

Nitrogen generators with pressure swing adsorption technology

PPNG 1-5.5 HE



The PPNG 1-5.5 HE is Pneumatech's premium generator for low-flow nitrogen applications. The cost-efficient alternative to ordering and storing gas cylinders, the PPNG HE gives you complete control over your nitrogen supply. Extremely compact thanks to its small footprint, it easily fits in existing compressed air networks. Its innovative PSA cycle and highly efficient CMS keep your operational costs down, while its extruded profile design ensures superior reliability and a long lifetime.

PSA nitrogen generation

The PPNG HE uses Pressure Swing Adsorption (PSA) technology to separate nitrogen from compressed air. As the air passes through a vessel filled with Carbon Molecular Sieves (CMS), the oxygen and other trace gases in the air are adsorbed by the CMS, leaving only nitrogen with a purity of up to 99.999% to reach the outlet.

Features and benefits

- Cost-efficient alternative to gas cylinders
- Outstanding air factors with innovative PSA cycle design
- Economizer function prevents air/energy waste
- Purity selection up to 99.999%
- Compact footprint
- Easy to install and use with existing compressed air networks

General specifications

- Pressure Swing Adsorption (PSA) nitrogen generator with extruded profile design
- Nitrogen purity achievable up to 99.999%
- Inlet pressure range: 4-10 barg/60-145 psig
- Inlet temperature range: 5-50°/41-122°F
- Required inlet air quality: 1-4-1 according to ISO 8573-1:2010
- Power supply: 115V AC/230V AC & 50/60Hz

The nitrogen cylinder alternative

- **Easy operation**

Easy to install and use, the PPNG 1-5.5 HE can simply be connected to your compressed air network.

- **Long lifetime**

The PPNG's protective features ensure a long lifetime of the machine and the CMS.

- **Efficiency**

Our innovative PSA cycle and high-quality CMS deliver best-in-class efficiency to keep your energy costs down and emissions low. The Economizer function ensures no air/energy is wasted because of stand-by losses.

- **Quality and purity options**

A host of optional features is available for applications that require strict quality and purity control. These include inlet and outlet PDP monitoring, a nitrogen purity analyzer, and a flow meter sensor.

- **Advanced controller**

An intuitive color touch screen shows the machine status, key parameters, service information, and alerts. The advanced controller can also be set up for remote monitoring when performance control is required.



Technical specifications for PPNG 1-5.5 HE

Specifications	Units	Product → Purity ↓	PPNG 1 HE	PPNG 2 HE	PPNG 3 HE	PPNG 3.5 HE	PPNG 5 HE	PPNG 5.5 HE
Nominal free Nitrogen delivery ⁽¹⁾	m³/hr	95%	4.3	6.9	9.6	11.1	14.3	18.8
		99.9%	0.8	1.7	2.5	3.2	4.3	5.5
		99.999%		0.3	0.5	0.8	1.6	1.8
Nominal air consumption ⁽¹⁾	m³/hr	95%	8.1	13	18.2	21	27.2	35.7
		99.9%	2.9	6.2	9.4	12	15.9	20.3
		99.999%		2.4	3.3	5.6	10.9	12.6
Air factor		95%	1.9	1.9	1.9	1.9	1.9	1.9
		99.9%	3.7	3.7	3.7	3.7	3.7	3.7
		99.999%		7	7	7	7	7
Pressure dewpoint outlet (°C)	°C/°F		-40	-40	-40	-40	-40	-40
Maximum pressure drop	bar	95-99.9%	0.6	0.8	0.8	0.8	0.9	1
		99.95% - 99.999%	0.6	0.3	0.3	0.3	0.4	0.5
Length	mm		440	440	440	440	440	440
	inch		17	17	17	17	17	17
Width	mm		453	453	453	453	453	453
	inch		18	18	18	18	18	18
Height	mm		738	918	1093	1243	1493	1843
	inch		29	36	43	49	59	73
Mass	kg		54	63	76	83	96	113
	lbs		119	139	168	183	212	249
Inlet - Outlet Connections			DN15	DN15	DN15	DN15	DN15	DN15

(1) Flow is measured at reference conditions: 1 bara and 20°C at operating pressure of 7 barg, inlet temperature 20°C/68°F & air inlet quality of ISO 8573-1:2010 class 1-4-1

Options

- **Advanced controller**

4.3" color display with TCP Modbus transmission.

- **Nitrogen purity analyzer**

Measures the purity of the produced nitrogen before allowing it to the outlet.

- **Inlet PDP monitoring**

Measures the PDP of compressed air at the inlet.

- **Outlet PDP monitoring**

Measures the PDP at the outlet.

- **Mass flow controller**

Ensures a constant nitrogen flow at the outlet.

- **Flow meter sensor**

Measures the nitrogen flow rate. Can be monitored with the advanced controller and re-transmitted through Modbus.

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

Measures the oxygen level in a room to ensure safety.