Pietro Fiorentini

Cirval

The **Cirval** is a **lever-operated gas pressure regulator** controlled by a diaphragm and setting spring which controls the valve. Mainly used for medium and low pressure natural gas distribution networks, as well as commercial applications. It should to be used with previously filtered non-corrosive gases. According to the European Standard EN 334, it is classified as **Fail Open**. The Cirval is **Hydrogen Ready** for NG-H2 blending.

Gas engines

District stations

Commercial users

Regasification

Features	Values	
Design pressure* (PS[1] / DP[2])	up to 860 kPa up to 125 psig	
Ambient temperature* (TS[1])	**Standard version** from -20 °C to +65 °C from -4 °F to +150 °F	**Arctic version** from -29 °C to +65 °C from -20 °F to +150 °F
Inlet gas temperature*	**Standard version** from -20 °C to +60 °C from -4 °F to +140 °F	**Arctic version** from -20 °C to +60 °C from -4 °F to +140 °F
Inlet pressure (MAOP / p_{umax}[1])	**Internal sensing line** from 13.8 kPa to 517 kPa from 2 psig to 75 psig	**External sensing line** from 13.8 kPa to 861 kPa from 2 psig to 125 psig
Range of downstream pressure (Wd[1])	from 1.4 kPa to 82 kPa from 5.6“ w.c. to 12 psig	
Available accessories	LA Slam shut, IMD (Independent Monitoring Device), IFM (Integral Full Monitor), built-in strainer	
Minimum operating differential pressure (Δp_{min}[1])	12 kPa | 1.75 psig	
Accuracy class (AC[1])	up to 10	
Lock-up pressure class (SG[1])	up to 20	
Nominal size (DN[1,2])	DN 32 | 1-1/4”; DN 40 | 1-1/2”; DN 50 | 2”	
Orifice	Cirval 200: 3/4” Cirval 300: 1-1/2”	
Connections	Cirval 200: 1-1/4”, 1-1/2” and 2” NPT according to ANSI B1.20.1, Cirval 300: 2” NPT according to ANSI B1.20.1, 2” S.125FF according to ANSI B16.5 and Sliding 2” S.150RF for AU version	

([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	Ductile iron GS 400-18 ISO 1083
Cover	Die cast aluminum
Seat	Brass
Diaphragm	Nitrile rubber
Sealing ring	Nitrile

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

Table 2 Materials

The **Cirval** regulator is designed according to ANSI B109.4, ANSI B109.5 and CSA 6.18 standards.
The regulator reacts in opening (Fail Open) according to EN 334.
Leakage class: bubble tight, better than class VIII according to ANSI/FCI 70-3.

ANSI B109.4 ANSI B109.5 CSA 6.18

Cirval competitive advantages

- Compact and simple design
- High accuracy
- Fail Open plug and seat regulator
- Balanced type
- Top entry
- Easy maintenance
- Built-in accessories
- Biomethane compatible and 20% Hydrogen blending compatible. Higher blending available on request

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