

Grade Overview

	Hydrogen Technical	Hydrogen Premier Plus	Hydrogen Ultrapure	Hydrogen BIP	Hydrogen Ultrapure Plus	Hydrogen BIP Plus
Purity	99.99%	99.9992%	99.9995%	99.9999%	99.9999%	99.99996%
Analytical Verification	N/A	BATCH	BATCH	BATCH	Individual	Individual
Oxygen	1	1	0.5	0.1	0.1	0.1
Nitrogen	100	5	2	1	0.2	0.2
CO+CO ₂	–	0.5	0.5	0.1	0.05	0.05
Water	2	2	1	0.02	0.5	0.02
THC	–	0.1	0.1	0.01	0.05	0.01

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.

Synopsis – Hydrogen

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 H₂O, and
< 20 parts per billion O₂

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.

Hydrogen BIP Plus features even higher overall purity based on improved specifications of other often critical impurities such as CO, CO₂ and N₂.

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

Hydrogen Premier Plus 5.2 (Rental Groups)

Product	PR Code	Size	Valve	Pressure	Contents
Hydrogen Premier Plus 5.2 (D02)	26048	X10S	BS4	200 bar	1.7 m ³
Hydrogen Premier Plus 5.2 (D02)	26046	X47S	BS4	200 bar	7.9 m ³
Hydrogen Premier Plus 5.2 (D09)	26047	11X47S	BS4	200 bar	86.3 m ³

Hydrogen BIP 6.0 (Rental Groups)

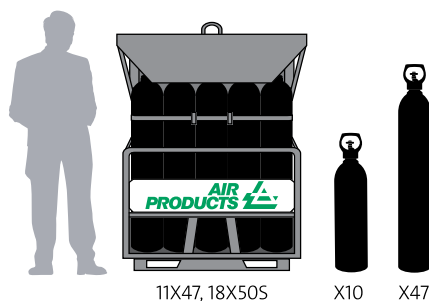
Product	PR Code	Size	Valve	Pressure	Contents
Hydrogen BIP 6.0 (D02)	138390	X47S	BS4	200 bar	7.9 m ³
Hydrogen BIP 6.0 (D09)	465246	18X50S	NEVOC	300 bar	212.6 m ³

Hydrogen BIP Plus 6.6 (Rental Groups)

Product	PR Code	Size	Valve	Pressure	Contents
Hydrogen BIP Plus 6.6 (D02)	138744	X47S	BS4	200 bar	7.9 m ³

Mode of Supply

For further information, please refer to mode of supply sheet



Cylinder and Pack Specifications

Size	Pressure	Height	Diameter	Width	Length	Empty Weight	Full Weight
X10S	200 bar	655 mm	176 mm	–	–	20.00 kg	20.14 kg
X47S	200 bar	1525 mm	230 mm	–	–	66.93 kg	67.60 kg
11X47S	200 bar	1963 mm	–	680 mm	1000 mm	1045.53 kg	1052.73 kg
18X50S NEVOC	300 bar	2138 mm	–	862 mm	1190 mm	1688.24 kg	1705.98 kg