PRESSURE REGULATOR EQA S-100

Specially designed for use in commercial and industrial installations.

For working pressures of up to 10 bar (models 102 and 117), 19 bar (model 127), or 25 bar (model 125), with regulated pressure ranging from 0.02 to 0.5 bar (see pressure and capacity tables for each model).

Models 117, 127, and 125 feature protection against excess regulated outlet pressure through a manually resettable lock system (optional: lock for low regulated pressure).

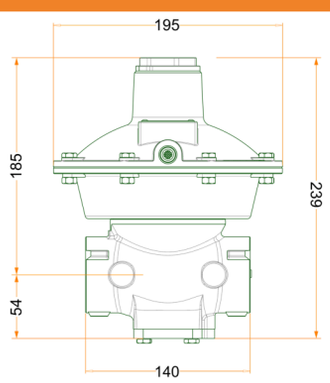
It activates when the regulated pressure exceeds the desired level by 150 to 600 mmWC (these values are adjusted by means of a spring whose pressure is externally regulated).

The operation is as follows: an excessive outlet pressure will force the lock diaphragm to move, disengaging the locking mechanism. This releases the stem, allowing the lock shutter to cut off the flow. This condition remains until the system is reset. To do this, release all pressure after the regulator, pull it until gas starts to flow.

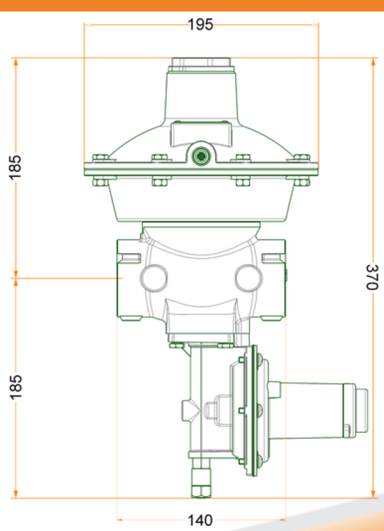
It includes a built-in filter that must be inspected periodically. To access it, remove the four (4) lock screws and extract both components.

TECHNICAL SPECIFICATIONS	MATERIALS
CONNECTIONS: Threaded 1.1/2" BSP or NPT	**MAIN BODY:** Nodular cast iron or carbon steel
OPERATING TEMPERATURE: -20°C to 60°C	**INTERNALS:** Brass
APPROXIMATE WEIGHT: 5 Kg to 7 Kg	**DIAPHRAGM and SHUTTER:** Acrylonitrile

DIMENTIONS Model 102



DIMENTIONS Models 117, 127, 125



CAPACITY TABLE in Nm³/hour | Density 0.6 | Sensitivity 10%

MODELS S-102 AND S-117

Outlet Pressure (mm. CA)	Inlet Pressure (bar)	Natural Gas (0,6) Ø of orifices in mm.						
		3.2	**4.8**	**6.4**	**9.5**	**12.7**	**15.8**	**19.1**
200	0.16			16	22	24	26	40
	0.35		8	18	30	40	42	48
	0.5		16	20	40	60	65	130
	1	18	24	30	62	130		
	1.5	24	30	52	124	195		
	2.5	30	40	75	210			
	4	40	42	120				
	5	50	52	130				
	7	55	60					
	10	68	70					
280	0.16			14	18	24	26	40
	0.35		8	16	26	42	50	52
	0.5		16	20	36	52	60	70
	1	16	18	30	48	130	170	210
	1.5	24	30	42	124	195	221	
	2.5	30	40	65	182	260		
	4	40	55	120				
	5	50	80	145				
	7	55	85	195				
	10	60	100					
500	0.16		8	16	25	30	35	45
	0.35		16	22	40	42	55	60
	0.5		18	30	42	52	80	85
	1	18	26	40	65	80	145	260
	1.5	24	30	52	75	180	220	
	2.5	30	42	80	180	260	310	
	4	40	65	130	260	260		
	5	50	80	145	300			
	7	55	85					
	10	60	100					
700	0.16		7	10	18	26	30	55
	0.35		14	18	28	32	40	65
	0.5	14	16	22	36	40	52	91
	1	16	24	30	50	62	120	234
	1.5	20	26	40	62	130	210	310
	2.5	26	36	52	85	260	290	
	4	34	50	85	260			
	5	40	65	130				
	7	50	80	180				
	10	55	90					
1600	0.2		7	10	18	20	24	45
	0.35		14	16	24	28	36	55
	0.5	14	16	20	28	32	50	80
	1	16	18	30	40	45	70	130
	1.5	18	26	36	50	65	90	180
	2.5	30	34	50	70	105	130	
	4	36	44	70	130	280		
	5	42	50	85	260			
	7	55	65	130				
	10	60	70					
3000	0.5		14	18	30	50	56	80
	1	16	18	30	50	65	80	100
	1.5	18	26	40	65	90	120	170
	2.5	26	36	50	100	170	210	260
	4	34	50	80	130	220		
	5	40	60	105	220	495		
	7	50	75	155	390			
	10	65	80	220				
5000	0.7		14	20	40	50	55	65
	1	14	20	30	52	55	60	105
	1.5	20	26	40	60	75	90	170
	2.5	30	40	60	80	130	105	195
	4	36	52	75	85	170	234	390
	5	50	60	90	130	260	495	
	7	55	80	130	180			
	10	70	85	195	234			

