

Xylia butterfly valves

DN 40 up to 300 mm

Technical manual



Description

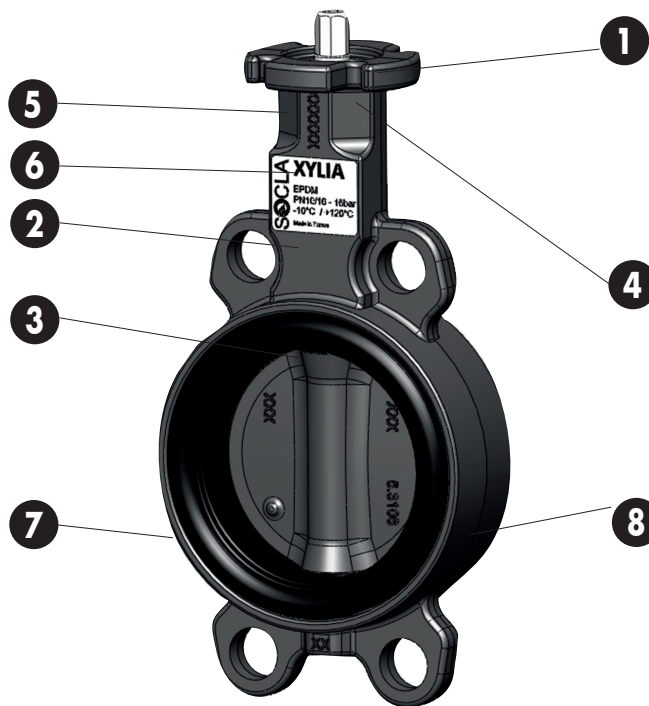
The Xylia butterfly valve has been designed for HVAC and air conditioning applications. The Xylia butterfly valve with electric actuator has been designed for cascade arrangement.



Xylia butterfly valves

DN 40 up to 300 mm

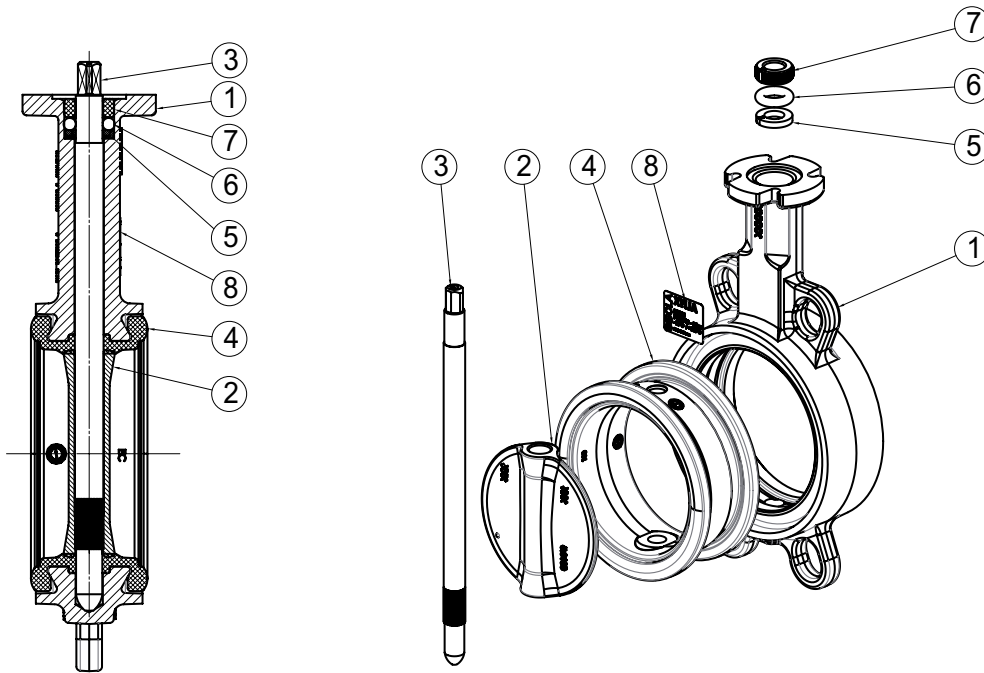
- Body cast iron GG25 - Wafer type
- Lug and Wafer type
- Disc ductile iron EPOXY or Stainless Steel
- Liner EPDM
- Using temperature : -10°C à +120°C
- Eco-design / Anti-ejection ring / Double watertightness / Sticked label.



