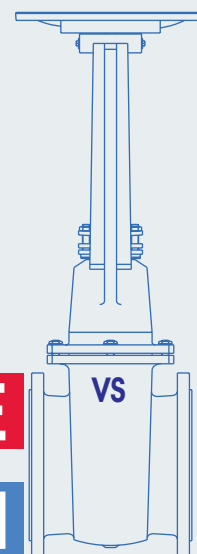


VALVOSIDER

MANUFACTURER OF VALVES

GATE VALVES
GLOBE VALVES
CHECK VALVES
STRAINERS
CATALOGUE



ASME

DIN

VALVOSIDER s.r.l.

Via S. Rocco, 2 - P.O. BOX 76 - 13011 Borgosesia (VC) - Italy

Phone: +39 0163 22991 - Fax: +39 0163 21537

e-mail: valvo@valvosider.com - <http://www.valvosider.com>



main location in Borgosesia town

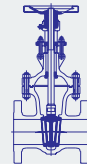


second location in Borgosesia
loc. Baraggione
- storage
- gamma-ray bunker for
radiographic tests

DIN

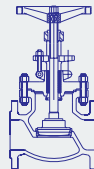
6 Gate valves

p. 59



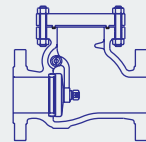
7 Globe valves

p. 71



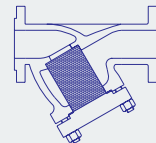
8 Check valves

p. 91



9 Strainers

p.109



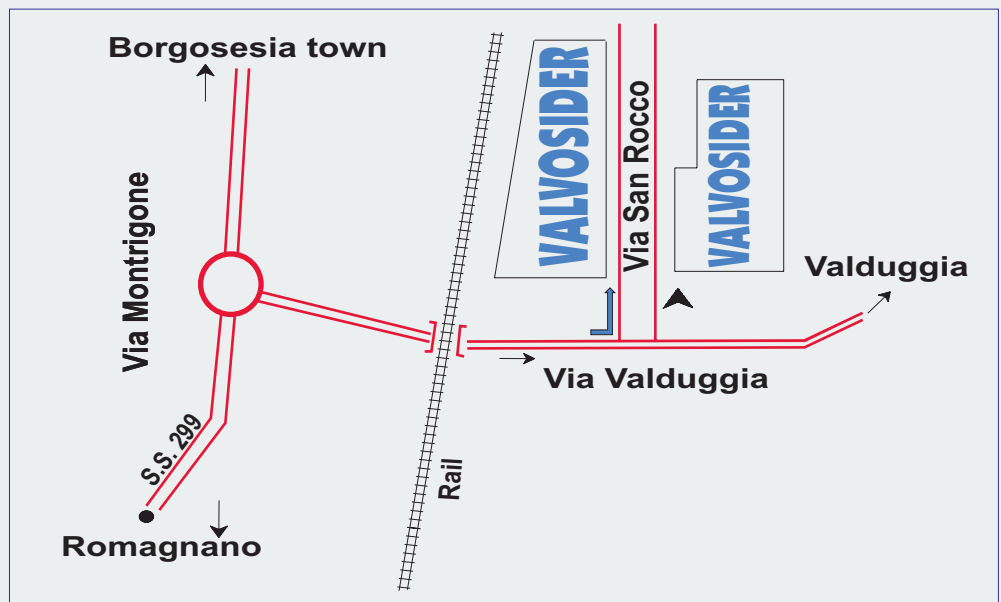
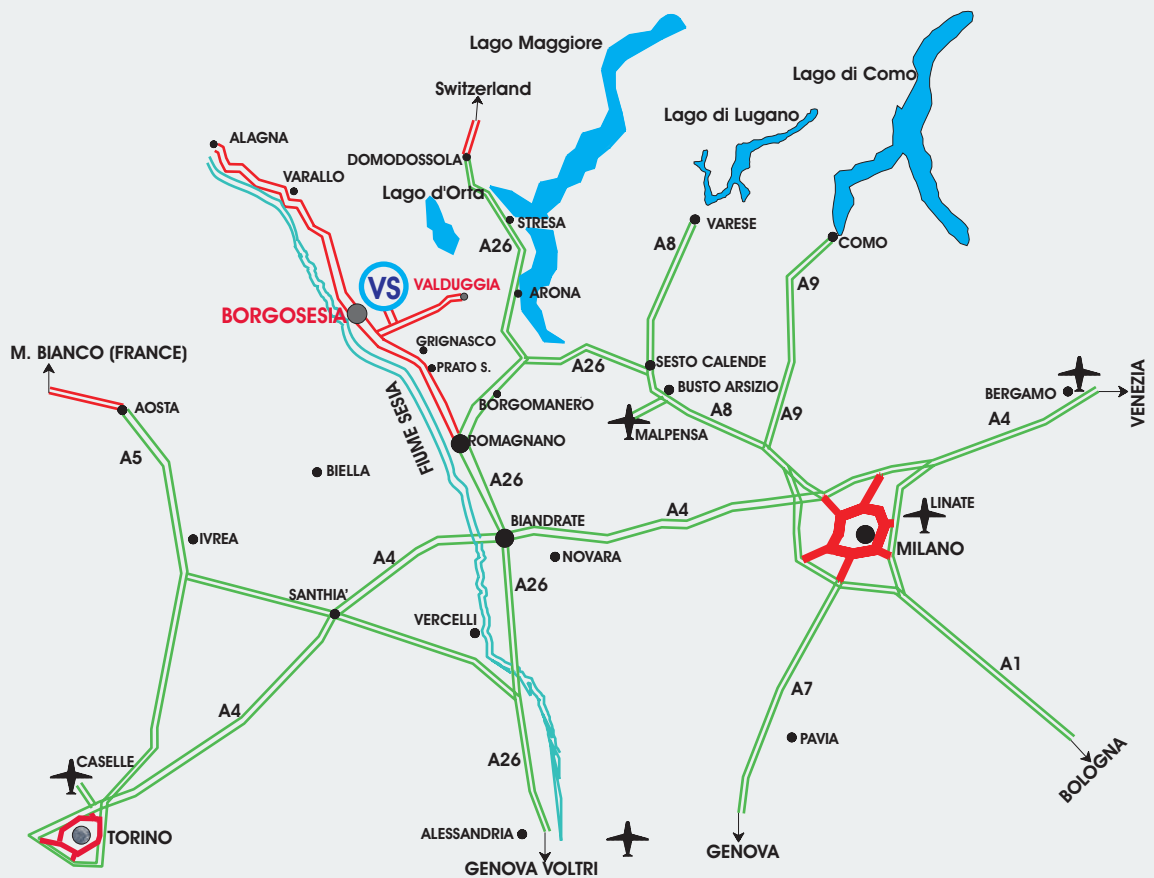
PLANT LOCATION

Valvosider is located in Borgosesia, Northern Italy, between Milan and Turin, approximately one hour driving from both towns.

The international airport of Milano Malpensa is 45 minutes driving far from Borgosesia.

The nearest port is Genoa, some 150 kms from Borgosesia.

The total plant area is approximately 96,000 square metres with 20,500 square metres being under cover.



VALVOSIDER'S HISTORY

Valvosider was formed in 1951 as a manufacturer of valves operating on oil & gas, petrochemical and chemical industries as well as on power-stations plants.

After more than 50 years of continuous growth, Valvosider has become a "VALVE MANUFACTURER" of international reputation.

Our many years of experience in producing top quality products, together with our policy of keeping our production facilities at the forefront of available technology, has enabled us to be certified by the following organizations:

ISO 9001 IQNET® - CISQ / RINA (1992)
API 6D-0166 AMERICAN PETROLEUM INSTITUTE (1993)
HP 0 TÜV (1991)
M0809V STOOMWEZEN (1995)
API QUALITY REGISTRAR No. 0072 (1999)
AD 2000 -A4 (TRB 801 Nr. 45 TÜV -1997)
TA-LUFT (Low emission TÜV approval, 1999)
CE PED (2001- Certificate No. DGR-0036-QS-111-01)
GOST R SYSTEM CERTIFICATION (2001)

COMPANY'S POLICY

Valvosider S.r.l. is committed to provide its customers a product which conforms in every aspect: both to the requirements of the contract and the customer needs at a fair cost, within the contractual delivery time, with the highest possible safety standards, while at the same time protecting the well-being of the natural environment and the community where the materials are being produced.

To accomplish this goal the General Management has set up a Quality System which operates in conformity with ISO 9001 standards.

This system has been designed in such a way so that it may be modified and improved at any stage of the production cycle, whilst also ensuring the professional and technical development of our staff.

The Managing Director has the ultimate responsibility for the development and implementation of the Quality System.

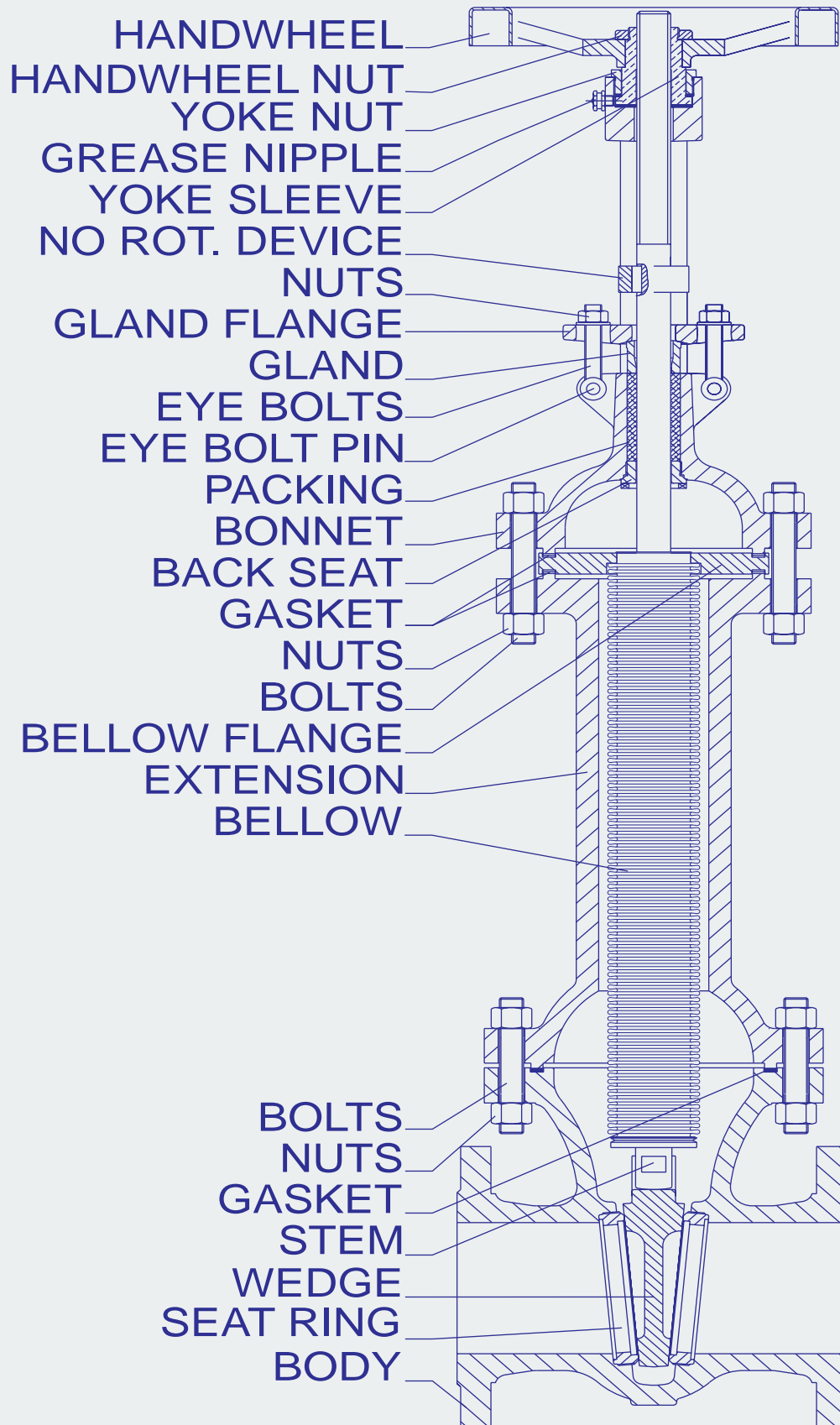
This responsibility has been delegated to the Quality Manager, who has full authority and autonomy to develop and maintain the Quality System.

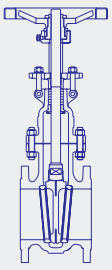
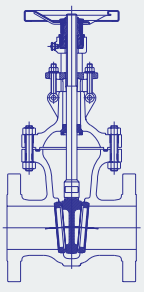
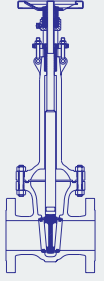
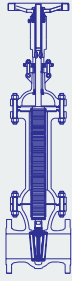
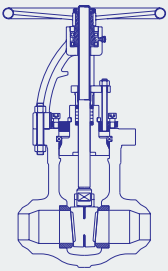
The Managing Director requires that all members of the company comply with the procedures laid down in the Quality System Manual.

All management levels are responsible for ensuring that the requirements of the Quality System Manual are both understood and observed.

All employees engaged in the manufacture of goods in Valvosider's name are responsible for producing a quality product that meets the customer specified requirements.

DESCRIPTION OF A TYPICAL GATE VALVE - BELLOW SEAL



	TYPE	CLASS	SIZES	FIG. N
	GATE VALVES BOLTED BONNET OVAL TYPE	PN 16 - F4	50 - 900	1180
		PN 16 - F5	50 - 1400	1190
<p style="text-align: right;">page 60</p>				
	GATE VALVES BOLTED BONNET ROUND TYPE	PN 16	50 - 1400	1200
		PN 25	50 - 1400	1210
		PN 40	50 - 1000	1220
		PN 63	50 - 600	1230
		PN 100	50 - 600	1240
		PN 160	50 - 400	1250
<p style="text-align: right;">page 62</p>				
	GATE VALVES CRYOGENIC EXTENDED BONNET	PN 16	50 - 600	1200EB
		PN 25	50 - 600	1210EB
		PN 40	50 - 600	1220EB
		PN 63	50 - 600	1230EB
		PN 100	50 - 600	1240EB
<p style="text-align: right;">page 64</p>				
	GATE VALVES BELLOW SEAL	PN 16	50 - 600	1200SO
		PN 25	50 - 600	1210SO
		PN 40	50 - 600	1220SO
		PN 63	50 - 600	1230SO
		PN 100	50 - 600	1240SO
<p style="text-align: right;">page 66</p>				
	GATE VALVES PRESSURE SEAL	PN 100	50 - 600	P24
		PN 160	50 - 600	P25
		PN 250	50 - 600	P26
		PN 320	50 - 600	P27
		PN 420	50 - 600	P28
<p style="text-align: right;">page 68</p>				

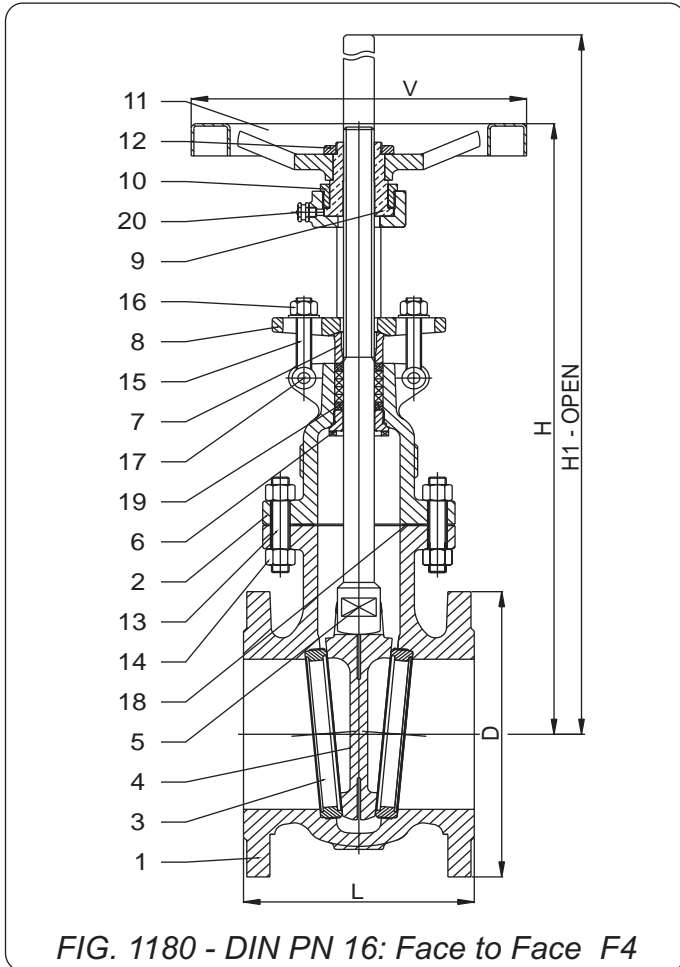


FIG. 1180 - DIN PN 16: Face to Face F4

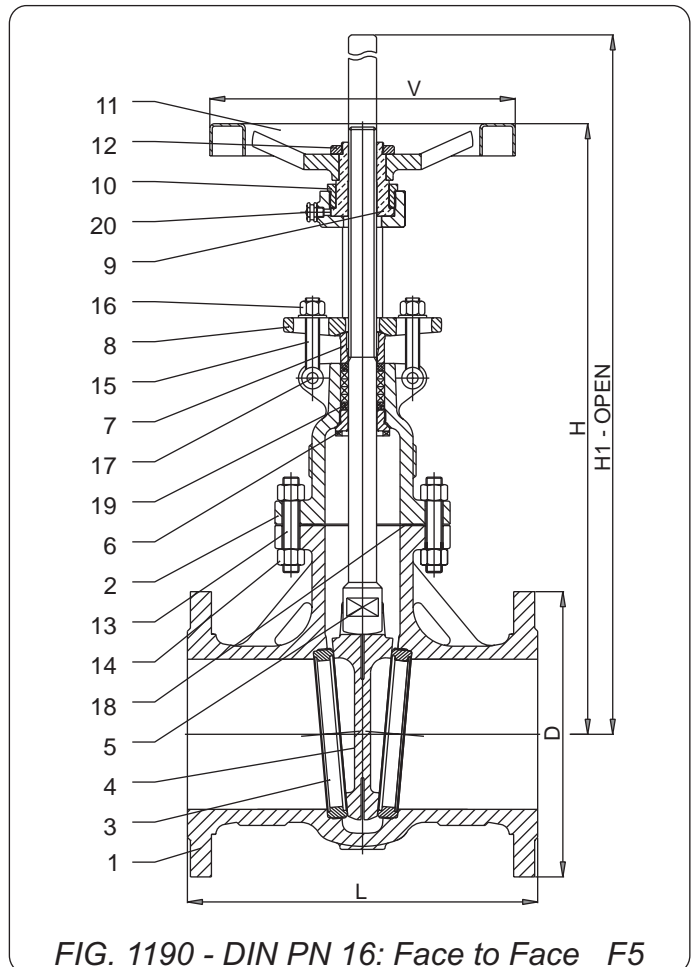


FIG. 1190 - DIN PN 16: Face to Face F5

PART NAME	A1180 - A1190	C1180 - C1190	FH1180 - FH1190	FK1180 - FK1190
1 Body	1.0619	1.7365	1.4552	1.4581
2 Bonnet	1.0619	1.7365	1.4552	1.4581
3 Seat ring surface	X20Cr13 (1)	X20Cr13 + HF (1)	X6CrNiTi18-10 (1)	X5CrNiMo17-12-2 (1)
4 Wedge seat surfaces	X20Cr13 (2)	X20Cr13 + HF (2)	X6CrNiTi18-10 (2)	X5CrNiMo17-12-2 (2)
5 Stem	X20Cr13 (3)	X20Cr13 (3)	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
6 Back seat	X20Cr13 (3)	X20Cr13 (3)	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
7 Gland	X20Cr13 (3)	X20Cr13 (3)	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
8 Gland flange	1.0460	X5CrNiMo17-12-2	X6CrNiTi18-10	X5CrNiMo17-12-2
9 Yoke sleeve	MS58 (4)	MS58 (4)	MS58 (4)	MS58 (4)
10 Yoke nut	1.0460	1.0460	X6CrNiTi18-10	X5CrNiMo17-12-2
11 Handwheel (*)		← Steel →		
12 Handwheel nut	1.0460	1.0460	X6CrNiTi18-10	X5CrNiMo17-12-2
13 Bolts	CK35	21CrMoV57	A2-70	A2-70
14 Nuts	C35	24CrMo5	A2-70	A2-70
15 Eye bolts	CK35	24CrMo5	A2-70	A2-70
16 Nuts	C35	24CrMo5	A2-70	A2-70
17 Eye bolt pin	CK35	24CrMo5	A2-70	A2-70
18 Gasket		← S.S. reinforced graphite (5) →		
19 Packing		← Graphite rings & wiper rings (6) →		
20 Grease nipple		← Steel →		

- (1) On request: faced with Stellite® - Mone® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Mone® - Hastelloy® - other materials
 (3) On request: 17 Cr - Monel® - Hastelloy® - other materials
 (*) Gear operator recommended from DN 500.

- (4) On request: GGG50 - Nitronic 60
 (5) On request: PTFE - other materials
 (6) On request: PTFE - other materials

All data, subject to technical changes, are only for information and not for official use.

 ISO 9001 No. 0072	 API 6 D - 0166	ISO 9001-2000 CERTIFIED	A.N.C.C. I.S.P.E.S.L. NOTIFIED	 97/23/CE	 AD-Merkblatt HP 0 AD 2000 A4 APPROVED
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VALVOSIDER s.r.l. - Via S. Rocco, 2 - P.O. BOX 76 - 13011 Borgosesia (VC) - Italy
 Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com

GATE VALVES OVAL BODY DIN PN 16 - F4 - DIN PN 16 - F5

VALVOSIDER
MANUFACTURER OF VALVES

FIG. N. 1180 - GATE VALVES OVAL BODY DIN PN 16 - Face to Face F4

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	--	--	--	--
L RF/BW	150	170	180	190	200	210	230	250	270	290	310	350	390	430	470	510	--	--	--	--
D	165	185	200	220	250	285	340	405	460	520	580	715	840	910	1025	1125	--	--	--	--
V	200	200	225	250	280	300	400	500	500	600	600	600	600	1000	1200	1200	--	--	--	--
H	350	420	500	520	610	700	900	1050	1200	1400	1580	1900	2300	2600	3200	4400	--	--	--	--
H1	415	495	580	620	720	840	1100	1300	1540	1750	1980	2450	3000	3500	4100	5500	--	--	--	--

FIG. N. 1190 - GATE VALVES OVAL BODY DIN PN 16 - Face to Face F5

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
L RF/BW	250	270	280	300	325	350	400	450	500	550	600	650	700	800	900	1000	1100	1200	1400	1600
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840	910	1025	1125	1255	1485	1685
V	200	200	225	250	280	300	400	500	500	600	600	600	600	600	1000	1200	1200	1200	1400	1400
H	350	430	500	520	610	700	900	1050	1200	1400	1580	1750	1900	2300	2600	3200	4400	4700	5200	6200
H1	415	495	580	620	720	840	1100	1300	1540	1750	1980	2200	2450	3000	3500	4100	5500	5900	6600	7900

standard features

- Description** OVAL BODY
BOLTED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
NON RISING HANDWHEEL
FLEXIBLE WEDGE
RENEWABLE SEATS
- Design** DIN 3352
DIN 3840
- Face to face** DIN 3202
- Flanges** DIN 2501
DIN 2543
DIN 2526 FORM E
BW TO DIN 3239
- Testing** DIN 3352 Part 1
DIN 3230 Part 3
- Rating** DIN 2401
- Marking** EN 19
CE - PED
- Certificates** EN 10204 – 3.1 B

features on request

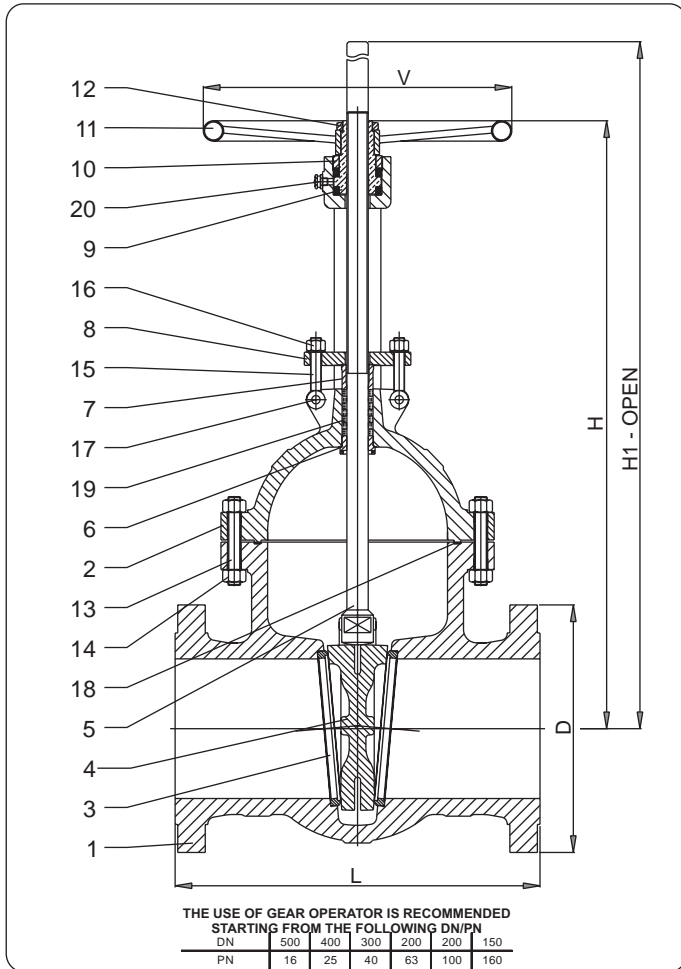
- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC ACTUATOR
- HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK SYSTEM
- PTFE SOFT SEATS
- STEM PROTECTION
- STEM EXTENSION
- LANTERN RING
- EXTENDED STUFFING BOX
- LIVE LOADED PACKING
- DRAIN PLUG
- BY PASS
- BW ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.



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Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com



standard features

- **Description** ROUND BODY
BOLTED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
NON RISING HANDWHEEL
FLEXIBLE WEDGE
RENEWABLE SEATS
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	A12xx	C12xx	FH12xx	FK12xx
1 Body	1.0619	1.7365	1.4552	1.4581
2 Bonnet	1.0619	1.7365	1.4552	1.4581
3 Seat ring surface	X20Cr13 (1)	X20Cr13 + HF (1)	X6CrNiTi18-10 (1)	X5CrNiMo17-12-2 (1)
4 Wedge seat surfaces	X20Cr13 (2)	X20Cr13 + HF (2)	X6CrNiTi18-10 (2)	X5CrNiMo17-12-2 (2)
5 Stem	X20Cr13 (3)	X20Cr13 (3)	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
6 Back seat	X20Cr13 (3)	X20Cr13 (3)	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
7 Gland	X20Cr13 (3)	X20Cr13 (3)	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
8 Gland flange	1.0460	X5CrNiMo17-12-2	X6CrNiTi18-10	X5CrNiMo17-12-2
9 Yoke sleeve	MS58 (4)	MS58 (4)	MS58 (4)	MS58 (4)
10 Yoke nut	1.0460	1.0460	X6CrNiTi18-10	X5CrNiMo17-12-2
11 Handwheel		← Steel →		
12 Handwheel nut	1.0460	1.0460	X6CrNiTi18-10	X5CrNiMo17-12-2
13 Bolts	CK35	21CrMoV57	A2-70	A2-70
14 Nuts	C35	24CrMo5	A2-70	A2-70
15 Eye bolts	CK35	24CrMo5	A2-70	A2-70
16 Nuts	C35	24CrMo5	A2-70	A2-70
17 Eye bolt pin	CK35	24CrMo5	A2-70	A2-70
18 Gasket		← S.S. Reinforced graphite (5) →		
19 Packing		← Graphite rings & wiper rings (6) →		
20 Grease nipple		← Steel →		

(1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (3) On request: 17 Cr - Monel® - Hastelloy® - other materials

(4) On request: GGG50 - Nitronic 60
 (5) On request: PTFE - other materials
 (6) On request: PTFE - other materials

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I.S.P.E.S.L.
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 Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com

GATE VALVES ROUND BODY

DIN PN 16 - 25 - 40 - 63 - 100 - 160

VALVOSIDER
MANUFACTURER OF VALVES

FIG. N. 1200 - GATE VALVES DIN PN 16 - Face to Face F5

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
L RF/BW	250	270	280	300	325	350	400	450	500	550	600	650	700	800	900	1000	1100	1200	1400	1600
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840	910	1025	1125	1255	1485	1685
V	200	200	225	250	280	300	400	500	500	600	600	600	600	600	1000	1200	1200	1200	1400	1400
H	400	420	500	520	610	620	780	1050	1200	1400	1580	1750	1900	2300	2600	3200	4400	4700	5200	6200
H1	470	495	580	620	720	760	980	1300	1540	1750	1980	2200	2450	3000	3500	4100	5500	5900	6600	7900

FIG. N. 1210 - GATE VALVES DIN PN 25 - Face to Face F5

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
L RF/BW	250	270	280	300	325	350	400	450	500	550	600	650	700	800	900	1000	1100	1200	1400	1600
D	165	185	200	235	270	300	360	425	485	555	620	670	730	845	960	1085	1185	1320	1530	1755
V	200	200	225	250	280	300	400	500	500	600	600	600	600	600	1000	1200	1200	1200	1400	1400
H	400	430	500	520	610	700	900	1050	1200	1400	1580	1750	1900	2300	2600	3200	4400	4700	5200	6200
H1	470	495	580	620	720	840	1100	1300	1540	1750	1980	2200	2450	3000	3500	4100	5500	5900	6600	7900

FIG. N. 1220 - GATE VALVES DIN PN 40 - Face to Face F7

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	--	--
L RF/BW	250	290	310	350	400	450	550	650	750	850	950	1050	1150	1350	1550	1750	1950	2150	--	--
D	165	185	200	235	270	300	375	450	515	580	660	685	755	890	995	1140	1250	1360	--	--
V	200	200	225	250	300	400	500	500	600	700	700	800	1000	1200	1200	1400	1400	1400	--	--
H	400	430	500	520	610	700	900	1050	1200	1400	1580	1750	1900	2300	2600	3200	4400	4700	--	--
H1	470	495	580	620	720	840	1100	1300	1540	1750	1980	2200	2450	3000	3500	4100	5500	5900	--	--

FIG. N. 1230 - GATE VALVES DIN PN 63 - Face to Face F7

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600
L RF/BW	250	290	310	350	400	450	550	650	750	850	950	1150	1350
D	180	205	215	250	295	345	415	470	530	600	670	800	930
V	200	250	250	400	400	500	600	700	700	800	1000	1000	1200
H	450	500	540	670	685	810	970	1155	1330	1500	1680	2100	2400
H1	500	570	620	780	810	980	1180	1420	1660	1880	2100	2650	3100

FIG. N. 1240 - GATE VALVES DIN PN 100 - Face to Face F7

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600
L RF/BW	250	290	310	350	400	450	550	650	750	850	950	1150	1350
D	195	220	230	265	315	355	430	505	585	655	715	870	990
V	200	250	250	400	400	500	600	700	700	800	1000	1000	1200
H	450	500	540	670	685	810	970	1155	1330	1500	1680	2100	2400
H1	500	570	620	780	810	980	1180	1420	1660	1880	2100	2650	3100

FIG. N. 1250 - GATE VALVES DIN PN 160 - Face to Face F8

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	--	--
L RF/BW	300	360	390	450	525	600	750	900	1050	1200	1350	--	--
D	195	220	230	265	315	355	430	505	585	655	715	--	--
V	200	250	250	400	400	500	600	700	700	800	1000	--	--
H	450	500	540	670	685	810	970	1155	1330	1500	1680	--	--
H1	500	570	620	780	810	980	1180	1420	1660	1880	2100	--	--

features on request

- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC ACTUATOR
- HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK
- PTFE SOFT SEATS
- STEM PROTECTION
- STEM EXTENSION
- LANTERN RING
- EXTENDED STUFFING BOX
- LIVE LOADED PACKING
- DRAIN PLUG
- BY PASS
- BW ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.

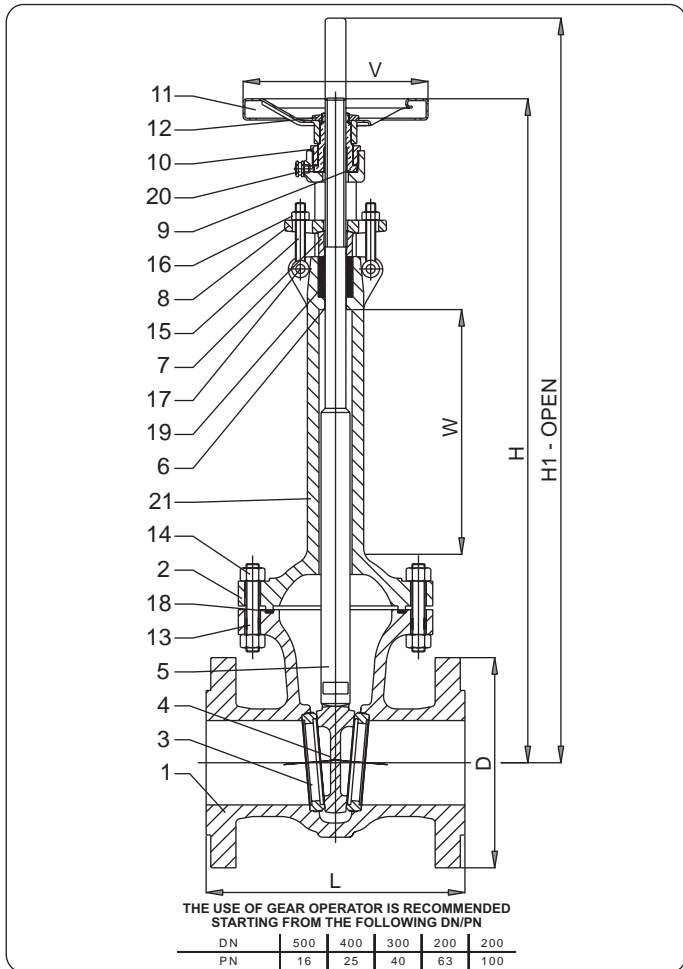


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I.S.P.E.S.L.
NOTIFIED



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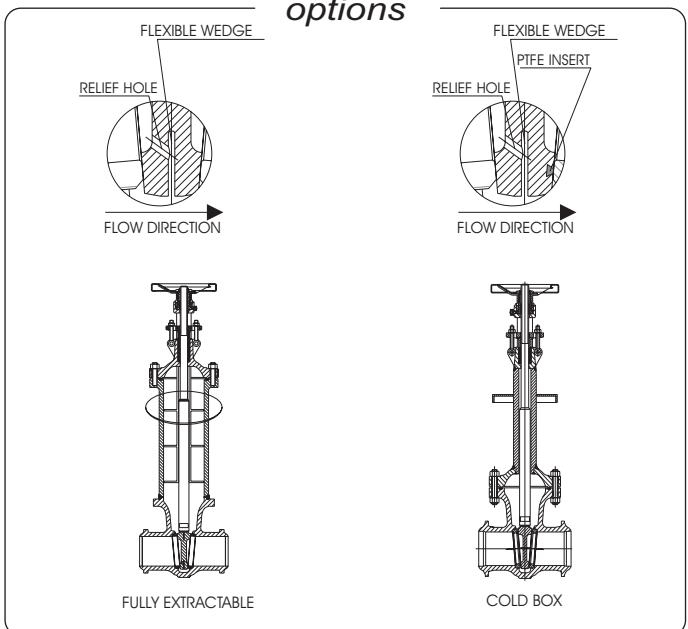
standard features

- **Description** EXTENDED BONNET
BOLTED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
NON RISING HANDWHEEL
RENEWABLE SEATS
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 - 3.1 B

PART NAME	FH12xxEB	FK12xxEB
1 Body	1.4552	1.4581
2 Bonnet	1.4552	1.4581
3 Seat ring surface	X6CrNiTi18-10 (1)	X5CrNiMo17-12-2 (1)
4 Wedge seat surfaces	X6CrNiTi18-10 (2)	X5CrNiMo17-12-2 (2)
5 Stem	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
6 Back seat (integral)	1.4552	1.4581
7 Gland	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
8 Gland flange	X6CrNiTi18-10	X5CrNiMo17-12-2
9 Yoke sleeve	MS58 (4)	MS58 (4)
10 Yoke nut	X6CrNiTi18-10	X5CrNiMo17-12-2
11 Handwheel	Steel	Steel
12 Handwheel nut	X6CrNiTi18-10	X5CrNiMo17-12-2
13 Bolts	A2-70	A2-70
14 Nuts	A2-70	A2-70
15 Eye bolts	A2-70	A2-70
16 Nuts	A2-70	A2-70
17 Eye bolt pin	A2-70	A2-70
18 Gasket	PTFE (5)	PTFE (5)
19 Packing	PTFE (6)	PTFE (6)
20 Grease nipple	1.4404	1.4404
21 Extension	X2CrNi19-11	X2CrNiMo17-12-2

- (1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (3) On request: 17 Cr - Monel® - Hastelloy® - other materials

options



- (4) On request: GGG50 - Nitronic 60
 (5) On request: Graphite - other materials
 (6) On request: Graphite - other materials

All data, subject to technical changes, are only for information and not for official use.



