

Válvula de seguridad accionada por resorte
Spring Loaded Safety Valve

SiC 11/13/14



General General

- 1) Según la Directiva 97/23/EC (PED) del Parlamento Europeo y el consejo de la Comunidad Europea
Acc. Directive 97/23/EC of the European Parliament and the Council of the European Union (PED)
- 2) Certificado por / certified acc to EN ISO 4126-1
Homologado por la TÜV / TÜV type test approval
ASME Sección VIII / UV-Stamp
Con aprobación según la PED / Type test approval acc. PED
- 3) Diseño según / Sizing acc. to
AD 2000-Merkblatt A2, 10. 2000 TRD 421
ASME Sección VIII
- 4) VdTÜV-Merkblatt „Sicherheitsventil 100“ XX.XX
- 5) Rango de presión de tara ≤ 200 bar
Set pressure range ≤ 200 bar
- 6) Materiales disponibles DIN + ASME
DIN + ASME Materials available
- 7) Tamaños desde / Sizes from
15 x 25 a / to 25 x 40
1/2" x 1" a / to 1" x 1 1/2"

Características y beneficios Features and Benefits

- 1) Máxima apertura con limitador de carrera para la capacidad certificada, dando una posición estable del obturador con apertura total.
Maximum lift with lift stop for the certified capacity gives a stable position of the disc at full lift.
- 2) Internos de una sola pieza, ideal para vapor gases y líquidos por ej. fluidos de dos fases
One-trim-design for steam, vapour, gas and liquids, advantage e.g. at 2-phase flow
- 3) Altos coeficientes de descarga gracias a la configuración de flujo
High discharge coefficients due to optimized flowgeometry
- 4) Sobrepresión y blowdown / Overpressure and blowdown
Vapor, gases +10%/-10% / steam, gas, vapour
Líquidos +10%/-20% / liquids
- 5) De fácil mantenimiento gracias a las características del diseño, por ej. vástago de una sola pieza
Easy maintenance because of special design features, e.g. one part spindle
- 6) Posibilidad de desmontar la válvula para lapeado de asiento y obturador sin afectar el tarado
Dismanteling of the valve for lapping of seat and disc without change of set-pressure possible
- 7) Fuelle ubicado en lugar seguro, fuera del área de flujo
Bellows in safe location because outside the flowpath

Ejemplo

Example

| | | | | | | | |
|--------|---|---|-----|-----------------------|----|----|----|
| SiC 14 | 0 | 0 | .59 | DN 25 x 40 PN 40 x 10 | 00 | AB | 17 |
|--------|---|---|-----|-----------------------|----|----|----|

Codificación

Type Coding

| Modelo/ Style | |
|---------------|---------------------------------------|
| SiC 11 | Tapa abierta Open Bonnet |
| SiC 13 | Estándar Convencional |
| SiC 14 | Fuelle equilibrio Balanced Bellows |

| Conexión entrada / Inlet connection | |
|-------------------------------------|-------------------------------|
| Z | Rosca macho / Screwed Male |
| M | Rosca hembra / Screwed Female |
| 0 | PN 10/40 |
| 1 | PN 63/160 |
| 2 | PN 250/320 |
| 3 | PN 400 |
| 4 | ASME 150# |
| 6 | ASME 300/600# |
| 7 | ASME 900/1500# |
| 8 | ASME 2500# |

| Conexión salida / Outlet connection | |
|-------------------------------------|-------------------------------|
| Z | Rosca macho / Screwed Male |
| M | Rosca hembra / Screwed Female |
| 0 | PN 10/40 |
| 1 | PN 63/160 |
| 4 | ASME 150# |
| 5 | ASME 300# |
| 6 | ASME 600# |

