

ZB-100 / 200

Sanitary Butterfly Valve

APPLICATION

Butterfly valves ZB-100, whether manually or automatically operated, can be used in most liquid product applications in the food-processing, pharmaceutical and chemical industries. The design of the butterfly valve between flanges ZB-100 facilitates its installation and maintenance, allowing the extraction of the valve by means of 4 screws while the flanges welded to the installation remain fixed. The butterfly valve can be operated automatically through an actuator or manually with a handle. The handle blocks the valve in the “open” or “closed” position, although there are also other models with intermediate positions. The actuator transforms the axial movement of the piston into a 90º rotary movement which it transmits to the disc.

DESIGN AND FEATURES

Hygienic design according to EHEDG guidelines.
Easily interchangeable manual handles and pneumatic or electric actuators.
Low pressure losses.
Body halves interchangeable with any connection type.
Traceability of components.
Gaskets comply with USP CLASS VI requirements.

TECHNICAL SPECIFICATIONS

Materials	
Disc	1.4404 (AISI 316L)
Body halves	1.4307 (AISI304L) or 1.4404 (AISI 316L)
Other St. St. parts	1.4307 (AISI 304L)
Gasket	EPDM, HNBR, VMQ or FPM
Surface finish	
Internal	Ra ≤ 0,8 µm
External	Mechanized
Available sizes	
DIN EN 10357 series A (previously DIN 11850 series 2)	DN 25 - DN 100
ASTM A269/270 (correspondsto OD pipe)	OD 1’’ - OD 4’’

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Connections

Weld
Male
Nuts
Clamp

Operating limits

Working temperature	-10ºC to 120ºC	14ºF to 248ºF
Temperature SIP	140ºC (max. 30 min)	284ºF
Minimum working pressure (absolute P.)	20 kPa (0,2 bar)	3 PSI
Maximum working pressure	1000 kPa (10 bar)1	145 PSI

1)ClassifiedaccordingtoDirective97/23/CEasCategory I valvesforusewithfluidsofGroup 1

DN	25	32	40	50	65	80	100
Dry torque1 [Nm]	5	5	5	8	15	25	30

DN	1''	1½''	2''	2½''	3''	4''
Dry torque1 [Nm]	5	5	8	15	25	30

1)Forrotatingthevalve disc in a dry seal ring

DRIVE TECHNICAL SPECIFICATIONS

Handles

Multiposition handle	1.4307 (AISI 304L) + plastic (PA6) o 1.4307 (AISI 304L)
Two position handle	1.4307 (AISI 304L) + plastic (PF31)

Actuator

Housing	1.4307 (AISI 304L)
Support	1.4301 (AISI 304)
Air pressure	600 - 800 kPa (6 - 8 bar)
Air connection	G 1/8 (Ø6 pipe)

Air consumption

Actuator	Air - Spring	Air - Air
ZB100 - T1	1,3	3,4
ZB200 - T2	2,1	4,9

Compressed air consumption at Prel=6 bar (litres N/cycle)

Standard assembly

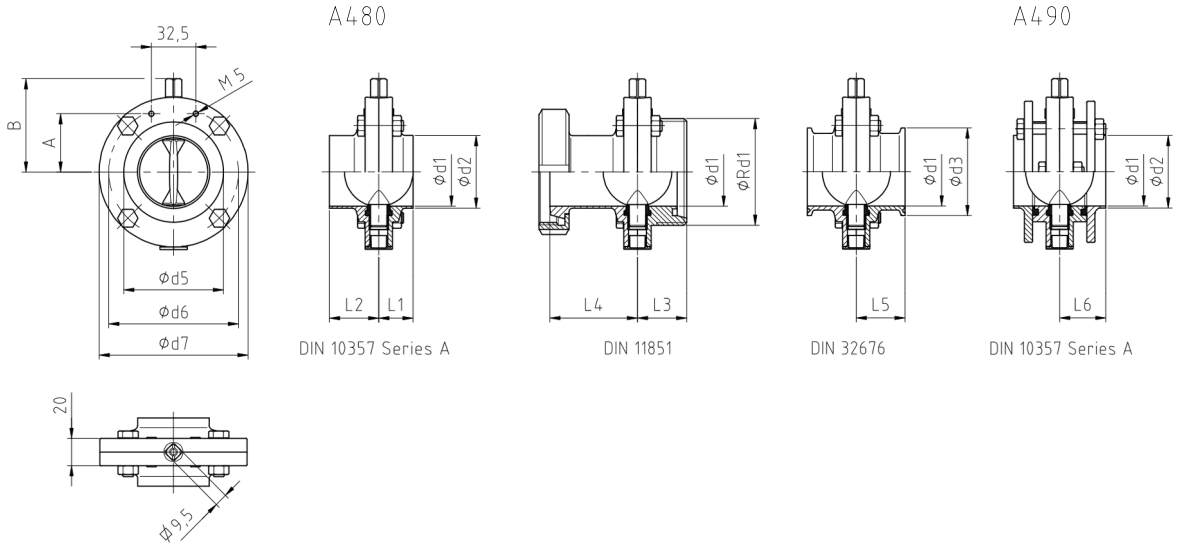
Valve	A940 - T1	A940 - T2
ZB100 & ZB200	DN 10 to DN 50	DN 65 to DN 100
	OD 1'' to OD 2''	OD 2½'' to OD 4''

