

## DN15 – DN200 resp. 1/2" – 8"

SDV Diaphragm Valves are ideally suited for Shut-off, Flow Control and Throttling of corrosive and abrasive process media in either liquid or gaseous state.

### Modular Design

Diaphragm Valves SDV Series are available as DIN- or ANSI-Valves, with handwheel for manual operation as per standard.

The sturdy design bodies are made of cast steel 1.0619 (WCB), epoxy coating RAL 5005 signal-blue or stainless steel casting 1.4408 (CF-8M), with resistant linings such as PFA or PFA-AS (conductive).

Proven PTFE/EPDM-diaphragms assure faultless closing function at any time.



### Main Features

- Heavy-duty, robust construction, maintenance-free
- Bubble-tight shut-off throughout the full pressure and temperature range
- Spindle protected against atmospheric corrosion
- Force limiting device protecting diaphragm from cold flow and other deformations, high life cycle
- Yellow sight indicator showing actual position of diaphragm
- Easy replacement of components on site
- Flanges acc. to DIN PN10/16 resp. ANSI 150lbs for installation into existing piping systems

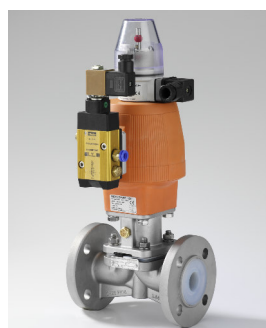
 **Conformity according to European Pressure Equipment Directive 97/23/EC (PED)**

