225	180	17
80	200	200	155	260	200	23
100	220	220	175	305	225	33
125	250	250	200	310	250	50
150	285	285	225	350	300	70
175	315	315	250	420	400	90
200	340	340	275	420	400	110
250	395	405	325	485	520	155
300	445	460	375	530	520	215
350	505	520	425	610	640	275
400	565	580	475	660	640	360
450	615	640	500	700	640	395
500	670	715	525	765	640	485
600	780	840	450+550	810	640	650



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Face to Face</b>	Bronze or Stainless steel
<b>Design</b>	DIN 86252 SDNR Type (DIN 3356)
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16 (as mentioned in DIN 86252)
<b>Temperature Range</b>	-10 °C...+180 °C (as mentioned in DIN 86252)
<b>Options</b>	Spring loaded, drain plug
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 4/6/10/16, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: Aboard ships for hot and cold water, oil and steam.

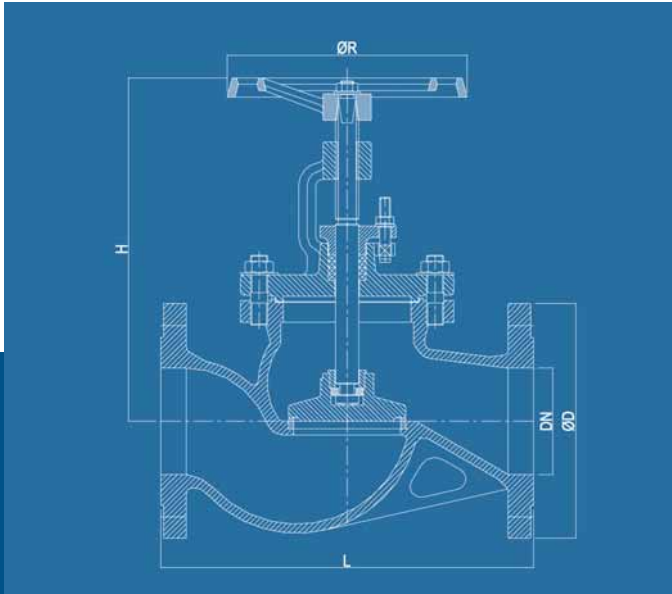


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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT - BOLTED BONNET

### DIN LENGTH - STOP TYPE



### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel (AISI 316)
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	DIN EN 13709 STOP Type (DIN 3356)
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)

### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	ØD PN25	ØD PN40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	95	95	130	165	120	4.0
20	105	105	105	105	150	165	120	4.5
25	115	115	115	115	160	175	140	5.0
32	140	140	140	140	180	180	140	7.0
40	150	150	150	150	200	220	160	11
50	165	165	165	165	230	230	160	13
65	185	185	185	185	290	245	180	19
80	200	200	200	200	310	295	200	25
100	220	220	235	235	350	330	225	35
125	250	250	270	270	400	365	250	58
150	285	285	300	300	480	420	300	80
175	315	315	330	350	550	500	400	125
200	340	340	360	375	600	510	400	145
250	395	405	425	450	730	600	520	230
300	445	460	485	515	850	670	520	330
350	505	520	555	580	980	755	640	440
400	565	580	620	660	1100	835	640	605
450	615	640	670	685	1200	920	640	750
500	670	715	730	755	1250	970	640	900
600	780	840	845	890	1450	1200	640	1130

**Pressure Rating** PN 4 - PN 40

**Temperature Range** -10 °C...+300 °C

**Options** Regulating disc, drain plug, balance disc

**Flange Options** Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 4/6/10/16/25/40, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: Steam, cold and hot water, oil and gases and aggressive media, for higher temperatures and pressures.

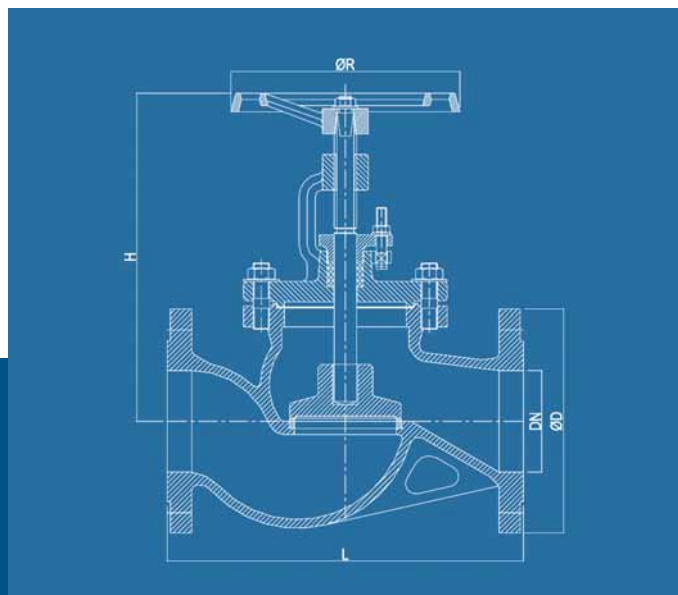


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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT - BOLTED BONNET

### DIN LENGTH - SDNR TYPE



### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel (AISI 316)
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	DIN EN 13709 STOP Type (DIN 3356)
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)

### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	ØD PN25	ØD PN40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	95	95	130	165	120	4.0
20	105	105	105	105	150	165	120	4.5
25	115	115	115	115	160	175	140	5.0
32	140	140	140	140	180	180	140	7.0
40	150	150	150	150	200	215	160	11
50	165	165	165	165	230	225	160	13
65	185	185	185	185	290	245	180	19
80	200	200	200	200	310	290	200	25
100	220	220	235	235	350	330	225	35
125	250	250	270	270	400	360	250	58
150	285	285	300	300	480	420	300	80
175	315	315	330	350	550	495	400	125
200	340	340	360	375	600	505	400	145
250	395	405	425	450	730	600	520	230
300	445	460	485	515	850	670	520	330
350	505	520	555	580	980	755	640	440
400	565	580	620	660	1100	830	640	605
450	615	640	670	685	1200	920	640	750
500	670	715	730	755	1250	970	640	900
600	780	840	845	890	1450	1200	640	1130

<b>Pressure Rating</b>	PN 4 - PN 40
<b>Temperature Range</b>	-10 °C...+300 °C
<b>Options</b>	Spring loaded, drain plug
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 4/6/10/16/25/40, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: Aboard ships for hot and cold water, oil and steam, high pressure liquids.

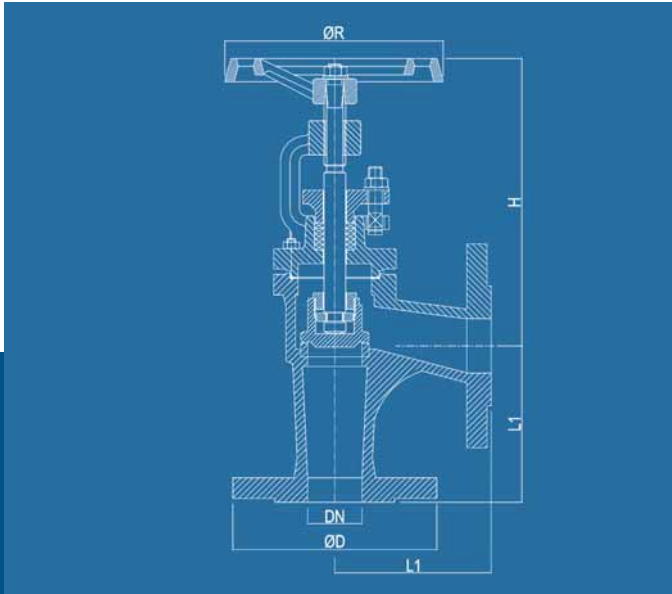


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE - BOLTED BONNET

### DIN LENGTH - STOP TYPE



### TECHNICAL FEATURES

<b>Body</b>	Cast steel
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	DIN EN 13709 STOP Type (DIN 3356)
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)

### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	ØD PN25	ØD PN40	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	95	95	90	160	120	3.8
20	105	105	105	105	95	155	120	4.0
25	115	115	115	115	100	165	140	5.0
32	140	140	140	140	105	170	140	7.0
40	150	150	150	150	115	215	160	10
50	165	165	165	165	125	215	160	12
65	185	185	185	185	145	225	180	17
80	200	200	200	200	155	265	200	23
100	220	220	235	235	175	305	225	33
125	250	250	270	270	200	310	250	50
150	285	285	300	300	225	355	300	70
175	315	315	330	350	250	420	400	90
200	340	340	360	375	275	420	400	110
250	395	405	425	450	325	485	520	155
300	445	460	485	515	375	535	520	215
350	505	520	555	580	425	610	640	275
400	565	580	620	660	475	660	640	360
450	615	640	670	685	500	700	640	395
500	670	715	730	755	525	765	640	485
600	780	840	845	890	450+550	810	640	650

**Pressure Rating** PN 4 - PN 40

**Temperature Range** -10 °C...+300 °C

**Options** Regulating disc, drain plug, balance disc

**Flange Options** Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 4/6/10/16/25/40, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: Aboard ships for hot and cold water, oil and steam, high pressure liquids.

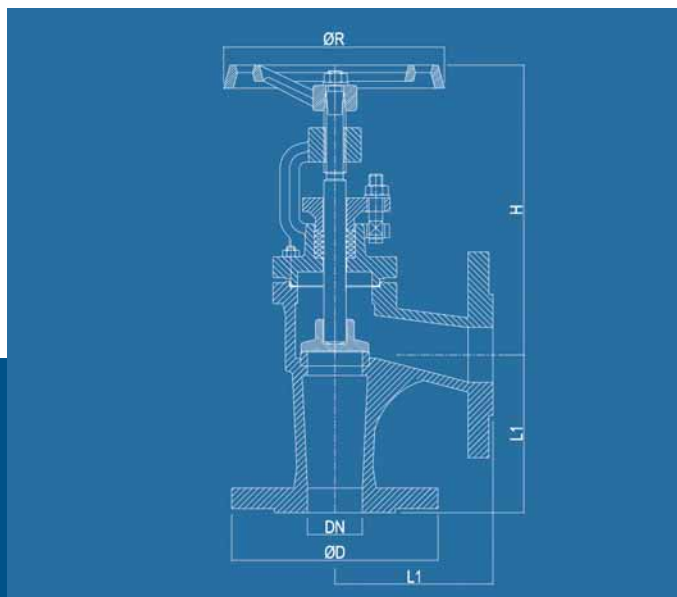


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE - BOLTED BONNET

### DIN LENGTH - SDNR TYPE



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	ØD PN25	ØD PN40	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	95	95	90	155	120	3.8
20	105	105	105	105	95	155	120	4.0
25	115	115	115	115	100	160	140	5.0
32	140	140	140	140	105	170	140	7.0
40	150	150	150	150	115	210	160	10
50	165	165	165	165	125	210	160	12
65	185	185	185	185	145	225	180	17
80	200	200	200	200	155	260	200	23
100	220	220	235	235	175	305	225	33
125	250	250	270	270	200	310	250	50
150	285	285	300	300	225	350	300	70
175	315	315	330	350	250	420	400	90
200	340	340	360	375	275	420	400	110
250	395	405	425	450	325	485	520	155
300	445	460	485	515	375	530	520	215
350	505	520	555	580	425	610	640	275
400	565	580	620	660	475	660	640	360
450	615	640	670	685	500	700	640	395
500	670	715	730	755	525	765	640	485
600	780	840	845	890	450+550	810	640	650



### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	DIN EN 13709 STOP Type (DIN 3356)
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)

**Pressure Rating** PN 4 - PN 40

**Temperature Range** -10 °C...+300 °C

**Options** Spring loaded, drain plug

**Flange Options** Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 4/6/10/16/25/40, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: Aboard ships for hot and cold water, oil and steam, high pressure liquids.



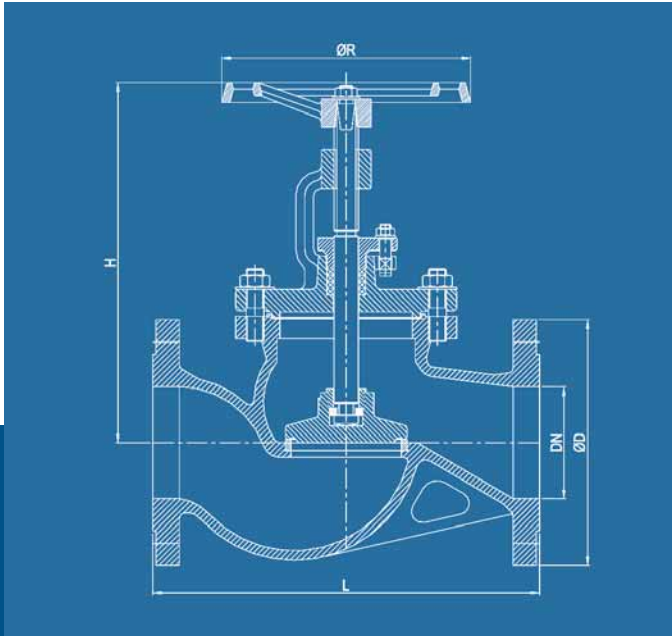
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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT

**BOLTED BONNET**  
**DIN LENGTH - STOP TYPE**



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	165	120	3.8
20	105	105	150	165	120	4.2
25	115	115	160	175	140	5.0
32	140	140	180	180	140	7.0
40	150	150	200	220	160	11
50	165	165	230	230	160	13
65	185	185	290	245	180	18
80	200	200	310	295	200	22
100	220	220	350	330	225	34
125	250	250	400	365	250	48
150	285	285	480	420	300	70
175	315	315	550	500	400	122
200	340	340	600	510	400	146
250	395	405	730	600	520	250
300	445	460	850	670	520	350
350	505	520	980	755	640	450
400	565	580	1100	835	640	625
450	615	640	1200	920	640	770
500	670	715	1250	970	640	980
600	780	840	1450	1200	640	1200



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	DIN 86260-A STOP type (DIN 3356)
<b>Face to Face</b>	EN 558 series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16 (as mentioned in DIN 86260)
<b>Temperature Range</b>	-10 °C...+180 °C (as mentioned in DIN 86260)
<b>Options</b>	Drain plug, indicator, regulating disc
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 4/6/10/16, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: The valves offer good resistance to corrosive action of seawater, fresh water and waste water.

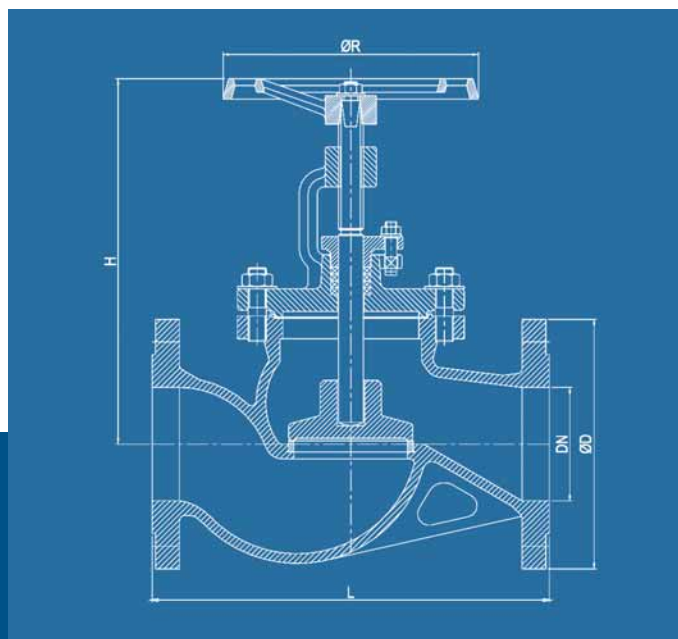


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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT

**BOLTED BONNET**  
**DIN LENGTH - SDNR TYPE**



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	165	120	3.8
20	105	105	150	165	120	4.2
25	115	115	160	175	140	5.0
32	140	140	180	180	140	7.0
40	150	150	200	215	160	11
50	165	165	230	225	160	13
65	185	185	290	245	180	18
80	200	200	310	290	200	22
100	220	220	350	330	225	34
125	250	250	400	360	250	48
150	285	285	480	420	300	70
175	315	315	550	495	400	122
200	340	340	600	505	400	146
250	395	405	730	600	520	250
300	445	460	850	670	520	350
350	505	520	980	755	640	450
400	565	580	1100	830	640	625
450	615	640	1200	920	640	770
500	670	715	1250	970	640	980
600	780	840	1450	1200	640	1200



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	DIN 86261-A SDNR type (DIN 3356)
<b>Face to Face</b>	EN 558 series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16 (as mentioned in DIN 86261)
<b>Temperature Range</b>	-10 °C...+180 °C (as mentioned in DIN 86261)
<b>Options</b>	Drain plug, indicator, with spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 4/6/10/16, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: The valves offer good resistance to corrosive action of seawater, fresh water and waste water.

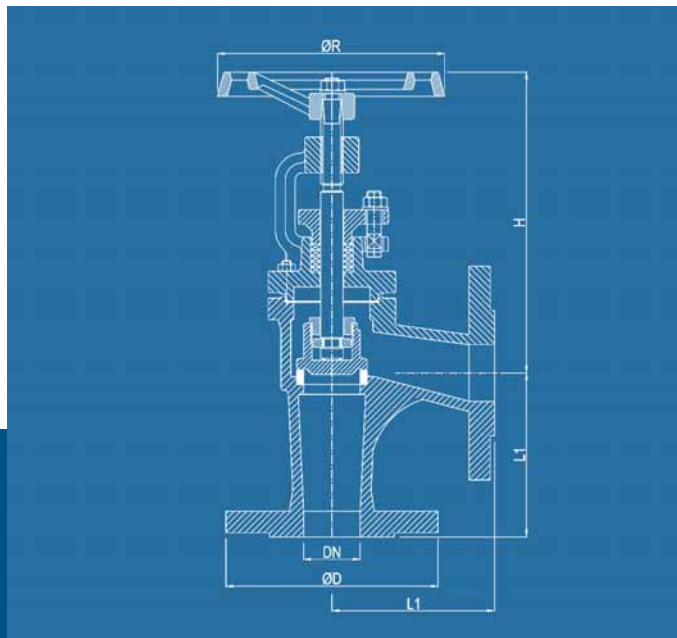


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE

**BOLTED BONNET**  
**DIN LENGTH - STOP TYPE**



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	90	160	120	3.6
20	105	105	95	155	120	4.1
25	115	115	100	165	140	5.0
32	140	140	105	170	140	7.0
40	150	150	115	215	160	10
50	165	165	125	215	160	12
65	185	185	145	225	180	17
80	200	200	155	265	200	21
100	220	220	175	305	225	33
125	250	250	200	310	250	50
150	285	285	225	355	300	70
175	315	315	250	420	400	96
200	340	340	275	420	400	120
250	395	405	325	485	520	160
300	445	460	375	535	520	240
350	505	520	425	610	640	290
400	565	580	475	660	640	430
450	615	640	500	925	640	460
500	670	715	525	765	640	495
600	780	840	450+550	1400	640	660

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	DIN 86260-B STOP type (DIN 3356)
<b>Face to Face</b>	EN 558 series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN16 (as mentioned in DIN 86260)
<b>Temperature Range</b>	-10 °C...+180 °C (as mentioned in DIN 86260)
<b>Options</b>	Drain plug, indicator, regulating disc
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

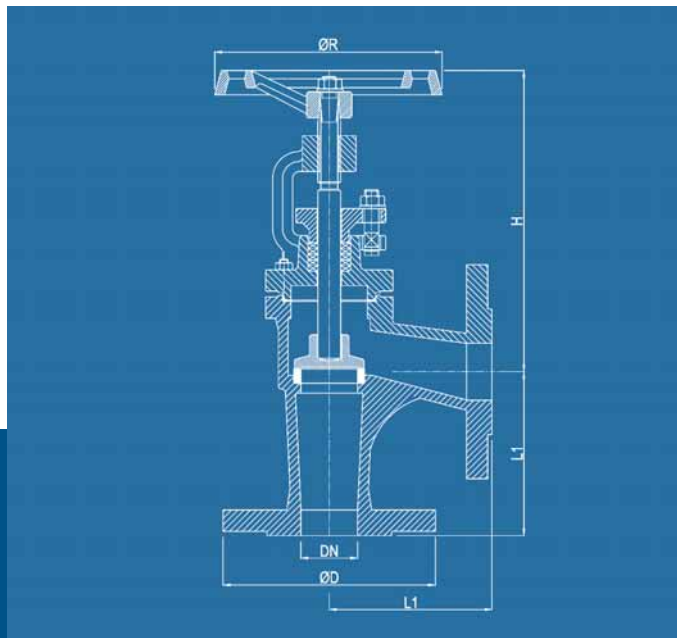
- Globe valves with pressure rating PN 4/6/10/16, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: the valves offer good resistance to corrosive action of seawater, fresh water and waste water.



# TECHNICAL DATA

## GLOBE VALVE - ANGLE

**BOLTED BONNET**  
**DIN LENGTH - SDNR TYPE**



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	90	155	120	3.6
20	105	105	95	155	120	4.1
25	115	115	100	160	140	5.0
32	140	140	105	170	140	7.0
40	150	150	115	210	160	10
50	165	165	125	210	160	12
65	185	185	145	225	180	17
80	200	200	155	260	200	21
100	220	220	175	305	225	33
125	250	250	200	310	250	50
150	285	285	225	350	300	70
175	315	315	250	420	400	96
200	340	340	275	420	400	120
250	395	405	325	485	520	160
300	445	460	375	530	520	240
350	505	520	425	610	640	290
400	565	580	475	660	640	430
450	615	640	500	700	640	460
500	670	715	525	765	640	495
600	780	840	450+550	810	640	660

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	DIN 86261-B SDNR type (DIN 3356)
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN16 (as mentioned in DIN 86261)
<b>Temperature Range</b>	-10 °C...+180 °C (as mentioned in DIN 86261)
<b>Options</b>	Drain plug, indicator, with spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

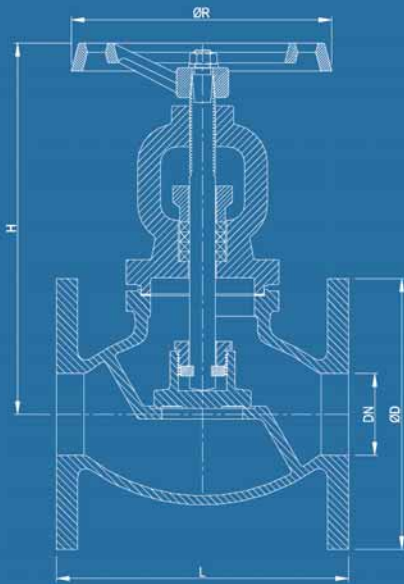
- Globe valves with pressure rating PN 4/6/10/16, bolted bonnet, outside screw & yoke. Raised face flanges according to DIN. TYPE APPROVED.
- Application: the valves offer good resistance to corrosive action of seawater, fresh water and waste water.



# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT

**BOLTED BONNET**  
**SPECIAL LENGTH - STOP TYPE**



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	PN 16	95	120	165	120	3.8
20	PN 16	105	120	165	120	4.2
25	PN 16	115	140	170	140	5.0
32	PN 16	140	150	180	140	6.0
40	PN 16	150	155	220	160	10
50	PN 16	165	180	235	160	12
65	PN 16	185	200	240	180	15
80	PN 16	200	240	280	200	21
100	PN 16	220	270	310	225	34
125	PN 16	250	320	350	250	50
150	PN 16	285	370	385	300	72
200	PN 10	340	500	490	400	122

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, STOP type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Drain plug, indicator, regulating disc
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 10/16, bolted bonnet, outside screw & yoke. Heavy pattern for ship building industry. TYPE APPROVED.
- Flat faced flanges according to DIN.
- Application: The valves offer good resistance to corrosive action of seawater, fresh water and waste water.



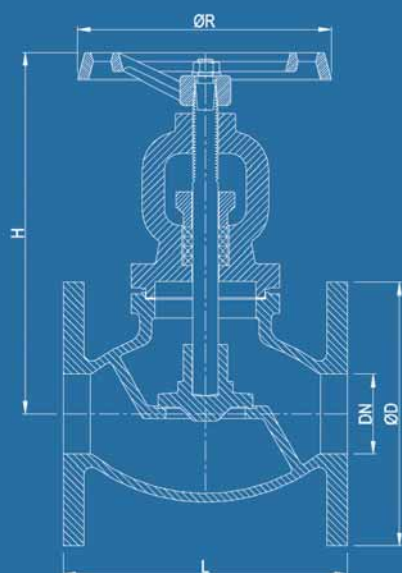
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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT

**BOLTED BONNET**

**SPECIAL LENGTH - SDNR TYPE**



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	PN 16	95	120	165	120	3.8
20	PN 16	105	120	165	120	4.2
25	PN 16	115	140	170	140	5.0
32	PN 16	140	150	180	140	6.0
40	PN 16	150	155	220	160	10
50	PN 16	165	180	230	160	12
65	PN 16	185	200	245	180	15
80	PN 16	200	240	280	200	21
100	PN 16	220	270	310	225	34
125	PN 16	250	320	355	250	50
150	PN 16	285	370	385	300	72
200	PN 10	340	500	490	400	122

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, SDNR type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Drain plug, indicator, with spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 10/16, bolted bonnet, outside screw & yoke. Heavy pattern for ship building industry. TYPE APPROVED.
- Flat faced flanges according to DIN.
- Application: The valves offer good resistance to corrosive action of seawater, fresh water and waste water.

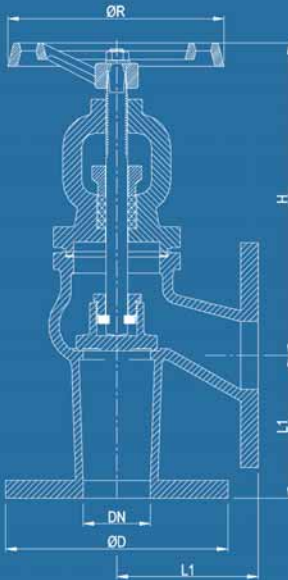


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE

**BOLTED BONNET**  
**SPECIAL LENGTH - STOP TYPE**



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	PN 16	95	65	155	120	3.6
20	PN 16	105	65	155	120	4.0
25	PN 16	115	70	155	140	4.5
32	PN 16	140	90	160	140	5.5
40	PN 16	150	90	200	160	9.0
50	PN 16	165	105	210	160	11
65	PN 16	185	115	210	180	15
80	PN 16	200	125	245	200	20
100	PN 16	220	145	275	225	28
125	PN 16	250	170	305	250	42
150	PN 16	285	200	340	300	65
200	PN 10	340	250	570	400	90

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, STOP type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	With drain plug, indicator, regulating disc
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 10/16, bolted bonnet, outside screw & yoke. Heavy pattern for ship building industry. TYPE APPROVED.
- Flat faced flanges according to DIN.
- Application: the valves offer good resistance to corrosive action of seawater, fresh water and waste water.

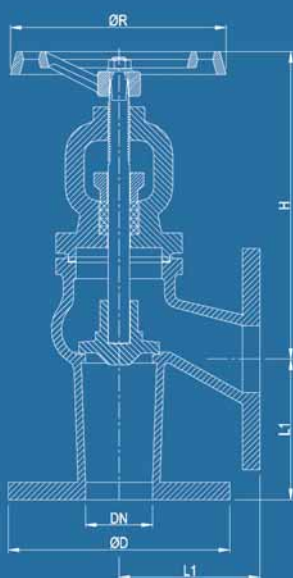


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE

**BOLTED BONNET**  
**SPECIAL LENGTH - SDNR TYPE**



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	PN 16	95	65	155	120	3.6
20	PN 16	105	65	155	120	4.0
25	PN 16	115	70	155	140	4.5
32	PN 16	140	90	160	140	5.5
40	PN 16	150	90	195	160	9.0
50	PN 16	165	105	205	160	11
65	PN 16	185	115	215	180	15
80	PN 16	200	125	245	200	20
100	PN 16	220	145	275	225	28
125	PN 16	250	170	305	250	42
150	PN 16	285	200	340	300	65
200	PN 10	340	250	570	400	90

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, SDNR type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Drain plug, indicator, with spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 10/16, bolted bonnet, outside screw & yoke. Heavy pattern for ship building industry. TYPE APPROVED.
- Flat faced flanges according to DIN.
- Application: the valves offer good resistance to corrosive action of seawater, fresh water and waste water.



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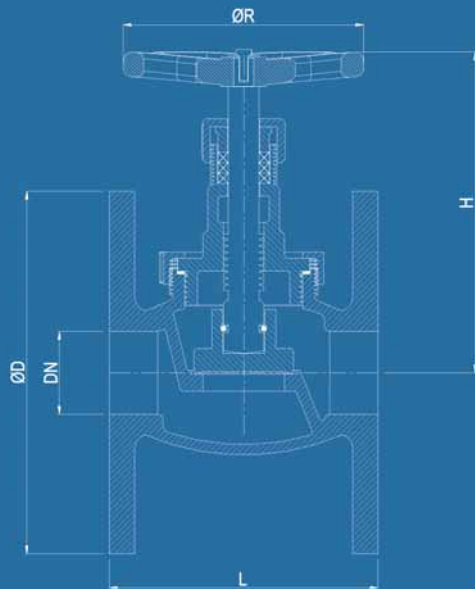


# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT

SCREWED BONNET

SECURED BONNET - STOP TYPE



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	PN 16	95	70	102	63	1.5
20	PN 16	105	80	117	80	2.3
25	PN 16	115	90	124	80	3.0
32	PN 16	140	105	130	90	5.0
40	PN 16	150	120	147	100	6.5
50	PN 16	165	140	172	125	8.0
65	PN 16	185	180	230	160	13
80	PN 16	200	200	250	200	17
100	PN 16	220	230	250	200	21

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, short pattern, STOP type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Regulating disc
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 16, straight pattern, flat faced flanges acc. to DIN PN 16, screwed and secured bonnet, inside screwed stem and rising handwheel.  
Primary application area is aboard ships where a light bronze construction is desirable. TYPE APPROVED.
- Application: Sea water, water and low pressure steam.



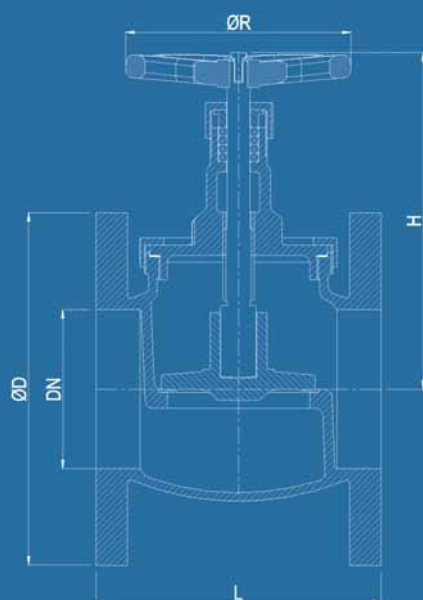
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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT

SCREWED BONNET

SECURED BONNET - SDNR TYPE



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	PN 16	95	70	102	63	1.5
20	PN 16	105	80	117	80	2.3
25	PN 16	115	90	124	80	3.0
32	PN 16	140	105	130	90	5.0
40	PN 16	150	120	147	100	6.5
50	PN 16	165	140	172	125	8.0
65	PN 16	185	180	230	160	13
80	PN 16	200	200	250	200	17
100	PN 16	220	230	250	200	21

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, short pattern, SDNR type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	With spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 16, straight pattern, flat faced flanges acc. to DIN PN 10/16, screwed and secured bonnet, inside screwed stem and rising handwheel. Primary application area is aboard ships where a light bronze construction is desirable. TYPE APPROVED.
- Application: Sea water, water and low pressure steam.

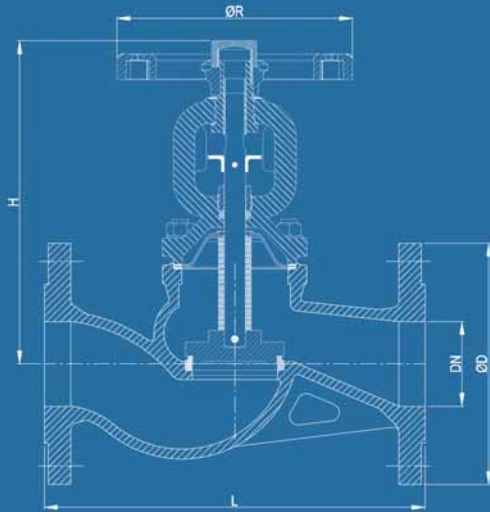


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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT - BELLOW SEALED

### STOP TYPE



### DIMENSIONS

DN (mm)	ØD PN10/16	ØD PN25/40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	190	120	4.0
20	105	105	150	190	120	4.5
25	115	115	160	190	140	6.0
32	140	140	180	195	140	8.0
40	150	150	200	220	160	11
50	165	165	230	210	160	13
65	185	185	290	230	180	19
80	200	200	310	260	200	25
100	220	235	350	345	225	35
125	250	270	400	340	250	55
150	285	300	480	435	300	80
200	340	360/375	600	550	400	135

### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	Body: DIN 86251 STOP Type
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 16 - PN 40
<b>Temperature Range</b>	-10 °C...+300 °C
<b>Options</b>	Regulating disc, balance disc
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Double skinned bellow sealed globe valves with safety packing as secondary seal, straight pattern, raised face flanges acc. to DIN standards. TYPE APPROVED. With standard position indicator, grease nipple, outside screwed stem and non rising handwheel.
- Application: Industry, power stations, steam installations, heating systems.

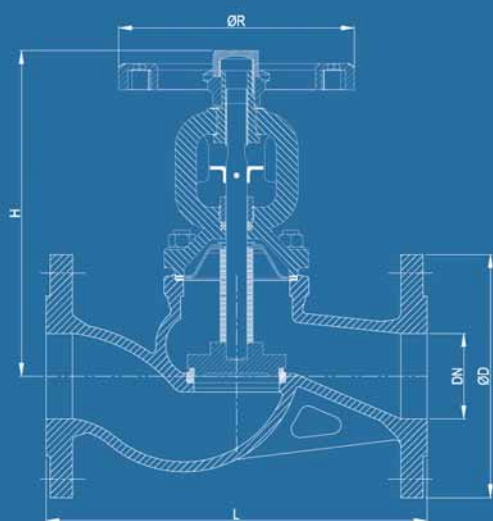


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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT - BELLOW SEALED

### SDNR TYPE



### DIMENSIONS

DN (mm)	ØD PN10/16	ØD PN25/40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	190	120	4.0
20	105	105	150	190	120	4.5
25	115	115	160	190	140	6.0
32	140	140	180	195	140	8.0
40	150	150	200	220	160	11
50	165	165	230	210	160	13
65	185	185	290	230	180	19
80	200	200	310	260	200	25
100	220	235	350	345	225	35
125	250	270	400	340	250	55
150	285	300	480	435	300	80
200	340	360/375	600	550	400	135

### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	Body: DIN 86252 SDNR Type
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 16 - PN 40
<b>Temperature Range</b>	-10 °C...+300 °C
<b>Options</b>	Stem extension
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Double skinned bellow sealed globe valves with safety packing as secondary seal, straight pattern, raised face flanges acc. to DIN standards. TYPE APPROVED. With standard position indicator, grease nipple, outside screwed stem and non rising handwheel.
- Application: Industry, power stations, steam installations, heating systems.

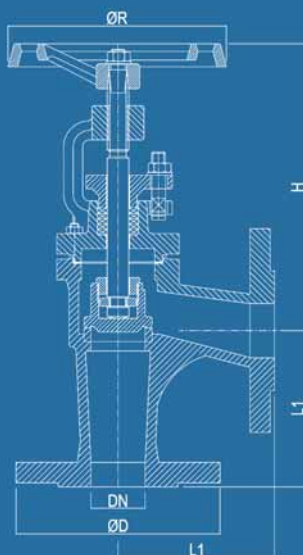


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE - BELLOW SEALED

### STOP TYPE



### DIMENSIONS

DN (mm)	ØD PN10/16	ØD PN25/40	L1 (mm)	H1 (mm)	ØR (mm)	Weight (kg)
15	95	95	90	180	120	4.0
20	105	105	95	180	120	4.5
25	115	115	100	180	140	5.0
32	140	140	105	185	140	7.0
40	150	150	115	200	160	8.5
50	165	165	125	210	160	11
65	185	185	145	220	180	15
80	200	200	155	250	200	20
100	220	220	175	320	225	31
125	250	270	200	350	250	49
150	285	300	225	375	300	63
200	340	360/375	275	500	400	105

### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	DIN 86251 Stop Type
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 16 - PN 40
<b>Temperature Range</b>	-10 °C...+300 °C
<b>Options</b>	Regulating disc
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Double skinned bellow sealed globe valves with safety packing as secondary seal aple pattern, raised face flanges acc. to DIN standards. With standard position indicator, grease nipple, outside screwed stem and non rising handwheel.
- Application: Industry, power stations, steam installations, heating systems.

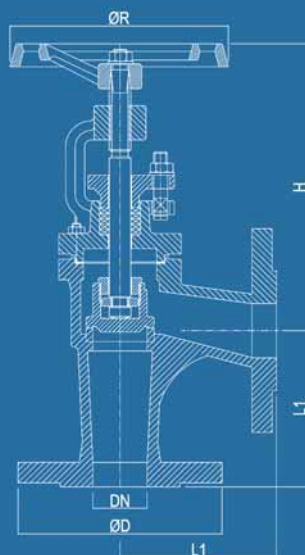


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE - BELLOW SEALED

### SDNR TYPE



### DIMENSIONS

DN (mm)	ØD PN10/16	ØD PN25/40	L1 (mm)	H1 (mm)	ØR (mm)	Weight (kg)
15	95	95	90	180	120	4.0
20	105	105	95	180	120	4.5
25	115	115	100	180	140	5.0
32	140	140	105	185	140	7.0
40	150	150	115	200	160	8.5
50	165	165	125	210	160	11
65	185	185	145	220	180	15
80	200	200	155	250	200	20
100	220	220	175	320	225	31
125	250	270	200	350	250	49
150	285	300	225	375	300	63
200	340	360/375	275	500	400	105

### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	DIN 86252 SDNR Type
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 16 - PN 40
<b>Temperature Range</b>	-10 °C...+300 °C
<b>Options</b>	Stem extension
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Double skinned bellow sealed globe valves with safety packing as secondary seal aple pattern, raised face flanges acc. to DIN standards. With standard position indicator, grease nipple, outside screwed stem and non rising handwheel.
- Application: Industry, power stations, steam installations, heating systems.

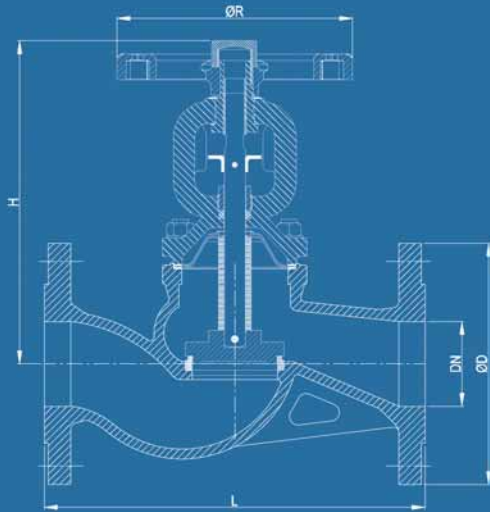


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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT - BELLOW SEALED

### STOP TYPE



### DIMENSIONS

DN (mm)	ØD PN10/16	ØD PN25/40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	190	120	4.0
20	105	105	150	190	120	4.5
25	115	115	160	190	140	6.0
32	140	140	180	195	140	8.0
40	150	150	200	220	160	11
50	165	165	230	210	160	13
65	185	185	290	230	180	19
80	200	200	310	260	200	25
100	220	235	350	345	225	35
125	250	270	400	340	250	55
150	285	300	480	435	300	80
200	340	360/375	600	550	400	135

### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	Body: DIN 86251 STOP Type
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 16 - PN 40
<b>Temperature Range</b>	-10 °C...+300 °C
<b>Options</b>	Regulating disc, balance disc
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Double skinned bellow sealed globe valves with safety packing as secondary seal, straight pattern, raised face flanges acc. to DIN standards. TYPE APPROVED. With standard position indicator, grease nipple, outside screwed stem and non rising handwheel.
- Application: Industry, power stations, steam installations, heating systems.

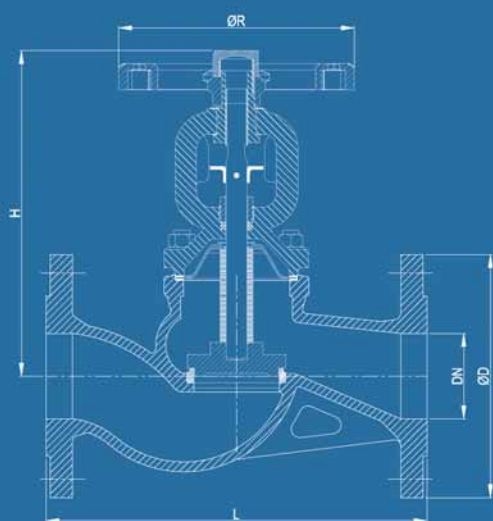


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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT - BELLOW SEALED

### SDNR TYPE



### DIMENSIONS

DN (mm)	ØD PN10/16	ØD PN25/40	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	190	120	4.0
20	105	105	150	190	120	4.5
25	115	115	160	190	140	6.0
32	140	140	180	195	140	8.0
40	150	150	200	220	160	11
50	165	165	230	210	160	13
65	185	185	290	230	180	19
80	200	200	310	260	200	25
100	220	235	350	345	225	35
125	250	270	400	340	250	55
150	285	300	480	435	300	80
200	340	360/375	600	550	400	135

### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	Body: DIN 86252 SDNR Type
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 16 - PN 40
<b>Temperature Range</b>	-10 °C...+300 °C
<b>Options</b>	Stem extension
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Double skinned bellow sealed globe valves with safety packing as secondary seal, straight pattern, raised face flanges acc. to DIN standards. TYPE APPROVED. With standard position indicator, grease nipple, outside screwed stem and non rising handwheel.
- Application: Industry, power stations, steam installations, heating systems.



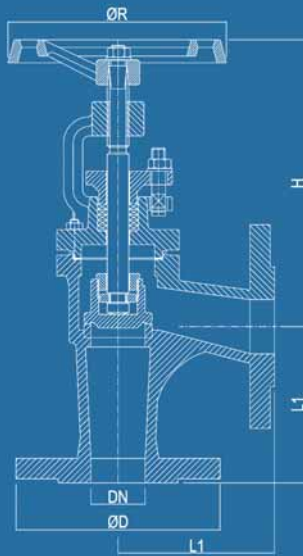
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# TECHNICAL DATA

## GLOBE VALVE - ANGLE - BELLOW SEALED

### STOP TYPE



### DIMENSIONS

DN (mm)	ØD PN10/16	ØD PN25/40	L1 (mm)	H1 (mm)	ØR (mm)	Weight (kg)
15	95	95	90	180	120	4.0
20	105	105	95	180	120	4.5
25	115	115	100	180	140	5.0
32	140	140	105	185	140	7.0
40	150	150	115	200	160	8.5
50	165	165	125	210	160	11
65	185	185	145	220	180	15
80	200	200	155	250	200	20
100	220	220	175	320	225	31
125	250	270	200	350	250	49
150	285	300	225	375	300	63
200	340	360/375	275	500	400	105

### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	DIN 86251 Stop Type
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 16 - PN 40
<b>Temperature Range</b>	-10 °C...+300 °C
<b>Options</b>	Regulating disc
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Double skinned bellow sealed globe valves with safety packing as secondary seal aple pattern, raised face flanges acc. to DIN standards. With standard position indicator, grease nipple, outside screwed stem and non rising handwheel.
- Application: Industry, power stations, steam installations, heating systems.

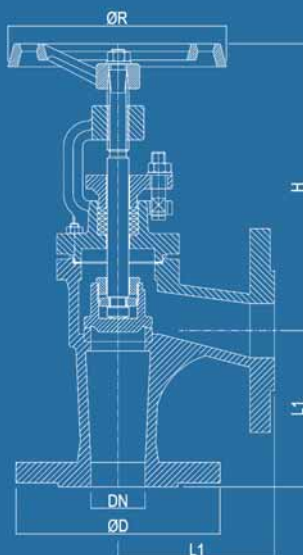


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE - BELLOW SEALED

### SDNR TYPE



### DIMENSIONS

DN (mm)	ØD PN10/16	ØD PN25/40	L1 (mm)	H1 (mm)	ØR (mm)	Weight (kg)
15	95	95	90	180	120	4.0
20	105	105	95	180	120	4.5
25	115	115	100	180	140	5.0
32	140	140	105	185	140	7.0
40	150	150	115	200	160	8.5
50	165	165	125	210	160	11
65	185	185	145	220	180	15
80	200	200	155	250	200	20
100	220	220	175	320	225	31
125	250	270	200	350	250	49
150	285	300	225	375	300	63
200	340	360/375	275	500	400	105

### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Stem/seat</b>	Stainless steel
<b>Design</b>	DIN 86252 SDNR Type
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 16 - PN 40
<b>Temperature Range</b>	-10 °C...+300 °C
<b>Options</b>	Stem extension
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Double skinned bellow sealed globe valves with safety packing as secondary seal aple pattern, raised face flanges acc. to DIN standards. With standard position indicator, grease nipple, outside screwed stem and non rising handwheel.
- Application: Industry, power stations, steam installations, heating systems.



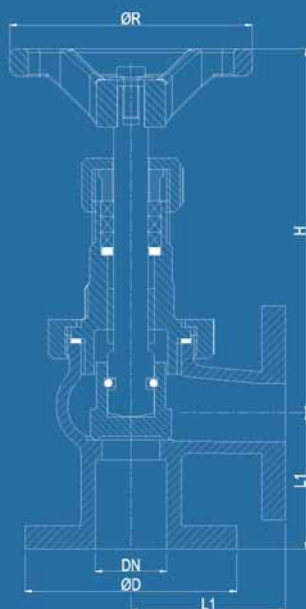
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# TECHNICAL DATA

## GLOBE VALVE - ANGLE

SCREWED BONNET

SECURED BONNET - STOP TYPE



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	PN 16	95	65	86	63	2.0
20	PN 16	105	70	100	80	2.7
25	PN 16	115	75	105	80	3.0
32	PN 16	140	90	120	90	4.6
40	PN 16	150	100	135	100	6.0
50	PN 16	165	105	150	125	8.0
65	PN 16	185	115	210	160	12
80	PN 16	200	125	230	200	14

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, short pattern, STOP type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Regulating disc
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 16, angle pattern, flat faced flanges acc. to DIN PN 16, screwed and secured bonnet, inside screwed stem and rising handwheel. TYPE APPROVED.
- Application: Sea water, water and low pressure steam.



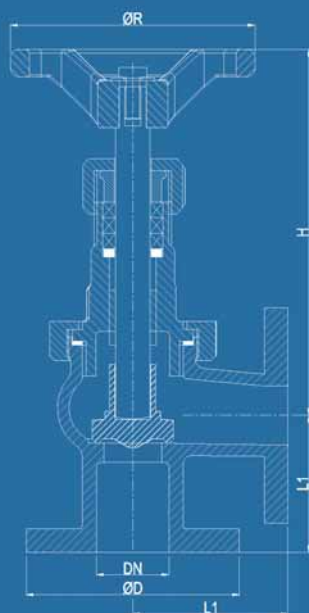
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# TECHNICAL DATA

## GLOBE VALVE - ANGLE

SCREWED BONNET

SECURED BONNET - SDNR TYPE



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	PN 16	95	65	86	86	1.9
20	PN 16	105	70	100	100	2.7
25	PN 16	115	75	105	105	3.0
32	PN 16	140	90	120	120	4.6
40	PN 16	150	100	135	135	6.0
50	PN 16	165	105	150	150	8.0
65	PN 16	185	115	210	210	12
80	PN 16	200	125	230	230	14

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, short pattern, SDNR type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	With spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Globe valves with pressure rating PN 16, angle pattern, flat faced flanges acc. to DIN PN 16, screwed and secured bonnet, inside screwed stem and rising handwheel. TYPE APPROVED.
- Application: Sea water, water and low pressure steam.

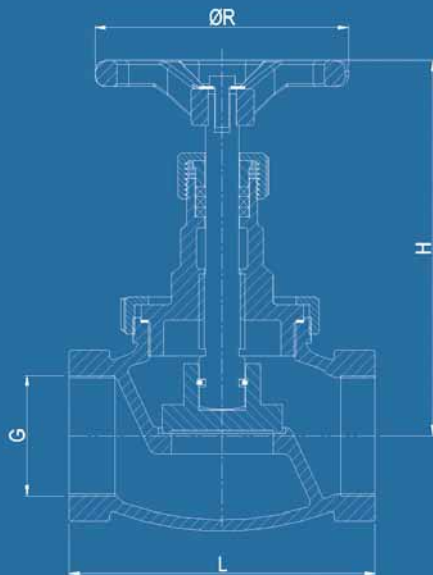


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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT

SCREWED BONNET  
THREADED ENDS - STOP TYPE



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, screwed and secured bonnet, STOP type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999))
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Regulating disc

- Globe valves with screwed and secured bonnet, metal seated, straight pattern, BSP female threaded ends.
- Inside screwed stem and rising handwheel. Primary application area is aboard ships where a light bronze construction is desirable.
- Application: Sea water, water and low pressure steam.

### DIMENSIONS

DN (mm)	Pressure rating	G (")	L (mm)	L (mm)	L (mm)	H (mm)	ØR (mm)	Weight (kg)
			STANDARD	SHORT TYPE	LONG TYPE			
10	PN 16	3/8	60	50	56	102	63	0.6
15	PN 16	1/2	65	60	67	102	63	0.6
20	PN 16	3/4	75	70	80	117	80	0.98
25	PN 16	1	90	80	95	124	80	1.4
32	PN 16	1 ¼	105	95	112	130	90	2.0
40	PN 16	1 ½	120	105	132	147	100	3.1
50	PN 16	2	145	130	160	172	125	4.4
65	PN 16	2 ½	170	-	-	180	160	6.0
80	PN 16	3	200	-	-	230	200	8.0
100	PN 16	4	220	-	-	250	200	12



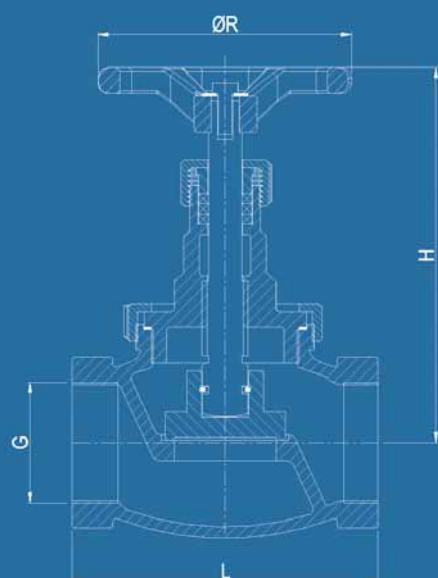
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# TECHNICAL DATA

## GLOBE VALVE - STRAIGHT

SCREWED BONNET

THREADED ENDS - SDNR TYPE



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, screwed and secured bonnet, SDNR type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	With spring

- Globe valves with screwed and secured bonnet, metal seated, straight pattern, BSP female threaded ends.
- Inside screwed stem and rising handwheel. Primary application area is aboard ships where a light bronze construction is desirable.
- Application: Sea water, water and low pressure steam.

### DIMENSIONS

DN (mm)	Pressure rating	G (")	L (mm)	L (mm)	L (mm)	H (mm)	ØR (mm)	Weight (kg)
			STANDARD	SHORT TYPE	LONG TYPE			
10	PN 16	3/8	60	50	56	102	63	0.63
15	PN 16	1/2	65	60	67	102	63	0.62
20	PN 16	3/4	75	70	80	117	80	0.98
25	PN 16	1	90	80	95	124	80	1.4
32	PN 16	1 ¼	105	95	112	130	90	2.0
40	PN 16	1 ½	120	105	132	147	100	3.1
50	PN 16	2	145	130	160	172	125	4.4
65	PN 16	2 ½	170	-	-	180	160	6.0
80	PN 16	3	200	-	-	230	200	8.0
100	PN 16	4	220	-	-	250	200	12

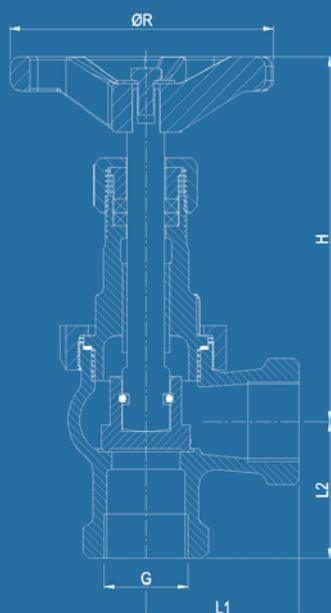


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# TECHNICAL DATA

## GLOBE VALVE - ANGLE

SCREWED BONNET  
THREADED ENDS - STOP TYPE



### DIMENSIONS

DN (mm)	G (")	L1 (mm)	L2 (mm)	H (mm)	ØR (mm)	Weight (kg)
10	3/8	35	30	93	63	0.6
15	1/2	40	35	94	63	0.6
20	3/4	45	40	106	80	0.9
25	1	50	45	115	80	1.2
32	1 ¼	55	50	125	90	1.9
40	1 ½	65	55	135	100	2.5
50	2	75	65	150	125	4.0
65	2 ½	90	75	230	160	5.5
80	3	110	90	250	200	7.5

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, screwed and secured bonnet, STOP Type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Regulating disc

- Globe valves with screwed and secured bonnet, metal seated, angle pattern, BSP female threaded ends.
- Inside screwed stem and rising handwheel. Primary application area is aboard ships where a light bronze construction is desirable.
- Application: Sea water, water and low pressure steam.



