

Butterfly Valve Type AK01 / AK02



description:

Butterfly valve to control a liquid or gaseous media in a pipeline system.

features:

- suitable for neutral and not neutral **gaseous & liquid media**
- Easy maintenance due to demountable design
- Industry design
- Soft sealing
- Central disc bearing, double sided sealing
- Position of installation can be chosen freely, from DN300 shaft preferably in horizontal position

connection:

DN32, DN40, DN50, DN65, DN80, DN100, DN125, DN150, DN200, DN250, DN300, DN350, DN400

temperature:

-20°C up to 150°C – depending on design

pressure:

Up to 16,0 bar

Type AK01 Wafer type:

Type AK02 Lug type:

design:

Butterfly Valve Wafer type or Lug type

body:

EN-JS1030 (GGG40) high quality epoxy-painting 80µm
Body colour blue (RAL 5005)

disc:

Stainless steel 1.4408 (CF8M)

stem:

Splitted stem 1.4021(AISI 420)

nominal pressure:

PN16

sealing leakage test:

DIN EN 12266-1 Leakage rate A

Length:

EN 558, row 20/13; SO 5752, row 20/13; API 609, table 2

actuation arrangement:

DN32-DN100 Lever made of alu with grey sleeve (NBR DVGW-G yellow)
DN125-DN200 Lever made of steel (NBR DVGW-G yellow sleeve)
Worm gear / recommended from DN125

seat:

EPDM DVGW WRAS ACS W270 drinking water -20°C up to +90°C
NBR-black DVGW Gas -10°C up to +60°C
FKM/FPM -5°C up to +150°C
EPDM HT FDA -5°C up to +130°C

DVGW Registration:

EPDM drinking water Reg.Nr. DW-6201CR0174 nach DIN EN 1074-1/-2
NBR-back for gas Reg.Nr. NG-4313CN0141 nach DIN EN 13774

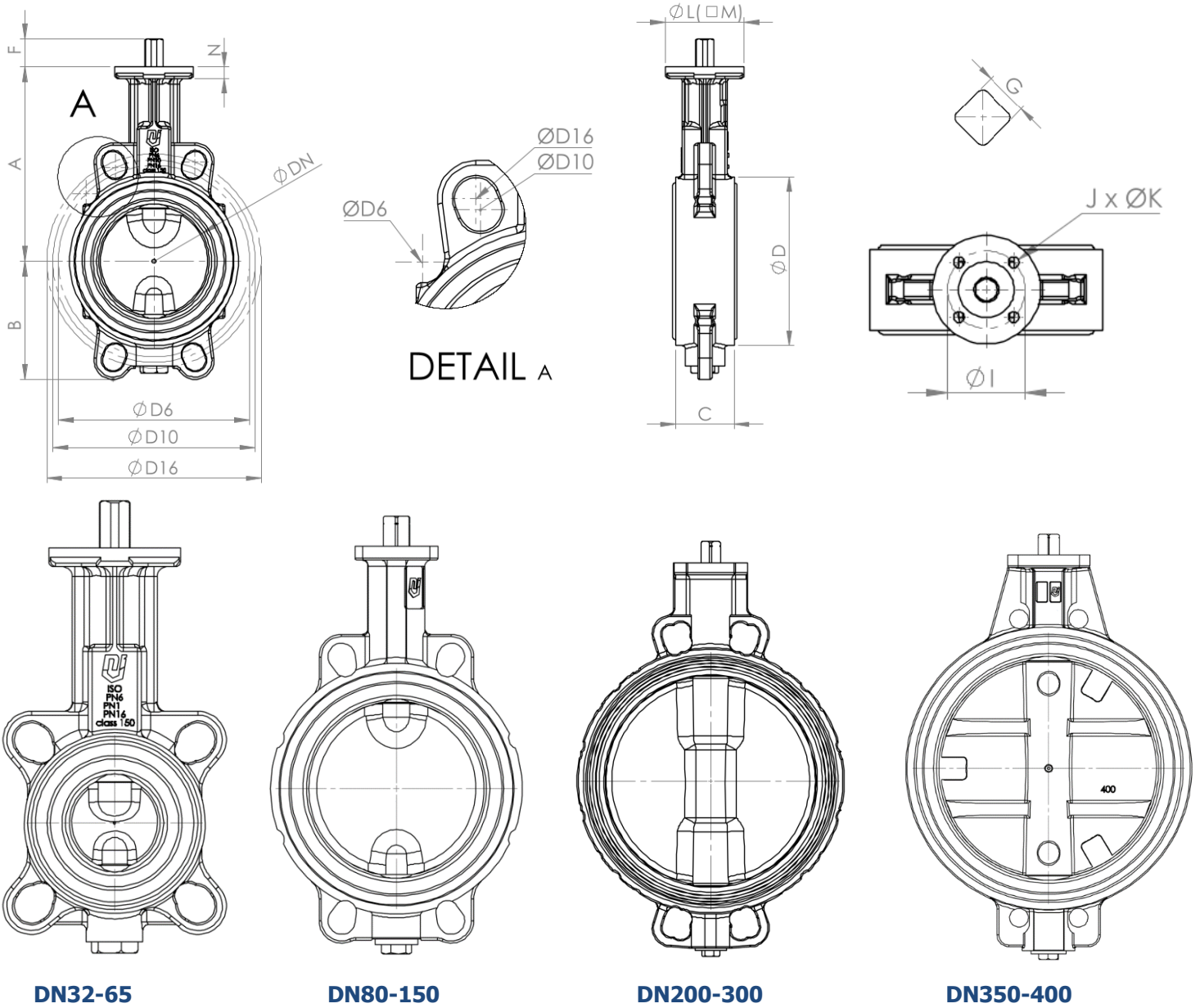
max. differential pressure:

16 bar

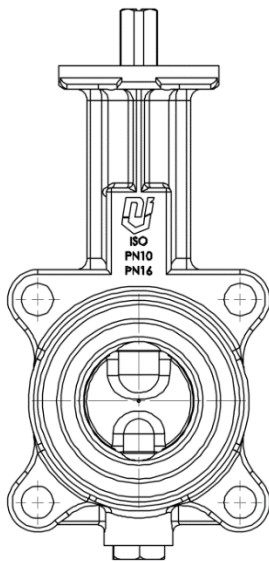
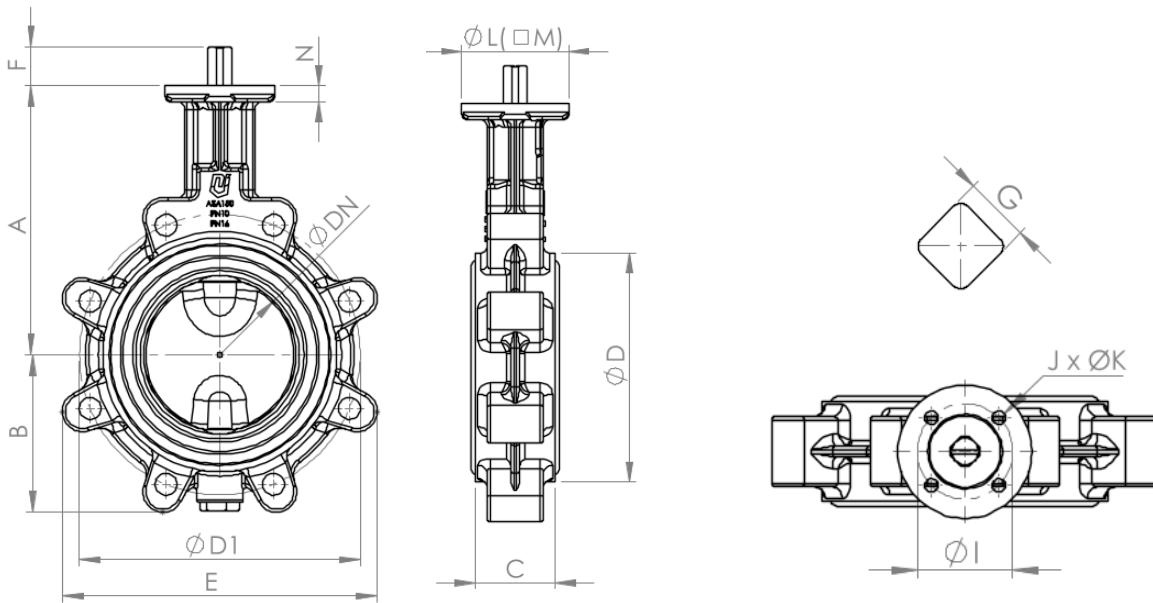
Options (on request):

