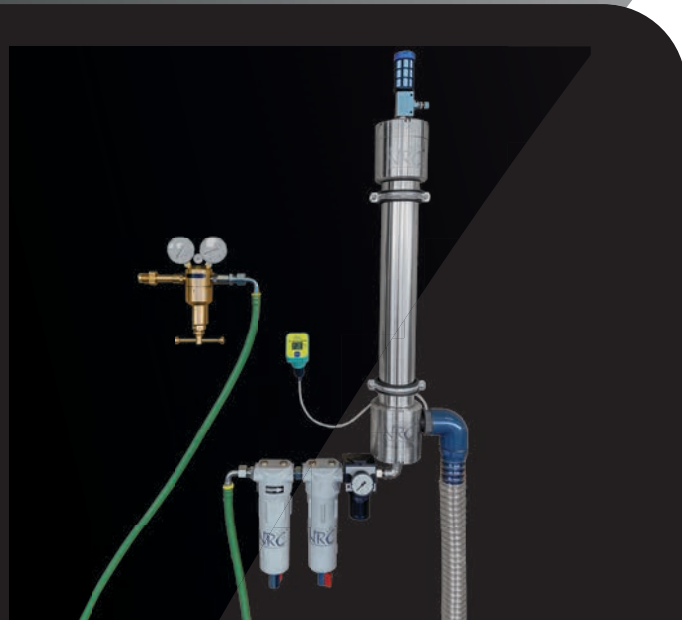




NRC International GmbH



NITROX SYSTEM CATALOG



Experience precision and reliability with NRC Membrane Systems.



NRC International is one of the leading manufacturers of nitrox systems worldwide. Developed and built in Germany, these systems ensure unparalleled quality and reliability. NRC International provides the right technology and solution in nitrox production for every customer.

NRC International Team

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Important Safety Warning:

Proper training for the use of membrane systems is essential for safe operation. Nrc International cannot be held responsible for any accidents resulting from improper use or failure to follow recommended maintenance or incorrect usage.



**Membrane
System
Video**

STORY OF NRC AND NITROX



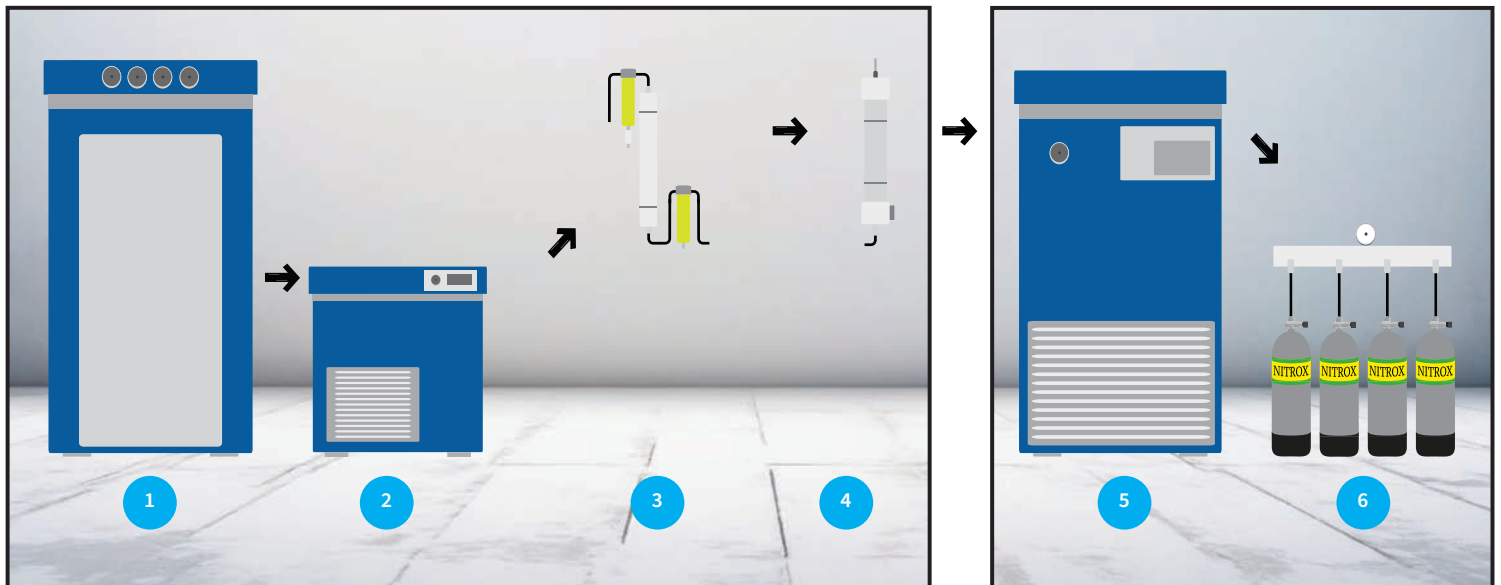
NRC International is undoubtedly one of the pioneers of modern nitrox diving. Programs such as 'Nitrox for free' or the training program widely used by almost all training organizations today set standards in the year 2000. However, not only in philosophy and training but also in the production of nitrox, NRC International has been and remains a leader. For more than 20 years, many of the largest dive centers worldwide have placed their trust in the technology of NRC International. Regardless of the procedure ultimately used, it is designed for professional use with unparalleled reliability. Trust in the quality Made in Germany.

