Description

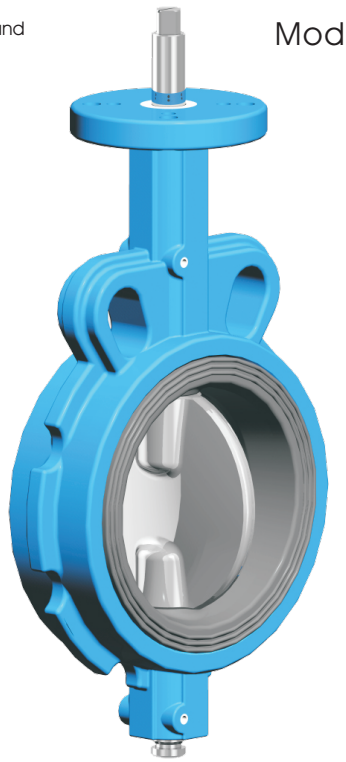
- 1022 series Wafer type butterfly valves,available in wafer version from DN40 to DN600, are designed and manufactured to be used in most applications in all industrial fields.
- Valve neck as per ISO 5211 for easy connections with all different types of actuators

- Face to face as per EN 558-1 series 20
- Tightness as per EN12266-1 rate A
- Integral sealing (with liner vulcanized on hard ring) which avoids any contact between fluid and valve body.
- Sealing design allowing perfect adherence to the valve body and perfect tightness to the flanges, without additional parts.Clamping between flanges does not influence the torque of the valve.
- Improved disc shape which allows better tightness,reduced torque and low wear of the liner
- All components properly treated against corrosion

Working temperature: EPDM from -40 °C to 135 °C
NBR from -23 °C to +82 °C
VITON from -10 °C to +190 °C
PTFE from -25 °C to +150 °C

For other applications, please contact our technical department.

