



Range DN: 15 ~ 1200
NPS: 1 1/2" ~ 40"



PED 97/23/EC
PED 2014/68/EU



TR TS 10/11,
12/11, 32/11



Range PN: 16 ~ 160
Class: 150 - 900

Operating temperature: -196 °C ~ 550 °C

Connection into piping: Flanged, welded ends, combined execution



DESCRIPTION

S38/S through conduit gate valves are controlled shut-off valves. They are designed to stop or allow the flow of the medium by external operation, either manually or via the installed drive. They are not intended to regulate the flow of the transported medium. The medium can flow in both directions. These gate valves are designed and manufactured to ensure maximum service life and reliability.

MATERIAL SPECIFICATION

S38/S through conduit gate valves are made from carbon, alloy and stainless steels. The material type can be adjusted according to the customer's request to optimally suit the operating conditions.

APPLICATION

S38/S through conduit gate valves are suitable for various liquids, gases and steam.

BASIC STANDARDS FOR DESIGN

Basic design

API 6D, ASME B16.34

Pressure-temperature rating

ASME B16.34, EN 12 516 - 1

Testing

API 598 EN 12 266 - 1, 2

Face-to-face dimensions

ANSI B16.10, EN 558, EN 12 982

Dimensions of the welded ends

ANSI B16.25, EN 12 627

Top Flange dimensions

EN ISO 5210

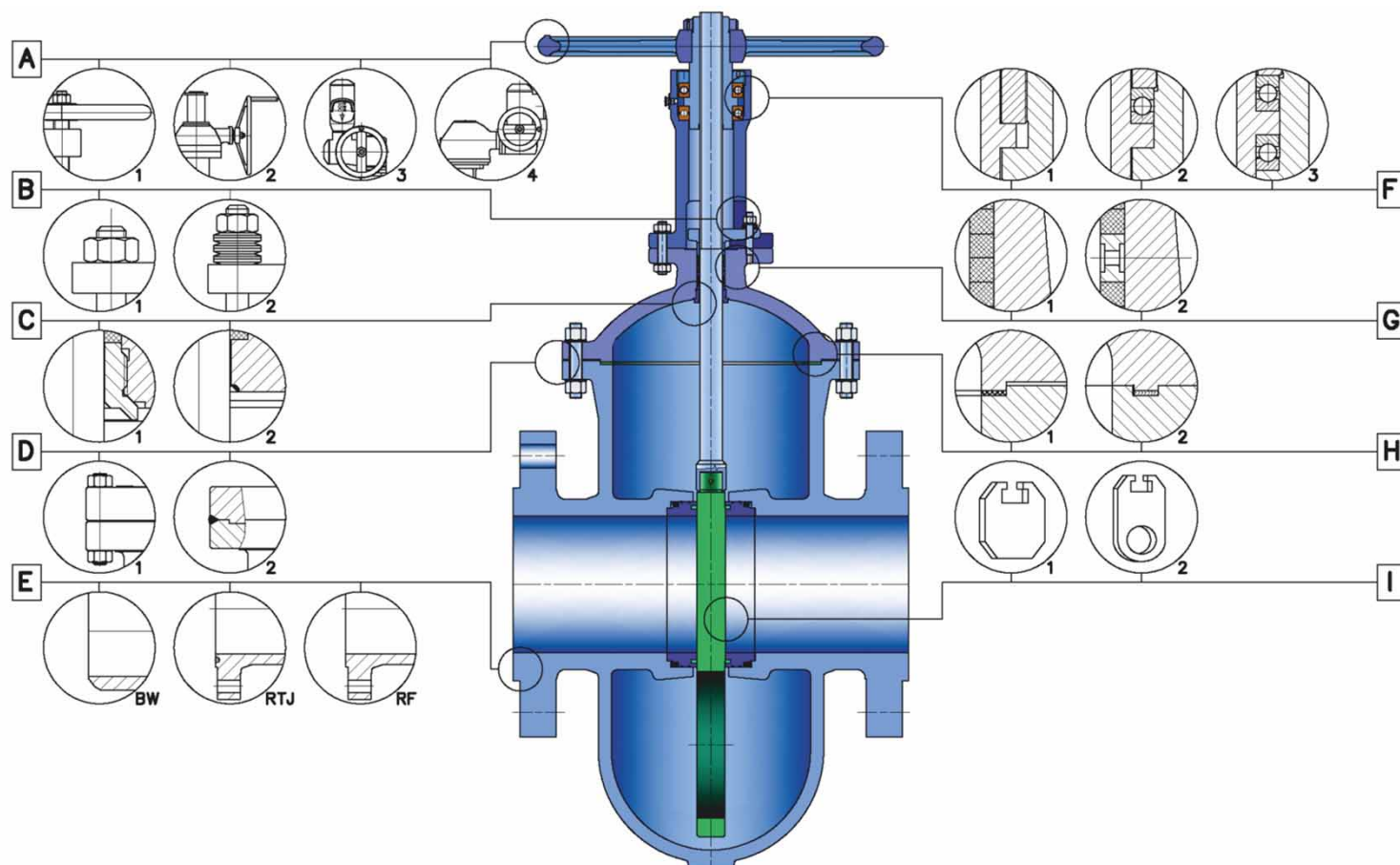
Flange dimensions

