

### DESCRIPTION

The P160 series direct acting, spring-loaded, diaphragm sensing pressure reducing valves are designed for use with cleansteam, compressed air, water and other gases or liquids compatible with the construction materials.

### MAIN FEATURES

1. Compact design
2. Completely machined from bar stock material, no castings or forgings are used on the standard version
3. No rising stem

### STANDARD SURFACE FINISH

Internal wetted parts:  $\leq 0,51$  micron Ra – SF1

External :  $\leq 0,76$  micron Ra – SF3

Other surface conditions see IS PV20.00 E – Technical information

Ultrasonic cleaning



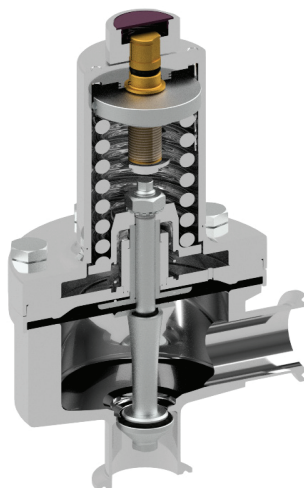
LIMITING CONDITIONS	
Valve model	P-160
Body design conditions	PN 16
Max.upstream pressure	8 bar 4bar*
Max.downstream pressure	5 bar
Min.downstream pressure	0,8 bar
Max.design temperature *	150 °C

\*\*Other on request.

\*See capacity table

\*\* For tight shut off, with regulating spring relaxed, ensure a minimum 0,2 bar downstream pressure

CE MARKING (PED - European Directive 97/23/EC)	
PN 16	Category
3/4" to 2"	SEP



**OPTIONS:** Leakage line connection 1/8" (captured vent).

Different soft valves for liquids and gases. Lock system, allows clean-in-place (CIP) and sterilization-in-place (SIP) operations with valve in line.

Gauge connection on body.

Adjusting screw with top cap.

**USE:** Clean steam, compressed air, water and other gases and liquids compatible with the construction

**AVAILABLE MODELS:** P-160

**SIZES:** 3/4", 1", 1 1/2", 2"; DN 20 to 50.

**OUTLET SPRING:** 0.8-1.5 bar, 1-3 bar, 1.5-5 bar RANGES

**CONNECTIONS:** Clamp ferrules or others on request

**INSTALLATION:** Horizontal installation, inlet vertical and horizontal outlet angle connection

**ORDER :** Type of fluid,  
**REQUIREMENTS** Maximum operating temperature  
 Inlet pressure & required outlet pressure  
 Capacity (maximum and minimum)

## DIMENSIONS (mm) ASME BPE

SIZE	Kvs	A	B	C	D	d1 *	d2 *	E *	F	H	WGT. (kg)
3/4"	1,3	85	56	192	130	25	15,75	89	25	15,75	6,7
1"	3,5	85	55	192	130	25	15,75	89	50,5	22,1	6,8
1 1/2"	5,5	85	65	199	130	25	15,75	89	50,5	34,8	7,6
2"	5,5 **	85	69	205	130	25	15,75	89	64	47,5	7,8

\* Optional.

\*\* 8,5 when limited to a maximum 4 bar inlet pressure.

## DIMENSIONS (mm) DIN

SIZE	Kvs	A	B	C	D	d1 *	d2 *	E *	F	H	WGT. (kg)
DN 20	1,3	89	62	192	130	25	15,75	89	34	20	6,6
DN 25	3,5	92	64	192	130	25	15,75	89	50,5	26	6,5
DN 40	5,5	92	75	199	130	25	15,75	89	50,5	38	7,2
DN 50	5,5 **	92	75	205	130	25	15,75	89	64	50	7,6