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CRYOGENIC GATE VALVES DIN PN 16 - 25 - 40 - 63 - 100

VALVOSIDER
MANUFACTURER OF VALVES

FIG. N. 1200EB - CRYOGENIC GATE VALVES DIN PN 16 - F5

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
L RF/BW	250	270	280	300	325	350	400	450	500	550	600	650	700	800	--	--	--	--	--	--
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840	--	--	--	--	--	--
V	200	200	225	250	280	300	400	500	500	600	600	600	600	600	--	--	--	--	--	--
W	200	200	300	300	300	300	300	300	300	300	300	300	300	300	--	--	--	--	--	--
H	600	630	800	820	910	920	1080	1350	1500	1700	1880	2050	2200	2600	--	--	--	--	--	--
H1	650	695	880	920	1020	1060	1280	1600	1840	2050	2280	2500	2750	3300	--	--	--	--	--	--

FIG. N. 1210EB - CRYOGENIC GATE VALVES DIN PN 25 - F5

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
L RF/BW	250	270	280	300	325	350	400	450	500	550	600	650	700	800	--	--	--	--	--	--
D	165	185	200	235	270	300	360	425	485	555	620	670	730	845	--	--	--	--	--	--
V	200	200	225	250	280	300	400	500	500	600	600	600	600	600	--	--	--	--	--	--
W	200	200	300	300	300	300	300	300	300	300	300	300	300	300	--	--	--	--	--	--
H	600	630	800	820	910	1000	1200	1350	1500	1700	1880	2050	2200	2600	--	--	--	--	--	--
H1	650	695	880	920	1020	1140	1400	1600	1840	2050	2280	2500	2750	3300	--	--	--	--	--	--

FIG. N. 1220EB - CRYOGENIC GATE VALVES DIN PN 40 - F7

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
L RF/BW	250	290	310	350	400	450	550	650	750	850	950	1050	1150	1350	--	--	--	--	--	--
D	165	185	200	235	270	300	375	450	515	580	660	685	755	890	--	--	--	--	--	--
V	200	200	225	250	280	300	400	500	500	600	600	600	600	600	--	--	--	--	--	--
W	200	200	300	300	300	300	300	300	300	300	300	300	300	300	--	--	--	--	--	--
H	600	630	800	820	910	1000	1200	1350	1500	1700	1880	2050	2200	2600	--	--	--	--	--	--
H1	650	695	880	920	1020	1140	1400	1600	1840	2050	2280	2500	2750	3300	--	--	--	--	--	--

FIG. N. 1230EB - CRYOGENIC GATE VALVES DIN PN 63 - F7

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600
L RF/BW	250	290	310	350	400	450	550	650	750	850	950	1150	1350
D	180	205	215	250	295	345	415	470	530	600	670	800	930
V	200	250	250	400	400	500	600	700	700	800	1000	1000	1200
W	200	200	300	300	300	300	300	300	300	300	300	300	300
H	650	700	840	970	985	1110	1270	1455	1630	1800	1980	2400	2700
H1	700	770	920	1080	1110	1280	1480	1720	1960	2180	2400	2950	3400

FIG. N. 1240EB - CRYOGENIC GATE VALVES DIN PN 100 - F7

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600
L RF/BW	250	290	310	350	400	450	550	650	750	850	950	1150	1350
D	195	220	230	265	315	355	430	505	585	655	715	870	990
V	200	250	250	400	400	500	600	700	700	800	1000	1000	1200
W	200	200	300	300	300	300	300	300	300	300	300	300	300
H	650	700	840	970	985	1110	1270	1455	1630	1800	1980	2400	2700
H1	700	770	920	1080	1110	1280	1480	1720	1960	2180	2400	2950	3400

features on request

- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC ACTUATOR
- HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK SYSTEM
- PTFE SOFT SEATS
- STEM PROTECTION
- STEM EXTENSION
- LANTERN RING
- EXTENDED STUFFING BOX
- LIVE LOADED PACKING
- DRAIN PLUG
- BY PASS
- BW ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.



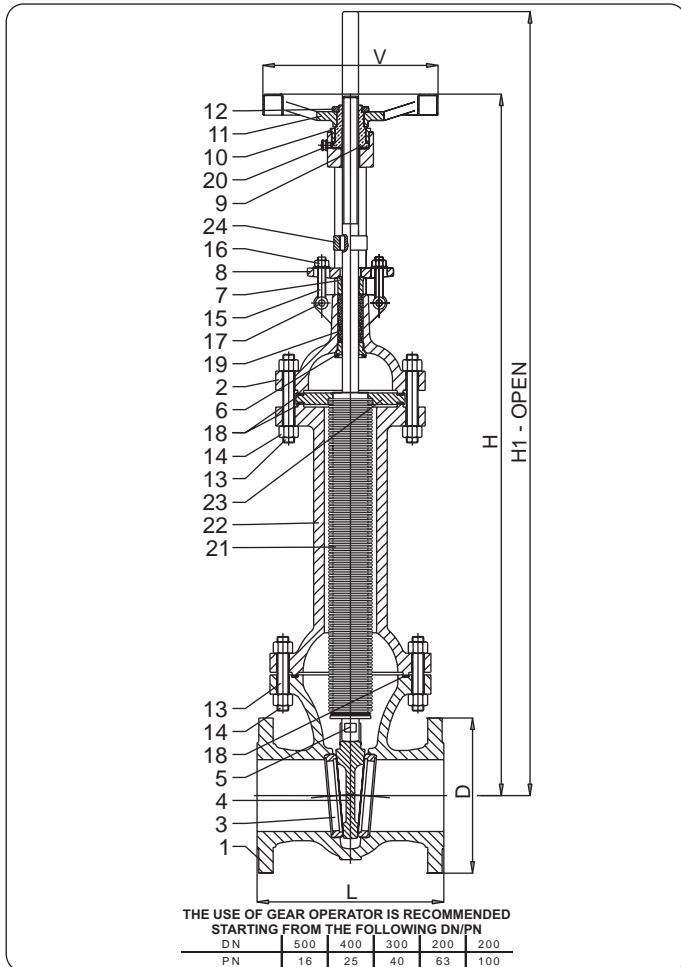
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standard features



- **Description** EXTENDED BODY
BOLTED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
NON RISING HANDWHEEL
RENEWABLE SEATS
BELLOW SEAL
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	A12xxSO	C12xxSO	FH12xxSO	FK12xxSO
1 Body	1.0619	1.7365	1.4552	1.4581
2 Bonnet	1.0619	1.7365	1.4552	1.4581
3 Seat ring surface	X20Cr13 (1)	X20Cr13 + HF (1)	X6CrNiTi18-10 (1)	X5CrNiMo17-12-2 (1)
4 Wedge seat surfaces	X20Cr13 (2)	X20Cr13 + HF (2)	X6CrNiTi18-10 (2)	X5CrNiMo17-12-2 (2)
5 Stem	X20Cr13 (3)	X20Cr13 (3)	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
6 Back seat	X20Cr13 (3)	X20Cr13 (3)	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
7 Gland	X20Cr13 (3)	X20Cr13 (3)	X6CrNiTi18-10 (3)	X5CrNiMo17-12-2 (3)
8 Gland flange	1.0460	X5CrNiMo17-12-2	X6CrNiTi18-10	X5CrNiMo17-12-2
9 Yoke sleeve		←	MS58 (4)	→
10 Yoke nut	1.0460	1.0460	X6CrNiTi18-10	X5CrNiMo17-12-2
11 Handwheel		←	Steel	→
12 Handwheel nut	1.0460	1.0460	X6CrNiTi18-10	X5CrNiMo17-12-2
13 Bolts	CK35	21CrMoV57	A2-70	A2-70
14 Nuts	C35	24CrMo5	A2-70	A2-70
15 Eye bolts	CK35	24CrMo5	A2-70	A2-70
16 Nuts	C35	24CrMo5	A2-70	A2-70
17 Eye bolt pin	CK35	24CrMo5	A2-70	A2-70
18 Gasket		←	S.S. reinforced graphite (5)	→
19 Packing		←	Graphite rings & wiper rings (6)	→
20 Grease nipple		←	Steel	→
21 Bellow	X6CrNiTi18-10	X6CrNiTi18-10	X6CrNiTi18-10	X6CrNiTi18-10
22 Extension	1.0460	1.7363	X6CrNiNb18-10	X2CrNiMo17-12-2
23 Bellow flange		←	X6CrNiTi18 10	→
24 No rot. Device	X20Cr13	X20Cr13	X6CrNiTi18-10	X5CrNiMo17-12-2

(1) On request: faced with Stellite® - Monei® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monei® - Hastelloy® - other materials
 (3) On request: 17 Cr - Monei® - Hastelloy® - other materials

(4) On request: GGG50 - Nitronic 60
 (5) On request: PTFE - other materials
 (6) On request: PTFE - other materials

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GATE VALVES - BELLOW SEAL DIN PN 16 - 25 - 40 - 63 - 100

VALVOSIDER
MANUFACTURER OF VALVES

FIG. N. 1200SO - BELLOW GATE VALVES DIN PN 16 - F5

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
L RF/BW	250	270	280	300	325	350	400	450	500	550	600	650	700	800	--	--	--	--	--	--
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840	--	--	--	--	--	--
V	200	200	225	250	280	300	400	500	500	600	600	600	600	600	--	--	--	--	--	--
H	610	675	820	940	1160	1530	1960	2530	2600	2980	3170	2550	4050	4650	--	--	--	--	--	--
H1	660	740	900	1040	1290	1680	2160	2600	2900	3350	3570	4000	4550	5250	--	--	--	--	--	--

FIG. N. 1210SO - BELLOW GATE VALVES DIN PN 25 - F5

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
L RF/BW	250	270	280	300	325	350	400	450	500	550	600	650	700	800	--	--	--	--	--	--
D	165	185	200	235	270	300	360	425	485	555	620	670	730	845	--	--	--	--	--	--
V	200	200	225	250	280	300	400	500	500	600	600	600	600	600	--	--	--	--	--	--
H	610	675	820	940	1160	1530	1960	2530	2600	2980	3170	2550	4050	4650	--	--	--	--	--	--
H1	660	740	900	1040	1290	1680	2160	2600	2900	3350	3570	4000	4550	5250	--	--	--	--	--	--

FIG. N. 1220SO - BELLOW GATE VALVES DIN PN 40 - F7

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
L RF/BW	250	290	310	350	400	450	550	650	750	850	950	1050	1150	1350	--	--	--	--	--	--
D	165	185	200	235	270	300	375	450	515	580	660	685	755	890	--	--	--	--	--	--
V	200	200	225	250	280	300	400	500	500	600	600	600	600	600	--	--	--	--	--	--
H	600	685	765	920	1070	1315	1700	2035	2395	2760	3135	3600	4080	4795	--	--	--	--	--	--
H1	650	750	840	1020	1200	1465	1900	2285	2700	3110	4535	4050	4580	5350	--	--	--	--	--	--

FIG. N. 1230SO - BELLOW GATE VALVES DIN PN 63 - F7

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600
L RF/BW	250	290	310	350	400	450	550	650	750	850	950	1150	1350
D	180	205	215	250	295	345	415	470	530	600	670	800	930
V	200	250	250	400	400	500	600	700	700	800	1000	1000	1200
H	650	685	805	905	1070	1360	1720	2120	2500	--	--	--	--
H1	700	750	880	1010	1200	1510	1920	2370	2800	--	--	--	--

FIG. N. 1240SO - BELLOW GATE VALVES DIN PN 100 - F7

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600
L RF/BW	250	290	310	350	400	450	550	650	750	850	950	1150	1350
D	195	220	230	265	315	355	430	505	585	655	715	870	990
V	200	250	250	400	400	500	600	700	700	800	1000	1000	1200
H	650	685	805	905	1070	1360	1720	2120	2500	--	--	--	--
H1	700	750	880	1010	1200	1510	1920	2370	2800	--	--	--	--

features on request

- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC ACTUATOR
- HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK SYSTEM
- PTFE SOFT SEATS
- STEM PROTECTION
- STEM EXTENSION
- LANTERN RING
- EXTENDED STUFFING BOX
- LIVE LOADED PACKING
- DRAIN PLUG
- BY PASS
- BW ENDS
- ANSI CONNECTIONS

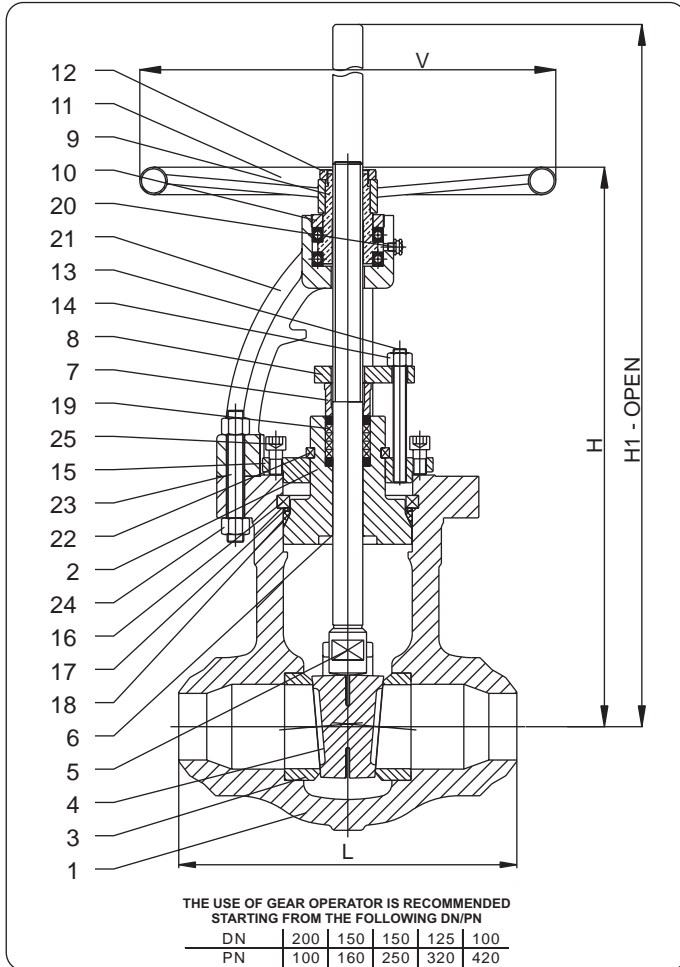
All dimensions in mm (except where differently indicated)

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Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com

standard features



- **Description** ROUND BODY
PRESSURE SEAL BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
NON RISING HANDWHEEL
INTEGRAL BACKSEAT
WELDED IN SEATS
FLEXIBLE WEDGE
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	AP2x	IP2x	MP2x	WCP2x	FKP2x
1 Body	1.0619	1.5419	1.7357	1.7379	1.4581
2 Bonnet	1.0619	1.5419	1.7357	1.7379	1.4581
3 Ring - seat surface	1.0160 + HF (1)	1.0160 + HF (1)	1.0460 + HF (1)	1.0160 + HF (1)	1.4401 + HF(1)
4 Wedge - seat surfaces	1.0619 + HF (1)	1.5419 + HF (1)	1.7357 + HF (1)	1.7380 + HF (1)	1.4581 + HF (1)
5 Stem	X20Cr13 (3)	X20Cr13 (3)	X20Cr13 (3)	X20Cr13 (3)	1.4401 (3)
6 Back seat (integral)		←	Stellite® (2)	→	
7 Gland	X20Cr13 (3)	X20Cr13 (3)	X20Cr13 (3)	X20Cr13 (3)	1.4401 (3)
8 Gland flange	1.0460	1.4401	1.4401	1.4401	1.4401
9 Yoke sleeve		←	GGG50 (4)	→	
10 Yoke nut	1.0460	1.0460	1.0460	1.0460	1.4401
11 Handwheel		←	Steel	→	
12 Handwheel nut		←	1.0460'	→	
13 Bolts	CK35	21CrMoV57	21CrMoV57	21CrMoV57	A2-70
14 Nuts	C35	24CrMo5	24CrMo5	24CrMo5	A2-70
15 Retainer flange	1.0160	1.0160	1.0460	1.0160	1.4401
16 Retainer ring	X20Cr13	X20Cr13	X20Cr13	X20Cr13	1.4401
17 Spacer ring	X20Cr13	X20Cr13	X20Cr13	X20Cr13	1.4401
18 Gasket		←	S. S. reinforced graphite (5)	→	
19 Packing		←	Graphite rings & wiper rings	→	
20 Grease nipple		←	Steel	→	
21 Yoke	1.0619	1.5419	1.7357	1.7380	1.4581
22 Segmented support ring	X20Cr13	X20Cr13	X20Cr13	X20Cr13	1.4401
23 Yoke / body bolt	CK35	21CrMoV57	21CrMoV57	21CrMoV57	A2-70
24 Yoke / body nut	C35	24CrMo5	24CrMo5	24CrMo5	A2-70
25 Bolt	CK35	21CrMoV57	21CrMoV57	21CrMoV57	A2-70

(1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Monel® - Hastelloy® - other materials
 (3) On request: 17 Cr - Monel® - Hastelloy® - other materials

(4) On request: Other materials
 (5) On request: Metal

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PRESSURE SEAL GATE VALVES DIN PN 100 - 160 - 250 - 320 - 420

VALVOSIDER
MANUFACTURER OF VALVES

FIG. P24 - PRESSURE SEAL GATE VALVES DIN PN 100 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
V	200	200	250	300	400	400	500	G.O.	G.O.	G.O.	G.O.	G.O.	--
H	500	590	590	600	860	860	1000	1330	1480	--	--	--	--
H1	560	670	700	720	1010	1040	1240	1610	1820	--	--	--	--

FIG. P25 - PRESSURE SEAL GATE VALVES DIN PN 160 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
V	200	200	250	300	400	400	500	G.O.	G.O.	G.O.	G.O.	G.O.	--
H	500	590	590	600	860	860	1000	1330	1480	--	--	--	--
H1	560	670	700	720	1010	1040	1240	1610	1820	--	--	--	--

FIG. P26 - PRESSURE SEAL GATE VALVES DIN PN 250 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
V	200	200	250	300	400	400	500	G.O.	G.O.	G.O.	G.O.	G.O.	--
H	500	590	590	600	860	860	1000	1330	1480	--	--	--	--
H1	560	670	700	720	1010	1040	1240	1610	1820	--	--	--	--

FIG. P27 - PRESSURE SEAL GATE VALVES DIN PN 320 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
V	200	200	250	300	400	400	500	G.O.	G.O.	G.O.	G.O.	G.O.	--
H	500	590	590	600	860	860	1000	1330	1480	--	--	--	--
H1	560	670	700	720	1010	1040	1240	1610	1820	--	--	--	--

FIG. P28 - PRESSURE SEAL GATE VALVES DIN PN 420 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
V	200	200	250	300	400	400	500	G.O.	G.O.	G.O.	G.O.	G.O.	--
H	500	590	590	600	860	860	1000	1330	1480	--	--	--	--
H1	560	670	700	720	1010	1040	1240	1610	1820	--	--	--	--

features on request

- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC OR HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK SYSTEM
- PTFE SOFT SEATS
- PARALLEL WEDGE
- TWO PIECE BODY GUIDED WEDGE
- STEM PROTECTION
- STEM EXTENSION
- LANTERN RING
- EXTENDED STUFFING BOX
- LIVE LOADED PACKING
- DRAIN PLUG
- BY PASS
- FLANGED ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.



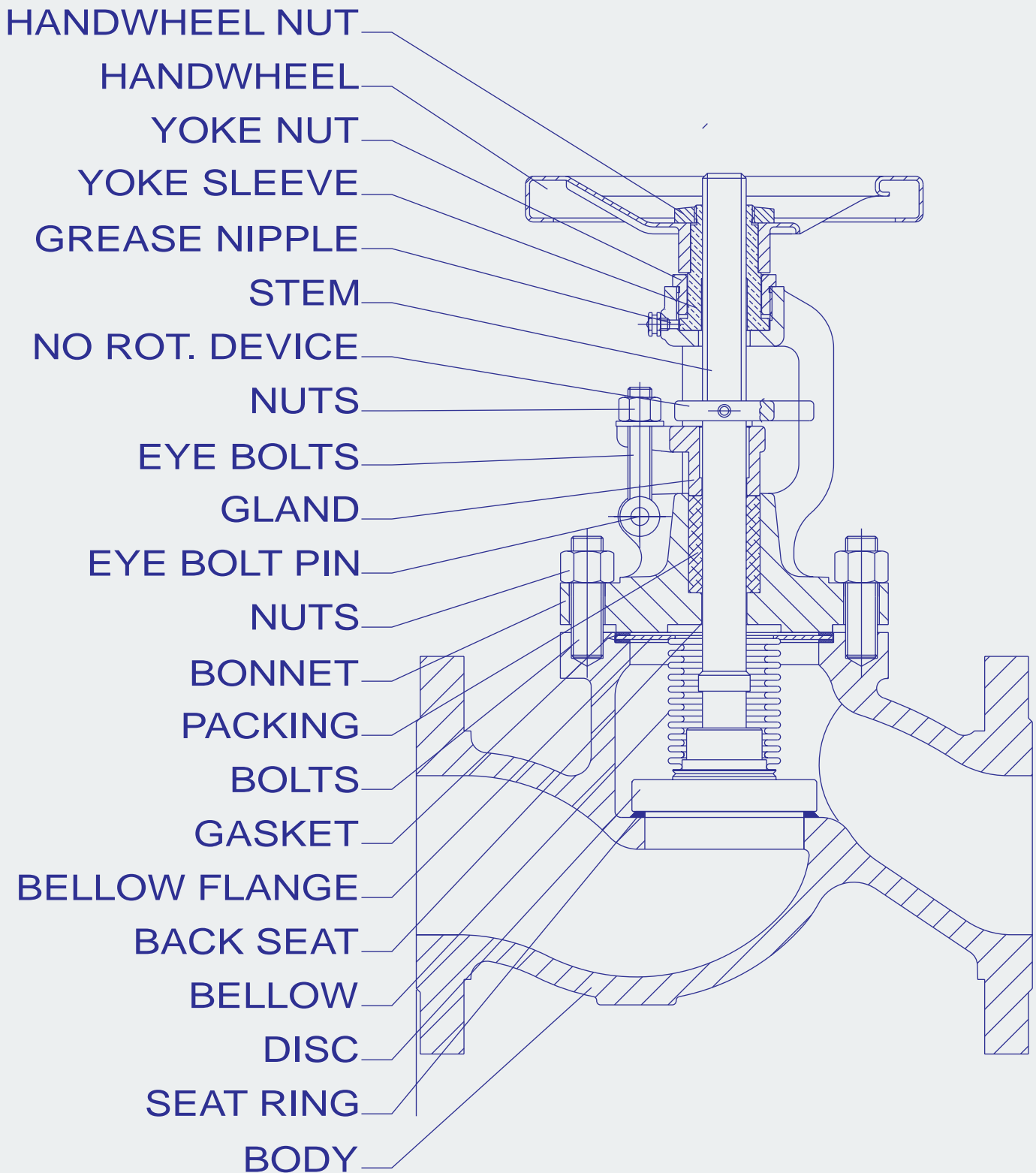
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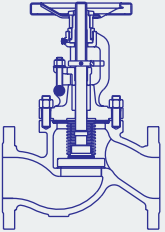
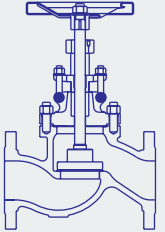
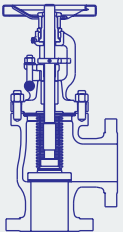
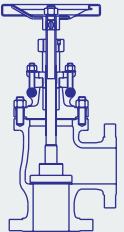
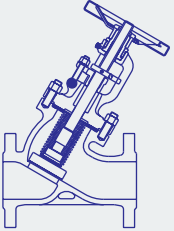
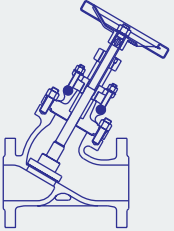
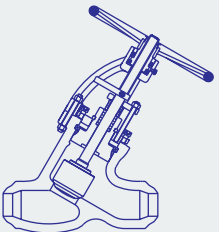
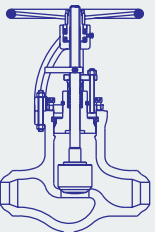

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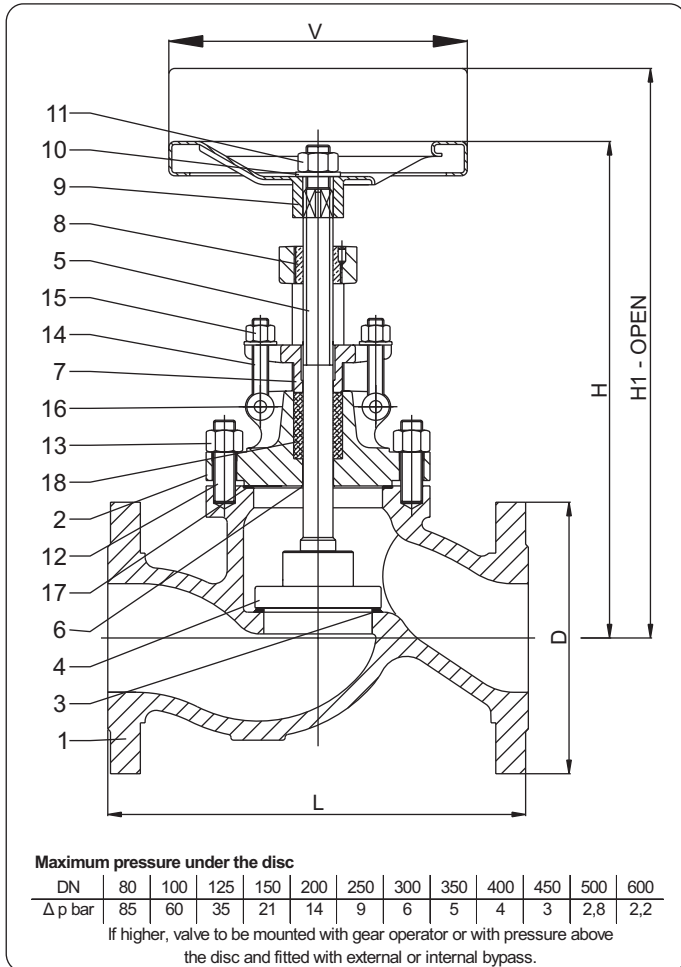


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DESCRIPTION OF A TYPICAL GLOBE VALVE - BELLOW SEAL



TYPE	CLASS	SIZES	FIG. N.	TYPE	CLASS	SIZES	FIG. N.
GLOBE VALVES BELLOW SEAL 	PN16/25	15 - 600	1800	GLOBE VALVES BOLTED BONNET 	PN16	15 - 600	1401
	PN 25/40	15 - 600	1670		PN 25/40	15 - 600	1430
	PN 63	15 - 600	1560SO		PN 63	15 - 600	1560
	PN 100	15 - 300	1570SO		PN 100	15 - 300	1570
page 78				page 72			
GLOBE VALVES 90° ANGLE BELLOW SEAL 	PN16	15 - 600	1810	GLOBE VALVES 90° ANGLE BOLTED BONNET 	PN16	15 - 600	1410
	PN 25/40	15 - 600	1680		PN 25/40	15 - 600	1440
	PN 63	15 - 600	1560ASO		PN 63	15 - 600	1560A
	PN 100	15 - 300	1570ASO		PN 100	15 - 300	1570A
page 80				page 74			
GLOBE VALVES Y TYPE BELLOW SEAL 	PN 40	50 - 600	1432SO	GLOBE VALVES Y TYPE BOLTED BONNET 	PN16	15 - 600	1403
	PN 63	50 - 600	1560YSO		PN 25/40	15 - 600	1432
	PN 100	50 - 300	1570YSO		PN 63	15 - 600	1560Y
page 82				page 76			
GLOBE VALVES Y TYPE PRESSURE SEAL 	PN 100	50 - 600	P182	GLOBE VALVES PRESSURE SEAL 	PN 100	50 - 600	P162
	PN 160	50 - 600	P183		PN 160	50 - 600	P163
	PN 250	50 - 600	P184		PN 250	50 - 600	P164
	PN 320	50 - 600	P185		PN 320	50 - 600	P165
	PN 420	50 - 600	P186		PN 420	50 - 600	P166
page 88				page 86			
				GLOBE VALVES CRYOGENIC 	PN 25/40	15 - 600	1430EB
					PN 63	15 - 600	1560EB
					PN 100	15 - 300	1570EB
				page 84			



standard features

- **Description** BOLTED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
RISING HANDWHEEL
LOOSE DISC
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	G1401 - (CAST IRON)	A1430-A1560 A1570-A1580	FK1430-FK1560-FK1570-FK1580
1 Body	EN-GJL 250	1.0619 (A)	1.4581
2 Bonnet	EN-GJL 250	1.0619 (B)	1.4581
3 Seat surface	X20Cr13 (1)	X20Cr13 (1) overlay	X5CrNiMo17-12-2 (1)
4 Disc seat surface	X20Cr13 (1)	X20Cr13 (1)	X5CrNiMo17-12-2 (1)
5 Stem	X20Cr13 (2)	X20Cr13 (2)	X5CrNiMo17-12-2 (2)
6 Back seat (integral)	EN-GJL 250	1.0619 (B)	1.4581
7 Gland	1.0460	1.0460	X5CrNiMo17-12-2
8 Yoke sleeve	N/A	MS58 (3)	MS58 (3)
9 Handwheel	Steel	Steel	Steel
10 Plate	1.0460	1.0460	1.0460
11 Handwheel nut	1.0460	1.0460	X5CrNiMo17-12-2
12 Bolts	CK35	CK35	A2-70
13 Nuts	C35	C35	A2-70
14 Eye bolts	CK35	CK35	A2-70
15 Nuts	C35	C35	A2-70
16 Eye bolt pin	CK35	CK35	A2-70
17 Gasket	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)
18 Packing	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)

(1) On request: faced with Stellite® - Monei® - Hastelloy® - other materials

(2) On request: 17 Cr - Monei® - Hastelloy® - other materials

(3) On request: GGG50

(4) On request: PTFE - other materials

(A) For PN ≤ 40 and DN ≤ 50 = 1.0460

For PN ≥ 63 and DN ≤ 25 = 1.0460

(B) For PN ≤ 40 and DN ≤ 80 = 1.0460

For PN ≥ 63 and DN ≤ 40 = 1.0460

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GLOBE VALVES - BOLTED BONNET DIN PN 16 - 25 - 40 - 63 - 100 - 160

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MANUFACTURER OF VALVES

FIG. 1401 - GLOBE VALVES BOLTED BONNET DIN PN 16 - CAST IRON - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D	95	105	115	140	150	165	185	200	220	250	285	315	340	405	460	520	580	640	715	840
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	160	165	190	200	225	260	280	320	375	415	460	550	570	750	900	1040	1290	1400	1600	
H1	164	170	197	208	235	273	297	340	400	447	498	594	620	813	975	1128	1390	1513	1725	

FIG.1430 - GLOBE VALVES BOLTED BONNET DIN PN 25 / 40 - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	160	165	190	200	225	260	280	320	375	415	460	550	570	750	900	1040	1290	1400	1600	
H1	164	170	197	208	235	273	297	340	400	447	498	594	620	813	975	1128	1390	1513	1725	

FIG. 1560 - GLOBE VALVES BOLTED BONNET DIN PN 63 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	500	600	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	1025	1150	1400	1600	
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	800	930	
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700	800	800	1000	1200	
H	250	310	310	330	350	380	410	460	490	550	610	700	750	800	930					
H1	254	315	317	338	360	393	427	480	515	582	648	744	800	863	1005					

FIG. 1570 - GLOBE VALVES BOLTED BONNET DIN PN 100 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900					
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585					
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700					
H	250	310	310	330	350	400	480	510	580	600	630	720	780	830	970					
H1	254	315	317	338	360	413	497	530	605	632	668	764	830	893	1045					

FIG. 1580 - GLOBE VALVES BOLTED BONNET DIN PN 160 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900					
D	105	130	140	155	170	195	220	230	265	315	355	390	430	515	585					
V	150	150	150	200	200	200	250	300	400	500	500	600	700	700	800					
H	250	310	310	355	355	400														
H1	254	315	317	363	365	413														

features on request

- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC ACTUATOR
- HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK SYSTEM
- PTFE SOFT SEATS
- STEM PROTECTION / EXTENSION
- REGULATING DISC
- DOUBLE STAGE DISC
- STOP CHECK DISC
- LIVE LOADED PACKING
- DRAIN PLUG
- BW ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

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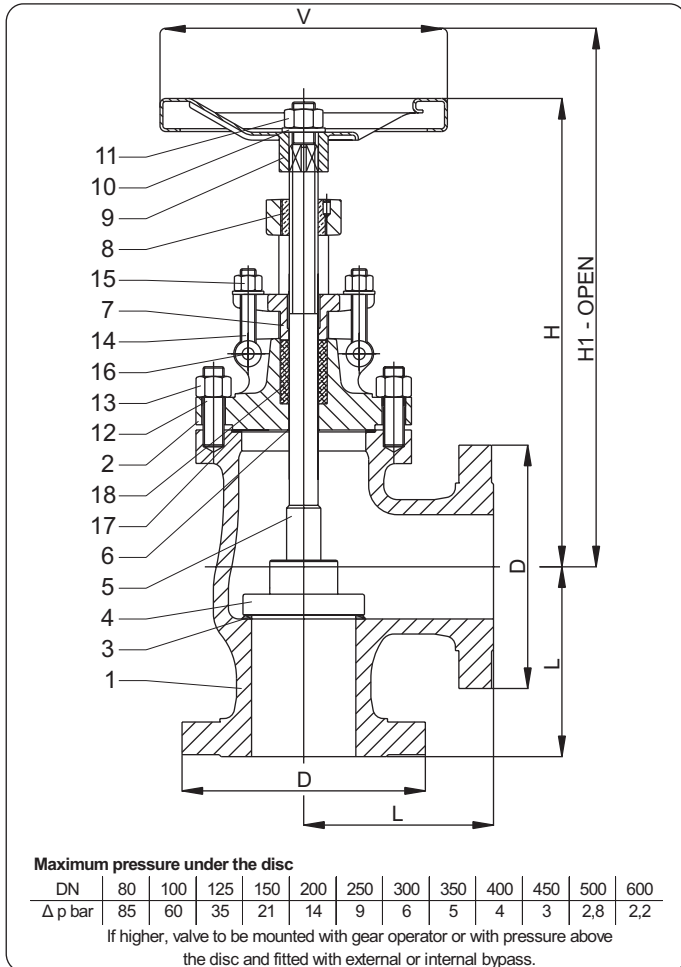


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standard features

- **Description** BOLTED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
RISING HANDWHEEL
LOOSE DISC
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	G1410 - (CAST IRON)	A1440 - A1560A - A1570A	FK1440 - FK1560A - FK1570A
1 Body	EN-GJL 250	1.0619 (A)	1.4581
2 Bonnet	EN-GJL 250	1.0619 (B)	1.4581
3 Seat surface	X20Cr13 (1)	X20Cr13 (1) overlay	X5CrNiMo17-12-2 (1)
4 Disc seat surface	X20Cr13 (1)	X20Cr13 (1)	X5CrNiMo17-12-2 (1)
5 Stem	X20Cr13 (2)	X20Cr13 (2)	X5CrNiMo17-12-2 (2)
6 Back seat (integral)	EN-GJL 250	1.0619 (B)	1.4581
7 Gland	1.0460	1.0460	X5CrNiMo17-12-2
8 Yoke sleeve	N/A	MS58 (3)	MS58 (3)
9 Handwheel	Steel	Steel	Steel
10 Plate	1.0460	1.0460	1.0460
11 Handwheel nut	1.0460	1.0460	X5CrNiMo17-12-2
12 Bolts	CK35	CK35	A2-70
13 Nuts	C35	C35	A2-70
14 Eye bolts	CK35	CK35	A2-70
15 Nuts	C35	C35	A2-70
16 Eye bolt pin	CK35	CK35	A2-70
17 Gasket	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)
18 Packing	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)

- (1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: 17 Cr - Monel® - Hastelloy® - other materials
 (3) On request: GGG50
 (4) On request: PTFE - other materials

- (A) For PN ≤ 40 and DN ≤ 50 = 1.0460
 For PN ≥ 63 and DN ≤ 25 = 1.0460
 (B) For PN ≤ 40 and DN ≤ 80 = 1.0460
 For PN ≥ 63 and DN ≤ 40 = 1.0460

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GLOBE VALVES - 90° ANGLE DIN PN 16 - 25 - 40 - 63 - 100

VALVOSIDER
MANUFACTURER OF VALVES

FIG. 1410 - GLOBE VALVES - 90° ANGLE - DIN PN 16 - CAST IRON - F32

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF	90	95	100	105	115	125	145	155	175	200	225	250	275	325	375	425	475	500	575	675
D	95	105	115	140	150	165	185	200	220	250	285	315	340	405	460	520	580	640	715	840
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	160	165	190	200	225	260	280	320	375	415	460	550	570	750	900	1040	1290	1400	1600	
H1	164	170	197	208	235	273	297	340	400	447	498	594	620	813	975	1128	1390	1513	1725	

FIG. 1440 - GLOBE VALVES - 90° ANGLE - DIN PN 25 / 40 - F32

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	90	95	100	105	115	125	145	155	175	200	225	250	275	325	375	425	475	500	575	675
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	160	165	190	200	225	260	280	320	375	415	460	550	570	750	900	1040	1290	1400	1600	
H1	164	170	197	208	235	273	297	340	400	447	498	594	620	813	975	1128	1390	1513	1725	

FIG. 1560A - GLOBE VALVES - 90° ANGLE - DIN PN 63 - F33

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	500	600	--
L RF/BW	105	105	115	130	130	150	170	190	215	250	275	300	325	390	450	515	575	700		
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	800	930	
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700	800	800	1000	1200	
H	250	310	310	330	350	380	410	460	490	550	610	700	750	800	930					
H1	254	315	317	338	360	393	427	480	515	582	648	744	800	863	1005					

FIG. 1570A - GLOBE VALVES - 90° ANGLE - DIN PN 100 - F33

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	105	105	115	130	130	150	170	190	215	250	275	300	325	390	450					
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585					
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700					
H	250	310	310	330	350	400	480	510	580	600	630	720	780	830	970					
H1	254	315	317	338	360	413	497	530	605	632	668	764	830	893	1045					

features on request

- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC ACTUATOR
- HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK SYSTEM
- PTFE SOFT SEATS
- STEM PROTECTION / EXTENSION
- REGULATING DISC
- DOUBLE STAGE DISC
- STOP CHECK DISC
- LIVE LOADED PACKING
- DRAIN PLUG
- BW ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.

