

# 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 <sup>1</sup> / DP <sup>2</sup> )	up to 1.89 MPa up to 18.9 barg
Ambient temperature* (TS <sup>1</sup> )	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 <sub>umax</sub> <sup>1</sup> )	from 0.05 to 1.89 MPa from 0.5 to 18.9 barg
Range of downstream pressure (Wd <sup>1</sup> )	from 2 to 950 kPa from 0.02 to 9.5 barg
Available accessories	none
Minimum operating differential pressure (Δp <sub>min</sub> <sup>1</sup> )	48 kPa 0.48 barg
Accuracy class (AC <sup>1</sup> )	up to 2.5
Lock-up pressure class (SG <sup>1</sup> )	up to 5
Nominal size (DN <sup>1,2</sup> )	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

(<sup>1</sup>) according to EN334 standard

(<sup>2</sup>) 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.

**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



1:500 High turn-down ratio



Balanced type



Low noise



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



Top Entry