### Options



#### Sliding Spindle

Body 1.0619/PFA, for external actuators



#### Automated Valve

Body CF-8M/PFA, with pneum. actuator, el. position indicator and solenoid valve



#### Limit Switch Box



#### Safety Padlock

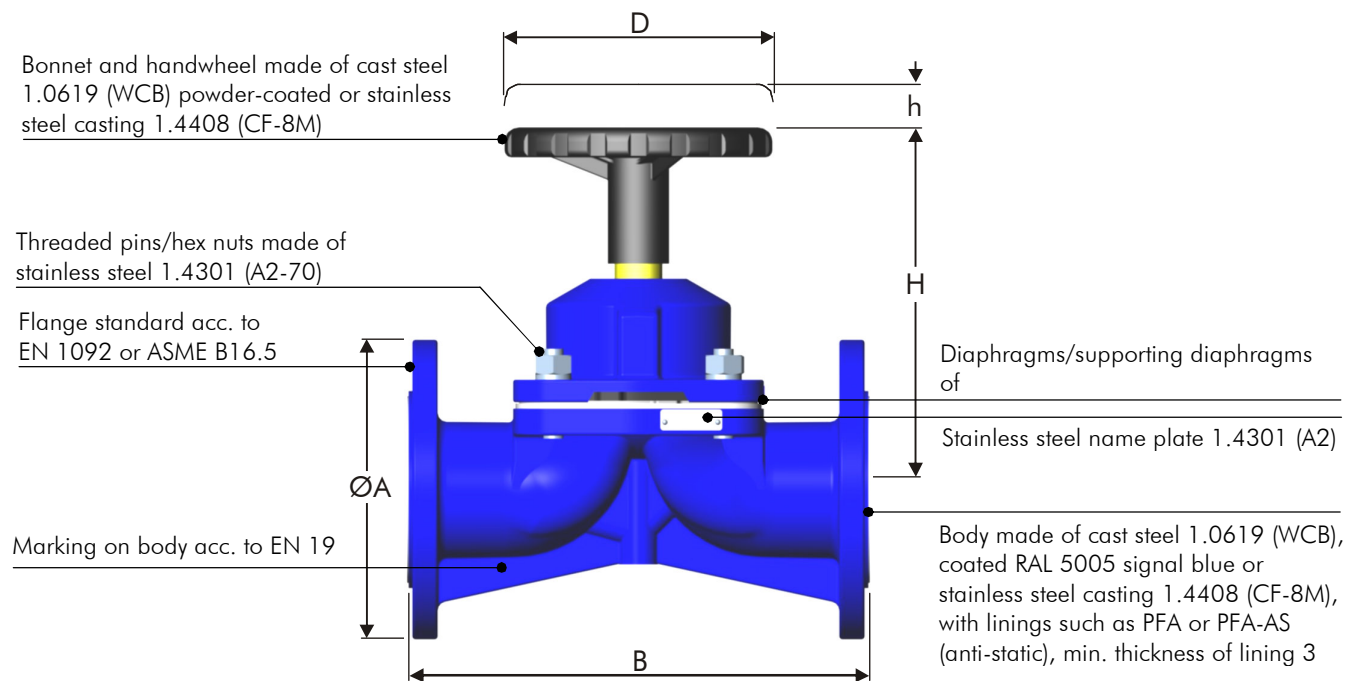
### Operating Conditions

- Temperature range from  $-30^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$ ) up to  $+150^{\circ}\text{C}$  ( $+302^{\circ}\text{F}$ ), depending on lining material
- Pressure range from 13.33 mbar (0.19 psi) up to 16 bar (232 psi), depending on size

### Testing / Marking

- Pressure- and tightness testing acc. to EN 12266-1, leakage rate A, resp. API 598.
- Marking of valves on body and name plate acc. to EN 19.
- Material- resp. test certificates acc. to EN 10204-3.1/2.2/2.1

### Construction of Valve



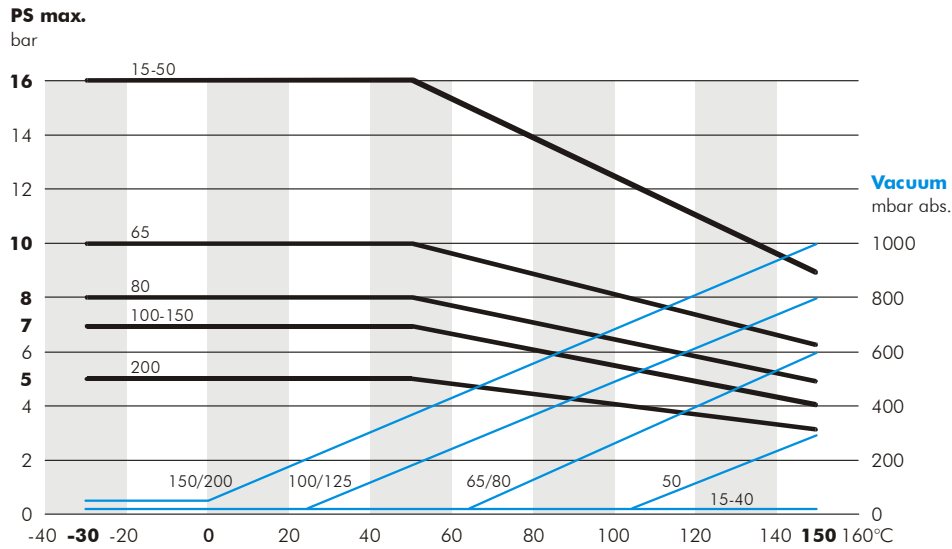