Model : 1022



CE

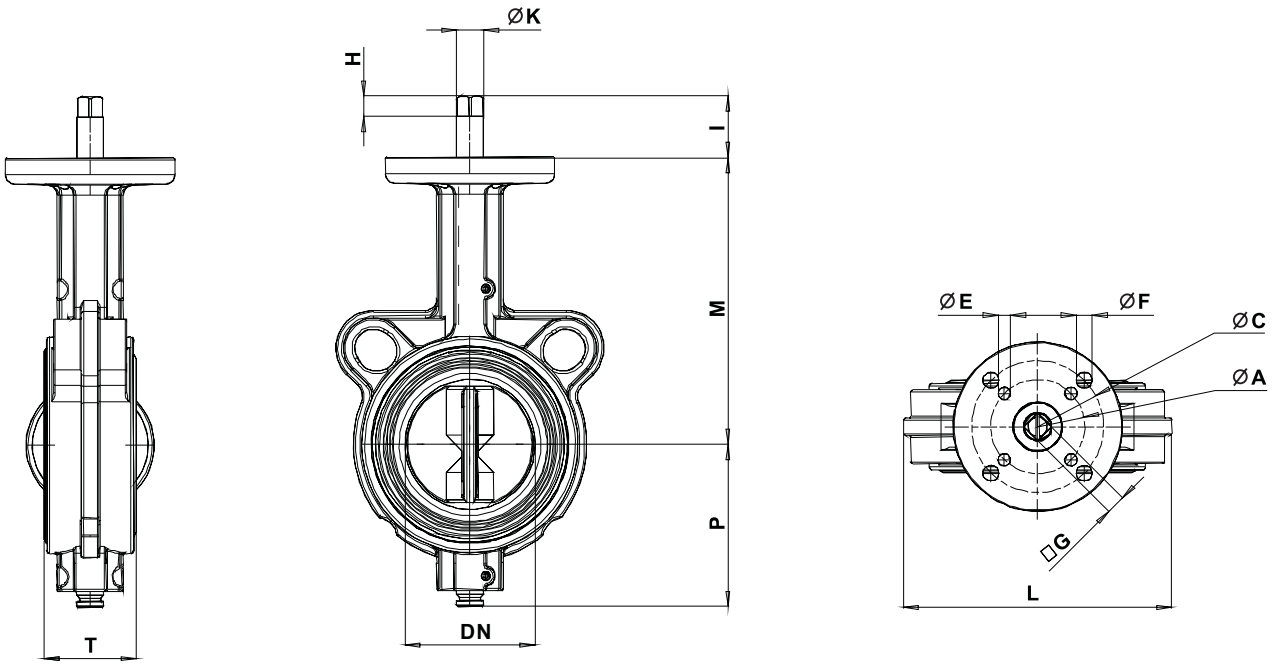
Dimensions

Item	Description	Material	Qty.	
1	Plug	Carbon Steel(Zn-coated)	1	
2	Gasket	Fibre	1	
3	O-Ring	NBR,VITON,EPDM	3	
4	Pin	Stainless Steel	1	
5	Bearing	Carbon Steel	2	
6	Botteom Stem	Stainless Steel	1	
7	Top Stem	Stainless Steel	1	
8	Seat	NBR,EPDM,VITON,PTFE	1	Other on request
9	Disc	Al.-Brz,S.S,D.I.(Ni-plated)	1	
10	Body	D.I.,Stainless Steel,Carbon Steel	1	

Applications

- Water distribution and supply with the main US approvals,water treatment,most of the fluids of gerneral service.
- Industrial applications such as:
  Metallurgical,mining,paper-making,shipbuilding,nuclear,environmental and mechanical,food industry
- For special applications,especially for particularly difficult media,contact our technical back office team.

Description



Size	øA	øC	øE	øF	□G	H	øK	I	L	M	P	T				
DN40	50	70	6,5	8,5	9	9	12	31	128,5	139,7	73	43				
DN50	50	70	6,5	8,5	9	9	12	31	128,5	139,7	73	43				
DN65	50	70	6,5	8,5	11	11	14,4	33	143	152,4	80	46				
DN80	50	70	6,5	8,5	11	11	14,4	33	153	158,8	86	46				
DN100	50	70	6,5	8,5	11	11	14,4	33	176,5	177,8	103,5	52				
DN125	70	--	8,5	--	14	14	19,1	36	198,5	190,5	118	56				
DN150	70	--	8,5	--	14	14	19,1	36	222	203,2	132	56				
DN200	70	--	8,5	--	17	17	22,3	39	282	238,3	162,5	60				
DN250	102	125	11	13	22	22	28,3	55	345	268,3	194,5	68				
DN300	102	125	11	13	22	22	28,3	55	417	306,4	226,5	78				
DN350	165	--	21	--	22	22	28,3	55	446	352	294	78				
DN400	165	--	21	--	27	27	36,4	60	508	388	322	102				
DN450	165	--	21	--	27	27	36,4	59,45	543	412	346	114				
DN500	165	--	21	--	36	36	48,2	70,12	600	441	384	127				
DN600	165	--	21	--	36	36	48,2	70,31	718	502	459	154				

Note: Bigger size is availably, please contact our technical department for more information.

Break away torques in Nm

Size	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300	DN350	DN400	DN450	DN500	DN600
PN 10bar	15	15	17	19	27	36	54	109	145	218	340	510	680	1020	1300
PN 16bar	18	18	25	27	35	52	72	142	170	250					

Torque can vary depending on temperature and type of fluid; a safety factor of 1.4 must be applied.Torque can drop on high frequency of operations.

Description

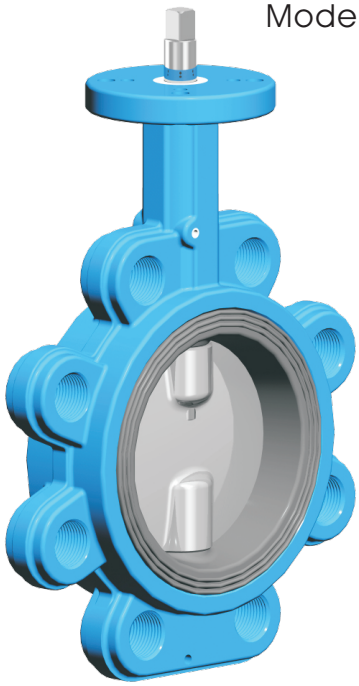
- 1023 series Lug type butterfly valves,available in wafer version from DN40 to DN300, are designed and manufactured to be used in most applications in all industrial fields.
- Valve neck as per ISO 5211 for easy connections with all different types of actuators

- Face to face as per EN 558-1 series 20
- Tightness as per EN12266-1 rate A
- Integral sealing (with liner vulcanized on hard ring) which avoids any contact between fluid and valve body.
- Sealing design allowing perfect adherence to the valve body and perfect tightness to the flanges, without additional parts.Clamping between flanges does not influence the torque of the valve.
- Improved disc shape which allows better tightness,reduced torque and low wear of the liner
- All components properly treated against corrosion

Working temperature: EPDM from -40 °C to 135 °C
NBR from -23 °C to +82 °C
VITON from -10 °C to +190 °C
PTFE from -25 °C to +150 °C

For other applications, please contact our technical department.

