

## Butterfly valve type 56/75



material of body	PVC-U	PP	PVDF
sealing material	• EPDM	• CSM • NBR	• FPM • FPM-F
working temperature <sup>1)</sup>	0 °C to 50 °C <sup>2)</sup>	-20 °C to 80 °C <sup>2)</sup>	-20 °C to 120 °C <sup>2)</sup>
nominal size	DN 40 to DN 600 <sup>1)</sup>		
connection with pipe	sandwich valve acc. to DIN 2501 - PN 10 <sup>3)</sup>		
length	company standard		
actuator	lockable lever with 19 positions (DN 40 to DN 150) or infinitely variable gear, optionally pneumatic or electric actuator		
accessories	limit switches		

<sup>1)</sup> PVC-U to DN 350

<sup>3)</sup> also available acc. to ANSI

<sup>2)</sup> working temperatures of sealing materials:

EPDM: -20 to 90 °C

CSM: -20 to 80 °C

NBR: -20 to 100 °C

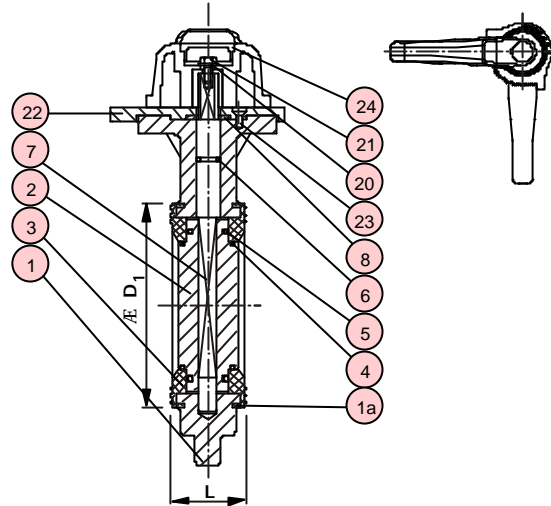
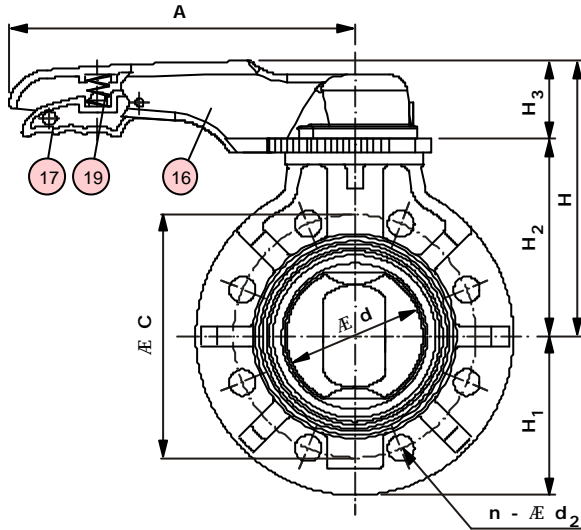
FPM: -20 to 120 °C

### example for an advertised bidding:

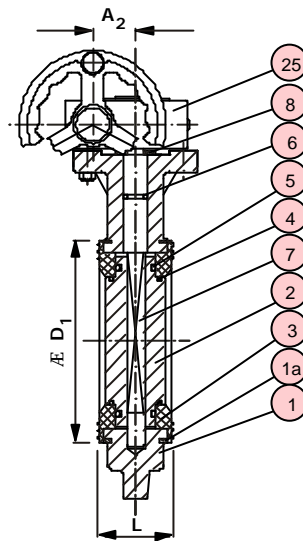
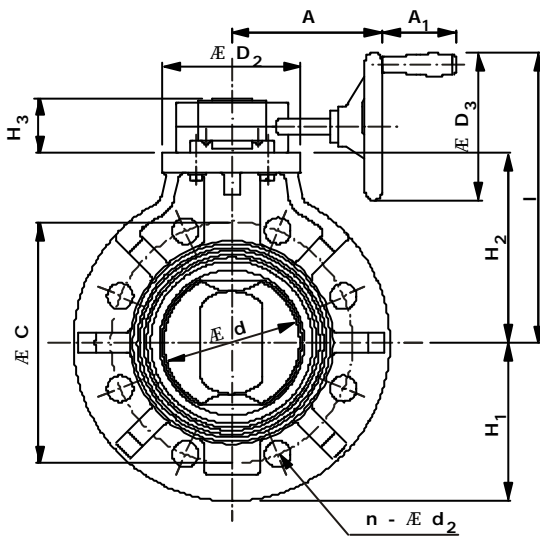
Butterfly valve type 56 DN 150, PN 10, PVC-U/EPDM, sandwich valve with connection acc. to DIN 2501-PN 10 with infinitely variable gear and optical position indicator