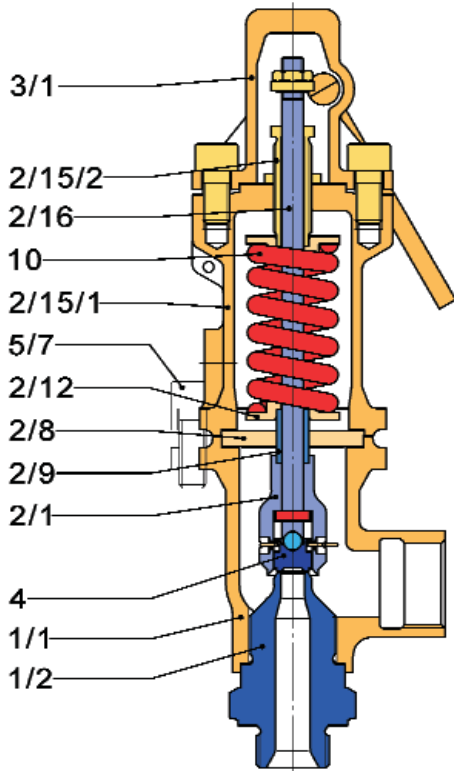
| Opciones / Options | |
|--------------------|---------------------------------------|
| .09 | Espaciador / spacer bush |
| .59 | Obturador estrellado / stellited disc |
| | Otras opciones bajo pedido |
| | Other options upon request |

| Tamaño /Size | Rango presión / Pressure Rating |
|---|---|
| DNEntrada x DN Salida DN Inlet x DN Outlet | PNEntrada x PN Salida PN Inlet x PN Outlet |

| Código material / Material code | | |
|---------------------------------|---|-----------------------------------|
| 00 | GP240GH+N/1.0619+N SA-216 WCB | -10 a +400°C -29 to +427 °C |
| 04 | GX5CrNiMo 19-11-2 / 1.4408 SA-351 CF8M | -270 a + 400°C -268 to +427 °C |

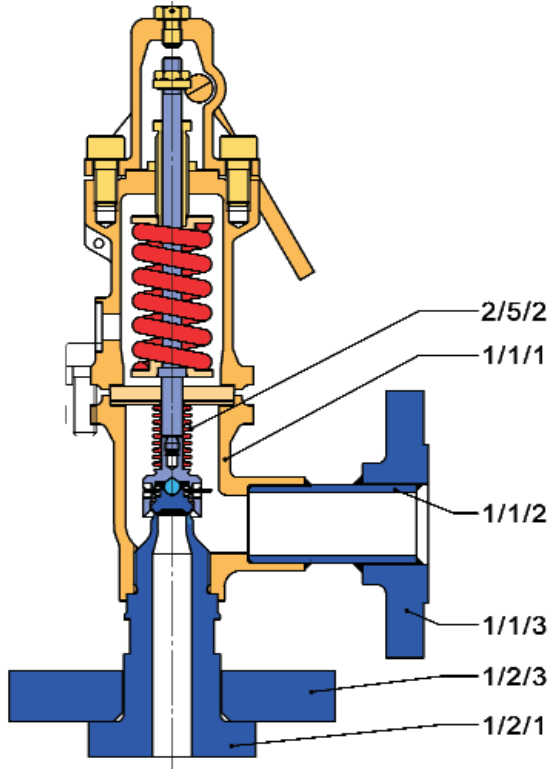
| Diseño de cabezal / Cap design | |
|--------------------------------|---|
| G | Cabezal sin palanca gastight without lifting lever |
| A | Palanca estanca packed lifting lever |
| B | Tornillo bloqueo test gag |

| | |
|---|--|
| Diámetro asiento seat diameter d ₀ | Ver tabla de dimensiones see table Dimensions |
|---|--|