ANSI B 16.5, ANSI B16.47A, EN1092 - 1

Special

NACE MR-0175

STRUCTURAL DESIGN



A – Control

- hand wheel
- hand wheel + gearbox
- electric actuator
- electric actuator with gearbox

B – Gland compression

- in case of valve operation with cyclic changes in pressure or at high pressures and temperatures, gland compression by means of Belleville springs, which ensure a constant pre-stress in packing, is preferred.

C - Back seat execution D - Bonnet execution

- screwed into the bonnet
- integral part of the bonnet
- the bonnet is bolted to the body
- the bonnet is welded to the body

E - Connection to piping

- flanged
- with rough or smooth raised face
- with male / female facing
- with tongue / groove facing
- with RTJ
- welded
- with welded ends according to customer's requirements

F - Bedding of stem nut

- depending on the operating torque
- friction (sliding) type
- combination of sliding and rolling stem nut bedding
- bedding of stem nut between two axial rolling bearings

G - Execution of gland packing

- standard
- double stem packing with lantern ring - shall be chosen in accordance with working conditions

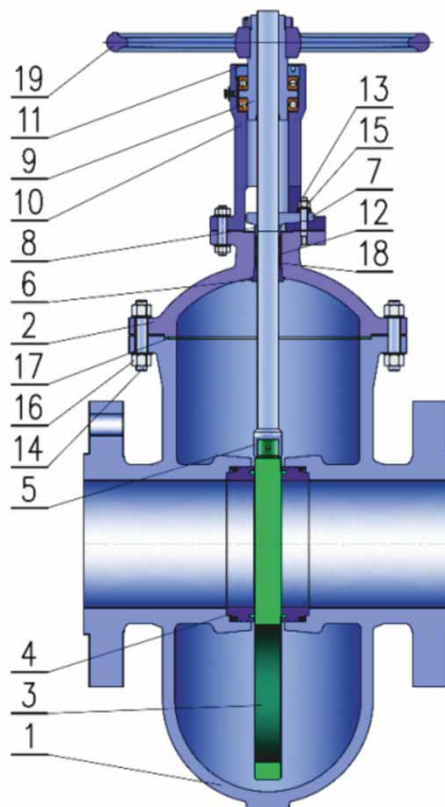
H - Bonnet sealing

- CLASS 150 to CLASS 400 – by gasket for male-female body/bonnet connection
- CLASS 600, 900 – by spiral wound gasket for tongue-groove body/bonnet connection