# Butterfly valve type 56/75

## DN 40 to DN 150



## DN 40 to DN 600

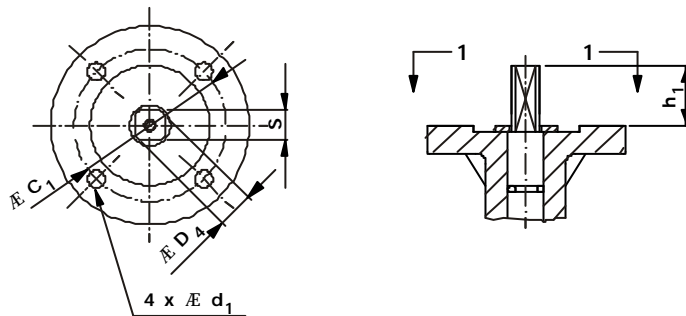


Top flange dimensions in [mm] for fixation and actuator mounting (DIN/ISO 5211)

DN	Typ	C <sub>1</sub>	h <sub>1</sub>	d <sub>1</sub>	D <sub>4</sub>	S
40	F07	70	30	9	14	11
50	F07	70	30	9	14	11
65	F07	70	30	9	14	11
80	F07	70	30	9	17	14
100	F07	70	30	9	17	14
125	F10	102	35	11	21	17
150	F10	102	35	11	21	17
200	F10	102	35	11	24	19
250	F10	102	35	11	27	22
300	F14	140	45	18	34	27
350	F14	140	45	18	34	27
400	F14	140	45	18	34	27

top flange

profile 1 - 1:



# Butterfly valve type 56/75

no.	name	pcs.	material
1	body	1	PVC-U, PP, PVDF
1a	reinforcing ring	2	W.-Nr. 1.0040 <sup>1)</sup>
2	disc	1	PVC-U, PP, PVDF
3	seat <sup>*)</sup>	1	EPDM, CSM, NBR, FPM, FPM-F
4	O-ring (A) <sup>2)</sup>	2	EPDM, CSM, NBR, FPM, FPM-F
5	O-ring (B)	2	EPDM, CSM, NBR, FPM, FPM-F
6	O-ring (C)	2	EPDM, CSM, NBR, FPM, FPM-F
7	stem	1	W.-Nr. 1.4024
8	stem holder	1	W.-Nr. 1.4301

\*) wearing parts    <sup>1)</sup> only with PP, epoxy coated

no.	name	pcs.	material
16	handle	1	PP <sup>3)</sup>
17	handle lever	1	PPG
19	spring	1	W.-Nr. 1.4301
20	washer	1	W.-Nr. 1.4301
21	stud bolt (B)	1	W.-Nr. 1.4301
22	locking plate	1	PPG
23	screw (B)	4	W.-Nr. 1.4301
24	cap (A)	1	PP
25	gear box	1	aluminium alloy, epoxy coated

<sup>2)</sup> DN 50 to DN 400    <sup>3)</sup> with inserted stainless steel stem connector

