Technical manual

Butterfly valves Sylax FM - CNPP

CNPP Version (National Center for Prevention and Protection) : DN32/40 - DN300 mm
FM Version (Factory Mutual approval) : DN32/40 - DN300 mm

sylax

Summary

Applications and main characteristics

Sprinkler systems

Applications :

- Sprinkler systems
- For special applications such as lug type body, alu-bronze or stainless steel disc ..., contact our technical back office team.

Main characteristics :

- Butterfly valves with gear box, dedicated to sprinkler systems, equipped with chain and padlocks (CNPP version only).
- CNPP approval n° YO/AL/12/037 dated 02/12/2003
- Factory Mutual approval n° 3029234. (Bombyx)
- Competitive quality and price ratio
- Reliability

An instruction notice specifying the installation characteristics and the commission of the Sylax FM-CNPP is available on our web site ***www.socla.com*** or on request by our sales department.

Sale leaflet

By concentrating the technologies and by integrating technical solutions of the highest levels, **Socla** fulfils its ambition :
- competitiveness of a standard range,
- reliability,
- comprehensive range thanks to a multiplicity of solutions.

SYLAX FM VERSION

(Factory Mutual approval)

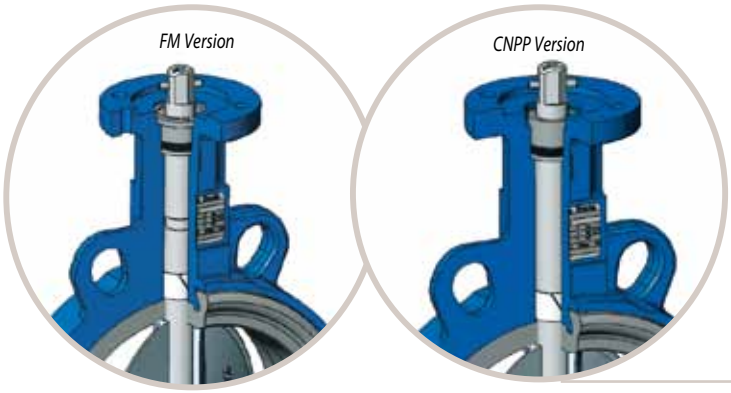
DN32/40 - DN300 mm

SYLAX CNPP VERSION

(National Center for Prevention and Protection approval)

DN32/40 - DN300 mm

Sale leaflet



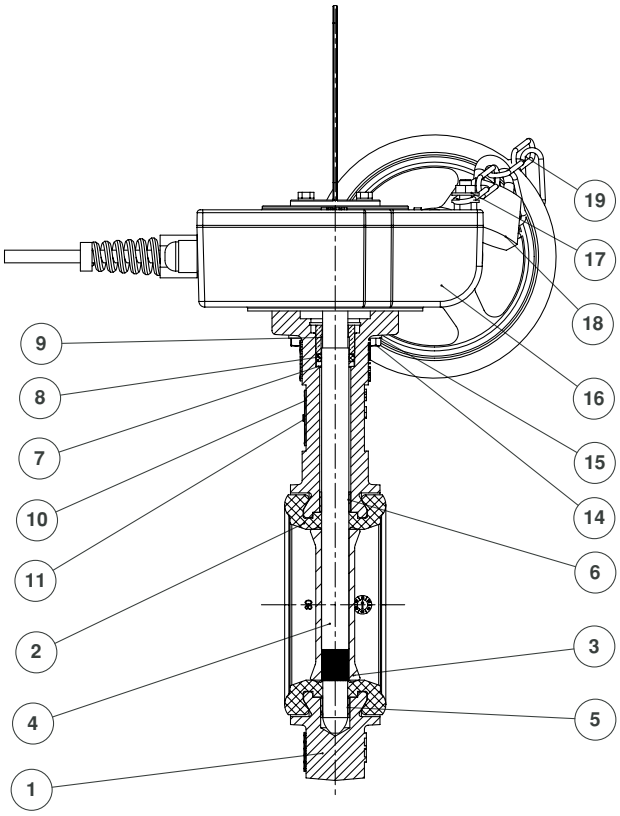
- Safety anti-ejection circlip keeps shaft in place and allows easy maintenance (FM version only)
- Safety reinforced by a secondary water tightness
- Spline driven one piece shaft connected to floating disc :

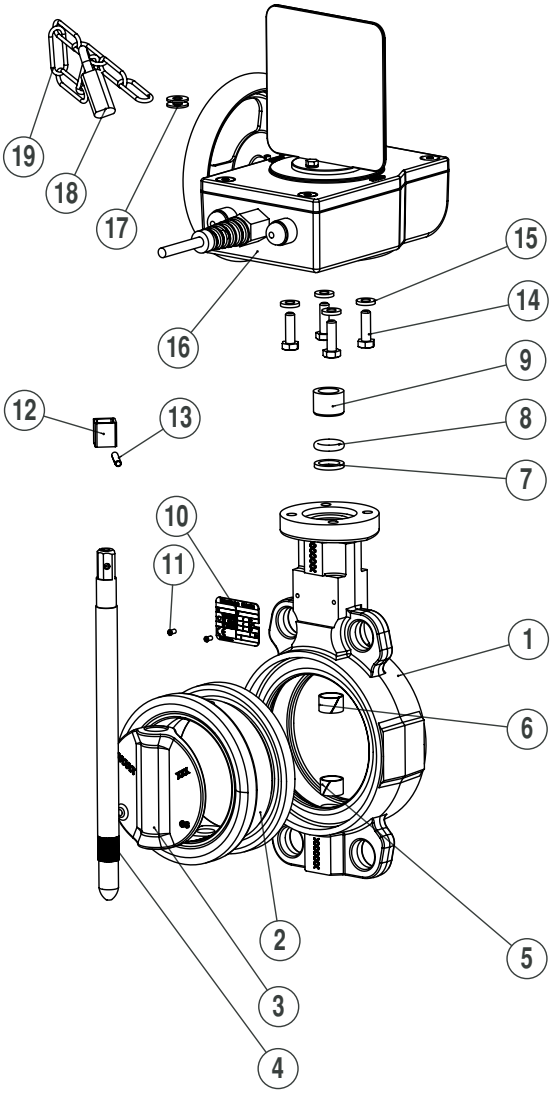
. high reliability of tightness and torque transmission in the long term.

- High power transmission with robust grooved connection between the shaft and the disc.
- Complete protection of the shaft and valve body from fluids.
- Reliability of movements with self-lubricating bearings.

- Identification and traceability ensured by riveted metal tag : see on page 15.

