

# Enclosed Discharge Safety Relief Valves

Seetru Limited

for compressed air or gases

steam

hygienic

## Type 6G6 / 6G1

Clean Service/Hygienic Safety valves with Stainless Steel body <  
Enclosed discharge valve with Tri-Clamp inlet connections <

*Safety valve for food industry & other hygienic applications including clean steam & gas applications*

### Example Applications

- Compressed air or gas
- Medical gases
- Food production plants
- Technical gases
- Hygienic applications
- Steam systems
- Pressure vessels

### Specifications

- Inlet connections: 1/2" to 1" Tr-Clamp (depending on bore size)
- Temperature: -15°C to +200°C (depending on seal material)
- Pressure range: 0.32 to 55.2 bar (depending on bore size)
  - Maximum 12 bar for Steam Applications.

### Materials of Construction

| Component      | Material        | Grade        |
|----------------|-----------------|--------------|
| Inlet          | Stainless Steel | 1.4404 (316) |
| Body           | Stainless Steel | 1.4408 (316) |
| Internal parts | Stainless Steel | 1.4401 (316) |
| Spring         | Stainless Steel | 1.4310 (302) |

#### SURFACE FINISH

##### Process Contact Surface

In accordance with ASME BPE-2005 Table SF-5.  
Surface designation Ra Max 15 µinches, 0.4 µm, Electropolished.

##### Other Surfaces

Not greater than 60 µinches, 1.5 µm.

### Approvals

- 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 |
|---------------------------|-------------------|
| Perfluoroelastomer (FFKM) | -15°C to +200°C   |

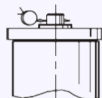
Standard seal materials shown, others are available.  
Elastomer soft sealing specifically developed for food & pharmaceutical industries.

#### Compliant to:

1. FDA 21 CFR 177.2600
2. United States Pharmacopoeia (USP) Class VI
3. SP3A Sanitary Standards for Multiple Use Rubber Dairy Equipment No 18-03.

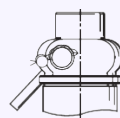
### Easing Gear / Lifting Gear Options

- **Standard option:**



Sealed Cap (gas tight cap)

- **Other Options:**



Sealed lever (gas tight)

## Technical information by bore size

| Bore size                              | 9.5mm (6G610/6G110)                          |      | 13.7mm (6G613/6G113)                          |    |
|--|--|------|---|----|
| Inlet Size                             | 1/2"   | 3/4" | 3/4"  | 1" |
| Outlet Size                            | 3/4"   |      | 1"  |    |
| Flow Area                              | 70.9mm <sup>2</sup>                          |      | 147.7mm <sup>2</sup>                          |    |
| H - Height (Sealed cap version)        | 160mm  |      | 180mm   |    |
| TÜV alloted outflow coefficient        | 0.77 above 1.55 bar                          |      | 0.77  |    |
| NB Certified rated slope (ASME)        | 1.71 scfm/psia                               |      | 3.47 scfm/psia                                |    |
| Weight (approximate) Kg                | 0.9  |      | 1.3   |    |
| Set Pressure range - PED (CE) bar      | 0.48 to 55.2 (max 12 bar for Steam)          |      | 0.32 to 49.0 (max 12 bar for Steam)           |    |
| Set Pressure range - ASME (UV) psi     | 22.5 to 800.4                                |      | 20.3 to 710.5                                 |    |
| Relieving pressure/fully open pressure | Set pressure +10%<br>(0.1 bar below 1.0 bar) |      | Set pressure +<br>10% (0.3 bar below 1.4 bar) |    |
| Reseating pressure                     | Set pressure -10% (0.3 bar minimum)          |      |   |    |

Stable operation on flows down to 50% of valve rated capacity.

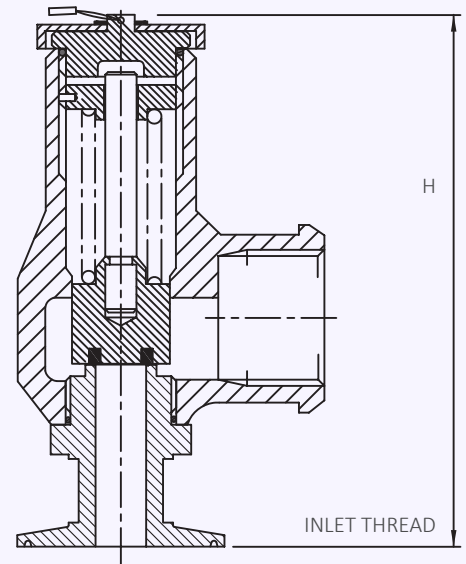
## Standard Thread Connection Types

- Tri-Clamp® compatible generally in accordance with ASME BPE 2005 & BS 4825-3.

