

# Safety EN

Full lift safety valve with spring loading. (AIT)



EP

AP

ES

CP

**Mod. 496**








EP

AP

ES

CP

**Mod. 495**

Connection: Flange x Flange  
 DN1 x DN2: 20x32 to 200x300  
 Material:  Cast iron, PN-16  
 Nodular iron, PN-40, 350°C  
 Carbon 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 Safety Valves".

Depending on version:








-60°C to +50°C



0,20 bar to 40,00 bar



Steam/Gases/Liquids

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  
 Carbon 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 Safety Valves".

Depending on version:



-60°C to +450°C



0,20 bar to 40,00 bar



Steam/Gases/Liquids

VYC





EP

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EP

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CP

### Mod. 596

### Mod. 696

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

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

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Depending on version



-60°C to +420°C



0,20 bar to 62,00 bar



Steam/Gases/Liquids

Depending on version



-60°C to +420°C



60,00 bar to 96,00 bar



Steam/Gases/Liquids

# Safety EN

Full lift safety valve with spring loading. (AIT)



EP AP ES AS

**Mod. 695**




EP AP ES AS


**Mod. 895 CRYOGENIC**

Connection: Male thread x Female thread


MR1 x FR2: 3/8"x1/2" to 1"x1"

Material:  Bronze, PS-36 bar

 Stainless steel PS-36 bar

Seal:  PTFE (Teflon)

 Silicone's rubber

 Fluoroelastomer (Viton)

 PerFluoroelastomer (FFKM)

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 Safety Valves".

Depending on version



-60°C to +250°C




0,20 bar to 36,00 bar





Steam/Gases/Liquids

Connection: Male thread x Female thread

MR1 x FR2: 3/8"x1/2" to 1"x1"

Material:  Bronze, PS-36 bar

 Stainless steel PS-36 bar

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 Safety Valves".

Depending on version



-100°C to +60°C



0,20 bar to 36,00 bar



Steam/Gases/Liquids



EP

AP

ES

AS

### Mod. 995

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

Material:  Stainless steel PS-144 bar

Seal:  PTFE (Teflon)



EP


AP

ES


AS

### Mod. 694 CLAMP

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

Material:  Stainless steel PN-16

Seat:  PTFE (Teflon)

 Silicone's rubber

 Fluoroelastomer (Viton)

 PerFluoroelastomer (FFKM)

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 Safety Valves".

Depending on version



-60°C to +200°C



35,01 bar to 144,00 bar



Steam/Gases/Liquids

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 Div.1". 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 16,00 bar



Steam/Gases/Liquids

# Safety EN

Normal safety valve with spring loading. (AN)



EP

AP

ES

CP






EP

AP

ES

**Mod. 494**







**Mod. 295**

Connection: Flange x Flange  
 DN1 x DN2: 25x25 to 200x200  
 Material:  Cast iron, PN-16  
            Nodular iron, PN-40, 350°C  
            Carbon 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 Safety Valves".

Depending on version



Connection: Male thread x Female thread  
 DN1 x DN2: 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  
        Fluoroelastomer (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 Safety Valves".

Depending on version





EP

AP

ES

AP

ES

AP

ES

## Mod. 296

## Mod. 095

## Mod. 096

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
- Seal:
- PTFE (Teflon)
  - Silicone's rubber
  - Fluoroelastomer (Viton)

Connection: Male thread x Female thread  
DN1 x DN2: 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
  - Fluoroelastomer (Viton)

Connection: Flange x Female thread  
MR1 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
  - Fluoroelastomer (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 Safety Valves".

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Depending on version



Depending on version



Depending on version



# Safety EN

Progressive opening safety relief valve. (AP)







Mod. 194



Mod. 195

Connection: Flange x Flange  
DN1 x DN2: 25x25 to 200x200

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

Seal:  Metal

The valve works as an automatic pressure relief regulator acting by the static pressure at the valve inlet. Design in accordance with "International Standard ISO 4126-1 Safety Valves".

Depending on version



-60°C to +450°C







0,05 bar to 0,2 bar



Steam/Gases/Liquids

Connection: Female thread x Female thread  
dn x R2: 3/4"x1 1/4" to 1"x1 1/2"

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

Seal:  Metal

The valve works as an automatic pressure relief regulator acting by the static pressure at the valve inlet. Design in accordance with "International Standard ISO 4126-1 Safety Valves".

