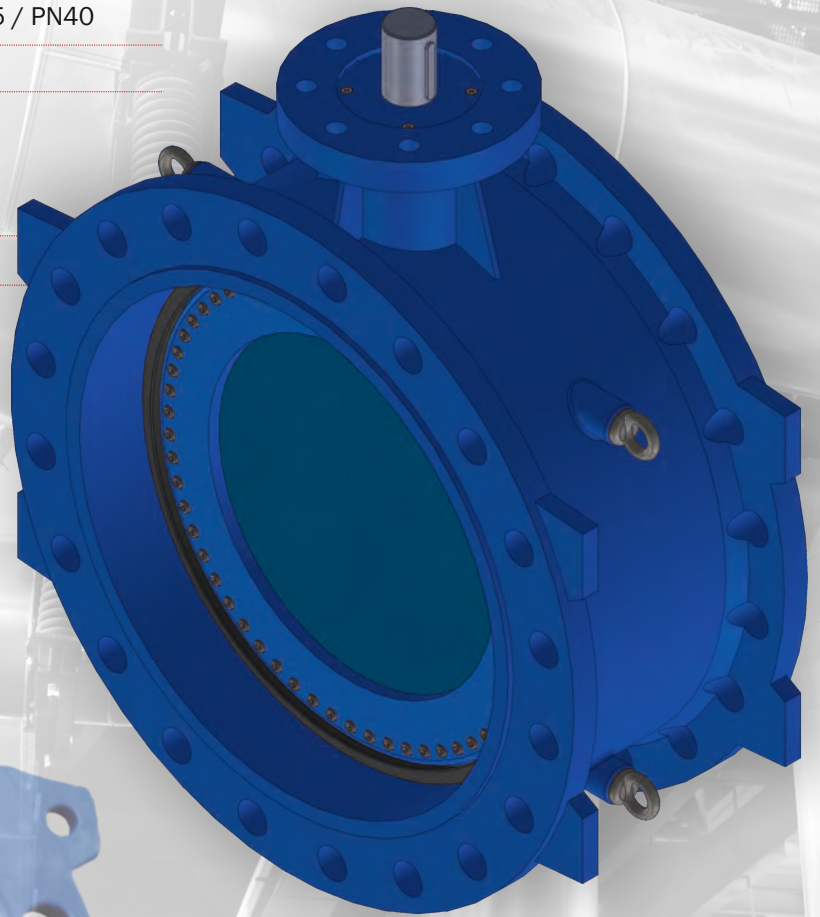


ABO valve

we make processes work

DOUBLE OFFSET DOUBLE FLANGED BUTTERFLY VALVES

Body type	Double flanged
Nominal size	DN150 - DN2000
Working pressure	16 bar / 25 bar / 40 bar / 50 bar
Flange connection	PN6 / PN10 / PN16 / PN25 / PN40
Working temperature	-10 °C / +80 °C
Working media	Industrial water Potable water Sewage Low corrosive liquids
Tightness	Class A
Features	Double offset design Splitted stem Bidirectional sealing WRAS certification



SERIES 2E3

power line

www.abovalve.com

GENERAL VALVE DESCRIPTION

Czech Industrial Valve Manufacturer

Double offset double flanged butterfly valves Series 2E3

are suited for wide range of industrial applications including:

- sanitary installations
- industrial piping
- hydraulic equipment
- chilled water, potable water
- waste water
- irrigation & drainage systems
- sewage piping systems
- desalination

The butterfly valves Series 2E3 are not suitable for flow rate throttling. Disc's shafts should be always installed in horizontal positions.

General features

- double flanged valve design with double eccentricity
- on/off regulating device
- bi-directional sealing
- stainless steel sealing
- easy repair and maintenance
- easy installation and assembly
- WRAS certification

Quality control

- manufacturing at ABO valve is certified according to quality control standard ISO 9001:2015 (14001, 18001)
- tightness tests according to standards: ČSN EN 12266-1, ISO 5208, ANSI/FCI 70-2
- production in accordance with the Pressure Equipment Directive 2014/68/EU - Equipment operating under pressure (Category III, module H)
- all the ABO valves are tested under the pressure of 110% work pressure to ensure leak tightness according to standards - the 2.2/3.1/3.2 pressure test certificates can be issued
- valve actuators, if delivered, are adjusted and tested while assembled
- all certificates are downloadable from www.abovalve.com