Model : 1023



CE

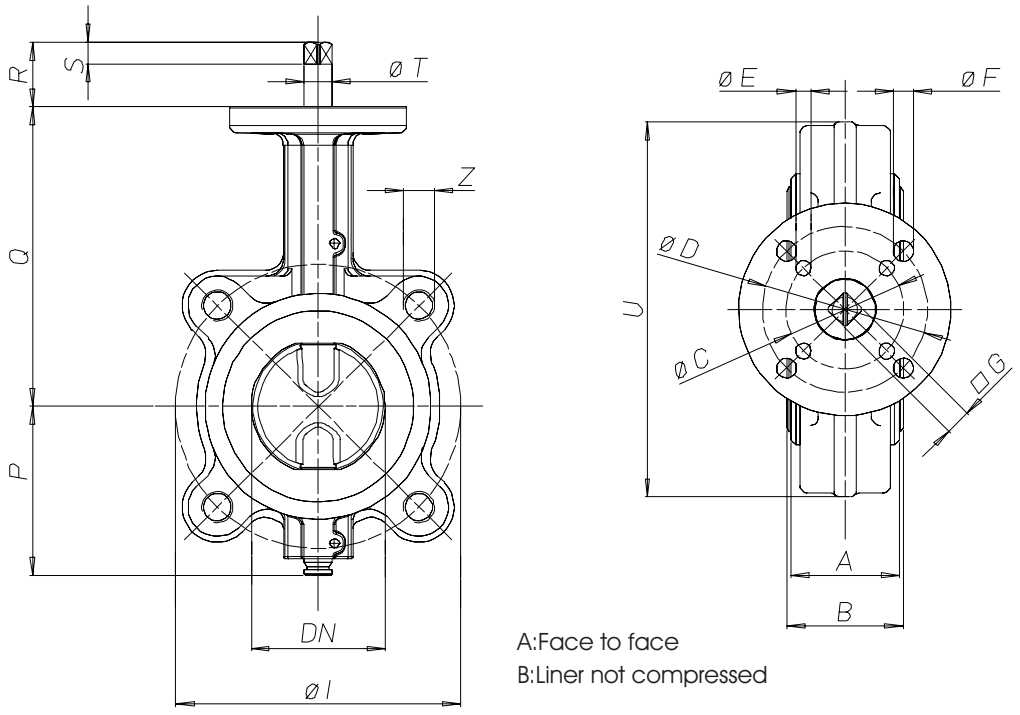
Material list

Item	Description	Material	Qty.	
1	Plug	Carbon Steel(Zn-coated)	1	
2	Gasket	Fibre	1	
3	O-Ring	NBR,VITON,EPDM	3	
4	Pin	Stainless Steel	1	
5	Bearing	Carbon Steel	2	
6	Botteom Stem	Stainless Steel	1	
7	Top Stem	Stainless Steel	1	
8	Seat	NBR,EPDM,VITON,PTFE	1	Other on request
9	Disc	Al.-Brz,S.S,D.I.(Ni-plated)	1	
10	Body	D.I.,Stainless Steel,Carbon Steel	1	

Applications

- Water distribution and supply with the main US approvals,water treatment,most of the fluids of gerneral service.
- Industrial applications such as:
  Metallurgical,mining,paper-making,shipbuilding,nuclear,environmental and mechanical,food industry
- For special applications,especially for particularly difficult media,contact our technical back office team.