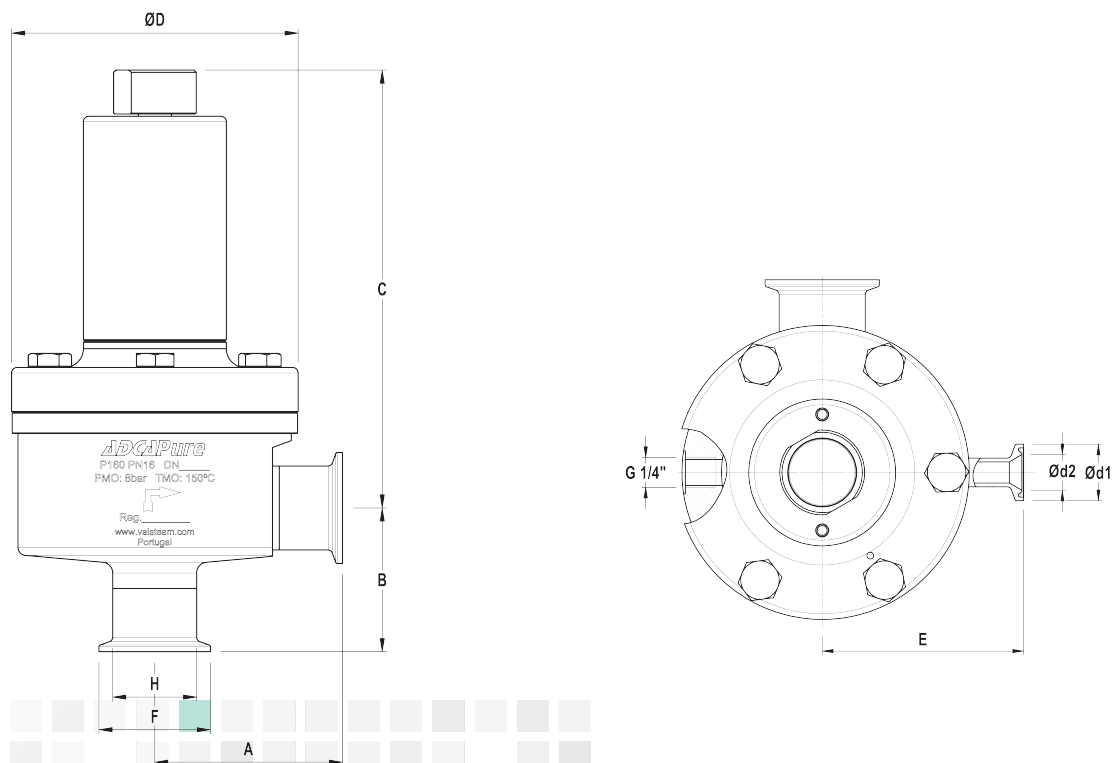
\* Optional.

\*\* 8,5 when limited to a maximum 4 bar inlet pressure.

## DIMENSIONS (mm) ISO

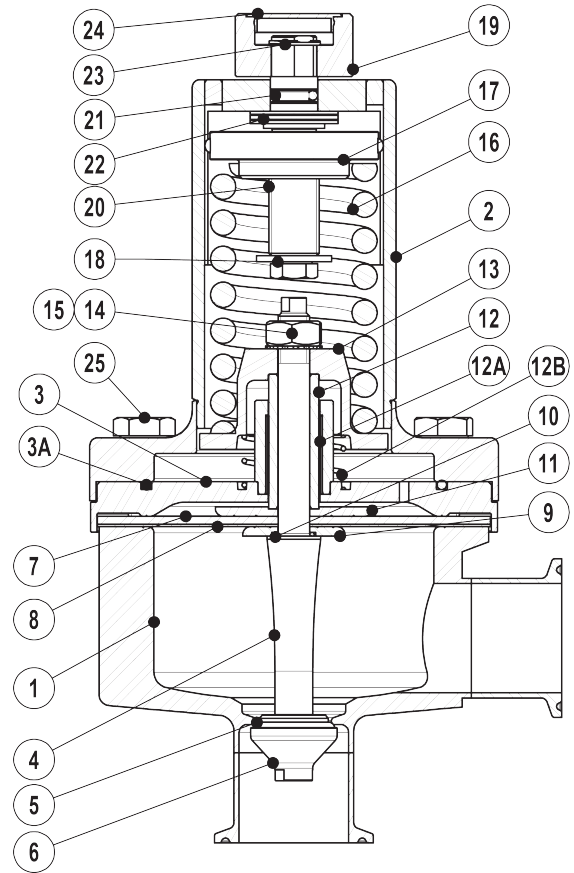
SIZE	Kvs	A	B	C	D	d1 *	d2 *	E *	F	H	WGT. (kg)
DN 20	1,3	81	49	192	130	25	15,75	89	50,5	23,7	6,5
DN 25	3,5	81	51	192	130	25	15,75	89	50,5	29,7	6,4
DN 40	5,5	92	80	199	130	25	15,75	89	64	44,3	7,7

\* Optional.



