

Oxygen Generation

CAN33™

CAN33™ is a chemical oxygen generator which provides 334l litres of breathable oxygen.



molecular

Applications

Safe supply of oxygen for critical life support and air revitalization in the following applications:

- Submarines (requires suitable furnace – see Specifications section)

Other oxygen generators in the series are EO2-26™ and EO2-30™ which have increased operational flexibility over the CAN33™, they are in:

- Submarines
- Underground safe havens

Properties

The oxygen producing chemical is sodium chlorate

- CAN33™ Oxygen Generators require no maintenance during storage
- Associated with a high degree of safety due to the absence of pressurized gases
- 7.4 litres storage volume per generator
- Approximately 440 litres oxygen per litre storage space @ NTP
- Ignition source – phosphorus nail
- Product requires specialist training and equipment maintenance for correct operation

Generator Dimensions

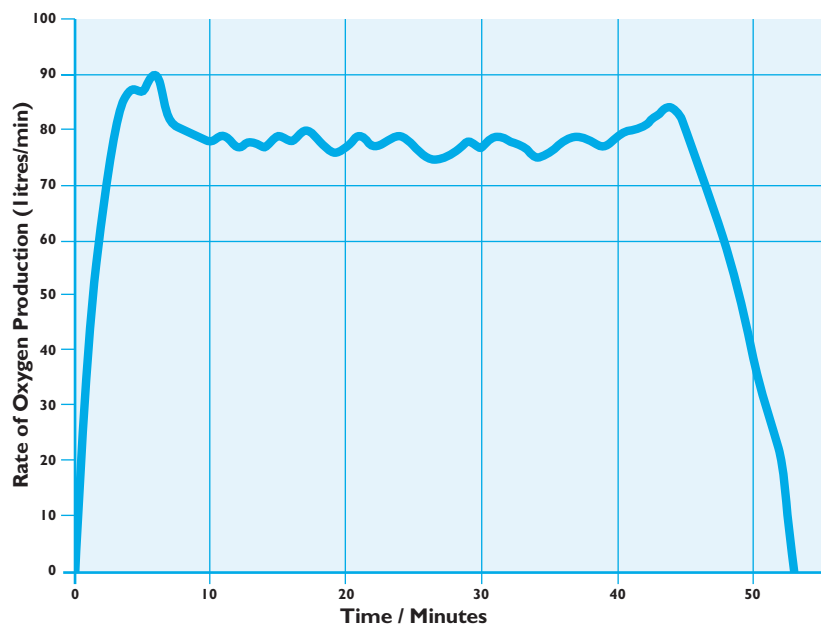
Generator and cigar tube containing initiation mechanism

Height = 28.89 – 29.53 cm
(11.37 – 11.62 inches)

Diameter = 15.56 – 16.51 cm
(6.13 – 6.50 inches)



Typical Performance - Rate of oxygen generation



Oxygen Generation CAN33™

Specifications

Oxygen Generation – litres oxygen @ NTP	> 334l (349l)
Duration - minutes	40 – 60 (50)
Purity of oxygen - %	> 99
Weight of generator - kg [lb]	< 12.74 (12.68) [28.09]
Carbon monoxide - parts per million analysed by infra red	< 25 (12)
Chlorine – parts per million analysed by electrochemical cell	< 2 (0.4)
Initiation mechanism	Phosphorus nail (supplied with oxygen generator, packaged in vacuum sealed unit and water tight protective tube, temporarily fixed to side of oxygen generator tin for transport)
Additional equipment required to operate generator	Furnace capable of housing: <ul style="list-style-type: none"> • A generator where the chemical block is located during operation • The filter socks to filter the sodium chloride from the gas generated (routinely supplied by Molecular Products Ltd) • A mechanism to operate the phosphorus match initiation device

*Figures in parentheses are typical values.

How it works

Oxygen is produced by the thermal decomposition of sodium chlorate.

This decomposition requires a significant amount of energy input to drive the chlorate decomposition. The source of this energy is the oxidation of iron powder (formulated with the sodium chlorate as a fuel). The initial energy input from the interaction between chlorate and phosphorus is generated by the initiation mechanism, in this case the phosphorus match.



Additional information

Packaging, Transportation & Disposal

Generators are packed four per box (Gross weight 57kg, Dims 38 x 38 x 39 cm) with 12 boxes per pallet (2 layers of 6 boxes). Total pallet Gross weight is 706kg, dimensions 120 x 80 x 94 cm.

Oxygen generators are classified as hazardous UN 3356, class 5.1 oxidiser; packing group II, and are packed in accordance with IATA regulations for airfreight (not passenger aircraft) or IMDG regulations for seafreight.

Spent oxygen generators are classed as non-hazardous and can be disposed of to landfill by a specialist waste contractor.

Quality

Molecular Products Ltd's aim is to manufacture chemical products which satisfy completely the needs of our customers. All products are rigorously tested to ensure conformance to the specification. Our activities comply to the requirements of ISO 9001:2008.

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