Excess Pressure Valve
TYPE EP616

Description

These simple and robust designed excess pressure valve (without auxiliary energy) are adapted to a large number of processes requiring upstream pressure control. The excess pressure valve opens when the upstream pressure increases.The set point is adjustable with a hand wheel which compresses a spring more or less according to the desired set point value. These valves are particularly ideal for steam installations and can also be used with liquids or gases. Direct passage valve with single direct seat. External impulse.

Characteristics

Flanges : DN25 au/ to DN80
Threaded sleeves : ½" au/to 2"
Material : Steel 1.0619 – A216 WCB/WCC
Stainless steel 1.4408 – A351 CF8M
Flanges ISO PN16…40 – Class 150, 300
Design ANSI B16-34 PN50

Options

- Flanges with grooves
- Flanges ANSI Class 150, Class 300
- PTFE soft seal cone (Max. Temp 200°C)
- Seat and exhaust valve : stellit
- Perforated cone (anti-noise)
- Device without copper alloy
- Stainless steel condensation bottle with 2 meters of stainless steel pipe and fitting
- Safety bellows

Special features

Wide range of Kvs: 4 to 42
Pressure set point range: 0.1 to 15.0 bar

How to order

- Excess pressure valve type EP616

DN, PN, Material, Bride Flanges according to EN.Kvs =__ ∅ siège/seat = _____ mm
Plug, stem and seat in stainless steel

- Actuator type _____

Diaphragm in EPDM (or NBR or FKM)
Range of adjustment n° _____ de/form _____à/to_____bar

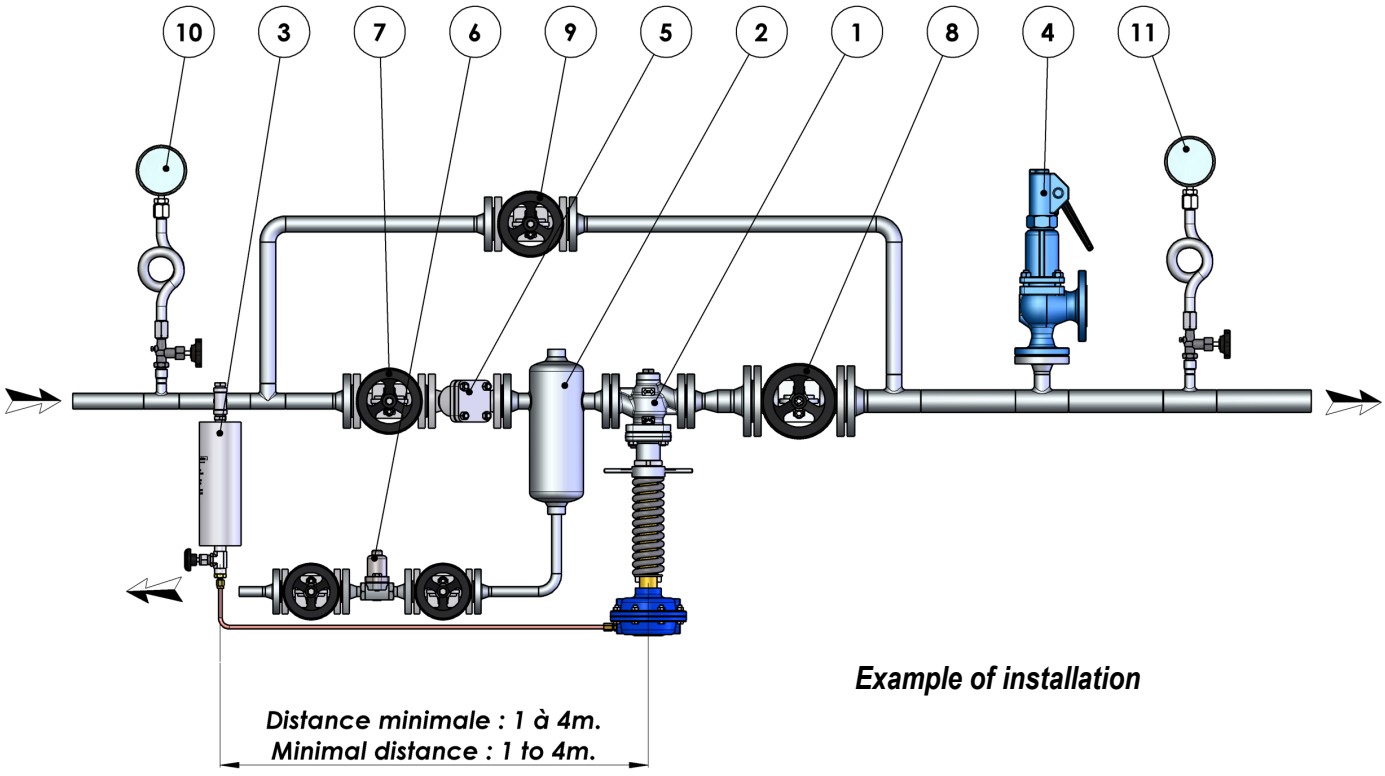
- Accessories :
  For saturated steam: condensation bottle + 2 m of copper pipe 6/8 (250°C maxi) and fitting ¼" BSP
  For thermal fluid: condensation bottle + 2 m of stainless steel pipe and fitting ¼" BSP
  For liquid and gases: 2 m copper pipe 6/8 and fitting ¼" BSP

