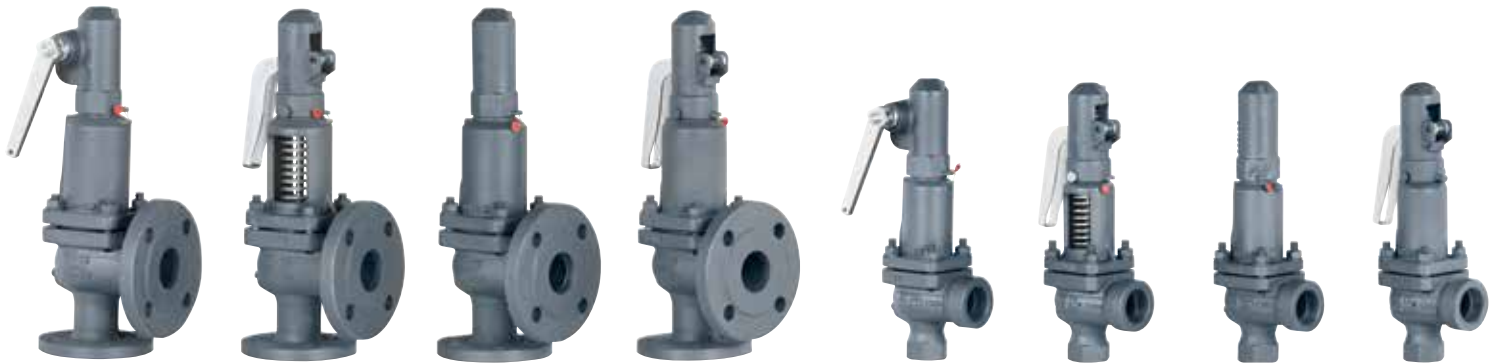


# Fabrication program



# Safety

## Full lift safety valve with spring loading. (AIT)



EP

AP

ES

CP

EP

AP

ES

CP

### Mod. 496 EN






Connection: Flange x Flange  
 DN1 x DN2: 20x32 to 200x300  
 Material:  Cast Iron. PN-16  
            Nodular iron. PN-40. 350°C  
            Cast steel. PN-40  
            Stainless steel. PN-40  
 Seal:  Metal

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.  
 Design in accordance with "International Standard ISO 4126-1:2004 Safety Valves".

Depending on version

 -60°C to +450°C     0,20 bar to 40,00 bar     Steam / Gases / Liquids

### Mod. 495 EN

Connection: Female thread x Female thread  
 FR1 x FR2: 3/4"x1 1/4" and 1"x1 1/2"  
 Material:  Cast Iron. PN-16  
            Nodular iron. PN-40. 350°C  
            Cast steel. PN-40  
            Stainless steel. PN-40  
 Seal:  Metal

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.  
 Design in accordance with "International Standard ISO 4126-1:2004 Safety Valves".

Depending on version

 -60°C to +450°C     0,20 bar to 40,00 bar     Steam / Gases / Liquids



EP

AP

ES

CP

EP

AP

ES

CP

### Mod. 486 ASME

### Mod. 485 ASME

Connetion: Flange x Flange  
 NPS1 x NPS2: 1"x 2" to 8"x10"  
 Material:  Carbon steel. 150 lbs and 300 lbs  
 Stainless steel. 150 lbs and 300 lbs  
 Seal:  Metal

Connetion: Female thread NPT x Female thread NPT  
 FNPT1 x FNPT2: 3/4"x1 1/4" and 1"x1 1/2"  
 Material:  Carbon steel. 300 lbs  
 Stainless steel. 300 lbs  
 Seal:  Metal

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.  
 Design in accordance with "ASME code section VIII".  
 Materials according ASME code section II and ASTM.  
 Connections according ASME B1.20.1 standard.

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.  
 Design in accordance with "ASME code section VIII".  
 Materials according ASME code section II and ASTM.  
 Connections according ASME B1.20.1 standard.

Depending on version



Depending on version



# Safety

## Full lift safety valve with spring loading. (AIT)



EP

AP

ES

CP

EP

AP

ES

### Mod. 596 EN




Connection: Flange x Flange  
 DN1 x DN2: 25x32 to 400x500  
 Material:  Carbon steel  
 PN-25/40/63/100/160. PMS-62 bar  
 Stainless steel  
 PN-25/40/63/100/160. PMS-62 bar  
 Seal:  Metal

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.  
 Design in accordance with "International Standard ISO 4126-1:2004 Safety Valves".

Depending on version

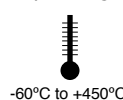


### Mod. 696 EN

Connection: Flange x Flange  
 DN1 x DN2: 25x40 to 300x400  
 Material:  Carbon steel  
 PN-25/40/63/100/160. PMS-95 bar  
 Stainless steel  
 PN-25/40/63/100/160. PMS-95 bar  
 Seal:  Metal

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.  
 Design in accordance with "International Standard ISO 4126-1:2004 Safety Valves".

Depending on version





CP



EP

AP

ES

AS

**Mod. 695 EN**



EP

AP

ES

AS

**Mod. 685 ASME**

Connection: Male thread x Female thread  
MR1 x FR2: 3/8"x1/2" to 1"x1"

Material: ■ Bronze. PMS-36 bar  
■ Stainless steel. PN-40

Seal: ○ PTFE (Teflon)  
○ Silicone's rubber  
● Fluorelastomer (Viton)

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.  
Design in accordance with "International Standard ISO 4126-1:2004 Safety Valves".

