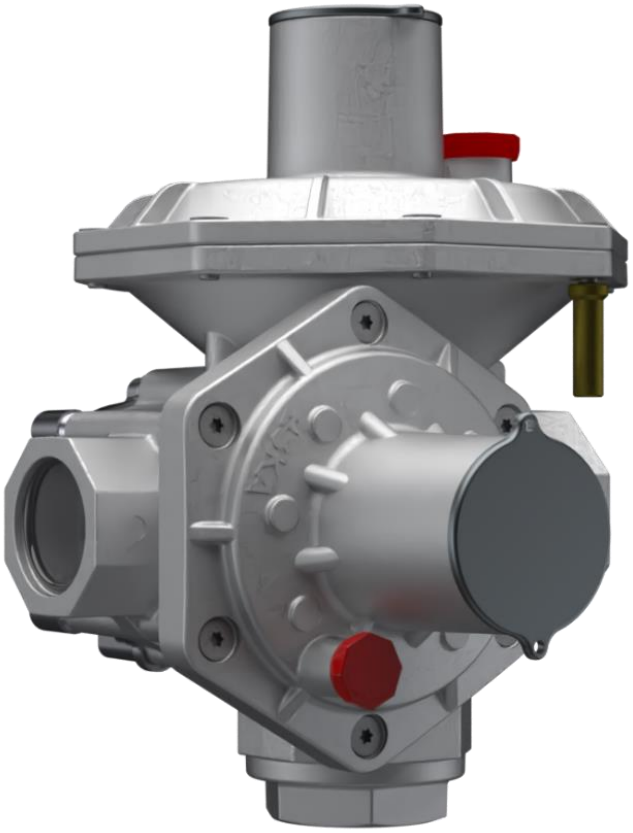
ESKA

Gas Technologies

ERG-SR Series



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Why ESKA?

With a deep understanding of the need for manufacturers to be close to gas distribution companies understanding their requirements and providing tailored solutions, ESKA grew to become a leading manufacturer of gas stream equipment. We start every day with a belief that change is constant, and the flexibility to follow that change and provide up to date solutions is crucial in the energy sector.

We manufacture gas stream equipment that are designed based on the needs of our partners. We strive to help gas distribution companies provide safe energy to their clients and to assist our partners with flexible business models that promote mutual growth.

Our commitment is to continually improve our products, ensuring the highest standards of safety and quality at an affordable cost, protecting end users while supporting our partners' success.