## MATERIALS

POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Centering plate	AISI 316L / 1.4404
3A	*** O-ring	EPDM
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	** EPDM; PTFE
6	* Valve plug	AISI 316L / 1.4404
7	* Upper diaphragm	EPDM
8	* Lower diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316 / 1.4401
12A	Plain bearing	Bronze
12B	Spring	AISI 302 / 1.4300
13	Spring plate	AISI 316 / 1.4401
14	Nut	Stainless steel A2-70
15	Washer	AISI 316 / 1.4401
16	* Adjustment spring	AISI 302 / 1.4300
17	Top spring plate	AISI 316 / 1.4401
18	Retaining washer	Stainless steel A2-70
19	Regulating nut	AISI 316L / 1.4404
20	Adjusting screw	Brass
21	O-ring	NBR
22	Bearing	Corrosion resistant steel
23	Ext. bowed shaft ring	Stainless steel
24	Cover nut	Plastic
25	Bolts	A2



\* Available spare parts ; \*\* Others according to fluid;

\*\*\* Applied only with leakage line option.

Remarks: FDA / USP Class VI seals certificate on request.

All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

## OPTIONS

LOCK SYSTEM	ADJUSTING SCREW W/ TOP CAP	PRESSURE GAUGE CONNECT.	LEAKAGE LINE CONNECTION

# SANITARY PRESSURE REDUCING VALVE

P-160 (2 1/2" – 3")

# SEALING SYSTEMS

## DESCRIPTION

The P160 series direct acting, spring-loaded, diaphragm sensing pressure reducing valves are designed for use with cleansteam, compressed air, water and other gases or liquids compatible with the construction materials.

## MAIN FEATURES

1. Compact design
2. Completely machined from bar stock material, no castings or forgings are used on the standard version
3. No rising stem

## STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1

External : ≤ 0,76 micron Ra – SF3

Other surface conditions see IS PV20.00 E – Technical information

Ultrasonic cleaning



LIMITING CONDITIONS	
Valve model	P-160
Body design conditions	PN 16
Max.upstream pressure	8 bar
Max.downstream pressure	4 bar
Min.downstream pressure	1 bar
Max.design temperature *	150 °C

\*\*Other on request.

\*See capacity table

\*\* For tight shut off, with regulating spring relaxed, ensure a minimum 0,2 bar downstream pressure

CE MARKING (PED - European Directive 97/23/EC)	
PN 16	Category
2 1/2" – 3"	1 (CE Marked)



**OPTIONS:** Leakage line connection 1/8" (captured vent).

Different soft valves for liquids and gases. Lock system, allows clean-in-place (CIP) and sterilization-in-place (SIP) operations with valve in line.

Gauge connection on body.

Adjusting screw with top cap.

**USE:** Clean steam, compressed air, water and other gases and liquids compatible with the construction

**AVAILABLE MODELS:** P-160

**SIZES:** 2 1/2" – 3"

**OUTLET SPRING**

**RANGES:** 1 – 1,7 bar, 1,5 – 4 bar.

**CONNECTIONS:** ASME BPE.

Clamp ferrules or others on request.

**INSTALLATION:** Horizontal installation, inlet vertical and horizontal outlet angle connection

**ORDER :** Type of fluid,  
**REQUIREMENTS** Maximum operating temperature  
Inlet pressure & required outlet pressure  
Capacity (maximum and minimum)

