

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 2014/68/EU (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

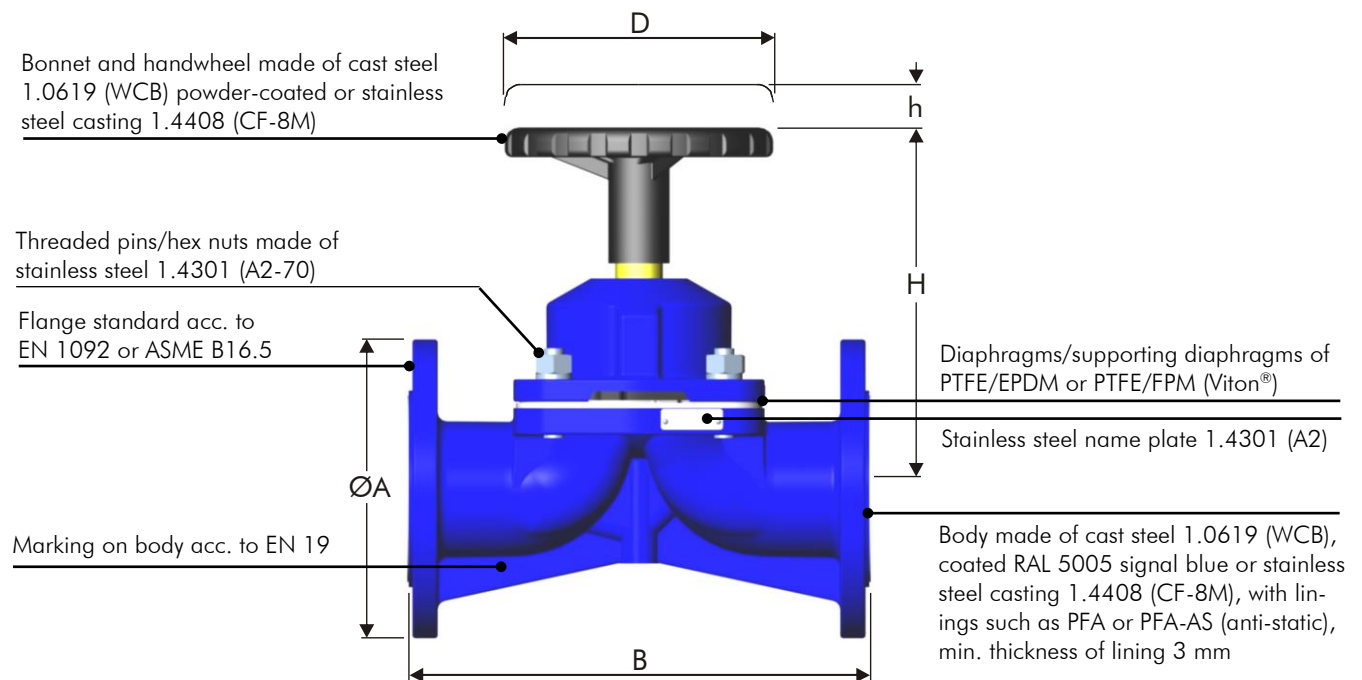
Operating Conditions

- Temperature range from -30°C (-22°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