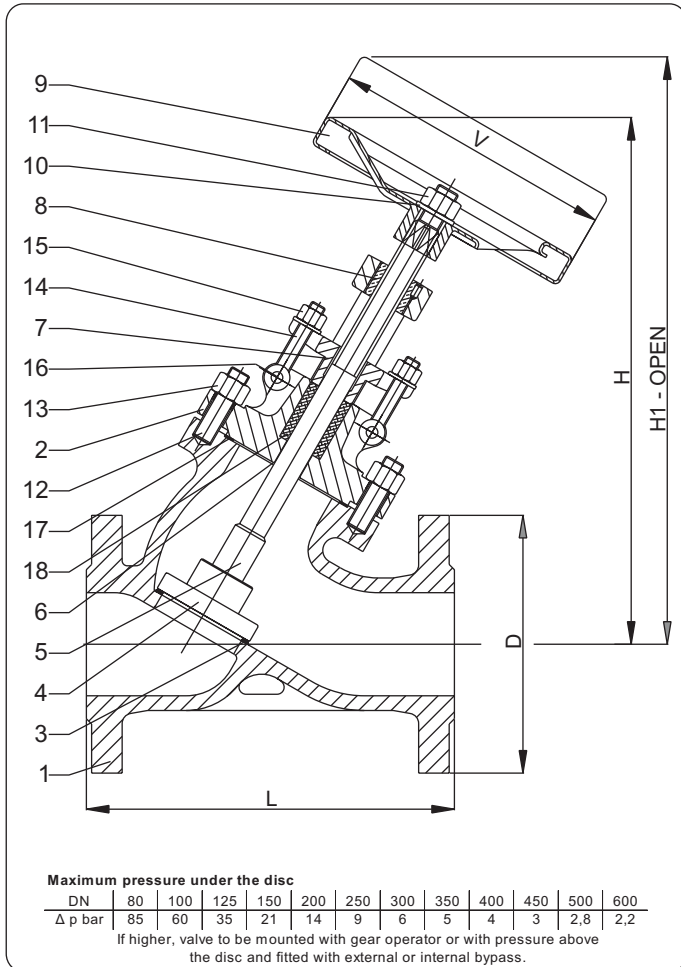


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Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com



standard features

- **Description** BOLTED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
RISING HANDWHEEL
LOOSE DISC
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	G1403 - (CAST IRON)	A1432 - A1560Y - A1570Y	FK1432 - FK1560Y - FK1570Y
1 Body	EN-GJL 250	1.0619 (A)	1.4581
2 Bonnet	EN-GJL 250	1.0619 (B)	1.4581
3 Seat surface	X20Cr13 (1)	X20Cr13 (1) overlay	X5CrNiMo17-12-2 (1)
4 Disc seat surface	X20Cr13 (1)	X20Cr13 (1)	X5CrNiMo17-12-2 (1)
5 Stem	X20Cr13 (2)	X20Cr13 (2)	X5CrNiMo17-12-2 (2)
6 Back seat (integral)	EN-GJL 250	1.0619 (B)	1.4581
7 Gland	1.0460	1.0460	X5CrNiMo17-12-2
8 Yoke sleeve	N/A	MS58 (3)	MS58 (3)
9 Handwheel	Steel	Steel	Steel
10 Plate	1.0460	1.0460	1.0460
11 Handwheel nut	1.0460	1.0460	X5CrNiMo17-12-2
12 Bolts	CK35	CK35	A2-70
13 Nuts	C35	C35	A2-70
14 Eye bolts	CK35	CK35	A2-70
15 Nuts	C35	C35	A2-70
16 Eye bolt pin	CK35	CK35	A2-70
17 Gasket	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)
18 Packing	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)

(1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials

(2) On request: 17 Cr - Monel® - Hastelloy® - other materials

(3) On request: GGG50

(4) On request: PTFE - other materials

(A) For PN < 40 and DN < 25 = 1.0460

For PN > 63 and DN < 25 = 1.0460

(B) For PN < 40 and DN < 80 = 1.0460

For PN > 63 and DN < 40 = 1.0460

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GLOBE VALVES - 'Y' TYPE DIN PN 16 - 25 - 40 - 63 - 100

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MANUFACTURER OF VALVES

FIG. 1403 - GLOBE VALVES - Y TYPE - DIN PN 16 - CAST IRON - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D	95	105	115	140	150	165	185	200	220	250	285	315	340	405	460	520	580	640	715	840
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	180	190	210	250	290	340	380	450	500	570	650	770	840	950	1100	1250	1500	1650	1850	
H1	184	195	217	258	300	353	397	470	525	602	688	814	890	1013	1175	1338	1600	1763	1975	

FIG. 1432 - GLOBE VALVES - Y TYPE - DIN PN 25 / 40 - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	180	190	210	250	290	340	380	450	500	570	650	770	840	950	1100	1250	1500	1650	1850	
H1	184	195	217	258	300	353	397	470	525	602	688	814	890	1013	1175	1338	1600	1763	1975	

FIG. 1560Y - GLOBE VALVES - Y TYPE - DIN PN 63 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	500	600	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	1025	1150	1400	1600	
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	800	930	
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700	800	800	1000	1200	
H	272	338	332	385	422	468	520	603	628	721	819	942	1047	1020	1150					
H1	276	343	339	393	432	481	537	623	653	753	857	986	1097	1083	1225					

FIG. 1570Y - GLOBE VALVES - Y TYPE - DIN PN 100 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900					
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585					
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700					
H	275	341	335	391	430	497	601	668	732	789	860	987	1107	1072	1212					
H1	279	346	342	399	440	510	618	688	757	821	898	1031	1157	1135	1287					

features on request

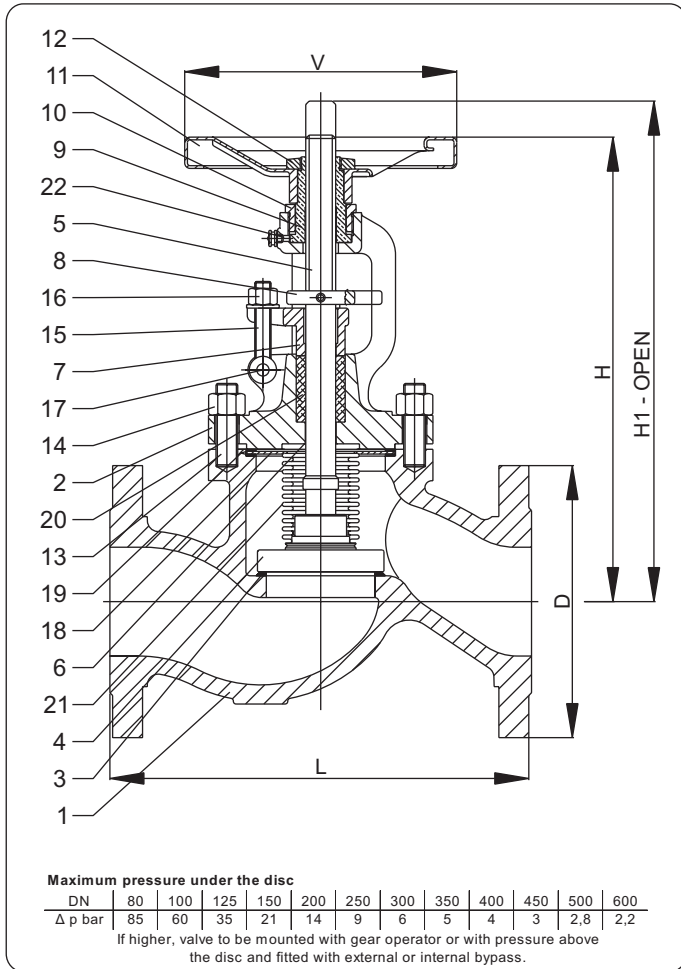
- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC ACTUATOR
- HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK SYSTEM
- PTFE SOFT SEATS
- STEM PROTECTION / EXTENSION
- REGULATING DISC
- DOUBLE STAGE DISC
- STOP CHECK DISC
- LIVE LOADED PACKING
- DRAIN PLUG
- BW ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

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standard features

- **Description** BOLTED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
NON RISING HANDWHEEL
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	S1800 - (NODULAR IRON)	A1670 - A1560SO - A1570SO	FK1670 - FK1560SO - FK1570SO
1 Body	EN GJS 400 18 LT	1.0619 (A)	1.4581
2 Bonnet	EN GJS 400 18 LT	1.0619 (B)	1.4581
3 Seat surface	X20Cr13 (1)	X20Cr13 (1) overlay	1.4581 (1)
4 Disc seat surface	X20Cr13 (1)	X20Cr13 (1)	X5CrNiMo17 12 2 (1)
5 Stem	X20Cr13 (2)	X20Cr13 (2)	X5CrNiMo17 12 2 (2)
6 Back seat (integral)	EN GJS 400 18 LT	1.0619 (B)	1.4581
7 Gland	1.0460	1.0460	X5CrNiMo17 12 2
8 No rot. Device	X20Cr13	X20Cr13	X5CrNiMo17 12 2
9 Yoke sleeve	N/A	MS58 (3)	MS58 (3)
10 Yoke nut	1.0460	1.0460	X5CrNiMo17 12 2
11 Handwheel	Steel	Steel	Steel
12 Handwheel nut	1.0460	1.0460	X5CrNiMo17 12 2
13 Bolts	CK35	CK35	A2 70
14 Nuts	C35	C35	A2 70
15 Eye bolts	CK35	CK35	A2 70
16 Nuts	C35	C35	A2 70
17 Eye bolt pin	CK35	CK35	A2 70
18 Bellow flange	X6CrNiTi18 10	X6CrNiTi18 10	X6CrNiTi18 10
19 Gasket	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)
20 Packing	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)
21 Bellow	X6CrNiTi18 10	X6CrNiTi18 10	X6CrNiTi18 10
22 Grease nipple	Steel	Steel	Steel

- (1) On request: faced with Stellite® - Monei® - Hastelloy® - other materials
 (2) On request: 17 Cr - Monei® - Hastelloy® - other materials
 (3) On request: GGG50
 (4) On request: PTFE - other materials

- (A) For PN ≤ 40 and DN ≤ 50 = 1.0460
 For PN ≥ 63 and DN ≤ 25 = 1.0460
 (B) For PN ≤ 40 and DN ≤ 80 = 1.0460
 For PN ≥ 63 and DN ≤ 40 = 1.0460

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GLOBE VALVES BELLOW SEAL DIN PN 16 - 25 - 40 - 63 - 100

VALVOSIDER
MANUFACTURER OF VALVES

FIG. 1800 - GLOBE VALVES BELLOW SEAL - DIN PN 16 / 25 - NODULAR IRON - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D	95	105	115	140	150	165	185	200	220	250	285	315	340	405	460	520	580	640	715	840
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	180	190	210	250	290	340	380	450	500	570	650	770	840	950	1100	1250	1500	1650	1850	
H1	184	195	217	258	300	353	397	470	525	602	688	814	890	1013	1175	1338	1600	1763	1975	

FIG. 1670 - GLOBE VALVES BELLOW SEAL - DIN PN 25 / 40 - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	210	220	220	220	240	270	310	350	400	460	510	600	630	810	950	1100	1350	1460	1660	
H1	214	225	227	228	250	283	327	370	425	492	548	594	680	813	925	1088	1300	1513	1725	

FIG. 1560SO - GLOBE VALVES BELLOW SEAL - DIN PN 63 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	500	600	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	1025	1150	1400	1600	
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	800	930	
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700	800	800	1000	1200	
H	300	360	360	380	400	430	460	510	540	610	670	760	810	860	990					
H1	304	365	367	388	410	443	477	530	565	642	708	804	860	923	1065					

FIG. 1570SO - GLOBE VALVES BELLOW SEAL - DIN PN 100 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900					
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585					
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700					
H	300	360	360	380	400	450	530	560	630	660	690	780	840	890	1030					
H1	304	365	367	388	410	463	547	580	655	692	728	824	890	953	1105					

features on request

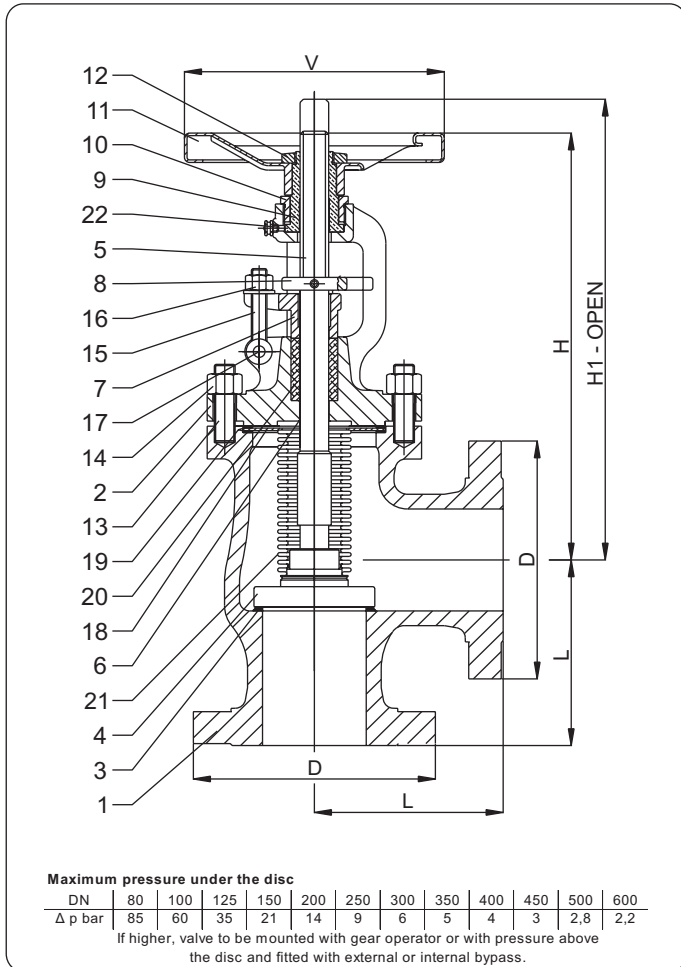
- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC ACTUATOR
- HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK SYSTEM
- PTFE SOFT SEATS
- STEM PROTECTION / EXTENSION
- REGULATING DISC
- DOUBLE STAGE DISC
- STOP CHECK DISC
- LIVE LOADED PACKING
- DRAIN PLUG
- BW ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

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standard features

- **Description** BOLTED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
NON RISING HANDWHEEL
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	S1810 - (NODULAR IRON)	A1680-A1560ASO-A1570ASO	FK1680-FK1560ASO-FK1570ASO
1 Body	EN GJS 400 18 LT	1.0619 (A)	1.4581
2 Bonnet	EN GJS 400 18 LT	1.0619 (B)	1.4581
3 Seat surface	X20Cr13 (1)	X20Cr13 (1) overlay	X5CrNiMo17 12 2 (1)
4 Disc seat surface	X20Cr13 (1)	X20Cr13 (1)	X5CrNiMo17 12 2 (1)
5 Stem	X20Cr13 (2)	X20Cr13 (2)	X5CrNiMo17 12 2 (2)
6 Back seat (integral)	EN GJS 400 18 LT	1.0619 (B)	1.4581
7 Gland	1.0460	1.0460	X5CrNiMo17 12 2
8 No rot. Device	X20Cr13	X20Cr13	X5CrNiMo17 12 2
9 Yoke sleeve	N/A	MS58 (3)	MS58 (3)
10 Yoke nut	1.0460	1.0460	X5CrNiMo17 12 2
11 Handwheel	Steel	Steel	Steel
12 Handwheel nut	1.0460	1.0460	X5CrNiMo17 12 2
13 Bolts	CK35	CK35	A2 70
14 Nuts	C35	C35	A2 70
15 Eye bolts	CK35	CK35	A2 70
16 Nuts	C35	C35	A2 70
17 Eye bolt pin	CK35	CK35	A2 70
18 Bellow flange	X6CrNiTi18 10	X6CrNiTi18 10	X6CrNiTi18 10
19 Gasket	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)
20 Packing	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)
21 Bellow	X6CrNiTi18 10	X6CrNiTi18 10	X6CrNiTi18 10
22 Grease nipple	Steel	Steel	Steel

- (1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: 17 Cr - Monel® - Hastelloy® - other materials
 (3) On request: GGG50
 (4) On request: PTFE - other materials

- (A) For PN ≤ 40 and DN ≤ 50 = 1.0460
 For PN ≥ 63 and DN ≤ 25 = 1.0460
 (B) For PN ≤ 40 and DN ≤ 80 = 1.0460
 For PN ≥ 63 and DN ≤ 40 = 1.0460

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GLOBE VALVES BELLOW SEAL - 90° ANGLE DIN PN 16 - 25 - 40 - 63 - 100

VALVOSIDER
MANUFACTURER OF VALVES

FIG. 1810 - GLOBE VALVES BELLOW SEAL - 90° ANGLE - DIN PN 16 / 25 - NODULAR IRON - F32

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF	90	95	100	105	115	125	145	155	175	200	225	250	275	325	375	425	475	500	575	675
D	95	105	115	140	150	165	185	200	220	250	285	315	340	405	460	520	580	640	715	840
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	180	190	210	250	290	340	380	450	500	570	650	770	840	950	1100	1250	1500	1650	1850	
H1	184	195	217	258	300	353	397	470	525	602	688	814	890	1013	1175	1338	1600	1763	1975	

FIG. 1680 - GLOBE VALVES BELLOW SEAL - 90° ANGLE - DIN PN 25 / 40 - F32

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	90	95	100	105	115	125	145	155	175	200	225	250	275	325	375	425	475	500	575	675
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	210	220	220	220	240	270	310	350	400	460	510	600	630	810	950	1100	1350	1460	1660	
H1	214	225	227	228	250	283	327	370	425	492	548	594	680	813	925	1088	1300	1513	1725	

FIG. 1560ASO - GLOBE VALVES BELLOW SEAL - 90° ANGLE - DIN PN 63 - F33

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	500	600	--
L RF/BW	105	105	115	130	130	150	170	190	215	250	275	300	325	390	450	515	575	700		
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	800	930	
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700	800	800	1000	1200	
H	300	360	360	380	400	430	460	510	540	610	670	760	810	860	990					
H1	304	365	367	388	410	443	477	530	565	642	708	804	860	923	1065					

FIG. 1570ASO - GLOBE VALVES BELLOW SEAL - 90° ANGLE - DIN PN 100 - F33

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	105	105	115	130	130	150	170	190	215	250	275	300	325	390	450					
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585					
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700					
H	300	360	360	380	400	450	530	560	630	660	690	780	840	890	1030					
H1	304	365	367	388	410	463	547	580	655	692	728	824	890	953	1105					

features on request

- | | |
|---|--|
| <input type="checkbox"/> TOP FLANGE TO ISO 5210 | <input type="checkbox"/> PTFE SOFT SEATS |
| <input type="checkbox"/> GEAR OPERATOR | <input type="checkbox"/> STEM PROTECTION / EXTENSION |
| <input type="checkbox"/> CHAIN WHEEL OPERATOR | <input type="checkbox"/> REGULATING DISC |
| <input type="checkbox"/> PNEUMATIC ACTUATOR | <input type="checkbox"/> DOUBLE STAGE DISC |
| <input type="checkbox"/> HYDRAULIC ACTUATOR | <input type="checkbox"/> STOP CHECK DISC |
| <input type="checkbox"/> ELECTRIC ACTUATOR | <input type="checkbox"/> LIVE LOADED PACKING |
| <input type="checkbox"/> POSITION INDICATOR | <input type="checkbox"/> DRAIN PLUG |
| <input type="checkbox"/> LIMIT SWITCHES | <input type="checkbox"/> BW ENDS |
| <input type="checkbox"/> LOCKING / INTERLOCK SYSTEM | <input type="checkbox"/> ANSI CONNECTIONS |

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.

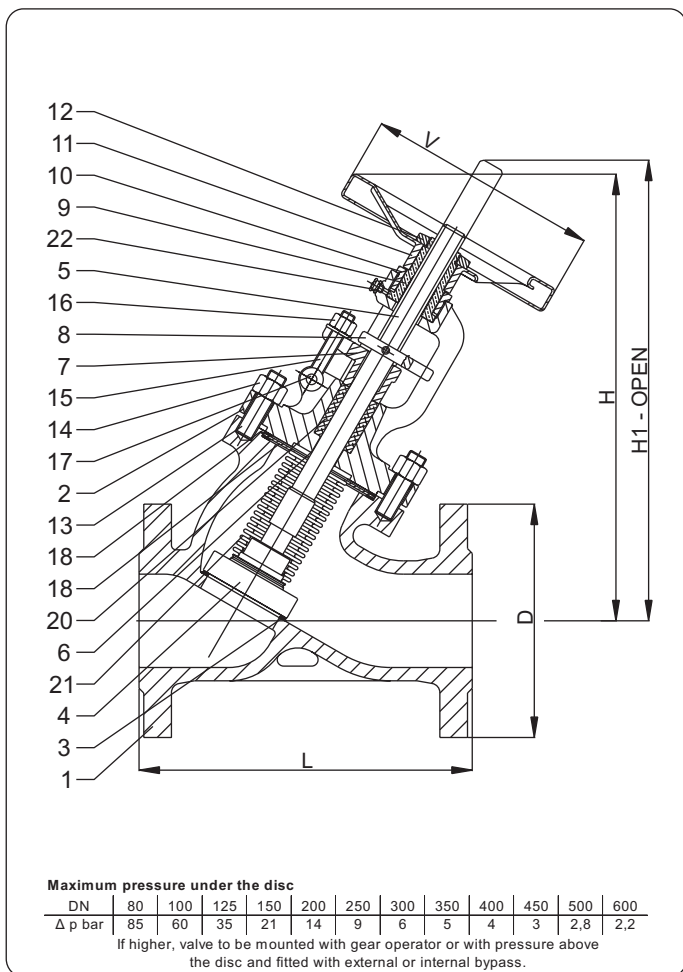


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Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com



standard features

- **Description** BOLTED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
NON RISING HANDWHEEL
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	A1432SO - A1560YSO - A1570YSO	FK1432SO - FK1560YSO - FK1570YSO
1 Body	1.0619 (A)	1.4581
2 Bonnet	1.0619 (B)	1.4581
3 Seat surface	X20Cr13 (1)	X5CrNiMo17 12 2 (1)
4 Disc seat surface	X20Cr13 (1)	X5CrNiMo17 12 2 (1)
5 Stem	X20Cr13 (2)	X5CrNiMo17 12 2 (2)
6 Back seat (integral)	1.0619 (B)	1.4581
7 Gland	1.0460	X5CrNiMo17 12 2
8 No rot. Device	X20Cr13	X5CrNiMo17 12 2
9 Yoke sleeve	MS58 (3)	MS58 (3)
10 Yoke nut	1.0460	X5CrNiMo17 12 2
11 Handwheel	Steel	Steel
12 Handwheel nut	1.0460	X5CrNiMo17 12 2
13 Bolts	CK35	A2 70
14 Nuts	C35	A2 70
15 Eye bolts	CK35	A2 70
16 Nuts	C35	A2 70
17 Eye bolt pin	CK35	A2 70
18 Bellow flange	X6CrNiTi18 10	X6CrNiTi18 10
19 Gasket	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)
20 Packing	Graphite rings & wiper rings (4)	Graphite rings & wiper rings (4)
21 Bellow	X6CrNiTi18 10	X6CrNiTi18 10
22 Grease nipple	Steel	Steel

- (1) On request: faced with **Stellite®** - **Monel®** - **Hastelloy®** - other materials
 (2) On request: 17 Cr - **Monel®** - **Hastelloy®** - other materials
 (3) On request: GGG50
 (4) On request: PTFE - other materials

- (A) For PN ≤ 40 and DN ≤ 25 = 1.0460
 For PN ≥ 63 and DN ≤ 25 = 1.0460
 (B) For PN ≤ 40 and DN ≤ 80 = 1.0460
 For PN ≥ 63 and DN ≤ 40 = 1.0460

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GLOBE VALVES BELLOW SEAL - 'Y' TYPE DIN PN 25 - 40 - 63 - 100

VALVOSIDER
MANUFACTURER OF VALVES

FIG. 1432SO - GLOBE VALVES BELLOW SEAL - Y TYPE - DIN PN 25 / 40 - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
H	230	240	260	300	340	390	430	500	550	630	710	830	900	1010	1160	1310	1560	1710	1910	
H1	234	245	267	308	350	403	447	520	575	662	748	874	950	1073	1235	1398	1660	1823	2035	

FIG. 1560YSO - GLOBE VALVES BELLOW SEAL - Y TYPE - DIN PN 63 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	500	600	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	1025	1150	1400	1600	
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	800	930	
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700	800	800	1000	1200	
H	322	388	382	435	472	518	570	653	678	781	879	1002	1107	1080	1210					
H1	326	393	389	443	482	531	587	673	703	813	917	1046	1157	1143	1285					

FIG. 1570YSO - GLOBE VALVES BELLOW SEAL - Y TYPE - DIN PN 100 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900					
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585					
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700					
H	325	391	385	441	480	547	651	718	782	849	920	1047	1167	1132	1272					
H1	329	396	392	449	490	560	668	738	807	881	958	1091	1217	1195	1347					

features on request

- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC ACTUATOR
- HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK SYSTEM
- PTFE SOFT SEATS
- STEM PROTECTION / EXTENSION
- REGULATING DISC
- DOUBLE STAGE DISC
- STOP CHECK DISC
- LIVE LOADED PACKING
- DRAIN PLUG
- BW ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.

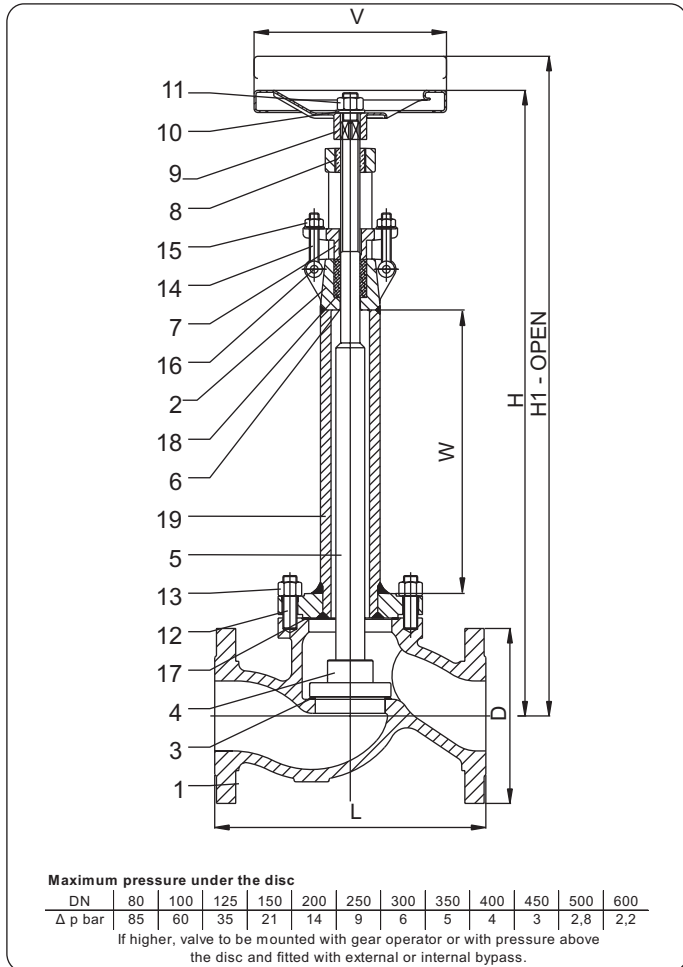


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Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com



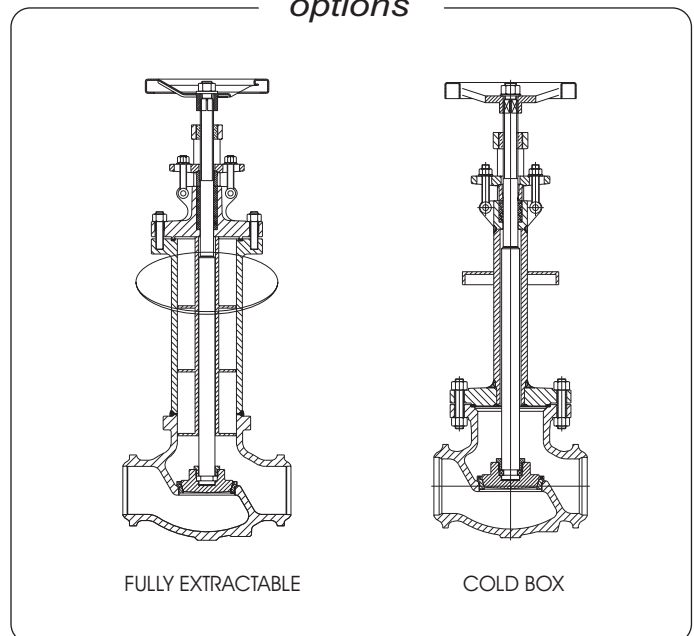
standard features

- **Description** BOLTED BONNET
EXTENDED BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
RISING HANDWHEEL
LOOSING DISC
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 - 3.1 B

PART NAME	FH1430EB - FH1560EB - FH1570EB
1 Body	1.4552
2 Bonnet	1.4552
3 Seat (integral)	1.4552 (1)
4 Disc	X5CrNiMo17-12-2 (1)
5 Stem	X5CrNiMo17-12-2 (2)
6 Back seat (integral)	1.4552
7 Gland	X5CrNiMo17-12-2
8 Yoke sleeve	MS58 (3)
9 Handwheel	Steel
10 Plate	1.0460
11 Handwheel nut	X5CrNiMo17-12-2
12 Bolts	A2-70
13 Nuts	A2-70
14 Eye bolts	A2-70
15 Nuts	A2-70
16 Eye bolt pin	A2-70
17 Gasket	S. S. reinforced graphite (4)
18 Packing	Graphite rings & wiper rings (4)
19 Extension	X2CrNiMo17-12-2

(1) On request: faced with Stellite[®] - Monel[®] - Hastelloy[®] - other materials
 (2) On request: 17 Cr - Monel[®] - Hastelloy[®] - other materials

options



(3) On request: GGG50
 (4) On request: PTFE - other materials

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GLOBE VALVES - CRYOGENIC DIN PN 25 - 40 - 63 - 100

VALVOSIDER
MANUFACTURER OF VALVES

FIG. 1430EB - CRYOGENIC GLOBE VALVES - DIN PN 25 / 40 - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
V	100	100	125	125	150	150	200	200	225	225	300	300	400	500	500	600	600	700	700	800
W	200	200	200	200	200	200	200	300	300	300	300	300	300	300	300	300	300	300	300	300
H	565	570	595	605	630	665	685	825	880	920	1070	1160	1180	1360	1510	1650	1900	2010	2210	2750
H1	569	575	602	613	640	678	702	845	905	952	1108	1204	1230	1423	1585	1738	2000	2123	2335	

FIG. 1560EB - CRYOGENIC GLOBE VALVES - DIN PN 63 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	500	600	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	1025	1150	1400	1600	
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	800	930	
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700	800	800	1000	1200	
W	200	200	200	200	200	200	200	300	300	300	300	300	300	300	300	300	300	300	300	
H	655	715	715	735	755	785	815	965	995	1055	1220	1310	1360	1410	1540					
H1	659	720	722	743	765	798	832	985	1020	1087	1258	1354	1410	1473	1615					

FIG. 1570EB - CRYOGENIC GLOBE VALVES - DIN PN 100 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900					
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585					
V	150	150	150	200	200	200	225	250	300	400	500	500	600	700	700					
W	200	200	200	200	200	200	200	300	300	300	300	300	300	300	300					
H	655	715	715	735	755	805	885	1015	1085	1105	1240	1330	1390	1440	1580					
H1	659	720	722	743	765	818	902	1035	1110	1137	1278	1374	1440	1503	1655					

features on request

- | | |
|--|---|
| <ul style="list-style-type: none"> <input type="radio"/> TOP FLANGE TO ISO 5210 <input type="radio"/> GEAR OPERATOR <input type="radio"/> CHAIN WHEEL OPERATOR <input type="radio"/> PNEUMATIC ACTUATOR <input type="radio"/> HYDRAULIC ACTUATOR <input type="radio"/> ELECTRIC ACTUATOR <input type="radio"/> POSITION INDICATOR <input type="radio"/> LIMIT SWITCHES <input type="radio"/> LOCKING / INTERLOCK SYSTEM | <ul style="list-style-type: none"> <input type="radio"/> PTFE SOFT SEATS <input type="radio"/> STEM PROTECTION / EXTENSION <input type="radio"/> REGULATING DISC <input type="radio"/> DOUBLE STAGE DISC <input type="radio"/> STOP CHECK DISC <input type="radio"/> LIVE LOADED PACKING <input type="radio"/> DRAIN PLUG <input type="radio"/> BW ENDS <input type="radio"/> ANSI CONNECTIONS |
|--|---|

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.