60 Years Know-how

Global Reach in 65 Countries

Localized Support

Application Area

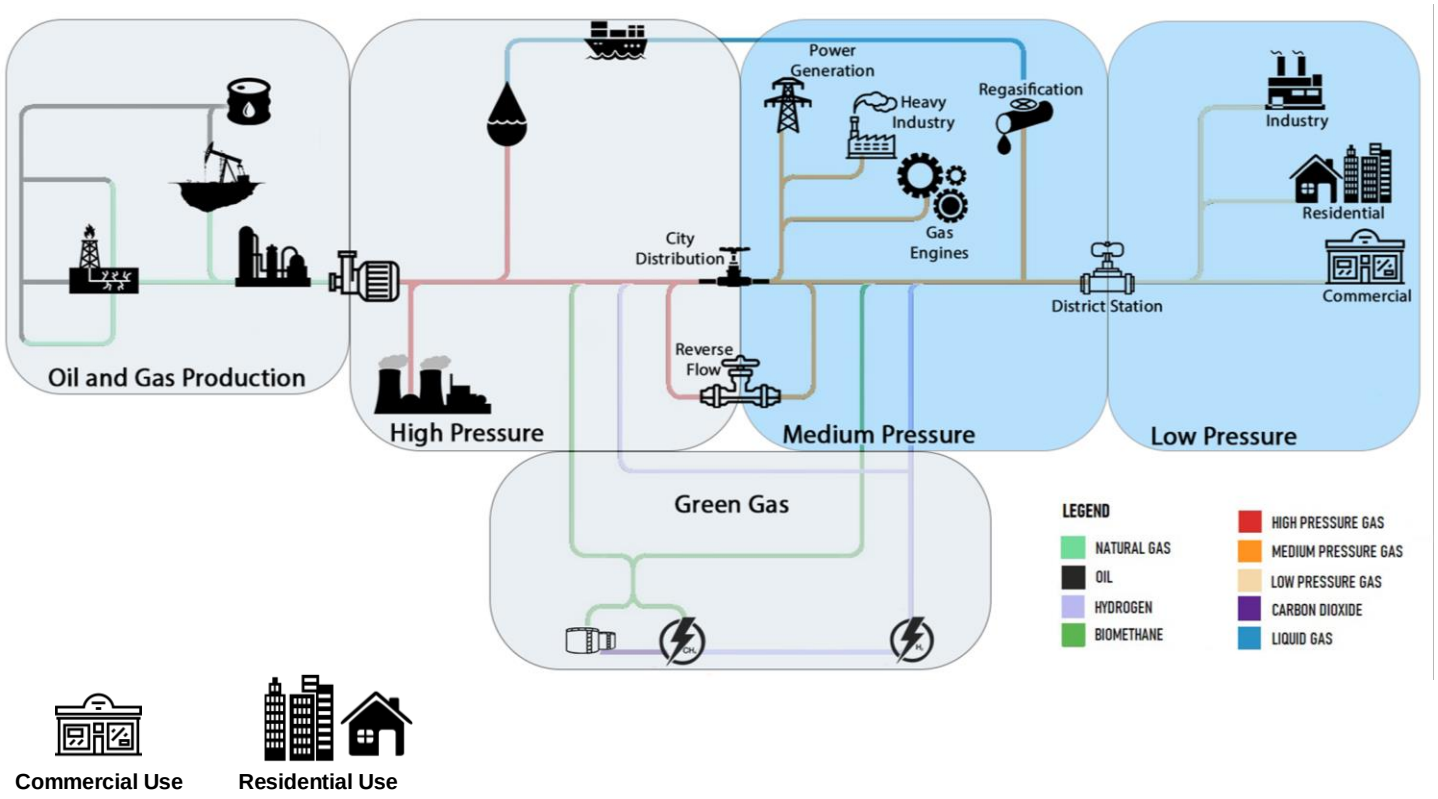

Figure 1: Gas Distribution Map

Introduction

ERG-SR series safety shut-off gas pressure regulators help the devices following it in the gas line to operate safely. In many cases, they are called service regulators. The gas pressure regulator reduces the inlet pressure to the desired/adjusted outlet pressure and maintains the outlet pressure within the tolerance range, and if the outlet pressure increases or decreases to undesirable levels above the safety set pressure (within its tolerances), it automatically detects this situation and automatically cuts off the gas in the line and continues to remain closed until it is manually set again. The gas pressure regulator has high pressure and low pressure gas safety shut-off device integrated into it. If requested in the order, the gas pressure regulator can have a discharge system that opens to air, in this case, necessary precautions should be taken to prevent the discharged gas from filling the closed environment. ERG-SR series gas pressure regulators are dual-stage, direct-operation principle, internal detection, spring-driven. They can operate with low differential pressure and provide precise outlet pressure control. This product should be used in accordance with the applicable legislation and user manual.

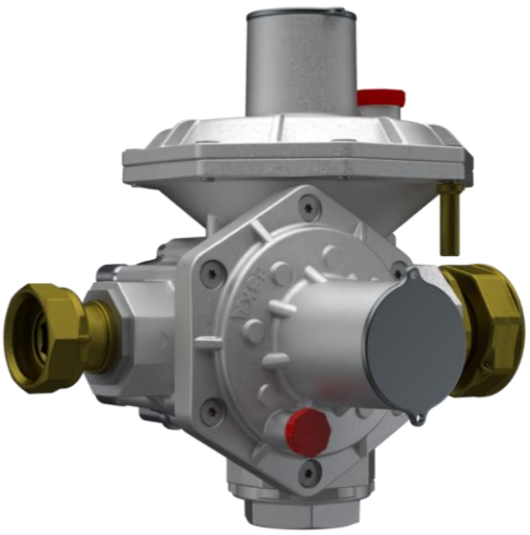

Figure 2: ERG-SR Inline Version

Figure 3: ERG-SR Angle Version

Features

ERG-SR Series pressure regulator is used on gas line to reduce inlet pressure to desired outlet pressure. It is suitable for both commercial and residential usage where can be directly installed to gas meters with high operational reliability and accurate outlet pressure accuracy. Simple installation procedure. Direction of the line can be inline or angle. Due to different inlet and outlet connection range, ERG-SR Series can be used along with pipe diameter from DN20 to DN50 with different thread standards as well as BSP, BSPT, NPT, NPP. (Also, can be added to flange connection.) The regulators are manufactured according to PED Directive 2014/68/EU. The functional tests are performed according to EN 334.

