

Aperval 101

The **Aperval 101** is one of the **pilot-operated gas pressure regulators** produced by Pietro Fiorentini. This device is suitable for use with previously filtered non-corrosive gases, and it is mainly used for medium and low pressure natural gas distribution networks. It is classified as **Fail Open** according to the European Standard EN 334. The Aperval 101 is **Hydrogen Ready** for NG-H2 blending.



Medium / small
industry



District stations

Features	Values
Design pressure* (PS ¹ / DP ²)	up to 1.89 MPa up to 18.9 barg
Ambient temperature* (TS ¹)**	from -20 °C to +60 °C from -4 °F to +140 °F
Inlet gas temperature*,***	from -10 °C to +60 °C from 14 °F to +140 °F
Inlet pressure (MAOP / p _{umax} ¹)	from 0.05 to 1.89 MPa from 0.5 to 18.9 barg
Range of downstream pressure (Wd ¹)	from 2 to 950 kPa from 0.02 to 9.5 barg
Available accessories	none
Minimum operating differential pressure (Δp _{min} ¹)	48 kPa 0.48 barg
Accuracy class (AC ¹)	up to 5 up to 1% absolute (depending on working conditions)
Lock-up pressure class (SG ¹)	up to 10
Nominal size (DN ^{1,2})	DN 50 2"; DN 80 3"; DN 100 4"
Connections	Class 125 FF, 125 RF and 150 RF according to ASME B16.1, and PN 16 according to ISO 7005-2

(¹) according to EN334 standard

(²) according to ISO 23555-1 standard

(*) NOTE: Different functional features and/or extended temperature ranges may be available on request. Stated inlet gas temperature range is the maximum for which the equipment's full performance, including accuracy is guaranteed. Product may have a different pressure or temperature ranges according to the version and/or installed accessories.

(**) NOTE: Stated temperature range is the operating range for which the equipment's mechanical resistance and leakage rate are guaranteed. Some body materials, if multiple choices are available, may not be suitable for all the available versions shown.

(***) NOTE: Stated temperature range is the range for which the equipment's full performance, including accuracy and lock-up are guaranteed. Some body materials, if multiple choices are available, may not be suitable for all the available versions shown.

Table 1 Features

Materials and Approvals

Part	Material
Body	Spheroidal cast iron GS 400- 18 ISO 1083 Cast steel ASTM A216 WBC
Cover	Rolled or forged carbon steel
Seat	Technopolymer
Diaphragm	Vulcanized rubber
Compression fittings	According to DIN 2353 in zinc-plated carbon steel.

NOTE: The materials indicated above refer to the standard models. Different materials can be provided according to specific needs.

Table 2 Materials

The **Aperval 101** regulator is designed according to the European standard EN 334. The regulator reacts in opening (Fail Open) according to EN 334. Leakage class: bubble tight, better than VIII according to ANSI/FCI 70-3.



EN 334

Aperval 101 competitive advantages



Compact and simple design



Easy maintenance



High turn-down ratio



Balanced type



Low noise



Biomethane compatible and
20% Hydrogen blending compatible.
Higher blending available on request



Top Entry