Depending on version



-60°C to +450°C



0,05 bar to 0,2 bar



Steam/Gases/Liquids





Mod. 196

Connections: Flange & Flange

Size: 1/2" - 3/4" - 1" - 1 1/4" - 1 1/2" - 2"

Material:

- Cast iron (PN 16)
- Stainless steel (PN 16)
- Cast iron (PN 40)
- Stainless steel (PN 40)

Seal:

The valve without an automatic pressure relief function acting by the water pressure inside valve main. Design in accordance with International Standard ISO 11547 "Safety Valves".

Depending on material:



4000 - 4001



4002 - 4003



4004 - 4005



Mod. 795

Connections: (Water thread) x (Water connection)

Size: 1/2" - 3/4" - 1" - 1 1/4" - 1 1/2" - 2"

Material:

- Brass (PN 16)
- Stainless steel (PN 16)
- Seal:
- Fluoropolymer (Seal)

The valve acts as an automatic safety valve (pressure relief) and prevents the operation of a vacuum inside pressurized installation or circuits.

Depending on material:



4000 - 4001



4002 - 4003



4004

# Safety ASME

Full lift safety valve with spring loading. (AIT)



EP

AP

ES

CP

**Mod. 486**






EP

AP

ES

CP

**Mod. 485**

Connection: Flange x Flange  
NPS1 x NPS2: 1" x 2" to 8" x 10"  
Material:  Carbon steel 150 lbs and 300 lbs  
 Stainless steel 150 lbs and 300 lbs  
Seat:  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 Div.1". Materials according ASME code section II and ASTM. Connections according ASME/ANSI B16.5 standard. Center to face dimensions according API-526.

Depending on version






-20,2 °F to +600 °F



2,90 psi to 580,16 psi



Steam/Gases/Liquids

Connection: 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  
Seat:  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 Div.1". Materials according ASME code section II and ASTM. Connections according ASME B1.20.1 standard.

Depending on version



-20,2 °F to +600 °F



2,90 psi to 580,16 psi



Steam/Gases/Liquids



EP AP ES AS

## Mod. 685



EP AP ES AS

## Mod. 885 CRYOGENIC





EP AP ES AS

## Mod. 985

Connection: Male thread NPT x Female thread NPT  
MNPT1 x

FNPT2: 3/8"x1/2" to 1"x1"

Material:  Bronze, MAWP-522,14 psi  
 Stainless steel MAWP-522,14 psi

Seal:  PTFE (Teflon)  
 Silicone's rubber  
 Fluoroelastomer (Viton)  
 Perfluoroelastomer (FFKM)

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 Div.1". Materials according ASME code section II and ASTM. Connections according ASME B1.20.1 standard.



Depending on version



-79°F to +302°F 2,90 psi to 522,14 psi Steam/Gases/Liquids

Connection: Male thread NPT x Female thread  
MNPT1 x

FNPT2: 3/8"x1/2" to 1"x1"

Material:  Bronze, MAWP-522,14 psi  
 Stainless steel MAWP-522,14 psi

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 Div.1". Materials according ASME code section II and ASTM. Connections according ASME B1.20.1 standard.

Depending on version



-300,0°F to +302,0°F 2,90 psi to 522,14 psi Steam/Gases/Liquids

Connection: Male thread NPT x Female thread  
MNPT1 x

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

Material:  Stainless steel MAWP-2069,54 psi

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 Div.1". Materials according ASME code section II and ASTM. Connections according ASME B1.20.1 standard.

Depending on version



-79°F to +302°F 523,08 psi to 2.898,07 psi Steam/Gases/Liquids

# Safety ASME

## Progressive opening safety relief valve. (AP)



Mod. 186



Mod. 185

Connection: Flange x Flange  
FNPT1 x FNPT2: 1/2" to 8x10"

Material:  Carbon steel  
 Stainless steel

Seal:  Metal

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve. Design in accordance with "International Standard ISO 4126-1 Safety Valves".

Depending on version



0.02" to 4.01"



6.750 psi to 2.4 psi



Steam/Gases/Liquids

Connection: Female thread NPT x Female thread NPT  
FNPT1 x FNPT2: 3/4" x 1 1/4" to 1" x 1 1/2"

Material:  Carbon steel  
 Stainless steel

Seal:  Metal

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve. Design in accordance with "International Standard ISO 4126-1 Safety Valves".

