

EXCIDIO®

Integrated Solution for Nitrous Oxide Conversion



BOC Healthcare is committed to working with healthcare providers and regulatory authorities to continuously promote safe use of medical products and improve patient care. We provide medical gas products, therapies, technical solutions and services to hospitals, clinics, nursing facilities, emergency management services and home healthcare providers around the world. With our long experience and understanding of healthcare realities, you can depend on solutions that are delivered and serviced to the highest possible standards of quality, safety and efficacy.

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Cleaner Air, Greener Care

BOC is proud to introduce the EXCIDIO Nitrous Oxide Conversion Unit – an innovative device designed to capture exhaled ENTONOX[®]/nitrous oxide and catalytically convert it into its harmless component gases, nitrogen and oxygen.

EXCIDIO removes over 95% of exhaled nitrous oxide at the point of use, supporting safer working environments, improved patient care, and meaningful reductions in environmental impact.

Nitrous oxide/oxygen mixtures remain integral to pain management, particularly in maternity and emergency care. However, many clinical teams are increasingly concerned about both the environmental footprint and occupational exposure risks associated with nitrous oxide. EXCIDIO has been developed to address these concerns without requiring any change to clinical practice.

EXCIDIO is a mobile, standalone unit that captures exhaled ENTONOX and converts them into harmless gases. Unlike systems tied to fixed Waste Anaesthetic Gas Scavenging (WAG) pipelines, EXCIDIO can be used in any suitable treatment room without vacuum lines or structural alterations, offering hospitals greater flexibility, consistency, and safety across clinical areas.

The system is fully automatic, quiet, and simple to operate, with minimal setup required. EXCIDIO has been designed to meet high standards of

safety and compatibility and integrates smoothly alongside existing medical equipment.

Who is EXCIDIO for?

- Maternity Wards
- Endoscopy and Gastroenterology Units
- Emergency Departments

Key takeaways

- Converts 95% of N₂O into O₂ and N₂
- Prevents 525 L of nitrous oxide from entering the environment in the average labour¹
- Ready to use within 20 minutes
- Low energy consumption
- 80% recyclable at end of life
- Avoids need for costly ventilation upgrades
- Single button operation

Equipment technical specification

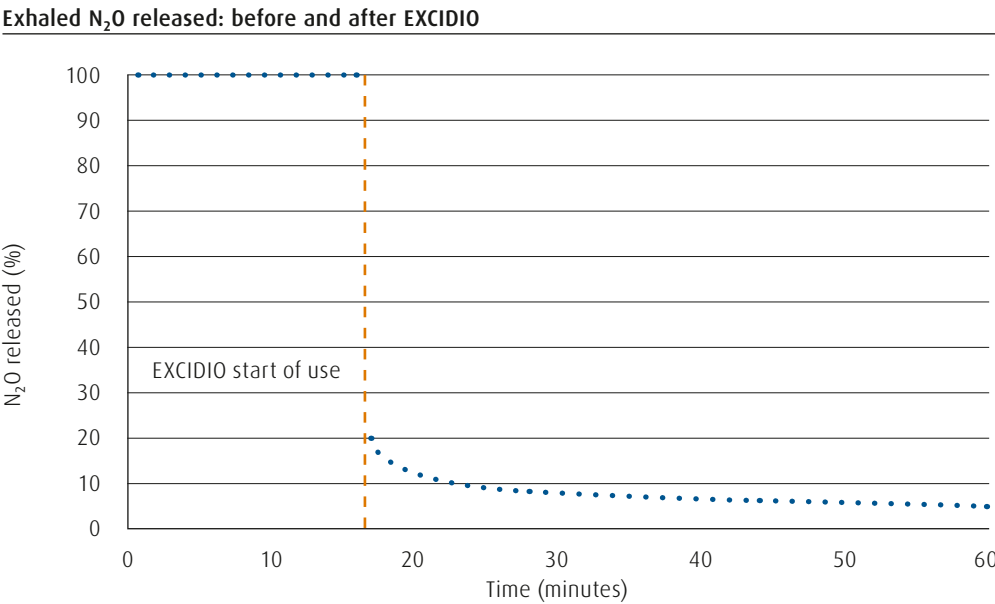
- Dimensions: 1100 mm (H) × 575 mm (W) × 500 mm (D)
- Weight: approx. 75 kg
- Power: maximum 850 W, 220–240 V AC
- Exterior: Stainless steel, wipe clean surfaces

EXCIDIO Performance

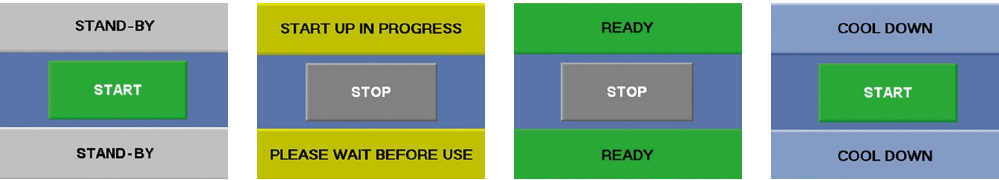
ENTONOX remains a safe and effective analgesic, but its environmental footprint is significant: each nitrous oxide molecule has a global warming potential 273 times greater than CO₂.² EXCIDIO captures and converts exhaled N₂O, rapidly reducing its environmental impact.

After a brief warmup, the catalytic process becomes largely self-sustaining. During a typical three-hour labour, EXCIDIO prevents the equivalent of 129 kg of CO₂ from entering the environment while using less than 1 kWh of energy – about the same as running a television.

The graph below shows how quickly emissions fall once EXCIDIO reaches operating temperature.



Simple Usage



1. Press **START**
2. 20 minute start up
3. Unit displays **READY**
4. After use, press **STOP** (5 minute cool down)
5. Display returns to **STANDBY**

Operating parameters

EXCIDIO uses very few moving parts, ensuring both low noise (<45 dB) and high reliability.

The catalyst requires heating to the correct operating temperature before conversion can occur; this warmup takes up to **20 minutes**. Once heated, the system maintains temperature in a low energy standby mode, allowing immediate use when needed.

- Exhaust gas temperature: <40°C
- External surfaces remain cool to the touch

Excidio care and maintenance package

Annual EXCIDIO service on-site by BOC engineers.

If you would like to learn more about EXCIDIO contact us at medicalbda@boc.com

¹ A total of 534 L of gas was passed through EXCIDIO over three hours – representing average ENTONOX use during labour. [https://www.bjanaesthesia.org/article/S0007-0912\(22\)00261-6/fulltext](https://www.bjanaesthesia.org/article/S0007-0912(22)00261-6/fulltext) <https://pubmed.ncbi.nlm.nih.gov/32452155>

² <https://ghgprotocol.org/sites/default/files/2024-08/Global-Warming-Potential-Values%20%28August%202024%29.pdf>