I – Disk execution

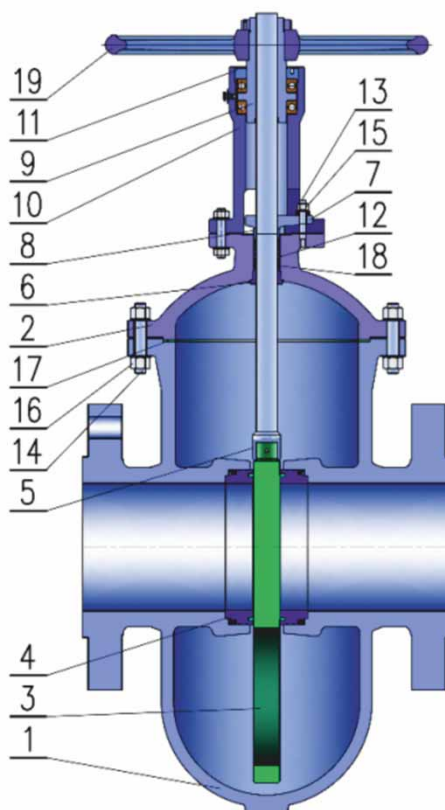
- The disk can be either with or without a hole. When using a disk with a hole, the pressure loss of the valve is the same as the pressure loss of the pipeline of the same inside diameter and length. The pressure loss of the valve with a disk without a hole is smaller than the pressure loss of the wedge gate valve. The flow coefficients of both discs are nearly identical except for the above-mentioned pressure loss.

MATERIAL SPECIFICATION



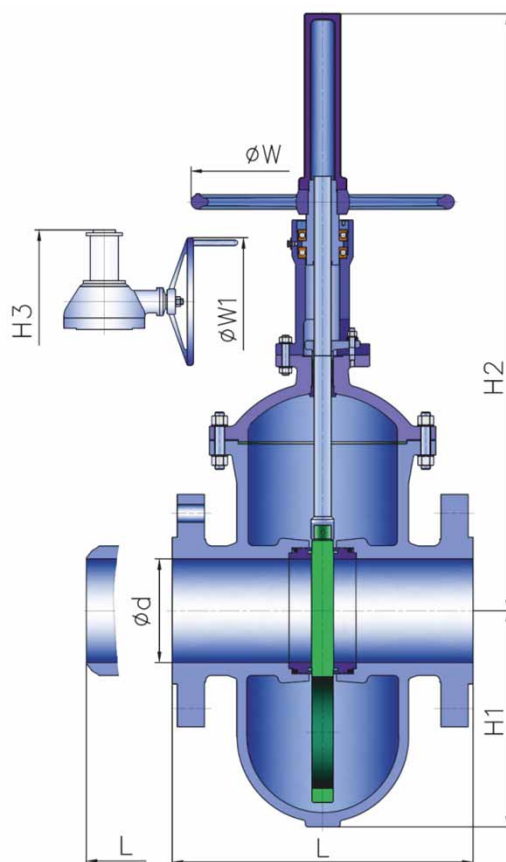
Pos.	Designation	WCB	LCC	LCB	WC 6	WC 9	C 5	C 12	CF8 / 304	CF8M / 316
1	Body	A216 WCB	A352 LCC	A352 LCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
2	Bonnet	A216 WCB	A352 LCC	A352 LCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
3	Disk	A105 + overlay	A350 LF3 + overlay	A350 LF3 + overlay	A217 WC6 + overlay	A217 WC9 + overlay	A217 C5 + overlay	A217 C12 + overlay	A182 F304	A182 F316
4	Seat	A105 + overlay	A350 LF3 + overlay	A350 LF3 + overlay	A182 F5 + overlay				A182 F304	A182 F316
5	Stem	A276 - 410	A182 F6a						A182 F304	A182 F316
6	Back seat	A182 F6a						A351 CF8	A351 CF8M	
7	Gland flange	A216 WCB	A352 LCC	A352 LCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
8	Stuffing box bushing	A182 F6a						A182 F304	A182 F316	
9	Stem nut	bronze, A439 D2								
10	Yoke	A216 WCB	A352 LCC	A352 LCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
11	Threaded bushing	carbon steel							stainless steel	stainless steel
12	Lantern ring	A276 - 420	A182 F6a						A182 F304	A182 F316
13	Bolt of gland flange	A193 B7	A320 L7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8M
14	Bolt	A193 B7	A320 L7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8M
15	Nut	A194 2H	A194 4	A194 4	A194 2H	A194 2H	A194 2H	A194 2H	A194 8	A194 8M
16	Nut	A194 2H	A194 4	A194 4	A194 2H	A194 2H	A194 2H	A194 2H	A194 8	A194 8M
17	Gasket	304 + graphite								316L + graphite
18	Stem packing	graphite								
19	Hand wheel	cast iron								

