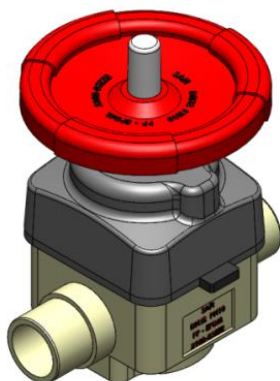
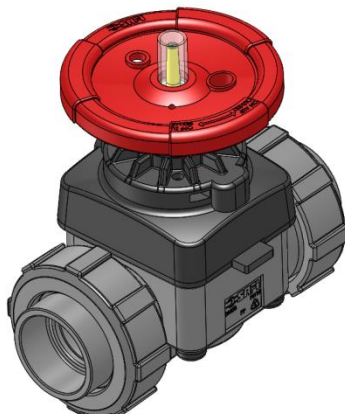


DIAPHRAGM VALVE - DN15 (1/2") to DN50 (2") – PVC-U, PP-H, PVDF

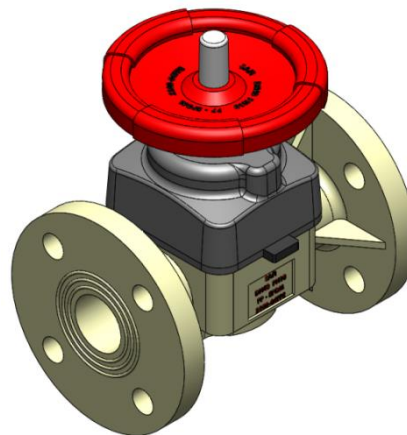
Conform to the 2014/68/EU Directive



DN40 – PP-H
Metric spigot outlets



DN40 – PVC
Double union



DN40 – PP-H
Flanged

MAIN FEATURES

- Optimized pressure drop due to body design.
- Stainless steel mounting inserts designed to support the valve. Same distance between the inserts for all DN.
- Standard handwheel suitable for handle extension and/or locking system.
- EPDM, FPM, or PTFE diaphragm (EPDM backing).
- Color wheel according to diaphragm material (Red= EPDM, Green = FPM, Blue = PTFE).

The design of diaphragm valves does not allow operation under vacuum.

STANDARDS AND APPROVALS



NR320 : Certification scheme of materials and equipment for the classification of marine units

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DIMENSIONS

Metric spigots version

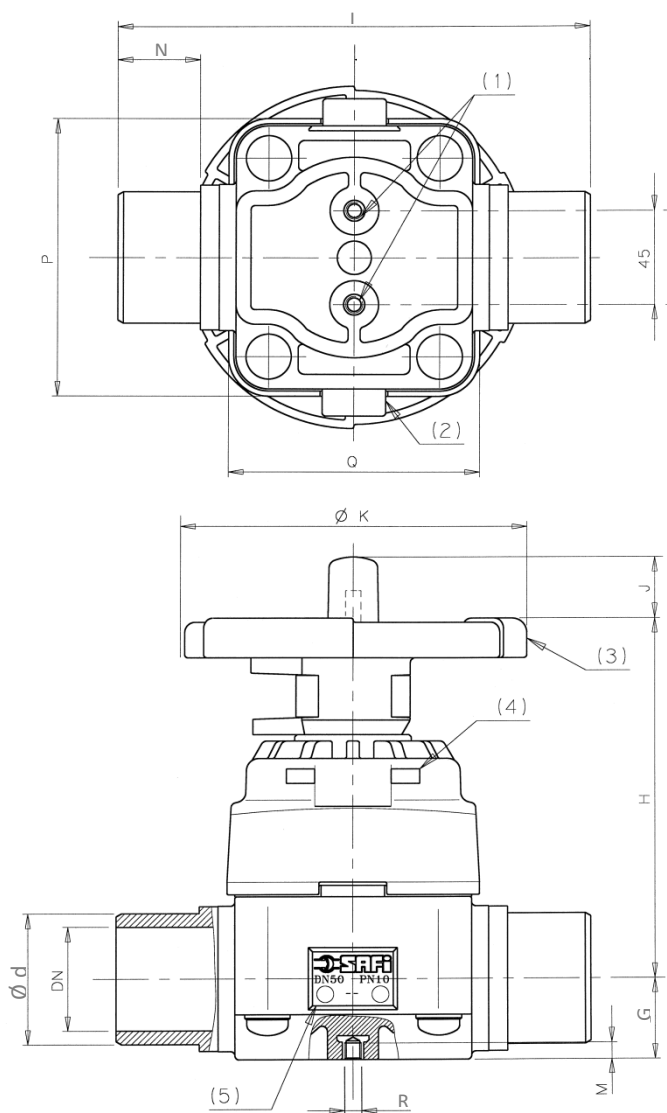


Diagram representing a DN50

												WEIGHT (in Kg)		
DN	Ød	G	H	J	ØK	L	M	N	P	Q	R	PVC-U	PP-H	PVDF
15	20	21,5	120	13	101	124	10	17	91	75	M6	0,76	0,68	0,80
20	25	21,5	120	13	101	144	10	19,5	91	75	M6	0,79	0,70	0,83
25	32	21,5	120	13	101	154	10	23,5	91	75	M6	0,80	0,71	0,85
32	40	32	142	25	139	174	8	27	110	101	M8	1,50	1,32	1,61
40	50	32	142	25	139	194	8	32	110	101	M8	1,56	1,34	1,66
50	63	39	175	30	163	224	8	39	137	123	M8	2,80	2,4	3,02