Depending on version



0.02" to 4.01"



6.750 psi to 2.4 psi



Steam/Gases/Liquids

# Safety EN/ASME

## Vacuum breaker safety valve



### Mod. 785

- Connection: Male thread NPT x Free admission  
 MNPT1 x 60B: 3/8"x60B to 1"x60B  
 Material:  Brass, 150 lbs  
            Stainless steel 150 lbs  
 Seal:  Silicone's rubber  
         Fluoroelastomer (Viton)

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

Depending on version



## Multi-stage diffusion silencers



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

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

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.

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



# Safety EN/ASME

## Test bench for safety valves



## Controlled safety pressure relief System CSPRS



**Mod.000** EN ASME/ANSI ASME/FNPT  
ASME/MNPT ASME/SW... others to be agreed

Connection: Mechanical clamps  
DN: 8 to 125

Test bench for regular inspections and setting and resetting safety valves. Ideal for distributors, maintenance companies or with in-house maintenance.

It allows safety valves to be adjusted, tested and/or checked to the test pressure (setting)  $P_t$  with cold (simulating service conditions), matching the opening pressure  $P_o$  and the closing pressure  $P_c$ , in accordance with the standard regulations.

Design in accordance with the requirements of machine directive 2006/427/EC and the pressure equipment directive (2014/68/EU).



+15°C to +30°C



200,00 bar



Nitrogen

**Mod. 004**

Controlled safety pressure relief system CSPRS valves are mainly used where conventional direct-loaded spring action valves cannot guarantee the opening and closing margins that certain specific conditions of service demand.

The objective is to help the closure by means of pressure so that the valve remains completely watertight until reaching the set pressure and/or to activate the opening with pressure. Once evacuated and in keeping with a previous adjustment, to assist with closing pressure, to once again achieve closure with the desired watertightness.

This allows us to:

- Stabilise the functioning in critical applications of one or several valves.
- Improve performance, position, repeatability and operational efficiency.
- Improve the opening-closure hysteresis.
- Reduce product losses and minimise them in the case of working with several valves at staggered pressures, if conditions so permit.
- Increase the operating pressure of the system up to 99.9% of the set pressure.

The control safety pressure relief system CSPRS device can be used with any safety valve available in the market.

# Check-Filters

## Disc check valve



### Mod. 170 EN ASME/ANSI

Connection: For placing between flanges

DN: 15 to 100

Material:  Bronze PN-16  
 Carbon 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



### Mod. 172 EN ASME/ANSI

Connection: For placing between flanges

DN: 125 to 300

Material:  Cast iron PN-16  
 Bronze PN-16  
 Carbon 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 -125 to 300.

Face-to-face dimensions in accordance with EN-558, basic series 49 and 51.

Depending on version




# Check-Filters

## Piston check valve



## Mod. 179 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  
 Carbon steel PN-250  
 Stainless steel PN-250
- Seat:  Metal

Check valve with spring operated piston closure.

Depending on version



-60°C to +60°C



25,00 bar



Steam/Gases/Liquids

## Y filters



## Mod. 090 EN ASME/ANSI

- Connection: Flange x Flange  
DN: 15 to 200
- Material:  Nodular iron, PN-16  
 Carbon steel PN-40  
 Stainless steel PN-40

It enables the filtration and accumulation of suspended solid particles, dragged by fluids, for their subsequent removal. In this way, we protect water control and regulation equipment underneath the filter and prevent collateral damage.

Depending on version



-60°C to +60°C



40,00 bar



Steam/Gases/Liquids



# Steam traps- Separators

## Thermodynamic

### Thermodynamic steam trap



041-04 without filter

043-044 with filter

### Mod. 191 EN ASME/FNPT ASME/SW

Connection: Female thread GAS  
Female thread NPT  
Socket welding ends SW  
R: 1/4" to 2"  
Material: Stainless steel PN-40

It enables the filtration and accumulation of suspended solid particles, dragged by fluids, for their subsequent removal. In this way, we protect water control and regulation equipment underneath the filter and prevent collateral damage.

