XOMOX®

Technische Dokumentation
Technical Documentation

XOMOX Resilient Seated Butterfly Valves Series 7500

XOMOX International GmbH & Co. OHG
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Dok. Nr.: tdb_7500_gb

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CRANE
ChemPharma Flow Solutions

Table of Content

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Scope of Supply

Type	Material	DN 40 – 300 NPS 1 ½ – 12	DN 350 – 600 NPS 14 – 24	DN 700 – 900 NPS 28 – 36	DN 1000 – 1200 NPS 40 - 48
Wafer Body	GG 25 GGG 40 GGG 40.3	PN 6/10/16/ASME 150 PN 10/16/ASME 150 PN 10/16	 PN 10/16/ASME 150 PN 10/16	 PN 10/16	- - -
Lug Body	GGG 40 GGG 40.3 GS-C25	PN 10/16/ASME 150 PN 10/16 PN 10/16/ASME 150	PN 10/16/ASME 150 PN 10/16 PN 10/16/ASME 150	PN 16/MSS-SP44 PN 16 PN 16/MSS-SP44	- - -
Wafer body with centering lugs	GG 25	PN 6/10/16/ASME 150	-		-
Flanged Body	GGG 40 GGG 40.3 GS-C25	- - -	- - -	PN 10 PN 10 PN 10	PN 10/16 MSS-SP 44 PN 10/16 PN 10/16

Components	Type	DN / NPS	Material
Operation	10 position lever	40 – 300 / 1 ½ – 12	-
	10 position lever	40 – 200 / 1 ½ – 8	-
	Square nut	40 – 200 / 1 ½ – 8	-
	Gear operator	40 – 1200 / 1 ½ – 48	-
	Pneumatic actuator	40 – 1200 / 1 ½ – 48	-
	Hydraulic actuator	40 – 1200 / 1 ½ – 48	-
	Electric actuator	40 – 1200 / 1 ½ – 48	-
Upper Stem		40 – 1200 / 1 ½ – 48	Cr-Steel
		40 – 1200 / 1 ½ – 48	Cr Ni-Steel
Body Liner		40 – 1200 / 1 ½ – 48	NBR
		40 – 500 / 1 ½ – 20	HNBR
		40 – 1200 / 1 ½ – 48	EPDM
		40 – 1200 / 1 ½ – 48	FPM
		40 – 600 / 1 ½ – 24	CSM
		40 – 1200 / 1 ½ – 48	EPDM-H
Disc		200 – 1200 / 8 – 48	GGG nickel plated [4]
		40 – 1200 / 1 ½ – 48	Stainless steel
		200 – 1200 / 8 – 48	GGG-VIADUR coated [1)4)]
		40 – 1200 / 1 ½ – 48	GGG-ECTFE coated [1)]
		40 – 600 / 1 ½ – 24	Hastelloy-C [1)5)]
		700 – 1200 / 28 – 48	Hastelloy-C22C
		40 – 150 / 1 ½ – 6	Stainless steel polished
		40 – 1200 / 1 ½ – 48	Duplex 9.4517 [1)2)]
		40 – 700 / 1 ½ – 28	Hostalen Gur lined
Lower Stem		40 – 1200 / 1 ½ – 48	Cr-Steel
		40 – 700 / 1 ½ – 28	Cr Ni-Steel

1) only for 10 bar closing pressure 2) only on request 3) DN 40 / NPS 1 ½ only lug body, not PN 6 and ASME 150
4) Alternatively, we may supply disc in stainless steel 5) or comparable

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Chemical Resistance of Body Liner

The following liner material / fluid combinations are based on user's practical experience. The materials quoted may not be suitable for all process media over the entire temperature range. Chemical resistance of the seat can be affected by fluid concentration, temperature, pressure, flow rate and ventilation. Therefore, the suitability of any liner material / fluid combination cannot be guaranteed. In case there are any doubts, the suitability should be checked by testing under the required operating conditions.

Body Liner Material	Resistant against	Temperature Range
NBR (Perbunan) * (Acrylonitrile Butadiene Rubber)	Petroleum, grease, alcohol, glycol, propane, butane, diesel fuels, compressed air, latex and many other media	-20°C up to +80°C or up to +110°C for intermittent operation
HNBR (Therban) * Hydrogenated Acrylonitrile Butadiene Rubber	Petroleum, grease, alcohols, glycol, propane, butane, diesel fuels, salts, amines, ammonia many other media. Highly polluted media with high velocity, abrasive media.	-20°C up to +120°C
EPDM (Ethylene Propylene Terpolymer)	Ozone, phosphate, ester, ketones, alcohols, glycols, dilutesulphuric acid, alkaline solutions in general, treated water (with caustic soda, sodium sulphite, chlorine), Hot water and steam (It is attacked by hydrocarbonaceous solutions and oils, chlorinated hydrocarbons, turpentine and all other petroleum based oils).	-34°C up to +120°C
EPDM-H	As EPDM including drinking water approval (KTW/DVGW)	-34°C up to +140°C
CR (Neoprene) * Chloroprene Rubber	Oxygen, caustic solution, vegetable oil, refrigerants (freon) and others. (It is attacked by chlorinated solutions, strongly oxidising chemicals, aromatic hydrocarbons and hydraulic fluids)	-20°C up to +80°C
CSM (Hypalon) * Chlorosulphonated Polyethylene	Sodium chloride, chromic acid, nitric and hydrofluoric acid, sulphuric acid, hydrocarbon oils, salts, chlorine bleaches and others	-20°C up to +80°C or up to +100°C for intermittent operation
FPM (Viton)* Fluorelastomer	Strong and weak mineral acids, aliphatic hydrocarbons, aromatic phenolic and halogenated hydrocarbons, ester of aromatic acids, aliphatic acids, phosphoric acids, phosphoric ester, aromatic ethers, aliphatic ethers, ozone, chlorine and hypochlorite. (Viton* is not suitable for dry heat, hat water and steam).	-20°C up to +150°C

