



Model 800



Model 1216



Model 1216C



Model 1216H



Model 1216B



Model 1216B



Model 1216 HP PN-100/250/400



Model 1400



Model 1415



Model 1000



Model 1100

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Model 1216

TECHNICAL DATA SHEET



Description

| | |
|-------------------------|-------------------------|
| Type | Safety and Relief valve |
| Connections | Threaded BSP / NPT |
| Rating | PN-40 |
| Material | Stainless steel 316 L |
| Temperature range | -10 to +350°C |
| Cryogenic service until | -196°C |

Requirements

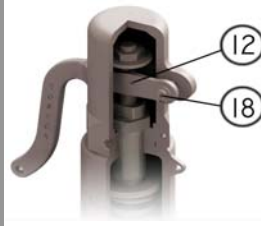
| | |
|-------------|---------------------------|
| Calculation | EN-4126-1 / 7 |
| Design | EN-12516-1, EN-4126-1 / 7 |
| | DIN 259 and ANSI B2.1 |
| Materials | EN |
| Inspection | EN-4126-1 / 7 |

Construction and materials

| Item | Description | Material | |
|------|--------------------|--------------|--------------|
| | | Standard | Cryogenic |
| 1 | Nozzle | SA 351 CF-3M | SA 351 CF-3M |
| 2 | Body | SA 351 CF-3M | SA 351 CF-3M |
| 4 | Cap | SA 351 CF 8 | SA 351 CF 8 |
| 5 | Disc | 316 L SS | 316 L SS |
| 6 | Guide | SA 351 CF-3M | SA 351 CF-3M |
| 7 | Push Road | 316 L SS | 316 L SS |
| 8 | Spring Button | 303 SS | 303 SS |
| 9 | Ajusting Screw | 303 SS | 303 SS |
| 10 | Tensor Nut | 303 SS | 303 SS |
| 11 | Spring | 303 SS | 17 / 7PH |
| 12 | Lever | SA 351 CF 8 | SA 351 CF 8 |
| 17 | Release nut | 306 L SS | 306 L SS |
| 18 | Lever axis | 303 SS | 303 SS |
| 19 | Packing lever axis | 303 SS | 303 SS |
| 20 | Gasket | PTFE | PCTFE |
| 21 | Gasket | PTFE | PCTFE |
| 22 | Gasket | Viton | PCTFE |
| 28 | Soft seat | Viton / PTFE | Metal |
| | | | |
| | | | |
| | | | |
| | | | |

○ Recommended spare parts

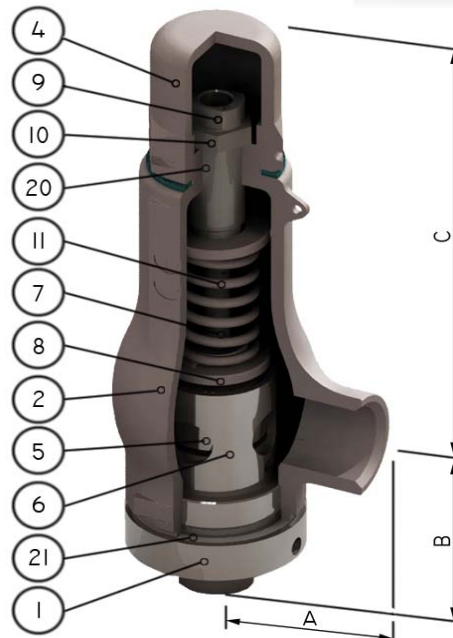
Palanca manual
Lifting device



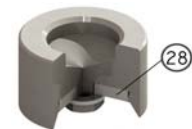
Palanca estanca
Sealed packing lever



T. Prueba
Test gag



Obturator o-ring
Disc o-ring



Technical information

| | |
|------------------------|--|
| Applications | Steam, gases, vapours and liquids |
| Min. Set pressure | 0,2 barg |
| Overpressure | 10% |
| Blowdown | Gases 10%, liquids 20% |
| Tolerance Set pressure | ± 3% |
| Discharge coefficients | k= 0,55 for gases k= 0,48 for liquids |

Dimensions

| Inlet | Outlet | Orifice | Area (mm ²) | A (mm) | B (mm) | C (mm) | Weight (kg) |
|--------|--------|---------|-------------------------|--------|--------|--------|-------------|
| 1/2" | 3/4" | 13 | 133 | 45 | 57 | 155 | 2,2 |
| 1/2" | 1" | 13 | 133 | 45 | 57 | 155 | 2,2 |
| 3/4" | 1" | 14 | 154 | 45 | 57 | 155 | 2,2 |
| 1" | 1" | 16 | 201 | 45 | 60 | 155 | 2,2 |
| 1" | 1 1/4" | 16 | 201 | 45 | 61 | 155 | 2,3 |
| 1" | 2" | 22 | 380 | 62 | 87 | 234 | 4,5 |
| 1 1/4" | 1 1/4" | 18 | 254 | 45 | 62 | 155 | 2,4 |
| 1 1/2" | 2" | 28 | 616 | 62 | 89 | 234 | 4,6 |
| 2" | 2" | 32 | 804 | 62 | 93 | 234 | 5,1 |



Model 1216 HP

TECHNICAL DATA SHEET

Description

| | |
|-------------------------|-------------------------|
| Type | Safety and Relief valve |
| Connections | Threaded BSP / NPT |
| Rating | PN-250&400 |
| Material | Stainless steel 316 L |
| Temperature range | -10 to +350°C |
| Cryogenic service until | -196°C |

Requirements

| | |
|-------------|--|
| Calculation | EN-4126-1 / 7 |
| Design | EN-12516-1, EN-4126-1 / 7 DIN 259 and ANSI B2.1 |
| Materials | EN |
| Inspection | EN-4126-1 / 7 |

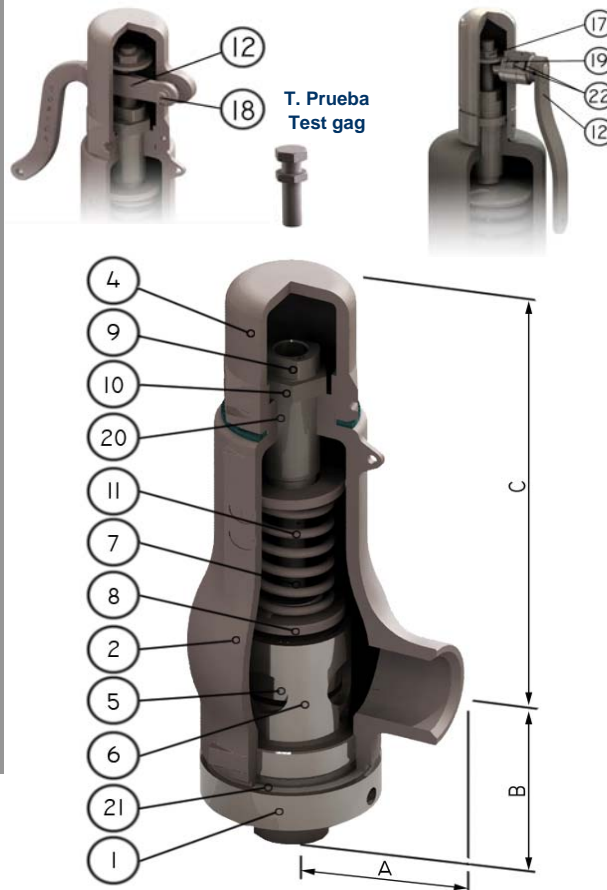
Construction and materials

| Item | Description | Material | |
|------|--------------------|----------------|--------------|
| | | Standard | Cryogenic |
| 1 | Nozzle | SA 351 CF-3M | SA 351 CF-3M |
| 2 | Body | SA 351 CF-3M | SA 351 CF-3M |
| 4 | Cap | SA 351 CF 8 | SA 351 CF 8 |
| 5 | Disc | 316 L SS+ PTFE | |
| 6 | Guide | SA 351 CF-3M | SA 351 CF-3M |
| 7 | Push Road | 316 L SS | 316 L SS |
| 8 | Spring Button | 303 SS | 303 SS |
| 9 | Ajusting Screw | 303 SS | 303 SS |
| 10 | Tensor Nut | 303 SS | 303 SS |
| 11 | Spring | 303 SS | 17 / 7PH |
| 12 | Lever | SA 351 CF 8 | SA 351 CF 8 |
| 17 | Release nut | 306 L SS | 306 L SS |
| 18 | Lever axis | 303 SS | 303 SS |
| 19 | Packing lever axis | 303 SS | 303 SS |
| 20 | Gasket | PTFE | PCTFE |
| 21 | Gasket | PTFE | PCTFE |
| 22 | Gasket | Viton | PCTFE |
| 28 | | | |

