DN>600 / DOUBLE FLANGED DESIGN - SERIES „U”

Industrial Valve Manufacturer

Body design Double flanged	Body with threaded / tapped holes
Design performance	Series „U” Short face-to-face length, Series 20 According to ISO 5752-20
Nominal size Design „U”	DN700 - DN1600
Working pressure	1,0 MPa - 1,6 MPa (PN10 / PN16)
Leak test	1,1 MPa - 1,76 MPa
Working temperature	NBR -10°C / +90°C Seat EPDM -20°C / +125°C *)
Features	**Concentric design** Top flange according to ISO 5211 Flange connection according to BS4504/DIN/ANSI Design complies with API609

**) other alternatives upon request*

1. International Standard compatibility

- according to the standard ISO 5211 the top flange enables to directly assemble any manual operators and actuators. Valves are usually delivered with worm gear actuators. A wide scale of pneumatic or electric actuators can be assembled, too.

2. Blow-out proof system

- a retaining washer disables shaft movement upwards.

3. Lenghtened neck

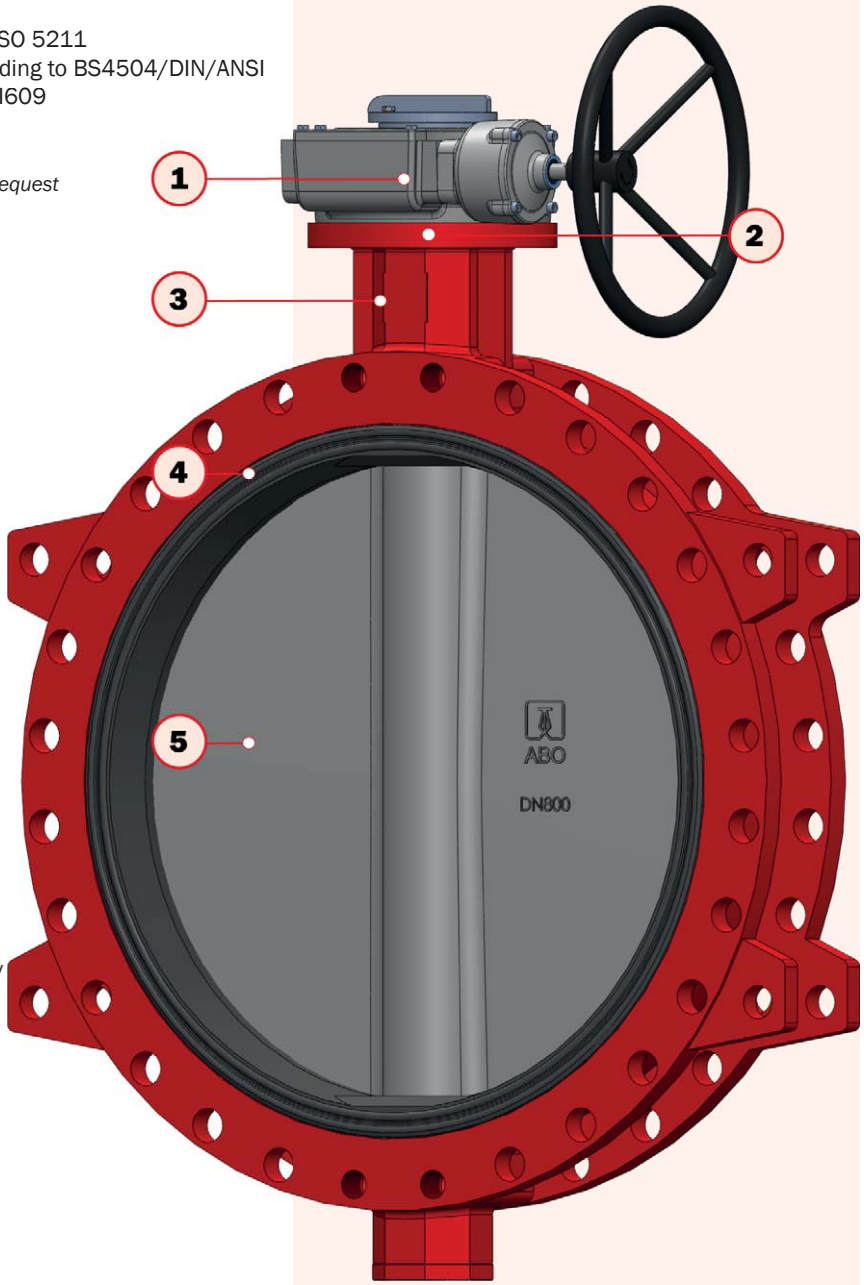
- enables to insulate the actuator from conveyed media warm effects and thus meets requirements on heating systems controls

4. Seat design

- seat movement or incorrect position is impossible - seat can be vulcanized. Vulcanizaton leads to decreasing torque values needed to handle the valve. Valve inner part is fully rubber lined and thus protected against corrosive effects.