Description



A:Face to face
B:Liner not compressed

Size	A	B	C	D	E	F	G	I	P	Q	R	S	T	U	Z				Holes
DN40	33	36	50	70	6.5	8.5	9	110	70	125	31	9	14.2	118	M16				4
DN50	43	46	50	70	6.5	8.5	9	125	80	140	31	9	14.2	125	M16				4
DN65	46	49	50	70	6.5	8.5	11	145	86	152	33	11	14.2	139	M16				4
DN80	46	49	50	70	6.5	8.5	11	160	95.5	159	33	11	14.2	184	M16				8
DN100	52	56	50	70	6.5	8.5	11	180	108	178	33	11	14.2	204	M16				8
DN125	56	59	70	-	8.5	-	14	210	124.5	190.5	36	14	19	230	M16				8
DN150	56	59	70	-	8.5	-	14	240	137	203	36	14	19	266	M20				8
DN200(PN16)	60	64	70	-	8.5	-	17	295	166	238	39	17	22.2	329	M20				12
Dn250(PN16)	68	72	102	125	11	13	22	355	199	268	55	22	28.5	395	M24				12
Dn300(PN16)	78	81.5	102	125	11	13	22	410	234	306	55	22	28.5	448	M24				12
Dn200(PN10)	60	64	70	-	8.5	-	17	295	166	238	39	17	22.2	318	M20				8
Dn250(PN10)	68	72	102	125	11	13	17	350	199	268	50	17	28.5	395	M20				12
Dn300(PN10)	78	81.5	102	125	11	13	22	400	234	306	55	22	28.5	448	M20				12

Note: Bigger size is availably, please contact our technical department for more information.

Break away torques in Nm

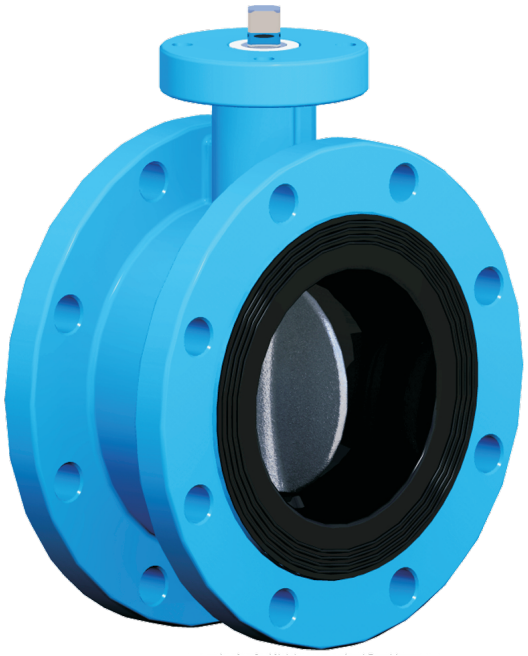
Size	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300	DN350	DN400	DN450	DN500	DN600
PN 10bar	15	15	17	19	27	36	54	109	145	218	340	510	680	1020	1300
PN 16bar	18	18	25	27	35	52	72	142	170	250					

Torque can vary depending on temperature and type of fluid; a safety factor of 1.4 must be applied.Torque can drop on high frequency of operations.

Description

Model : 1030

- 1030 series Flange type butterfly valves,available in wafer version from DN50 to DN1200, are designed and manufactured to be used in most applications in all industrial fields.
- Valve neck as per ISO 5211 for easy connections with all different types of actuators



- Face to face as per EN 558-1 series 20
- Tightness as per EN12266-1 rate A
- Integral sealing (with liner vulcanized on hard ring) which avoids any contact between fluid and valve body.
- Sealing design allowing perfect adherence to the valve body and perfect tightness to the flanges, without additional parts.Clamping between flanges does not influence the torque of the valve.
- Improved disc shape which allows better tightness,reduced torque and low wear of the liner
- All components properly treated against corrosion

Working temperature: EPDM from -40 °C to 135 °C
NBR from -23 °C to +82 °C
VITON from -10 °C to +190 °C
PTFE from -25 °C to +150 °C

For other applications, please contact our technical department.