Other dimensions, sealings, body- and discmaterials, vacuum applications, ATEX, body-coating as C4 and other, disc-coating, stem extensions

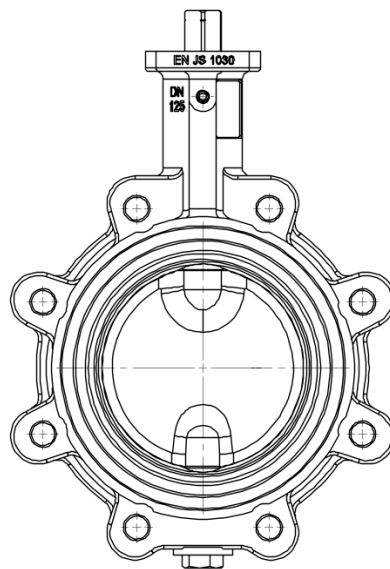
type AK01 butterfly valve wafer type:



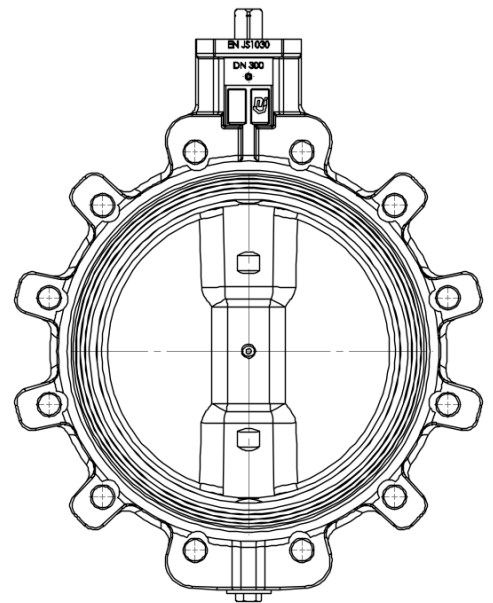
type AK02 butterfly valve lug type:



DN32-65



DN80-200



DN250-400

dimensions TYP AK01 / AK02:

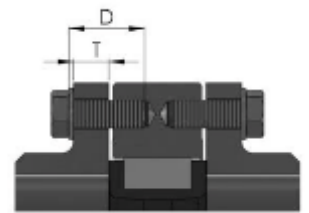
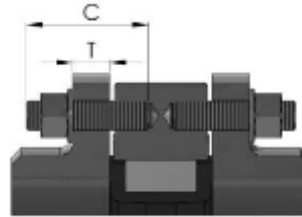
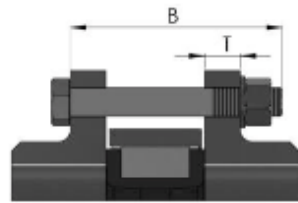
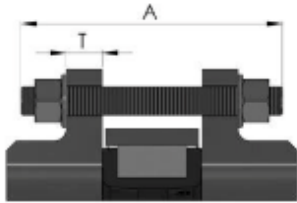
		DN	32	40	50	65	80	100	125	150	200	250	300	350	400
Valve dimensions	A	136	136	146	154	163	173	193	205	234	270	310	325	365	
	B	54	54	64	72	89	105	119	130	166	202	237	271	314	
	C	33	33	43	46	46	52	56	56	60	68	78	78	102	
	∅D	78	78	96	113	128	150	184	212	268	320	378	435	488	
	AK01	D _{PN6}	90	100	110	130	150	170	200	225	280	335	395	445*	495*
		D _{PN10}	100	110	125	145	160	180	210	240	295	350	400	460	515
		D _{PN16}	100	110	125	145	160	180	210	240	295	355	410	470	525
		D _{ANSI}	88,9	98,4	121	139,7	152,4	190	215,9	241	298,4	361,9	431,8	476,2*	539,8*
	AK02	D _{PN6}	90*	100*	110*	130*	150*	170*	200*	225*	280*	335*	395*	445*	495*
		D _{PN10}	100	110	125	145	160	180	210	240	295	350	400	460	515
		D _{PN16}	100	110	125	145	160	180	210	240	295*	355*	410*	470*	525*
		D _{ANSI}	88,9*	98,4*	121*	139,7*	152,4*	190*	215,9*	241*	298,4*	361,9*	431,8*	476,2*	539,8*
	E	110	110	115	129	174	204	234	255	319	396	465	509	590	
	Endshaft-dimensions	F	25	25	25	25	25	25	25	25	25	30	30	36	36
G		14	14	14	14	14	14	17	17	17	22	22	27	27	
flange-dimensions	I	50/70	50/70	50	50	50	50	70	70	70	102	102	125	140	
	J	4	4	4	4	4	4	4	4	4	4	4	4	4	
	K	7	7	7	7	7	7	9	9	9	11	11	14	18	
	L	--	--	70	70	70	70	--	--	--	--	--	--	--	
	M	70	70	--	--	--	--	70	70	70	105	105	130	140	
	N	8	8	8	8	8	8	12	12	14	17	17	17	21	
weight	AK01	wafer	1,9	1,9	2,7	3,2	3,7	4,7	6,7	8,4	13,3	22,0	29,3	46,4	69,8
	AK02	lug	2,3	2,3	3,0	3,7	4,8	6,1	9,2	10,2	15,3	28,4	41,2	62,0	96,3
ISO Flange		F05/07	F05/07	F05	F05	F05	F05	F07	F07	F07	F10	F10	F10	F12	F14
Max. pressure		PN16	PN16	PN16	PN16	PN16	PN16	PN16	PN16	PN16	PN16	PN16	PN16	PN16	PN16

