PRESSURE REGULATORS EQA S-302/317

The EQA S-302 Regulator is a direct-acting pressure regulator featuring a spring-loaded diaphragm mechanism, designed to ensure precise pressure control in medium and low-pressure applications. This, combined with its exceptional sensitivity, ensures that the regulated pressure remains constant with a variation of less than 10%.

It features overpressure protection for the regulated outlet pressure via a manual reset slam-shut system (available only on model 317). This system is ideal for applications where installing a relief valve vent is either inadvisable or impractical.

Thanks to its robust construction and adaptability, this regulator integrates seamlessly into a wide range of industrial and commercial installations.

The EQA S-300 is designed to operate with inlet pressures ranging from 0.3 bar to 6 bar. It is available in two versions based on the pressure registration method: with internal sensing, or with external sensing to be connected to the downstream piping.

Its versatility allows it to function effectively as a first or second-stage regulator, thanks to a wide outlet pressure range spanning from 20 mbar to 620 mbar.



EQA S-302

TECHNICAL SPECIFICATIONS	
Connections	2" Flanged ANSI S-150
Operating temperature	-20°C to 60°C
Inlet pressure	0,3 to 6 bar
Outlet pressure	20 to 620 mbar
Minimum differential pressure	0,1 bar
MATERIALS	
Main body	Nodular cast iron ASTM A536
Seat	Brass
Diaphragm	Nitrile (NBR)
Shutter	Nitrile (NBR)

CAPACITY CHART - NATURAL GAS in Nm³/hour (Sp. Gravity 0,6 - Sensitivity 10%)

INTERNAL SENSING MODEL (I.S.) and EXTERNAL SENSING MODEL (E.S.)

Inlet Pressure (bar)	Regulated Pressure (mbar)											
	20		**70**		**160**		**280**		**410**		**620***	
	I.S.	E.S.	I.S.	E.S.	I.S.	E.S.	I.S.	E.S.	I.S.	E.S.	I.S.	E.S.
0,3	322	119	184	166	154	138	-	-	-	-	-	-
0,4	322	131	207	190	214	202	166	161	-	-	-	-
0,5	322	190	276	230	261	242	226	230	154	142	-	-
0,6	322	196	437	253	273	253	261	276	166	214	-	-
0,7	322	196	621	276	320	276	309	322	173	219	-	-
1	322	196	662	345	546	368	414	414	265	276	276	285
1,5	-	196	767	495	665	483	686	575	311	345	345	345
2	-	196	781	690	855	644	748	587	391	460	506	495
2,5	-	196	-	690	973	679	863	621	519	518	624	518
3	-	196	-	690	-	702	967	690	690	529	713	587
4	-	196	-	690	-	759	-	898	713	690	898	759
6	-	196	-	690	-	886	-	990	713	782	898	898

CAPACITY CHART - NATURAL GAS in Nm³/hour (Sp. Gravity 0,6 - Sensitivity 20%)

INTERNAL SENSING MODEL (I.S.) and EXTERNAL SENSING MODEL (E.S.)

Inlet Pressure (bar)	Regulated Pressure (mbar)											
	20		**70**		**160**		**280**		**410**		**620***	
	I.S.	E.S.	I.S.	E.S.	I.S.	E.S.	I.S.	E.S.	I.S.	E.S.	I.S.	E.S.
0,3	322	230	322	285	237	253	-	-	-	-	-	-
0,4	322	276	357	332	332	297	285	253	-	-	-	-
0,5	322	288	460	345	380	345	309	345	214	273	-	-
0,6	322	288	541	345	475	345	380	345	273	284	-	-
0,7	322	288	621	345	546	472	451	345	311	288	-	-
1	322	288	662	575	655	621	667	575	460	402	403	380
1,5	-	288	767	690	874	857	834	926	529	552	541	552
2	-	288	781	690	1078	978	1006	940	794	621	598	767
2,5	-	288	-	690	1078	1093	1019	1112	926	754	741	873
3	-	288	-	690	-	1093	1112	1231	1019	873	887	1059
4	-	288	-	690	-	1093	-	1323	1072	1098	898	1204
6	-	288	-	690	-	1093	-	1323	1072	1190	898	1231

NOTA: The optional internal filter reduces the CG by 10%.