Depending on version

-60°C to +200°C 0,20 bar to 36,00 bar Steam / Gases / Liquids

Connection: Male thread NPT x Female thread NPT  
MNPT1 x FNPT2: 3/8"x1/2" to 1"x1"

Material: ■ Bronze. PMS-522,14 psi  
■ Stainless steel. 300 lbs

Seal: ○ PTFE (Teflon)  
○ Silicone's rubber  
● Fluorelastomer (Viton)

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.  
Design in accordance with "ASME code section VIII".  
Materials according ASME code section II and ASTM. Connections according ASME B1.20.1 standard.

Depending on version

-76°F to +392°F 2,90 psi to 522,14 psi Steam / Gases / Liquids



# Safety

## Full lift safety valve with spring loading. (AIT)



EP AP ES AS

### Mod. 895 EN CRYOGENIC

Connection: Male thread x Female thread  
MR1 x FR2: 3/8"x1/2" to 1"x1"  
Material: ■ Bronze. PMS-36 bar  
■ Stainless steel. PN-40  
Seal: ○ PTFE (Teflon)

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.  
Design in accordance with "International Standard ISO 4126-1:2004 Safety Valves".

Depending on version

 -196°C to +200°C  
 0,20 bar to 36,00 bar  
 Steam / Gases / Liquids



EP AP ES AS

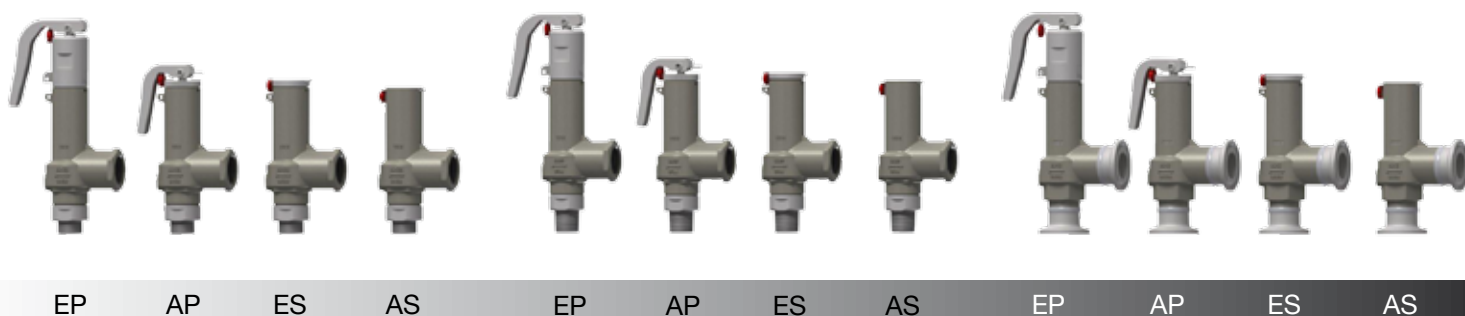
### Mod. 885 EN CRYOGENIC

Connection: Male thread NPT x Female thread NPT  
MNPT1 x FNPT2: 3/8"x1/2" to 1"x1"  
Material: ■ Bronze. PMS-522,14 psi  
■ Stainless steel. 300 lbs  
Seal: ○ PTFE (Teflon)

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.  
Design in accordance with "ASME code section VIII".  
Materials according ASME code section II and ASTM.  
Connections according ASME B1.20.1 standard.

Depending on version

 -320,8°F to +392°F  
 2,90 psi to 522,14 psi  
 Steam / Gases / Liquids



### Mod. 995 EN

### Mod. 985 ASME

### Mod. 694 CLAMP

Connection: Male thread x Female thread  
MR1 x FR2: 3/8"x1/2" and 1/2"x1/2"

Material: Stainless steel. PN-160

Seal: PTFE (Teflon)

Silicone's rubber

Fluorelastomer (Viton)

Connection: Male thread NPT x  
Female thread NPT

MNPT1 x FNPT2: 3/8"x1/2" and 1/2"x1/2"

Material: Stainless steel. 900 lbs

Seal: PTFE (Teflon)

Silicone's rubber

Fluorelastomer (Viton)

Connection: Flange clamp x Flange clamp  
DN1 x DN2: 10 x15 to 25 x 25

Material: Stainless steel. PN-16

Seal: PTFE (Teflon)

Silicone's rubber

Fluorelastomer (Viton)

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.

Design in accordance with "International Standard ISO 4126-1:2004 Safety Valves".

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.

Design in accordance with "ASME code section VIII".

Materials according ASME code section II and ASTM. Connections according ASME B1.20.1 standard.

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.

Design in accordance with "ASME code section VIII".

Materials according ASME code section II and ASTM. Connections according ISO 2852 standard.

Depending on version



-60°C to +200°C

0,20 bar to 144,00 bar

Gases

Depending on version



-76°F to +392°F

2,90 psi to 2.088,57 psi

Gases

Depending on version



-60°C to +200°C

0,20 bar to 16,00 bar

Steam / Gases / Liquids



# Safety

## Normal safety valve with spring loading. (AN)



EP

AP


ES


CP


### Mod. 494 EN


Connection: Flange x Flange

DN1 x DN2: 25x25 to 200x200

Material:  Cast Iron. PN-16

 Nodular iron. PN-40. 350°C

 Cast steel. PN-40

 Stainless steel. PN-40

Seal:  Metal

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance

to the valve and is characterized by its ability to open, at the first proportional to the pressure increase, and after instantly and totally.

Design in accordance with "International Standard ISO 4126 -1: 2004 Safety Valves".