To obtain the capacities with other gases, multiply the table value by the K factor.

GAS	DENSITY	K FACTOR
Butane	2	0.55
Propane (LPG)	1.5	0.63
Carbon Dioxide	1.5	0.63
Oxygen	1.1	0.74
Air	1	0.77
Nitrogen	0.97	0.79
Acetylene	0.9	0.82
Ammonia	0.59	1.02
Hydrogen	0.07	3

CAPACITY TABLE in Nm³/hour | Density 0.6 | Sensitivity 10%

MODEL S-125

Outlet Pressure (bar)	Inlet Pressure (bar)	Natural Gas (0,6) Ø of orifices in mm.	
		3.2	**4.8**
0.16	7	44	86
	10	57	112
	15	79	155
	19	96	190
	21	105	
	25	122	
0.3	7	44	86
	10	57	112
	15	79	155
	19	96	190
	21	105	
	25	122	
0.5	7	44	86
	10	57	112
	15	79	155
	19	96	190
	21	105	
	25	122	

MODEL S-127

Outlet Pressure (bar)	Inlet Pressure (bar)	Natural Gas (0,6) Ø of orifices in mm.	
		3.2	**4.8**
0.16	7	40	78
	10	51	101
	15	70	140
	19	85	171
0.3	7	40	78
	10	51	101
	15	70	140
	19	85	171
0.5	7	40	78
	10	51	101
	15	70	140
	19	85	171

INSTALLING RECOMENDATIONS

It is fundamental to pay attention to the position of the regulator vent, as it also acts as a breather. If it becomes obstructed, it could be hazardous. Therefore, it must be protected from water, dust, or other harmful elements. In general, it should always be installed facing downward.

If the regulator is to be installed in an enclosed space (only permitted for the second stage), a vent pipe of at least Ø ¾" must be installed to discharge any gases vented by the regulator.

If the regulator is to be installed in an underground tank, the vent must be extended with a pipe above the possible water level.
Any gas leakage outside the valve indicates that the service should be shut off, and technical support should be contacted.
Only a qualified technician should install or repair the regulator.

- Whenever requesting a spare part or technical service, mention the valve nameplate data. (Model - Serial number - Pressures - Orifice - Flow rate)

INSTALLATION

Before installing the regulator, inspect it for any damage that may have occurred during transport. If any of the protective plastic plugs are missing, check that no foreign objects have entered through the connections.

Vent the supply piping several times until no particles come out. (This is the most common cause of startup issues).

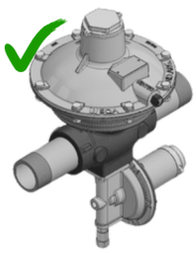
The regulator can be installed in any position, as long as the gas flow direction indicated by the arrow on the body is followed and the vent orifice is neither obstructed nor exposed to rain or dust. It must also be protected from potential impacts caused by vehicle traffic.

The vent orifice should be periodically inspected to ensure it is not blocked.

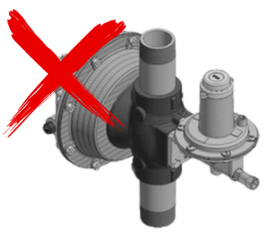
It is always advisable to install two regulation branches with shut-off valves upstream and downstream of each one independently to avoid gas interruption during maintenance or repair.

