

# Reflux 819/FO

The **Reflux 819/FO** 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, power plants and for medium pressure natural gas distribution networks. According to the European Standard EN 334, it is classified as **Fail Open**. The Reflux 819/FO is **Hydrogen Ready** for NG-H2 blending.



Gas liquefaction



City gates



Power generation

Gas compression /  
booster stations

Heavy industries



LNG marine



Gas storage



Regasification



Gas reverse-flow

| Features  | Values  |  |
|---|---|--|
| Design pressure* (PS <sup>1</sup> / DP <sup>2</sup> )                     | up to 10.3 MPa<br>up to 1500 psig   |  |
| Ambient temperature* (TS <sup>1</sup> )**                                 | <b>Standard version</b><br>from -10 °C to +70 °C<br>from +14 °F to +158 °F  | <b>Arctic version</b><br>from -40 °C to +65 °C<br>from -40 °F to +150 °F |
| Inlet gas temperature***  | <b>Standard version</b><br>from -10 °C to +70 °C<br>from +14 °F to +158 °F  | <b>Arctic version</b><br>from -20 °C to +60 °C<br>from -4 °F to +140 °F  |
| Inlet pressure (MAOP / p <sub>umax</sub> <sup>1</sup> )                   | from 0.3 to 10.2 MPa (for CE marked product it is limited to 10.0 MPa)<br>from 43.5 to 1480 psig (for CE marked product it is limited to 1450 psig) |  |
| Range of downstream pressure (Wd <sup>1</sup> )                           | from 0.1 to 7.4 MPa<br>from 14.5 to 1073.3 psig   |  |
| Available accessories   | DB/819 Silencer, LDB/171 Silencer, PM/819 Monitor,<br>SB/82 Slam shut, HB/97 Slam shut  |  |
| Minimum operating differential pressure (Δp <sub>min</sub> <sup>1</sup> ) | 0.2 MPa   29 psig   |  |
| Accuracy class  | up to 2.5% gauge  |  |
| Lock-up pressure class  | up to 5% gauge  |  |
| Nominal size (DN <sup>1,2</sup> )   | DN 25   1"; DN 50   2"; DN 80   3"; DN 100   4";<br>DN 150   6"; DN 200   8"; DN 250   10"; DN 300   12"  |  |
| Connections   | Class 150, 300, 600 RF or RTJ according to ASME B16.5 and PN16  |  |

(<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.

(\*\*) 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                 | ASTM A 352 LCC cast steel for classes ANSI 600 and 300;<br>ASTM A 216 WCB cast steel for classes ANSI 150 and PN 16/40 |
| Heads                | ASTM A 350 LF2 steel   |
| Stem                 | AISI 416 stainless steel   |
| Plug                 | ASTM A 350 LF2 nickel-plated steel   |
| Seat                 | Vulcanized Nitrile Rubber on metal support   |
| Membrane             | Rubberised Canvas (pre-formed by hot-pressing process)   |
| O-rings              | Nitrile Rubber   |
| Compression fittings | Made of zinc-plated steel according to DIN 2353;<br>on request, stainless steel  |

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

**Table 2** Materials

The **Reflux 819/FO** 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).

DVGW certified as a truly Fail Open regulator.

Leakage class: bubble tight, better than VIII according to ANSI/FCI 70-3.



EN 334



PED-CE



DVGW

## Reflux 819/FO competitive advantages



Compact and simple design



High accuracy



1:1000 High turn-down ratio



True Fail Open plug and seat regulator



Built-in pilot filter



Top Entry



Easy maintenance



Built-in accessories



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



Balanced type