AIR PRODUCTS

Marine Systems

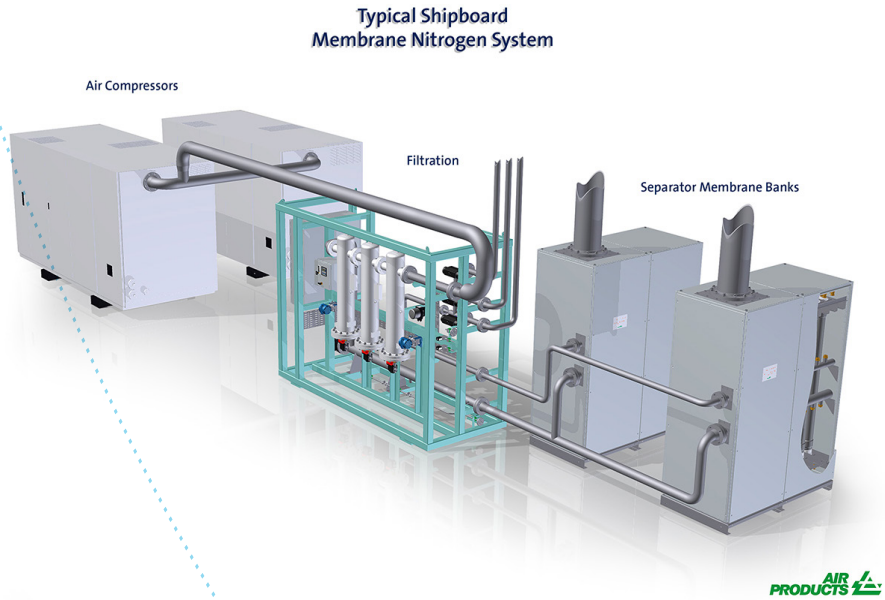
NC 2.0 Shipboard Nitrogen System

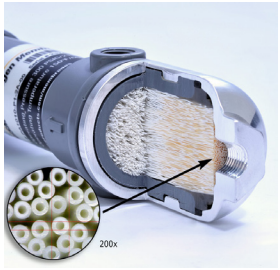
Nitrogen Membrane Systems for 420 to 6000 Nm^3/h

The NC 2.0 Shipboard Nitrogen System is a PRISM® membrane-based nitrogen generator which is designed specifically for shipboard use. This robust skid-mounted system has the capacity to supply up to 6000 cubic meters (6000 Nm^3/h) of nitrogen per hour, and meets demanding international marine standards.

The unique generating system warms up and delivers nitrogen quickly while automatically adjusting the purity even with variable feed inlet pressure. The modular design makes installation easy and internal components are protected by the rugged enclosure.

An easy-to-understand, solid-state, PLC user interface is integrated into the front panel where the operator can access all status signals, process parameters and alarms. There is also the option to interface the unit directly into ships IAS using a standard serial communication (MODBUS) connection which eliminates multicore cables. The NC 2.0 system will even remind you about routine maintenance and provide instant access to our service and parts department for simplified ordering.





Each membrane separator contains thousand of tiny hollow fiber membranes which use selective permeation to separate nitrogen and oxygen molecules and route them into individual streams.

NC 2.0 Nitrogen System

Features

Operator terminal.
Feed air pre-treatment.
All necessary control valves and accessories.
Air Products PRISM® Membranes.
Online oxygen analyzer.
Feed air pre-treatment.
Product dew-point analyzer.
Separate outlet to receiver tank.
Double block-and-bleed design.
Remote monitoring. Prepared for telemetry.
Flange connections according to DIN or JIS standards.
Dual System LNG.
Approvals by all major Classification Societies.

Operator terminal functions:

Monitor process and status indication.
Monitor alarms and alarm set points.
Start / Stop the nitrogen generator.
Delivery of nitrogen to cargo tanks.
Select working range (auto start/stop) for operation on nitrogen discharge pressure.
Select auto start/stop to nitrogen receiver tank.

Specifications

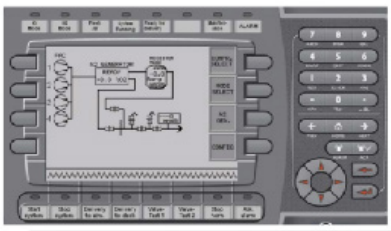
El. Power consumption [kW]	7.0 – 7.5
Inlet air pressure [barg]	5.0 – 13.0
N_2 product pressure [barg]	≤ 10.0
Nitrogen purity [% N_2]	95.0 – 99.9

Maximum capacities

At 95% nitrogen purity	6000 Nm^3/h
At 97% nitrogen purity	4000 Nm^3/h
At 99% nitrogen purity	2000 Nm^3/h
At 99.9% nitrogen purity	750 Nm^3/h

Dimensions/Connections:

Nitrogen gen, LxWxH [mm]	(2800-3800) x 1100 x (2160-2360)
Membrane bank, LxWxH [mm]	(900-3135) x 810 x 2170
Max. weight N2 Gen [kg]	1100 – 2300
Max. weight Membrane Bank [kg]	600 – 1000
Flange connections	DIN /JIS standard



Operator terminal

PRISM PA4050 membrane separator

The NC 2.0 Shipboard Nitrogen System incorporates PRISM® Membrane separation technology to generate nitrogen. PRISM Membranes are lightweight, durable, and efficient molecular separators.

FIlter and Control skid

Membrane separator banks

DNV Type-A approved meets demanding international marine standards.

PRISM® is a registered trademark of Air Products and Chemicals, Inc.

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