

Aperval

The **Aperval** is one of the **pilot-operated gas pressure regulators** designed and manufactured 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. According to the European Standard EN 334, it is classified as **Fail Open**.



Medium / small
industry



District stations

Features	Values
Design pressure* (PS ¹ / DP ²)	up to 2.5 MPa up to 25 barg
Ambient temperature* (TS ¹)**	from -20 °C to +60 °C from -4 °F to +140 °F
Inlet gas temperature*,**	from -20 °C to +60 °C from -4 °F to +140 °F
Inlet pressure (MAOP / p _{umax} ¹)	from 0.05 to 2.5 MPa from 0.5 to 25 barg
Range of downstream pressure (Wd ¹)	from 0.0005 to 0.95 MPa from 0.005 to 9.5 barg
Available accessories	DB Silencer, Slam shut SA, PM/182 Monitor
Minimum operating differential pressure (Δp _{min} ¹)	0.045 MPa 0.45 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 25 1"; DN 50 2" DN 65 2" 1/2; DN 80 3"; DN 100 4"
Connections	Class 150 RF according to ASME B16.5 and PN16, 25 according to ISO 7005

(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 3 Features

Materials and Approvals

Part	Material
Body	Cast steel ASTM A216 WCB for all sizes Ductile iron GS 400-18 ISO 1083 for all sizes
Cover	Rolled or forged carbon steel
Seat	Technopolymer
Diaphragm	Vulcanized rubber
Sealing ring	Nitrile rubber
Compression fittings	According to DIN 2353 in zinc-plated carbon steel. Stainless steel on request

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

Table 4 Materials

The **Aperval** regulator is designed according to the European standard EN 334. The regulator reacts in opening (Fail Open) according to EN 334. The product is certified according to European Directive 2014/68/EU (PED). Leakage class: bubble tight, better than VIII according to ANSI/FCI 70-3.



EN 334



PED-CE

Aperval competitive advantages



Balanced type



Top Entry



Operate with low differential pressure



Easy maintenance



High accuracy



Low noise



High turn-down ratio



Built-in accessories



Built-in pilot filter



Biomethane compatible and
10% Hydrogen blending compatible.
Higher blending available on request