Main technical features - Design in accordance with EN 593

1	Top connection according to ISO5211 standard
2	Spline driven shaft connected to spherically machined disc. Floating disc allows self centering thus preventing stress on the liner during operation
3	Tongue and groove seat design allows perfect tightness.
4	Circlip preventing ejection of shaft
5	Secondary sealing
6	One piece shaft in stainless steel
7	Elastomer liner ensures full protection of shaft and body
8	Face to face dimensions according to : ISO 5752 class 20 NFEN 558 class 20 API609 table 2
9	Connection between flanges PN10-16 according to EN1092-1 and EN1092-2 and ASA 150 according to ANSI B16.5

Spare parts list and materials



N°	Description	Qty	Materials	EN	ASTM	JIS
1	Body	1	Cast iron graphite lamellar	EN GIL-250 (5.1301)	-	FC25
2	Disc	1	Cast iron graphite spheroidal	EN GJS 400-15 (5.3106)	-	FCD40
			Stainless steel	GXS CriNiMo 19-11-2 (1.4408)	316	SUS 316
3	Stem	1	Stainless steel	X30 Cr13 (1.4028)	420	SUS 420 J2
4	Liner	1	EPDM	-	-	-
5	Sealing washer	1	Plastic	Grivory XE3883 Black 9915 GV4	-	-
6	O-ring	1	Nitrile	-	-	-
7	Anti-extrusion bush	1	Plastic	TECHNYL A216	-	-
8	Identification plate	1	Polyester with permanent adhesive	-	-	-

Pressure

DIRECTIVE 2014/68/UE EQUIPMENTS UNDER PRESSURE

Products manufactured in conformity with the requirements of the directive, according to pressure, DN and fluid (see on the precedent page).

LINERS	DN mm	Cat.	MOUNTING	PFA	PS			
					L1	L2	G1	G2
XYLIA 16 bar	40 to 100	4.3	Flanges	16	16			
			End of line	12	12			
	125	4.3	Flanges	16	16			
			End of line	12	12			
	150	4.3	Flanges	16	16			
			End of line	12	12			
	200 to 300	4.3	Flanges	16	16			
			End of line	10	10			
XYLIA Waterfall of boiler 6 bar	40 to 150	4.3	Flanges	6	6			
			End of line	4	4			

PS : Maximum allowable pressure (in bar) according to Directive 2014/68/UE

PFA : Allowable operating pressure (in bar) for supply, distribution and disposal of water.

The Xylia butterfly valve has been designed for HVAC and air conditioning applications.

The Xylia butterfly valve with electric actuator has been designed for cascade arrangement.

Installation

General remarks :

For safety reasons, the installation must take place under the supervision of authorised people taking account of local safety instructions and advice.

The handling of butterfly valves and their controls must be done by staff trained in all technical aspects of their operation.

Before installation the pipes must be depressurised and purged (empty of its fluid) in order to avoid any danger to the operator.

The pipe work must be correctly aligned so that no extra stress is exerted on the valve casing.

In ATEX zone, check that the pipes are connected to the earth. Do not use insulating pipes (PVC...)

Check the compatibility of the connection flanges against the operating pressure : the PN number of the flanges must be greater or equal to the operating pressure.