## Dimensions and weights

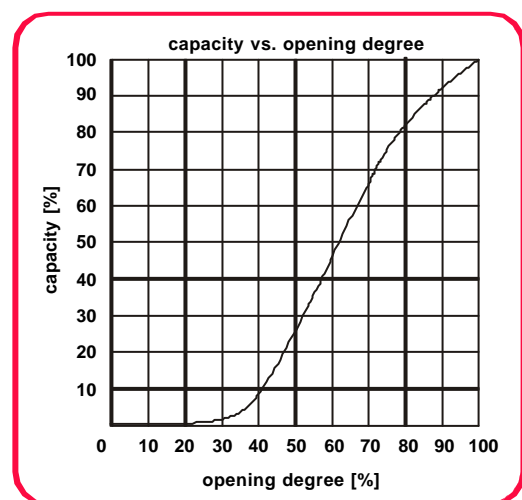
dimensions in mm																						
DN	d	E	C	D <sub>1</sub>	D <sub>2</sub>	L	H <sub>1</sub>	n x d <sub>2</sub>	lever type				gear type							weight in kg/pc. <sup>1)</sup>		
									A	H	H <sub>2</sub>	H <sub>3</sub>	A	A <sub>1</sub>	A <sub>2</sub>	I	H	H <sub>2</sub>	H <sub>3</sub>	D <sub>3</sub>	PVC-U	PP
40	47	110	82	100	39	75	4 x 18	220	156	93	56	167	80	47	202	122	93	60	160	1,2 / 3,3	1,0 / 3,1	1,4 / 3,4
50	57	125	87	100	42	83	4 x 18	220	162	99	56	167	80	47	208	128	99	60	160	1,4 / 3,4	1,1 / 3,3	1,6 / 3,6
65	71	145	112	100	46	93	4 x 18	220	173	110	56	167	80	47	219	139	110	60	160	1,6 / 3,7	1,3 / 3,6	1,8 / 4,0
80	81	160	123	100	46	100	8 x 18	250	180	116	56	167	80	47	225	145	116	60	160	1,8 / 3,8	1,4 / 3,7	2,1 / 4,2
100	105	180	147	100	56	115	8 x 18	250	198	134	56	167	80	47	243	163	134	60	160	2,5 / 4,5	2,0 / 4,4	3,0 / 5,2
125	131	210	180	165	66	127	8 x 18	320	241	159	69	167	80	47	268	188	159	60	160	4,9 / 5,7	4,0 / 5,3	5,5 / 7,0
150	154	240	210	165	71	143	8 x 22	320	254	172	69	167	80	47	281	201	172	60	160	6,0 / 7,2	5,5 / 7,2	7,5 / 8,6
200	204	295	257	200	87	170	8 x 22	400	286	206	69	167	80	47	315	235	206	60	160	9,0 / 11,0	8,5 / 10,0	11,0 / 12,7
250	256	350	316	200	110	203	12 x 22	-	-	-	-	199	95	60	366	266	237	60	200	- / 18,5	- / 16,5	- / 21,5
300	320	400	370	235	129	242	12 x 22	-	-	-	-	212	95	76	445	320	291	69	250	- / 26,5	- / 24,0	- / 32,5
350	365	460	420	235	129	260	16 x 22	-	-	-	-	212	95	76	453	328	299	69	250	- / 30,0	- / 30,0	- / 38,5
400	406	515	470	280	169	300	16 x 26	-	-	-	-	212	95	76	498	373	344	69	250	- / -	- / 36,0	- / 46,0
450	452	565	525	340	179	315	20 x 26	-	-	-	-	319	110	85	650	445	370	158	410	- / -	- / 63,5	- / 103,0
500	502	620	575	340	190	350	20 x 26	-	-	-	-	319	110	85	680	475	400	158	410	- / -	- / 77,0	- / 124,0
600	603	725	686	340	209	424	20 x 30	-	-	-	-	319	110	85	745	540	465	158	410	- / -	- / 114,0	- / 157,0

<sup>1)</sup> lever type / gear type

## k<sub>v</sub> value<sup>2)</sup> in m<sup>3</sup>/h

DN	opening degree			
	25 %	50 %	75 %	100 %
40	1,2	17	46	61
50	1,6	22	59	79
65	2,4	33	90	120
80	3,8	52	141	188
100	6,5	89	244	325
125	12	172	468	624
150	19	259	705	940
200	43	588	1603	2137
250	62	846	2308	3077
300	88	1213	3308	4410
350	110	1514	4128	5504
400	143	1960	5346	7128
450	186	2560	6981	9308
500	240	3305	9013	12017
600	316	4348	11859	15812