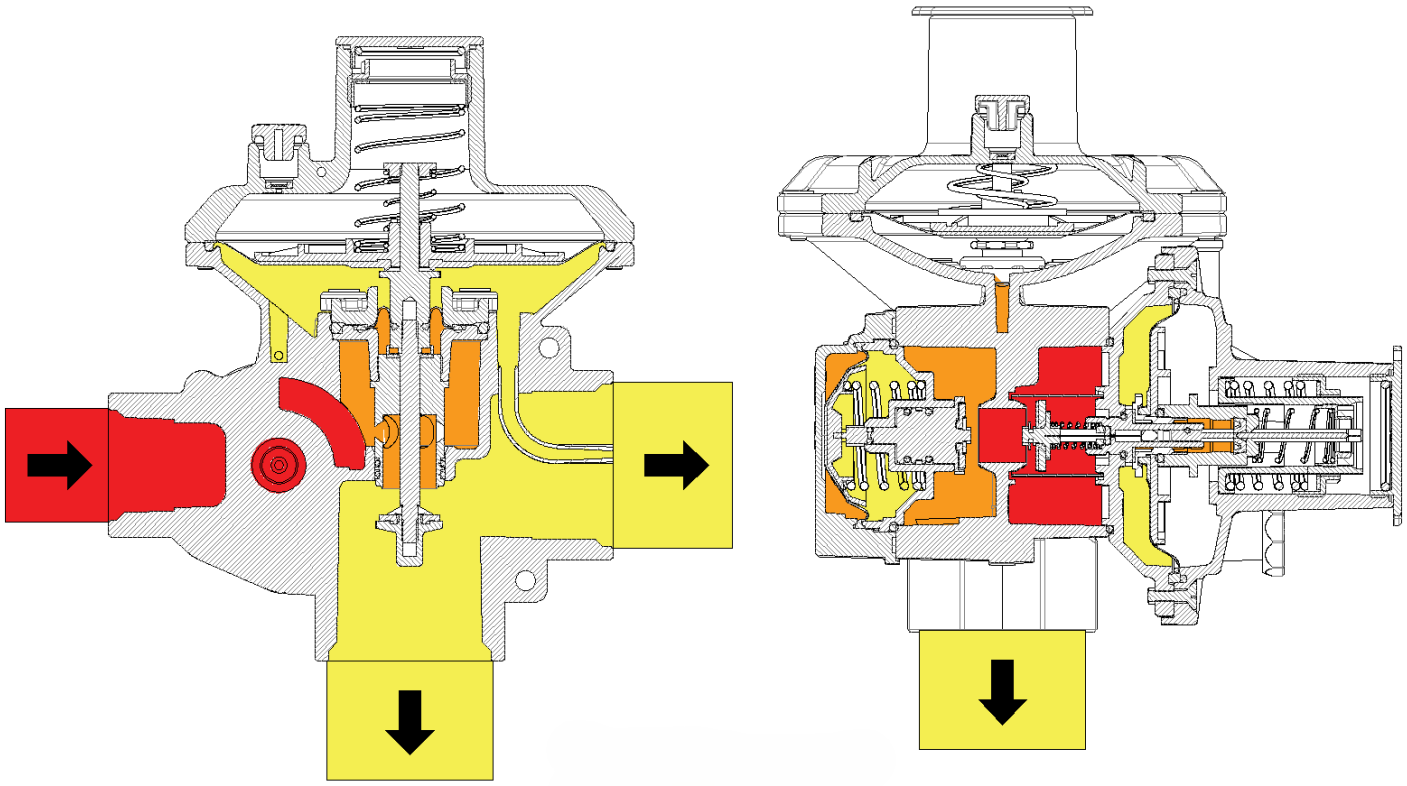

Figure 4: ERG-SR Pressure Display

Characteristics

Table 1: ERG-SR Series characteristics

Feature	Values		
Design Pressure	PS6		
Inlet Pressure	0.1 to 6 bar		
Flow	50 to 100 m^3/h		
Outlet Pressure Range (Wd)	18 - 500 mbar		
Safety shut-off Pressure Range (Wdo)	35 – 520 mbar		
Safety shut-off Pressure Range (Wdu)	6 – 250 mbar		
Accuracy Class (AC)	±10% AC10 or ±5% AC5[1]		
Lock-up over pressure (SG)	±10% SG10[1], ±20% SG20 or ±30% SG30[1]		
	Standard Versions		LT Version[2]
Ambient temperature	-10°C to 50°C	-20°C to 60°C	-40°C to 60°C
Configuration	Inline	Angle	
Connections	Standard Threaded Inlet (DN25") [4], Outlet:(DN40) [4]		

[1] Upon request''
[2] The stated value is the temperature at which the device's mechanical resistance and leakage are tested. Extra body parts may not be suitable for that version.
[3] The standard inlet and outlet pressure are set as per TS EN 10624, EN 88-1, EN 88-2
[4] Different modular connection options include BSPP, BSPT and NPT.