## DIMENSIONS (mm) ASME BPE

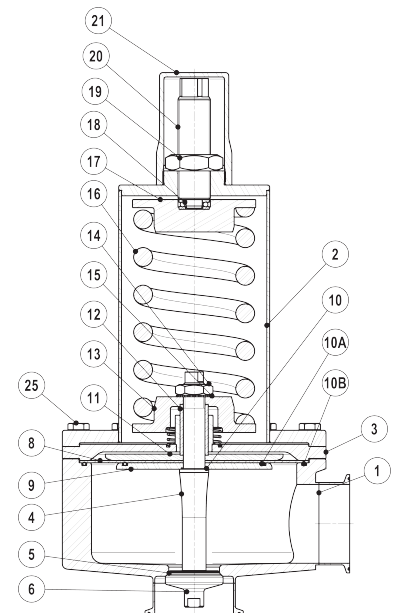
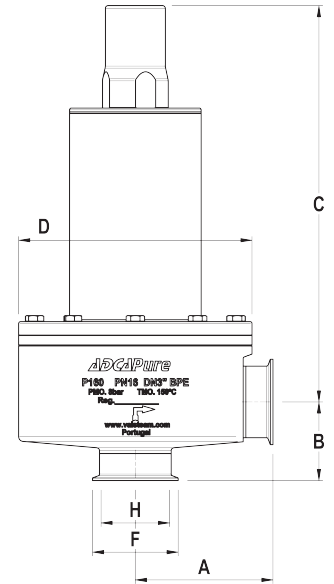
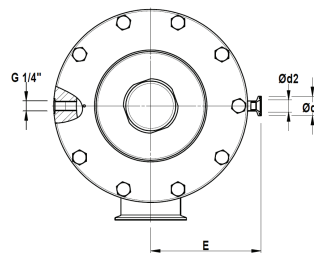
SIZE	Kvs	A	B	C	D	d1 *	d2 *	E *	F	H	WGT. (kg)
2 1/2"	19,6	144	78	410	245	25	15,75	141	77,4	60,2	34,6
3"	19,6	144	84	417	245	25	15,75	141	90,9	72,9	36,2

\* Optional.

## MATERIALS

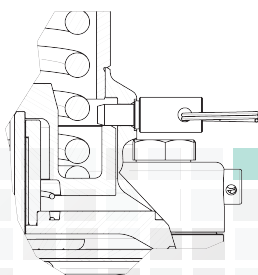
POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Centering plate	AISI 316L / 1.4404
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	EPDM; PTFE **
6	* Valve plug	AISI 316L / 1.4404
8	* Diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	* O-ring	EPDM
12	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316 / 1.4401
13	Spring plate	AISI 316 / 1.4401
14	Nut	Stainless steel A2-70
15	Washer	AISI 316 / 1.4401
16	* Adjustment spring	Zinc plated spring steel
17	Top spring plate	AISI 316 / 1.4401
18	Bearing	Corrosion resistant steel
19	Nut	Stainless steel A2-70
20	Adjusting screw	AISI 304 / 1.4301
21	Top cap	AISI 316L / 1.4404
25	Bolts	A2

\* Available spare parts ; \*\* Others according to fluid;  
Remarks: FDA / USP Class VI seals certificate on request.  
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.

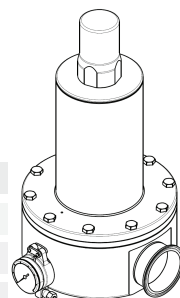


## OPTIONS

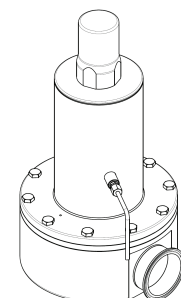
### LOCK SYSTEM



### PRESSURE GAUGE CONNECTION



### LEAKAGE LINE CONNECTION



### DESCRIPTION

The P160A series direct acting, air loaded, diaphragm sensing pressure reducing valves are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials.

### MAIN FEATURES

1. Compact design.
2. Completely machined from bar stock material, no castings or forgings are used on the standard version.
3. Set point can be adjusted remotely using a relieving gas pressure regulator or through an I/P converter.
4. Ease operation during the sterilization or cleaning process (SIP – CIP), by remotely increasing the set point, ensures that the valve stays totally open during the process.

### STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1

External : ≤ 0,76 micron Ra – SF3

Other surface conditions see IS PV20.00 E – Technical information

Ultrasonic cleaning



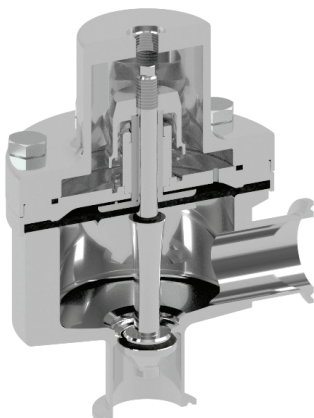
LIMITING CONDITIONS	
Valve model	P-160A
Body design conditions	PN 16
Max.upstream pressure	8 bar
Max.downstream pressure	6 bar
Min.downstream pressure	0.8 bar
Max.design temperature *	150 °C

\*\*Other on request.