OPTIONS

Different handle types.
Single- or double-acting actuator or electric actuator.
Inductive position sensors.
C-TOP S control unit.
ATEX version available.

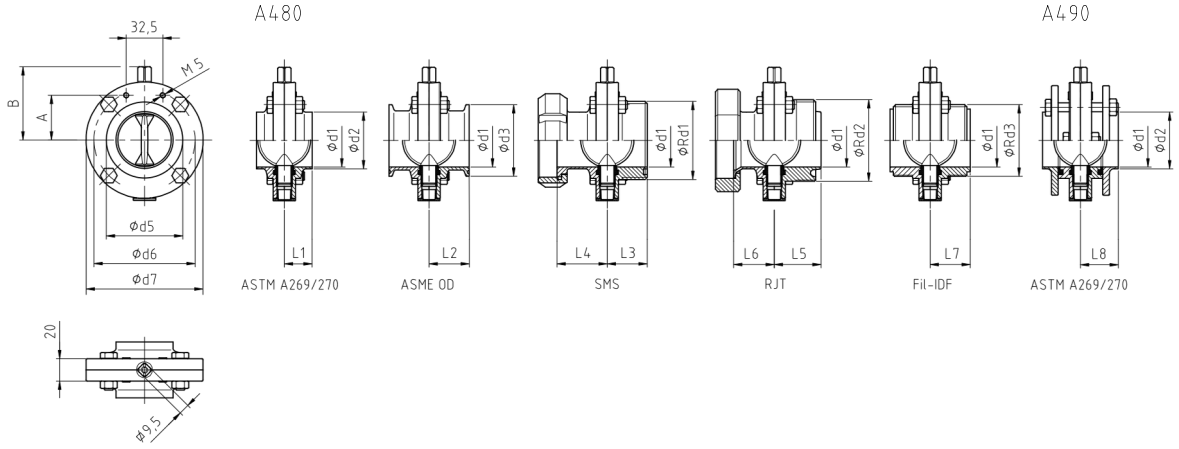
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DIMENSIONS



DN	Valve									Connection							Weight [kg]	
	Ød5	Ød6	Ød7	A	B	Ød1	Ød2	ØRd1	Ød3	L1	L2	L3	L4	L5	L6	A4801	A490
25	47	69	32	53	75	83	29,5	55,0	26	29	Rd 52 x 1/6”	50,5	25	32	32	47	32	34	0,9	1,5
40	60	82	50	73	95	89	32,5	58,0	32	35	Rd 58 x 1/6”	50,5	25	32	32	50	32	34	1,0	1,6
65	90	112	80	105		96	36,0	61,5	38	41	Rd 65 x 1/6”	50,5	25	36	36	51	36	34	1,2	1,8
127	100	125	147			109	42,5	68,0	50	53	Rd 78 x 1/6”	64,0	25	36	36	53	36	34	1,4	2,2
						126	51,0	76,5	66	70	Rd 95 x 1/6”	91,0	25	38	38	57	38	34	1,8	2,8
						141	58,5	84,0	81	85	Rd 110 x 1/4”	106	30	45	45	67	45	36	2,3	3,7
						161	68,5	94,0	100	104	Rd 130 x 1/4”	119	30	45	45	74	45	36	2,9	4,6