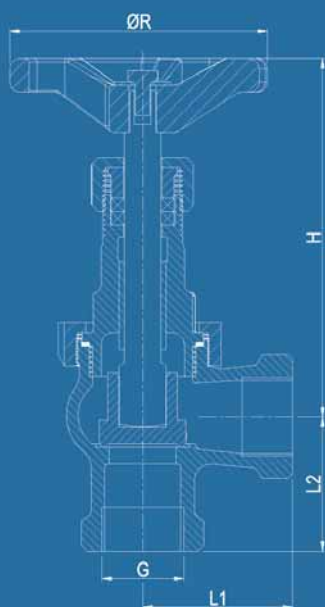
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# TECHNICAL DATA

## GLOBE VALVE - ANGLE

### SCREWED BONNET

### THREADED ENDS - SDNR TYPE



## DIMENSIONS

DN (mm)	G (")	L1 (mm)	L2 (mm)	H (mm)	ØR (mm)	Weight (kg)
10	3/8	35	30	93	63	0.6
15	1/2	40	35	94	63	0.6
20	3/4	45	40	106	80	0.9
25	1	50	45	115	80	1.2
32	1 ¼	55	50	125	90	1.9
40	1 ½	65	55	135	100	2.5
50	2	75	65	150	125	4.0
65	2 ½	90	75	230	160	5.5
80	3	110	90	250	200	7.5

## TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Special design, screwed and secured bonnet, SDNR Type
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	With spring

- Globe valves with screwed and secured bonnet, metal seated, angle pattern, BSP female threaded ends.
- Inside screwed stem and rising handwheel. Primary application area is aboard ships where a light bronze construction is desirable.
- Application: Sea water, water and low pressure steam.



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## 5 STRAINERS

### TECHNICAL DATA



4310

4411

4511

4311

4412

4312

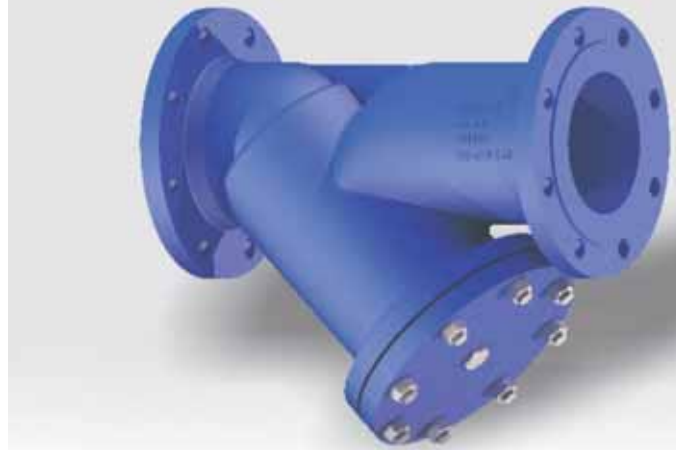
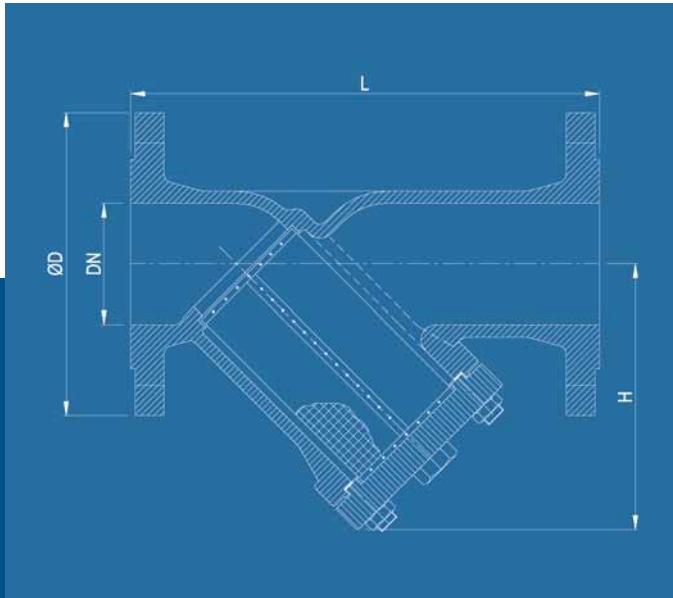


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# TECHNICAL DATA

## STRAINER - Y TYPE - FLANGED

### DIN LENGTH



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Basket</b>	Stainless steel
<b>Design</b>	Y-Type Strainer with 1.0 mm mesh screen
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 - PN 40

**Temperature Range** -10 °C...+200 °C

**Options** Special screen mesh

**Flange Options** Special flange drilling acc. to ANSI or JIS

- Y-type strainers, complying with DIN flanges and face to face, avoids dirt and unwanted particles damaging valves and pumps in the pipe systems. Easy to replace screen and clean it by drain plug without removing the bonnet.
- Application: Water, oil and other process liquids.

### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	ØD PN25	ØD PN40	L (mm)	H (mm)	Weight (kg)
15	95	95	95	95	130	75	3.0
20	105	105	105	105	150	80	3.5
25	115	115	115	115	160	90	4.5
32	140	140	140	140	180	90	5.5
40	150	150	150	150	200	110	8.0
50	165	165	165	165	230	120	10
65	185	185	185	185	290	140	15
80	200	200	200	200	310	170	22
100	220	220	235	235	350	220	32
125	250	250	270	270	400	260	43
150	285	285	300	300	480	300	60
200	340	340	360	375	600	370	90
250	395	405	425	450	730	440	155
300	445	460	485	515	850	525	180
350	505	520	555	580	980	590	250
400	565	580	620	660	1100	680	320
500	670	715	730	755	1250	985	430

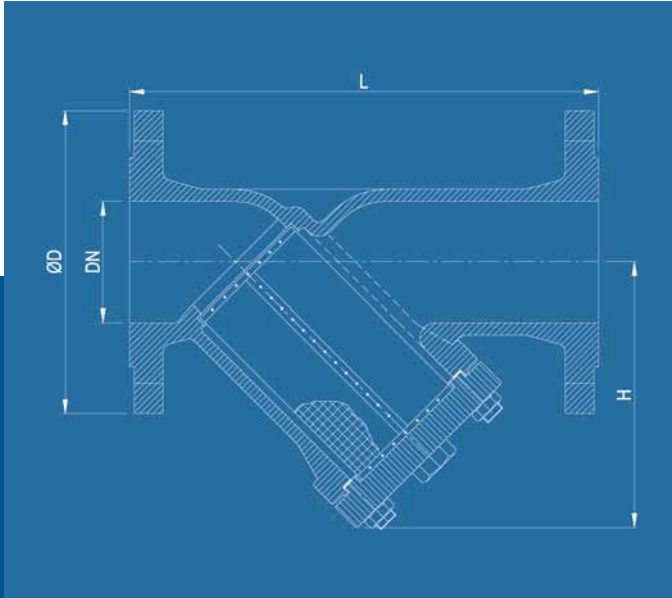
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# TECHNICAL DATA

## STRAINER - Y TYPE - FLANGED

### DIN LENGTH



### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Basket</b>	Stainless steel
<b>Design</b>	Y-Type Strainer with 1.0 mm mesh screen
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 - PN 40

**Temperature Range** -10 °C...+200 °C

**Options** Special screen mesh

**Flange Options** Special flange drilling acc. to ANSI or JIS

- Y-type strainers, complying with DIN flanges and face to face, avoids dirt and unwanted particles damaging valves and pumps in the pipe systems. Easy to replace screen and clean it by drain plug without removing the bonnet.
- Application: Water, oil and other process liquids.

### DIMENSIONS

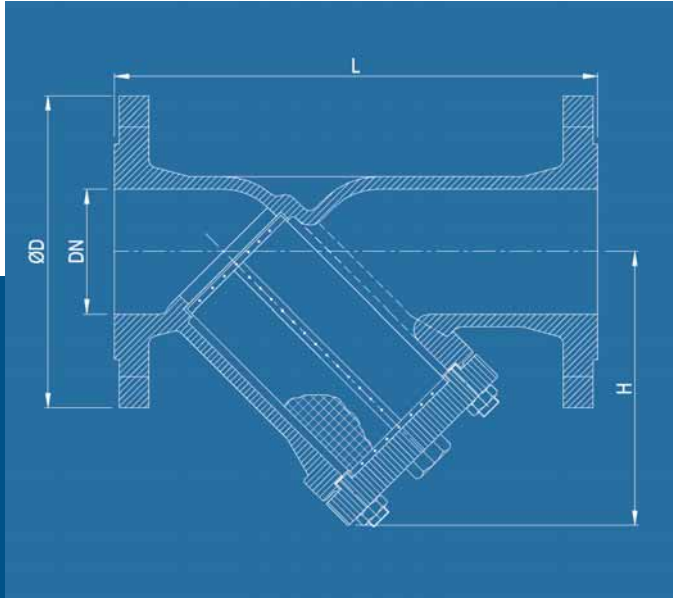
DN (mm)	ØD PN10	ØD PN16	ØD PN25	ØD PN40	L (mm)	H (mm)	Weight (kg)
15	95	95	95	95	130	75	3.0
20	105	105	105	105	150	80	3.5
25	115	115	115	115	160	90	4.5
32	140	140	140	140	180	90	5.5
40	150	150	150	150	200	110	8.0
50	165	165	165	165	230	120	10
65	185	185	185	185	290	140	15
80	200	200	200	200	310	170	22
100	220	220	235	235	350	220	32
125	250	250	270	270	400	260	43
150	285	285	300	300	480	300	60
200	340	340	360	375	600	370	90
250	395	405	425	450	730	440	155
300	445	460	485	515	850	525	180
350	505	520	555	580	980	590	250
400	565	580	620	660	1100	680	320
500	670	715	730	755	1250	985	430

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# TECHNICAL DATA

## STRAINER - Y TYPE - FLANGED

### BOLTED BONNET



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Design</b>	Y-Type strainer with 1.0 mm mesh screen
<b>Face to Face</b>	EN 558 series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Special screen mesh
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
15	95	95	130	75	3.0
20	105	105	150	80	3.5
25	115	115	160	90	4.5
32	140	140	180	90	5.5
40	150	150	200	110	9.0
50	165	165	230	120	11
65	185	185	290	140	15
80	200	200	310	170	22
100	220	220	350	220	35
125	250	250	400	260	50
150	285	285	480	300	80
200	340	340	600	370	110
250	395	405	730	440	165
300	445	460	850	525	215
350	505	520	980	590	290
400	565	580	1100	680	480
500	670	715	1250	985	750

- Y-type strainers, complying with DIN flanges and face to face avoids dirt and unwanted particles damaging valves and pumps in the pipe systems.
- Easy to replace screen and clean it by drain plug without removing the bonnet.
- Application: Water, oil and other process liquids.

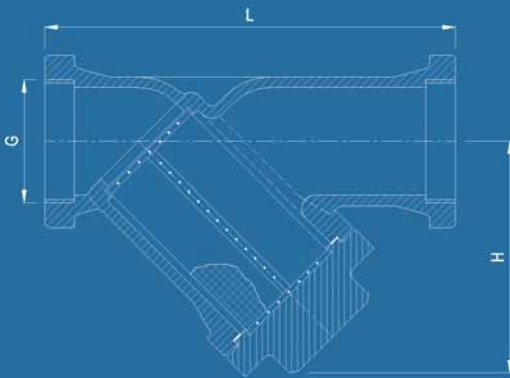


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# TECHNICAL DATA

## STRAINER - Y TYPE

THREADED ENDS  
SPECIAL DESIGN



### DIMENSIONS

DN (mm)	G (")	STANDARD		HEAVY CONSTRUCTION		Weight (kg)
		L (mm)	H (mm)	L (mm)	H (mm)	
15	½	60	35	85	55	0.5
20	¾	68	42	100	60	0.6
25	1	76	55	120	75	0.9
32	1¼	90	63	140	90	1.9
40	1½	105	77	160	100	3.0
50	2	125	91	205	160	4.0
65	2½	-	-	245	185	6.5
80	3	-	-	265	205	9.0

### TECHNICAL FEATURES

<b>Body</b>	Stainless steel
<b>Basket</b>	Stainless steel
<b>Design</b>	Special design, with 1.0 mm mesh screen
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Threaded Ends</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Special screen mesh

- Y-type strainers with BSP-female threaded ends are light constructed and for general filtering use.
- Suitable for use in horizontal and vertical pipelines with a downward flow direction.
- Application: Water, neutral and other process liquids.

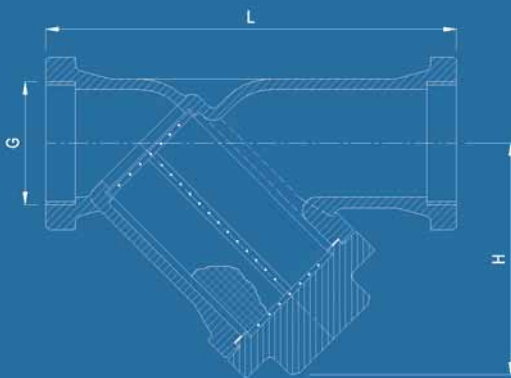


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# TECHNICAL DATA

## STRAINER - Y TYPE

THREADED ENDS  
SPECIAL DESIGN



### DIMENSIONS

DN (mm)	G (")	STANDARD		HEAVY CONSTRUCTION		Weight (kg)
		L (mm)	H (mm)	L (mm)	H (mm)	
15	½	60	35	85	55	0.5
20	¾	68	42	100	60	0.6
25	1	76	55	120	75	0.9
32	1¼	90	63	140	90	1.9
40	1½	105	77	160	100	3.0
50	2	125	91	205	160	4.0
65	2½	-	-	245	185	6.5
80	3	-	-	265	205	9.0

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Basket</b>	Stainless steel
<b>Design</b>	Special design, with 1.0 mm mesh screen
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Threaded Ends</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Special screen mesh

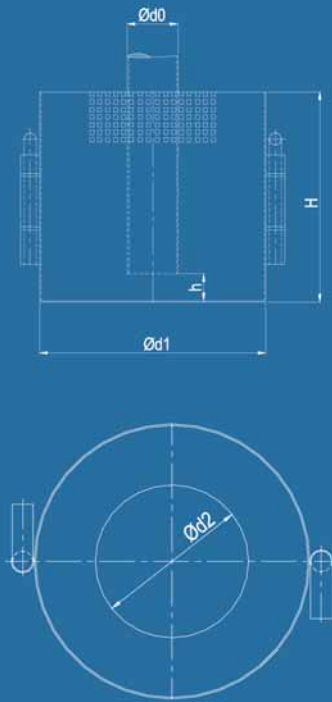
- Y-type strainers with BSP-female threaded ends are light constructed and for general filtering use.
- Suitable for use in horizontal and vertical pipelines with a downward flow direction.
- Application: Water, neutral and other process liquids.



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# TECHNICAL DATA

## SUCTION STRAINER



### TECHNICAL FEATURES

<b>Body</b>	Steel / Stainless steel
<b>Design</b>	DIN 87160 for steel pipes
<b>Face to Face</b>	Acc. to DIN 87160
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Special screen mesh, narrow execution, suction strainer for CuNi pipes

- Steel & Stainless Steel suction strainers are mainly used at the intake of bilge systems for preventing large solids to enter the bilge pump systems.
- Application: Water and cold water.

### DIMENSIONS

DN (mm)	Ød0 St (mm)	Ød0 CuNiFe (mm)	Ød1 (mm)	Ød2 St (mm)	Ød2 CuNiFe (mm)	H (mm)	h (mm)	Weight (kg)
20	26.9	25	85	30	28	80	12	0.3
25	33.7	30	85	37	33	80	12	0.4
32	42.4	38	100	45	41	90	12	0.5
40	48.3	44.5	125	51	47	100	12	0.7
50	60.3	57	150	63	60	125	15	0.9
65	76.1	76	200	79	79	160	22	1.0
80	88.9	89	225	92	92	200	24	2.0
100	114.3	108	275	117	111	240	30	3.0
125	139.7	133	340	144	137	300	38	4.0
150	168.3	159	400	172	163	365	45	6.0
175	193.7	194	450	198	198	430	50	8.0
200	219.1	219	450	224	224	430	50	13
250	273	273	600	280	280	600	80	17
300	318	318	750	325	325	700	95	25
350	368	368	860	374	374	800	110	30



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## 6 ACTUATORS

### TECHNICAL DATA



**GEARBOXES**



**ELECTRIC ACTUATORS**



**PNEUMATIC ACTUATORS**



**SWITCHBOXES**



**SOLENOID**



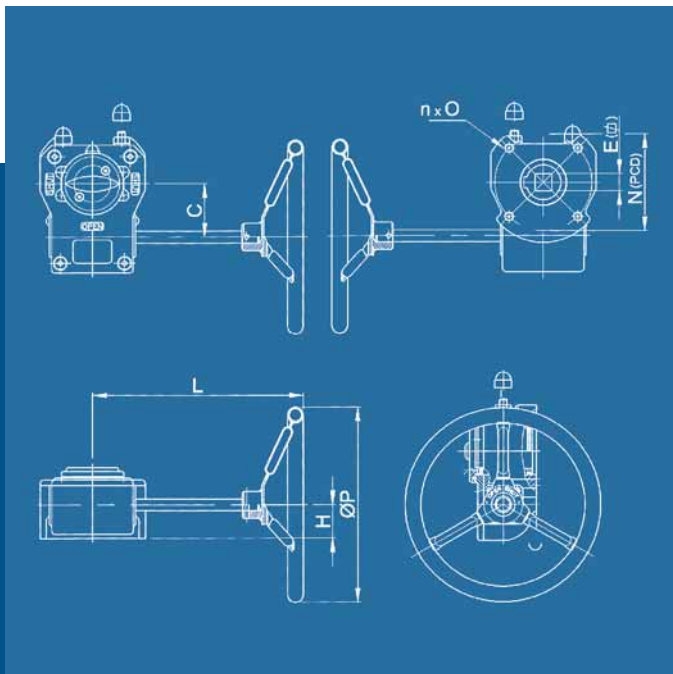
**MANUAL OVERRIDE**



# TECHNICAL DATA

## ACTUATORS

### CAST IRON GEARBOX SERIES 'Q'



#### TECHNICAL FEATURES

DISCRIPTION	MATERIAL	SPECS / STANDARD
<b>Fasteners</b>	Stainless steel	
<b>Grease</b>	Complex EP-0 grease	
<b>O-rings</b>	Nitrile	NBR-70° shore
<b>Gasket</b>	Nitrile / Silicone	NBR-70° shore / Silicone
<b>Axial needle bearing</b>		
<b>Shaft</b>	Stainless steel	AISI 303
<b>Worm</b>	Carbon steel	C45-K
<b>Quadrant</b>	Ductile iron	GGG40 / ASTM A356
<b>Pos. indicator</b>	Cast iron	GG25 / ASTM A48
<b>Coverplate</b>	Cast iron	GG25 / ASTM A48
<b>Body</b>	Cast iron	GG25 / ASTM A48

#### DIMENSIONS

DN (mm)	□E	L (mm)	C (mm)	H (mm)	P (mm)	N (mm)	n x O	Gearbox type
50	11	144.5	43.5	28.5	150	70	4 x M8	Q-200 C150
65	11	144.5	43.5	28.5	150	70	4 x M8	Q-200 C150
80	11	144.5	43.5	28.5	150	70	4 x M8	Q-200 C150
100	11	144.5	43.5	28.5	150	70	4 x M8	Q-200 C150
125	14	144.5	43.5	28.5	150	70	4 x M8	Q-200 C150
150	14	144.5	43.5	28.5	150	70	4 x M8	Q-200 C150
200	17	220.5	52.5	34	200	70	4 x M8	Q-400 W200
250	22	270.5	68.75	42.5	250	102	4 x M10	Q-800 W250
300	22	270.5	68.75	42.5	250	102	4 x M10	Q-800 W250
350	27	277.5	68.75	42.5	250	125	4 x M12	Q-800 W250
400	27	328	84	45	300	125	4 x M12	Q-1500 W300
450	36	328	84	45	500	140	4 x M16	Q-1500 W500
500	36	340	96.5	50	500	140	4 x M16	Q-2000 W500
600	46	408	137.5	54.5	500	165	4 x M20	Q-4000 W500

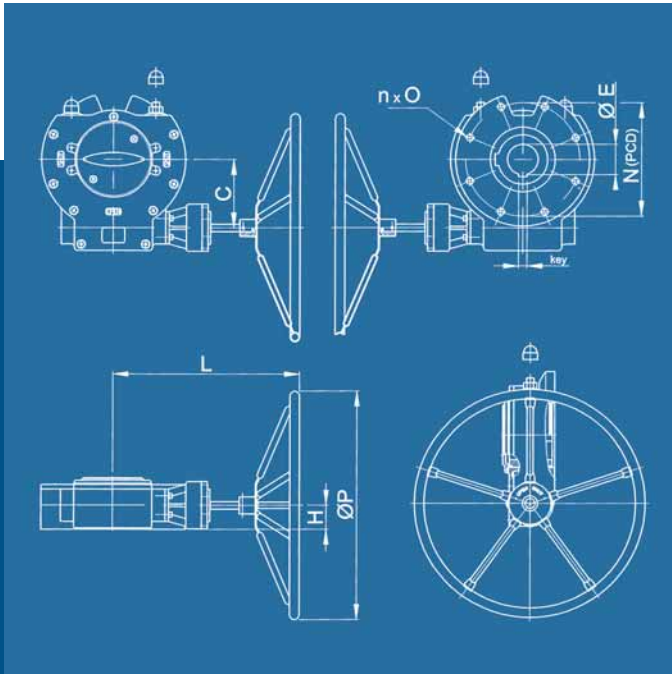
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# TECHNICAL DATA

## ACTUATORS

### CAST IRON GEARBOX SERIES 'Q'



#### TECHNICAL FEATURES

DISCRIPTION	MATERIAL	SPECS / STANDARD
Fasteners	Stainless steel	
Grease	Complex EP-0 grease	
O-rings	Nitrile	NBR-70° shore
Gasket	Nitrile / Silicone	NBR-70° shore / Silicone
Axial needle bearing		
Shaft	Stainless steel	AISI 303
Worm	Carbon steel	C45-K
Quadrant	Ductile iron	GGG40 / ASTM A356
Pos. indicator	Cast iron	GG25 / ASTM A48
Coverplate	Cast iron	GG25 / ASTM A48
Body	Cast iron	GG25 / ASTM A48

#### DIMENSIONS

DN (mm)	□ E	Key	L (mm)	C (mm)	H (mm)	P (mm)	N (mm)	n x O	Gearbox type
700	70	20	440	137.5	54.5	500	165	4 x M20	Q-4000 W700
800	80	22	456	137.5	54.5	600	254	8 x M16	Q-6500 W400
900	90	25	514.5	180	63.5	700	254	8 x M16	Q-12000 W500
1000	90	25	540	180	63.5	500	254	8 x M16	Q-12000 W600

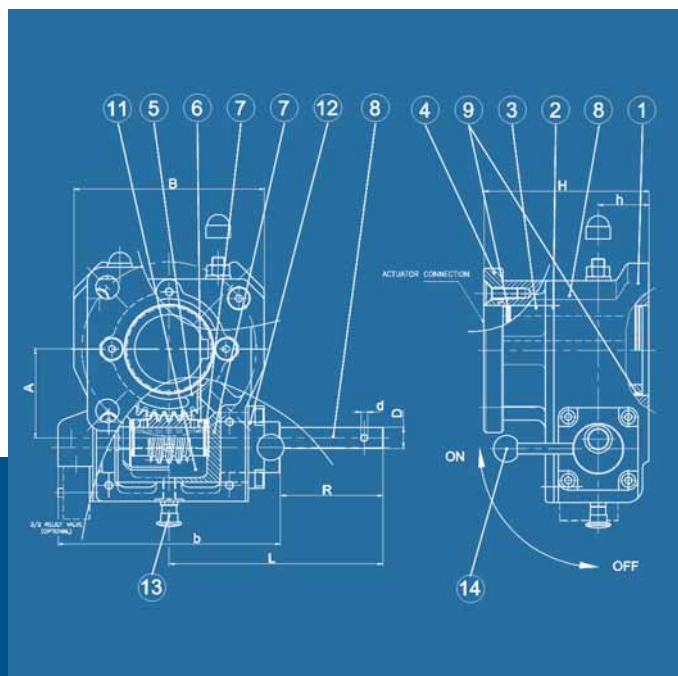
Gearbox type is sized on torque figures PN10



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# TECHNICAL DATA

## MANUAL OVERRIDE MO-D SERIES



### TECHNICAL FEATURES

<b>1 Body</b>	Cast iron	GG25 / ASTM A48
<b>2 Gasket</b>	Nitrile	NBR 70° Shore
<b>3 Coverplate</b>	Ductile iron	GGG40 / ASTM 356
<b>4 Top mounting flange</b>	Ductile iron	GGG40 / ASTM 356
<b>5 Quadrant</b>	Ductile iron	GGG40 / ASTM 356
<b>6 Worm</b>	Carbon steel	C45-K
<b>7 Axial needle bearing</b>		
<b>8 Shaft</b>	Stainless steel	
<b>9 Shaft</b>	Nitrile	NBR-70° Shore
<b>10 Closing plate rack</b>	Ductile iron	GGG40 / ASTM A356
<b>11 Grease</b>	Complex EP-O	DIN KG0G0.N-30 / ISO-L-XCDIB05
<b>12 Excentric rack</b>	Ductile iron	GGG40 / ASTM 356
<b>13 Fixating bolt</b>	Stainless steel	
<b>14 Excentric lever</b>	AISI 316 / Plastic	
<b>Fasteners</b>	Steel 8.8	

MODEL	Ratio	Torque (Nm) Output	Torque (Nm) Input	M.A. ±10%	Weight (Kg) excl. insert & adaptor
MO-D 150	40:1	150	12.6	11.9	3.1
MO-D 350	44:1	350	31.25	11.2	6
MO-D 700	52:1	700	50	14.0	16.3
MO-D 1600	42:1	1600	125	12.8	25
MO-D 3000	72:1	3000	155	19.4	49.5
MO-D 5000	267:1	5000	95	52.6	56

Nm=0.737562 lbf.ft. 1Nm=8.8507 lbf.ins. (Converting International Units to British Units)

### DIMENSIONS

GEARBOX	TYPE	A	b	B	d	D	h	H	L	R	Valve connection ACC ISO 5211			Actuator connection ACC ISO 5211			
MO-D 150	MM	4.2	122.5	84	4	12	28.5	120	117.5	60	42(F04)	50(F05)	70(F05)	50(F05)	70(F05)		
	INCH	1.71	4.82	3.31	0.16	0.47	1.12	4.02	4.63	2.36	1.65	1.97	2.76	1.97	2.76		
MO-D 350	MM	52.5	143.5	112	4	12	34	122	148	78	70(F07)	102(F10)		70(F07)	102(F10)		
	INCH	2.07	5.65	4.41	0.16	0.47	1.34	4.80	5.83	3.07	2.76	4.02		2.76	4.02		
MO-D 700	MM	68.75	168	135	5	15	41	130	161	78	70(F07)	102(F10)	125(F12)	102(F10)	125(F12)		
	INCH	2.71	6.61	5.31	0.20	0.59	1.61	5.12	6.34	3.07	2.76	4.02	4.92	4.02	4.92		
MO-D 1600	MM	84	210	180	6.1	20	43	156	202.5	97.5	102(F10)	125(F12)	140(F14)	125(F12)	140(F14)	165(F16)	
	INCH	3.31	8.27	7.09	0.24	0.79	1.69	6.14	7.97	3.84	4.02	4.92	5.51	4.92	5.51	6.50	
MO-D 3000	MM	132.5	280.5	282	6.1	20	56.5	201	250.5	105	165(F16)	254(F25)		140(F14)	165(F16)	254(F25)	
	INCH	5.22	11.04	11.10	0.24	0.79	2.22	7.91	9.86	4.13	6.50	10.00		5.51	6.50	10.00	
MO-D 5000	MM	132.5	395.5	282	6.1	20	56.5	201	372.5	110	165(F16)	132.5		140(F14)	165(F16)	254(F25)	298(F30)
	INCH	5.22	15.57	11.10	0.24	0.79	2.22	7.91	14.67	4.33	6.50	5.22		5.51	6.50	10.00	11.73

\* Optionally, a 3/2 relief valve can be fitted on the housing in order to automatically evacuate air pressure from the actuator while engaging the manual override.

# TECHNICAL DATA

## ELECTRIC ACTUATOR



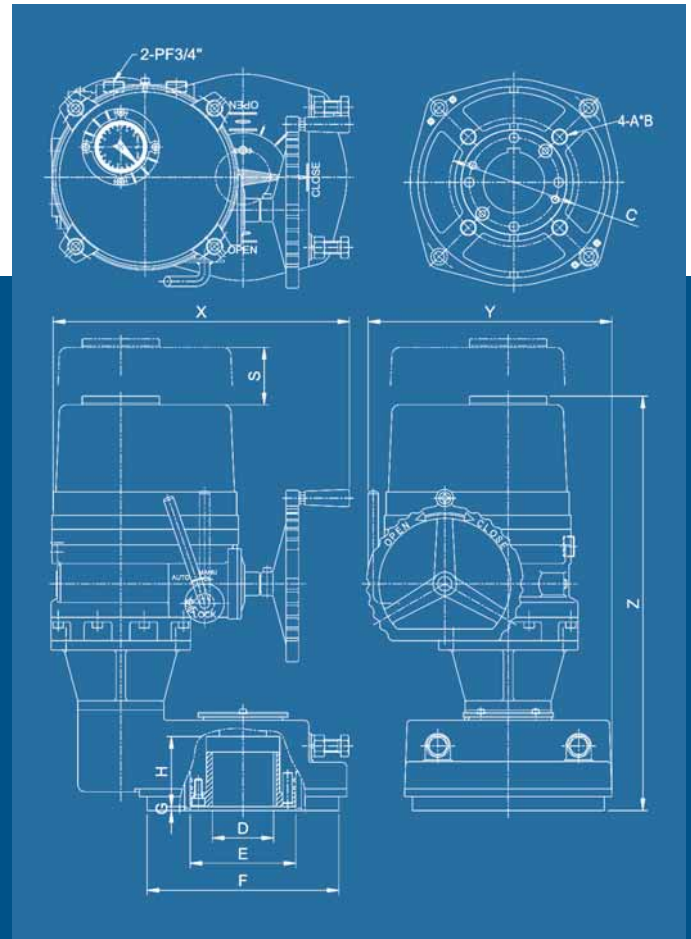
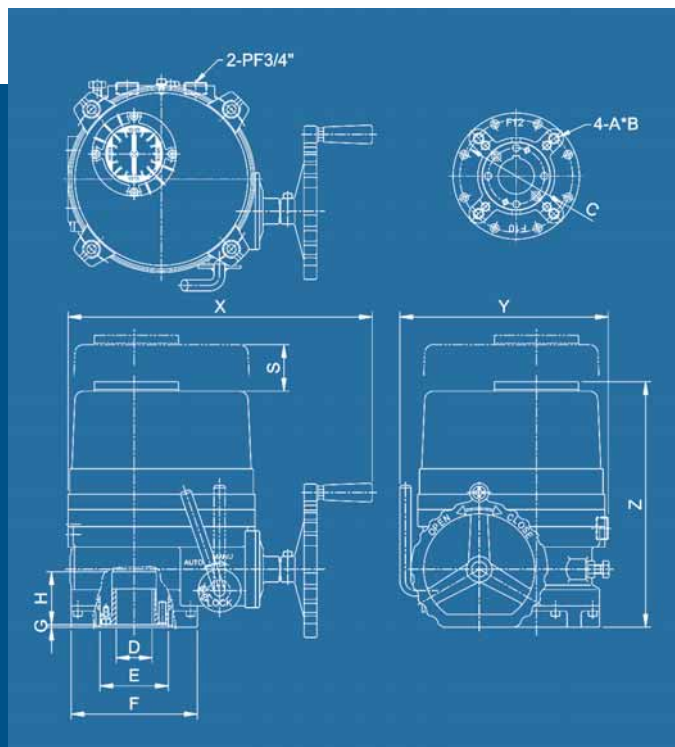
### STANDARD SPECIFICATION

<b>Enclosure</b>	Weatherproof IP67, NEMA4 4X and 6, O-ring sealed
<b>Main Power supply</b>	110/220VAC/1Ph/50/60Hz, 380/440/VAC/3Ph/50/60/Hz $\pm 10\%$ , 24VDC
<b>Control power supply</b>	110/220VAC/1Ph/50/60Hz $\pm 10\%$
<b>Duty cycle(on-off)</b>	S2: 10Min~30Min
<b>Duty cycle(modulating)</b>	S4, 30~50%, 300~1200 start/Hour
<b>Motor</b>	Squirrel Cage induction motor
<b>Limit switches</b>	2 each for Open and Close (SPDT 250VAC/10A rating)
<b>Torque switches</b>	1 each for Open and Close (SPDT 250VAC/10A rating except for ITQ 0100)
<b>Stall protection/ set temp.</b>	Built in Thermal protection, Open 150°C $\pm 5^\circ\text{C}$ , Close 97°C $\pm 15^\circ\text{C}$
<b>Travel angle</b>	90° $\pm 5^\circ$ (0° ~ 100°)
<b>Position indicator</b>	Continuous mechanical indicator with arrow
<b>Manual override</b>	De-clutchable
<b>Self locking</b>	Provided by double worm gearing (no brake)
<b>Mechanical stopper</b>	1 each for each travel end (Open and Close), external & adjustable
<b>Space Heater</b>	5W(110/220VAC) for anti-condensation
<b>Cable entries</b>	2 - PF 3/4" TAP
<b>Lubrication</b>	EP type grease
<b>Terminal block</b>	Screw and Lever Push type (spring loaded)
<b>Ambient temperature</b>	Basic actuator : -20°C~+70°C c/w control options : -10°C~+60°C
<b>Ambient humidity</b>	90%RH Max (Non-Condensing)
<b>Anti vibration</b>	XYZ 10g. 02~34Hz, 30 minutes
<b>External coating</b>	Dry powder (Polyester)

# TECHNICAL DATA

## ELECTRIC ACTUATOR

- WITHOUT GEARBOX
- WITH GEARBOX



### DIMENSIONS

TYPE	With gear box										
	ITQ 0100 (mm)	ITQ 0160 (mm)	ITQ 0240 (mm)	ITQ 0350 (mm)	ITQ 0500 (mm)	ITQ 0800 (mm)	ITQ 1100 (mm)	ITQ 2000 (mm)	ITQ 3000 (mm)	ITQ 6000 (mm)	ITQ 9000 (mm)
Flange	F07	Ø 07	Ø 07	Ø 10	Ø 10	Ø 12	Ø 12	Ø 16	Ø 16	Ø 25	Ø 25
ISO5211		F10	F10	F12	F12	F14	F14			F30	F30
C	Ø 70	Ø 70	Ø 70	Ø 102	Ø 102	Ø 125	Ø 125	Ø 165	Ø 165	Ø 254	Ø 254
		Ø 102	Ø 102	Ø 125	Ø 125	Ø 140	Ø 140			Ø 298	Ø 298
A	M8	M8/M10	M8/M10	M10/M12	M10/M12	M12/M16	M12/M16	M20	M20	M16/M20	M16/M20
B	14	14/17	14/17	17/21	17/21	20/25	20/25	32	32	30/35	30/35
D(Key)	Ø 22	Ø 25	Ø 25	Ø 40	Ø 40	Ø 48	Ø 48	Ø 275	Ø 75	Ø 2120	Ø 120
D(Squ.)	□ 20	□ 23	□ 23	□ 34	□ 34	□ 40	□ 40	□ 64	□ 64	□ 100	□ 100
E	Ø 50	Ø 58.5	Ø 58.5	Ø 80	Ø 80	Ø 95	Ø 95	Ø 135	Ø 135	Ø 216	Ø 216
F	Ø 88	Ø 125	Ø 125	Ø 148	Ø 148	Ø 178	Ø 178	Ø 226	Ø 226	Ø 350	Ø 350
G	3	3	3	3	3	3	3	5	5	5	5
H	37	57	57	62	62	67	67	90	90	114	114
S	100	115	115	145	145	170	170	225	225	225	225
X	258	338	338	357	357	380	380	440	440	516	516
Y	172	229	229	244	244	287	287	375	375	417	417
Z	220	259	259	288	288	313	313	385	385	668	668

# TECHNICAL DATA

## ELECTRIC ACTUATOR

### FEATURES

- Compact and robust construction, light weight providing high output torque (Max 9000Nm).
- Wide range of torque variation (From min 100Nm to max 9000Nm).
- Hard anodized aluminum housing inside and outside with external powder coated against severe industrial environment.
- Enclosure using radial seals & O-rings that provide protection to waterproof IP67 (Nema 4 & 6) and optional watertight IP68
- Mounting base according to ISO5211 standard.
- Removable drive bushing for easy machining and mounting.
- Self-locking provided by double worm gearing (no brake required).
- Auto-declutching manual override handwheel with padlockable auto / manual switchable lever.
- Reliable Mechanical Torque sensing system providing safe operation in overload condition.
- Large size window and indicator provides better position indication from a distance.
- Various Local position control options providing easy commissioning and operation in field.
- Digitalized control component.

### TECHNICAL INFORMATION

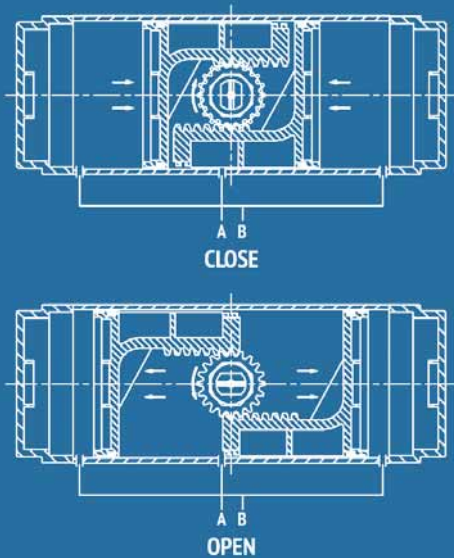
MODEL	ITQ 0100	ITQ 0160	ITQ 0240	ITQ 0350	ITQ 0500	ITQ 0800	ITQ 1100	ITQ 2000	ITQ 3000	ITQ 6000	ITQ 9000
Rated torque (Nm)	100	160	240	350	500	800	1100	2000	3000	6000	9000
Duty cycle S4 (%)	40	30	30	30	30	30	30	30	30	30	30
Operating time (second)											
50Hz	21	26	26	31	31	39	39	59	59	178	178
60Hz	18	22	22	26	26	32	32	50	50	149	149
Max bore Size (mm)											
Key( )	22	25	25	40	40	48	48	75	75	120	120
Square( )	20	23	23	34	34	40	40	64	64	100	100
Rated current (A)											
1Phase / 110V / 50Hz	0.98	1.60	1.62	1.72	3.60	3.90	3.90	-	-	-	-
60Hz	1.10	1.70	1.72	1.80	3.90	4.20	4.30	-	-	-	-
1Phase / 220V / 50Hz	0.52	0.85	0.87	0.92	1.50	2.05	2.15	2.95	3.75	2.95	3.75
60Hz	0.58	0.90	0.90	0.95	1.60	2.20	2.30	3.15	3.85	3.15	3.85
3Phase / 380V / 50Hz	0.43	0.30	0.32	0.32	0.52	0.82	0.84	1.5	1.6	1.5	1.6
60Hz	0.33	0.30	0.32	0.32	0.56	0.88	0.90	1.8	2.0	1.8	2.0
3Phase / 440V / 50Hz	0.59	0.30	0.32	0.32	0.55	0.82	0.84	2.3	2.5	2.3	2.5
60Hz	0.42	0.32	0.35	0.35	0.58	0.88	0.88	2.2	2.4	2.2	2.4
DC / 24V	2.8	1.8	2.4	3.8	5.0	-	-	-	-	-	-
Motor insulation class	F	F	F	F	F	F	F	F	F	F	F
ISO 5211 mounting flange	F07	F07/F10	F07/F10	F10/F12	F10/F12	F12/F14	F12/F14	F16	F16	F25/F30	F25/F30
Weight (Kgs)	7	15	15	20	20	25	25	42	42	152	152
No of handwheel turns	10	12	12	14	14	17	17	13	13	39	39

# TECHNICAL DATA

## PNEUMATIC ACTUATORS



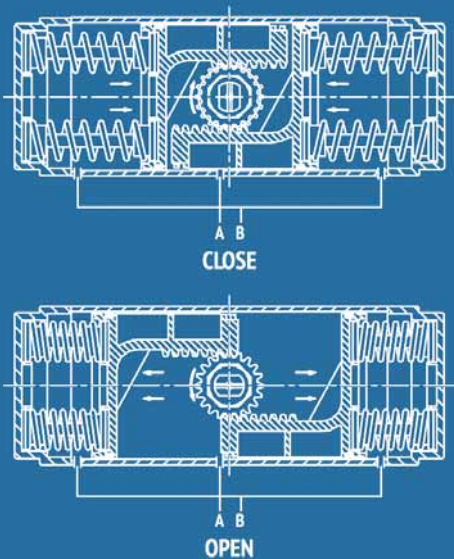
### DOUBLE ACTING OPERATION



### DOUBLE ACTING OPERATION

As standard the actuator is supplied for counterclockwise rotation when pressure is applied to port A. This pressurizes the internal chamber driving the pistons apart. When air is applied to port B the end chambers are pressurized driving the pistons together causing clockwise actuator rotation. If required, the pistons can be inverted in the housing resulting in clockwise rotation when pressure is applied to port A.

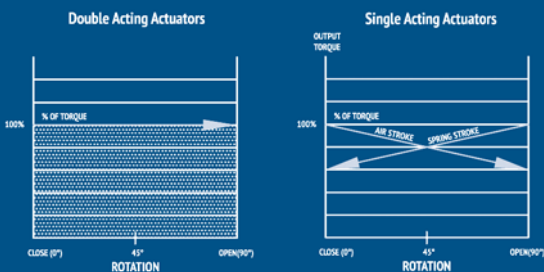
### SPRING RETURN OPERATION



### SPRING RETURN OPERATION

As standard the actuator is supplied for clockwise rotation in air failure mode. When port A is vented the springs drive the pistons together, causing clockwise rotation. When pressure is applied to port A the internal chamber is pressurized driving the pistons apart and compressing the springs, causing anti-clockwise actuator rotation. Port B is used as a breather for the spring chamber swept volume.

### TORQUE OUTPUTS



### TORQUE OUTPUTS

**Double Acting:** The PMA-Series actuator is designed such that torque is independent of actuator travel and is constant throughout the travel range.

**Spring Return:** Spring return actuators have both spring and air torques and each torque has a higher start figure than the end figure. The PMA-Series actuator is designed such that the spring and air start torques are equal, as are the spring and air end torques.



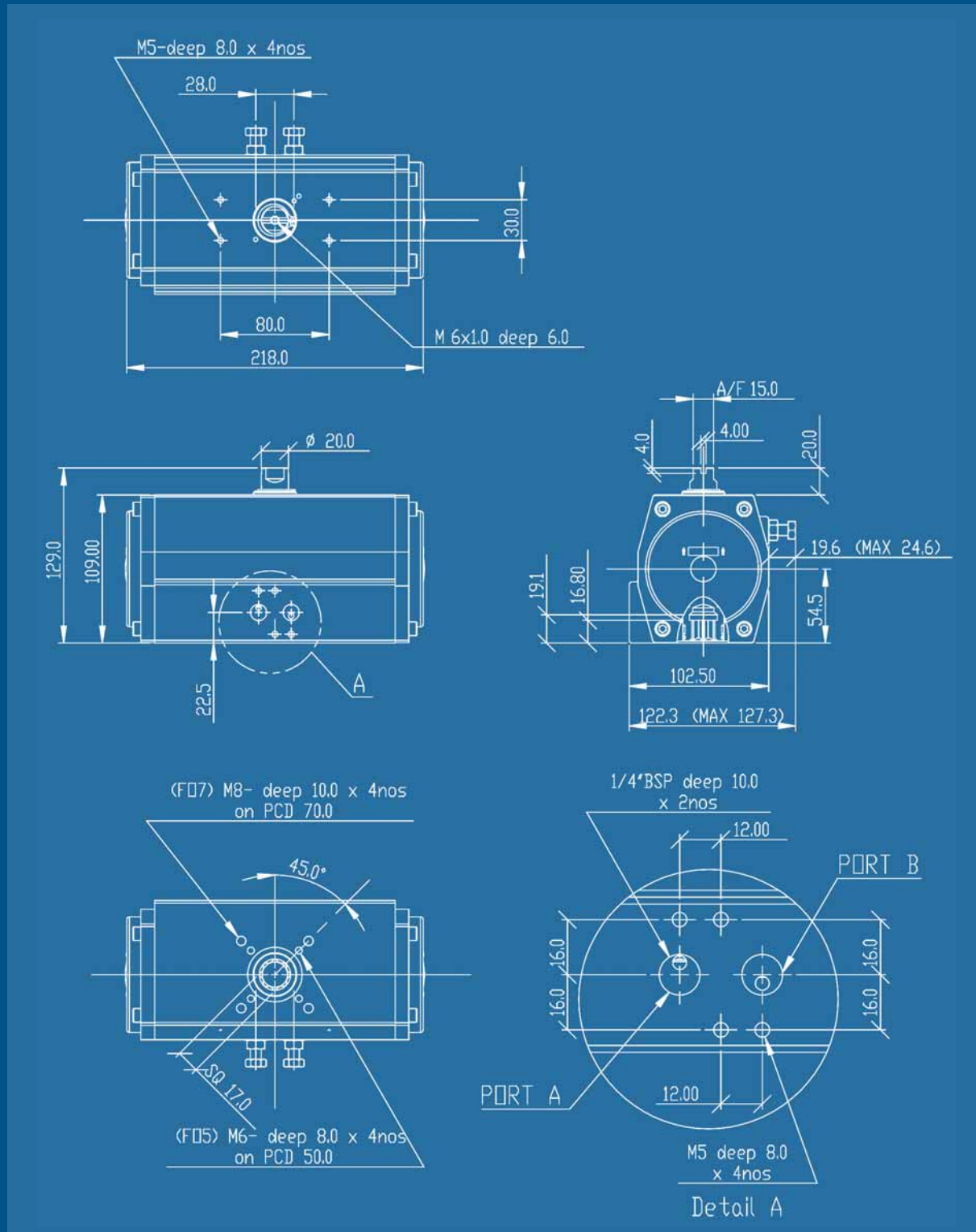
[www.wosupply.com](http://www.wosupply.com)