Materials and Approvals

Table 2: ERG-SR Series Materials and Approvals

Part	Material*	Standard
Body and Cover	Aluminium	EN 1706
Diaphragm and	Nitril Rubber	EN 549
Seat	Brass	EN 12164-EN12165

*Above materials are listed for standard models. For other request please refer to our sales team or your local distributer.

The ERG-SR Series regulator is designed according to European standard EN 334. The product is certified according to European Directive 2014/68/EU (PED)

UNI 8827 **EN334** **EN 88-2** **EN 14382** **PED**

Technical Data

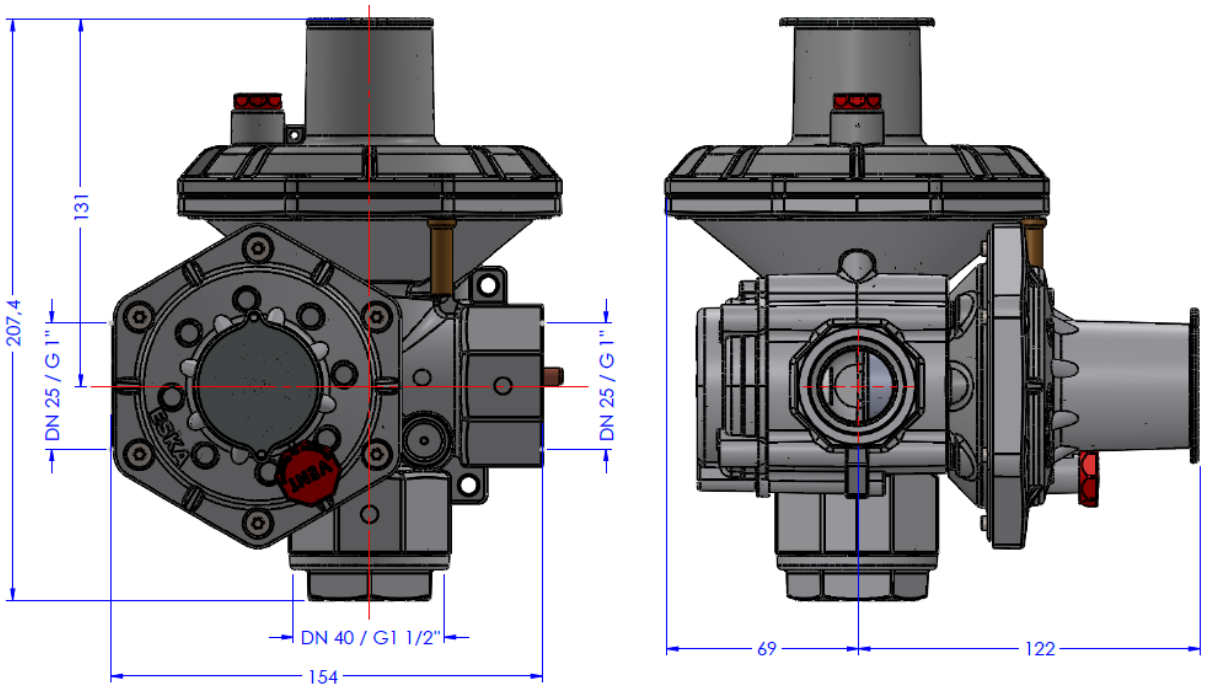

Figure 5: ERG-EH Technical Dimensions

Capacity Table

Table 3: ERG-SR Series Capacity Tables

ERG-SR 50																
Inlet Pressure			Outlet Pressure													
			21(mbar)/2,1kPa		30(mbar)/3kPa		50(mbar)/5kPa		70(mbar)/7kPa		100(mbar)/10kPa		200(mbar)/20kPa		300(mbar)/30kPa	
barg	PSI	MPa	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)
0,1	1,45	0,01	20	22,8	22	25,08	22	25,08	20	22,8	-	-	-	-	-	-
0,3	4,35	0,03	40	45,6	50	57	50	57	50	57	50	57	35	39,9	-	1,14
0,5	7,25	0,05	50	57	50	57	50	57	50	57	50	57	50	57	50	57
0,7	10,15	0,07	50	57	50	57	50	57	50	57	50	57	50	57	50	57
0,9…6	13…87	0,09…0,6	50	57	50	57	50	57	50	57	50	57	50	57	50	57
*The values in the table are for AC 10 * Sm³/h values are for Natural Gas																