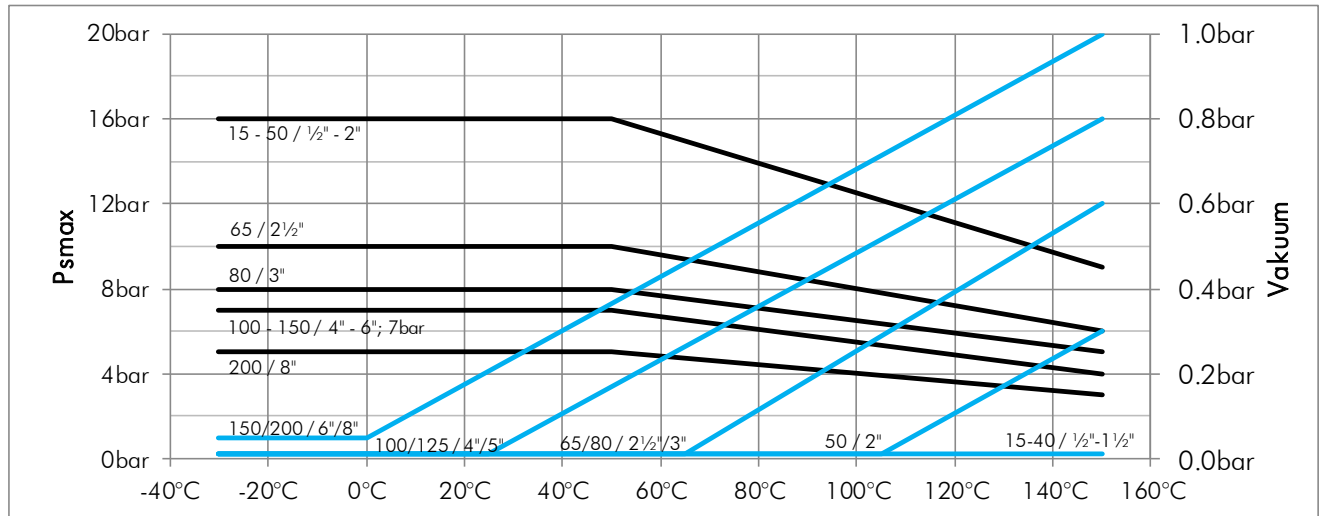
Technical Data

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

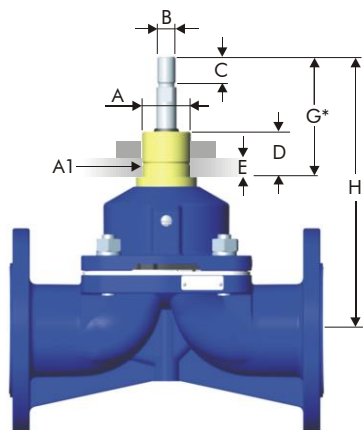
DN Size nom.	$\varnothing A$ DIN	$\varnothing A$ ANSI	B DIN	B ANSI	D	H	h Stroke	Revol. per stroke	kg DIN	kg ANSI	PS max. bar	Kv-Value max. (m^3/hr)
15/1/2"	95	95	130	130	85	115	8	4.5	2.5	2.5	16	7.8
20/3/4"	105	105	150	150	85	117	8	4.5	3.0	3.0	16	10.0
25/1"	115	108	160	146	85	124	10	5.5	3.8	3.5	16	15.0
32/1 1/4"	140	140	180	180	85	134	12	7.0	5.2	5.2	16	22.5
40/1 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 1/2"	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" ¹⁾	340	345	600	600	400	489	90	22.5	122.0	127.0	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

¹⁾ above PS max. 3 bar: supplier to be contacted

Pressure-/Temperature Diagram


Low temperature or austenitic steels are required for use below -10°C (14°F) operating temperature.

Options


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



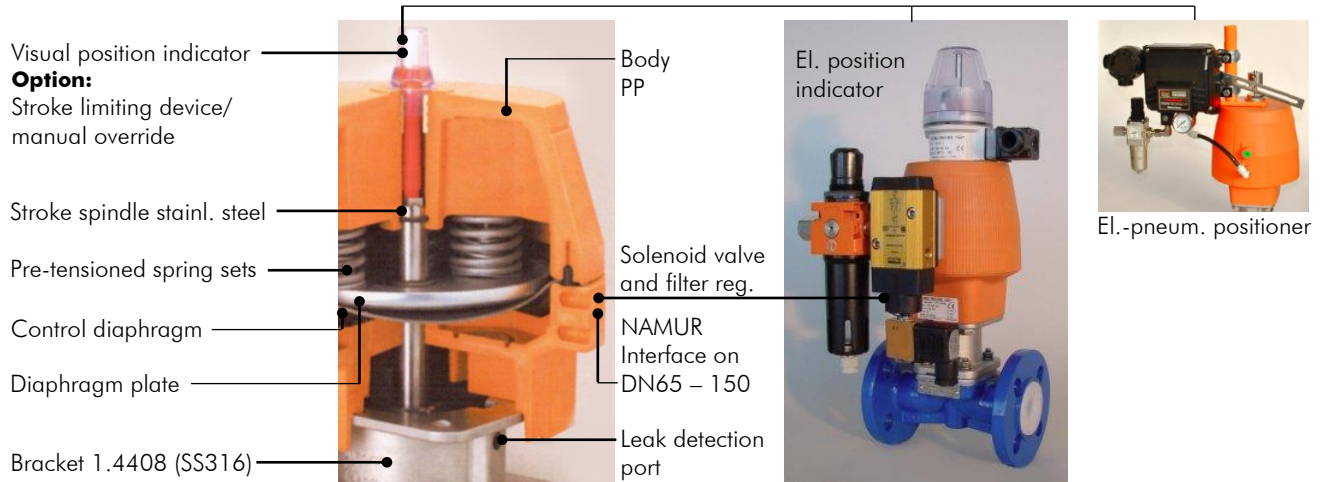
Bonnet Type Stroke Actuator
optional with limit switch box and filter regulator, E/P positioner, solenoid valve