Double union version + Female socket

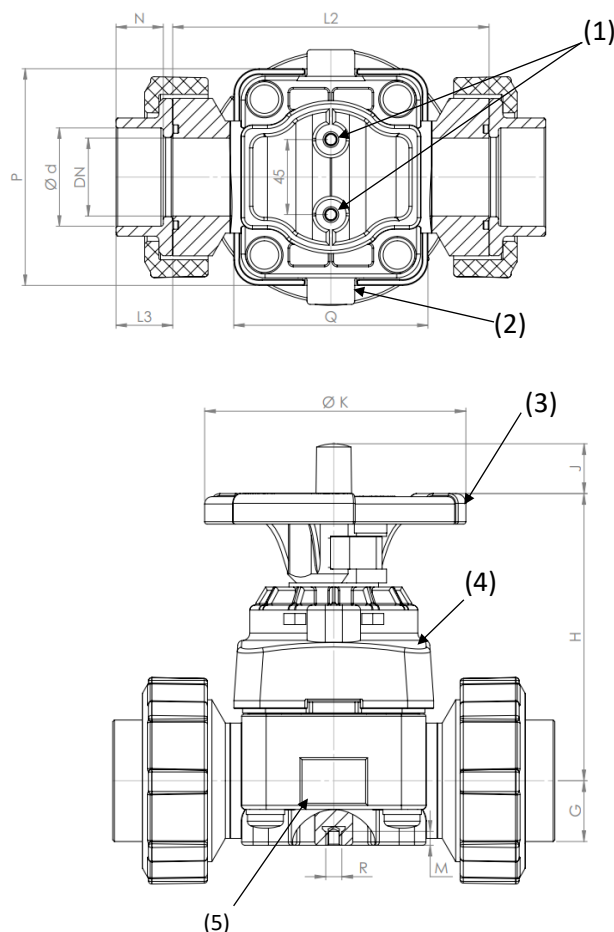
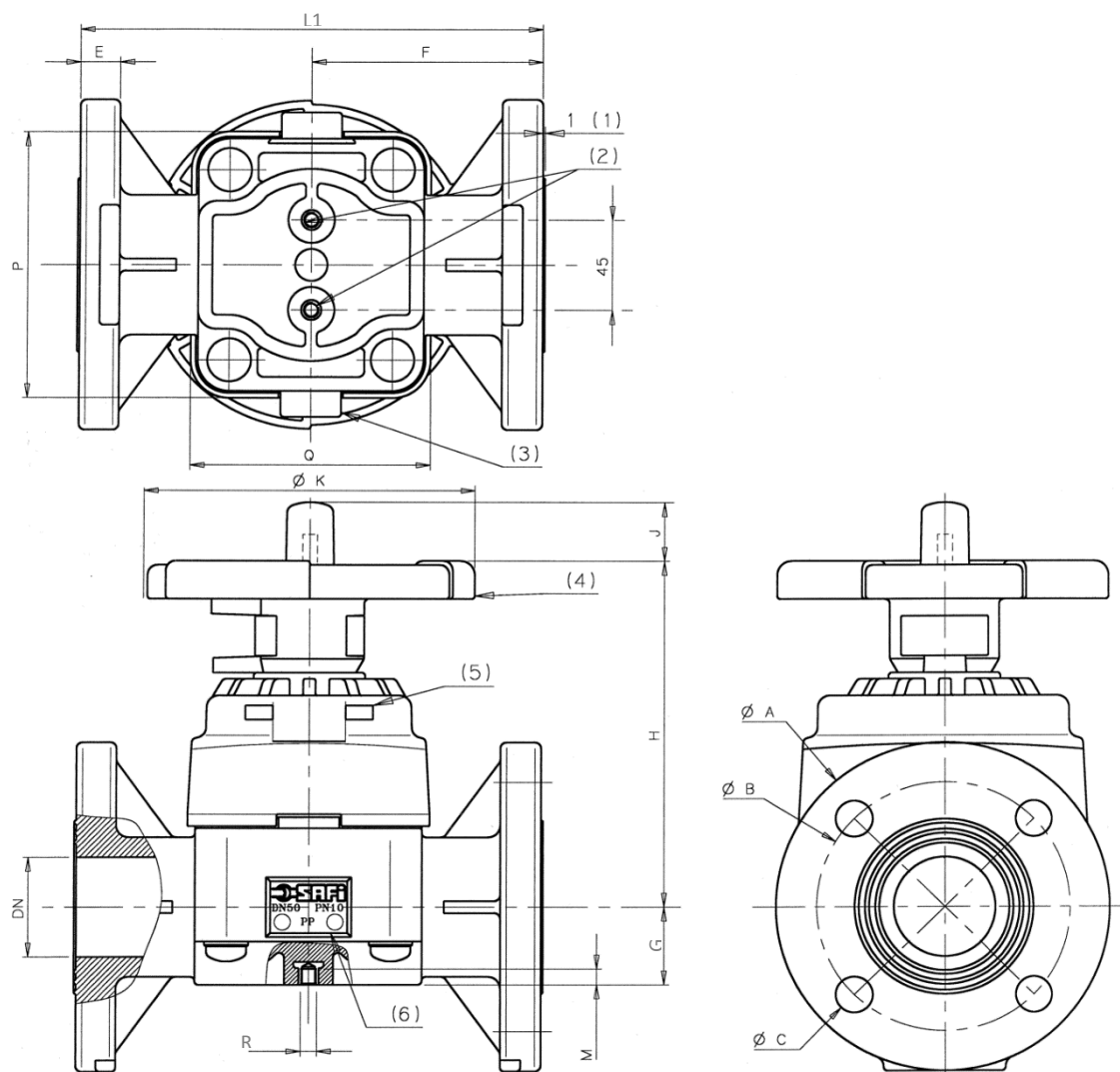


Diagram representing a DN50

D N		Ød	PVC-U			PP-H						PVDF		
			Metric Socket		L2	Metric Socket		Metric Spigot	Threaded socket		L2	Metric Socket		L2
N	L3	N	L3	N	L3	L3	N	L3	N	L3				
15	20	16,5	22,5	135	17	21	49,5	17,5	22,5	134	17	21,5	133	
20	25	20	25,5	132	18	22,5	49,5	20,5	25,5	129	18	22,5	130	
25	32	23,5	28	133	20	24	49	22	29	132	20	24,5	131	
32	40	27,5	32	166	22	27	49	24	30	165	22	26	164	
40	50	24,5	32	178	25	30,5	48	24	31	177	25	31	175	
50	63	24,5	34,5	198	29,5	35,5	48	24	32,5	196	29,5	36	194	

DN									WEIGHT (in Kg)		
	H	J	ØK	G	M	P	Q	R	PVC-U	PP-H	PVDF
15	120	13	101	21,5	10	91	75	M6	0,85	0,83	0,94
20	120	13	101	21,5	10	91	75	M6	0,87	0,84	1,03
25	120	13	101	21,5	10	91	75	M6	0,90	0,91	1,09
32	142	25	139	32	8	110	101	M8	1,80	1,60	1,99
40	142	25	139	32	8	110	101	M8	1,96	1,85	2,21
50	175	30	163	39	8	137	123	M8	2,90	3,00	3,87

Flanged Version



NOTE: Our flanged valve body, designed as one-piece body, requires imperatively the use of bolts with adapted lengths for the connection. Using flat washers is highly recommended.

The optimum tightening for the bolts of the flanges is obtained at a torque of 10 to 20 N.m.

DN	ØA	ØB			ØC			E	F	L1			H	J	ØK	G	M	P	Q	R
		DIN	ANSI	BS	DIN	ANSI	BS			PVC-U	PP-H	PVDF								
15	95	65	60	-	14	16	-	14	65	131	131	130,5	120	13	101	21,5	10	91	75	M6
20	105	75	70	-	14	16	-	16	75	151	150	150	120	13	101	21,5	10	91	75	M6
25	115	85	79,5	82	14	16	14	16	80	162	161	160,5	120	13	101	21,5	10	91	75	M6
32	140	100	89	87,3	18	16	14	18	90	181	181	180	142	25	139	32	8	110	101	M8
40	150	110	98,4	98,4	18	16	14	18	100	201	201	200	142	25	139	32	8	110	101	M8
50	165	125	120,6	114,3	18	19	18	20	115	232	231	230	175	30	163	39	8	137	123	M8

DIN = Drilling in accordance with EN1092-1 PN10/PN16

ANSI = Drilling in accordance with ASME B16.5 CLASS 150

DN	WEIGHT (in Kg)		
	PVC-U	PP-H	PVDF
15	1,02	0,84	1,02
20	1,14	0,92	1,27
25	1,22	0,97	1,32
32	2,2	1,76	2,5
40	2,3	1,84	2,7
50	3,9	3,09	4,4