Depending on version



-60°C to +450°C



0,20 bar to 40,00 bar



Steam / Gases / Liquids





AP

ES

**Mod. 295 EN**



AP

ES

**Mod. 296 EN**

- Connection: Male thread x Female thread  
 MR1 x FR2: 1/2"x1" to 1 1/4" x 2"  
 Material: ■ Bronze. PMS-25 bar  
           ■ Carbon steel. PMS-25 bar  
           ■ Stainless steel. PMS-25 bar  
 Seal: ○ PTFE (Teflon)  
       ○ Silicone's rubber  
       ● Fluorelastomer (Viton)

- Connection: Flange x Flange  
 DN1 x DN2: 15x25 to 32x50  
 Material: ■ Bronze. PMS-25 bar  
           ■ Carbon steel. PMS-25 bar  
           ■ Stainless steel. PMS-25 bar  
 Cierre: ○ PTFE (Teflon)  
       ○ Silicone's rubber  
       ● Fluorelastomer (Viton)

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open, at the first proportional to the pressure increase, and after instantly and totally.  
 Design in accordance with "International Standard ISO 4126 -1: 2004 Safety Valves".

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open, at the first proportional to the pressure increase, and after instantly and totally.  
 Design in accordance with "International Standard ISO 4126 -1: 2004 Safety Valves".

Depending on version



Depending on version



# Safety

## Proportional safety valve with spring loading. (AP)



AP

ES

### Mod. 095 EN

Connection: Male thread x Female thread  
MR1 x FR2: 1/4"x1/4" to 4"x4"

Material: ■ Bronze/Brass. PN-16  
■ Mixed (Bronze/Brass - S. steel). PN-25  
■ Stainless steel. PN-25

Seal: ● PTFE (Teflon)  
● Silicone's rubber  
● Fluorelastomer (Viton)

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open proportional to the pressure increase. Design in accordance with "International Standard ISO 4126-1:2004 Safety Valves".

Depending on version

 -60°C to +250°C  
 0,20 bar to 25,00 bar  
 Steam / Gases / Liquids



AP

ES

### Mod. 096 EN

Connection: Flange x Female thread  
DN1 x FR2: 8x1/4" to 100x4"

Material: ■ Bronze/Brass. PN-16  
■ Mixed (Bronze/Brass - S. steel). PN-25  
■ Stainless steel. PN-25

Seal: ○ PTFE (Teflon)  
○ Silicone's rubber  
● Fluorelastomer (Viton)

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open proportional to the pressure increase. Design in accordance with "International Standard ISO 4126-1:2004 Safety Valves".

Depending on version

 -60°C to +250°C  
 0,20 bar to 25,00 bar  
 Steam / Gases / Liquids

Vacuum breaker safety valve

Multi-stage diffusion silencers



Mod. 795 EN

Mod.005 EN ASME/ANSI ASME/FNPT  
ASME/MNPT ASME/SW ...others to be agreed

- Connection: Male thread x Free admission  
 MR1 x 6ØB: 3/8"x6ØB to 1"x6ØB  
 Material: ■ Brass. PN-16  
           ■ Stainless steel. PN-16  
 Seal: ● Silicone's rubber  
       ● Fluorelastomer (Viton)

- Connection: Flange  
 Male thread GAS  
 Female thread GAS  
 Male thread NPT  
 Female thread NPT  
 SW welding end  
 DN: To be agreed  
 R: To be agreed  
 Material: ■ Carbon Steel

The valve acts as an automatic regulator of pressure drops and prevents the creation of a vacuum inside pressurised installations or vessels.

During the expansion process for compressible substances such as gases, steam or air, one of the main problems is noise pollution. The noise is caused by opening the valve and discharging the expanded fluid at the speed of sound. Silencers are a great way to reduce this noise, caused by discharging the valve, bringing it down to allowable levels.

Depending on version



They are used in places such as power, chemical and petrochemical plants to discharge safety valves, control valves, etc. in pressure lines and equipment that convey compressible substances such as steam, air, carbon dioxide, helium, methane, nitrogen, oxygen and other gases.

They achieve noise reductions of more than 50 dB without any additional acoustic absorption materials.

Depending on version



# Check

## Disc check valve



### Mod. 170 EN ASME/ANSI

Connection: For placing between flanges  
DN: 15 to 100

Material: ■ Bronze. PN-16  
■ Cast steel. PN-40  
■ Stainless steel. PN-40

Seal: ● Metal

Disc check valve with centering ring for placing between flanges in accordance with DIN, UNE, ANSI, BS, etc. DN -15 to 100.  
Face-to-face dimensions in accordance with EN-558, basic series 49.

Depending on version



-60°C to +400°C



40,00 bar



Steam / Gases / Liquids

### Mod. 172 EN ASME/ANSI

Connection: For placing between flanges  
DN: 125 to 300

Material: ■ Cast iron. PN-16  
■ Bronze. PN-16  
■ Cast steel. PN-40  
■ Stainless steel. PN-40

Seal: ● Metal

Disc check valve with centering ring for placing between flanges in accordance with DIN, UNE, ANSI, BS, etc. DN -15 to 100.  
Face-to-face dimensions in accordance with EN-558, basic series 49 and 51.

Depending on version



-60°C to +400°C



40,00 bar



Steam / Gases / Liquids

# Steam traps

## Piston check valve

## Thermodynamic steam trap



041-042 without filter

043-044 with filter

### Mod. 179 EN ASME/FNPT ASME/SW

### Mod. 041 EN ASME/FNPT ASME/SW

- Connection: Female thread GAS  
 Female thread NPT  
 Socket welding ends SW  
 R: 1/4" to 2"  
 Material: ■ Brass. PN-200  
■ Cast steel. PN-250  
 Seal: ■ Stainless steel. PN-250  
● Metal

Check valve with spring operated piston closure.