Spare parts list CNPP Version - DN32/40 - DN300 mm

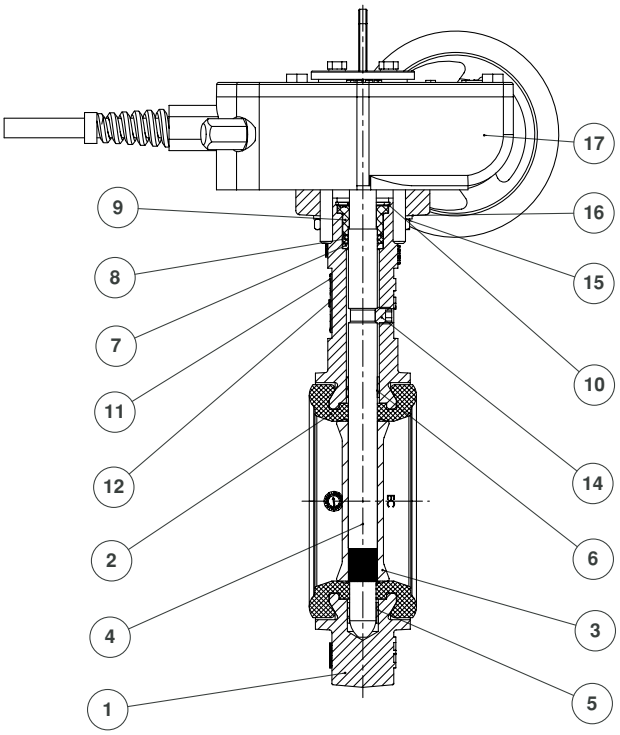


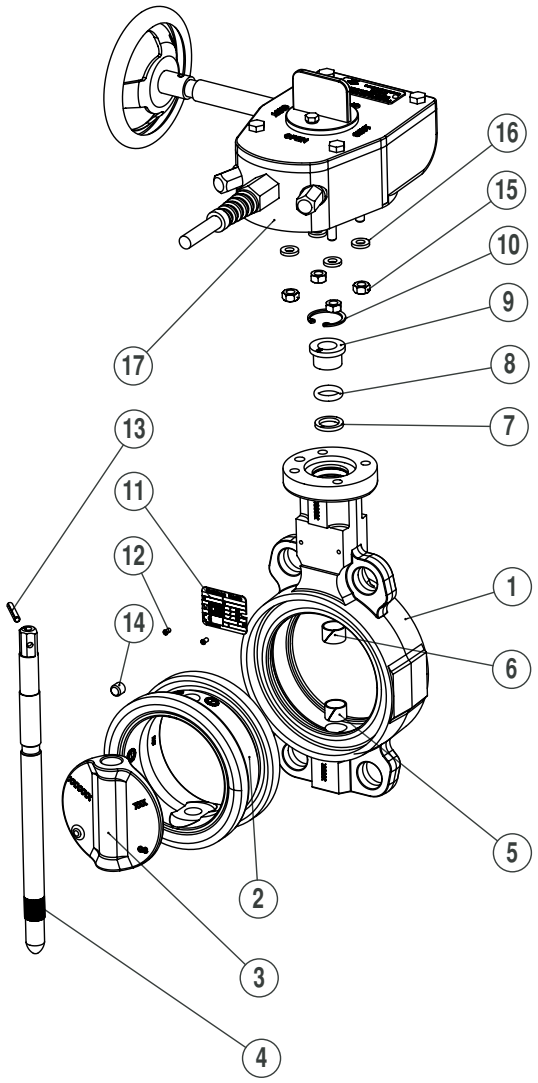


Nb.	DESCRIPTION	Qty	MATERIALS ACCORDING TO NORMS			
			Materials	EN	ASTM	JIS
1	Body	1	Ductile iron	EN GJS 400-15 (JS1030)		FCD40
2	Liner	1	EPDM	-	-	-
3	Disc	1	Ductile iron	EN GJS 400-15 (JS1030)	-	FCD40
			Stainless steel	GX5 CrNiMo 19-11-2 (1.4408)	316	SUS 316
			Stainless steel	X2 CrNiMo 17-12-2 (1.4404)	316L	SUS 316L
			Cupro - Aluminium	CuAl10Fe5Ni5 (C333G)	-	-
4	Shaft	1	Stainless steel	X5 CrNiCuNb 16-4 (1.4542)	630	SUS 630
			Stainless steel	X2 CrNiMo 17-12-2 (1.4404)	316L	SUS 316L
			Stainless steel	X30 Cr13 (1.4028)	420	SUS 420 J2
5	Anti-friction bearing	1	Zinc coated steel/PTFE	-	-	-
6	Anti-friction bearing	1	Zinc coated steel/PTFE	-	-	-
7	Anti-extrusion bush	1	Plastic	IXEF 50 FV	-	-
8	O-ring	1	Nitrile	-	-	-
9	Sealing washer	1	Brass	CuZn39Pb2 (CW612N)	-	-
10	Identification plate	1	Aluminium	EN AW - AL995 (EN AW - 1050A)	-	-
11	Rivet	2	Alu/Stainless steel	-	-	-
12	Counter square (1)	1	Steel	-	-	-
13	Pin	1	Steel	-	-	-
14	Screw H	4	Zinc coated steel	-	-	-
15	Elastic washer	4	Zinc coated steel	-	-	-
16	Gear box CNPP approved	1	Aluminium	-	-	-
17	Flat washer	2	Zinc coated steel	-	-	-
18	Padlock	1	Steel + brass	-	-	-
19	Chain	1	Steel	-	-	-

(1) DN32/40 to 80 and DN200

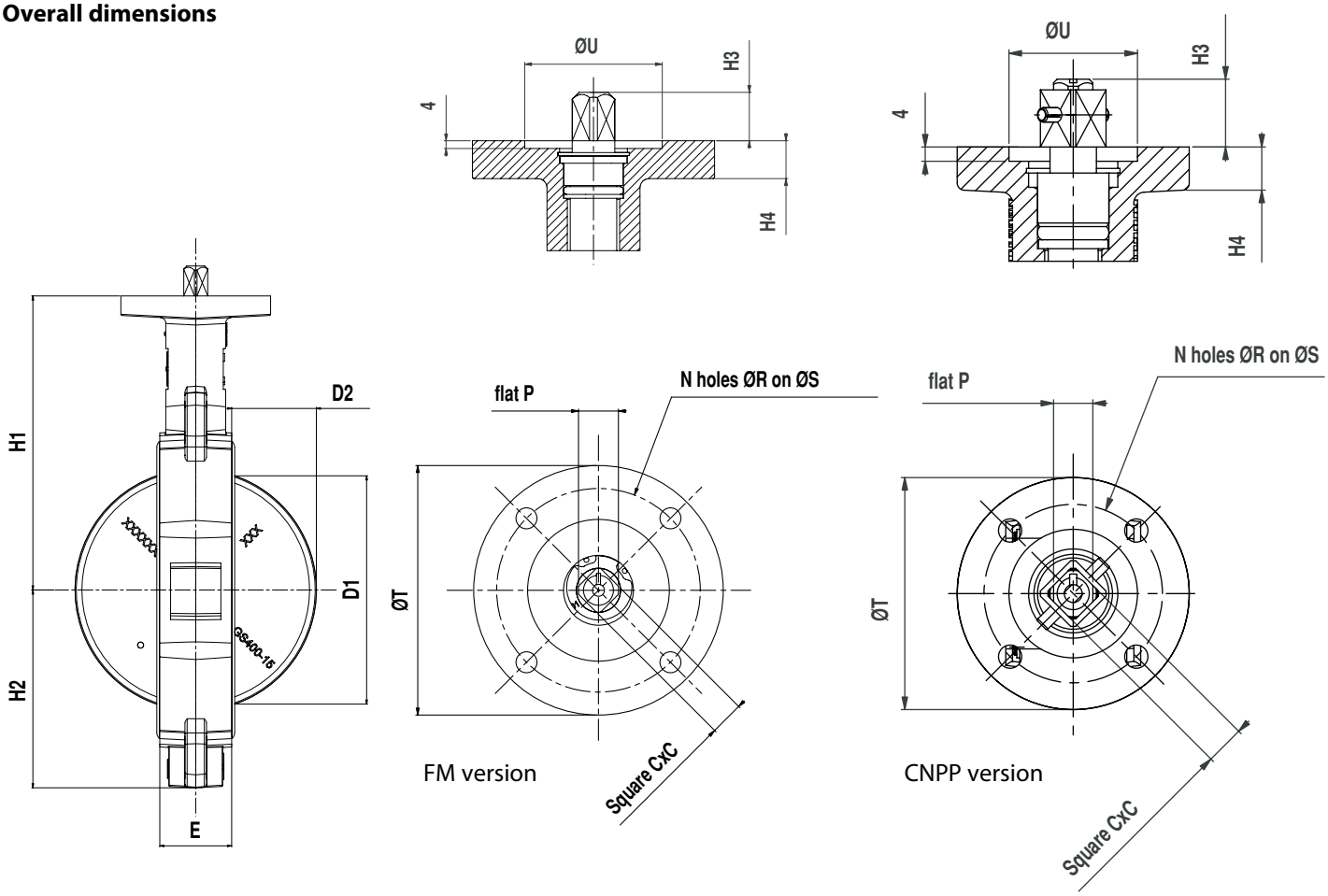
Spare parts list FM Version - DN32/40 - DN300 mm





