

PRESSURE REGULATOR EQA 802/827

Series 800 regulators are intended for pressure control by piloted regulation with closed failure.

It means that if valve diaphragm, pilot diaphragm or pilot feeding fail, the regulator remains closed.

These regulators are designed to offer pressure regulation in a varied range of inlet pressures up to 19 bar (depending on the model) (ANSI S-150)/(EN PN20) and outlet pressures from 0,1 bar up to 6 bar. To be used in commercial and industrial facilities.

Their quick closure system is specially designed to protect downstream appliances. This, added to the supply gas double filtering and the shutoff safety system, provides security, reliability and a wide variety of uses.

Their last generation control pilot provides high sensibility allowing the user to operate the processes with more efficiency, less deviation and more accuracy of operation pressures.



TECHNICAL SPECIFICATIONS

Connections	2" (DN 50)
	Flanged ANSI S-150 (PN 20)
Operating temperature	-20°C to 60°C
Inlet pressure	0,5 to 19 bar (2*)
Outlet pressure (Pd)	0,1 to 6 bar
Accuracy class	Up to AC 5 (5%) (3*)
Flow coefficient	Up to CG 1000
Closure class	Up to SG 20 (4*)
Minimum differential pressure	0,1 bar

MATERIALS

Main body	Nodular cast iron ASTM A536
Seat	Brass (AISI 316 upon request)
Diaphragm	Nitrile (NBR)
Shutter	Nitrile (NBR)
Accessories	Brass (AISI 316 upon request)
Tubing	AISI 316

WEIGHT

Modelo 827 50FC	26 Kg. (57 lbs)
Modelo 827 51FC	25,5 Kg. (56 lbs)
Modelo 827 51FC + Estabilizador	26,8 Kg. (59 lbs)
Modelo 802 50FC	25 Kg. (55 lbs)
Modelo 802 51FC	24,5 Kg. (54 lbs)

(1*) The optional internal filter reduces the CG by 10%.

(2*) With silencer for up to 6 bar inlet pressure.

(3*) Depending on the process.

(4*) 20% over Pd with a suitable accumulator.



SIZING ACCORDING TO EN-334 STANDARD

(Standard conditions STP / 15°C (59°F) / 1,01325 bar)

The S-800 line operates with a flow coefficient (Cg) according to the need in percentages, in accordance with the following table (5*):

Cg 1000 (100%)	Cg 500 (50%)
Cg 750 (75%)	Cg 300 (30%)

(5*) The reduced CG of 30%, 50%, and 75% is achieved through an internal silencer, which operates at a maximum inlet pressure of 6 bar.
(7*) Please note that the addition of an optional internal filter reduces the CG by 10%.

To calculate process necessary CG, consider following information:

Q= Flow in Sm³/h

P1= Absolute inlet pressure

P2= Absolute outlet pressure

d= Density relative to air

t= Temperature in °C

CRITICAL CONDITION P1 ≥ 2P2

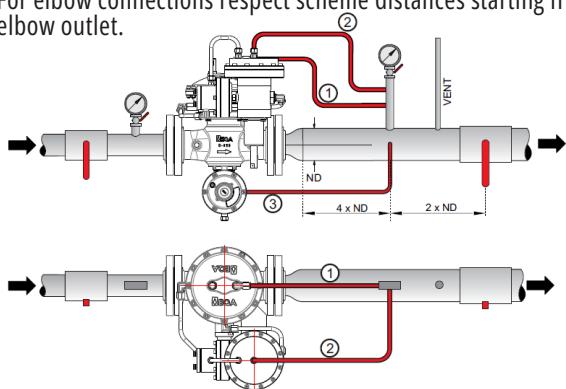
$$Cg = \frac{Q}{6,97 \times P_1} \times \sqrt{d \times (273,15+t)}$$

SUBCRITICAL CONDITION P1 < 2P2

$$Cg = \frac{Q}{13,94} \times \sqrt{\frac{d \times (273,15+t)}{P_2 \times (P_1 - P_2)}}$$

INSTALLATION

- Installation position is shown on the scheme.
- Must make sure that flow matches the direction of the arrow on the body.
- **Connections 1, 2 y 3 are performed by the client.**
- Pipe diameter for connections 1 and 2 is 3/8" x 1 mm and for shutoff connection 3 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.



To guarantee regulator proper performance, velocity on pressure connections must be less than following values:

Vmax= 30 m/s for Pd > 5 bar

Vmax= 25 m/s for 0.5 < Pd < 5 bar

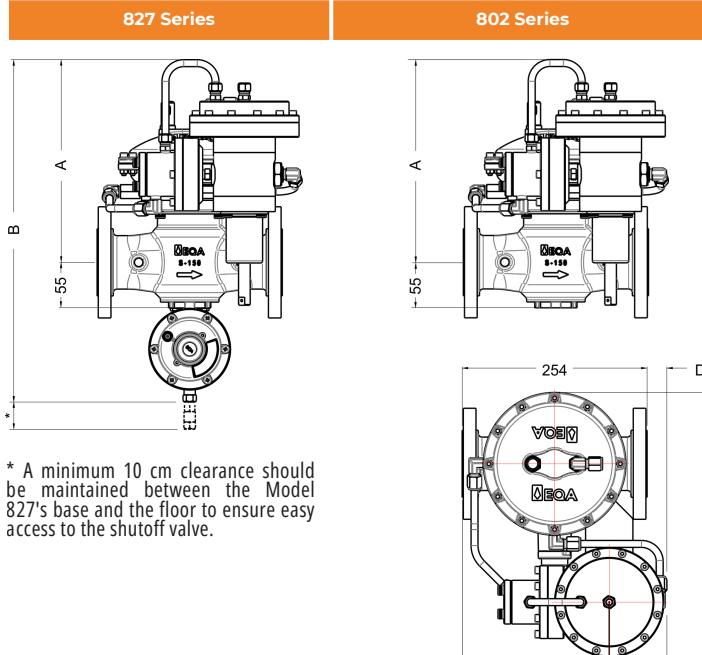
Vmax= 15 m/s for Pd < 0.5 bar

- It's recommended to oversize the regulator 20% to avoid operation at 100% opening.
- It's recommended that regulator does not operate below 3% of shutter opening to avoid oscillations in process.
- It's very important to keep gas velocity on shutter outlet below 0,5 mach to guarantee right performance, useful life and maximum noise conditions on regulator. To learn about this condition, request regulator technical sheet to seller according necessity.
- **Should you have any questions concerning the regulator sizing, feel free to reach out to our sales department.**

GENERAL SIZING

Dimensions are in millimeters (mm)

	A	B	C	D	E
827+50FC	278	470	363	26	280
827+51FC	283	480	330	26	280
802+50FC	278	333	363	26	280
802+51FC	283	338	330	26	280



* 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.

 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.