*Trademark or Tradename

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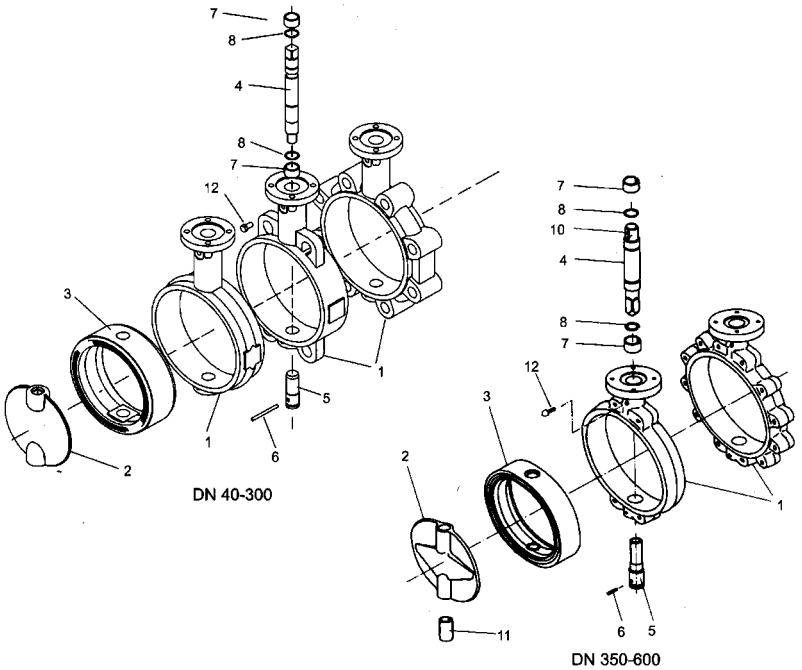
Materials of Construction



	Component	Material Specification	Material-No.	Temperature Range
Components without medium contact	**Body (1)**	EN-GJL-250 (only Wafer / DN 50-300) EN-GJS-400-15 GP 240 GH	JL-1040 JS-1030 1.0619	N/A
	Upper (4) **Lower Stem (5)**	Chromium X20Cr13 Stainless Steel X5CrNiMo 18/10	1.4021 1.4401	
	Pin (6)	Spring Steel, zinc plated		
	Bushing (7)	DU/Plastic (manufacturer's choice)		
	Circlip (8)	Spring Steel, zinc plated		
	Parallel Keys (10)	Steel		
	Bushing (11)	Bronze		
	Screw (12)	Steel, zinc plated		
Components with medium contact	**Disc (2)**	Ductile Iron (nickel plated) GGG-40-gal Ni (only DN 200–600)	JS-1030	-10°C, upper tsemperature limited by liner
		Ductile Iron VIADUR-coated (only DN 200–600)	JS-1030	-10°C to +80°C
		Ductile Iron ECTFE-coated	JS-1030	-10°C, upper temperature limited by liner
		Ductile Iron Hostalen GUR lined	UHMWPE	-10°C to +70°C
		Stainless Steel (manufacturer's choice) G-X5CrNiMo 19-11-2 G-X5CrNiMoNb 18/10	 1.4408 1.4581	limited by liner
		Duplex Steel G-X2CrNiMoCuN 27 77 43	9.4517	limited by liner
		Hastelloy C (G-NiMo16Cr) (or equal)	2.4883	limited by liner
	Body Lining	EPDM		-34°C to +120°C
		EPDM-H		-34°C to +140°C (with KTW approval)
		NBR (Perbunan)		-20°C to +80°C (up to 100°C for intermittent operation)
		HNBR		-20°C to +120°C
		FPM / Viton (or equal)		-5°C to +150°C
		CSM (Hypalon)		-20°C to +80°C (up to 100°C for intermittent operation)

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Valve & Actuator Sizing

The size of XOMOX butterfly valves which are used for control purposes should not be chosen on the basis of the nominal diameter of the pipe, but should be calculated on the basis of the basis of the operating characteristics, in order to achieve the correct control characteristics.
XOMOX rubber lined butterfly valves are designed with approximately equal percentage characteristics over an opening angle of 60°.
It is necessary only to consider this opening angle when determining the size of a control valve.
In determining the valve nominal diameter, firstly calculate the kv-value from the following formula:

a) for liquids $k_V = Q \cdot \sqrt{\frac{\Upsilon}{\Delta p}}$

b) for gases $k_V = \frac{V_N}{514} \cdot \sqrt{\frac{G \cdot T}{\Delta p \cdot p_2}}$

Where:

k_V = Flow coefficient
Q = Maximum flow volume in m³/h
Υ = Specific weight in kg/dm³
F = Cross-section of pipe in cm²
Δp = Pressure drop in bar
V_N = Maximum flow volume in Nm³/h
G = Specific weight in kg/Nm³
T = Absolute temperature in °K
p_1 = Absolute pressure upstream in bar
p_2 = Absolute pressure downstream in bar

After having calculated the kv-value, it is now possible to determine the nominal diameter of the valve using the table below.

DN	NPS	Cross Section of pipe F in cm²	Opening Angle								
			90°	80°	75°	70°	60°	50°	40°	30°	25°
40/50	1 ½ / 2	19.6	111	89	76	59	45	23	14	7	5
65	2 ½	33.2	170	136	111	89	70	35	22	12	8
80	3	50.3	256	205	175	136	106	53	32	18	12
100	4	78.5	470	405	341	260	200	102	62	35	23
125	5	123	961	854	709	534	418	213	132	75	51
150	6	177	1666	1410	1153	880	683	350	213	123	83
200	8	314	2777	2329	1880	1495	1111	598	358	213	145
250	10	491	4273	3675	3076	2350	1837	982	572	333	222
300	12	707	6410	5170	4273	3461	2649	1367	854	470	324
350	14	962	8547	6923	5726	4358	3504	1880	1111	641	427
400	16	1257	10683	9230	7692	5555	4358	2264	1452	769	555
450	18	1590	14957	11965	10256	7863	6068	3162	1965	1068	769
500	20	1963	18803	14957	12820	9829	7435	3931	2393	1367	961
600	24	2827	23931	20512	17521	14102	10042	5213	3247	1880	1282

The following flow velocities should not be exceeded so as to avoid valve noise, vibration and cavitation.
a) for liquids: 4.5 m/sec b) for gases: 100 m/sec.