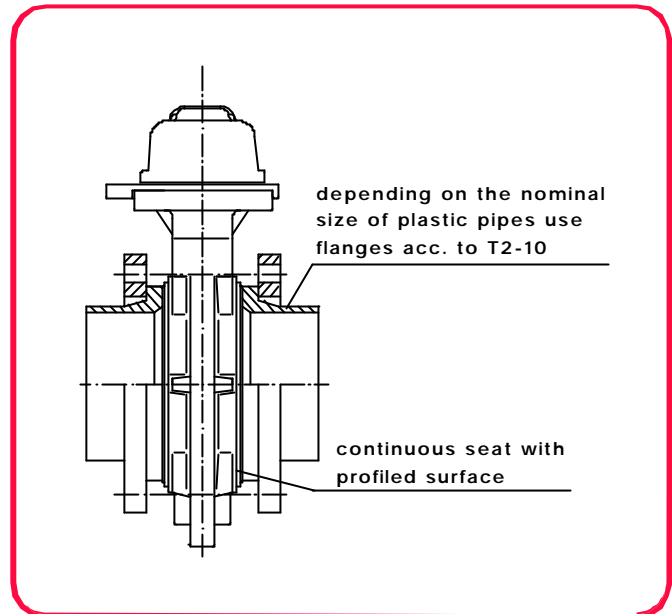
<sup>2)</sup> definition of k<sub>v</sub>-value look T2/technical information



# Butterfly valve type 56/75

## Tightening torque in Nm for flange bolts

DN	Torque
40	20
50, 65	22,5
80, 100	30
125, 150	40
200, 250	55
300, 350	60
400, 450	80
500, 600	100



## Maximum working pressure<sup>1)</sup> in bar vs. temperature

body material	temp. in °C	DN							
		40 - 150	200 - 250	300	350	400	450	500, 600	
PVC-U	0 to 50	10	10	7	7	-	-	-	
PP	-20 to 60	10	10	7	7	6	5	3,5	
	80	7	6	4	3	3	3	2	
PVDF	-20 to 60	10	10	7	7	6	5	3,5	
	80	7	5	3	3	2	2	1,5	
	100 to 120	5	4	2	1	1	1	1	

<sup>1)</sup> definition of working pressure look T2 /technical information

## Operating torque<sup>2)</sup> in Nm

DN														
40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
9	12	16	24	35	52	69	240	460	520	860	910	<sup>3)</sup>	<sup>3)</sup>	<sup>3)</sup>

<sup>2)</sup> referring to maximum working pressure

<sup>3)</sup> on request

## Hydrostatic bursting pressure<sup>4)</sup> in bar

DN														
40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
147	147	147	118	118	98	78	74	69	54	54	44	29	25	25