○ Recommended spare parts

Palanca manual
Lifting device

Palanca estanca
Sealed packing lever



Technical information

| | |
|------------------------|--|
| Applications | Steam, gases, vapours and liquids |
| Min. Set pressure | 0,2 barg |
| Overpressure | 10% |
| Blowdown | Gases 10%, liquids 20% |
| Tolerance Set pressure | ± 3% |
| Discharge coefficients | k= 0,5 for gases k= 0,4 for liquids |

Dimensions

| Inlet | Outlet | Orifice | Area (mm ²) | A (mm) | B (mm) | C (mm) | Weight (kg) |
|--------------|-------------|---------|-------------------------|--------|--------|--------|-------------|
| PN250 | PN40 | | | | | | |
| 1/2" | 3/4" | 9 | 64 | 45 | 57 | 155 | 3 |
| 3/4" | 3/4" | 9 | 64 | 45 | 57 | 155 | 3 |
| 1" | 1" | 9 | 64 | 45 | 57 | 155 | 3 |
| PN400 | PN40 | | | | | | |
| 1/2" | 3/4" | 6 | 28 | 45 | 57 | 155 | 3 |
| 3/4" | 3/4" | 6 | 28 | 45 | 57 | 155 | 3 |
| 1" | 1" | 6 | 28 | 45 | 57 | 155 | 3 |
| PN100 | PN40 | | | | | | |
| 1" | 2" | 16 | 201 | 62 | 95 | 234 | 5 |
| 1 1/4" | 2" | 18 | 254 | 62 | 100 | 234 | 5 |
| 1 1/2" | 2" | 20 | 314 | 62 | 102 | 234 | 6 |
| 2" | 2" | 22 | 380 | 62 | 105 | 234 | 6,3 |



Model 1216B

TECHNICAL DATA SHEET

Description

| | |
|-------------------|--|
| Type | Safety and Relief valve |
| Connections | PN 16, PN 40, 150#, 300# Threaded BSP / NPT |
| Rating | PN-40 |
| Material | Stainless steel 316 L SS |
| Temperature range | -28 to +350°C |

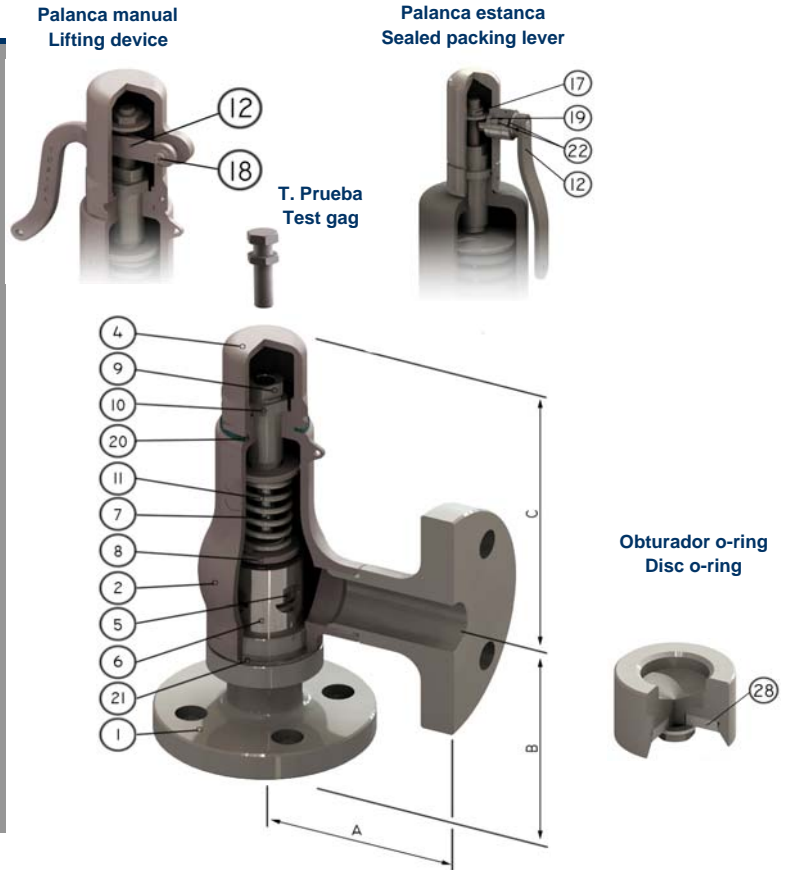
Requirements

| | |
|-------------|--|
| Calculation | EN-4126-1 / 7 |
| Design | EN-12516-1, EN-4126-1 / 7 DIN 259, ANSI B2.1 and ANSI B16.5 |
| Materials | EN |
| Inspection | EN-4126-1 / 7 |

Construction and materials

| Item | Description | Material |
|------|--------------------|--------------|
| 1 | Nozzle | 316 L |
| 2 | Body | SA 351 CF-3M |
| 4 | Cap | SA 351 CF-8 |
| 5 | Disc | 316 L SS |
| 6 | Guide | SA 351 CF-3M |
| 7 | Push Road | 316 L SS |
| 8 | Spring Button | 303 SS |
| 9 | Ajusting Screw | 303 SS |
| 10 | Lock nut | 303 SS |
| 11 | Spring | 302 SS |
| 12 | Lever | SA 351 CF-8 |
| 17 | Release nut | 316 L SS |
| 18 | Lever axis | 303 SS |
| 19 | Packing lever axis | 303 SS |
| 20 | Gasket | PTFE |
| 21 | Gasket | PTFE |
| 22 | Gasket | Viton |
| 28 | Soft seat | Viton / PTFE |

○ Recommended spare parts

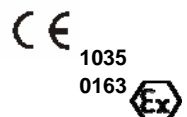


Technical information

| | |
|------------------------|--|
| Applications | Steam, gases, vapours and liquids |
| Min. Set pressure | 0,2 barg |
| Overpressure | 10% |
| Blowdown | Gases 10%, liquids 20% |
| Tolerance Set pressure | ± 3% |
| Discharge coefficients | k= 0,55 for gases k= 0,48 for liquids |

