

# BUTTERFLY VALVE

## AL 42-A / AL 43-A

## Wafer / Lug

### Description

AL 42-A and AL 43-A are butterfly valves for mounting between flanges according to DIN 1092-1, DIN 2631 and ASME B16.5. The valve body is epoxy coated with replaceable liner. Blowout-proof stem and mounting flange according to ISO 5211 for direct mounting of actuators. Suitable as a shut off valve for fluids, gases and powder, but can also be used for simple control applications.

- Splitted shaft
- Long neck of the body, to be isolated.
- Vacuum max 0,2 bar absolute (with bonded liner)
- Leakage rate according to EN 12266-1 Class A, ISO 5208 Class A, API 598, TAB 5.
- Mounting flange according to EN ISO 5211
- Max. working pressure: DN 32-600 16 bar; DN 700-1600 10 bar
- Temperature range -40°C - +160°C (depending on material).

### Approvals

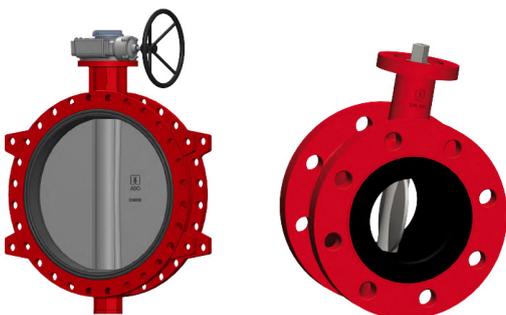
- CE/PED 2014/68/EU
- DVGW water
- DVGW gas
- ABS type approval
- Lloyd's
- GOST
- SIL
- ATEX (on request)

### Types

Connctcion	Type	Lining	Disc
Wafer	AL 42-A-924B	EPDM	Stainless steel 1.4408
	AL 42-A-994B	Nitrile	
Lug	AL 43-A-924B	EPDM	
	AL 43-A-994B	Nitrile	

### Double flange versions

These valves are also available as double flange design, with two flanges welded to the body, one at the upstream end and one at the downstream end of the valve. A double-flanged butterfly valve is easier to mount and center, and is mechanically stronger in construction. This is the most resilient valve design, suitable for dead-end services and other demanding applications.



AL 42-A - Wafer

AL 43-A - Lug

### Pressure class

Pressure class	AL 42-A - Wafer		AL 43-A - Lug	
	Standard	Optional	Standard	Optional
PN 6	DN 32-300	350-600	-	DN 32-400
PN 10	DN 32-600	-	DN 32-400	DN 450-600
PN 16	DN 32-400 DN 500-600	DN 450	DN 32-150	DN 200-600

### Optional

- Lockable hand lever with fixed steps
- Gear
- Electric or pneumatic actuators
- Limit switch
- Double flange

