

# Installation & Commissioning Instructions

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Product: REGULATOR WITHOUT RELIEF VALVE

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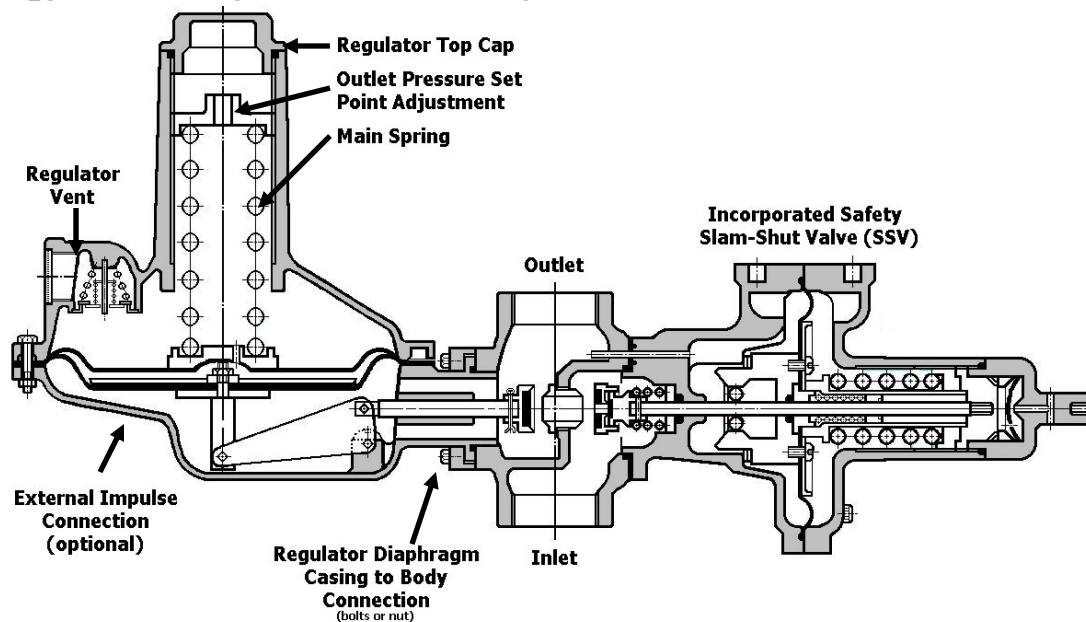


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## GENERAL INFORMATION

### EQUIPMENT DIAGRAM AND LABELLING



- Technical information will be found on the regulator adhesive label or metal badge usually on the main spring housing of the diaphragm casing
- Information – model number, factory outlet pressure setting, factory safety valve setting, orifice diameter, maximum recommended inlet pressure, serial number, etc.

## REGULATOR INSTALLATION

1. Clean the inlet pipe-work to remove any moisture, dirt or debris that could damage the regulator or impair its operation; if possible, it is recommended that a filter be installed upstream of the regulator.
2. Check that the inlet pressure is not beyond the recommended maximum inlet pressure range of the regulator. More specifically, this is determined by the diameter of the orifice fitted in the regulator. This information is stated on the regulator adhesive label or found in the technical brochure published by the manufacturer.
3. Check the regulator for any damage and clean out the regulator body, if necessary.
4. Install the regulator within the pipe-work, using approved pipe sealant on the male pipe threads of the adjoining pipe only. The regulator can be fitted in any position or at any angle but the direction of the main spring will have a small effect on factory setting. In particular, pay specific attention to the following:

- Ensure the “flow directional arrow” marked on the regulator body is in the correct direction or the outlet side will become over-pressurized and damaged.
- There is adequate protection against physical damage while in operation.
- There is sufficient access to the regulator top cap for outlet pressure adjustment. Additionally, regulators with no internal relief valve are incorporated with integral safety slam-shut valve (SSV). There must be sufficient access to the SSV top cap for setting adjustment. Approximately 6” (20 cm) from the SSV top cap to closest surface is recommended.
- Ensure the regulator relief vent is pointing downwards or a fitting is installed to point the termination of the vent downwards. Additionally, there should be a screen fitted at the vent termination. This is to prevent debris, rain or other foreign particles from entering the diaphragm chamber.
- Even though the regulator is installed indoors, the regulator relief vent does not need to be piped away to atmosphere since there is no internal relief valve and there is layers of safety devices to protect against diaphragm rupture and over-pressure conditions.
- The regulator vent should be inspected periodically to ensure it is not blocked.

#### **START-UP PROCEDURE**

5. Ensure both inlet and outlet isolation valves are closed. Mount a pressure gauge downstream of the regulator, if one is not already installed to measure downstream pressure.
6. Open the downstream isolation valve slowly. Gradually open inlet isolation valve or introduce inlet pressure. The outlet pressure gauge should read a slightly higher pressure that stated on regulator label.
7. Soap test the regulator and associated piping joints to ensure there is no gas leakages.
8. Introduce a small flow through the regulator by opening a downstream purge valve or allow downstream equipment to demand the supply of gas. With a small flow, ensure the regulator outlet pressure set point is accurate to the application requirement.

#### **ADJUSTING OUTLET PRESSURE**

9. Remove the regulator top cap
10. Rotate the outlet pressure set point adjuster clockwise to increase outlet pressure, counterclockwise to decrease outlet pressure to desired level.
11. Once the desired outlet pressure set point is achieved, replace the regulator top cap.

#### **EXTERNAL IMPULSE LINE CONNECTION E.C.L. (optional)**

12. If the regulator senses outlet pressure externally or via an external control line, this line will have to be installed before commissioning.
13. The regulator diaphragm casing will have a boss that is drilled and tapped for the installation of an external impulse line. This external control line must be connected from this point to the outlet piping system, a minimum of five times (5X) the diameter of the outlet piping. The control line must be equal or larger than the tapped diameter of the boss.
14. Commissioning is completed the same as an internally control or impulse regulator but leakage or soap test must be completed on the control line once commissioned.

#### **SAFETY SLAM-SHUT COMMISSIONING INSTRUCTIONS**

**\*\*Since this regulator does not have an internal relief valve, there will an incorporated integral safety slam-shut valve. Commissioning, installation and setting instructions will be found on a separate specific sheet enclosed in the shipped package.**

#### **REMARKS**

**\*\*THIS REGULATOR SHOULD ONLY BE INSTALLED, COMMISSIONED AND ADJUSTED BY A LICENSED GAS FITTER. INSTALLATION MUST MEET ALL LOCAL REQUIREMENTS, CODES AND REGULATIONS.**