### Technical Data

Dimensions in mm (usg/min. =  $\text{m}^3/\text{hr} \times 1.16$ ) (psi = bar/0.0689)

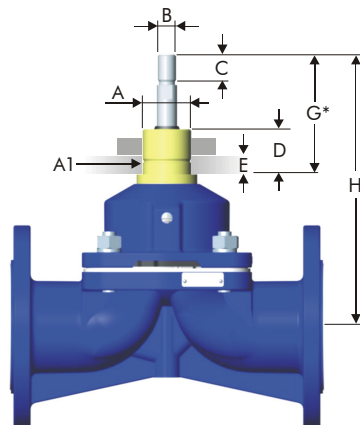
DN Size nom.	ØA DIN	ØA ANSI	B DIN	B ANSI	D	H	h Stroke	Revol. per stroke	kg DIN	kg ANSI	PS max. bar	Kv-Value max. ( $\text{m}^3/\text{hr}$ )
15/1/2"	95	95	130	130	85	115	8	4.5	2.5	2.5	16	7.8
20/3/4"	105	105	150	150	85	117	8	4.5	3.0	3.0	16	10.0
25/1"	115	108	160	146	85	124	10	5.5	3.8	3.5	16	15.0
32/1/4"	140	140	180	180	85	134	12	7.0	5.2	5.2	16	22.5
40/1/2"	150	127	200	174	120	173	24	12.0	7.4	6.3	16	37.0
50/2"	165	152	230	200	120	186	30	15.0	9.7	9.0	16	65.0
65/2/2"	185	185	290	290	180	208	30	12.0	13.5	13.5	10	95.0
80/3"	200	190	310	260	180	233	34	13.5	18.0	16.9	8	134.0
100/4"	220	229	350	327	250	282	40	13.5	30.0	30.3	7	200.0
125/5"	250	250	400	400	250	345	52	17.5	43.0	43.0	7	320.0
150/6"	285	279	480	416	400	412	60	15.0	66.0	59.5	7	452.0
200/8" <sup>1)</sup>	340	340	600	600	400	489	90	22.5	122.0	122.0	5	650.0

