

# Aperflux 101

The **Aperflux 101** 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 high-pressure transmission systems and for medium pressure natural gas distribution networks. According to the European Standard EN 334, it is classified as **Fail Open**. The Aperflux 101 is **Hydrogen Ready** for NG-H<sub>2</sub> blending.



Gas liquefaction



Gas storage



Heavy industries

Gas compression /  
booster stations

City gates



Regasification

| Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Values                                                                     |                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Design pressure* (PS <sup>1</sup> / DP <sup>2</sup> )                                                                                                                                                                                                                                                                                                                                                                                                                     | up to 8.5 MPa<br>up to 1232 psig                                           |                                                                          |
| Operating ambient temperature* (TS <sup>1</sup> )                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Standard version</b><br>from -10 °C to +65 °C<br>from +14 °F to +150 °F | <b>Arctic version</b><br>from -40 °C to +65 °C<br>from -40 °F to +150 °F |
| Permissible gas temperature*                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Standard version</b><br>from -10 °C to +60 °C<br>from +14 °F to +140 °F | <b>Arctic version</b><br>from -20 °C to +60 °C<br>from -4 °F to +140 °F  |
| Inlet pressure range bpu (MAOP / p <sub>umax</sub> <sup>1</sup> )                                                                                                                                                                                                                                                                                                                                                                                                         | from 0.18 to 8.5 MPa<br>from 26.1 to 1232 psig                             |                                                                          |
| Range of downstream pressure (Wd <sup>1</sup> )                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.08 ÷ 7.4 MPa<br>11.6 ÷ 1073 psig                                         |                                                                          |
| Available accessories                                                                                                                                                                                                                                                                                                                                                                                                                                                     | none                                                                       |                                                                          |
| Minimum differential pressure (Δp <sub>min</sub> <sup>1</sup> )                                                                                                                                                                                                                                                                                                                                                                                                           | 0.1 MPa - recommended > 0.2 MPa<br>14.5 psig - recommended > 29 psig       |                                                                          |
| Accuracy class                                                                                                                                                                                                                                                                                                                                                                                                                                                            | up to 2.5% gauge (depending on working conditions)                         |                                                                          |
| Lock-up pressure class                                                                                                                                                                                                                                                                                                                                                                                                                                                    | up to 10% gauge (depending on working conditions)                          |                                                                          |
| Nominal dimensions (DN <sup>1,2</sup> )                                                                                                                                                                                                                                                                                                                                                                                                                                   | DN 50   2"; DN 80   3" ; DN 100   4";                                      |                                                                          |
| Connections*                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Class 300/600 RF / RTJ according to ANSI B 16.5                            |                                                                          |
| <div>(<sup>1</sup>) according to EN334 standard<br/>(<sup>2</sup>) according to ISO 23555-1 standard<br/>(*) 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.</div> |                                                                            |                                                                          |

**Table 1** Features

## Materials and Approvals

| Part                                                                                                                                      | Material                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Body                                                                                                                                      | Cast steel ASTM A352 LCC for rating 300 and 600   |
| Cover                                                                                                                                     | Rolled or forged carbon steel A350 LF2            |
| Seat                                                                                                                                      | Stainless steel                                   |
| Diaphragm                                                                                                                                 | Vulcanized rubber                                 |
| Sealing ring                                                                                                                              | Nitrile rubber                                    |
| Compression fittings                                                                                                                      | According to DIN 2353 in zinc-plated carbon steel |
| <b>NOTE:</b> The materials indicated above refer to the standard models. Different materials can be provided according to specific needs. |                                                   |

**Table 2** Materials

The **Aperflux 101** 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

## Aperflux 101 competitive advantages



Compact and simple design



1:500 High turn-down ratio



Low noise



Top Entry



Easy maintenance



Balanced type



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