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PARTS LIST

Metric spigots version

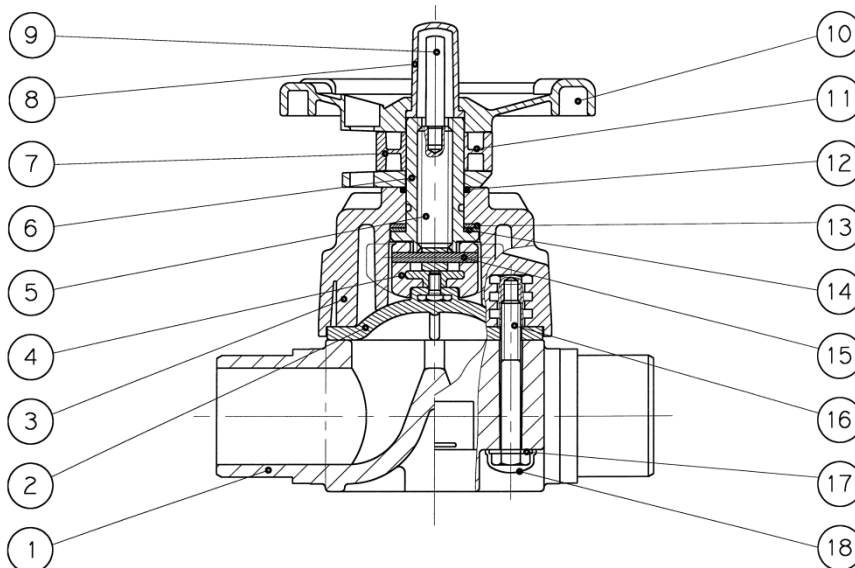


Diagram showing a DN50

ITEM	No	DESCRIPTION	MATERIAL
1	1	VALVE BODY WITH DIN METRIC SPIGOTS	PVC-U, PP-H, PVDF
		VALVE BODY WITH BS SPIGOTS	PVC-U, PP-H, PVDF
2	1	EPDM DIAPHRAGM	EPDM
		FPM DIAPHRAGM	FPM
		PTFE DIAPHRAGM WITH EPDM BACKING	PTFE + EPDM
3	1	BONNET	PPGF
4	1	DIAPHRAGM COMPRESSOR	PPGF
5	1	DIAPHRAGM COMPRESSOR SCREW	STEEL
6	1	GUIDE RING	BRASS
7	1	HANDLE KEY	PPGF
8	1	TRANSPARENT CAP	PC
9	1	VISUAL POSITION INDICATOR	PP-H
10	1	RED WHEEL (FOR EPDM DIAPHRAGM)	PP-H
		GREEN WHEEL (FOR FPM DIAPHRAGM)	PP-H
		BLUE WHEEL (FOR PTFE DIAPHRAGM)	PP-H
11	1	LOCKING CLIP	PPGF
12	1	O'RING	EPDM
13	1	FIXED WASHER	-
14	1	FLOATING WASHER	-
15	1	SPLIT IN	STEEL
16	4	FIXING SCREW	SS 316
17	4	FLAT WASHER	SS 316
18	4	PROTECTING CAP	PE

Double union version + Socket

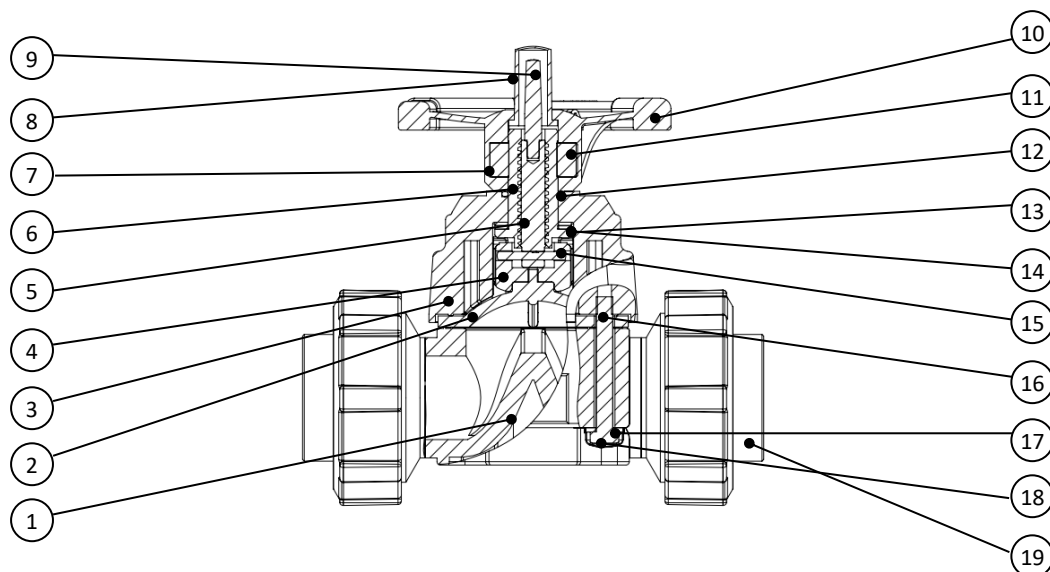


Diagram showing a DN50

ITEM	No	DESCRIPTION	MATERIAL
1	1	VALVE BODY WITH DIN FUSION SPIGOTS	PVC-U, PP-H, PVDF
2	1	EPDM DIAPHRAGM	EPDM
		FPM DIAPHRAGM	FPM
		PTFE DIAPHRAGM WITH EPDM BACKING	PTFE + EPDM
3	1	BONNET	PPGF
4	1	DIAPHRAGM COMPRESSOR	PPGF
5	1	DIAPHRAGM COMPRESSOR SCREW	STEEL
6	1	GUIDE RING	BRASS
7	1	HANDLE KEY	PPGF
8	1	TRANSPARENT CAP	PC
9	1	VISUAL POSITION INDICATOR	PP-H
10	1	RED WHEEL (FOR EPDM DIAPHRAGM)	PP-H
		GREEN WHEEL (FOR FPM DIAPHRAGM)	PP-H
		BLUE WHEEL (FOR PTFE DIAPHRAGM)	PP-H
11	1	LOCKING CLIP	PPGF
12	1	O-RING	EPDM
13	1	FIXED WASHER	-
14	1	FLOATING WASHER	-
15	1	SPLIT IN	STEEL
16	4	FIXING SCREW	SS 316
17	4	FLAT WASHER	SS 316
18	4	PROTECTING CAP	PE
19	2	PVC SOLVENT FEMALE SOCKET	PVC-U
		PP-H FUSION FEMALE SOCKET	PP-H
		PP-H FUSION SPIGOT	PP-H
		PP-H THREADED SOCKET	PP-H
		PVDF FUSION FEMALE SOCKET	PVDF

As standard, PTFE Diaphragm Valves are supplied with EPDM O-rings. On request, they can be delivered in FPM.