Certifications

DESP; ATEX II 2 G/D; ISO9001 / PED; ATEX II 2 G/D; ISO9001

Operation

The excess pressure valves type EP616 are self-actuated (without auxiliary energy) controlling the pressure upstream compared to a set point. The excess pressure valve opens by increase in the pressure upstream in a proportional way.
During the assembly, the actuator will be directly connected to piping by impulse pipe including or not a condensation bottle.
The choice of the adjustment range will be carried out according to the pressure upstream to control and of adjustment range table.



Example of installation

Mounting

It is imperative to assemble the excess pressure valve, on horizontal piping, the actuator downwards. For use on steam, the condensation bottle must be filled with water before the startup in order to protect the diaphragm from the actuator against too high temperatures.

Rep./Item	Description
1	Excess pressure valve
2	Separator
3	Condensation bottle
4	Safety valve
5	Y strainer
6	Steamtrap
7	Inlet isolating valve
8	Outlet isolating valve
9	Robinet by-pass / Bypass valve
10	Upstream gauge
11	Downstream gauge

Operational Limits

Excess pressure valve	Nominal Diameter	Leakage rate	Max temperature in valve	Max temperature in actuator	
				Sans pot Without bottle	Avec pot With bottle
EP616 Single seat Stem sealing by 2 FKM O-ring	DN 25 … DN 80	/Metallic sealing < 0,01% Kvs Classe IV ANSI B16 104	Max. 200°C	130°C EPDM diaphragm	230°C EPDM diaphragm
Stem sealing by stainless steel bellows			Max. 350°C	150°C FKM diaphragm	250°C FKM diaphragm

Kvs values (m^3/h)

Sleeves	1"	1¼"	1½" *	2" *	-	-
Flanges	**25**	**32**	**40**	**50**	**65**	**80**
Ø Seat	Kvs					
20	5.2	4	4.1	5		
25	8	8.3	8.5	12	12	
32		14	17	21	21	
40			24	29	30	31
50				36	41	42

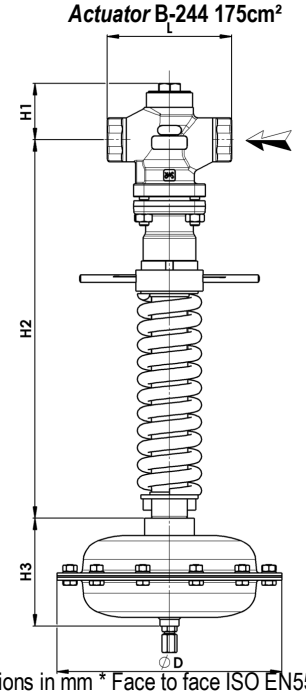
* Up to seat Ø32

Adjustment range (bar eff)