MATERIAL SPECIFICATION



Pos.	Designation	Material							
		GP 240GH	G17CrMo5-5	GS12CrMo 19-5	GX12CrMo 10-1	G17Mn5	G20Mn5	GX5CrNi19-10	GX5CrNiMo19-11-2
1	Body	GP 240GH	G17CrMo5-5	GS12CrMo 19-5	GX12CrMo 10-1	G17Mn5	G20Mn5	GX5CrNi19-10	GX5CrNiMo19-11-2
2	Bonnet	GP 240GH	G17CrMo5-5	GS12CrMo 19-5	GX12CrMo 10-1	G17Mn5	G20Mn5	GX5CrNi19-10	GX5CrNiMo19-11-2
3	Disk	GP 240GH + overlay	G17CrMo5-5 + overlay	GS12CrMo 19-5 + overlay	GX12CrMo 10-1 + overlay	G17Mn5 + overlay	G20Mn5 + overlay	GX5CrNi19-10 + overlay	GX5CrNiMo19-11-2 + overlay
4	Seat	P355NH + overlay	13CrMo4-5 + overlay	X11CrMo5 + overlay	X11CrMo 9-1 + overlay	P355NH + overlay	P355 NL1 + overlay	X5CrNi18-10 + overlay	X5CrNiMo 17-12-2 + overlay
5	Stem	X12Cr13						X5CrNi18-10	X5CrNiMo 17-12-2
6	Back seat	X12Cr13						X5CrNi18-10	X5CrNiMo 17-12-2
7	Gland flange	GP 240GH	G17CrMo5-5	GS12CrMo 19-5	GX12CrMo 10-1	G17Mn5	G20Mn5	GX5CrNi19-10	GX5CrNiMo19-11-2
8	Stuffing box bushing	P355NH	13CrMo4-5	X11CrMo5	GX12CrMo 10-1	P355NH	P355NL1	X5CrNi18-10	X5CrNiMo 17-12-2
9	Stem nut	Bronze ,A439 D2							
10	Yoke	GP 240GH	G17CrMo5-5	GS12CrMo 19-5	GX12CrMo 10-1	G17Mn5	G20Mn5	GX5CrNi19-10	GX5CrNiMo19-11-2
11	Threaded bushing	Carbon steel						Stainless steel	
12	Lantern ring	X12Cr13						GX5CrNi19-10	GX5CrNiMo19-11-2
13	Bolt of gland flange	25CrMo4	25CrMo4	25CrMo4	25CrMo4	25CrMo4	25CrMo4	A193B8,A4-70	A193B8M,A4-70
14	Bolt	42CrMo4	A193B16	A193B16	A193B16	42CrMo4	26CrMo4	A193B8,A4-70	A193B8M,A4-70
15	Nut	25CrMo4	25CrMo4	25CrMo4	25CrMo4	25CrMo4	25CrMo4	A194 8,A4-70	A194 8M,A4-70
16	Nut	25CrMo4	A194 7	A194 7	A194 7	25CrMo4	26CrMo4	A194 8,A4-70	A194 8M,A4-70
17	Gasket	304 + graphite, 316L + graphite							
18	Stem packing	graphite							
19	Hand wheel	cast iron							