Flanged Version

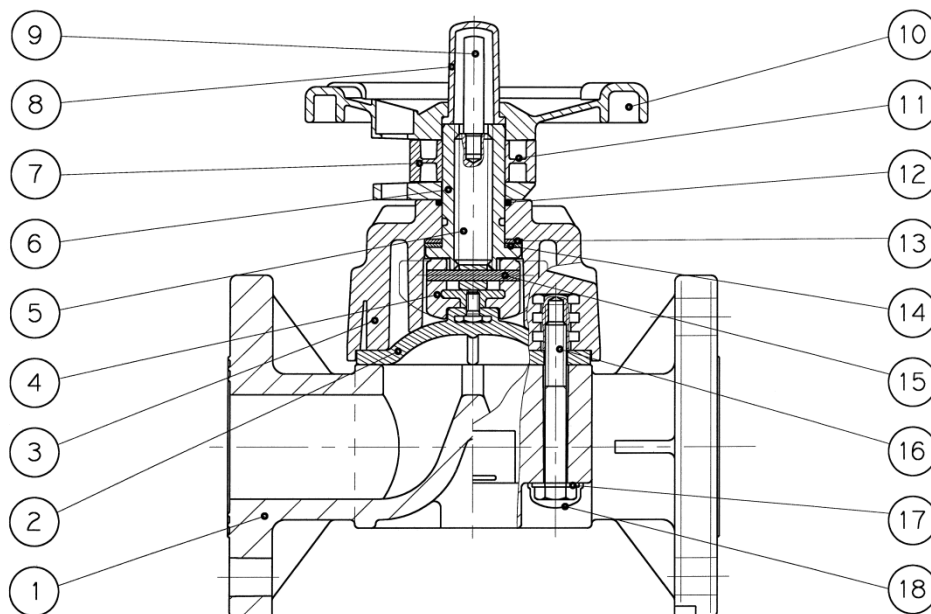
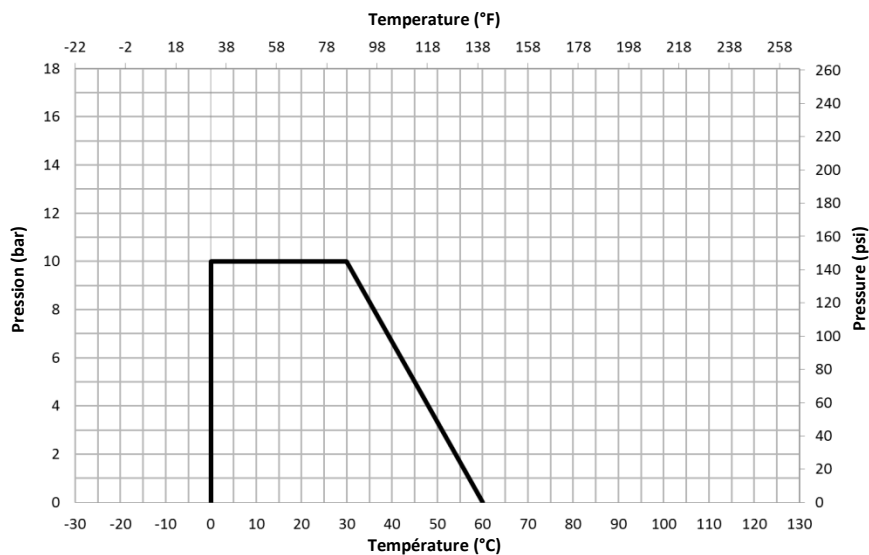


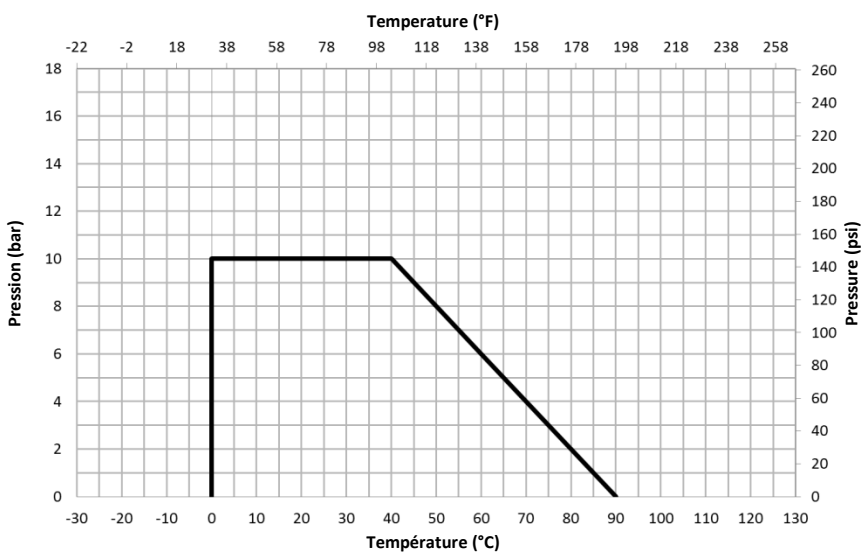
Diagram showing a DN50

ITEM	No	DESCRIPTION	MATERIAL
1	1	DIN FLANGED VALVE BODY	PVC-U, PP-H, PVDF
		ANSI FLANGED VALVE BODY	PVC-U, PP-H, PVDF
		BS FLANGED VALVE BODY	PVC-U, PP-H, PVDF
2	1	EPDM DIAPHRAGM	EPDM
		FPM DIAPHRAGM	FPM
		PTFE DIAPHRAGM WITH EPDM BACKING	PTFE + EPDM
3	1	BONNET	PPGF
4	1	DIAPHRAGM COMPRESSOR	PPGF
5	1	DIAPHRAGM COMPRESSOR SCREW	STEEL
6	1	GUIDE RING	BRASS
7	1	HANDLE KEY	PPGF
8	1	TRANSPARENT CAP	PC
9	1	VISUAL POSITION INDICATOR	PP-H
10	1	RED WHEEL (FOR EPDM DIAPHRAGM)	PP-H
		GREEN WHEEL (FOR FPM DIAPHRAGM)	PP-H
		BLUE WHEEL (FOR PTFE DIAPHRAGM)	PP-H
11	1	LOCKING CLIP	PPGF
12	1	O'RING	EPDM
13	1	FIXED WASHER	-
14	1	FLOATING WASHER	-
15	1	SPLIT IN	STEEL
16	4	FIXING SCREW	SS 316
17	4	FLAT WASHER	SS 316
18	4	PROTECTING CAP	PE