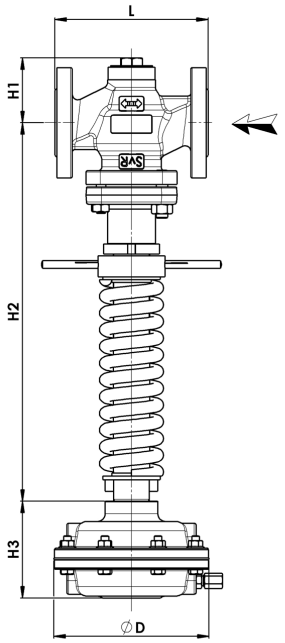
Type	Surface	N° Plage Range	R Ressort Springs	Range according to Ø seat	
				Ø20 Stroke 5mm	Ø25 à/to Ø50 Stroke 10mm
B	175 cm²	**24**	8-41	0.1 … 0.4	0.1 … 0.3
		23	8-40	0.1 … 0.7	0.2 … 0.6
		22	8-39	0.2 … 1.2	0.4 … 1.1
		21	8-38	0.3 … 2.1	0.7 … 1.9
		20	8-37	0.6 … 3.7	1.2 … 3.4
C	70 cm²	**31**	8-41	0.1 … 0.9	0.3 … 0.9
		30	8-40	0.3 … 1.7	0.5 … 1.5
		29	8-39	0.5 … 3.0	0.9 … 2.7
		28	8-38	0.8 … 5.1	1.7 … 4.7
		27	8-37	1.5 … 9.3	3.0 … 8.6
		104	8-98	2.9 … 15.0	5.7 … 13.6

Dimensions

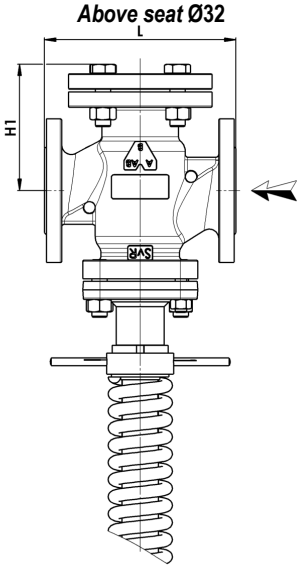
EP616 DN1" – DN2" (*Sleeves*)
***Up to seat* Ø32**
***Actuator* B-244 175cm²**



EP616 DN25 – DN65 (*Flanges*) *Up to seat* Ø32 *Actuator* C-243 70cm²



EP616 DN40 – DN80 (*Flanges*)
***Above seat* Ø32**



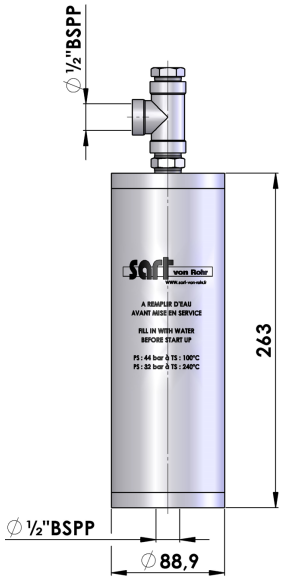
All dimensions in mm * Face to face ISO EN558 series 1

Threaded and welded version				
DN	**1"**	**1"¼**	**1" ½**	**2"**
L	130	200	200	200
H1	70	100	100	100
H2	395	425	425	425
Masse / Mass (kg)	8.5	15	15	15

Up to seat Ø32

Flanges version						
DN	**25**	**32**	**40**	**50**	**65**	**80**
L (ISO PN16/25/40)	160	180	200	230	290	310
L (ANSI Class 150 RF)	184	/	222	254	/	298
L (ANSI Class 150 RF)	/	/	200*	230*	/	310*
L (ANSI Class 300 RF)	190	/	235	267	/	317
L (ANSI Class 150 RTJ)	197	/	235	267	/	311
L (ANSI Class 300 RTJ)	210	/	248	283	/	333
H1	85	90	100	120	120	145
H1	/	/	135	150	160	175
H2	395	400	430	425	425	420
Mass (kg)	12	14	21	25	30	40

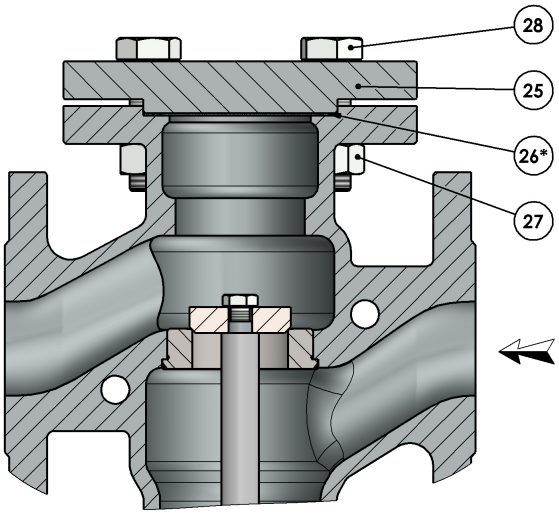
Up to seat Ø32
Above seat Ø32
Up to seat Ø32
Up to seat Ø32
Up to seat Ø32
Up to seat Ø32
Above seat Ø32