In order to calculate capacities with other gases, multiply the values of the chart by K factor.

GAS	DENSITY	K FACTOR
Butane	2	0.55
Propane (LPG)	1.5	0.63
Carbonic Anhydride	1.5	0.63
Oxygen	1.1	0.74
Air	1	0.77
Nitrogen	0.97	0.79

GAS	DENSITY	K FACTOR
Acetylene	0.9	0.82
Ammonia	0.59	1.02
Hydrogen	0.07	3
Biogas*	max 1.2	0.7
	min 0.8	0.75

**The proper operation is guaranteed only for treated Biogas (Low content of sulfur)*

UNIT CONVERSION

TO OBTAIN	POUNDS PER SQUARE INCH	INCHES OF WATER COLUMN W	MILLIMETERS OF WATER COLUMN W	INCHES OF MERCURY	MILLIMETERS 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	0.001	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

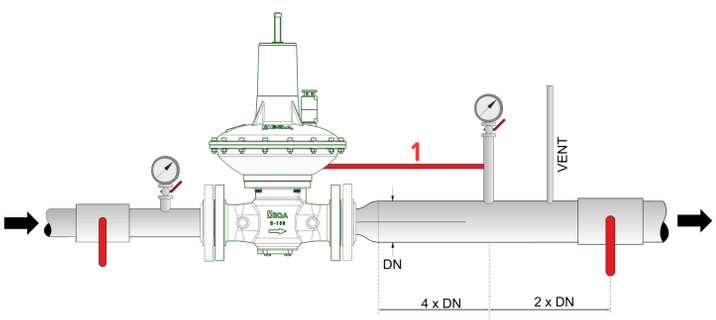
FLOW RATE CONVERSION

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

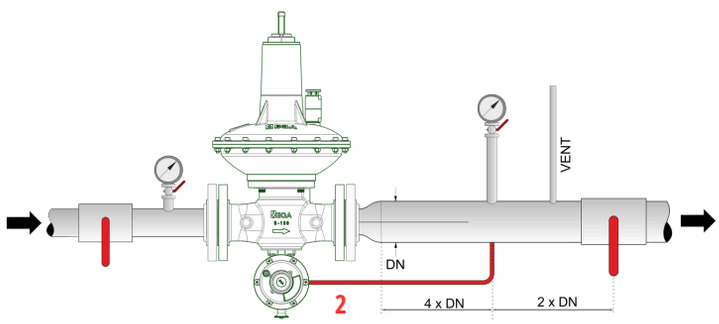
INSTALLATION

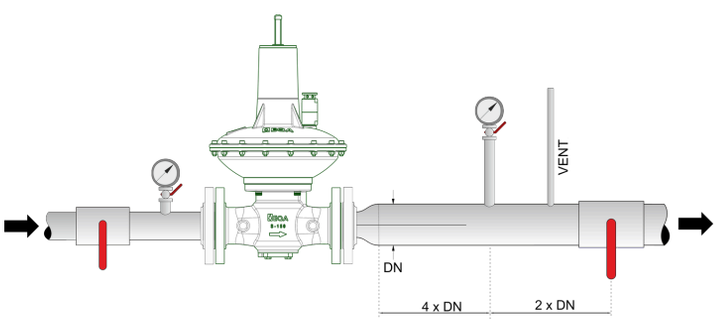
- Installation position is shown on the scheme.
- Must make sure that flow matches the direction of the arrow on the body.
- **Connections 1 and 2 are performed by the client.**
- Pipe diameter for connections 1 is 3/8" x 1 mm and for shutoff connection 2 is 1/4" x 0,8 mm.
- Distances indicated on installation scheme must be respected.
- For elbow connections respect scheme distances starting from
- elbow outlet.