<sup>4)</sup> referring to maximum working temperature

DN 400 to DN 600: values for PP, otherwise PVC-U

## Vacuum resistance<sup>5)</sup> in bar

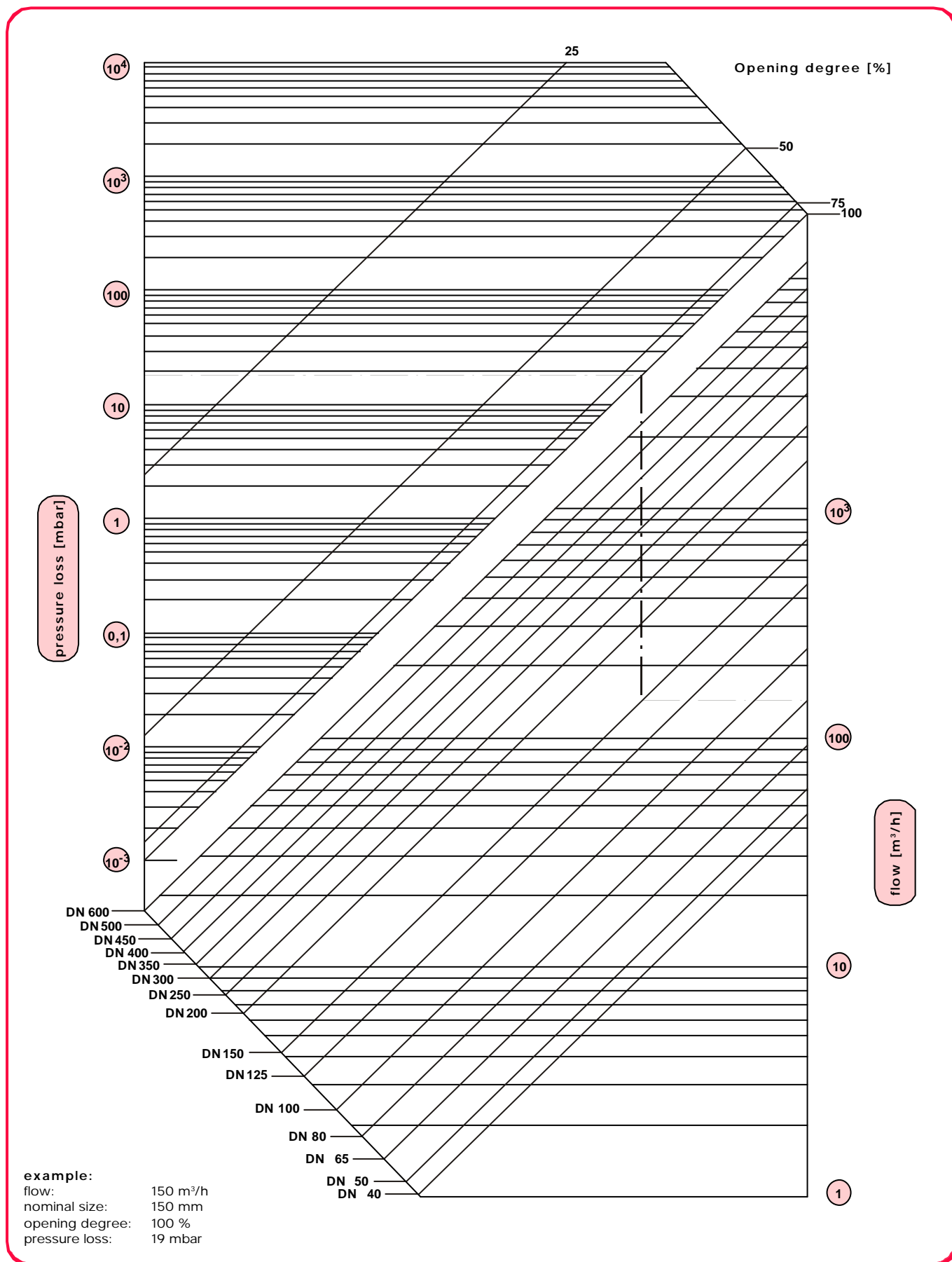
DN														
40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
1,0	1,0	1,0	1,0	1,0	1,0	0,91	0,91	0,91	0,85	0,85	0,85	0,78	0,78	0,78