*: light blue „on request“

**:
Type AK01 (wafer) has a connection for flanges acc. to PN6-PN10-PN16 and ANSI150 for dimensions DN32 up to DN300. Bigger sizes have a connection acc. to PN10-PN16.

***:
Type AK02 (lug-type) has a connection for flanges acc. to PN10-PN16 for dimensions DN32 up to DN150. Bigger sizes have a connection acc. to PN10.

quantity screws butterfly valve:



AK01 wafer

AK02 lug

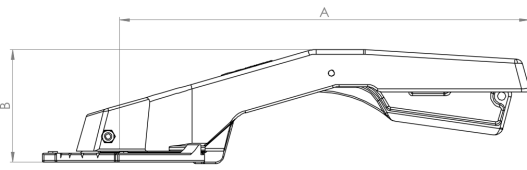
PNG	DN	32	40	50	65	80	100	125	150	200	250	300	350	400
	ØK	90	100	110	130	150	170	200	225	280	335	395	445	495
thread G	M12	M12	M12	M12	M16	M16	M16	M16	M16	M16	M20	M20	M20	
AK01	quantity (A, B)	4	4	4	4	4	4	8	8	8	12	12	12	16
	length A	100	100	110	110	120	130	140	140	150	160	170	170	200
	length B	80	80	90	100	100	110	120	120	130	140	150	150	180
AK02	quantity (C, D)	8	8	8	8	8	8	16	16	16	24	24	24	32
	length C	50	50	55	55	60	60	65	65	70	75	80	80	90
	length D	30	30	35	35	40	40	45	45	50	55	55	55	65
T	14	14	14	14	16	16	18	18	20	22	22	22	22	22

PN10	DN	32	40	50	65	80	100	125	150	200	250	300	350	400
	ØK	100	110	125	145	160	180	210	240	295	350	400	460	515
thread G	M16	M16	M16	M16	M16	M16	M16	M16	M20	M20	M20	M20	M20	M24
AK01	quantity (A, B)	4	4	4	4	8	8	8	8	8	12	12	16	16
	length A	115	115	125	130	130	140	150	150	160	170	180	190	220
	length B	95	95	105	110	110	120	120	130	140	150	160	160	190
AK02	quantity (C, D)	8	8	8	8	16	16	16	16	16	24	24	32	32
	length C	55	55	60	60	60	65	70	75	80	85	85	85	100
	length D	35	35	40	40	40	45	50	50	55	60	60	65	75
T	18	18	18	18	20	20	22	22	24	26	26	26	26	26