5. Disc design

- disc with polished edges is protective to seat and provides a long lifespan. Symmetric disc profile improves valve performance by increasing Kv (Cv) values, decre ases turbulence and minimizes pressure loss

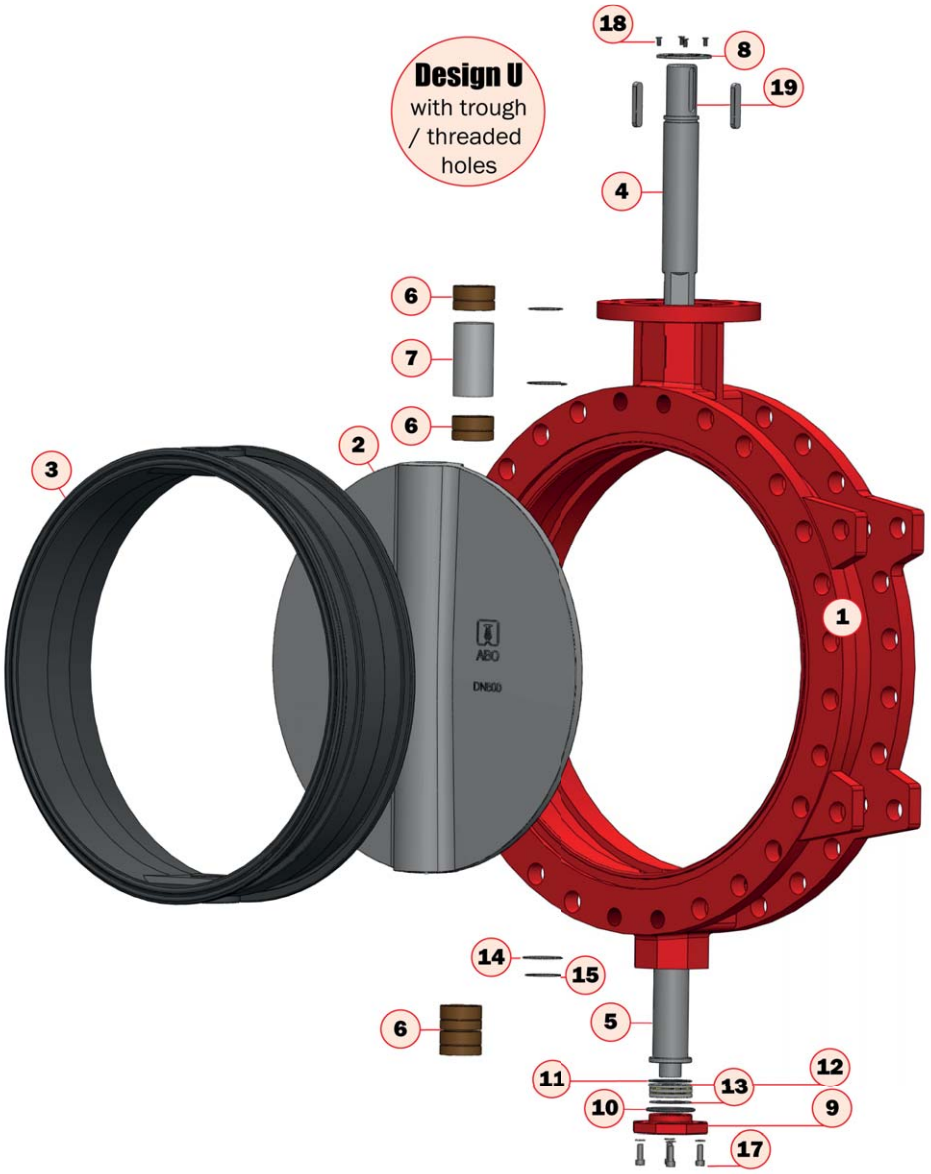


DN>600 / DOUBLE FLANGED DESIGN - SERIES „U”

ABO valve

DN700-DN1600 / PN10

Pos	Name	Material
1	**Body**	0.7040
2	**Disc**	upon request
3	**Seat**	upon request
4	**Shaft**	1.4021
5	**Pivot**	1.4021
6	**Bushing**	Bronze
7	**Supporting liner**	1.4301
8	**Retaining ring**	1.4401 (316)
9	**Cover**	0.7040
10	**Washer**	1.4301 (304)
11	**Washer**	1.4301 (304)
12	**Bearing**	upon standard
13	**O-ring**	upon request
14	**O-ring**	upon request
15	**O-ring**	upon request
16	**Washer**	A4
17	**Bolt**	A4
18	**Bolt**	A4
19	**Spring**	A4



