

# Hydrogen Transport Refueler

For efficient Hydrogen transport to refuel and resupply to any location.

The Hydrogen Transport Refueler answers the question of "how do I get hydrogen to my site, my business, my equipment, etc.?"

With the large trailer capacity, this has the ability to provide well for most hydrogen applications and reduce the refilling trips needed over time.

The trailer technology includes built-in compression

and chilling equipment (powered by the on-board Hydrogen fuel cells), as well as various options for delivery connections.

Use the H2 Refueler to refill stationary Hydrogen storage units, heavy transport and machinery powered by Hydrogen or other Hydrogen consumers needs.

"Effective delivery of high pressure, high quality hydrogen has never been as easy or versatile."



## Cleaner

- **Fuel cell powered** - the onboard compressing and chilling equipment is powered by hydrogen fuel cells.
- **Hydrogen tank holds 1,000+ kg** - more than 1,000 kg of Hydrogen can be safely built into the trailer. The latest technology in gas pressure tanks provides efficient, safe storage of this renewable fuel.
- **Green Hydrogen recommended** - the source of the Hydrogen fuel is important and makes all the difference in making this a carbon-free power supply

## Faster

- **High pressure** - by storing the hydrogen at up to 700 bar the Hydrogen Transport Refueler can carry the maximum amount of hydrogen fuel to make the whole refueling operation as efficient as possible.
- TBC

## Versatile

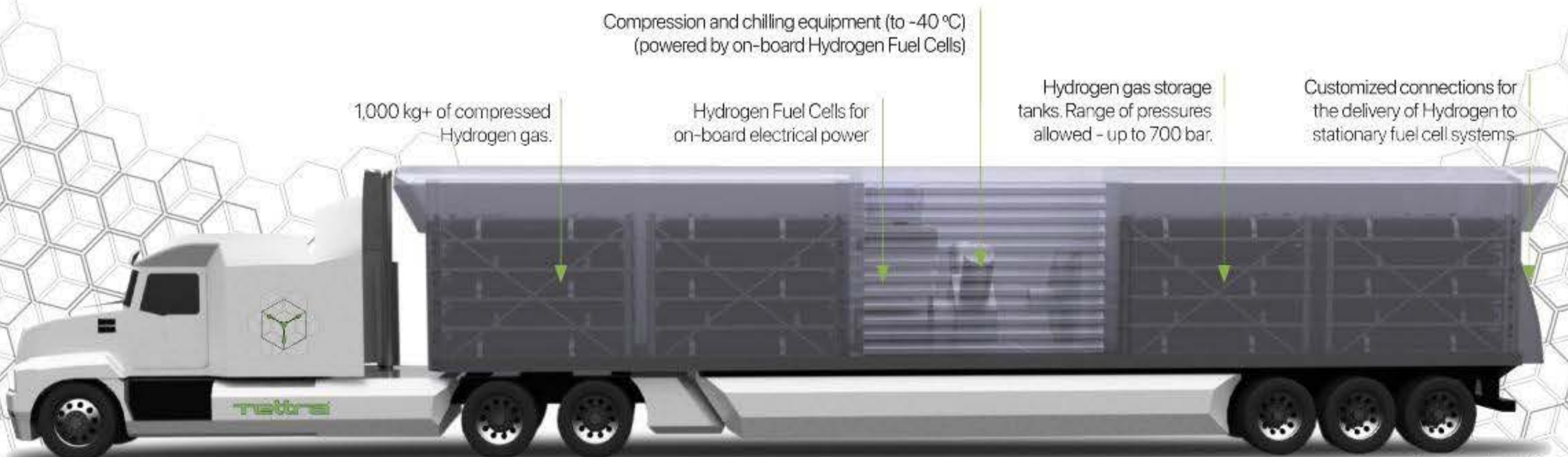
- **NAME** - Text
- **Custom sizes** - Different sizes of trailer are available based on the exact requirements of our customers.

## Specification

Onboard fuel cell power	?? kW
Hydrogen tanks	1,000+ kg
Hydrogen storage pressure	up to 700 bar
Hydrogen gas quality	99.999%
Hydrogen output connections	Custom
AC output - custom (Utility or EV chargers)	120/208 (BOP) 480 Delta 400 -415 Delta
Weight	?? kg (?? lbs)
Dimensions (L x W x H)	? x ? x ? (m) (? x ? x ?)