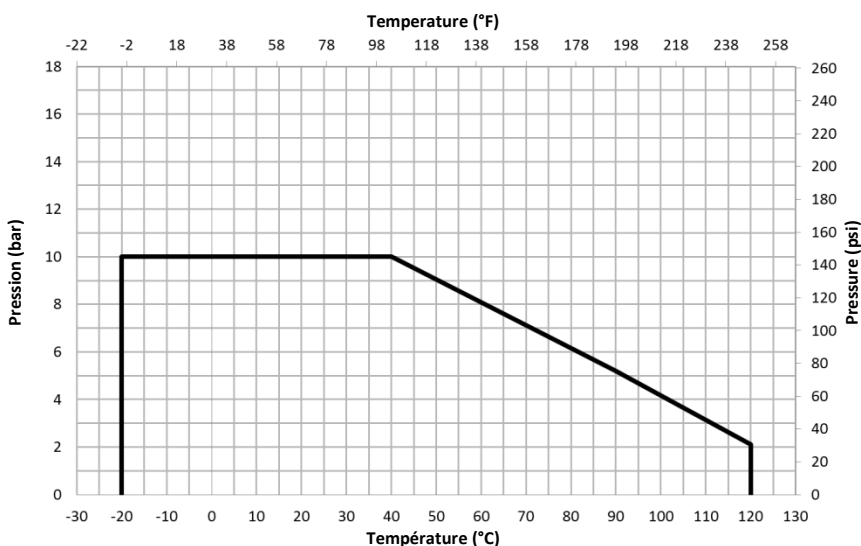
PRESSURE / TEMPERATURE CURVES



PVC-U



PP-H



PVDF

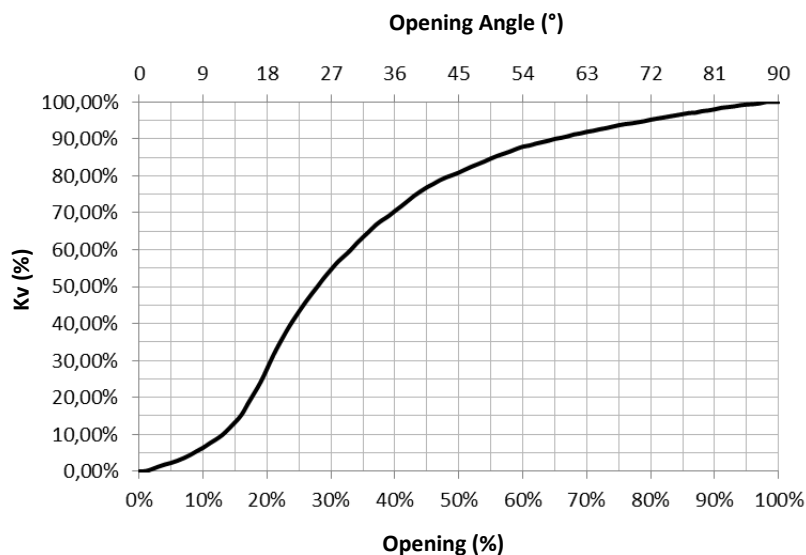
Pressure/Temperature Summary

Diaphragm	Working Pressure	Working Temperature		
		PVC-U	PP-H	PVDF
EPDM / FPM / PTFE	10 bars at 20°C	0°C to + 60°C	0°C to + 90°C	-20°C to +120°C
FPM	10 bars at 20°C	0°C to + 60°C	0°C to + 90°C	-20°C to +120°C
PTFE	10 bars at 20°C	0°C to + 60°C	0°C to + 90°C	-20°C to +120°C

The mechanical characteristics of the FPM and FFPM seals subjected to an ambient temperature below -5°C require the implementation of proper insulation on the valves equipped with such seals. Contact us for more information.

PRESSURE LOSS

DN	Kv (m ³ /h)
15	6,1
20	9,4
25	12,2
32	24,3
40	29,3
50	45,8



Our valves are guaranteed for an average fluid velocity in the pipeline of ≤ 2 m/s. Please contact us with the working conditions for any higher speed.

CHEMICAL RESISTANCE

The chemical resistance of the valve is subject to the type of fluid, the temperature, the pressure, as well as the materials and seals of the valve.

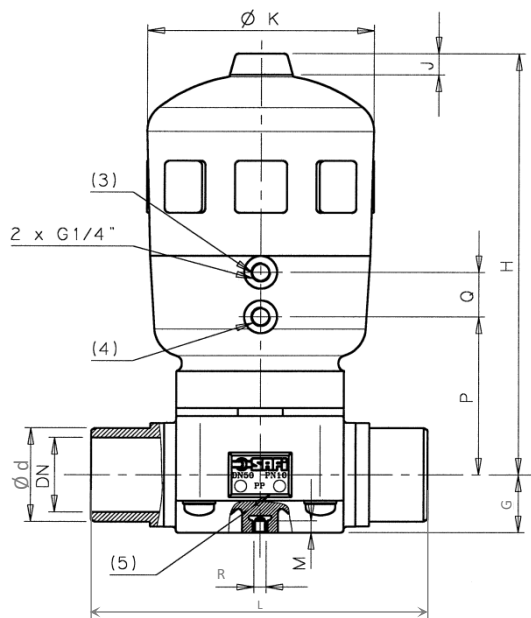
Please contact us to have a personalized analysis of the resistance of one of our products to a given fluid

You can also consult, for information only, the table given in ISO 10358. However, this table cannot be considered as a recommendation by SAFI who could not be held liable for the use of this document.

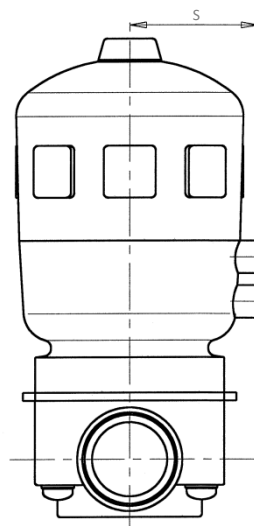
Necessary operations and torques for closing the valve

DN	d	Numbers of handle turns to close the valve	Closing torque (N.m)		
			EPDM diaphragm	FPM diaphragm	PTFE diaphragm
DN15	20	4 ½	6	7	8
DN20	25	4 ½	6	7	8
DN25	32	4 ½	6	7	8
DN32	40	7 ¼	19	21	20
DN40	50	7 ¼	19	21	20
DN50	63	7 ¼	24	26	32

OPTION: PNEUMATIC ACTUATION

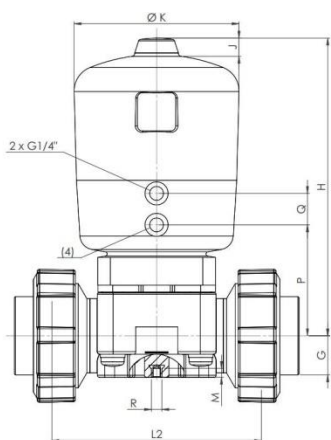


Metric spigot version

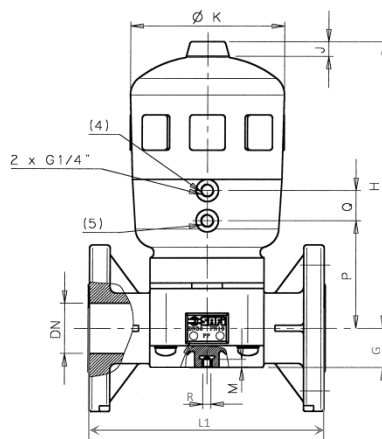
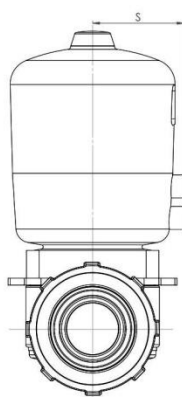