# TECHNICAL DATA

## ECF80

### TECHNICAL FEATURES

Pinion mm	17.0
Minimum	17.02
Maximum	17.11



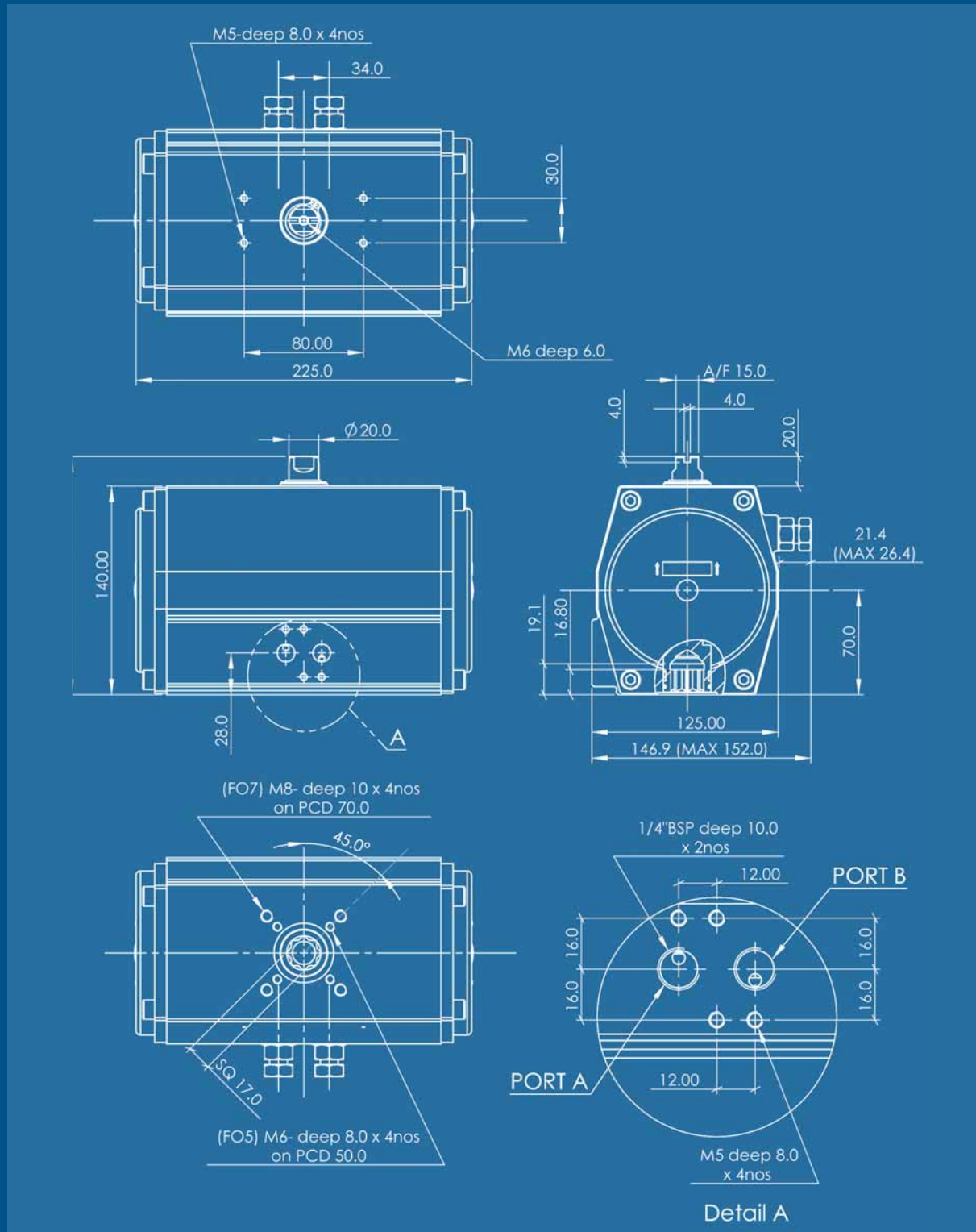


# TECHNICAL DATA

## ECF90

### TECHNICAL FEATURES

Pinion mm	17.0
Minimum	17.02
Maximum	17.11

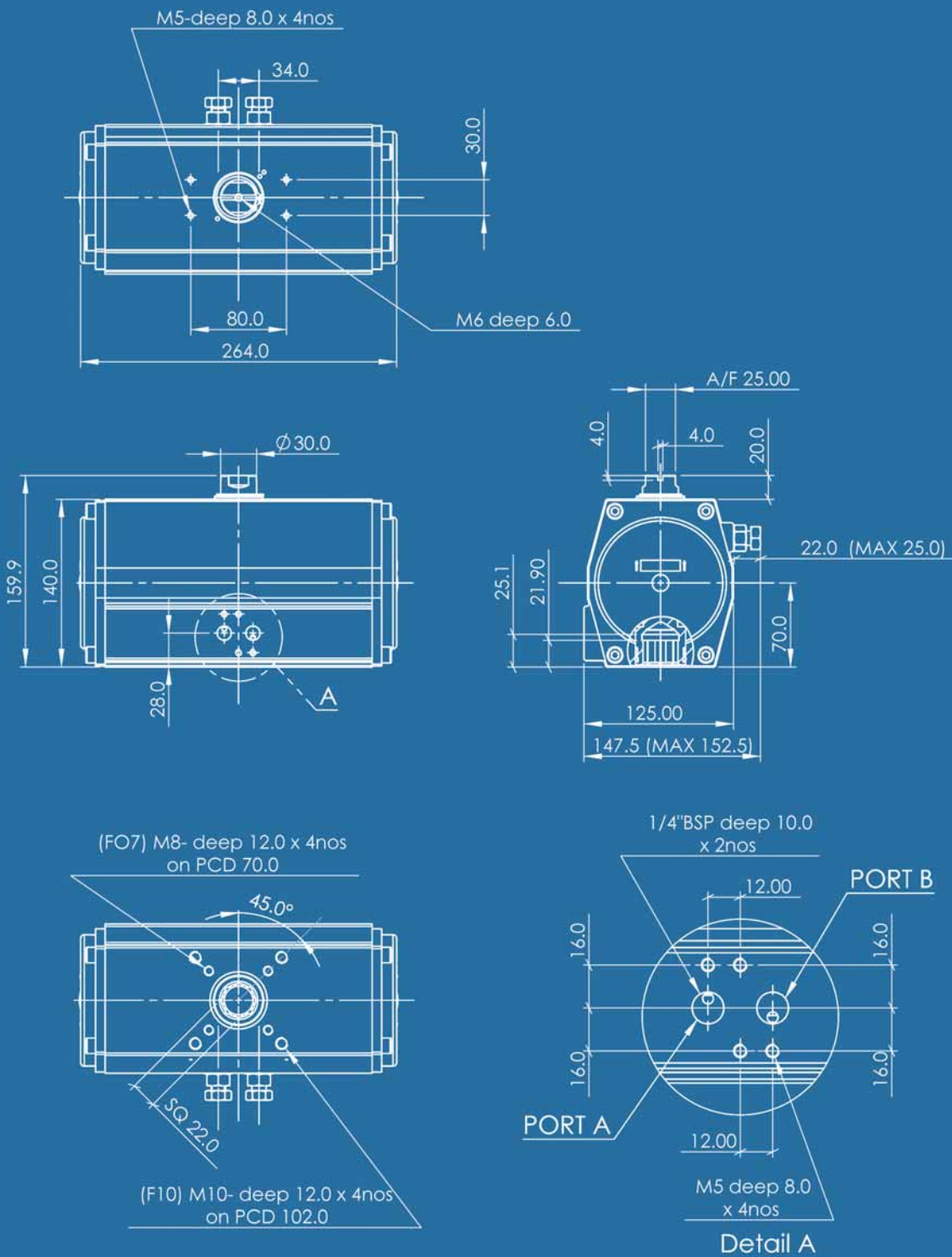


# TECHNICAL DATA

## ECF100

### TECHNICAL FEATURES

Pinion mm	22.0
Minimum	22.02
Maximum	22.13

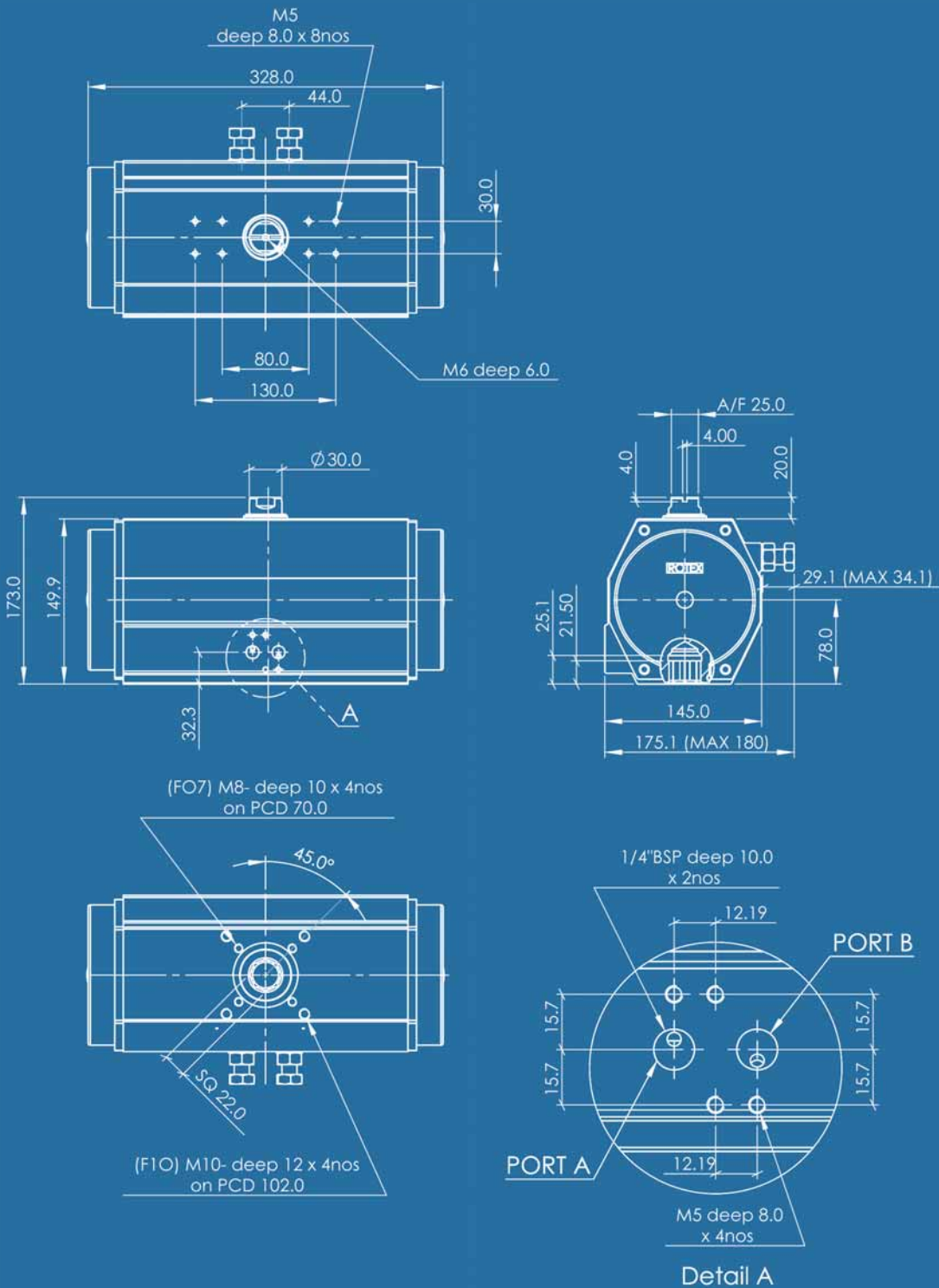


# TECHNICAL DATA

## ECF125

### TECHNICAL FEATURES

Pinion mm	22.0
Minimum	22.02
Maximum	22.13

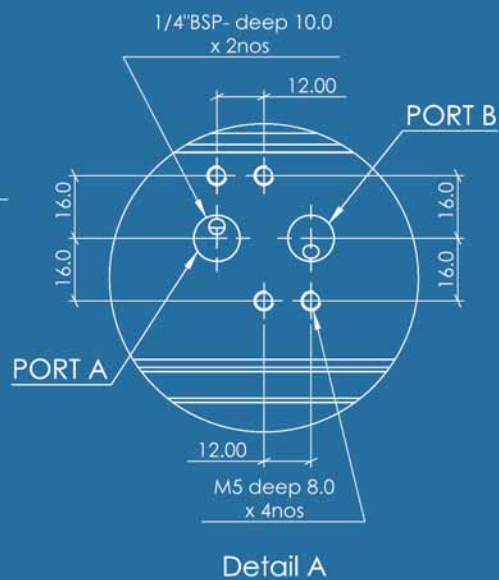
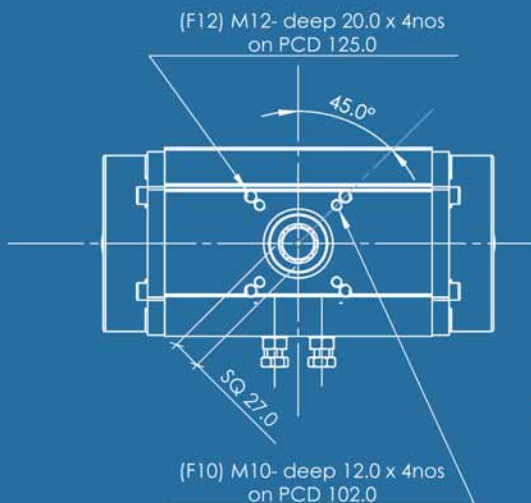
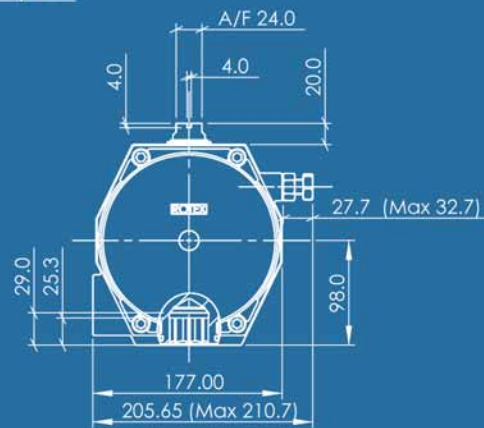
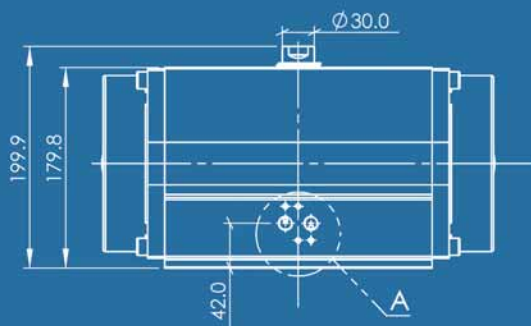
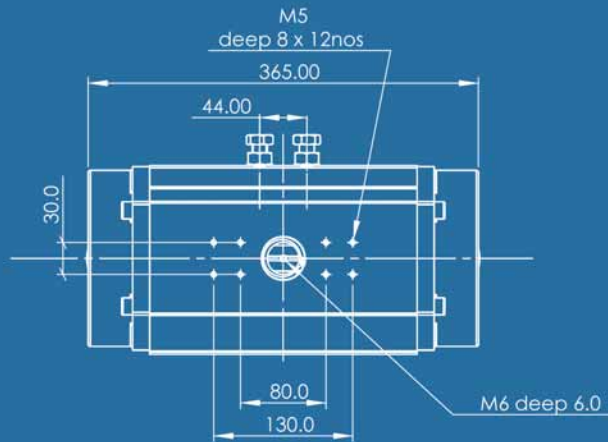


# TECHNICAL DATA

## ECF150

### TECHNICAL FEATURES

Pinion mm	22.0
Minimum	22.02
Maximum	22.13

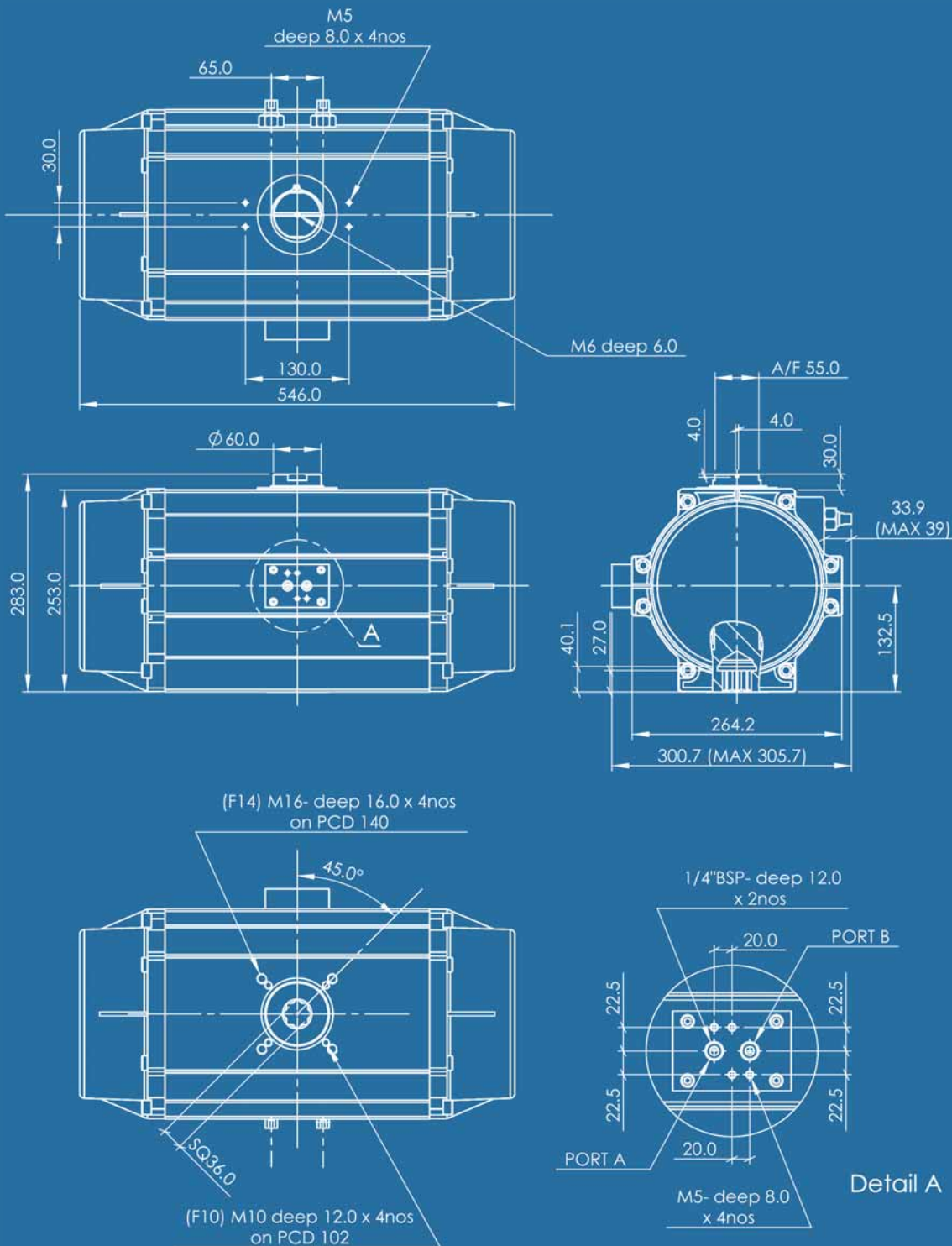


# TECHNICAL DATA

## ECF200

### TECHNICAL FEATURES

Pinion mm	36.0
Minimum	36.02
Maximum	36.16



# TECHNICAL DATA

## OUTPUT TORQUE (NM) OF SINGLE ACTING ACTUATORS

### AIR PRESSURE SUPPLIED TO ACTUATOR (BAR)

MODEL	Spring qty	Spring torque		2,5 Bar		3,0 Bar		4,0 Bar		5,0 Bar		6,0 Bar		7,0 Bar		8,0 Bar	
		start	end	start	end	start	end	start	end	start	end	start	end	start	end	start	end
PMA-021000-SR	5	309.0	200.0	332.0	222.0	438.0	329.0	651.0	542.0								
	6	371.0	240.0	292.0	161.0	398.0	267.0	611.0	480.0	824.0	693.0						
	7	433.0	280.0	252.0	99.0	358.0	206.0	571.0	418.0	784.0	631.0						
	8	495.0	320.0			318.0	143.0	531.0	356.0	744.0	569.0	957.0	782.0	1169.0	995.0		
	9	557.0	360.0					491.0	295.0	704.0	507.0	917.0	720.0	1130.0	933.0		
	10	618.0	400.0					451.0	233.0	664.0	446.0	877.0	658.0	1090.0	871.0	1302.0	1084.0
	11	680.0	440.0							624.0	384.0	837.0	597.0	1050.0	809.0	1263.0	1022.0
	12	742.0	480.0							584.0	322.0	797.0	535.0	1010.0	748.0	1223.0	960.0

### AIR PRESSURE SUPPLIED TO ACTUATOR (BAR)

MODEL	Spring qty	Spring torque		2,5 Bar		3,0 Bar		4,0 Bar		5,0 Bar		6,0 Bar		7,0 Bar		8,0 Bar	
		start	end	start	end	start	end	start	end	start	end	start	end	start	end	start	end
PMA-1200-SR	5	380.0	275.0	390.0	285.0	523.0	418.0	789.0	684.0								
	6	456.0	330.0	335.0	209.0	468.0	342.0	734.0	608.0	1000.0	874.0						
	7	532.0	385.0	280.0	133.0	413.0	266.0	679.0	532.0	954.0	798.0						
	8	608.0	440.0			358.0	199.0	624.0	456.0	890.0	722.0	1146.0	988.0	1422.0	1254.0		
	9	684.0	495.0					569.0	380.0	835.0	646.0	1101.0	912.0	1367.0	1178.0		
	10	670.0	550.0					514.0	304.0	780.0	570.0	1046.0	836.0	1312.0	1102.0	1578.0	1368.0
	11	836.0	605.0							725.0	494.0	991.0	760.0	1257.0	1026.0	1523.0	1292.0
	12	912.0	660.0							670.0	418.0	936.0	684.0	1202.0	950.0	1468.0	1216.0

### WEIGHT TABLE (kg)

PMA-012 (Ø40)	PMA-020 (Ø52)	PMA-035 (Ø63)	PMA-050 (Ø75)	PMA-075 (Ø83)	PMA-110 (Ø92)	PMA-160 (Ø105)	PMA255 (Ø125)	PMA-435 (Ø140)	PMA-665 (Ø160)	PMA-1000 (Ø190)	PMA-1200 (Ø210)	PMA-1800 (Ø240)	PMA-2700 (Ø270)
-	1.45	2.05	2.90	3.60	5.22	6.85	10.11	15.55	24.00	36.25	54.80	80.20	118.00

### AIR VOLUME (dm<sup>3</sup>)

MODEL	OPENING	CLOSING
PMA-1000	5.90	5.40
PMA-1200	7.50	7.50



# TECHNICAL DATA

## OUTPUT TORQUE (NM) OF SINGLE ACTING ACTUATORS

### AIR PRESSURE SUPPLIED TO ACTUATOR (BAR)

MODEL	Spring qty	Spring torque		2,5 Bar		3,0 Bar		4,0 Bar		5,0 Bar		6,0 Bar		7,0 Bar		8,0 Bar	
		start	end	start	end	start	end	start	end	start	end	start	end	start	end	start	end
PMA-1800-SR	5	554.0	410.0	552.0	409.0	744.0	600.0	1129.0	985.0								
	6	665.0	492.0	470.0	297.0	662.0	489.0	1047.0	874.0	1432.0	1259.0						
	7	775.0	575.0	388.0	187.0	580.0	379.0	964.0	764.0	1349.0	1149.0						
	8	886.0	656.0			498.0	268.0	883.0	653.0	1267.0	1037.0	1652.0	1422.0	2037.0	1807.0		
	9	998.0	739.0					800.0	542.0	1185.0	926.0	1596.0	1311.0	1954.0	1696.0		
	10	1108.0	821.0					718.0	431.0	1103.0	816.0	1488.0	1201.0	1872.0	1586.0	2257.0	1970.0
	11	1219.0	903.0							1021.0	705.0	1406.0	1090.0	1791.0	1474.0	2167.0	1859.0
	12	1330.0	985.0							939.0	594.0	1323.0	979.0	1708.0	1363.0	2093.0	1748.0

### AIR PRESSURE SUPPLIED TO ACTUATOR (BAR)

MODEL	Spring qty	Spring torque		2,5 Bar		3,0 Bar		4,0 Bar		5,0 Bar		6,0 Bar		7,0 Bar		8,0 Bar	
		start	end	start	end	start	end	start	end	start	end	start	end	start	end	start	end
PMA-2700-SR	5	787.0	560.0	903.0	675.0	1195.0	968.0	1779.0	1552.0								
	6	943.0	672.0	790.0	519.0	1093.0	811.0	1667.0	1396.0	2252.0	1981.0						
	7	1101.0	783.0	679.0	361.0	972.0	654.0	1556.0	1238.0	2141.0	1823.0						
	8	1258.0	895.0			860.0	497.0	1444.0	1081.0	2029.0	1666.0	2614.0	2252.0	3099.0	2836.0		
	9	1416.0	1007.0					1332.0	923.0	1917.0	1509.0	2505.0	2094.0	3087.0	2678.0		
	10	1572.0	1119.0					1220.0	767.0	1805.0	1352.0	2390.0	1937.0	2974.0	2521.0	3560.0	3107.0
	11	1730.0	1231.0							1693.0	1194.0	2278.0	1779.0	2862.0	2364.0	3448.0	2949.0
	12	1887.0	1342.0							1582.0	1037.0	2167.0	1623.0	2751.0	2207.0	3336.0	2792.0

### WEIGHT TABLE (kg)

PMA-012 (Ø40)	PMA-020 (Ø52)	PMA-035 (Ø63)	PMA-050 (Ø75)	PMA-075 (Ø83)	PMA-110 (Ø92)	PMA-160 (Ø105)	PMA255 (Ø125)	PMA-435 (Ø140)	PMA-665 (Ø160)	PMA-1000 (Ø190)	PMA-1200 (Ø210)	PMA-1800 (Ø240)	PMA-2700 (Ø270)
-	1.45	2.05	2.90	3.60	5.22	6.85	10.11	15.55	24.00	36.25	54.80	80.20	118.00

### AIR VOLUME (dm<sup>3</sup>)

MODEL	OPENING	CLOSING
PMA-1800	11.00	9.00
PMA-2700	17.00	14.00



# TECHNICAL DATA

## OUTPUT TORQUE (NM) OF DOUBLE ACTING ACTUATORS

### AIR PRESSURE SUPPLIED TO ACTUATOR (BAR)

MODEL	2,5 Bar	3,0 Bar	4,0 Bar	4,5 Bar	5,0 Bar	5,5 Bar	6,0 Bar	7,0 Bar	8,0 Bar
PMA-12-DA	3.48	4.2	6.0	6.8	7.5	8.4	9.0	10.0	11.5
PMA-20-DA	10.0	12.0	16.0	18.0	20.0	21.9	23.9	27.9	31.9
PMA-35-DA	18.2	21.9	29.2	32.8	36.5	40.1	43.8	51.1	58.4
PMA-50-DA	25.1	30.1	40.1	45.1	50.2	55.2	60.2	70.2	80.3
PMA-75-DA	39.2	47.0	62.7	70.5	78.4	86.2	94.1	109.7	125.4
PMA-110-DA	56.4	67.7	90.3	101.6	112.9	124.1	135.4	158.0	180.6
PMA-160-DA	82.7	99.2	132.2	148.8	165.3	181.1	198.4	231.4	264.5
PMA-255-DA	125.4	150.5	200.6	225.7	250.8	275.9	301.0	351.1	401.3
PMA-435-DA	213.8	256.5	342.0	384.8	427.5	470.3	513.0	598.5	684.0
PMA-665-DA	332.5	399.0	532.0	598.5	665.0	731.5	798.0	931.0	1064.0
PMA-1000-DA	532.0	638.4	851.2	957.6	1064.0	1170.4	1276.8	1489.6	1702.4
PMA-1200-DA	665.0	798.0	1064.0	1197.0	1330.0	1463.0	1596.0	1862.0	2128.0
PMA-1800-DA	961.9	1154.3	1539.0	1731.4	1928.8	2116.1	2308.5	2693.3	3078.0
PMA-2700-DA	1462.1	1754.5	2339.3	2631.7	2924.1	3216.5	3508.9	4093.7	4678.6

### WEIGHT TABLE (kg)

PMA-012 (Ø40)	PMA-020 (Ø52)	PMA-035 (Ø63)	PMA-050 (Ø75)	PMA-075 (Ø83)	PMA-110 (Ø92)	PMA-160 (Ø105)	PMA255 (Ø125)	PMA-435 (Ø140)	PMA-665 (Ø160)	PMA-1000 (Ø190)	PMA-1200 (Ø210)	PMA-1800 (Ø240)	PMA-2700 (Ø270)
0.80	1.38	2.03	2.70	3.13	4.60	6.77	8.90	13.25	20.14	31.30	42.60	60.28	96.90

### AIR VOLUME (dm<sup>3</sup>)

MODEL	OPENING	CLOSING
PMA-012	0.08	0.07
PMA-020	0.12	0.16
PMA-035	0.21	0.23
PMA-050	0.30	0.34
PMA-075	0.43	0.47
PMA-110	0.65	0.73
PMA-160	0.95	0.88
PMA-235	1.60	1.40
PMA-435	2.50	2.20
PMA-665	3.70	3.20



# TECHNICAL DATA

## ELECTRO HYDRAULIC LINEAR ACTUATOR S.5.AR.1-2 + E-BOX

SINGLE ACTING - PN10 / PN16  
STRAIGHT TYPE / ANGLE TYPE

### TECHNICAL FEATURES

VALVE WITH ACTUATOR FOR DRY MOUNTING SINGLE ACTING

Valve body

GG25 / GGG40 / GS-C 25

Flanges according to DIN 2501

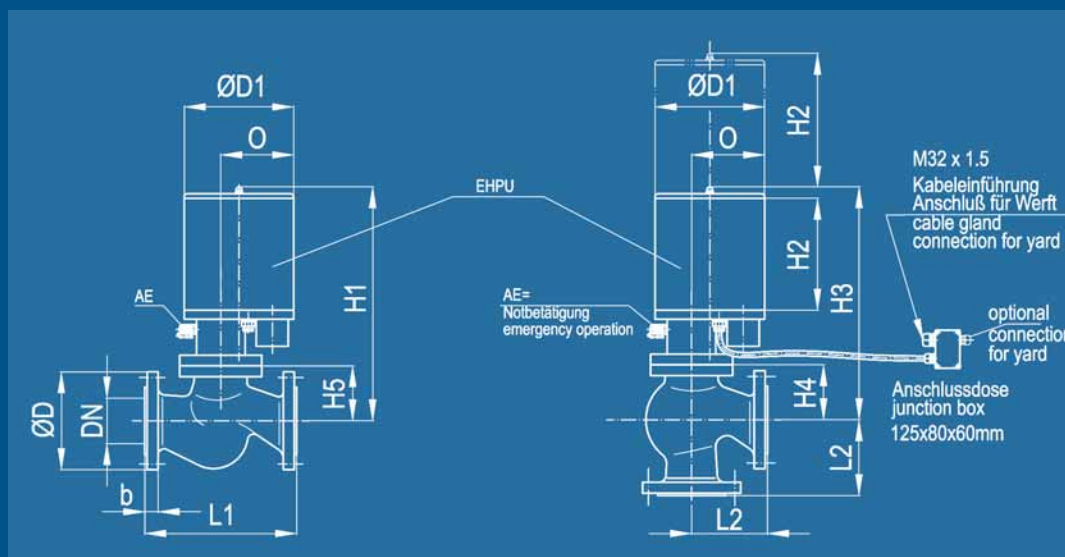
If execution : EEx actuator

Dimension : H1 / H3 + ~30mm

AE = connection for emerg. operating by hand pump

Dimension "O" - possibility to turn the actuator on butterfly valve

Standard installation : Vertical  $\pm 90^\circ$ ; or acc. arrangement the EHPU can be delivered separately, if requested actuator - painting: RAL 5021



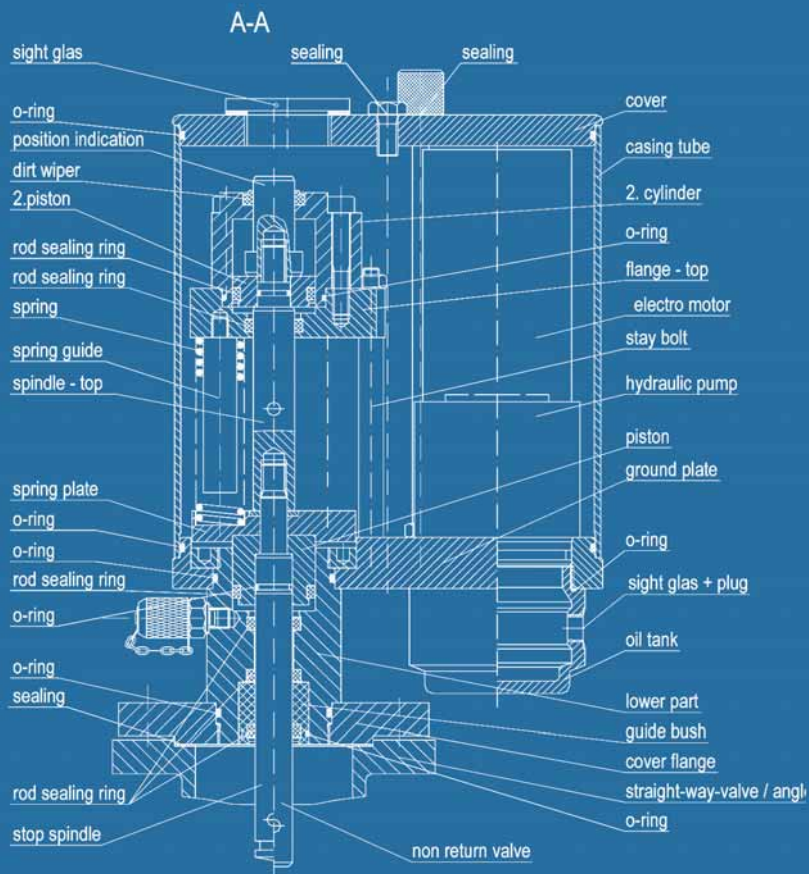
### DIMENSIONS

DN (mm)	ØD	b (mm)	L1 (mm)	H1 (mm)	H5 (mm)	ØD1 (mm)	L2 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	O (mm)	P <sub>diff</sub> (bar)	Weight (kg)	Actuator P <sub>P</sub> =8-10bar
25	115	16	160	394	72	208	100	212	365	43	159	13	18	EHL 40-80/S
32	140	18	180	394	72	208	105	212	363	41	159	11	20	EHL 40-80/S
40	150	18	200	403	81	208	115	212	369	47	159	9	22	EHL 40-80/S
50	165	20	230	405	83	208	125	212	368	46	159	7	33	EHL 40-80/S
65	185	20	290	419	97	208	145	212	377	55	159	5	34	EHL 40-80/S
80	200	22	310	472	109	208	155	235	426	63	146	5	34	EHL 50-100/S
100	220	24	350	486	123	208	175	235	435	72	146	3	52	EHL 50-100/S
100	220	24	350	615	123	236	175	307	538	72	160	5.5	56	EHL 50-125/S
125	250	26	400	645	149	236	200	307	557	91	160	4	75	EHL 50-125/S
150	285	26	480	697	179	236	225	307	579	113	160	2	88	EHL 50-125/S
150	285	26	480	722	179	237	225	372	656	113	161	6	100	EHL 80-100/S
200	340	30	600	774	231	237	275	372	697	154	161	3.5	144	EHL 80-100/S
250	405	32	730	832	289	237	325	372	723	180	161	2.5	269	EHL 80-100/S

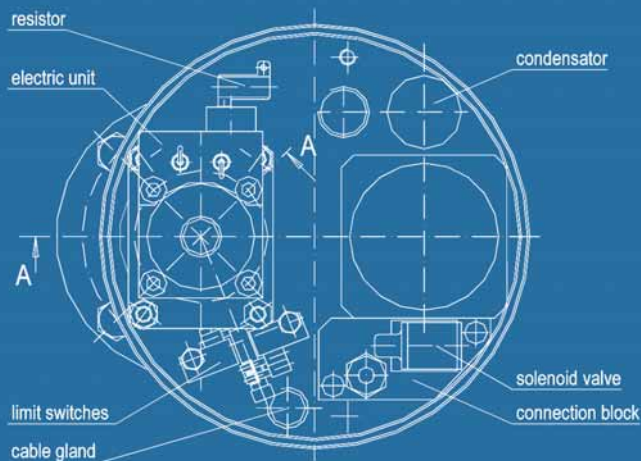
# TECHNICAL DATA

## ELECTRO HYDRAULIC LINEAR ACTUATOR

### SINGLE ACTING



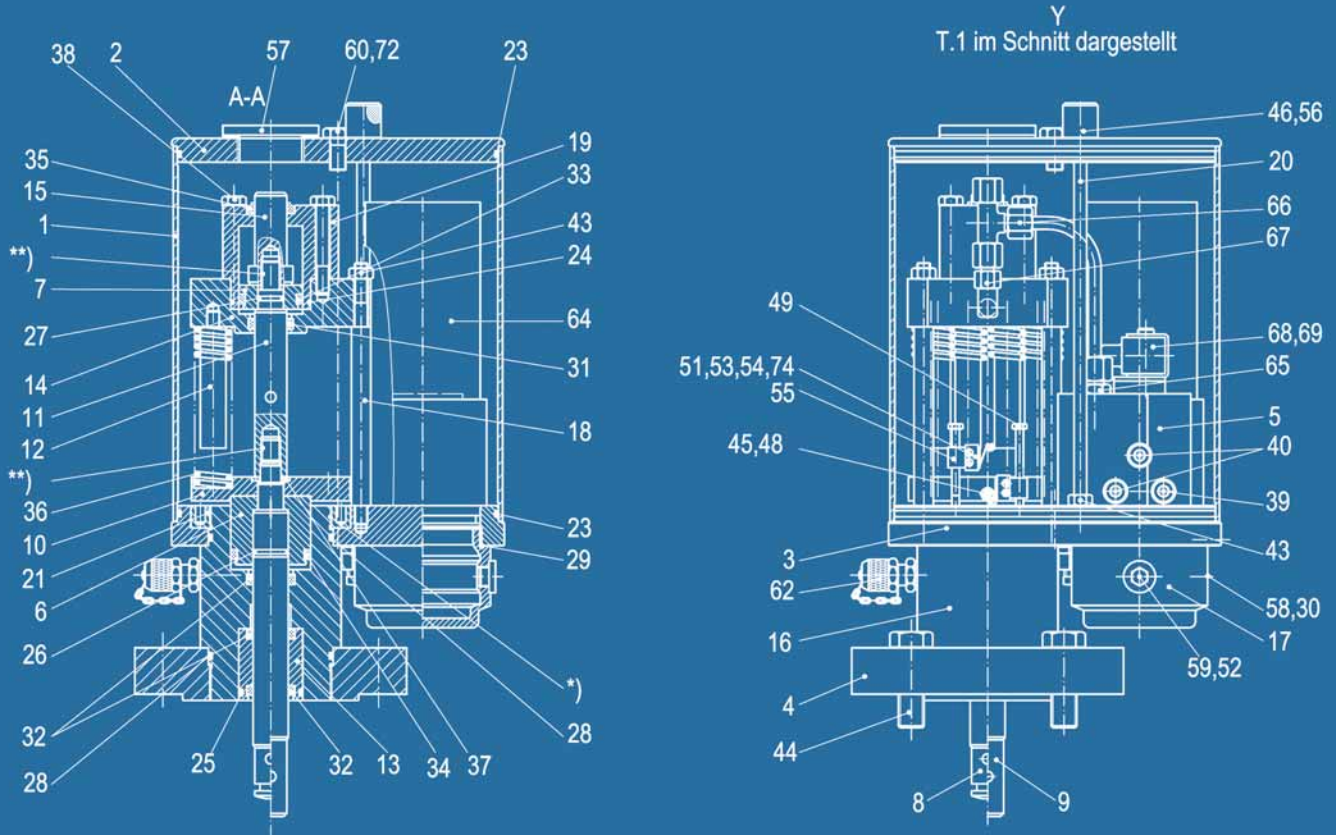
representation without cover



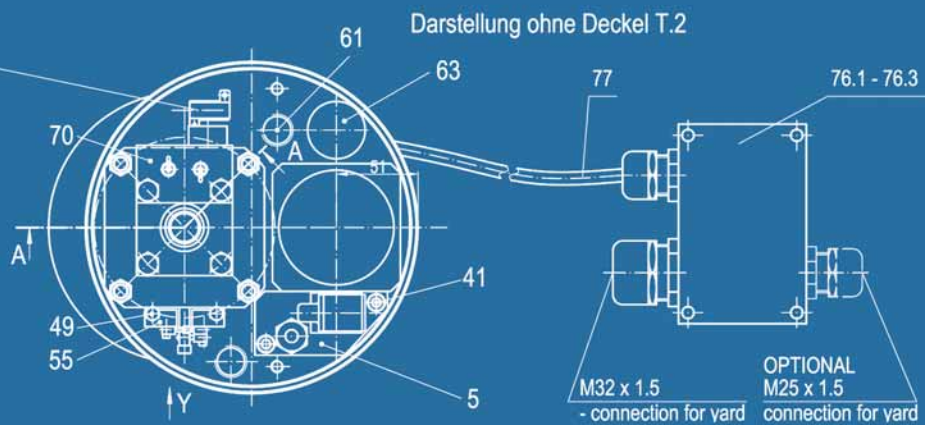
# TECHNICAL DATA

## ELECTRO HYDRAULIC LINEAR ACTUATOR 50-100

### SINGLE ACTING



Optional  
Widerstand für  
Stillstandheizung  
resistance for  
stand still heating



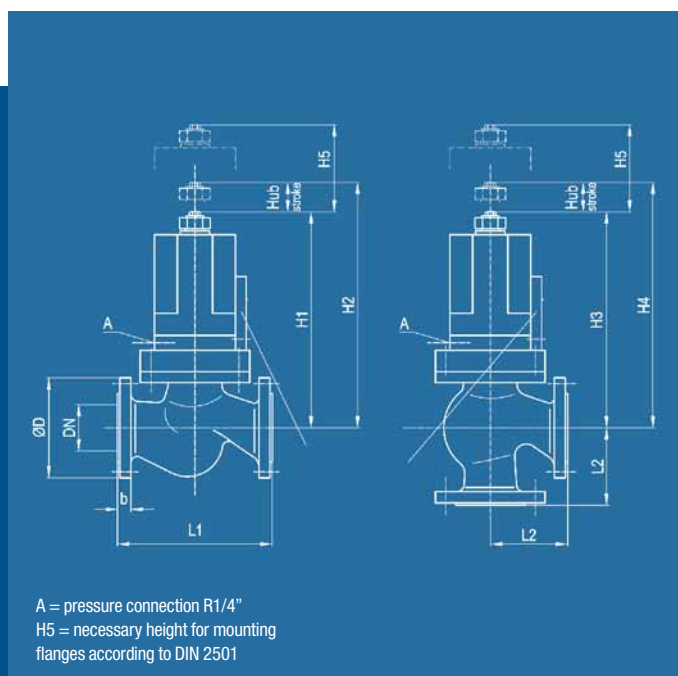
# TECHNICAL DATA

## PNEUMATIC LINEAR ACTUATOR

### REMOTELY CONTROLLED-VALVES

### PLA/S - SINGLE ACTING

### VALVE BODY : GG25 / GGG40 / GS-C25



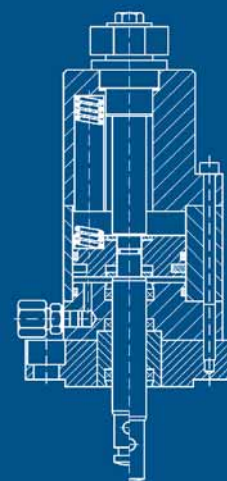
### TECHNICAL FEATURES FOR PNEUMATICAL LINEAR ACTUATORS DRY MOUNTING

<b>Type</b>	PLA-S-1
<b>Function</b>	Single acting / Spring closing
<b>Principle</b>	Linear actuator with piston
<b>Pilot pressure</b>	8 - 10 bar air pressure opening
<b>Execution</b>	Material: aluminium
<b>Pneumatic connection</b>	Direct, via 1/4" connection
<b>Position indication at actuator</b>	Mechanical
<b>As required for electrical position indicator</b>	At the actuator 2 electrical limit switches 24V / DC
<b>Design</b>	Dry mounting
<b>Emergency operation</b>	Hand operation by hexagon or hand wheel
<b>High temperature &gt; 70°C</b>	Actuator mounted on stay bolts additional height = ca. 240 mm

### DIMENSIONS

DN (mm)	ØD	b (mm)	L1 (mm)	H1 (mm)	H2 (mm)	L2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	P <sub>diff</sub> (bar)	Weight (kg)	Actuator P <sub>P</sub> =8-10bar
25	115	16	160	273	286	100	244	257	60	9	10	PLA 60/S
32	140	18	180	273	286	105	242	255	60	6	11	PLA 60/S
40	150	18	200	282	295	115	248	259	60	3,5	11	PLA 60/S
50	165	20	230	284	297	125	247	258	60	2,5	13	PLA 60/S
65	185	20	290	314	335	145	272	293	80	4	23	PLA 80/S
80	200	22	310	326	347	155	280	301	85	3	28	PLA 80/S
100	220	24	350	344	369	175	293	318	100	3,5	35	PLA 100/S
100	220	24	350	359	390	175	327	358	125	5	65	PLA 125/S
125	250	26	400	385	416	200	349	380	125	3	70	PLA 125/S
150	285	26	480	479	517	225	425	463	230	5,5	95	PLA 150/S
200	340	28	600	531	569	275	454	492	230	3,5	190	PLA 230/S

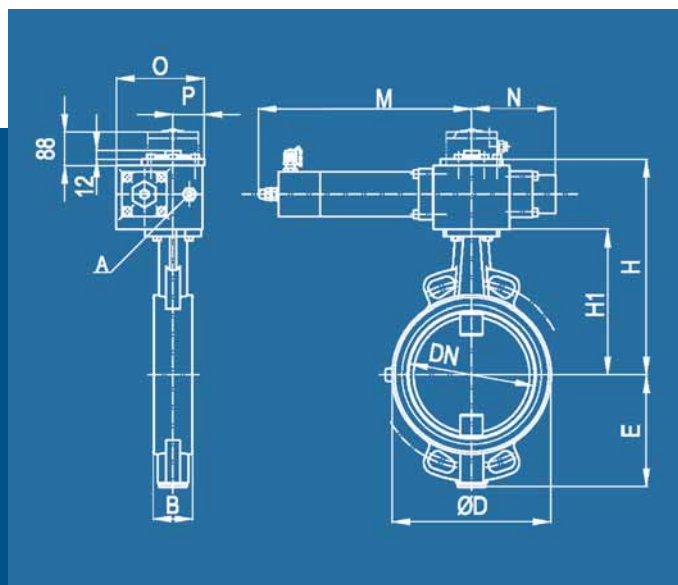
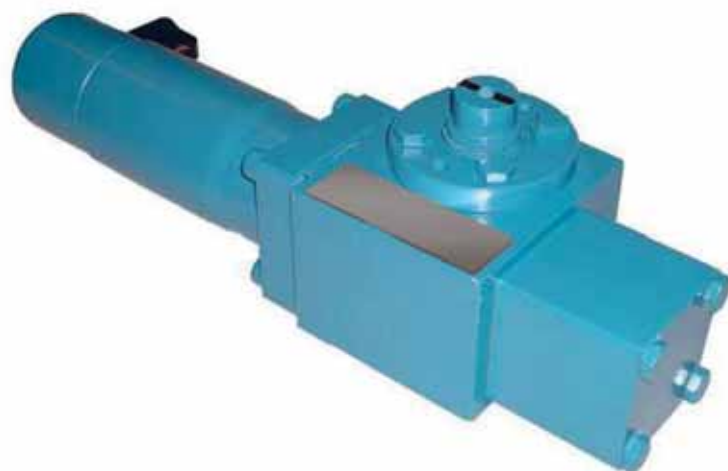
P<sub>P</sub> = pilot pressure



# TECHNICAL DATA

## HYDRAULIC ACTUATOR

### BUTTERFLY VALVE - WAFER TYPE DRY



#### TECHNICAL FEATURES

for hydraulic 92° rotary actuators - dry mounting

<b>Type</b>	HRA-S.V3
<b>Function</b>	Single acting, pressure opening / spring closing
<b>Principle</b>	Rack and pinion
<b>Valve Body</b>	GG25 / GGG40 / GS-C 25
<b>Control pressure</b>	105 - 135 bar
<b>Closing position</b>	Adjustable
<b>Position indication</b>	a) Visual: Direct at actuator c) Indirect: VPI-P/Limit switch
<b>Design</b>	Dry mounting
<b>Hydraulic connection</b>	Direct at actuator with 1/4" connection for pipe diameter - 8mm = standard (A = pressure opening)
<b>Emergency operation</b>	a) Hydraulically, via 2. piston independent from main piston by portable hand pump - connection AE (AE = pressure opening emergency) b) Hydraulically, via shuttle valve by portable hand pump.
<b>Action</b>	Quick opening Slowly closing - actuator with installed throttle.

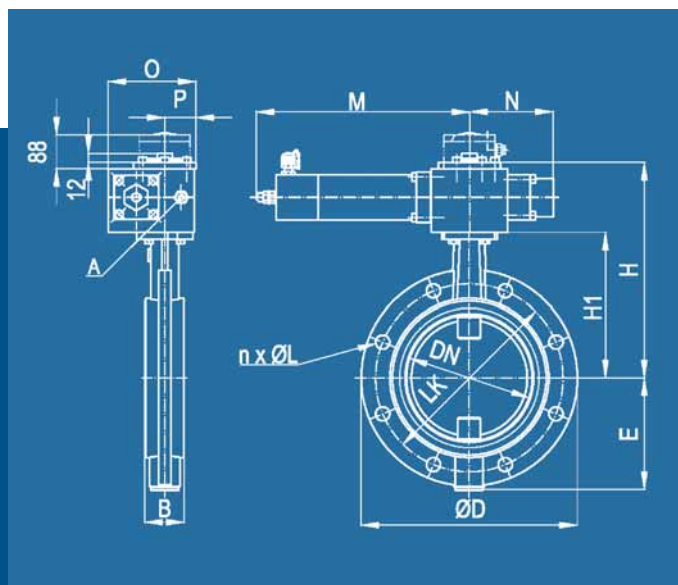
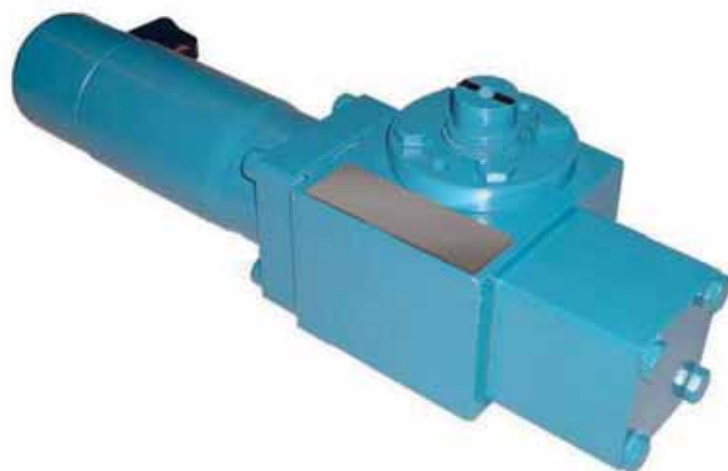
#### DIMENSIONS modification without notice!

DN (mm)	B (mm)	ØD (mm)	E (mm)	H (mm)	H1 (mm)	LK (mm)	nxØL (mm)	M (mm)	N (mm)	O (mm)	P (mm)	Weight (kg)	Actuator
50	108	165	67	198	118	125	4x18	269	105	100	36	16	HRA 42.5-40/S
65	112	185	74	206	126	145	4x18	269	105	100	36	18	HRA 42.5-40/S
80	114	200	82	213	133	160	8x18	269	105	100	36	19	HRA 42.5-40/S
100	127	228	100	227	147	180	8x18	269	105	100	36	22,5	HRA 42.5-40/S
125	140	254	112	240	160	210	8x18	269	105	100	36	26,5	HRA 42.5-40/S
150	140	285	134	260	180	240	8x22	269	105	100	36	30	HRA 42.5-40/S
200	152	343	172	302	204	295	8x22	306	105	110	45	44	HRA 43-40/S
250	165	405	203	355	245	350	12x22	362	140	145	56	66,5	HRA 65-50/S
300	178	445	223	380	270	400	12x22	424	165	165	59	78,5	HRA 75-60/S
350	190	505	282	425	315	460	16x22	424	165	165	59	107	HRA 75-60/S
400	216	565	307	470	350	515	16x26	424	424	200	100	146	HRA 75-60-60/S
450	222	615	352	495	375	565	20x26	424	424	200	100	168,5	HRA 75-60-60/S
500	229	670	387	535	415	620	20x26	424	424	200	100	214	HRA 75-60-60/S
600	267	780	452	585	465	725	20x30	424	424	200	100	276	HRA 75-60-60/S
700	292	895	495	675	555	840	24x30	424	424	200	100	445	HRA 75-60-60/S

# TECHNICAL DATA

## HYDRAULIC ACTUATOR

### BUTTERFLY VALVE - MONO FLANGE TYPE DRY



#### TECHNICAL FEATURES

for hydraulic 92° rotary actuators - dry mounting

<b>Type</b>	HRA-S.V3
<b>Function</b>	Single acting, pressure opening / spring closing
<b>Principle</b>	Rack and pinion
<b>Valve Body</b>	GG25 / GGG40 / GS-C 25
<b>Control pressure</b>	105 - 135 bar
<b>Closing position</b>	Adjustable
<b>Position indication</b>	a) Visual: Direct at actuator c) Indirect: VPI-P/Limit switch
<b>Design</b>	Dry mounting
<b>Hydraulic connection</b>	Direct at actuator with 1/4" connection for pipe diameter - 8mm = standard (A = pressure opening)
<b>Emergency operation</b>	a) Hydraulically, via 2. piston independent from main piston by portable hand pump - connection AE (AE = pressure opening emergency) b) Hydraulically, via shuttle valve by portable hand pump.
<b>Action</b>	Quick opening Slowly closing - actuator with installed throttle.

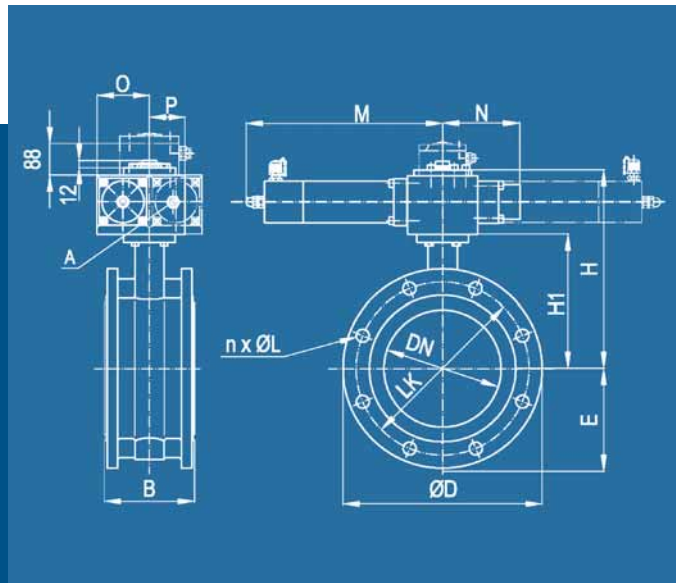
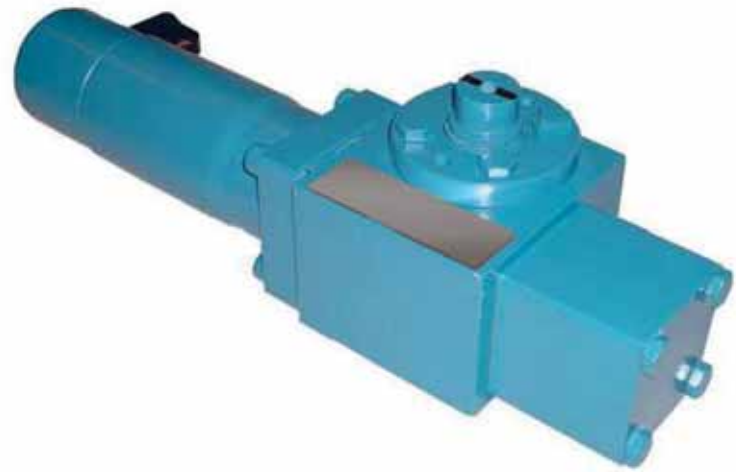
#### DIMENSIONS modification without notice!