SiC 13 Estándar / Conventional

SiC 11 Tapa abierta / Open Bonnet



SiC 14 con fuelle equilibrio / Balanced Bellows

Materiales

Material

| | Código material / Material code | | 00 | | 04 | |
|----------------------|--|--------------------------------------|---------------------|--|----------------------|---|
| | Descripción | Description | DIN/EN | ASTM | DIN/EN | ASTM |
| Parte Part | Rango temperatura / Temperature range | | -10 °C a +400 °C | -29 °C a +427 °C -20 °F to + 800 °F | -270 °C a +400 °C | -268 °C a +427 °C* -450 °F to +800 °F* |
| 1/1 y / and 1/1/1 | Cuerpo | Body | 1.0619 | SA-216 WCB | 1.4408 | SA-351 CF8M |
| 1/2 y / and 1/2/1 | Tobera | Nozzle | 1.4571 | SA479/316 Ti | 1.4571 | SA 479/316 Ti |
| 1/2/3 | Brida | Flange | 1.0460 | SA 105 | 1.4571 | SA 479/316 Ti |
| 1/1/2 | Salida | Outlet | 1.0305 | A 106 | 1.4571 | 316 Ti |
| 1/1/3 | Brida | Flange | 1.0460 | A 105 | 1.4571 | 316 Ti |
| 2/1 | Anillo disco | Disc holder | 1.4571 | 316 Ti | 1.4571 | 316 Ti |
| 2/5/2 | Fuelle | Bellow | 1.4571 | 316 Ti | 1.4571 | 316 Ti |
| 2/8 | Guía obturador | Cover | 1.4571 | 316 Ti | 1.4571 | 316 Ti |
| 2/9 | Casquillo obturador | Guide bush | 1.4571 | 316 Ti | 1.4571 | 316 Ti |
| 2/12 | Plato resorte | Spring washer | 1.0038 | Acero | 1.4571 | 316 Ti |
| 2/15/1 | Cuerpo intermedio | Bonnet | 1.0619 | SA-216 WCB | 1.4408 | SA-351 CF8M |
| 2/15/2 | Tornillo regulación | Adjusting screw | 1.4021 | 420 | 1.4571 | 316 Ti |
| 2/16 | Vástago estándar Vástago con fuelle | Standard spindle/ Bellows spindle | 1.4571 1.4021 | 316 Ti 420 | 1.4571 1.4571 | 316 Ti 316 Ti |
| 3/1 | Tapa | Cap | 1.0619 | SA-216 WCB | 1.4408 | SA-351 CF8M |
| 4 | Obturador | Disc | 1.4571 | 316 Ti | 1.4571 | 316 Ti |
| 5/7 | Tornillo | Screw | A4-70 | | | |
| 10 | Fuelle | Spring | 1.4310 | 302 | 1.4310 | 302 |

* Si se usa con fluidos no corrosivos / if used for noncorrosive medium
 Otros materiales disponibles bajo pedido / other materials upon request

Recambios recomendados: / Recommended Spares:

Puesta en marcha / commissioning:

Juego de juntas / set of gaskets

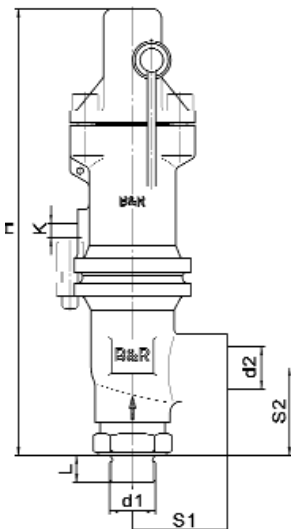
2 años de operación / 2-years operation:

Juego de juntas, Obturador / set of gaskets, disc

Tabla de dimensiones con conexión roscada

Dimensions table screwed connection

| | Tamaño DN Size DN | Diámetro asiento Flow diameter | Area de paso Flow Area | Máxima presión tarado / Max. Set Pressure | Entrada Inlet | Salida Outlet | Distancias entre caras Center to face dimensions | Distancias entre centros Center to face dimensions | Altura Height | Peso Weight | Dimensión Dimension |
|----|----------------------|-----------------------------------|--------------------------------------|---|----------------|----------------|---|---|------------------|----------------|------------------------|
| | [mm]/ [inch] | d ₀ [mm] | A ₀ [mm ²] | p [barg] | d ₁ | d ₂ | S ₁ [mm] | S ₂ [mm] | H [mm] | m [kg] | x [mm] |
| 1) | 15 x 25 | 9 | 63,6 | 200 | G1/2A | G1 | 57 | 48 | 265 | 3 | 14 |
| | 20 x 25 | 9 | 63,6 | 200 | G3/4A | G1 | 57 | 48 | 265 | 3 | 16 |
| | 20 x 25 | 12,2 | 116,9 | 100 | G3/4A | G1 | 57 | 48 | 272 | 3 | 16 |
| | 25 x 25 | 12,2 | 116,9 | 100 | G1A | G1 | 57 | 48 | 272 | 3 | 18 |
| | 25 x 40 | 17 | 227 | 50 | G1A | G1 1/2 | 62 | 55 | 274 | 3,5 | 18 |
| 2) | 1/2" x 1" | 9 | 63,6 | 200 | NPT1/2-14 | NPT1-11,5 | 57 | 48 | 265 | 3 | 20 |
| | 3/4" x 1" | 9 | 63,6 | 200 | NPT3/4-14 | NPT1-11,5 | 57 | 48 | 265 | 3 | 20 |
| | 3/4" x 1" | 12,2 | 116,9 | 100 | NPT3/4-14 | NPT1-11,5 | 57 | 48 | 272 | 3 | 20 |
| | 1" x 1" | 12,2 | 116,9 | 100 | NPT1-11,5 | NPT1-11,5 | 57 | 48 | 272 | 3 | 25 |
| | 1" x 1 1/2" | 17 | 227 | 50 | NPT1-11,5 | NPT1 1/2"-11,5 | 62 | 55 | 274 | 3,5 | 25 |