Face to face B acc. to DIN EN 558-1 range 1, ANSI-Valves acc. to MSS SP-88 (1/2", 3/4", 1 1/4", 2 1/2", 5", 8" acc. to EN 558-1 range 1  
<sup>1)</sup> above PS max. 3 bar: supplier to be contacted

### Pressure-/Temperature Diagram



### Options



#### Type Ss

Bonnet with sliding spindle for easy actuation with pneumatic or electric actuators (not suitable for Swissfluid type actuators)



#### Bonnet Type Stroke Actuator

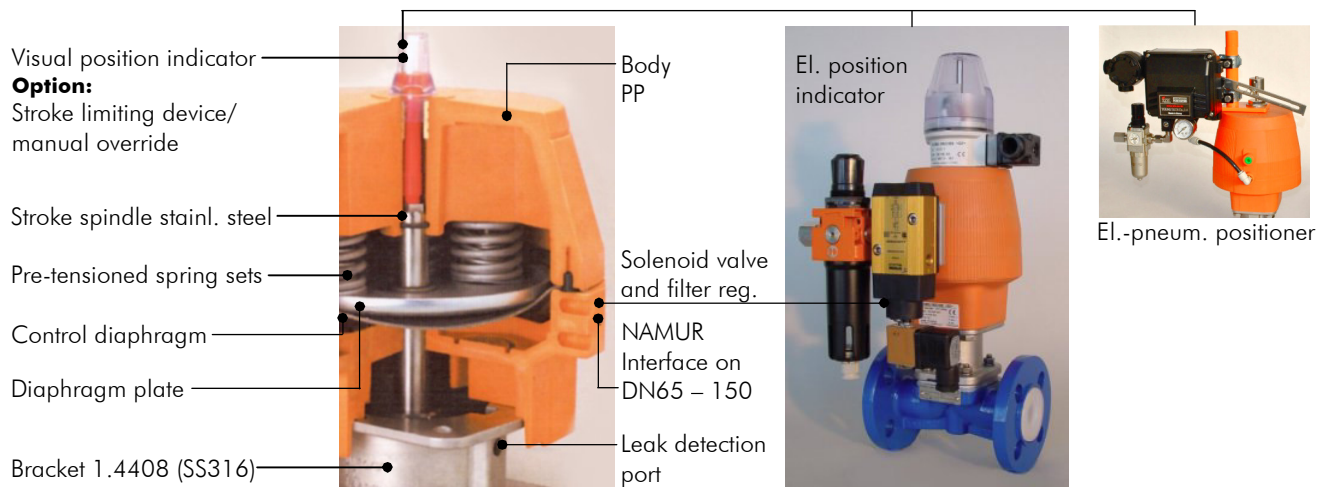
optional with limit switch box and filter regulator, E/P positioner, solenoid valve