Type designation

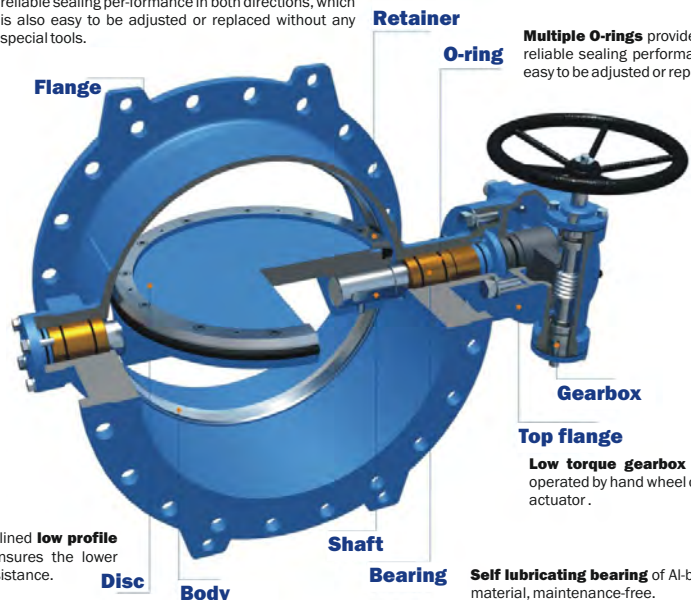
2E3 3 4 3 F 150

- **Nominal size (DN)**
- **Body design**
F - Double flanged
- **Disc material**
3 - Ductile iron 0.7040 (GGG40)
○ Ductile iron 0.7050 (GGG50)
- **Seat material**
4 - Stainless steel 1.4301
- **Body material**
3 - Ductile iron 0.7040 (GGG40)
○ Ductile iron 0.7050 (GGG50)
- **Series name**
Series 2E3

Standards

Design	EN 593
Leak test	EN 12266-1, Class A ISO 5208, Class A API 598
Face to face length	EN 558-1, Series 14 ISO 5752, Series 14 ISO 5752, Series 13
Flange connection	EN1092/BS4504 (DIN2501) ASME B16.5 Class 150
Top flange	EN ISO 5211

T-profiled disc seal ring fixed by retainer ensures reliable sealing performance in both directions, which is also easy to be adjusted or replaced without any special tools.



Multiple O-rings provide long life and reliable sealing performance, which is easy to be adjusted or replaced.

Streamlined **low profile disc** ensures the lower flow resistance.

Low torque gearbox can be easily operated by hand wheel or connect with actuator.

Self lubricating bearing of Al-bronze material, maintenance-free.

Stainless steel body seat ensures reliable and durable performance.

DESIGN ADVANTAGES

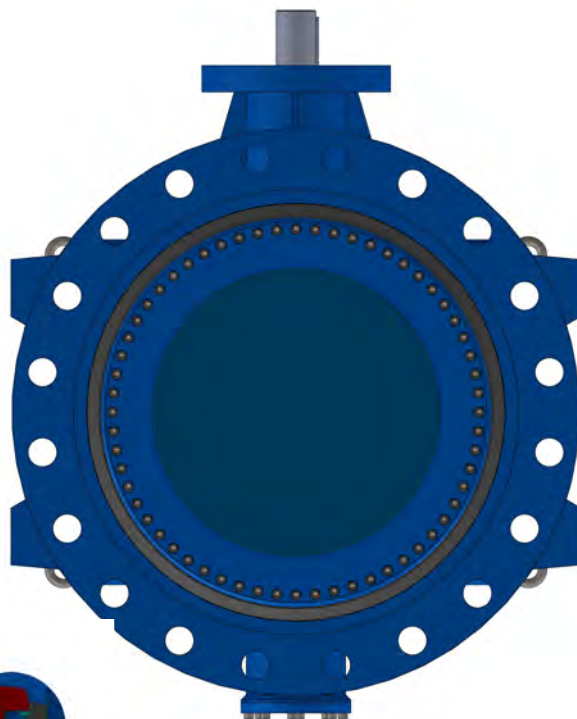


Design F DOUBLE FLANGED



Easy seat replacement

Possibility of replacement of the profile sealing ring without disassembling the disc.



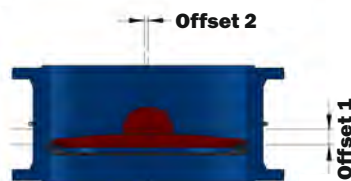
International standard compatibility

Top flange according ISO 5211 allows direct installation of manual gearboxes or actuators.



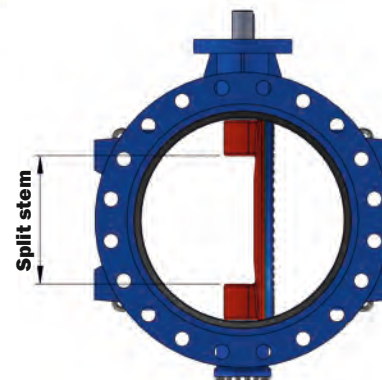
Improved sealing performance

Automatic sealing system with enclosed and pressure-supported profile sealing ring.



Double offset

Double offset design ensures perfect tightness and function of the valve, especially in case of water hammer. This offers results in friction during the first 10 degrees of opening and final 10 degrees of closing.



Split stem

Splitted stem allows higher flow rate and Kv value and lower pressure drop.