### Installation

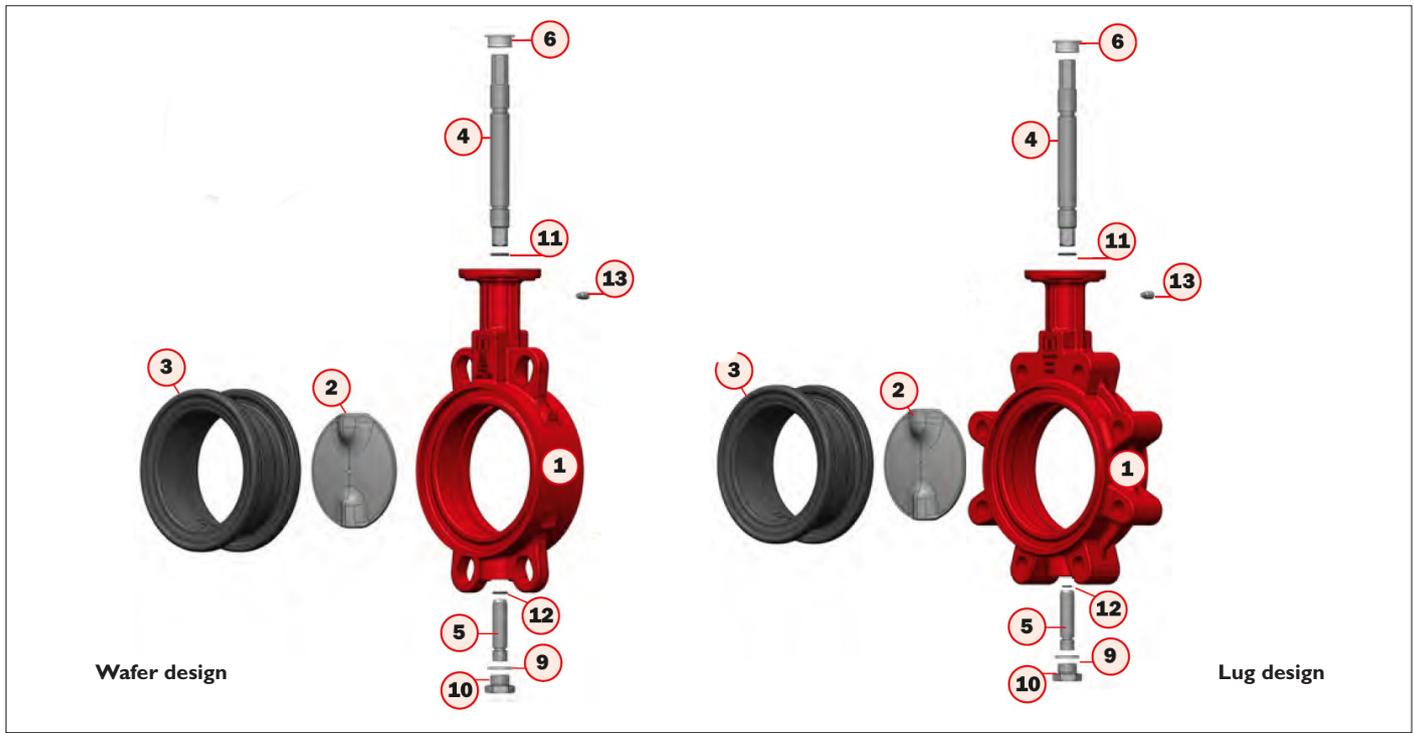
The valve can be installed in horizontal and vertical lines. When mounted, the disc should be in a semi-open position. In horizontal pipes we recommend the shaft in horizontal position. The valve is maintenance free but should be operated at regular intervals depending on the installation.

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### Material specification



No	Part	Material
1	Body	Standard Ductile iron 0.7040 (GGG 40) Epoxy coated
		Optional Carbon steel 1.0446 (A216 WCB) Low carbon content steel 1.1156 (A352 LCC) Stainless steel 1.4408 (CF8M)
2	Disc	0 - Brass 2.0402 1 - Aluminium bronze 2.0966 2 - Stainless steel 1.4308 (CF8) 3 - Ductile iron 0.7040 (GGG40) 4 - Stainless steel 1.4408 (CF8M) 5 - Hastelloy 6 - Stainless steel 1.4539 (Uranus B6) 7 - Titanium
3	Seat	1 - NBR -10°C – +90°C 2 - EPDM -20°C – +90°C 3 - Carboxylic NBR 0°C – +90°C 4 - VITON (FPM) -5°C – +150°C 5 - Silicone Steam (MVQ) -40°C – +140°C 6 - Silicone (VMQ) -40°C – +160°C 7 - Epichlorohydrin -40°C – +90°C 8 - HYPALON (CSM) -10°C – +100°C 9 - NBR 70-AG -10°C - +90°C - NBR conduct -10°C – +80°C
4	Stem	Stainless steel 1.4021 (AISI 420)
5	Pivot	Stainless steel 1.4021 (AISI 420)
6	Bushing	Delrin DN 32-300 Brass DN 350-600
9	Seal	Klingsil C-4400
10	Plug	Stainless steel A2
11	Stem O-ring	NBR, EPDM (option Viton)
12	Pivot O-ring	NBR, EPDM (option Viton)
13	Retaining bolt	Stainless steel A2