Advantages of concentric shut-off valve double-flanged design

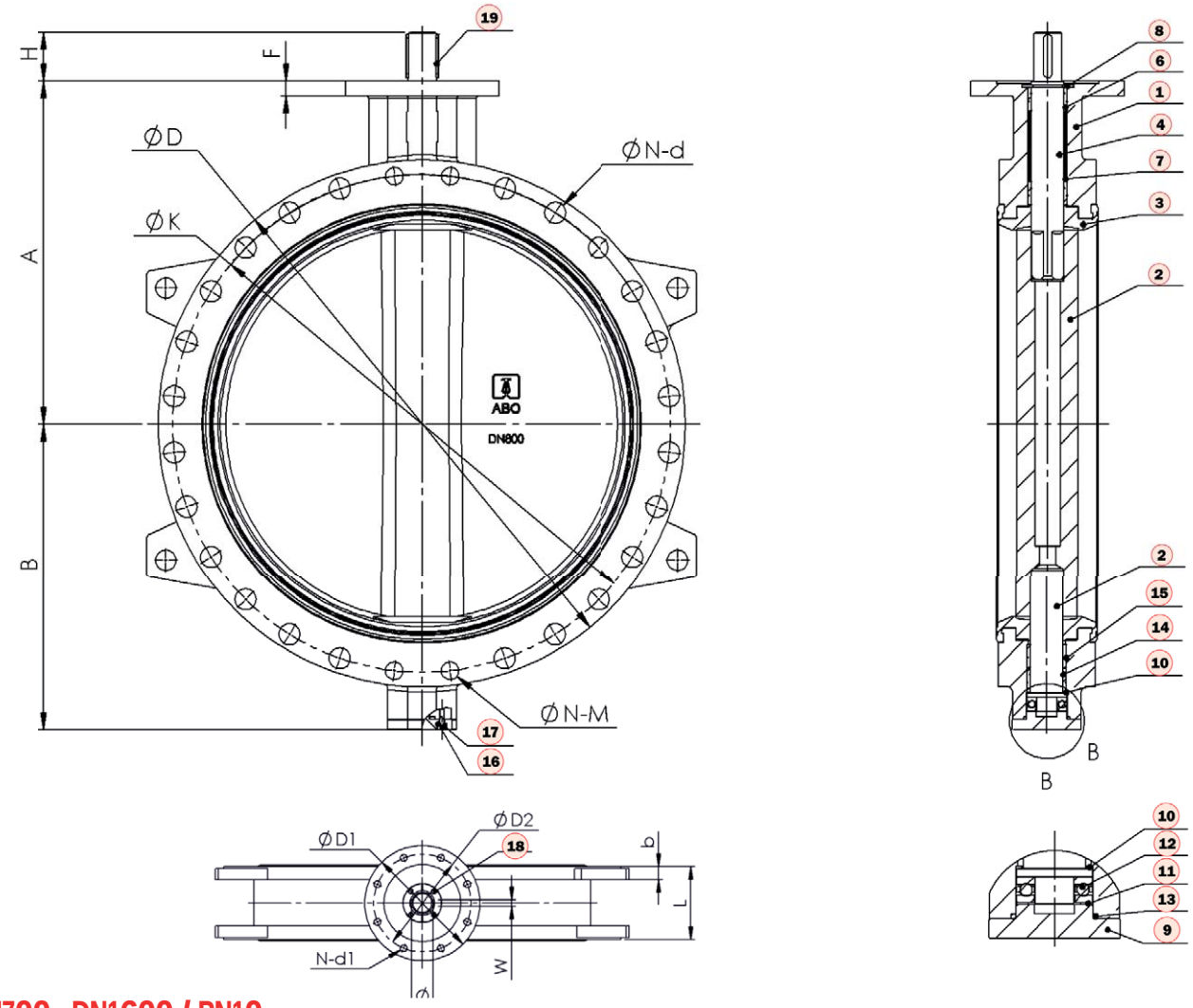
- 100 % tightness
- 0% leakinesst
- vulcanized seat
- actuation by various actuator types - manual, electric, pneumatic or special types
- on/off and for regulation
- fully sealed stem, medium is not in contact with stem and body
- bi-directional tightness
- low body weight
- disc aerodynamic design minimising pressure loss
- disc with polished edges, high through put profile

Material options
Body / Disc / Seat/ Shaft

Body	Grey cast iron / Ductile iron / Carbon steel / Stainless steel / Epoxy coating / Coating C4, C5
Disc	Ductile iron / Stainless steel / Aluminium Bronze / Duplex / Super Duplex / HC276 / RILSAN, HALAR coating
Seat	NBR / EPDM / EPDM for potable water/FPM/Silicone
Shaft	AISI420 / AISI431 / F51/ F55 or