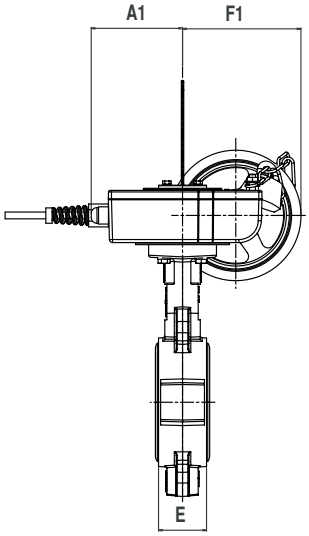
Nr	DESCRIPTION	Qty	MATERIALS ACCORDING TO NORMS			
			Materials	EN	ASTM	JIS
1	Body	1	Ductile iron	EN GJS 400-15 (JS1030)	-	FCD40
2	Liner	1	EPDM	-	-	-
3	Disc	1	Ductile iron	EN GJS 400-15 (JS1030)	-	FCD40
			Stainless steel	GX5 CrNiMo 19-11-2 (1.4408)	316	SUS 316
			Stainless steel	X2 CrNiMo 17-12-2 (1.4404)	316L	SUS 316L
			Cupro-aluminium	CuAl10Fe5Ni5 (C333G)	-	-
4	Shaft	1	Stainless steel	X30 Cr13 (1.4028)	420	SUS 420 J2
5	Anti-friction bearing	1	Zinc coated steel + PTFE	-	-	-
6	Anti-friction bearing	1	Zinc coated steel + PTFE	-	-	-
7	Anti-extrusion bush	1	Plastic	IXEF 50 FV	-	-
8	O-ring	1	Nitrile	-	-	-
9	Sealing washer	1	Plastic	IXEF 50 FV	-	-
10	Circlips	1	Steel	XC 75	-	-
11	Identification plate	1	Aluminium	EN AW - AL995 (EN AW - 1050A)	-	-
12	Rivet	1	Alu/Stainless steel	-	-	-
13	Pin	1	Steel	-	-	-
11	Identification plate	1	Aluminium	-	-	-
14	Headless screw	1	Zinc coated steel	-	-	-
15	Nut	4	Zinc coated steel	-	-	-
16	Elastic washer	4	Zinc coated steel	-	-	-
17	Gear box FM approved	1	Ductile iron	-	-	-

Overall dimensions

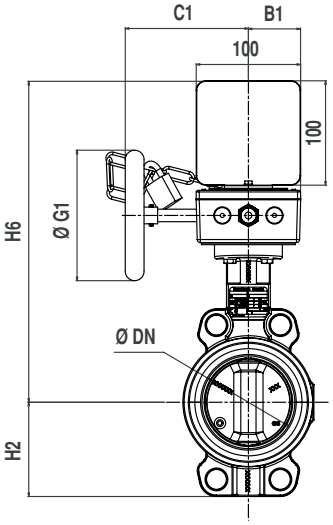


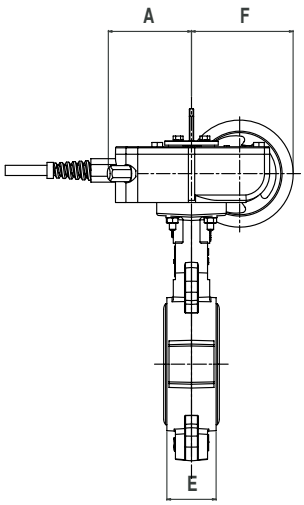
DN	NPS	Iso top according to ISO 5211						Square drive outlet			
		N	ØR	ØS	ØT	ØU	N°	□C	H3	Flat P	H4
32/40	1 1/2	4	6,5	50	65	36	F05	11	19	11	12
50	2	4	6,5	50	65	36	F05	11	19	11	12
65	2 1/2	4	6,5	50	65	36	F05	11	19	11	12
80	3	4	6,5	50	65	36	F05	11	19	11	12
100	4	4	8,5	70	90	56	F07	14	19	14	12
125	5	4	8,5	70	90	56	F07	14	19	14	12
150	6	4	8,5	70	90	56	F07	14	19	14	12
200	8	4	10,5	102	125	71	F10	17	25	20	15,5
250	10	4	10,5	102	125	71	F10	22	32	26	16
300	12	4	12,5	125	150	87	F12	22	32	26	16

Overall dimensions

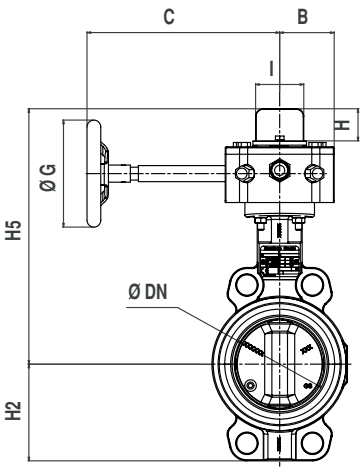


CNPP version

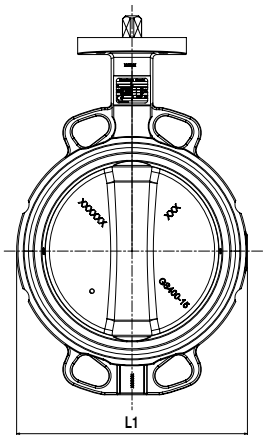




FM version



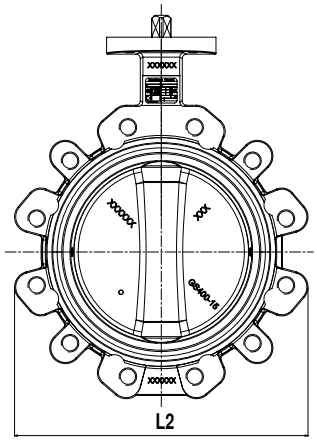
Centring lugs



Diameter		Face to face	Overall dimensions					Iso top according to ISO 5211												Travel of the disc		Weight (kg)	
DN	NPS	E	L1	H1	H2	H5	H6	A	A1	B	B1	C	C1	F	F1	G	G1	H	I	D1	D2	(1)	(2)
32/40	1 1/2	32	112 (JL) 144 (JS)	130	57	232	281	74	84,5	40	50	168	118	93	110,5	100	125	50	55	31	6,5	4,7	3,2
50	2	43	121	136	62	238	287	74	84,5	40	50	168	118	93	110,5	100	125	50	55	29	4,5	5,1	4
65	2 1/2	46	136	145	70	247	296	74	84,5	40	50	168	118	93	110,5	100	125	50	55	48	10	5,5	4,3
80	3	46	127	151	89	253	302	74	84,5	40	50	168	118	93	110,5	100	125	50	55	67	18	5,8	4,6
100	4	52	153	175	106	277	326	74	84,5	40	50	175	118	105,5	110,5	125	125	50	55	88	25	7,7	6,6
125	5	56	182	190	120	292	341	74	84,5	40	50	175	118	105,5	110,5	125	125	50	55	113	35	9	7,8
150	6	56	209	203	131	305	354	74	84,5	40	50	175	118	105,5	110,5	125	125	50	55	141	48	10	8,8
200	8	60	265	245,5	164	386	414,5	100	82,5	70	73	228	205	145	160	200	200	40	75	192	71	24,5	18,6
250	10	68	317	271	200	411,5	440	100	82,5	70	73	228	205	145	160	200	200	40	75	242	91,5	30,8	24,9
300	12	78	370	296	235	461,5	465	100	82,5	70	73	234	205	170	160	250	200	40	75	291	112	42,6	34,1

