ESKA

ERG-H6
SERIES

ERG-H6 Series pressure regulator is used on gas line to reduce inlet pressure to desired outlet pressure.

It is mainly used in Distribution of Natural Gas and also suitable to use with non-corrosive gases. ERG-H6 is a single stage direct acting regulator with a optional security systems such as relief valve UPSO and OPSO

Monitor version is also available.

FEATURES

- For medium and high pressure domestic or industrial second group gas lines.
- Max inlet pressure 0,3 to 20 bar.
- Max outlet pressure 15-4000 mbar.
- Outlet pressure tolerance is ±%5-10 (AC5 & AC10)
- Lock up pressure tolerance is max +%10 (SG30 and SG20 is possible also)
- Can be integrated with Relief valve & UPSO & OPSO
- Temperature class as a standard -20 to +60 Celcius Degree. Low temperature series has ability to work under as low as -40 Celcius Degree.
- Flow direction inline type.

CONFIGURATIONS

INLINE TYPE
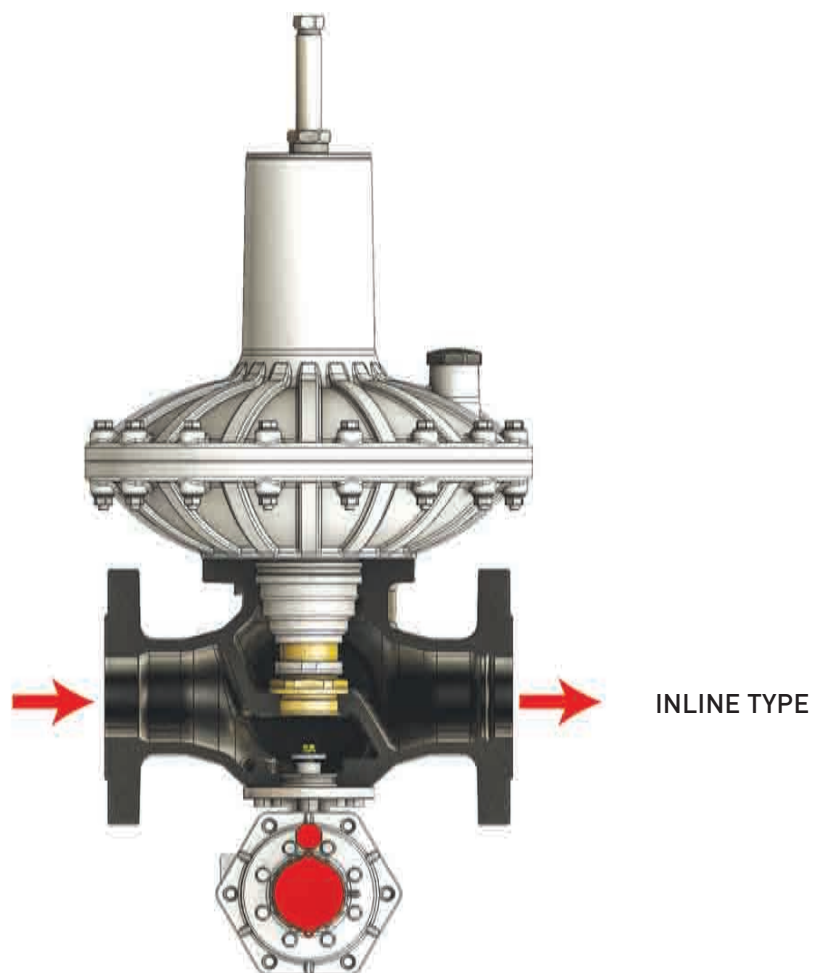
DIMENSIONS
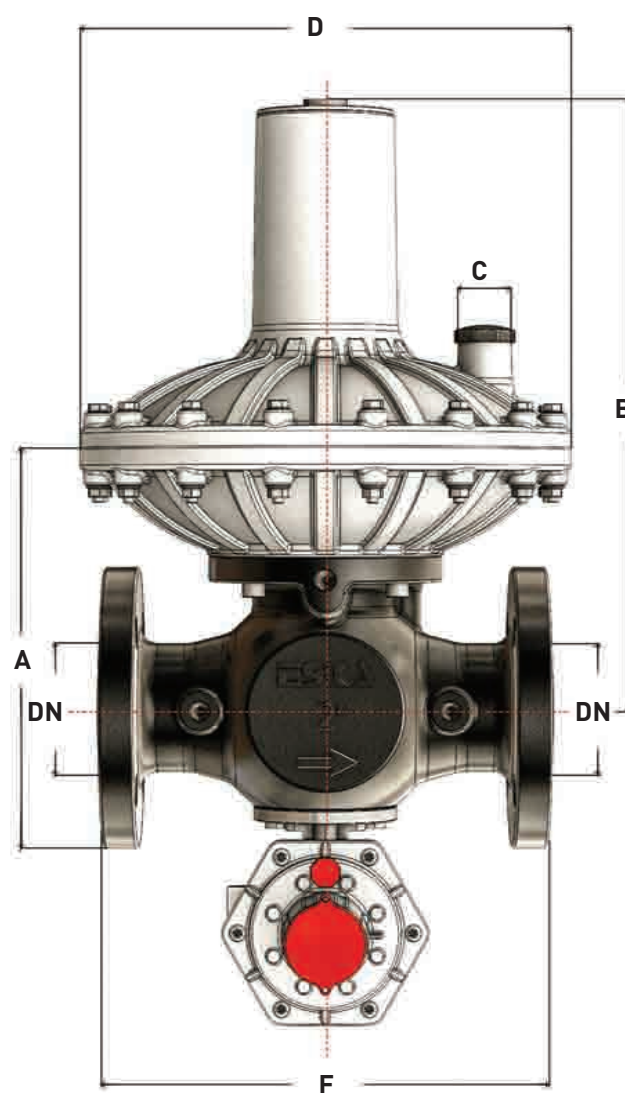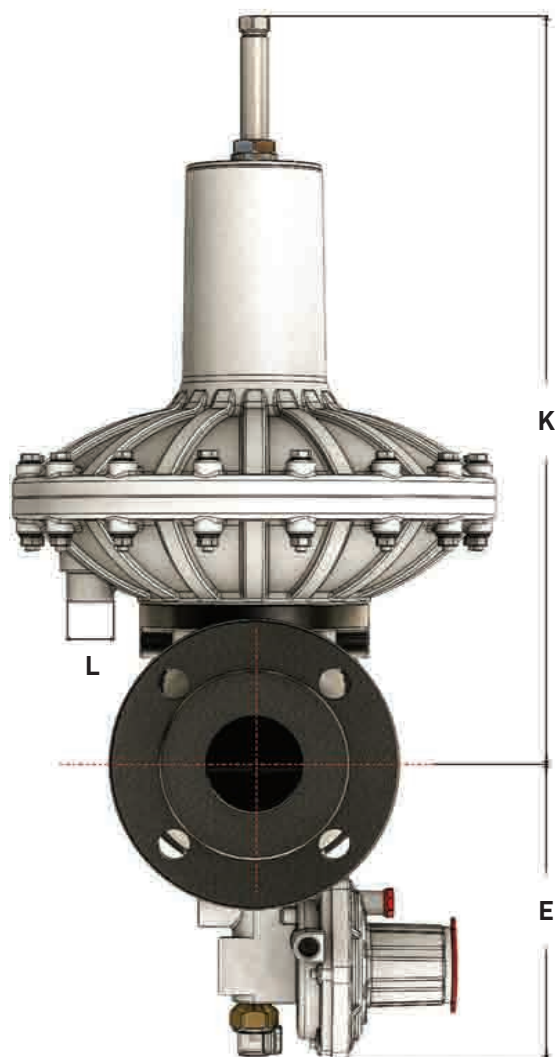
| DN	A	B	C	D	E	F	K	L
50	227	345	G 1/2¨	280	175	255	430	G 1/2¨