<sup>5)</sup> referring to maximum working temperature

DN 400 to DN 600: values for PP, otherwise PVC-U

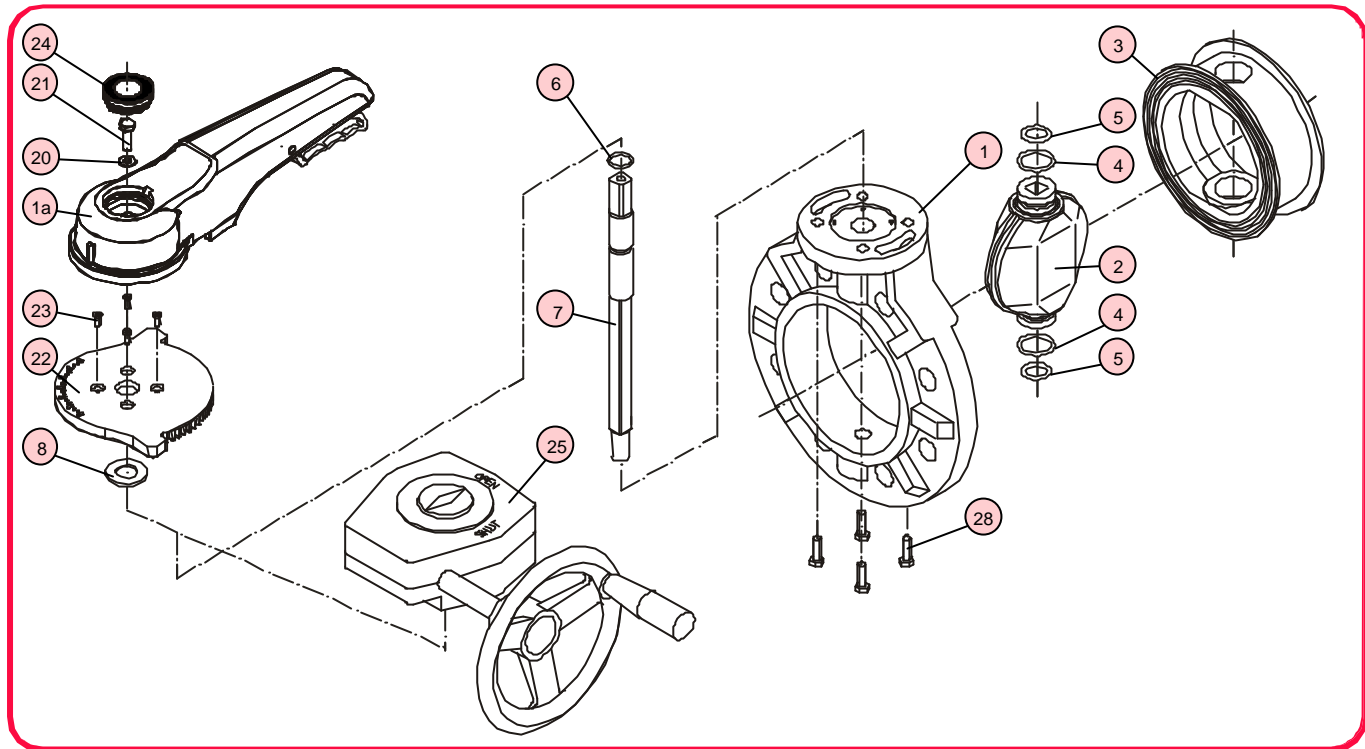
# Butterfly valve type 56/75

## Pressure loss diagram



# Butterfly valve type 56/75

## Maintenance and installation



### Handle or gear version

#### Disassembly of the valve

**Caution:** Never dismantle the valve when the pipe is under pressure.

- Drain fluid completely from the pipeline.

**Handle version:**

- Leave the valve slightly opened.
- Loosen the connecting bolts and nuts.
- Remove the valve from the pipeline.
- To take off handle 16, firstly take off cap 24 by using a screw driver and release bolt 21 by using a socket wrench, then pull up the handle 16 while holding handle lever 17.

**Gear version:**

- Remove bolts 28 and remove gear box 25.

**Handle version or gear version:**

- Pull the stem 7 out of the body.
- Push disc 2 together with seat 3 out of the body 1. Therefore use a lever to pull the seat and the disc through the body.
- Turn the disc in full opened position. Press the seat slightly and remove disc 2 from seat 3.
- Remove O-rings 4 and 5 with a suitable tool.

#### Assembly of the valve

- The assembly is to be performed in reverse order to the disassembly.
- Before the assembly all parts have to be checked for damages.

- All parts have to be clean.
- If necessary, a silicone-free lubricant can be applied to the O-rings.
- Set the O-rings in the disc's notches and set the disc in the seat.
- Setting the seat together with the disc in the body, the disc must be in half opened position.
- The stem is to be mounted in a way that its top mark complies with the disc position.
- After the assembly a pressure test according to DIN 3230 has to be performed.

#### Installation instructions

- Because of the full cover seat additional flange gaskets are not necessary.
- Install the valve without invoking material stress, therefore be aware of flange face parallelism, axial misalignment and valve length.
- For use with media containing solids or sediments the valve should be installed with the stem in horizontal position and the disc opening in flow direction.
- Depending on the size chamfered stub flanges according to T2-10 have to be used.