Size: 2" ~ 48"
ANSI B16.5 CL150
DIN PN1.0
DIN PN1.6

CE

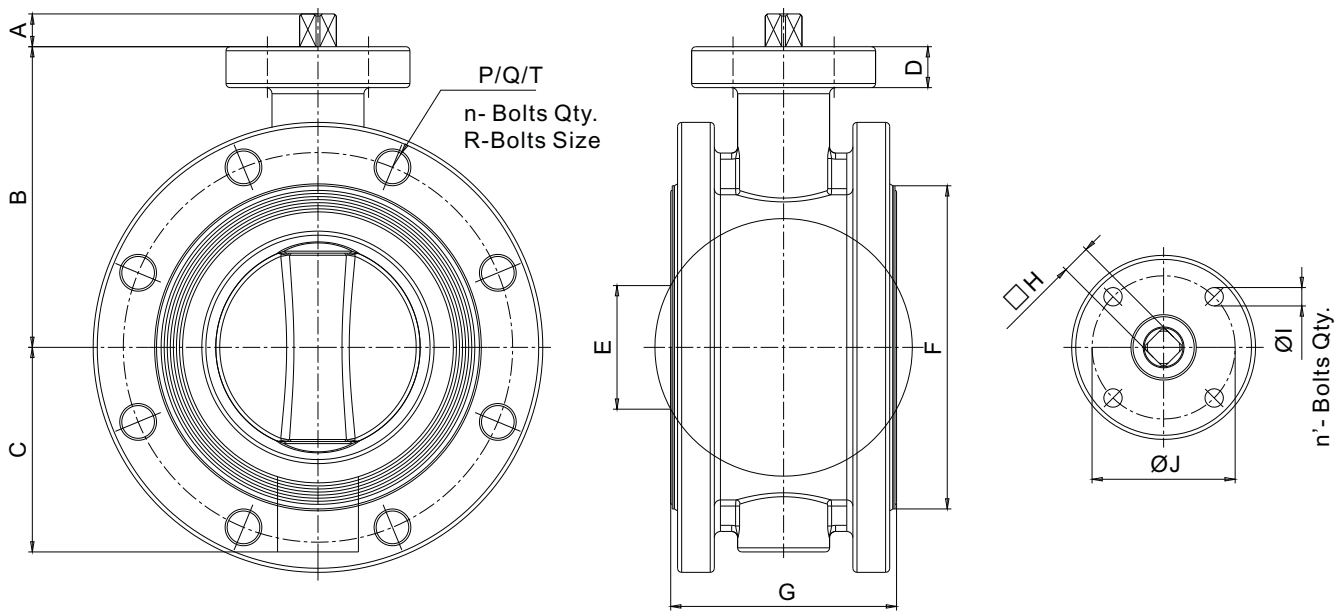
Material list

Item	Description	Material	Qty.	
1	Plug	Cast Steel	1	
2	O-Ring	NBR,VITON,EPDM	2	
3	Pin	Stainless Steel	1	
4	Bearing	AL-BRZ, Carbon Steel	2	
5	Botteom Stem	SS420,SS431,SS316	1	Other on request
6	Top Stem	SS420,SS431,SS316	1	Other on request
7	Seat	NBR,EPDM,VITON,SILICONE	1	Other on request
8	Disc	D.I.-NI-PLATED,AL-BRZ,316,304	1	Other on request
9	Body	DUCTILE IRON, CAST STEEL	1	

Applications

- Water distribution and supply with the main US approvals,water treatment,most of the fluids of gerneral service.
- Industrial applications such as:
  Metallurgical,mining,paper-making,shipbuilding,nuclear,environmental and mechanical,food industry
- For special applications,especially for particularly difficult media,contact our technical back office team.

Description



Size	A	B	C	D	E	F	G	H	I	J	P	R	n'	n					
DN50	13	118	67	12	-	102	108	11	9	70	120.5	5/8"	4	4					
DN65	13	126	74	12	-	122	112	11	9	70	139.5	5/8"	4	4					
DN80	16	133	82	14	-	130	114	14	9	70	152.5	5/8"	4	4					
DN100	16	147	100	14	-	158	127	14	9	70	190.5	5/8"	4	8					
DN125	19	160	112	14	-	191	140	17	9	70	216	3/4"	4	8					
DN150	19	180	134	14	53	215	140	17	9	70	241.5	3/4"	4	8					
DN200	24	204	159	14	130	268	152	22	9	70	298.5	3/4"	4	8					
DN250	24	245	195	15	188	324	165	22	11	102	362	7/8"	4	12					
DN300	29	270	220	15	242	374	178	27	11	102	432	7/8"	4	12					
DN350	29	315	282	120	294	438	190	27	14	125	-	-	4	-					
DN400	29	350	307	20	337	488	216	27	14	125	-	-	4	-					
DN450	38	375	352	20	392	536	222	36	18	140	-	-	4	-					
DN500	38	415	387	20	445	590	229	36	18	140	-	-	4	-					
DN600	48	465	452	25	538	692	267	46	22	165	-	-	4	-					
DN700	48	555	490	25	625	805	292	46	18	254	-	-	8	-					
DN800	48	620	550	30	723	910	318	46	18	254	-	-	8	-					
DN900	57	675	625	30	816	1005	330	55	18	254	-	-	8	-					
DN1000	57	740	660	30	896	1110	410	55	18	254	-	-	8	-					
DN1100	77	850	790	40	1005	1220	410	75	22	298	-	-	8	-					
DN1200	77	875	805	40	1088	1325	470	75	22	298	-	-	8	-					