These speeds can be checked by using the following formula:

a) for liquids: $C = \frac{Q}{F \cdot 0.36}$ in m/sec.

b) for gases: $C: \frac{V_N \cdot T}{F \cdot p_1 \cdot 98.28}$ in m/sec.

Actuator Sizing / Torques
The drive torque required when calculating the size of automatic actuators for XOMOX butterfly can be obtained from the following table:

Shut off Pressure in bar	Nominal diameter of a butterfly valve (mm)																		
DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
NPS	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36	40	48
16	26	38	59	121	180	260	330	480	690	1520	2020	2490	3070	5760	8500	12000	15000	20000	25000	
10	16	23	35	71	95	127	200	280	400	890	1190	1460	1800	3470	5000	7000	9000	11000	12000	
3.5	-	-	-	31	40	63	115	210	260	420	550	970	1250	2310	3500	4800	6300	8500	10000	

The torques apply to liquid and moist media.

The torques are listed in Nm. The actuator should be capable of producing the torque listed in the table over the total deflection angle.

The closing speed of the actuator must be taken into consideration in order to avoid water hammer when the butterfly valve is installed in pipes conveying a liquid.

The closure period for pneumatic and hydraulic actuators can be achieved by controlling the flow of compressed air or hydraulic fluid. In electrical systems the actuator should be designed by the manufacturer to provide the appropriate closure period.

Installation Instructions for Actuator Mounting

XOMOX Rubber Lined Butterfly valves are equipped with a DIN/ISO 5211 flange. The DN 40-300 shaft end is square acc. to DIN 3337. The DN 350 - 600 shaft is provided with parallel keyway. The shaft dimensions are shown in the following table. An actuator bore with tolerance is recommended.

DN	350	400	450	500	600	700	800	900	1000	1200
NPS	14	16	18	20	24	28	32	36	40	48
Ø	45	45	45	45	70	70	75	85	90	95

All XOMOX Rubber Lined Butterfly valves are also available with mounting flange for the transmission to smaller or larger sized DIN/ISO flanges.

XOMOX Model Numbers

XOMOX model numbering currently under review !!!

Gear Operator Model Numbers

Xomox Butterfly valve DN NPS	Shutoff pressure	Gear operator Base-no.	Xomox Butterfly valve DN NPS	Shutoff pressure	Gear operator Base-no.
DN 40 – 100 NPS 1 ½ – 4	3,5 bar, 10 bar, 16 bar	GH2-0100A	**DN 700 NPS 28**	3,5 bar, 10 bar	GH2-0700B
DN 125 – 200 NPS 5 – 8	3,5 bar, 10 bar, 16 bar	GH2-0200A	**DN 800 NPS 32**	16 bar	GH2-0800A
DN 250 – 300 NPS 10 - 12	16 bar 3,5 bar, 10 bar	GH2-0300A GH2-0300B		10 bar 3,5 bar	GH2-0800B GH2-0800C
DN 350 – 400 NPS 14 – 18	3,5 bar, 10 bar, 16 bar	GH2-0500B	**DN 900 NPS 36**	16 bar	GH2-0900A
DN 450 – 500 NPS 18 – 20	16 bar 3,5 bar, 10 bar	GH2-0500A GH2-0500B		10 bar 3,5 bar	GH2-0900B GH2-0900C
DN 600 NPS 24	16 bar 3,5 bar, 10 bar	GH2-0600A GH2-0600B	**DN 1000 NPS 40**	3,5 bar, 10 bar	GH2-1000A
DN 700 NPS 28	16 bar	GH2-0700A	**DN 1200 NPS 48**	3,5 bar, 10 bar	GH2-1200B

Selecting Table Hand Levers / Gear Operators

The table given underneath is only a recommendation.

Shutoff pressure	DN 40 – 125 NPS 1 ½ – 5	DN 150 NPS 6	DN 200 NPS 8	DN 250 NPS 10	DN 300 – 1200 NPS 12 – 48
16 bar		Gear operator			
10 bar	Hand lever		Gear operator		
3.5 bar	Hand lever			Gear operator	

Hand levers can be supplied up to DN 300 / NPS 12, whereas gear operators start from DN 40 / NPS 1 ½.

XOMOX recommends to use gears or actuators for sizes above DN 250 / NPS 10.

Note: XOMOX model numbering for gears also to be revised shortly.