Dimensions in mm (psi = bar/0.0689)

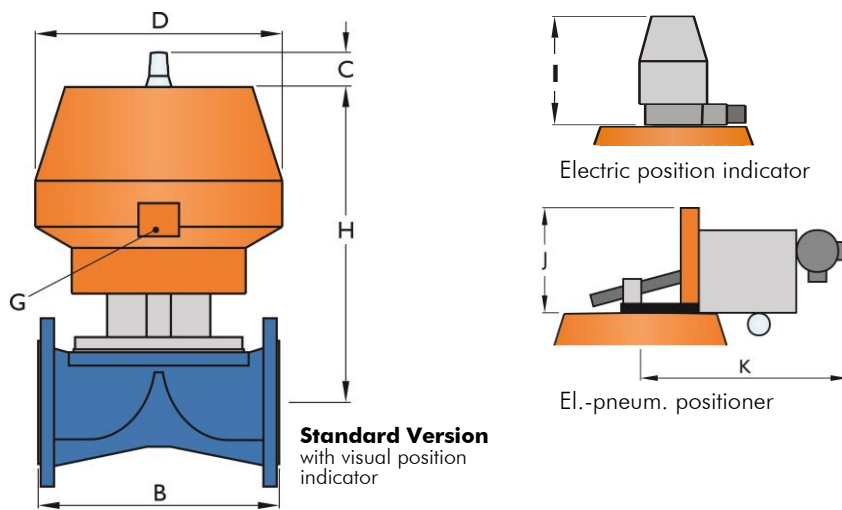
DN Size nom.	A	A1	B	C	D	E	G Valve closed	H	PS max. bar	kN Closing forces
15/1/2"	M30x1.5	32	M12	26	26	10	110	168	16	1.78
20/3/4"	M30x1.5	32	M12	26	26	10	110	170	16	2.27
25/1"	M30x1.5	32	M12	26	26	10	110	179	16	2.82
32/1 1/4"	M30x1.5	32	M12	26	26	10	110	190	16	3.44
40/1 1/2"	M40x1.5	40	M16	28	35	12	110	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