Installation between flanges (DN150-DN3000)

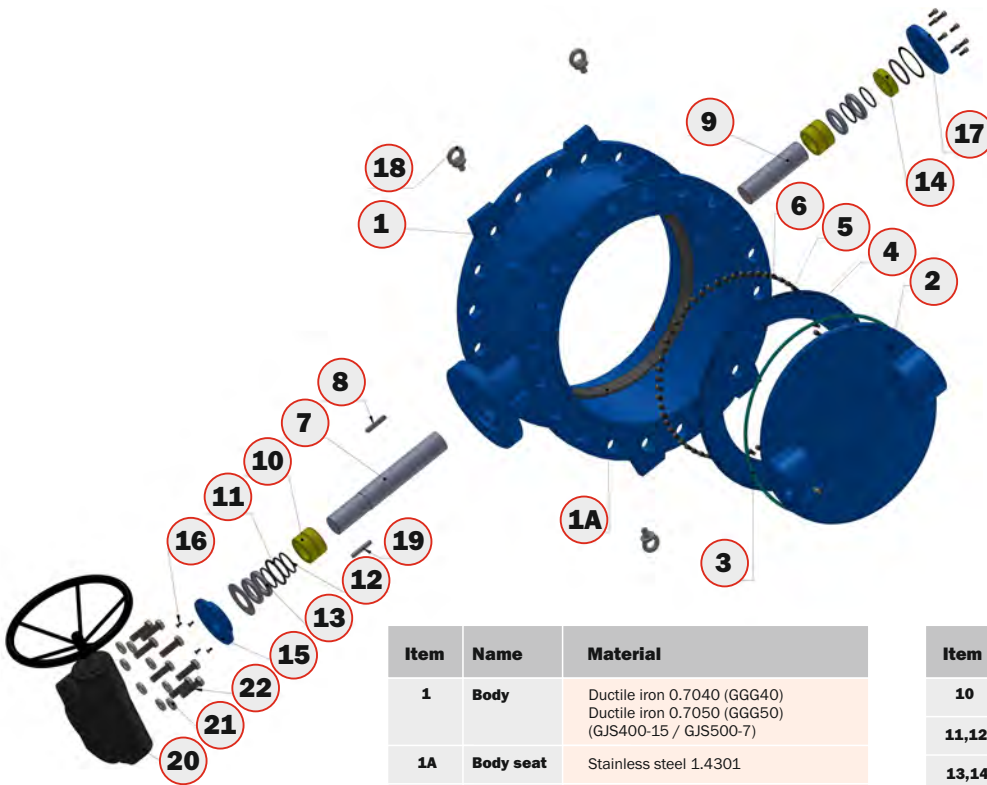
DN	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1400	1500	1600	1800	2000	2200	2400	2500	2600	3000		
PN10														X			X										
PN16																		X									
PN25														X										X	X	X	
PN40														X							X	X	X	X	X	X	

standard

X impossible

MATERIAL PERFORMANCE / TECHNICAL INFORMATION

Czech Industrial Valve Manufacturer



Coating

Epoxy coating is applied for excellent corrosion resistance. The coating is electrostatically applied (inside and outside), thickness 250 µm.

ABO valve coating is executed in blue finish RAL5005. Other color possibilities: RAL5015/RAL5017.

Item	Name	Material
1	Body	Ductile iron 0.7040 (GGG40) Ductile iron 0.7050 (GGG50) (GJS400-15 / GJS500-7)
1A	Body seat	Stainless steel 1.4301
2	Disc	Ductile iron 0.7040 (GGG40) Ductile iron 0.7050 (GGG50) (GJS400-15 / GJS500-7)
3	Disc sealing ring	Rubber (EPDM/NBR)
4	Retaining ring	Stainless steel 1.4301 (SS304) Stainless steel 1.4571
5	Bolt	Stainless steel A2
6	Screws	Stainless steel A4
7	Upper shaft	Stainless steel 1.4021 (SS420) Duplex stainless steel 1.4462 (S31803)
8	Key	Steel 1.4021 (SS420) Duplex stainless steel 1.4462 (S31803)
9	Lower shaft	Stainless steel 1.4021 Duplex stainless steel 1.4462 (S31803)

Item	Name	Material
10	Bushing	Bronze 2.0936
11,12	O-ring	Rubber (EPDM/NBR)
13,14	Adjustment ring	Delrin
15	End cover	Ductile iron GGG50 / GGG40
16	Bolt	Stainless steel A2
17	End cover	Ductile iron GGG50 / GGG40
18	Eye bolt	Steel A21CWCB
19	Key	Steel 1.4021 (SS420) Duplex stainless steel 1.4462 (S31803)
20	Gearbox	Grey cast iron GG25 (0.6025)
21	Washer	Steel 1.0037
22	Bolt	Steel A2-70

Execution in other material types can be provided upon request. Choice of the seat and disc materials for various media will be recommended upon specific inquiry.