- 1) según DIN 3852, T2 Form A y Form Y / acc. DIN 3852
 2) según ASME / ANSI B1.20.1 / acc. ASME/ANSI B1.20.1

Conexiones entrada/salida / Inlet/Outlet Connections:

- Bridas según ASME / DIN/ flanged acc to ASME, DIN
- Rosca NPT, métrica, otras bajo pedido
Screwed connection NPT, metric, other upon request
- Swagelok / Swagelok
- Otros tipos bajo pedido / other types upon request

SIC 11 / 13

Máxima presión de tara: 200 bar / max. set pressure 200 bar
 Diámetro asiento: 9, 12,2; 17 mm / seat diameter: 9; 12,2; 17 mm
 diameters

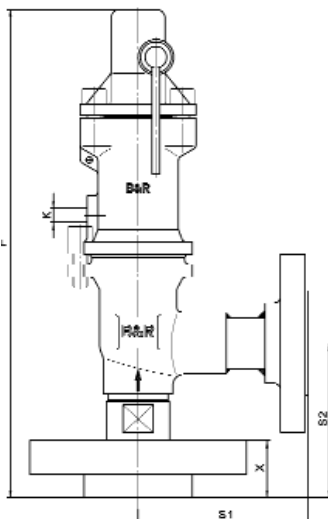
SIC 14

Máxima presión de tara: 100 bar / max. set pressure
 Diámetro asiento: 12,2; 17 mm / seat 12,2; 17 mm
 Cuerpo intermedio con conexión K= G 1/4
 Bonnet with test connect K= G 1/4

