# PRESSURE SAFETY VALVE





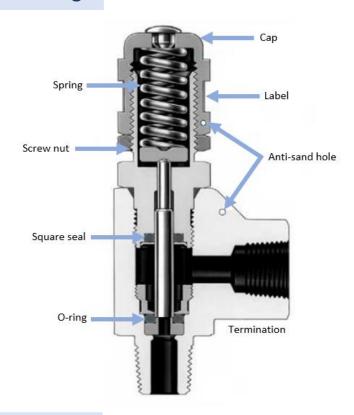
# **EVOL PRESSURE SAFETY VALVE**



EVOL Technologies manufactures pressure safety valve for general pressure protection to high pressure conditions. With the feature of SS316L as valve material, EVOL pressure safety valve is suitable in most of the chemical industries, especially the pipelines of compressed natural gas filling stations which operated in high pressure. They are also suitable for hydraulic pipes.



#### **Product Design**



### **Specifications**

#### **EVPSV-SS**

#### **Features & Highlights:**

- Valve material: SS316L
- Nominal diameter: DN6 to DN32
- Set pressure range: 6.4 to 42 MPa
- Temperature range: -20 to 150 °C
- For noble gases, temperature
  - range: -20 to 80 °C
- Multiple springs for high pressure valve
- Single spring for low pressure
- Connection type: Welded or thread
- Can be customized based on customer's requirement

#### **Applications:**

- Low to high pressure gases and liquids
- Non-corrosive and corrosive gases and liquids
- Compressed natural gas transmission

| Model    | Set pressure range | Temperature range         | Nominal diameter of termination | Connection type |
|----------|--------------------|---------------------------|---------------------------------|-----------------|
| EVPSV-SS | 6.4 to 42 MPa      | ❖ Normal: -20 to 150 °C   | ❖ DN6                           | Welded          |
|          |                    | Noble gases: -20 to 80 °C | ❖ DN8                           | Thread          |
|          |                    |                           | <b>❖</b> DN10                   | Flange          |
|          |                    |                           | <b>❖</b> DN15                   |                 |
|          |                    |                           | <b>❖</b> DN20                   |                 |
|          |                    |                           | <b>❖</b> DN25                   |                 |
|          |                    |                           | <b>❖</b> DN32                   |                 |

Can be customized based on customer's requirement.

# **Working Principle**

#### Condition 1: Normal operation $(F_s = F_p)$

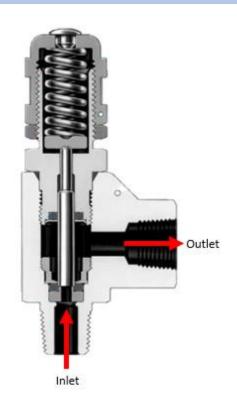
The spring force  $(F_s)$  is equivalent to the force created by the pressure at inlet of pressure safety valve  $(F_p)$ . The valve functions normally.

#### Condition 2: Low pressure at inlet $(F_s > F_p)$

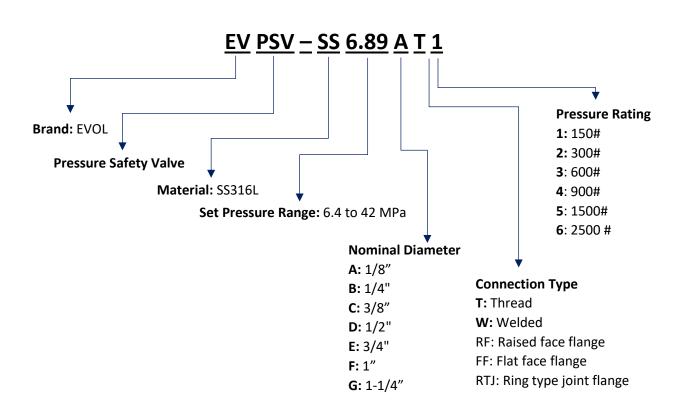
If the  $F_p$  is lower than the  $F_s$ , the mechanical spring transfers the force via spindle to close the inlet of pressure safety valve to build up the pressure in pipeline until it reaches the set pressure.

#### Condition 3: High pressure at inlet (F<sub>s</sub> < F<sub>p</sub>)

When the pressure at inlet of pressure safety valve continuously increases above the set pressure, the  $F_p$  compresses the mechanical spring. Thus, the valve opens rapidly and releases the gas/fluid out.



## **Model Number**





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