## Standard Outlet Connection Types

- BSP Female Pipe threads (G)

## Valve drawing



## Valve Selection Guide

| Approval Required        | Valve type | Select Bore                       | Inlet Size                         | Easing Gear                    | Seal Material             |
|--------------------------|------------|-----------------------------------|------------------------------------|--------------------------------|---------------------------|
| PED (CE)                 | 6G6        | Select bore size from above table | Select inlet size from above table | Select easing gear/top fitting | Perfluoroelastomer (FFKM) |
| PED (CE), ASME (UV) & CR | 6G1        |                                   |                                    |                                | Other                     |


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 | PED, ASME & CRN | 6G1        | 9.5mm     | 1/2"       | Sealed Cap  | Perfluoroelastomer (FFKM) | 3.5 bar      |
|                   | Approval        | Valve Type | Bore Size | Inlet Size | Easing Gear | Seal                      | Set Pressure |

Capacity Table - In accordance with TÜV, AIR at 0°C and 1013mbar. Normal m<sup>3</sup>/hour  
Type 6G6: Flow rates at 10% above the set pressure

| Set Pressure  |       | Bore Size (D0)        |                       |
|--|-------|-----------------------|-----------------------|
|  |       | 9.5mm (6G610)         | 13.7mm (6G613)        |
| bar  | psi   | Nm <sup>3</sup> /Hour | Nm <sup>3</sup> /Hour |
| 0.32   | 4.64  |                       | 123.9                 |
| 0.48   | 6.96  | 46.5                  | 138.2                 |
| 1  | 14.5  | 71.4                  | 178.8                 |
| 2  | 29    | 119.5                 | 248.4                 |
| 3  | 43.5  | 160.4                 | 333.5                 |
| 4  | 58    | 201.3                 | 418.5                 |
| 5  | 72.5  | 242.1                 | 503.6                 |
| 6  | 87    | 283.0                 | 588.6                 |
| 7  | 101.5 | 323.9                 | 673.6                 |
| 8  | 116   | 364.8                 | 758.7                 |
| 9  | 130.5 | 405.7                 | 843.7                 |
| 10   | 145   | 446.6                 | 928.8                 |
| 15   | 217.5 | 651.1                 | 1354.0                |
| 20   | 290   | 855.5                 | 1779.2                |
| 25   | 362.5 | 1060.0                | 2204.5                |
| 30   | 435   | 1264.5                | 2629.7                |
| 35   | 507.5 | 1468.9                | 3054.9                |
| 40   | 580   | 1673.4                | 3480.2                |
| 45   | 652.5 | 1877.9                | 3905.4                |
| 49   | 710.5 | 2041.5                | 4245.6                |
| 50   | 725   | 2082.4                |                       |
| 55.2   | 800.4 | 2295.0                |                       |
|  |       |                       |                       |
|  |       |                       |                       |
|  |       |                       |                       |
|  |       |                       |                       |
|  |       |                       |                       |
|  |       |                       |                       |

For any intermediate pressures/flows please contact Seetru

Capacity Table - In accordance ASME section VIII Div I, AIR at 60°F and 14.7 psia/scfm. SCFM  
Type 6G1: Flow rates at 10% above the set pressure

| Set Pressure  |       | Bore Size (D0) |                |
|--|-------|----------------|----------------|
|  |       | 9.5mm (6G610)  | 13.7mm (6G613) |
| psi  | bar   | SCFM           | SCFM           |
| 20.3   | 1.40  |                | 131.9          |
| 22.5   | 2.50  | 68.7           | 139.4          |
| 30   | 2.07  | 81.5           | 165.5          |
| 34.8   | 2.80  | 90.6           | 183.8          |
| 40   | 2.76  | 100.4          | 203.7          |
| 43.5   | 3.00  | 106.9          | 217.0          |
| 50   | 3.45  | 119.2          | 241.8          |
| 82   | 5.66  | 179.3          | 363.9          |
| 100  | 6.90  | 213.2          | 432.6          |
| 150  | 10.34 | 307.2          | 623.4          |
| 200  | 13.79 | 401.2          | 814.2          |
| 250  | 17.24 | 495.3          | 1005.0         |
| 300  | 20.69 | 589.3          | 1195.8         |
| 350  | 24.14 | 683.3          | 1386.6         |
| 400  | 27.59 | 777.4          | 1577.4         |
| 435  | 30.00 | 843.2          | 1711.0         |
| 450  | 31.03 | 871.4          | 1768.2         |
| 500  | 34.48 | 965.4          | 1959.0         |
| 507.5  | 35.00 | 979.5          | 1987.6         |
| 550  | 37.93 | 1059.4         | 2149.8         |
| 600  | 41.38 | 1153.4         | 2340.6         |
| 650  | 44.83 | 1247.5         | 2531.4         |
| 700  | 48.28 | 1341.5         | 2722.2         |
| 710.5  | 49.00 | 1361.3         | 2762.3         |
| 750  | 51.72 | 1435.5         |                |
| 800.4  | 55.20 | 1530.3         |                |
|  |       |                |                |
|  |       |                |                |
|  |       |                |                |
|  |       |                |                |
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