(1) SYLAX FM Ductile iron body (JS1030) ; Ductile iron disc (JS1030) , EPDM liner
(2) SYLAX CNPP Cast iron body (JL1040) ; Ductile iron disc (JS1030) , EPDM liner

Tapped lugs

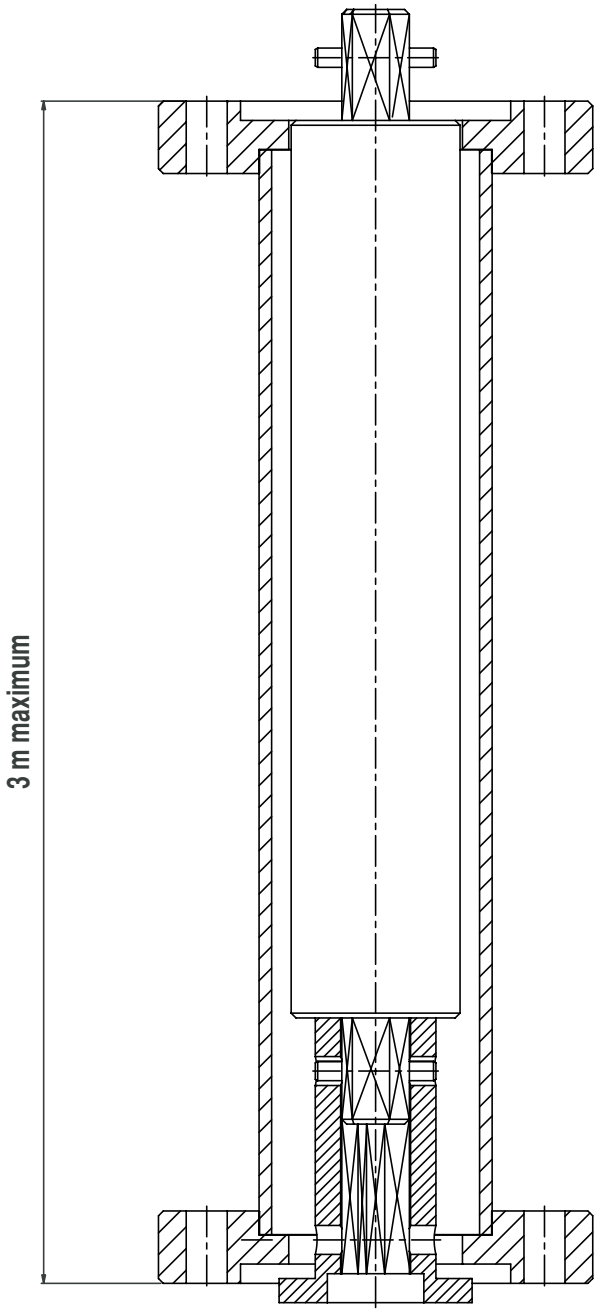


Diameter		Face to face	Overall dimensions					Iso top according to ISO 5211												Travel of the disc		Weight (kg)	
DN	NPS	E	L2	H1	H2	H5	H6	A	A1	B	B1	C	C1	F	F1	G	G1	H	I	D1	D2	(1)	(2)
32	1 1/2	32	146	130	57	232	281	74	84,5	40	50	168	118	93	110,5	100	125	50	55	31	6,5	5,2	3,5
40	1 1/2	32	146	130	57	232	281	74	84,5	40	50	168	118	93	110,5	100	125	50	55	31	6,5	5,2	3,5
50	2	43	121	136	62	238	287	74	84,5	40	50	168	118	93	110,5	100	125	50	55	29	4,5	5,7	4,4
65	2 1/2	46	135	145	70	247	296	74	84,5	40	50	168	118	93	110,5	100	125	50	55	48	10	6,2	4,8
80	3	46	179	151	89	253	302	74	84,5	40	50	168	118	93	110,5	100	125	50	55	67	18	7,1	5,8
100	4	52	206	175	103	277	326	74	84,5	40	50	175	118	105,5	110,5	125	125	50	55	88	25	9,4	8,2
125	5	56	238	190	119	292	341	74	84,5	40	50	175	118	105,5	110,5	125	125	50	55	113	35	11,6	10,3
150	6	56	265	203	133	305	354	74	84,5	40	50	175	118	105,5	110,5	125	125	50	55	141	48	12,7	11,4
200	8	60	336	245,5	168	386	414,5	100	82,5	70	73	228	205	145	160	200	200	40	75	192	71	30,6	24,9
250	10	68	396	271	198	411,5	440	100	82,5	70	73	228	205	145	160	200	200	40	75	242	91,5	36,9	31,6
300	12	78	453	296	227	461,5	465	100	82,5	70	73	234	205	170	160	250	200	40	75	291	112	48,7	40,9

(1) SYLAX FM Ductile iron body (JS1030) ; Ductile iron disc (JS1030) , EPDM liner
(2) SYLAX CNPP Cast iron body (JL1040) ; Ductile iron body (JS1030) , EPDM liner

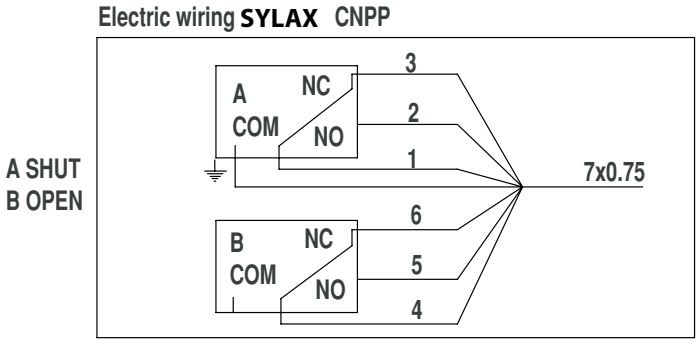
Extension shaft

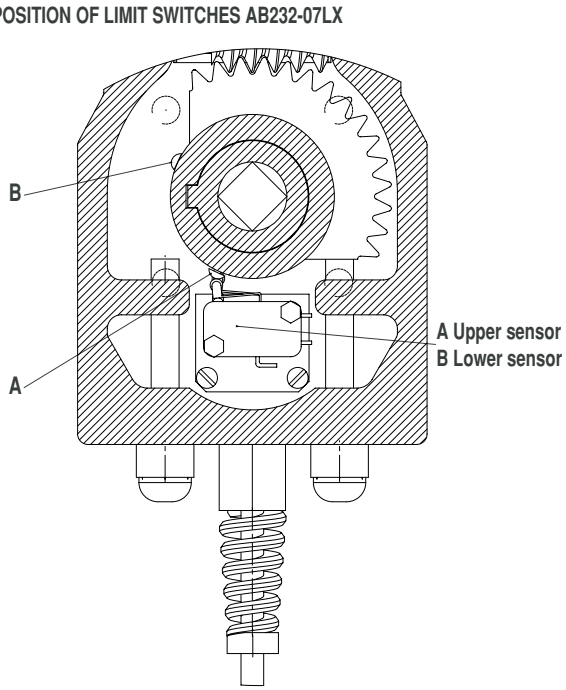
Optional : extension shaft on Sylax CNPP version , maximum length 3 m : on request from our sales department.