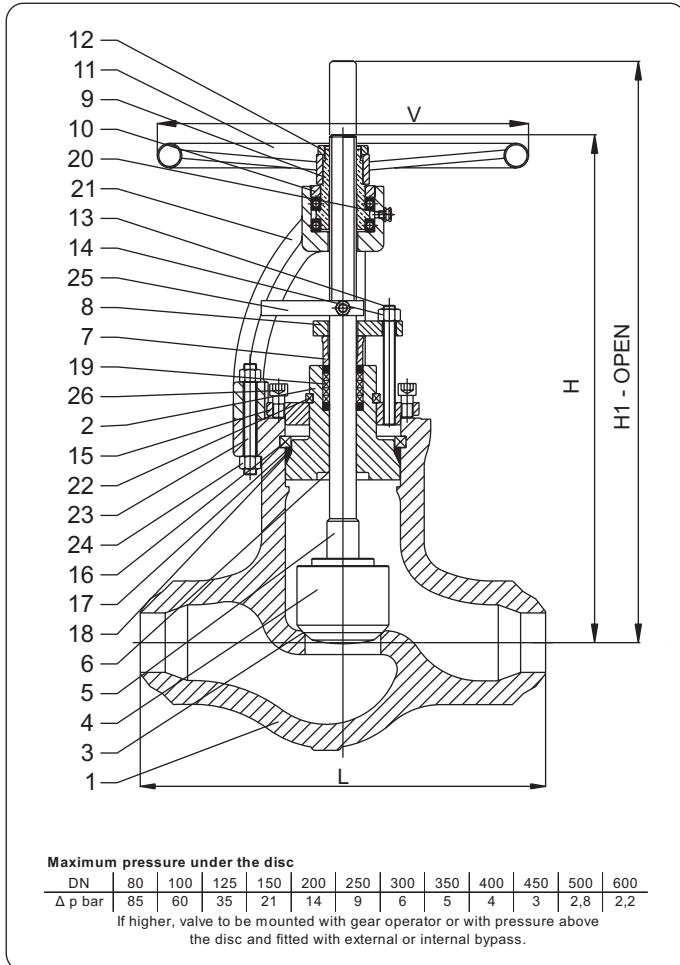
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standard features



- **Description** PRESSURE SEAL BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
NON RISING HANDWHEEL
INTEGRAL BACKSEAT
WELDED IN SEATS
LOOSED DISC
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	AP16x	MP16x	WCP16x
1 Body	1.0619	1.7357	1.7380
2 Bonnet	1.0619	1.7357	1.7380
3 Ring - seat surface	1.0460 - HF (1)	1.0460 + HF (1)	1.0460 + HF (1)
4 Disc - seat surface	1.0619 - HF (1)	1.7357 + HF (1)	1.7380 + HF (1)
5 Stem	X20Cr13 (3)	X20Cr13 (3)	X20Cr13 (3)
6 Back seat (integral)	Overlay Stellite [®] (2)	Overlay Stellite [®] (2)	Overlay Stellite [®] (2)
7 Gland	X20Cr13	X20Cr13	X20Cr13
8 Gland flange	1.0460	X20Cr13	X20Cr13
9 Yoke sleeve	GGG50 (4)	GGG50 (4)	GGG50 (4)
10 Yoke nut	1.0460	1.0460	1.0460
11 Handwheel	Steel	Steel	Steel
12 Handwheel nut	1.0460	1.0460	1.0460
13 Bolts	CK35	21CrMoV57	21CrMoV57
14 Nuts	C35	24CrMo5	24CrMo5
15 Retainer flange	1.0460	1.0460	1.0460
16 Retainer ring	X20Cr13	X20Cr13	X20Cr13
17 Spacer ring	X20Cr13	X20Cr13	X20Cr13
18 Gasket	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)
19 Packing	Graphite rings and wiper rings	Graphite rings and wiper rings	Graphite rings and wiper rings
20 Grease nipple	Steel	Steel	Steel
21 Yoke	1.0619	1.7357	1.7380
22 Support ring	1.0460	X20Cr13	X20Cr13
23 Yoke / body bolt	CK35	21CrMoV57	21CrMoV57
24 Yoke / body nut	C35	24CrMo5	24CrMo5
25 No rotation device	C35	21CrMoV57	21CrMoV57
26 Bolt	CK35	21CrMoV57	21CrMoV57

(1) On request: faced with Stellite[®] - Monel[®] - Hastelloy[®] - other materials
 (2) On request: faced with Monel[®] - Hastelloy[®] - other materials
 (3) On request: 17 Cr - Monel[®] - Hastelloy[®] - other materials

(4) On request: Nodular Iron - Nitronic 60
 (5) On request: Metal

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PRESSURE SEAL GLOBE VALVES DIN PN 100 - 160 - 250 - 320 - 420

VALVOSIDER
MANUFACTURER OF VALVES

FIG. P162 - PRESSURE SEAL GLOBE VALVES DIN PN 100 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	
V	200	200	250	300	400	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	
H	500	590	590	600	860	860	1000	1330	1480				
H1	513	607	610	625	892	898	1050	1393	1555				

FIG. P163 - PRESSURE SEAL GLOBE VALVES DIN PN 160 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	
V	250	300	300	400	500	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	
H	500	590	590	600	860	860	1000	1330	1480				
H1	513	607	610	625	892	898	1050	1393	1555				

FIG. P164 - PRESSURE SEAL GLOBE VALVES DIN PN 250 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	
V	300	400	400	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	
H	500	590	590	600	860	860	1000	1330	1480				
H1	513	607	610	625	892	898	1050	1393	1555				

FIG. P165 - PRESSURE SEAL GLOBE VALVES DIN PN 320 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	
V	300	400	400	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	
H	500	590	590	600	860	860	1000	1330	1480				
H1	513	607	610	625	892	898	1050	1393	1555				

FIG. P166 - PRESSURE SEAL GLOBE VALVES DIN PN 420 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	
V	300	400	400	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	
H	500	590	590	600	860	860	1000	1330	1480				
H1	513	607	610	625	892	898	1050	1393	1555				

features on request

- TOP FLANGE TO ISO 5210
- GEAR OPERATOR
- CHAIN WHEEL OPERATOR
- PNEUMATIC ACTUATOR
- HYDRAULIC ACTUATOR
- ELECTRIC ACTUATOR
- POSITION INDICATOR
- LIMIT SWITCHES
- LOCKING / INTERLOCK SYSTEM
- PTFE SOFT SEATS
- STEM PROTECTION / EXTENSION
- REGULATING DISC
- DOUBLE STAGE DISC
- STOP CHECK DISC
- LIVE LOADED PACKING
- DRAIN PLUG
- FLANGED ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.

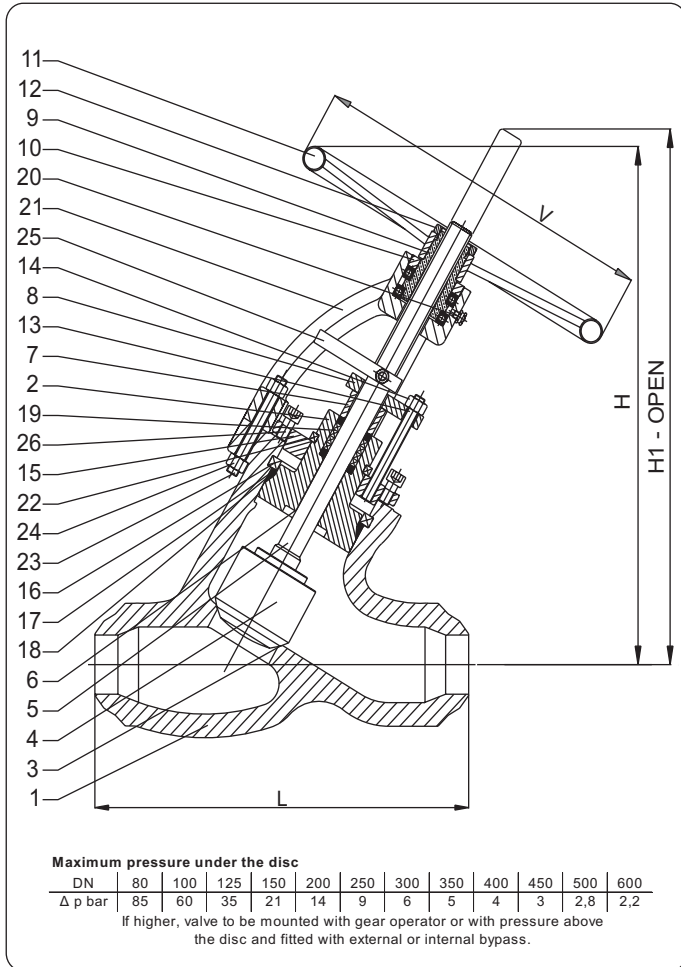


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standard features

- **Description** PRESSURE SEAL BONNET
OUTSIDE SCREW AND YOKE
RISING STEM
NON RISING HANDWHEEL
INTEGRAL BACKSEAT
WELDED IN SEATS
LOOSED DISC
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 - 3.1 B

PART NAME	AP18x	WP18x	WCP18x
1 Body	1.0619	1.7357	1.7380
2 Bonnet	1.0619	1.7357	1.7380
3 Ring - seat surface	1.0460 - HF (1)	1.0460 + HF (1)	1.0460 + HF (1)
4 Disc - seat surface	1.0619 - HF (1)	1.7357 + HF (1)	1.7380 + HF (1)
5 Stem	X20Cr13 (3)	X20Cr13 (3)	X20Cr13 (3)
6 Back seat (integral)	Overlay Stellite [®] (2)	Overlay Stellite [®] (2)	Overlay Stellite [®] (2)
7 Gland	X20Cr13	X20Cr13	X20Cr13
8 Gland flange	1.0460	X20Cr13	X20Cr13
9 Yoke sleeve	GGG50 (4)	GGG50 (4)	GGG50 (4)
10 Yoke nut	1.0460	1.0460	1.0460
11 Handwheel	Steel	Steel	Steel
12 Handwheel nut	1.0460	1.0460	1.0460
13 Bolts	CK35	21CrMoV57	21CrMoV57
14 Nuts	C35	24CrMo5	24CrMo5
15 Retainer flange	1.0460	1.0460	1.0460
16 Retainer ring	X20Cr13	X20Cr13	X20Cr13
17 Spacer ring	X20Cr13	X20Cr13	X20Cr13
18 Gasket	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)	S. S. reinforced graphite (4)
19 Packing	Graphite rings and wiper rings	Graphite rings and wiper rings	Graphite rings and wiper rings
20 Grease nipple	Steel	Steel	Steel
21 Yoke	1.0619	1.7357	1.7380
22 Support ring	1.0460	1.0460	1.0460
23 Yoke / body bolt	CK35	21CrMoV57	21CrMoV57
24 Yoke / body nut	C35	24CrMo5	24CrMo5
25 No rotation device	C35	21CrMoV57	21CrMoV57
26 Bolt	CK35	21CrMoV57	21CrMoV57

(1) On request: faced with Stellite[®] - Monel[®] - Hastelloy[®] - other materials
 (2) On request: faced with Monel[®] - Hastelloy[®] - other materials
 (3) On request: 17 Cr - Monel[®] - Hastelloy[®] - other materials

(4) On request: Nodular Iron - Nitronic 60
 (5) On request: Metal

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PRESSURE SEAL GLOBE VALVES - 'Y' TYPE

DIN PN 100 - 160 - 250 - 320 - 420

VALVOSIDER
MANUFACTURER OF VALVES

FIG. P182 - PRESSURE SEAL GLOBE VALVES - Y TYPE - DIN PN 100 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	
V	200	200	250	300	400	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	
H	500	590	590	600	860	860	1000	1330	1480				
H1	513	607	610	625	892	898	1050	1393	1555				

FIG. P183 - PRESSURE SEAL GLOBE VALVES - Y TYPE - DIN PN 160 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	
V	250	300	300	400	500	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	
H	500	590	590	600	860	860	1000	1330	1480				
H1	513	607	610	625	892	898	1050	1393	1555				

FIG. P184 - PRESSURE SEAL GLOBE VALVES - Y TYPE - DIN PN 250 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	
V	300	400	400	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	
H	500	590	590	600	860	860	1000	1330	1480				
H1	513	607	610	625	892	898	1050	1393	1555				

FIG. P185 - PRESSURE SEAL GLOBE VALVES - Y TYPE - DIN PN 320 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	
V	300	400	400	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	
H	500	590	590	600	860	860	1000	1330	1480				
H1	513	607	610	625	892	898	1050	1393	1555				

FIG. P186 - PRESSURE SEAL GLOBE VALVES - Y TYPE - DIN PN 420 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	
V	300	400	400	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	G.O.	
H	500	590	590	600	860	860	1000	1330	1480				
H1	513	607	610	625	892	898	1050	1393	1555				

features on request

- | | |
|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> TOP FLANGE TO ISO 5210 <input type="checkbox"/> GEAR OPERATOR <input type="checkbox"/> CHAIN WHEEL OPERATOR <input type="checkbox"/> PNEUMATIC ACTUATOR <input type="checkbox"/> HYDRAULIC ACTUATOR <input type="checkbox"/> ELECTRIC ACTUATOR <input type="checkbox"/> POSITION INDICATOR <input type="checkbox"/> LIMIT SWITCHES <input type="checkbox"/> LOCKING / INTERLOCK SYSTEM | <ul style="list-style-type: none"> <input type="checkbox"/> PTFE SOFT SEATS <input type="checkbox"/> STEM PROTECTION / EXTENSION <input type="checkbox"/> REGULATING DISC <input type="checkbox"/> DOUBLE STAGE DISC <input type="checkbox"/> STOP CHECK DISC <input type="checkbox"/> LIVE LOADED PACKING <input type="checkbox"/> DRAIN PLUG <input type="checkbox"/> FLANGED ENDS <input type="checkbox"/> ANSI CONNECTIONS |
|---|---|

All dimensions in mm (except where differently indicated)

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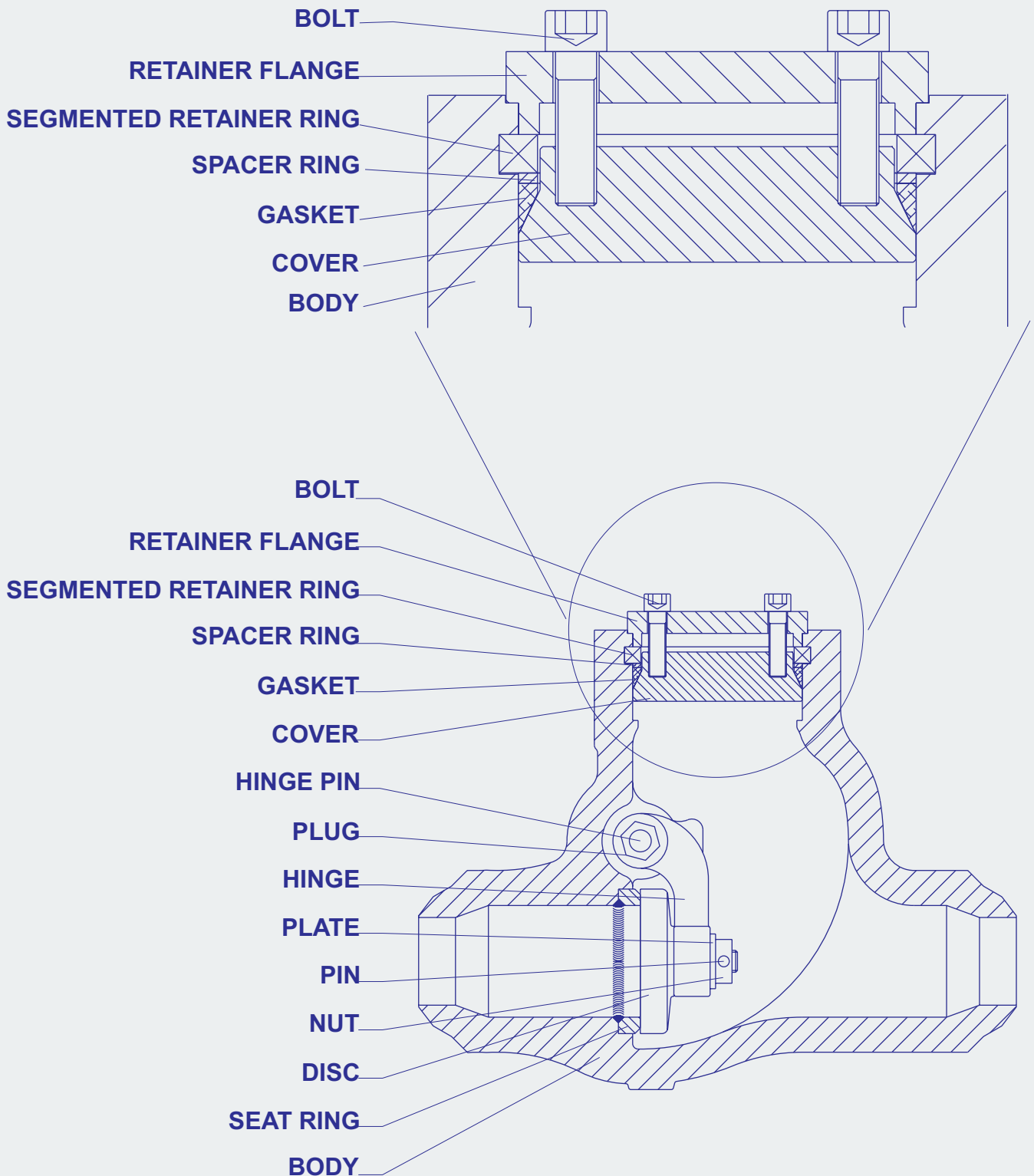
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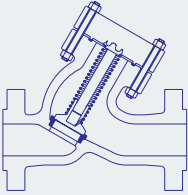
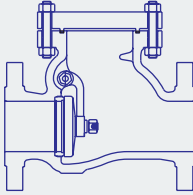
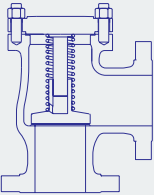
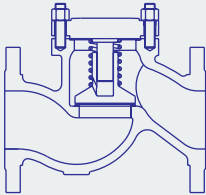
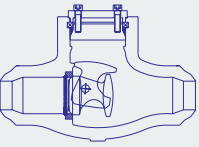
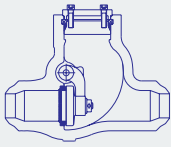
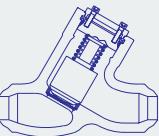
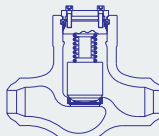
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I.S.P.E.S.L.
NOTIFIED

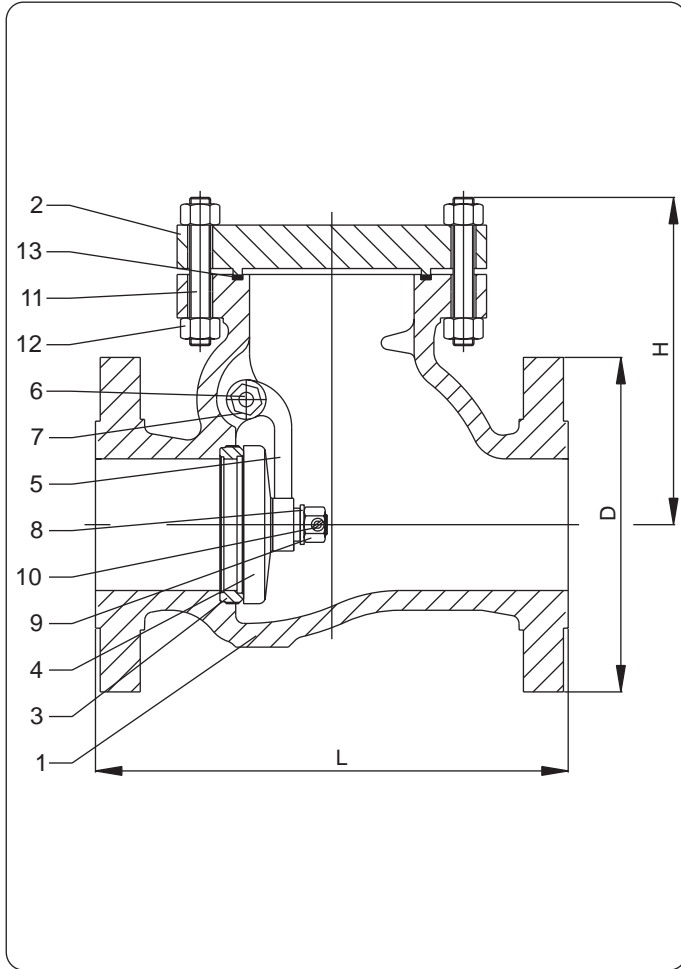


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DESCRIPTION OF A TYPICAL SWING CHECK VALVE - PRESSURE SEAL



TYPE	CLASS	SIZE	FIG. N.	TYPE	CLASS	SIZE	FIG. N.
PISTON CHECK VALVES Y TYPE  page 96	PN16	15 - 600	1405	SWING CHECK VALVES  page 92	PN16 - F6	50 - 1000	1311
	PN 25/40	15 - 600	1434		PN16 - F1	50 - 1000	1312
	PN 63	15 - 600	1560YR		PN 25	50 - 1000	1313
	PN 100	15 - 300	1570YR		PN 40	50 - 1000	1314
			PN 63		50 - 600	1315	
			PN 100		50 - 600	1316	
			PN 160		50 - 600	1317	
PISTON CHECK VALVES 90° ANGLE  page 98	PN16	15 - 600	1411	PISTON CHECK VALVES  page 94	PN16	15 - 600	1402
	PN 25/40	15 - 600	1441		PN 25/40	15 - 600	1431
	PN 63	15 - 600	1560AR		PN 63	15 - 600	1560R
	PN 100	15 - 300	1570AR		PN 100	15 - 300	1570R
			PN 160		15 - 300	1580R	
TILTING DISC CHECK VALVES PRESSURE SEAL  page 102	PN 100	50 - 600	P172T	SWING CHECK VALVES PRESSURE SEAL  page 100	PN 100	50 - 600	P172
	PN 160	50 - 600	P173T		PN 160	50 - 600	P173
	PN 250	50 - 400	P174T		PN 250	50 - 400	P174
	PN 320	50 - 400	P175T		PN 320	50 - 400	P175
	PN 420	50 - 400	P176T		PN 420	50 - 400	P176
LIFT CHECK VALVES PRESSURE SEAL Y TYPE  page 106	PN 100	50 - 600	P182PC	LIFT CHECK VALVES PRESSURE SEAL STRAIGHT  page 104	PN 100	50 - 600	P162PC
	PN 160	50 - 600	P183PC		PN 160	50 - 600	P163PC
	PN 250	50 - 400	P184PC		PN 250	50 - 400	P164PC
	PN 320	50 - 400	P185PC		PN 320	50 - 400	P165PC
	PN 420	50 - 400	P186PC		PN 420	50 - 400	P166PC



standard features




- **Description** FULL OPENING
BOLTED COVER
LAPPED DISC AND SEAT
RENEWABLE SEAT
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED

PART NAME	A13xx	C13xx	FH13xx	FK13xx
1 Body	1.0619	1.7363	1.4552	1.4581
2 Cover	1.0619	1.7363	1.4552	1.4581
3 Seat ring surface	X20Cr13 (1)	X20Cr13 (1)	X6CrNiTi18-10 (1)	X5CrNiMo17-12-2 (1)
4 Disc seat surface	X20Cr13 (2)	X20Cr13 (2)	X6CrNiTi18-10 (2)	X5CrNiMo17-12-2 (2)
5 Hinge	1.0619 (3)	X5CrNiMo17-12-2 (3)	X6CrNiTi18-10 (3)	GX5CrNiMoNb19-11-2 (3)
6 Inge pin	X20Cr13	X20Cr13	X6CrNiTi18-10	X5CrNiMo17-12-2
7 Plug	1.0460	X5CrNiMo17-12-2	X5CrNiMo17-12-2	X5CrNiMo17-12-2
8 Plate	1.0460	X5CrNiMo17-12-2	X5CrNiMo17-12-2	X5CrNiMo17-12-2
9 Nut	C35	24CrMo5	A2-70	A2-70
10 Pin	X5CrNiMo17-12-2	X5CrNiMo17-12-2	X5CrNiMo17-12-2	X5CrNiMo17-12-2
11 Bolts	CK35	21CrMoV57	A2-70	A2-70
12 Nut	C35	24CrMo5	A2-70	A2-70
13 Gasket	← S.S. spiral wound reinforced graphite (4) →			

(1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (3) On request: 17 Cr - Monel® - Hastelloy® - other materials

(4) On request: PTFE - other materials

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 QUALITY REGISTRAR ISO 9001 No. 0072	 API 6 D - 0166	ISO 9001-2000 CERTIFIED	A.N.C.C. I.S.P.E.S.L. NOTIFIED	 TÜV 97/23/CE	 TÜV AD-Merkblatt HP 0 TRB 801 No. 45 APPROVED
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SWING CHECK VALVES

DIN PN 16 - 25 - 40 - 63 - 100 - 160

VALVOSIDER
MANUFACTURER OF VALVES

FIG. 1311 - SWING CHECK VALVES DIN PN 16 - F6

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000
L RF/BW	200	240	260	300	350	400	500	600	700	800	900	1100	1300	1500	1700	1900	2100
D	165	185	200	220	250	285	340	405	460	520	580	715	840	910	1025	1125	1255
H	150	180	200	225	270	300	355	390	445	495	530	620	730	--	--	--	--

FIG. 1312 - SWING CHECK VALVES DIN PN 16 - F1

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000
L RF/BW	230	290	310	350	400	480	600	730	850	980	1100	1250	1450	1650	1850	2050	2250
D	165	185	200	220	250	285	340	405	460	520	580	715	840	910	1025	1125	1255
H	150	180	200	225	270	300	355	390	445	495	530	620	730	--	--	--	--

FIG. 1313 - SWING CHECK VALVES DIN PN 25 - F1

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000
L RF/BW	230	290	310	350	400	480	600	730	850	980	1100	1250	1450	1650	1850	2050	2250
D	165	185	200	235	270	300	360	425	485	555	620	730	845	960	1085	1185	1320
H	165	180	200	235	270	300	360	425	485	495	530	740	--	--	--	--	--

FIG. 1314 - SWING CHECK VALVES DIN PN 40 - F1

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000
L RF/BW	230	290	310	350	400	480	600	730	850	980	1100	1250	1450	1650	1850	2050	2250
D	165	185	200	235	270	300	375	450	515	580	660	775	890	995	1140	1250	1360
H	150	180	200	225	270	300	355	390	445	495	530	740	--	--	--	--	--

FIG. 1315 - SWING CHECK VALVES DIN PN 63 - F2

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000
L RF/BW	300	340	380	430	500	550	650	775	900	1025	1150	1400	1600	--	--	--	--
D	180	205	215	250	295	345	415	470	530	600	670	800	930	--	--	--	--
H	195	210	230	290	305	370	410	470	520	--	--	--	--	--	--	--	--

FIG. 1316 - SWING CHECK VALVES DIN PN 100 - F2

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000
L RF/BW	300	340	380	430	500	550	650	775	900	1025	1150	1400	1600	--	--	--	--
D	195	220	230	265	315	355	430	505	585	655	715	870	990	--	--	--	--
H	195	210	230	290	305	370	410	470	520	--	--	--	--	--	--	--	--

FIG. 1317 - SWING CHECK VALVES DIN PN 160 - F8

SIZE DN	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000
L RF/BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--	--	--	--	--
D	195	220	230	265	315	355	430	515	585	--	--	--	--	--	--	--	--
H	195	210	230	290	305	370	410	--	--	--	--	--	--	--	--	--	--

features on request

- | | |
|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> DISK WITH PTFE OR RUBBER <input type="checkbox"/> LEVER AND WEIGHT <input type="checkbox"/> SHOCK ABSORBER <input type="checkbox"/> LOCKING DEVICE <input type="checkbox"/> INTEGRAL SEAT | <ul style="list-style-type: none"> <input type="checkbox"/> BY-PASS <input type="checkbox"/> DRAIN PLUG <input type="checkbox"/> BW ENDS <input type="checkbox"/> RTJ FLANGES <input type="checkbox"/> ANSI CONNECTIONS |
|--|--|

All dimensions in mm (except where differently indicated)

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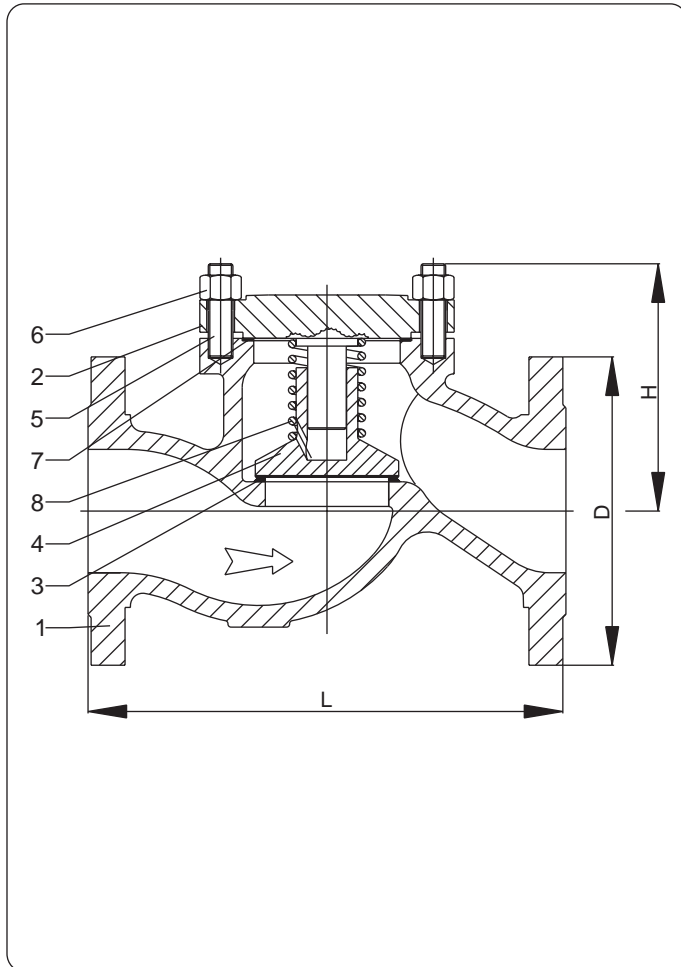
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standard features



- **Description** BOLTED COVER
RETURN SPRING
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	G1402 - (CAST IRON)	A1431 A1560R A1570R A1580R	FK1431 FK1560R FK1570R FK1580R
1 Body	EN-GJL-250	1.0619 (A)	1.4581
2 Cover	EN-GJL-250	1.0619 (B)	1.4581
3 Seat ring surface	N/A	X20Cr13 (1)	X5CrNiMo17-12-2 (1)
4 Disc seat surface	X20Cr13 (2)	X20Cr13 (2)	X5CrNiMo17-12-2 (2)
5 Spring	X5CrNiMo17-12-2	X5CrNiMo17-12-2	X5CrNiMo17-12-2
6 Bolts	CK35	CK35	A2-70
7 Nuts	C35	C35	A2-70
8 Gasket	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)

- (1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (3) On request: PTFE - other materials

- (A) For PN ≤ 40 and DN ≤ 50 = 1.0460
 For PN ≥ 63 and DN ≤ 25 = 1.0460
 (B) For PN ≤ 40 and DN ≤ 80 = 1.0460
 For PN ≥ 63 and DN ≤ 40 = 1.0460

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PISTON CHECK VALVES

DIN PN 16 - 25 - 40 - 63 - 100 - 160

VALVOSIDER
MANUFACTURER OF VALVES

FIG. 1402 - PISTON CHECK VALVES DIN PN 16 - CAST IRON - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D	95	105	115	140	150	165	185	200	220	250	285	315	340	405	460	520	580	640	715	840
H	70	80	85	100	110	115	130	145	165	185	205	235	250	300	360	410	460	520	570	--

FIG.1431 - PISTON CHECK VALVES DIN PN 25 / 40 - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
H	65	75	85	100	110	125	145	160	190	220	250	295	320	385	450	510	585	610	670	--

FIG. 1560R - PISTON CHECK VALVES DIN PN 63 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	500	600	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	1025	1150	1400	1600	--
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	800	930	--
H	105	120	120	135	150	160	180	200	230	280	310	340	390	430	500	--	--	--	--	--

FIG. 1570R - PISTON CHECK VALVES DIN PN 100 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	--	--	--	--	--
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585	--	--	--	--	--
H	105	120	120	135	150	170	200	220	250	300	350	380	410	480	570	--	--	--	--	--

FIG. 1580R - PISTON CHECK VALVES DIN PN 160 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	--	--	--	--	--
D	105	130	140	155	170	195	220	230	265	315	355	390	430	515	585	--	--	--	--	--
H	110	125	125	140	155	180	220	240	270	320	370	400	430	500	600	--	--	--	--	--

features on request

- | | |
|---|---|
| <input type="checkbox"/> DISC WITH PTFE OR RUBBER | <input type="checkbox"/> BW ENDS |
| <input type="checkbox"/> INTEGRAL SEAT | <input type="checkbox"/> RTJ FLANGES |
| <input type="checkbox"/> BY-PASS | <input type="checkbox"/> ANSI CONNECTIONS |
| <input type="checkbox"/> DRAIN PLUG | |

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.