Depending on version



-20°C to +180°C



48.00 bar



Steam/Gases/Liquids

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

### 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  
ON: 15 to 25  
Material: Stainless steel PMA, 63 bar  
Seal: Metal

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

Depending on version



+400°C



0,25 bar to 12,5 bar



Steam

# Steam traps- Separators

## Mechanical

Float and 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, SMS-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:  Carbon steel PMS-14 bar  
Seal:  Metal

### Mod. 244 EN ASME/ANSI

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

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.

Depending on version



-20 to 0



10.0 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



-20 to 0



10.0 bar



Steam

## Thermostatics

### 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:  Carbon steel BR PN-40  
 Carbon steel MR PN-40  
 Carbon steel AR PN-100

Seal:  Metal

### Mod. 144 EN ASME/ANSI

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

Material:  Carbon steel SP PN-40  
 Carbon steel MR PN-40  
 Carbon steel AP PH-100

Seal:  Metal

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

Depending on version



+40°C



8,00 bar



Steam

### Thermostatic steam trap



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

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, calendars, pressure  
reducing equipment, etc.

Depending on version



+20°C



2,00 bar



Steam

## Steam traps- Separators

Ultrasonic leak detector



### Mod. 003

Material:  Plastic ABS -  Stainless steel

To detect leaks:  
- In condensate purgers,  
- In valve seats.

Checking for wear on bearings,  
Solving mechanical problems in general.  
Ultrasonic is directional and localizable. In a noisy environment, we can remove or block the distracting ultrasounds.

During preventive maintenance, we should place the stethoscope properly and we will detect, audibly and visually, the leaks that are affecting us. We can take corrective action, safeguarding the environment, saving energy, time and consequently money.

It meets and exceeds the requirements of ASTM E1000-2005 for Leak Detection.

Depending on version



1/8" version



3/8" version

## Reducing- Mixing

Direct action pressure reducing valve



### Mod. 513 EN ASME/FNPT

Connection: Female threaded G3/8  
Female threaded NPT

R1: 1/2" to 1"

Material:  Nodular iron PN-40  
 Carbon steel PN-40  
 Stainless steel PN-40

Seat:  Metal

### Mod. 514 EN ASME/ANSI

Connection: Flange & Flange

DN: 15 to 25

Material:  Nodular iron PN-25  
 Carbon steel PN-40  
 Stainless steel PN-40

Seat:  Metal

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

Suitable for application in: empty machines, sand-dry and dry cleaners, cooking vats, bottle machines, drying cylinders, autoclaves, steam ovens, distillers, heat exchangers, the food industry, chemical laboratories, etc.

Depending on version



1/2" version



1/2" version



3/4" version

## Steam-water mixing valve



## Mod. 614 EN ASME/ANSI

Connection: Flange x Flange  
 DN: 25 to 50  
 Material: Carbon steel PN-16  
 Seal: Metal

## Mod. 253 EN ASME/FNPT

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

Depending on version



+93°C



0,35 to 10,30 bar



Steam

## Water gun PI. 1

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

For steam and gases. 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



+10 to +120°C



1,40 to 16,00 bar



Steam/Gases

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



+93°C



0,35 bar



Liquids

# Float-Buoys

## Float valves



## Buoys



### Mod. 150 EN ASME/ANSI

- Connectors: Flange  
DN: 15 to 60  
Material:  Stainless steel PN-16  
Seat:  Silicone rubber

### Mod. 151 EN ASME/MNPT

- Connections: Male thread GAS  
Male thread NPT  
R: 3/8" to 2 1/2"  
Material:  Stainless steel PN-16  
Seat:  Silicone rubber

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

Depending on version



### Mod. 152

Material:  Stainless steel

#### Flat:

- Ø150x60, Female thread, M10
- Ø150x60, Sliding (Ø5 mm, internal)
- Ø200x80 and Ø250x85, Female thread, M10
- Ø300x115 and Ø350x130, Female thread, M12

#### Cylindrical:

- Ø40x60, Male thread, M4
- Ø40x60, Sliding (Ø4 mm, internal)
- Ø60x120, Female thread, M6, (With or without Epoxy coating)
- Ø60x120, Sliding (Ø5 mm, internal), (With or without Epoxy coating)

#### Spherical:

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

Depending on version



# Control-Regulation

## Stop valve with bellow seals



## Thermal and acoustic insulation textile jackets



### Mod. 248 EN ASME/ANSI

Connection: Flange x Flange

DN: 15 to 200

- Material:
- Nodular iron PN-10
  - Carbon steel PN-40
  - Stainless steel PN-40
- Seal:  Metal

Stop valve with bellow seals, maintenance-free, designed with external spindle and support guide, thus avoiding the atmospheric emissions of conventional valves.