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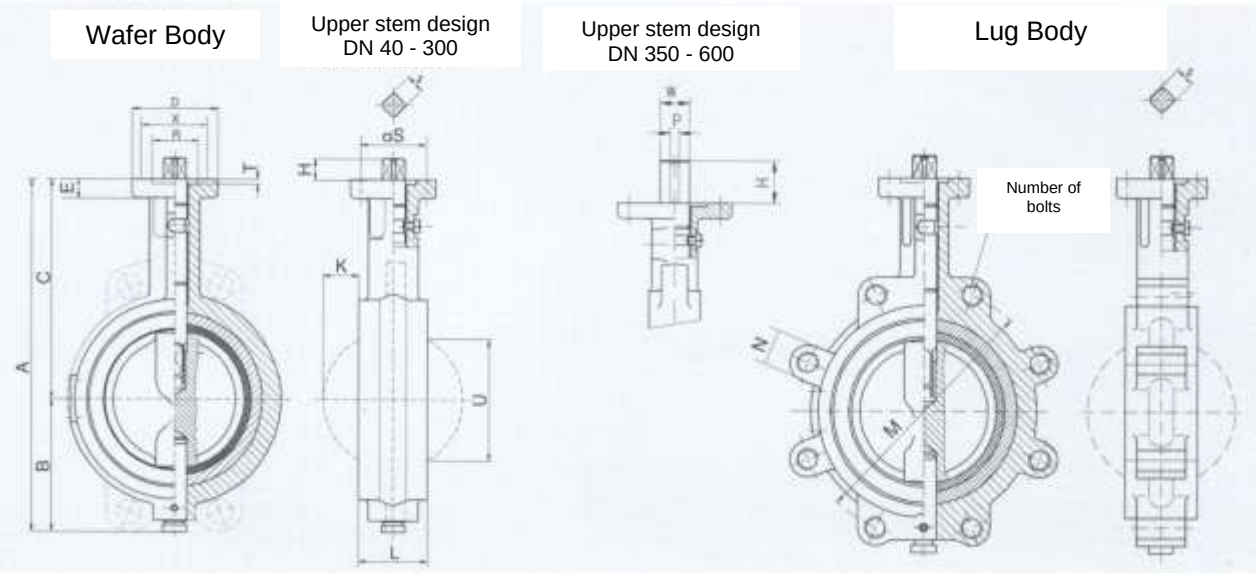
Dimensions / Weights DN 40 – 600 / NPS 1 ½ – 24



	Nominal diameter														
DN	**40**	**50**	**65**	**80**	**100**	**125**	**150**	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**600**
NPS	**1 ½**	**2**	**2 ½**	**3**	**4**	**5**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**20**	**24**
A[1)]	202	202	225	240	268	292	320	386	462	542	627	677	743	793	934
A[2)]	202	202	225	251	286	314	342	401	462	542	-	-	-	-	-
B	72	72	79	86	101	112	125	156	192	242	277	302	341	366	424
C[1)]	130	130	146	154	167	180	195	230	270	300	350	375	402	427	510
C[2)]	130	130	146	165	185	202	217	245	270	300	-	-	-	-	-
D DIN/ISO	65	65	65	65	65	90	90	90	125	125	175	175	175	175	210
E DIN/ISO	14	14	14	14	14	15	15	15	18	18	23	23	23	23	25
H DIN/ISO	16	16	16	16	16	19	19	19	24	24	65	65	65	65	80
K	7	7	13	19	27	37	49	70	90	111	129	141	162	181	221
L	43	43	46	46	52	56	56	60	68	78	78	102	114	127	154
M PN 10	110	125	145	160	180	210	240	295	350	400	460	515	565	620	725
M PN 16	110	125	145	160	180	210	240	295	355	410	470	525	585	650	770
M ASME 150	-	120.7	139.7	152.4	190.5	215.3	241.3	298.5	362	431.3	476.3	539.8	577.9	635	749.3
N PN 10	M16	M16	M16	M16	M16	M16	M20	M20	M20	M20	M20	M24	M24	M24	M27
N PN 16	M16	M16	M16	M16	M16	M16	M20	M20	M24	M24	M24	M27	M27	M30	M33
N ASME 150		⅝"– 11 UNC				¾'' – 10 UNC			⅞"– 9 UNC		1'' – 8 UNC		1 ⅛"– 7 UNC		1 ¼"-7 UNC
O PN 10	4	4	4	8	8	8	8	8	12	12	16	16	20	20	20
O PN 16	4	4	4	8	8	8	8	12	12	12	16	16	20	20	20
O ASME 150	-	4	4	4	8	8	8	8	12	12	12	16	16	20	20
P	-										14	14	14	14	20
R	Ø 35					Ø 55			Ø 70		Ø 100				Ø 130
S DIN/ISO	⌠14 – 0.1					⌠17 – 0.1			⌠22 – 0.1		-				
T	3,5										5				7
U	39	39	56	71	93	117	144	191	240	291	327	371	423	472	575
W	-										Ø 45				Ø 70
X	Ø 50/4 x Ø 7					Ø 70/4 x Ø 9			Ø 102/4 x Ø 11		Ø 140/4 x Ø 18				Ø 165/4 x Ø 22

Weights in kg

	Nominal diameter														
DN	**40**	**50**	**65**	**80**	**100**	**125**	**150**	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**600**
NPS	**1 ½**	**2**	**2 ½**	**3**	**4**	**5**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**20**	**24**
Wafer body*	2.2	2.2	2.8	3.4	4.7	6.8	7.6	11.5	19.6	31.2	50	72	92	111	195
Lug body	3.4	3.4	4.0	4.8	6.9	10.6	11.4	15.9	26.0	38.2	60	92	108	151	245

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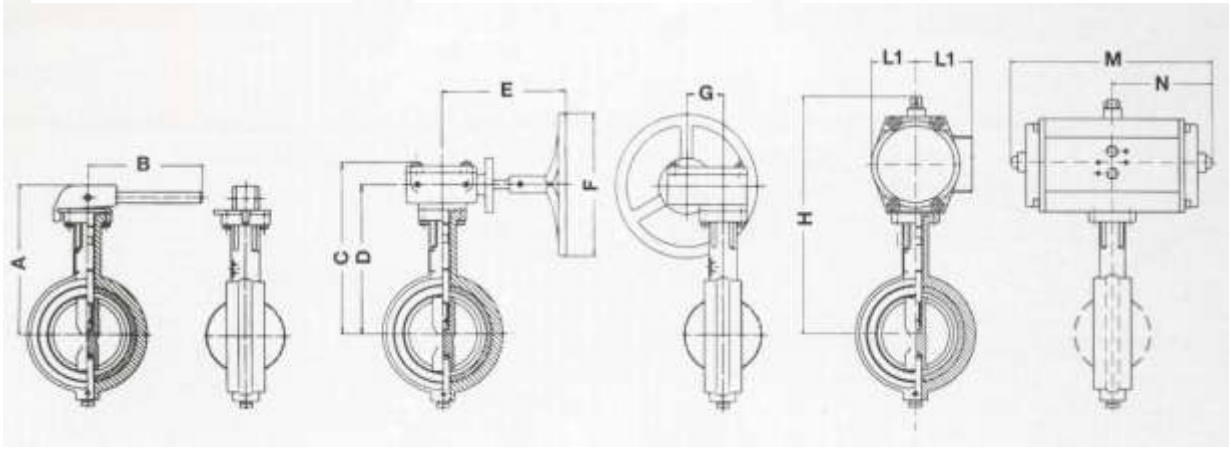
* with centering lugs GG25