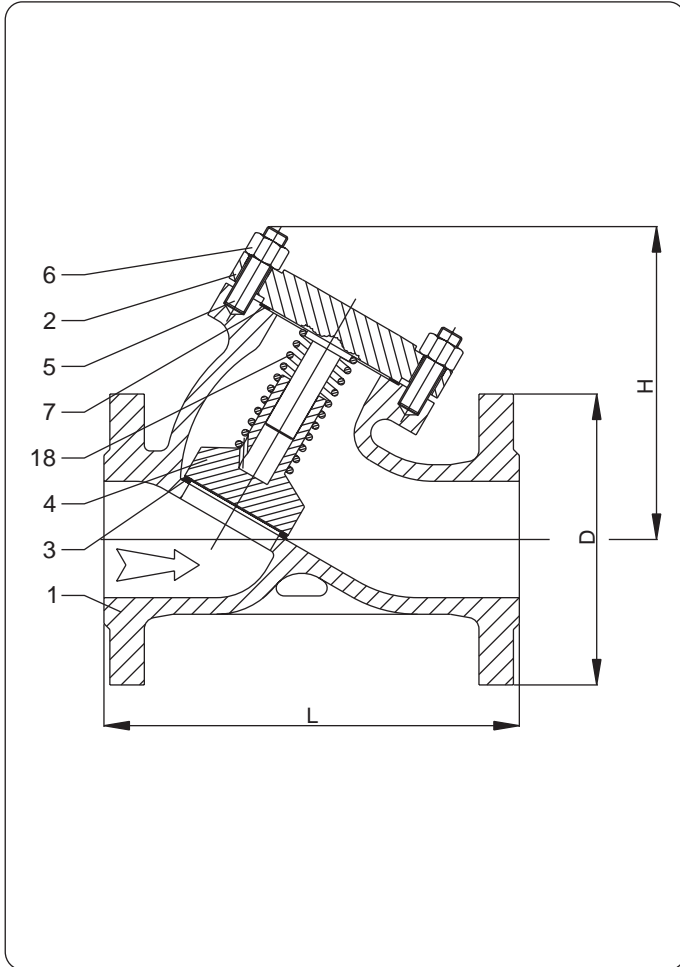


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standard features

- **Description** BOLTED COVER
RETURN SPRING
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	G1405 - (CAST IRON)	A1434 A1560YR A1570YR	FK1434 FK1560YR FK1570YR
1 Body	EN-GJL-250	1.0619 (A)	1.4581
2 Cover	EN-GJL-250	1.0619 (B)	1.4581
3 Seat ring surface	N/A	X20Cr13 (1)	X5CrNiMo17-12-2 (1)
4 Disc seat surface	X20Cr13 (2)	X20Cr13 (2)	X5CrNiMo17-12-2 (2)
5 Spring	X5CrNiMo17-12-2	X5CrNiMo17-12-2	X5CrNiMo17-12-2
6 Bolts	CK35	CK35	A2-70
7 Nuts	C35	C35	A2-70
8 Gasket	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)

(1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (3) On request: PTFE - other materials

(A) For PN ≤ 40 and DN ≤ 50 = 1.0460
 For PN ≥ 63 and DN ≤ 25 = 1.0460
 (B) For PN ≤ 40 and DN ≤ 80 = 1.0460
 For PN ≥ 63 and DN ≤ 40 = 1.0460

All data, subject to technical changes, are only for information and not for official use.

 QUALITY REGISTRAR ISO 9001 No. 0072	 API 6 D - 0166	ISO 9001-2000 CERTIFIED	A.N.C.C. I.S.P.E.S.L. NOTIFIED	 TÜV 97/23/CE	 TÜV AD-Merkblatt HP 0 TRB 801 No. 45 APPROVED
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PISTON CHECK VALVES - 'Y' TYPE DIN PN 16 - 25 - 40 - 63 - 100

VALVOSIDER
MANUFACTURER OF VALVES

FIG. 1405 - PISTON CHECK VALVES - 'Y' TYPE - DIN PN 16 - CAST IRON - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D	95	105	115	140	150	165	185	200	220	250	285	315	340	405	460	520	580	640	715	840
H	70	80	85	100	110	115	130	145	165	185	205	235	250	300	360	410	460	520	570	--

FIG.1434 - PISTON CHECK VALVES - 'Y' TYPE - DIN PN 25 / 40 - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
H	65	75	85	100	110	125	145	160	190	220	250	295	320	385	450	510	585	610	670	--

FIG. 1560YR - PISTON CHECK VALVES - 'Y' TYPE - DIN PN 63 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	500	600	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	1025	1150	1400	1600	--
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	800	930	--
H	105	120	120	135	150	160	180	200	230	280	310	340	390	430	500	--	--	--	--	--

FIG. 1570YR - PISTON CHECK VALVES - 'Y' TYPE - DIN PN 100 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	--	--	--	--	--
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585	--	--	--	--	--
H	105	120	120	135	150	170	200	220	250	300	350	380	410	480	570	--	--	--	--	--

features on request

- | | |
|--|--|
| <input type="radio"/> DISC WITH PTFE OR RUBBER | <input type="radio"/> BW ENDS |
| <input type="radio"/> INTEGRAL SEAT | <input type="radio"/> RTJ FLANGES |
| <input type="radio"/> BY-PASS | <input type="radio"/> ANSI CONNECTIONS |
| <input type="radio"/> DRAIN PLUG | |

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.

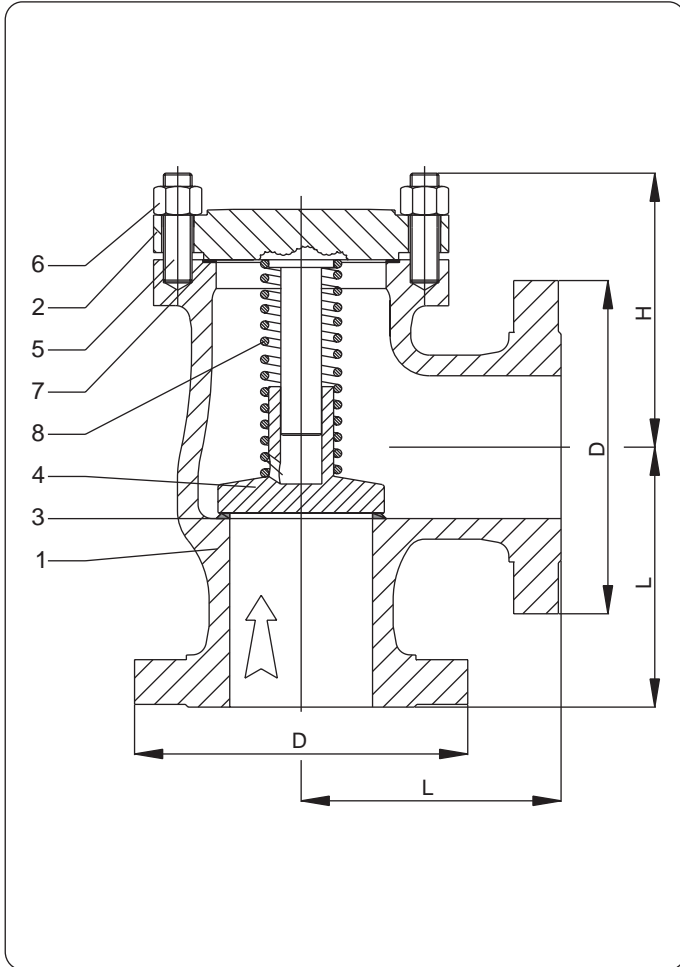


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Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com



standard features



- **Description** BOLTED COVER
RETURN SPRING
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	G1411 - (CAST IRON)	A1441 A1560AR A1570AR	FK1441 FK1560AR FK1570AR
1 Body	EN-GJL-250	1.0619 (A)	1.4581
2 Cover	EN-GJL-250	1.0619 (B)	1.4581
3 Seat ring surface	N/A	X20Cr13 (1)	X5CrNiMo17-12-2 (1)
4 Disc seat surface	X20Cr13 (2)	X20Cr13 (2)	X5CrNiMo17-12-2 (2)
5 Spring	X5CrNiMo17-12-2	X5CrNiMo17-12-2	X5CrNiMo17-12-2
6 Bolts	CK35	CK35	A2-70
7 Nuts	C35	C35	A2-70
8 Gasket	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)

(1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (3) On request: PTFE - other materials

(A) For PN ≤ 40 and DN ≤ 50 = 1.0460
 For PN ≥ 63 and DN ≤ 25 = 1.0460
 (B) For PN ≤ 40 and DN ≤ 80 = 1.0460
 For PN ≥ 63 and DN ≤ 40 = 1.0460

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 ISO 9001 No. 0072	 API 6 D - 0166	ISO 9001-2000 CERTIFIED	A.N.C.C. I.S.P.E.S.L. NOTIFIED	 97/23/CE	 AD-Merkblatt HP 0 TRB 801 No. 45 APPROVED
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PISTON CHECK VALVES - 90° ANGLE DIN PN 16 - 25 - 40 - 63 - 100

VALVOSIDER
MANUFACTURER OF VALVES

FIG. 1411 - PISTON CHECK VALVES - 90° ANGLE - DIN PN 16 - CAST IRON - F32

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF	90	95	100	105	115	125	145	155	175	200	225	250	275	325	375	425	475	500	575	675
D	95	105	115	140	150	165	185	200	220	250	285	315	340	405	460	520	580	640	715	840
H	70	80	85	100	110	115	130	145	165	185	205	235	250	300	360	410	460	520	570	--

FIG.1441 - PISTON CHECK VALVES - 90° ANGLE - DIN PN 25 / 40 - F32

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	90	95	100	105	115	125	145	155	175	200	225	250	275	325	375	425	475	500	575	675
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
H	70	80	85	100	110	125	145	160	190	220	250	295	320	385	450	510	585	610	670	--

FIG. 1560AR - PISTON CHECK VALVES - 90° ANGLE - DIN PN 63 - F33

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	500	600	--
L RF/BW	105	105	115	130	130	150	170	190	215	250	275	300	325	390	450	515	575	700	--	--
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	800	--	--
H	105	120	120	135	150	160	180	200	230	280	310	340	390	430	500	--	--	--	--	--

FIG. 1570AR - PISTON CHECK VALVES - 90° ANGLE - DIN PN 100 - F33

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	--	--	--	--	--
L RF/BW	105	105	115	130	130	150	170	190	215	250	275	300	325	390	450	--	--	--	--	--
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585	--	--	--	--	--
H	105	120	120	135	150	170	200	220	250	300	350	380	410	480	570	--	--	--	--	--

features on request

- | | |
|--|--|
| <input type="radio"/> DISC WITH PTFE OR RUBBER | <input type="radio"/> BW ENDS |
| <input type="radio"/> INTEGRAL SEAT | <input type="radio"/> RTJ FLANGES |
| <input type="radio"/> BY-PASS | <input type="radio"/> ANSI CONNECTIONS |
| <input type="radio"/> DRAIN PLUG | |

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.

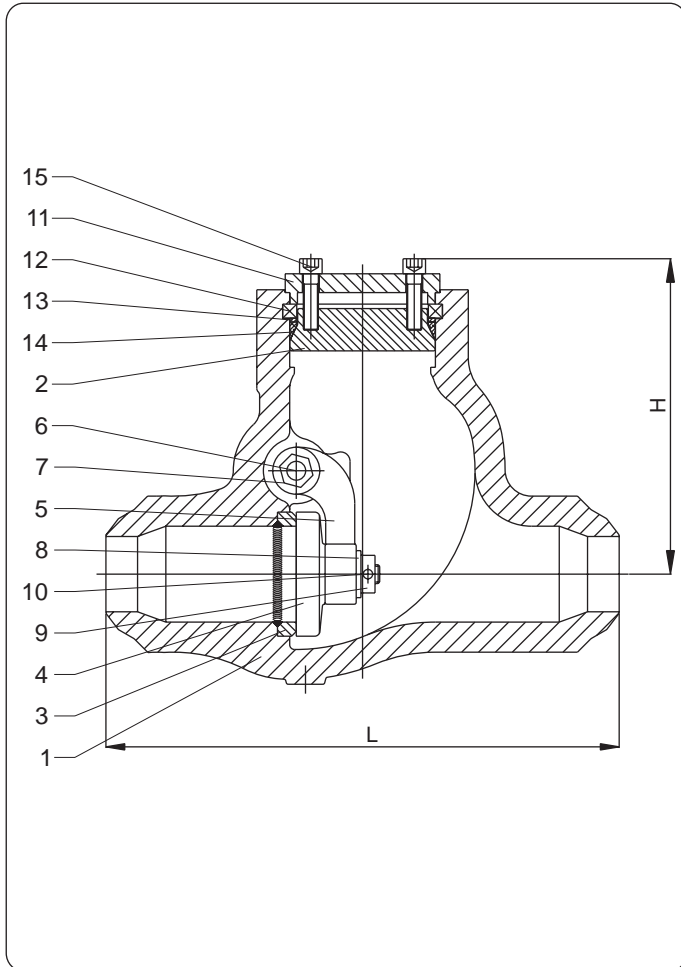


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Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com



standard features

- **Description** PRESSURE SEAL COVER
FULL OPENING
LAPPED DISC AND SEAT
WELDED IN SEATS
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	AP17x	FKP17x
1 Body	1.0619	1.4581
2 Cover	1.0619	1.4581
3 Ring - seat surface	1.0460 + HF (1)	X2CrNiMo17-12-2 + HF (1)
4 Disc - seat surfaces	1.0619 + HF (2)	1.4581 + HF (2)
5 Hinge	1.0619	1.4581
6 Hinge pin	X20Cr13	X5CrNiMo17-12-2
7 Plug (externally)	1.0460	X5CrNiMo17-12-2
8 Plate	1.0460	X5CrNiMo17-12-2
9 Nut	C35	A2-70
10 Pin	X5CrNiMo17-12-2	X5CrNiMo17-12-2
11 Retainer flange	1.0460	1.4401
12 Segmented retainer ring	X20Cr13	1.4401
13 Spacer ring	X20Cr13	1.4401
14 Gasket	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)
15 Bolt	CK35	A2-70

- (1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (3) On request: Soft iron - Stainless steel

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SWING CHECK VALVES - PRESSURE SEAL DIN PN 100 - 160 - 250 - 320 - 420

VALVOSIDER
MANUFACTURER OF VALVES

FIG. P172 - PRESSURE SEAL SWING CHECK VALVES DIN PN 100 - F2

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	340	380	430	500	550	650	775	900	1025	1150	1275	1600
L RF	300	340	380	430	500	550	650	775	900	1025	1150	1275	1600
H	180	205	215	275	300	350	390	450	500	555	630	800	1000

FIG. P173 - PRESSURE SEAL SWING CHECK VALVES DIN PN 160 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
L RF	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
H	245	260	250	310	340	390	510	580	620	680	740	850	--

FIG. P174 - PRESSURE SEAL SWING CHECK VALVES DIN PN 250 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	245	270	290	350	380	420	630	690	750	800	980	--	--

FIG. P175 - PRESSURE SEAL SWING CHECK VALVES DIN PN 320 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	245	280	300	380	405	430	650	720	780	--	--	--	--

FIG. P176 - PRESSURE SEAL SWING CHECK VALVES DIN PN 420 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	245	280	300	380	405	430	650	720	780	--	--	--	--

features on request

- DISC WITH PTFE OR RUBBER
- INTEGRAL SEAT
- BY-PASS
- DRAIN PLUG
- FLANGED ENDS
- RTJ FLANGES
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.

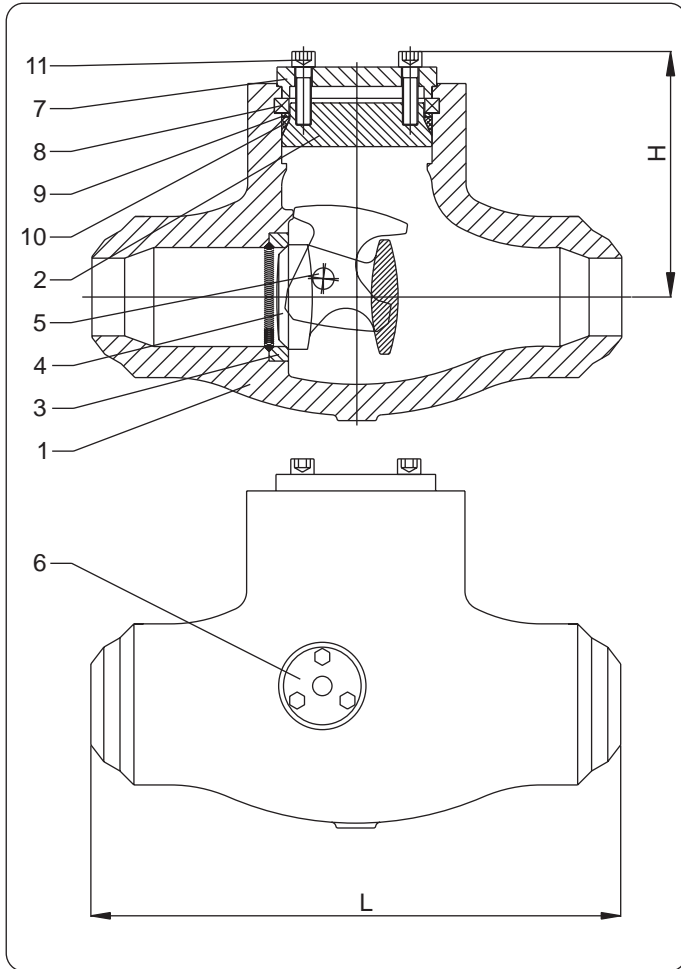


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Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com



standard features

- **Description** PRESSURE SEAL COVER LAPPED DISC AND SEAT WELDED IN SEATS
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	AP17xT	FKP 17xT
1 Body	1.0619	1.4581
2 Cover	1.0619	1.4581
3 Ring - seat surface	1.0460 + HF (1)	X2CrNiMo17-12-2 + HF (1)
4 Disc - seat surfaces	1.0619 + HF (2)	1.4581 + HF (2)
5 Pin	X5CrNiMo17-12-2	X5CrNiMo17-12-2
6 Plug (externally)	1.0460	X5CrNiMo17-12-2
7 Retainer flange	1.0460	1.4401
8 Segmented retainer ring	X20Cr13	1.4401
9 Spacer ring	X20Cr13	1.4401
10 Gasket	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)
11 Bolt	CK35	A2-70

- (1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (3) On request: Soft iron - Stainless steel

All data, subject to technical changes, are only for information and not for official use.

 <p>QUALITY REGISTRAR ISO 9001 No. 0072</p>	 <p>API 6 D - 0166</p>	<p>ISO 9001-2000 CERTIFIED</p>	<p>A.N.C.C. I.S.P.E.S.L. NOTIFIED</p>	 <p>TUV 97/23/CE</p>	 <p>TUV AD-Merkblatt HP 0 TRB 801 No. 45 APPROVED</p>
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TILTING DISC CHECK VALVES

PRESSURE SEAL DIN PN 100 - 160 - 250 - 320 - 420

VALVOSIDER
MANUFACTURER OF VALVES

FIG. P172T - PRESSURE SEAL TILTING DISC CHECK VALVES DIN PN 100 - F2

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	340	380	430	500	550	650	775	900	1025	1150	1275	1600
L RF	300	340	380	430	500	550	650	775	900	1025	1150	1275	1600
H	180	205	215	275	300	350	390	450	500	555	630	800	1000

FIG. P173T - PRESSURE SEAL TILTING DISC CHECK VALVES DIN PN 160 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
L RF	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
H	245	260	250	310	340	390	510	580	620	680	740	850	--

FIG. P174T - PRESSURE SEAL TILTING DISC CHECK VALVES DIN PN 250 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	245	270	290	350	380	420	630	690	750	800	980	--	--

FIG. P175T - PRESSURE SEAL TILTING DISC CHECK VALVES DIN PN 320 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	245	280	300	380	405	430	650	720	780	840	1010	--	--

FIG. P176T - PRESSURE SEAL TILTING DISC CHECK VALVES DIN PN 420 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	245	280	300	380	405	430	650	720	780	840	1010	--	--

features on request

- | | |
|--|---|
| <input type="radio"/> DISC WITH PTFE OR RUBBER
<input type="radio"/> INTEGRAL SEAT
<input type="radio"/> BY-PASS
<input type="radio"/> DRAIN PLUG | <input type="radio"/> FLANGED ENDS
<input type="radio"/> RTJ FLANGES
<input type="radio"/> ANSI CONNECTIONS |
|--|---|

All dimensions in mm (except where differently indicated)

All data, subject to technical changes, are only for information and not for official use.

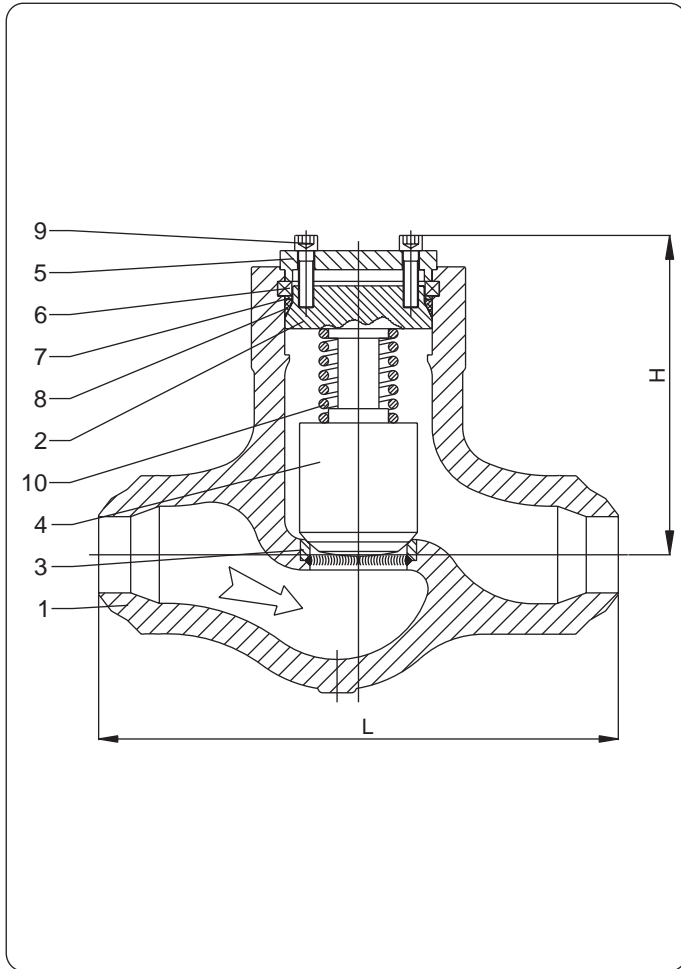


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standard features

- **Description** PRESSURE SEAL COVER
LAPPED DISC AND SEAT
WELDED IN SEATS
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	AP16xPC	FKP16xPC
1 Body	1.0619	1.4581
2 Cover	1.0619	1.4581
3 Ring - seat surface	1.0460 + HF (1)	X2CrNiMo17-12-2 + HF (1)
4 Disc - seat surfaces	1.0619 + HF (2)	1.4581 + HF (2)
5 Retainer flange	1.0460	1.4401
6 Segmented retainer ring	X20Cr13	1.4401
7 Spacer ring	X20Cr13	1.4401
8 Gasket	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)
9 Bolt	CK35	A2-70
10 Spring	X5CrNiMo17-12-2	X5CrNiMo17-12-2

- (1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (3) On request: Soft iron - Stainless steel

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LIFT CHECK VALVES - PRESSURE SEAL STRAIGHT TYPE - DIN PN 100 - 160 - 250 - 320 - 420

VALVOSIDER
MANUFACTURER OF VALVES

FIG. P162PC - PRESSURE SEAL LIFT CHECK VALVES DIN PN 100 - F2

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	340	380	430	500	550	650	775	900	1025	1150	1275	1600
L RF	300	340	380	430	500	550	650	775	900	1025	1150	1275	1600
H	230	260	280	330	360	450	520	600	700	--	--	--	--

FIG. P163PC - PRESSURE SEAL LIFT CHECK VALVES DIN PN 160 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
L RF	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
H	270	285	300	390	410	430	520	60	700	--	--	--	--

FIG. P164PC - PRESSURE SEAL LIFT CHECK VALVES DIN PN 250 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	270	290	310	400	420	440	530	620	720	--	--	--	--

FIG. P165PC - PRESSURE SEAL LIFT CHECK VALVES DIN PN 320 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	270	290	310	400	420	440	530	620	720	--	--	--	--

FIG. P166PC - PRESSURE SEAL LIFT CHECK VALVES DIN PN 420 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	270	290	310	400	420	440	530	620	720	--	--	--	--

features on request

- DISC WITH PTFE OR RUBBER
- INTEGRAL SEAT
- BY-PASS
- DRAIN PLUG
- FLANGED ENDS
- RTJ FLANGES
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

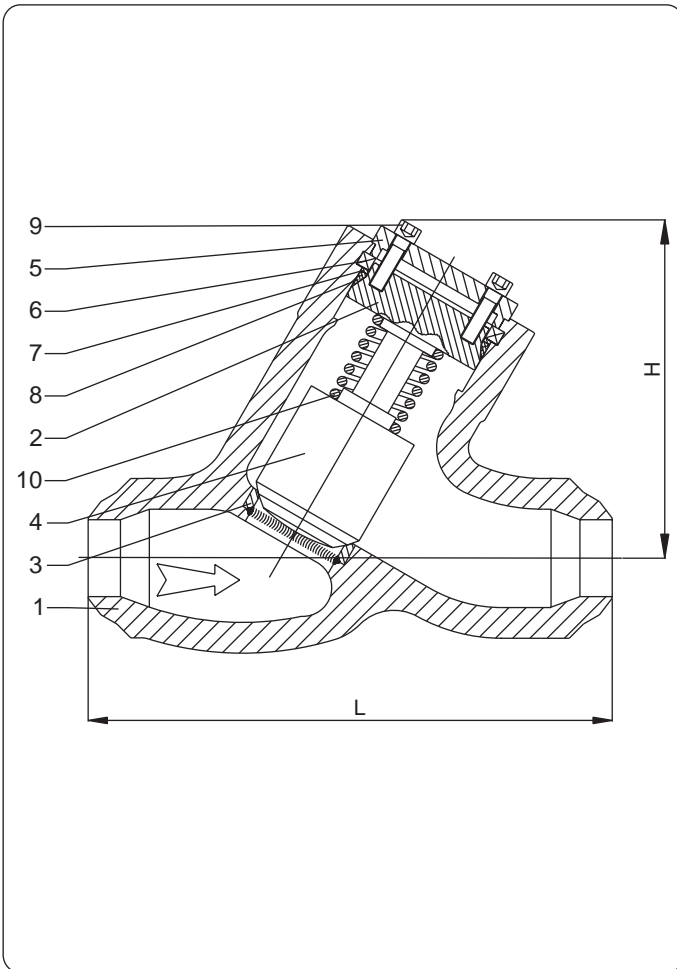
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standard features

- **Description** PRESSURE SEAL COVER
LAPPED DISC AND SEAT
WELDED IN SEATS
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B



PART NAME	AP18xPC	FKP18xPC
1 Body	1.0619	1.4581
2 Cover	1.0619	1.4581
3 Ring - seat surface	1.0460 + HF (1)	X2CrNiMo17-12-2 + HF (1)
4 Disc - seat surfaces	1.0619 + HF (2)	1.4581 + HF (2)
5 Retainer flange	1.0460	1.4401
6 Segmented retainer ring	X20Cr13	1.4401
7 Spacer ring	X20Cr13	1.4401
8 Gasket	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)
9 Bolt	CK35	A2-70
10 Spring	X5CrNiMo17-12-2	X5CrNiMo17-12-2

- (1) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (2) On request: faced with Stellite® - Monel® - Hastelloy® - other materials
 (3) On request: Soft iron - Stainless steel

All data, subject to technical changes, are only for information and not for official use.



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LIFT CHECK VALVES - PRESSURE SEAL
'Y' TYPE - DIN PN 100 - 160 - 250 - 320 - 420

VALVOSIDER
 MANUFACTURER OF VALVES

FIG. P182PC - PRESSURE SEAL LIFT CHECK VALVES - 'Y' TYPE - DIN PN 100 - F2

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	340	380	430	500	550	650	775	900	1025	1150	1275	1600
L RF	300	340	380	430	500	550	650	775	900	1025	1150	1275	1600
H	230	260	280	330	360	450	520	600	700	--	--	--	--

FIG. P183PC - PRESSURE SEAL LIFT CHECK VALVES - 'Y' TYPE - DIN PN 160 - F8

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
L RF	300	360	390	450	525	600	750	900	1050	1200	1350	1650	--
H	270	285	300	390	410	430	520	60	700	--	--	--	--

FIG. P184PC - PRESSURE SEAL LIFT CHECK VALVES - 'Y' TYPE - DIN PN 250 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	270	290	310	400	420	440	530	620	720	--	--	--	--

FIG. P185PC - PRESSURE SEAL LIFT CHECK VALVES - 'Y' TYPE - DIN PN 320 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	270	290	310	400	420	440	530	620	720	--	--	--	--

FIG. P186PC - PRESSURE SEAL LIFT CHECK VALVES - 'Y' TYPE - DIN PN 420 - F9

SIZE	50	65	80	100	125	150	200	250	300	350	400	500	600
L BW	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
L RF	350	425	470	550	650	750	950	1150	1350	1550	1750	--	--
H	270	290	310	400	420	440	530	620	720	--	--	--	--

features on request

- DISC WITH PTFE OR RUBBER
- INTEGRAL SEAT
- BY-PASS
- DRAIN PLUG
- FLANGED ENDS
- RTJ FLANGES
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

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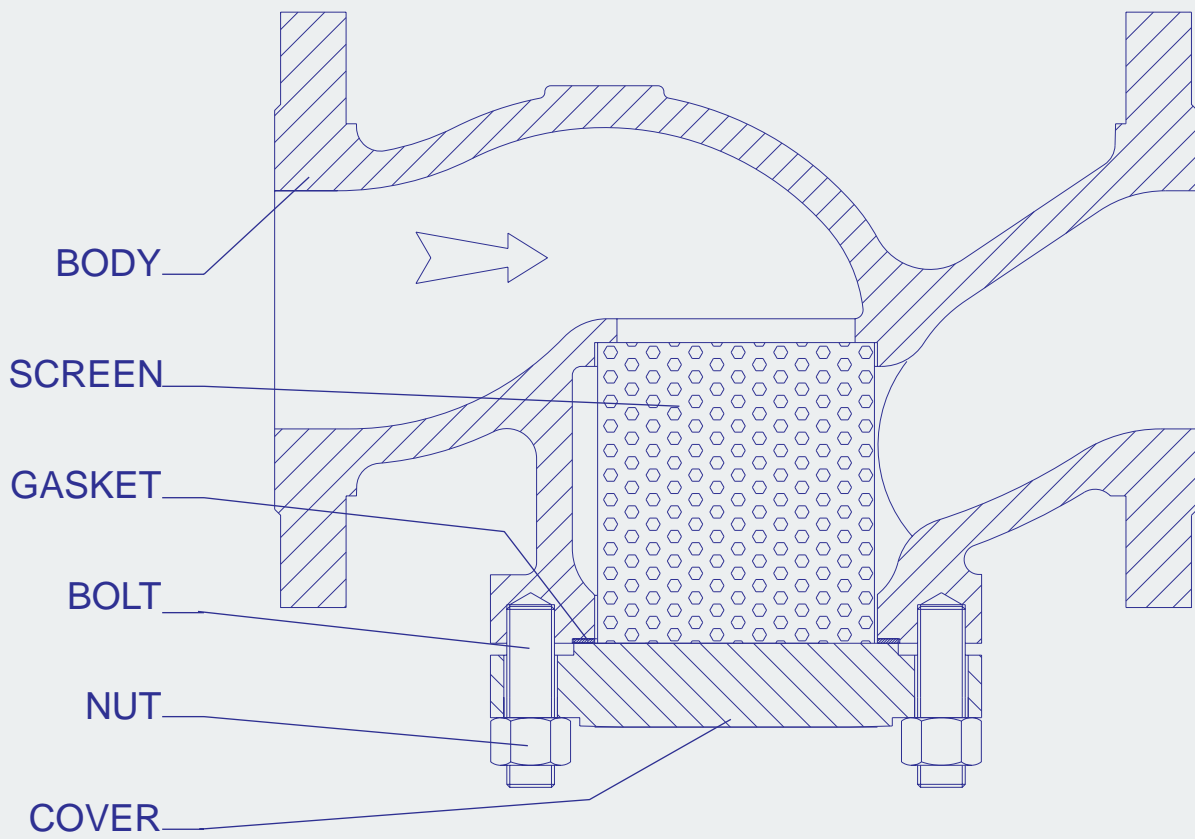
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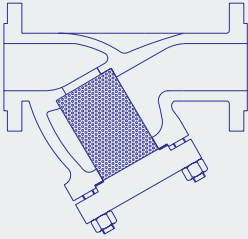
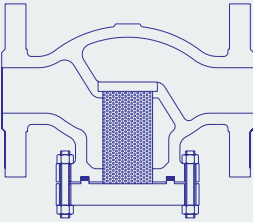
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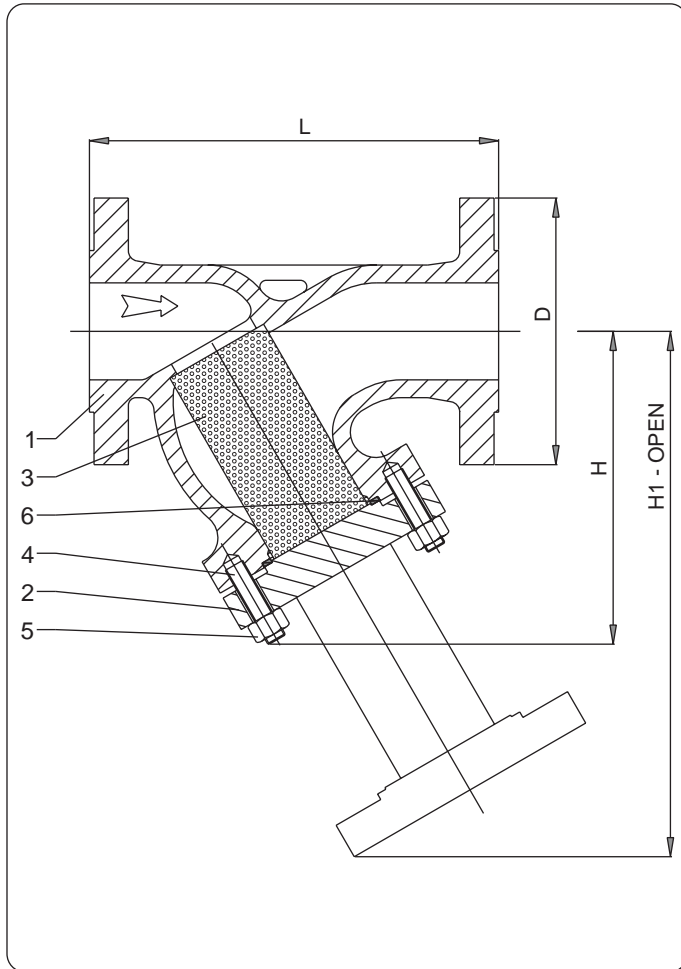