(3) Input supply for the closure of a normally open and double acting valve

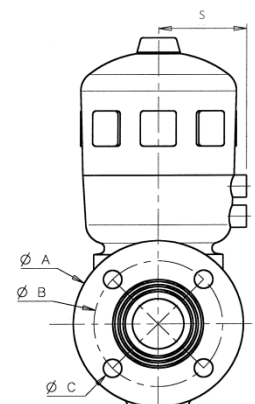
(4) Input supply for the closure of a normally closed and double acting valve



Double union version + Socket



Flanged version



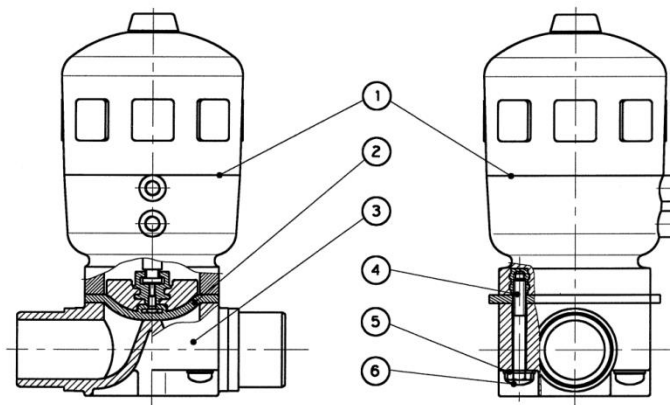
		ACTUATOR																	
		DIMENSIONS									WEIGHT (in kg)			PRODUCT CODE					
DN	Type	G	H	J	ØK	M	P	Q	R	S	NC	NO	DA	NC	NO	DA	L	L1	L2
15	NC, NO, DA	21,5	174	11	101	10	64	24	M6	60	1,5	0,9	0,9	B08NF-02	B08NO-02	B08DE-02	See page 2	See page 4	See page 3
20	NC, NO, DA	21,5	174	11	101	10	64	24	M6	60	1,5	0,9	0,9	B08NF-02	B08NO-02	B08DE-02			
25	NC, NO, DA	21,5	174	11	101	10	64	24	M6	60	1,5	0,9	0,9	B08NF-02	B08NO-02	B08DE-02			
32	NC, NO, DA	32	236	14	127	8	89	24	M8	73	3	2	2	B10NF-04	B10NO-04	B10DE-04			
40	NC, NO, DA	32	236	14	127	8	89	24	M8	73	3	2	2	B10NF-04	B10NO-04	B10DE-04			
50	NC	39	283	14	153	8	105	30	M8	86	3	2	2	B12NF-05	-	-			
50	NO, DA	39	245	14	127	8	98	24	M8	73	5,5	2,5	2,5	-	B10NO-05	B10DE-05			

NC = Normally Closed

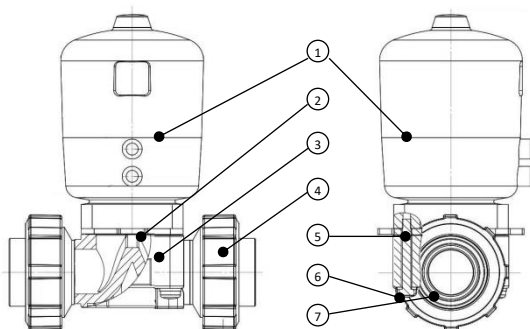
NO= Normally Open

DA = Double Acting

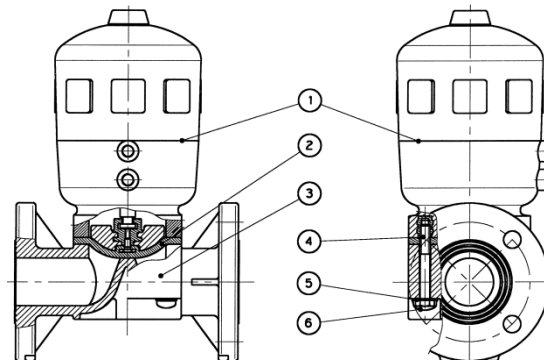
Parts List – Actuated Version



Metric spigot version



Double union version + Socket



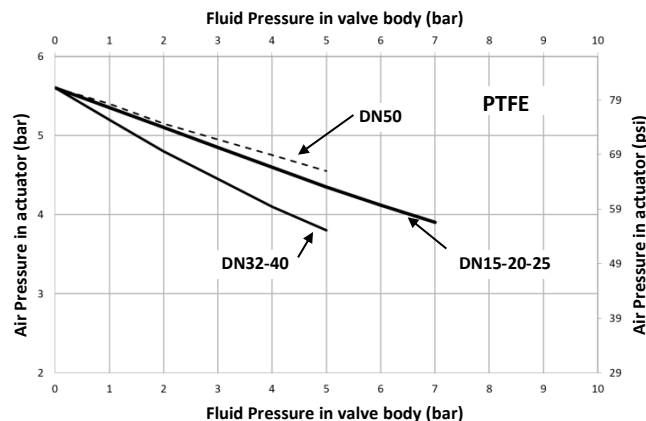
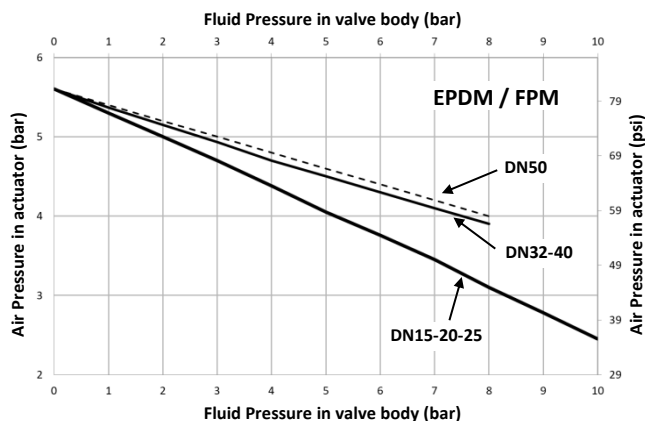
Flanged version

ITEM	No	DESCRIPTION	MATERIAL
1	1	Pneumatic Actuator NC (Normally Closed)	POLYAMIDE FIBREGLASS
		Pneumatic Actuator NO (Normally Open)	POLYAMIDE FIBREGLASS
		Pneumatic Actuator DE (Double Acting)	POLYAMIDE FIBREGLASS
2	1	Diaphragm	EPDM, FPM, PTFE
3	1	Valve body	PVC-U, PP-H, PVDF
4	4	Screw	SS 316
5	4	Flat washer	SS 316
6	4	Protection cap	PE
7	2	Union end	PVC-U, PP-H, PVDF