Depending on version



-40 to +100°C



40,00 bar



ZeroEmissionLeak

### Mod. 008 EN ASME/ANSI

Connection: VVC thermal and acoustic insulation textile jackets are designed and manufactured to measure for our valves, but we are able to adjust them to any other valve or installation on the market. Remember that only our original products will offer the maximum guarantee.

Material: Fibreglass with external silicone coating

They help to reduce heat loss, protect against frost and adverse weather conditions, noise attenuation and work as a preventive measure in work-place safety, etc.

Depending on version



+100°C



ZeroEmissionLeak

# Control-Regulation

Siphon tube. For pressure gauges



Needle valve



Mod. 011 EN ASME/MNPT

Connection: Male thread GAS  
Male thread NPT  
R: 1/4" to 1/2"  
Material:  Carbon steel B40  
 Stainless steel CL300

## Sleeve and nuts

Connection: Female thread GAS  
Female thread NPT  
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:



-40°C +400°C







65.00 bar



Steam/Gases/Liquids

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  
 Carbon steel PN-250  
 Stainless steel PN-250  
Seat:  Metal

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

Depending on version:



-40°C +400°C



20.00 bar



Steam/Gases/Liquids



# Bleeding for steam boilers

Blowdown valve for bleeding dirt and sludge  
For steam boilers



Mod. 460 EN ASME/ANSI



Mod. 660 EN ASME/ANSI

Connection: Flange x Flange  
DN: 20 to 50  
Material: Carbon steel PN-40  
Seat: Metal

Connection: Flange x Flange  
DN: 20 to 50  
Material: Carbon steel PN-40  
Seat: 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 increases.

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

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- Produce thermic voltages, causing cracks in the metal plate and soldering cost.
- Notably slow down thermic transmission, meaning an unnecessary and excessive consumption of fuel.

Depending on version



<math>420^{\circ}\text{C}</math>



400 bar



Steam/Liquid



<math>420^{\circ}\text{C}</math>



400 bar



Steam/Liquid

# Bleeding for steam boilers

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



MP-2

**Mod. 660-A EN ASME/ANSI**

Connection: Range x Range

DN: 20 to 50

Material: Carbon steel PN-40

Seat: Metal

**Programmable control for automatic  
bleeding of dirt and sludge MP-2**

Connection: Air inlet 1/8"

Control and discharge tube Ø6/4 mm

Temper.: 220 VA 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 increases.

To prevent these lime deposits forming, the water supply must be automatically 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 voltage, causing cracks in the metal plate and soldering cord.
- Notably slow down thermic transmission, ensuring an unnecessary and excessive consumption of fuel.

Depending on version:



1/200°C



400°C



Steam Liquor

**Continuous desalting valve  
For steam boilers**



**Mod. 560 EN ASME/ANSI**

Connection: Flange x Flange

DN: 15 to 25

Material: Carbon steel PN-40

Seat: 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 reduce:

- 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 cost.

Depending on version:



1/200°C



400°C



Steam Liquor

## Automatic continuous desalting valve For steam boilers



EC-1

560-A

RD-1

ARD-1

### Mod.560-A EN ASME/ANSI

Connection: Flange x Flange  
DN: 15 to 20  
Material:  Carbon steel PN-40  
Seat:  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: Flange  
DN: 20  
Material:  Carbon steel PN-40  
Blow off 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 caline 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



+90°C



4000 bar



Steam/liquids

## Samples water-cooler For steam boilers



Connection: Sampling circuit: Tube Ø6/8mm.  
Refrigeration circuit: Female thread 1/2"

Material:  Stainless steel.