THERE ARE THREE PRIMARY WAYS TO CREATE NITROX

- 1) Membrane system
- 2) Continuous Blending
- 3) Partial Pressure Blending

Please be aware that while other techniques exist, they are not endorsed by Nrc International. Safety and reliability remain our top priorities.

1 - MEMBRANE SYSTEM METHOD



The Full Membrane System comprises six key components:

- 1 **Low Pressure Compressor:** Initiates the compression of ambient air.
- 2 **Refrigeration Dryer:** Ensures that the air is devoid of moisture.
- 3 **Filtration System:** The air then passes through our advanced filtration system, removing impurities and contaminants.
- 4 **Nitrox Membrane:** Compressed and conditioned air is forced through a specialized hollow fiber membrane. The membrane technology enables precise control over the nitrogen-oxygen volume ratio, resulting in the desired Nitrox mixture.
- 5 **High-Pressure Nitrox Compressor:** The filling capacity is determined by the performance of the high-pressure Nitrox compressor.
- 6 **Filling Panel:** Streamlines the dispensing process, making it safe and convenient for dive centers to produce large quantities of Nitrox.

Advantage

No need for 100% oxygen or any other consumables

Produces

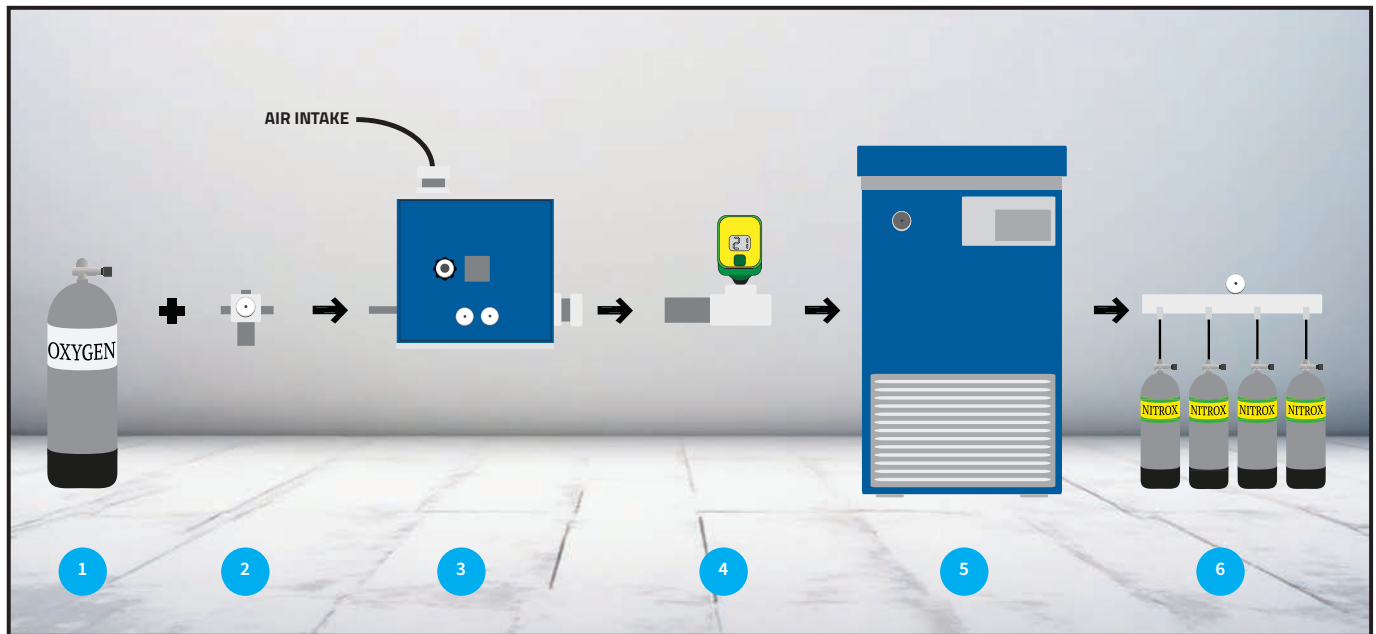
Up to 40% Oxygen content.