Dimensions

| | Inlet | Outlet | | Orif. | Area | Outlet | | B | C | Weight |
|------|---------|---------|----------|-------|--------------------|--------|---------|------|------|--------|
| | | 150# RF | 150# BSP | | | BSP | flanges | | | |
| ANSI | 300# RF | RF | NPT | (mm) | (mm ²) | A | A | (mm) | (mm) | (kg) |
| | 1/2" | 3/4" | 13 | 133 | 45 | 70 | 90 | 155 | 3 | |
| | 1/2" | 1" | 1" | 13 | 133 | 45 | 70 | 90 | 155 | 3 |
| | 3/4" | 1" | 1" | 14 | 154 | 45 | 70 | 90 | 155 | 3,2 |
| | 3/4" | 1" | 1" | 14 | 154 | 45 | 70 | 90 | 155 | 3,2 |
| EN | PN-16 | PN16 | BSP | | | | | | | |
| | PN-40 | NPT | | | | | | | | |
| | 15 | 25 | 3/4" | 13 | 133 | 45 | 70 | 90 | 155 | 3 |
| | 15 | 25 | 1" | 13 | 133 | 45 | 70 | 90 | 155 | 3 |
| | 20 | 25 | 1" | 14 | 154 | 45 | 70 | 90 | 155 | 3,2 |
| 20 | 25 | 1" | 14 | 154 | 45 | 70 | 90 | 155 | 3,2 | |
| 25 | 25 | 1" | 16 | 201 | 45 | 70 | 90 | 155 | 3,5 | |



Description

| | |
|-------------------|----------------------------|
| Type | Safety and Relief valve |
| Connections | Flanged EN 1092 |
| Rating | PN-16 / 25 / 40 / 63 / 100 |
| Material | Nodular Iron, Carbon steel |
| | Stainless steel |
| Temperature range | -28°C to +350°C |

Requirements

| | |
|---------------|---------------------------------|
| Calculation | EN-4126-1 / 7 |
| Design / Size | EN-12516-1, EN-4126-1 / 7 |
| Materials | EN / ASTM |
| Inspection | EN-4126-1 / 7 API 527 MSS-SP-55 |
| Tolerances | EN-4126-1 and ASME UG-126 |

Construction and materials

| Item | Description | PN-16/25 | | PN-40 | | PN-63/100 | PN-16/25/40 | | PN-63/100 |
|------|--------------------|--|--|-------------------------------------|--|--|--|---|--|
| | | Carbon steel | | Carbon steel | | Carbon steel | Stainless steel | | Stainless st. |
| | | DN-15x25 to DN-40x65 PN-16/25 | DN-50x80 to DN-200x300 PN-16/25 | DN-15x25 to DN-50x80 PN-40 | DN-65x100 to DN-300x400 PN-40 | DN-15x25 to DN-65x100 PN-63/100 | DN-15x25 to DN-50x80 PN-16/40 | DN-65x100 to DN-300x400 PN-16/40 | DN-15x25 to DN-65x100 PN-63/100 |
| 1 | Nozzle | C.S. + 308 L SS | C.S. + 308 L SS | C.S. + 308 L SS | C.S. + 308 L SS | 316L + Stellite | AISI 316L | AISI 316L | 316L + Stellite |
| 2 | Body | A106 Gr.B | EN-JS1030 | A106 Gr.B | C.S. 1.0619 | A106 Gr.B | AISI 316L | AISI 316L | AISI 316L |
| 3 | Bonnet | A106 Gr.B | EN-JS1030 | A106 Gr.B | C.S. 1.0619 | A106 Gr.B | AISI 316L | AISI 316L | AISI 316L |
| 4 | Cap | A351 CF-8 | A351 CF-8 | A351 CF-8 | A351 CF-8 | A351 CF8 | A351 CF-8 | A351 CF-8 | A351 CF-8 |
| 5 | Disc | AISI 420 | C.S. + 308 L SS | AISI 420 | C.S. + 308 L SS | AISI 316L | AISI 316L | AISI 316L | AISI 316L |
| 6 | Guide | C. Steel zn. | C.S. + 304 SS | C. Steel zn. | C.S. + 304 SS | C. Steel zn. | AISI 316L | AISI 316L | AISI 316L |
| 7 | Push Road | AISI 420 | AISI 420 | AISI 420 | AISI 420 | AISI 420 | AISI 316L | AISI 316L | AISI 316L |
| 8 | Spring Button | C. Steel zn. | C. Steel zn. | C. Steel zn. | C. Steel zn. | C. Steel zn. | AISI 303 | AISI 303 | AISI 303 |
| 9 | Ajusting Screw | Brass | AISI-420 | AISI 303 | AISI-420 | AISI303 | AISI 303 | AISI 303 | AISI 303 |
| 10 | Lock Nut | Brass | C. Steel zn. | AISI 303 | C. Steel zn. | C. Steel zn. | AISI 303 | AISI 303 | AISI 303 |
| 11 | Spring | Carbon steel | Carbon Steel | Carbon steel | Carbon Steel | Carbon steel | AISI 302 | AISI 302 | AISI 302 |
| 12 | Lever | A 351 CF 8 | A 351 CF 8 | A 351 CF 8 | A 351 CF 8 | A 351 CF 8 | A351 CF-8 | A351 CF-8 | A351 CF-8 |
| 17 | Release nut | AISI 304 | AISI 304 | Carbon steel | AISI 304 | Carbon steel | AISI 316L | AISI 316L | AISI 316L |
| 18 | Lever axis | AISI 303 | AISI 303 | AISI-303 | AISI 303 | AISI-303 | AISI 303 | AISI 303 | AISI 303 |
| 19 | Packing lever axis | AISI 303 | AISI 303 | AISI-303 | AISI 303 | AISI-303 | AISI 303 | AISI 303 | AISI 303 |
| 20 | Gasket cap | NBR+MF | NBR+MF | NBR+MF | NBR+MF | NBR+MF | PTFE | PTFE | PTFE |
| 21 | Gasket bonnet | NBR+MF | NBR+MF | NBR+MF | NBR+MF | NBR+MF | PTFE | PTFE | PTFE |
| 22 | Gasket pack. lever | Viton | Viton | Viton | Viton | Viton | Viton | Viton | Viton |
| 27 | Bellow | 316 TI SS | 316 TI SS | 316 TI SS | 316 TI SS | 316 TI SS | AISI 316TI | AISI 316TI | AISI 316TI |
| 28 | Soft seat | Viton / PTFE | Viton / PTFE | Viton / PTFE | Viton / PTFE | Viton / PTFE | Viton / PTFE | Viton / PTFE | Viton / PTFE |

○ Recommended spare parts

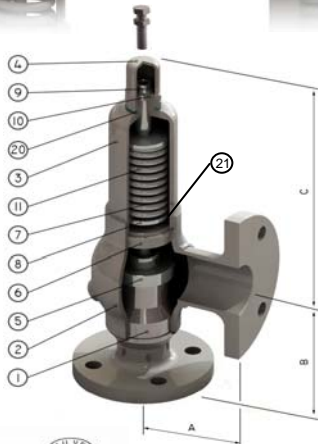
Palanca manual
Lifting device



Palanca estanca
Sealed packing lever



T. Prueba
Test gag



Cpo. intermedio abierto
Open bonnet



Obturator o-ring
Disc soft seat





Technical information

| | |
|------------------------|--|
| Applications | Steam, gases, vapours and liquids |
| Min. Set pressure | 0,2 barg |
| Seat | metal-metal, PTFE, Viton, Nozzle SS+Stellite |
| Overpressure | 10% for steam, gas and vapour 20% for fire exposure 25% for liquid on thermal relief |
| Blowdown | 7% |
| Tolerance Set pressure | ± 3% |
| Discharge coefficients | k= 0,64 for gases k= 0,5 for liquids |