**) special materials upon request*

DN>600 / DOUBLE FLANGED DESIGN - SERIES „U”



DN700 - DN1600 / PN10

	700	800	900	1000	1100	1200	1400	1600
A	624	672	720	800	900	941	1040	1150
B	535	606	670	735	830	978	1009	1138
H	95	95	130	130	135	150	150	180
D	910	1025	1125	1255	1355	1485	1685	1930
K	840	950	1050	1160	1270	1380	1590	1820
N-d	20-31	20-34	24-34	24-37	28-37	28-41	32-44	36-50
N-m	4-M27	4-M30	4-M30	4-M33	4-M33	4-M36	4-M39	4-M45
L	165	190	203	216	254	254	279	318
b	32,5	35	37,5	40	42,5	45	46	49
D1	300	300	300	300	350	350	415	415
D2	254	254	254	254	298	298	356	356
N-d1	8-18	8-18	8-18	8-18	8-22	8-22	8-33	8-33
F	30	30	34	34	34	34	40	40
Ø	55	55	75	85	105	105	120	160
W	16	16	20	22	28	28	32	40

Dimensions are mentioned in mm.
PN16 / Class 150 upon request

DOUBLE FLANGED DESIGN - SERIES „U”

ABO valve

Operating torques (Nm) vs working pressure (bar) SERIES 20

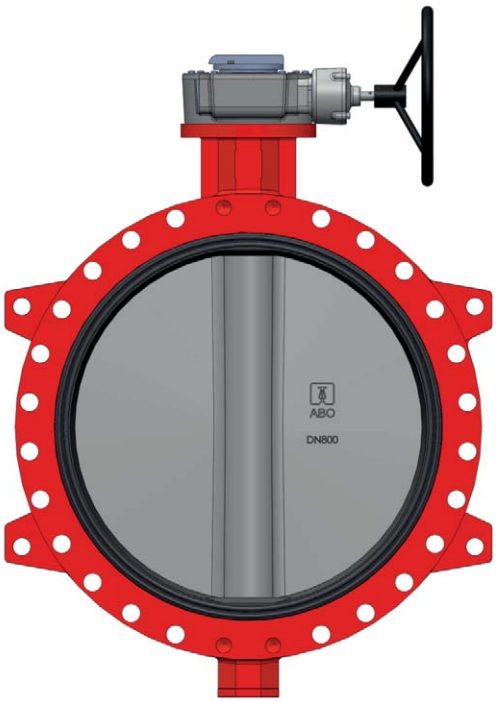
DN	PN10	PN16
	Nm	Nm
700	3500	4200
750	3800	4800
800	4600	5600
900	5800	7800
1000	8800	10800
1100	11240	15600
1200	13800	19320
1300	16900	23660
1400	20000	28000
1500	25000	35000
1600	29000	40600
1800	39900	55860
2000	52250	73150

Mentioned torques are valid for valves of Series 20 with interchangeable seats. The data do not include values of the safety factor. Using seat EPDM multiply the values by 1,2. Using seats NBR/VITON/SILICONE multiply the values by 1,3.

Operating torques (Nm) vs working pressure (bar) SERIES 13

DN	PN10	PN16
	Nm	Nm
50	17	17
65	25	25
80	38	38
100	56	56
125	90	90
150	124	124
200	233	233
250	392	392
300	560	560
350	736	988
400	1011	1479
450	1355	1887
500	1807	2444
600	2825	4054
700	4410	6204
750	5080	-
800	5812	8782
900	7092	12142
1000	10584	16122
1050	12172	-
1200	16935	29684
1400	22000	345000

Mentioned torques does not include safety factor. Please use a factor of 1.3



VALVE ACTUATION
Worm gearbox with handwheel

Manual gearbox casing is made from cast iron with suitable surface treatment and protection degree class IP 67. Self-locking design of the worm gear enables both to set basic positions open/shut and to control (throttle) media flow. The worm gearbox is simply controlled hand-wheel of a suitable diameter. End positions of the worm gearbox are adjusted by screws. The gearbox can be equipped with a lockable system secured by a padlock. The worm gearbox as well as the hand lever can be completed with limit switch boxes.