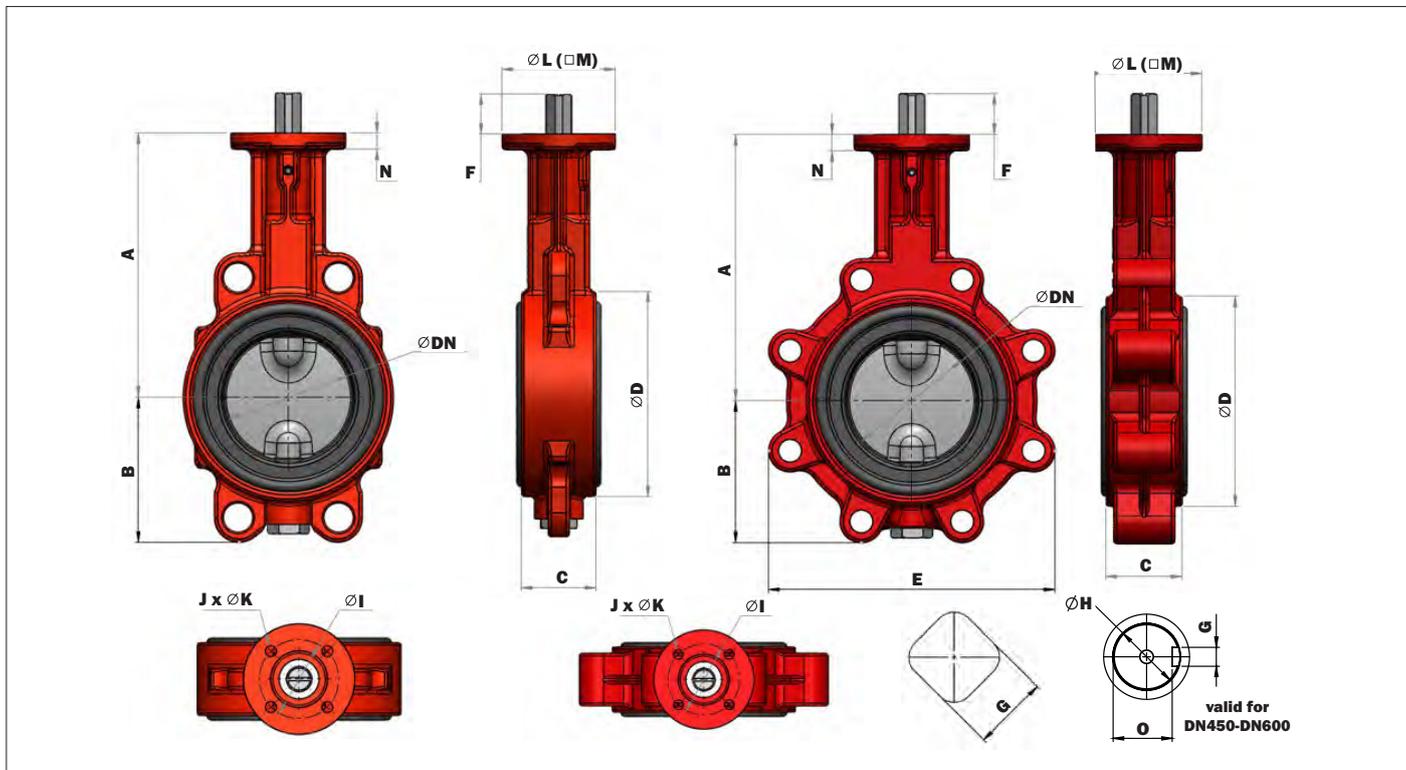
Other material on request.