### Dimensions in mm (psi = bar/0.0689)

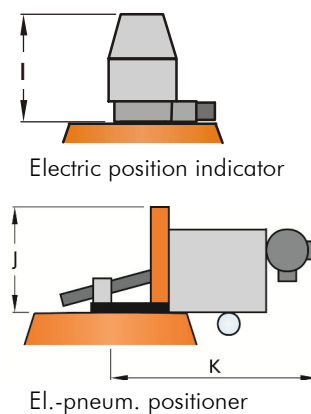
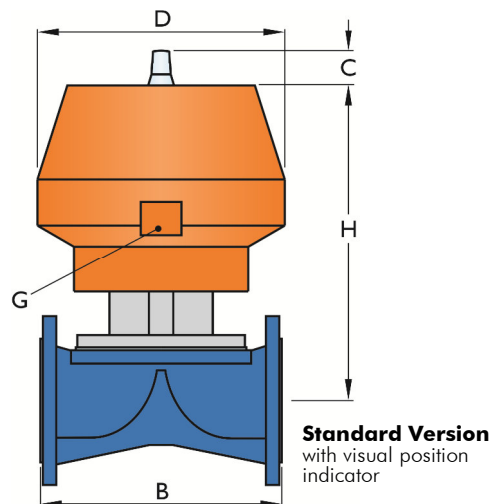
DN Size nom.	A	A1	B	C	D	E	G Valve closed	H	PS max. bar	kN Closing forces
15/1/2"	M30x1.5	32	M12	26	26	10	110	168	16	1.78
20/3/4"	M30x1.5	32	M12	26	26	10	110	170	16	2.27
25/1"	M30x1.5	32	M12	26	26	10	110	179	16	2.82
32/1 1/4"	M30x1.5	32	M12	26	26	10	110	190	16	3.44
40/1 1/2"	M40x1.5	40	M16	28	35	12	110	208	16	4.22
50/2"	M40x1.5	40	M16	28	35	12	110	221	16	5.82
65/2 1/2"	M48x1.5	48	M18x1.5	35	38	12	110	232	10	7.48
80/3"	M48x1.5	48	M18x1.5	35	38	12	110	257	8	8.85
100/4"	M52x1.5	52	M24x2	35	38	12	110	290	7	11.05
125/5"	M52x1.5	52	M24x2	35	38	12	110	305	7	16.53
150/6"	M62x1.5	62	M30x2	35	38	12	110	357	7	32.37
200/8"	M62x1.5	62	M30x2	35	38	12	110	432	5	42.06

Closing Forces in kN at PS max. (lbf = kN x 225)

**Construction of Linear Stroke Actuator** Sectional view and accessories



**Mounting Options** Dimensions in mm (lbs = kg x 2.2) (psi = bar/0.0689)



**Accessories**

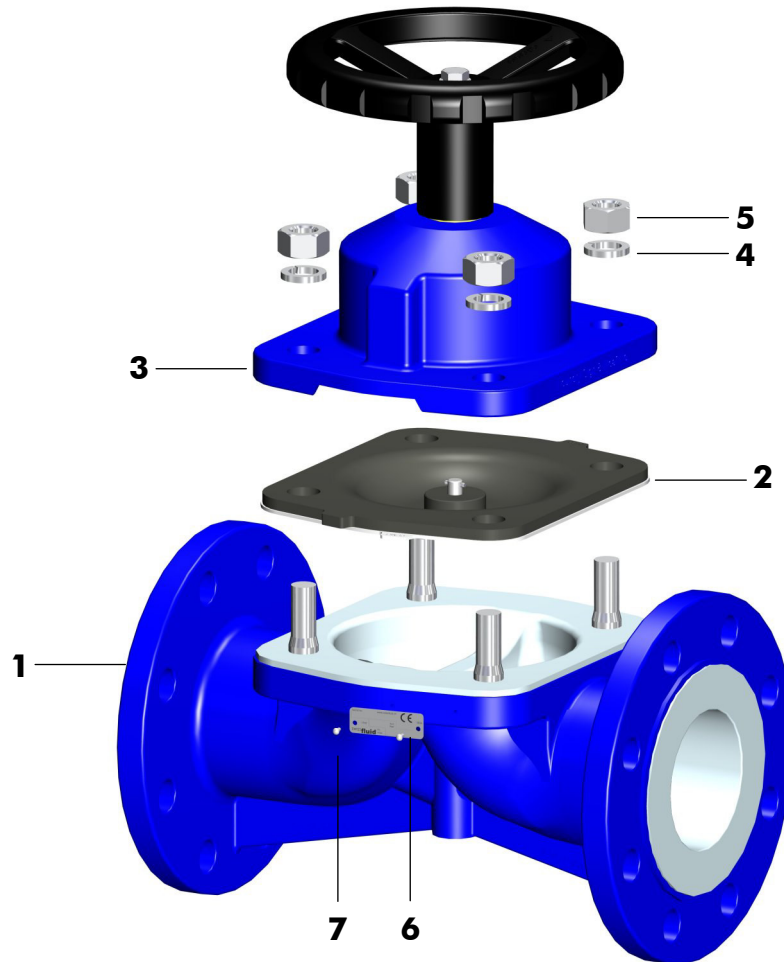
- Electric position indicator
- Adapter mounting kit  
must be applied if valve with stroke limiter and manual override is combined with an electric position indicator
- Stroke limiter/manual override
- Mounting flange kit for el.-pneum. positioner
- Electro-pneum. positioner
- 3/2-way solenoid valve for single-acting actuators
- 5/2-way solenoid valve for double-acting actuators
- Pneum. positioner
- NAMUR adapter plate

