



# Over-range protectors

## AORP AORPB

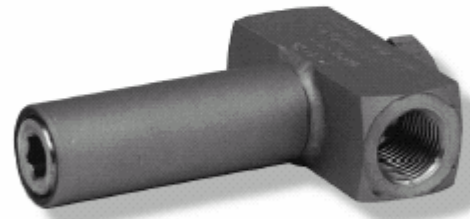
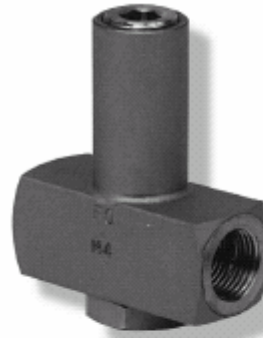
These over-range protectors have been designed to protect the pressure gauges (or other instruments) against accidental overpressures, the values of which are known. The gas or fluids must be "clean" that is to say without particles in suspension, non-viscous and more over they must not corrode 1.4401(AISI 316) stainless steel and/or Viton rubber.

**Working principle :**

The pressure inlet is closed by means of an 'O' ring which fits on a conical seat located above a pressure gauge inlet. As soon as the set pressure is reached the valve closes.

Two models are available according to the pressures.

- AORP model : with piston-rod fitted with an "O" ring for "middle and high pressures".
- AORPB model : with bellow for "low pressures".



### Specifications (20°C)

**AORP :**

**Connection:**

1/2 NPT Female

**Maximum overrange:**

700 bar.

**Maximum temperature:**

150° C.

**Set point (to be specified on the order) :**

Possible spans :

- From 3 to < 6 bar
- From 6 to < 18 bar
- From 18 to < 25 bar
- From 25 to < 80 bar
- From 80 to < 160 bar
- From 160 to 400 bar

**Set point repeatability:**

± 10% in normal operation (≥ 5 seconds, when the pressure increases).  
Release pressure should be 20 % lower than pressure needed for closing the valve.

**Gap:**

7,5%. Between the closing of the valve when the pressure increases, and the opening when the pressure decreases.

**Piston-rod:**

1.4404 (316 L) stainless steel.  
Sealing in the body by means of a viton o'ring.

**Body, spring, adjusting screw and cleaning plug:**

1.4404 (316 L) stainless steel.

**Valve:**

1.4404 (316 L) stainless steel with viton o'ring (standard).

**AORPB :**

**Connection:**

1/2 NPT Female.

**Maximum overrange:**

700 bar.

**Maximum temperature:**

150° C.

**Set point (to be specified on the order) :**

Possible spans:

- From -1 to 0 bar
- From 0,1 to < 0,4 bar
- From 0,4 to < 0,6 bar
- From 0,6 to < 1 bar
- From 1 to < 3 bar
- From 3 to < 6 bar
- From 6 to 16 bar

**Set point repeatability :**

± 2% (≥ 5 seconds, when the pressure increases).

**Gap:**

5%.  
Between the closing of the valve when the pressure increases, and the opening when the pressure decreases.

**Rod, bellow, body, spring, adjusting screw and cleaning plug:**

1.4404 (316 L) stainless steel.

**Valve:**

1.4404 (316 L) stainless steel with viton o'ring (standard) .



## Dimensions (mm), options

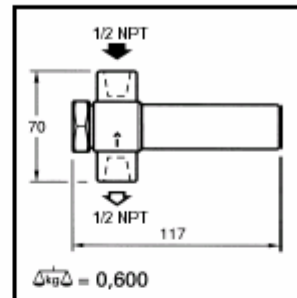
### AORP

Medium and high pressures  
(3 to 400 bar)



### AORPB

Low pressures  
(-1 to 16 bar)



#### Nota :

They are set in our factory so as to limit the pressure at the desired point ; above the set point, the valve closes in order to protect the pressure gauge.

When the pressure decreases, the valve opens itself at the same pressure value (taking into account the gap).

Fine adjustment is achieved by means of the adjusting screw (with hexagon socket) which flattens the calibrated spring accordingly.

## Options\*

- Set point can be adjusted
- Oxygen cleanliness.
- Specific o'rings : EPDM - NBR.
- Full monel execution.

## Standard products codification \*

A   O   R   P			
Family :	A	Pressure range	in bar :
Accessories			
Type :			
Commercial reference			
ORP	ORP		
ORPB	ORPB		

	code	scale
AORP	381	3 + 6
	382	6 + 18
	383	18 + 25
	384	25 + 80
	385	80 + 160
	386	160 + 400
AORPB	507	-1 + 0
	501	0.1 + 0.4
	502	0.4 + 0.6
	503	0.6 + 1
	504	1 + 3
	505	3 + 6
	506	6 + 16

\* Products with options should not be coded.

For the over-range protectors with options : after the product name (AORP, AORPB), list the informations to specify, the product characteristics. Options have to be listed after the product characteristics.