

# Atmospheric Discharge Safety Relief Valves

Seetru Limited

for compressed air or gases

## Type 106 / 116

Safety valves made from Brass or Aluminum <  
Atmospheric discharge with threaded connections – FKS approved <

### Example Applications

- Compressors
- Pressure vessels
- Pneumatic systems
- Particle laden air/gas (FKS)
- Transport vehicles

### Specifications

- Inlet connections: 1" to 2"
- Temperature: -40°C to +200°C (depending on seal material)
- Pressure range: 0.5 to 12.0 bar

### Materials of Construction

| Component      | Material        | Grade        |
|----------------|-----------------|--------------|
| Inlet          | Brass           | CW614N       |
|                | Aluminium Alloy | 6082         |
| Body           | Brass           | CW614N       |
|                | Aluminium Alloy | 6082         |
| Internal parts | Brass           | CW614N       |
|                | Aluminium Alloy | 6082         |
| Spring         | Stainless Steel | 1.4310 (302) |



### Approvals

- FKS approval for particle laden gases
- Designed in accordance with BS EN ISO-4126-1 & -7
- PED 2014/68/EU (CE)
- PE(S)R UK SI 2016 No. 1105 (UKCA)
- ASME BPVC VIII.1 & XIII (UV)
- CRN



### Seal Materials

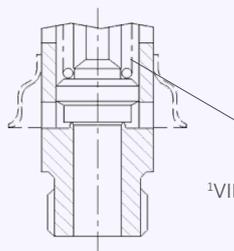
| Seal Material | Temperature Range |
|---------------|-------------------|
| Viton® (FKM)  | -15°C to +200°C   |
| Nitrile (NBR) | -40°C to +120°C   |

### Easing Gear / Lifting Gear Options

- Standard option – Rota-lift cap, twist type

#### Other options:

<sup>1</sup>Downward deflecting shroud available



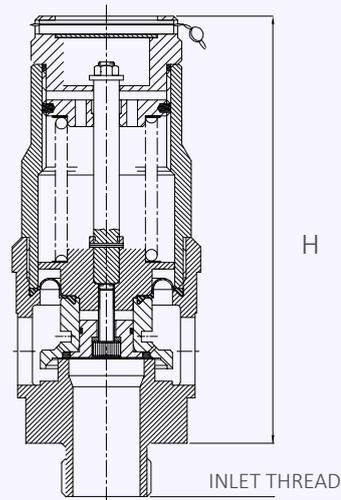
<sup>1</sup>VIEW SHOWING OPTIONAL SHROUD AVAILABLE

## Technical information by bore size



| Bore Size                                     | 25mm   |        |        |    |
|---|--|--------|--------|----|
| Inlet Size                                    | 1"   | 1 1/4" | 1 1/2" | 2" |
| Flow Area                                     | 491mm <sup>2</sup>                               |        |        |    |
| H - Height (Rota-lift cap version)            | 172mm  |        |        |    |
| TÜV allotted outflow coefficient <sup>1</sup> | 0.79 (above 0.8 bar)<br>0.70 (0.8 bar and below) |        |        |    |
| NB Certified rated slope (ASME)               | 11.3 scfm/psia                                   |        |        |    |
| Weight (approximate) Kg                       | 2.8 (for brass valve)                            |        |        |    |
| Set Pressure range - PED (CE) bar             | 0.5-12.0 bar                                     |        |        |    |
| Set Pressure range - ASME (UV) psi            | 7.25-174.0 bar                                   |        |        |    |
| Relieving pressure/fully open pressure        | Set pressure +10%                                |        |        |    |
| Reseating pressure                            | Set pressure -10%                                |        |        |    |