DN Size	B DIN	B ANSI	C	D	G	H	I	J	K	kg DIN	kg ANSI
15/1/2"	130	130	22.5	96	1/8"	211	100	160	290	4.8	4.8
20/3/4"	150	150	22.5	96	1/8"	213	100	160	290	5.3	5.3
25/1"	160	146	22.5	96	1/8"	227	100	160	290	6.4	6.1
32/1 1/4"	180	180	35.5	120	1/8"	253	100	160	290	7.8	7.8
40/1 1/2"	200	174	35.5	150	1/4"	284	100	160	290	13.9	12.8
50/2"	230	200	35.5	150	1/4"	302	100	160	290	16.0	15.3
65/2 1/2"	290	290	46	280	1/4"	366	129	160	290	19.8	19.8
80/3"	310	260	46	280	1/4"	373	129	160	290	32.8	31.7
100/4"	350	327	46	335	1/4"	448	129	160	290	46.7	47.0
125/5"	400	400	46	335	1/4"	533	129	160	290	60.0	60.0
150/6"	480	416	46	335	1/4"	620	129	160	290	84.0	77.5
200/8"	600	600	-	-	-	-	-	-	-	-	-

Standard Version w/o stroke limiter and manual override

Parts List  
Manual Valve compl.

**Standard Version** (Picture showing DN 80 PN16, PFA-lined, with handwheel)

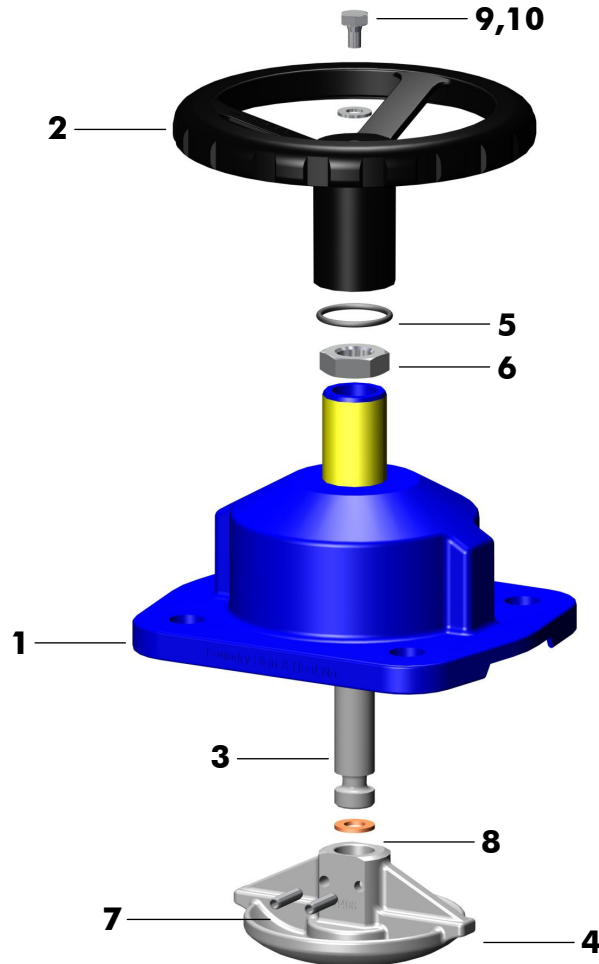


Item	Qty.	Description	Material	No.
1	1	Body PFA-lined, RAL 5005	WCB	1.0619
2	1	Diaphragm complete	PTFE/EPDM	
3	1	Bonnet complete RAL 5005, with handwheel RAL 9004	WCB	1.0619
4	4	Spring Washer	A2	1.4310
5	4	Hex. Nut	A2-70	1.4310
6	1	Name Plate 42 x 14 CE	A2	1.4301
7	2	Hammer Screw 2.49 x 4.76	A2	1.4310

Parts List

Bonnet compl.