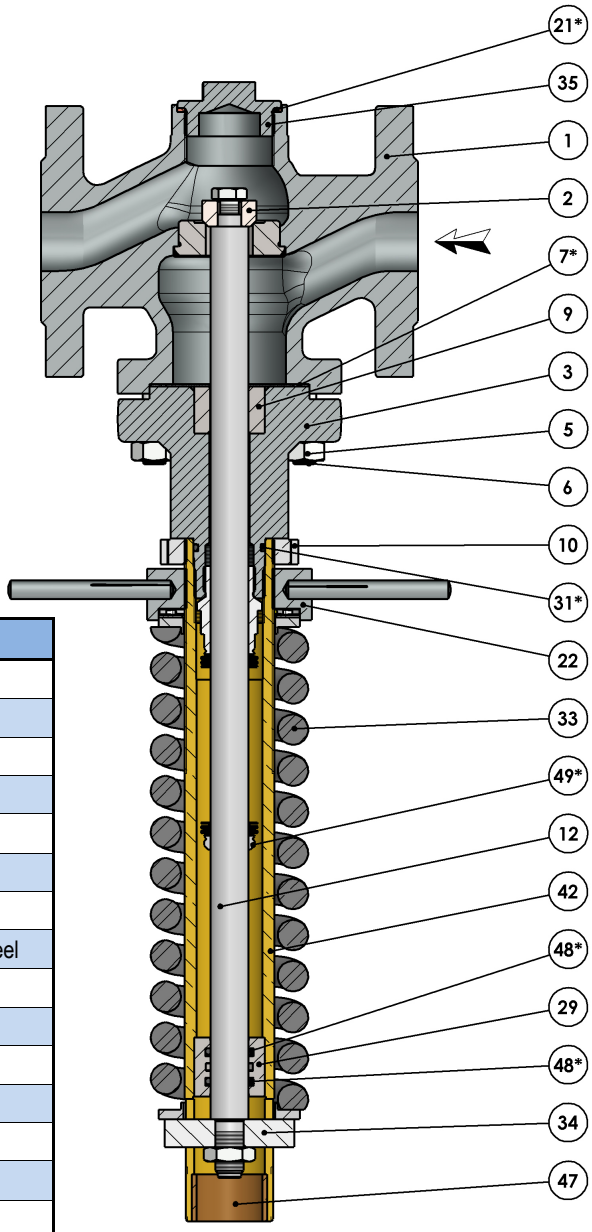


Actuator	B 244	C 243
ØD	235	161
H3	113	101
Surface / Section	175 cm²	70 cm²
Raccordement Connexion	¼'' NPT	
Mass (kg)	6	5.5

Condensation bottle			
Version Limit	**Standard**		**High Temperature**
PS (bar)	44	32	50
TS (°C)	100	240	550
Conduite d'impulsion **Impulsion pipe**	2m tube de cuivre 6/8 2m copper tube 6/8		
Raccordement Connexion	½ '' BSPP		
Masse / Mass (kg)	2		

Part List - DN25 – DN80 / DN1” - DN2”