DIMENSIONS



NPS	DN	PN 16, PN 25, CLASS 150									PN 40, CLASS 300								
		L		H1	H2	H3	W	W1	(KG)		L		H1	H2	H3	W	W1	(KG)	
		1	2						2	1	1	2						2	1
1 1/2	40	165	165	115	435	-	250	-	29	33	190	190	115	435	-	250	-	32	35
2	50	178	216	122	475	-	250	-	48	54	216	216	122	575	-	250	-	51	54
2 1/2	65	190	241	152	535	-	300	-	59	70	241	241	152	535	-	300	-	62	70
3	80	203	283	178	600	-	300	-	63	73	283	283	178	600	-	300	-	66	73
4	100	229	305	220	700	-	350	-	73	85	305	305	220	700	-	350	-	78	90
6	150	267	403	345	910	-	350	-	158	180	403	403	345	910	-	350	-	159	180
8	200	292	419	420	1095	1235	350	305	264	300	419	419	420	1095	1235	350	305	266	300
10	250	330	457	495	1370	1510	450	305	290	329	457	457	495	1370	1510	450	305	416	470
12	300	356	502	600	1470	1610	500	305	400	455	502	502	600	1470	1610	500	305	576	650
14	350	381	572	640	1730	1890	600	458	619	704	762	762	640	1730	1890	600	458	890	1005
16	400	406	610	720	1870	2030	650	458	869	987	838	838	720	1870	2030	650	458	1260	1410
18	450	432	660	798	2185	2415	700	458	1115	1267	914	914	798	2185	2415	700	458	1620	1810
20	500	457	711	875	2335	2565	800	458	1435	1631	991	991	875	2335	2545	800	458	2110	2330
24	600	508	813	1250	2815	3045	1000	458	2310	2625	1143	1143	1170	2815	3045	1000	458	3410	3750
28	700	610	914	1250	-	-	-	-	3203	3640	1346	1346	1250	-	-	-	-	4715	5200
32	800	660	965	1370	-	-	-	-	4540	5159	1524	1524	1370	-	-	-	-	6690	7370
36	900	711	1016	1500	-	-	-	-	6209	7056	1727	1727	1500	-	-	-	-	9230	10080
40	1000	813	-	1670	-	-	-	-	7293	8288	-	-	-	-	-	-	-	-	-

DIMENSIONS

		CLASS 400									PN 63								
NPS	DN	L		H1	H2	H3	W	W1	(KG)		L		H1	H2	H3	W	W1	(KG)	
		1	2						2	1	1	2						2	1
1 1/2	40	241	241	127	457	-	250	-	34	40	241	241	127	457	-	250	-	34	40
2	50	292	292	135	499	-	250	-	51	59	250	292	135	499	-	250	-	51	59
2 1/2	65	330	330	167	562	-	300	-	58	70	290	330	167	562	-	300	-	58	70
3	80	356	356	196	630	-	300	-	84	100	310	356	196	630	-	300	-	84	100
4	100	406	406	242	735	-	350	-	137	165	350	406	242	735	-	350	-	137	165
6	150	495	495	380	956	1096	350	305	210	240	450	495	380	956	1096	350	305	210	240
8	200	597	597	462	1150	1290	400	305	340	385	550	597	462	1150	1290	350	305	340	385
10	250	673	673	545	1439	1580	500	305	505	565	650	673	545	1439	1580	450	305	505	565
12	300	762	762	660	1545	1705	600	458	680	765	750	762	660	1545	1705	500	458	680	765
14	350	826	826	705	1818	197	650	458	1010	1130	850	826	705	1817	1977	600	458	1010	1130
16	400	902	902	792	1965	2125	700	458	1430	1580	950	902	792	1965	2125	650	458	1430	1580
18	450	978	978	878	2295	2525	700	458	1940	2120	1050	978	878	2295	2525	700	458	1940	2120
20	500	1054	1054	963	2452	2682	1000	458	2500	2750	1150	1054	963	2452	2682	800	458	2500	2750
24	600	1232	1232	1287	-	3186	-	458	3710	4050	1350	1232	1287	-	3186	1000	458	3710	4050
28	700	1397	1397	1375	-	-	-	-	5100	5700	1450	1397	1375	-	-	-	-	5100	5700
32	800	1650	1650	1507	-	-	-	-	6920	7547	1650	1651	1507	-	-	-	-	6920	7547
36	900	1880	1880	1650	-	-	-	-	9800	10600	1880	1880	1650	-	-	-	-	9800	10600

