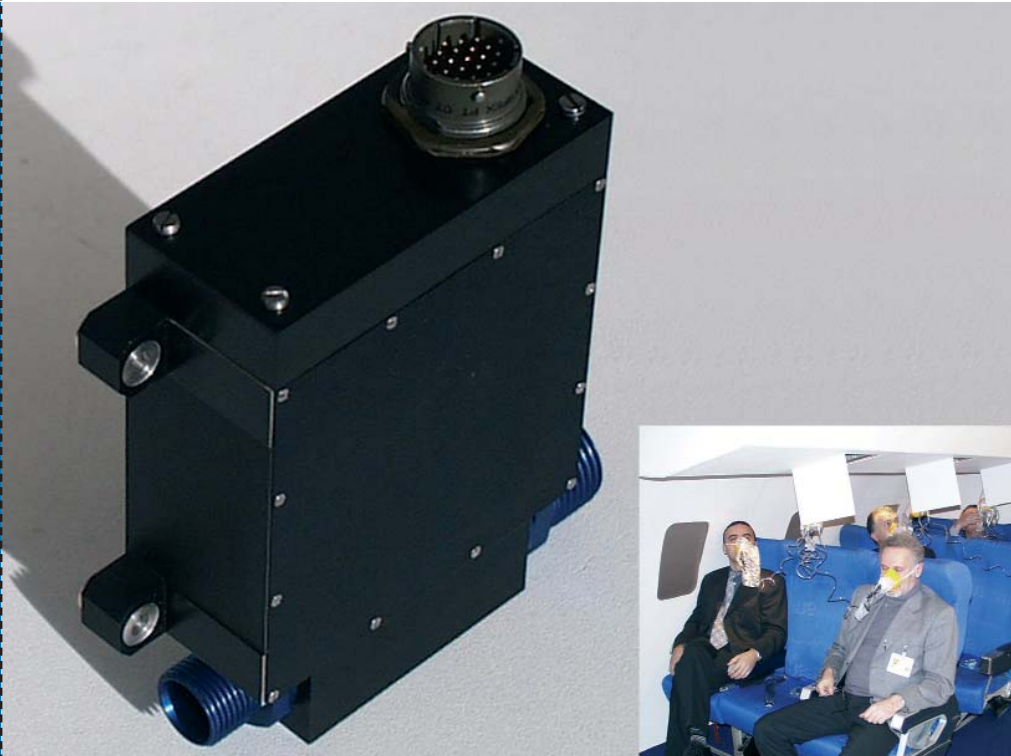


Electronic Passenger Oxygen Regulator



The latest Air Liquide Passenger Oxygen Regulator (POR) is a safety device providing oxygen to passengers after a cabin pressure loss.

The use of electronic flow regulation rather than pneumatic regulation significantly decreases the mandatory quantity of gaseous oxygen carried on board.

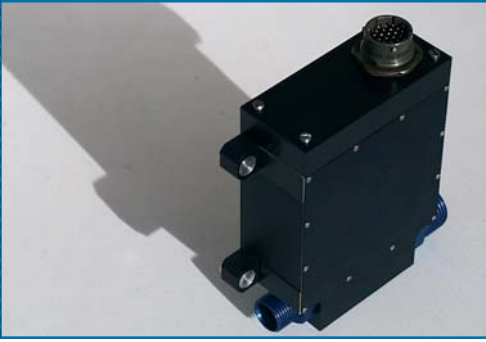
Designed for a wide range of aircraft layouts from long-range aircraft to very light jets, the AIR LIQUIDE electronic passenger oxygen regulator (POR) is integrated into emergency gaseous oxygen systems.

This compact device optimizes oxygen consumption and offers a high level of safety, significant weight saving and simplified maintenance.