ERG-SR 75																
Inlet Pressure			Outlet Pressure													
			21(mbar)/2,1kPa		30(mbar)/3kPa		50(mbar)/5kPa		70(mbar)/7kPa		100(mbar)/10kPa		200(mbar)/20kPa		300(mbar)/30kPa	
barg	PSI	MPa	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)
0,1	1,45	0,01	20	23	22	25	22	25	20	23	-	-	-	-	-	-
0,3	4,35	0,03	40	46	50	57	50	57	50	57	50	57	35	40	-	-
0,5	7,25	0,05	75	86	75	86	75	86	75	86	75	86	65	74	60	68
0,7	10,15	0,07	75	86	75	86	75	86	75	86	75	86	75	86	75	86
0,9…6	13…87	0,09…0,6	75	86	75	86	75	86	75	86	75	86	75	86	75	86
*The values in the table are for AC 10 * Sm³/h values are for Natural Gas																

ERG-SR 100																
Inlet Pressure			Outlet Pressure													
			21(mbar)/2,1kPa		30(mbar)/3kPa		50(mbar)/5kPa		70(mbar)/7kPa		100(mbar)/10kPa		200(mbar)/20kPa		300(mbar)/30kPa	
barg	PSI	MPa	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)	Sm³/h	Kg/h (LPG)
0,1	1,45	0,01	20	23	22	25	22	25	20	23	-	-	-	-	-	-
0,3	4,35	0,03	40	46	50	57	50	57	50	57	50	57	35	40	-	-
0,5	7,25	0,05	75	86	75	86	75	86	75	86	75	86	65	74	60	68
0,7	10,15	0,07	100	114	100	114	100	114	100	114	100	114	100	114	80	91
0,9…6	13…87	0,09…0,6	100	114	100	114	100	114	100	114	100	114	100	114	100	114
*The values in the table are for AC 10 * Sm³/h values are for Natural Gas																

To find the flows for other types of gases, the following formula should be used:

Adjustment Factor K at 15ºC	
Butane	0,55
Propene	0,64
Oxygen	0,76
Air	0,78
Nitrogen	0,81
Biogas	0,85
City Gas	1,23
Hydrogen	3,04
LPG	0,62

Condition: +15°C, 1013 mbar,
Q (n)m³/h (naturalgas) x K = Q (n)m³/h (x gas)
Example: Q (n)m³/h (naturalgas) x 0,78 = Q (n)m³/h (air)

Regulation Spring Table

Table 4: ERG-SR Series Regulation Spring Table

Regulation Spring		Spring Range (mbar)	
Spring Code	Spring Color	Min.	Max.
PDM00003787	Grey	18	25
PDM00003795	White	25	35
PDM00003797	Green	35	55
PDM00003798	Blue	55	80
PDM00003801	Yellow	80	110
PDM00003803	Red	110	140
PDM00003805	Orange	140	230
PDM00003806	Black	230	350

OPSO Spring Table

Table 5: ERG-SR OPSO Spring Table

OPSO Spring		Spring Range (mbar)	
Spring Code	Spring Color	Min.	Max.
PDM00002304	Yellow	32	55
PDM00002229	Black	25	35
PDM00002292	Blue	35	55
PDM00002172	Red	55	80
PDM00003764	Red	80	110
PDM00003815	Red	110	140

UPSO Spring Table

Table 7: ERG-SR UPSO Spring Table

UPSO Spring		Spring Range (mbar)	
Spring Code	Spring Color	Min.	Max.
PDM00002252	White	6	15
PDM00002239	Yellow	15	40
PDM00003788	Yellow	40	80
PDM00003817	White	80	160
PDM00002247	Red	140	250
PDM00003815	Red	110	140

Relief Spring Table

Table 6: ERG-SR Relief Spring Table

Relief Spring		Spring Range (mbar)	
Spring Code	Spring Color	Min.	Max.
PDM00002069	Green	8	15
PDM00003723	Black	15	45

Packaging

Table 8: ERG-SR Series Packing Information

Product	Number or Items	Unit Weight	Package Size (LxWxH cm)	Number of Boxed Products in 1 Package	Total Package Weight	Pallet Total Items	Pallet Total Weight
ERG-SR	1	Approximately 3 kg	50x50x29	4	Approximately 12 kg	192	Approximately 580 kg

ESKA

ERG-SR
USER MANUAL

This manual is subject to change according to technical developments.

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