1) Weld connection



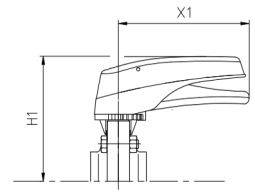
DN	Valv								Connection								Weight [kg]	
	Ød5	Ød6	e	A	B	Ød1	Ød2	Ød3	ØRd2	ØRd3 Rd 37,13	L1	L2	L5	L6	L7	L8	A4801	A490
1”	42	64	1½”	55	77	**Ød7**	27,0	52,5	22,1	25,4	50,5	Rd 45,72 x 1/8”	x 1/8” Rd 50,65	25	32	39	45	39	34	0,8	1,3
2”	68	90	2½”	80		78	91	33,5	59,0	34,8	38,1	50,5	Rd 58,42 x 1/8”	x 1/8” Rd 64,16	25	36	42	49	36	34	1,0	1,7
102	3”	93	115	4”		104	40,0	65,5	47,5	50,8	64,0	Rd 72,72 x 1/6”	x 1/8” Rd 77,56	25	36	42	53	36	34	1,3	2,0
125	147					116	46,0	71,5	60,2	63,5	77,5	Rd 85,42 x 1/6”	x 1/8” Rd 91,19	25	38	42	57	38	34	1,5	2,4
						129	52,5	78,0	72,9	76,2	91,0	Rd 98,12 x 1/6”	x 1/8” Rd 125,9	25	38	42	57	38	36	1,8	3,0
						161	68,5	94,0	97,4	101,6	119	Rd 123,52 x 1/6”	x 1/6”	30	45	45	64	45	36	2,9	4,8

1) Weld connection

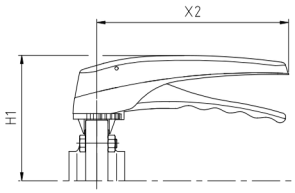
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SMS	Connection			Weight [kg]
	ØRd1 Rd 40	**L3**	**L4**	**A4801**
25	x 1/6'' Rd 60	32	40	1,0
38	x 1/6'' Rd 70	36	45	1,6
51	x 1/6'' Rd 85	36	45	1,9
63,5	x 1/6'' Rd 98	38	49	2,5
76	x 1/6'' Rd 132	38	49	2,9
101,6	x 1/6'' Rd 125	65	60	5,7
104	x 1/4''	45	60	4,6

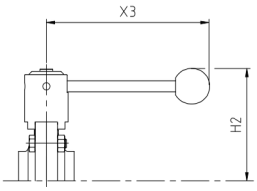
1) Male connection



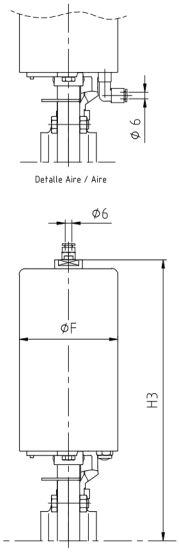
Multiposition mini handle



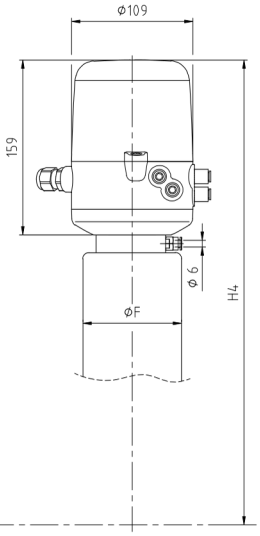
Multiposition handle



Two position handle



A940 Actuator



ZA-TOP

DN	Drive								
	H1	X1	X2	H2	X3	T1 (ØF = 76)		T2 (ØF = 88,5)	
						H3	H4	H3	H4
25	100	11	173*	88	146	218	385	240*	407*
32	104	8	173*	92	146	221	388	243*	410*
40	107	118	173	95	146	225	392	247*	414*
50	113	8	173	101	146	231	398	253*	420*
65	122	118	173	110	146	-	-	262	429
80	130	*	173	117	175	-	-	269	436
100	140	118	173	128	175	-	-	279	446
		*							
		118							
		*							