# BUTTERFLY VALVE

## AL 42-A / AL 43-A

Wafer / Lug

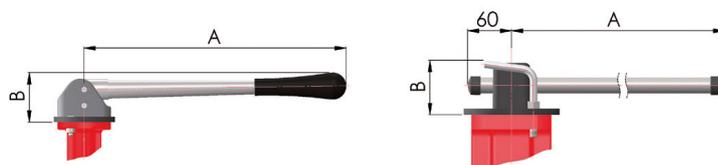
### Dimensions



DN	32/40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
A	136	146	154	163	173	193	205	234	270	310	325	365	375	485	565
B	54	64	72	89	105	119	130	166	202	237	271	314	330	468	464
C	33	43	46	46	52	56	56	60	68	78	78	102	114	127	154
D	78	96	113	128	150	184	212	268	320	378	435	488	544	590	695
E	110	115	129	174	204	234	255	319	396	465	509	590	610	682	810
F	25	25	25	25	25	25	25	25	30	30	36	36	80	80	80
G	14	14	14	14	14	17	17	17	22	22	27	27	10	12	14
H	-	-	-	-	-	-	-	-	-	-	-	-	Ø38	Ø42	Ø50
O	-	-	-	-	-	-	-	-	-	-	-	-	33,3	37,1	44,5
I	50/70	50/70	50/70	50/70	50/70	70	70	70	102	102	125	140	140	140	165
J	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
K	7	7	7	7	7	9	9	9	11	11	14	18	18	18	23
L	-	70	70	70	70	-	-	-	-	-	-	-	175	175	210
M	70	-	-	-	-	70	70	70	105	105	130	140	-	-	-
N	8	8	8	8	8	12	12	14	17	17	17	21	22	27	27
ISO	F05/F07	F05	F05	F07	F07	F07	F07	F07	F10	F10	F12	F14	F14	F14	F16
Weight AL 42-A	1,9	2,7	3,2	3,7	4,7	6,7	8,4	13,3	22,0	29,3	46,4	69,8	83,0	112,0	216,0
Weight AL 43-A	2,3	3,0	3,7	4,8	6,1	9,2	10,2	15,3	28,4	41,2	62,0	96,3	130,0	149,0	288,0

### Lever (optional)

DN	32/40	125	150-200	250	300
A	270	270	362	450	750
B	75	75	75	135	135
Weight	1,24	1,26	1,40	2,20	3,10



DN 32-200

DN 250-300

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### Kv value

DN	10°	20°	30°	40°	50°	60°	70°	80°	90°
32/40	0,1	2	4	9	17	30	45	61	84,4
50	0,1	3	6	11	23	50	81	110	147
65	0,1	5	10	21	53	90	160	210	290
80	0,2	8	15	33	76	160	238	340	450
100	0,3	20	35	60	122	220	362	520	730
125	0,4	35	60	110	223	430	626	797	1260
150	0,7	54	105	248	400	640	987	1630	1990
200	2	120	210	410	915	1630	2331	3446	4396
250	3	129	274	590	1037	2000	3210	4164	4500
300	3	188	424	820	1500	2710	4180	5433	6800
350	5	265	685	1327	1990	3214	4690	6292	8900
400	7	345	1000	1825	2550	4383	6090	9779	11500
450	9	449	1200	2518	3680	5929	7840	11925	15000
500	12	586	1511	2909	4340	7167	9508	12762	18800
600	19	847	2217	4203	6560	9863	14614	23621	27600

### Torque at maximum working pressure - Nm

DN	32/40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
PMA 6 bar	8	11	15	20	38	55	70	100	160	235	480	750	1180	1380	2050
PMA 10 bar	9	12	17	25	46	70	80	125	200	290	530	1200	1550	2050	2700
PMA 16 bar	10	14	20	30	55	85	100	150	220	380	580	1650	2100	2700	3750

The above mentioned torques are valid for valves with EPDM seat, and water as media. While actuating the valve, the above mentioned figures should be multiplied by a coefficient of 1,2. When using a NBR seat, it is necessary to apply a coefficient of 1,8 up to DN 300. For larger dimensions factor 1,32.

For other lining materials or other media, please contact Axel Larsson.

### Ordering key

Ordering example: AL 42-A - 9 - 2 - 4 - B

Type	Model	Seat material	Disc material	Connection
AL 42-A = Wafer AL 43-A = Lug	9 = 900	<b>Standard</b> 1 = NBR -10°C - +90°C 2 = EPDM -20°C - +90°C  <b>Optional</b> 3 = Carboxylic NBR 0°C - +90°C 4 = VITON (FPM) -5°C - +150°C 5 = Silicone Steam (VMQ) -40°C - +140°C 6 = Silicone (VMQ) -40°C - +160°C 7 = Epichlorohydrin -40°C - +90°C 8 = HYPALON® (CSM) -10°C - +100°C 9 = NBR 70-AG -10°C - +90°C NBR conduct -10°C - +80°C	<b>Standard</b> 2 = Stainless steel 1.4308 (CF8) *  <b>Optional</b> 0 = Brass 2.0402 1 = Aluminium bronze 2.0966 3 = Ductile iron 0.7040 (GGG40) * 4 = Stainless steel 1.4408 (CF8M) * 5 = HASTELLOY 6 = Stainless steel 1.4539 (Uranus B6) 7 = Titanium * Halar + Rilsan Coating optional	<b>Standard</b> B = Wafer T = Lug  <b>Optional</b> F = Double flange

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