Best for

Dive centers that want to produce large quantities of nitrox.

NITROX PRODUCTION

2 - CONTINUOUS BLENDING METHOD



The Continuous Blending method comprises six key components:

- 1 **100% Oxygen Source**
- 2 **Pressure Reducer:** Manage and adjust the Oxygen pressure.
- 3 **Blending Panel:** Oversees, regulates, and ensures a safe and accurate blending process.
- 4 **Nitrox Analyser:** Continuously monitors the gas mixture, providing real-time data for adjustment as needed.
- 5 **High-Pressure Nitrox Compressor:** The filling capacity is determined by the performance of the high-pressure Nitrox compressor.
- 6 **Filling Panel:** Streamlines the dispensing process, making it safe and convenient for dive centers to produce large quantities of Nitrox.

Warning

100% oxygen safety precautions have to be observed.

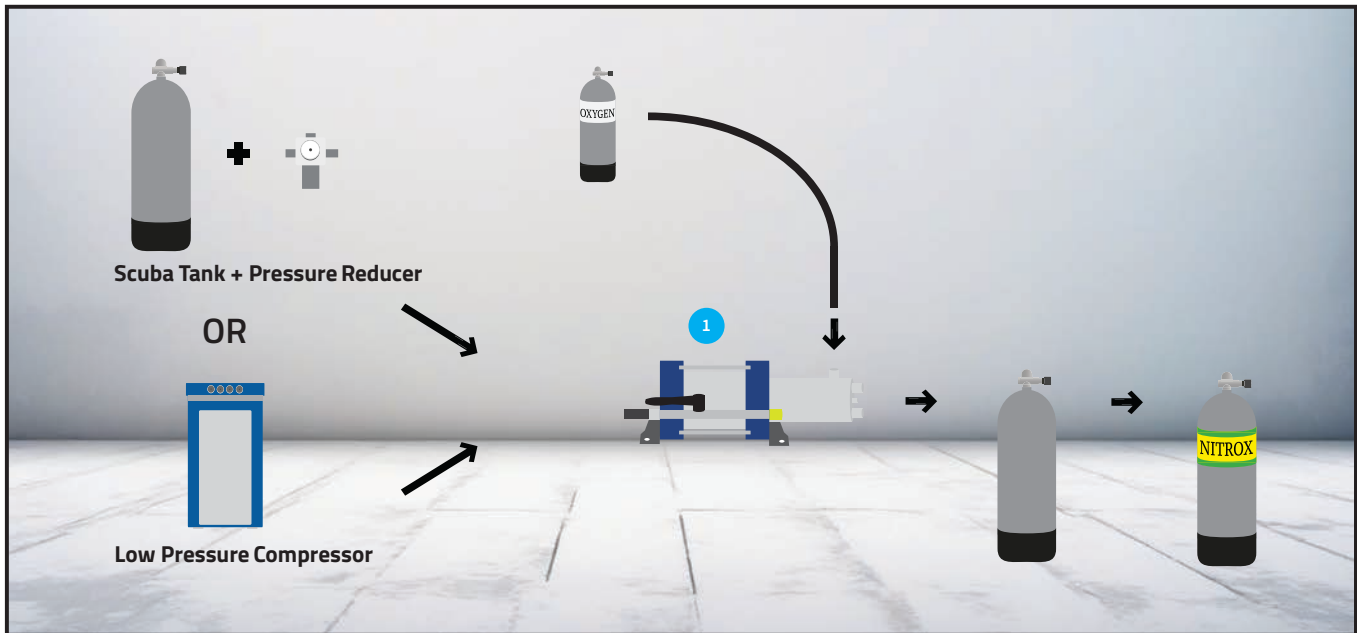
Produces

Up to 40% Oxygen content.