Actuators

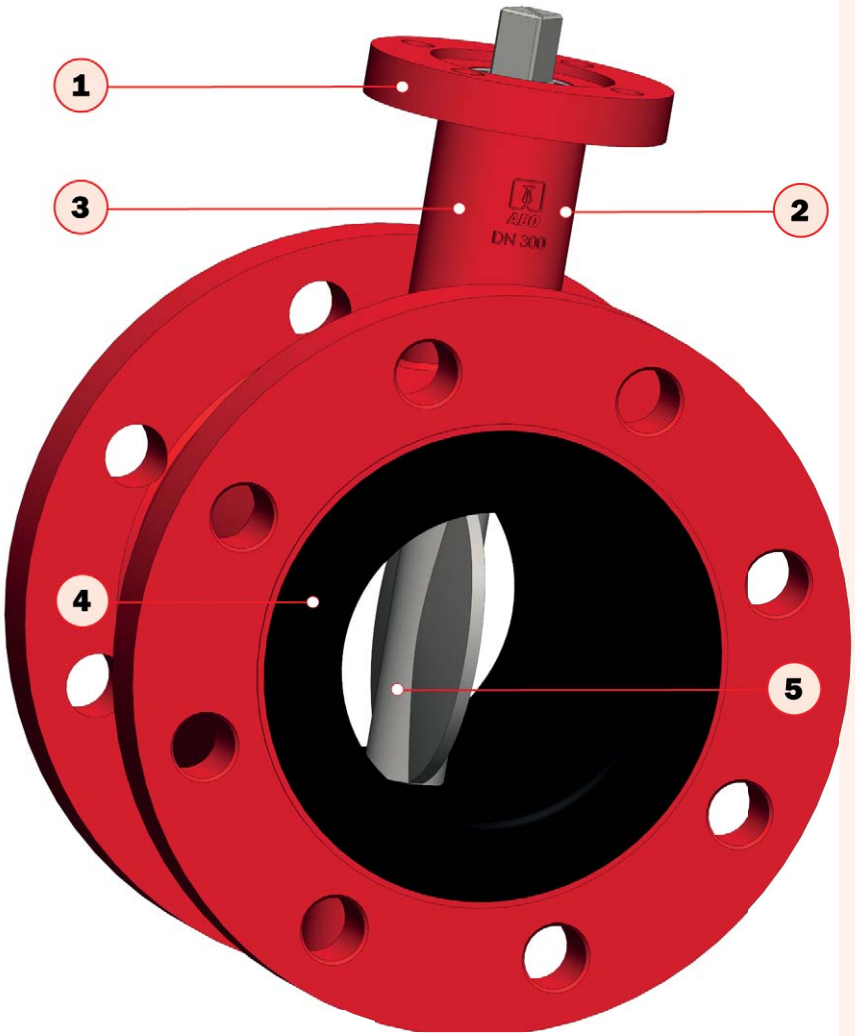
Pneumatic actuators
Two standard designs: single-action/double-action.
Electric actuators
Electric actuators can be installed for voltages of 24 V, 230 V or 400 V
Special actuators types
Made by suppliers Auma, Regada, Valpes, etc

DN>600 / DOUBLE FLANGED DESIGN - SERIES „F”

Industrial Valve Manufacturer

Body design Double flanged	Body with through / threaded holes	
Design performance Series „F“	Increased face-to-face length, Series 13 According to ISO 5752-13	
Nominal size Design „F”	DN50 - DN2200	
Working pressure	10 bar - 16 bar (PN10 / PN16)	
Leak test	11 bar - 17,6 bar	
Working temperature	Seat NBR Seat EPDM	-10 °C / +90 °C **vulcanized** -20 °C / +125 °C **vulcanized** *)
Features	**Concentric design** Top flange according to ISO 5211 Flange connection according to S4504/DIN/ANSI Design complies with API609	

**) other alternatives upon request*



1. International Standard compatibility

- according to the standard ISO 5211 the top flange enables to directly assemble any manual operators and actuators. Valves are usually delivered with worm gear actuators. A wide scale of pneumatic or electric actuators can be assembled, too.

2. Blow-out proof system

- a retaining washer disables shaft movement upwards.

3. Lenghtened neck

- enables to insulate the actuator from conveyed media warm effects and thus meets requirements on heating systems controls

4. Seat design

- seat movement or incorrect position is impossible - seat can be vulcanized. Vulcanizaton leads to decreasing torque values needed to handle the valve. Valve inner part is fully rubber lined and thus protected against corrosive effects.

5. Disc design

- disc with polished edges is protective to seat and provides a long lifespan. Symmetric disc profile improves valve performance by increasing Kv (Cv) values, decreases turbulence and minimizes pressure loss.