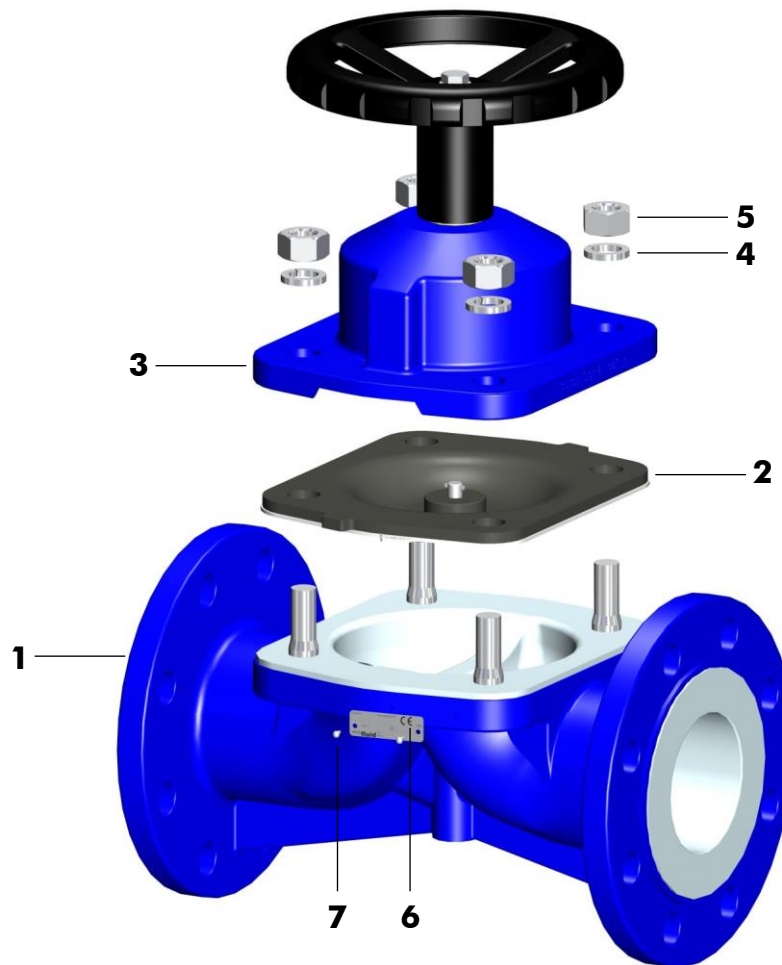
DN Size	B DIN	B ANSI	C	D	G	H	I	J	K	kg DIN	kg ANSI
15/1/2"	130	130	22.5	96	1/8"	211	100	160	290	4.8	4.8
20/3/4"	150	150	22.5	96	1/8"	213	100	160	290	5.3	5.3
25/1"	160	146	22.5	96	1/8"	227	100	160	290	6.4	6.1
32/1 1/4"	180	180	35.5	120	1/8"	253	100	160	290	7.8	7.8
40/1 1/2"	200	174	35.5	150	1/4"	284	100	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)

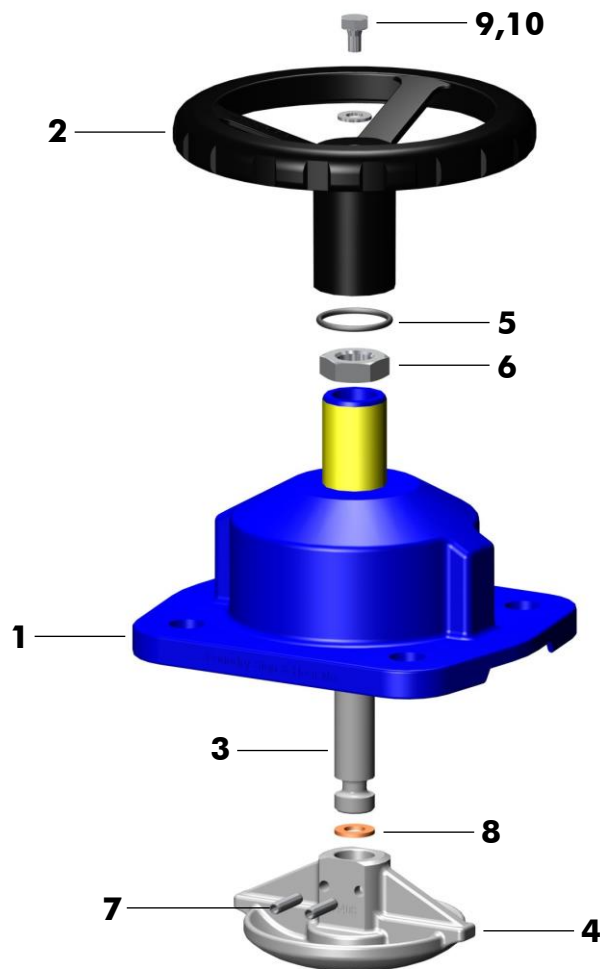


Item	Qty.	Description	Material	No.
1	1	Body PFA-lined, RAL 5005	WCB	1.0619
2	1	Diaphragm complete	PTFE/EPDM	
3	1	Bonnet complete RAL 5005, with handwheel RAL 9004	WCB	1.0619
4	4	Spring Washer	A2	1.4310
5	4	Hex. Nut	A2-70	1.4310
6	1	Name Plate 42 x 14 CE	A2	1.4301
7	2	Hammer Screw 2.49 x 4.76	A2	1.4310

Parts List

Bonnet compl.