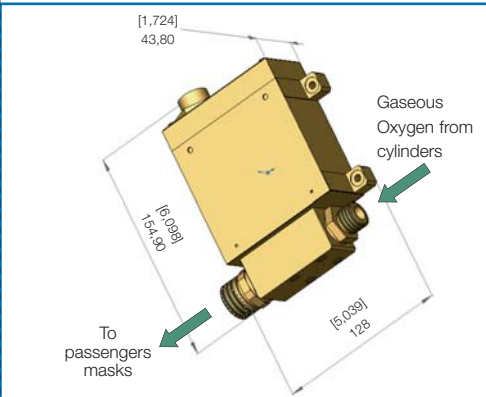
Features :

- Provides oxygen flow according to FAR25 requirements after the loss of cabin pressure
- Optimizes oxygen consumption by matching the delivered flow with the passengers' exact needs for each altitude (leading to a typical reduction of 20% in the oxygen required on board a 200-passenger aircraft)
- Provides flexible pressure schedules depending on the particular regulator application (aircraft layouts, specific emergency descent profiles, therapeutic oxygen supply, etc.)
- Equipment testing is simplified and does not require parasitic gas consumption
- Troubleshooting during operation and in repair shops is facilitated by improved failure detection and reporting

Passengers Oxygen Regulator



Outline drawing in mm [inch]



Specification

Nominal supply pressure from cylinders :

5 to 10 bars (70 to 145 psig)

Regulated flow rate :

0 to 900 litres per minute (up to 210 PAX)

Regulated pressure :

0 to 5 bars (0 to 70 psig)

Ambient temperature:

Storage: -55°C to +85°C (-67°F to 185°F)
Operational: -15°C to +71°C (5°F to 160°F)

Compact and light:

0,8 kg (1.8 lb)

Tested and certified according to RTCA/DO-160D

Supplies the minimum mass flow of supplemental oxygen according to FAR 25, §1443.c)

Electrical specification:

Supply voltage: 18 to 32 V

Power consumption:

Standby mode: mean 4,2 W, max: 5,6 W
Activated mode: mean 10 W, max: 12,6 W

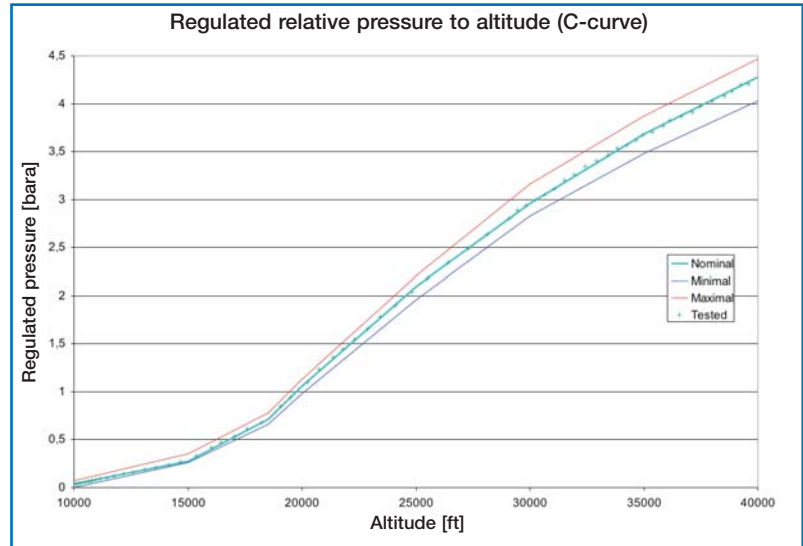
Contacts

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E-mail : gcom.dta@airliquide.com

Performance and operating principle

Regulation performances:

On the complete pressure schedule (adaptable according to the aircraft), the pressure is regulated with an outstanding precision (up to +/- 2%)



Regulation principle:

The output pressure measurement is compared with pressure instructions based on the cabin altitude pressure and the selected operational mode.

The comparison between regulated pressure and the required output pressure provides a position instruction. This position instruction is compared with the position measurement of the altimetric valve and the difference in position is used to operate the motorized valve.