Depending on version



### Mod. 043 EN ASME/FNPT ASME/SW

- Connection: Female thread GAS  
 Female thread NPT  
 Socket welding ends SW  
 R: 1/2" to 1"  
 Material: ■ Stainless steel. PMA. 63 bar  
 Seal: ● Metal

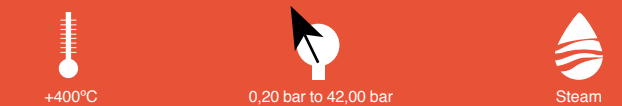
### Mod. 042 EN ASME/ANSI

### Mod. 044 EN ASME/ANSI

- Connection: Flange x Flange  
 DN: 15 to 25  
 Material: ■ Stainless steel. PMA. 63 bar  
 Seal: ● Metal

For the extraction of steam condensates.  
 For use in: steam piping, irons, laundries, tanks and vessels with condensate discharge, multiple plate presses, vulcanizing autoclaves, pressure reduction equipment, etc.

Depending on version



# Steam traps

## Bimetallic steam trap



143

144

### Mod. 143 EN ASME/FNPT ASME/SW

Connection: Female thread GAS  
 Female thread NPT  
 Socket welding ends SW  
 R: BP 1/2" and 3/4"  
 MP 1/2" and 3/4"  
 AP 1/2" to 1"

Material:  Cast steel. BP. PN-40  
 Cast steel. MP. PN-40  
 Cast steel. AP. PN-100

Seal:  Metal

### Mod. 144 EN ASME/ANSI

Connection: Flange x Flange  
 DN: BP 15 to 25  
 MP 15 to 25  
 AP 15 to 25

Material:  Cast steel. BP. PN-40  
 Cast steel. MP. PN-40  
 Cast steel. AP. PN-100

Seal:  Metal

For the extraction of steam condensates.  
 Applicable in: steam piping, heat exchangers, chemical and petrochemical industries,... etc.

Depending on version



+450°C



80,00 bar



Steam

## Inverted bucket steam trap



### Mod. 343 EN ASME/FNPT

Connection: Female thread GAS  
 Female thread NPT  
 R: 1/2" to 1"

Material:  Cast iron. PN-16

Seal:  Metal

To extract saturated or super-heated low-pressure steam condensates.

Applicable to: steam piping, heat exchangers, plants with automatic temperature control, etc., in the chemical and petrochemical industries, etc.

Depending on version



+220°C



16,00 bar



Steam

Float and thermostatic steam trap

Thermostatic steam trap





241



243

244



Mod. 241 EN ASME/FNPT

Connection: Female thread GAS  
 Female thread NPT  
 R: 1/2" to 1"  
 Material:  Cast iron. PMS-14 bar  
 Seal:  Metal

Mod. 243 EN ASME/FNPT ASME/SW

Connection: Female thread GAS  
 Female thread NPT  
 Socket welding ends SW  
 R: 1/2" to 1", 1 1/2" and 2"  
 Material:  Cast steel. PMS-14 bar  
 Seal:  Metal

Mod. 244 EN ASME/ANSI

Connection: Flange x Flange  
 DN: 15 to 25, 40 and 50  
 Material:  Cast steel. PMS-14 bar  
 Seal:  Metal

Depending on version



+220°C



14,00 bar



Steam





443



444

543



Mod. 443 EN ASME/FNPT ASME/SW

Connection: Female thread GAS  
 Female thread NPT  
 Socket welding ends SW  
 R: 1/4" to 1"  
 Material:  Stainless steel. PMS-22 bar  
 Seal:  Metal

Mod. 444 EN ASME/ANSI

Connection: For placing between flanges  
 DN: 15 to 25  
 Material:  Stainless steel. PMS-22 bar  
 Seal:  Metal

Mod. 543 EN ASME/FNPT

Connection: Female thread GAS  
 Female thread NPT  
 R: 1/2"  
 Material:  Stainless steel. PMS-22 bar  
 Seal:  Metal

Depending on version



+250°C



22,00 bar



Steam

To extract saturated or super-heated medium or low-pressure steam condensates.

Applicable to: steam piping, heat exchangers, plants with automatic temperature control, etc., in the chemical and petrochemical industries, etc.

To extract saturated or super-heated medium or low-pressure steam condensates.





Applicable to: steam piping, irons, laundries, vessels with condensate discharge, cooking pots, sterilizers, heat exchangers, multiple dish presses, vulcanizing autoclaves, calenders, pressure reducing equipment, etc.

# Reducing

Direct action pressure reducing valve



## Mod. 513 EN

Connection: Female thread  
 R: 1/2" to 1"  
 Material:  Nodular iron. PN-25  
 Cast steel. PN-40  
 Stainless steel. PN-40  
 Seal:  Metal

## Mod. 514 EN

Connection: Flange x Flange  
 DN: 15 to 25  
 Material:  Nodular iron. PN-25  
 Cast steel. PN-40  
 Stainless steel. PN-40  
 Seal:  Metal

For steam and gases. (For liquids, consult our technical department).

Suitable for application in: ironing machines, laundries and dry cleaners', cooking vats, textile machinery, drying cylinders, autoclaves, steam ovens, distilleries, heat exchangers, the food industry, chemical laboratories, etc.

Depending on version





# Mixing

Steam-water mixing valve





## Mod. 253 EN

Connection: Female thread  
 R: 1/2", 3/4", 1" and 1 1/2"  
 Material:  Bronze. PN-16  
 Seal:  PTFE (Teflon)

Depending on version



## Watergun PI. 1

Connection: Female thread  
 R: 1/2"  
 Material:  Bronze (covered with synthetic rubber)  
 Seal:  Fluorelastomer (Viton)

In installations with steam, the steam can be mixed with cold water to obtain instant hot water in the most economical way. Can be used in packaging plants, dairies, detergent plants, slaughterhouses, meat processing plants, hospitals,... etc. For cleaning floors, vehicles, toilets, tanks, filters,... etc. In the manufacture of food, chemical, paper and tannery products,... etc.

