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Pure air . Pure gas

# $N_2$ purification system

# PPNG 12-235 DX


Achieving nitrogen gas purity of up to 99.9999% is now simpler and more cost-efficient than ever with the new Pneumatech PPNG DX. Pairing a nitrogen gas generator with our purification system, you get unparalleled nitrogen purity to meet the stringent demands of industries where even the smallest impurities can compromise operational quality and performance.

## Nitrogen purification system

A nitrogen purification system is part of an on-site nitrogen generation system. It relies on a small amount of hydrogen to remove residual oxygen from nitrogen gas produced by a nitrogen generator. The catalytic reaction ensures that nitrogen gas achieves near-absolute purity, making it suitable for critical applications in industries such as electronics, chemicals, laser cutting and more. By generating ultra-pure nitrogen with a nitrogen generator+purification system rather than with just a generator, users can size the compressor and generator of their gas generation system smaller and significantly reduce feed air consumption.

## Features & Benefits:

- Guaranteed ultra-high purity from 99.999% up to 99.9999% with 99.9% as inlet
- Cost-efficient alternative to bigger sized gas generator and compressor
- 40% less feed air required
- Ability to increase nitrogen output capacity when added to an existing nitrogen generation system
- Does not strain a facility's electrical system
- Lower $CO_2$ footprint through energy efficiency
- Easy to install
- Fully automated hydrogen dosing
- Automated quality and reliability features
- Works with most nitrogen generators

## General Specifications

- Nitrogen purity achievable from 99.999% up to 99.9999% with 99.9% inlet
- $N_2$ inlet pressure range: 4-13 bar(g) / 58-188 psi(g)
- $H_2$ inlet pressure range: 6-15 bar (g) / 87-218 psi(g)
- Inlet temperature range: 5-45°C / 41-113°F
- Pressure drop: 0.05 bar
- $H_2$ feed purity grade: ≥3.0
- Power supply: 115V AC / 230V AC & 50 / 60Hz
- IEC, UL approvals

# Proven Reliability

## Guaranteed purity

- Guaranteed $N_2$ output purity with optional $N_2$ check and restore functionality

## Long lifetime

- Catalyst built into aluminum proven design
- Continuous temperature and moisture monitoring
- Overflow protection
- $H_2$ accumulation prevention with built-in evacuation valves

## Efficiency

- 40% less feed air than generator-only system
- Low pressure drop
- Precise $H_2$ dosing based on $N_2$ feed purity and flow monitoring

## Advanced Purelogic™ Controller

- Color touch screen shows machine status
- Purity alerts
- Automatic start-up and stand-by ensure operational savings
- 24/7 ICONS remote real-time monitoring of flow, pressure, purity and all other key data
- Connectivity options

# Technical specifications for PPNG 12-235 DX

| Type | Purity | Nitrogen C=capacity | Dimensions | | | | | | Weight | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | mm | | | in | | | | |
| | | Inlet 99.9% purity Outlet > 99.999% purity | W | L | H | W | L | H | kg | lbs |
| PPNG 12 DX | Nm³/hr | 20.0 | 775 | 840 | 2015 | 31 | 33 | 79 | 232 | 511 |
| | Scfm | 11.8 | | | | | | | | |
| PPNG 24 DX | Nm³/hr | 40.0 | 775 | 840 | 2015 | 31 | 33 | 79 | 233 | 514 |
| | Scfm | 24.0 | | | | | | | | |
| PPNG 35 DX | Nm³/hr | 60.0 | 775 | 840 | 2015 | 31 | 33 | 79 | 240 | 529 |
| | Scfm | 35.0 | | | | | | | | |
| PPNG 47 DX | Nm³/hr | 80 | 775 | 840 | 2015 | 31 | 33 | 79 | 241 | 531 |
| | Scfm | 47.0 | | | | | | | | |
| PPNG 59 DX | Nm³/hr | 100.0 | 775 | 840 | 2015 | 31 | 33 | 79 | 243 | 536 |
| | Scfm | 59.0 | | | | | | | | |
| PPNG 71 DX | Nm³/hr | 120.0 | 775 | 840 | 2015 | 31 | 33 | 79 | 244 | 538 |
| | Scfm | 71.0 | | | | | | | | |
| PPNG 82 DX | Nm³/hr | 140.0 | 775 | 840 | 2015 | 31 | 33 | 79 | 248 | 547 |
| | Scfm | 82.0 | | | | | | | | |
| PPNG 94 DX | Nm³/hr | 160.0 | 775 | 840 | 2015 | 31 | 33 | 79 | 249 | 549 |
| | Scfm | 94.0 | | | | | | | | |
| PPNG 118 DX | Nm³/hr | 200.0 | 775 | 840 | 2015 | 31 | 33 | 79 | 250 | 551 |
| | Scfm | 118.0 | | | | | | | | |
| PPNG 147 DX | Nm³/hr | 250.0 | 1400 | 840 | 2015 | 55 | 33 | 79 | 362 | 798 |
| | Scfm | 147.0 | | | | | | | | |
| PPNG 177 DX | Nm³/hr | 300.0 | 1400 | 840 | 2015 | 55 | 33 | 79 | 387 | 853 |
| | Scfm | 177.0 | | | | | | | | |
| PPNG 206 DX | Nm³/hr | 350.0 | 1400 | 840 | 2015 | 55 | 33 | 79 | 388 | 855 |
| | Scfm | 206.0 | | | | | | | | |
| PPNG 235 DX | Nm³/hr | 400.0 | 1400 | 840 | 2015 | 55 | 33 | 79 | 395 | 871 |
| | Scfm | 235.0 | | | | | | | | |

Notes:
Inlet nitrogen quality acc ISO 8573-1:2010 [1-2-1]
Traces of hydrogen can be present in the delivered nitrogen
0.002 Nm³ hydrogen consumption per Nm³ of $N_2$

| Reference conditions | Metric | Imperial |
|---|---|---|
| Ambient/inlet temperature | 20°C | 68°F |
| Ambient pressure | 1 bar (a) | 14.5psi (a) |
| Inlet air quality | 1:4:1 acc ISO 8573 1:2010 | |
| Humidity | 0% RH | |

# Options

**Outlet nitrogen check and restore**

**External oxygen analyzer (wall-mounted)**

**External hydrogen analyzer (wall-mounted)**