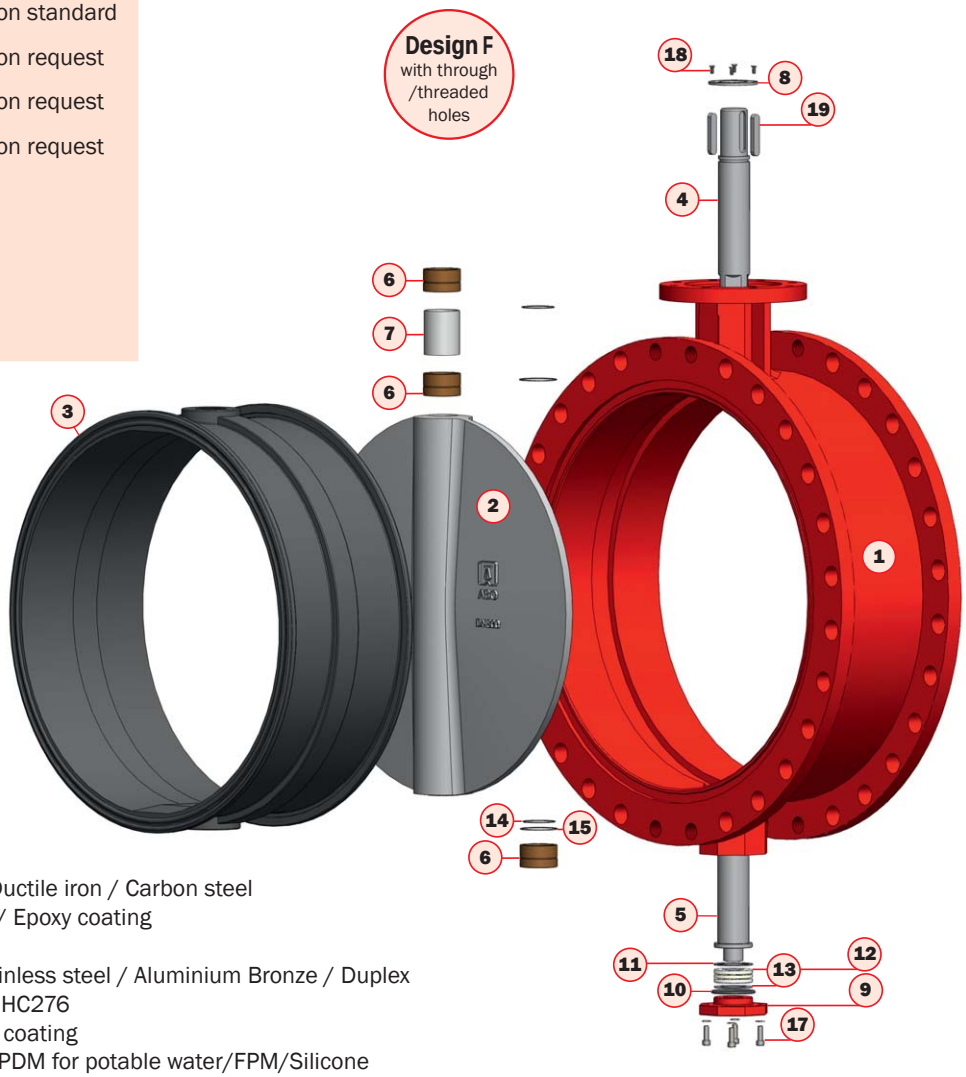
DOUBLE FLANGED DESIGN - SERIES „F”

ABO valve



DN50-DN2200 / PN10

Pos	Name	Material
1	**Body**	0.7040
2	**Disc**	upon request
3	**Seat**	upon request
4	**Shaft**	1.4021
5	**Pivot**	1.4021
6	**Bushing**	Bronze
7	**Supporting liner**	1.4301
8	**Retaining ring**	1.4401 (316)
9	**Cover**	0.7040
10	**Washer**	1.4301 (304)
11	**Washer**	1.4301 (304)
12	**Bearing**	upon standard
13	**O-ring**	upon request
14	**O-ring**	upon request
15	**O-ring**	upon request
16	**Washer**	A4
17	**Bolt**	A4
18	**Bolt**	A4
19	**Spring**	A4



Material options
Body / Disc / Seat/ Shaft

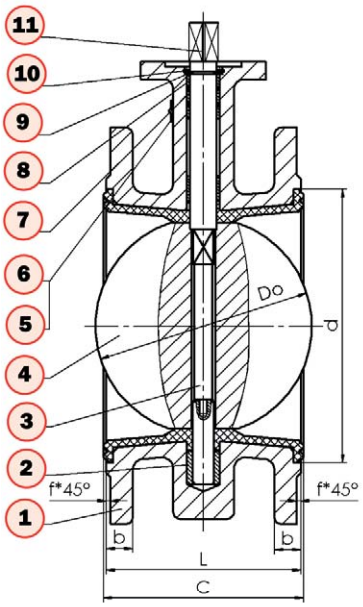
Body	Grey cast iron / Ductile iron / Carbon steel / Stainless steel / Epoxy coating / Coating C4, C5
Disc	Ductile iron / Stainless steel / Aluminium Bronze / Duplex / Super Duplex / HC276 / RILSAN, HALAR coating
Seat	NBR / EPDM / EPDM for potable water/FPM/Silicone
Shaft	AISI420 / AISI431 / F51/ F55 or