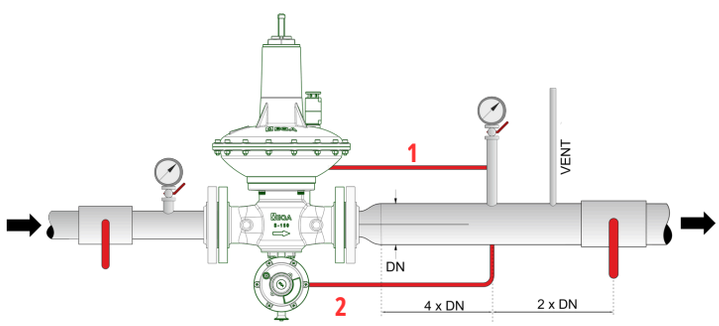
S-302



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INITIAL START-UP S-302 MODEL

1- Close the downstream block valve and open the vent valve to the atmosphere upstream of it (if present).
2- Very slowly open the block valve upstream of the regulator, allowing a small flow of gas to pass through the valve, until the downstream piping is filled with gas.
3- Check that the regulated pressure has reached its set value. Then close the vent valve.

INITIAL START-UP S-317 MODEL

Or in case of activation of the safety valve.

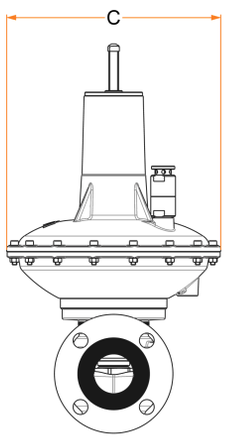
1- Close the downstream block valve and open the vent valve to the atmosphere upstream of it (if present).
2- Open the blocking valve upstream of the regulator.
3- Close the pressure gauge downstream of the regulator, as pulling the reset may cause a small increase in pressure.
4- Gently pull the RESET allowing a small flow of gas to pass through the valve until the downstream pipe fills with gas.
5- Pull the RESET for a few seconds until it is armed (this will only be possible when the regulation pressure is within the established parameters) and then close the vent valve.
6- Open the downstream pressure gauge and check that the regulated pressure has reached its set value. Then close the vent valve.

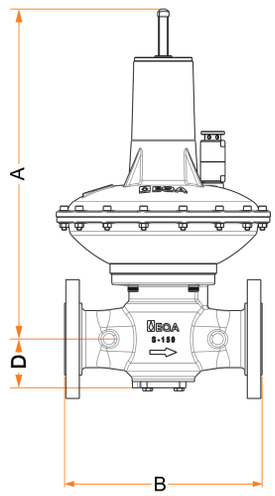
GENERAL SIZING (mm) and WEIGHT (kg/lb)

	A	B	C	D	PESO
302	423	254	275	62,5	16 / 35.3
317	423	254	275	192 (*)	17 / 37.5

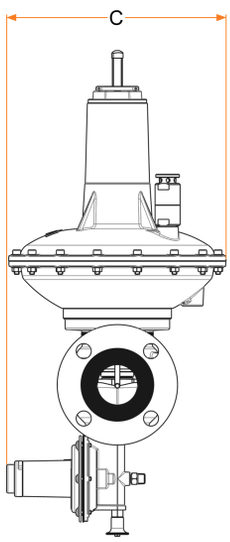
* A minimum 10 cm clearance should be maintained between the Model 827's base and the floor to ensure easy access to the shutoff valve.

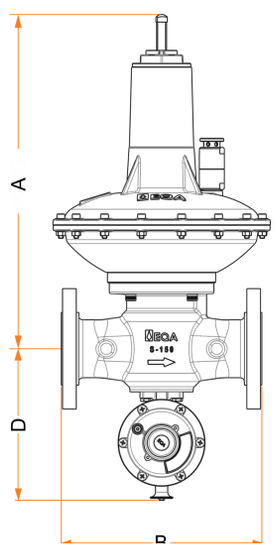
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At EQA, we strive to minimize our environmental impact through sustainable and responsible practices. Therefore, we encourage you to join our commitment and, at the end of the product's lifecycle, adhere to the current Municipal, Provincial, and National 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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