POSITIONING RECOMMENDATIONS

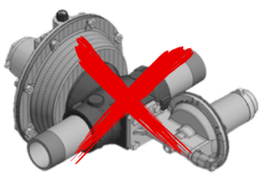
Recommended position
For regulator installation on horizontal piping

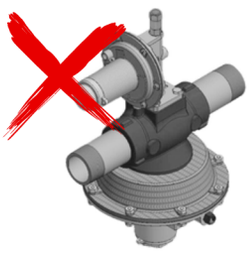


Incorrect Positions
For regulator installation on horizontal piping



Incorrect Position
Installation on vertical piping





COMMISSIONING

It is advisable to carry out the commissioning process using pressure gauges suitable for the inlet and outlet pressures of the regulator to monitor this procedure.

1- Slowly open the inlet shut-off valve.
2- Check the pressures.
3- Slowly open the outlet shut-off valve.
4- Check all connections for possible leaks.

ADJUSTMENT

If it is necessary to adjust the regulator's outlet pressure, this can be done using the nut that compresses the spring. Turning it clockwise increases the pressure, while turning it counterclockwise decreases it.

When increasing the pressure, consider the possible presence of safety elements such as relief valves, shut-off mechanisms, or pressure switches that will activate if their set pressure is exceeded. Additionally, the identification nameplate should be modified at the factory to comply with regulations and prevent future confusion.

SPARE PARTS

Always request them according to the part number from the General Cut and mention the regulator's nameplate data.

MAINTENANCE

Before disassembling the regulator, shut off the gas supply and release the accumulated pressure.

Due to the normal wear that may occur in any gas regulator, some components must be periodically inspected and replaced if necessary.
The inspection frequency depends on the severity of service or the requirements of the applicable regulations.
For disassembly and reassembly, follow these instructions. For any questions, please consult the factory.

FLOW RATE CONVERSION

TO OBTAIN	CUBIC FOOT PER HOUR	CUBIC METER PER HOUR	CUBIC FOOT PER DAY	CUBIC METER PER DAY
MULTIPLY	**(Scf/h)**	**(Scm/h)**	**(Scf/d)**	**(Scm/d)**
Cubic foot per hour	1	0.028	24	0.672
Cubic meter per hour (15°C, 1.01325 bara)	35.71	1	857.04	24
Cubic foot per day	0.0417	0.0012	1	0.028
Cubic meter per day	1.4879	0.0417	35.71	1

UNIT CONVERSION

TO OBTAIN	POUNDS PER SQUARE INCH	INCHES OF WATER COLUMN	MILIMETERS OF WATER COLUMN	INCHES OF MERCURY	MILIMETERS OF MERCURY	BAR	MILIBAR	KILOGRAMS PER SQUARE CENTIMETER	KILOPASCALS
MULTIPLY	**psi**	**in H2O**	**mm H2O**	**in Hg**	**mm Hg**	**bar**	**mbar**	**Kg/cm²**	**Kpa**
psi	1	27.68	703.1	2.036	51.7	0.06895	68.95	0.0703	6.895
in H2O	0.0361	1	25.4	0.07355	1.87	0.002491	2.491	0.00254	0.22491
mm H20	0.0014	0.0394	1	0.00289	0.07355	0.000098	0.0981	0.0001	0.00981
in Hg	0.4911	13.6	345.4	1	25.4	0.03386	33.86	0.03453	3.386
mm Hg	0.01934	0.535	13.6	0.03937	1	0.001333	1.333	0.00136	0.1333
bar	14.5	401.5	10198.1	29.53	750.06	1	1000	1.02	100
mbar	0.0145	0.4015	10.1981	0.02953	0.7501	0.0001	1	0.00102	0.1
Kg/cm²	14.22	393.7	10000	28.96	735.58	0.9807	980.7	1	98.07
Kpa	0.145	4.015	101.98	0.2953	7.501	0.01	10	0.0102	1

At EQA, we strive to minimize our environmental impact through sustainable and responsible practices. Therefore, we encourage you to join our commitment and, at the end of the product's lifecycle, adhere to the current Municipal, Provincial, and National regulations regarding the classification, recycling, destruction, or disposal of the product, spare parts, non-reusable parts, and packaging. By doing so, we prevent environmental damage and promote reuse and recycling whenever possible. Thank you for your commitment and efforts in joining these actions.

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