**Standard Version** (Picture showing DN 80, with handwheel)



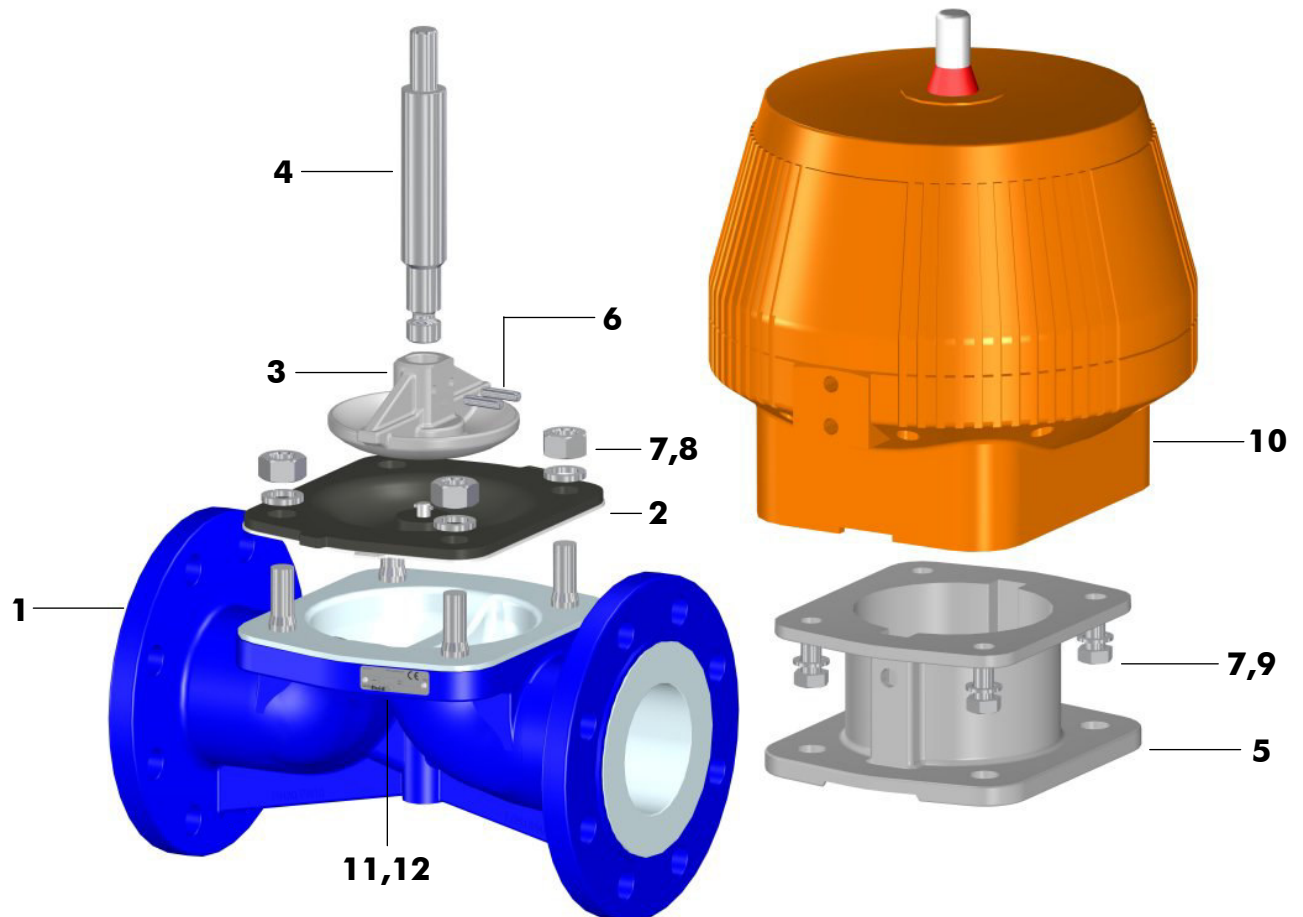
Item	Qty.	Description	Material	No.
1	1	Bonnet, RAL 5005	WCB	1.0619
2	1	Handwheel, RAL 9004	WCB	1.0619
3	1	Spindle	A2	1.4021
4	1	Compressor Plug Bayonet	CF-8M	1.4408
5	1	O-Ring Handwheel	NBR	
6	1	Hex. Nut	A2	1.4310
7	2	Spring Tension Pin	A2	1.4310
8	1	Spacer	Ms60Pb	2.0371
9	1	Spring Washer	A2	1.4310
10	1	Hex. Head Screw	A2-70	1.4310