DN (mm)	B (mm)	ØD (mm)	E (mm)	H (mm)	H1 (mm)	LK (mm)	nxØL (mm)	M (mm)	N (mm)	O (mm)	P (mm)	Weight (kg)	Actuator
50	43	165	67	198	118	125	4x18	269	105	100	36	12	HRA 42.5-40/S
65	46	185	74	206	126	145	4x18	269	105	100	36	13	HRA 42.5-40/S
80	46	200	82	213	133	160	8x18	269	105	100	36	13,5	HRA 42.5-40/S
100	52	228	100	227	147	180	8x18	269	105	100	36	15,5	HRA 42.5-40/S
125	56	254	112	240	160	210	8x18	269	105	100	36	17,5	HRA 42.5-40/S
150	56	285	134	260	180	240	8x22	306	105	110	45	20	HRA 43-40/S
200	60	340	159	302	204	295	12x22	306	105	110	45	27,5	HRA 43-40/S
250	68	405	195	355	245	355	12x26	362	140	145	56	46,5	HRA 65-50/S
300	78	460	220	390	270	410	12x26	424	165	165	59	61,5	HRA 75-60/S
350	78	533	282	435	315	470	16x26	424	165	165	59	74,5	HRA 75-60/S
400	102	585	307	470	350	525	16x30	424	424	200	100	118,5	HRA 75-60-60/S

# TECHNICAL DATA

## HYDRAULIC ACTUATOR

### BUTTERFLY VALVE - DOUBLE FLANGE TYPE DRY



#### TECHNICAL FEATURES

for hydraulic 92° rotary actuators - dry mounting

<b>Type</b>	HRA-S.V3
<b>Function</b>	Single acting, pressure opening / spring closing
<b>Principle</b>	Rack and pinion
<b>Valve Body</b>	GG25 / GGG40 / GS-C 25
<b>Control pressure</b>	105 - 135 bar
<b>Closing position</b>	Adjustable
<b>Position indication</b>	a) Visual: Direct at actuator c) Indirect: VPI-P/Limit switch
<b>Design</b>	Dry mounting
<b>Hydraulic connection</b>	Direct at actuator with 1/4" connection for pipe diameter - 8mm = standard (A = pressure opening)
<b>Emergency operation</b>	a) Hydraulically, via 2. piston independent from main piston by portable hand pump - connection AE (AE = pressure opening emergency) b) Hydraulically, via shuttle valve by portable hand pump.
<b>Action</b>	Quick opening Slowly closing - actuator with installed throttle.

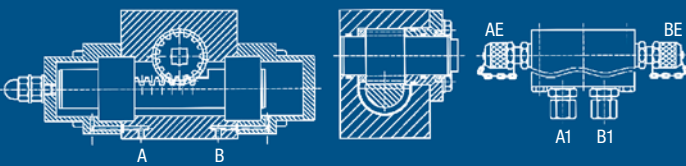
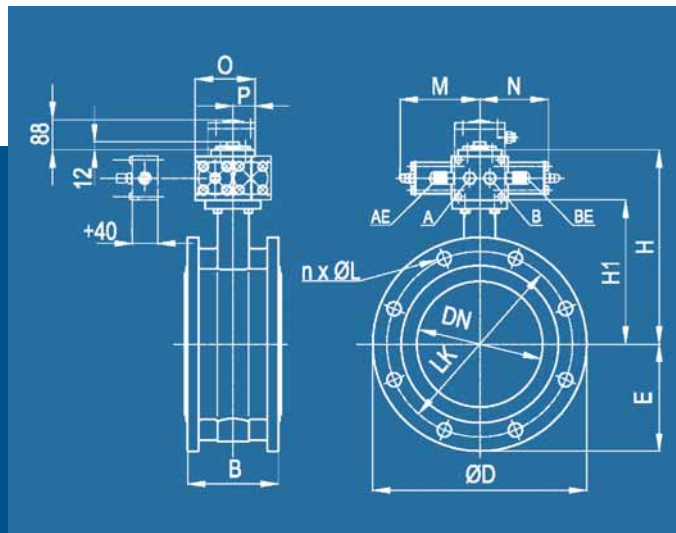
#### DIMENSIONS modification without notice!

DN (mm)	B (mm)	ØD (mm)	E (mm)	H (mm)	H1 (mm)	LK (mm)	nxØL (mm)	M (mm)	N (mm)	O (mm)	P (mm)	Weight (kg)	Actuator
50	110	165	67	198	118	125	4x18	269	105	64	36	16	HRA 42.5-40/S
65	114	185	74	206	126	145	4x18	269	105	64	36	18	HRA 42.5-40/S
80	116	200	82	213	133	160	8x18	269	105	64	36	19	HRA 42.5-40/S
100	129	228	100	227	147	180	8x18	269	105	64	36	22,5	HRA 42.5-40/S
125	142	254	112	240	160	210	8x18	269	105	64	36	26,5	HRA 42.5-40/S
150	142	285	134	260	180	240	8x18	306	105	65	45	30	HRA 43-40/S
200	155	343	172	302	204	295	8x22	306	105	65	45	43,6	HRA 43-40/S
250	168	405	203	355	245	350	12x22	362	140	89	56	66,5	HRA 65-50/S
300	181	445	223	390	270	400	12x22	424	165	106	59	78,5	HRA 75-60/S
350	193	505	282	435	315	460	16x22	424	165	106	59	107	HRA 75-60/S
400	220	565	307	470	350	515	16x26	424	424	100	100	146	HRA 75-60-60/S
450	226	615	352	525	375	565	20x26	430	140	145	84	456	HRA 125-80/S
500	233	670	387	565	415	620	20x26	430	165	145	84	576	HRA 125-80/S

# TECHNICAL DATA

## HYDRAULIC ACTUATOR

### BUTTERFLY VALVE - DOUBLE FLANGE TYPE DRY



### TECHNICAL FEATURES

for hydraulic 90° rotary actuators - dry mounting

<b>Type</b>	HRA-D.V3
<b>Function</b>	Double acting
<b>Principle</b>	Rack and pinion
<b>Valve Body</b>	GG25 / GGG40 / GS-C 25
<b>Control pressure</b>	115 - 145 bar
<b>Closing position</b>	Adjustable
<b>Position indication</b>	a) Visual: Direct at actuator c) Indirect: VPI-P/Limit switch
<b>Design</b>	Dry mounting
<b>VHydraulic connection</b>	Directly / via Co-Block b 1/4" connection for pipe diameter 8mm = standard
<b>Hydraulic blocking</b>	(=optional) Double checked non-return valve
<b>Emergency operation</b>	Quick connection for hand pump at Co-Block.

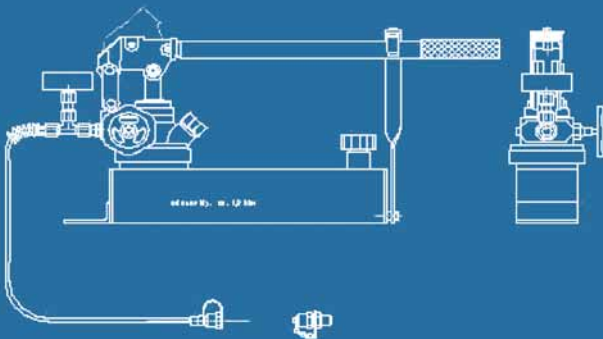
### DIMENSIONS modification without notice!

DN (mm)	B (mm)	ØD (mm)	E (mm)	H (mm)	H1 (mm)	LK (mm)	nxØL (mm)	M (mm)	N (mm)	O (mm)	P (mm)	Weight (kg)	Actuator
50	108	165	67	200	118	125	4x18	130	105	100	36	16	HRA 42.5-40/D
65	112	185	74	208	126	145	4x18	130	105	100	36	18	HRA 42.5-40/D
80	114	200	82	215	133	160	8x18	130	105	100	36	19	HRA 42.5-40/D
100	127	228	100	229	147	180	8x18	130	105	100	36	22,5	HRA 42.5-40/D
125	140	254	112	242	160	210	8x18	130	105	100	36	26,5	HRA 42.5-40/D
150	140	285	134	262	180	240	8x22	130	105	100	36	30	HRA 42.5-40/D
200	152	343	172	286	204	295	8x22	130	105	100	36	41	HRA 42.5-40/D
250	165	405	203	343	245	350	12x22	130	105	110	45	58	HRA 43-40/D
300	178	445	223	380	270	400	12x22	177	151	145	55	73,5	HRA 65-50/D
350	190	505	282	425	315	460	16x22	177	151	145	55	105	HRA 65-50/D
400	216	565	307	470	350	515	16x26	216	170	165	59	119,5	HRA 75-60/D
450	222	615	352	495	375	565	20x26	216	170	165	59	142	HRA 75-60/D
500	229	670	387	535	415	620	20x26	216	216	200	100	208,5	HRA 75-60-60/D
600	267	780	452	610	465	725	20x30	216	216	200	100	270	HRA 75-60-60/D
700	292	895	495	720	555	840	24x30	314	314	290	145	497	HRA 125-80-80/D
800	318	1015	550	785	620	950	24x33	314	314	145	145	597	HRA 125-80-80/D
900	330	1115	620	840	675	1050	28x33	314	314	145	145	575	HRA 125-80-80/D
1000	410	1230	670	940	740	1160	28x36	460	460	200	200	1100	HRA 200-80-80/D

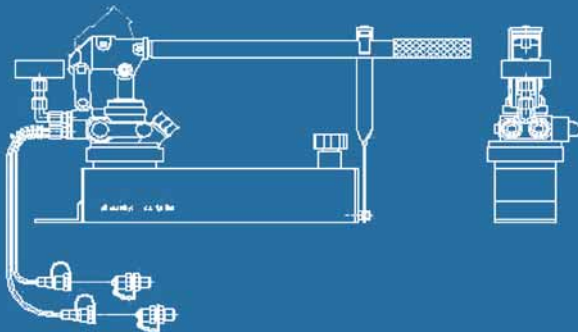


# TECHNICAL DATA

## FOR PHP 01 PORTABLE HAND PUMP



For single acting!  
PHP 01-01A



For double acting!  
PHP 01-03A

### TECHNICAL FEATURES

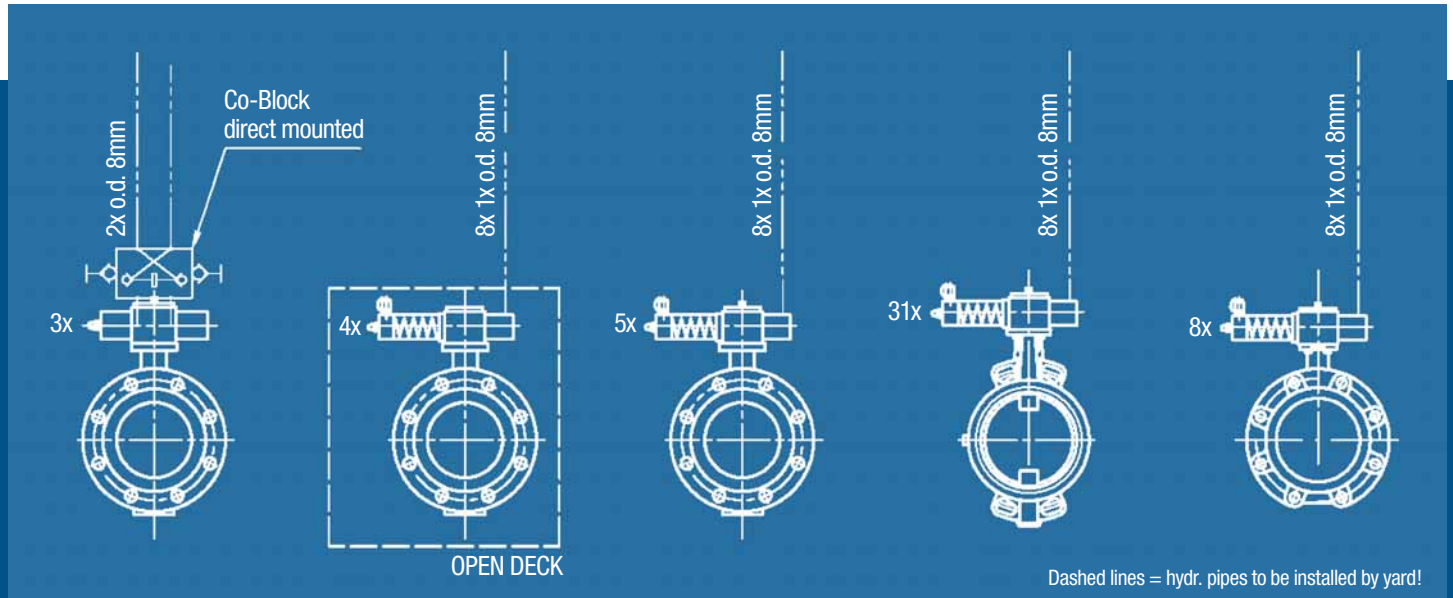
for PHP 01 - portable hand pump

<b>Type</b>	L = 570mm H = 270mm W = 115 mm
<b>Tank capacity</b>	1,9 litre oil tank
<b>Volume</b>	12cm <sup>3</sup> per stroke
<b>Components</b>	Equipped with: non-return valve, ventilation valve, manometer 0-250 bar
<b>Control single</b>	By 3/2 way control valve to change from open to close
<b>Control double</b>	By 4/3 way control valve to change from open to close
<b>Operation</b>	By hand lever
<b>Connection single</b>	To pressure connection A at actuator
<b>Connection double</b>	- To Co-Block at actuator - dry mounted - To separate Co-Block - submerged mounted
<b>Weight</b>	7 kg.

# TECHNICAL DATA

## GENERAL DIAGRAM

All actuators are without control and are “unthrottled”



FLANGED TYPE  
open / close

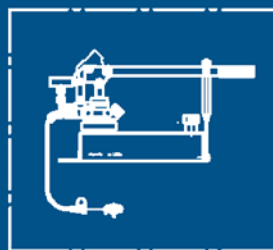
FLANGED TYPE  
open / close

FLANGED TYPE  
open / close

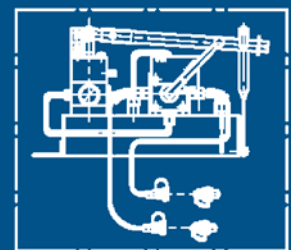
WAFER TYPE  
open / close

MONO TYPE  
open / close

### Optional



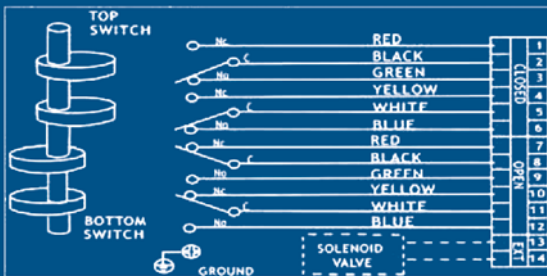
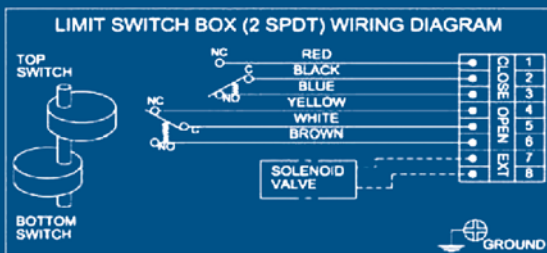
portable hand pump  
1x for single acting actuator





portable hand pump  
1x for double acting actuator

# TECHNICAL DATA

## SWITCHBOX S-200 - S-300



MODEL	Bracket type
MB-1	 30 x 80 (H=30) PMA-012 - PMA-665
MB-2	 30 x 130 (H=40) PMA-1000 - PMA-2700

### S-200

- Enclosure: Weatherproof IP 67/NEMA4&4X (O-Ring Sealed)
- Bolts on visual position indicator (Re-adjustment available upon required direction)
- Dual Cable entries: 2 x M20 x 1,5 (Standard), 2 x 1/2" NPT (Optional)
- Terminal Strips: 8 points (0.08-2.5mm<sup>2</sup>)
- Ambient Temperature: -20°C - +80°C
- Coating: Polyester inside and outside against corrosion
- 2x Mechanical Switches: 5A 125-250 VAC (Standard)
- Stainless steel 316 drive shaft
- Steel + RAL 9005 Powder Coated Mounting bracket (MB-1)

### S-300

- Enclosure: Weatherproof IP 67/NEMA4&4X (O-Ring Sealed)
- Bolts on visual position indicator (Re-adjustment available upon required direction)
- Dual Cable entries: 2 x 1/2 NPT" (Standard), 2 x M20 x 1,5 (Optional)
- Terminal Strips: 8 points (0.08-2.5mm<sup>2</sup>)
- Ambient Temperature: -20°C - +80°C
- Coating: Polyester inside and outside against corrosion
- 2x Mechanical Switches: 5A 125-250 VAC (Standard)
- Stainless steel 316 drive shaft
- Steel + RAL 9005 Powder Coated Mounting bracket (MB-2)

### Options Available

- 3-4 Switches available
- 8-14 Points Terminal Strips (0.08-2.5mm<sup>2</sup>)

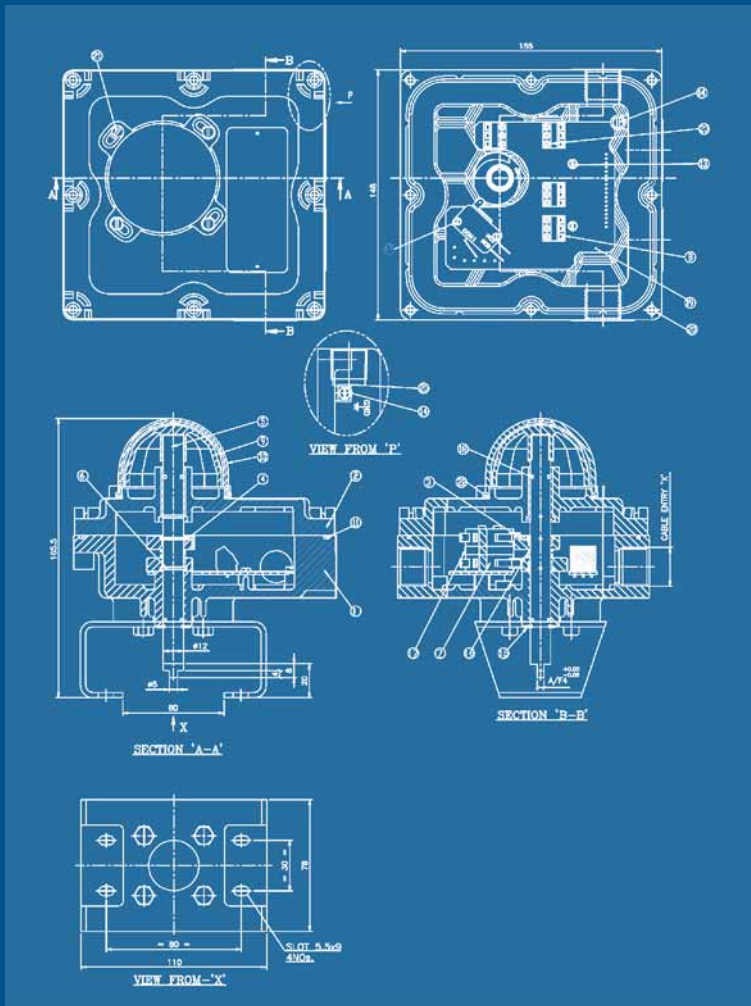


[www.wosupply.com](http://www.wosupply.com)

# TECHNICAL DATA

## FLAMEPROOF LIMITSWITCH

DNLF1A2/1B2



### TECHNICAL FEATURES

#### DISCRIPTION

#### MATERIAL

23	Earthing screw clamp	1	S.S.304
22	"O" ring	1	NBR
21	Philips head screws	4	S.S.304
20	S.H.C. screw	8	S.S.304
19	Printed circuit boar (1.6 THK)	1	FR4
18	"O" ring	2	NBR
17	Pad	1	PA6
16	Spring	1	S.S.304
15	"E" type circlip	1	SP. Steel
14	Screw for earthing (DIN84-M4x8)	2	S.S.304
13	Screw for conn.PCB (DIN84-M3x8)	2	S.S.304
12	Screw for microswitch	2	S.S.304
11	Gasket	1	NBR
10	Indicator cover	1	Polycarbonate
9	Indicator	1	ABS
8	Terminal block-3 way	4	-
7	Microswitch (SPDT)	2	Cherry/Honewell
6	Spring dowel	2	SP.Steel
5	Shaft	1	S.S.304
4	Cam-lock	2	Delrin
3	Cam	2	Polycarbonate
2	Cover (powder coated)	1	Aluminium
1	Housing (powder coated)	1	Aluminium

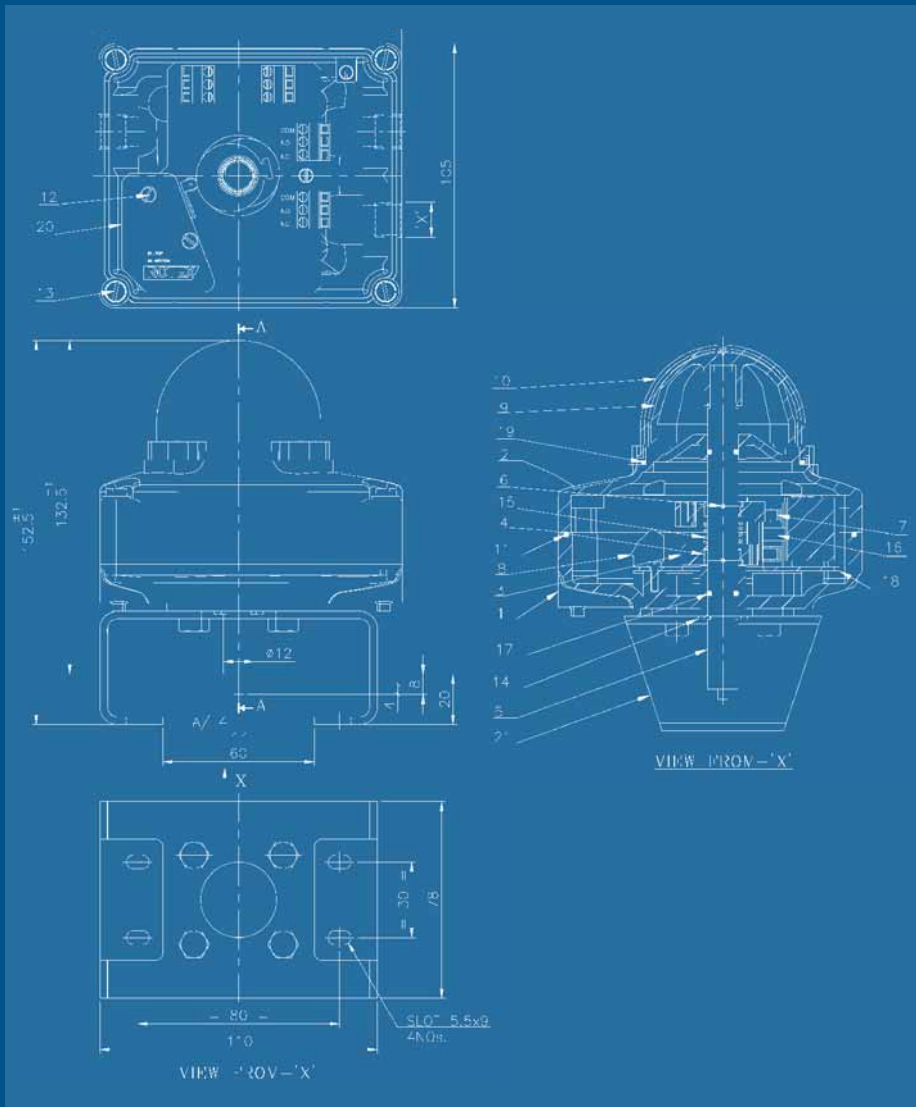
#### CABLE ENTRY 'X'

3/4" ET (3E)  
 1/2" NPT (4R)  
 3/4" NPT (6R)  
 M20 x 1.5 (M)

# TECHNICAL DATA

## FLAMEPROOF LIMITSWITCH

DNLF1A2/1B2



### TECHNICAL FEATURES

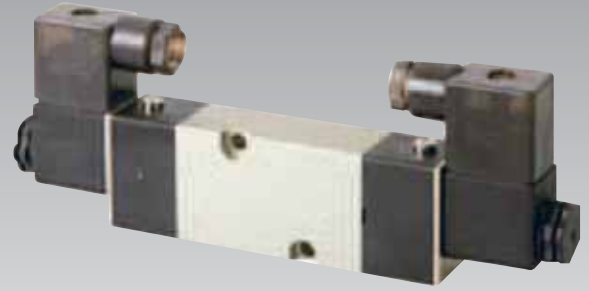
DISCRIPTION	MATERIAL
21 Bracket	1 M.S./S.S.304
20 Cover for microswitch	1 PA6
19 "O" ring	1 NBR
18 PCB	1 -
17 "O" ring	2 NBR
16 Pad	1 PA6
15 Spring	1 S.S.302
14 'E' type circlip	1 SP. Steel
13 Screw for cover	4 S.S.304
12 Screw for microswitch	2 S.S.304
11 Gasket	1 NBR
10 Indicator cover	1 Polycarbonate
9 Indicator	1 ABS
8 3-way terminal block	4 Dinkle
7 Microswitch (SPDT)	2 Cherry/Honewell
6 Spring dowel	2 SP.Steel
5 Shaft	1 S.S.304
4 Cam-lock	2 Delrin
3 Cam	2 PA6
2 Cover	1 Al. (ADC12)
1 Housing	1 Al. (ADC12)

### DIMENSION 'X'

3/4" ET Standard  
 1/2" NPT On order  
 M20 x 1.5P On order

# TECHNICAL DATA

## SOLENOID SERIES: SV NAMUR



### Versions

- 3/2 (24V Ac/Dc - 110V Ac/Dc - 220V Ac/Dc)



- 5/2 (24V Ac/Dc - 110V Ac/Dc - 220V Ac/Dc)



### TECHNICAL FEATURES

<b>Body</b>	Aluminium (Hard anodised)
<b>Piston</b>	Aluminium Extrusion
<b>Fasteners</b>	Stainless steel A4 (AISI 316)
<b>Spring</b>	Stainless steel A4 (AISI 316)
<b>Seals</b>	NBR

### TYPE 3/2 - 5/2 SOLENOID VALVES

- Can be mounted on all types of pneumatic actuators (Rotary / Linear with a NAMUR Connection)
- Working temperature -10°C - +70°C
- Standard IP65 Enclosure
- Lockable Manual Operator
- Port Size: Inlet and Exhaust 1/4" NPT



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## 7 CHECK VALVES

### TECHNICAL DATA



950

951

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957 B

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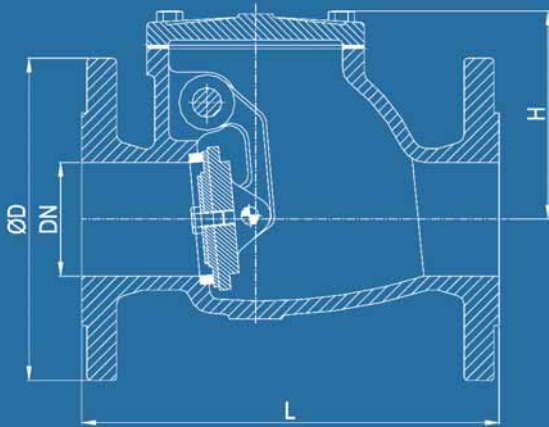
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# TECHNICAL DATA

## SWING CHECK VALVE

### WITHOUT LEVER & COUNTER WEIGHT



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
32	140	140	180	100	8.0
40	150	150	180	100	8.0
50	165	165	200	105	10
65	185	185	240	120	15
80	200	200	260	145	21
100	220	220	300	152	26
125	250	250	350	165	42
150	285	285	400	190	55
200	340	340	500	290	112
250	395	405	600	300	165
300	445	460	700	365	250
350	505	520	800	420	360
400	565	580	900	485	505
500	670	715	1100	580	1150
600	780	840	1300	700	1250

### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Disc</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3232, Rubber Sealed
<b>Face to Face</b>	EN 558 Series 48 (DIN 3202 F6)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 6 - PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Lift limiter, metal seated
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Swing check valves, with metal seat or rubber seal, full bore are suitable for horizontal and vertical installation.
- Application: Cold and hot water, fresh and seawater.



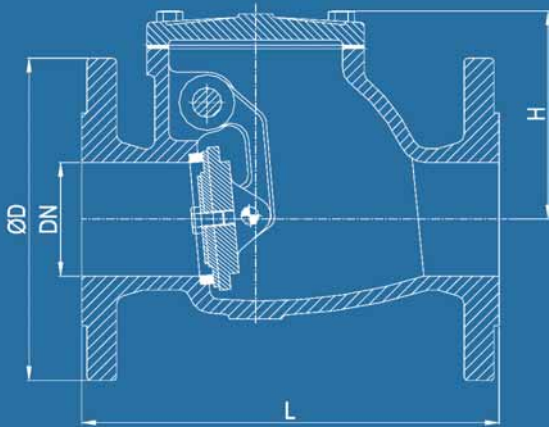
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# TECHNICAL DATA

## SWING CHECK VALVE

### WITHOUT LEVER & COUNTER WEIGHT



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
32	140	140	180	100	10
40	150	150	180	100	10
50	165	165	200	105	12
65	185	185	240	120	17
80	200	200	260	145	23
100	220	220	300	152	29
125	250	250	350	165	46
150	285	285	400	190	60
200	340	340	500	290	123
250	395	405	600	300	182
300	445	460	700	365	275
350	505	520	800	420	395
400	565	580	900	485	555
500	670	715	1100	580	1265
600	780	840	1300	700	1375

### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Disc</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3232, Rubber Sealed
<b>Face to Face</b>	EN 558 Series 48 (DIN 3202 F6)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 - PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Lift limiter, metal seated
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Swing check valves, with metal seat or rubber seal, full bore are suitable for horizontal and vertical installation.
- Application: Cold and hot water, fresh and seawater.

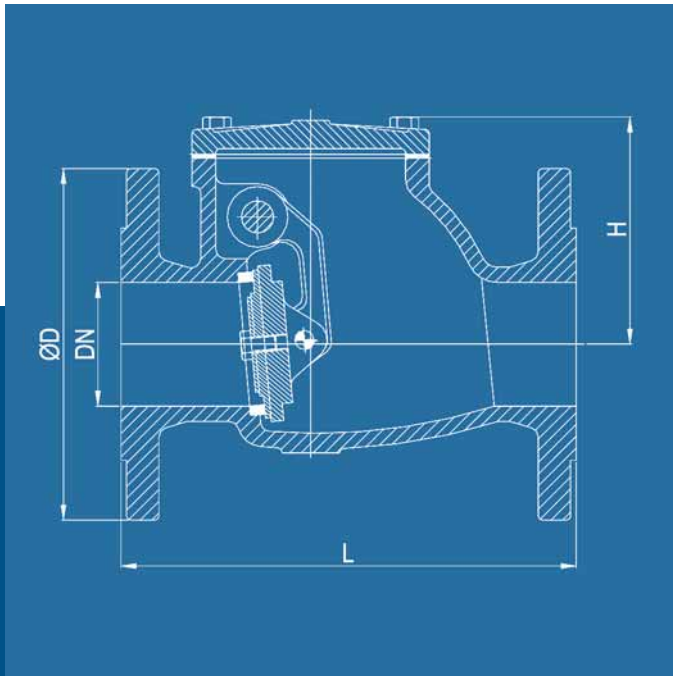


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# TECHNICAL DATA

## SWING CHECK VALVE

WITHOUT LEVER & C. WEIGHT  
DIN LENGTH



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
32	140	140	180	95	8.0
40	150	150	180	95	10
50	165	165	200	100	12
65	185	185	240	115	17
80	200	200	260	135	23
100	220	220	300	145	30
125	250	250	350	160	42
150	285	285	400	185	60
200	340	340	500	270	120
250	395	405	600	320	175
300	445	460	700	350	275
350	505	520	800	435	380
400	565	580	900	475	580
500	670	715	1100	570	960
600	780	840	1300	670	1190



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc</b>	Bronze
<b>Design</b>	DIN 3232, rubber sealed
<b>Face to Face</b>	EN 558 series 48 (DIN 3202 F 6)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Wrench cock for operation, two way pattern
<b>Flange Options</b>	Lever & counterweight, metal seated, by-pass

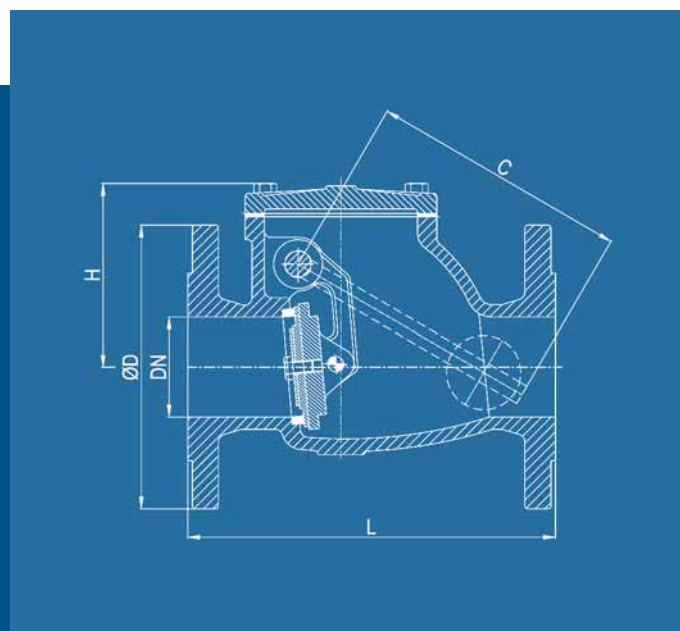
- Swing check valves, with bronze seat or rubber seal, full bore are suitable for horizontal and vertical installation.
- Application: Cold and hot water, fresh and seawater.

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# TECHNICAL DATA

## SWING CHECK VALVE

### WITH LEVER & COUNTER WEIGHT



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	C (mm)	Weight (kg)
32	140	140	180	100	200	7.0
40	150	150	180	100	200	9.0
50	165	165	200	105	200	11
65	185	185	240	120	300	16
80	200	200	260	145	300	24
100	220	220	300	152	300	29
125	250	250	350	165	400	49
150	285	285	400	190	400	60
200	340	340	500	290	500	120
250	395	405	600	300	500	172
300	445	460	700	365	600	280
350	505	520	800	420	670	380
400	565	580	900	485	900	590
500	670	715	1100	580	1100	990
600	780	840	1300	700	1100	1200

### TECHNICAL FEATURES

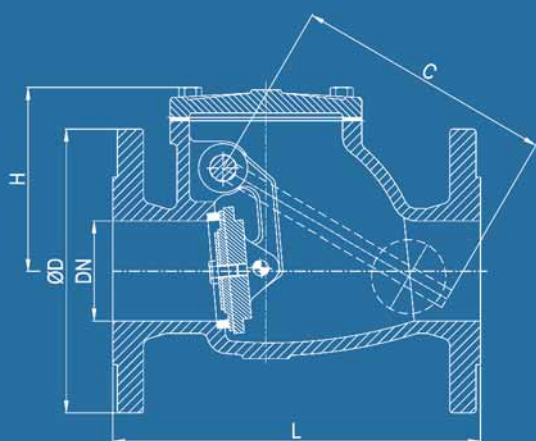
<b>Body</b>	Cast iron / Ductile iron
<b>Disc</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3232, Rubber sealed, with lever and counter weight
<b>Face to Face</b>	EN 558 Series 48 (DIN 3202 F6)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 - PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Lift limiter, metal seated
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Swing check valves, with metal seat or rubber seal, full bore are suitable for horizontal and vertical installation.
- Application: Cold and hot water, fresh and seawater.

# TECHNICAL DATA

## SWING CHECK VALVE

### WITH LEVER & COUNTER WEIGHT



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	C (mm)	Weight (kg)
32	140	140	180	100	200	7.0
40	150	150	180	100	200	9.0
50	165	165	200	105	200	11
65	185	185	240	120	300	16
80	200	200	260	145	300	24
100	220	220	300	152	300	32
125	250	250	350	165	400	45
150	285	285	400	190	400	67
200	340	340	500	290	500	125
250	395	405	600	300	500	190
300	445	460	700	365	600	290
350	505	520	800	420	670	410
400	565	580	900	485	900	610
500	670	715	1100	580	1100	1030
600	780	840	1300	700	1100	1230

### TECHNICAL FEATURES

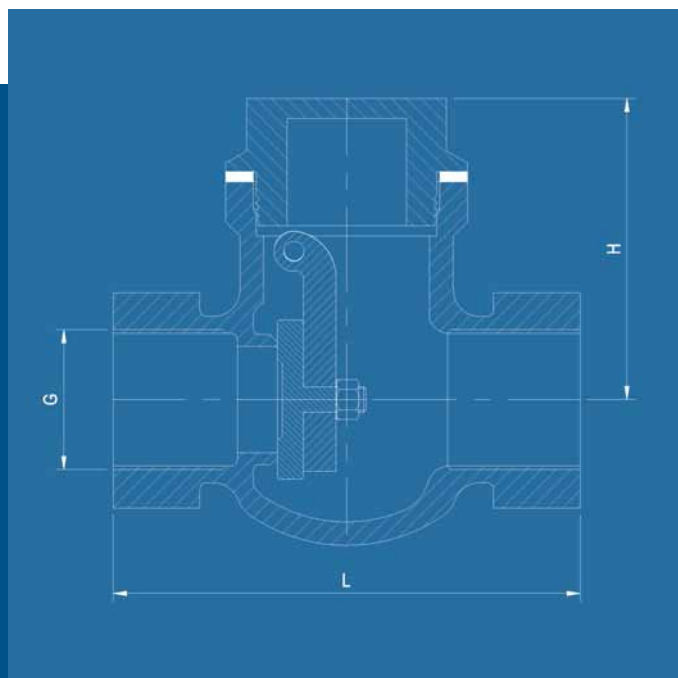
<b>Body</b>	Cast steel / Stainless steel
<b>Disc</b>	Bronze or Stainless steel
<b>Design</b>	DIN 3232, Rubber sealed, with lever and counter weight
<b>Face to Face</b>	EN 558 Series 48 (DIN 3202 F6)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 - PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Lift limiter, metal seated
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Swing check valves, with metal seat or rubber seal, full bore are suitable for horizontal and vertical installation.
- Application: Cold and hot water, fresh and seawater.

# TECHNICAL DATA

## SWING CHECK VALVE

SCREWED BONNET  
THREADED ENDS



### DIMENSIONS

DN (mm)	G (")	Pressure rating	H (mm)	L (mm)	Weight (kg)
10	3/8	PN 16	35	50	0.3
15	1/2	PN 16	40	60	0.4
20	3/4	PN 16	50	70	0.5
25	1	PN 16	55	80	0.8
32	1 ¼	PN 16	60	95	1.1
40	1 ½	PN 16	70	105	1.5
50	2	PN 16	77	130	2.1
65	2 ½	PN 16	94	160	4.6
80	3	PN 16	130	185	7.0

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc</b>	Bronze
<b>Design</b>	Special design, threaded ends, soft sealing
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Threaded Ends</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Metal seated

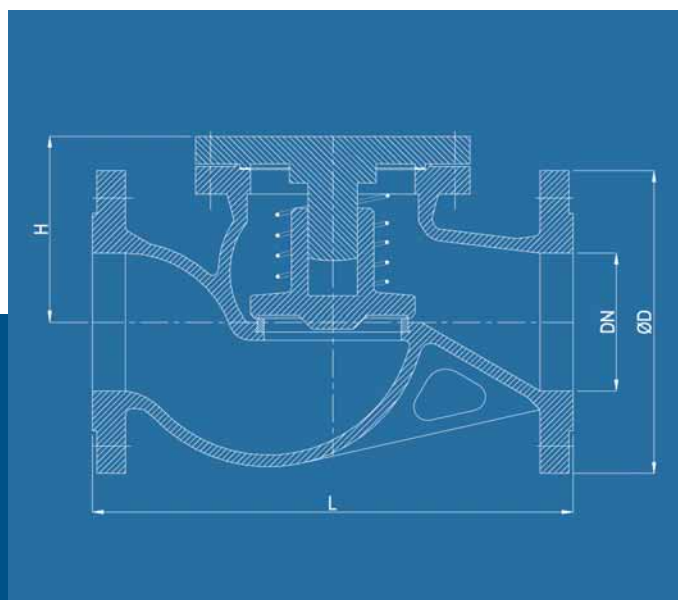
- Check valves with screwed bonnet and BSP-female threaded ends, for horizontal and vertical (upward flow) installation.
- Application: They offer excellent resistance to the corrosive action of seawater, fresh water and waste water.

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# TECHNICAL DATA

## CHECK VALVE - STRAIGHT

### LIFT TYPE - DIN LENGTH



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
15	95	95	130	55	3.0
20	105	105	150	55	3.5
25	115	115	160	65	4.0
32	140	140	180	75	5.0
40	150	150	200	80	8.0
50	165	165	230	85	10
65	185	185	290	95	14
80	200	200	310	115	22
100	220	220	350	140	38
125	250	250	400	160	47
150	285	285	480	200	60
175	315	315	550	225	95
200	340	340	600	245	115
250	395	405	730	290	150
300	445	460	850	345	230
350	505	520	980	400	280
400	565	580	1100	425	430
450	615	640	1200	450	500
500	670	715	1250	500	670



### TECHNICAL FEATURES

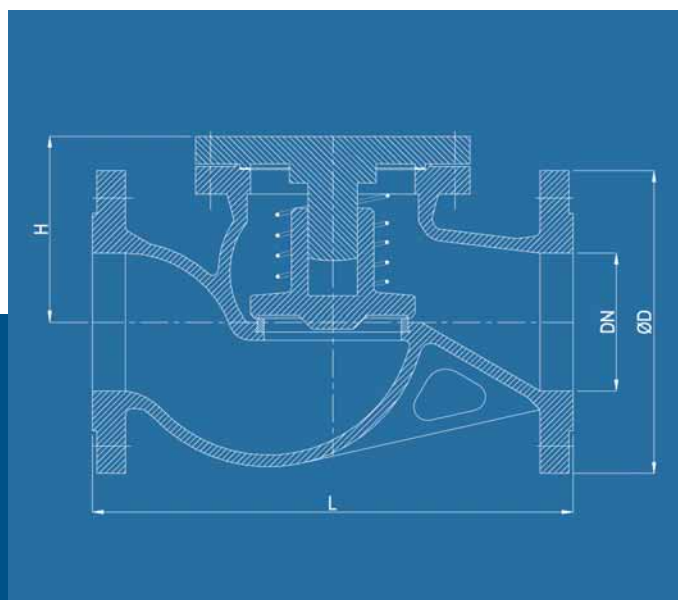
<b>Body</b>	Cast iron / Ductile iron
<b>Disc/seat</b>	Bronze or Stainless steel
<b>Design</b>	Body: DIN 86252 with spring
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Lift type check valves in DIN Standards, straight pattern, raised flanges as per DIN and bolted bonnet.
- Application: Cold and hot water, gases, steam and other neutral liquids.

# TECHNICAL DATA

## CHECK VALVE - STRAIGHT

### LIFT TYPE - DIN LENGTH



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
15	95	95	130	55	3.5
20	105	105	150	55	4.0
25	115	115	160	65	4.5
32	140	140	180	75	5.5
40	150	150	200	80	9.0
50	165	165	230	85	11
65	185	185	290	95	15
80	200	200	310	115	24
100	220	220	350	140	32
125	250	250	400	160	48
150	285	285	480	200	65
175	315	315	550	225	98
200	340	340	600	245	120
250	395	405	730	290	190
300	445	460	850	345	240
350	505	520	980	400	290
400	565	580	1100	425	440
450	615	640	1200	450	520
500	670	715	1250	500	690



### TECHNICAL FEATURES

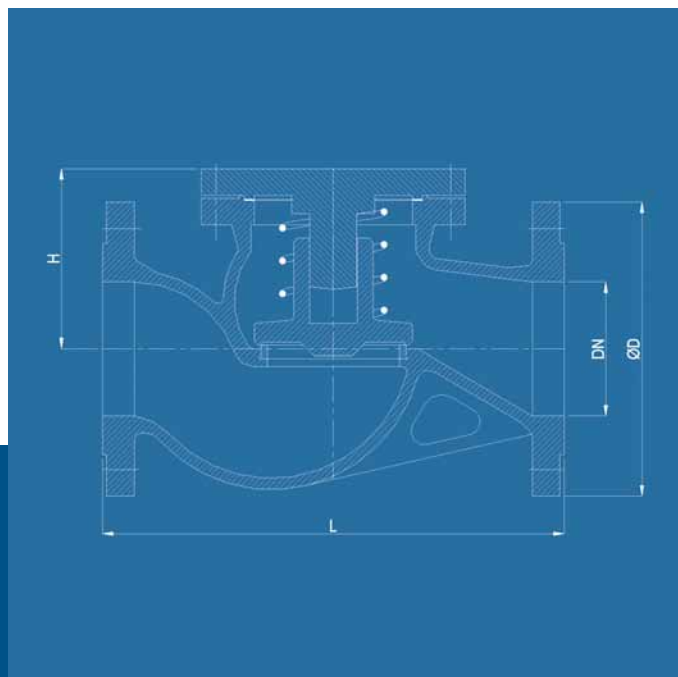
<b>Body</b>	Cast steel / Stainless steel
<b>Disc/seat</b>	Bronze or Stainless steel
<b>Design</b>	Body: EN 13709 with spring
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 40
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Lift type check valves in DIN Standards, straight pattern, raised flanges as per DIN and bolted bonnet.
- Application: Cold and hot water, gases, steam and other neutral liquids.

# TECHNICAL DATA

## LIFT CHECK VALVE - STRAIGHT TYPE

### DIN LENGTH WITH SPRING



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
15	95	95	130	55	3.5
20	105	105	150	55	4.0
25	115	115	160	65	4.5
32	140	140	180	75	5.5
40	150	150	200	80	9.0
50	165	165	230	85	11
65	185	185	290	95	15
80	200	200	310	115	24
100	220	220	350	140	32
125	250	250	400	160	48
150	285	285	480	200	65
175	315	315	550	225	100
200	340	340	600	245	150
250	395	405	730	290	190
300	445	460	850	345	240
350	505	520	980	400	290
400	565	580	1100	425	440
450	615	640	1200	450	520
500	670	715	1250	500	690

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Seat</b>	Bronze
<b>Design</b>	DIN 86262, body: DIN 86261 SDNR - with spring
<b>Face to Face</b>	EN 558 series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16 (as mentioned in DIN 86261)
<b>Temperature Range</b>	-10 °C. . .+180 °C (as mentioned in DIN 86261)
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

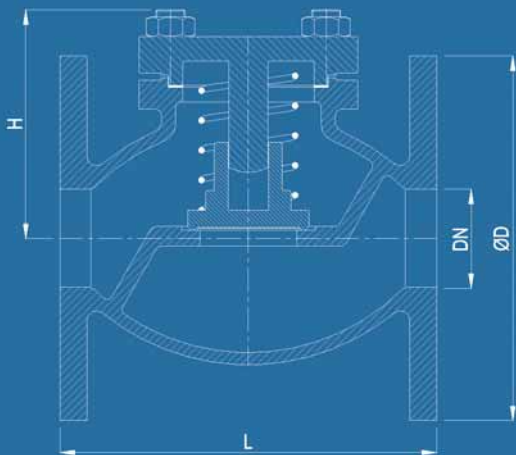
- Lift type check valves in DIN Standards, straight pattern, raised faced flanges as per DIN and bolted bonnet.
- Application: The valves offer good resistance to corrosive action of seawater, fresh water and waste water.



# TECHNICAL DATA

## LIFT CHECK VALVE - STRAIGHT TYPE

### SPECIAL LENGTH



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	H (mm)	Weight (kg)
15	PN 16	95	120	65	2.5
20	PN 16	105	120	65	2.9
25	PN 16	115	140	75	4.0
32	PN 16	140	150	75	5.0
40	PN 16	150	155	95	6.0
50	PN 16	165	180	105	8.0
65	PN 16	185	200	115	11
80	PN 16	200	240	130	15
100	PN 16	220	270	150	24
125	PN 16	250	320	175	40
150	PN 16	285	370	195	50
200	PN 10	340	500	260	95

### TECHNICAL FEATURES

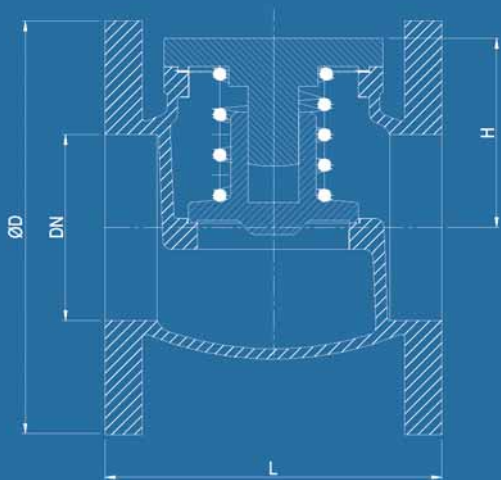
<b>Body</b>	Bronze
<b>Seat</b>	Bronze
<b>Design</b>	Special design - with spring
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Lift type check valves with pressure rating PN 16, straight pattern, flat faced flanges as per DIN PN 16 and bolted bonnet. Only suitable for installation in horizontal pipelines.
- Application: The valves offer good resistance to corrosive action of seawater, fresh water and waste water.

# TECHNICAL DATA

## LIFT CHECK VALVE - STRAIGHT TYPE

### SCREWED BONNET



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	H (mm)	Weight (kg)
10	PN 16	90	70	40	1.2
15	PN 16	95	70	40	1.4
20	PN 16	105	80	45	1.7
25	PN 16	115	90	50	2.0
32	PN 16	140	105	55	3.0
40	PN 16	150	120	60	5.1
50	PN 16	165	140	70	7.1
65	PN 16	185	180	80	11
80	PN 16	200	200	100	15
100	PN 16	220	230	120	22

### TECHNICAL FEATURES

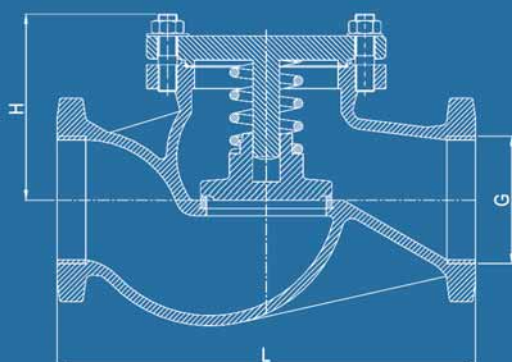
<b>Body</b>	Bronze
<b>Seat</b>	Bronze
<b>Design</b>	Special design, screwed bonnet, straight type - with spring
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Lift type check valves with pressure rating PN 16, straight pattern, flat faced flanges as per DIN PN 16 and screwed bonnet.
- Application: Liquids and steam that do not attack the integral material.

# TECHNICAL DATA

## GLOBE CHECK VALVE - STEEL STRAIGHT TYPE

### THREADED ENDS



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron / Cast Steel
<b>Disc/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 2999 with spring
<b>Face to Face</b>	DIN 3202 M9
<b>Flange Dimension</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Without spring

- Globe check valves, with threaded ends and straight type for light duty.
- Application: Water, gas and other neutral liquids.

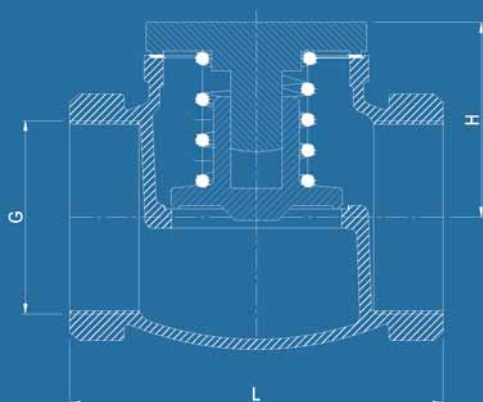
### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
15	1/2	100	50	120	0.6
20	3/4	120	50	120	0.7
25	1	135	60	140	1.0
32	1 ¼	160	70	140	2.0
40	1 ½	185	80	160	3.0
50	2	220	90	160	4.0

# TECHNICAL DATA

## LIFT CHECK VALVE - STRAIGHT TYPE

### SCREWED BONNET - THREADED ENDS



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Seat</b>	Bronze
<b>Design</b>	Special design, screwed bonnet, straight type - with spring
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Without spring

- Lift type check valves with screwed and secured bonnet, metal seated, straight pattern, BSP female threaded ends.
- Application: Water, steam and oil.