Wafer with hand lever | Wafer with gear worm | Valve with pneumatic actuator



Dimensions in mm *

	Nominal diameter														
DN	**40**	**50**	**65**	**80**	**100**	**125**	**150**	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**600**
NPS	**1 ½**	**2**	**2 ½**	**3**	**4**	**5**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**20**	**24**
A[1)]	181	181	197	205	218	231	246	281	519	599	-	-	-	-	-
A[2)]	181	181	197	216	236	253	268	296	519	599	-	-	-	-	-
B	200	200	200	200	200	240	240	240	558	558	-	-	-	-	-
C[1)]	206	206	222	230	243	256	271	306	346	376	437	462	489	514	616
C[2)]	206	206	222	241	261	278	293	321	346	376	-	-	-	-	-
D[1)]	172	172	188	196	209	222	237	272	312	342	402	427	454	479	560
D[2)]	172	172	188	207	227	244	259	287	312	342	-	-	-	-	-
E	230	230	230	230	230	230	230	230	230	230	285	285	285	285	366
F	200	200	200	200	200	250	250	250	250	250	400	400	400	400	610
G	65	65	65	65	65	65	65	65	65	65	96	96	96	96	123
H[1)]	250	250	266	274	301	314	379	414	402	432	653	678	705	730	962
H[2)]	250	250	266	285	319	336	401	429	402	432	-	-	-	-	-
L1	52.5	52.5	52.5	52.5	67	67	79	79	94	94	-	-	-	-	-
L2	41	41	41	41	55	55	67	67	78	78	-	-	-	-	-
M	152	152	152	231	251.5	251.5	311	311	410	410	374	374	490	490	532
N	56.5	56.5	56.5	115.5	125.75	125.75	155.5	155.5	205	205	187	187	245	245	266

* Dimensions are for valves PN 10/16 Δp 10 bar, Actuators double acting for 5 bar supply pressure
1) Body GGG/GS-C 2) Body GG

Weights in kg **

	Nominal diameter														
DN	**40**	**50**	**65**	**80**	**100**	**125**	**150**	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**600**
NPS	**1 ½**	**2**	**2 ½**	**3**	**4**	**5**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**20**	**24**
Hand lever	3.8	3.8	4.4	4.6	5.9	8.5	9.5	13.6	24.5	35.9	-	-	-	-	-
Gear operator	10.2	10.2	10.8	11.0	12.3	14.8	15.8	19.9	27.6	39.0	66.8	88.8	108.8	127.8	230
Actuator	4.3	4.3	4.9	5.6	8.1	10.6	11.4	19.4	31.2	43.2	76.0	104	129.0	148.0	318

** Weights for Butterfly valves with wafer type body only

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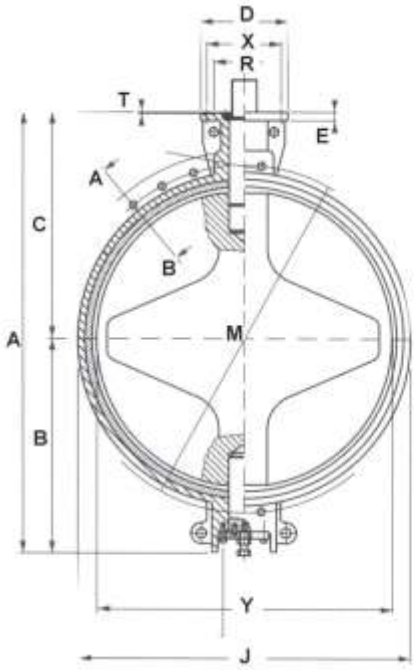
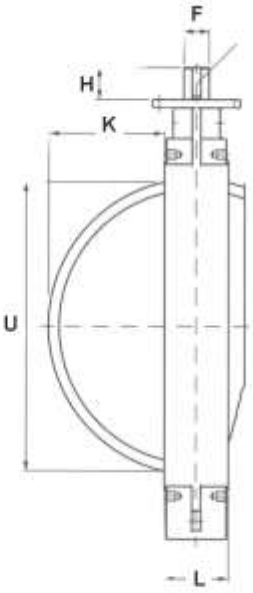
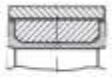
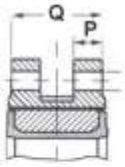
Dimensions / Weights DN 700 – 1200 / NPS 28 – 48