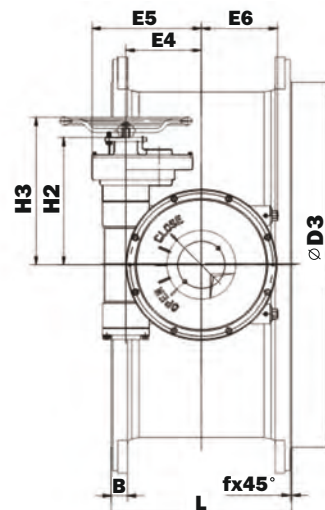
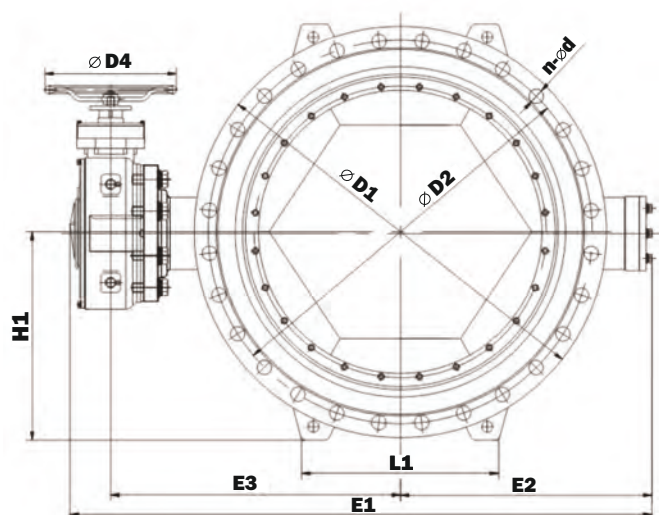
Operating torques vs. working pressure (Nm)

DN	150	200	250	300	350	400	450	500	600	700	800	900
p_{MAX} 10 bar		315	505	788	1098	1591	2015	2623	4029	5758	8376	11387
p_{MAX} 16 bar	222	466	827	1163	1754	2341	3074	4135	6328	9166	13446	17794
p_{MAX} 25 bar	396	800	1346	2018	2731	3869	5085	6789	9958	15815	22048	27462
p_{MAX} 40 bar	721	1206	2042	3230	4535	6049	9532	8567	13249	27154	27596	37516

DN	1000	1100	1200	1300	1400	1500	1600	1700	1800	2000	2200	2400
p_{MAX} 10 bar	15268	20252	23567		33714	40972	48968		67936	90666	115614	150482
p_{MAX} 16 bar	23843	30342	37685		53058	56484	81921		107690	139344		
p_{MAX} 25 bar	39462		49698		88368	92579	127759					
p_{MAX} 40 bar	47534	71004	108230		126595	153086						

Bare shaft torques.

MAIN DIMENSIONS / PN10



PN10

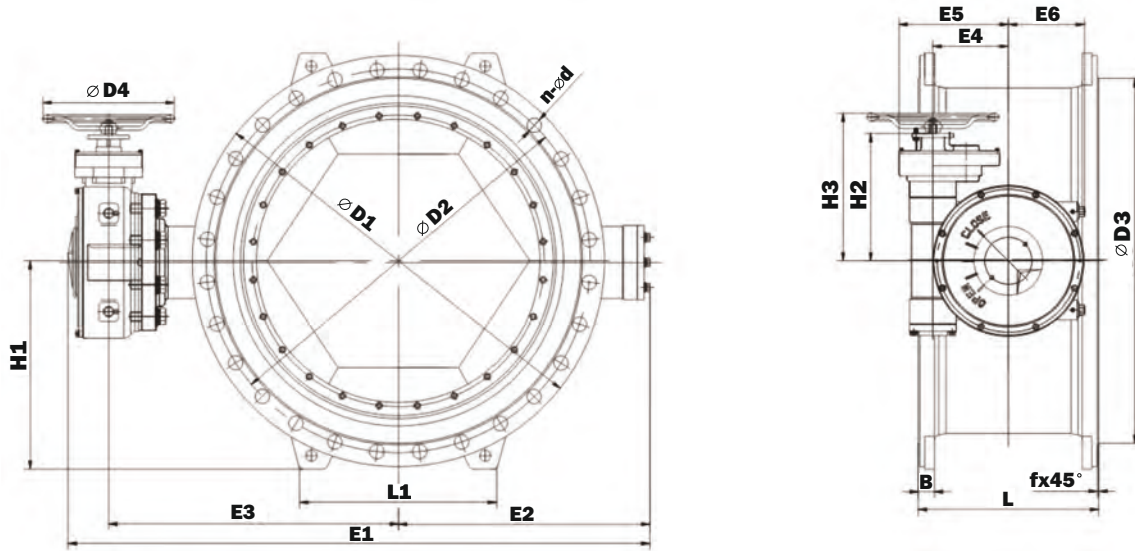
DN	D1	D2	D3	B	f	L		n-d	H1	H2	H3	E1	E2	E3	E4	E5	E6	L1	D4
						Series 14	Series 13												
200	ø 340	ø 295	ø 266	20	3	230	152	8-ø23	175	137	193	526	198	272	64	99	86	196	240
250	ø 395	ø 350	ø 319	22	3	250	165	12-ø23	202,5	137	193	568	219	293	64	99	86	240	240
300	ø 445	ø 400	ø 370	24,5	4	270	178	12-ø23	227,5	178	233	670	254	351	93,4	135	115	260	320
350	ø 505	ø 460	ø 429	24,5	4	290	190	16-ø23	257,5	178	233	720	279	376	93,4	135	115	280	320
400	ø 565	ø 515	ø 480	24,5	4	310	216	16-ø28	287,5	192	283	834	320	432	120	169	138	310	400
450	ø 615	ø 565	ø 530	25,5	4	330	222	20-ø28	312,5	192	283	903	359	462	120	169	138	340	400
500	ø 670	ø 620	ø 582	26,5	4	350	229	20-ø28	340	317	378	988	393	513	120	186	138	370	400
600	ø 780	ø 725	ø 682	30	5	390	267	20-ø31	395	315	376	1119	450	580	148	214	166	430	400
700	ø 895	ø 840	ø 794	32,5	5	430	292	24-ø31	452,5	315	376	1217	530	598	148	214	166	480	400
800	ø 1015	ø 950	ø 901	35	5	470	318	24-ø34	512,5	346	407	1410	614	691	185	265	196	560	400
900	ø 1115	ø 1050	ø 1001	37,5	5	510	330	28-ø34	562,5	346	407	1530	675	750	185	265	196	615	400
1000	ø 1230	ø 1160	ø 1112	40	5	550	410	28-ø37	620	390	451	1712	748	839	230	333	232	670	400
1200	ø 1455	ø 1380	ø 1328	45	5	630	470	32-ø41	732,5	451	512	1971	865	981	230	368	232	800	400
1400	ø 1675	ø 1590	ø 1530	46	5	710	530	36-ø44	842,5	507	568	2313	1011	1138	315	453	327	920	400
1500	ø 1785	ø 1700	ø 1640	48	5	750	565	36-ø44	897,5	507	568	2489	1112	1213	315	453	327	980	400
1600	ø 1915	ø 1820	ø 1750	49	5	790	600	40-ø50	962,5	507	568	2588	1161	1263	315	453	327	1050	400
1800	ø 2115	ø 2020	ø 1950	52	5	870	670	44-ø50	1063	599	660	3038	1324	1501	412	613	408	1162	400
2000	ø 2325	ø 2230	ø 2150	55	5	950	760	48-ø50	1168	599	660	3255	1436	1606	412	613	408	1270	400