Fuelle
Bellows



Dimensions

| Design | DN | TOSACA Model | Valve Size Inlet by Outlet | EN 1092 Flanges | | Orif. (mm) | Area (mm ²) | Face Dimension (mm) | | | Weight (kg) W |
|---|------------|--------------|----------------------------|-----------------|--------|------------|-------------------------|---------------------|------|------|---------------|
| | | | | Inlet | Outlet | | | A | B | C | |
|  | 15 | 1400 PN 16 | 15 x 25 | 16 | 16 | 16 | 201 | 85 | 95 | 253 | 7 |
| | | 1400 PN 25 | 15 x 25 | 25 | 16 | 16 | 201 | 85 | 95 | 253 | 7 |
| | | 1400 PN 40 | 15 x 25 | 40 | 16 | 16 | 201 | 85 | 95 | 253 | 7 |
| | | 1400 PN 63 | 15 x 25 | 63 | 16 | 13 | 133 | 85 | 95 | 253 | 7 |
| | | 1400 PN100 | 15 x 25 | 100 | 16 | 13 | 133 | 85 | 95 | 253 | 7 |
| | 20 | 1400 PN 16 | 20 x 32 | 16 | 16 | 18 | 254 | 85 | 95 | 253 | 7 |
| | | 1400 PN 25 | 20 x 32 | 25 | 16 | 18 | 254 | 85 | 95 | 253 | 7 |
| | | 1400 PN 40 | 20 x 32 | 40 | 16 | 18 | 254 | 85 | 95 | 253 | 7 |
| | | 1400 PN 63 | 20 x 32 | 63 | 16 | 13 | 133 | 100 | 105 | 253 | 7 |
| | | 1400 PN100 | 20 x 32 | 100 | 16 | 13 | 133 | 100 | 105 | 253 | 7 |
| | 25 | 1400 PN 16 | 25 x 40 | 16 | 16 | 23,8 | 445 | 100 | 105 | 275 | 9 |
| | | 1400 PN 25 | 25 x 40 | 25 | 16 | 23,8 | 445 | 100 | 105 | 275 | 9 |
| | | 1400 PN 40 | 25 x 40 | 40 | 16 | 23,8 | 445 | 100 | 105 | 275 | 9 |
| | | 1400 PN 63 | 25 x 50 | 63 | 16 | 20 | 314 | 110 | 100 | 275 | 9 |
| | | 1400 PN100 | 25 x 50 | 100 | 16 | 16 | 201 | 110 | 100 | 275 | 9 |
| | 32 | 1400 PN 16 | 32 x 50 | 16 | 16 | 29,5 | 683 | 110 | 115 | 325 | 12 |
| | | 1400 PN 25 | 32 x 50 | 25 | 16 | 29,5 | 683 | 110 | 115 | 325 | 12 |
| | | 1400 PN 40 | 32 x 50 | 40 | 16 | 29,5 | 683 | 110 | 115 | 325 | 12 |
| | | 1400 PN 63 | 32 x 50 | 63 | 16 | 23,8 | 445 | 110 | 115 | 325 | 12 |
| | | 1400 PN100 | 32 x 50 | 100 | 16 | 20 | 314 | 110 | 115 | 325 | 12 |
| 40 | 1400 PN 16 | 40 x 65 | 16 | 16 | 36 | 1018 | 115 | 140 | 325 | 14 | |
| | 1400 PN 25 | 40 x 65 | 25 | 16 | 36 | 1018 | 115 | 140 | 325 | 14 | |
| | 1400 PN 40 | 40 x 65 | 40 | 16 | 36 | 1018 | 115 | 140 | 325 | 14 | |
| | 1400 PN 63 | 40 x 65 | 63 | 16 | 26 | 531 | 115 | 140 | 325 | 14 | |
| | 1400 PN100 | 40 x 65 | 100 | 16 | 23,8 | 445 | 115 | 140 | 325 | 14 | |
| 50 | 1400 PN 40 | 50 x 80 | 40 | 16 | 46 | 1662 | 120 | 150 | 400 | 21 | |
| | 1400 PN 63 | 50 x 80 | 63 | 16 | 32 | 804 | 120 | 150 | 400 | 21 | |
| | 1400 PN100 | 50 x 80 | 100 | 16 | 32 | 804 | 120 | 150 | 400 | 21 | |
|  | 50 | 1400 PN 16 | 50 x 80 | 16 | 16 | 46 | 1662 | 120 | 150 | 400 | 25 |
| | | 1400 PN 25 | 50 x 80 | 25 | 16 | 46 | 1662 | 120 | 150 | 400 | 25 |
| | 65 | 1400 PN 16 | 65 x100 | 16 | 16 | 59,5 | 2781 | 140 | 170 | 450 | 36 |
| | | 1400 PN 25 | 65 x100 | 25 | 16 | 59,5 | 2781 | 140 | 170 | 450 | 36 |
| | | 1400 PN 40 | 65 x100 | 40 | 16 | 59,5 | 2781 | 140 | 170 | 450 | 36 |
| | | 1400 PN 63 | 65 x100 | 63 | 16 | 48 | 1810 | 140 | 170 | 450 | 36 |
| | | 1400 PN100 | 65 x100 | 100 | 16 | 39 | 1195 | 140 | 170 | 450 | 36 |
| | 80 | 1400 PN 16 | 80 x 125 | 16 | 16 | 72 | 4072 | 160 | 195 | 625 | 58 |
| | | 1400 PN 25 | 80 x 125 | 25 | 16 | 72 | 4072 | 160 | 195 | 625 | 58 |
| | | 1400 PN 40 | 80 x 125 | 40 | 16 | 72 | 4072 | 160 | 195 | 625 | 58 |
| | 100 | 1400 PN 16 | 100 x 150 | 16 | 16 | 90 | 6362 | 180 | 220 | 663 | 85 |
| | | 1400 PN 25 | 100 x 150 | 25 | 16 | 90 | 6362 | 180 | 220 | 663 | 85 |
| | | 1400 PN 40 | 100 x 150 | 40 | 16 | 90 | 6362 | 180 | 220 | 663 | 85 |
| | 125 | 1400 PN 16 | 125 x 200 | 16 | 16 | 105 | 8659 | 200 | 250 | 760 | 140 |
| | | 1400 PN 25 | 125 x 200 | 25 | 16 | 105 | 8659 | 200 | 250 | 760 | 140 |
| | | 1400 PN 40 | 125 x 200 | 40 | 16 | 105 | 8659 | 200 | 250 | 760 | 140 |
| | 150 | 1400 PN 16 | 150 x 250 | 16 | 16 | 125 | 12272 | 242 | 240 | 760 | 150 |
| | | 1400 PN 25 | 150 x 250 | 25 | 16 | 125 | 12272 | 242 | 240 | 760 | 150 |
| | | 1400 PN 40 | 150 x 200 | 40 | 16 | 125 | 12272 | 242 | 240 | 760 | 150 |
| | 200 | 1400 PN 16 | 200 x 300 | 16 | 16 | 153 | 18385 | 300 | 290 | 795 | 200 |
| 250 | 1400 PN 16 | 200 x 350 | 16 | 16 | 153 | 31415 | 406 | 305 | 1390 | 750 | |
| 300 | 1400 PN 16 | 300 x 400 | 16 | 16 | 153 | 40808 | 406 | 359 | 1432 | 850 | |
| 400 | 1400 PN 16 | 400 x 500 | 16 | 16 | 305 | 72950 | 533 | 432 | 1943 | 1850 | |

Description

| | |
|-------------------|---|
| Type | Safety and Relief valve |
| Connections | Flanged ASME/ANSI B16.5 |
| Rating | 150#/300# 600#/900#/1500#/2500# |
| Material | Carbon steel A 216 WCB/WCC Carbon steel A 217 WC6 Stainless steel A 351 CF3M Special constructions |
| Temperature range | -28°C to +400°C |
| Stainless steel | -96°C to +400°C |

Requirements

| | |
|---------------|-------------------------------------|
| Calculation | API RP 520 |
| Design / Size | API STD 526, ASME Section VIII |
| Materials | EN / ASTM / ASME |
| Inspection | EN-4126-1 / 7 API STD 527 MSS-SP-55 |
| Tolerances | EN-4126-1 and ASME UG-126 |