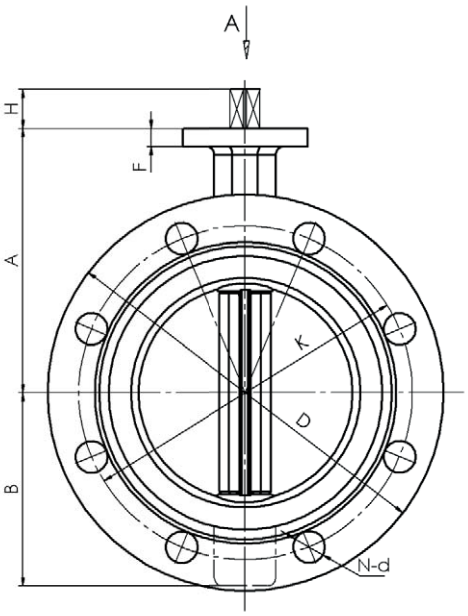
*) special materials upon request

DESIGN PARAMETERS / SERIES - „F”

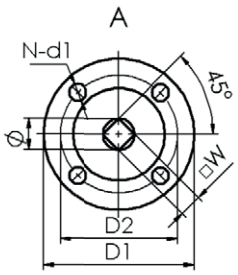
DN50 - DN350 / PN10

Pos	Name	Material
1	Body	0.7040 + EPDM
2	Bushing	Bronze
3	Pivot	SS 1.4021/420t
4	Disc	1.4408 (CF8M)
5	Rivet	SS A2
6	Label	1.4301/SS304
7	Bushing	Bronze
8	O-ring	EPDM/NBR
9	Washer	1.4301/SS304
10	Retaining ring	SS A2
11	Shaft	SS 1.4021/420









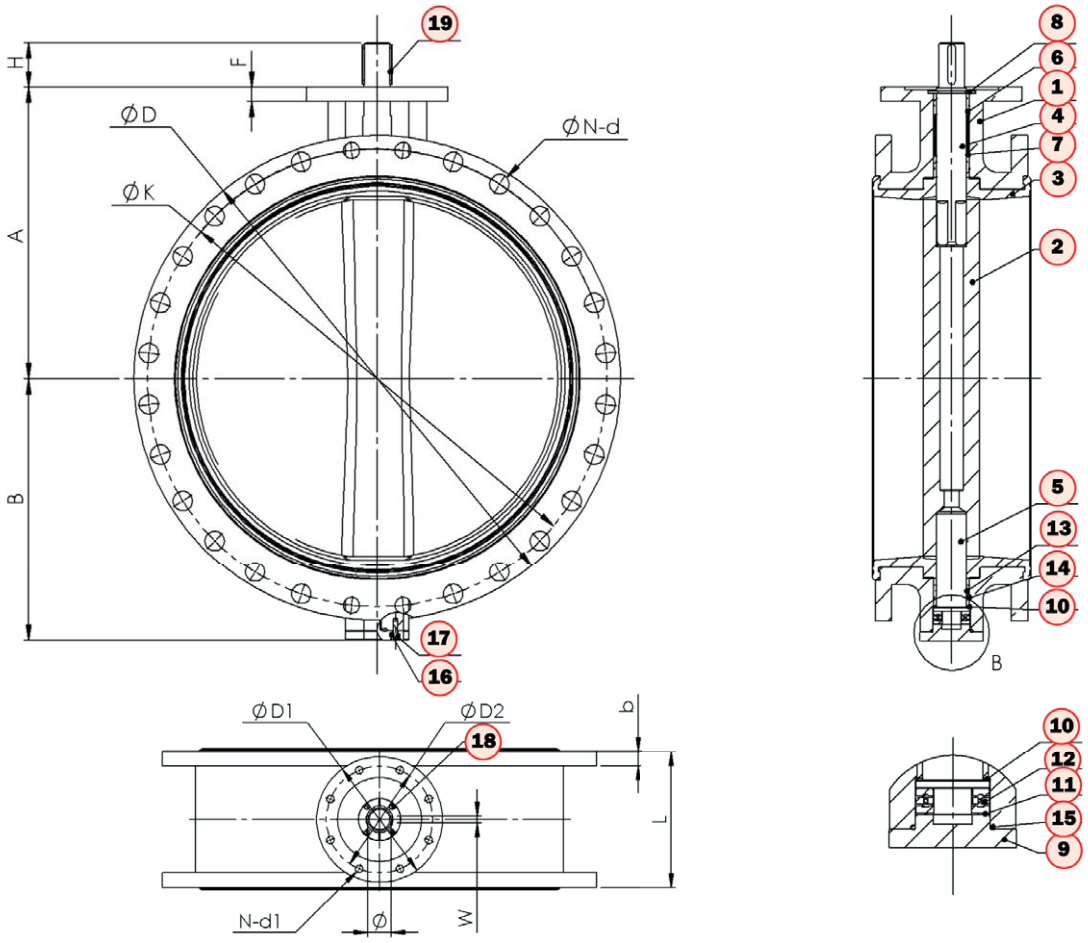
	50	65	80	100	125	150	200	250	300	350	400
A	120	130	145	155	170	190	205	235	280	310	340
B	80	89	95	114	125	139	170	198	223	254	306
H	25	25	25	25	25	25	25	30	30	30	36
D	165	135	200	220	250	285	340	395	445	505	580
K	125	145	160	180	210	240	295	350	400	460	525
N-d	4-19	4-19	8-19	8-19	8-19	8-23	8-23	12-23	12-23	16-23	16-31
Do	52.6	64.3	78,8	104	123,3	155,7	202,4	250,4	301,5	333,3	389,6
d	89	106	120	144	170	197	252	305	350	415	460
L	108	112	114	127	140	140	152	165	178	190	216
C	111	115	117	130	143	143	155	168	182	194	221
b	19	19	19	19	19	19	20	22	24,5	24,5	28
f	3	3	3	3	3	3	3	3	3	4	4
D1	65	65	65	90	90	90	125	125	125	150	175
D2	50	50	50	70	70	70	102	102	102	125	140
N-d1	4-7	4-7	4-7	4-10	4-10	4-10	4-12	4-12	4-12	4-14	4-18
F	13	13	13	13	13	13	15	15	20	20	22
Ø	12,6	12,6	12,6	15,77	18,92	18,92	22,1	28,45	31,6	31,6	37,95
W	14	14	14	14	17	17	17	22	22	27	27