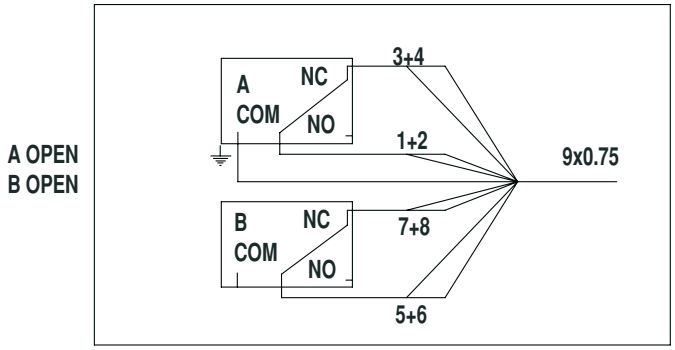
Electric wiring

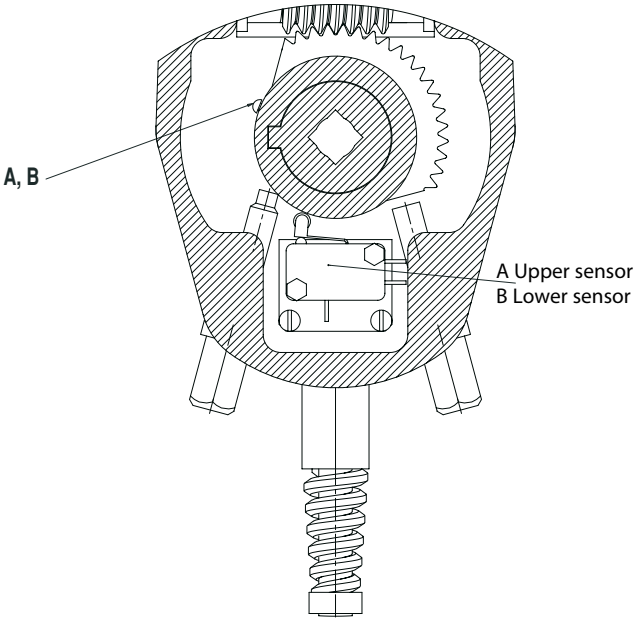
CNPP version :
Position of limit switches for AB232-07LX





FM version :
Position of limit switches for AB150LX and AB550LX





Connecting flanges

The valve type Sylax FM-CNPP can be mounted with the following connections (other types on request) :

✔ : possible mounting
● : possible mounting with re-machining
■ : impossible mounting

• 4 Centring lugs

DN	NPS	EN 1092-1 & EN 1092-2					ASME/ANSI B16.1 Class 125	ASME/ANSI B16.5 Class 150	ASME/ANSI B16.5 Class 300	BS10		JIS B2238 & JIS B2239		
		PN6	PN10	PN16	PN25	PN40				Table D	Table E	5K	10K	16K
32	1 1/4	✔	✔	✔	✔	✔	✔(1)	✔(1)	✔	●	●	●	✔	●
40	1 1/2	✔	✔	✔	✔	✔	✔	✔	●	✔	✔	●	✔	●
50	2	✔	✔	✔	✔	✔	✔	✔	●	✔	✔	●	●	●
65	2 1/2	✔	✔	✔	●	●	✔	✔	●	●	●	●	●	●
80	3	✔	✔	✔	✔	✔	✔	✔	●	✔	✔	✔	●	●
100	4	✔	✔	✔	●	●	✔	✔	●	✔	✔	●	●	●
125	5	✔	✔	✔	●	●	✔	✔	●	✔	✔	✔	✔	●
150	6	✔	✔	✔	●	●	✔	✔	●	✔	●	✔	✔	●
200	8	✔	✔	✔	●	●	✔	✔	●	●	●	●	●	●
250	10	✔	✔	✔	●	●	✔	✔	■	●	✔	✔	✔	●
300	12	✔	✔	✔	●	●	✔	✔	■	✔	✔	●	●	●

(1) Cast iron body GJL-250 (JL1040) only; re-machining for ductile iron body GJS 400-15 (JS1030)

• Tapped lugs

✔ : possible threading
■ : impossible mounting

DN	NPS	EN 1092-1 & EN 1092-2					ASME/ANSI B16.1 Class 125	ASME/ANSI B16.5 Class 150	ASME/ANSI B16.5 Class 300	BS10		JIS B2238 & JIS B2239		
		PN6	PN10	PN16	PN25	PN40				Table D	Table E	5K	10K	16K
32	1 1/4	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
40	1 1/2	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
50	2	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	■	✔	✔(2)
65	2 1/2	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
80	3	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
100	4	■	✔	✔	✔	✔	✔	✔	✔	✔(3)	✔	■	✔	✔
125	5	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
150	6	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
200	8	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
250	10	✔	✔	✔	✔	✔	✔	✔	✔	■	✔	✔	✔	✔
300	12	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

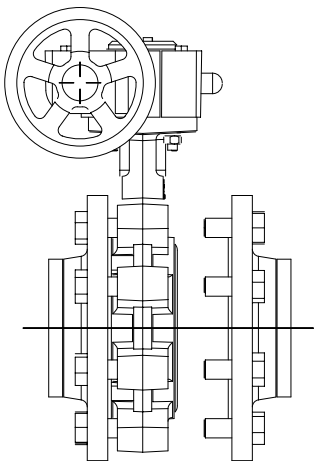
(2) Mounting OK for ductile iron body GJS 400-15 (JS1030), impossible mounting for body GJL-250 (JL1040)
(3) Possible mounting if the valve is inclined at 22,5°

Attention : the lug type body is not a multi-connection body (connection to many flanges of different sizes). Generally, every connection relates to a different reference of finished products.

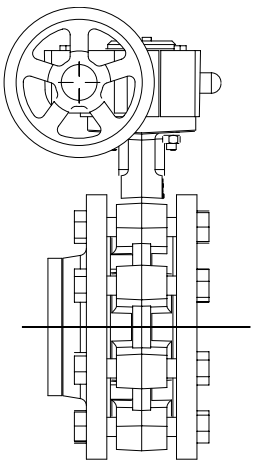
• End of line mounting and downstream removing

The end of line mounting and the downstream removing, at ambient temperature, of the Sylax FM-CNPP is limited to the pressure mentioned on page 11 according to the PED directive 97/23/CE .
These mountings are only possible on tapped lug bodies

Downstream removing



End of line mounting



Normalisation

- **Design :**
  According to EN 593 and marking according to EN 19

- **Iso top connection for actuations :**
  According to EN ISO 5211

- **Face to face :**
  According to 558-1 series 20
  ISO 5752 series 20
  API 609 table 2

- **Connecting flanges :** see on page 10
  According to EN1092-1 and EN1092-2
  ASME/ANSI B16.5
  BS10-d and BS10-e
  JIS B2238 and JIS B2239

- **Tests** :
  According to EN12266-1
  Resistance and tightness of the body : test P11(1,5 x allowable operating pressure)
  Tightness of the seat : test P12 rate A (1,1 x allowable operating pressure)

- **European Directive :**
  Our butterfly valves are in accordance to the safety requirements of the following directive. :