Depending on version

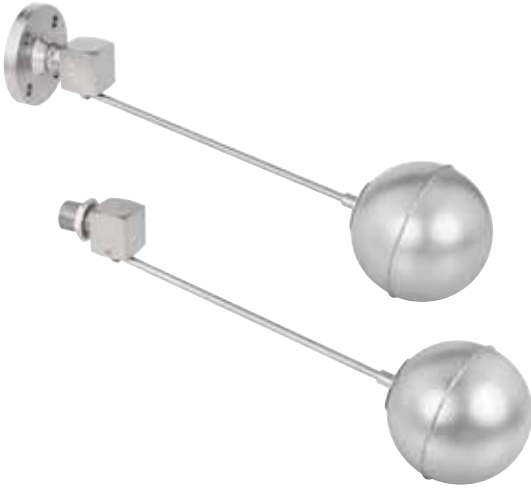




# Float-Buoys

## Float valve



## Buoys



### Mod. 150 EN ASME/ANSI

Connection: Flange  
 DN: 15 to 65  
 Material:  Stainless steel. PN-16  
 Seal:  Silicone's rubber

### Mod. 151 EN ASME/FNPT

Connection: Male thread GAS  
 Male thread NPT  
 R: 3/8" to 2 1/2"  
 Material:  Stainless steel. PN-16  
 Seal:  Silicone's rubber

To control the level of liquids in tanks, deposits, etc.

Depending on version



-60°C to +200°C



16,00 bar



Liquids

### Mod. 152

Material:  Stainless steel

**Flat:**

Ø150x60. Female thread. M10  
 Ø150x60. Sliding (Ø8 mm. internal)  
 Ø200x80 & Ø250x95. Female thread. M10  
 Ø300x115 & Ø350x130. Female thread. M12

**Cylindrical:**

Ø40x50. Male thread. M4  
 Ø40x50. Sliding (Ø4 mm. internal)  
 Ø60x120. Female thread. M6. (With or without Epoxi coating)  
 Ø60x120. Sliding (Ø6 mm. internal). (With or without Epoxi coating)

**Spherical:**

Ø60. Dowel Ø4,5 mm.  
 Ø60. Female thread. M4  
 Ø90. Female thread. M10  
 Ø105. Sliding (Ø18 mm. internal)  
 Ø110 & Ø150. Female thread. M10  
 Ø200 & Ø300. Female thread. M12

Depending on version



-60°C to +200°C



Liquids



# Instrumentation

## Siphon tube. For pressure gauges



### Mod. 011 EN

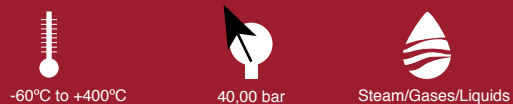
- Connection: Male thread  
 R: 1/4" to 1/2"  
 Material: ■ Cast steel. PN-32  
■ Stainless steel. PN-40

### Sleeve and nuts

- Connection: Female thread  
 R: 1/4" to 1/2"  
 Material: ■ Brass  
■ Stainless steel

Prevents breakdowns and misalignments in pressure gauges.  
 Absorbs abrupt pressure changes or water hammer which cause malfunctioning pressure gauges.  
 Isolates the pressure gauge from extreme temperatures by creating thermal isolation space.  
 If working with steam, ensure that the pressure gauge is activated by water condensation and not by steam.

Depending on version



## Needle valve



### Mod. 147 EN ASME/FNPT ASME/SW

- Connection: Female thread GAS  
 Female thread NPT  
 Socket welding ends SW  
 R: 1/4" to 2"  
 Material: ■ Brass. PN-200  
■ Cast steel. PN-250  
■ Stainless steel. PN-250  
 Seal: ● Metal

For liquids, gases and steam.  
 For use in hydraulic, pneumatic, heating and steam systems, chemical and food industries, etc.

Depending on version



# Bleeding for steam boilers

**Blowdown valve for bleeding dirt and sludge  
For steam boilers**



## Mod. 460 EN

Connection: Flange x Flange

DN: 25 to 50

Material:  Cast steel. PN-40

Seal:  Metal

The water in the boiler contains salts, which are built up by the continuous evaporation. If these salts are not eliminated, bubbles and foam are formed when the density of the water increased. To prevent these lime deposits forming, the water supply must be suitably treated, with the result that certain salts are changed producing impurities which form sludge and encrusted deposits which then adhere to the sides or the bottom of the boiler and to the combustion tubes, together with particles of dirt, remains of electrodes, carbonic acid, oxygen, etc. This leads to a high level of rust which may:

-Destroy the metal plate of the boiler, causing high maintenance costs.

-Produce thermic voltages, causing cracks in the metal plate and soldering cord.

-Notably slow down thermic transmission, meaning an unnecessary and excessive consumption of fuel.

Depending on version



+250°C



40,00 bar



Steam/Liquids

## Mod. 260 EN

Connection: Flange x Flange

DN: 20 to 50

Material:  Cast steel. PN-40

Seal:  Metal

The water in the boiler contains salts, which are built up by the continuous evaporation. If these salts are not eliminated, bubbles and foam are formed when the density of the water increased. To prevent these lime deposits forming, the water supply must be suitably treated, with the result that certain salts are changed producing impurities which form sludge and encrusted deposits which then adhere to the sides or the bottom of the boiler and to the combustion tubes, together with particles of dirt, remains of electrodes, carbonic acid, oxygen, etc. This leads to a high level of rust which may:

-Destroy the metal plate of the boiler, causing high maintenance costs.

-Produce thermic voltages, causing cracks in the metal plate and soldering cord.

-Notably slow down thermic transmission, meaning an unnecessary and excessive consumption of fuel.