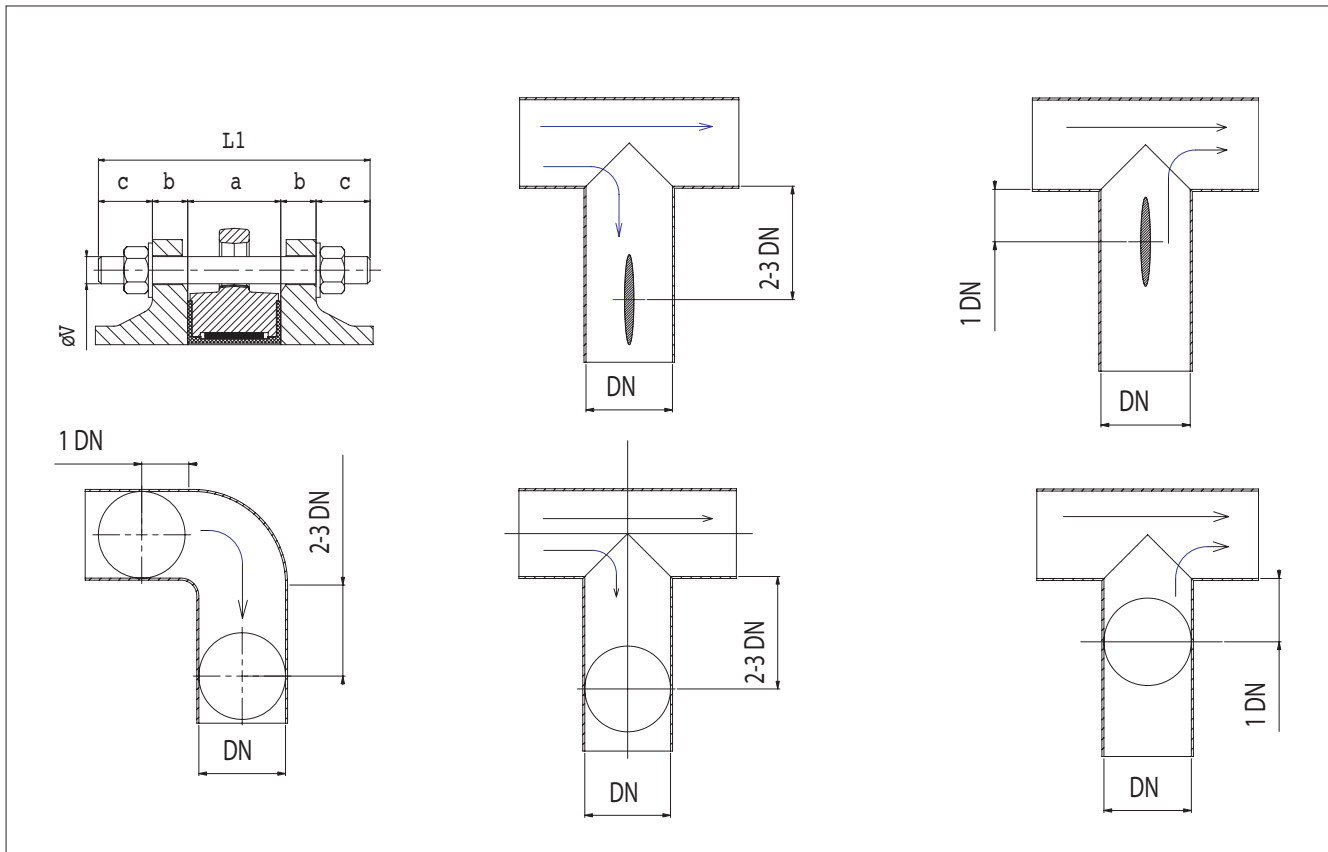
The valve is a machined piece of equipment and must not be used to prise apart the flanges.

An instruction notice specifying the installation characteristics and the commission of the Sylax 25-350 mm is added to every product. It is available on our web site www.socla.com or on request by our sales department.

Installation conditions :

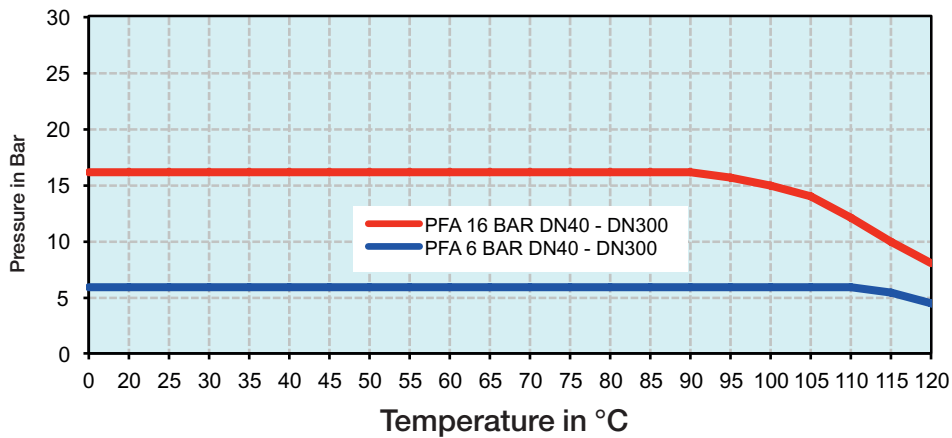
It is recommended that the distances mentioned below be respected in order to prolong the life time of the valve.

Mounting the valve close to pipe work junctions places it in turbulent zones which increase its wear.