Directive 97/23/CE : Equipments under pressure **PED** (Pressure Equipment Directive)
Applies to the design, manufacturing and the assessment of the conformity of pressure equipment, the maximum allowable pressure of which is 0.5 bar.
Pressure equipment for water supply, distribution, and disposal of water is excluded.
Depending on the type of pressure equipment, maximum allowable temperature (PS), DN, physical nature of the fluid (liquid, gas or vapour) and the degree of danger of the fluid (group1/2)*, the directive classifies this same equipment into different categories (article 3.3, I, II, III, IV), required for the assessment of conformity with CE marking.
The equipment defined in article 3.3 of the directive must not bear the CE marking.
(*) Group 1 : hazardous fluids (directive 67/548/EEC) / explosive / highly flammable /easily flammable / flammable / very toxic / toxic / combustion agents.
Group 2 : all other fluids

Important notice : the indicated pressure for the different categories of fluids (L1/L2/G1/G2) is under no condition a guarantee of use. Therefore, it is essential to validate the use of products under given operating conditions. Socla is not responsible for alterations of the products to working conditions not previously specified by the customer.
In order to facilitate your choice regarding these new regulatory requirements, Socla has put the necessary information concerning products with CE marking, specification sheets and product identification plates at your disposal in the price list (+ see additional explanations on the detachable slip).
In addition, the operating instructions are available on our web site www.socla.com or by simple request from our sales department.

An instruction notice specifying the installation characteristics and the commission of the Sylax FM-CNPP is available on our web site ***www.socla.com*** or on request by our sales department.

Pressure

DIRECTIVE 97/23/CE 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
16 bar	EPDM (CNPP Approval), EPDM (FM Approval)	50 to 300	3,3	Flanges	16		16		
				End of line	12		12		

PS : Maximum allowable pressure (in bar) according to Directive 97/23/CE
PFA : Allowable operating pressure (in bar) for supply, distribution and disposal of water.

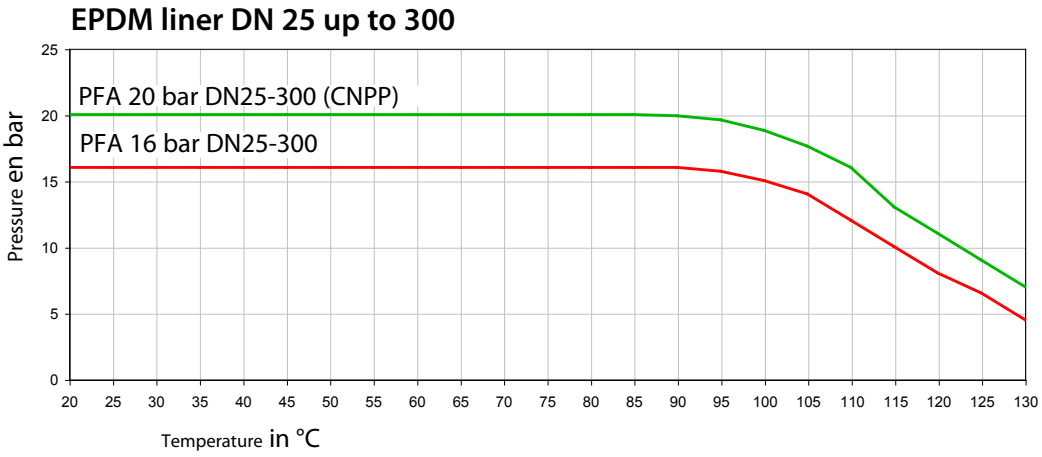
ATTENTION
Gas G1 and G2 : The max. pressure is 6 bar when using cast iron GGG25 bodies (FGL 250)

Torque values

Torques for water in Nm ***EPDM***	32/40	50	65	80	100	125	150	200	250	300
PS16	15	18	30	32	50	83	115	180	280	430
PS20 (1)	20	32	45	65	100	130	190	350	560	850

(1) SYLAX CNPP only
One actuation minimum per month.

Pressure/temperature diagram



Flow rate (Kv)

OPENING STAGE - Stainless steel disc

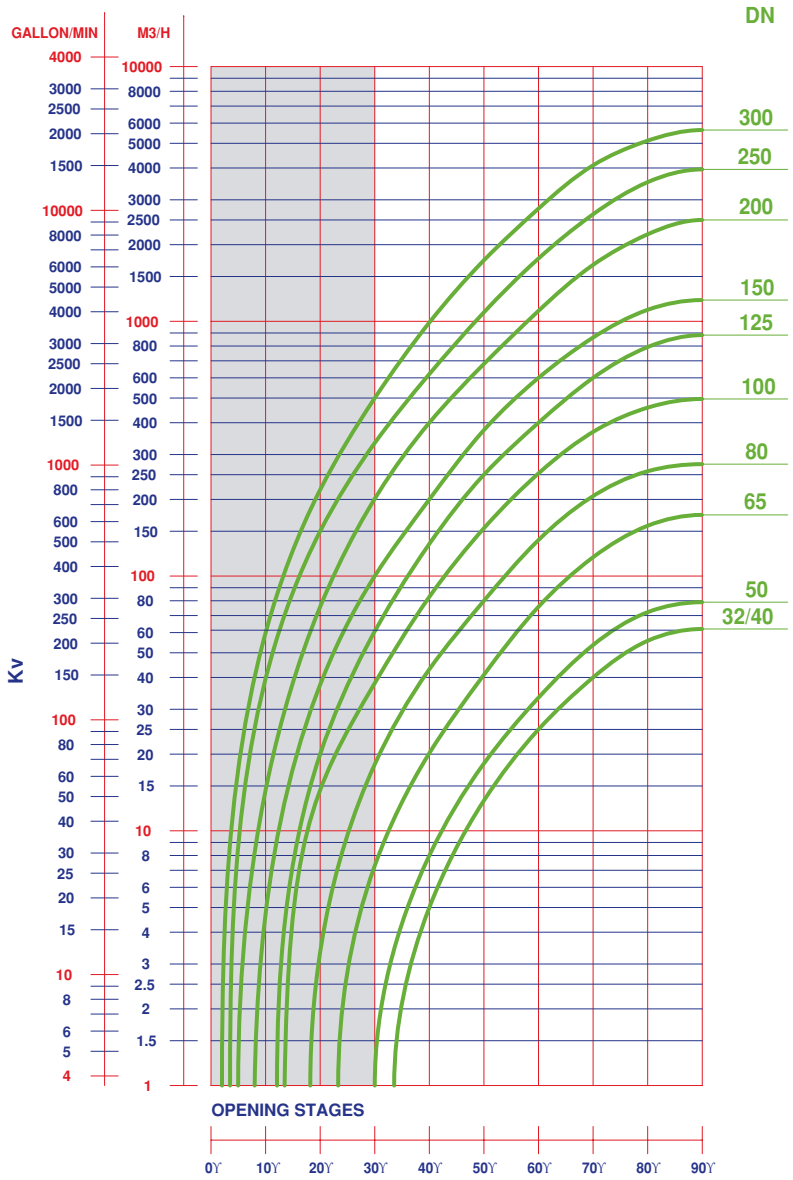
DN	10°	20°	30°	40°	50°	60°	70°	80°	90°
32/40	-	-	-	5	12	25	40	56	62
50	-	-	1	8	18	33	54	71	79
65	-	-	6	19	41	76	118	158	174
80	-	3	18	43	79	138	211	252	275
100	-	15	38	83	154	253	368	458	496
125	-	20	61	134	249	399	599	792	883
150	5	37	100	200	374	600	863	1109	1212
200	15	76	200	399	680	1099	1666	2196	2500
250	40	150	333	621	1084	1765	2652	3517	3948
300	60	219	500	989	1736	2770	4097	5118	5635

The butterfly valve is not the best product for regulating Nevertheless, the Sylax FM-CNPP butterfly valve can be used to regulate by an opening stage between 30° and 90°.