Construction and materials

| Item | Description | Material | Material |
|------|--------------------|--------------|-----------------|
| | | Carbon Steel | Stainless steel |
| 1 | Nozzle | AISI-316L | AISI-316L |
| 2 | Body | A216 WCB | A351 CF-3M |
| 3 | Bonnet | A216 WCB | A351 CF-3M |
| 4 | Cap | A351 CF 8 | A351 CF 8 |
| 5 | Disc | AISI-316L | AISI-316L |
| 6 | Guide | AISI-316L | AISI-316L |
| 7 | Push Road | AISI-316L | AISI-316L |
| 8 | Spring Button | C. Steel zn. | AISI-304 |
| 9 | Ajusting Screw | AISI-420 | AISI-303 |
| 10 | Tensor Nut | C. Steel zn. | AISI-303 |
| 11 | Spring | Carbon Steel | AISI-302 |
| 12 | Lever | A351 CF 8 | A351 CF 8 |
| 17 | Release nut | AISI-316L | AISI-316L |
| 18 | Lever axis | AISI-303 | AISI-303 |
| 19 | Packing lever axis | AISI-303 | AISI-303 |
| 20 | Gasket | NBR+MF | NBR |
| 21 | Gasket | NBR+MF | NBR |
| 22 | Gasket | Viton | Viton |
| 27 | Bellow | AISI-316 TI | AISI-316 TI |
| 28 | Soft seat | Viton / PTFE | Viton / PTFE |
| 24 | Screw-nut | Carbon Steel | AISI-316 |

○ Recommended spare parts

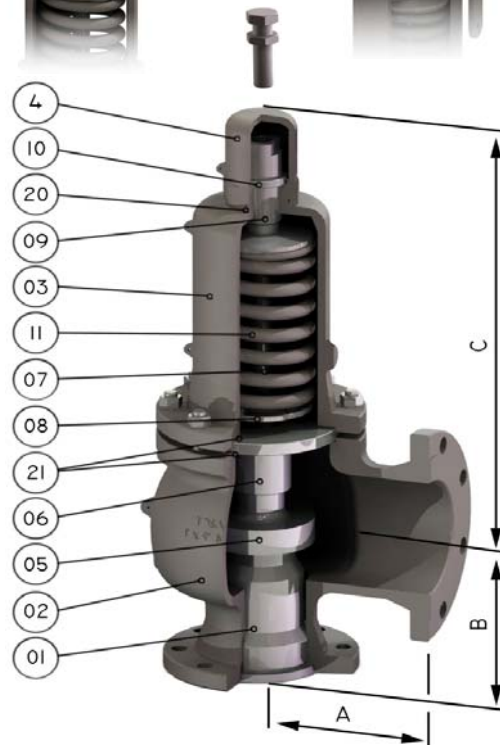
Palanca manual
Lifting device



Palanca estanca
Sealed packing lever



T. Prueba
Test gag



Cpo. intermedio abierto
Open bonnet



Fuelle
Bellows

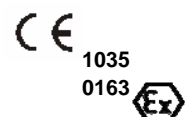


Obturador o-ring
Disc soft seat



Technical information

| | |
|------------------------|--|
| Applications | Steam, gases, vapours and liquids |
| Min. Set pressure | 0,2 barg |
| Seat | metal-metal, PTFE, Viton, Nozzle SS+Stellite (600#, 900#, 1500# & 2500#) |
| Overpressure | 10% for steam, gas and vapour 20% for fire exposure 25% for liquid on thermal relief |
| Blowdown | 7% |
| Tolerance Set pressure | ± 3% |
| Discharge coefficients | k= 0,975 for gases k= 0,64 for liquids |



| Design | Orif. Area (mm ²) | 1415 150# RF | | | | 1415 300# RF | | | | 1415 600# RF | | | | 1415 900# RF | | | | 1415 1500# RF | | | | 1415 2500# RF | | | | | | | | |
|------------|-------------------------------|---------------------------|-----|-----|----------------|---------------------------|---------------------------|-----|----------------|---------------------------|-------------------------|----------------------------|----------------|---------------------------|-----|-----|-----------------------------|---------------------------|-----|-----|----------------|------------------------------|-----|-----|----------------|-------------------------|-----|-----|----|-----|
| | | Dimension (mm) | | | | Dimension (mm) | | | | Dimension (mm) | | | | Dimension (mm) | | | | Dimension (mm) | | | | Dimension (mm) | | | | | | | | |
| | | Valve Size ANSI rating | A | C | Weight (kg) | Valve Size ANSI rating | A | C | Weight (kg) | Valve Size ANSI rating | A | C | Weight (kg) | Valve Size ANSI rating | A | C | Weight (kg) | Valve Size ANSI rating | A | C | Weight (kg) | Valve Size ANSI rating | A | C | Weight (kg) | | | | | |
| | D/E 71/133 | 1/2" D/E 1" 150# /150# | 75 | 255 | 5 | 95 | 1/2" D/E 1" 300# /150# | 75 | 255 | 5 | 95 | 1/2" D/E 1" 600# / 150# | 75 | 255 | 7 | 105 | | | | | | | | | | | | | | |
| | | 3/4" D/E 1" 150# /150# | 75 | 255 | 5 | 95 | 3/4" D/E 1" 300# /150# | 75 | 255 | 5 | 95 | 3/4" D/E 1" 600# / 150# | 75 | 255 | 7 | 105 | | | | | | | | | | | | | | |
| | | 1" D/E 1" 150# /150# | 75 | 255 | 5 | 95 | 1" D/E 1" 300# /150# | 75 | 255 | 5 | 95 | 1" D/E 1" 600# / 150# | 75 | 255 | 7 | 105 | | | | | | | | | | | | | | |
| | | 1" D/E 2" 150# /150# | 114 | 305 | 14 | 105 | 1" D/E 2" 300# /150# | 114 | 305 | 14 | 105 | 1" D/E 2" 600# / 150# | 114 | 305 | 18 | 105 | 1 1/2"D/E 2" 900# / 300# | 140 | 315 | 19 | 105 | 1 1/2"D/E 2" 1500# / 300# | 140 | 315 | 24 | 105 | | | | |
| | F 201 | 1 1/2" F 2" 150# /150# | 121 | 315 | 17 | 124 | 1 1/2" F 2" 300# /150# | 121 | 315 | 17 | 124 | 1 1/2" F 2" 600# / 150# | 152 | 315 | 20 | 124 | 1 1/2" F 3" 900# / 300# | 165 | 315 | 22 | 124 | 1 1/2" F 3" 1500# / 300# | 165 | 315 | 22 | 124 | | | | |
| | G 346 | 1 1/2" G 3" 150# /150# | 121 | 400 | 25 | 124 | 1 1/2" G 3" 300# /150# | 121 | 400 | 25 | 124 | 1 1/2" G 3" 600# / 150# | 152 | 400 | 28 | 124 | 1 1/2" G 3" 900# / 300# | 165 | 430 | 25 | 124 | | | | | 2" G 3" 2500# / 300# | 175 | 444 | 41 | 156 |
| | H 531 | 1 1/2" H "3 150# /150# | 124 | 400 | 25 | 130 | 1 1/2" H "3 300# /150# | 124 | 400 | 27 | 130 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 2"H 3" 300# /150# | 124 | 400 | 27 | 130 | 2"H 3" 600# / 150# | 162 | 400 | 32 | 154 | 2"H 3" 900# / 150# | 162 | 400 | 26 | 154 | 2" H 3" 1500# / 300# | 162 | 430 | 25 | 154 | | | | |
| | J 830 | 2" J 3" 150# /150# | 124 | 400 | 27 | 137 | 2" J 3" 300# /150# | 124 | 400 | 27 | 137 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 3" J 4" 300# /150# | 181 | 570 | 56 | 184 | 3" J 4" 600# / 150# | 181 | 570 | 62 | 184 | 3" J 4" 900# / 150# | 181 | 570 | 33 | 184 | 3" J 4" 1500# / 300# | 181 | 570 | 33 | 184 | | | | |
| | K 1195 | 3" K 4" 150# /150# | 162 | 570 | 56 | 156 | 3" K 4" 300# /150# | 162 | 570 | 56 | 156 | 3" K 4" 600# / 150# | 181 | 570 | 62 | 184 | 3" K 6" 900# / 150# | 216 | 610 | 90 | 198 | 3" K 6" 1500# /300# | 216 | 610 | 105 | 198 | | | | |
| | L 1886 | 3" L 4" 150# /150# | 165 | 570 | 56 | 156 | 3" L 4" 300# /150# | 165 | 570 | 56 | 156 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 4" L 6" 300# /150# | 181 | 610 | 90 | 179 | 4" L 6" 600# / 150# | 203 | 610 | 110 | 179 | 4" L 6" 900# / 150# | 222 | 820 | 120 | 197 | 4" L 6" 1500# / 150# | 222 | 820 | 120 | 197 | | | | |
| | M 2376 | 4" M 6" 150# /150# | 184 | 610 | 88 | 178 | 4" M 6" 300# /150# | 184 | 610 | 90 | 178 | 4" M 6" 600# / 150# | 203 | 610 | 110 | 178 | 4" M 6" 900# / 150# | 222 | 820 | 120 | 197 | | | | | | | | | |
| | N 2827 | 4" N 6" 150# /150# | 210 | 610 | 88 | 197 | 4" N 6" 300# /150# | 210 | 610 | 90 | 197 | 4" N 6" 600# / 150# | 222 | 610 | 110 | 197 | 4" N 6" 900# / 150# | 222 | 820 | 120 | 197 | | | | | | | | | |
| | P 4185 | 4" P 6" 150# /150# | 229 | 610 | 88 | 181 | 4" P 6" 300# /150# | 229 | 610 | 90 | 181 | 4" P 6" 600# / 150# | 254 | 610 | 94 | 225 | 4" P 6" 900# / 150# | 254 | 610 | 120 | 225 | | | | | | | | | |
| Q 7238 | 6" Q 8" 150# /150# | 241 | 659 | 156 | 240 | 6" Q 8" 300# /150# | 241 | 659 | 160 | 240 | 6" Q 8" 600# / 150# | 241 | 659 | 170 | 240 | | | | | | | | | | | | | | | |
| R 10387 | 6" R 8" 150# /150# | 241 | 659 | 156 | 240 | 6" R 8" 300# /150# | 241 | 659 | 160 | 240 | 6" R 10" 600# / 150# | 267 | 659 | 190 | 240 | | | | | | | | | | | | | | | |
| T 16972 | 8" T 10" 150# /150# | 279 | 795 | 190 | 276 | 8" T 10" 300# /150# | 279 | 795 | 195 | 276 | | | | | | | | | | | | | | | | | | | | |