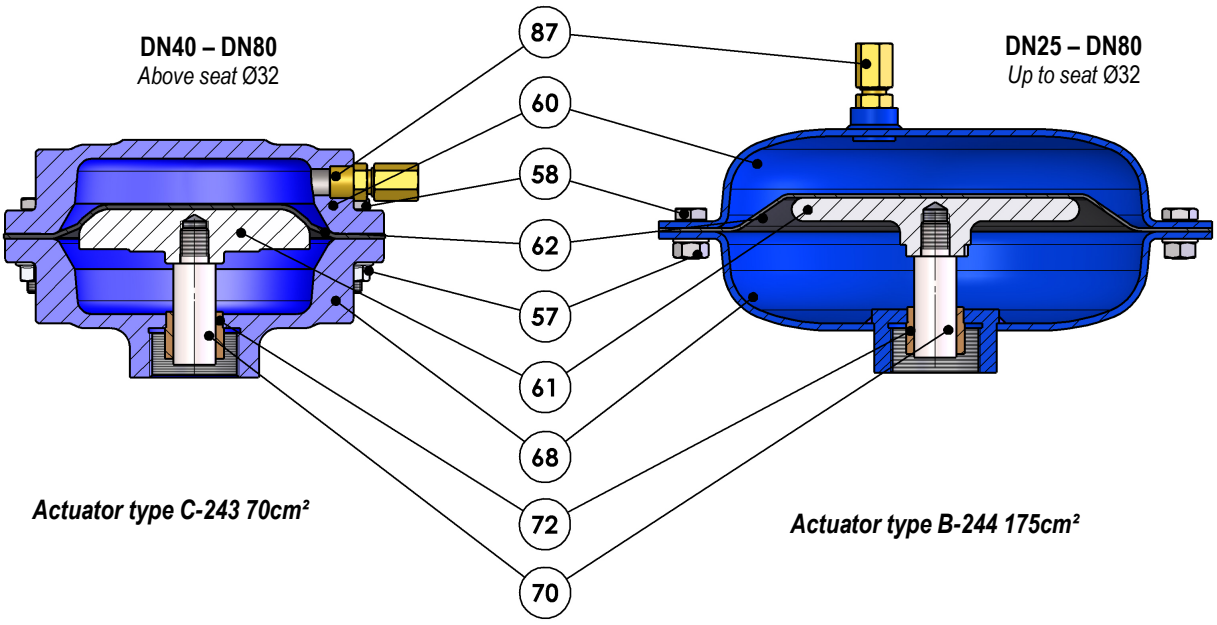




Rep./Item	Description	Material
1	Body	1.0619 / 1.4408
2	Cone	Inox / Stainless steel
3	Cover	1.0565 / 1.4408
5	Nut	8.8 / A2-70
6	Stud	8.8 / A2-70
7*	**Gasket**	Graphite
9	Bush	Inox / Stainless steel
10	Slotted round nut	Acier / Inox -- Steel / Stainless steel
12	Stem	Inox / Stainless steel
21*	**Gasket**	Cu/Gr – Inox/Gr – Cu/Gr – SS/Gr
22	Adjusting nut	Acier / Steel
25	Cover	1.0565 / 1.4404
26*	**Gasket**	Graphite
27	Nut	8.8 / A2-70
28	Screw	8.8 / A2-70
29	Bush	Inox / Stainless steel
31*	**O-ring**	FKM
33	Spring	Acier / Steel
34	Stop	Inox / Stainless steel
35	Cap	Acier / Inox -- Steel / Stainless steel
42	Tube	Laiton / Brass -- Inox / Stainless steel
47	Bush	Cuivre / Copper
48*	**O-ring**	FKM
49**	**Safety bellow**	Inox / Stainless steel