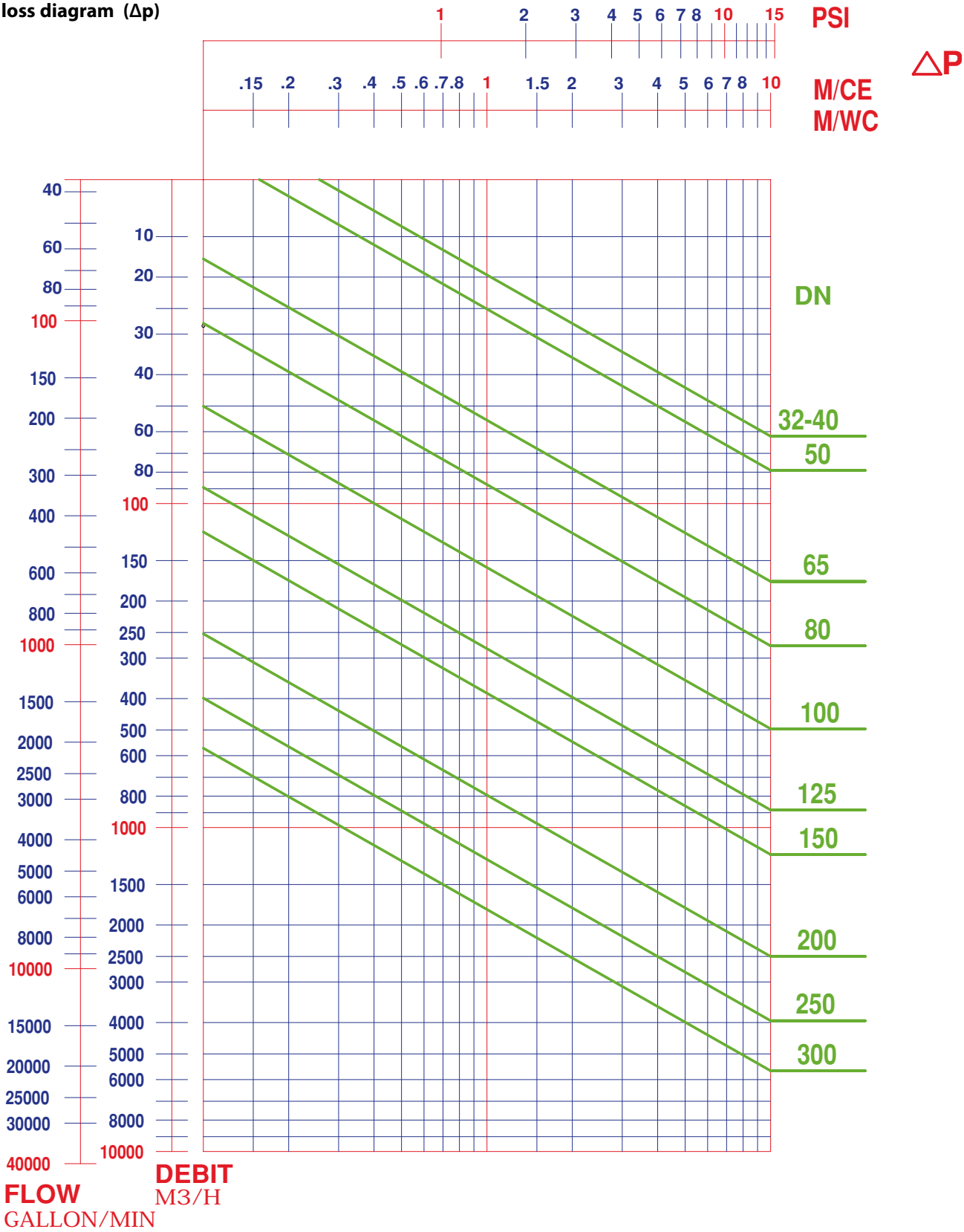
A regulation in the opening stage lower than 30° is not advisable because of over speed, cavitation effect, which could damage prematurely the valve.

Kv = volume of water in m^3/h through a valve at a preset opening stage and under a head loss of 1 bar.

The maximum flow velocity of the fluid through the valve must not exceed :
- 3 m/s for liquid fluids. Between 3 and 5m/s, the use of the Sylax FM-CNPP butterfly valve is possible, but the phenomena of cavitation, noise, vibration and water hammering increase..



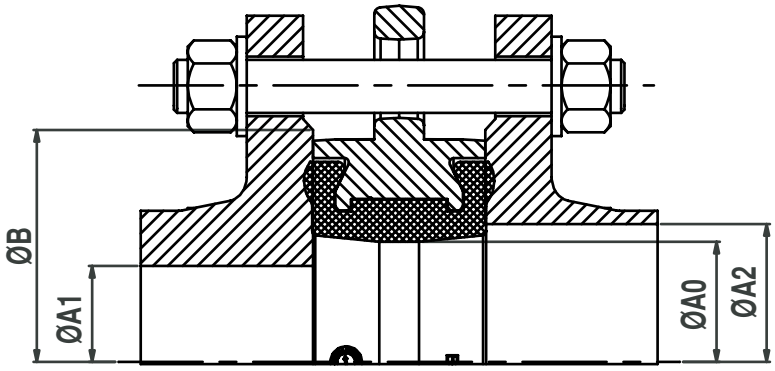
Head loss diagram (Δp)



Type of flange

The Sylax FM-CNPP butterfly valve has been designed to be mounted on standard flanges. Only standard flanges type 11, 21 and 34 according to EN 1092 are quite compatible.

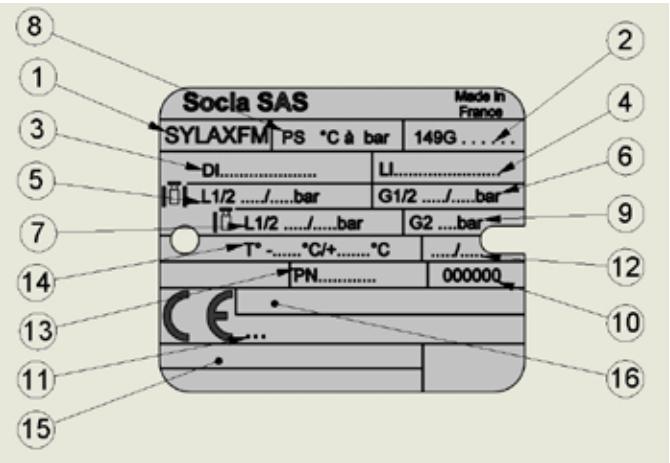
For other types of flanges, refer to the table below.
Non appropriate connections will cancel our guarantee.



DN		Ø A0	Ø A1 mini	Ø A2 maxi	Ø B mini
32/40	**1 1/4**	43	33	51	80
50	**2**	50	36	59	90
65	**2 1/2**	65	54	74	110
80	**3**	80	73	88	128
100	**4**	100	93	116	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

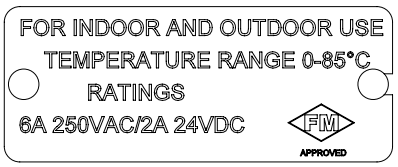
NOTE :
The use of expansion seals, as well as the use of elastomer coated flanges, between the flange and the valve are strictly forbidden.