Depending on version



+250°C



40,00 bar



Steam/Liquids

# Bleeding for steam boilers

**Blowdown valve  
for automatic bleeding dirt and sludge  
For steam boilers**

**Continuous desalting valve  
For steam boilers**



260-A

MP-2

MP-1

260-A

## Mod. 260-A EN

Connection: Flange x Flange  
DN: 20 to 50  
Material:  Cast steel. PN-40  
Seal:  Metal

### Programmable control for automatic bleeding of dirt and sludge. MP-1 and MP-2

Connection: Air inlet 1/8"  
Control and discharge tube Ø6/4mm.  
Voltage: 220 V.A.C. ±10% 50/60 Hz.

The water in the boiler contains salts, which are built up by the continuous evaporation. If these salts are not eliminated, bubbles and foam are formed when the density of the water increased. To prevent these lime deposits forming, the water supply must be suitably treated, with the result that certain salts are changed producing impurities which form sludge and encrusted deposits which then adhere to the sides or the bottom of the boiler and to the combustion tubes, together with particles of dirt, remains of electrodes, carbonic acid, oxygen, etc. This leads to a high level of rust which may:

- Destroy the metal plate of the boiler, causing high maintenance costs.
- Produce thermic voltages, causing cracks in the metal plate and soldering cord.
- Notably slow down thermic transmission, meaning an unnecessary and excessive consumption of fuel.

Depending on version



+250°C





40,00 bar



Steam/Liquids

## Mod. 560 EN

Connection: Flange x Flange  
DN: 15 and 20  
Material:  Cast steel. PN-40  
Seal:  Metal

The continuous desalting valve is used to empty an adjustable quantity of water from the steam boiler, removing:

- Organic matter and mineral salts in solution. (Calcium, magnesium, sodium, potassium, iron, bicarbonate ions, chlorides, sulphates, nitrates, ...etc.).
- Solid materials in suspension. (Sand, clay, metal residues, rock residues, organic matter, ...etc.).

The continuous bleeding process prevents:

- Damage caused by erosion and perforation, entailing the following high costs:

- Direct: Replacement or repair of materials.
- Indirect: Stoppages, product losses, ...etc.

- Danger of boiler explosion.

And reduces:

- Incrustations and sediments caused by precipitation of calcium and magnesium salts, which obstruct thermic transmission and which cause unnecessary and excessive fuel consumption.
- Foam formation caused by excessive saline concentration, with its corresponding drag.

Depending on version



+300°C



40,00 bar



Steam/Liquids

## Automatic continuous desalting valve For steam boilers



EC-1

560-A

RD-1

ARD-1

### Mod.560-A EN

Connection: Flange x Flange  
DN: 15 to 20  
Material: Cast steel. PN-40  
Seal: Metal  
Servomotor voltage: 220 V.A.C.  $\pm 10\%$  50/60 Hz.

**Desalting controller** With assembly cupboard. ARD-1  
Without assembly cupboard. RD-1

Voltage: 220 V.A.C.  $\pm 10\%$  50/60 Hz.

### Conductivity electrode EC1

Connection: Male thread  
R: 1"  
Material: PTFE (Teflon)-  
 Stainless steel. PMS-32 bar

### Electrode connection collector

Connection: Flanged  
DN: 20  
Material: Cast steel. PN-40  
Blowoff valve: Mod. 999 de 1/2" with simple joint plug

The conductivity electrode EC-1, the desalting controller RD-1 and the continuous desalting valve with servomotor allow the automatic desalting process of boiler water which eliminates:

- Organic matter and mineral salts in solution. (Calcium, magnesium, sodium, potassium, iron, bicarbonate ions, chlorides, sulphates, nitrates, ...etc.).
- Solid materials in suspension. (Sand, clay, metal residues, rock residues, organic matter, ...etc.).

The continuous bleeding process prevents:

- Damage caused by erosion and perforation, entailing the following high costs:
  - Direct: Replacement or repair of materials.
  - Indirect: Stoppages, product losses, ...etc.
- Danger of boiler explosion.

And reduces:

- Incrustations and sediments caused by precipitation of calcium and magnesium salts, which obstruct thermic transmission and which cause unnecessary and excessive fuel consumption.
- Foam formation caused by excessive saline concentration, with its corresponding drag.

This combination of measuring, comparison and control ensures minimum water loss and thus gives considerable energy savings.

Depending on version



+300°C



40,00 bar



Steam/Liquids

## Samples water-cooler For steam boilers



### Mod.560 DRM-1 EN

Connection: Sampling circuit: Tube  $\varnothing 6/8$ mm.  
Refrigeration circuit: Female thread 1/2"  
Material: Stainless steel.  
Sampling circuit. PMS-140 bar  
Refrigeration circuit. PMS-10 bar

Efficient monitoring of the purging of salts, dirt and sludge in a steam boiler requires regular analysis of the water in order to verify that its parameters are within the ideal levels of salinity and alkalinity demanded by law. All the Continuous desalting valve (Mod. 560 and 560-A) are provided with taps for obtaining samples. As the water is

extracted continuously 30 ÷ 50 mm. below the minimum level, the collection level is ideal and does not interfere with the control and level regulation devices. Direct sampling is incorrect:

- Losses by expansion increase the density of the water and falsify results.
- There is an obvious physical risk involved.

The basic premise for conducting analyses correctly is to bring the samples from the tap of the Continuous desalting valve to the Samples water-cooled DRM-1, and bring them down to between 24 ÷ 26°C.