Functioning characteristics

Pressure/temperature diagram : Liner EPDM DN 40 to 300



NOTE : For every other elastomer, please ask our sales department.

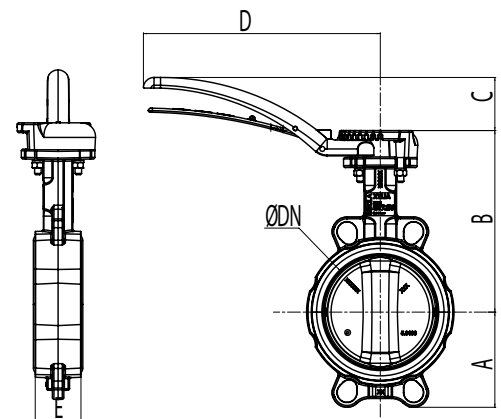
Overall dimensions



Xylia with notched ductile iron handlever

Wafer type
Liner EPDM
Disc : stainless steel or ductile iron epoxy

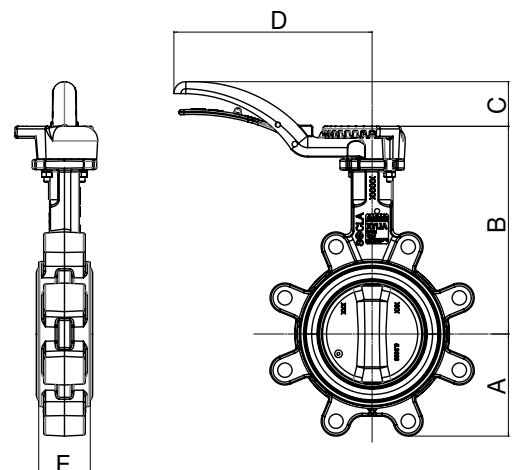
Flange rating PN 6/10/16/ASA 150					
DN	A	B	C	D	E
40	57	163	45	200	32
50	60	169	45	200	43
65	83	178	45	200	46
80	90	184	45	200	46
100	106	209	45	200	52
125	117	223	65	290	56
150	131	236	65	290	56
200	165	258	65	290	60
250	200	318	86	450	68
300	235	343	86	450	78



Xylia with electric actuator

Lug type
Liner EPDM
Disc : stainless steel or ductile iron epoxy

Flange rating PN 10/16 Flange rating ASA150, on request					
DN	A	B	C	D	E
40	57	163	45	200	43
50	59	169	45	200	43
65	66	178	45	200	46
80	87	184	45	200	46
100	103	209	45	200	52
125	119	223	65	290	56
150	133	236	65	290	56
200	157	258	65	290	60
250	198	318	86	450	68
300	227	343	86	450	78



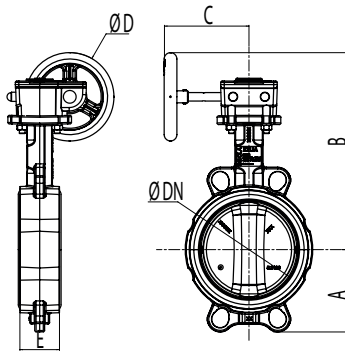
Overall dimensions

Xylia with manual gear box



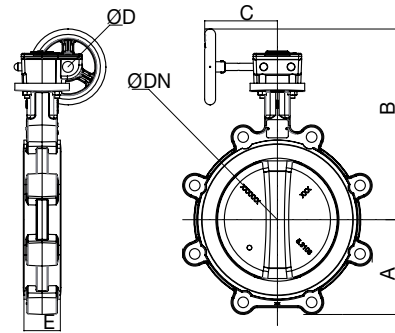
Wafer type - Liner EPDM
Disc : stainless steel or ductile iron epoxy

Flange rating PN 6/10/16/ASA 150					
DN	A	B	C	D	E
40	57	219,5	120	125	32
50	60	225,5	120	125	43
65	83	234,5	120	125	46
80	90	240,5	120	125	46
100	106	264,5	120	125	52
125	117	279,5	120	125	56
150	131	292,5	120	125	56
200	165	315	120	125	60
250	200	399	197	200	68
300	235	459	239	250	78