Tabla de dimensiones con conexión bridada

Dimensions table flanged connection

| | Tamaño DN Size DN | Diámetro asiento Flow diameter | Area de paso Flow Area | Máxima presión tarado/ Max. Setu Pressure | Entrada Inlet | Salida Outlet | Distancias entre caras Center to face dimensions | Distancias entre centros Center to face dimensions | Altura Height | Peso Weight | Dimensión Dimension |
|-------------|----------------------|---|--------------------------------------|---|------------------|------------------|--|--|------------------|----------------|------------------------|
| | [mm]/ [inch] | d ₀ [mm] | A ₀ [mm ²] | p [barg] | PN/Class | PN/Class | S ₁ [mm] | S ₂ [mm] | H [mm] | m [kg] | x [mm] |
| 1) | 15 x 25 | 9,0 | 63,6 | 40 | 10-40 | 10-40 | 110 | 100 | 317 | 5,5 | 26 |
| | 15 x 25 | 9,0 | 63,6 | 160 | 64-160 | 10-40 | 110 | 100 | 317 | 6,5 | 33 |
| | 15 x 25 | 9,0 | 63,6 | 200 | 250/320 | 10-40 | 110 | 100 | 317 | 7,5 | 39 |
| | 20 x 25 | 9,0 | 63,6 | 40 | 10-40 | 10-40 | 110 | 100 | 317 | 6,0 | 33 |
| | 20 x 25 | 12,2 | 116,9 | 40 | 10-40 | 10-40 | 110 | 100 | 324 | 6,0 | 31 |
| | 25 x 25 | 12,2 | 116,9 | 40 | 10-40 | 10-40 | 110 | 100 | 324 | 6,5 | 31 |
| | 25 x 25 | 12,2 | 116,9 | 100 | 64-160 | 10-40 | 110 | 100 | 324 | 7,5 | 37 |
| | 25 x 40 | 17,0 | 227 | 40 | 10-40 | 10-40 | 125 | 100 | 319 | 8,0 | 31 |
| | 25 x 40 | 17,0 | 227 | 50 | 64-160 | 10-40 | 125 | 100 | 319 | 9,0 | 37 |
| 2) | 1/2" x 1" | 9,0 | 63,6 | 19,7 | 150 | 150 | 110 | 100 | 317 | 5,0 | 28 |
| | 1/2" x 1" | 9,0 | 63,6 | 102 | 300/600 | 150 | 110 | 100 | 317 | 5,0 | 32 |
| | 1/2" x 1" | 9,0 | 63,6 | 102 | 300/600 | 300 | 110 | 100 | 317 | 6,0 | 32 |
| | 1/2" x 1" | 9,0 | 63,6 | 200 | 900/1500 | 150 | 110 | 100 | 317 | 6,5 | 42 |
| | 1/2" x 1" | 9,0 | 63,6 | 200 | 900/1500 | 300 | 110 | 100 | 317 | 7,0 | 42 |
| | 3/4" x 1" | 9,0 | 63,6 | 19,7 | 150 | 150 | 110 | 100 | 317 | 5,5 | 28 |
| | 3/4" x 1" | 9,0 | 63,6 | 102 | 300/600 | 150 | 110 | 100 | 317 | 6,0 | 35 |
| | 3/4" x 1" | 9,0 | 63,6 | 102 | 300/600 | 300 | 110 | 100 | 317 | 6,5 | 35 |
| | 3/4" x 1" | 9,0 | 63,6 | 200 | 900/1500 | 150 | 110 | 100 | 317 | 7,0 | 44 |
| | 3/4" x 1" | 9,0 | 63,6 | 200 | 900/1500 | 300 | 110 | 100 | 317 | 7,5 | 44 |
| | 3/4" x 1" | 12,2 | 116,9 | 19,7 | 150 | 150 | 110 | 100 | 324 | 5,5 | 28 |
| | 3/4" x 1" | 12,2 | 116,9 | 100 | 300/600 | 150 | 110 | 100 | 324 | 6,0 | 35 |
| | 3/4" x 1" | 12,2 | 116,9 | 100 | 300/600 | 300 | 110 | 100 | 324 | 6,5 | 35 |
| | 3/4" x 1" | 12,2 | 116,9 | 100 | 900/1500 | 150 | 110 | 100 | 324 | 7,0 | 44 |
| | 3/4" x 1" | 12,2 | 116,9 | 100 | 900/1500 | 300 | 110 | 100 | 324 | 7,5 | 44 |
| | 1" x 1" | 12,2 | 116,9 | 19,7 | 150 | 150 | 110 | 100 | 324 | 6,0 | 33 |
| | 1" x 1" | 12,2 | 116,9 | 100 | 300/600 | 150 | 110 | 100 | 324 | 6,5 | 37 |
| | 1" x 1" | 12,2 | 116,9 | 100 | 300/600 | 300 | 110 | 100 | 324 | 7,0 | 37 |
| | 1" x 1" | 12,2 | 116,9 | 100 | 900/1500 | 150 | 110 | 100 | 324 | 8,0 | 44 |
| | 1" x 1" | 12,2 | 116,9 | 100 | 900/1500 | 300 | 110 | 100 | 324 | 9,0 | 44 |
| 1" x 1 1/2" | 17,0 | 227 | 19,7 | 150 | 150 | 125 | 100 | 319 | 6,5 | 33 | |
| 1" x 1 1/2" | 17,0 | 227 | 50 | 300/600 | 150 | 125 | 100 | 319 | 7,5 | 37 | |
| 1" x 1 1/2" | 17,0 | 227 | 50 | 300/600 | 300 | 125 | 100 | 319 | 8,0 | 37 | |



- 1) Bridas PN 10 - PN 100 según DIN EN 1092-1 y PN 160 según DIN 2544; Superficie: hasta PN 40 Forma B1, superior a PN63 Forma B2

Flanges PN 10 - PN 100 acc. DIN EN 1092-1 and PN 160 acc. DIN 2544, sealing surface up to PN 40 form B1, above form B2

- 2) Bridas según ASME / ANSI B16.5
Flanges acc. ASME / ANSI B16.5