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DESCRIPTION OF A TYPICAL STRAINER BASKET TYPE



	TYPE	CLASS	SIZES	FIG. N.
 <p data-bbox="443 405 662 524">STRAINERS 'Y' TYPE</p> <p data-bbox="635 680 762 714">page 110</p>	<p data-bbox="900 409 983 439">PN16</p> <p data-bbox="874 463 1008 492">PN 25/40</p> <p data-bbox="895 517 987 546">PN 63</p> <p data-bbox="887 571 995 600">PN 100</p> <p data-bbox="887 624 995 654">PN 160</p>	<p data-bbox="1158 409 1299 439">15 - 600</p> <p data-bbox="1158 463 1299 492">15 - 600</p> <p data-bbox="1158 517 1299 546">15 - 600</p> <p data-bbox="1158 571 1299 600">15 - 300</p> <p data-bbox="1158 624 1299 654">15 - 300</p>	<p data-bbox="1437 409 1513 439">1404</p> <p data-bbox="1437 463 1513 492">1433</p> <p data-bbox="1417 517 1533 546">1560YS</p> <p data-bbox="1417 571 1533 600">1570YS</p> <p data-bbox="1417 624 1533 654">1580YS</p>	
 <p data-bbox="424 779 681 898">STRAINERS BASKET TYPE</p> <p data-bbox="635 1061 762 1095">page 112</p>	<p data-bbox="900 786 983 815">PN16</p> <p data-bbox="874 840 1008 869">PN 25/40</p> <p data-bbox="895 893 987 922">PN 63</p> <p data-bbox="887 947 995 976">PN 100</p> <p data-bbox="887 1001 995 1030">PN 160</p>	<p data-bbox="1158 786 1299 815">15 - 600</p> <p data-bbox="1158 840 1299 869">15 - 600</p> <p data-bbox="1158 893 1299 922">15 - 600</p> <p data-bbox="1158 947 1299 976">15 - 300</p> <p data-bbox="1158 1001 1299 1030">15 - 300</p>	<p data-bbox="1417 786 1533 815">1401BS</p> <p data-bbox="1417 840 1533 869">1430BS</p> <p data-bbox="1417 893 1533 922">1560BS</p> <p data-bbox="1417 947 1533 976">1570BS</p> <p data-bbox="1417 1001 1533 1030">1580BS</p>	



standard features

- **Description** BOLTED COVER
REPLACEABLE SCREEN
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	G1404 - (CAST IRON)	A1433 A1560YS A1570YS A1580YS	FK1433 FK1560YS FK1570YS FK1580YS
1 Body	EN-GJL-250	1.0619 (A)	1.4581
2 Cover	EN-GJL-250	1.0619 (B)	1.4581
3 Screen	X5CrNi18-10 (1)	X5CrNi18-10 (1)	X2CrNiMo17-12-2 (1)
4 Bolts	CK35	CK35	A2-70
5 Nuts	C35	C35	A2-70
6 Gasket	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)

(1) On request: other materials

(2) On request: PTFE - other materials

(A) For PN ≤ 40 and DN ≤ 25 = 1.0460

For PN ≥ 63 and DN ≤ 25 = 1.0460

(B) For PN ≤ 40 and DN ≤ 80 = 1.0460

For PN ≥ 63 and DN ≤ 40 = 1.0460

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STRAINERS - 'Y' TYPE

DIN PN 16 - 25 - 40 - 63 - 100 - 160

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FIG. 1404 - STRAINERS - 'Y' TYPE DIN PN 16 - CAST IRON - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D	95	105	115	140	150	165	185	200	220	250	285	315	340	405	460	520	580	640	715	840
H	70	80	85	100	110	115	130	145	165	185	205	235	250	300	360	410	460	520	570	--
H1	130	144	155	172	200	220	265	290	340	390	440	505	520	680	845	870	1000	--	--	--

FIG.1433 - STRAINERS - 'Y' TYPE DIN PN 25 / 40 - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
H	70	80	85	100	110	125	145	160	190	220	250	295	320	385	450	510	585	610	670	--
H1	130	144	155	172	200	230	280	305	365	425	485	565	590	765	935	970	1125	--	--	--

FIG. 1560YS - STRAINERS - 'Y' TYPE DIN PN 63 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	1025	1150	--	1400	1600
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	--	800	930
H	105	120	120	135	150	160	180	200	230	280	310	340	390	430	500	--	--	--	--	--
H1	165	184	190	207	240	265	315	345	405	485	545	610	660	810	985	--	--	--	--	--

FIG. 1570YS - STRAINERS - 'Y' TYPE DIN PN 100 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	--	--	--	--	--
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585	--	--	--	--	--
H	105	120	120	135	150	170	200	220	250	300	350	380	410	480	570	--	--	--	--	--
H1	165	184	190	207	240	275	335	365	425	505	585	650	680	860	1055	--	--	--	--	--

FIG. 1580YS - STRAINERS - 'Y' TYPE DIN PN 160 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	--	--	--	--	--
D	105	130	140	155	170	195	220	230	265	315	355	390	430	515	585	--	--	--	--	--
H	110	125	125	140	155	180	220	240	270	320	370	400	430	500	600	--	--	--	--	--
H1	170	189	195	212	245	285	355	385	445	525	605	670	700	880	1085	--	--	--	--	--

features on request

- | | |
|--|---|
| <ul style="list-style-type: none"> <input type="radio"/> SCREEN IN SPECIAL MATERIALS <input type="radio"/> DISCHARGE VALVE <input type="radio"/> DRAIN PLUG | <ul style="list-style-type: none"> <input type="radio"/> BW ENDS <input type="radio"/> ANSI CONNECTIONS |
|--|---|

All dimensions in mm (except where differently indicated)

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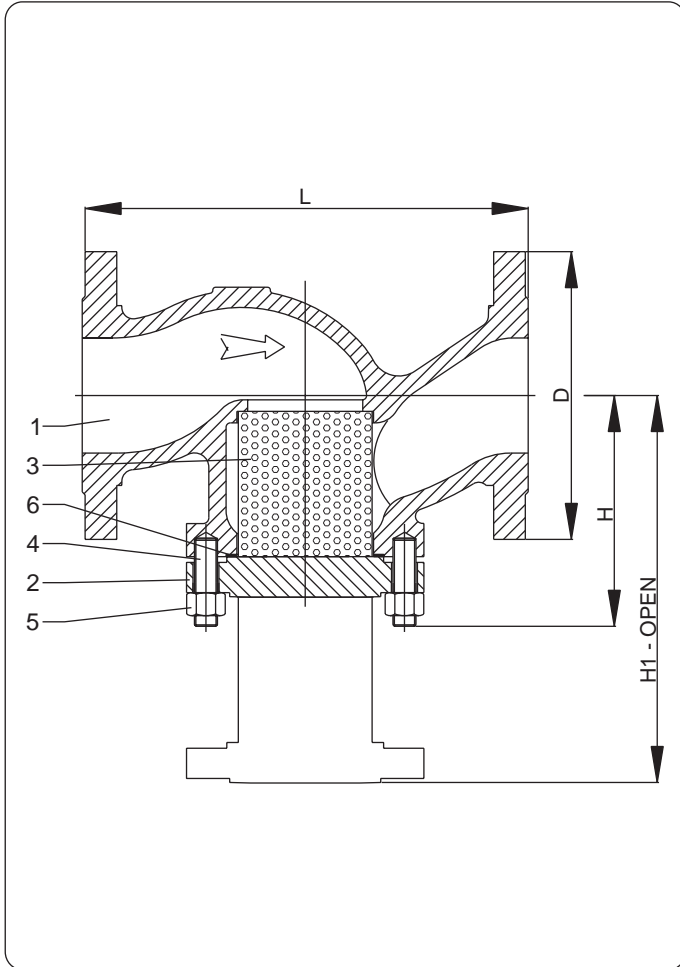


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standard features

- **Description** BOLTED COVER
REPLACEABLE SCREEN
- **Design** DIN 3352
DIN 3840
- **Face to face** DIN 3202
- **Flanges** DIN 2501
DIN 2547
DIN 2526 FORM E
BW TO DIN 3239
- **Testing** DIN 3352 Part 1
DIN 3230 Part 3
- **Rating** DIN 2401
- **Marking** EN 19
CE - PED
- **Certificates** EN 10204 – 3.1 B

PART NAME	FIG. 1401 - (CAST IRON)	A1430BS A1560BS A1570BS A1580BS	FK1430BS FK1560BS FK1570BS FK1580BS
1 Body	EN-GJL-250	1.0619 (A)	1.4581
2 Cover	EN-GJL-250	1.0619 (B)	1.4581
3 Screen	X5CrNi18-10 (1)	X5CrNi18-10 (1)	X2CrNiMo17-12-2 (1)
4 Bolts	CK35	CK35	A2-70
5 Nuts	C35	C35	A2-70
6 Gasket	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)	S. S. reinforced graphite (3)

(1) On request: other materials

(2) On request: PTFE - other materials

(A) For PN ≤ 40 and DN ≤ 25 = 1.0460

For PN ≥ 63 and DN ≤ 25 = 1.0460

(B) For PN ≤ 40 and DN ≤ 80 = 1.0460

For PN ≥ 63 and DN ≤ 40 = 1.0460

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STRAINERS - BASKET TYPE

DIN PN 16 - 25 - 40 - 63 - 100 - 160

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FIG. 1401BS - STRAINERS - BASKET TYPE DIN PN 16 - CAST IRON - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D	95	105	115	140	150	165	185	200	220	250	285	315	340	405	460	520	580	640	715	840
H	70	80	85	100	110	115	130	145	165	185	205	235	250	300	360	410	460	520	570	--
H1	130	144	155	172	200	220	265	290	340	390	440	505	520	680	845	870	1000	520	570	--

FIG.1430BS - STRAINERS - BASKET TYPE DIN PN 25 / 40 - F1

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	130	150	160	180	200	230	290	310	350	400	480	550	600	730	850	980	1100	1200	1250	1450
D - PN25	95	105	115	140	150	165	185	200	235	270	300	330	360	425	485	555	620	670	730	845
D - PN40	95	105	115	140	150	165	185	200	235	270	300	350	375	450	515	580	660	685	755	890
H	70	80	85	100	110	125	145	160	190	220	250	295	320	385	450	510	585	610	670	--
H1	130	144	155	172	200	230	280	305	365	425	485	565	590	765	935	970	1125	610	670	--

FIG. 1560BS - STRAINERS - BASKET TYPE DIN PN 63 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	1025	1150	--	1400	1600
D	105	130	140	155	170	180	205	215	250	295	345	375	415	470	530	600	670	--	800	930
H	105	120	120	135	150	160	180	200	230	280	310	340	390	430	500	--	--	--	--	--
H1	165	184	190	207	240	265	315	345	405	485	545	610	660	810	985	--	--	--	--	--

FIG. 1570BS - STRAINERS - BASKET TYPE DIN PN 100 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	--	--	--	--	--
D	105	130	140	155	170	195	220	230	265	315	355	385	430	505	585	--	--	--	--	--
H	105	120	120	135	150	170	200	220	250	300	350	380	410	480	570	--	--	--	--	--
H1	165	184	190	207	240	275	335	365	425	505	585	650	680	860	1055	--	--	--	--	--

FIG. 1580BS - STRAINERS - BASKET TYPE DIN PN 160 - F2

SIZE DN	15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400	450	500	600
L RF/BW	210	230	230	260	260	300	340	380	430	500	550	600	650	775	900	--	--	--	--	--
D	105	130	140	155	170	195	220	230	265	315	355	390	430	515	585	--	--	--	--	--
H	110	125	125	140	155	180	220	240	270	320	370	400	430	500	600	--	--	--	--	--
H1	170	189	195	212	245	285	355	385	445	525	605	670	700	880	1085	--	--	--	--	--

features on request

- SCREEN IN SPECIAL MATERIALS
- DISCHARGE VALVE
- DRAIN PLUG
- BW ENDS
- ANSI CONNECTIONS

All dimensions in mm (except where differently indicated)

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DIN

5 Dimensions

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6 Materials

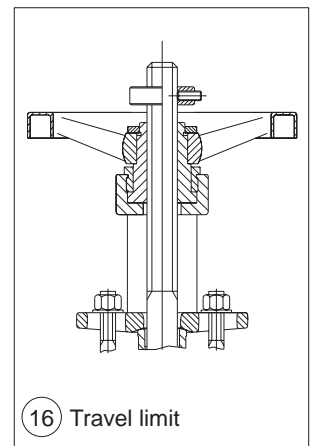
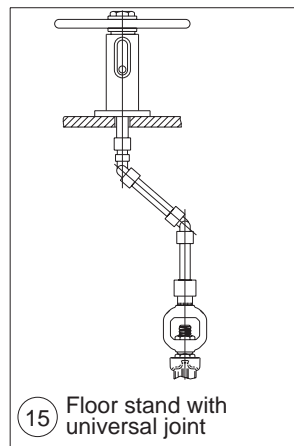
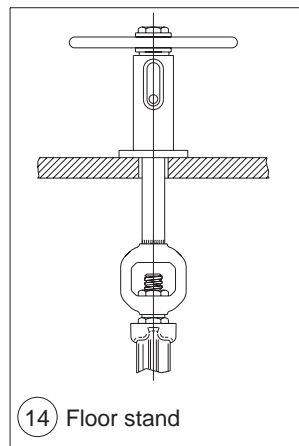
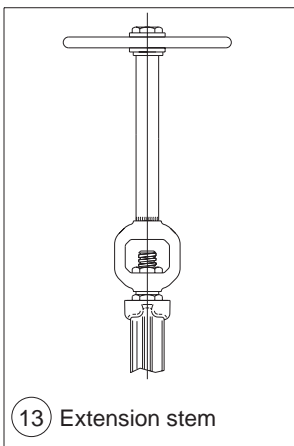
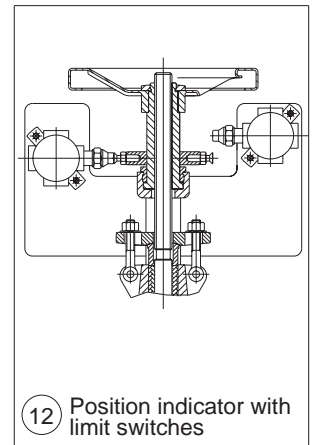
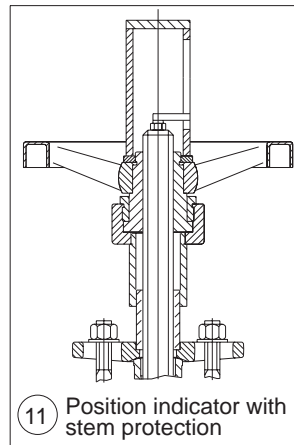
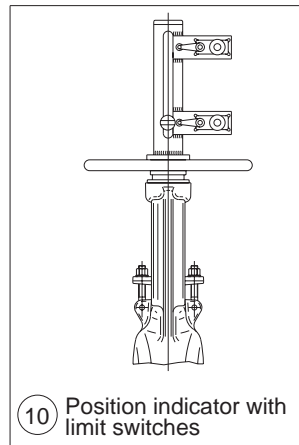
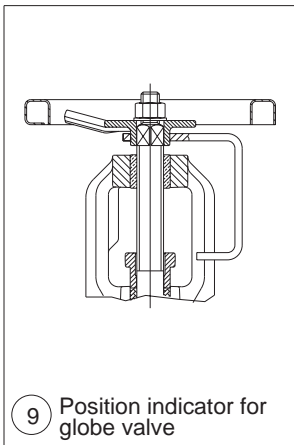
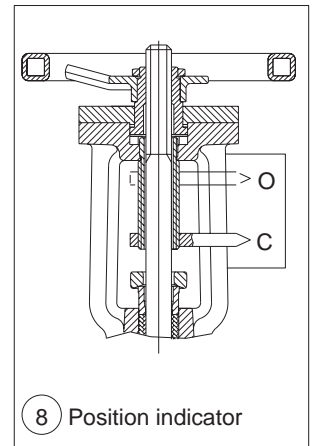
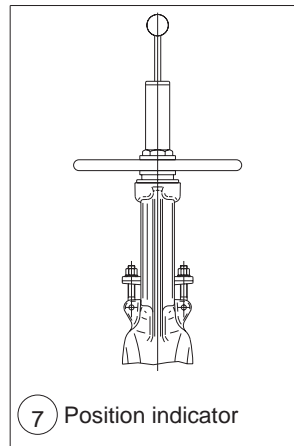
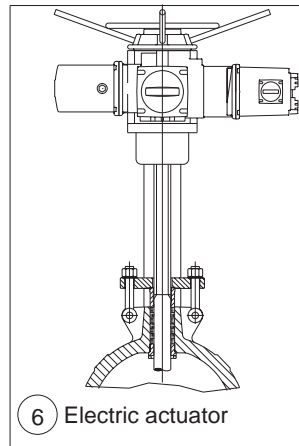
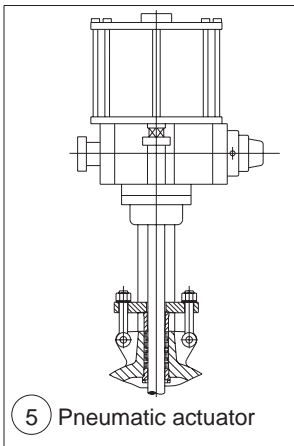
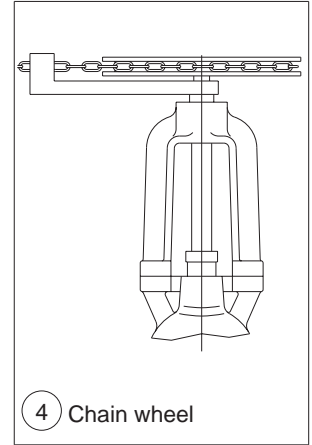
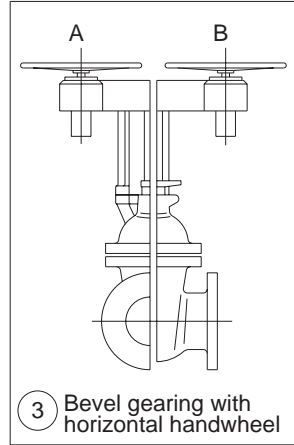
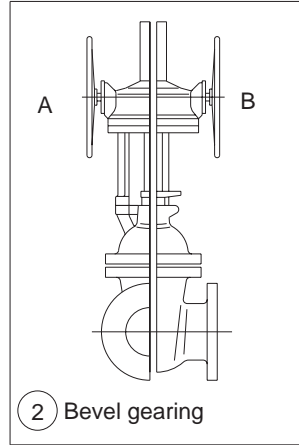
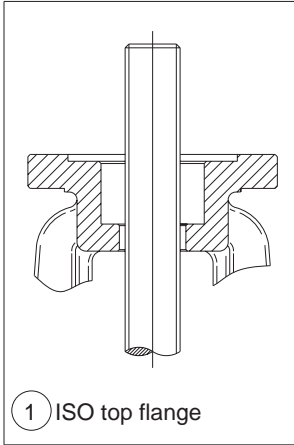
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7 Materials comparison

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8 Ratings

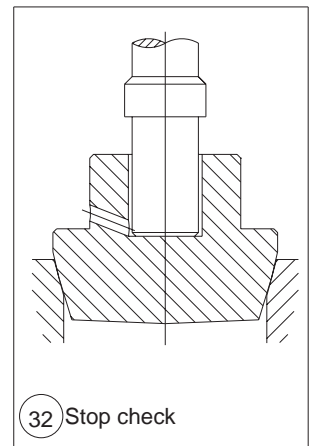
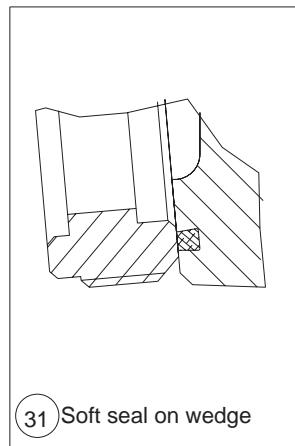
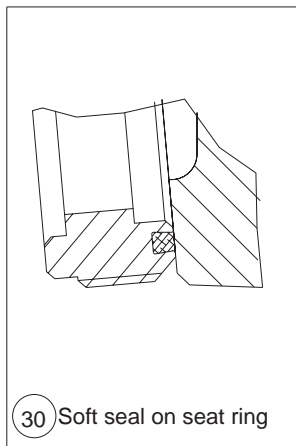
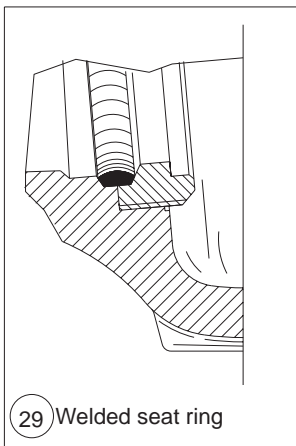
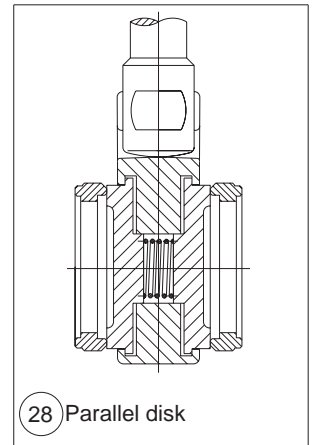
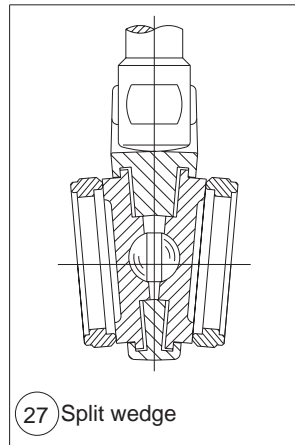
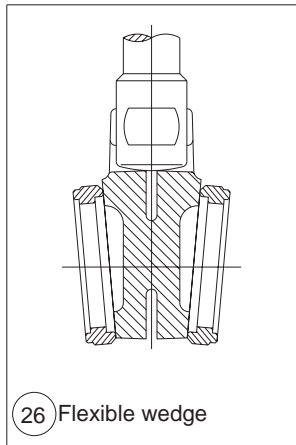
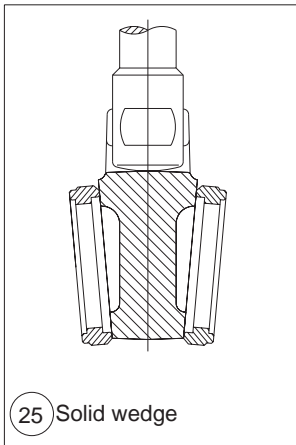
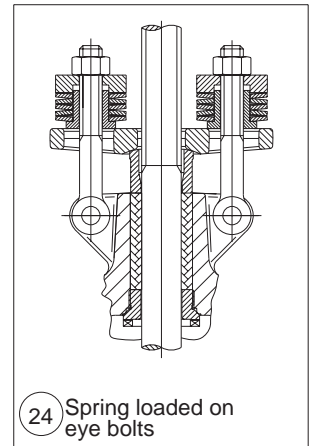
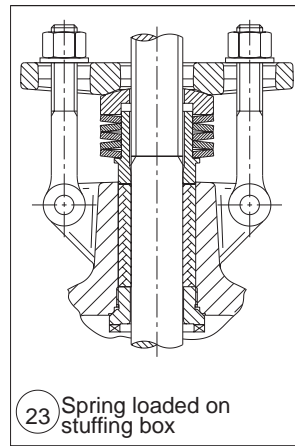
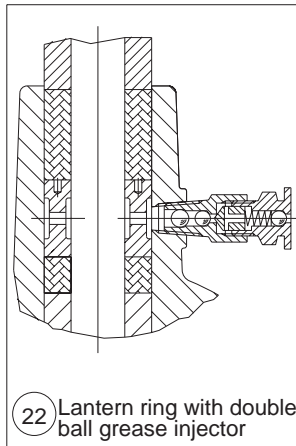
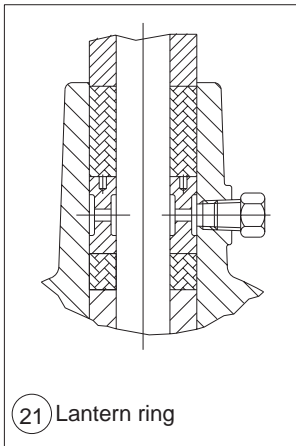
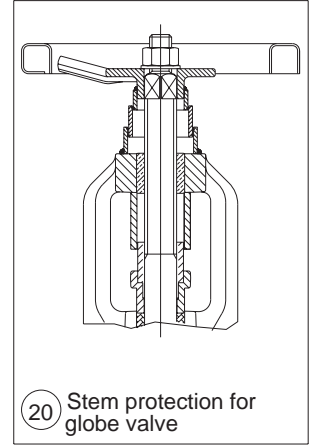
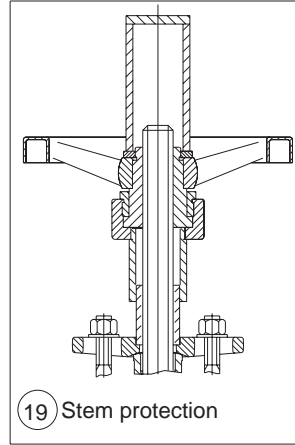
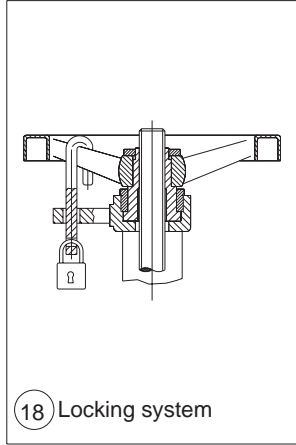
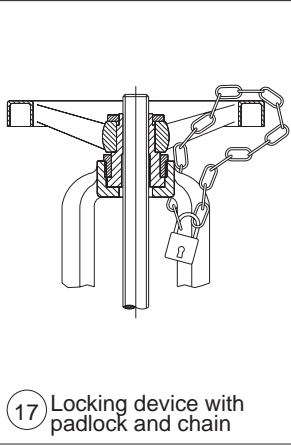
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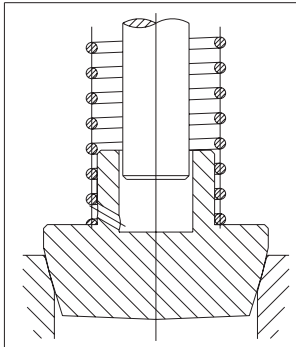
SPECIAL EXECUTIONS

VALVOSIDER
MANUFACTURER OF VALVES

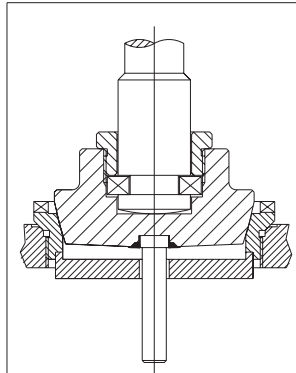


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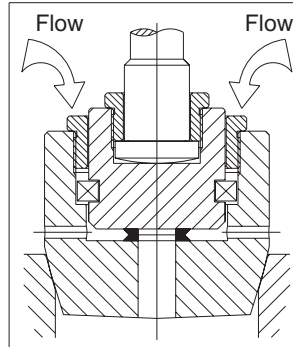
VALVOSIDER s.r.l. - Via S. Rocco, 2 - P.O. BOX 76 - 13011 Borgosesia (VC) - Italy
Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com



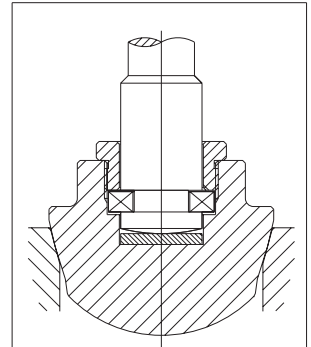
33 Stop check with spring



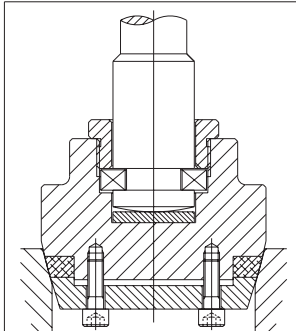
34 Guided disk



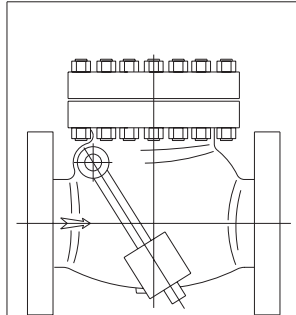
35 Double stage opening disk



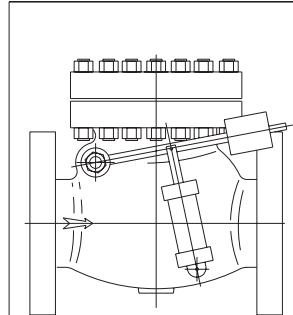
36 Parabolic / regulating disk



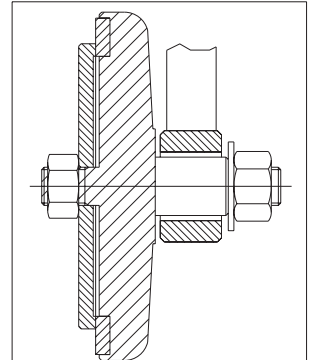
37 Soft seated disk



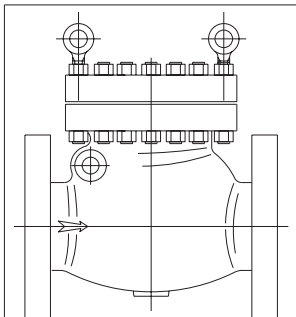
38 Swing check valve with outside lever and weight



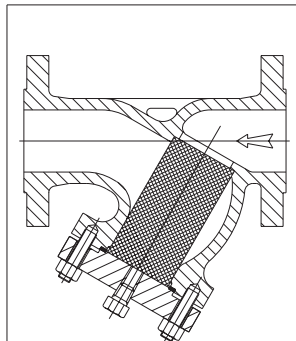
39 Swing check valve with shock absorber



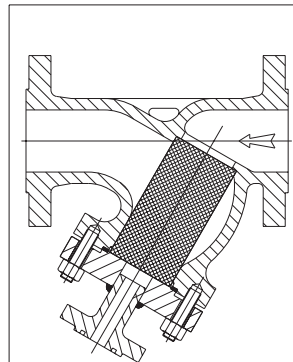
40 Soft seated disk for check valve



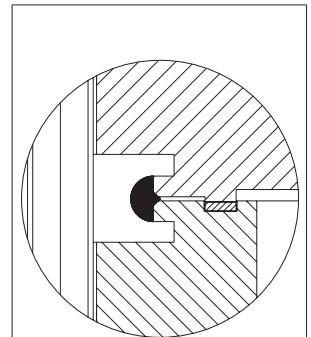
41 Swing check valve with lifting eyebolt



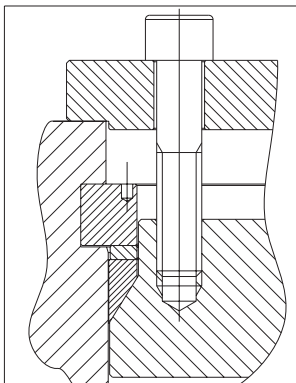
42 Strainer Y type with drain plug



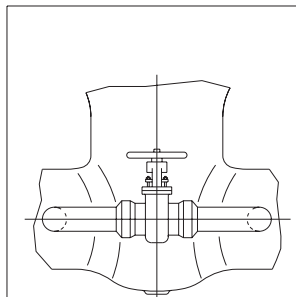
43 Strainer Y type with flange connection



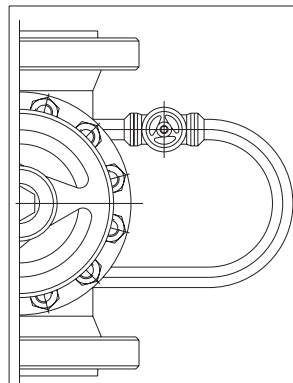
44 Body / bonnet seal weld



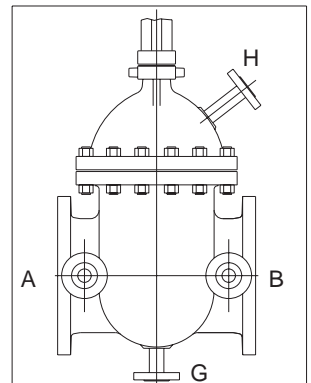
45 Pressure seal construction



46 By pass (front view)



47 By pass (top view)

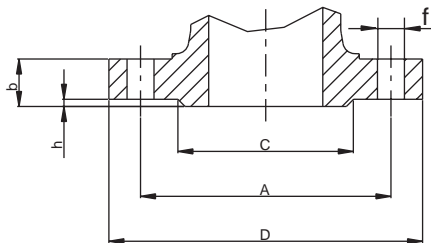


48 Flanges connection

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DIN FLANGES DIMENSIONS

DN 10 ÷ DN 300



DN = Nominal pipe size
 D = Outside diameter of flange
 b = Thickness of flange min.
 C = Diameter of hub
 h = Height of raised face
 N = Number of bolt holes
 f = Diameter of bolt holes
 A = Diameter of bolt circle

PN	DN	D	b	C	h	N°	f	A		PN	DN	D	b	C	h	N°	f	A
6	10	75	12	35	2	4	11	50		6	100	210	16	148	3	4	18	170
10-16	10	90	14	40	2	4	14	60		10-16	100	220	20	158	3	8	18	180
25-40	10	90	16	40	2	4	14	60		25-40	100	235	24	162	3	8	22	190
64-100	10	100	20	40	2	4	14	70		64	100	250	30	162	3	8	26	200
160	10	100	20	40	2	4	15	70		160	100	265	40	162	3	8	30	210
250	10	125	24	40	2	4	18	85		250	100	300	54	162	3	8	34	235
6	15	80	12	40	2	4	11	55		100	125	265	36	162	3	8	30	210
10-16	15	95	14	45	2	4	14	65		6	125	240	18	178	3	8	18	200
25-40	15	95	16	45	2	4	14	65		10-16	125	250	22	188	3	8	18	210
64-100	15	105	20	45	2	4	14	75		25-40	125	270	26	188	3	8	26	220
160	15	105	20	45	2	4	15	75		64	125	295	34	188	3	8	30	240
250	15	130	26	45	2	4	18,5	90		100	125	315	40	188	3	8	33	250
6	20	90	14	50	2	4	11	65		160	125	315	44	188	3	8	33	250
10-16	20	105	16	58	2	4	14	75		250	125	340	60	188	3	12	41	275
25-40	20	105	18	58	2	4	14	75		6	150	265	18	202	3	8	18	225
64-100	20	130	24	58	2	4	18	90		10-16	150	285	22	212	3	8	22	240
6	25	100	14	60	2	4	11	75		25-40	150	300	28	218	3	8	26	250
10-16	25	115	16	68	2	4	14	85		64	150	345	36	218	3	8	33	280
25-40	25	115	18	68	2	4	14	85		100	150	355	44	218	3	12	33	290
64-100	25	140	24	68	2	4	18	100		160	150	355	50	218	3	12	33	290
160	25	140	24	68	2	4	18	100		250	150	390	68	218	3	12	48	320
250	25	150	28	68	2	4	19	105		6	175	295	20	232	3	8	18	255
6	32	120	14	70	2	4	14	90		10-16	175	315	24	242	3	8	22	270
10-16	32	140	16	78	2	4	18	100		25	175	330	28	248	3	12	26	280
25-40	32	140	18	78	2	4	18	100		40	175	350	32	260	3	12	30	295
64-100	32	155	24	78	2	4	22	110		64	175	375	40	260	3	12	33	310
6	40	130	14	80	3	4	14	100		100	175	385	48	260	3	12	33	320
10-16	40	150	16	88	3	4	18	110		160	175	390	54	260	3	12	36	320
25-40	40	150	18	88	3	4	18	110		250	175	430	74	260	3	12	50	355
64-100	40	170	26	85	3	4	22	125		6	200	320	20	258	3	8	18	280
160	40	170	28	88	3	4	22	125		10	200	340	24	268	3	8	22	295
250	40	185	34	88	3	4	25	135		16	200	340	24	268	3	12	22	295
6	50	140	14	90	3	4	14	110		25	200	360	30	278	3	12	26	310
10-16	50	165	18	102	3	4	18	125		40	200	375	34	285	3	12	30	320
25-40	50	165	20	102	3	4	18	125		64	200	415	42	285	3	12	36	345
64	50	180	26	102	3	4	22	135		100	200	430	52	285	3	12	36	360
100	50	195	28	102	3	4	26	145		160	200	430	60	285	3	12	36	360
160	50	195	30	102	3	4	26	145		250	200	485	82	285	3	12	57	400
250	50	200	38	102	3	5	26	150		6	250	375	22	312	3	12	18	335
6	65	160	14	110	3	4	14	130		10	250	395	26	320	3	12	22	350
10-16	65	185	18	122	3	4	18	145		16	250	405	26	320	3	12	26	355
25-40	65	185	22	122	3	8	18	145		25	250	425	32	335	3	12	30	370
64	65	205	26	120	3	8	22	160		40	250	450	38	345	3	12	33	385
100	65	220	30	120	3	8	26	170		64	250	470	46	345	3	12	36	400
160	65	220	34	122	3	8	26	180		100	250	505	60	345	3	12	39	430
250	65	230	42	122	3	8	30	180		160	250	515	68	345	3	12	42	430
6	80	190	16	128	3	4	18	150		250	250	585	100	345	3	16	72	490
10	80	200	20	138	3	8	18	160		6	300	440	22	365	4	12	22	395
16	80	200	20	138	3	8	18	160		10	300	445	26	370	4	12	22	400
25-40	80	200	24	138	3	8	18	160		16	300	460	28	378	4	12	26	410
64	80	215	28	138	3	8	22	170		25	300	485	34	390	4	16	30	430
100	80	230	32	138	3	8	24	180		40	300	515	42	410	4	16	33	450
160	80	230	36	138	3	8	40	180		64	300	530	52	410	4	16	36	460
250	80	255	46	138	3	8	31	200		100	300	585	68	410	4	16	42	500
										160	300	585	78	410	4	16	42	500
										250	300	690	120	410	4	16	90	590