Lug type - Liner EPDM
Disc : stainless steel or ductile iron epoxy

Flange rating PN 10/16 Flange rating ASA150, on request					
DN	A	B	C	D	E
40	57	219,5	120	125	32
50	59	225,5	120	125	43
65	66	234,5	120	125	46
80	72	240,5	120	125	46
100	103	264,5	120	125	52
125	119	279,5	120	125	56
150	133	292,5	120	125	56
200	157	315	120	125	60
250	198	399	197	200	68
300	227	459	239	250	78



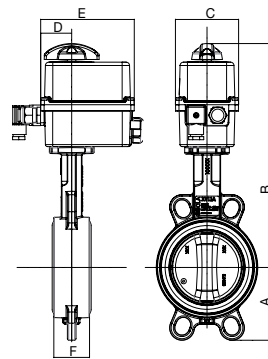
Overall dimensions

Xylia with electric actuator 15-30VAC (12-48VDC) or 100-240VAC (100-350VDC)



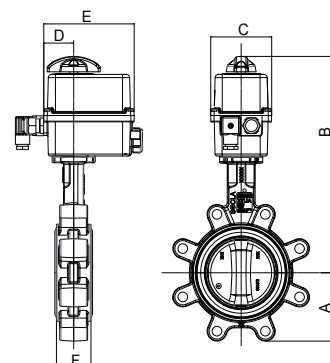
Wafer type - Liner EPDM
Disc : stainless steel or ductile iron epoxy

Flange rating PN 6/10/16/ASA 150						
DN	A	B	C	D	E	F
40	57	280	92	45	136	43
50	60	286	92	45	136	43
65	83	295	92	45	136	46
80	90	301	92	45	136	46
100	106	326	92	45	136	52
125	117	367	128	95	151	56
150	131	380	128	95	151	56



Lug type - Liner EPDM
Disc : stainless steel or ductile iron epoxy

Flange rating PN 10/16 Flange rating ASA150, on request						
DN	A	B	C	D	E	F
40	57	280	92	45	136	43
50	60	286	92	45	136	43
65	83	295	92	45	136	46
80	90	301	92	45	136	46
100	106	326	92	45	136	52
125	119	367	128	95	151	56
150	133	380	128	95	151	56



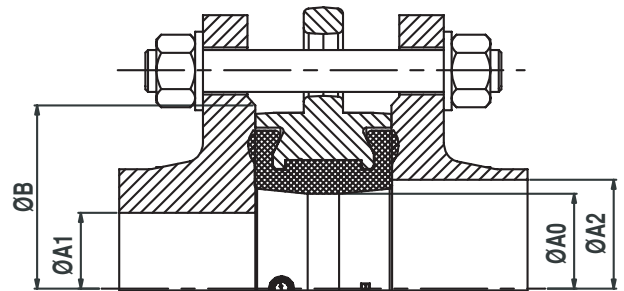
Type of flange

The Xylia 40-300 mm butterfly valve has been designed to be mounted on normalised standard flanges. Only standard flanges type 11, 21 and 34 according to EN 1092 are quite compatible.

For other types of flanges, refer to the table below.

Non appropriate connections will cancel our guarantee.

DN		Ø A0	Ø A1 mini	Ø A2 maxi	Ø B mini
mm	"	mm	mm	mm	mm
40	1 1/2	43	33	51	80
50	2	54	40	60	90
65	2 1/2	70	59	74	110
80	3	85	78	91	128
100	4	100	97	108	148
125	5	125	119	143	178
150	6	150	146	166	202
200	8	200	196	224	258
250	10	250	246	280	312
300	12	300	296	329	365



NOTE : The use of expansion seals, as well as the use of elastomer coated flanges, between the flange and the valve are strictly forbidden.

Bolts and nuts

Note : Bolts and nuts are not part of our standard supply.