Sampling circuit: PMS-140 bar

Refrigeration circuit: PMS-10 bar

Efficient monitoring of the pugging 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



+90°C



14000 bar



Steam/liquids

# Automatic level controller

## Sliding buoy type automatic level controller



290

291

262

### Mod. 290

Connection: Bracket with 2 screws M 8 x 8  
 Material: Stainless steel  
 Standard level fluctuation: 495 mm  
 Buoy: Ø190x90 sliding  
 Maximum n° of switches: 1

### Mod. 291 EN ASME/MNPT

Connection: Male thread GAG  
 Male thread NPT  
 R: 2 1/2"  
 Male V: Stainless steel - brass, PVD-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 signaling of the level of liquids in wells, tanks, cisterns, etc.

Depending on version



Water



Steam



Steam/Liquids

## Buoy type automatic level controller



CC

CM

SC

### Mod. 076 EN ASME/ANSI

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  
 Weaver (CM): F = Front, D = Right, L = Left  
 Blow off valve: Mod. 999 1/2" with single joint plug

This device guarantees automatic, safe and reliable control, regulation and signaling of the level of liquids in: steam boilers, pressurized vessels, pre heaters, processors, etc.

Depending on version



40°C to +200°C



18,00 bar



Steam/Liquids

### Mod. 262

Connection:  
 Voltage:

M4  
 220 VAC  
 To be meant for Mod. 290, 291 and 076

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



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



**Mod. 176 EN ASME/MNPT**

**Mod. 276 EN ASME/MNPT**

**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

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

Tension: 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:  Carbon steel PN-40

Maximum n° of electrodes: 1 or 3

Distance between centres of flanges: 190 or 250 mm.

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

**Electrode connection collector**

Connection: Flange  
DN: 25

Material:  Carbon steel PN-40

Maximum n° of electrodes: 1 or 3

Distance between centres of flanges: 190 or 250 mm.

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

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

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 feed water 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



$\pm$ 200 °C



32,00 bar



Steam/Liquid

Depending on version



$\pm$ 200 °C



32,00 bar



Steam/Liquid

# Window sight glasses- Level indicators

## Window sight glasses

## 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:  Carbon steel PN-40  
 Stainless steel PN-40

### Mod. 006

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

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

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

Material:  Borosilicate  
 Graphite (Joints)

### Mod. 366 EN ASME/ANSI

Connection: Flange x Flange  
DN: 15 to 200  
Material:  Carbon 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 cool the would enter. 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.

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



Depending on version



### Round-dowel level indicator



**Mod.166-ER EN ASME/ANSI**  
Round-dowel level indicator box

Connection: Round-dowel Ø 20mm.

Box n°: 0 all X

Material: ■ Carbon 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 poly prismatic 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.666 EN ASME/ANSI**  
Level gauges

Connection: Flange

DN: 20 and 25

Material: ■ Carbon steel PN-16  
■ Carbon steel PN-40  
■ Stainless steel PN-40

Seat: ● Metal

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

### Square-dowel level indicator



**Mod.166-EC EN ASME/ANSI**  
Square-dowel level indicator box

Connection: Square-dowel 11x8 mm.

Box n°: 0 all X

Material: ■ Carbon steel PN-16, PN-40  
■ Stainless steel PN-40

Page top: 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 poly prismatic 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.466 EN ASME/ANSI**  
Level gauges

Connection: Flange

DN: 20 and 25

Material: ■ Carbon steel PN-16  
■ Carbon steel PN-40  
■ Stainless steel PN-40

Seat: ● Metal

# Window sight glasses- Level indicators

## Reflection and transparency glasses




For level indicator box



Mod. 066

Type reflection: A 5 prism 0 to IX  
B 5 prism 0 to IX  
H 5 prism 0 to IX

Type transparency: A V to IX  
B V to IX  
H V to IX

Material:  Bivoxalcoat  
 Kington cardboard type (only)  
 Graphite (only)

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



+140°C



100,00 bar



Glass/Glass/Glycol

## Mica shield

For level indicator box



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



+400°C



300,00 bar



Glass/Glass/Glycol



## 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-55 bar

Seal:  PTFE (Teflon)-Metal

### Simple plug

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

R: 3/8" and 1/2"

Material:  Carbon steel,

 Stainless steel

### Sleeve

Connection: Male thread

R: 3/8" and 1/2"

Material:  Carbon steel.

Depending on version



-60°C to +200°C



56,00 bar



Steam/Gases/Liquids

VYC