Model 1415 B Big size

TECHNICAL DATA SHEET

Description

| | |
|-------------------|---|
| Type | Safety and Relief valve |
| Connections | Flanged ASME/ANSI B16.5 |
| Rating | 150#/300# RF |
| Material | Carbon steel A 216 WCB Stainless steel A 351 CF3M Special constructions |
| Temperature range | -28°C to +400°C |
| Stainless steel | -96°C to +400°C |

Requirements

| | |
|---------------|-------------------------------------|
| Calculation | API RP 520 |
| Design / Size | API STD 526, ASME Section VIII |
| Materials | EN / ASTM / ASME |
| Inspection | EN-4126-1 / 7 API STD 527 MSS-SP-55 |
| Tolerances | EN-4126-1 and ASME UG-126 |

Construction and materials

| Item | Description | Material | Material |
|------|--------------------|--------------|-----------------|
| | | Carbon Steel | Stainless steel |
| 1 | Nozzle | AISI-304 | AISI-316L |
| 2 | Body | A216 WCB | A351 CF-3M |
| 3 | Bonnet | A216 WCB | A351 CF-3M |
| 4 | Cap | A351 CF 8 | A351 CF 8 |
| 5 | Disc | AISI-316L | AISI-316L |
| 6 | Guide | AISI-316L | AISI-316L |
| 7 | Push Road | AISI-316L | AISI-316L |
| 8 | Spring Button | C. Steel zn. | AISI-304 |
| 9 | Ajusting Screw | AISI-420 | AISI-303 |
| 10 | Tensor Nut | C. Steel zn. | AISI-303 |
| 11 | Spring | Carbon Steel | AISI-302 |
| 12 | Lever | A351 CF 8 | A351 CF 8 |
| 17 | Release nut | AISI-316L | AISI-316L |
| 18 | Lever axis | AISI-303 | AISI-303 |
| 19 | Packing lever axis | AISI-303 | AISI-303 |
| 20 | Gasket | NBR+MF | NBR |
| 21 | Gasket | NBR+MF | NBR |
| 22 | Gasket | Viton | Viton |
| 27 | Bellow | AISI-316 TI | AISI-316 TI |
| 28 | Soft seat | Viton / PTFE | Viton / PTFE |
| 24 | Screw-nut | Carbon Steel | AISI-316 |

○ Recommended spare parts

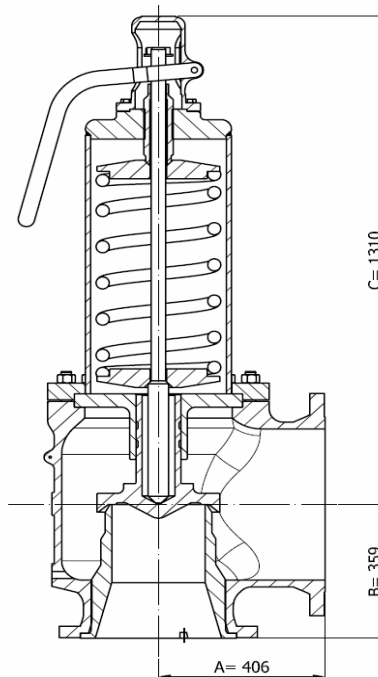
Palanca manual
Lifting device



Palanca estanca
Sealed packing lever



T. Prueba
Test gag



Cpo. intermedio abierto
Open bonnet



Fuelle
Bellows



Obturador o-ring
Disc soft seat

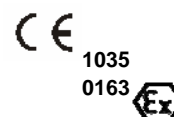


Technical information

| | |
|------------------------|--|
| Applications | Steam, gases, vapours and liquids |
| Min. Set pressure | 0,2 barg |
| Seat | metal-metal, PTFE, Nozzle SS+Stellite |
| Overpressure | 10% for steam, gas and vapour 20% for fire exposure 25% for liquid on thermal relief |
| Blowdown | 7% |
| Tolerance Set pressure | ± 3% |
| Discharge coefficients | k= 0,975 for gases k= 0,64 for liquids |

Dimensions

| Inlet | Outlet | Orifice | Area (mm ²) | A (mm) | B (mm) | C (mm) | Weight (kg) |
|-------|--------|---------|-------------------------|--------|--------|--------|-------------|
| 8" | 10" | U | 21383 | 279 | 276 | 795 | 200 |
| 10" | 14" | V | 31415 | 406 | 305 | 1390 | 750 |
| 12" | 16" | W | 40808 | 406 | 359 | 1432 | 850 |
| 16" | 20" | X | 72950 | 533 | 432 | 1943 | 1850 |



