

## **PSA Nitrogen Generator**

**Model: INMATEC PNC9000**

### **PSA Nitrogen Generator**

Nitrogen is often delivered in cylinders, bundles or in tanks. The tank must be refilled or, if applicable, replace the cylinders or bundles. This is associated with deliveries according to specific schedules and entails logistics and handling costs. On site nitrogen generator will help improve your bottom line and enhance the safety of your operation.

### **Principles of Operation**

The technology associated with supplying a constant and purified Nitrogen Gas is referred to Pressure Swing Adsorption (PSA). This technology uses a molecular screen bed of desiccants known as Carbon Molecular Sieve, in order to effectively remove (extract) oxygen and carbon dioxide molecules from the compressed air. The two screens switch alternatively from the filter mode to regeneration mode to ensure a consistent supply of nitrogen.



### ***In summary the nitrogen system has the following advantages:***

- Nitrogen, whenever you need it, at any location, at a self-cost price which can be calculated in advance
- Nitrogen purity up to 99.9999%
- Low noise
- No logistics
- Cost savings
- Filter unit can be replaced in few minutes

## Scope of Supply

### Nitrogen Generator assembly

- Fully assembled on steel channel frame consisting of the following main components

### PSA Tower

- 2 x pressure vessels filled with Carbon Molecular Sieve (CMS)
- Pressure Vessel code = ASME VIII (No Code Stamp)
- Piping assembly and control valves
- Manufacturer production standard paint finish

### Control Panel

- Full function PLC control panel
- Remote control / Trend display
  - Dew point
  - Oxygen analyzer
  - Outlet pressure
  - Inlet pressure
  - Inlet temp
  - Flow rate
- Local alarms =
  - Low nitrogen purity



### Filtration Nitrogen Generator (a component of the system)

- Fine filter
- Activated carbon filter
- Micro filter

### Filter / Metering System (a component of the system)

- Micro filter (as per above)
- Pressure regulator
- Flow controller

### Nitrogen Surge / Buffer Vessel (Priced Separately)

- Pressure vessel code = AS1210
- Pressure indicator & pressure safety relief valve

## Technical Specifications

Model:	PNC9000						
Nitrogen Generator Type:	PSA						
Nitrogen Outlet Purity: %	95.0%	97.0%	98.0%	99.0%	99.5%	99.9%	99.99%
Nitrogen Outlet Capacity: [Nm <sup>3</sup> /h]	122.1	109.9	93.6	71.7	58.4	37.6	23.6
Feed Air Supply (Normal Capacity to DIN 1343 Reference Conditions): [Nm <sup>3</sup> /h]	225.9	225.3	205.9	185.7	165.9	123.3	108.8
Dry Air Receiver: [L]	1500	1500	1500	1500	1500	1000	1000
Nitrogen buffer Tank: [L]	1000	1000	1000	1000	1000	1000	1000
Nitrogen Outlet Pressure: [Bar g]	6						
Nitrogen Dew Point: °C PDP	-10 to -20						
Feed Air Requirement:							
Feed Air Pressure: [Bar g]	7 to 8						
Feed Air Pressure Dew Point: °C	3 – 5						
Power Supply: Vac / Ø / Hz	230 / 1 / 50						
Dimensions (L x W x H): mm	830 x 1100 x 2100						
Weight: kg	859						
Air Inlet Port: G “ (DN mm)	1-1/2”				1”		
Nitrogen Outlet Port: G “ (DN mm)	1/2”						
Noise	Approx. < 70dB(A)						
Supply Termination Points / Battery Limits:	<ul style="list-style-type: none"> <li>• Electrical: Local Control Panel</li> <li>• Mechanical: Package Base, Air Inlet Port &amp; Nitrogen Outlet Port</li> </ul>						
Note:	<ul style="list-style-type: none"> <li>• Operating amb temp range = 20 to 40DegC</li> <li>• Compressed air temp range = 10 to 50DegC</li> <li>• Additional Options / Accessories are separately described &amp; priced from Base / Standard Package – Refer to Other Options &amp; Price Adders (unless otherwise specified).</li> </ul>						