



# NITROGEN-GENERATOR IMT-PN PAN

## > NITROGEN GENERATION WITH "PRESSURE SWING ADSORPTION" UP TO 99,9999% (6.0) / 1.0 PPM (RESIDUAL O<sub>2</sub>)

INMATEC PAN technology provides a consumption-based, energy-optimised nitrogen supply in a purity of up to 6.0/1.0 ppm (residual oxygen) and quantities of 0.5 – 10,000 Nm<sup>3</sup>/h.

### PROCESS:

The production of high-purity to ultra-pure nitrogen is what makes INMATEC PSA nitrogen generators stand out. In this process, the clean compressed air flows through the adsorption containers. In this pressure swing adsorption process, the high-quality activated carbon binds the oxygen molecules, while the free nitrogen molecules flow unhindered into the product tank. This production process removes carbon dioxide molecules as well as oxygen molecules. The dry and high-purity nitrogen can now be used in a wide range of applications.

### BENEFITS:

Constant quality control is ensured by measuring nitrogen purity. All measured values are recorded on our user-friendly INMATEC touch control panel and can be monitored remotely from anywhere in the world with internet access.

The special PAN process reduces compressed air consumption for cyclical quantities and also guarantees constant nitrogen purity. The adsorption potential of the high-quality activated carbon is used to optimum effect and results in a considerable improvement in the efficiency of the nitrogen generators.

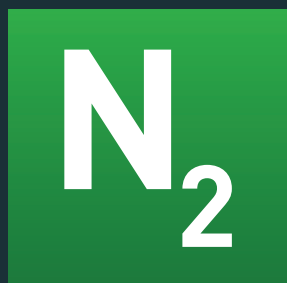
The effectiveness of the new INMATEC PAN technology promises savings from the very first minute as well as reducing climate-damaging CO<sub>2</sub> emissions.

Low-maintenance valve technology and compact design are further benefits in addition to the constant availability of high-purity nitrogen.

A multilingual touch control panel, remote control via PC and iPad, long-term data storage, automatic restart after a power cut and inlet and outlet filtration all come as standard.



## > ONSITE IS OUR WORLD



### Options:

#### Measured values:

- Flow
- Pressure dew point
- Inlet pressure
- Temperature

#### Interfaces:

- Modbus
- Profibus
- GSM
- VMC

#### Availability:

- Redundant
- Load change control
- Modular extension
- Recipe control

#### High pressure:

- up to 300 bar
- System control





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## Calculation of compressed air requirements

Multiplying the nitrogen capacity by the air factor indicated below gives the compressed air requirements.

Nitrogen content [%]	95,00	97,00	98,00	99,00	99,50	99,90	99,99	99,999	99,9999
Air factor	1,9	2,1	2,3	2,5	2,9	3,9	5,5	8,0-10	10,0-12,0

## Compressed air specification

Temperature range: +5 to +50°C  
Air quality: ISO 8573.1, Class 1: dirt and oil, Class 4: water  
Pressure dew point: +3°C

## Ambient conditions

Temperature range: +5°C to +40°C  
Option:  
Temperature range: -50°C to +60°C

## Technical dimensions and connections

Dimensions H x W x D (mm): 925 x 560 x 1285 (PN-1150 up to PN-1280)  
1000 x 1000 x 1710 (PN-1350 and PN-1450)  
1000 x 1000 x 1900 (PN-1550)  
from PN-1650 special dimensions on request

Operating pressure: 11 bar  
Electrical connection: 110-230 V/60-50 Hz (shock-proof plug)  
Noise level: from 55 to max. 85 dB(A)

Certified in accordance with ISO 9001:2008 and in accordance with Pressure Equipment Directive 93/27/EC

## Special design

Stainless steel, explosion protection, Atex, IP 65, ASME



ISO 9001:2008

## Capacity (Nm<sup>3</sup>/h)

Nitrogen content (%) Quality Residual O <sub>2</sub> (PPM)	95,0	97,0	98,0	99,0	99,5	99,9	99,99	99,995	99,999	99,9999
				2,0	2,5	3,0	4,0	4,5	5,0	6,0
				10.000	5.000	1.000	100	50	10	1
IMT-PN 1150	5,70	4,70	4,10	3,20	2,60	1,60	0,90	0,70	0,40	
IMT-PN 1250	10,80	8,70	7,90	5,80	5,10	3,20	1,30	1,10	0,85	
IMT-PN 1280	16,50	13,40	12,00	9,00	7,70	4,80	2,40	1,80	1,30	
IMT-PN 1350	20,80	17,10	15,80	12,60	9,50	6,30	3,20	2,50	1,80	
IMT-PN 1450	31,20	25,60	23,70	18,90	14,20	9,50	4,80	3,60	2,40	
IMT-PN 1550	49,20	40,10	35,60	28,40	22,10	12,60	6,30	4,80	3,20	
IMT-PN 1650	84,00	59,90	53,80	46,60	37,80	23,20	11,70	8,80	5,80	
IMT-PN 1750	105,00	84,00	76,00	64,00	51,80	32,60	16,50	11,90	7,30	
IMT-PN 2000	140,70	116,50	98,30	77,50	63,00	38,80	19,40	14,60	9,70	
IMT-PN 2150	211,10	174,30	146,50	115,00	94,50	57,80	29,00	21,80	14,50	
IMT-PN 2250	260,40	215,30	188,00	143,90	116,60	73,40	35,80	26,90	18,00	
IMT-PN 3000	372,80	308,70	269,90	205,80	167,00	102,90	51,40	38,60	25,80	
IMT-PN 4000	442,10	366,50	320,30	244,70	198,50	121,80	60,90	45,80	30,60	
IMT-PN 5000	630,00	522,90	457,80	348,60	283,50	174,30	87,20	65,40	43,60	
IMT-PN 6000	913,50	756,00	661,50	504,00	409,50	252,00	126,00	94,50	63,00	
IMT-PN 8000	1370,30	1134,00	992,30	756,00	630,00	378,00	189,00	142,00	95,00	

All values apply at 7 bar inlet pressure and 20°C ambient temperature.

on request