If there is any request for larger sizes, please consult with us.

Face to face length acc. to EN588-1 Series 14/13 (ISO 5752 Series 14/13, DIN 3202 F4/F16).
Flange dimensions and drilling acc. to EN1092-2 (ISO 7005-2).

MAIN DIMENSIONS / PN16

Czech Industrial Valve Manufacturer



PN16

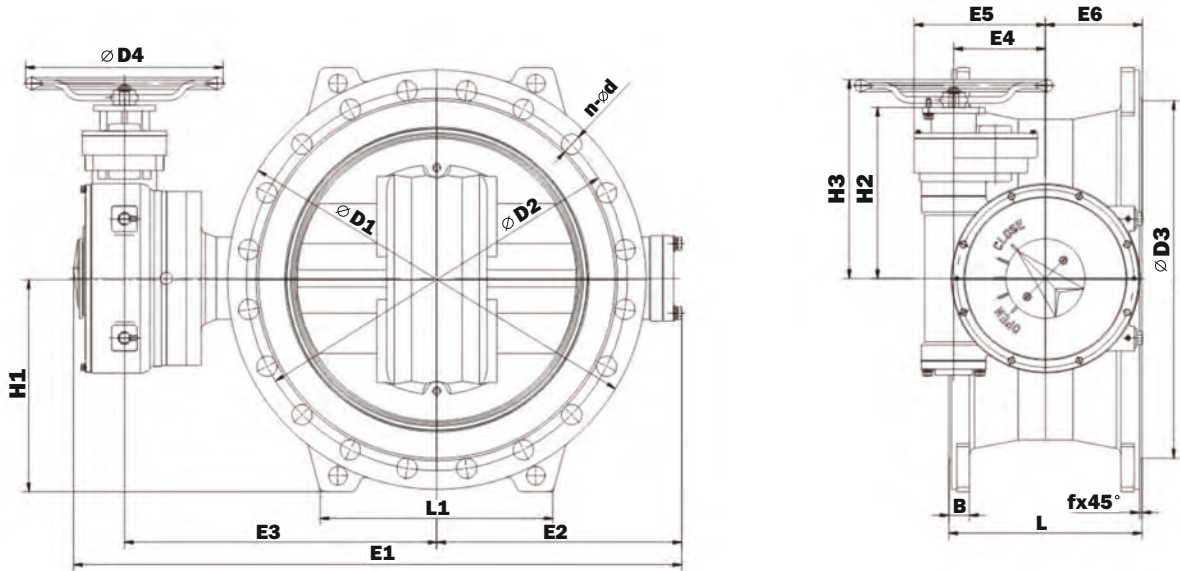
DN	D1	D2	D3	B	f	L		n-d	H1	H2	H3	E1	E2	E3	E4	E5	E6	L1	D4
						Series 14	Series 13												
200	ø 340	ø 295	ø 266	20	3	230	152	12-ø3	175	137	193	526	198	272	64	99	86	196	240
250	ø 405	ø 355	ø 319	22	3	250	165	12-ø28	207,5	178	233	623	230	328	93,4	135	115	240	320
300	ø 460	ø 410	ø 370	24,5	4	270	178	12-ø28	235	178	233	670	254	351	93,4	135	115	275	320
350	ø 520	ø 470	ø 429	26,5	4	290	190	16-ø28	265	192	283	784	295	407	120	169	138	290	400
400	ø 580	ø 525	ø 480	28	4	310	216	16-ø31	295	192	283	853	334	437	120	169	138	310	400
450	ø 640	ø 585	ø 548	30	4	330	222	20-ø31	325	317	378	938	368	488	120	186	138	360	400
500	ø 715	ø 650	ø 609	31,5	4	350	229	20-ø34	362,5	315	376	1019	400	530	148	214	166	470	400
600	ø 840	ø 770	ø 720	36	5	390	267	20-ø37	425	315	376	1117	480	548	148	214	166	395	400
700	ø 910	ø 840	ø 794	39,5	5	430	292	24-ø37	460	346	407	1308	563	640	185	265	196	480	400
800	ø 1025	ø 950	ø 901	43	5	470	318	24-ø41	517,5	346	407	1426	623	698	185	265	196	560	400
900	ø 1125	ø 1050	ø 1001	46,5	5	510	330	28-ø41	567,5	390	451	1612	698	789	230	265	232	618	400
1000	ø 1255	ø 1170	ø 1112	50	5	550	410	28-ø44	635,5	451	512	1773	766	882	230	333	232	600	400
1200	ø 1485	ø 1390	ø 1328	57	5	630	470	32-ø50	737,5	507	568	2112	910,5	1038	315	368	327	800	400
1400	ø 1685	ø 1590	ø 1530	60	5	710	530	36-ø50	847,5	599	660	2529	1063	1253	412	453	408	920	400
1500	ø 1820	ø 1710	ø 1640	62,5	5	750	565	36-ø57	915	599	660	2633	1120	1300	412	453	408	1000	400
1600	ø 1930	ø 1820	ø 1750	65	5	790	600	36-ø57/4-M52	970	599	660	2754	1172	1369	412	453	408	1060	400
1800	ø 2130	ø 2020	ø 1950	70	5	870	670	36-ø57/8-M52	1070	777	838	3257	1416	1602	495	613	485	1170	600
2000	ø 2345	ø 2230	ø 2150	75	5	950	760	48-ø62	1178	777	838	3523	1583	1701	495	613	485	1290	600