Depending on version



+340°C



140,00 bar

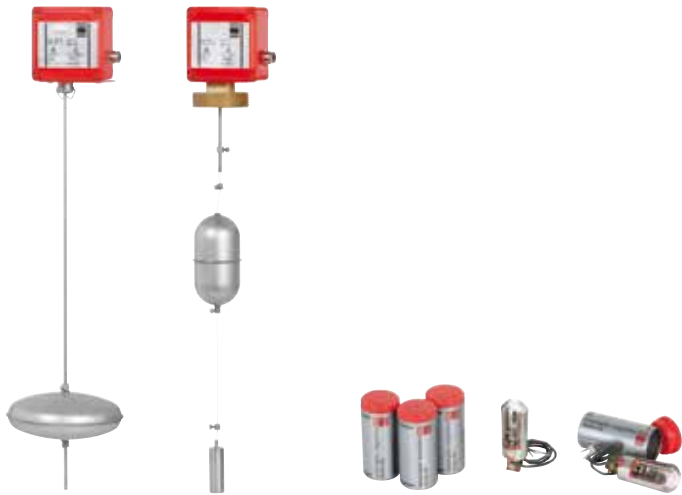


Steam/Liquids

# Automatic level controller

## Sliding buoy type automatic level controller

## Buoy type automatic level controller



290


291

262

### Mod. 290 EN

Connection: Bracket with 2 screws M.8 x...  
 Material:  Stainless steel  
 Standard level fluctuation: 495 mm.  
 Buoy: Ø150x60 sliding  
 Maximum n° of switches: 1

### Mod.291 EN

Connection: Female thread  
 R: 2 1/2"  
 Material:  Stainless steel - Brass. PMS-19 bar  
 Standard level fluctuation: 3.000 mm.  
 Maximum level fluctuation: 30.000 mm.  
 Buoy: Ø60x120 sliding  
 Maximum n° of switches: 1

This device guarantees automatic, safe and reliable control, regulation and signalling of the level of liquids in: wells, tanks, cisterns, etc.

Depending on version

  
 -60°C to +150°C

  
 19,00 bar

  
 Liquids





CC

CM


SC

### Mod. 076 EN

Connection: Flange  
 DN: 25  
 Connection (SC): Flange with 4 screws M. 16x40  
 Material:  Cast iron. PN-16  
 Stainless steel. PN-16 (SC)  
 Standard level fluctuation: 120 mm.  
 Buoy: Ø60x120  
 Maximum n° of switches: 10  
 Distance between centres of flanges: 190 or 250 mm.  
 Viewer (CM): F =Front. D =Right. I =Left  
 Blowoff valve: Mod. 999 1/2" with simple joint plug

This device guarantees automatic, safe and reliable control, regulation and signalling of the level of liquids in: steam boilers, pressurised vessels, preheaters, processes, etc.

Depending on version

  
 -60°C to +300°C

  
 16,00 bar

  
 Steam/Liquids

### Mod. 262

Connection: M.4  
 Voltage: 220 V.A.C  
 To be meant for Mod. 290, 291 and 076

**Electrode based electronic level controller  
For steam boilers**



**Mod. 176 EN**

**Modulating electrode based electronic  
level controller  
For steam boilers**



**Mod. 276 EN**

**Level controller. RN-1  
Minimum level  
safety controller. RS-1**

Voltage: 220 V.A.C.  $\pm 10\%$  50/60 Hz.

**Level electrode. EN-1  
Minimum level  
safety electrode. ES-1**

Connection: Male thread  
R: 1"  
Material:  PTFE (Teflon)-  
Stainless steel. PMS-32 bar

Measuring standard length: 700 mm

**Electrode connection collector**

Connection: Flange  
DN: 25  
Material:  Cast steel. PN-40

Maximum n° of electrodes: 1 or 3

Distance between centres of flanges: 190 or 250 mm.

Blowoff valve: Mod. 999 1/2" with simple joint plug

This device guarantees a safe and reliable control, regulation and electronic signalling of the level of electrically conducting liquids in: steam and hot water boilers, autoclaves, preheaters, pressure vessels, feedwater and condensates tanks, processes, etc.

Depending on version



+238°C



32,00 bar



Steam/Liquids

**Modulating level controller.  
RAC-1. RAC-2. RAC-3**

Voltage: 220 V.A.C.  $\pm 10\%$  50/60 Hz.

**Modulating level electrode. EAC-1**

Connection: Male thread  
R: 1"  
Material:  PTFE (Teflon)-  
Stainless steel. PMS-32 bar

Measuring standard length: 300 to 1.500 mm.

**Electrode connection collector**

Connection: Flange  
DN: 25  
Material:  Cast steel. PN-40

Maximum n° of electrodes: 1 or 3

Distance between centres of flanges: 190 ó 250 mm.

Blowoff valve: Mod. 999 1/2" with simple joint plug

This device, when combined with a motorised valve, ensures the continuous control and display of the level, with a high and low level alarm for: steam and hot water boilers, autoclaves, pre-heaters, pressured vessels, condensation and feedwater tanks, processing, etc.

Applicable to steam boilers in accordance with TRD-602, TRD-604 (24/72 hours) and EN-12953 Part 6 (24 hours).

Depending on version



+238°C



32,00 bar



Steam/Liquids

# Level indicators Window Sight glasses

## Window sight glasses



Model 265

Model 365

Model 366

## Transparency round glasses For window sight glasses



### Mod.265 EN ASME/FNPT ASME/SW

Connection: Female thread GAS  
Female thread NPT  
Socket welding ends SW  
R: 1/2" to 1"  
Material:  Cast steel. PN-40  
 Stainless steel. PN-40

### Mod.365 EN ASME/FNPT ASME/SW

Connection: Female thread GAS  
Female thread NPT  
Socket welding ends SW  
R: 1/2" to 2"  
Material:  Cast steel. PN-40  
 Stainless steel. PN-40

### Mod.366 EN ASME ANSI

Connection: Flange x Flange  
DN: 15 to 200  
Material:  Cast steel. PN-16. PN-40  
 Stainless steel. PN-40

To verify the flow, direction and condition of liquid in a section of piping. It helps detect blockages in valves, filters and other line equipment. In particular, it enables verification of correct operation of the condensate traps, ensuring that there are no steam leaks, with the cost this would entail. It also enables observation of a product's viscosity, turbidity and, in particular, its colour in the different phases of its production process. Applicable to: piping conveying liquids, steam and condensates, among others, in any type of industry: chemical, petrochemical, pharmaceutical, food and more.