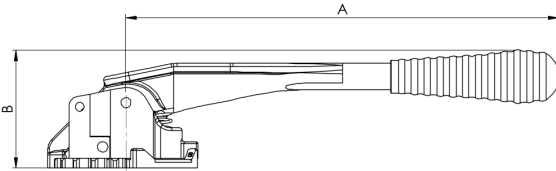
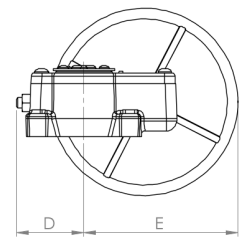
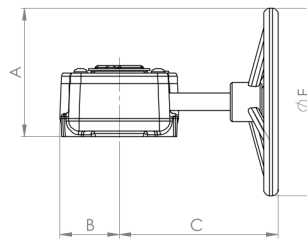
PN16	DN	32	40	50	65	80	100	125	150	200	250	300	350	400
	ØK	100	110	125	145	160	180	210	240	295	355	410	470	525
thread G	M16	M16	M16	M16	M16	M16	M16	M16	M20	M20	M24	M24	M24	M27
AK01	quantity (A, B)	4	4	4	4	8	8	8	8	12	12	12	16	16
	length A	110	110	120	130	130	140	150	150	160	180	200	200	230
	length B	90	90	100	110	110	120	120	130	140	150	170	170	200
AK02	quantity (C, D)	8	8	8	8	16	16	16	16	24	24	24	32	32
	length C	55	55	60	60	60	65	70	75	80	90	95	100	110
	length D	35	35	40	40	40	45	50	50	55	60	65	70	80
T	18	18	18	18	20	20	22	22	24	26	28	30	32	

ANSI	DN	32	40	50	65	80	100	125	150	200	250	300	350	400
	ØK	88,9	98,4	121	139,7	152,4	190	215,9	241	298,4	361,9	431,8	476,2	539,8
thread	1/2" - 13 UNC	1/2" - 13 UNC	5/8" - 11 UNC	5/8" - 11 UNC	5/8" - 11 UNC	5/8" - 11 UNC	3/4" - 10 UNC	3/4" - 10 UNC	3/4" - 10 UNC	7/8" - 9 UNC	7/8" - 9 UNC	1" - 8 UNC	1" - 8 UNC	
AK01	quantity (A, B)	4	4	4	4	4	8	8	8	8	12	12	12	16
	length A	100	100	130	140	140	150	160	160	175	190	210	220	240
	length B	90	90	110	115	120	125	130	140	150	165	180	190	210
AK02	quantity (C, D)	8	8	8	8	8	16	16	16	16	24	24	24	32
	length C	45	45	60	65	65	70	75	75	80	90	95	110	120
	length D	30	30	40	45	45	50	50	50	55	65	70	75	90
T	16	18	20	22	24	24	24	25	28	30	32	35	37	

actuators:



Lever DN32 up to DN100 aluminium



Lever DN125 up to DN200 steel

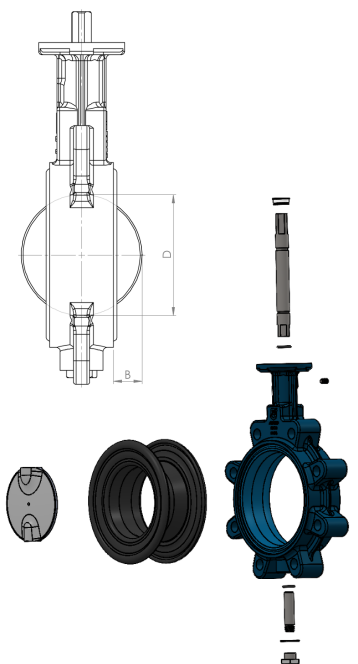
	DN	32	40	50	65	80	100	125	150	200	250	300	350 PN10	350 PN16	400 PN10	400 PN16
Lever	Lever type	HB01	HB01	HB01	HB01	HB01	HB01	HB02	HB02	HB02						
	A Lever	200	200	200	200	200	200	362	362	362	--	--	--	--	--	--
	B Lever	76	76	76	76	76	76	75	75	75	--	--	--	--	--	--
	weight Lever	0,35	0,35	0,35	0,35	0,35	0,35	1,40	1,40	1,40	--	--	--	--	--	--
Worm-gear	A gear	70	70	70	70	70	70	127,5	127,5	127,5	134	134	183	238	292	341
	B gear	35	35	35	35	35	35	46	46	46	57	57	57	67	78	78
	C gear	91	91	91	91	91	91	139	139	139	156	156	210	255	350	350
	D gear	38	38	38	38	38	38	59	59	59	60	60	95	131	169	219
	E gear	84	84	84	84	84	84	141	141	141	155	155	205	267	331	381
	F gear	100	100	100	100	100	100	200	200	200	200	200	300	400	500	600
	weight gear	1,2	1,2	1,2	1,2	1,2	1,2	2,2	2,2	2,2	4,2	4,2	4,5	6,5	11,0	12,0
stem	14x14	14x14	14x14	14x14	14x14	14x14	17x17	17x17	17x17	17x17	22x22	22x22	27x27	27x27	27x27	27x27