If there is any request for larger sizes, please consult with us.

Face to face length acc. to EN588-1 Series 14/13 (ISO 5752 Series 14/13, DIN 3202 F4/F16).

Flange dimensions and drilling acc. to EN1092-2 (ISO 7005-2).

MAIN DIMENSIONS / PN25



PN25

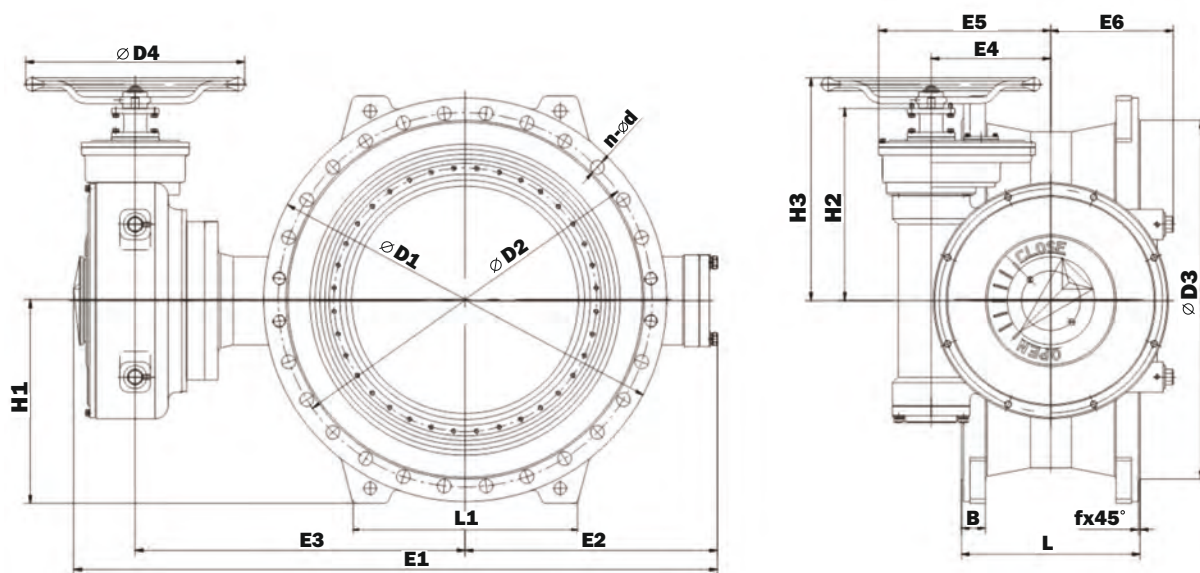
DN	D1	D2	D3	B	f	L		n-d	H1	H2	H3	E1	E2	E3	E4	E5	E6	L1	D4
						Series 14													
200	ø 360	ø 310	ø 274	22	3	230		12-ø28	190	178	233	586	221	300	93,4	135	115	220	320
250	ø 425	ø 370	ø 330	25	3	250		12-ø31	220	178	233	656	254	337	93,4	135	115	260	320
300	ø 485	ø 430	ø 389	28	4	270		16-ø31	250	192	283	757	298	377	120	169	138	300	400
350	ø 555	ø 490	ø 448	30	4	290		16-ø34	285	317	378	830	318	430	120	186	138	320	400
400	ø 620	ø 530	ø 503	32	4	310		16-ø37	315	315	376	945	370	486	148	214	166	350	400
450	ø 670	ø 600	ø 548	34,5	4	330		20-ø37	340	315	376	991	406	496	148	214	166	370	400
500	ø 730	ø 660	ø 609	37	4	350		20-ø37	370	346	407	1112	453	554	185	265	196	410	400
600	ø 845	ø 770	ø 720	42	5	390		20-ø41	427,5	346	407	1235	495	631	185	265	196	470	400
700	ø 960	ø 875	ø 820	46,5	5	430		24-ø44	485	390	451	1398	569	704	230	333	232	530	400
800	ø 1085	ø 990	ø 928	51	5	470		24-ø50	547,5	390	451	1571	646	800	230	333	232	600	400
900	ø 1185	ø 1090	ø 1028	45,5	5	510		28-ø50	597,5	451	512	1669	695	849	230	368	232	655	400
1000	ø 1320	ø 1210	ø 1140	60	5	550		24-ø57/4 -M52	665	507	568	1923	779	980	315	453	327	730	400
1200	ø 1530	ø 1420	ø 1350	69	5	630		32-ø57	770	599	660	2252	903	1136	412	613	408	840	400
1400	ø 1755	ø 1640	ø 1560	74	5	710		36-ø62	882,5	599	660	2516	1041	1262	412	613	408	970	400
1500	ø 1865	ø 1750	ø 1678	77,5	5	750		36-ø62	937,5	599	660	2651	1130	1308	412	613	408	1030	400
1600	ø 1975	ø 1860	ø 1780	81	5	790		36-ø62/4 -M56	992,5	777	838	2852	1208	1405	495	725	485	1080	600

