

Datasheet

Carbo 30



With Safety.

This self-rescuer is particularly suitable for short evacuation routes and is the lightest among the 30-minute self-rescuers. It provides comfortable breathing during evacuation or self-rescue.

The starter is activated immediately upon removing the cover, allowing the user to begin breathing within a few seconds after activation.

The Carbo 30 self-rescuer is a chemical oxygen self-contained breathing apparatus with a closed breathing circuit, designed for escape from unbreathable atmospheres that pose an immediate danger to life and health (IDLH). It can be worn on a shoulder strap or waist belt. The Carbo 30 protects the respiratory system during escape in conditions of dense smoke from fires, high concentrations of toxic gases, or oxygen deficiency in the atmosphere. The Carbo 30 is intended for use in explosive atmospheres, including underground environments. The Carbo 30 is designed for daily carrying as well as storage at changeover stations along escape routes.

The Carbo 30 self-rescuer is not intended for use as a working breathing apparatus.



Article-Number: 203419

Certification: Complies with PPE Regulation (EU) 2016/425 and EN 13794.

Technical data:

Parameter name	Parameter value
Rated duration ¹ in accordance with EN 13794, AS/NZS1716 and IS 15803 at lung ventilation, not less: – 10 l/min (waiting for help) – 35 l/min (normal walking)	90 min 30 min
Breathing resistance (to inhalation or exhalation) during operation, max	1.0 kPa
Temperature of the inhaled gas, not more	50 °C
Volume of oxygen in the inhaled gas during the rated duration, not less	21% ²
Maximum volume fraction of carbon dioxide in the inhaled gas, not more	3%
Average volume fraction of carbon dioxide in the inhaled gas during the rated duration, not more	1.5%
Volume of breathing bag, not less	6 L
Overall dimensions (without waist and shoulder straps or pouch), not more: – width – height – depth	215 mm 191 mm 106 mm
Weight (for the option with belt loops and fixators)	2.4 ± 0.05 kg
Weight (for the option without belt loops and fixators)	2.3 ± 0.05 kg
Operating temperature	from –5 to +60 °C
Relative humidity (at +35 °C) during operation and storage	up to 100%

Revision 10.2025 – Errors and omissions excepted. All data are non-binding guide values.

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Notes:

- ¹ Rated duration may vary under escape conditions depending on physical activity and physiological characteristics of the user.
- ² A short-term decrease of oxygen volume fraction in the inhaled gas down to 17% is allowed during the first two minutes after the self-rescuer activation.

Information about service life, shelf life and warranty period is indicated on the label supplied with each self-rescuer.

Operating principle

When the locking lever of the Carbo 30 is opened, the starter is automatically activated, initiating the oxygen supply. Oxygen fills the breathing bag, allowing the user to start breathing within the first few seconds after activation, before the regeneration cartridge reaction begins.

The exhaled gas mixture, which contains CO₂ and moisture, triggers a chemical reaction inside the regeneration cartridge, where CO₂ is absorbed and O₂ is released. The Carbo 30 operates on a pendulum breathing circuit. The exhaled gas passes through the mouthpiece, the heat and moisture exchanger, and the breathing hose into the regeneration cartridge. Inside the cartridge, the exhaled gas is purified from carbon dioxide and enriched with oxygen, then directed into the breathing bag. When the breathing bag is completely filled, any excess gas is released through the overpressure valve.

During inhalation, the breathing gas flows in the opposite direction — from the breathing bag, through the regeneration cartridge, the breathing hose, the heat and moisture exchanger, and the mouthpiece, to the user's respiratory system. The oxygen generation and carbon dioxide absorption in the regeneration cartridge are accompanied by heat release.

Manufacturer: DEZEGA SP

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