SAFETY AND ACCESSORIES

Relief System

Regulator can be produced with a relief valve. Relief valve monitors outlet pressure continuously and when it detects pressure level higher than regulator's nominal outlet pressure, it activates and discharges gas to the atmosphere.

Relief valve has limited discharge capacity. Usually calibration point is lower than OPSO system. Under certain conditions such as gas expansion during hot weather seasons, Relief Valve is activated before OPSO closes the gas lines. It prevents random shut-off regarding pressure increase on outlet side.

Relief valve can be recalibrated by using proper tools.

RELIEF
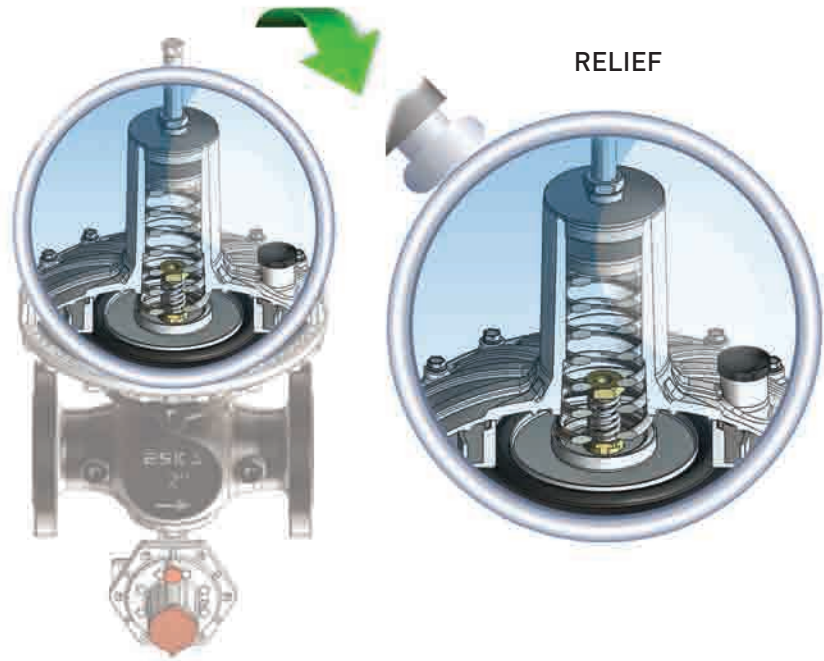
Over Pressure Shut-Off System

OPSO system is very useful during major breakdown situations and keeps the customer side safe. System works as a security valve and activates itself when the outlet pressure passes OPSO calibration point. OPSO system cuts the gas off, and manual reset is needed to activate the regulator again.