Description

| | |
|-------------------|--------------------------|
| Type | Safety and Relief valve |
| Connections | Clamp / BSP |
| Rating | PN-10 |
| Material | Stainless steel 316 L SS |
| Temperature range | -10 to +350°C |

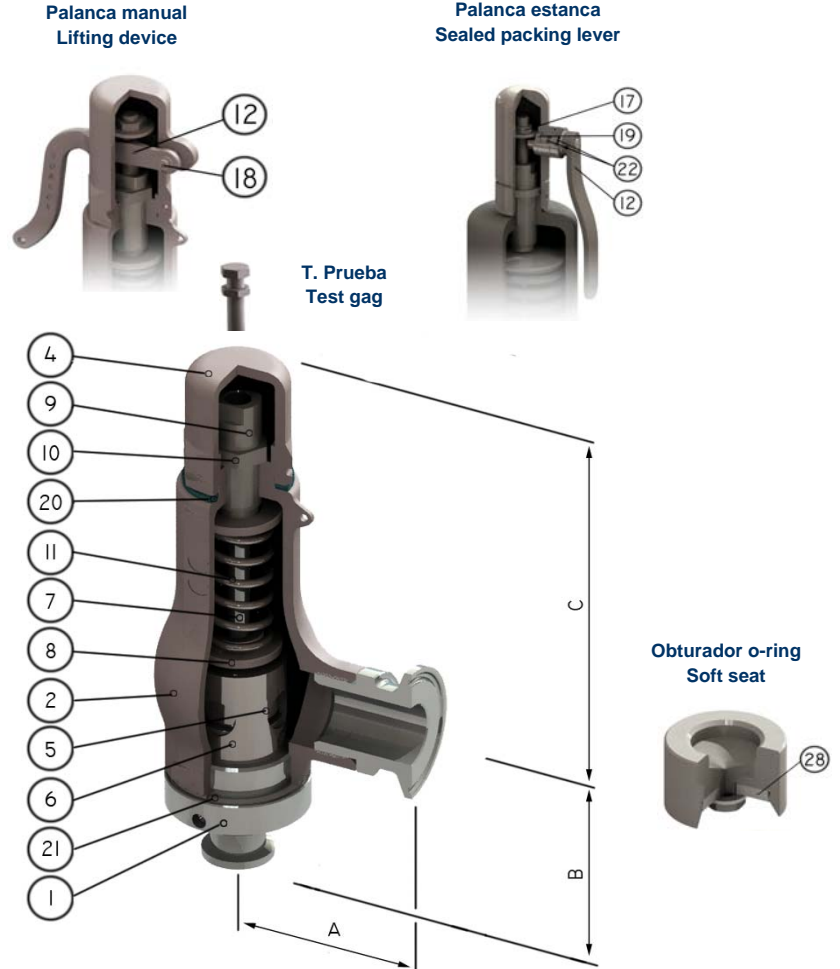
Requirements

| | |
|-------------|--|
| Calculation | EN-4126-1 / 7 ISO-2852 |
| Design | EN-12516-1, EN-4126-1 / 7 DIN 259 & ANSI B2.1 |
| Materials | EN |
| Inspection | EN-4126-1 / 7 |

Construction and materials

| Item | Description | Material |
|------|--------------------|--------------|
| 1 | Nozzle | A351 CF-3M |
| 2 | Body | A351 CF-3M |
| 4 | Cap | A351 CF-8 |
| 5 | Disc | A351 CF-3M |
| 6 | Guide | AISI-316L |
| 7 | Push Road | AISI-316L |
| 8 | Spring Button | AISI-303 |
| 9 | Ajusting Screw | AISI-303 |
| 10 | Tensor Nut | AISI-303 |
| 11 | Spring | AISI-302 |
| 12 | Lever | A351 CF-8 |
| 17 | Release nut | AISI-316L |
| 18 | Lever axis | AISI-303 |
| 19 | Packing lever axis | AISI-303 |
| 20 | Gasket | PTFE |
| 21 | Gasket | PTFE |
| 22 | Gasket | Viton |
| 27 | | |
| 28 | Soft seat | Viton / PTFE |

○ Recommended spare parts



Technical information

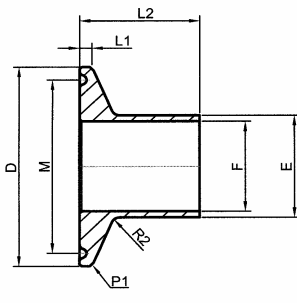
| | |
|------------------------|--|
| Applications | Steam, gases, vapours and liquids |
| Min. Set pressure | 0,2 barg |
| Overpressure | 10% |
| Blowdown | Gases 10%, liquids 20% |
| Tolerance Set pressure | ± 3% |
| Discharge coefficients | k= 0,55 for gases k= 0,48 for liquids |

Dimensions

| Inlet | Outlet | Orifice | Area (mm ²) | A (mm) | B (mm) | C (mm) | Weight (kg) |
|-------|--------|---------|-------------------------|--------|--------|--------|-------------|
| 15 | 25 | 9,5 | 71 | 66 | 68 | 155 | 2,4 |
| 20 | 25 | 15 | 176,6 | 66 | 68 | 155 | 2,4 |
| 25 | 25 | 18 | 254 | 66 | 73 | 155 | 2,8 |
| 40 | 40 | 32 | 804 | 90 | 98 | 234 | 8,2 |
| 15 | 1" | 9,5 | 71 | 45 | 68 | 155 | 2 |
| 20 | 1" | 15 | 176,6 | 45 | 68 | 155 | 2 |
| 25 | 1" | 18 | 254 | 45 | 68 | 155 | 2,2 |
| 40 | 2" | 32 | 804 | 62 | 98 | 234 | 8,2 |

Clamp ISO 2852

| | D | M | E | L1 | L2 |
|------------|------|------|------|------|------|
| 15 | 25 | 19 | 12,7 | 2,85 | 12,7 |
| 20 | 25 | 19 | 19 | 2,85 | 12,7 |
| 1"(25) | 50,5 | 43,5 | 25,6 | 2,85 | 21,5 |
| 1 1/2"(38) | 50,5 | 43,5 | 38,6 | 2,85 | 21,5 |



Model 1000

TECHNICAL DATA SHEET



Description

| | |
|-------------------|---|
| Type | Vacuum breaker |
| Connections | Flanges EN PN-10,16 or ANSI 150# RF |
| Rating | PN-10 |
| Material | Aluminium, carbon steel and Stainless steel |
| Temperature range | -10 to +260°C |

Requirements

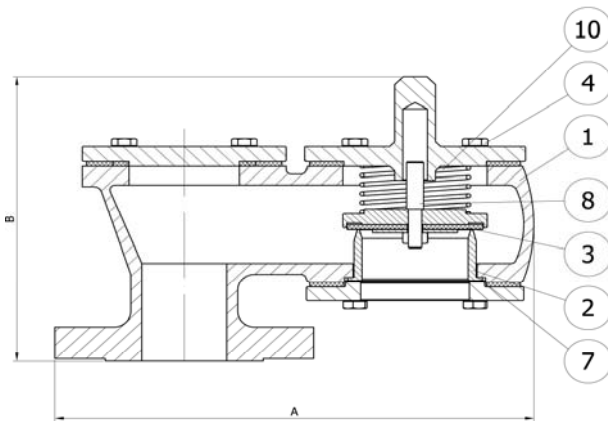
| | |
|-------------|--|
| Calculation | TOSACA 1001 |
| Design | EN-12516-1, EN-1092-1 DIN 259 & ANSI B2.1 |
| Materials | EN |
| Inspection | EN-4126-1 / 7 |