NORMALLY CLOSE (NC) VERSION

REQUIRED AIR PRESSURE FOR THE VALVE TO BE FULLY OPEN ACCORDING TO THE LINE PRESSURE

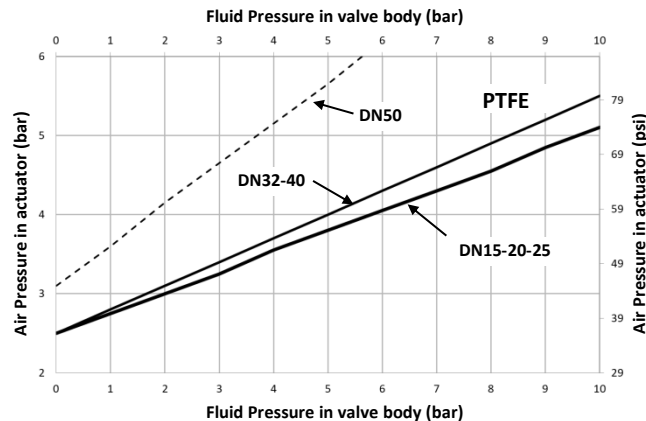
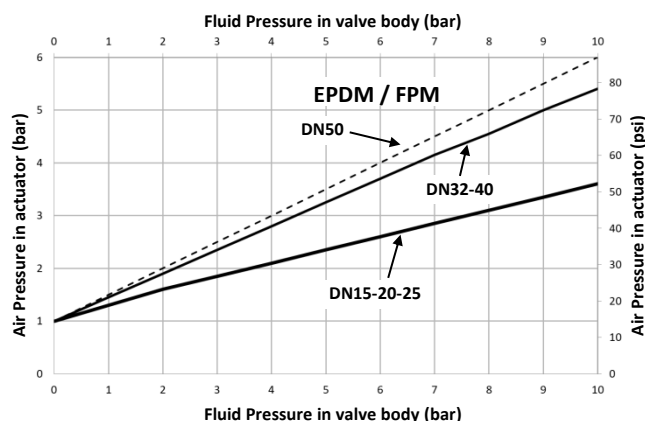
*MAX ALLOWED OPERATING PRESSURE for the actuator = 7 bars



NORMALLY OPEN (NO) VERSION

REQUIRED AIR PRESSURE FOR THE VALVE TO BE FULLY OPEN ACCORDING TO THE LINE PRESSURE

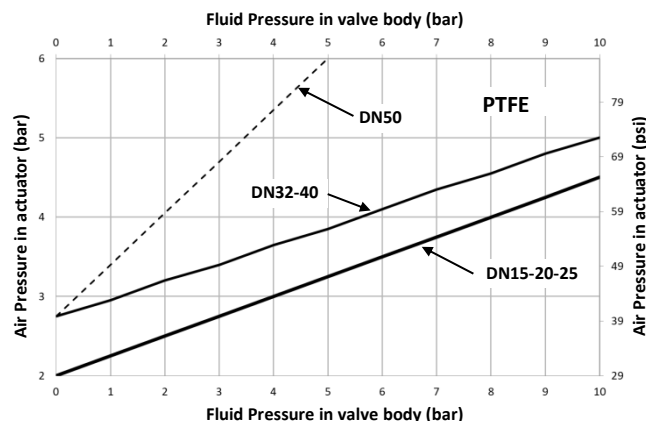
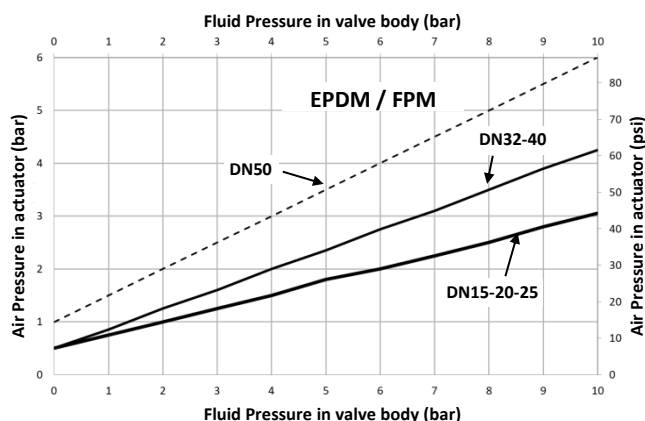
*MAX ALLOWED OPERATING PRESSURE for the actuator = 7 bars