System has an independent shut-off mechanism and orifice and it monitors outlet pressure changes continuously, so activation time is below 2 seconds.

OPSO - UPSO
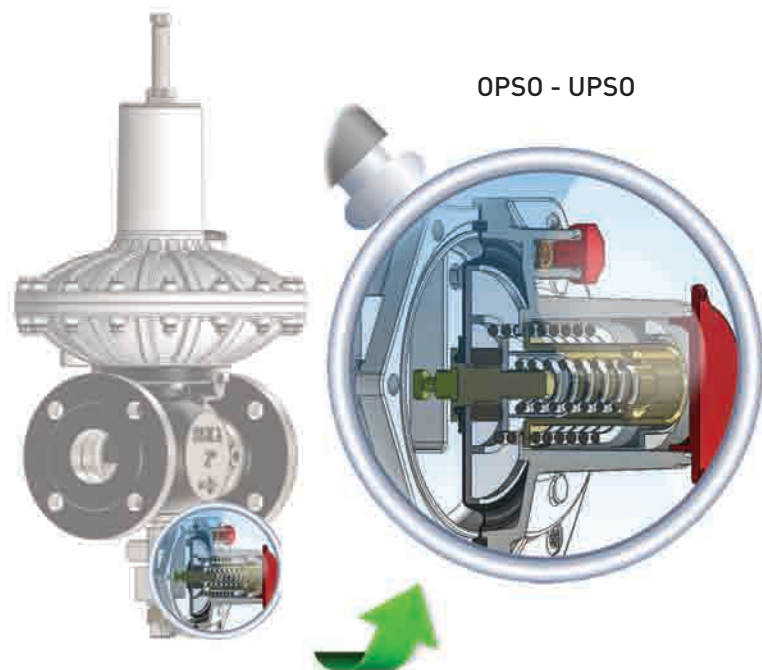
Under Pressure Shut-Off System.

• UPSO system on ERG-H6 series regulator is pressure based. It cuts the gas off when the outlet pressure drops below the UPSO calibration point.

• UPSO valve continuously monitors outlet pressure changes. Scenarios like, pipeline breakdown on outlet sides, or consumption is exceeding the total capacity of regulator or lack of inlet pressure situations etc...the outlet pressure drops and the regulator cuts the gas off once UPSO system is activated.

SPECIFICATIONS

Medium : Natural Gas, LPG and Non-Corrosive Gases
Operating temperature : -20... + 60°C (optional : -40... +60°C)
Assembly : Vertical and Horizontal Position
Maximum inlet pressure : 20 bar
Outlet pressure range : 21 mbar to 4 bar
Conforming : 2014/68/EU
Type : IS
Fail Mode : Fail to Open
DN : 1" (25) - 1"1/2 (40) - 2" (50)

DESIGN

The ERG-H6 Series pressure regulator body consists of :
• Valve housing
• Set up tool
• Breather consol.
• Over pressure shut off OPSO
• Under pressure shut off UPSO
• Furthermore the truly "top entry design" allows an easy periodical maintenance without removing body from the line.
• High flow rate coefficient
• High accuracy, even at maximum flow rates
• Reduced response times,
• Periodical maintenance without disassembling the body from the pipework,

MATERIALS

• Body is ductile cast iron
• Rubber components have gas approval according to EN 549
• Orifice is Brass
• Head covers is die cast alluminium EN AC-AISI 12

CAPACITIES

	LP Version			MP Version		
Norminal Diameter	25	40	50	25	40	50
CG Flow Coffivient	275	665	792	326	704	781
KG Flow Coffivient	290	695	833	343	739	820
K1 Body Shape Factor	98	98	91	101	98	100

Sizing of regulators is usually made on the basis of Cg valve and KG flow rate coeffcients. Flow rates at the fully open position and the various operating

Q = flow rate in Scm/h
Pe = Absolute Upstream Pressure in bar
Pa = Absolute Downstream Pressure in bar

When the Cg and KG values of the regulator are known, as well as Pe and Pa, the flow rate can be calculated as follows:
1- in non-critical conditions: (Pe ← 2 x Pa)

$$Q = 0.52 \times Cg \times Pe \times sen \left(K1 \times \sqrt{\frac{Pe - Pa}{Pe}}\right) \qquad Q = KG \times \sqrt{Pa \times (Pe - Pa)}$$

2- in critical conditions: (Pe ↗ 2 x Pa)

$$Q = \frac{KG}{2} \times Pe$$

$$Q = 0.52 \times Cg \times Pe$$