Note:

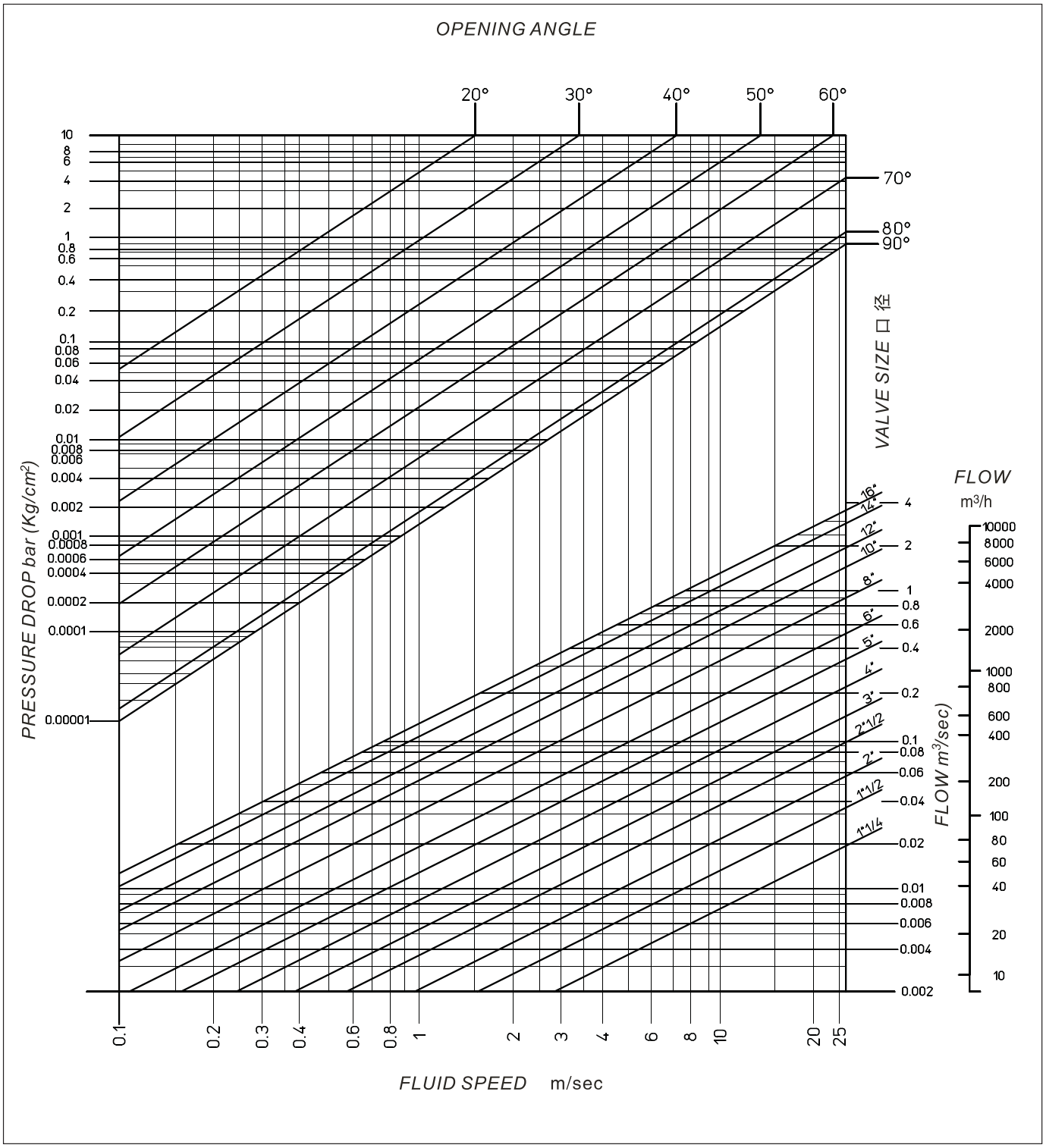
Pressure loss-flow diagram

Example of flow-pressure drop in a 6"(DN150) valve with a water flow of 0.1m3/sec.And a rotation angle of 90°:

1)Detarmine the point where the valve flow and diameter lines meet

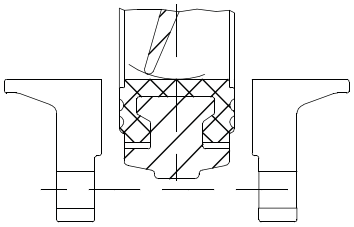
2)Draw a vertical line from the above-mentioned point to the 90° straight line,then draw a horizontal line from this point to the flow-pressure loss scale,where you will read the requested value(0.038 Bar)

3)Starting from piont 1 and going down the fluid speed scale,you will read the fluid speed values(5 m/sec)

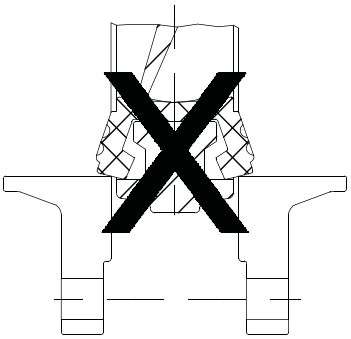


MOUNTING INSTRUCTIONS

STEM 1

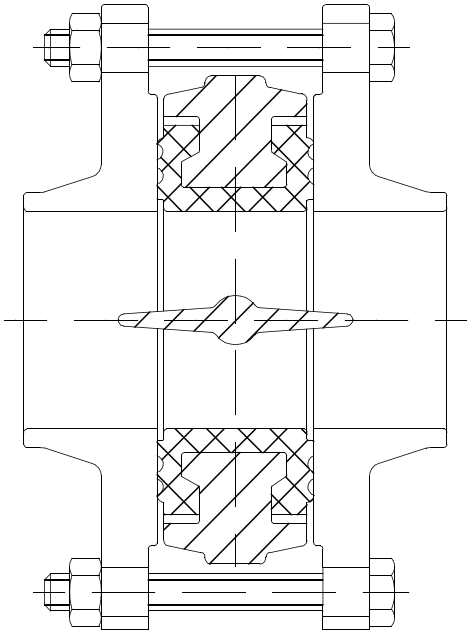


When the valve is being inserted, the flanges must be at such a distance from on another to make inspection possible without any contacts between flanges and sealing. Meanwhile, the butterfly must be kept in half-closed position.



Example of wrong mounting: the flanges are not open enough and the sealing might be damaged

STEM 2

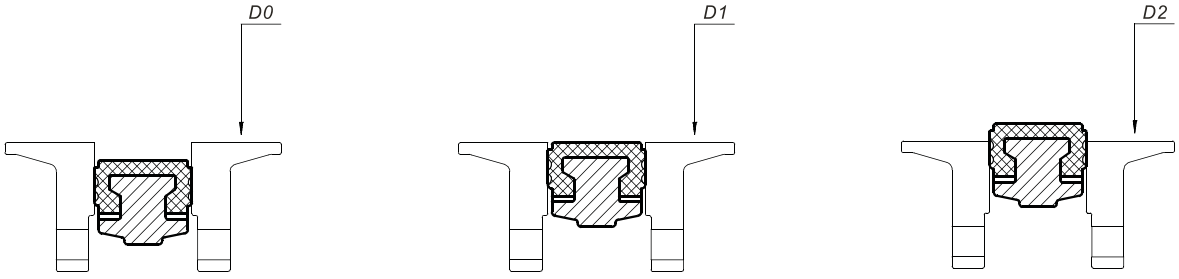


After inserting the valve between the flanges, but before screwing the bolts up, the butterfly must be switched into the open position. Otherwise, you might damage or permanently deform the sealing, while closing the valve.

MOUNTING DIMENSIONS

Butterfly valves are assembled between pipe flanges without other rings and they are centered by means of tie-rods and fixing screws.
Their diameter must conform to the following values.