Depending on version



### Mod. 006

Type: Transparency 45x10  
63x10  
63x15  
80x12  
80x20  
100x15  
100x25  
125x20  
125x30  
150x25  
150x30  
175x25  
175x30  
200x30  
250x30

Material:  Borosilicate  
 Graphite (Joints)

For visual checking of the level of liquids in all types of vessel, including those under pressure, in special thermal and chemical conditions. Also for checking processes. The quality of the sight glass satisfies the most demanding safety standards and industry guarantees in general.

Depending on version









## Round-dowel level indicator

**Mod. 666 EN**

Level gauges

Connection: Flanged

DN: 20

Material:  Cast iron. PN-16  
 Nodular iron. PN-40. 350°C  
 Cast steel. PN-40  
 Stainless steel. PN-40

Seal:  Metal

Blowoff valve: Mod. 999 3/8" with simple joint plug and/or sleeve





## Square-dowel level indicator

**Mod. 466 EN**

Level gauges

Connection: Flange

DN: 20



Material:  Cast iron. PN-16  
 Nodular iron. PN-40. 350°C  
 Cast steel. PN-40  
 Stainless steel. PN-40

Seal:  Metal**Mod.166-ER EN**

Round-dowel level indicator box

Connection: Round-dowel Ø 20 mm.

Box n°: 0 to X

Material:  Cast steel. PN-16. PN-40  
 Stainless steel. PN-40

For use in boilers, receivers, cisterns, reservoirs, ...etc., to control the level of liquids, gases and steam.

A multiple-slot polyprismatic viewer allows the level to be optically read, clearly differentiating liquid and gas phases from liquid ones.

Depending on version



-60°C to +400°C



40,00 bar





Steam/Gases/Liquids

**Mod.166-EC EN**

Square-dowel level indicator box

Connection: Square-dowel □18 mm.

Box n°: 0 to X

Material:  Cast steel. PN-16. PN-40  
 Stainless steel. PN-40

Blowoff valve: Mod. 999 3/8" with simple joint plug

For use in boilers, receivers, cisterns, reservoirs, ...etc., to control the level of liquids, gases and steam.

A multiple-slot polyprismatic viewer allows the level to be optically read, clearly differentiating liquid and gas phases from liquid ones.

Depending on version



-60°C to +400°C



40,00 bar



Steam/Gases/Liquids

# Level indicators Window Sight glasses

**Reflection and transparency glasses**  
**For level indicator box**



**Mica shield**  
**For level indicator box**



## Mod. 066

- Type:  
 Reflection: A 5 prisms 0 to IX  
               B 5 prisms 0 to IX  
               H 5 prisms 0 to IX  
 Transparency: A V to IX  
                   B V to IX  
                   H V to IX
- Material: ■ Borosilicate  
■ Klingerit cardboard type (Joint)  
■ Graphite (Joint)

For visual checking of the level of liquids in all types of vessel, including those under pressure, in special thermal and chemical conditions. Also for checking processes. The quality of the sight glass satisfies the most demanding safety standards and industry guarantees in general.

Depending on version



+243°C



100,00 bar



Steam/Gases/Liquids

## Mod. 066-PM

- Type: A I to X  
           B/H I to X  
 Material: ■ Natural muscovite mica

In combination with transparent glasses the life of these is increased when working at high pressures and temperatures. Also, they are protected from erosion, which results from the effects of the corrosive chemical components, alkaline solutions, boiler water, steam, caustic products, hydrofluoric acids, hot and concentrated phosphoric acids, sodium and potassium hydroxides and other contaminating, viscous or corrosive media.

Applicable in level indicators for electrical generation plants, thermal power plants, petroleum refineries, petrochemical plants, pressure vessels, fertilizers, sugar refining plants, paper mills,... etc..

Depending on version



+600°C

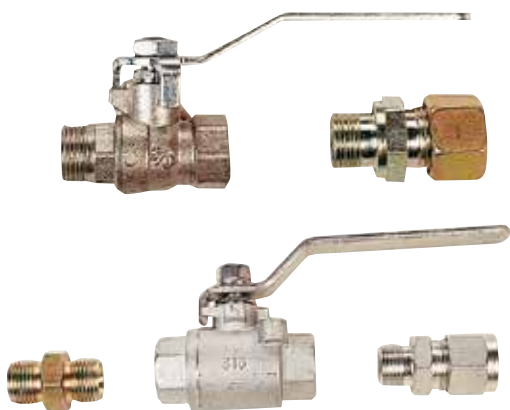


392,00 bar



Steam/Gases/Liquids

## Blowoff valve




## Mod. 999 EN

Connection: Female thread


R: 3/8" and 1/2"


Material:  Brass. PN-25

Seal:  PTFE (Teflon)-Metal

Connection: Male thread x Female thread

R: 3/8" and 1/2"

Material:  Stainless steel. PMS-56 bar


Seal:  PTFE (Teflon)-Metal

## Simple plug

Connection: Male thread x Tube Ø 12/10  
and Ø 15/13 mm.

R: 3/8" and 1/2"

Material:  Cast steel

 Stainless steel

## Sleeve

Connection: Male thread

R: 3/8" and 1/2"

Material:  Cast steel

Depending on version



-60°C to +260°C



56,00 bar



Steam/Gases/Liquids



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 Founded in 1914  
 www.vycindustrial.com  
 Avenc del Daví, 22 B Pol. Ind. Can Petit 08227 TERRASSA (Barcelona) SPAIN  
 ☎ +34 93 735 76 90 📠 +34 93 735 81 35 ✉ 119 @ info@vycindustrial.com