All dimensions in mm (except where differently indicated)

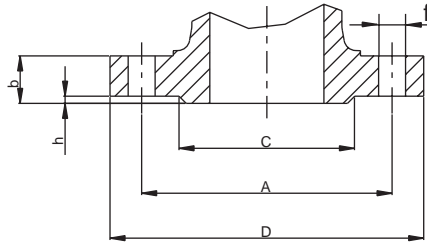
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DIN FLANGES DIMENSIONS

DN 350 ÷ DN 1200

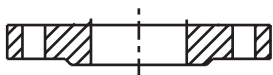
VALVOSIDER
MANUFACTURER OF VALVES



DN = Nominal pipe size
D = Outside diameter of flange
b = Thickness of flange min.
C = Diameter of hub
h = Height of raised face
N = Number of bolt holes
f = Diameter of bolt holes
A = Diameter of bolt circle

PN	DN	D	b	C	h	N°	f	A		PN	DN	D	b	C	h	N°	f	A
6	350	490	22	415	4	12	22	445		6	700	860	24	775	5	24	25	810
10	350	505	26	430	4	16	22	460		10	700	895	30	800	5	24	30	840
16	350	520	30	438	4	16	26	470		16	700	910	42	795	5	24	36	840
25	350	555	38	450	4	16	33	490		25	700	960	50	820	5	24	42	875
40	350	580	46	465	4	16	36	510		40	700	995	64	840	5	24	48	900
64	350	600	56	465	4	16	39	525		64	700	1045	84	840	5	24	56	935
100	350	655	74	465	4	16	48	560		100	700	1145	120	840	5	24	70	1020
6	400	540	22	465	4	16	22	495		6	800	975	24	880	5	24	30	920
10	400	565	26	482	4	16	26	515		10	800	1015	32	905	5	24	33	950
16	400	580	32	490	4	16	30	525		16	800	1025	42	900	5	24	39	950
25	400	620	40	505	4	16	36	550		25	800	1085	64	930	5	24	48	990
40	400	660	50	535	4	16	39	585		40	800	1165	72	960	5	24	62	1050
64	400	670	60	535	4	16	42	585		64	800	1165	92	960	5	24	62	1050
100	400	715	78	535	4	16	48	620		100	800	n.a	n.a	n.a	n.a	n.a	n.a	n.a
6	450	595	22	520	4	16	22	550		6	900	1075	26	980	5	24	30	1020
10	450	615	26	532	4	20	26	565		10	900	1115	34	1005	5	28	33	1050
16	450	640	32	550	4	20	30	585		16	900	1125	44	1000	5	28	39	1050
25	450	670	40	555	4	20	36	600		25	900	1185	68	1030	5	28	48	1090
40	450	685	50	560	4	20	39	610		40	900	1250	78	1070	5	28	56	1140
64	450	715	64	560	4	20	42	630		64	900	1285	98	1070	5	28	62	1170
100	450	770	86	560	4	20	48	675		100	900	n.a	n.a	n.a	n.a	n.a	n.a	n.a
6	500	645	24	570	4	20	22	600		6	1000	1175	26	1080	5	28	30	1120
10	500	670	28	585	4	20	26	620		10	1000	1230	34	1110	5	28	36	1160
16	500	715	36	610	4	20	33	650		16	1000	1255	46	1115	5	28	42	1170
25	500	730	44	615	4	20	36	660		25	1000	1320	62	1140	5	28	56	1210
40	500	755	52	615	4	20	42	670		40	1000	1360	80	1180	5	28	56	1250
64	500	800	68	615	4	20	48	705		64	1000	1415	108	1180	5	28	70	1290
100	500	870	94	615	4	20	56	760		100	1000	n.a	n.a	n.a	n.a	n.a	n.a	n.a
6	600	755	24	670	5	20	26	705		6	1200	1405	28	1295	5	32	33	1340
10	600	780	28	685	5	20	30	725		10	1200	1455	38	1330	5	32	39	1380
16	600	840	40	725	5	20	36	770		16	1200	1485	52	1330	5	32	48	1390
25	600	845	46	720	5	20	39	770		25	1200	1530	70	1350	5	32	56	1420
40	600	890	54	735	5	20	48	795		40	1200	1575	88	1380	5	32	62	1460
64	600	930	76	735	5	20	56	820		64	1200	1665	126	1380	5	32	78	1530
100	600	990	104	735	5	20	62	875		100	1200	n.a	n.a	n.a	n.a	n.a	n.a	n.a

FLANGES - TYPES OF CONTACT SURFACES - DIN 2526



FLANGES WITH RAISED FACE



FLANGES WITHOUT RAISED FACE

Type A - Contact face without stipulation

Type B - Contact face $R_z = 160$, turned (not finer than 40 micron)

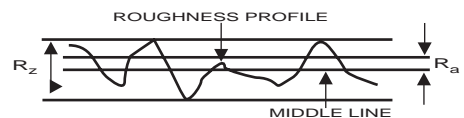
Type C - Raised face $R_z = 160$ (not finer than 40 micron), turned

Type D - Raised face $R_z = 40$, turned

Type E - Raised face $R_z = 16$, turned

NOMINAL ROUGHNESS GRADES (R_a)

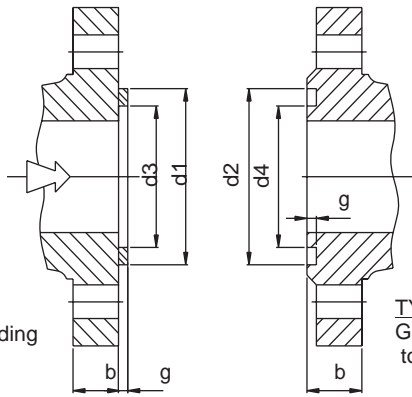
R_a (μm)	R_z (μm)
1.6	16
3.2	25
6.3	40
12.5	100
25	160



All dimensions in mm (except where differently indicated)

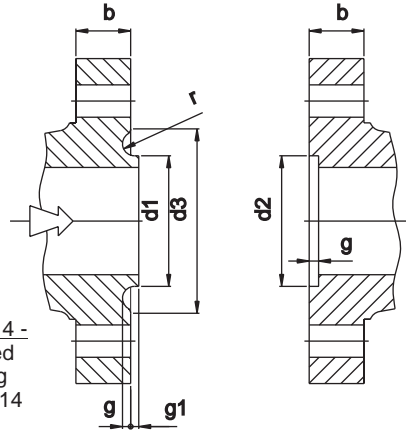
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Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com



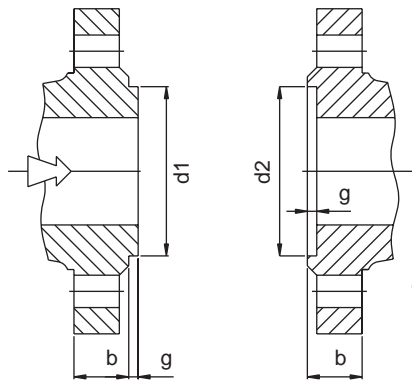
TYPE F -
Tongue according
to DIN 2512

TYPE N -
Groove according
to DIN 2512



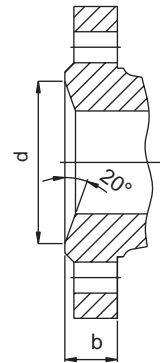
TYPE V 14 -
Male-facing
according
to DIN 2514

TYPE R 14 -
Female-facing
according
to DIN 2514

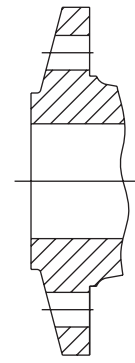


TYPE V 13 -
Male-facing
according
to DIN 2513

TYPE R 13 -
Female-facing
according
to DIN 2513



TYPE L - Recess for lenticular seal
according to DIN 2696



TYPE M - Bevel for diaphragm
seal welding according to
DIN 2695

DIMENSIONS OF FACING

DN	DIN 2513					DIN 2512									DN	DIN 2514							LENTICULAR SEAL DIN 2696		DN
	PN ≤ 6		PN ≥ 10			g	PN ≤ 6				PN ≥ 10					g	PN 10 ÷ 40					PN 64 : 250			
	d ₁	d ₂	d ₁	d ₂	d ₃		d ₄	d ₁	d ₂	d ₃	d ₄	d ₁	d ₂	d ₃			g	g ₁	r	d					
10	30	31	34	35	4	30	31	22	21	34	35	24	23	4	10	-	-	-	-	-	-	18	10		
15	35	36	39	40	4	35	36	27	26	39	40	29	28	4	15	-	-	-	-	-	-	24	15		
20	42	43	50	51	4	42	43	32	31	50	51	36	35	4	20	35	36	51	4	2	2,5	30	20		
25	49	50	57	58	4	49	50	39	38	57	58	43	42	4	25	42	43	58	4	2	2,5	35	25		
32	61	62	65	66	4	61	62	49	48	65	66	51	50	4	32	50	51	66	4	2	2,5	43	32		
40	68	69	75	76	4	68	69	56	55	75	76	61	60	4	40	60	61	76	4	2	2,5	51	40		
50	81	82	87	88	4	81	82	69	68	87	88	73	72	4	50	72	73	88	4	2	2,5	63	50		
65	101	102	109	110	4	101	102	89	88	109	110	95	94	4	65	94	95	110	4	2	2,5	85	65		
80	117	118	120	121	4	117	118	103	102	120	121	106	105	4	80	105	106	121	4	2	2,5	97	80		
100	137	138	149	150	4,5	137	138	123	122	149	150	129	128	4,5	100	128	129	150	4,5	2,5	3	124	100		
125	165	166	175	176	4,5	165	166	149	148	175	176	155	154	4,5	125	154	155	176	4,5	2,5	3	153	125		
150	192	193	203	204	4,5	192	193	176	175	203	204	183	182	4,5	150	182	183	204	4,5	2,5	3	181	150		
175	222	223	233	234	4,5	222	223	206	205	233	234	213	212	4,5	175	212	213	234	4,5	2,5	3	218	175		
200	249	250	259	260	4,5	249	250	231	230	259	260	239	238	4,5	200	238	239	260	4,5	2,5	3	243	200		
250	304	305	312	313	4,5	304	305	286	285	312	313	292	291	4,5	250	291	292	313	4,5	2,5	3	298	250		
300	354	355	363	364	4,5	354	355	336	335	363	364	343	342	4,5	300	342	343	364	4,5	2,5	3	345	300		
350	401	402	421	422	5	401	402	381	380	421	422	395	394	5	350	394	395	422	5	3	3,5	394	350		
400	451	452	473	474	5	451	452	431	430	473	474	447	446	5	400	446	447	474	5	3	3,5	445	400		
450	505	506	523	524	5	505	506	481	480	523	524	497	496	5	450	496	497	524	5	3	3,5		450		
500	555	556	575	576	5	555	556	531	530	575	576	549	548	5	500	548	549	576	5	3	3,5		500		
600	655	656	675	676	5	655	656	631	630	675	676	649	648	5	600	648	649	676	5	3	3,5		600		
700	760	761	777	778	5	760	761	736	735	777	778	751	750	5	700	750	751	778	5	3	3,5		700		
800	865	866	882	883	5	865	866	841	840	882	883	856	855	5	800	855	856	883	5	3	3,5		800		
900	965	966	987	988	5	965	966	941	940	987	988	961	960	5	900	960	961	988	5	3	3,5		900		
1000	1062	1063	1091	1092	6	1062	1063	1036	1035	1091	1092	1061	1060	6	1000	1060	1061	1092	6	3	4		1000		

All dimensions in mm (except where differently indicated)

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VALVE WELDING ENDS - DIN 3239

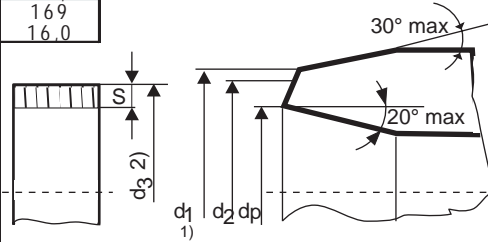
Part 1 - Butt ends | Part 2 - Socket ends

VALVOSIDER
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Nominal size DN	Butt Welding ends for pipes of							
	series 1 (up to PN 40)	series 2 (PN 63)	series 3 (PN 100)	series 4 (PN 160)	series 5 (PN 250)	series 6 *) (PN 320)	series 7 (PN 400)	series 8 (PN 630)
10	d1	Use series 4 welding ends		20	Use series 6 welding ends	20	20	24
	d2	Use series 4 welding ends		18	Use series 6 welding ends	18	18	22
	d3	Use series 4 welding ends		17,2	Use series 6 welding ends	17,2	17,2	21,3
	dp	Use series 4 welding ends		13	Use series 6 welding ends	12	10	11,5
	s	Use series 4 welding ends		2,0	Use series 6 welding ends	2,6	3,6	5,0
15	d1	Use series 4 welding ends		24	24	24	31	37
	d2	Use series 4 welding ends		22	22	22	28	34
	d3	Use series 4 welding ends		21,3	21,3	21,3	26,9	33,7
	dp	Use series 4 welding ends		17	16	15	17	18,5
	s	Use series 4 welding ends		2,0	2,6	3,2	5,0	8,0
20	d1	31	--	--	--	--	--	--
	d2	28	--	--	--	--	--	--
	d3	26,9	--	--	--	--	--	--
	dp	22	--	--	--	--	--	--
	s	2,3	--	--	--	--	--	--
25	d1	Use series 3 welding ends		37	39	39	48	54
	d2	Use series 3 welding ends		34	34	35	44	49
	d3	Use series 3 welding ends		33,7	33,7	33,7	42,4	48,3
	dp	Use series 3 welding ends		28,5	27	20,5	24	25
	s	Use series 3 welding ends		2,6	3,2	3,6	5,0	7,1
40	d1	Use series 3 welding ends		54	54	54	67	67
	d2	Use series 3 welding ends		49	49	49	61	77
	d3	Use series 3 welding ends		48,3	48,3	48,3	60,3	76,1
	dp	Use series 3 welding ends		43	41	38,5	40	43,5
	s	Use series 3 welding ends		2,6	3,6	5,0	6,3	11,0
50	d1	Use series 3 welding ends		67	67	67	83	96
	d2	Use series 3 welding ends		61	61	61	77	90
	d3	Use series 3 welding ends		60,3	60,3	60,3	76,1	88,9
	dp	Use series 3 welding ends		54	52,5	45	59,5	51,5
	s	Use series 3 welding ends		3,2	4,0	8,0	8,8	20,0
65	d1	Use series 3 welding ends		83	83	83	96	121
	d2	Use series 3 welding ends		77	77	77	90	115
	d3	Use series 3 welding ends		76,1	76,1	76,1	88,9	114,3
	dp	Use series 3 welding ends		69	85	59,5	68	81
	s	Use series 3 welding ends		3,6	5,6	8,8	11,0	17,5
80	d1	Use series 3 welding ends		96	96	121	121	121
	d2	Use series 3 welding ends		90	90	115	115	115
	d3	Use series 3 welding ends		88,9	88,9	114,3	114,3	114,3
	dp	Use series 3 welding ends		81	76,5	93	87,5	81
	s	Use series 3 welding ends		4,0	6,3	11,0	14,2	17,5
100	d1	Use series 3 welding ends		121	121	121	121	--
	d2	Use series 3 welding ends		115	115	115	115	--
	d3	Use series 3 welding ends		114,3	114,3	114,3	114,3	--
	dp	Use series 3 welding ends		104	96,5	104	96,5	--
	s	Use series 3 welding ends		5,0	8,0	5,0	8,0	--
125	d1	Use series 2 welding ends	147	147	147	147	147	147
	d2		141	141	141	141	141	
	d3		139,7	139,7	139,7	139,7	139,7	
	dp		130,5	127	120,5	130,5	127	
	s		4,5	6,3	10,0	4,5	6,3	
150	d1	Use series 2 welding ends	176	176	176	176	176	
	d2		170	170	170	170		
	d3		168,3	168,3	168,3	168,3		
	dp		156,5	154	144,5	156,5	154	
	s		5,6	7,1	12,5	5,6	7,1	
200	d1	Use series 2 welding ends	228	228	228	228	228	
	d2		222	222	222	222		
	d3		219,1	219,1	219,1	219,1		
	dp		204,5	199,5	169	204,5	199,5	
	s		7,1	10	16,0	7,1	10	
250	d1	282	282	282	282	282	282	
	d2	276	276	276	276	276		
	d3	273	273	273	273	273		
	dp	256,5	255	248,5	256,5	255		
	s	8,0	8,8	12,5	8,0	8,8		
300	d1	331	331	331	331	331	331	
	d2	325	325	325	325	325		
	d3	323,9	323,9	323,9	323,9	323,9		
	dp	306,5	301	295,5	306,5	301		
	s	8,0	11,0	14,2	8,0	11,0		
350	d1	365	365	365	365	365	365	
	d2	359	359	359	359	359		
	d3	355,6	355,6	355,6	355,6	355,6		
	dp	336,5	330	324	336,5	330		
	s	8,8	12,5	16,0	8,8	12,5		
400	d1	417	417	417	417	417	417	
	d2	411	411	411	411	411		
	d3	406,4	406,4	406,4	406,4	406,4		
	dp	383	377	371	383	377		
	s	11	14,2	17,5	11	14,2		
500	d1	518	518	518	518	518	518	
	d2	512	512	512	512	512		
	d3	508	508	508	508	508		
	dp	478	478	478	478	478		
	s	14,2	14,2	14,2	14,2	14,2		

DIN 3239 - Part 1

Type 1

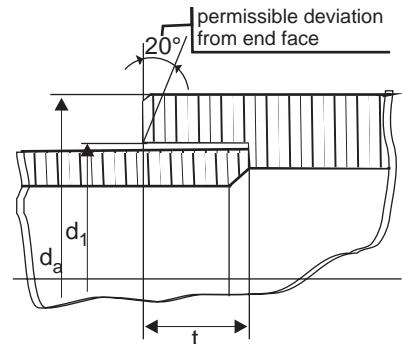


S = wall thickness
d₂ = pipe external diameter
d_p = d₂ - 2S (pipe int. diameter)

- d₁ is the maximum permissible major diameter, generally applicable for steel castings or malleable cast iron components suitable for welding.
 - d₃ is the major diameter of the associated series 1 steel pipe as specified in ISO 4200 - 1985.
- *) Welding neck flanges are not suitable for use with piping systems rated for PN 320 and PN 630.

WELDING SOCKET CONNECTIONS

DIN 3239 - Part 2



d_a = min. socket ext. diameter

d₁ = socket bore diameter

t = depth of socket

Nominal width DN	d _a min. Series			d _i	Associated outside diameter of pipe	t
	4	5	6			
6	17	17	17	11	10,2	10
8	21	21	22	14	13,5	10
10	24	24	26	18	17,2	10
15	29	32	34	22	21,3	10
20	35	38	41	27,5	26,9	13
25	42	46	50	34,5	33,7	13
32	52	55	59	43	42,4	13
40	57	62	68	49	48,3	13
50	71	75	83	61,5	60,3	16
65	90	100	110	77	76,1	16
80	100	120	130	90	88,9	16
100	135	150	165	115,5	114,3	20

All dimensions in mm (except where differently indicated)

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Designation		Chemical composition (cast analysis) (% min.)								
Name	Number	C	Si max	Mn	P max	S max	Cr	Mo	Ni	others
GP240GH	1.0619	0,18 to 0,23	0,60	0,50 to 1,20	0,030	0,020 ¹⁾	--	--	--	--
G20Mo5	1.5419	0,18 to 0,23	0,60	0,50 to 1,00	0,025	0,020 ¹⁾	--	0,40 to 0,60	--	--
G17CrMo5-5	1.7357	0,15 to 0,20	0,60	0,50 to 1,00	0,020	0,020 ¹⁾	1,00 to 1,50	0,45 to 0,65	--	--
G17CrMo9-10	1.7379	0,13 to 0,20	0,60	0,50 to 0,90	0,020	0,020 ¹⁾	2,00 to 2,50	0,90 to 1,20	--	--
GX15CrMo5	1.7365	0,12 to 0,19	0,80	0,50 to 0,80	0,025	0,025	4,00 to 6,00	0,45 to 0,65	--	--
G20Mn5	1.6220	0,17 to 0,23	0,60	1,00 to 1,60	0,020	0,020 ¹⁾	--	--	0,80 max	--
G9Ni10	1.5636	0,06 to 0,12	0,60	0,50 to 0,80	0,020	0,015	--	--	2,00 to 3,00	--
G9Ni14	1.5638	0,06 to 0,12	0,60	0,50 to 0,80	0,020	0,015	--	--	3,00 to 4,00	--
GX5CrNi19-10 2)	1.4308 2)	0,07 max	1,50	1,50	0,040	0,030	18,00 to 20,00	--	8,00 to 11,00	--
GX5CrNiNb19-11 2)	1.4552 2)	0,07 max	1,50	1,50	0,040	0,030	18,00 to 20,00	--	9,00 to 12,00	Nb: 8 x C, max: 1,00
GX5CrNiMo19-11-2 2)	1.4408 2)	0,07 max	1,50	1,50	0,040	0,030	18,00 to 20,00	2,00 to 2,50	9,00 to 12,00	--
GX5CrNiMoNb19-11-2 2)	1.4581 2)	0,07 max	1,50	1,50	0,040	0,030	18,00 to 20,00	2,00 to 2,50	9,00 to 12,00	Nb: 8 x C, max: 1,00
GX2CrNiMoN22-5-3	1.4470	0,03 max	1,00	2,00	0,035	0,025	21,00 to 23,00	2,50 to 3,50	4,50 to 6,50	N: 0,12 to 0,20

1) For castings of ruling thickness <28 mm, % 0,030 S is permitted

2) It should be pointed out that the suggested chemical composition ranges of these alloyed corrosion resistant steel grades are rather large. According to the final destination (high temperature/low temperature, etc...) it may be advisable for the founder to aim for narrower ranges for different elements in order to achieve the most suitable structures.

MECHANICAL PROPERTIES

Designation		Heat treatment °C		Test at room temperature				Test at elevated temperature								
Name	Number	Symbol 2)	Normalizing (+ N) or Quenching (+ Q) 1)	Tempering (+T)	Tensile test			Impact test	Tensile test							
					Rp _{0,2} Mpa *) min	Rm Mpa *)	A % min	KV J min.	Rp _{0,2} Mpa *) min at °C							
									100°	200°	300°	350°	400°	450°	500°	550°
GP240GH	1.0619	+ N + QT	900 to 980 890 to 980	-- 600 to 700	240	420 to 600	22	27	210	175	145	135	130	125	--	--
G20Mo5	1.5419	+ QT	920 to 980	650 to 730	245	440 to 590	22	27	--	190	165	155	150	145	135	--
G17CrMo5-5	1.7357	+ QT	920 to 960	680 to 730	315	490 to 690	20	27	--	250	230	215	200	190	175	160
G17CrMo9-10	1.7379	+ QT	930 to 970	680 to 740	400	590 to 740	18	40	--	355	345	330	315	305	280	240
GX15CrMo5	1.7365	+ QT	930 to 990	680 to 730	420	630 to 760	16	27	--	390	380	--	370	--	305	250

1) +Q means quenching media: air or liquid. +T = tempering. +N = normalizing

2) If there are alternative specifications for heat treatment, the requested alternative shall be indicated on the order, e.g.: GP240GH +QT1 or 1.0619 +QT1

*) 1 Mpa = 1N/mm²

Designation		Heat treatment °C		Test at room temperature			Impact test		
Name	Number	Symbol 1)	Quenching	Tempering	Tensile strength			KV J min.	At °C
					Rp _{0,2} Mpa *) min	Rm Mpa *)	A % min		
G20Mn5	1.6220	+ N + QT	900 to 980 900 to 940	-- 610 to 660	300	480 to 620 500 to 650	20 22	27 27	-30 -40
G9Ni10	1.5636	+ QT	830 to 890	600 to 650	280	480 to 630	24	27	-70
G9Ni14	1.5638	+ QT	820 to 900	590 to 650	360	500 to 650	20	27	-90

1) +Q: quenching in water. +T = tempering. +N = normalizing.

*) 1 Mpa = 1 N/mm²

Designation		Heat treatment		Test at room temperature				Test at elevated temperature							
Name	Number	+ AT 1)	°C	Tensile test			Impact test	Tensile test							
				Rp _{1,0} 5) Mpa *) min	Rm Mpa *)	A % min	KV J min.	°C 8)	Rp _{1,0} 5) Mpa *) min. at °C						
									100°	200°	300°	350°	400°	500°	550°
GX5CrNi19-10	1.4308		1050 to 1150	200	440 to 640	30	60 7)	RT 7)	160	125	110	--	--	--	--
GX5CrNiNb19-11	1.4552		1050 to 1150	200	440 to 640	25	40	RT	165	145	130	--	120	110	100
GX5CrNiMo19-11-2	1.4408		1080 to 1150	210	440 to 640	30	60 7)	RT 7)	170	135	115	--	105	--	--
GX5CrNiMoNb19-11-2	1.4581		1080 to 1150	210	440 to 640	25	40	RT	185	160	145	--	130	120	115
GX2CrNiMoN22-5-3	1.4470		1120 to 1150 2) 3)	420 6)	600 to 800	20	30	RT	330 6)	280 6)	4)	--	--	--	--

1) The heat treatment for all the steel grades is +AT +QW (solution annealing + water quenching).

2) After solution annealing at high temperature, castings may be cooled down to 1040 °C to 1010 °C prior to water quenching in order to improve corrosion resistance and prevent cracks in complex shapes.

3) As far as steel castings for pressure vessel are concerned the austenitic-ferritic steel are not considered in their age hardened condition.

4) For similar reasons as those concerning note 3) the austenitic-ferritic steel have not to be used for temperatures higher than 250 °C in pressure vessel applications.

5) Rp_{0,2} may be estimated by lowering Rp_{1,0} by 25 Mpa.

6) Rp_{0,2}

7) For use at low temperature impact properties may be agreed and the following applies: Steel number 1.4308 KV J min. 60 at -196 °C.

8) RT = Room temperature. *) 1 Mpa = 1 N/mm²

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MATERIALS EQUIVALENCE AND COMPARISON

VALVOSIDER
MANUFACTURER OF VALVES

MATERIALS EQUIVALENCE

ASTM	EN 10213	EN No.	UNS	JIS	TRADE MARK
A48-40B	EN-GJL-250	0.6025			
	EN-GJS-400-18	0.7043			
A216 WCB	GP240GH	1.0619	J03002	SCPH2	
A352 LCB	G20Mn5	1.6220	J03003	SCPL1	
A352 LC2					
A352 LC3	G9Ni14	1.5638	J31550	SCPL31	
A217 WC1	G20Mo5	1.5419	J12524	SCPH11	
A217 WC6	G17CrMo5-5	1.7357	J12072	SCPH21	
A217 WC9	GS12CrMo9-10	1.7379	J21890	SCPH32-CF	
A217 C5	GX15CrMo5	1.7365 (1.7363)	J42045	SCPH61	
A217 C12	(GX12CrMo10-1)	(1.7389)	J82090		
A351 CF3	X2CrNi19-11	1.4306	J92500	SCS19	
A351 CF3M	X2CrNiMo17-12-2	1.4409	J92800	SCS16	
A351 CF8	GX5CrNiMo19-10	1.4308	J92600	SCS13	
A351 CF8C	GX5CrNiNb19-11	1.4552	J92710		
A351 CF8M	GX5CrNiMo19-11-2	1.4408	J92900	SCS14	
A351 CF8MC	GX5CrNiMoNb19-11-2	1.4581			
A351 CG8M					
	GX2CrNiMoN22-5-3	1.4470			
A351 CK3MCuN					
A351 CN7M			N08007	SCS23	
A494 N-12MV			N10001		HASTELLOY B ®
A494 CW-12MW			N10002		HASTELLOY C ®
A494 M35-1			N04400		MONEL 400 ®
A494 CW-6MC			N06625		INCONEL 625 ®
			N08825		INCOLOY 825 ®
			S31803		SAF 2205 ®
			S31254		254 SMO ®
			S32550		FERRALIUM 255 ®

MATERIALS COMPARISON

CASTINGS			FORGINGS		
ASTM	EN 10213	EN No.	ASTM	EN 10213	EN No.
A216 WCB	GP240GH (GS-C 25N)	1.0619	A105	(C22.8)	1.0460
A352 LCB	G20Mn5	1.6220	A352 LF2		1.0437
A352 LC2					
A352 LC3	G9Ni14	1.5638	A352 LF3		1.5637
A217 WC1	G20Mo5	1.5419	A182 F1		1.5415
A217 WC6	G17CrMo5-5	1.7357	A182 F11	14CrMo4-5	1.7335
A217 WC9	GS12CrMo9-10	1.7379	A182 F22		1.7380
A217 C5	GX15CrMo5	1.7365 (1.7363)	A182 F5		1.7362
A217 CA15			A182 F6	(X20Cr13)	1.4021
A217 C12	(GX12CrMo10-1)	(1.7389)	A182 F9	(15CrMo12.1)	1.4920
A351 CF3	X2CrNi19-11	1.4306	A182 F304L	X2CrNi19-11	1.4306
A351 CF3M	X2CrNiMo17-12-2	1.4409	A182 F316L	X2CrNiMo17-12-2	1.4404
A351 CF8	GX5CrNiMo19-10	1.4308	A182 F304	X5CrNi18-10	1.4301
A351 CF8C	GX5CrNiNb19-11	1.4552	A182 F321	X6CrNiTi18-10	1.4541
A351 CF8M	GX5CrNiNb19-11	1.4552	A182 F347	X6CrNiNb18-10	1.4550
A351 CF8M	GX5CrNiMo19-11-2	1.4408	A182 F316	X5CrNiMo17-12-2	1.4401
A351 CF8MC	GX5CrNiMoNb19-11-2	1.4581	A182 F348	X6CrNiMoNb17-12-2	1.4580
A351 CG8M			A182 F317		
A351 CK3MCuN			A182 F44		
A351 CN7M			A182 F20		

BOLTS - ASME MATERIALS

BOLTS		NUTS	
B7	ASTM A193 B7	2H	ASTM A194 Gr.2H
B16	ASTM A193 B16	Gr.4	ASTM A194 Gr.4
L7	ASTM A320 L7	Gr.4	ASTM A194 Gr.4
B8M	ASTM A193 B8M	Gr.8M	ASTM A193 Gr.8M
B8	ASTM A193 B8 CL. 1	Gr.8 A	ASTM A194 Gr.8A
320 B8	ASTM A320 B8 CL.1	Gr.8 A	ASTM A194 Gr.8A
307 B	ASTM A307 Gr.B		
B8	ASTM A193 B8 CL. 1	2H	ASTM A194 Gr.2H

BOLTS - DIN MATERIALS

MATERIALS		BOLTS		NUTS	
Y	C35	1.0501	C35	C35	C35
YK	CK35	1.1181	CK35	CK35	C35
G	24CrMo5	1.7258	24CrMo5	CK35	CK35
GA	21CrMoV57	1.7709	21CrMoV57	24CrMo5	24CrMo5
	A2-70		A2-70	A2-70	A2-70
	A4-70		A4-70	A4-70	A4-70

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RATING FOR GROUP 3E0 MATERIALS - GP240GH - 1.0619					
TEMP. °C	GAUGE WORKING PRESSURE IN BAR				
	PN 16	PN 25	PN 40	PN 63	PN 100
RT	15,6	24,4	39,0	61,4	97,4
50	14,9	23,2	37,2	58,6	93,0
100	13,6	21,3	34,1	53,7	85,3
150	12,7	19,8	31,7	49,9	79,2
200	11,4	17,8	28,4	44,8	71,1
250	10,4	16,2	26,0	40,6	65,0
300	9,4	14,7	23,5	37,1	58,9
350	8,8	13,7	21,9	34,5	54,8
375	8,6	13,5	21,6	34,0	54,0
400	8,4	13,2	21,1	33,3	52,8
425					
450					
475					
500					

RATING FOR GROUP 4E0 MATERIALS - G20Mo5 - 1.5419					
TEMP. °C	GAUGE WORKING PRESSURE IN BAR				
	PN 16	PN 25	PN 40	PN 63	PN 100
RT	16,0	25,0	40,0	63,0	100,0
50	16,0	25,0	40,0	63,0	100,0
100	16,0	25,0	40,0	62,9	99,9
150	15,1	23,7	37,8	59,6	94,6
200	14,0	21,8	34,9	55,0	87,3
250	13,0	20,3	32,5	51,2	81,2
300	11,0	17,3	27,5	43,5	69,0
350	10,4	16,2	26,0	40,9	6,0
375	10,1	15,7	25,2	39,6	62,9
400	9,7	15,2	24,4	38,4	60,9
425	9,6	15,0	24,0	37,9	60,1
450	9,4	14,7	23,5	37,1	58,9
475	9,3	14,5	23,2	36,6	58,1
500	7,2	11,4	18,0	28,3	44,9

RATING FOR GROUP 5E0 MATERIALS - G17CrMo5-5 - 1.7357					
TEMP. °C	GAUGE WORKING PRESSURE IN BAR				
	PN 16	PN 25	PN 40	PN 63	PN 100
RT	16,0	25,0	40,0	63,0	100,0
50	16,0	25,0	40,0	63,0	100,0
100	16,0	25,0	40,0	63,0	100,0
150	15,8	24,8	39,6	62,4	99,0
200	14,9	23,3	37,4	58,8	93,4
250	14,3	22,3	35,7	56,3	89,3
300	13,3	20,8	33,3	52,4	83,2
350	12,3	19,3	30,9	48,6	77,1
375	12,0	18,8	30,0	47,3	75,1
400	11,5	18,0	28,9	45,5	72,2
425	11,1	17,3	27,7	43,6	69,2
450	10,7	16,7	26,7	42,0	66,7
475	10,0	15,6	25,0	39,4	62,5
500	8,9	13,9	22,3	35,1	55,7
510	8,2	12,9	20,6	32,5	51,6
520	6,7	10,4	16,7	26,3	41,8
530	5,5	8,7	13,9	21,8	34,7
550	3,5	5,4	8,7	13,7	21,8

RATING FOR GROUP 6E1 MATERIALS - GX15CrMo5 - 1.7365					
TEMP. °C	GAUGE WORKING PRESSURE IN BAR				
	PN 16	PN 25	PN 40	PN 63	PN 100
RT	16,0	25,0	40,8	63,0	100,0
50	16,0	25,0	40,8	63,0	100,0
100	16,0	25,0	40,7	63,0	100,0
150	15,8	24,8	39,6	62,4	99,0
200	15,4	24,1	38,5	60,6	96,3
250	14,6	22,9	36,6	57,6	91,4
300	13,5	21,1	33,8	53,3	84,6
350	12,7	19,8	31,8	50,0	79,4
375	12,3	19,1	30,6	48,2	76,6
400	11,5	18,0	28,9	45,5	72,2
425	11,1	17,3	27,7	43,6	69,2
450	10,7	16,7	26,7	42,0	66,7
475	10,0	15,6	25,0	39,4	62,5
500	8,0	12,6	20,1	31,6	50,2
510					
520					
530					
550					

RATING FOR GROUP 12E0 MATERIALS - GX5CrNiNb 19-11 - 1.4552					
TEMP. °C	GAUGE WORKING PRESSURE IN BAR				
	PN 16	PN 25	PN 40	PN 63	PN 100
RT	14,2	22,2	35,6	56,0	88,9
50	13,5	21,1	33,8	53,2	84,4
100	12,5	19,6	31,3	49,3	78,2
150	11,7	18,3	29,3	46,2	73,3
200	11,0	17,2	27,6	43,4	68,9
250	10,3	16,1	25,8	40,6	64,4
300	9,7	15,1	24,2	38,1	60,4
350	9,2	14,4	23,1	36,4	57,8
375	9,1	14,2	22,8	35,8	56,9
400	8,9	13,9	22,2	35,0	55,6
425	8,8	13,8	22,0	34,7	55,1
450	8,7	13,6	21,7	34,2	54,2
475	8,6	13,4	21,5	33,9	53,8
500	8,5	13,2	21,2	33,3	52,9
525	7,6	11,9	19,0	29,9	47,5
550	7,5	11,7	18,7	29,4	46,7
575	7,3	11,5	18,4	28,9	45,9
600	6,1	9,6	15,3	24,1	38,2

RATING FOR GROUP 15E0 MATERIALS - GX5CrNiMoNb 19-11-2 - 1.4581					
TEMP. °C	GAUGE WORKING PRESSURE IN BAR				
	PN 16	PN 25	PN 40	PN 63	PN 100
RT	14,9	23,3	37,3	58,8	93,3
50	14,6	22,8	36,4	57,4	91,1
100	13,5	21,1	33,8	53,2	84,4
150	12,5	19,6	31,3	49,3	78,2
200	11,7	18,3	29,3	46,2	73,3
250	11,0	17,2	27,6	43,4	68,9
300	10,3	16,1	25,8	40,6	64,4
350	10,0	15,6	24,9	39,2	62,2
375	9,8	15,3	24,5	38,6	61,3
400	9,6	15,0	24,0	37,8	60,0
425	9,5	14,9	23,8	37,5	59,6
450	9,5	14,8	23,6	37,2	59,1
475	9,4	14,7	23,5	37,0	58,7
500	8,9	13,9	22,3	35,1	55,7
525	8,1	12,7	20,4	32,1	50,9
550	7,9	12,3	19,7	31,0	49,2
575	7,6	11,8	18,9	29,8	47,2
600	6,8	10,6	16,9	26,6	42,3

* prEN 12516-1 is a draft and must not be regarded or used as International Standard. All data, subject to technical changes, are only for information and not for official use.