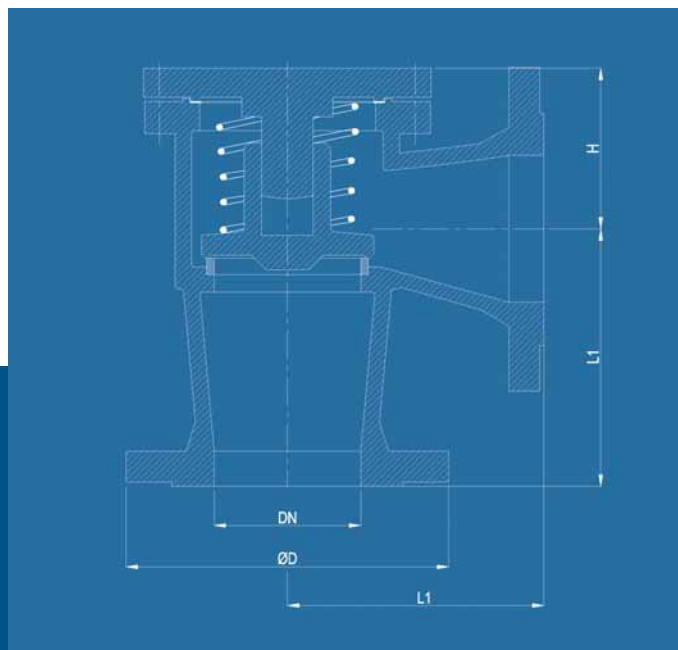
### DIMENSIONS

DN (mm)	Pressure rating	G (")	L			H (mm)	Weight (kg)
			STANDARD (mm)	SHORT TYPE (mm)	LONG TYPE (mm)		
10	PN 16	3/8	60	50	56	40	0.3
15	PN 16	1/2	65	60	67	40	0.4
20	PN 16	3/4	75	70	80	45	0.5
25	PN 16	1	90	80	95	50	0.9
32	PN 16	1 ¼	105	95	112	55	1.3
40	PN 16	1 ½	120	105	132	60	1.9
50	PN 16	2	145	130	160	70	3.0
65	PN 16	2 ½	170	-	-	85	6.0
80	PN 16	3	200	-	-	95	7.5
100	PN 16	4	220	-	-	150	9.0

# TECHNICAL DATA

## CHECK VALVE - ANGLE

### LIFT TYPE - DIN LENGTH



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	Weight (kg)
15	95	95	90	55	3.0
20	105	105	95	55	3.5
25	115	115	100	60	4.0
32	140	140	105	60	5.0
40	150	150	115	75	8.0
50	165	165	125	70	9.0
65	185	185	145	80	14
80	200	200	155	90	19
100	220	220	175	115	28
125	250	250	200	105	40
150	285	285	225	130	58
175	315	315	250	150	80
200	340	340	275	155	95
250	395	405	325	170	120
300	445	460	375	210	190
350	505	520	425	250	220
400	565	580	475	270	290
450	615	640	500	330	340
500	670	715	525	360	480



### TECHNICAL FEATURES

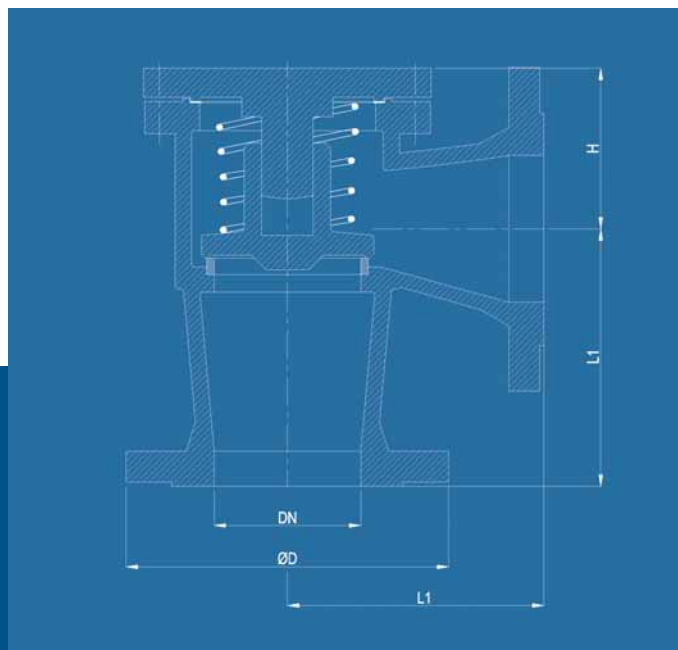
<b>Body</b>	Cast iron / Ductile iron
<b>Disc/seat</b>	Bronze or Stainless steel
<b>Design</b>	Body: DIN 86252 with spring
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Lift type check valves in DIN Standards, angle pattern, raised flanges as per DIN and bolted bonnet.
- Application: Cold and hot water, gases, steam and other neutral liquids.

# TECHNICAL DATA

## CHECK VALVE - ANGLE

### LIFT TYPE - DIN LENGTH



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	Weight (kg)
15	95	95	90	55	3.5
20	105	105	95	55	4.0
25	115	115	100	60	4.5
32	140	140	105	60	6.5
40	150	150	115	75	9.0
50	165	165	125	70	12
65	185	185	145	80	15
80	200	200	155	90	22
100	220	220	175	115	38
125	250	250	200	105	43
150	285	285	225	130	60
175	315	315	250	150	85
200	340	340	275	155	100
250	395	405	325	170	125
300	445	460	375	210	195
350	505	520	425	250	230
400	565	580	475	270	300
450	615	640	500	330	350
500	670	715	525	360	490



### TECHNICAL FEATURES

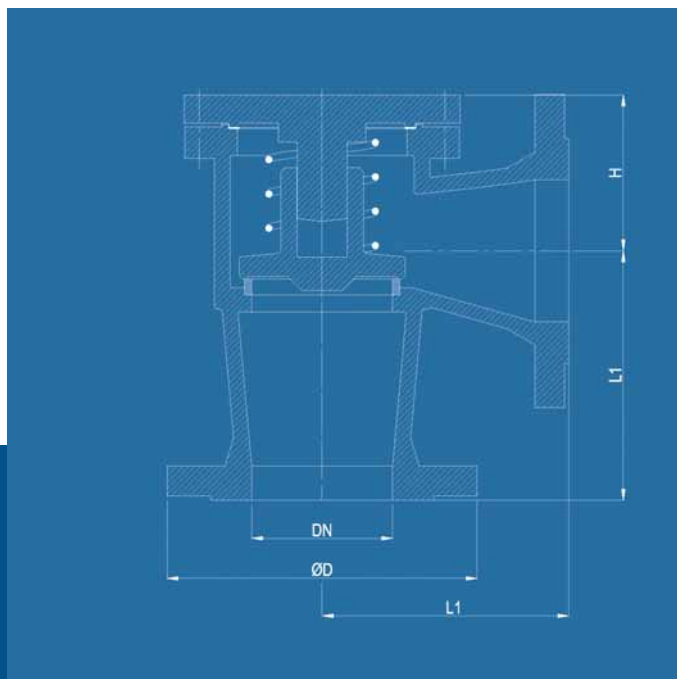
<b>Body</b>	Cast steel / Stainless steel
<b>Disc/seat</b>	Bronze or Stainless steel
<b>Design</b>	Body: EN 13709 with spring
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 40
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Lift type check valves in DIN Standards, angle pattern, raised flanges as per DIN and bolted bonnet.
- Application: Cold and hot water, gases, steam and other neutral liquids.

# TECHNICAL DATA

## LIFT CHECK VALVE - ANGLE TYPE

### DIN LENGTH WITH SPRING



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
15	95	95	90	55	3.5
20	105	105	95	55	4.0
25	115	115	100	60	4.5
32	140	140	105	60	5.5
40	150	150	115	75	9.0
50	165	165	125	80	11
65	185	185	145	90	14
80	200	200	155	105	23
100	220	220	175	120	30
125	250	250	200	140	43
150	285	285	225	150	60
175	315	315	250	160	85
200	340	340	275	170	100
250	395	405	325	190	125
300	445	460	375	225	195
350	505	520	425	280	230
400	565	580	475	300	300
450	615	640	500	340	350
500	670	715	525	360	490



### TECHNICAL FEATURES

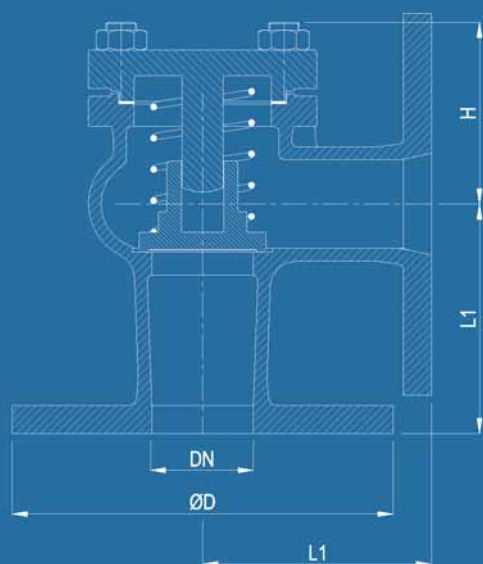
<b>Body</b>	Bronze
<b>Disc/seat</b>	Bronze
<b>Design</b>	DIN 86262, body: DIN 86261 SDNR - with spring
<b>Face to Face</b>	EN 558 series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16 (as mentioned in DIN 86261)
<b>Temperature Range</b>	-10 °C...+180 °C (as mentioned in DIN 86261)
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Lift type check valves in DIN Standards, angle pattern, raised faced flanges as per DIN and bolted bonnet.
- Application: The valves offer good resistance to corrosive action of seawater, fresh water and waste water.

# TECHNICAL DATA

## LIFT CHECK VALVE - ANGLE TYPE

### SPECIAL LENGTH



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	H (mm)	Weight (kg)
15	PN 16	95	65	55	2.5
20	PN 16	105	65	55	2.9
25	PN 16	115	70	65	4.0
32	PN 16	140	90	65	5.0
40	PN 16	150	90	80	6.0
50	PN 16	165	105	90	8.0
65	PN 16	185	115	90	11
80	PN 16	200	125	100	15
100	PN 16	220	145	120	24
125	PN 16	250	170	135	40
150	PN 16	285	200	150	50
200	PN 10	340	250	170	95

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc/seat</b>	Bronze
<b>Design</b>	Special design - with spring
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

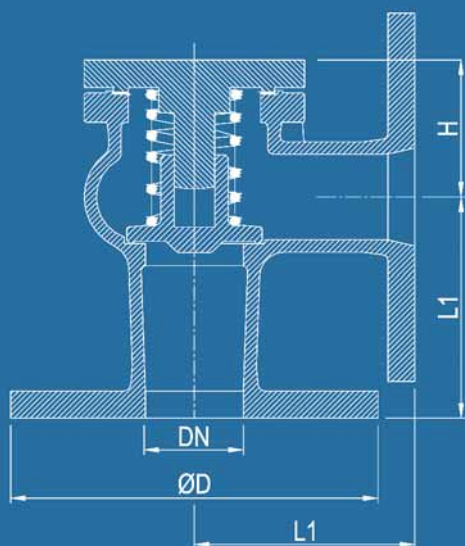
- Lift type check valves with pressure rating PN 16, angle pattern, flat faced flanges as per DIN PN 16 and bolted bonnet. Only suitable for installation in horizontal pipelines.
- Application: The valves offer good resistance to corrosive action of seawater, fresh water and waste water.



# TECHNICAL DATA

## LIFT CHECK VALVE - ANGLE TYPE

### SCREWED BONNET



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L1 (mm)	H (mm)	Weight (kg)
10	PN 16	90	65	60	1.2
15	PN 16	95	65	65	1.4
20	PN 16	105	70	75	1.7
25	PN 16	115	75	85	2.0
32	PN 16	140	90	95	3.0
40	PN 16	150	100	110	5.1
50	PN 16	165	105	125	7.1
65	PN 16	185	115	150	11
80	PN 16	200	125	170	15

### TECHNICAL FEATURES

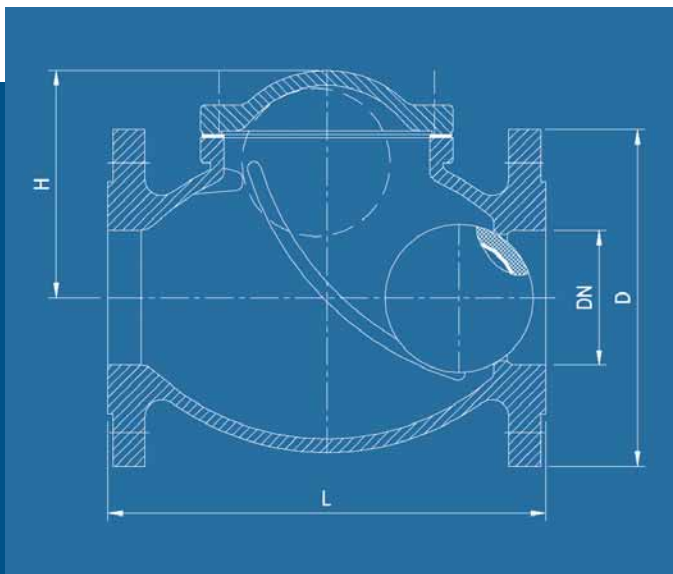
<b>Body</b>	Bronze
<b>Seat</b>	Bronze
<b>Design</b>	Special design, screwed bonnet, angle type - with spring
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+200 °C
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Lift type check valves with pressure rating PN 16, angle pattern, flat faced flanges as per DIN PN 16 and screwed bonnet.
- Application: Liquids and steam that do not attack the integral material.

# TECHNICAL DATA

## BALL CHECK VALVE

### DOUBLE FLANGED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
40	150	150	180	92	9.0
50	165	165	200	102	10
65	185	185	240	113	15
80	200	200	260	135	20
100	220	220	300	140	25
125	250	250	350	178	35
150	285	285	400	203	53
200	340	340	500	276	90
250	395	405	600	327	140
300	445	460	700	390	180
350	505	520	800	585	270
400	565	580	900	655	310

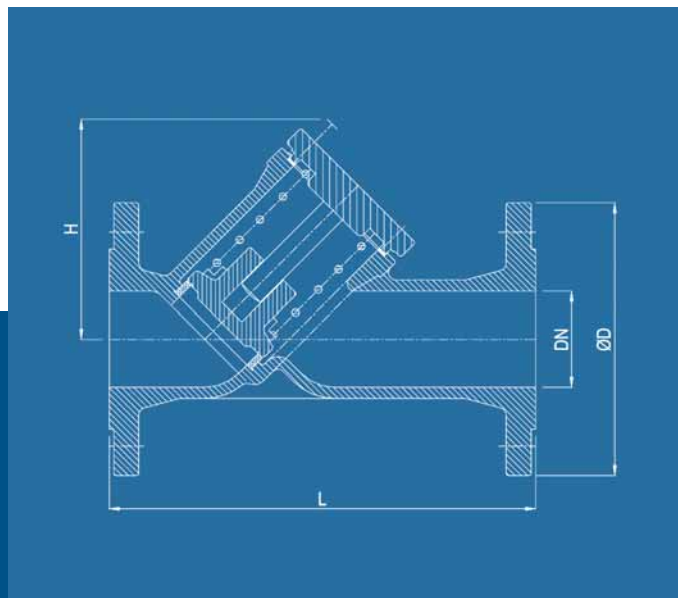
### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Disc/seat</b>	NBR or EPDM
<b>Design</b>	Sinking ball
<b>Face to Face</b>	EN 558 Series 48 (DIN 3202 F 6)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Floating ball
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Ball check valves with sinking ball, DIN standard flanges, full bore, bolted bonnet, silent operation and low pressure loss. Suitable for horizontal and vertical (upwards installation).
- Application: Clean, waste, sewage water and viscous media. Mostly used in water purification stations, sewage treatment installations and pumping stations.

# TECHNICAL DATA

## CHECK VALVE - Y TYPE - BOLTED BONNET



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
15	95	95	130	85	3.0
20	105	105	150	85	3.5
25	115	115	160	95	4.5
32	140	140	180	95	5.5
40	150	150	200	115	8.0
50	165	165	230	130	9.5
65	185	185	290	145	14
80	200	200	310	170	22
100	220	220	350	235	30
125	250	250	400	280	47
150	285	285	480	315	62
200	340	340	600	390	110
250	395	405	730	440	160
300	445	460	850	525	240
350	505	520	980	625	270
400	565	580	1100	680	440
500	670	715	1250	985	690



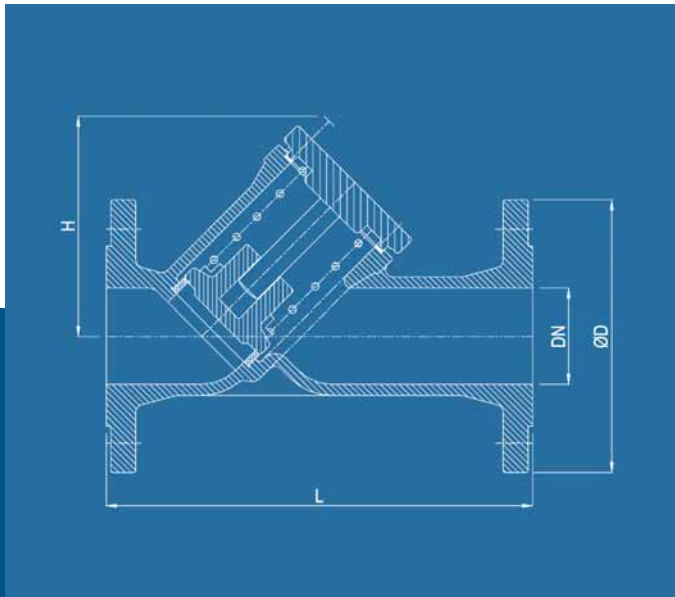
### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Disc/seat</b>	Bronze or Stainless steel
<b>Design</b>	Free-flow Form, Y-type with spring
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Lift type check valves with bolted bonnet, free-flow pattern. Raised face flanges according to DIN.
- Application: Aboard ships for hot and cold water, oil and steam.

# TECHNICAL DATA

## CHECK VALVE - Y TYPE - BOLTED BONNET



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
15	95	95	130	85	3.0
20	105	105	150	85	3.5
25	115	115	160	95	4.5
32	140	140	180	95	5.5
40	150	150	200	115	8.0
50	165	165	230	130	9.5
65	185	185	290	145	15
80	200	200	310	170	23
100	220	220	350	235	32
125	250	250	400	280	49
150	285	285	480	315	65
200	340	340	600	390	115
250	395	405	730	440	165
300	445	460	850	525	250
350	505	520	980	625	300
400	565	580	1100	680	450
500	670	715	1250	985	700



### TECHNICAL FEATURES

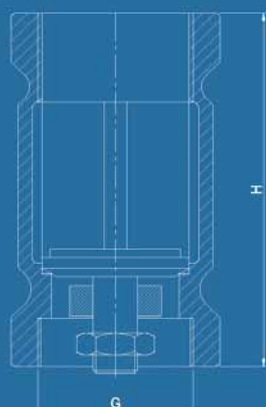
<b>Body</b>	Cast steel / Stainless steel
<b>Disc/seat</b>	Bronze or Stainless steel
<b>Design</b>	Free-flow Form, Y-type with spring
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 40
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Without spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Lift type check valves with bolted bonnet, free-flow pattern. Raised face flanges according to DIN.
- Application: Aboard ships for hot and cold water, oil and steam.

# TECHNICAL DATA

## CHECK VALVE - VERTICAL TYPE

### THREADED ENDS



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc/seat</b>	Bronze
<b>Design</b>	Special design (for vertical lines)
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999))
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	Max. 200 °C
<b>Options</b>	Rubber sealed disc

- Check valves with BSP female threaded ends, only suitable for vertical (upward flow) installation.
- Application: Water and other neutral liquids.

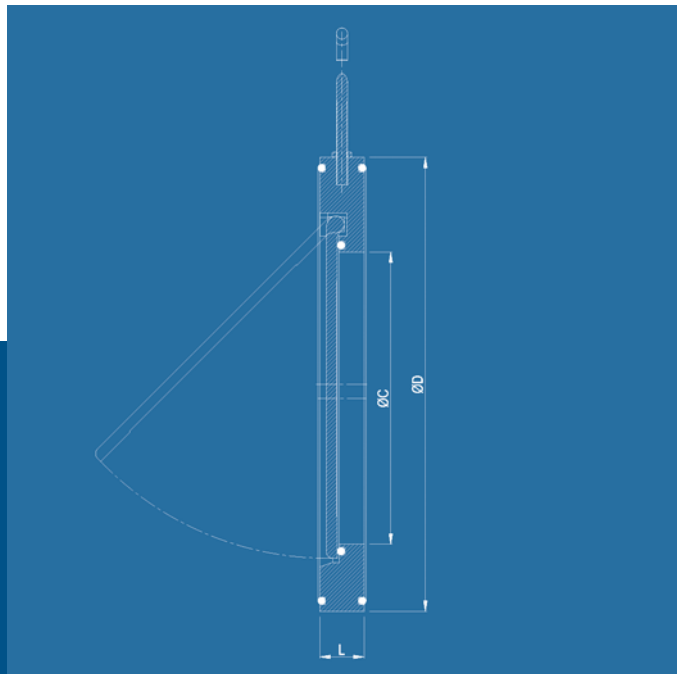
### DIMENSIONS

DN (mm)	Pressure rating	G (")	L (mm)	Weight (kg)
10	PN 16	3/8	55	0.18
15	PN 16	1/2	55	0.18
20	PN 16	3/4	65	0.25
25	PN 16	1	72	0.38
32	PN 16	1 ¼	80	0.60
40	PN 16	1 ½	85	0.85
50	PN 16	2	112	1.45

# TECHNICAL DATA

## SWING CHECK VALVE - WAFER TYPE

(SANDWICH TYPE)



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	ØC (mm)	Weight (kg)
32	84	84	16	16	0.7
40	94	94	16	22	0.9
50	109	109	16	30	1.2
65	129	129	16	37	1.7
80	144	144	16	48	2.1
100	164	164	16	70	2.8
125	194	194	18	95	3.9
150	220	220	19	121	6.0
200	275	275	29	155	11
250	330	331	29	196	21
300	380	386	38	230	34
350	440	446	41	250	45
400	491	498	51	303	71
450	541	558	51	358	86
500	596	620	61	398	126
600	698	737	71	480	203
700	813	807	76	580	307
800	920	914	89	621	460
900	1020	1014	95	715	605
1000	1127	1131	118	815	920



### TECHNICAL FEATURES

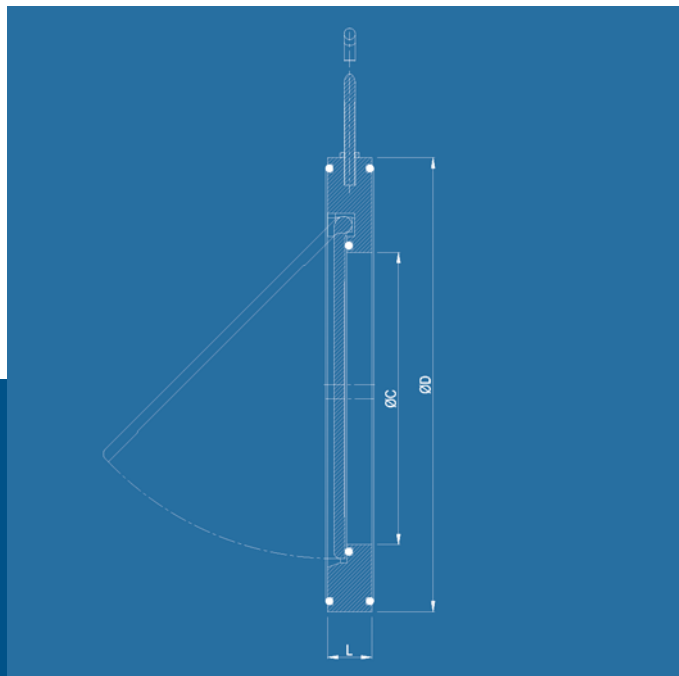
<b>Body</b>	Ductile iron / Cast steel
<b>Disc</b>	Ductile iron / Cast steel
<b>Design</b>	Special Sandwich type, for fitting between flanges
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Pressure Rating</b>	PN 10 - PN 16
<b>Temperature Range</b>	-10 °C...+100 °C
<b>Options</b>	EPDM, PTFE disc seal, galvanized body, with spring
<b>Flange Options</b>	Available acc. to customers request

- Wafer type check valves with short face to face length, disc and flange sealing by NBR O- ring, are suitable for fitting between DIN flanges. Suitable for horizontal and vertical (upward flow) installation and have low weight and low pressure loss.
- Application: Fresh water, cold water, waste water.

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# TECHNICAL DATA

## SWING CHECK VALVE - WAFER TYPE (SANDWICH TYPE)



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	ØC (mm)	Weight (kg)
25	73	73	14	14	0.6
32	84	84	16	16	0.7
40	94	94	16	22	0.9
50	109	109	16	30	1.2
65	129	129	16	37	1.7
80	144	144	16	48	2.1
100	164	164	16	70	2.8
125	194	194	18	95	3.9
150	220	220	19	121	6.0
200	275	275	29	155	11
250	330	331	29	196	21
300	380	386	38	230	34
350	440	446	41	250	45
400	491	498	51	303	71
450	541	558	51	358	86
500	596	620	61	398	126
600	698	737	71	480	203
700	813	807	76	580	307
800	920	914	89	621	460
900	1020	1014	95	715	605
1000	1127	1131	118	815	920



### TECHNICAL FEATURES

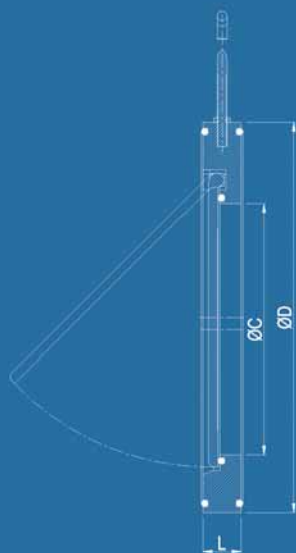
<b>Body</b>	Stainless steel
<b>Disc</b>	Stainless steel
<b>Design</b>	Special Sandwich type, for fitting between flanges
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Pressure Rating</b>	PN 10 - PN 16
<b>Temperature Range</b>	-10 °C...+100 °C
<b>Options</b>	EPDM, PTFE disc seal, with spring
<b>Flange Options</b>	Available acc. to customers request

- Wafer type check valves with short face to face length, disc and flange sealing by NBR O- ring, are suitable for fitting between DIN flanges. Suitable for horizontal and vertical (upward flow) installation and have low weight and low pressure loss.
- Application: Fresh water, cold water, waste water.

# TECHNICAL DATA

## SWING CHECK VALVE

### WAFER TYPE (SANDWICH TYPE)



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	C (mm)	Weight (kg)
40	PN 16	94	16	22	0.8
50	PN 16	109	16	30	1.1
65	PN 16	129	16	37	1.6
80	PN 16	144	16	48	2.0
100	PN 16	164	16	70	2.4
125	PN 16	194	18	95	3.3
150	PN 16	220	19	121	4.5
200	PN 16	275	29	155	10
250	PN 10	330	29	196	16
300	PN 10	380	38	230	28
350	PN 10	440	41	250	35
400	PN 10	491	51	303	60
450	PN 10	541	51	358	68
500	PN 10	596	61	398	80
600	PN 10	698	71	480	120



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc</b>	Bronze
<b>Design</b>	Special sandwich type, for fitting between flanges
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+100 °C
<b>Options</b>	EPDM or PTFE disc seal, with spring
<b>Flange and Bore Options</b>	Available acc. to customers request

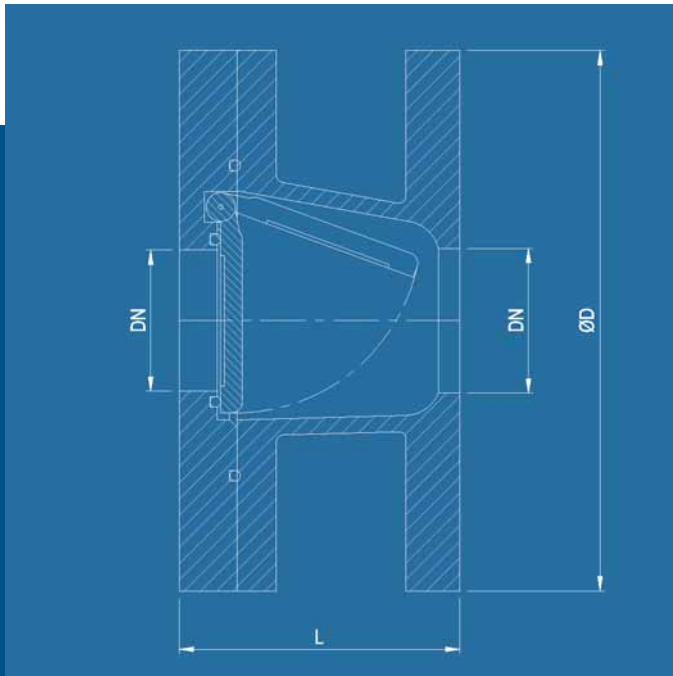
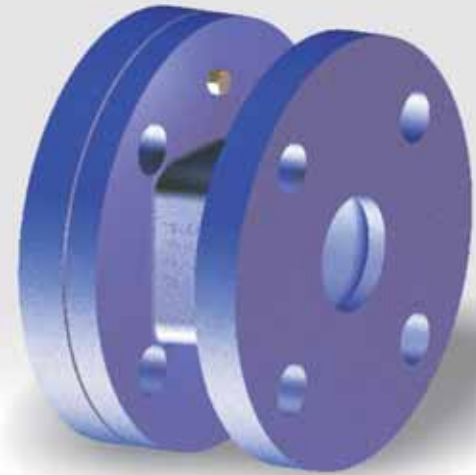
- Wafer type check valves with short face to face length, disc and flange sealing by NBR O- ring, are suitable for fitting between DIN flanges.
- Suitable for horizontal and vertical (upward flow) installation and have low weight and low pressure loss.
- Application: They offer excellent resistance to the corrosive action of seawater, fresh water and waste water.



# TECHNICAL DATA

## SWING CHECK VALVE - FULL BORE

### SHORT TYPE



### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	Opening pressure [mmwk] horizontal	Weight (kg)
15	PN 16	95	65	230	2
20	PN 16	105	65	233	2
25	PN 16	115	70	233	3
32	PN 16	140	75	237	4
40	PN 16	150	80	243	5
50	PN 16	165	85	250	6
65	PN 16	185	105	110	8
80	PN 16	200	125	126	10
100	PN 16	220	145	126	14
125	PN 16	250	170	128	20
150	PN 16	285	200	158	26
200	PN 10	340	255	160	42
250	PN 10	395	310	215	62
300	PN 10	445	360	230	78

### TECHNICAL FEATURES

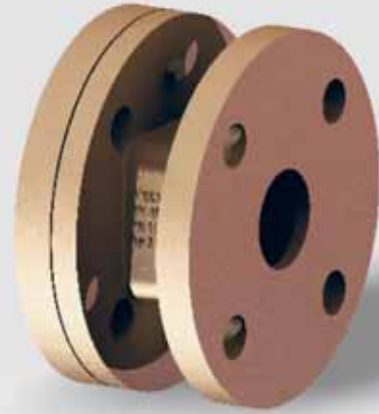
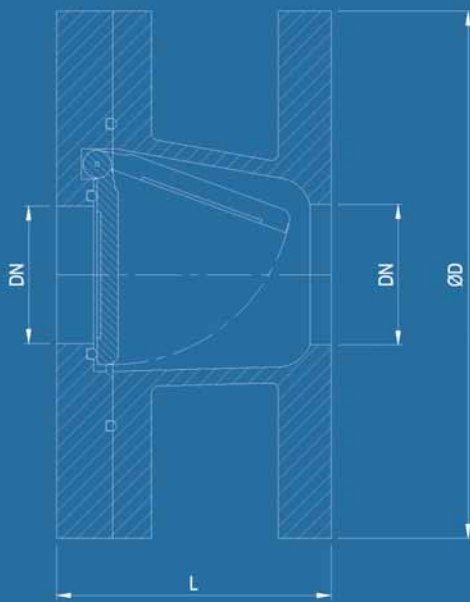
<b>Body</b>	Cast iron / Ductile iron
<b>Disc</b>	Bronze or Stainless steel
<b>Design</b>	Special Short Type - Full Bore
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/A (DIN 2501)
<b>Pressure Rating</b>	PN 10 - PN 16
<b>Temperature Range</b>	-10 °C...+100 °C
<b>Options</b>	EPDM, PTFE or VITON disc seal, Metal seated
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Swing type check valves with short face to face length, disc and NBR O- ring seal, flat faced flanges acc. to DIN PN 10/16. Suitable for horizontal and vertical (upward flow) installation and have low weight and low pressure loss.
- Application: Gaseous and liquid media in oil, gas, water systems, chemical industry.

# TECHNICAL DATA

## SWING CHECK VALVE

### SHORT TYPE FULL BORE



#### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc</b>	Bronze
<b>Design</b>	Special short type - full bore
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16
<b>Temperature Range</b>	-10 °C...+100 °C
<b>Options</b>	EPDM disc seal, PTFE disc seal
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

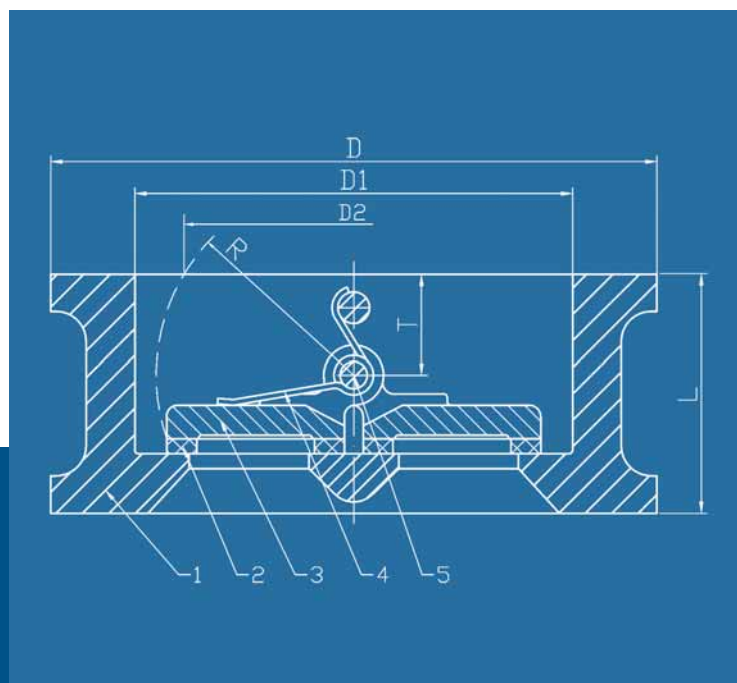
#### DIMENSIONS

DN (mm)	Pressure rating	ØD (mm)	L (mm)	Opening pressure [mmwk]	Weight (kg)
15	PN 16	95	65	230	2.1
20	PN 16	105	65	233	2.5
25	PN 16	115	70	233	3.0
32	PN 16	140	75	237	5.0
40	PN 16	150	80	243	6.0
50	PN 16	165	85	250	7.0
65	PN 16	185	105	110	9.0
80	PN 16	200	125	126	11
100	PN 16	220	145	126	16
125	PN 16	250	170	128	21
150	PN 16	285	200	158	29
200	PN 10	340	255	160	45
250	PN 10	395	310	215	64
300	PN 10	445	360	230	79

- Swing type check valves with short face to face length, disc and NBR O- ring seal, flat faced flanges acc. to DIN PN 10/16. Suitable for horizontal and vertical (upward flow) installation and have low weight and low pressure loss.
- Application: They offer excellent resistance to the corrosive action of seawater, fresh water and waste water.

# TECHNICAL DATA

## DUO CHECK VALVE CI/NCI



### TECHNICAL FEATURES

1	body	cast iron / nodular cast iron
2	seat	EPDM/NMR/VITON
3	disc	DISC, CF8M/CF8/C954/DI
4	spring	SS316/SS304
5	stem	SS316/SS304

### NOTE

1. The face to face: ISO5752
2. Joint flange: BS4504 PN10/PN16
3. Test: AP1598

### TECHNICAL DATA

Normal Pressure		1.0MPa	1.6MPa
Test pressure	SEAT	1.1MPa	1.76MPa
	SHELL	1.5MPa	2.4MPa

### DIMENSIONS

Size DN	Size (inch)	D (mm)	D1 (mm)	D2 (mm)	L (mm)	R (mm)	T (mm)
50	2	107	65	43.3	43	28.8	19
65	2 1/2	127	80	60.2	46	36.1	20
80	3	142	94	66.4	64	43.4	28
100	4	162	117	90.8	64	52.8	27
125	5	192	145	116.9	70	65.7	30
150	6	218	170	144.6	76	78.6	31
200	8	273	224	198.2	89	104.4	33
250	10	328	265	233.7	114	127.0	50
300	12	378	310	283.9	114	148.3	43
350	14	438	360	332.9	127	172.4	45
400	16	489	410	381.0	140	197.4	52
450	18	539	450	419.9	152	217.8	58
500	20	594	505	467.8	152	241.0	58
600	24	700	624	572.6	178	295.4	73
700	28	820	720	661.6	229	345.0	98
800	32	930	825	762.2	241	394.0	100



## 8 MARINE VALVES

### TECHNICAL DATA



**OVERBOARD VALVES**



**STORM VALVES**



**SELF CLOSING VALVES**



**QUICK CLOSING VALVES**



**FIRE AND DECKWASH VALVES**



**FOOT VALVES**



**MUD BOXES**



**SOUNDING COCKS**



**LINE BLINDS**

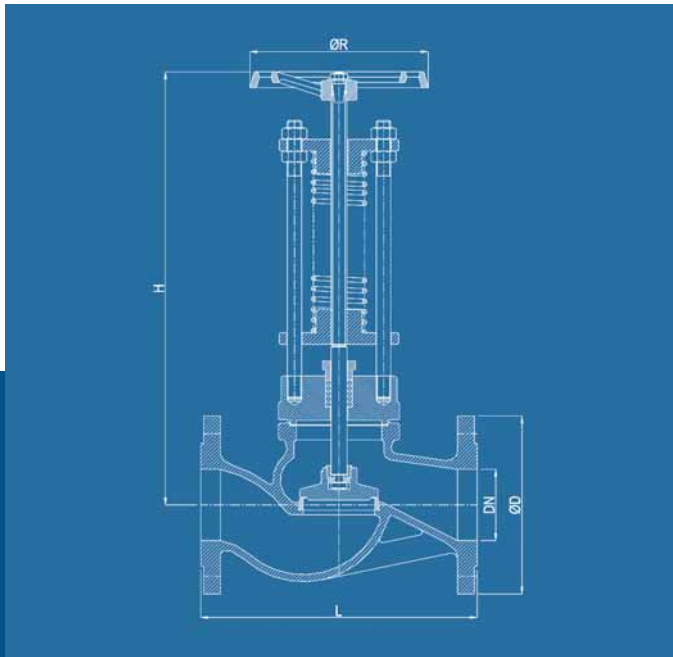


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# TECHNICAL DATA

## OVERBOARD VALVE

STRAIGHT - STOP TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	255	120	4.5
20	105	105	150	255	120	5.0
25	115	115	160	280	140	6.0
32	140	140	180	285	140	8.0
40	150	150	200	350	160	12
50	165	165	230	395	160	14
65	185	185	290	405	180	19
80	200	200	310	490	200	28
100	220	220	350	555	225	40
125	250	250	400	620	250	60
150	285	285	480	755	300	85
175	315	315	550	790	400	130
200	340	340	600	810	400	150
250	395	405	730	930	520	260
300	445	460	850	985	520	360
350	505	520	980	1045	640	460
400	565	580	1100	1095	640	780
450	615	640	1200	1200	640	1000
500	670	715	1250	1250	640	1220



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Body: DIN 86260 STOP type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, crank operation, blocks
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

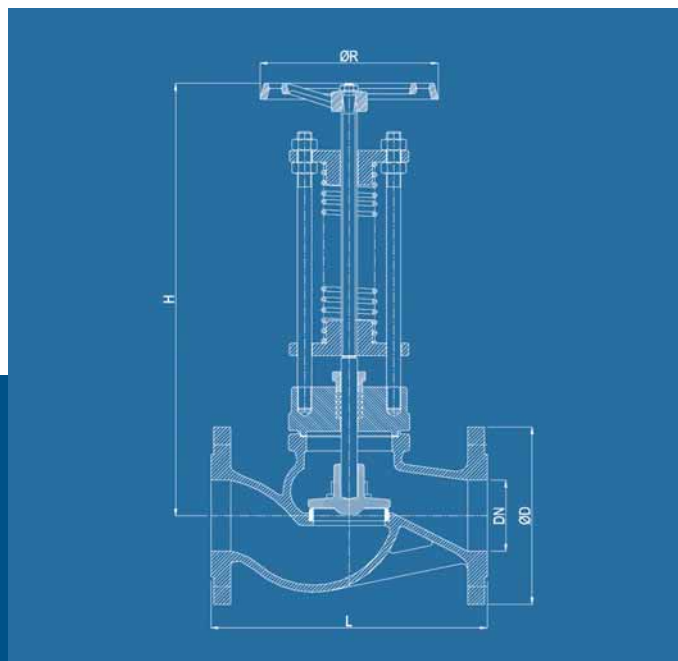
- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge.
- Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with Handwheel. TYPE APPROVED.
- Application: Cooling water and bilge water systems.

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# TECHNICAL DATA

## OVERBOARD VALVE

STRAIGHT - SDNR TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	255	120	4.5
20	105	105	150	255	120	5.0
25	115	115	160	265	140	6.0
32	140	140	180	280	140	8.0
40	150	150	200	350	160	12
50	165	165	230	375	160	14
65	185	185	290	400	180	19
80	200	200	310	490	200	28
100	220	220	350	525	225	40
125	250	250	400	620	250	60
150	285	285	480	750	300	85
175	315	315	550	790	400	130
200	340	340	600	810	400	150
250	395	405	730	930	520	260
300	445	460	850	980	520	360
350	505	520	980	1000	640	460
400	565	580	1100	1105	640	780
450	615	640	1200	1200	640	1000
500	670	715	1250	1260	640	1220



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Body: DIN 86261 SDNR type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, with spring, crank operation, blocks
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

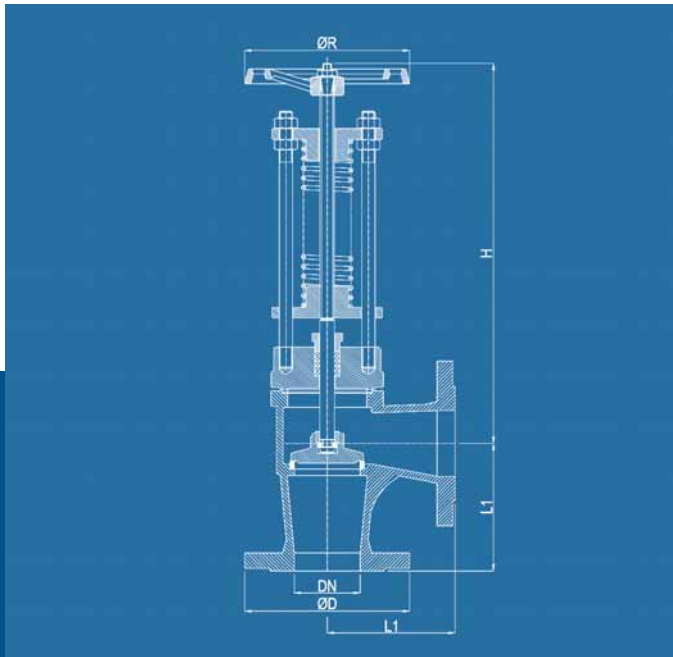
- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge.
- Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with Handwheel. TYPE APPROVED.
- Application: Cooling water and bilge water systems.

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# TECHNICAL DATA

## OVERBOARD VALVE

ANGLE - STOP TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	95	250	120	4.0
20	105	105	95	245	120	4.5
25	115	115	100	270	140	6.0
32	140	140	105	275	140	7.0
40	150	150	115	350	160	11
50	165	165	125	380	160	13
65	185	185	145	385	180	18
80	200	200	155	460	200	26
100	220	220	175	530	225	38
125	250	250	200	570	250	58
150	285	285	225	690	300	80
175	315	315	250	710	400	110
200	340	340	275	720	400	125
250	395	405	325	810	520	175
300	445	460	375	850	520	250
350	505	520	425	900	640	300
400	565	580	475	920	640	440
450	615	640	500	1000	640	470
500	670	715	525	1045	640	510



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Body: DIN 86260 STOP type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, crank operation, blocks
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

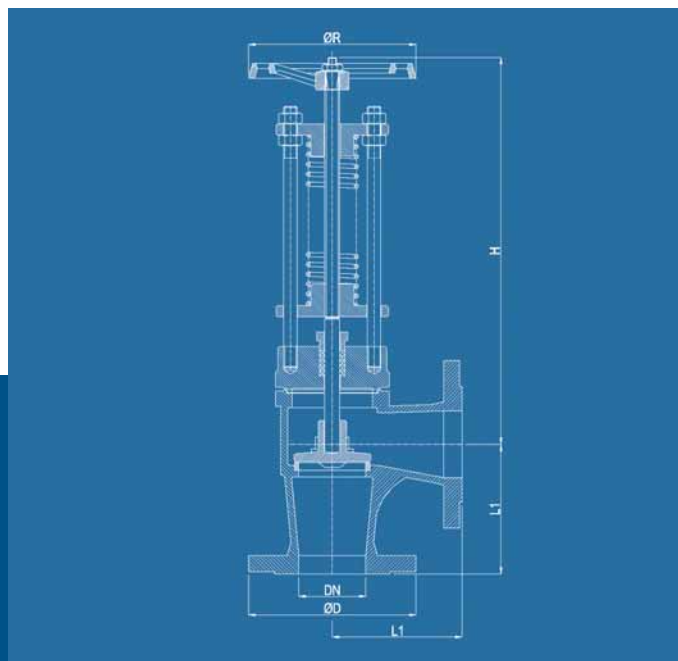
- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge. TYPE APPROVED.
- Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with handwheel.
- Application: Cooling water and bilge water systems.

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# TECHNICAL DATA

## OVERBOARD VALVE

ANGLE - SDNR TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	95	250	120	4.0
20	105	105	95	250	120	4.5
25	115	115	100	255	140	6.0
32	140	140	105	275	140	7.0
40	150	150	115	345	160	11
50	165	165	125	360	160	13
65	185	185	145	380	180	18
80	200	200	155	460	200	26
100	220	220	175	510	225	38
125	250	250	200	565	250	58
150	285	285	225	685	300	80
175	315	315	250	710	400	110
200	340	340	275	715	400	125
250	395	405	325	810	520	175
300	445	460	375	850	520	250
350	505	520	425	900	640	300
400	565	580	475	930	640	440
450	615	640	500	1000	640	470
500	670	715	515	1100	640	510

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	Body: DIN 86261 SDNR type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, with spring, crank operation, blocks
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge. TYPE APPROVED.
- Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with handwheel.
- Application: Cooling water and bilge water systems.

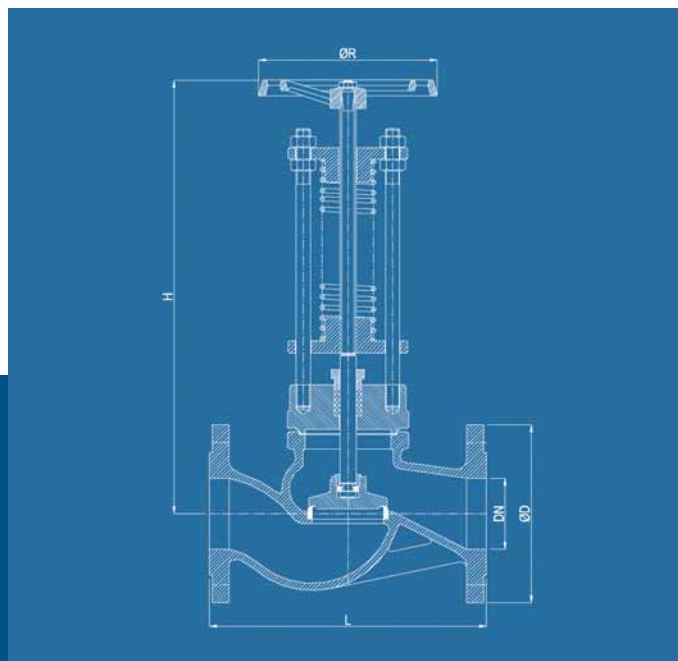




# TECHNICAL DATA

## OVERBOARD VALVE

STRAIGHT - STOP TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	255	120	4.0
20	105	105	150	255	120	4.5
25	115	115	160	280	140	5.0
32	140	140	180	285	140	8.0
40	150	150	200	350	160	13
50	165	165	230	395	160	19
65	185	185	290	405	180	20
80	200	200	310	490	200	26
100	220	220	350	555	225	38
125	250	250	400	620	250	58
150	285	285	480	755	300	85
175	315	315	550	790	400	120
200	340	340	600	810	400	145
250	395	405	730	930	520	225
300	445	460	850	985	520	310
350	505	520	980	1045	640	430
400	565	580	1100	1095	640	560
450	615	640	1200	1200	640	700
500	670	715	1250	1250	640	850



### TECHNICAL FEATURES

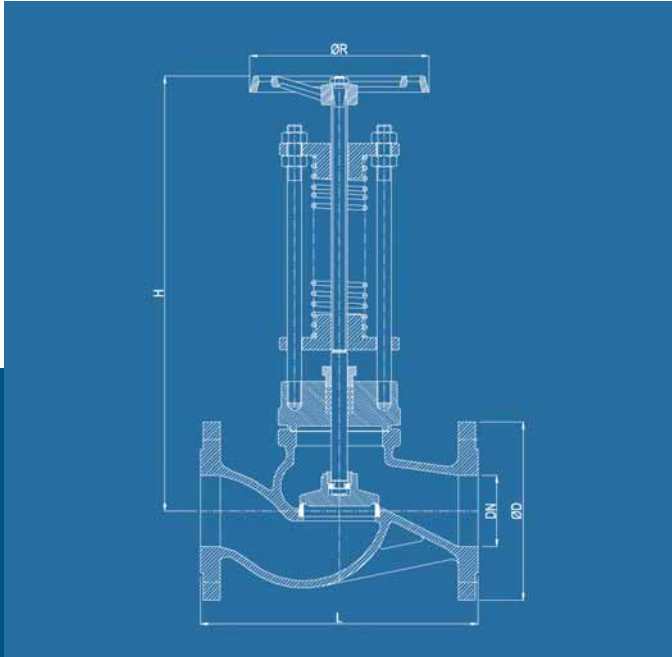
<b>Design</b>	Body: DIN 86251 STOP Type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, crank operation, blocks, higher set pressure
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge. Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with Handwheel. TYPE APPROVED.
- Application: Cooling water and bilge water systems.

# TECHNICAL DATA

## OVERBOARD VALVE

STRAIGHT - STOP TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	255	120	4.0
20	105	105	150	255	120	4.5
25	115	115	160	280	140	5.0
32	140	140	180	285	140	8.0
40	150	150	200	350	160	13
50	165	165	230	395	160	19
65	185	185	290	405	180	20
80	200	200	310	490	200	26
100	220	220	350	555	225	38
125	250	250	400	620	250	58
150	285	285	480	755	300	85
175	315	315	550	790	400	120
200	340	340	600	810	400	145
250	395	405	730	930	520	225
300	445	460	850	985	520	310
350	505	520	980	1045	640	430
400	565	580	1100	1095	640	560
450	615	640	1200	1200	640	700
500	670	715	1250	1250	640	850



### TECHNICAL FEATURES

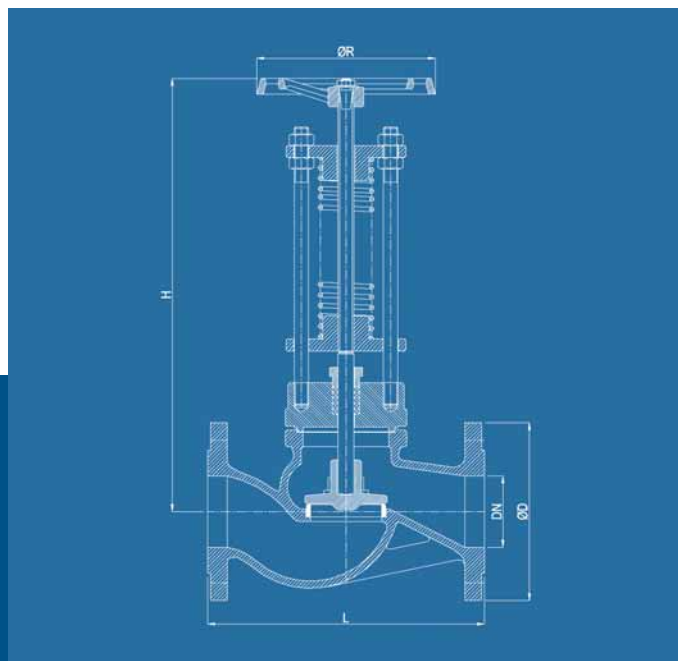
<b>Design</b>	Body: DIN 86251 STOP Type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-1/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, crank operation, blocks, higher set pressure
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge. Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with Handwheel. TYPE APPROVED.
- Application: Cooling water and bilge water systems.