Best for

Dive centers that want to produce large quantities of nitrox.

3 - PARTIAL PRESSURE METHOD



This method also uses 100% oxygen. Here, the nitrox mixture is produced in several steps, which significantly reduces productivity. First, a defined amount of 100% oxygen is filled into an empty diving cylinder and then brought to the desired final pressure with compressed air. Various aids such as a booster pump (①) or overflow hose (②) can be used. This method of Nitrox production allows Nitrox mixtures with an arbitrarily high oxygen content to be produced. This method is used when small amounts of Nitrox or high oxygen concentrations are required.

Warning
100% oxygen safety precautions

Produces
High Oxygen % content

Best for
Small amounts high %

MEMBRANE SYSTEM

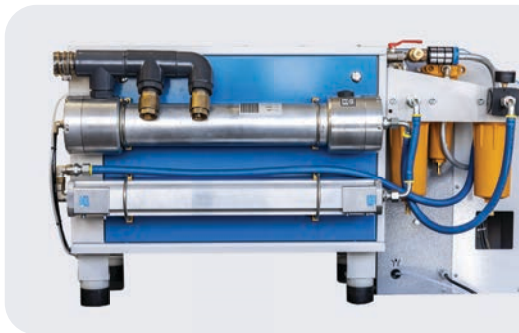
AIR PRO SERIE

The Air PRO series is known for its robustness, offering filling capacities from 200 to over 1000 liters/min of Nitrox. Easy to install and maintain, it stands out for its performance and user-friendly design. The new AirPro series also features an intelligent operating concept and the option for Trimix upgrades.



CHARACTERISTICS

- Easy installation with the system delivered ready-to-operate and tested.
- Features a large-capacity, oil-free filtration system, industrial-grade refrigeration dryer, and filter.
- High performance with low power consumption and space requirements.
- Robust, powder-coated 2mm steel casing (also available in stainless steel).



For the compression stage, a performance-reduced industrial screw is utilized, ensuring maximum durability and an extended lifespan. The access to the compression stage, refrigeration dryer, and filter system has been further optimized for maintenance, providing you with the freedom to work seamlessly.



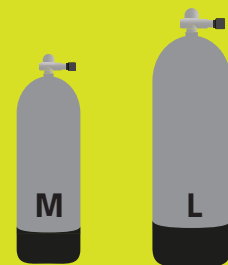
Our optional Tropical Kit ensures optimal system performance in high-temperature tropical environments. With a larger filtration unit, special oil, and an expanded refrigeration dryer, it guarantees smooth operation even in extremely high temperatures.



TRIMIX READY

A conversion kit is available to upgrade the membrane system for Trimix production. In this process, the use of 100% oxygen for Trimix creation is not necessary. The potential Trimix blends are determined by the delivery capacity and model.

MADE FOR



Medium to Large Dive Operation

Air Pro 5,5-7.5



Produces up to 320 liters
Nitrox 32% per minute.



Air Pro 11



Produces up to 450 liters
Nitrox 32% per minute.



Air Pro 15



Produces up to 900 liters
Nitrox 32% per minute.



EXTREME SERIE

CARACTERISTICS

- Extremely flexible installation due to modular design.
- Compact size for confined spaces.
- Available in air-cooled or water-cooled options.
- Large filtration unit for high ambient temperatures.
- Flexible planning of the entire system.



The name says it all—extreme environmental conditions, confined spaces, or any other challenges. There’s almost nothing that can prevent the Extreme Series systems from smooth operation. Whether it’s special cooling, the highly modular structure, or the compact size, the Extreme Series adapts to all circumstances. Let this flexible series convince you as well.

Our optional Tropical Kit ensures optimal system performance in high-temperature tropical environments. With a larger filtration unit, special oil, and an expanded refrigeration dryer, it guarantees smooth operation even in extremely high temperatures.



MADE FOR



Liveboards and Boats

EXTREME 11



Produces up to 450 liters
Nitrox 32% per minute.