FLOW COEFFICIENT, K_v

may be defined as the rate of flow of water in cubic metres per hour, that will generate a pressure drop of one bar across the valve.

FLOW COEFFICIENT, C_v

may be defined as the rate of flow of water in US gallons per minute, at 60 °F (15,6 °C), that will generate a pressure drop of one pound-force per square inch across the valve.

BASIC FORMULAS

Liquid flow:

$$K_v = \frac{Q\sqrt{G}}{\sqrt{P}} ; P = G \frac{Q^2}{K_v^2}$$

where

Q = flow rate in cubic metres per hour;
G = specific gravity of liquid (water = 1);
P = pressure drop across valve in bar.

$$C_v = \frac{Q\sqrt{G}}{\sqrt{P}} ; P = G \frac{Q^2}{C_v^2}$$

where

Q = flow rate in US gal/min;
G = specific gravity of liquid (water = 1);
P = pressure drop across valve in lbf/in²

Gases flow :

$$P = P_1 \sqrt{P_1^2 - 2S_G T \frac{W_G}{1360 \frac{K_v}{0.86}}}$$

where

P₁ = inlet pressure (PSIA);
S_G = specific gravity of gas at standard conditions (air = 1);
T = absolute temperature of gas (-460 °F)
W_G = Volumetric flow of gas

Steam flow:

$$P = P_1 \sqrt{P_1^2 - \frac{1}{2.1} \frac{0.0007 T_s}{\frac{K_v}{0.86}} W^2}$$

where

W = pound per hour of Steam;
T_s = degree of superheat (°F);
P₁ = inlet pressure
P = pressure drop across valve in lbf/in²

Each type and size of valve has a particular flow coefficient and the general formulas indicate how a knowledge of this can be used to establish the pressure drop across a valve for a given flow rate or, alternatively, to determinate the flow rate through a valve which will generate a given pressure drop.

Flow coefficient values are determined by testing and may not be valid for all conditions of flow.

CAST STEEL VALVES - FLOW COEFFICIENT K_v (m³/h) (C_v (US gal/minute) = $K_v/0.86$)

Type	Class	Nominal dimension											
		2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
GATE VALVES	150	204	510	893	2074	3808	6035	8840	12325	16320	20825	23290	37060
	300	204	510	893	2074	3808	6035	8840	11339	15014	19159	21427	34095
	600	204	510	893	2074	3808	6035	10880	13065	17145	22330	27319	39704
	900	188	469	821	1908	3504	5552	10010	12019	15773	20543	25134	36527
	1500	173	432	756	1755	3223	5108	9209	11058	14511	18900	23123	33605
	2500	159	432	756	1755	3223	5108	9209	11058	--	--	--	--
GLOBE VALVES	150	38	102	174	400	740	1190	1700	2380	3188	4080	5015	7225
	300	38	102	174	400	740	1190	1700	2380	3188	3754	4614	6647
	600	35	86	149	352	633	985	1415	2190	2268	--	--	--
	900	32	79	137	324	582	906	1302	2015	2087	--	--	--
	1500	30	73	126	298	536	834	1198	1853	1920	--	--	--
	2500	27	67	116	275	493	768	1102	1705	1766	--	--	--
SWING CHECK VALVES F.B.	150	80	204	349	799	1479	2380	3400	4760	6375	8160	9350	14875
	300	77	198	338	775	1435	2309	3298	4617	6184	7915	9070	14429
	600	73	188	321	736	1363	2193	3133	4386	5874	7519	8616	13707
	900	70	179	305	700	1295	2083	2977	4167	5580	7143	8186	--
	1500	66	170	290	665	1231	1979	2828	3958	5301	6786	7777	--
	2500	63	162	275	632	1170	1880	2687	3760	5036	6447	7388	--
STRAINERS	150	56	127	200	494	675	944	1378	1916	2874	4311	6467	9700
	300	56	127	200	494	675	944	1378	1916	2874	4311	6467	9700
	600	49	111	176	434	594	830	1213	1686	2529	3794	5691	8536
	900	48	109	172	426	582	814	1188	1652	2479	3718	5577	8365
	1500	47	107	169	417	570	797	1165	1619	2429	3643	5466	8198
	2500	46	105	165	409	559	781	1141	1587	2380	3571	5356	8034

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	Multiply →	by	→ to obtain		Multiply →	by	→ to obtain	
Length	mil	25,4	μ (micron)	Velocity	ft/s (foot per second)	3,281	m/s (metre per second)	
	in (inch)	25,4	mm		m/min (metre per minute)	60	m/s (metre per second)	
	ft (foot)	0,3048	m		ft/min (foot per minute)	196,85	m/s (metre per second)	
	yd (yard)	0,9144	m		mile/h (mile per hour)	1,6093	km/h (kilometre per hour)	
	miles (nautical)	1,853	km		m/s (metre per second)	3,6	km/h (kilometre per hour)	
	miles (statute)	1,609	km					
Area	sq.in. (square inch)	6,4516	cm ²	Dynamic viscosity	g/ (cm s) (Poise)	0,1	Pa s = kg / (m s)	
	sq.ft. (square foot)	0,0929	cm ²		centipoise	0,001	Pa s	
	sq.yd. (square yard)	0,8361	cm ²		lb/ (ft s)	1,48819	Pa s	
Volume	cu.in (cubic inch)	16,387	cm ³	Kinematic viscosity	cm ² (Stokes)	0,0001	m ² /s	
	cu.ft. (cubic foot)	28,317	dm ³			centistokes	0,000001	m ² /s
	UK gal (UK gallon)	4,5461	dm ³			ft ² / s	0,09290	m ² /s
	US gal (US gallon)	3,7854	dm ³	Moment of force	N m (newton metre)	0,001	kN m (kilonewton metre)	
	bushel	35,24	dm ³			kN m	101,972	kgf m (kilogram-force metre)
	US gal (US gallon)	42	Us barrel			kgf m	86,8	lbf in (Pound-force inch)
	UK pint	1,76	l (litre)			lbf ft (Pound-force foot)	12	lbf in (Pound-force inch)
	l (litre)	1000	cm ³		lbf ft (Pound-force foot)	1,356	N m (newton metre)	
	l (litre)	1	dm ³	Mass per unit length	kg/m	0,672	lb/ft	
	m3 (cubic metre)	1000	l (litre)			lb/ft	1,488	kg/m
Mass	grains	0,0648	g	Mass per unit area	kg/m ²	0,2048	lb/ft ²	
	lb (pound)	0,4536	kg			lb/ft ²	4,882	kg/m ²
	oz (ounce)	28,3495	g	Thermal conductivity	W/(m °C)	6,934	Btu in/(ft ² h °F)	
	ton (UK ton)	1016,05	kg			Btu in/ft ² °F	0,1442	W/(m °C)
	sh ton (US ton)	907,2	kg	Entalpy	Btu (British Thermal Unit)	1055	J (Joule)	
	t (tonne)	1000	kg			Btu	0,252	kcal = Cal
					J	0,73560	ft lb	
					kWh	3600	kJ	
Pressure and Stress	kgf/cm ² = atc	0,980556	bar	Power	Btu	0,252	kcal = Cal	
	Pa (Pascal) = N/m ²	0,00001	bar			kcal	4186,8	J
	MPa (Megapascal)	10	bar	Energy	kJ/kg	0,239	kcal/kg	
	mm H ₂ O	9,80665	Pa			kW	1,34102	hp
	Torr (mm Hg)	133,322	Pa			hp	746	watt
psi (lbs per square inch)	0,068941	bar	Calorific value (volume basis)	MJ/m ³	26,84	Btu/ft ³		
UK tonf/in ²	15,44	Mpa			Btu/ft ³	0,03726	MJ/m ³	
					Btu/ft ³	37,26	kJ7m ³	
Density	lb/in ³	27,680	g/cm ³	Force	N (Newton)	0,102	kgf = kp (unità in disuso)	
	lb/ft ³	0,01602	g/cm ³			lbf (pound-force)	4,4483	N
	g/cm ³	1000	litre - g/dm ³			kgf = kp	2,205	lbf
	kg/m ³	0,752	ton/yd ³					
	ton/yd ³	13,319	lb/Ukgal					
	to obtain ←	by	← Divide		to obtain ←	by	← Divide	
To →			add	→ to obtain				
psig (psi at gauge)			14,70	psia (psi absolute)				
bar (at gauge)			1,01325	bar absolute				
°C (degrees Celsius)			273,15	K (degees Kelvin)				
°F (degrees Fahrenheit)			459,4	°R (degrees Rankine)				
to obtain ←			subtract	← To				

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TEMPERATURE CONVERSION

FAHRENHEIT AND CENTIGRADE

VALVOSIDER
MANUFACTURER OF VALVES

°C	(a)		°C	(a)		°C	(a)		°C	(a)		°C	(a)	
	°C → °F	← °F		°C → °F	← °F		°C → °F	← °F		°C → °F	← °F		°C → °F	← °F
			17,2	1	33,8	16,1	61	141,8	149	300	572	482	900	1652
			16,7	2	35,6	16,7	62	143,6	154	310	590	488	910	1670
			16,1	3	37,4	17,2	63	145,4	160	320	608	493	920	1688
			15,6	4	39,2	17,8	64	147,2	166	330	626	499	930	1706
			15,0	5	41,0	18,3	65	149,0	171	340	644	504	940	1724
			14,4	6	42,8	18,9	66	150,8	177	350	662	510	950	1742
			13,9	7	44,6	19,4	67	152,6	182	360	680	516	960	1760
			13,3	8	46,4	20,0	68	154,4	188	370	698	521	970	1778
			12,8	9	48,2	20,6	69	156,2	193	380	716	527	980	1796
			12,2	10	50,0	21,1	70	158,0	199	390	734	532	990	1814
			11,7	11	51,8	21,7	71	159,8	204	400	752	538	1000	1832
273	-459,4		11,1	12	53,6	22,2	72	161,6	210	410	770	549	1020	1868
268	-450		10,6	13	55,4	22,8	73	163,4	216	420	788	560	1040	1904
262	-440		10,0	14	57,2	23,3	74	165,2	221	430	806	571	1060	1940
257	-430		9,4	15	59,0	23,9	75	167,0	227	440	824	582	1080	1976
251	-420		8,9	16	60,8	24,4	76	168,8	232	450	842	593	1100	2012
246	-410		8,3	17	62,6	25,0	77	170,6	238	460	860	604	1120	2048
240	-400		7,8	18	64,4	25,6	78	172,4	243	470	878	616	1140	2084
234	-390		7,2	19	66,2	26,1	79	174,2	249	480	896	627	1160	2120
229	-380		6,7	20	68,0	26,7	80	176,0	254	490	914	638	1180	2156
223	-370		6,1	21	69,8	27,2	81	177,8	260	500	932	649	1200	2192
218	-360		5,6	22	71,6	27,8	82	179,6	266	510	950	660	1220	2228
212	-350		5,0	23	73,4	28,3	83	181,4	271	520	968	671	1240	2264
207	-340		4,4	24	75,2	28,9	84	183,2	277	530	986	682	1260	2300
201	-330		3,9	25	77,0	29,4	85	185,0	282	540	1004	693	1280	2336
196	-320		3,3	26	78,8	30,0	86	186,8	288	550	1022	704	1300	2372
190	-310		2,8	27	80,6	30,6	87	188,6	293	560	1040	732	1350	2462
184	-300		2,2	28	82,4	31,1	88	190,4	299	570	1058	760	1400	2552
179	-290		1,7	29	84,2	31,7	89	192,2	304	580	1076	788	1450	2642
173	-280		1,1	30	86,0	32,2	90	194,0	310	590	1094	816	1500	2732
169	-273	459,4	0,6	31	87,8	32,8	91	195,8	316	600	1112	843	1550	2822
168	-270	454	0,0	32	89,6	33,3	92	197,6	321	610	1130	871	1600	2912
162	-260	436	0,6	33	91,4	33,9	93	199,4	327	620	1148	899	1650	3002
157	-250	418	1,1	34	93,2	34,4	94	201,2	332	630	1166	927	1700	3092
151	-240	400	1,7	35	95,0	35,0	95	203,0	338	640	1184	954	1750	3182
146	-230	382	2,2	36	96,8	35,6	96	204,8	343	650	1202	982	1800	3272
140	-220	364	2,8	37	98,6	36,1	97	206,6	349	660	1220	1010	1850	3362
134	-210	346	3,3	38	100,4	36,7	98	208,4	354	670	1238	1038	1900	3452
129	-200	328	3,9	39	102,2	37,2	99	210,2	360	680	1256	1066	1950	3542
123	-190	310	4,4	40	104,0	37,8	100	212,0	366	690	1274	1093	2000	3632
118	-180	292	5,0	41	105,8	43	110	230	371	700	1292	1121	2050	3722
112	-170	274	5,6	42	107,6	49	120	248	377	710	1310	1149	2100	3812
107	-160	256	6,1	43	109,4	54	130	266	382	720	1328	1177	2150	3902
101	-150	238	6,7	44	111,2	60	140	284	388	730	1346	1204	2200	3992
96	-140	220	7,2	45	113,0	66	150	302	393	740	1364	1232	2250	4082
90	-130	202	7,8	46	114,8	71	160	320	399	750	1382	1260	2300	4172
84	-120	184	8,3	47	116,6	77	170	338	404	760	1400	1288	2350	4262
79	-110	166	8,9	48	118,4	82	180	356	410	770	1418	1316	2400	4352
73	-100	148	9,4	49	120,2	88	190	374	416	780	1436	1343	2450	4442
68	-90	130	10,0	50	122,0	93	200	392	421	790	1454	1371	2500	4532
62	-80	112	10,6	51	123,8	99	210	410	427	800	1472	1399	2550	4622
57	-70	94	11,1	52	125,6	100	212	414	432	810	1490	1427	2600	4712
51	-60	76	11,7	53	127,4	104	220	428	438	820	1508	1454	2650	4802
46	-50	58	12,2	54	129,2	110	230	446	443	830	1526	1482	2700	4892
40	-40	40	12,8	55	131,0	116	240	464	449	840	1544	1510	2750	4982
34	-30	22	13,3	56	132,8	121	250	482	454	850	1562	1538	2800	5072
29	-20	4	13,9	57	134,6	127	260	500	460	860	1580	1566	2850	5162
28	-18	0	14,4	58	136,4	132	270	518	466	870	1598	1593	2900	5252
23	-10	14	15,0	59	138,2	138	280	536	471	880	1616	1621	2950	5342
18	0	32	15,6	60	140,0	143	290	554	477	890	1634	1649	3000	5432

The central column (a) represent the know temperature in °C or in °F.
 The equivalent temperature in °F or in °C is then read from the column to the right or the left.
 General Formula °C = (°F - 32) x 5/9
 °F = (°C x 9/5) + 32

All data, subject to technicals changes, are only for information and not for official use.

VALVOSIDER s.r.l. - Via S. Rocco, 2 - P.O. BOX 76 - 13011 Borgosesia (VC) - Italy
 Phone: +39016322991 - Fax: +39016321537 - www.valvosider.com - e-mail: valvo@valvosider.com

INCHES	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16
0	0,00	1,59	3,18	4,76	6,35	7,94	9,53	11,11	12,70	14,29	15,88	17,46	19,05	20,64	22,23	23,81
1	25,40	26,99	28,58	30,16	31,75	33,34	34,93	36,51	38,10	39,69	41,28	42,86	44,45	46,04	47,63	49,21
2	50,80	52,39	53,98	55,56	57,15	58,74	60,33	61,91	63,50	65,09	66,68	68,26	69,85	71,44	73,03	74,61
3	76,20	77,79	79,38	80,96	82,55	84,14	85,73	87,31	88,90	90,49	92,08	93,66	95,25	96,84	98,43	100,01
4	101,60	103,19	104,78	106,36	107,95	109,54	111,13	112,71	114,30	115,89	117,48	119,06	120,65	122,24	123,83	125,41
5	127,00	128,59	130,18	131,76	133,35	134,94	136,53	138,11	139,70	141,29	142,88	144,46	146,05	147,64	149,23	150,81
6	152,40	153,99	155,58	157,16	158,75	160,34	161,93	163,51	165,10	166,69	168,28	169,86	171,45	173,04	174,63	176,21
7	177,80	179,39	180,98	182,56	184,15	185,74	187,33	188,91	190,50	192,09	193,68	195,26	196,85	198,44	200,03	201,61
8	203,20	204,79	206,38	207,96	209,55	211,14	212,73	214,31	215,90	217,49	219,08	220,66	222,25	223,84	225,43	227,01
9	228,60	230,19	231,78	233,36	234,95	236,54	238,13	239,71	241,30	242,89	244,48	246,06	247,65	249,24	250,83	252,41
10	254,00	255,59	257,18	258,76	260,35	261,94	263,53	265,11	266,70	268,29	269,88	271,46	273,05	274,64	276,23	277,81
11	279,40	280,99	282,58	284,16	285,75	287,34	288,93	290,51	292,10	293,69	295,28	296,86	298,45	300,04	301,63	303,21
12	304,80	306,39	307,98	309,56	311,15	312,74	314,33	315,91	317,50	319,09	320,68	322,26	323,85	325,44	327,03	328,61
13	330,20	331,79	333,38	334,96	336,55	338,14	339,73	341,31	342,90	344,49	346,08	347,66	349,25	350,84	352,43	354,01
14	355,60	357,19	358,78	360,36	361,95	363,54	365,13	366,71	368,30	369,89	371,48	373,06	374,65	376,24	377,83	379,41
15	381,00	382,59	384,18	385,76	387,35	388,94	390,53	392,11	393,70	395,29	396,88	398,46	400,05	401,64	403,23	404,81
16	406,40	407,99	409,58	411,16	412,75	414,34	415,93	417,51	419,10	420,69	422,28	423,86	425,45	427,04	428,63	430,21
17	431,80	433,39	434,98	436,56	438,15	439,74	441,33	442,91	444,50	446,09	447,68	449,26	450,85	452,44	454,03	455,61
18	457,20	458,79	460,38	461,96	463,55	465,14	466,73	468,31	469,90	471,49	473,08	474,66	476,25	477,84	479,43	481,01
19	482,60	484,19	485,78	487,36	488,95	490,54	492,13	493,71	495,30	496,89	498,48	500,06	501,65	503,24	504,83	506,41
20	508,00	509,59	511,18	512,76	514,35	515,94	517,53	519,11	520,70	522,29	523,88	525,46	527,05	528,64	530,23	531,81
21	533,40	534,99	536,58	538,16	539,75	541,34	542,93	544,51	546,10	547,69	549,28	550,86	552,45	554,04	555,63	557,21
22	558,80	560,39	561,98	563,56	565,15	566,74	568,33	569,91	571,50	573,09	574,68	576,26	577,85	579,44	581,03	582,61
23	584,20	585,79	587,38	588,96	590,55	592,14	593,73	595,31	596,90	598,49	600,08	601,66	603,25	604,84	606,43	608,01
24	609,60	611,19	612,78	614,36	615,95	617,54	619,13	620,71	622,30	623,89	625,48	627,06	628,65	630,24	631,83	633,41
25	635,00	636,59	638,18	639,76	641,35	642,94	644,53	646,11	647,70	649,29	650,88	652,46	654,05	655,64	657,23	658,81
26	660,40	661,99	663,58	665,16	666,75	668,34	669,93	671,51	673,10	674,69	676,28	677,86	679,45	681,04	682,63	684,21
27	685,80	687,39	688,98	690,56	692,15	693,74	695,33	696,91	698,50	700,09	701,68	703,26	704,85	706,44	708,03	709,61
28	711,20	712,79	714,38	715,96	717,55	719,14	720,73	722,31	723,90	725,49	727,08	728,66	730,25	731,84	733,43	735,01
29	736,60	738,19	739,78	741,36	742,95	744,54	746,13	747,71	749,30	750,89	752,48	754,06	755,65	757,24	758,83	760,41
30	762,00	763,59	765,18	766,76	768,35	769,94	771,53	773,11	774,70	776,29	777,88	779,46	781,05	782,64	784,23	785,81
31	787,40	788,99	790,58	792,16	793,75	795,34	796,93	798,51	800,10	801,69	803,28	804,86	806,45	808,04	809,63	811,21
32	812,80	814,39	815,98	817,56	819,15	820,74	822,33	823,91	825,50	827,09	828,68	830,26	831,85	833,44	835,03	836,61
33	838,20	839,79	841,38	842,96	844,55	846,14	847,73	849,31	850,90	852,49	854,08	855,66	857,25	858,84	860,43	862,01
34	863,60	865,19	866,78	868,36	869,95	871,54	873,13	874,71	876,30	877,89	879,48	881,06	882,65	884,24	885,83	887,41
35	889,00	890,59	892,18	893,76	895,35	896,94	898,53	900,11	901,70	903,29	904,88	906,46	908,05	909,64	911,23	912,81
36	914,40	915,99	917,58	919,16	920,75	922,34	923,93	925,51	927,10	928,69	930,28	931,86	933,45	935,04	936,63	938,21
37	939,80	941,39	942,98	944,56	946,15	947,74	949,33	950,91	952,50	954,09	955,68	957,26	958,85	960,44	962,03	963,61
38	965,20	966,79	968,38	969,96	971,55	973,14	974,73	976,31	977,90	979,49	981,08	982,66	984,25	985,84	987,43	989,01
39	990,60	992,19	993,78	995,36	996,95	998,54	1000,13	1001,71	1003,30	1004,89	1006,48	1008,06	1009,65	1011,24	1012,83	1014,41
40	1016,00	1017,59	1019,18	1020,76	1022,35	1023,94	1025,53	1027,11	1028,70	1030,29	1031,88	1033,46	1035,05	1036,64	1038,23	1039,81
41	1041,40	1042,99	1044,58	1046,16	1047,75	1049,34	1050,93	1052,51	1054,10	1055,69	1057,28	1058,86	1060,45	1062,04	1063,63	1065,21
42	1066,80	1068,39	1069,98	1071,56	1073,15	1074,74	1076,33	1077,91	1079,50	1081,09	1082,68	1084,26	1085,85	1087,44	1089,03	1090,61
43	1092,20	1093,79	1095,38	1096,96	1098,55	1100,14	1101,73	1103,31	1104,90	1106,49	1108,08	1109,66	1111,25	1112,84	1114,43	1116,01
44	1117,60	1119,19	1120,78	1122,36	1123,95	1125,54	1127,13	1128,71	1130,30	1131,89	1133,48	1135,06	1136,65	1138,24	1139,83	1141,41
45	1143,00	1144,59	1146,18	1147,76	1149,35	1150,94	1152,53	1154,11	1155,70	1157,29	1158,88	1160,46	1162,05	1163,64	1165,23	1166,81
46	1168,40	1169,99	1171,58	1173,16	1174,75	1176,34	1177,93	1179,51	1181,10	1182,69	1184,28	1185,86	1187,45	1189,04	1190,63	1192,21
47	1193,80	1195,39	1196,98	1198,56	1200,15	1201,74	1203,33	1204,91	1206,50	1208,09	1209,68	1211,26	1212,85	1214,44	1216,03	1217,61
48	1219,20	1220,79	1222,38	1223,96	1225,55	1227,14	1228,73	1230,31	1231,90	1233,49	1235,08	1236,66	1238,25	1239,84	1241,43	1243,01
49	1244,60	1246,19	1247,78	1249,36	1250,95	1252,54	1254,13	1255,71	1257,30	1258,89	1260,48	1262,06	1263,65	1265,24	1266,83	1268,41
50	1270,00	1271,59	1273,18	1274,76	1276,35	1277,94	1279,53	1281,11	1282,70	1284,29	1285,88	1287,46	1289,05	1290,64	1292,23	1293,81

All data, subject to technical changes, are only for information and not for official use.

1. Offers are made without obligation; orders are to be considered accepted only after our order acknowledgement.
2. Order are not cancellable except with our consent, and then upon terms which indemnify us against loss.
3. Prices are for delivery ex our works in Borgosesia. All transportation charges, insurance, customs charges, special packing or other fees will be at customer's expense.
4. We are not responsible for delays in delivery or defaults in completing a contract due to strikes, work stoppages, fires, floods, accident, inability to obtain materials, fuel, transportation or other causes beyond our control. No penalty is due if not written in the contract.
5. All claims for shortages, corrections or deductions must be made within 30 days after receipt of the goods. Responsibility for goods lost or damaged in transit, rests with carrier, and claims should be filed with the carrier by the consignee and accompanied by the packing list covering the shipment.
6. All amounts invoiced to the customer must be paid without rebate, deduction or set-off. The customer shall never have the right to suspend its obligations.
7. The customer owes, without any further notice of default, interest equal to the statutorily prescribed rate of interest applying in Italy at the time, on all amounts that have not been paid by the last day of the term for payment at the latest.
8. We reserve the right to change or modify the design and construction of any product without incurring any obligation to supply or substitute or modify materials previously sold.
9. Before shipment the goods are carefully tested. Valvosider guarantees its product against defect in material and workmanship for a period of time up to one year from the date of shipment, where such product is used in a service for which it is recommended. Valvosider's obligation under warranty is limited to repair of the product, f.o.b. factory, or replacement of any part or parts having defects in material or workmanship. The buyer shall permit Valvosider to inspect the product so that it may determine its obligation, if any.
10. Valvosider is not responsible for any other damages, whatsoever, in connection with replacement, repair, or refund as set forth above, said obligations and remedies to be sole warranty given hereunder. No warranty shall apply to any product which is modified or changed in design or function after leaving the Valvosider's factory.
11. Catalogue pictures have only to show different types of product, but we don't undertake to carry out exactly details, to which we reserve to introduce changes and improvements according to our experience.
12. In case of controverse only the judicial authorities of the Vercelli (Italy) law-court are competent.

Disclaimer

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IQNet and its partner
CISQRINA
herby certify that the organization
VALVOSIDER S.r.l.
VIA SAN ROCCO 2 13011 BORGOSIESA VC ITALIA
in the following operative units
VIA SAN ROCCO 2 13011 BORGOSIESA VC ITALIA

for the following field of activities
DESIGN AND MANUFACTURE OF INDUSTRIAL VALVES FOR PETROCHEMICAL AND POWER PLANTS

has implemented and maintains a
Quality Management System
which fulfills the requirements of the following standard
ISO 9001:2000

Registration Number: **IT-2573**

First issue : 1992-01-27

Current issue : 2004-02-18



Fabrizio Rivaroli
President of IQNet



Giuseppe Prati
President of CISQ

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3000 AZ Rotterdam
Phone: 031 10 - 2014200
Telefax: 031 10 - 4117980

Valvosider Srl
Ca. Post. 76
13011 Borgosesia (VC)
Italy
Attn. Mr. P.L. Moretta

Subject
Prohibition of Valvosider Srl according M 0809 of the Dutch
"Rules for Pressure Vessels"

Dear Mr. Moretta,
Herewith we inform you, that based on the supplied information, your company

VALVOSIDER SRL
13011 BORGOSIESA (VC), ITALY

is considered to be able to manufacture:

Valves, gate, globe, check

that fulfill the requirements of the sheet M 0809 and the sheets from the Dutch Rules for Pressure Vessels
that are referred to.

Based on the above the mentioned company will be listed on the M 0809 list for a period until:

December 31st, 2004.

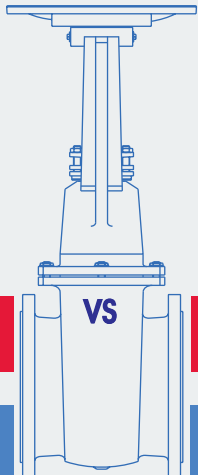
Until that moment this notification serves as evidence of acceptance according M 0809 of the Dutch
"Rules for Pressure Vessels".

Kind regards,

R. Bambach
Department CBA/Sector Safety

Stoomwezen BV Weena Zaid 148, 1012 CR Rotterdam

*This reference is valid only for the use of the notified information and is not intended to be used as a basis for the design of the product. The user of the product is advised to consult the manufacturer for further information.



ASME

DIN

VALVOSIDER s.r.l.

Via S. Rocco, 2 - P.O. BOX 76 - 13011 Borgosesia (VC) - Italy

Phone: +39 0163 22991 - Fax: +39 0163 21537

e-mail: valvo@valvosider.com - <http://www.valvosider.com>

CERTIFICATE

FOR MANUFACTURER ACCORDING TO
AD 2000-MERKBLATT HP 0 / AD 2000 A4

We hereby certify that the company

Valvosider S.R.L., Via San Rocco, 2 I- 13011 Borgosesia (VC)

has been approved according to AD 2000-Merkblatt HP 0 / AD 2000 A4.

The scope of this approval and other details are
described in our technical Report No. 138349 dated 12.02.2004.
All requirements are met.

Beside others the following main preconditions are given:

- technical equipment for a proper and up-to-date manufacturing and testing,
- quality assurance which assures a correct working and testing of materials according to the Technical Rules,
- qualified supervising and manufacturing personnel.

This approval is valid for 3 years.

Milan, 2004-02-17

TÜV BAYERN HESSEN SACHSEN SÜDWEST E. V.

Bau und Betrieb

F. J. ...
Industrial Division
BB / Milan Office



CERTIFICATE

The Certification Body of
TÜV SÜDDEUTSCHLAND Bau und Betrieb GmbH
(a Pressure Equipment Directive Notified Body)

certifies that

Valvosider Srl
Via San Rocco 2
I-13011 Borgosesia (Vc)
Italy

has implemented, operates and maintains a quality system as described in
the Pressure Equipment Directive (97/23/EC) Annex III Module H1

for the scope

MANUFACTURE OF INDUSTRIAL GATE-, GLOBE- and CHECK-
VALVES

Evidence that the quality system satisfies the PED requirements is
documented in Assessment Report, Report No.: I-Q-501-01.

The manufacturer is, therefore, authorized to provide the pressure
equipment manufactured within the scope of the assessed quality system
with the below listed Notified Body identification number (following the
product's CE marking as illustrated).

CE 0036

Certificate No.: DGR-0036-QS-111-101

Mannheim, February 12, 2001

TÜV SÜDDEUTSCHLAND
Bau und Betrieb GmbH
Dulauer Str.
D-68187 Mannheim

Tel: (0681) 621 30 32 37
Fax: (0681) 621 30 55 94

...
Notified Body No.: 0036
Member of
CONFEDERATION EUROPEEN
CEOC
ORGANISME DE CONTROLE

Certificate of Authority to use the Official API Monogram

License Number: 609-0020 ORIGINAL

The American Petroleum Institute hereby grants to:

VALVOSIDER S.R.L.
Via San Rocco, 2
Borgosesia, Verelli
Italy

the right to use the Official API Monogram™ on manufactured products under the conditions in the official
publications of the American Petroleum Institute entitled API Spec Q1™ and API Standard 609
and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram should be used in conjunction with this
certificate number: 609-0020

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram
for any reason satisfactory to the Board of Directors of the American Petroleum Institute.
The scope of this license includes the following product: Ballast Bored Steel Gas Valves

Effective Date: JULY 26, 2004
Expiration Date: MAY 3, 2005

...
Director of Certification Programs

Certificate of Authority to Use the Official API Monogram

License Number: 6D-0166 ORIGINAL

The American Petroleum Institute hereby grants to:

VALVOSIDER SRL
Borgosesia, Verelli, Italy

the right to use the Official API Monogram™ on manufactured products under the conditions in the official
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certificate number: 6D-0166

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram
for any reason satisfactory to the Board of Directors of the American Petroleum Institute.
The scope of this license includes the following product: Gas Valve Check Valve

Effective Date: MAY 3, 2002
Expiration Date: MAY 3, 2005

...
Secretary

СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р ГОСТСТАНДАРТ РОССИИ



СЕРТИФИКАТ СООТВЕТСТВИЯ

№ РОСС ИТ.Н003.В00622

Срок действия с 15.10.01 г. по 15.10.04 г.
№4786697

ОРГАН ПО СЕРТИФИКАЦИИ рег. в РОСС RU.0001.11R003
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специальных и нефтяных компрессов «ТЕХНОСТАНДАРТ» (орган по сертификации сырья,
материалов, машин и оборудования для нефтяного комплекса)
125009, Москва, Таганский переулок, д. 9, стр. 4 (119991, Москва, Ленинский проспект, 45)
телефон/факс (095) 135-79-26, 930-90-43

ПРОДУКЦИЯ
Заворы шиберные Ду5350 мм, Ру542 МПа
Серийное производство

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ НОРМАТИВНЫХ ДОКУМЕНТОВ
ГОСТ 12.2.063
ГОСТ 9544
ИД 08-200-98

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НА ОСНОВАНИИ
Протокола испытаний № 01/110 от 08.10.01 г. Испытательного центра
средств автоматизации газовых систем (ИИС ГАПС), Россия, 113405,
г. Москва, ул. Гавриловод, 42, рег. в РОСС RU.0001.22T04 до 13.07.06 г.
Сертификата систем качества ISO 9001, рег. № ИТ-2573,
иной ИСО и СИ/РД/И.
Сертификата Американского Нефтяного Института (API), рег. № 6D-0166
Акта анализа состояния производства от 28.09.01 г.

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ
Знак соответствия по ГОСТ Р 50460 наносится на корпус изделия
включая дополнительную документацию
Копия сертификата - За
Руководитель органа
Эксперт



...
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