*) PN16 upon request

DESIGN PARAMETERS / SERIES - „F”

ABO valve

DN450 - DN1200 / PN10



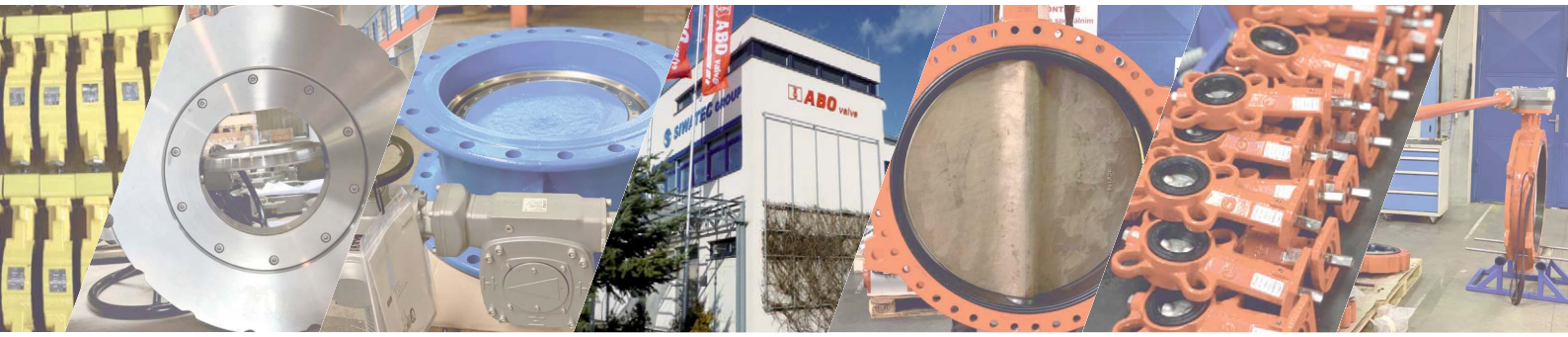
	450	500	600	700	800	900	1000	1200
A	375	430	500	560	620	685	735	917
B	345	378	440	510	560	638	705	815
H	80	80	80	95	95	130	130	150
D	615	670	780	895	1015	1115	1230	1455
K	565	620	725	840	950	1050	1160	1380
N-d	20-28	20-28	20-31	24-31	24-34	28-34	28-37	32-41
Do	440,5	491,6	592,5	695	794,7	864,7	965	1160,6
d	510	560	660	770	871	972	1080	1270
L	222	229	267	292	318	330	410	470
C	227	234	272	299	325	337	417	478
b	25,5	26,5	30	32,5	35	37,5	40	45
f	4	4	5	5	5	5	5	5
D1	175	175	210	300	300	300	300	350
D2	140	140	165	254	254	254	254	298
N-d1	4-18	4-18	4-22	8-18	8-18	8-18	8-18	8-22
F	22	22	22	30	30	34	34	34
Ø	38	42	50	55	55	75	85	105
W	10	12	14	16	16	20	22	28

*) sizes above DN1200 upon request.
*) PN16 on request

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Industrial Valve Manufacturer





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