*** Spare parts**
**** Optionnal**

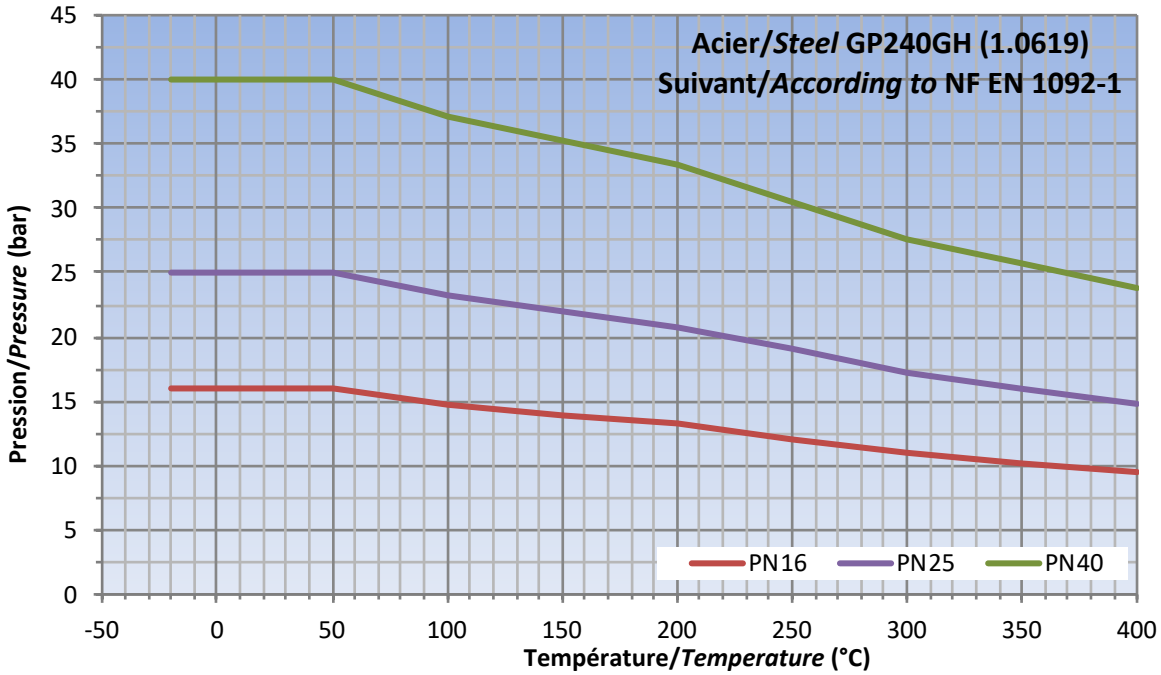
Actuator Part List

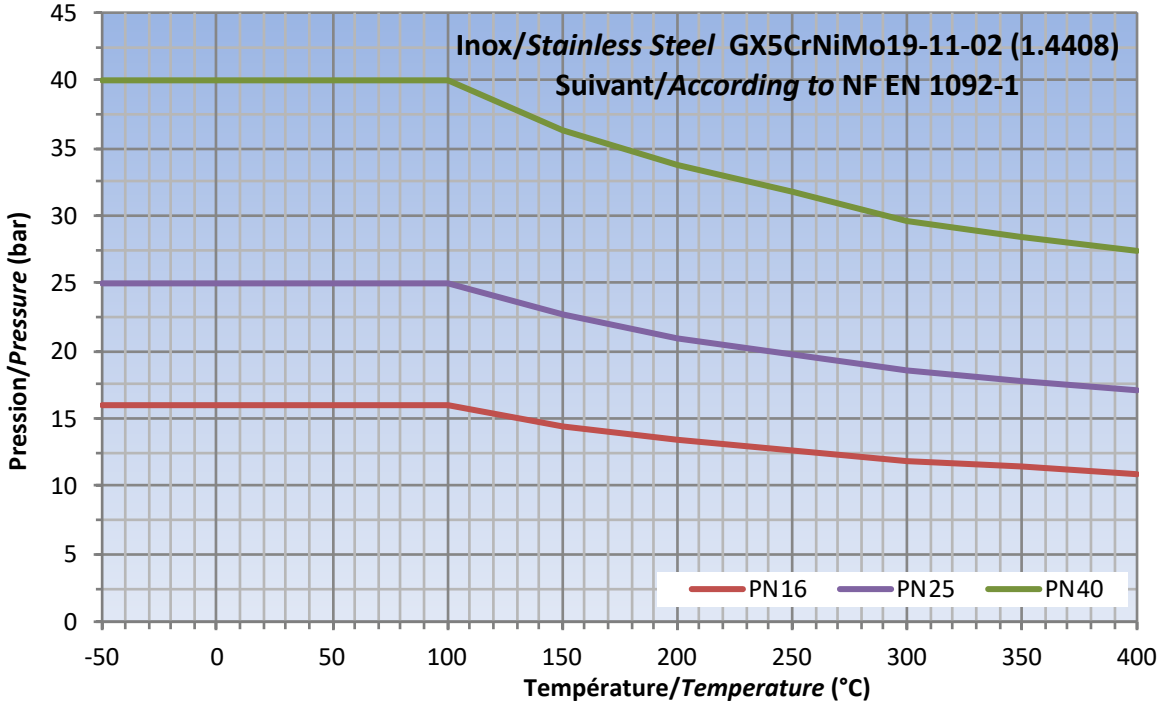


Rep./Item	Description	Material
57	Nut	8.8 / A2-70
58	Screw	8.8 / A2-70
60	Above casing	Steel / Stainless steel
61	Diaphragm plate	Steel / Stainless steel
62*	**Diaphragm**	FKM - NBR
68	Lower casing	Inox - Stainless steel
70	Stem	Stainless steel
72	Bush	Copper tin alloy
87	Male fitting	Brass -- Inox / Stainless steel

*** Spare parts**

Pressure -Temperature Charts





Pressure -Temperature Charts