If there is any request for larger sizes, please consult with us.

Face to face length acc. to EN588-1 Series 14 (ISO 5752 Series 14, DIN 3202 F4).
Flange dimensions and drilling acc. to EN1092-2 (ISO 7005-2).

MAIN DIMENSIONS / PN40

Czech Industrial Valve Manufacturer



PN40

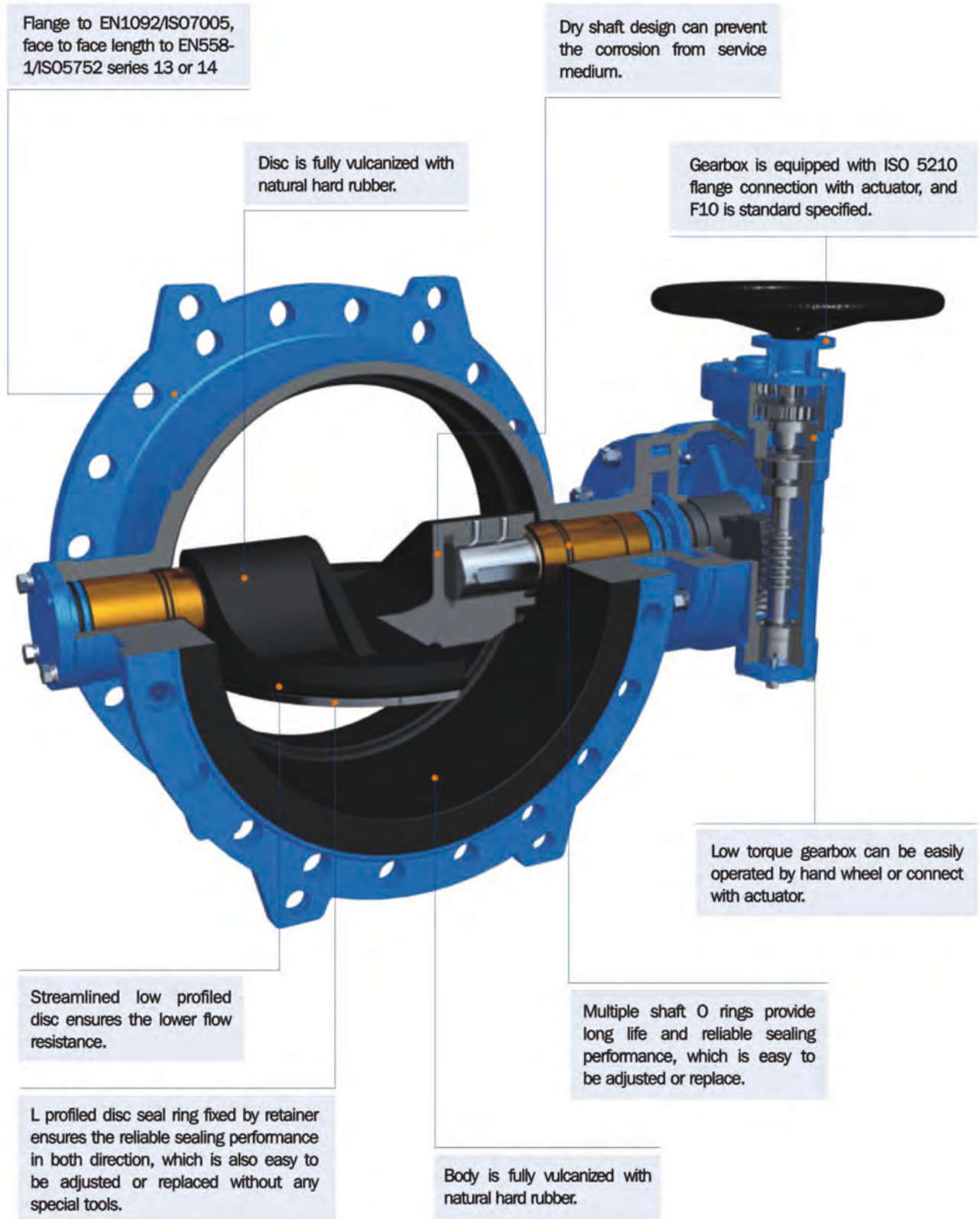
DN	D1	D2	D3	B	f	L		n-d	H1	H2	H3	E1	E2	E3	E4	E5	E6	L1	D4
						Series 14													
200	ø 375	ø 320	ø 284	30	3	230		12-ø31	192,5	178	233	603	229	309	93,4	135	115	180	320
250	ø 450	ø 385	ø 345	35	3	250		8-ø34/4-M30	230	192	283	712	261	369	120	169	138	200	400
300	ø 515	ø 450	ø 409	40	4	270		12-ø34/4-M30	262,5	317	378	795	305	408	120	186	138	240	400
350	ø 580	ø 510	ø 465	44	4	290		12-ø37/4-M33	295	315	376	904	360	455	148	214	166	320	400
400	ø 660	ø 585	ø 535	48	4	310		12-ø41/4-M36	335	315	376	1001	407	505	148	214	166	320	400
450	ø 685	ø 610	ø 560	49	4	330		16-ø41/4-M36	347,5	346	407	1067	429	533	185	265	196	360	400
500	ø 755	ø 670	ø 615	52	4	350		16-ø44/4-M39	382,5	346	407	1180	477	598	185	265	196	450	400
600	ø 890	ø 795	ø 735	58	5	390		16-ø50/4-M45	450	390	451	1363	555	683	230	333	232	500	400
700	ø 995	ø 900	ø 840	64	5	430		20-ø48/4-M45	505	507	568	1625	666	795	315	453	327	560	400