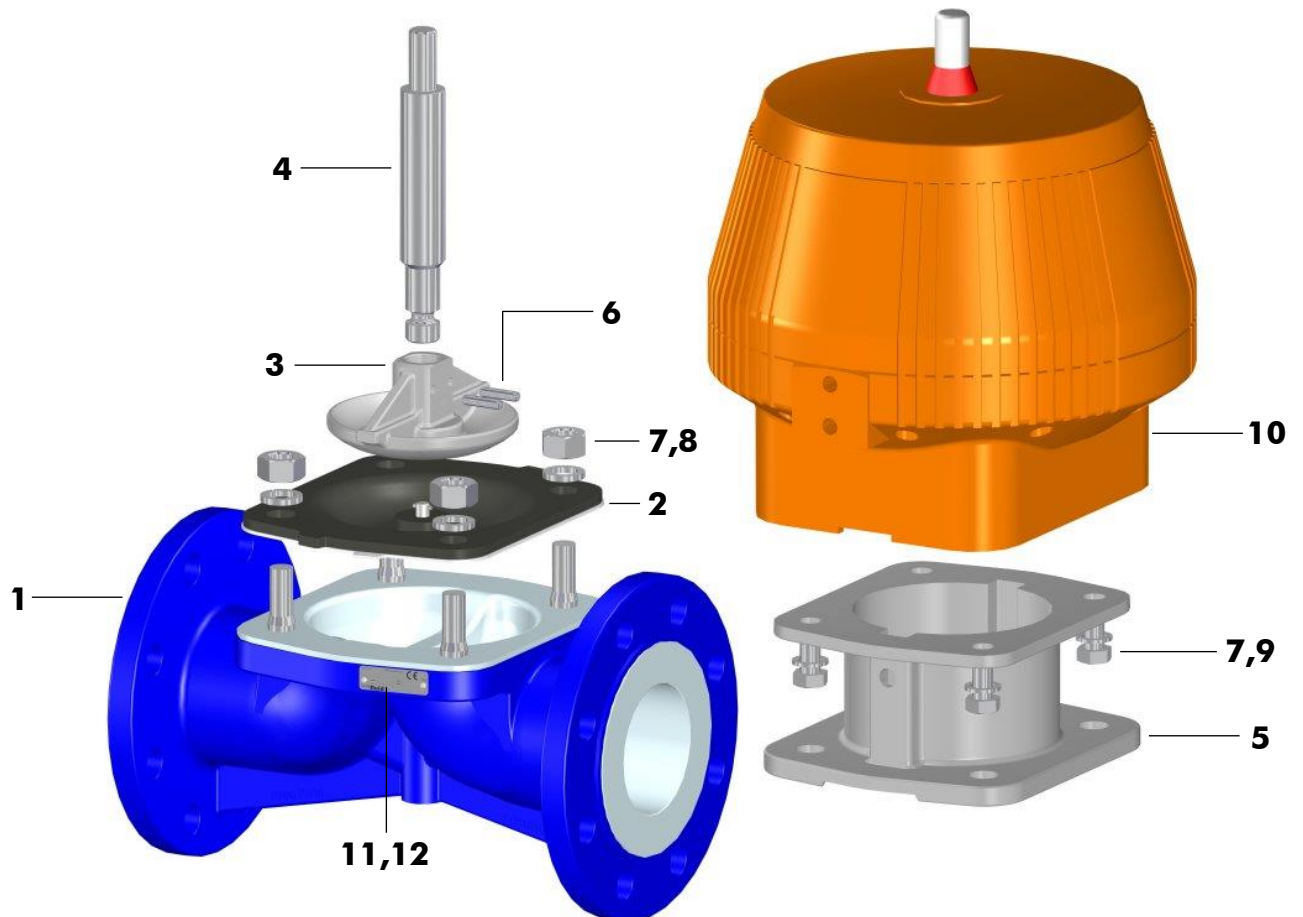
Standard Version (Picture showing DN 80, with handwheel)