D0 minimum flange diameter necessary for the inspection of the valve (with a perfectly centered valve)
D1 maximum flange diameter which allows the best possible used
D2 maximum flange diameter which allows uses at low pressure.
If you need any other information, please contact out technical department.



FLANGE SIZE TABLE	ANGE SIZE TABLE											
VALVE / DIAMETER	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300	DN 350	DN 400
D0 mm.	27	30	49	69	87	114	141	193	242	293	339	390
D1 mm.	42	51	65	81	100	124	149	198	249	300	345	399
D2 mm.	49	61	77	89	115	140	169	220	274	325	357	407

Table of all available materials

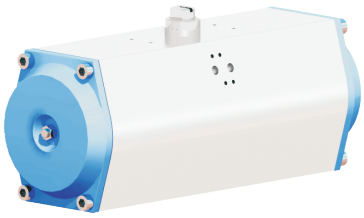
Body	Dn40 ~ DN300 : AISI304 AISI316 WCB DN40 ~ DN900 : CAST IRON A536 65-45-12*EPOXY COATED CAST IRON A536 65-45-12 RILSAN COATED
Stem	STAINLESS STEEL AISI420 STAINLESS STEEL SUS630
Disc	Dn40 ~ DN900 CAST IRON A536 65-45-12*CHEMICAL NICKEL PLATING DN40 ~ DN300 CAST IRON A536 65-45-12*EPOXY COATED CAST IRON A536 65-45-12*RILSAN COATED STAINLESS STEEL AISI 316 STAINLESS STEEL AISI 316 POLISHED STAINLESS STEEL AISI 316L STAINLESS STEEL AISI 316L POLISHED STAINLESS STEEL AISI 316 F46 COATED BRONZE-ALUMINIUM
Liner	Dn40 ~ DN900 EPDM,NBR DN40 ~ DN300 VITON,PTFE,NBR,WHITE NBR,POTABLE WATER WHITE NBR,HNBR,CARBOX NBR,SILICONE

Material Applications

MATERIAL	FEATURES	APPLICATIONS
EPDM	Temperature: limit from -50°C to +170°C ; work from -40°C to +135°C Unsuitable for hydrocarbons	Water (soft, salt, glycolic and industrial), steam, ozone, animal and vegetable fats, bases and diluted acids,acetic solvents, alcohol, caustic soda, atmospheric agents.
NBR	Excellent mechanical features (abrasion) suitable for mineral oils, some hydrocarbons and aliphatic solvents. Temperature: limit from -23°C to +120°C; work from -23 °C to +82 °C Not suitable for acetone,ketones and nitrated or chlorinated hidrocarbons	General applications, compressed air, cold water,hydraulic fluids, methane, butane, petroleum, seawater and abrasive materials pneumatically transported.
VITON	Excellent resistance to: heat, light, atmospheric agents, benzoic acids.Gas-proof. Unsuitable for steam and boiling water. Temperature: limit from -30 °C to +250 °C; work from -10 °C to +190 °C	Solvents (except acetic ones), solid hydrocarbons,oxygenating fuels, acids, bases, hydraulic fluids, oils.
PTFE	Excellent chemical resistance to solvents and corrosive products. Unsuitable for abrasive fluids, alkali metals (potassium and sodium), gaseous fluorine. Temperature: from -20 °C to +150 °C	Food and chemical industries, with very corrosive products
SILICONE	Excellent chemical and mechanical stength to steam and superhheated water(160 °C) Temperature limits(°C):-50/+200 Operating temperature(°C):-50/+160	Air or hot inert gas(temperature limits(°C)+180),food industry,water,steam

NOTE: The table above lists typical features and applications of all products. Nevertheless, if unusual situations occur (i.e. special applications, contacts with particular fluids, extraordinary pressure or temperature conditions, …) the elements which determine corrosion and abrasion might change and, as a consequence, metal performances might change, too. It is always the customer who has to choose the right material; however, our technical department is willing to meet all customers requests.

VALVE ACTUATION



Pneumatic actuator

Electrical actuator

Lever(with 9-position notch plate 0-90)

ACCESSORIES

Different types of couplings
1.Brackets for actuators support
2.Stem extensions.
3.Special flange for pneumatic actuators.
4.Male/female bushing
5.Suplementary square bushing
6.Drive bushing