800	ø 1140	ø 1030	ø 960	72	5	470		20-ø56/4-M52	575	507	568	1696	664	868	315	453	327	630	400
900	ø 1250	ø 1140	ø 1070	76	5	510		24-ø56/4-M52	635	507	568	1904	785	955	315	453	327	690	400
1000	ø 1360	ø 1250	ø 1180	80	5	550		24-ø56/4-M52	690	599	660	2039	837	989	412	613	408	740	400
1200	ø 1575	ø 1460	ø 1380	88	5	630		24-ø62/8-M56	792,5	777	838	2595	1077	1279	495	725	485	860	600
1400	ø 1795	ø 1680	ø 1600	98	5	710		28-ø62/8-M56	902,5	777	838	2839	1200	1400	495	725	485	1000	600
1500	ø 1925	ø 1800	ø 1715	105	5	750		28-ø70/8-M64	967,5	777	838	3041	1305	1497	495	725	485	1060	600
1600	ø 2025	ø 1900	ø 1815	108	5	790		32-ø70/8-M64	1018	958		3252	1410	1520	560	820	566	1110	

If there is any request for larger sizes, please consult with us.

Face to face length acc. to EN588-1 Series 14 (ISO 5752 Series 14, DIN 3202 F4).

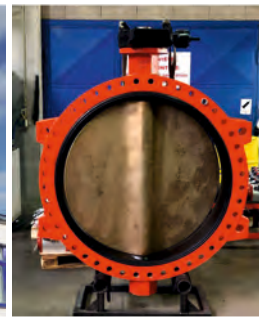
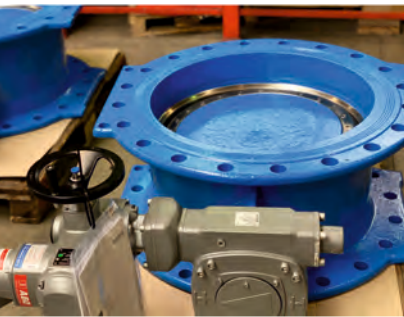
Flange dimensions and drilling acc. to EN1092-2 (ISO 7005-2).

RUBBER LINED OPTION / MAIN FEATURES



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Valid since: 08/2021



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