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

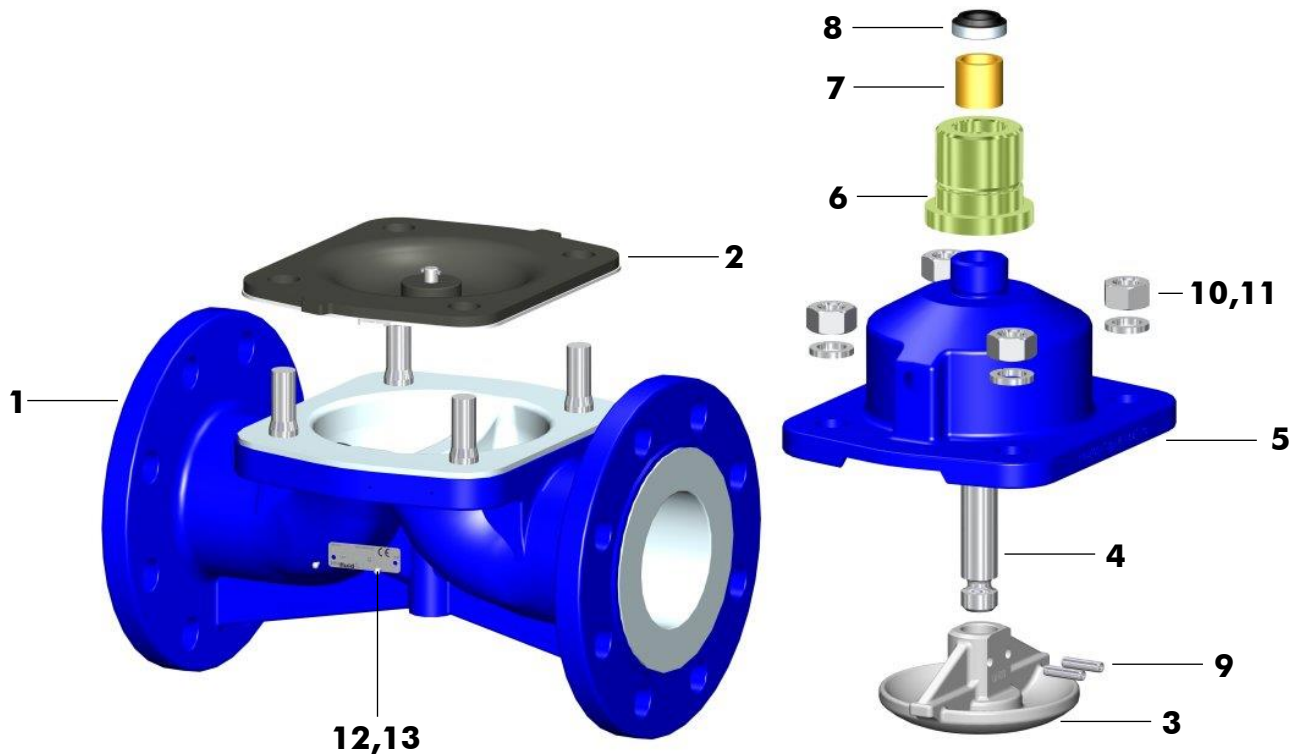
Automated Valve compl.

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

Project-/Customer Data		Inquiry/Date: _____		Ref. SF _____	
Company:	_____	Contact Person:	_____	Phone:	_____
Address:	_____	Function:	_____	Fax:	_____
ZIP/Place:	_____	Department:	_____	E-mail:	_____
Project:	_____	Phone direct:	_____	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 ³ /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. diaphr.	Actuator	Options
SDV	DN50	PN16	G10	A85	M84	HW	
	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.