Pietro Fiorentini

Aperval H

The **Aperval H** is one of the **pilot-operated gas pressure regulators** designed and manufactured by Pietro Fiorentini. This device is suitable for **100% hydrogen applications**. It is used in medium and low-pressure gas distribution networks. It is classified as **Fail Open** according to the European Standard EN 334.

Small/medium industry

District stations

Blending units

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
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.

Table 1 Features

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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 2 Materials

The **Aperval H** 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 H competitive advantages

- Balanced type
- Operate with low differential pressure
- High accuracy
- High turn-down ratio
- Built-in pilot filter
- Top Entry
- Easy maintenance
- Low noise
- Built-in accessories
- Suitable for 100% Hydrogen

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