\*See capacity table

\*\* For tight shut off, with regulating spring relaxed, ensure a minimum 0,2 bar downstream pressure

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	Category
3/4" to 2", DN 20 to 50	SEP



**OPTIONS:** Different soft valves for liquids and gases.  
Gauge connection on body.

**USE:** Clean steam, compressed air, water and other gases and liquids compatible with the construction

**AVAILABLE MODELS: P-160A**

**SIZES:** 3/4" to 2" DN 20 to DN 50

**OUTLET SPRING**

**RANGES:** 0,8 – 6 bar

**CONNECTIONS:** Clamp ferrules or others on request

**PACKAGING:** Assembling and packaging in a clean room certified according to ISO 14644-1.

The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

**INSTALLATION:** Horizontal installation, inlet vertical and horizontal outlet angle connection

**ORDER**

**REQUIREMENTS:** Type of fluid.

Maximum operating temperature

Inlet pressure & required outlet pressure

Capacity (maximum and minimum)

## DIMENSIONS (mm) ASME BPE

SIZE	Kvs	A	B	C	D	d1	d2 *	d3 *	d4 *	E *	F	H	WGT. (kg)
3/4"	1,3	85	56	116	130	1/4"	25	15,75	1/4"	89	25	15,75	5,5
1"	3,5	85	55	117	130	1/4"	25	15,75	1/4"	89	50,5	22,1	5,5
1 1/2"	5,5	85	65	124	130	1/4"	25	15,75	1/4"	89	50,5	34,8	5,8
2"	8,5	85	70	130	130	1/4"	25	15,75	1/4"	89	64	47,5	6,4

\* Optional.

## DIMENSIONS (mm) DIN

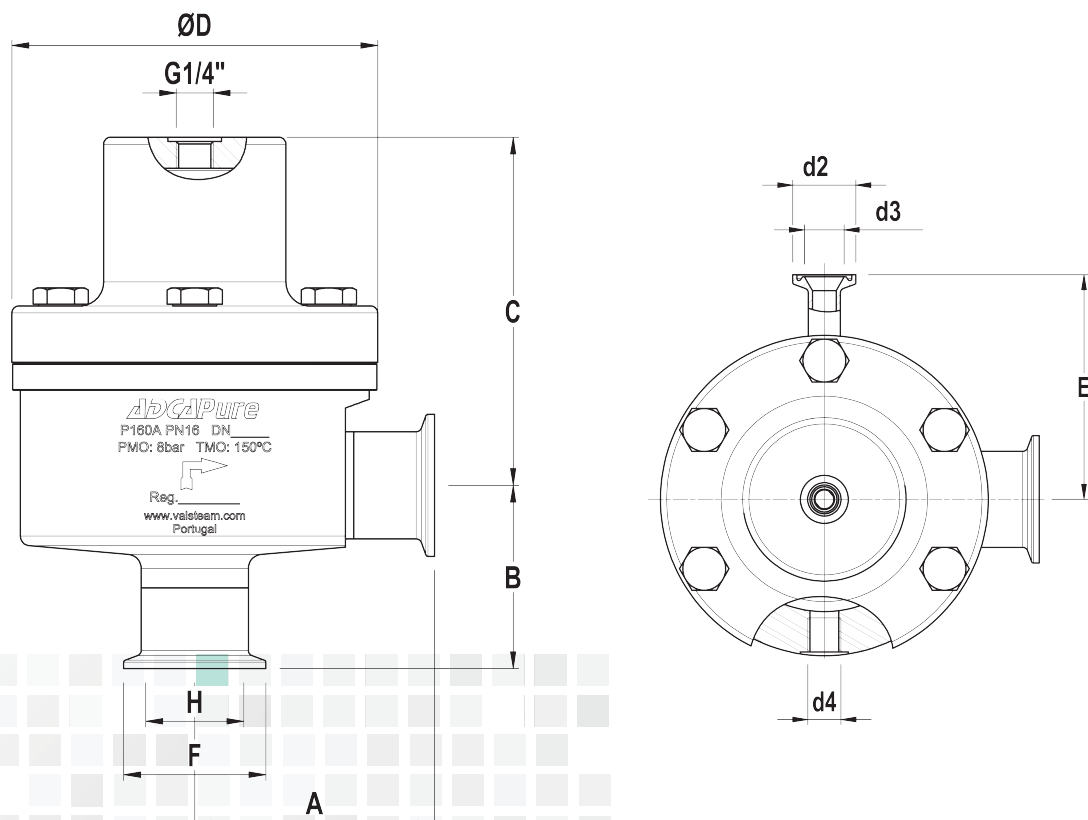
SIZE	Kvs	A	B	C	D	d1	d2 *	d3 *	d4 *	E *	F	H	WGT. (kg)
DN 20	1,3	89	62	116	130	1/4"	25	15,75	1/4"	89	34	20	5,5
DN 25	3,5	92	64	117	130	1/4"	25	15,75	1/4"	89	50,5	26	5,2
DN 40	5,5	92	75	124	130	1/4"	25	15,75	1/4"	89	50,5	38	5,4
DN 50	8,5	92	75	130	130	1/4"	25	15,75	1/4"	89	64	50	6,2