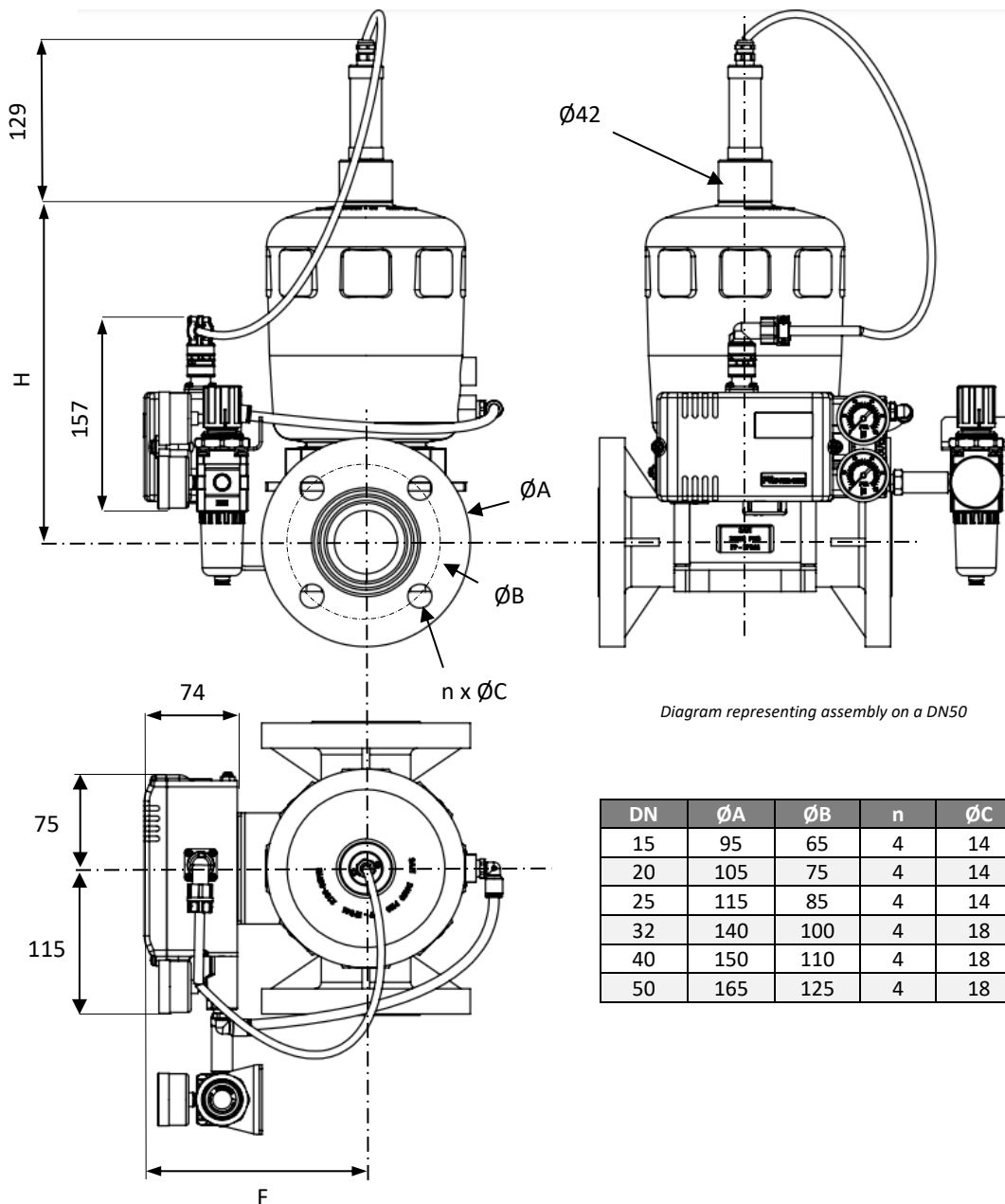
DOUBLE ACTING (DA) VERSION

REQUIRED AIR PRESSURE FOR THE VALVE TO BE FULLY OPEN ACCORDING TO THE LINE PRESSURE

*MAX ALLOWED OPERATING PRESSURE for the actuator = 7 bars



OPTION: POSITIONER



DN	ØA	ØB	n	ØC	F	H
15	95	65	4	14	141	163
20	105	75	4	14	141	163
25	115	85	4	14	141	163
32	140	100	4	18	155	222
40	150	110	4	18	155	222
50	165	125	4	18	165	269

Positioner:

- Operating voltage : 24V DC
- Input control signal (regulation of position or process): 4-20 mA; (0-20 mA by software).
- Weight: 1.6 kg approx. (3.53 lb).
- Protection : IP 65, Intrinsically safe Ex ia IIC T6/T5
- Operating temperature: 0 à 60°C (32 to 140°F).

Connections and others features:

Electric

- Voltage supply : 24 VDC
- Connection: PT 1/2, NPT 1/2, M20 x 1.5

Pneumatic

- Air type: dry filtered air, non-lubricated to comply with class 3 / ISO 8573-1
- Air inlet pressure : 3-7 bar
- Output pressure : 0-100% of supply pressure
- Connections : PT $\frac{1}{4}$, NPT $\frac{1}{4}$

Options

- Communication : HART, Profibus PA, Fieldbus
- Positioner operating temperature: -40°C on request
- Pneumatic connections : other than standard on request
- Cable length: 3, 5, 10, 15m, other on request

OPTION: LOCKING SYSTEM

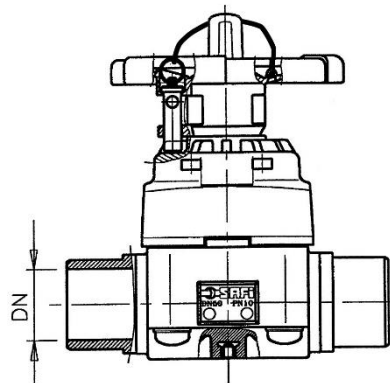
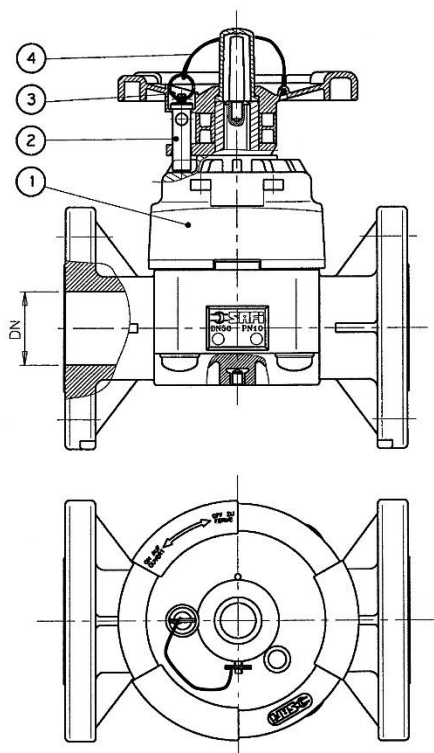


Diagram representing assembly on a DN50

ITEM	N°	DESCRIPTION	MATERIAL	PRODUCT CODE					
				DN15	DN20	DN25	DN32	DN40	DN50
1	1	Diaphragm valve DN15 to DN50	PVC-U/PP-H/PVDF	2x00 Series					
2	1	Locking Stem*	SS 304	2150-04A				2150-05A	
3	2	Clamp ring	SS 304	2006-08J					
4	1	Lanyard	Santoprène	CODIY0012					
2+3+4		Locking kit	-	2150-04AA				2150-05AA	

*For a padlock wire with a diameter of 7mm

Locking system in SS 316: Contact us.

OTHER AVAILABLE OPTIONS

- Extended handle
- Limit switch box with inductive or mechanical switches.
- Electrical feedback signal; only one position detected.
- External magnetic inductive position feedback.
- Stroke limit device to set position when open, exclusive for a normally closed valve.
- Stroke limit device upper and lower stroke limitation with manual over-ride for both open and closed position and visual position indicator.
- SS Namur base.
- Manual over-ride with visual position indicator, exclusive for a normally closed valve.

Contact us, for more information on the Available Options.

DETERMINING A PRODUCT CODE

TYPE	MATERIAL	SPECIFICATION		DN	Fitting (Inlet)	Connection (Outlet)	Diaphragm
2 = Diaphragm valve	10 = PP-H 20 = PVDF 30 = PVC-U	0 = Manual 7 = Pneumatic DA 8 = Pneumatic NO 9 = Pneumatic NC	-	00 = DN15 01 = DN20 02 = DN25 03 = DN32 04 = DN40 05 = DN50	B = PVC-U DIN Metric plain socket C = Metric plain socket (same material as body) F = Flanges with drilling in accordance with EN 1092-1 PN10/PN16 (DIN) G = Flanges with drilling in accordance with EN1759-1/ASME B16.5 Class 150 (ANSI) Z = Metric spigot (same material as body)	B = PVC-U DIN Metric plain socket C = Metric plain socket (same material as body) F = Flanges with drilling in accordance with EN 1092-1 PN10/PN16 (DIN) G = Flanges with drilling in accordance with EN1759-1/ASME B16.5 Class 150 (ANSI) Z = Metric spigot (same material as body)	E = EPDM Z = FPM (SAFKM5) P = PTFE DIAPHRAGM WITH EPDM BACKING

Example: 2300-05BBE

2	30	0	-	05	B	B	E
Diaphragm Valve	PVC-U	Manual	-	DN50	Double union, PVC-U metric socket	Double union, PVC-U metric socket	EPDM

Example: Diaphragm Valve + LOCKING SYSTEM: 2300-05BBE + 2150-05AA

2300-05BBE	+	2150-05AA
PVC-U Manual Diaphragm valve DN50 Double union, PVC-U metric socket EPDM	+	LOCKING SYSTEM for a DN50

Example: Diaphragm valve + PNEUMATIC ACTUATOR, SINGLE ACTING, NORMALLY CLOSED: 2309-05BBE

2	30	9	-	05	B	B	E
Diaphragm Valve	PVC-U	Pneumatic NC	-	DN50	Double union, PVC-U metric socket	Double union, PVC-U metric socket	EPDM