## Valves with Rota-lift Easing Gear



## Standard Thread Connection Types



- BSP Parallel male thread
- BSP Taper male thread
- NPT male thread

## Valve Selection Guide



| Approval Required         | Valve type               | Bore Size | Inlet Size                         | Thread Type        | Easing Gear   | Downward Deflecting Shroud Required? | Seal Material |
|---------------------------|--------------------------|-----------|------------------------------------|--------------------|---|--------------------------------------|---------------|
| PED (CE)                  | 106<br>(Brass valve)     | 25=25mm   | Select inlet size from above table | Select thread type | Select easing gear (rota-lift is the standard option) | Yes or No                            | Viton® (FKM)  |
|                           | 116<br>(Aluminium valve) |           |                                    |                    |   |                                      |               |
| PED (CE), ASME (UV) & CRN | 101<br>(Brass valve)     |           |                                    |                    |   |                                      | Nitrile (NBR) |
|                           | 111<br>(Aluminium valve) |           |                                    |                    |   |                                      |               |

EAC marking available upon request

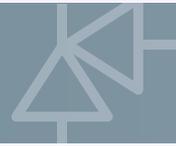
**\*Please send your selected details to Seetru and we can provide the full ordering code, price and lead-time.**

## Example of Valve Selection Process



|                   |          |            |             |            |             |             |         |       |              |
|-------------------|----------|------------|-------------|------------|-------------|-------------|---------|-------|--------------|
| Example Selection | CE       | 106        | 25          | 1"         | BSP Taper   | Rota-lift   | Shroud? | Viton | 3.1 bar      |
|                   | Approval | Valve Type | Bore = 25mm | Inlet Size | Thread Type | Easing Gear | No      | Seal  | Set Pressure |

**Capacity Table - In accordance with TÜV, AIR at 0°C and 1013mbar. Normal m<sup>3</sup>/hour**  
**Type 106/116: Flow rates at 10% above the set pressure**



| Set Pressure  |       | Bore Size (D0)        |  |  |  |
|--|-------|-----------------------|--|--|--|
|  |       | 25mm                  |  |  |  |
| bar  | Psi g | Nm <sup>3</sup> /Hour |  |  |  |
| 0.5  | 7.25  | 369                   |  |  |  |
| 1  | 14.5  | 558                   |  |  |  |
| 2  | 29    | 848                   |  |  |  |
| 3  | 43.5  | 1139                  |  |  |  |
| 4  | 58    | 1429                  |  |  |  |
| 5  | 72.5  | 1720                  |  |  |  |
| 6  | 87    | 2010                  |  |  |  |
| 7  | 101.5 | 2301                  |  |  |  |
| 8  | 116   | 2592                  |  |  |  |
| 9  | 130.5 | 2882                  |  |  |  |
| 10   | 145   | 3173                  |  |  |  |
| 11   | 159.5 | 3463                  |  |  |  |
| 12   | 174   | 3754                  |  |  |  |

**Capacity Table - In accordance with ASME BPVC.XIII, AIR at 60°F and 14.7 psia/scfm. SCFM**  
**Type 106/116: Flow rates at 10% above the set pressure.**



| Set Pressure  |       | Bore Size (D0) |  |  |  |
|--|-------|----------------|--|--|--|
|  |       | 25mm           |  |  |  |
| psi  | bar   | SCFM           |  |  |  |
| 7.25   | 0.50  | 282            |  |  |  |
| 10   | 2.50  | 313            |  |  |  |
| 20   | 1.38  | 426            |  |  |  |
| 30   | 2.80  | 539            |  |  |  |
| 40   | 2.76  | 663            |  |  |  |
| 50   | 3.45  | 786            |  |  |  |
| 60   | 4.14  | 912            |  |  |  |
| 70   | 4.83  | 1036           |  |  |  |
| 80   | 5.52  | 1161           |  |  |  |
| 90   | 6.21  | 1285           |  |  |  |
| 100  | 6.90  | 1409           |  |  |  |
| 150  | 10.34 | 2031           |  |  |  |
| 174  | 12.00 | 2329           |  |  |  |