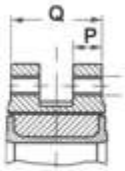




Section A-B



Section A-B
Flange Body



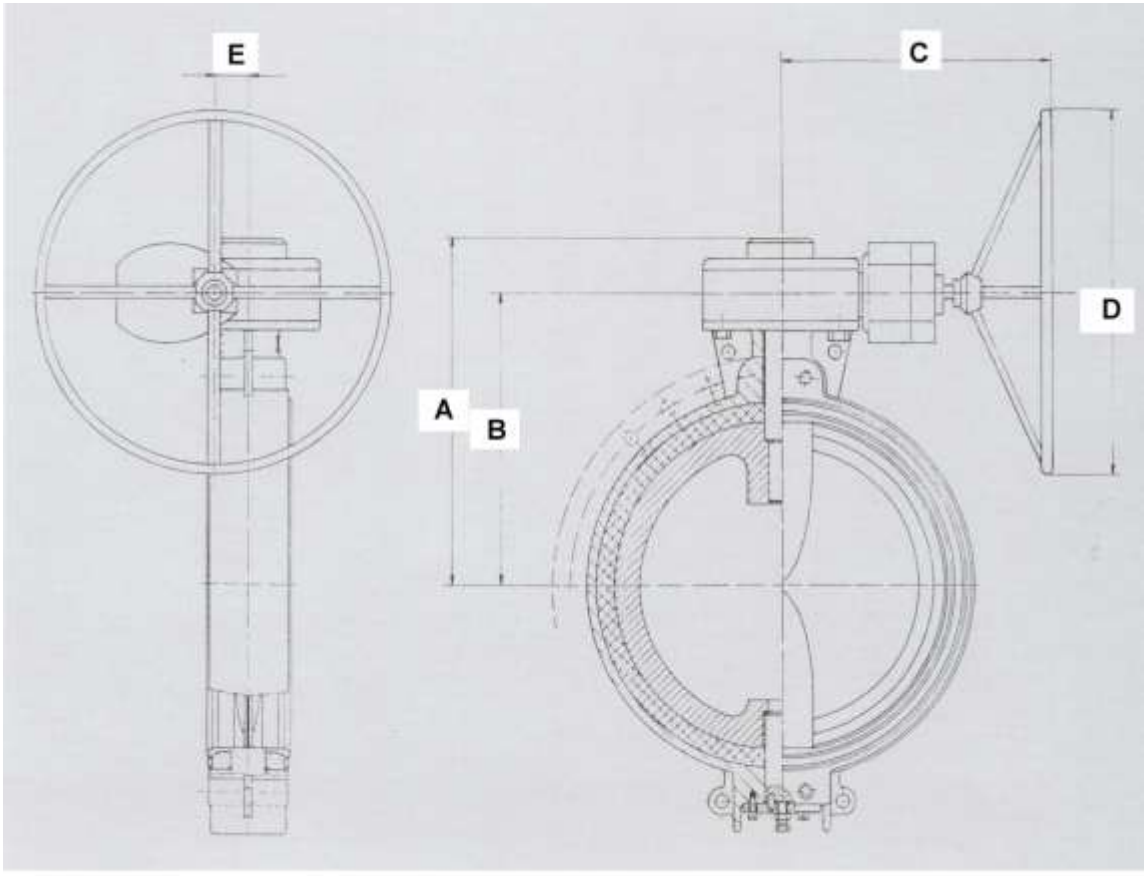
Section A-B
Lug Body

Dimensions in mm

Maß	DN NPS	700 28	800 32	900 36	1000 40	1200 48
A		1065	1200	1330	1540	1765
B		515	580	640	750	855
C		550	620	690	790	910
D	**DIN / ISO**	Ø 300			Ø 350	
E		25			35	
F		Ø 70	Ø 75	Ø 85	Ø 90	Ø 95
G		20 x 115	20 x 115			
H		110			130	
J	**PN 10**	910	1025	1125	1230	1455
	PN 16	910	1025	1125	1255	1485
K		262	230	343	387	467
L		165	190	203	216	254
M	**PN 10**	Ø 840	Ø 950	Ø 1050	Ø 1160	Ø 1380
	PN 16	Ø 840	Ø 950	Ø 1050	Ø 1170	Ø 1390
N	**PN 10**	2x4xM27x35 deep	2x4xM30x43 deep	2x4xM30x43 deep	2x4xM33x48 deep	2x4xM36x48 deep
	PN 16	2x4xM33x40 deep	2x4xM36x43 deep	2x4xM36x43 deep	2x4xM39x48 deep	2x4xM45x48 deep
O1)	**PN 16**	2 x 20 x M33	2 x 20 x M36	2 x 24 x M36		
O2)	**PN 10**	2 x 20 x Ø30	2 x 20 x Ø33	2 x 24 x Ø33	2 x 24 x Ø36	2 x 28 x Ø39
	PN 16	2 x 20 x Ø30	2 x 20 x Ø33	2 x 24 x Ø33	2 x 24 x Ø42	2 x 28 x Ø48
R	**DIN / ISO**	Ø 200			Ø 230	
T		5	5	5	5	5
U		669				
X		Ø 254/8 x Ø 17.5			Ø 298/8 x Ø 22	
Y		686	786	885	986	1186
P		45	50	50	50	55
Q		155	180	190	206	244

Weights in kg (Butterfly valve without actuator)

DN NPS	700 28	800 32	900 36	1000 40	1200 48
Wafer type body	350	450	600	750	1200
Flange type body / Lug type body	400	550	700	900	1350



Dimensions in mm (valve with hand gear)

DN NPS	700 28	800 32	900 36	1000 40	1200 48
A	678	748	849	954	1074
B	616	686	754	860	980
C	497	497	529	551	551
D	610	610	610	610	610
E	138	138	181	237	237

Weights in kg (Butterfly valve with gear operator)