DN	Drive								
	H1	X1	X2	H2	X3	T1 (ØF = 76)		T2 (ØF = 88,5)	
						H3	H4	H3	H4
1''	98	118	173*	86	146	216	383	238*	405*
1½''	104	118*	173	92	146	222	389	244*	411*
2''	110	118*	173	98	146	229	396	251*	418*
2½''	117	118*	173	104	146	-	-	257	424
3''	123	118*	173	111	146	-	-	263	430
4''	140	118*	173	128	175	-	-	279	446

*Not standard or not recommended

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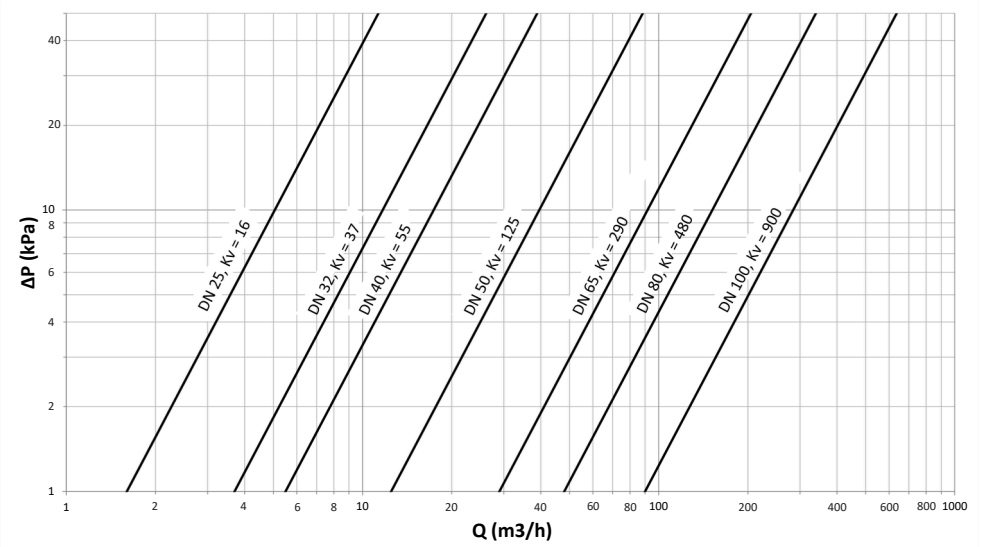
SIZING

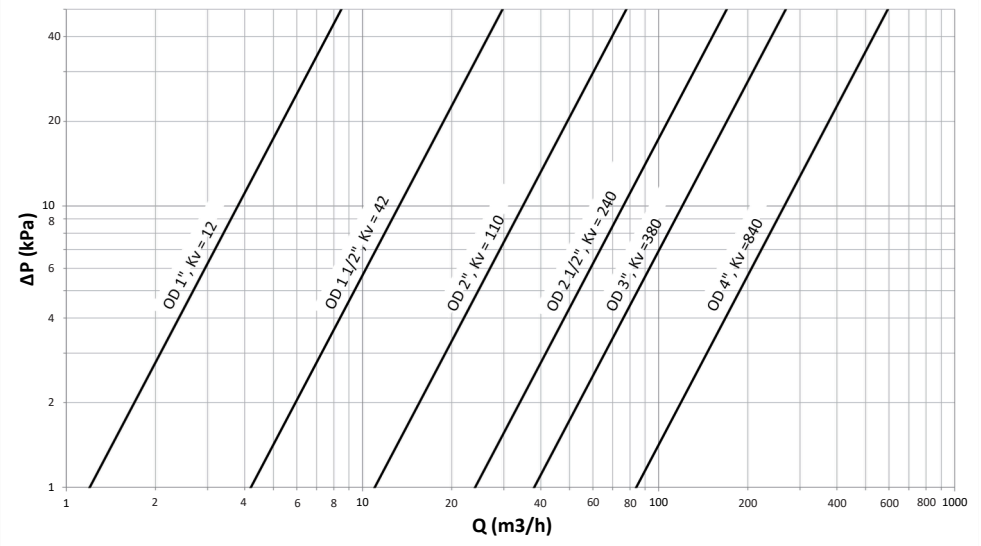
The following formula can calculate the required Kv for products with a similar density and viscosity to water:

$$Kv = \frac{Q}{\sqrt{\Delta P}}$$

where: Q ≡ flow (m3/h)
ΔP ≡ drop in pressure in the valve

Tests have been performed with water at 20ºC.





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