disc projection to length:

DN	32	40	50	65	80	100	125	150	200	250	300	350	400
B	--	5	5	11	18	25	36	48	71	91	112	132	147
D	--	26	29	49	68	88	115	142	194	243	292	333	383

part-list and material:

Pos.	description	AK01 / AK02
1	body	Ductile iron 0.7040 (GGG40) epoxy coated
2	disc	Stainless steel 1.4408 (CF8M)
3	seat	EPDM, NBR, FPM, other on request
4	stem	Stainless steel 1.4021 (AISI 420)
5	pivot	Stainless steel 1.4021 (AISI 420)
6	bushing	Delrin (bis DN300), brass (ab DN350)
9	seal	Klingsil -4400
10	plug	Stainless steel A2
11	stem O-Ring	EPDM, NBR, optionally Viton
12	pivor O-Ring	EPDM, NBR, optionally Viton
13	Retaining bolt	Stainless steel A2



Torque values for liquid media*

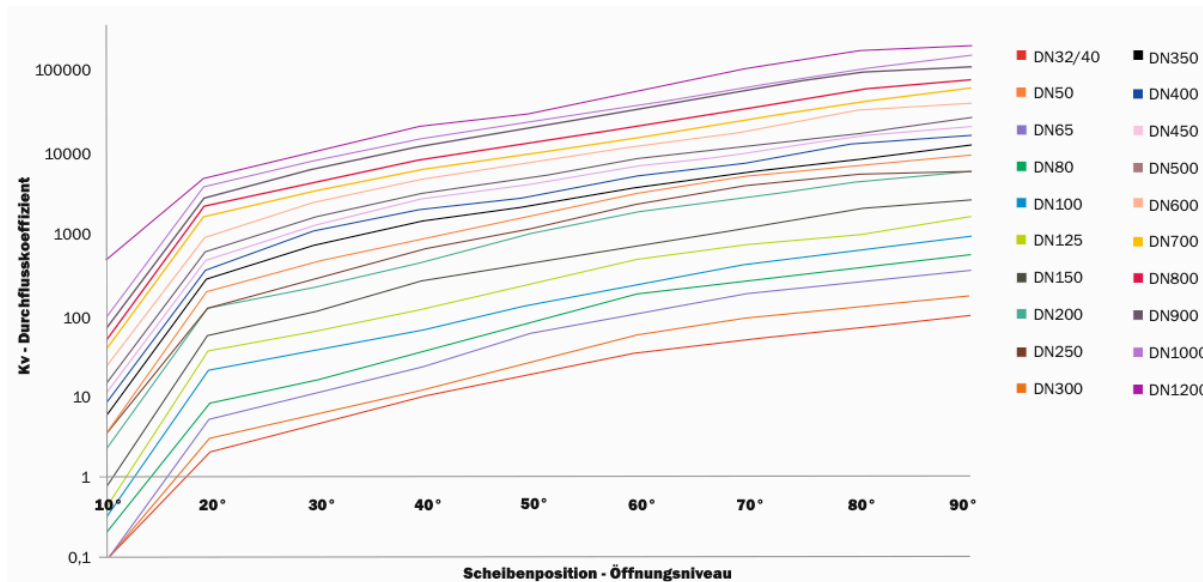
dimension	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300	DN350	DN400
Torque value Nm (pmax 6bar)	8	8	11	15	20	38	55	70	100	160	235	480	750
Torque value Nm (pmax 10bar)	9	9	12	17	25	46	70	80	125	200	290	530	1200
Torque value Nm (pmax 16bar)	10	10	12	20	30	55	85	100	150	290	380	580	1650

* Values for valves with EPDM collars and stainless steel discs. A safety factor of at least 1.2 is recommended. For NBR & FPM seats, gaseous media or media with abrasive particles, a safety factor of at least 1.4 should be considered.