Construction and materials

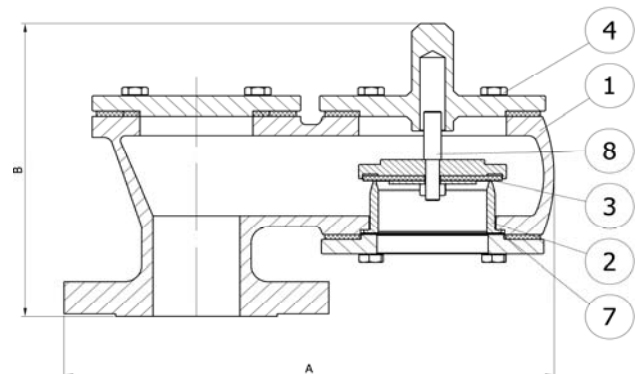
| Item | Description | Aluminium | Carbon steel | Stainless steel |
|------|--------------|----------------|------------------|-------------------|
| 1 | Body | BS 1490 Gr LM6 | ASTM A216 Gr WCB | ASTM A 351 Gr CF8 |
| 2 | Seat | AISI-304 | AISI-304 | AISI-304 |
| 3 | Diaphragm | PTFE | PTFE | PTFE |
| 5 | stem | AISI-304 | AISI-304 | AISI-304 |
| 6 | Weatherhood | Aluminium | Aluminium | Aluminium |
| 7 | Birds screen | AISI-304 | AISI-304 | AISI-304 |



○ Recommended spare parts



Spring loaded



Weight loaded

Technical information

| | |
|------------------------|---------------------|
| Applications | Air |
| Min. Set pressure | -2 mbar |
| Max. Set pressure | -750 mbar |
| Weight loaded | < 35 mbarg |
| Spring loaded | > 35 mbarg |
| Tolerance Set pressure | ± 3% |
| Others materials | Hastelloy, Titanium |

Dimensions

| Model | 1000 | Flanges EN | ANSI | A | B | Weight (Kg) |
|-------|------|------------|------|------|-----|-------------|
| | | 50 | 2" | 280 | 145 | 10 |
| | | 80 | 3" | 400 | 165 | 12 |
| | | 100 | 4" | 440 | 180 | 14 |
| | | 150 | 6" | 610 | 220 | 20 |
| | | 200 | 8" | 720 | 370 | 30 |
| | | 250 | 10" | 840 | 390 | 40 |
| | | 300 | 12" | 1000 | 410 | 60 |



Model 1100

TECHNICAL DATA SHEET

Description

| | |
|-------------------|-------------------------------------|
| Type | Pressure & Vacuum relief valve |
| Connections | Flanges EN PN-10 or ANSI 150# RF |
| Rating | PN-10 |
| Material | Al / carbon steel / Stainless steel |
| Temperature range | -10 to +260°C |

Requirements

| | |
|-------------|--|
| Calculation | TOSACA 1100 |
| Design | EN-12516-1, EN-1092-1 DIN 259 & ANSI B2.1 |
| Materials | ASTM / EN |
| Inspection | EN-4126-1 / 7 |

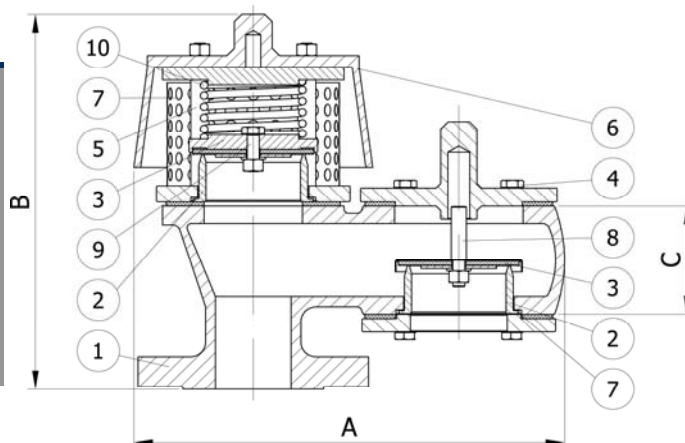
Construction and materials

| Item | Description | Descripción | Material | Material | Material |
|------|---------------|-------------------|----------------------|-------------------|--------------------|
| | | | Aluminium | Carbon steel | Stainless steel |
| 1 | Body | Cuerpo | Aluminium alloy LM 6 | ASTM A 216 Gr WCB | ASTM A 351 Gr CF 8 |
| 2 | Seat | Tobera | S.S. AISI 304 | S.S. AISI 304 | S.S. AISI 316 |
| 3 | Disc | Obturador | S.S. AISI 304 | S.S. AISI 304 | S.S. AISI 316 |
| 4 | Bolts nuts | Tuercas | S.S. AISI 304 | S.S. AISI 304 | S.S. AISI 304 |
| 5 | Studs | Columnas | S.S. AISI 304 | S.S. AISI 304 | S.S. AISI 304 |
| 6 | Weather hood | Protector presión | Aluminium | Aluminium | Aluminium |
| 7 | Wire mesh | Regulla vacío | Perforated sheet | Perforated sheet | Perforated sheet |
| 8 | Vacuum stem | Espiga vacío | S.S. AISI 304 | S.S. AISI 304 | S.S. AISI 304 |
| 9 | Pressure stem | Espiga presión | S.S. AISI 304 | S.S. AISI 304 | S.S. AISI 304 |
| 10 | Spring | Resorte | Carbon steel | Carbon steel | S.S. AISI 302 |

○ Recommended spare parts

Dimensions

| Flanges | | A | B | C | Weight |
|---------|------|-----|-----|-----|--------|
| EN | ANSI | | | | |
| 50 | 2" | 290 | 270 | 100 | 8 |
| 80 | 3" | 415 | 300 | 110 | 12 |
| 100 | 4" | 455 | 320 | 115 | 25 |
| 150 | 6" | 600 | 340 | 120 | 50 |
| 200 | 8" | 715 | 460 | 180 | 60 |
| 250 | 10" | 420 | 500 | 200 | 80 |



Technical information

| | |
|------------------------|-----------|
| Applications | Air |
| Min. Vacuum pressure | -15 mbar |
| Max. Vacuum pressure | -750 mbar |
| Min. Set pressure | 15 mbar |
| Max. Set pressure | 495 mbar |
| Tolerance Set pressure | ± 3% |



Lifting device



Manual lifting device.
Steam service must have lifting device.

Test gag



To test pressure of the installation.
After testing test gag must be removed.
Test gag is possible for safety transport of the valve.

Lift indicator



Proximity switch and valve position indicator.
Inductive prox 3-wire switching type
Supply voltage 20 to 264 VAC, 50/60 Hz.
Enclosure ratings IEC 144 IP67
Option Eex / ATEX

Packing lever



Manual lifting device.
This system to ensure that the fluid does not escape to the atmosphere.

Nozzle ring/Blowdown ring



To help the control flow capacity.
Adjustable blowdown

Specials spring



| | |
|-----------------|--------|
| Carbon steel | 120° C |
| Chrome Vanadium | 219° C |
| S.S. AISI.302 | 260° C |
| Inconel X-750 | 500° C |

Bellows



To protect:
Constant back pressure
Variable back pressure
Material: S.S. AISI-316TI
Max. Back pressure 40%

Trim in hastelloy



Nozzle and disc: Hastelloy C 276
(Nickel-molybdenum-tungsten alloy)
Excellent general corrosion resistance
Rest of valve: S.S. AISI-316L
Bursting disc

Stellite in the seat



In PN-63, PN-100
600#, 900# and 1500#

Heating Jacket



Areas of application are system to be protected from media which are viscous and have tendency to crystallise.
Material: S.S. AISI-316L