Parts List

Automated Valve compl.

**Standard Version** (Picture showing DN 80 PN16, PFA-lined, actuator with visual position indicator)

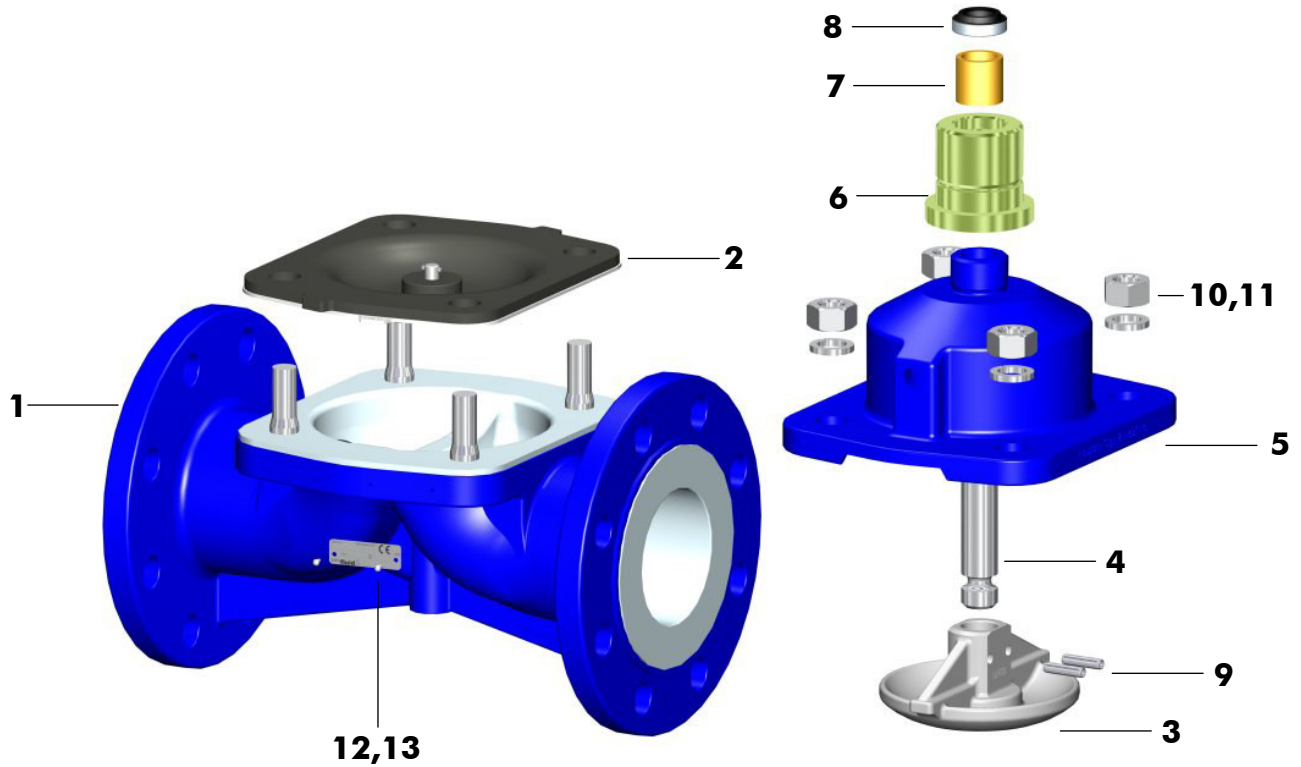


Item	Qty.	Description	Material	No.
1	1	Body PFA-lined, RAL 5005	WCB	1.0619
2	1	Diaphragm complete	PTFE/EPDM	
3	1	Compressor Plug Bayonet	CF-8M	1.4408
4	1	Actuator Spindle	A2	1.4021
5	1	Bracket	CF-8M	1.4408
6	2	Spring Tension Pin	A2	1.4310
7	8	Lock Washer	A2	1.4310
8	4	Hex. Nut	A2-70	1.4310
9	4	Hex. Head Screw	A2-70	1.4310
10	1	Pneumatic Linear Stroke Actuator	PP	SPA-L
11	1	Name Plate 42 x 14 CE	A2	1.4301
12	2	Hammer Screw 2.49 x 4.76	A2	1.4310

Parts List

Valve compl.

**Standard Version** (Picture showing DN 80 PN16, PFA-lined, with sliding spindle)



Item	Qty.	Description	Material	No.
1	1	Body PFA-lined, RAL 5005	WCB	1.0619
2	1	Diaphragm complete	PTFE/EPDM	
3	1	Compressor Plug Bayonet	CF-8M	1.4408
4	1	Sliding Spindle	A2	1.4021
5	1	Bonnet, RAL 5005	WCB	1.0619
6	1	Threaded Bushing	C.St/galv.	1.0737
7	1	Bushing	Bronze	
8	1	Scraper	St/Nitrile	
9	2	Spring Tension Pin	A2	1.4310
10	4	Lock Washer	A2	1.4310
11	4	Hex. Nut	A2-70	1.4310
12	1	Name Plate 42 x 14 CE	A2	1.4301
13	2	Hammer Screw 2.49 x 4.76	A2	1.4310



Specification

<b>Project-/Customer Data</b>		Inquiry/Date: _____	<b>Ref. SF</b> _____
Company:	_____	Contact Person:	_____
Address:	_____	Function:	_____
ZIP/Place:	_____	Department:	_____
Project:	_____	Phone direct:	_____
		Phone:	_____
		Fax:	_____
		E-mail:	_____
		Mobile:	_____

**Operating Conditions**

**Media / Chemical Composition:**

<input type="checkbox"/> liquid	<input type="checkbox"/> powdery	<input type="checkbox"/> crystallizing	<input type="checkbox"/> sticky	<input type="checkbox"/> Spec. Grav. _____
<input type="checkbox"/> gaseous	<input type="checkbox"/> Solids _____ %	<input type="checkbox"/> viscous	<input type="checkbox"/> Flow Velocity _____ m/s	
<input type="checkbox"/> abrasive	<input type="checkbox"/> Particle _____ mm	<input type="checkbox"/> Visc. _____ cp	<input type="checkbox"/> Flow Rate _____ m <sup>3</sup> /hr	

**Pressure**

max. \_\_\_\_\_ bar  
min. \_\_\_\_\_ bar

**Temperature**

max. \_\_\_\_\_ °C  
min. \_\_\_\_\_ °C

**Mode**

On/Off  
 Flow Control  
\_\_\_\_\_ cycles/ \_\_\_\_\_

**Installation / Environment**

horizontal  Room dry  
 vertical  Room humid  
 \_\_\_\_\_  outdoor

Remarks:

**SDV Product Code**

Specification of a complete Diaphragm Valve SDV Series

Product code	Nom. size	Flange conn.	Body	Lining	Diaphragm/ supp. diaphragh.	Actuator	Options
<b>SDV</b>	<b>DN50</b>	<b>PN16</b>	<b>G10</b>	<b>A85</b>	<b>M84</b>	<b>HW</b>	
	DN15 - 150 DN200 ½" - 8"	PN16 PN10 ANSI150# ANSI300# JIS 10K	G10 WCB G15 CF-8M	A85 PFA A86 PFA-AS A88 PVDF A89 PP A91 ETFE	M83 PTFE/FPM M84 PTFE/EPDM M60 EPDM	HW Handwheel FC Pneum. FC FO Pneum. FO DA Pneum. DA Ss Sliding stem	RAL... special paint B7 B7 body bolts

Note: Actuator options and accessories to be specified on orders separately.