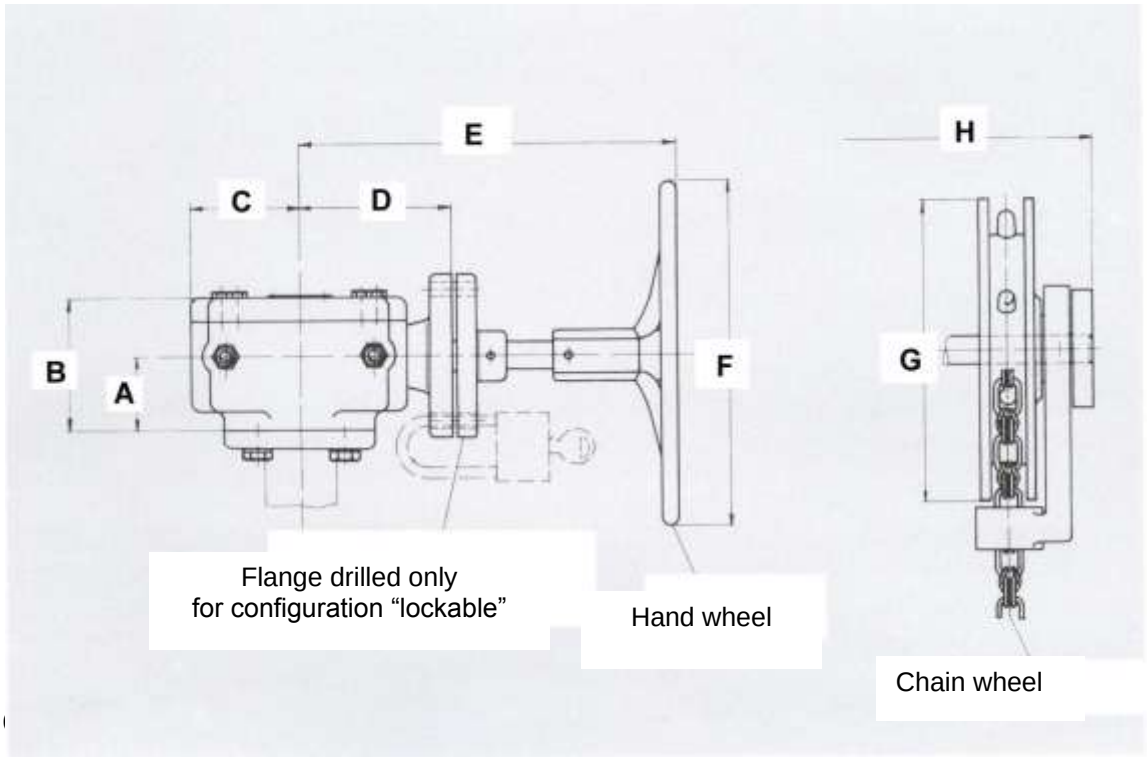
DN NPS	700 28	800 32	900 36	1000 40	1200 48
Wafer type body	**415**	**515**	**708**	**919**	**1369**
Flange type body / Lug type body	**515**	**615**	**808**	**1069**	**1519**

XOMOX®

Gear Dimensions, Model Numbers, Weights

Butterfly valve		Gear operator with handwheel		Gear operator with handwheel (lockable)		Gear operator with chain wheel	
DN	Shutoff pressure bar	Model	Weight kg	Model	Weight kg	Model	Weight kg
40-100 1 ½ - 4	3.5 – 16	GH2-0100A-H10A	7.8	GH2-0100A-J10A	8.0	GH2-0100A-K10A	7.7
125-200 5 - 8	3.5 – 16	GH2-0200A-H10A	8.0	GH2-0200A-J10A	8.2	GH2-0200A-K10A	7.7
250-300 10 – 12	3.5 – 10	GH2-0300B-H10A	10.8	GH2-0300B-J10A	10.4	GH2-0300B-K10A	7.7
	16	GH2-0300A-H10A	19.6	GH2-0300A-J10A	19.8	GH2-0300A-K10A	16.6
350-400 14 – 16	3.5 – 16	GH2-0500B-H10A	16.8	GH2-0500B-J10A	17.4	GH2-0500B-K10A	21.2
450-500 18 – 20	3.5 – 10	GH2-0500B-H10A	16.8	GH2-0500B-J10A	17.4	GH2-0500B-K10A	21.2

When ordering chain wheel, please specify the exact length.



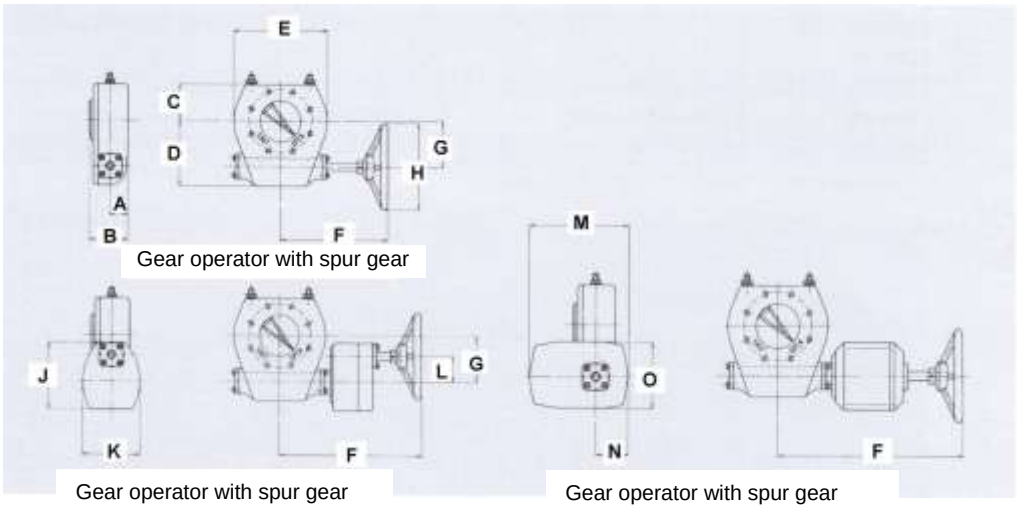
Rotations	Dimensions										
90°	A	B	C	D	E	F	G	H	K	L	M
10	42	76	64	92	230	200	265	184	184	65	45
10	42	76	64	92	230	250	265	184	184	65	45
10	42	76	64	92	230	250	265	184	184	65	45
19	52	87	100	134	282	400	365	212	242	96	64
19	52	87	100	134	282	400	365	212	242	96	64