Flow values (m3/h)

dimensions	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300	DN350	DN400
10°	0,1	0,1	0,1	0,1	0,2	0,3	0,4	0,7	2	3	3	5	7
20°	2	2	3	5	8	20	35	54	120	129	188	265	345
30°	4	4	6	10	15	35	60	105	210	274	424	685	1000
40°	9	9	11	21	33	60	110	248	410	590	820	1327	1825
50°	17	17	23	53	76	122	223	400	915	1037	1500	1990	2550
60°	30	30	50	90	160	220	430	640	1630	2000	2710	3214	4383
70°	45	45	81	160	238	362	626	987	2331	3210	4180	4690	6090
80°	61	61	110	210	340	520	797	1630	3446	4164	5433	6292	9779
90°	84,4	84,4	147	290	450	730	1260	1990	4396	4500	6800	8900	11500

flow chart:



weight AK01:

DN	32	40	50	65	80	100	125	150	200	250	300	350 PN10	350 PN16	400 PN10	400 PN16
vlave	1,9	1,9	2,7	3,2	3,7	4,7	6,7	8,4	13,3	22,0	29,3	46,4	46,4	69,8	69,8
lever	1,24	1,24	1,24	1,24	1,24	1,24	1,26	1,4	1,4	--	--	--	--	--	--
gear	1,2	1,2	1,2	1,2	1,2	1,2	2,2	2,2	2,2	4,2	4,2	4,5	6,5	11,0	12,0

weight AK02:

DN	32	40	50	65	80	100	125	150	200	250	300	350 PN10	350 PN16	400 PN10	400 PN16
vlave	2,3	2,3	3,0	3,7	4,8	6,1	9,2	10,2	15,3	28,4	41,2	62,0	62,0	96,3	96,3
lever	1,24	1,24	1,24	1,24	1,24	1,24	1,26	1,4	1,4	--	--	--	--	--	--
gear	1,2	1,2	1,2	1,2	1,2	1,2	2,2	2,2	2,2	4,2	4,2	4,5	6,5	11,0	12,0

Article number:

AK01:

type	pressure	seal	actuation	dimension
AK01 – wafer	1 – PN6-PN10-PN16-ANSI150	0 – EPDM DVGW water 1 – NBR DVGW gas 2 – FPM 6 – EPDM HT FDA	00 – lever** 01 – worm gear 06 – free shaft	06 – DN32 07 – DN40 08 – DN50 09 – DN65 10 – DN80 11 – DN100 12 – DN125 13 – DN150 14 – DN200 15 – DN250 16 – DN300
type	pressure	seal	actuation	dimension
AK01 – wafer	1 – PN10-PN16 2 – PN6*	0 – EPDM DVGW water 1 – NBR DVGW gas 2 – FPM 6 – EPDM HT FDA	01 – worm gear 06 – free shaft	17 – DN350 18 – DN400

AK02:

type	pressure	seal	actuation	dimension
AK02 – lug type	1 – PN10-PN16 2 – PN6*	0 – EPDM DVGW water 1 – NBR DVGW gas 2 – FPM 6 – EPDM HT FDA	00 – lever ** 01 – worm gear 06 – free shaft	06 – DN32 07 – DN40 08 – DN50 09 – DN65 10 – DN80 11 – DN100 12 – DN125 13 – DN150
type	pressure	seal	actuation	dimension
AK02 – lug type	0 – PN10 1 – PN16* 2 – PN6*	0 – EPDM DVGW water 1 – NBR DVGW gas 2 – FPM 6 – EPDM HT FDA	00 – lever ** 01 – worm gear 06 – free shaft	14 – DN200 15 – DN250 16 – DN300 17 – DN350 18 – DN400

example Nr. AK02110115:

AK02	1	1	01	15
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Article-no. AK02110115
 Butterfly valve lug type
 Pressure norm: PN16
 seal: NBR
 actuation: worm gear
 dimension: DN250

* connection acc. to PN6 on request, for type AK02 PN16 for dimension from DN200 on request
 ** only up to DN200 possible

Image similar, subject change without notice.