



Application Brief:

Hydrogen Cylinders for Alternative Fuel Trains



Giving you more **green journeys**

At Luxfer, we are dedicated to creating a greener world for future generations. Our cylinders make rail transport better for everyone, getting you to your destination without costing you the earth.

Getting you from A to B.

Train operators in England have been given a target to phase out diesel trains by 2040 in favour of trains using cleaner fuel technologies. Luxfer are working with several train manufacturers and train leasing companies to develop new trains and also to convert mid-life and redundant rail stock to hydrogen powered locomotives.

Hydrogen technology in 2020 may be a new idea for trains but Luxfer have been making alternative fuel cylinders and systems for road transport for over 20 years. There are over 100,000 Luxfer alternative fuel cylinders in use and over 18,000 commercial vehicles operating across the globe.

Hydrogen is one of the cleanest energy carriers. It can be produced by electrolysis and/or by using the energy produced by renewable technologies e.g. wind or tidal power.

The only output from the generation of energy using hydrogen in conjunction with a fuel cell is water. It is an ideal energy source for trains operating on non-electrified lines.

The Luxfer G-Stor™ H2 is a lightweight Type 3 aluminium lined cylinder fully wrapped with aerospace grade carbon fibre. The structure is impermeable which offers the best safety option for hydrogen gas which may be stored in special compartments within or under the train carriage.

At Luxfer, we take pride in giving each of our customers the ability to help reduce pollutants by facilitating innovative new fuel technologies.

DID YOU KNOW?

- Luxfer supplied the fuel cylinders for the HydroFLEX project, the first UK hydrogen prototype train with Porterbrook and the University of Birmingham.
- There are a wide range of standard cylinder sizes available (custom lengths and diameters are available upon request with minimum order).
- In Europe bespoke fuel cylinder systems can be provided to vehicle manufacturers.
- Luxfer can provide Bulk Gas Transport modules to move large quantities of hydrogen to new locations for processing and/or for refuelling.

Why Luxfer?

- Over 100,000 alternative fuel cylinders in use globally.
- A worldwide company with manufacturing and assembly operations in United States, Canada, China, India and England.
- Global sales and marketing teams located in Europe, North America, South America, Middle East and Asia Pacific.
- 70 years' experience of providing safe, reliable gas cylinders around the world.