DN	NPS	a	e	EN 1092 PN6			EN 1092 PN10			EN 1092 PN16			EN 1092 PN25			ASME / ANSI B16.5 Class 150			
				* Nb rods or Nb screw	ØV	c	* Nb rods or Nb screw	ØV	c	* Nb rods or Nb screw	ØV	c	* Nb rods or Nb screw	ØV	c	* Nb rods or Nb screw	ØV Metric	ØV UNC**	c
32/40	1 1/2	32	14	4	M12	18	4	M16	24	4	M16	24	4	M16	24	4	M14	1/2"	18
50	2	43	18	4	M12	18	4	M16	24	4	M16	24	4	M16	24	4	M16	5/8"	24
65*	2 1/2	46	20	4	M12	18	8*	M16	24	8*	M16	24	8	M16	24	4	M16	5/8"	24
80	3	46	20	4	M16	24	8	M16	24	8	M16	24	8	M16	24	4	M16	5/8"	24
100	4	52	24	4	M16	24	8	M16	24	8	M16	24	8	M20	26	8	M16	5/8"	24
125	5	56	26	8	M16	24	8	M16	24	8	M16	24	8	M24	32	8	M20	3/4"	26
150	6	56	26	8	M16	24	8	M20	26	8	M20	26	8	M24	32	8	M20	3/4"	26
200	8	60	28	8	M16	24	8	M20	26	12	M20	26	12	M24	32	8	M20	3/4"	26
250	10	68	32	12	M16	24	12	M20	26	12	M24	32	12	M27	32	12	M24	7/8"	26
300	12	78	36	12	M20	26	12	M20	26	12	M24	32	16	M27	32	12	M24	7/8"	26

* For flanges in cast or ductile iron 4 holes M16 and for flanges in steel 8 holes M16 on the same drilling circle.

*** WAFER TYPE BODY, CENTRAL FLANGE BODY :**

Assembly by rods : number of nuts and washer = 2 x Number of rods (above)

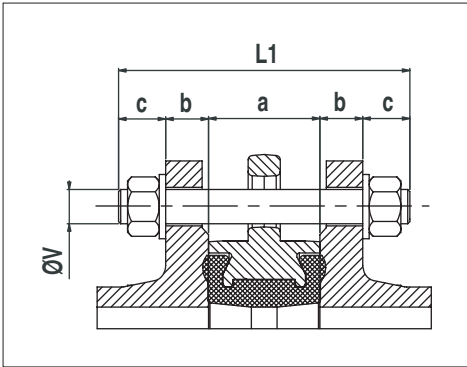
Assembly by bolts : Number of nuts = Number of screws (above) and number of washer = 2 x Number of nuts

*** LUG TYPE BODY :**

Assembly by screws : Number of screw per face (above) and number of washer is the same

**** ASME / ANSI B16.5 Class 150 : Standard version : metric threading; UNC threading : please consult us.**

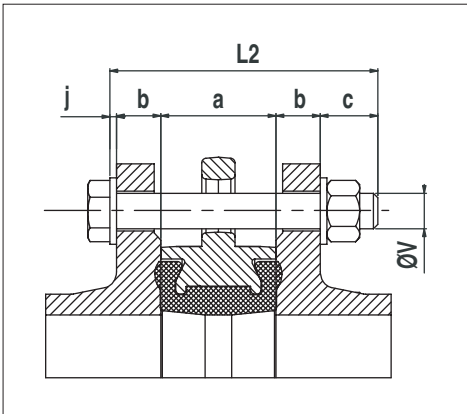
Bolts and nuts



For wafer type and central flange type body ; assembly by rods :

$$L1 = a + 2(b+c)$$

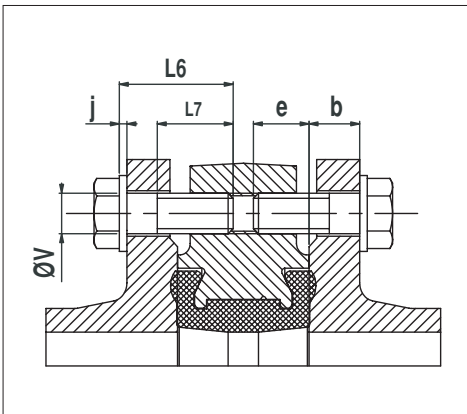
- L1 = minimum length of rods
- a = width of the butterfly valve (face to face dimension)
- b = thickness of the flange (customer)
- c = thickness of washer + thickness of nut + exceeding length of the rod.



For wafer type ; assembly by bolts :

$$L2 = a + 2b + c + j$$

- L2 = minimum length under head of screw
- a = width of the butterfly valve
- b = thickness of the flange (customer)
- c = thickness of washer + thickness of nut + exceeding length of the rod
- j = thickness of washer at the head of the screw.



For lug type body ;assembly by screws :

$$L6 \leq b + e + j \text{ avec } L7 \geq L6 - (b + j)$$

- L6 = maximum length under head of screw
- L7 = minimum length of the threading of the screw
- a = width of the butterfly valve (face to face dimension)
- b = thickness of the flange (customer)
- e = maxi depth of screw
- j = thickness of washer

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