		PN 100, CLASS 600									PN 160, CLASS 900								
NPS	DN	L		H1	H2	H3	W	W1	(KG)		L		H1	H2	H3	W	W1	(KG)	
		1	2						2	1	1	2						2	1
1 1/2	40	241	241	127	457	-	250	-	42	46	305	305	140	503	-	300	-	42	45
2	50	292	292	135	499	-	300	-	59	68	368	368	147	550	-	350	-	82	87
2 1/2	65	330	330	167	562	-	350	-	78	90	419	419	184	618	-	400	305	129	136
3	80	356	356	196	630	-	350	-	106	122	381	381	216	693	833	500	305	165	173
4	100	432	432	242	735	-	400	-	134	167	457	457	266	810	950	600	458	237	251
6	150	559	559	380	956	1096	500	305	212	260	610	610	418	1052	1212	650	458	421	443
8	200	660	660	462	1150	1290	600	305	384	484	737	737	508	126	1423	700	458	672	707
10	250	787	787	525	1439	1580	650	458	540	720	838	838	600	1583	1813	800	458	983	1034
12	300	838	838	660	1545	1705	700	458	965	1160	965	965	726	1698	1928	1000	458	1634	1720
14	350	889	889	705	1817	1977	800	458	1305	1620	1029	1029	775	-	2230	-	-	2353	2476
16	400	991	991	792	1965	2125	1000	458	1350	1800	1130	1130	871	-	-	-	-	2613	2750
18	450	1092	1092	878	-	2525	-	458	1950	2440	1219	1219	966	-	-	-	-	3575	3763
20	500	1194	1194	963	-	2682	-	458	2365	2985	1321	1321	1060	-	-	-	-	4331	4559
24	600	1397	1397	1287	-	-	-	-	3800	4740	1549	1549	1416	-	-	-	-	6954	7320
28	700	1549	1549	1375	-	-	-	-	5930	6800	-	-	-	-	-	-	-	-	-
32	800	1778	1778	1507	-	-	-	-	8333	9410	-	-	-	-	-	-	-	-	-

TYPE DESIGNATION

S38/S C/D E M₁ PN or Class/S

C CONNECTION INTO PIPE

- 1 Flanged
- 2 Welded ends
- 8 Combined

M₁ BODY MATERIAL

- 0 Stainless steel
- 2 Cast alloy steel
- 5 Cast carbon steel
- LT Carbon steel for low temperatures

S SPECIAL EXECUTION

- As Antistatic execution
- B Bypass
- O With overflow

D FLANGE FACING

EN 1092 - 1

- A Flat face
- B Raised face
- C Tongue face
- D Groove face
- E Spigot
- F Recess
- G O - ring recess
- H O - ring groove

ANSI B 16.5

- PFF Flat sealing face
- RF Raised face
- LTF Large tongue
- STF Small tongue
- LGF Large groove
- SGF Small groove
- LMF Large male
- SMF Small male
- LFF Large female
- SFF Small female
- RTJ Ring joint

E CONTROL

- 1 Hand wheel
- 2 Gearbox + hand wheel
- 3 Electric actuators
- 4 Gearbox + electric actuators
- 9 Bare shaft