Tag / traceability



Rep	Description
1	Name of the valve
2	Reference
3	Material of the disc
4	Material of the liner
5	Pressure PS between flanges L1/L2 (liquid)
6	Pressure PS between flanges G1/G2 (gas)
7	Pressure PS end flange L1/L2 (liquid)
8	Pressure PFA water 20°C
9	Pressure PS end flange G2 (gas)
10	Number of manufacturing order
11	Notified Body Number for the Directive PED 97/23/CE
12	Manufacturing date
13	Connecting flanges
14	Limit of use
15	Approval information zone
16	Marking relating to the Directive ATEX 94/9/CE

FM approval tag riveted on gear box



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 UNC**	c
32/40	1 1/2	32	14	4	M12	18	4	M16	24	4	M16	24	4	M16	24	4	1/2»	18
50	2	43	18	4	M12	18	4	M16	24	4	M16	24	4	M16	24	4	5/8»	24
65*	2 1/2	46	20	4	M12	18	8*	M16	24	8*	M16	24	8	M16	24	4	5/8»	24
80	3	46	20	4	M16	24	8	M16	24	8	M16	24	8	M16	24	4	5/8»	24
100	4	52	24	4	M16	24	8	M16	24	8	M16	24	8	M20	26	8	5/8»	24
125	5	56	26	8	M16	24	8	M16	24	8	M16	24	8	M24	32	8	3/4»	26
150	6	56	26	8	M16	24	8	M20	26	8	M20	26	8	M24	32	8	3/4»	26
200	8	60	28	8	M16	24	8	M20	26	12	M20	26	12	M24	32	8	3/4»	26
250	10	68	32	12	M16	24	12	M20	26	12	M24	32	12	M27	32	12	7/8»	26
300	12	78	36	12	M20	26	12	M20	26	12	M24	32	16	M27	32	12	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.

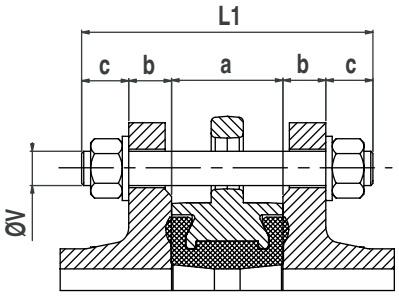
DN	NPS	a	e	BS10-d			BS10-e			JIS2238 & JIS2239 5K			JIS2238 & JIS2239 10K			JIS2238 & JIS2239 16K		
				* Nb rods or Nb screw	ØV UNC	c	* Nb rods or Nb screw	ØV UNC	c	* Nb rods or Nb screw	ØV	c	* Nb rods or Nb screw	ØV	c	* Nb rods or Nb screw	ØV	c
32/40	1 1/2	32	14	4	1/2»	18	4	1/2»	18	4	M12	18	4	M16	24	4	M16	24
50	2	43	18	4	5/8»	24	4	5/8»	24	4	M12	18	4	M16	24	8	M16	24
65	2 1/2	46	20	4	5/8»	24	4	5/8»	24	4	M12	18	4	M16	24	8	M16	24
80	3	46	20	4	5/8»	24	4	5/8»	24	4	M16	24	8	M16	24	8	M20	26
100	4	52	24	4	5/8»	24	8	5/8»	24	8	M16	24	8	M16	24	8	M20	26
125	5	56	26	8	5/8»	24	8	5/8»	24	8	M16	24	8	M20	26	8	M22	26
150	6	56	26	8	5/8»	24	8	3/4»	26	8	M16	24	8	M20	26	12	M22	26
200	8	60	28	8	5/8»	24	8	3/4»	26	8	M20	26	12	M20	26	12	M22	26
250	10	68	32	8	3/4»	26	12	3/4»	26	12	M20	26	12	M22	26	12	M24	32
300	12	78	36	12	3/4»	26	12	7/8»	26	12	M20	26	16	M22	26	16	M24	32

** WAFER TYPE 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

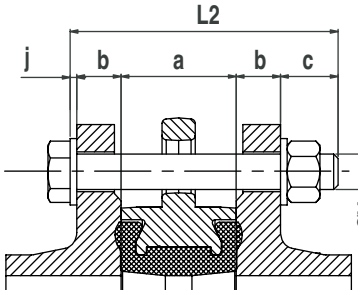
*** ASME / ANSI B16.5 Class 150 : ØV UNC threading in inch ; for metric threading, please consult us.*

Bolts and nuts



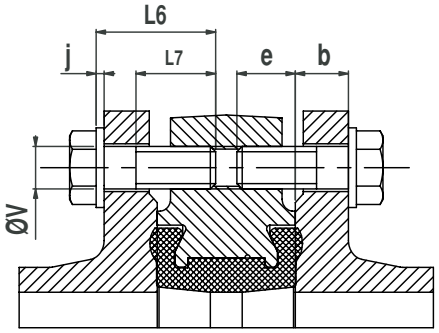
For wafer type body; assembly by rods :

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 body; assembly by bolts :

L2 = a + 2b + c + j
L2 = minimum length of rods
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 :

L5 ≤ b + e + j avec L6 ≥ L5 - (b + j)
L5 = maximum length under head of screw
L6 = 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

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.

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.

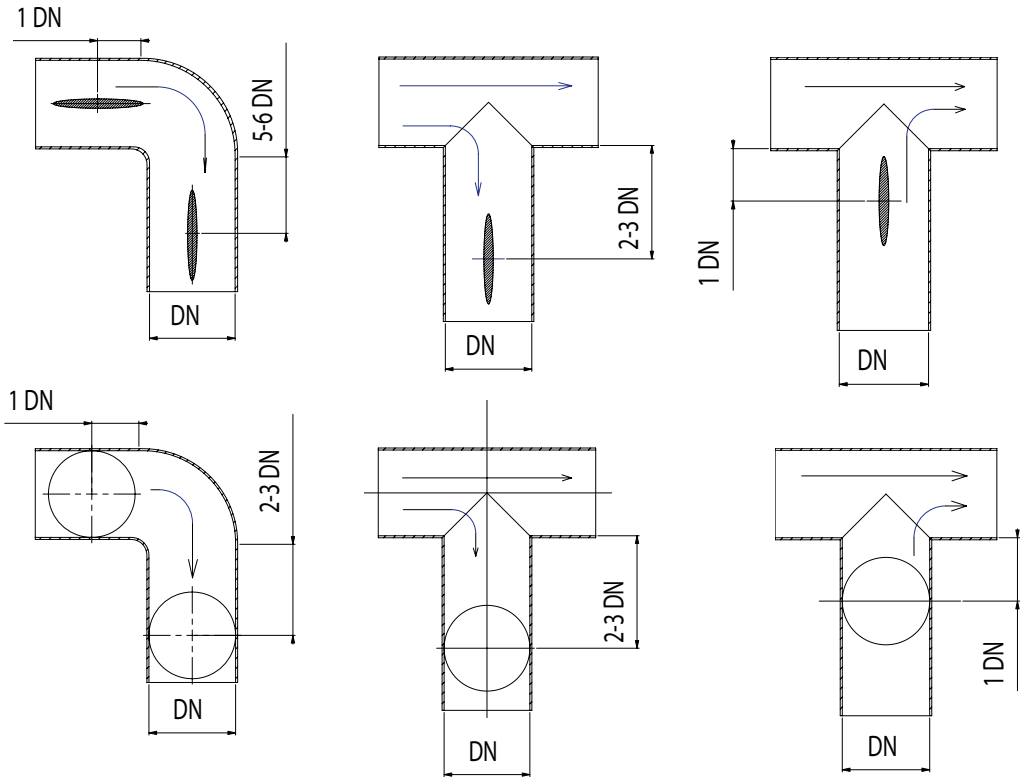
The valve is a machined piece of equipment and must not be used to prise apart the flanges.

An **instruction notice** specifying the installation characteristics and the commission of the Sylax FM-CNPP 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.



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