# TECHNICAL DATA

## OVERBOARD VALVE

STRAIGHT - SDNR TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	255	120	4.0
20	105	105	150	255	120	4.5
25	115	115	160	265	140	5.0
32	140	140	180	280	140	8.0
40	150	150	200	350	160	13
50	165	165	230	375	160	19
65	185	185	290	400	180	20
80	200	200	310	490	200	26
100	220	220	350	525	225	38
125	250	250	400	620	250	58
150	285	285	480	750	300	85
175	315	315	550	790	400	120
200	340	340	600	810	400	145
250	395	405	730	930	520	225
300	445	460	850	980	520	310
350	505	520	980	1000	640	430
400	565	580	1100	1105	640	560
450	615	640	1200	1200	640	700
500	670	715	1250	1260	640	850



### TECHNICAL FEATURES

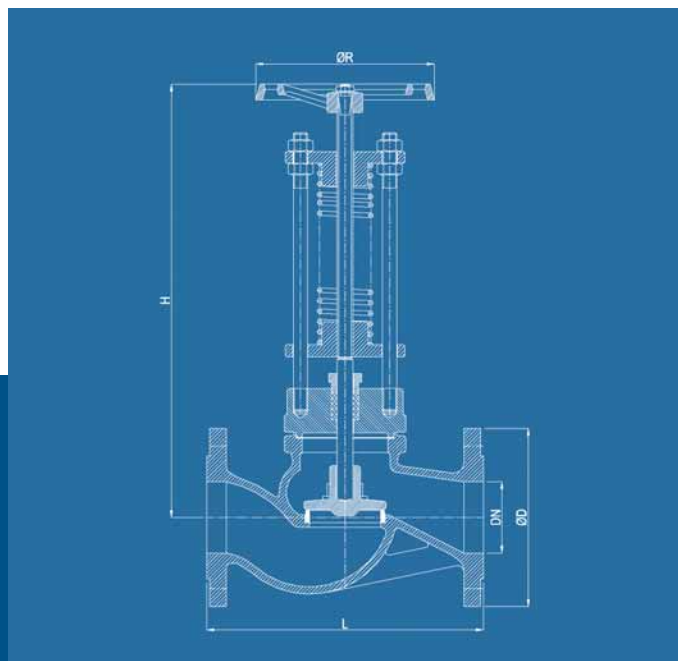
<b>Design</b>	Body: DIN 86252 SDNR Type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, crank operation, blocks, higher set pressure, inside spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge. Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with Handwheel. TYPE APPROVED.
- Application: Cooling water and bilge water systems.

# TECHNICAL DATA

## OVERBOARD VALVE

STRAIGHT - SDNR TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	130	255	120	4.5
20	105	105	150	255	120	5.0
25	115	115	160	265	140	6.0
32	140	140	180	280	140	8.5
40	150	150	200	350	160	13
50	165	165	230	375	160	15
65	185	185	290	400	180	21
80	200	200	310	490	200	27
100	220	220	350	525	225	40
125	250	250	400	620	250	60
150	285	285	480	750	300	87
175	315	315	550	790	400	125
200	340	340	600	810	400	150
250	395	405	730	930	520	230
300	445	460	850	980	520	315
350	505	520	980	1000	640	435
400	565	580	1100	1105	640	570
450	615	640	1200	1200	640	720
500	670	715	1250	1260	640	880



### TECHNICAL FEATURES

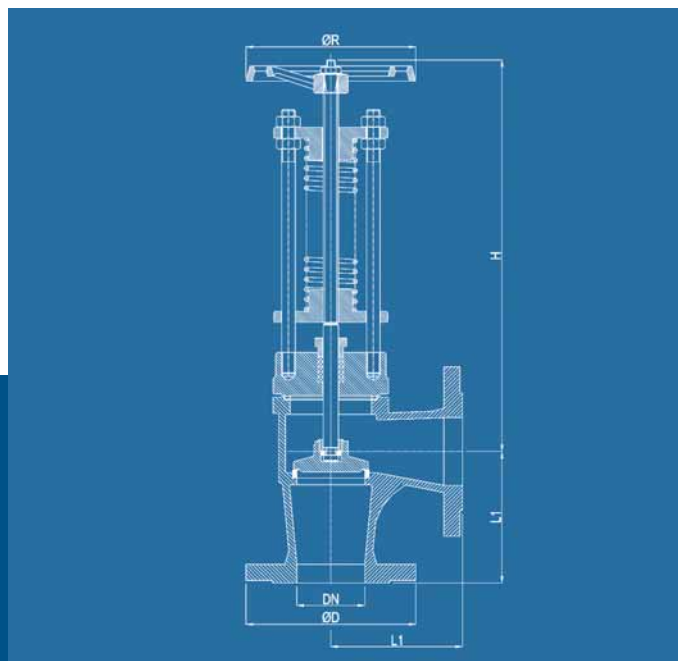
<b>Design</b>	Body: DIN 86252 SDNR Type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, crank operation, blocks, higher set pressure, inside spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge. Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with Handwheel. TYPE APPROVED.
- Application: Cooling water and bilge water systems.

# TECHNICAL DATA

## OVERBOARD VALVE

ANGLE - STOP TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	95	250	120	4.0
20	105	105	95	245	120	4.2
25	115	115	100	270	140	6.0
32	140	140	105	275	140	8.0
40	150	150	115	350	160	11
50	165	165	125	380	160	13
65	185	185	145	385	180	18
80	200	200	155	460	200	24
100	220	220	175	530	225	34
125	250	250	200	570	250	55
150	285	285	225	690	300	72
175	315	315	250	710	400	95
200	340	340	275	720	400	120
250	395	405	325	810	520	170
300	445	460	375	850	520	230
350	505	520	425	900	640	290
400	565	580	475	920	640	380
450	615	640	500	1000	640	420
500	670	715	525	1045	640	510



### TECHNICAL FEATURES

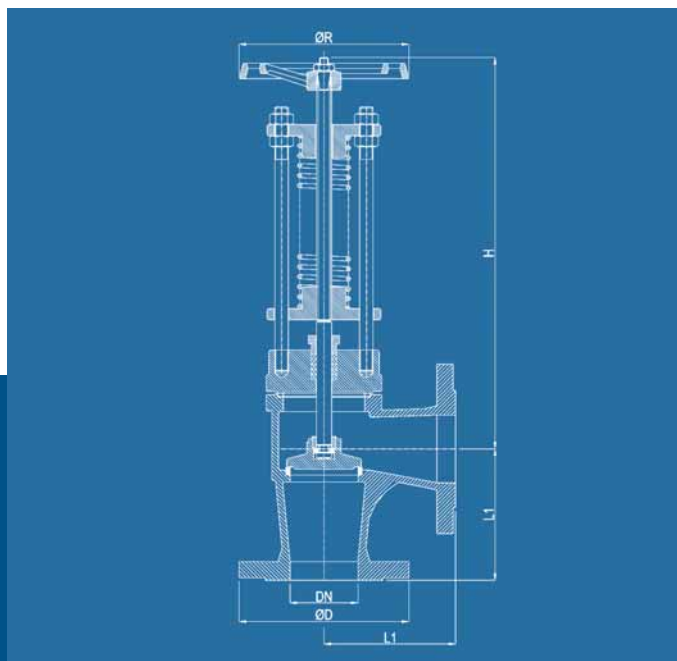
<b>Design</b>	Body: DIN 86251 STOP Type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, crank operation, blocks, higher set pressure
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge. Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with Handwheel. TYPE APPROVED.
- Application: Cooling water and bilge water systems.

# TECHNICAL DATA

## OVERBOARD VALVE

ANGLE - STOP TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	95	250	120	4.0
20	105	105	95	245	120	4.2
25	115	115	100	270	140	6.0
32	140	140	105	275	140	8.0
40	150	150	115	350	160	12
50	165	165	125	380	160	14
65	185	185	145	385	180	19
80	200	200	155	460	200	25
100	220	220	175	530	225	38
125	250	250	200	570	250	58
150	285	285	225	690	300	75
175	315	315	250	710	400	98
200	340	340	275	720	400	122
250	395	405	325	810	520	175
300	445	460	375	850	520	240
350	505	520	425	900	640	300
400	565	580	475	920	640	390
450	615	640	500	1000	640	430
500	670	715	525	1045	640	520



### TECHNICAL FEATURES

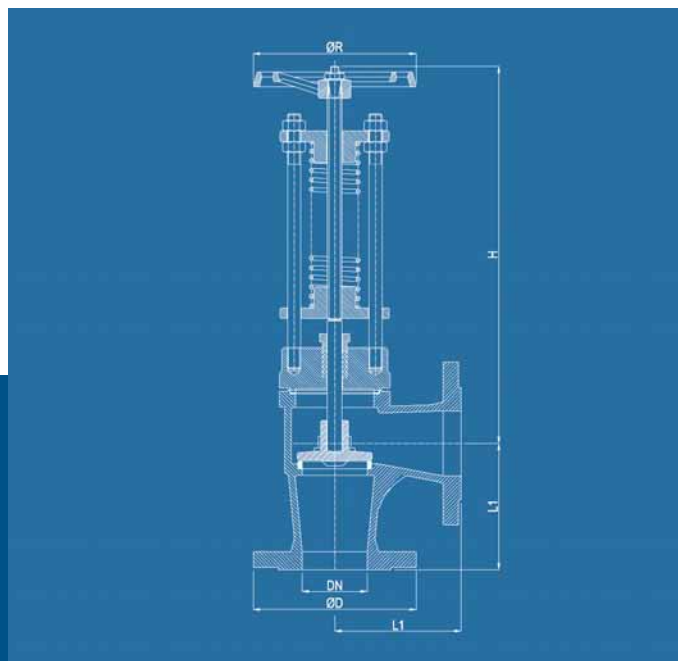
<b>Design</b>	Body: DIN 86251 STOP Type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, crank operation, blocks, higher set pressure
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge. Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with Handwheel. TYPE APPROVED.
- Application: Cooling water and bilge water systems.

# TECHNICAL DATA

## OVERBOARD VALVE

ANGLE - SDNR TYPE  
OUTSIDE SPRING LOADED



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	L1 (mm)	H (mm)	ØR (mm)	Weight (kg)
15	95	95	95	250	120	4.0
20	105	105	95	250	120	4.2
25	115	115	100	255	140	6.0
32	140	140	105	275	140	8.0
40	150	150	115	345	160	12
50	165	165	125	360	160	14
65	185	185	145	380	180	19
80	200	200	155	460	200	25
100	220	220	175	510	225	38
125	250	250	200	565	250	58
150	285	285	225	685	300	75
175	315	315	250	710	400	98
200	340	340	275	715	400	122
250	395	405	325	810	520	175
300	445	460	375	850	520	240
350	505	520	425	900	640	300
400	565	580	475	930	640	390
450	615	640	500	1000	640	430
500	670	715	515	1100	640	520



### TECHNICAL FEATURES

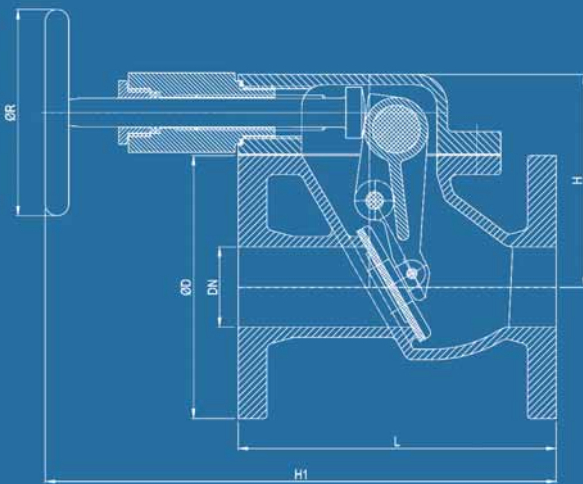
<b>Design</b>	Body: DIN 86252 SDNR Type (DIN 3356), bonnet: spring loaded
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Indicator, crank operation, blocks, higher set pressure, inside spring
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Spring loaded overboard discharge valves are mainly used aboard ships in pressurised water and liquid for overboard discharge. Adjustable opening pressure is set to 0.1 - 0.5 bar. In standard equipped with Handwheel. TYPE APPROVED.
- Application: Cooling water and bilge water systems.

# TECHNICAL DATA

## STORM VALVE

### STRAIGHT (VERTICAL) TYPE WITH CLOSING DEVICE



### DIMENSIONS

DN (mm)	ØD (mm)	L (mm)	H (mm)	H1 (mm)	ØR (MM)	Weight (kg)
50	165	200	140	310	140	16
65	185	240	150	350	140	22
80	200	260	185	390	140	27
100	220	300	200	435	140	35
125	250	350	220	495	160	50
150	285	400	245	530	160	67
200	340	500	315	625	160	101
250	395	600	400	750	200	150
300	445	700	400	900	200	240

### TECHNICAL FEATURES

<b>Body</b>	Ductile iron / Cast steel / Stainless steel
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 87101 Form B - with closing device and handwheel
<b>Face to Face</b>	EN 558 Series 48 (DIN 3202 F6)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/A (DIN 2501)
<b>Pressure Rating</b>	PN 4
<b>Temperature Range</b>	-10 °C...+60 °C
<b>Options</b>	With indicator
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

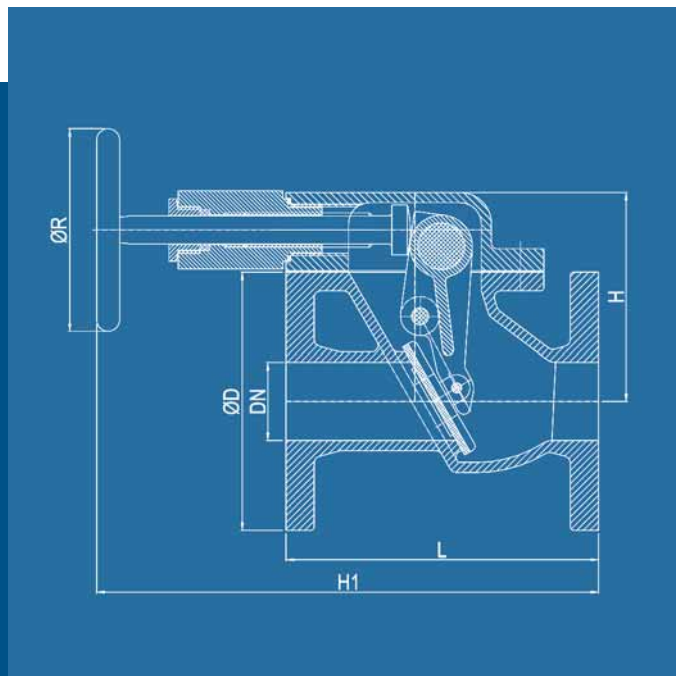
- Storm valves with flat faced DIN flanges and NBR vulcanized disc and closing device with handwheel, prevent sea water entering this system during heavy sea.
- Application: Mainly installed in sanitary piping systems which have a ship's side exit.



# TECHNICAL DATA

## STORM VALVE

**STRAIGHT (VERTICAL) TYPE  
WITH CLOSING DEVICE AND HANDWHEEL**



### DIMENSIONS

DN (mm)	ØD (mm)	L (mm)	H (mm)	H1 (mm)	ØR (MM)	Weight (kg)
50	165	200	140	310	140	18
65	185	240	150	350	140	24
80	200	260	185	390	140	30
100	220	300	200	435	140	38
125	250	350	220	495	160	55
150	285	400	245	530	160	72
200	340	500	315	625	160	115

### TECHNICAL FEATURES

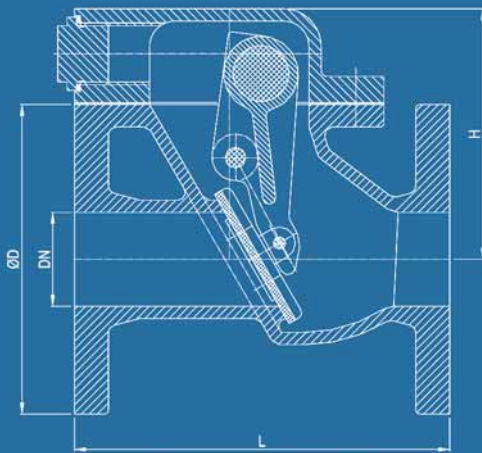
<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	DIN 87101 Form B - with closing device and handwheel
<b>Face to Face</b>	EN 558 Series 48 (DIN 3202 F6)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 4
<b>Temperature Range</b>	-10 °C...+60 °C
<b>Options</b>	With indicator
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Storm valves with flat faced DIN flanges and NBR vulcanized disc prevents seawater entering this system during heavy sea.
- Application: Mainly installed in sanitary piping systems which have a ship's side exit.

# TECHNICAL DATA

## STORM VALVE

### STRAIGHT (VERTICAL) TYPE



#### TECHNICAL FEATURES

<b>Body</b>	Ductile iron / Cast steel / Stainless steel
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN 87101 Form A - without closing device
<b>Face to Face</b>	EN 558 Series 48 (DIN 3202 F6)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/A (DIN 2501)
<b>Pressure Rating</b>	PN 4
<b>Temperature Range</b>	-10 °C...+60 °C
<b>Options</b>	Closing device, handwheel
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

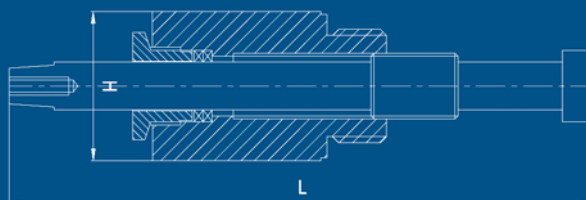
- Storm valves with flat faced DIN flanges and NBR vulcanized disc, prevent sea water entering this system during heavy sea.
- Application: Mainly installed in sanitary piping systems which have a ship's side exit.

#### DIMENSIONS

DN (mm)	ØD (mm)	L (mm)	H (mm)	Weight (kg)
50	165	200	140	16
65	185	240	150	22
80	200	260	185	27
100	220	300	200	35
125	250	350	220	50
150	285	400	245	67
200	340	500	315	101
250	395	600	400	150
300	445	700	400	240

#### BRASS CLOSING DEVICE FOR DIKKAN STRAIGHT TYPE STORM VALVES [33]

Figure No.	Suitable for	L	H
[CD050]	DN50 - DN65	180	AA 45
[CD080]	DN80 - DN100	220	AA 50
[CD125]	DN125	245	AA 50
[CD150]	DN150	245	AA 50
[CD200]	DN200	265	AA 50

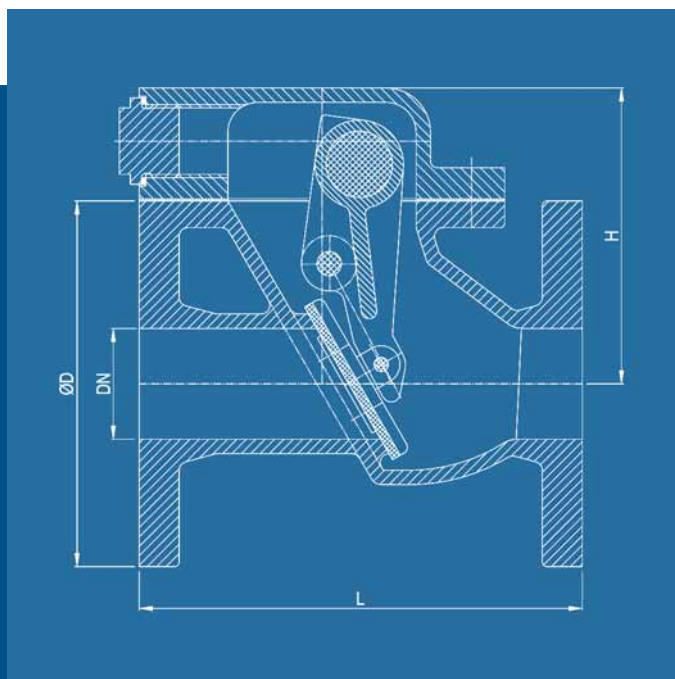


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# TECHNICAL DATA

## STORM VALVE

### STRAIGHT (VERTICAL) TYPE WITHOUT CLOSING DEVICE



#### TECHNICAL FEATURES

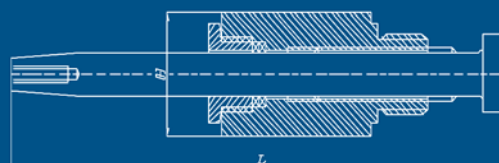
<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	DIN 87101 Form A - without closing device
<b>Face to Face</b>	EN 558 series 48 (DIN 3202 F6)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 4
<b>Temperature Range</b>	-10 °C...+60 °C
<b>Options</b>	Closing device, handwheel
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Storm valves with flat faced DIN flanges and NBR vulcanized disc prevents sea water entering this system during heavy sea.
- Application: Mainly installed in sanitary piping systems which have a ship's side exit.

#### DIMENSIONS

DN (mm)	ØD (mm)	L (mm)	H (mm)	Weight (kg)
50	165	200	140	18
65	185	240	150	24
80	200	260	185	30
100	220	300	200	38
125	250	350	220	55
150	285	400	245	72
200	340	500	315	115

BRASS CLOSING DEVICE FOR STRAIGHT TYPE STORM VALVES [72]			
Figure No.	Suitable for	L	H
[CD050]	DN50 - DN65	180	AA 45
[CD080]	DN80 - DN100	220	AA 50
[CD125]	DN125	245	AA 50
[CD150]	DN150	245	AA 50
[CD200]	DN200	265	AA 50

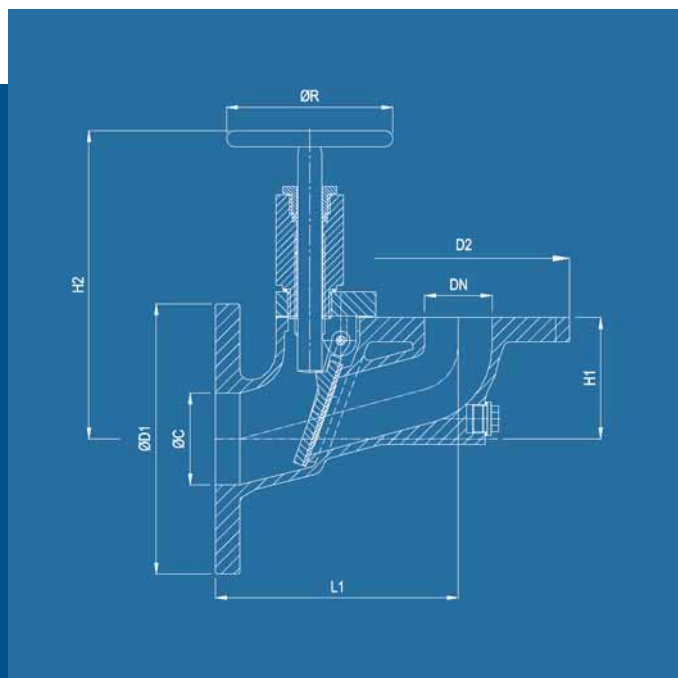
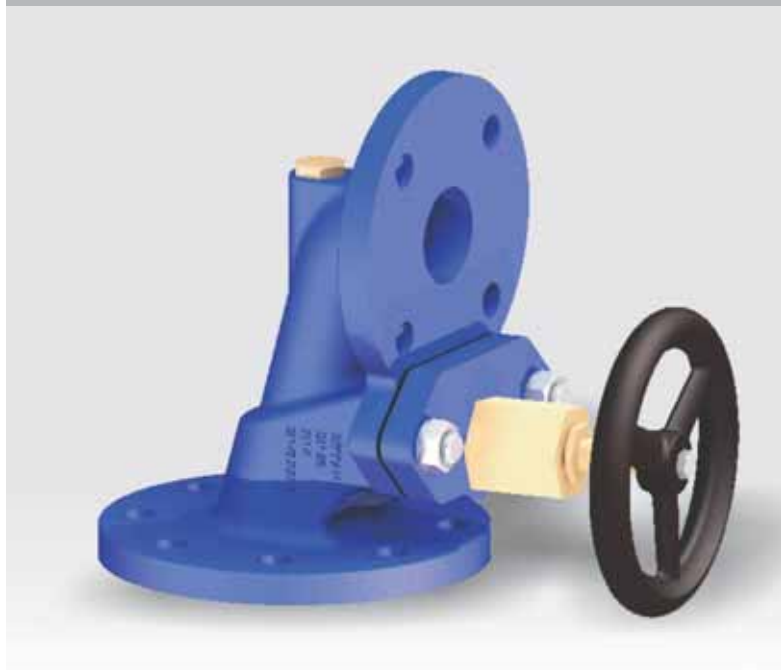


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# TECHNICAL DATA

## STORM VALVE

### ANGLE TYPE WITH CLOSING DEVICE



### DIMENSIONS

DN (mm)	ØD1 (mm)	ØD2 (mm)	L1 (mm)	H1 (mm)	ØC (MM)	H2 (mm)	ØR (mm)	Weight (kg)
50	200	165	180	90	70	245	140	12
65	220	185	200	100	85	255	140	14
80	250	200	215	108	100	275	140	20
100	285	220	250	130	130	285	140	25
125	315	250	290	152	158	350	160	36
150	340	285	330	176	190	365	160	43
200	395	340	425	180	240	360	160	72
250	445	395	630	300	300	500	200	110
300	565	445	650	300	400	500	200	150

### TECHNICAL FEATURES

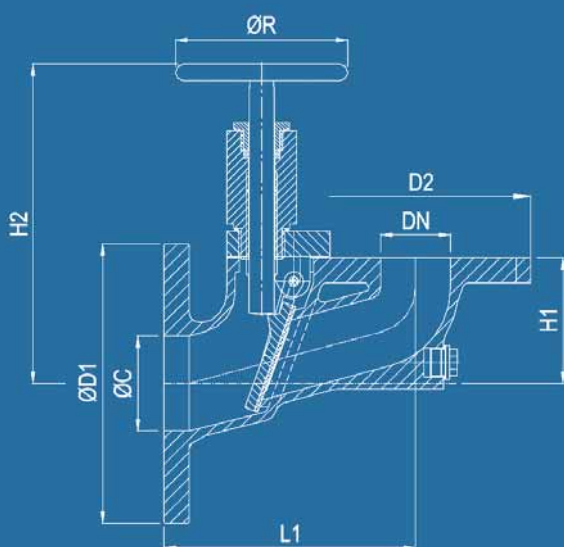
<b>Body</b>	Ductile iron / Cast steel / Stainless steel
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN HNA Sr 6 Form B - with closing device and handwheel
<b>Face to Face</b>	DIN HNA Sr 6
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/A (DIN 2501)
<b>Pressure Rating</b>	PN 4
<b>Temperature Range</b>	-10 °C...+60 °C
<b>Options</b>	With indicator
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Storm valves with flat faced DIN flanges and NBR vulcanized disc and closing device with handwheel, prevent sea water entering this system during heavy sea.
- Application: Mainly installed in sanitary piping systems which have a ship's side exit.

# TECHNICAL DATA

## STORM VALVE

ANGLE TYPE  
WITH CLOSING DEVICE AND HANDWHEEL



### DIMENSIONS

DN (mm)	ØD1 (mm)	ØD2 (mm)	L1 (mm)	H1 (mm)	ØC (MM)	H2 (mm)	ØR (mm)	Weight (kg)
50	200	165	180	90	70	245	140	14
65	220	185	200	100	85	255	140	16
80	250	200	215	108	100	275	140	22
100	285	220	250	130	130	285	140	28
125	315	250	290	152	158	350	160	40
150	340	285	330	176	190	365	160	50
200	395	340	425	180	240	360	160	80

### TECHNICAL FEATURES

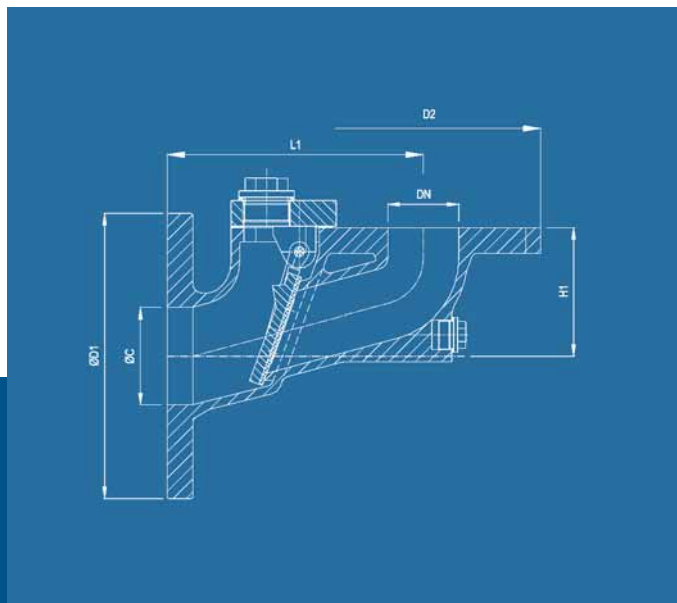
<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	DIN HNA Sr 6 Form B - with closing device and handwheel
<b>Face to Face</b>	DIN HNA Sr 6
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 4
<b>Temperature Range</b>	-10 °C...+60 °C
<b>Options</b>	With indicator, oblique pattern
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Storm valves with flat faced DIN flanges and NBR vulcanized disc prevents sea water entering this system during heavy sea.
- Application: Mainly installed in sanitary piping systems which have a ship's side exit.

# TECHNICAL DATA

## STORM VALVE

### ANGLE TYPE



### DIMENSIONS

DN (mm)	ØD1 (mm)	ØD2 (mm)	L1 (mm)	H1 (mm)	ØC (mm)	Weight (kg)
50	200	165	180	90	70	12
65	220	185	200	100	85	14
80	250	200	215	108	100	20
100	285	220	250	130	130	25
125	315	250	290	152	158	36
150	340	285	330	176	190	43
200	395	340	425	180	240	72
250	445	395	630	300	300	110
300	565	445	650	300	400	150

### TECHNICAL FEATURES

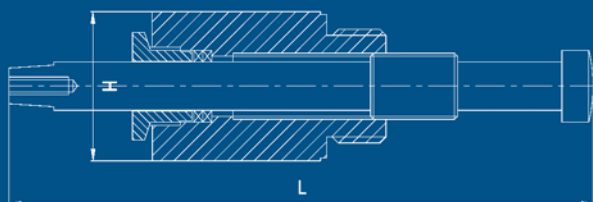
<b>Body</b>	Ductile iron / Cast steel / Stainless steel
<b>Stem/seat</b>	Bronze or Stainless steel
<b>Design</b>	DIN HNA Sr 6 Form A - without closing device
<b>Face to Face</b>	DIN HNA Sr 6
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/A (DIN 2501)
<b>Pressure Rating</b>	PN 4
<b>Temperature Range</b>	-10 °C...+60 °C
<b>Options</b>	Closing device, handwheel, oblique pattern
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Storm valves with flat faced DIN flanges and NBR vulcanized disc prevents sea water entering this system during heavy sea.
- Application: Mainly installed in sanitary piping systems which have a ship's side exit.



### DIKKAN FIGURE NO.

Figure No.	Suitable for	L	H
[CDA050]	DN50 - DN65	182	AA 45
[CDA080]	DN80 - DN100	197	AA 50
[CDA125]	DN125 - Dn150	242	AA 50
[CDA200]	DN200	240	AA 50



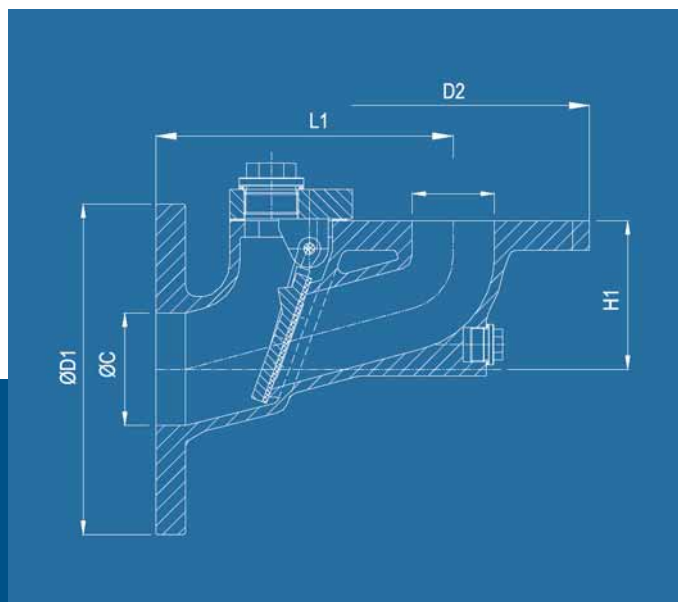
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# TECHNICAL DATA

## STORM VALVE

### ANGLE TYPE WITHOUT CLOSING DEVICE



#### DIMENSIONS

DN (mm)	ØD1 (mm)	ØD2 (mm)	L1 (mm)	H1 (mm)	ØC (mm)	Weight (kg)
50	200	165	180	90	70	14
65	220	185	200	100	85	16
80	250	200	215	108	100	22
100	285	220	250	130	130	28
125	315	250	290	152	158	40
150	340	285	330	176	190	50
200	395	340	425	180	240	80

BRASS CLOSING DEVICE FOR ANGLE TYPE STORM VALVE [72A]			
Figure No.	Suitable for	L (mm)	H (mm)
[CDA050]	DN50 - DN65	182	AA 45
[CDA080]	DN80 - DN100	197	AA 50
[CDA125]	DN125 - Dn150	242	AA 50
[CDA200]	DN200	240	AA 50



#### TECHNICAL FEATURES

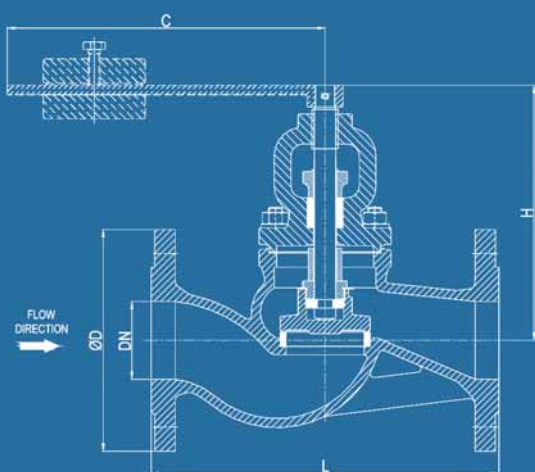
<b>Body</b>	Bronze
<b>Stem/seat</b>	Bronze
<b>Design</b>	DIN HNA Sr 6 Form A - without closing device
<b>Face to Face</b>	DIN HNA Sr 6
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/A (DIN 2501)
<b>Pressure Rating</b>	PN 4
<b>Temperature Range</b>	-10 °C...+60 °C
<b>Options</b>	Closing device, handwheel, oblique pattern
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Storm valves with flat faced DIN flanges and NBR vulcanized disc prevents sea water entering this system during heavy sea.
- Application: Mainly installed in sanitary piping systems which have a ship's side exit.

# TECHNICAL DATA

## SELF CLOSING VALVE

### STRAIGHT TYPE WITH COUNTER WEIGHT



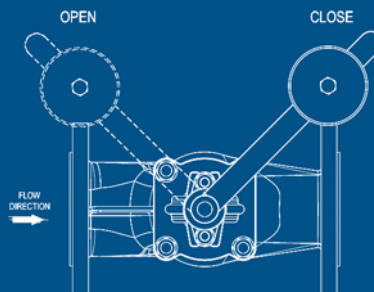
### DIMENSIONS

DN (mm)	ØD (mm)	L (mm)	H (mm)	C (mm)	Weight (kg)
15	95	130	150	265	5.0
20	105	150	150	265	5.5
25	115	160	155	265	6.0
32	140	180	160	265	9.0
40	150	200	195	265	13
50	165	230	200	265	15
65	185	290	215	265	20
80	200	310	265	400	28
100	220	350	295	400	38

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc/stem</b>	Bronze
<b>Design</b>	Body: DIN 86260, bonnet: with counter weight
<b>Face to Face</b>	EN 558 series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Anti-clockwise closing
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Self closing globe valves are mainly used aboard ships as quickly operated safety valves with a counter weighted lever.  
TYPE APPROVED.
- With a 90 degree turn, the valve will open or close respectively.
- Application: For hot and cold water, oil and steam.



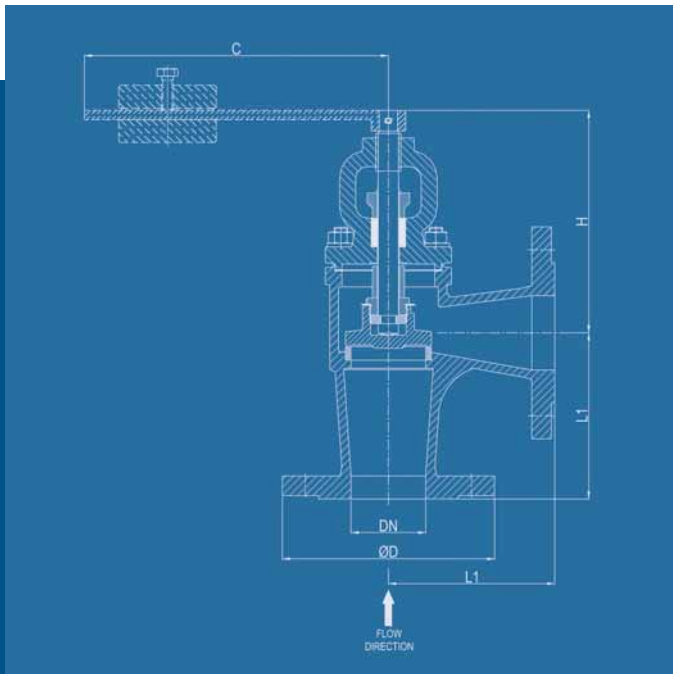
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# TECHNICAL DATA

## SELF CLOSING VALVE

### ANGLE TYPE WITH COUNTER WEIGHT



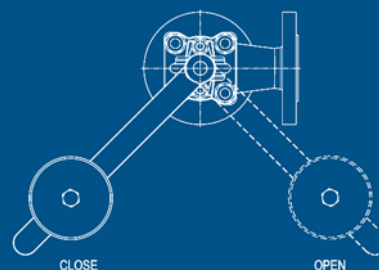
### DIMENSIONS

DN (mm)	ØD (mm)	L 1 (mm)	H (mm)	C (mm)	Weight (kg)
15	95	90	140	265	5.0
20	105	95	140	265	5.5
25	115	100	145	265	6.0
32	140	105	150	265	9.0
40	150	115	190	265	13
50	165	125	195	265	15
65	185	145	195	265	20
80	200	155	235	400	28
100	220	175	270	400	38

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc/stem</b>	Bronze
<b>Design</b>	Body: DIN 86260, bonnet: with counter weight
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Anti-clockwise closing
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Self closing globe valves are mainly used aboard ships as quickly operated safety valves with a counter weighted lever.  
TYPE APPROVED.
- With a 90 degree turn, the valve will open or close respectively.
- Application: For hot and cold water, oil and steam.

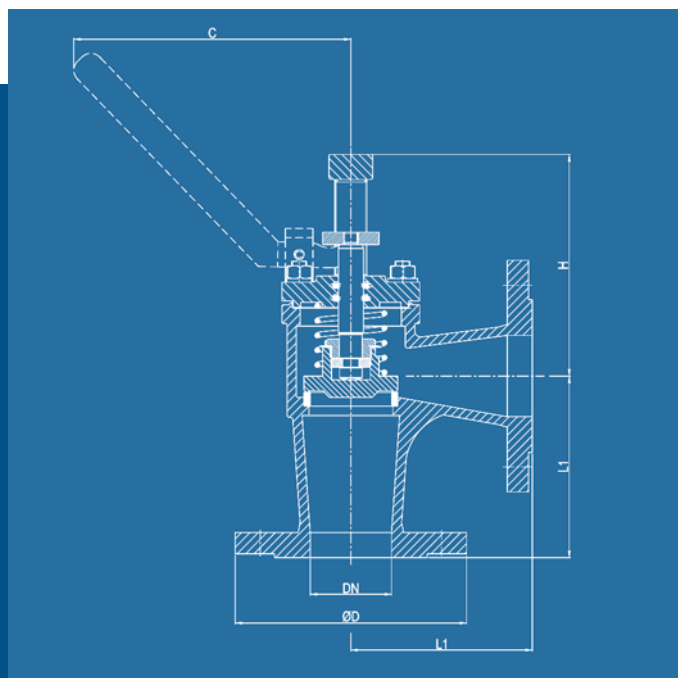


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# TECHNICAL DATA

## SELF CLOSING VALVE

### ANGLE TYPE - SPRING LOADED



### DIMENSIONS

DN (mm)	ØD (mm)	L1 (mm)	H (mm)	C (mm)	Weight (kg)
15	95	90	125	140	3.4
20	105	95	125	140	3.8
25	115	100	135	140	4.5
32	140	105	135	140	6.0
40	150	115	155	150	8.0
50	165	125	155	150	10
65	185	145	180	225	14
80	200	155	190	230	19
100	220	175	220	215	28

### TECHNICAL FEATURES

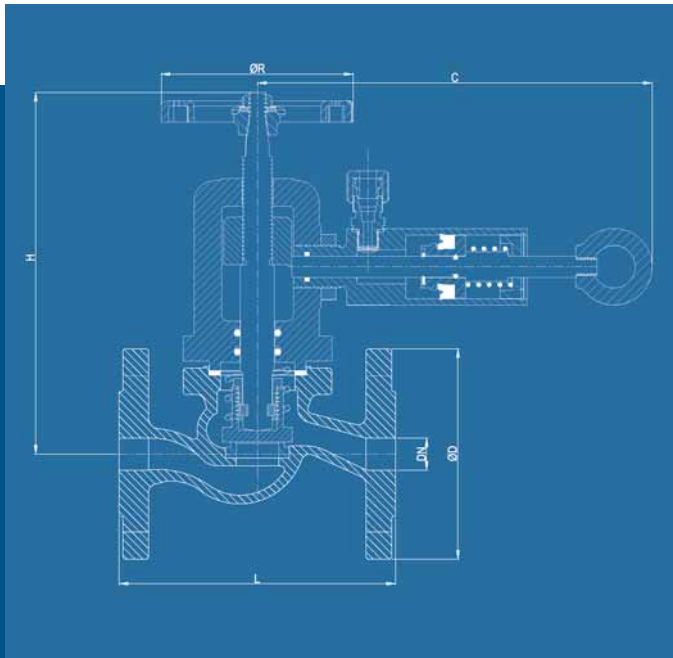
<b>Body</b>	Bronze
<b>Disc/stem</b>	Bronze
<b>Design</b>	Body: DIN 86260, spring loaded
<b>Face to Face</b>	EN 558 series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+180 °C
<b>Options</b>	Special materials
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Self closing globe valves are mainly used aboard ships as quickly operated safety valves with spring and push button. TYPE APPROVED.
- With push of button, the valve will open and by release of button the valve will close by spring support.
- Application: For hot and cold water, oil and steam.

# TECHNICAL DATA

## QUICK CLOSING VALVE

### STRAIGHT TYPE - DIN LENGTH WITH PULL RING



### DIMENSIONS

DN (mm)	ØD (mm)	L (mm)	H (mm)	ØR (mm)	C	Weight (kg)
15	95	130	175	120	190	4.0
20	105	150	175	120	190	4.5
25	115	160	190	140	190	5.0
32	140	180	190	140	190	7.0
40	150	200	205	160	195	11
50	165	230	215	160	195	13
65	185	290	245	180	195	19
80	200	310	270	200	195	25
100	220	350	305	225	195	35
125	250	400	330	250	195	55
150	285	480	380	300	195	75
175	315	550	450	400	195	115
200	340	600	450	400	195	135

### TECHNICAL FEATURES

<b>Body</b>	Ductile iron
<b>Design</b>	Bonnet: with Release Cylinder & Pull Ring
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Dikkan quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

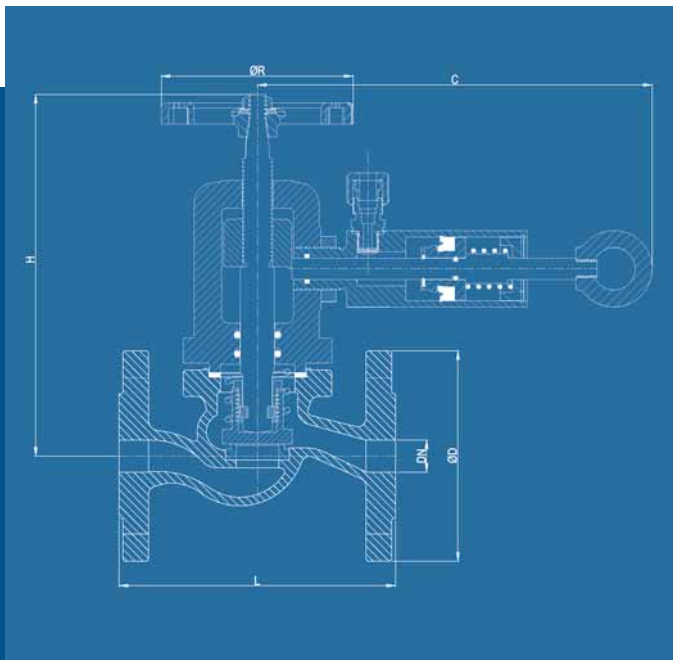


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# TECHNICAL DATA

## QUICK CLOSING VALVE

### STRAIGHT TYPE - DIN LENGTH WITH PULL RING



### DIMENSIONS

DN (mm)	ØD (mm)	L (mm)	H (mm)	ØR (mm)	C	Weight (kg)
15	95	130	175	120	190	4.0
20	105	150	175	120	190	4.5
25	115	160	190	140	190	5.0
32	140	180	190	140	190	7.0
40	150	200	205	160	195	11
50	165	230	215	160	195	13
65	185	290	245	180	195	19
80	200	310	270	200	195	25
100	220	350	305	225	195	35
125	250	400	330	250	195	55
150	285	480	380	300	195	75
175	315	550	450	400	195	115
200	340	600	450	400	195	135

### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Design</b>	Bonnet: with Release Cylinder & Pull Ring
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Dikkan quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

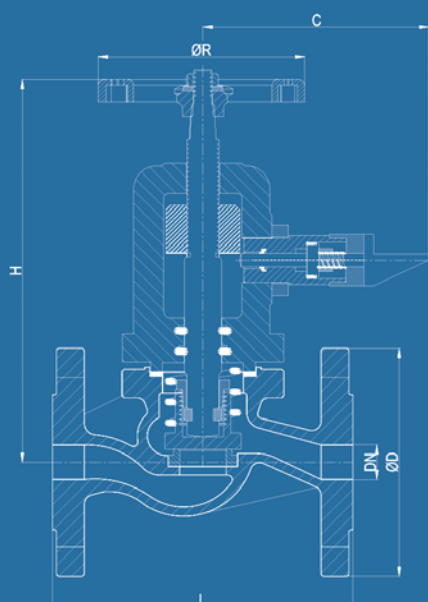
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# TECHNICAL DATA

## QUICK CLOSING VALVE

### STRAIGHT TYPE - DIN LENGTH WITH PUSH BUTTON



### DIMENSIONS

DN (mm)	ØD (mm)	L (mm)	H (mm)	ØR (mm)	C MECHANICAL HYDRAULIC PNEUMATIC	Weight (kg)
15	95	130	175	120	200	4.0
20	105	150	175	120	200	4.5
25	115	160	190	140	200	5.0
32	140	180	190	140	200	7.0
40	150	200	205	160	205	11
50	165	230	215	160	210	13
65	185	290	245	180	210	19
80	200	310	270	200	210	25
100	220	350	305	225	210	35
125	250	400	330	250	210	55
150	285	480	380	300	210	75
175	315	550	450	400	210	115
200	340	600	450	400	210	135

### TECHNICAL FEATURES

<b>Body</b>	Ductile iron
<b>Design</b>	Bonnet: with Release Cylinder & Push Button
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Dikkan quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

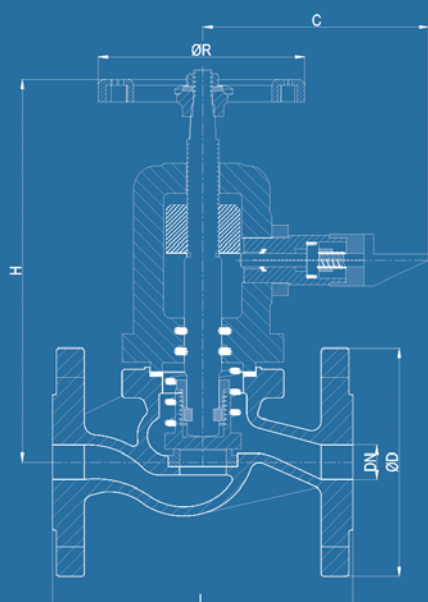


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# TECHNICAL DATA

## QUICK CLOSING VALVE

### STRAIGHT TYPE - DIN LENGTH WITH PUSH BUTTON



### DIMENSIONS

DN (mm)	ØD (mm)	L (mm)	H (mm)	ØR (mm)	C MECHANICAL HYDRAULIC PNEUMATIC	Weight (kg)
15	95	130	175	120	200	4.0
20	105	150	175	120	200	4.5
25	115	160	190	140	200	5.0
32	140	180	190	140	200	7.0
40	150	200	205	160	205	11
50	165	230	215	160	210	13
65	185	290	245	180	210	19
80	200	310	270	200	210	25
100	220	350	305	225	210	35
125	250	400	330	250	210	55
150	285	480	380	300	210	75
175	315	550	450	400	210	115
200	340	600	450	400	210	135

### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Design</b>	Bonnet: with Release Cylinder & Push Button
<b>Face to Face</b>	EN 558 Series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Dikkan quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

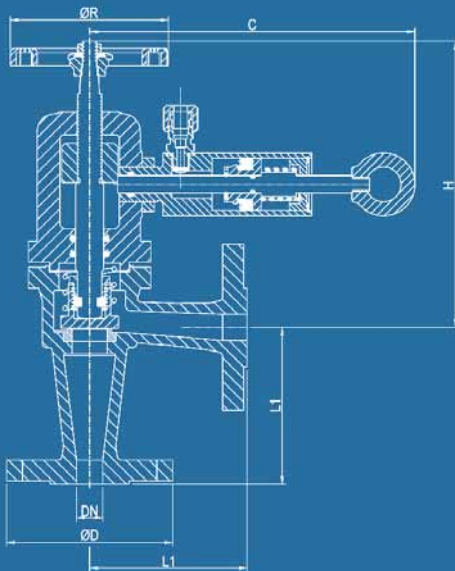


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# TECHNICAL DATA

## QUICK CLOSING VALVE

### ANGLE TYPE - DIN LENGTH WITH PULL RING



### DIMENSIONS

DN (mm)	ØD (mm)	L1 (mm)	H (mm)	ØR (mm)	C MECHANICAL HYDRAULIC PNEUMATIC	Weight (kg)
15	95	90	170	120	190	3.8
20	105	95	170	120	190	4.0
25	115	100	180	140	190	5.0
32	140	105	180	140	190	7.0
40	150	115	200	160	195	10
50	165	125	200	160	195	12
65	185	145	225	180	195	17
80	200	155	245	200	195	23
100	220	175	275	225	195	33
125	250	200	275	250	195	50
150	285	225	315	300	195	70
175	315	250	360	400	195	90
200	340	275	360	400	195	110

### TECHNICAL FEATURES

<b>Body</b>	Ductile iron
<b>Design</b>	Bonnet: with Release Cylinder & Pull Ring
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Dikkan quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

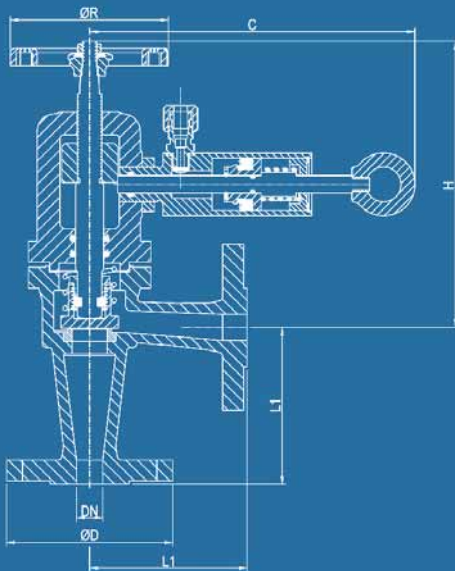


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# TECHNICAL DATA

## QUICK CLOSING VALVE

### ANGLE TYPE - DIN LENGTH WITH PULL RING



### DIMENSIONS

DN (mm)	ØD (mm)	L1 (mm)	H (mm)	ØR (mm)	C MECHANICAL HYDRAULIC PNEUMATIC	Weight (kg)
15	95	90	170	120	190	3.8
20	105	95	170	120	190	4.0
25	115	100	180	140	190	5.0
32	140	105	180	140	190	7.0
40	150	115	200	160	195	10
50	165	125	200	160	195	12
65	185	145	225	180	195	17
80	200	155	245	200	195	23
100	220	175	275	225	195	33
125	250	200	275	250	195	50
150	285	225	315	300	195	70
175	315	250	360	400	195	90
200	340	275	360	400	195	110

### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Design</b>	Bonnet: with Release Cylinder & Pull Ring
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

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- Application: On board ships for fuel, oil etc.