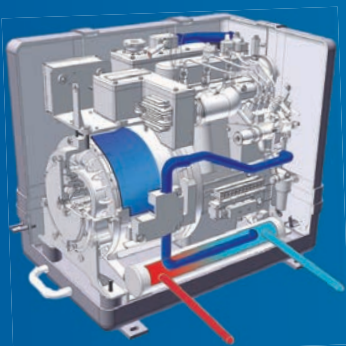
EXTREME 15



Produces up to 900 liters
Nitrox 32% per minute.



WATERCOOLING SYSTEM



Optional, the cooling of the Extrem Serie can be connected to the boat's water circuit. This ensures the flawless operation of the nitrox system under extreme installation conditions.

LIGHT SERIE

CARACTERISTICS

- No separate low-pressure system required.
- Compact size for confined spaces.
- Ideal for limited power capacity.
- Smooth operation even in high ambient temperatures.
- Flexible planning of the entire system.

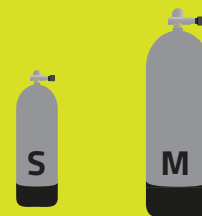


The Light Series is designed for customers with limited electrical power. In this series, the membrane system is not supplied by a low-pressure compressor but receives the necessary compressed air from storage tanks filled beforehand with a high-pressure compressor. This not only saves power capacity and cooling but also conserves a significant amount of space, making it a solution for confined spaces or high ambient temperatures. Consult with us for personalized advice on the structure and applications.



For customers with limited electric power capacity.

MADE FOR



Small to Medium Dive Operation

PG 400 Light



Produces up to 309 liters
Nitrox 32% per minute.

PG 600 Light



Produces up to 550 liters
Nitrox 32% per minute.

Additional equipment needed

Not included :
Needs to be connected to a high pressure
source like a bank.



NESY SYSTEM

- No need for a separate low-pressure system.
- Compact size for confined spaces.
- Ideal for limited power capacity.
- Flexible planning of the entire system.
- Safe and comfortable operation.

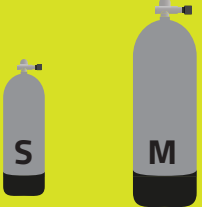


If you have a reliable supply of medical oxygen and don't need to fill hundreds of Nitrox cylinders every day but still want to work safely and efficiently, the NESY System might be just right for you. Unlike a membrane system, a different process is used here. With a NESY System, oxygen is dosed into your high-pressure compressor during the filling process, secured by multiple safety measures and easy to operate.



**TRIMIX
READY**

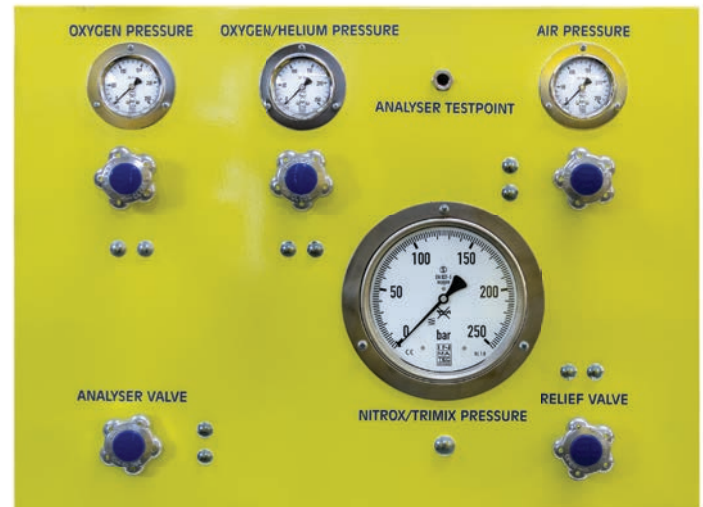
MADE FOR



Small to Medium Dive Operation

BLENDING PANEL

- High oxygen concentrations possible.
- Trimix capable.
- Flexible adaptation to inputs and outputs.
- High safety ensured by safety valves.
- Robust casing available in various designs.



If high oxygen concentrations are required, quick and flexible gas mixtures are essential, or Trimix is a significant part of your daily gas logistics, we have the perfect solution for you. The extremely flexible Blending Panel can be customized and configured to meet all your needs. Choose the required inputs and outputs, and we'll configure it for you. All in the familiar NRC quality and safety. Explore the possibilities and find your personalized Blending Panel.





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