

## Grade Overview

	Nitrogen Technical	Nitrogen Premier	Nitrogen Pharma	Nitrogen BIP	Nitrogen BIP ECD	Nitrogen BIP Plus
Purity	99.999%	99.9992%	99.9992%	99.9999%	99.9999%	99.99998%
Analytical Verification	N/A	BATCH	EP GMP Part II	BATCH	BATCH	Individual
Oxygen	5	3	3	0.01	0.01	0.01
Hydrogen	–	–	–	0.2	0.2	0.05
CO+CO <sub>2</sub>	–	–	1+1	0.5	0.5	0.05
Water	2	2	2	0.02	0.02	0.02
THC	–	0.5	–	0.1	0.1	0.05
CFC	–	–	–	–	0.001	–
NOx	–	–	–	0.1	–	0.02
SO <sub>2</sub>	–	–	–	–	–	0.02

## Nitrogen Premier 5.2 (Rental Groups)

Product	PR Code	Size	Valve	Pressure	Contents
Nitrogen Premier 5.2 (D02)	26050	X2A	BS3	200 bar	0.4 m <sup>3</sup>
Nitrogen Premier 5.2 (D02)	401673	X7A	BS3	200 bar	1.3 m <sup>3</sup>
Nitrogen Premier 5.2 (D02)	26052	X47S	BS3	200 bar	8.5 m <sup>3</sup>

## Nitrogen Pharma 5.2 (Rental Groups)

Product	PR Code	Size	Valve	Pressure	Contents
Nitrogen Pharma 5.2 (D02)	133996	X47S	BS3	200 bar	8.5 m <sup>3</sup>
Nitrogen Pharma 5.2 (D09)	143678	12X50S	BS3	200 bar	107.6 m <sup>3</sup>

## Nitrogen BIP 6.0 (Rental Groups)

Product	PR Code	Size	Valve	Pressure	Contents
Nitrogen BIP 6.0 (D02)	53960	X10S	BS3	200 bar	1.8 m <sup>3</sup>
Nitrogen BIP 6.0 (D02)	25883	X47S	BS3	200 bar	8.5 m <sup>3</sup>
Nitrogen BIP 6.0 (D09)	28691	12X50S	BS3	200 bar	107.6 m <sup>3</sup>

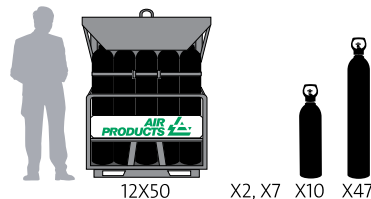
## Nitrogen BIP ECD 6.0 (Rental Groups)

Product	PR Code	Size	Valve	Pressure	Contents
Nitrogen BIP ECD 6.0 (D02)	25917	X47S	BS3	200 bar	8.5 m <sup>3</sup>

## Nitrogen BIP Plus 6.8 (Rental Groups)

Product	PR Code	Size	Valve	Pressure	Contents
Nitrogen BIP Plus 6.8 (D02)	25884	X47S	BS3	200 bar	8.5 m <sup>3</sup>
Nitrogen BIP Plus 6.8 (D09) Check local asset availability	56757	12X50S	BS3	200 bar	107.6 m <sup>3</sup>

## Mode of Supply



## Cylinder and Pack Specifications

Size	Pressure	Height	Diameter	Width	Length	Empty Weight	Full Weight
X2A	200 bar	510 mm	100 mm	–	–	3.4 kg	3.9 kg
X7A	200 bar	730 mm	152 mm	–	–	10.16 kg	11.67 kg
X10S	200 bar	655 mm	176 mm	–	–	20.00 kg	22.09 kg
X47S	200 bar	1525 mm	230 mm	–	–	66.93 kg	76.80 kg
12X50S	200 bar	1900 mm	–	965 mm	735 mm	1026.00 kg	1150.90 kg

## Explanation of Terminology

**Batch** – The product is filled on a manifold and Air Products carries out statistical batch analysis on cylinders from the same batch to verify conformance to the advertised specification.

**Individual** – The product is filled on a manifold, but each cylinder is individually analysed to verify conformance to the advertised specification.

**EP, GMP part II** - Pharma grade gases are delivered with hard copy certificates of analysis as standard and are fully compliant with the monographs of the European, US and Japanese pharmacopoeias.

All work is carried out within the scope of our ISO:9001 2008 accredited Quality Management System. All analytical results are retained for quality control and auditing purposes. The full product specification is shown on the cylinder label together with a unique lot number delivering traceability to the filling location, raw material batch, and quality control records.

## Synopsis – Nitrogen

**BIP®** technology removes oxygen and moisture from ultra-high purity gas making it ideal for any application where these are critical impurities. Benefits include:

< 100 parts per billion O<sub>2</sub>, and  
< 20 parts per billion H<sub>2</sub>

## For Analytical applications:

- Reduced GC column bleed and longer column life - Lower expenditure on column replacement, less analyser down time, and lower maintenance costs.
- Reduced baseline noise, and elimination of extra peaks - More accurate analysis, greater sensitivity, and lower limits of detection.
- An ideal instrument fuel gas - Low THC specification

**More useable gas per cylinder** – Reduced gas costs, and less cylinder changeovers.

## Elimination of external inline purifiers –

No initial purchase costs, less analyser downtime, no maintenance costs, no purifier disposal issues, no purifier saturation, more accurate analysis. A more environmentally friendly solution for delivering ultra-high purity gas.

**Consistent gas supply** – No 'rogue' cylinders. BIP gas is never a source of contamination.

**Nitrogen BIP Plus** features even higher overall purity based on improved specifications of other often critical impurities such as CO, CO<sub>2</sub> and H<sub>2</sub>.

Certificates of conformity are available on request for all grades of ultra-high purity Nitrogen.