Subject to technical modifications

XOMOX®

Available Gears und Weights

Butterfly valve		Gear operator with hand wheel		Butterfly valve		Gear operator with hand wheel	
DN / NPS	Shutoff pressure in bar	Model	Weight (kg)	DN / NPS	Shutoff pressure in bar	Model	Weight (kg)
450/500 18 / 20	16	GH2-0500A-H10A	32	**800 / 32**	16	GH2-0800A-H10A	169
600 / 24	3,5-10	GH2-0600B-H10A	32	**900 / 36**	3,5	GH2-0900C-H10A	65
	16	GH2-0600A-H10A	65		10	GH2-0900B-H10A	108
700 / 28	3,5-10	GH2-0700B-H10A	65		16	GH2-0900A-H10A	169
	16	GH2-0700A-H10A	108	**1000 / 40**	3,5-16	GH2-1000A-H10A	169
800 / 32	3,5	GH2-0800C-H10A	65	**1200 / 48**	3,5-10	GH2-1200B-H10A	169
	10	GH2-0800B-H10A	65		16	GH2-1200A-H10A	262



Gear operator with spur gear

Gear operator with spur gear

Gear operator with spur gear

Dimensions in mm

Gear operator Model	Rotation	Dimensions													
	90°	A	B	C	D	E	F	G	H	J	K	L	M	N	O
GH2-500A/0600B	17	50	106	114	178	252	366	123	610	-	-	-	-	-	-
GH2-0600A	43	66	128	155	195	310	497	138	610	210	171	78	-	-	-
GH2-0700B	43	66	128	155	195	310	497	138	610	210	171	78	-	-	-
GH2-0700A	63	63.5	159	140	251	356	529	181	610	210	171	84	-	-	-
GH2-0800C	43	66	128	175	195	310	497	138	610	210	171	78	-	-	-
GH2-0800B	45	66	128	155	195	310	497	138	610	210	171	84	-	-	-
GH2-0800A	75	70	164	175	326	463	551	237	610	210	171	84	-	-	-
GH2-0900C	45	66	128	155	195	310	497	138	610	210	171	84	-	-	-
GH2-0900B	63	63.5	159	140	251	356	529	181	610	210	171	84	-	-	-
GH2-0900A	75	70	164	175	326	463	551	237	610	210	171	84	-	-	-
GH2-1000A	75	70	164	175	326	463	551	237	610	210	171	84	-	-	-
GH2-1200B	75	70	164	175	326	463	551	237	610	210	171	84	-	-	-
GH2-1200A	188	83	175	178	400	565	655	292	610	-	-	-	284	94	188

XOMOX®

Bolt Dimensions

DN	PN	For Wafer Type Body (bolt with nuts) Pcs.	Thread	Length (mm / inch)	For Lug Type Bodies (bolt without nuts) Pcs.	Thread	Length (mm / inch)
	PN 10	4	M16	100	-	M16	-
40 /	**PN 16**	4	M16	100	-	M16	-
1 ½	**ASME 150**	-	-	-	-	-	-
	PN 10	4	M16	100	8	M16	35
50 /	**PN 16**	4	M16	100	8	M16	35
2	**ASME 150**	4	⅝" - 11 UNC	4''	8	⅝" - 11 UNC	1 ½"
	PN 10	4	M16	110	8	M16	35
65 /	**PN 16**	4	M16	110	8	M16	35
2 ½	**ASME 150**	4	⅝" - 11 UNC	4''	8	⅝" - 11 UNC	1 ¾"
	PN 10	8	M16	110	16	M16	40
80 /	**PN 16**	8	M16	110	16	M16	40
3	**ASME 150**	4	⅝" - 11 UNC	5''	8	⅝" - 11 UNC	1 ¾"
	PN 10	8	M16	120	16	M16	40
100 /	**PN 16**	8	M16	120	16	M16	40
4	**ASME 150**	8	⅝" - 11 UNC	5''	16	⅝" - 11 UNC	1 ¾"
	PN 10	8	M16	120	16	M16	45
125 /	**PN 16**	8	M16	120	16	M16	45
5	**ASME 150**	8	¾" - 10 UNC	5 ½''	16	¾" - 10 UNC	2''
	PN 10	8	M20	130	16	M20	45
150 /	**PN 16**	8	M20	130	16	M20	45
6	**ASME 150**	8	¾" - 10 UNC	5 ½''	16	¾" - 10 UNC	2''
	PN 10	8	M20	130	16	M20	50
200 /	**PN 16**	12	M20	130	24	M20	50
8	**ASME 150**	8	¾" - 10 UNC	5 ½''	16	¾" - 10 UNC	2''
	PN 10	12	M20	150	24	M20	50
250 /	**PN 16**	12	M24	150	24	M24	50
10	**ASME 150**	12	⅞" – 9 UNC	6 ½''	24	⅞" – 9 UNC	2 ½"
	PN 10	12	M20	160	24	M20	60
300 /	**PN 16**	12	M24	160	24	M24	60
12	**ASME 150**	12	⅞" – 9 UNC	7''	24	⅞" – 9 UNC	2 ½"
	PN 10	16	M20	160	32	M20	60
350 /	**PN 16**	16	M24	170	32	M24	65
14	**ASME 150**	12	1'' – 8 UNC	8''	24	1'' – 8 UNC	2 ¾''
	PN 10	16	M24	180	32	M24	70
400 /	**PN 16**	16	M27	200	32	M27	75
16	**ASME 150**	16	1'' – 8 UNC	9''	32	1'' – 8 UNC	2 ¾"
	PN 10	20	M24	200	40	M24	70
450 /	**PN 16**	20	M27	220	40	M27	75
18	**ASME 150**	16	1 ⅛" – 7 UNC	10''	32	1 ⅛" – 7 UNC	3''
	PN 10	20	M24	220	40	M24	70
500 /	**PN 16**	20	M30	240	40	M30	90
20	**ASME 150**	20	1 ⅛" – 7 UNC	10''	40	1 ⅛" – 7 UNC	3''

For welding neck flanges according to DIN 2632 (PN10), DIN 2633 (PN16) or ASME 150 (B 16,5.)