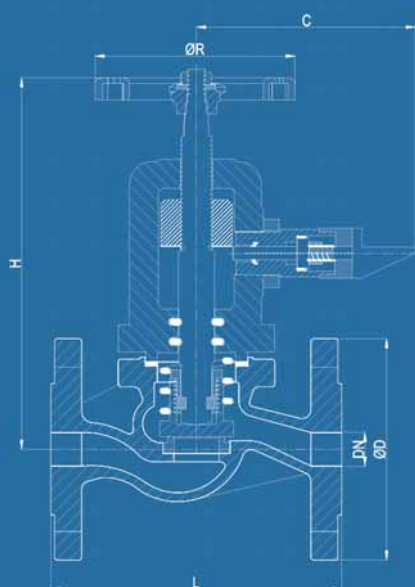
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# TECHNICAL DATA

## QUICK CLOSING VALVE

### ANGLE TYPE - DIN LENGTH WITH PUSH BUTTON



### DIMENSIONS

DN (mm)	ØD (mm)	L1 (mm)	H (mm)	ØR (mm)	C	Weight (kg)
15	95	90	170	120	200	3.8
20	105	95	170	120	200	4.0
25	115	100	180	140	200	5.0
32	140	105	180	140	200	7.0
40	150	115	200	160	205	10
50	165	125	200	160	210	12
65	185	145	225	180	210	17
80	200	155	245	200	210	23
100	220	175	275	225	210	33
125	250	200	275	250	210	50
150	285	225	315	300	210	70
175	315	250	360	400	210	90
200	340	275	360	400	210	110

### TECHNICAL FEATURES

<b>Body</b>	Ductile iron
<b>Design</b>	Bonnet: with Release Cylinder & Push Button
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Dikkan quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

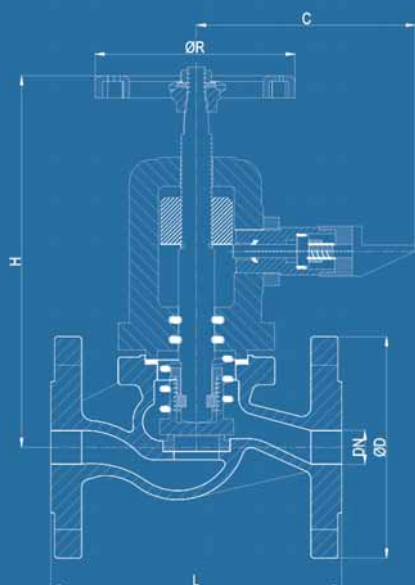
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# TECHNICAL DATA

## QUICK CLOSING VALVE

### ANGLE TYPE - DIN LENGTH WITH PUSH BUTTON



### DIMENSIONS

DN (mm)	ØD (mm)	L1 (mm)	H (mm)	ØR (mm)	C MECHANICAL HYDRAULIC PNEUMATIC	Weight (kg)
15	95	90	170	120	200	3.8
20	105	95	170	120	200	4.0
25	115	100	180	140	200	5.0
32	140	105	180	140	200	7.0
40	150	115	200	160	205	10
50	165	125	200	160	210	12
65	185	145	225	180	210	17
80	200	155	245	200	210	23
100	220	175	275	225	210	33
125	250	200	275	250	210	50
150	285	225	315	300	210	70
175	315	250	360	400	210	90
200	340	275	360	400	210	110

### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Design</b>	Bonnet: with Release Cylinder & Push Button
<b>Face to Face</b>	EN 558 Series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Dikkan quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

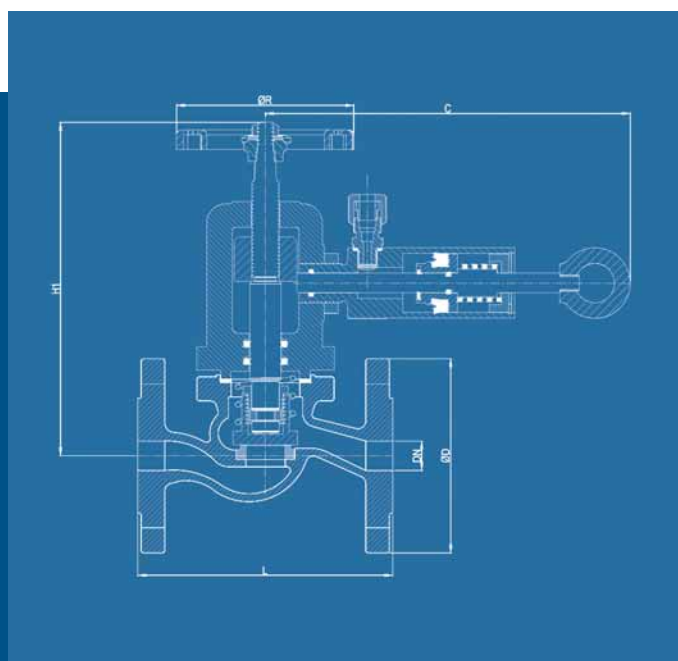


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# TECHNICAL DATA

## QUICK CLOSING VALVE

### STRAIGHT TYPE - DIN LENGTH



### DIMENSIONS

DN (mm)	ØD (mm)	L1 (mm)	H1 (mm)	ØR (mm)	C MECHANICAL HYDRAULIC PNEUMATIC	Weight (kg)
15	95	130	175	120	190	4.0
20	105	150	175	120	190	4.5
25	115	160	190	140	190	6.0
32	140	180	190	140	190	8.0
40	150	200	205	160	195	12
50	165	230	215	160	195	14
65	185	290	245	180	195	20
80	200	310	270	200	195	26
100	220	350	305	225	195	36
125	250	400	330	250	195	58
150	285	480	380	300	195	75
175	315	550	450	400	195	110
200	340	600	450	400	195	145

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc/stem</b>	Stainless steel
<b>Design</b>	Body: DIN 86260, bonnet: with release cylinder
<b>Face to Face</b>	EN 558 series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

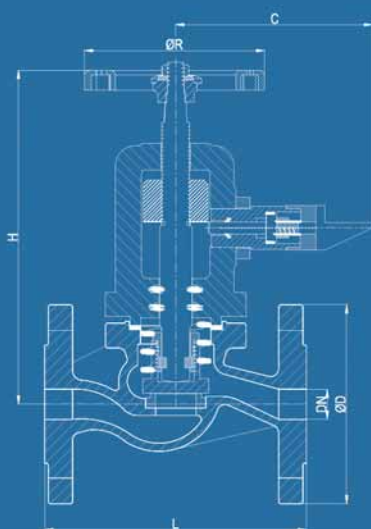


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# TECHNICAL DATA

## QUICK CLOSING VALVE

### STRAIGHT TYPE - DIN LENGTH WITH PUSH BUTTON



### DIMENSIONS

DN (mm)	ØD (mm)	L1 (mm)	H1 (mm)	ØR (mm)	C MECHANICAL HYDRAULIC PNEUMATIC	Weight (kg)
15	95	130	175	120	200	4.0
20	105	150	175	120	200	4.5
25	115	160	190	140	200	6.0
32	140	180	190	140	200	8.0
40	150	200	205	160	205	12
50	165	230	215	160	210	14
65	185	290	245	180	210	20
80	200	310	270	200	210	26
100	220	350	305	225	210	36
125	250	400	330	250	210	58
150	285	480	380	300	210	75
175	315	550	450	400	210	110
200	340	600	450	400	210	145

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc/stem</b>	Stainless steel
<b>Design</b>	Body: DIN 86260, bonnet: with release cylinder
<b>Face to Face</b>	EN 558 series 1 (DIN 3202 F1)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

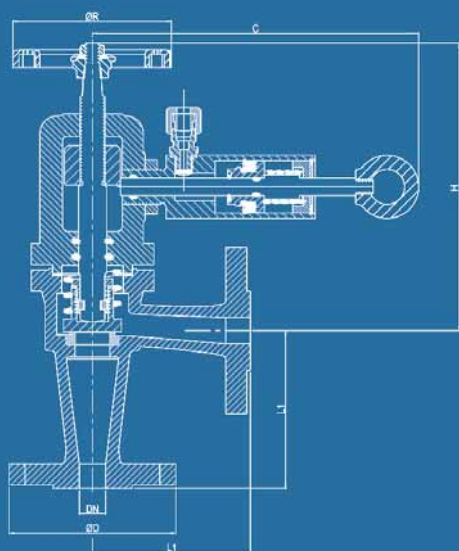
- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

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# TECHNICAL DATA

## QUICK CLOSING VALVE

### ANGLE TYPE - DIN LENGTH



### DIMENSIONS

DN (mm)	ØD (mm)	L1 (mm)	H1 (mm)	ØR (mm)	C MECHANICAL HYDRAULIC PNEUMATIC	Weight (kg)
15	95	90	170	120	190	4.0
20	105	95	170	120	190	4.5
25	115	100	180	140	190	6.0
32	140	105	180	140	190	8.0
40	150	115	200	160	195	12
50	165	125	200	160	195	14
65	185	145	225	180	195	19
80	200	155	245	200	195	25
100	220	175	275	225	195	32
125	250	200	275	250	195	55
150	285	225	315	300	195	70
175	315	250	360	400	195	100
200	340	275	360	400	195	130

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc/stem</b>	Stainless steel
<b>Design</b>	Body: DIN 86260, bonnet: with release cylinder
<b>Face to Face</b>	EN 558 series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

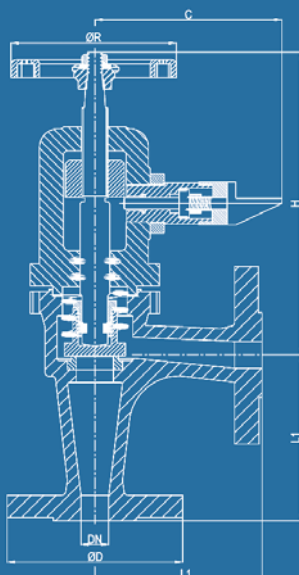
- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

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# TECHNICAL DATA

## QUICK CLOSING VALVE

### ANGLE TYPE - DIN LENGTH WITH PUSH BUTTON



### DIMENSIONS

DN (mm)	ØD (mm)	L1 (mm)	H1 (mm)	ØR (mm)	C MECHANICAL HYDRAULIC PNEUMATIC	Weight (kg)
15	95	90	170	120	200	4.0
20	105	95	170	120	200	4.5
25	115	100	180	140	200	6.0
32	140	105	180	140	200	8.0
40	150	115	200	160	205	12
50	165	125	200	160	210	14
65	185	145	225	180	210	19
80	200	155	245	200	210	25
100	220	175	275	225	210	32
125	250	200	275	250	210	55
150	285	225	315	300	210	70
175	315	250	360	400	210	100
200	340	275	360	400	210	130

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Disc/stem</b>	Stainless steel
<b>Design</b>	Body: DIN 86260, bonnet: with release cylinder
<b>Face to Face</b>	EN 558 series 8 (DIN 3202 F32)
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 10 / PN 16 (Pressure above the disc)
<b>Temperature Range</b>	-10 °C...+150 °C
<b>Options</b>	Impuls unit for remote control
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

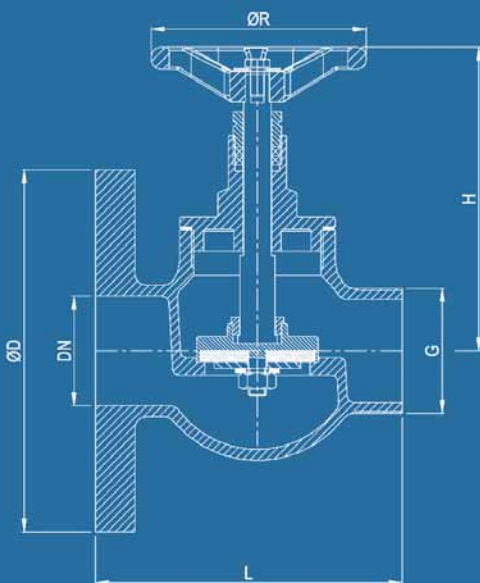
- Quick closing valves are specifically designed for marine use, providing a quick shut-off in emergency situations from outside the engine room and above the water line. Quick closing valves are equipped with a release cylinder for pneumatic, hydraulic or mechanical Remote Control. TYPE APPROVED.
- Application: On board ships for fuel, oil etc.

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# TECHNICAL DATA

## FIRE AND DECKWASH VALVE

STRAIGHT TYPE  
SCREWED BONNET - FLANGED INLET



### DIMENSIONS

DN (mm)	G (")	D (mm)	L (mm)	H (open) (mm)	R (mm)	Weight (kg)
40	1½	150	135	150	100	4.0
50	2	165	160	160	100	6.0
65	2½	185	180	190	120	8.0

### TECHNICAL FEATURES

<b>Design</b>	Straight type, screwed bonnet, without coupling
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Inlet Flange Dimension</b>	DIN Flange acc. to EN 1092-3/A (DIN 2501)
<b>Outlet Threaded End</b>	BSP-male threaded
<b>Pressure Rating</b>	PN 16
<b>Temperature Range</b>	-10 °C...+60 °C
<b>Options</b>	Handwheel in gunmetal, connection pieces, with coupling
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Fire fighting valves straight type, screwed bonnet and double sealing. Inlet DIN flat face flanged, outlet BSP-male threaded.
- Application: Water and for coupling of fire hose.

#### Connection Pieces

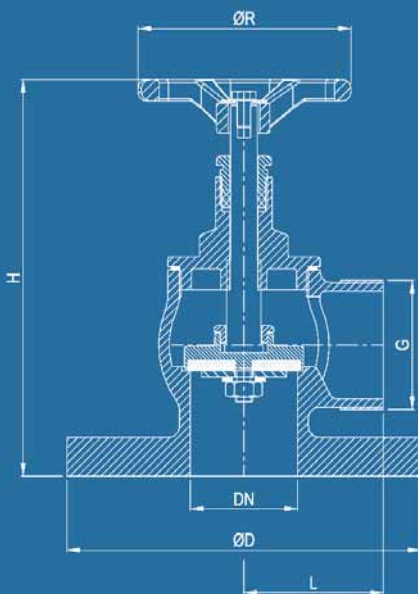


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# TECHNICAL DATA

## FIRE AND DECKWASH VALVE

ANGLE TYPE  
SCREWED BONNET - FLANGED INLET



### DIMENSIONS

DN (mm)	ØG (")	D (mm)	L (mm)	H (open) (mm)	R (mm)	Weight (kg)
40	1½	150	68	210	100	3.5
50	2	165	75	220	100	5.5
65	2½	185	85	250	120	7.0

### TECHNICAL FEATURES

- Design** 90° angle type, screwed bonnet, without coupling
- Face to Face** Acc. to below mentioned dimension table
- Inlet Flange Dimension** DIN Flange acc. to EN 1092-3/A (DIN 2501)
- Outlet Threaded End** BSP-male threaded
- Pressure Rating** PN 16
- Temperature Range** -10 °C...+60 °C
- Options** Handwheel in gunmetal, connection pieces, with coupling
- Flange Options** Special flange drilling acc. to ANSI or JIS
- Fighting valves angle type, screwed bonnet and double sealing. Inlet DIN flat face flanged, outlet BSP-male threaded.
  - Application: Water and for coupling of fire hose.

#### Connection Pieces



Coupling [CPL]



Female Adaptor [FA]



Blank Cap with Chain [BC]

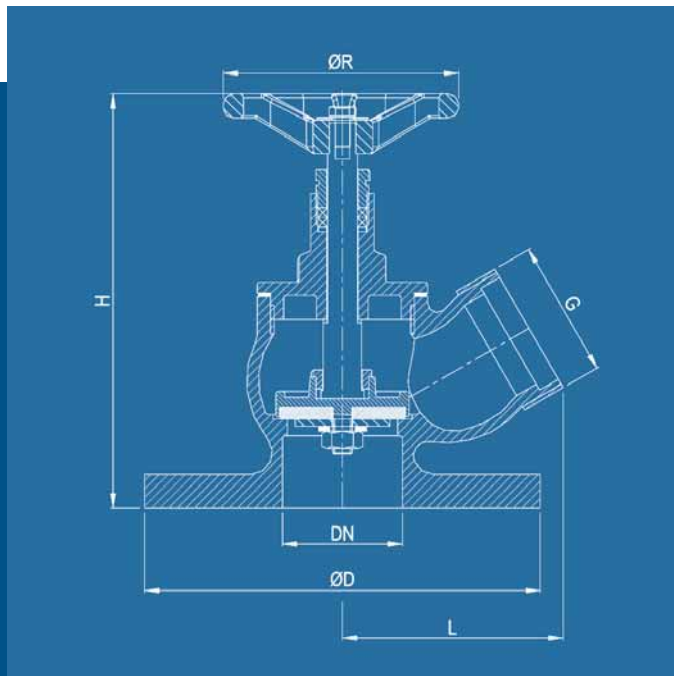
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# TECHNICAL DATA

## FIRE AND DECKWASH VALVE 30°

OBLIQUE TYPE  
SCREWED BONNET - FLANGED INLET



### DIMENSIONS

DN (mm)	ØG (")	D (mm)	L (mm)	H (open) (mm)	R (mm)	Weight (kg)
40	1½	150	85	210	100	4.1
50	2	165	90	220	100	5.5
65	2½	185	-	250	120	7.0

### TECHNICAL FEATURES

- Design** 30° angle type, screwed bonnet, without coupling
- Face to Face** Acc. to below mentioned dimension table
- Inlet Flange Dimension** DIN Flange acc. to EN 1092-3/A (DIN 2501)
- Outlet Threaded End** BSP-male threaded
- Pressure Rating** PN 16
- Temperature Range** -10 °C...+60 °C
- Options** Handwheel in gunmetal, connection pieces, with coupling
- Flange Options** Special flange drilling acc. to ANSI or JIS
- Fire fighting valves oblique type, screwed bonnet and double sealing. Inlet DIN flat face flanged, outlet BSP-male threaded.
  - Application: Water and for coupling of fire hose.

#### Connection Pieces



Coupling [CPL.]



Female Adaptor [FA.]



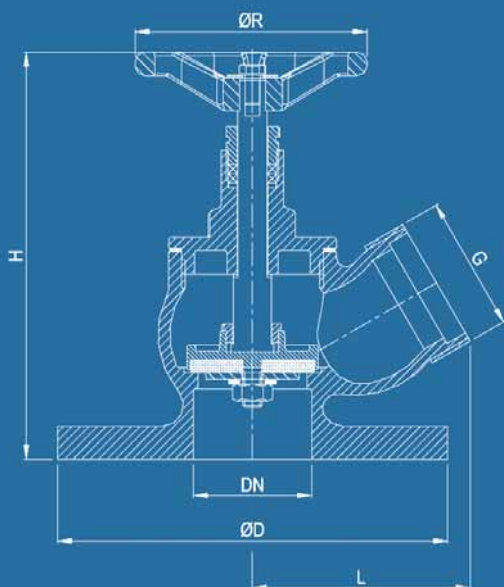
Blank Cap with Chain [BC.]

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# TECHNICAL DATA

## FIRE AND DECKWASH VALVE 45°

OBLIQUE TYPE  
SCREWED BONNET - FLANGED INLET



### DIMENSIONS

DN (mm)	ØG (")	D (mm)	L (mm)	H (open) (mm)	R (mm)	Weight (kg)
40	1½	150	80	210	100	4.1
50	2	165	100	220	100	5.5
65	2½	185	105	250	120	7.0

### TECHNICAL FEATURES

- Design** 45° angle type, screwed bonnet, without coupling
- Face to Face** Acc. to below mentioned dimension table
- Inlet Flange Dimension** DIN Flange acc. to EN 1092-3/A (DIN 2501)
- Outlet Threaded End** BSP-male threaded
- Pressure Rating** PN 16
- Temperature Range** -10 °C...+60 °C
- Options** Handwheel in gunmetal, connection pieces, with coupling
- Flange Options** Special flange drilling acc. to ANSI or JIS
- Fire fighting valves oblique type, screwed bonnet and double sealing. Inlet DIN flat face flanged, outlet BSP-male threaded.
  - Application: Water and for coupling of fire hose.

#### Connection Pieces



Coupling [CPL.]



Female Adaptor [FA.]



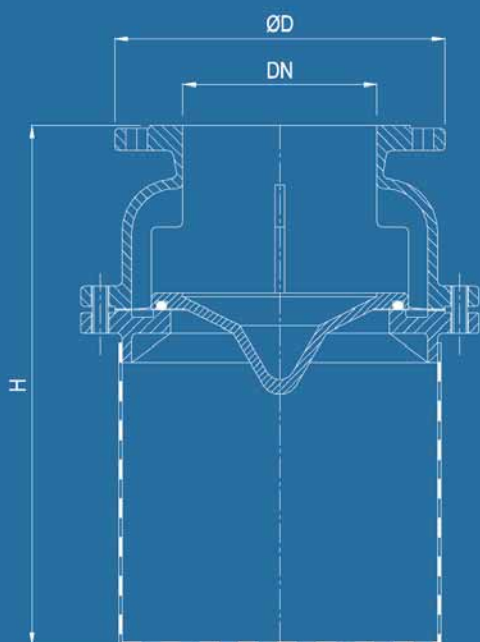
Blank Cap with Chain [BC.]

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# TECHNICAL DATA

## FOOT VALVE

### WITH BASKET AND CHECK VALVE



### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	H (mm)	Weight (kg)
40	150	150	230	10
50	165	165	230	12
65	185	185	280	14
80	200	200	300	19
100	220	220	315	23
125	250	250	400	35
150	285	285	505	45
200	340	340	535	55
250	395	405	635	100
300	445	460	710	160
350	505	520	800	190
400	565	580	860	210
500	670	715	945	275

### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Basket</b>	Stainless steel
<b>Design</b>	Special Design with basket and check valve
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flange acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 10
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	NBR disc ring, st. steel or CuNiFe screen, special screen mesh
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Foot valves with galvanized steel strainer basket, rubber disc ring, flange connection rated PN 10/PN 16 and compact construction.
- Application: Water and neutral liquids.

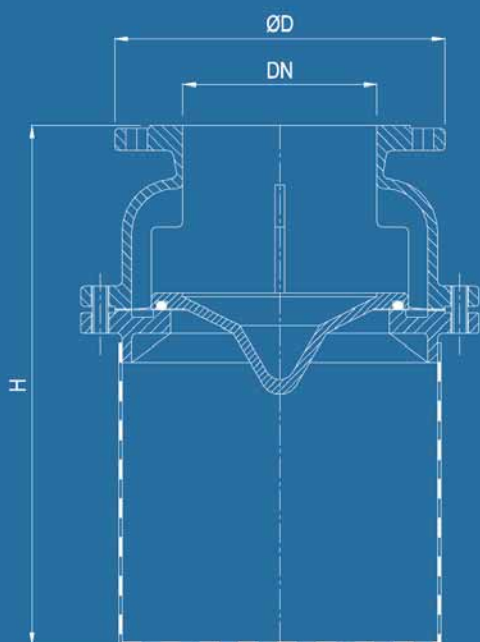


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# TECHNICAL DATA

## FOOT VALVE

### WITH BASKET AND CHECK VALVE



### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Basket</b>	Stainless steel
<b>Design</b>	Special Design with basket and check valve
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flange acc. to EN 1092-2/B (DIN 2501)
<b>Pressure Rating</b>	PN 6 - PN 16
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	NBR disc ring, st. steel or CuNiFe screen, special screen mesh
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Foot valves with galvanized steel strainer basket, rubber disc ring, flange connection rated PN 10/PN 16 and compact construction.
- Application: Water and neutral liquids.

### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	H (mm)	Weight (kg)
40	150	150	230	10
50	165	165	230	12
65	185	185	280	15
80	200	200	300	20
100	220	220	315	25
125	250	250	400	37
150	285	285	505	48
200	340	340	535	60
250	395	405	635	105
300	445	460	710	165
350	505	520	800	195
400	565	580	860	215
500	670	715	945	285

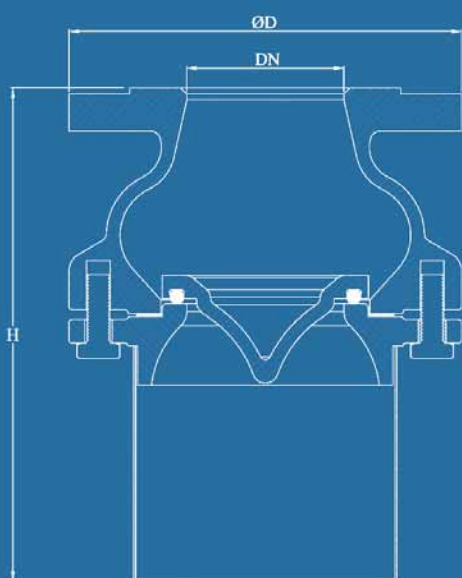


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# TECHNICAL DATA

## FOOT VALVE

### WITH BASKET INTEGRAL CHECK VALVE



### TECHNICAL FEATURES

<b>Design</b>	Special Design with basket
<b>Face to Face</b>	Acc. to below mentioned dimension table
<b>Flange Dimension</b>	DIN Flange acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 4 - PN 16
<b>Temperature Range</b>	-10 °C...+90 °C
<b>Options</b>	NBR disc ring, CuNiFe basket
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Foot valves with stainless steel strainer basket, rubber disc ring, flange connection rated PN 10/ PN 16 and compact construction.
- Application: Water, seawater and neutral liquids.

### DIMENSIONS

DN (mm)	ØD PN10	ØD PN16	H (mm)	Weight (kg)
40	150	150	230	12
50	165	165	230	13
65	185	185	280	16
80	200	200	300	21
100	220	220	315	27
125	250	250	400	40
150	285	285	505	52
200	340	340	535	63
250	395	405	635	110
300	445	460	710	170
350	505	520	800	190
400	565	580	860	225
500	670	715	945	295

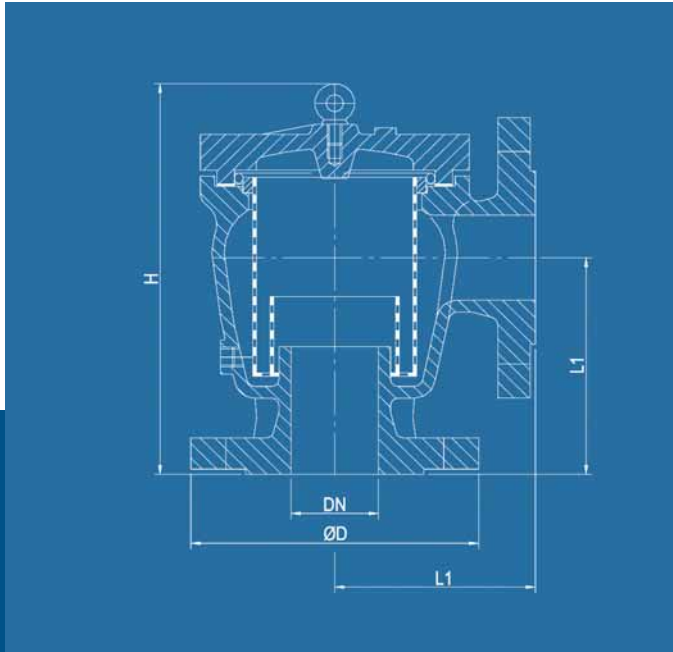
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# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### ANGLE TYPE



### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	100	200	7.0
32	PN 4	140	140	105	250	11
40	PN 4	150	150	125	250	13
50	PN 4	165	165	135	260	18
65	PN 4	185	185	150	275	22
80	PN 4	200	200	175	350	31
100	PN 4	220	220	195	365	46
125	PN 4	250	250	220	425	62
150	PN 4	285	285	270	480	89
175	PN 4	315	315	300	550	125
200	PN 4	340	340	300	550	133
250	PN 4	395	405	390	665	163
300	PN 4	445	460	450	795	175
350	PN 4	505	520	400	735	230
400	PN 4	565	580	420/520	940	320
450	PN 4	615	640	625	1050	460
500	PN 2.5	670	715	550	1070	700
600	PN 2.5	780	840	620/720	1225	950

### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Gasket</b>	Stainless steel
<b>Design</b>	DIN 87151 E - with fixed studs and nuts
<b>Face to Face</b>	DIN 87151 - Angle Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Brass bow nuts, CuNiFe basket or special perforation air plug or air vent valve on the cover
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

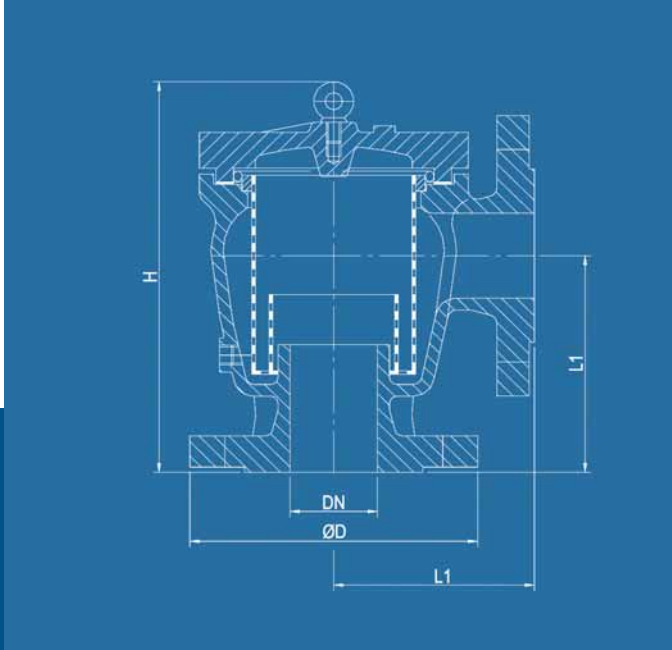
- Mud boxes with DIN face to face length and drain plug are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65, and 8 mm square for DN 80 to DN 600. As an option basket perforation can be 3 mm or other special perforation. The cover is mounted with fixed studs and hexagon nuts.
- Application: especially for suction and discharge lines for sea cooling water and bilge systems.



# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### ANGLE TYPE



### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	100	200	7.0
32	PN 4	140	140	105	250	11
40	PN 4	150	150	125	250	13
50	PN 4	165	165	135	260	18
65	PN 4	185	185	150	275	22
80	PN 4	200	200	175	350	31
100	PN 4	220	220	195	365	46
125	PN 4	250	250	220	425	62
150	PN 4	285	285	270	480	89
175	PN 4	315	315	300	550	125
200	PN 4	340	340	300	550	133
250	PN 4	395	405	390	665	163
300	PN 4	445	460	450	795	175
350	PN 4	505	520	400	735	230
400	PN 4	565	580	420/520	940	320
450	PN 4	615	640	625	1050	460
500	PN 2.5	670	715	550	1070	700
600	PN 2.5	780	840	620/720	1225	950

### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Gasket</b>	Stainless steel
<b>Design</b>	DIN 87151 E - with fixed studs and nuts
<b>Face to Face</b>	DIN 87151 - Angle Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Brass bow nuts, CuNiFe basket or special perforation air plug or air vent valve on the cover
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

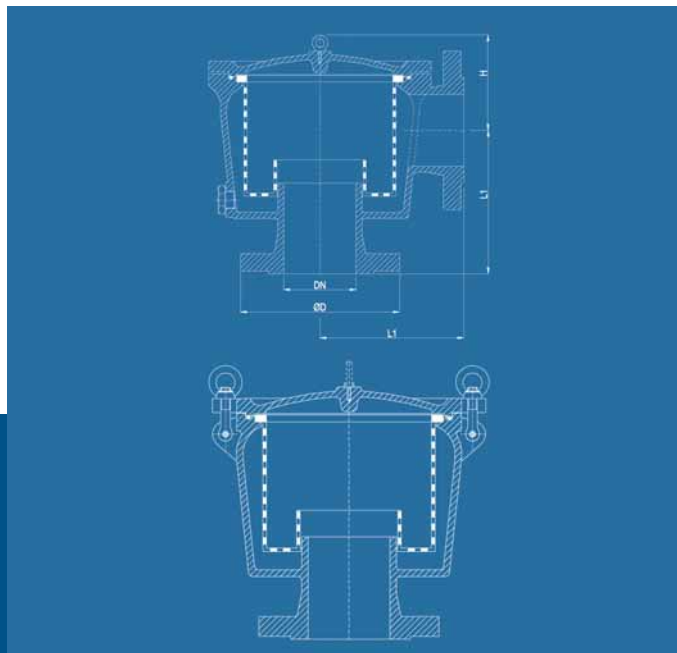
- Mud boxes with DIN face to face length and drain plug are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65, and 8 mm square for DN 80 to DN 600. As an option basket perforation can be 3 mm or other special perforation. The cover is mounted with fixed studs and hexagon nuts.
- Application: especially for suction and discharge lines for sea cooling water and bilge systems.



# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### ANGLE TYPE WITH QUICK RELEASE COVER



### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	100	95	5.0
32	PN 4	140	140	105	130	7.0
40	PN 4	150	150	125	110	12
50	PN 4	165	165	135	120	15
65	PN 4	185	185	150	120	20
80	PN 4	200	200	175	145	30
100	PN 4	220	220	195	150	40
125	PN 4	250	250	220	190	64
150	PN 4	285	285	270	200	90
175	PN 4	315	315	300	235	122
200	PN 4	340	340	300	235	130
250	PN 4	395	405	390	260	170
300	PN 4	445	460	450	350	250
350	PN 4	505	520	400	335	260
400	PN 4	565	580	420+520	420	390
450	PN 4	615	640	625	425	540
500	PN 2.5	670	715	675	455	600
600	PN 2.5	780	840	620+720	505	860



### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Design</b>	DIN 87151 E - With quick release cover
<b>Face to Face</b>	DIN 87151 - Angle Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Brass bow nuts, CuNiFe basket or special perforation, air plug or air vent valve on the cover
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Mud boxes with DIN face to face length and drain plug are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65, and 8 mm square for DN 80 to DN 600. The cover is mounted with wing bolts and eye nuts.
- Application: Especially for suction and discharge lines for sea cooling water and bilge systems.



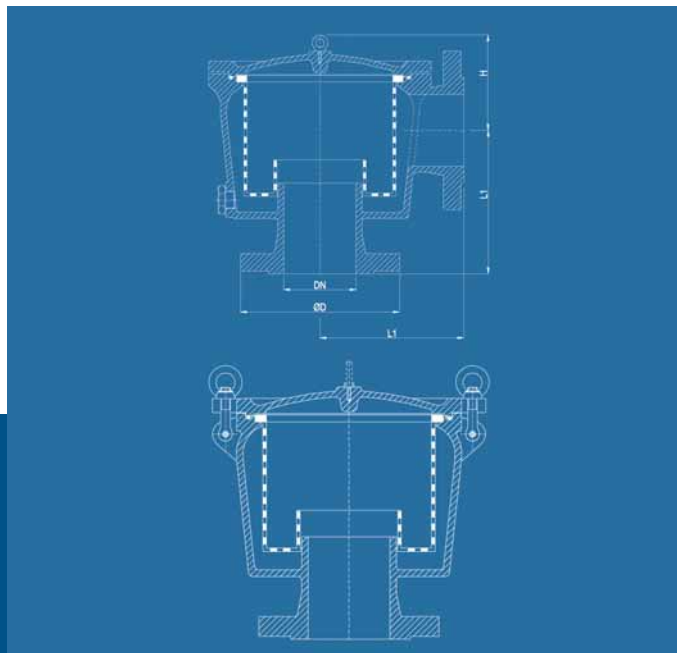
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# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### ANGLE TYPE WITH QUICK RELEASE COVER



### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	100	95	5.0
32	PN 4	140	140	105	130	7.0
40	PN 4	150	150	125	110	12
50	PN 4	165	165	135	120	15
65	PN 4	185	185	150	120	20
80	PN 4	200	200	175	145	30
100	PN 4	220	220	195	150	40
125	PN 4	250	250	220	190	64
150	PN 4	285	285	270	200	90
175	PN 4	315	315	300	235	122
200	PN 4	340	340	300	235	130
250	PN 4	395	405	390	260	170
300	PN 4	445	460	450	350	250
350	PN 4	505	520	400	335	260
400	PN 4	565	580	420+520	420	390
450	PN 4	615	640	625	425	540
500	PN 2.5	670	715	675	455	600
600	PN 2.5	780	840	620+720	505	860



### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Design</b>	DIN 87151 E - With quick release cover
<b>Face to Face</b>	DIN 87151 - Angle Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Brass bow nuts, CuNiFe basket or special perforation, air plug or air vent valve on the cover
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Mud boxes with DIN face to face length and drain plug are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65, and 8 mm square for DN 80 to DN 600. The cover is mounted with wing bolts and eye nuts.
- Application: Especially for suction and discharge lines for sea cooling water and bilge systems.

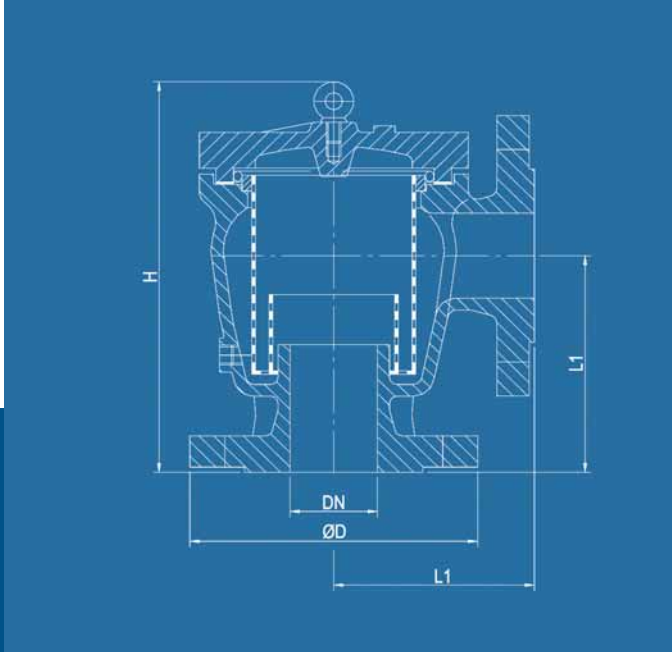


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# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### ANGLE TYPE WITH DRAIN PLUG



### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	100	195	6.0
32	PN 4	140	140	105	235	8.
40	PN 4	150	150	125	235	14
50	PN 4	165	165	135	255	18
65	PN 4	185	185	150	270	22
80	PN 4	200	200	175	320	30
100	PN 4	220	220	195	345	42
125	PN 4	250	250	220	410	70
150	PN 4	285	285	270	470	94
175	PN 4	315	315	300	535	130
200	PN 4	340	340	300	535	145
250	PN 4	395	405	390	650	170
300	PN 4	445	460	450	800	260
350	PN 4	505	520	400	735	270
400	PN 4	565	580	420/520	940	390
450	PN 4	615	640	625	1050	550
500	PN 2.5	670	715	675	1130	630
600	PN 2.5	780	840	620/720	1225	900



### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Gasket</b>	Stainless steel
<b>Design</b>	DIN 87151 E - with drain plug
<b>Face to Face</b>	DIN 87151 - Angle Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	CuNiFe basket or special perforation, air vent valve
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Mud boxes with DIN face to face length are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65, and 8 mm square for DN 80 to DN 600. The cover is mounted with fixed studs and hexagon nuts.
- Application: especially for suction and discharge lines for sea cooling water and bilge systems.

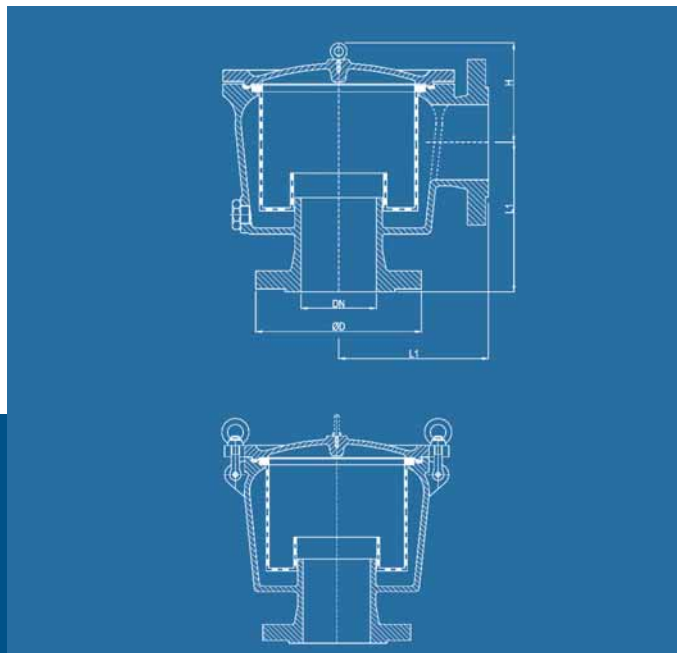


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# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### ANGLE TYPE WITH QUICK RELEASE COVER



### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	100	95	6.0
32	PN 4	140	140	105	130	8.0
40	PN 4	150	150	125	110	14
50	PN 4	165	165	135	120	18
65	PN 4	185	185	150	120	23
80	PN 4	200	200	175	145	34
100	PN 4	220	220	195	150	44
125	PN 4	250	250	220	190	72
150	PN 4	285	285	270	200	96
175	PN 4	315	315	300	235	132
200	PN 4	340	340	300	235	148
250	PN 4	395	405	390	260	175
300	PN 4	445	460	450	350	265
350	PN 4	505	520	400	335	275
400	PN 4	565	580	420/520	420	395
450	PN 4	615	640	625	425	555
500	PN 2.5	670	715	675	455	635
600	PN 2.5	780	840	620/720	505	910

### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Gasket</b>	Stainless steel
<b>Design</b>	DIN 87151 E - with quick release cover
<b>Face to Face</b>	DIN 87151 - angle Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Brass bow nuts, CuNiFe basket or special perforation, air plug or air vent valve on the cover
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Mud boxes with DIN face to face length and drain plug are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65, and 8 mm square for DN 80 to DN 600. The cover is mounted with wing bolts and eye nuts.
- Application: especially for suction and discharge lines for sea cooling water and bilge systems.

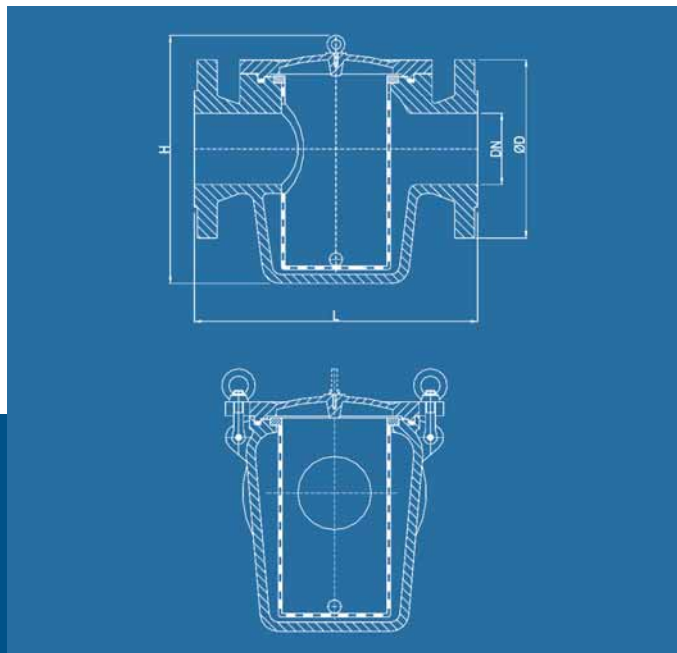


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# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### STRAIGHT TYPE



### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	160	180	6.0
32	PN 4	140	140	200	210	10
40	PN 4	150	150	200	210	12
50	PN 4	165	165	230	225	12
65	PN 4	185	185	290	265	23
80	PN 4	200	200	310	300	28
100	PN 4	220	220	350	340	39
125	PN 4	250	250	400	415	63
150	PN 4	285	285	480	465	84
175	PN 4	315	315	600	575	141
200	PN 4	340	340	600	575	155
250	PN 4	395	405	600	620	175
300	PN 4	445	460	600/700*	660	235
350	PN 4	505	520	610/690/800*	740	300
400	PN 4	565	580	740	900	430
450	PN 4	615	640	1000	1000	480
500	PN 2.5	670	715	1100	1100	555
600	PN 2.5	780	840	1100	1100	820
700	PN 2.5	895	910	1250	1150	1000
750	PN 2.5	965	975	1350	1200	1200

\*STANDARD LENGTH



### TECHNICAL FEATURES

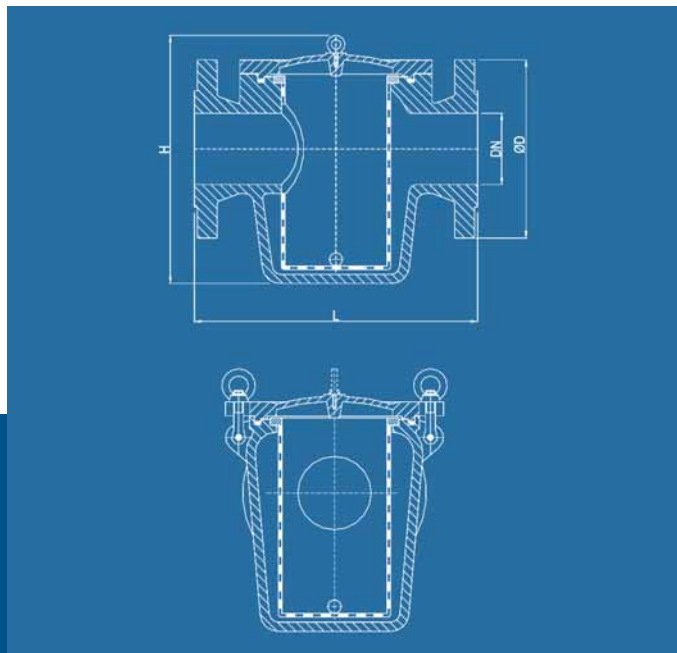
<b>Body</b>	Cast iron / Ductile iron
<b>Gasket</b>	Stainless steel
<b>Design</b>	DIN 87151 D - with fixed studs and nuts
<b>Face to Face</b>	DIN 87151 - Straight Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Brass bow nuts, CuNiFe basket or special perforation, air plug or air vent valve on the cover
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Mud boxes with DIN face to face length and drain plug are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65, and 8 mm square for DN 80 to DN 750. As an option basket perforation can be 3 mm or other special perforation. The cover is mounted with wing bolts and eye nuts.
- Application: Especially for suction and discharge lines for sea cooling water and bilge systems.

# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### STRAIGHT TYPE



### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	160	180	6.0
32	PN 4	140	140	200	210	10
40	PN 4	150	150	200	210	12
50	PN 4	165	165	230	225	12
65	PN 4	185	185	290	265	23
80	PN 4	200	200	310	300	28
100	PN 4	220	220	350	340	39
125	PN 4	250	250	400	415	63
150	PN 4	285	285	480	465	84
175	PN 4	315	315	600	575	141
200	PN 4	340	340	600	575	155
250	PN 4	395	405	600	620	175
300	PN 4	445	460	600/700*	660	235
350	PN 4	505	520	610/690/800*	740	300
400	PN 4	565	580	740	900	430
450	PN 4	615	640	1000	1000	480
500	PN 2.5	670	715	1100	1100	555
600	PN 2.5	780	840	1100	1100	820
700	PN 2.5	895	910	1250	1150	1000
750	PN 2.5	965	975	1350	1200	1200

\*STANDARD LENGTH



### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Gasket</b>	Stainless steel
<b>Design</b>	DIN 87151 D - with fixed studs and nuts
<b>Face to Face</b>	DIN 87151 - Straight Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Brass bow nuts, CuNiFe basket or special perforation, air plug or air vent valve on the cover
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

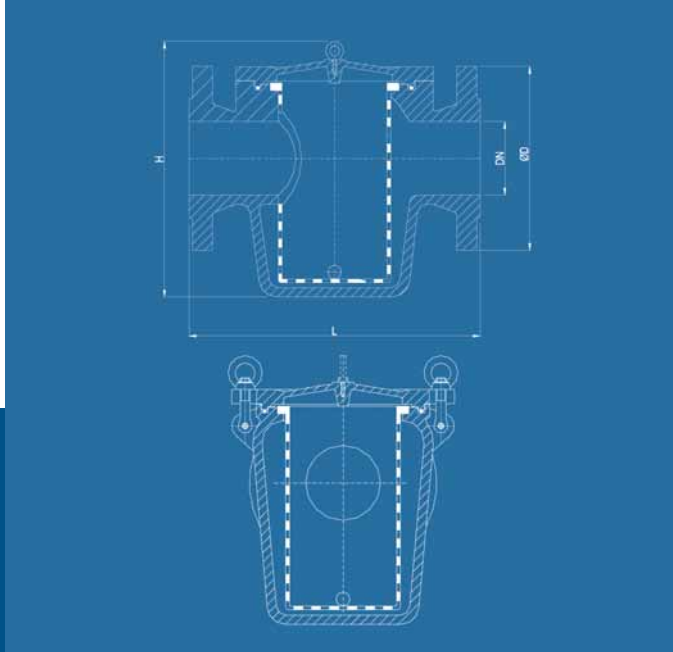
- Mud boxes with DIN face to face length and drain plug are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65, and 8 mm square for DN 80 to DN 750. As an option basket perforation can be 3 mm or other special perforation. The cover is mounted with wing bolts and eye nuts.
- Application: Especially for suction and discharge lines for sea cooling water and bilge systems.

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# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### STRAIGHT TYPE WITH QUICK RELEASE COVER



### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	160	180	5.0
32	PN 4	140	140	200	210	8.0
40	PN 4	150	150	200	210	10
50	PN 4	165	165	230	215	14
65	PN 4	185	185	290	265	20
80	PN 4	200	200	310	300	26
100	PN 4	220	220	350	340	39
125	PN 4	250	250	400	415	58
150	PN 4	285	285	480	465	75
175	PN 4	315	315	600	500	130
200	PN 4	340	340	600	580	145
250	PN 4	395	405	600	620	155
300	PN 4	445	460	700	660	195
350	PN 4	505	520	610/690/800*	750	210
400	PN 4	565	580	740	900	315
450	PN 4	615	640	1000	1000	510
500	PN 2.5	670	715	1100	1210	770
600	PN 2.5	780	840	1100	1100	840
700	PN 2.5	895	910	1250	1150	910
750	PN 2.5	965	975	1350	1200	

\*STANDARD LENGTH

### TECHNICAL FEATURES

<b>Body</b>	Cast iron / Ductile iron
<b>Design</b>	DIN 87151 D - With quick release cover
<b>Face to Face</b>	DIN 87151 - Straight Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Brass bow nuts, CuNiFe basket or special perforation, air plug or air vent valve on the cover
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

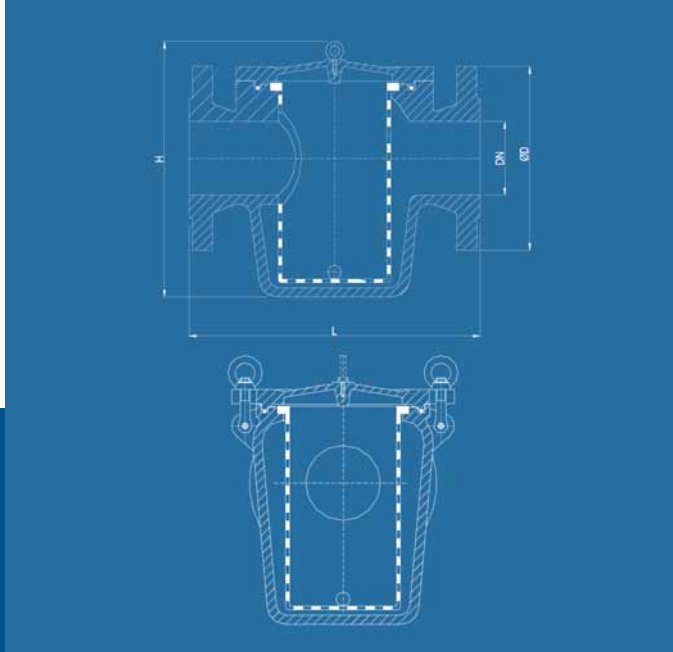
- Mud boxes with DIN face to face length and drain plug are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65 and 8 mm square for DN 80 to DN 750. The cover is mounted with wing bolts and eye nuts.
- Application: Especially for suction and discharge lines for sea cooling water and bilge systems.

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# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### STRAIGHT TYPE WITH QUICK RELEASE COVER



#### TECHNICAL FEATURES

<b>Body</b>	Cast steel / Stainless steel
<b>Design</b>	DIN 87151 D - With quick release cover
<b>Face to Face</b>	DIN 87151 - Straight Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Brass bow nuts, CuNiFe basket or special perforation, air plug or air vent valve on the cover
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Mud boxes with DIN face to face length and drain plug are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65 and 8 mm square for DN 80 to DN 750. The cover is mounted with wing bolts and eye nuts.
- Application: Especially for suction and discharge lines for sea cooling water and bilge systems.

#### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	160	180	5.0
32	PN 4	140	140	200	210	8.0
40	PN 4	150	150	200	210	10
50	PN 4	165	165	230	215	14
65	PN 4	185	185	290	265	20
80	PN 4	200	200	310	300	26
100	PN 4	220	220	350	340	39
125	PN 4	250	250	400	415	58
150	PN 4	285	285	480	465	75
175	PN 4	315	315	600	500	130
200	PN 4	340	340	600	580	145
250	PN 4	395	405	600	620	155
300	PN 4	445	460	700	660	195
350	PN 4	505	520	610/690/800*	750	210
400	PN 4	565	580	740	900	315
450	PN 4	615	640	1000	1000	510
500	PN 2.5	670	715	1100	1210	770
600	PN 2.5	780	840	1100	1100	840
700	PN 2.5	895	910	1250	1150	910
750	PN 2.5	965	975	1350	1200	

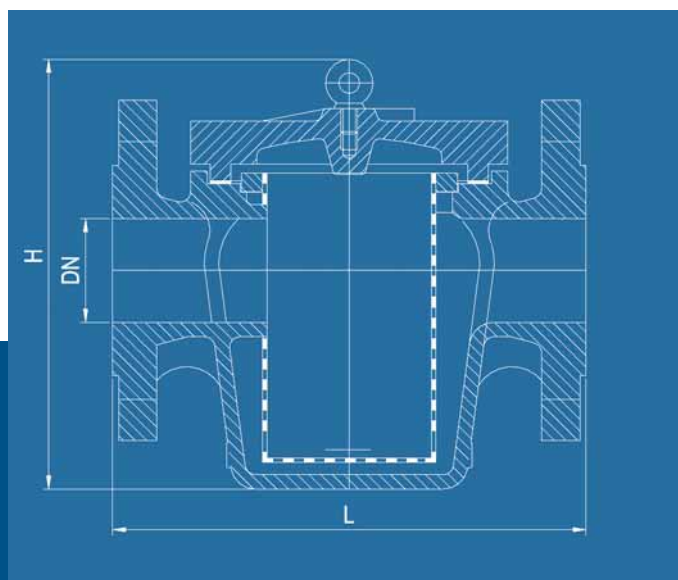
\*STANDARD LENGTH

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# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### STRAIGHT TYPE WITH DRAIN PLUG



#### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	160	180	5.0
32	PN 4	140	140	200	210	8.0
40	PN 4	150	150	200	210	12
50	PN 4	165	165	230	215	16
65	PN 4	185	185	290	265	23
80	PN 4	200	200	310	300	28
100	PN 4	220	220	350	340	42
125	PN 4	250	250	400	415	60
150	PN 4	285	285	480	465	75
175	PN 4	315	315	600	500	130
200	PN 4	340	340	600	580	150
250	PN 4	395	405	600	620	160
300	PN 4	445	460	700	660	220
350	PN 4	505	520	610/690/800*	750	237
400	PN 4	565	580	740	900	330
450	PN 4	615	640	1000	1000	520
500	PN 2.5	670	715	1100	1200	860
600	PN 2.5	780	840	1100	1100	940
700	PN 2.5	895	950	1250	1150	1000

\*STANDARD LENGTH



#### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Gasket</b>	Stainless steel
<b>Design</b>	DIN 87151 D - with drain plug
<b>Face to Face</b>	DIN 87151 - Straight Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	CuNiFe basket or special perforation, air vent valve
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

- Mud boxes with DIN face to face length are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65, and 8 mm square for DN 80 to DN 700. The cover is mounted with fixed studs and hexagon nuts.
- Application: Especially for suction and discharge lines for sea cooling water and bilge systems.

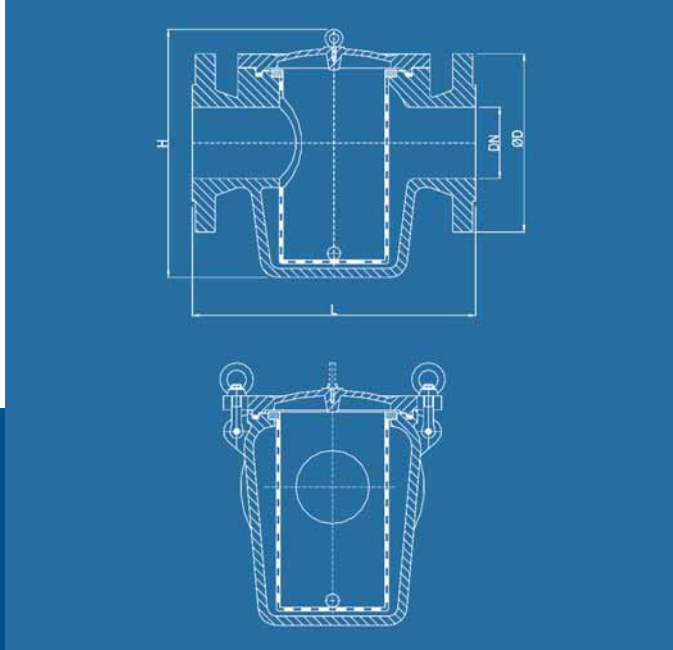
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# TECHNICAL DATA

## MUD BOX (BASKET STRAINER)

### STRAIGHT TYPE WITH QUICK RELEASE COVER



#### DIMENSIONS

DN (mm)	Pressure rating	ØD PN10	ØD PN16	L (mm)	H (mm)	Weight (kg)
25	PN 4	115	115	160	180	5.0
32	PN 4	140	140	200	210	8.0
40	PN 4	150	150	200	210	12
50	PN 4	165	165	230	225	16
65	PN 4	185	185	290	265	24
80	PN 4	200	200	310	300	32
100	PN 4	220	220	350	340	42
125	PN 4	250	250	400	415	60
150	PN 4	285	285	480	465	82
175	PN 4	315	315	600	575	135
200	PN 4	340	340	600	575	155
250	PN 4	395	405	600	620	165
300	PN 4	445	460	700	660	210
350	PN 4	505	520	610/690/800*	740	237
400	PN 4	565	580	740	900	330
450	PN 4	615	640	1000	1000	510
500	PN 2.5	670	715	1100	1100	855
600	PN 2.5	780	840	1100	1100	910
700	PN 2.5	895	950	1250	1150	-

\*STANDARD LENGTH



#### TECHNICAL FEATURES

<b>Body</b>	Bronze
<b>Gasket</b>	Stainless steel
<b>Design</b>	DIN 87151 D - with quick release cover
<b>Face to Face</b>	DIN 87151 - Straight Type
<b>Flange Dimension</b>	DIN Flanges acc. to EN 1092-3/B (DIN 2501)
<b>Pressure Rating</b>	PN 2.5 / PN 4
<b>Temperature Range</b>	-10 °C...+120 °C
<b>Options</b>	Brass bow nuts, CuNiFe basket or special perforation, air plug or air vent valve on the cover
<b>Flange Options</b>	Special flange drilling acc. to ANSI or JIS

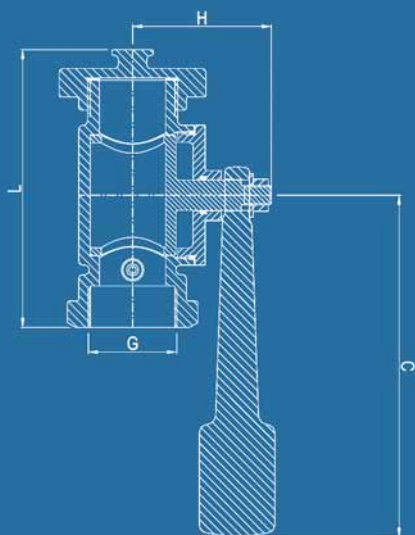
- Mud boxes with DIN face to face length and drain plug are installed in suction pipes board vessels to protect pumps against large solids.
- The standart perforation of the basket is 5 mm square for DN 25 to DN 65, and 8 mm square for DN 80 to DN 700. The cover is mounted with wing bolts and eye nuts.
- Application: Especially for suction and discharge lines for sea cooling water and bilge systems.

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# TECHNICAL DATA

## SOUNDING COCK

**SELF CLOSING TYPE**  
**360 °C TURNING LEVER**



### TECHNICAL FEATURES

<b>Body/Plug</b>	Bronze
<b>O-ring</b>	N Bronze
<b>Design</b>	DIN 86120 Form A - with test valve
<b>Face to Face</b>	DIN 86120
<b>Threaded End</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 2.5
<b>Temperature Range</b>	-10 °C...+90 °C
<b>Options</b>	Foot pedal, lever in gunmetal, cap

- Self-closing sounding cocks with BSP-female threaded end and 360°C. turning lever. Standard equipped with a brass self-closing test valve, cap and chain.
- Application: To be used for tank sounding.

### DIMENSIONS

DN (mm)	G (")	L (mm)	C (mm)	H (mm)	Weight (kg)
50	1 ¼	150	182	81	4.0
65	1 ½	150	182	81	4.0
80	2	150	182	81	4.5
100	2 ½	150	182	81	5.0

### Figure [CSC]

Cap for Sounding Cocks  
Standard DIN 86121 A  
Dimensions DN 32 - DN 65  
Materials Rg5, Rg10, CuSn10

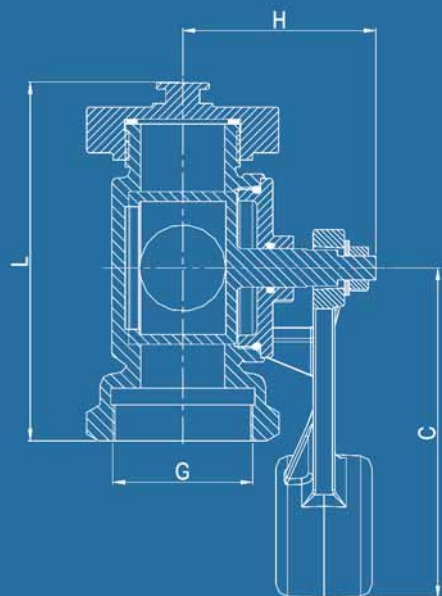


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# TECHNICAL DATA

## SOUNDING COCK

SELF CLOSING TYPE  
WITH END STOP



### TECHNICAL FEATURES

<b>Body/Plug</b>	Bronze
<b>O-ring</b>	N Bronze
<b>Design</b>	DIN 86120 Form A - with test valve
<b>Face to Face</b>	DIN 86120
<b>Threaded End</b>	BSP-female acc. to DIN EN 10226-1 (DIN 2999)
<b>Pressure Rating</b>	PN 2.5
<b>Temperature Range</b>	-10 °C...+90 °C
<b>Options</b>	Foot pedal, lever in gunmetal, cap

- Self-closing sounding cocks with BSP-female threaded end and End Stop at 90°C. Standard equipped with a brass self-closing test valve, cap and chain.
- Application: To be used for tank sounding.

### DIMENSIONS

DN (mm)	G (")	L (mm)	C (mm)	H (mm)	Weight (kg)
32	1 ¼	150	182	81	4.0
40	1 ½	150	182	81	4.0
50	2	150	182	81	4.5
65	2 ½	150	182	81	5.0

### Figure [CSC]

Cap for Sounding Cocks  
Standard DIN 86121 A  
Dimensions DN 32 - DN 65  
Materials Rg5, Rg10, CuSn10

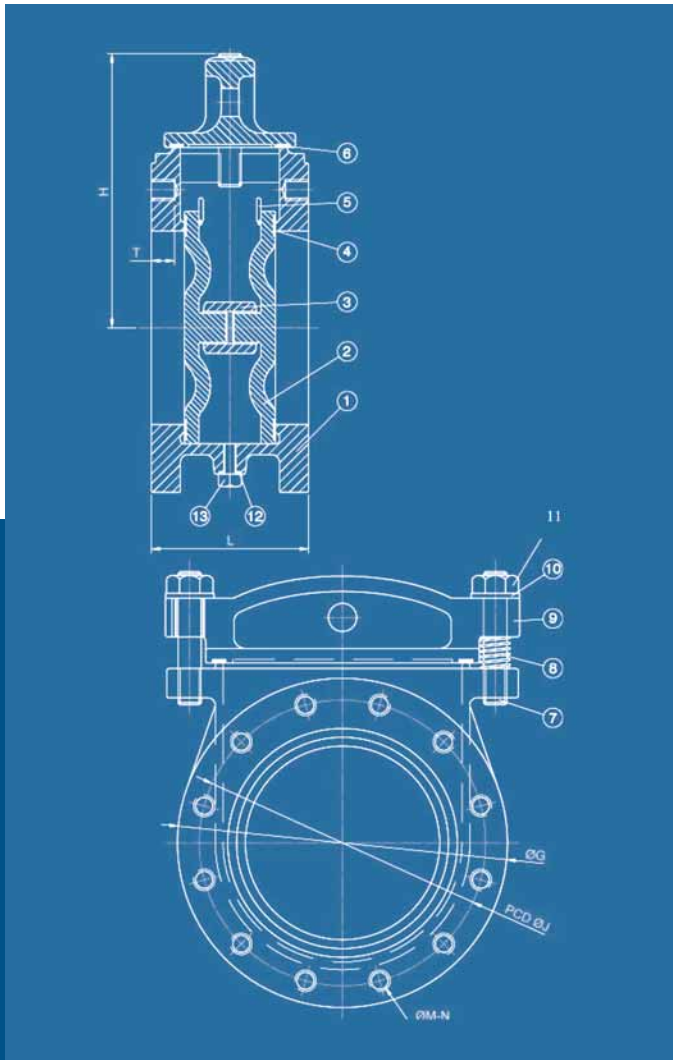


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# TECHNICAL DATA

## S1 LIGHT

### TYPE 5.5 - TYPE C.S.



#### DIMENSIONS PN 10

Size (")	ØG PN10	H (mm)	ØJ (mm)	L (mm)	ØM (mm)	N (mm)	T (mm)
2	165	173	125	154	M16	4	18
2 1/2	185	185	145	154	M16	4	18
3	200	194	160	154	M16	8	18
4	220	235	180	162	M16	8	20
5	250	245	210	162	M16	8	22
6	285	265	240	162	M20	8	22
8	340	300	295	162	M20	8	24
10	395	330	350	200	M20	12	26
12	445	360	400	200	M20	12	28



TECHNICAL FEATURES	TYPE 5.5	TYPE C.S.
<b>Body</b>	A351 Gr.CF8M (MoMin 2.75%)	A 216 Gr.WCB
<b>Size</b>	DN50~DN300 (2"~12")	DN50~DN300 (2"~12")
<b>Pressure Rating</b>	PN 10	PN 10
<b>2 Disc</b>	A351 Gr.CF8M (MoMin 2.75%)	AISI 304
<b>3 Tightening Nut</b>	A351 Gr.CF8M (MoMin 2.75%)	AISI 304
<b>4 Disc Seal</b>	PTFE	PTFE
<b>5 Stop Pin</b>	AISI 316	AISI 304
<b>6 Top Cover Seal</b>	Kemflon + PTFE	Kemflon + PTFE
<b>7 Top Cover Bolts</b>	AISI 316	AISI 304
<b>8 Spring</b>	Stainless Steel	Stainless Steel
<b>9 Topcover</b>	A351 Gr.CF8M(MoMin 2.75%)	A 216 Gr.WCB
<b>10 Washer</b>	AISI 316	AISI 304
<b>11 Top Cover Nut</b>	AISI 316	AISI 304
<b>12 Drain Plug Seal</b>	PTFE	PTFE
<b>13 Drain Plug</b>	AISI 316	AISI 304

S.S. Stainless Steel (MoMin 2.75%)

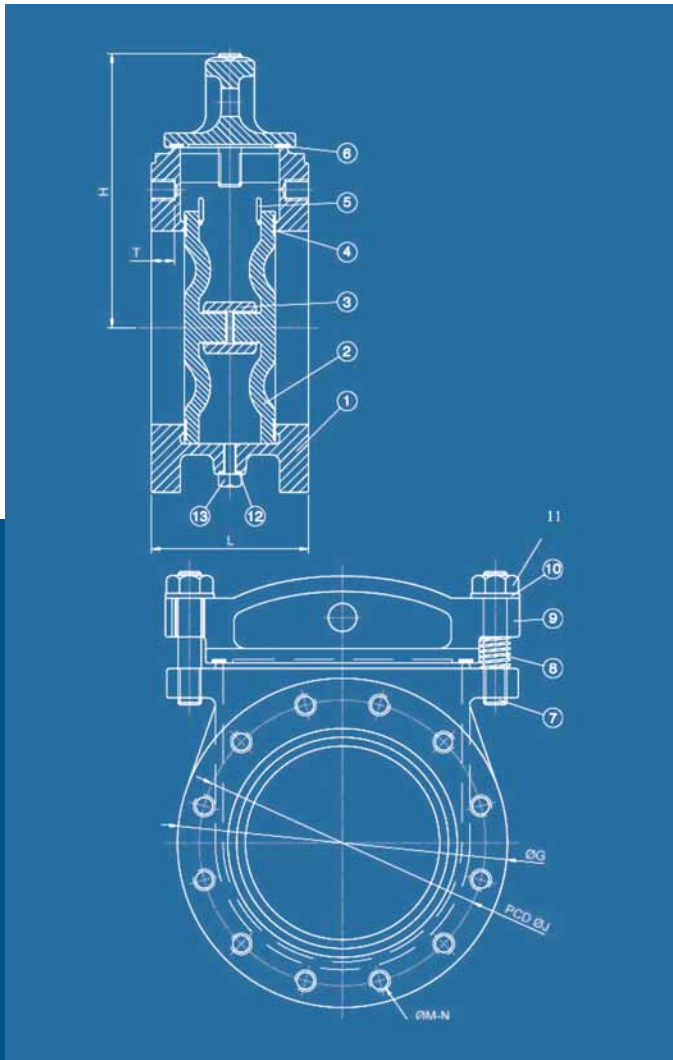
C.S. Cast Steel (GS-C25)

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# TECHNICAL DATA

## S1 LIGHT

### TYPE 5.5 - TYPE C.S.



#### DIMENSIONS PN 16

Size (")	ØG PN16	H (mm)	ØJ (mm)	L (mm)	ØM (mm)	N (mm)	T (mm)
2	165	173	125	154	M16	4	18
2 1/2	185	185	145	154	M16	4	18
3	200	194	160	154	M16	8	18
4	220	235	180	162	M16	8	20
5	250	245	210	162	M16	8	22
6	285	265	240	162	M20	8	22
8	340	300	295	162	M20	12	24
10	405	330	355	200	M24	12	26
12	460	360	410	200	M24	12	28



TECHNICAL FEATURES	TYPE 5.5	TYPE C.S.
<b>Body</b>	A351 Gr.CF8M (MoMin 2.75%)	A 216 Gr.WCB
<b>Size</b>	DN50~DN300 (2"~12")	DN50~DN300 (2"~12")
<b>Pressure Rating</b>	PN 16	PN 16
<b>2 Disc</b>	A351 Gr.CF8M (MoMin 2.75%)	AISI 304
<b>3 Tightening Nut</b>	A351 Gr.CF8M (MoMin 2.75%)	AISI 304
<b>4 Disc Seal</b>	PTFE	PTFE
<b>5 Stop Pin</b>	AISI 316	AISI 304
<b>6 Top Cover Seal</b>	Kemflon + PTFE	Kemflon + PTFE
<b>7 Top Cover Bolts</b>	AISI 316	AISI 304
<b>8 Spring</b>	Stainless Steel	Stainless Steel
<b>9 Topcover</b>	A351 Gr.CF8M(MoMin 2.75%)	A 216 Gr.WCB
<b>10 Washer</b>	AISI 316	AISI 304
<b>11 Top Cover Nut</b>	AISI 316	AISI 304
<b>12 Drain Plug Seal</b>	PTFE	PTFE
<b>13 Drain Plug</b>	AISI 316	AISI 304

S.S. Stainless Steel (MoMin 2.75%)

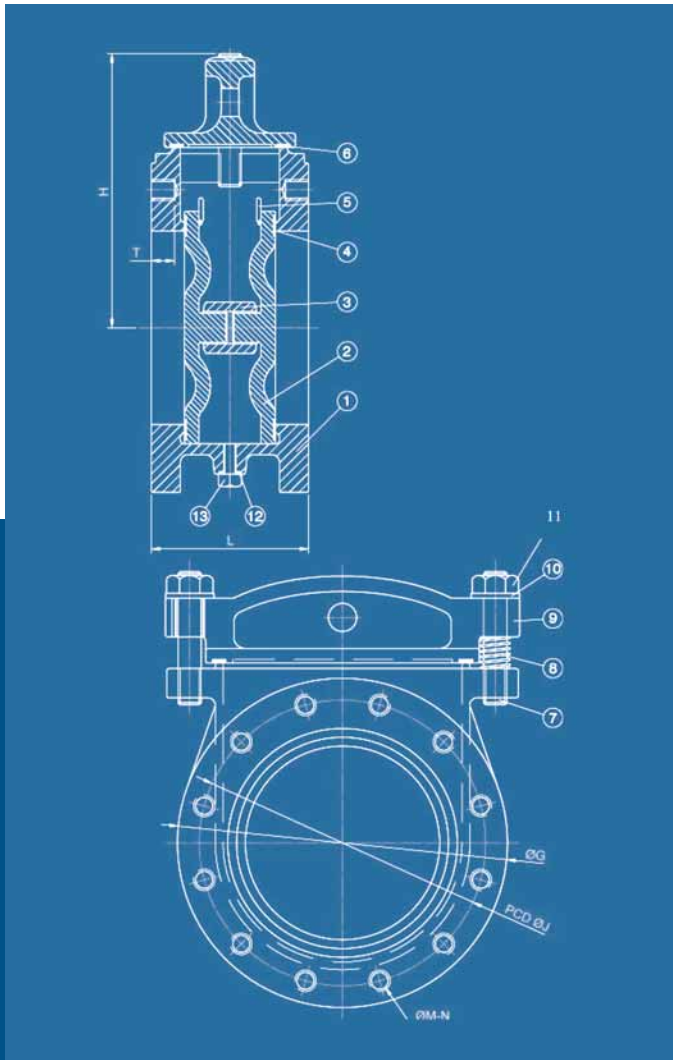
C.S. Cast Steel (GS-C25)

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# TECHNICAL DATA

## S1 LIGHT

### TYPE 5.5 - TYPE C.S.



#### DIMENSIONS PN 25

Size (")	ØG PN16	H (mm)	ØJ (mm)	L (mm)	ØM (mm)	N (mm)	T (mm)
2	165	173	125	154	M16	4	18
2 1/2	185	185	145	154	M16	8	18
3	200	194	160	154	M16	8	18
4	235	235	190	162	M20	8	20
5	270	245	220	162	M24	8	22
6	300	265	250	162	M24	8	22
8	360	300	310	162	M24	12	24
10	425	330	370	200	M27	12	26
12	485	360	430	200	M27	16	28



TECHNICAL FEATURES	TYPE 5.5	TYPE C.S.
<b>Body</b>	A351 Gr.CF8M (MoMin 2.75%)	A 216 Gr.WCB
<b>Size</b>	DN50~DN300 (2"~12")	DN50~DN300 (2"~12")
<b>Pressure Rating</b>	PN 25	PN 25
<b>2 Disc</b>	A351 Gr.CF8M (MoMin 2.75%)	AISI 304
<b>3 Tightening Nut</b>	A351 Gr.CF8M (MoMin 2.75%)	AISI 304
<b>4 Disc Seal</b>	PTFE	PTFE
<b>5 Stop Pin</b>	AISI 316	AISI 304
<b>6 Top Cover Seal</b>	Kemflon + PTFE	Kemflon + PTFE
<b>7 Top Cover Bolts</b>	AISI 316	AISI 304
<b>8 Spring</b>	Stainless Steel	Stainless Steel
<b>9 Topcover</b>	A351 Gr.CF8M(MoMin 2.75%)	A 216 Gr.WCB
<b>10 Washer</b>	AISI 316	AISI 304
<b>11 Top Cover Nut</b>	AISI 316	AISI 304
<b>12 Drain Plug Seal</b>	PTFE	PTFE
<b>13 Drain Plug</b>	AISI 316	AISI 304

S.S. Stainless Steel (MoMin 2.75%)

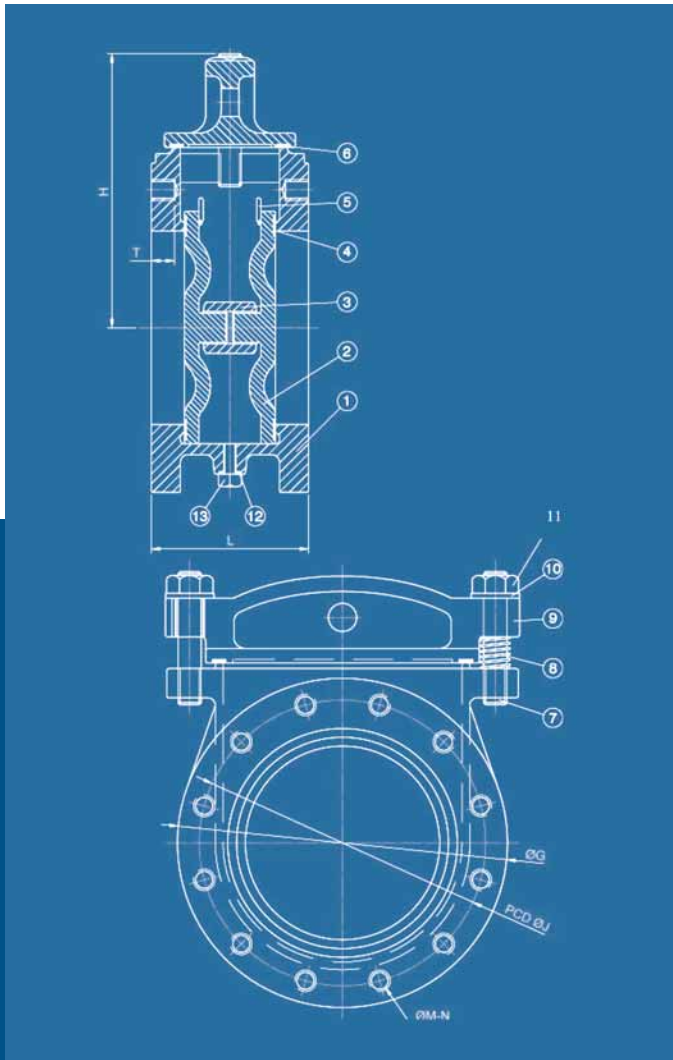
C.S. Cast Steel (GS-C25)

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# TECHNICAL DATA

## S1 LIGHT

### TYPE 5.5 - TYPE C.S.



#### DIMENSIONS PN 40

Size (")	ØG PN16	H (mm)	ØJ (mm)	L (mm)	ØM (mm)	N (mm)	T (mm)
2	165	173	125	154	M16	4	18
2 1/2	185	185	145	154	M16	8	18
3	200	194	160	154	M16	8	18
4	235	235	190	162	M20	8	20
5	270	245	220	162	M24	8	22
6	300	265	250	162	M24	8	22
8	375	300	320	162	M27	12	24
10	450	330	385	200	M30	12	26
12	515	360	450	200	M30	16	28



TECHNICAL FEATURES	TYPE 5.5	TYPE C.S.
<b>Body</b>	A351 Gr.CF8M (MoMin 2.75%)	A 216 Gr.WCB
<b>Size</b>	DN50~DN300 (2"~12")	DN50~DN300 (2"~12")
<b>Pressure Rating</b>	PN 40	PN 40
<b>2 Disc</b>	A351 Gr.CF8M (MoMin 2.75%)	AISI 304
<b>3 Tightening Nut</b>	A351 Gr.CF8M (MoMin 2.75%)	AISI 304
<b>4 Disc Seal</b>	PTFE	PTFE
<b>5 Stop Pin</b>	AISI 316	AISI 304
<b>6 Top Cover Seal</b>	Kemflon + PTFE	Kemflon + PTFE
<b>7 Top Cover Bolts</b>	AISI 316	AISI 304
<b>8 Spring</b>	Stainless Steel	Stainless Steel
<b>9 Topcover</b>	A351 Gr.CF8M(MoMin 2.75%)	A 216 Gr.WCB
<b>10 Washer</b>	AISI 316	AISI 304
<b>11 Top Cover Nut</b>	AISI 316	AISI 304
<b>12 Drain Plug Seal</b>	PTFE	PTFE
<b>13 Drain Plug</b>	AISI 316	AISI 304

S.S. Stainless Steel (MoMin 2.75%)

C.S. Cast Steel (GS-C25)

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## 9 INSTRUMENTATION

### TECHNICAL DATA



**PRESSURE  
GAUGES**

**THERMOMETERS**



# TECHNICAL DATA

## PRESSURE GAUGES

### HEAVY DUTY PRESSURE GAUGES WITH BOURBON TUBE AND GLYCERINE FILLING



#### DESCRIPTION

The Heavy Duty pressure gauges with glycerine filling are used at measuring points with high dynamic alternating loads and strong vibrations and pulses.

The glycerine filling ensures smooth pointer movement and thus good readability even in extreme load and strong vibration conditions. The lubricating effect of the glycerine also provides protection against increased wear.

The modern modular construction system with an o-ring sealing system, tried and tested for many years, ensures a high level of functional safety and a long service life.

Case components are composed of stainless steel.

#### TECHNICAL FEATURES

- Nominal sizes ND 100
- Connection position bottom, radial or back, eccentric
- High reliability and long service life due to modular construction system.
- Overload capacity 1.3x
- Protection to IP 65
- Accuracy class 1.0
- Casing, stainless steel
- Copper alloy stainless steel measuring system
- Vibration-free display

#### Measuring ranges:

0...0.6 bar to 0...1000 bar - 1...15 bar

#### Applications:

Iron and steel industry, power stations, general mechanical engineering, pumps, hydraulics, compressors, water treatment plants.

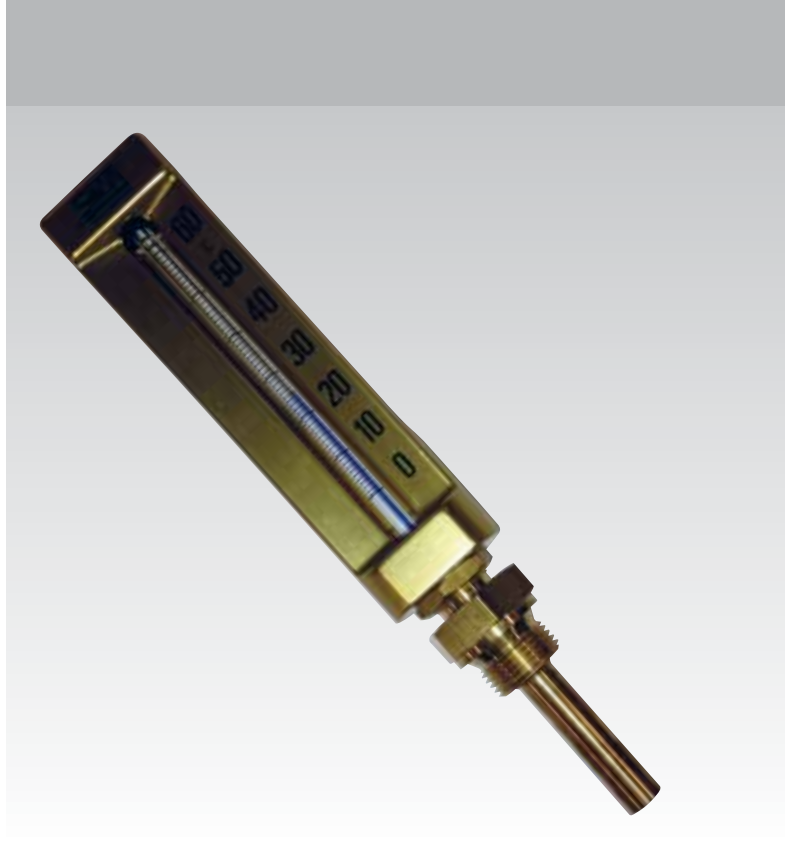
#### TECHNICAL DATA

Models	P1778	P1779	Options
Nominal size	100		
Accuracy class	1.0 to EN 837-1		
Ranges	0...0.6 bar to 0...1000 bar negative or positive or negative/positive gauge pressure		
Applications	Constant load: up to full scale value Dynamic load: up to 0.9 x full scale value Short-time overload capacity 1.3x		1.5 to 2x
Case	Stainless steel 1.4301 with pressure relief opening		Stainless steel, polished
Bezel	Stainless steel 1.4301		Steel, black
Mounting	Without		Front flange, SS 1.4301 polished Rear flange, SS 1.4301 blank Triangular bezel, SS polished with U-clamp steel zinc plated
Window	Glass lens		Safety glass, Plexiglass
Dial	Aluminium, white, scale and imprint black		Dual scale
Pointer	Aluminium, black		Drag pointer
Movement	CuZn-alloy		
Measuring element	Copper alloy up to <100 bar, above ≥100 bar stainless steel 316 L		
Pressure connection	Copper alloy up to 1000 bar		
- position	Radial bottom	Rear eccentric	
- thread	G 1/2 B		Other threads on request
Temperatures			
- medium	Tmin. -20°C, Tmax 80°C		
- ambient	Tmin. -25°C, Tmax 60°C		
Temperature drift	0.4%/10K if deviation from normal temperature 20°C		
Liquid filling	Glycerine		Others on request
Protection	IP 65 to EN 60 529/IEC 529		
Orifice	Without		Ø 0.3 - Ø 0.4 - Ø 0.8
Weight	0.9 kg	0.9 kg	
Case diameter	63 mm - 100 mm - 160 mm		

# TECHNICAL DATA

## THERMOMETER

### STRAIGHT



#### TECHNICAL FEATURES

- Connection: 1/2" BSP
- Execution: Straight
- Scale: Celsius

#### Height 110 mm (small), Art T20110

- Reach -30 ... 50°C, Plug length 40, 63 en 100 mm
- Reach 0 ... 120°C, Plug length 40, 63 en 100 mm
- Reach 0 ... 200°C, Plug length 40 mm

#### Height 150 mm (middle), Art T20150

- Reach -30 ... 50°C, Plug length 40, 63 en 100 mm
- Reach 0 ... 120°C, Plug length 40, 63 en 100 mm
- Reach 0 ... 200°C, Plug length 63 en 100 mm

#### Height 200 mm (large), Art T20200

- Reach -30 ... 50°C, Plug length 63, 100 en 160 mm
- Reach 0 ... 120°C, Plug length 63, 100 en 160 mm
- Reach 0 ... 160°C, Plug length 100 mm
- Reach 0 ... 200°C, Plug length 63 en 100 mm
- Reach 0 ... 400°C, Plug length 63 en 100 mm
- Reach 0 ... 500°C, Plug length 100 mm
- Reach 0 ... 600°C, Plug length 160 mm



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# TECHNICAL DATA

## THERMOMETER

### ANGLE



#### TECHNICAL FEATURES

- Connection: 1/2" BSP
- Execution: Angle
- Scale: Celcius

#### Hight 110 mm (small), Art T19110

- Reach -30 ... 50°C, Plug lenght 40, 63 en 100 mm
- Reach 0 ... 120°C, Plug lenght 40, 63 en 100 mm
- Reach 0 ... 200°C, Plug lenght 40 mm

#### Hight 150 mm (middle), Art T19150

- Reach -30 ... 50°C, Plug lenght 40, 63 en 100 mm
- Reach 0 ... 120°C, Plug lenght 40, 63 en 100 mm
- Reach 0 ... 200°C, Plug lenght 63 en 100 mm

#### Hight 200 mm (large), Art T19200

- Reach -30 ... 50°C, Plug lenght 63, 100 en 160 mm
- Reach 0 ... 120°C, Plug lenght 63, 100 en 160 mm
- Reach 0 ... 160°C, Plug lenght 100 mm
- Reach 0 ... 200°C, Plug lenght 63 en 100 mm
- Reach 0 ... 400°C, Plug lenght 63 en 100 mm
- Reach 0 ... 500°C, Plug lenght 100 mm
- Reach 0 ... 600°C, Plug lenght 100 mm



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## T TECHNICAL INFORMATION

### FLANGE DIMENSIONS - DIN

PN 4

PN 20

PN 10

PN 40

PN 16

### FLANGE DIMENSIONS - JIS

JIS 5K

JIS 16K

JIS 10K

JIS 20K

### FLANGE DIMENSIONS - ANSI

CLASS 150

CLASS 300

### SEAT MATERIALS

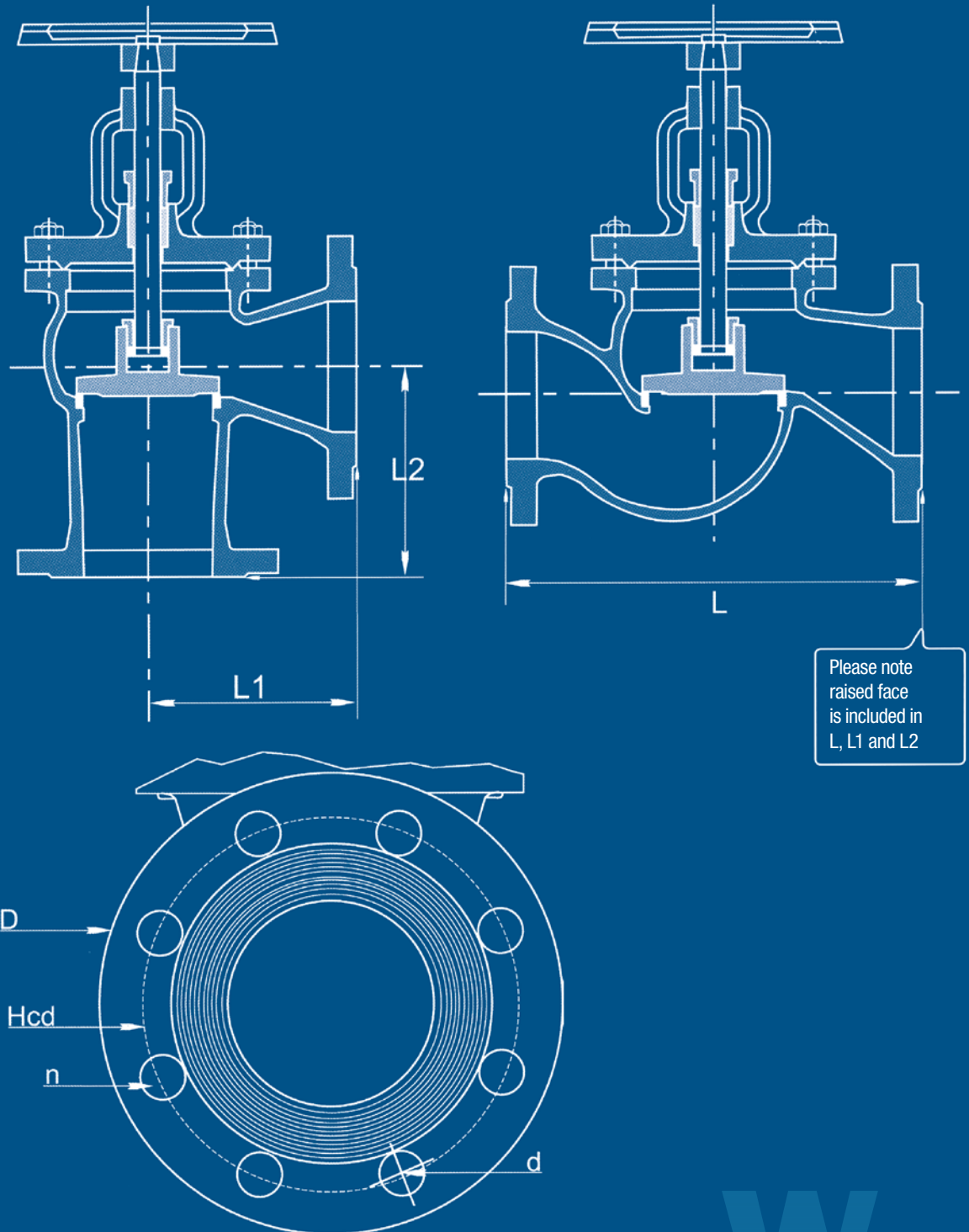
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# TECHNICAL INFORMATION

## HOW TO MEASURE A VALVE

In order to supply correct valve we want information about dimensions acc to below.  
If possible also medium, pressure and temperature



### TECHNICAL FEATURES

- $L$  = Face to face length
- $L_1$  = Face to center length
- $L_2$  = Face to center length
- $D$  = Flange diameter
- $n$  = Number of bolt holes
- $P_{cd}$  = Pit circle diameter
- $d$  = Diameter of bolt holes

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# TECHNICAL INFORMATION

## FLANGE DIMENSIONS - DIN

### DIMENSIONS PN 6

DN (mm)	D (mm)	n (mm)	Pcd (mm)	d (mm)
10	75	4	50	11
15	80	4	55	11
20	90	4	65	11
25	100	4	75	11
32	120	4	90	14
40	130	4	100	14
50	140	4	110	14
65	160	4	130	14
80	190	4	150	18
100	210	4	170	18
125	240	8	200	18
150	264	8	225	18
200	320	8	280	18
250	375	12	335	18
300	440	12	395	22
350	490	12	445	22
400	540	16	495	22
450	595	16	550	22
500	645	20	600	22
600	755	20	705	26

### DIMENSIONS PN 10

DN (mm)	D (mm)	n (mm)	Pcd (mm)	d (mm)
10	90	4	60	14
15	95	4	65	14
20	105	4	75	14
25	115	4	85	14
32	140	4	100	18
40	150	4	110	18
50	165	4	125	18
65	185	4	145	18
80	200	8	160	18
100	220	8	180	18
125	250	8	210	18
150	285	8	240	22
200	340	8	295	22
250	395	12	350	22
300	445	12	400	22
350	505	16	460	22
400	565	16	515	26
450	615	20	565	26
500	670	20	620	26
600	780	20	725	30

### TECHNICAL FEATURES

- D** = Flange diameter
- n** = Number of bolt holes
- Pcd** = Pit circle diameter
- d** = Diameter of bolt holes



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# TECHNICAL INFORMATION

## FLANGE DIMENSIONS - DIN

### DIMENSIONS PN 16

DN (mm)	D (mm)	n (mm)	Pcd (mm)	d (mm)
10	90	4	60	14
15	95	4	65	14
20	105	4	75	14
25	115	4	85	14
32	140	4	100	18
40	150	4	110	18
50	165	4	125	18
65	185	4	145	18
80	200	8	160	18
100	220	8	180	18
125	250	8	210	18
150	285	8	240	22
200	340	12	295	22
250	405	12	355	26
300	460	12	410	26
350	520	16	470	26
400	580	16	525	30
450	640	20	585	30
500	715	20	650	33
600	840	20	770	36

### DIMENSIONS PN 25

DN (mm)	D (mm)	n (mm)	Pcd (mm)	d (mm)
10	90	4	60	14
15	95	4	65	14
20	105	4	75	14
25	115	4	85	14
32	140	4	100	18
40	150	4	110	18
50	165	4	125	18
65	185	8	145	18
80	200	8	160	18
100	235	8	190	22
125	270	8	220	26
150	300	8	250	26
200	360	12	310	26
250	425	12	370	30
300	485	16	430	30
350	555	16	490	33
400	620	16	550	36
450	670	20	600	36
500	730	20	660	36
600	845	20	770	39

### TECHNICAL FEATURES

- D** = Flange diameter
- n** = Number of bolt holes
- Pcd** = Pit circle diameter
- d** = Diameter of bolt holes



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# TECHNICAL INFORMATION

## FLANGE DIMENSIONS - DIN

### DIMENSIONS PN 40

DN (mm)	D (mm)	n (mm)	Pcd (mm)	d (mm)
10	90	4	60	14
15	95	4	65	14
20	105	4	75	14
25	115	4	85	14
32	140	4	100	18
40	150	4	110	18
50	165	4	125	18
65	185	8	145	18
80	200	8	160	18
100	235	8	190	22
125	270	8	220	26
150	300	8	250	26
200	375	12	320	30
250	450	12	385	33
300	515	16	450	33
350	580	16	510	36
400	660	16	585	39
450	685	20	610	39
500	755	20	670	42
600	890	20	795	48

### TECHNICAL FEATURES

- D** = Flange diameter  
**n** = Number of bolt holes  
**Pcd** = Pit circle diameter  
**d** = Diameter of bolt holes



# TECHNICAL INFORMATION

## FLANGE DIMENSIONS - JIS

### DIMENSIONS JIS 5K

DN	INCH	D (mm)	Pcd (mm)	d (mm)	Bolt (mm)	N (mm)
15	1/2	60	60	12	M10	4
20	3/4	85	65	12	M10	4
25	1	95	75	12	M10	4
32	1 1/4	115	90	15	M12	4
40	1 1/2	120	95	15	M12	4
50	2	130	105	15	M12	4
65	1 1/2	155	130	15	M12	4
80	3	180	145	19	M16	4
100	4	200	165	19	M16	8
125	5	235	200	19	M16	8
150	6	265	230	19	M16	8
200	8	320	280	23	M20	8
250	10	385	345	23	M20	12
300	12	430	390	23	M20	12
350	14	480	435	25	M22	12
400	16	540	495	25	M22	16
450	18	605	555	25	M22	16
500	20	655	605	25	M22	20
550	22	720	665	27	M24	20
600	24	770	715	27	M24	20
650	26	825	770	27	M24	24
700	28	875	820	27	M24	24
750	30	945	880	33	M30	24
800	32	995	930	33	M30	24
900	36	1095	1030	33	M30	24
1000	40	1195	1130	33	M30	28
1100	44	1305	1240	33	M30	28
1200	48	1420	1350	33	M30	32
1400	56	-	-	-	-	-

### DIMENSIONS JIS 10K

DN	INCH	D (mm)	Pcd (mm)	d (mm)	Bolt (mm)	N (mm)
15	1/2	95	70	15	M12	4
20	3/4	100	75	15	M12	4
25	1	125	90	19	M16	4
32	1 1/4	135	100	19	M16	4
40	1 1/2	140	105	19	M12	4
50	2	155	120	19	M12	4
65	1 1/2	175	140	19	M16	4
80	3	185	150	19	M16	8
100	4	210	175	19	M12	8
125	5	250	210	23	M12	8
150	6	280	240	23	M16	8
200	8	330	290	23	M16	12
250	10	400	355	25	M12	12
300	12	445	400	25	M12	16
350	14	490	445	25	M16	16
400	16	560	510	27	M16	16
450	18	620	565	27	M12	20
500	20	675	620	27	M12	20
550	22	745	680	33	M16	20
600	24	795	730	33	M16	24
650	26	845	780	33	M12	24
700	28	905	840	33	M12	24
750	30	970	900	33	M16	24
800	32	1020	950	33	M16	28
900	36	1120	1050	39	M12	28
1000	40	1235	1160	33	M12	28
1100	44	1345	1270	39	M16	28
1200	48	1465	1380	39	M16	32
1400	56	-	-	-	-	-

### TECHNICAL FEATURES

- D** = Flange diameter
- n** = Number of bolt holes
- Pcd** = Pit circle diameter
- d** = Diameter of bolt holes



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# TECHNICAL INFORMATION

## FLANGE DIMENSIONS - JIS

### DIMENSIONS JIS 16K

DN	INCH	D (mm)	Pcd (mm)	d (mm)	Bolt (mm)	N (mm)
15	1/2	95	70	15	M12	4
20	3/4	100	75	15	M12	4
25	1	125	90	19	M16	4
32	1 1/4	135	100	19	M16	4
40	1 1/2	140	105	19	M16	4
50	2	155	120	19	M16	8
65	1 1/2	175	140	19	M16	8
80	3	200	160	23	M20	8
100	4	225	185	23	M20	8
125	5	270	225	25	M22	8
150	6	305	260	25	M22	12
200	8	350	305	25	M22	12
250	10	430	380	27	M24	12
300	12	480	430	27	M24	16
350	14	540	480	33	M30x3	16
400	16	605	540	33	M30x3	16
450	18	675	605	33	M30x3	20
500	20	730	660	33	M30x3	20
550	22	795	720	39	M36x3	20
600	24	845	770	39	M36x3	24
650	26	895	820	39	M36x3	24
700	28	960	875	42	M39x3	24
750	30	1020	935	42	M39x3	24
800	32	1085	990	48	M45x3	24
900	36	1185	1090	48	M45x3	28
1000	40	1320	1210	56	M52x3	28
1100	44	1420	1310	56	M52x3	32
1200	48	1530	1420	56	M52x3	32
1400	56	1755	1640	62	M52x3	36

### DIMENSIONS JIS 20K

DN	INCH	D (mm)	Pcd (mm)	d (mm)	Bolt (mm)	N (mm)
15	1/2	95	70	15	M12	4
20	3/4	100	75	15	M12	4
25	1	125	90	19	M16	4
32	1 1/4	135	100	19	M16	4
40	1 1/2	140	105	19	M16	4
50	2	155	120	19	M16	8
65	1 1/2	175	140	19	M16	8
80	3	200	160	23	M20	8
100	4	225	185	23	M20	8
125	5	270	225	25	M22	8
150	6	305	260	25	M22	12
200	8	350	305	25	M22	12
250	10	430	380	27	M24	12
300	12	480	430	27	M24	16
350	14	540	480	33	M30x3	16
400	16	605	540	33	M30x3	16
450	18	675	605	33	M30x3	20
500	20	730	660	33	M30x3	20
550	22	795	720	39	M36x3	20
600	24	845	770	39	M36x3	24
650	26	945	850	48	M45x3	24
700	28	995	900	48	M45x3	24
750	30	1080	970	56	M52x3	24
800	32	1140	1030	56	M52x3	24
900	36	1250	1140	56	M52x3	28

### TECHNICAL FEATURES

- D** = Flange diameter
- n** = Number of bolt holes
- Pcd** = Pit circle diameter
- d** = Diameter of bolt holes



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# TECHNICAL INFORMATION

## FLANGE DIMENSIONS - ANSI

### DIMENSIONS ANSI CLASS 150

DN	INCH	D (mm)	Pcd (mm)	d (mm)	Bolt (")	44N (mm)
25	1	108	80	16	1/2	4
32	1 1/4	118	89	16	1/2	4
40	1 1/2	127	98	16	1/2	4
50	2	152	121	20	5/8	4
65	1 1/2	178	140	20	5/8	4
80	3	190	152	20	5/8	4
100	4	229	190	20	5/8	8
125	5	254	216	23	3/4	8
150	6	279	241	23	3/4	8
200	8	343	298	23	3/4	8
250	10	406	362	26	7/8	12
300	12	483	431	26	7/8	12
350	14	533	476	28	1	12
400	16	597	540	29	1	16
450	18	635	578	32	1 1/8	16
500	20	698	635	32	1 1/8	20
600	24	813	749	35	1 1/4	20
700	28	927	846	35	1 1/4	28
750	30	984	914	35	1 1/4	28
800	32	1060	978	41	1 1/2	28
900	36	1168	1086	41	1 1/2	32
1000	40	1289	1200	41	1 1/2	36
1100	44	1403	1314	41	1 1/2	40
1200	48	1511	1422	41	1 1/2	44

### DIMENSIONS ANSI CLASS 300

DN	INCH	D (mm)	Pcd (mm)	d (mm)	Bolt (")	N (mm)
25	1	124	89	20	5/8	4
32	1 1/4	133	98	20	5/8	4
40	1 1/2	156	114	23	3/4	4
50	2	165	127	20	5/8	8
65	1 1/2	190	149	23	3/4	8
80	3	210	168	23	3/4	8
100	4	254	200	23	3/4	8
125	5	279	235	23	3/4	8
150	6	318	270	23	3/4	12
200	8	381	330	23	7/8	12
250	10	445	387	32	1	16
300	12	520	450	35	1 1/8	16
350	14	584	514	35	1 1/8	20
400	16	648	571	38	1 1/4	20
450	18	710	629	35	1 1/4	24
500	20	775	685	38	1 1/4	24
600	24	915	813	42	1 1/2	24
700	28	1035	940	45	1 1/2	28
750	30	1098	997	48	1 3/4	28
800	32	1149	1054	51	1 3/4	28
900	36	1270	1168	54	2	32

### TECHNICAL FEATURES

- D** = Flange diameter
- n** = Number of bolt holes
- Pcd** = Pit circle diameter
- d** = Diameter of bolt holes



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# TECHNICAL INFORMATION

## SEAT MATERIALS

Name		Temp °C	Suitable for
Buna-N NBR, Nitril	NBR	-30° / +90°	Oils, fats & fuels (not gasoline).
EPDM	EPDM	-50° / +130°	General purpose, highly-resistant to temperatures most corrosive chemicals and abrasive liquids.
VITON	FPM	-40° / +200°	Concentrated sulphuric & other acids, aromatic hydrocarbons, chlorine services.
PTFE +25% Glass	PTFE	-50° / +210°	General purpose, highly-resistant to temperatures most corrosive chemicals.
PTFE +50%	PTFE	-50° / +210°	
St. steel-Aisi-316	PTFE/S	-50° / +230°	
SILICONE	VSI	-50° / +130°	Moderate or oxidizing chemicals, ozone, concentrated sodium hydroxine. Recommended for food.
Natural rubber	NR	-50° / +130°	General purpose, abrasives, water, dilute mineral acids.