\* Optional.

## DIMENSIONS (mm) ISO

SIZE	Kvs	A	B	C	D	d1	d2 *	d3 *	d4 *	E *	F	H	WGT. (kg)
DN 20	1,3	81	49	116	130	1/4"	25	15,75	1/4"	89	50,5	23,7	5,4
DN 25	3,5	81	51	117	130	1/4"	25	15,75	1/4"	89	50,5	29,7	5,4
DN 40	5,5	92	80	124	130	1/4"	25	15,75	1/4"	89	64	44,3	5,9

\* Optional.



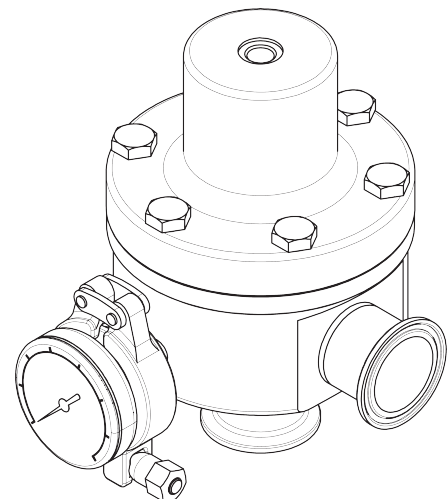
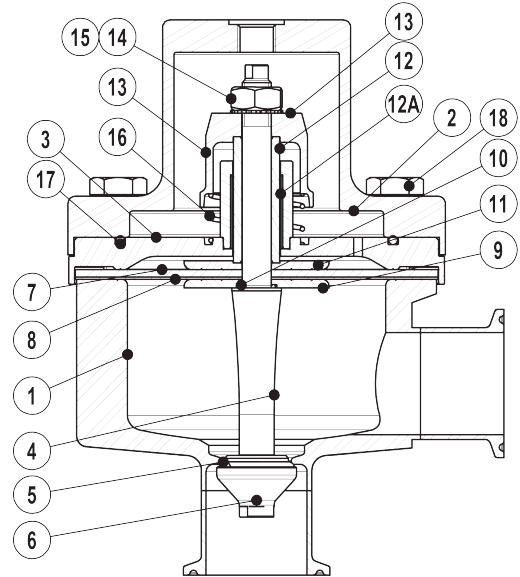
## MATERIALS

POS. N°	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Centering plate	AISI 316L / 1.4404
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	EPDM; PTFE **
6	* Valve plug	AISI 316L / 1.4404
7	* Upper diaphragm	EPDM
8	* Lower diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316 / 1.4401
12A	Plain bearing	Bronze
13	Spring plate	AISI 316 / 1.4401
14	Nut	Stainless steel A2-70
15	Washer	AISI 316 / 1.4401
16	Spring	AISI 302 / 1.4300
17	O-ring	EPDM
18	Bolts	Stainless steel A2-70

\* Available spare parts ; \*\* On request.

Remarks: FDA / USP Class VI seals certificate on request.

All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.



Optional pressure gauge connection