Specifications subject to change without notice.

## The World's Most Efficient & Reliable HTR





# Empower 1.5 MW Hydrogen Power Module

## Carbon-free, Scalable, UPS or Primary Power

The Empower 1.5 MW is a Hydrogen powered energy supply with a zero carbon footprint. Every Hydrogen Power Module has Hydrogen fuel built in to the system,

enabling quick, flexible installation. These make available large scale power to remote locations and minimize new cabling infrastructure.

### Cleaner

- **Carbon-free primary power** - With a continuous or refilled supply of green Hydrogen, the Empower 1.5 MW will deliver continuous 'green' power to your facility.
- **Green backup and UPS power** - Hydrogen Fuel Cells are always on-line, requiring no switching and making them ideal for emergency power systems. No more need for your diesel generators.
- **Kinder on people** - Hydrogen Fuel Cell systems make almost no noise and the only waste exhaust is pure water (no dangerous fumes or chemicals)
- **Longer lasting** - Hydrogen gas stores indefinitely without degrading (much better than current diesel supplies that need replacing, cleaning or removing)

### Scalable

- **Made to measure** - Hydrogen power modules are scalable and available in a range of standard sizes - 250 kW, 750 kW, and 1.5 MW (the 1.5 MW module is shown below.) Custom module(s) can be designed to meet your precise needs.
- **Additional Hydrogen storage** - Hydrogen Power Modules can run for as long as you can supply them with Hydrogen. You can increase the standard storage of Hydrogen at any time with the addition of extra Hydrogen storage modules.
- **Hydrogen refueling** - meet your Hydrogen fuel needs by either generating yourself with green energy sources (like solar, wind, hydro, or thermal), or use our transport refueler to deliver green Hydrogen from another generation site and refill your Hydrogen storage units.

### Versatile

- **Data centers** - fuel cell power modules are ideal for data center UPS power as they are on-line and can be installed externally very quickly (or internally if needed and connected to existing HVAC super-computer cooling systems)
- **Commercial** - business offices, warehouse, machinery, airports, etc. can all make good use of fuel cell power modules to provide, carbon-free power.
- **Reducing permits** - these units do not require permitting for CO2 emissions
- **Boost your EV chargers** - An on site Hydrogen Power Module also provides additional power for the growing demand of rapid EV chargers.
- **Retail** - retail stores and retail parks can make good use of fuel cell power to deliver carbon-free energy to all the core facility power needs. Often there are very large roof spaces that can be used to generate solar electricity which can feed into the energy management system.

**"Large scale, carbon-free power can be delivered to any location with the Hydrogen Power Modules."**

### Specification

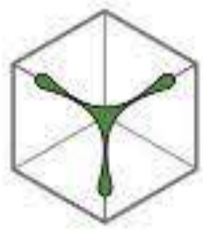
Fuel cell rating	1.12 MW 1.75 MW
Hydrogen gas quality	99.999%
Inverter rating	1 MW 1.5 MW
Battery	500 to 1,200 kWh
Hydrogen tanks	(Additional)
Hydrogen consumption	12 - 20 kWh per 1 kg
AC output (Load / Utility)	120.208 (BOP) 480 Delta
Weight	TBC
Dimensions (L x W x H)	12.2 x 2.44 x 3.5 m (40' x 8' x 11'6")

### Hydrogen Usage Calculator

Based on a continuous load, the fuel cell module will consume the following maximum amounts of Hydrogen.

Load	1 hour	6 hours	12 hours
1.5 MW (max)	100 kg	600 kg	1,200 kg
1MW	67 kg	400 kg	800 kg
500 kW	34 kg	200 kg	400 kg





## EMPOWER HYDROGEN POWER MODULES 1.0 & 1.5 MW

### Carbon-free, scalable, on-line UPS or primary power system.

Hydrogen Fuel Cell power modules are reliable and deliver a zero carbon footprint when operating, making them well suited to many power services.

Because these power modules have their own Hydrogen fuel as part of the system, they can be installed anywhere, making large scale power available to remote locations minimizing cabling infrastructure.

### Primary Power

With a continuous or refilled supply of Hydrogen, the fuel cell power modules can deliver continuous power to your facility. The built-in management system manages the individual cells as needed during the power delivery cycles.

### Backup and UPS Power

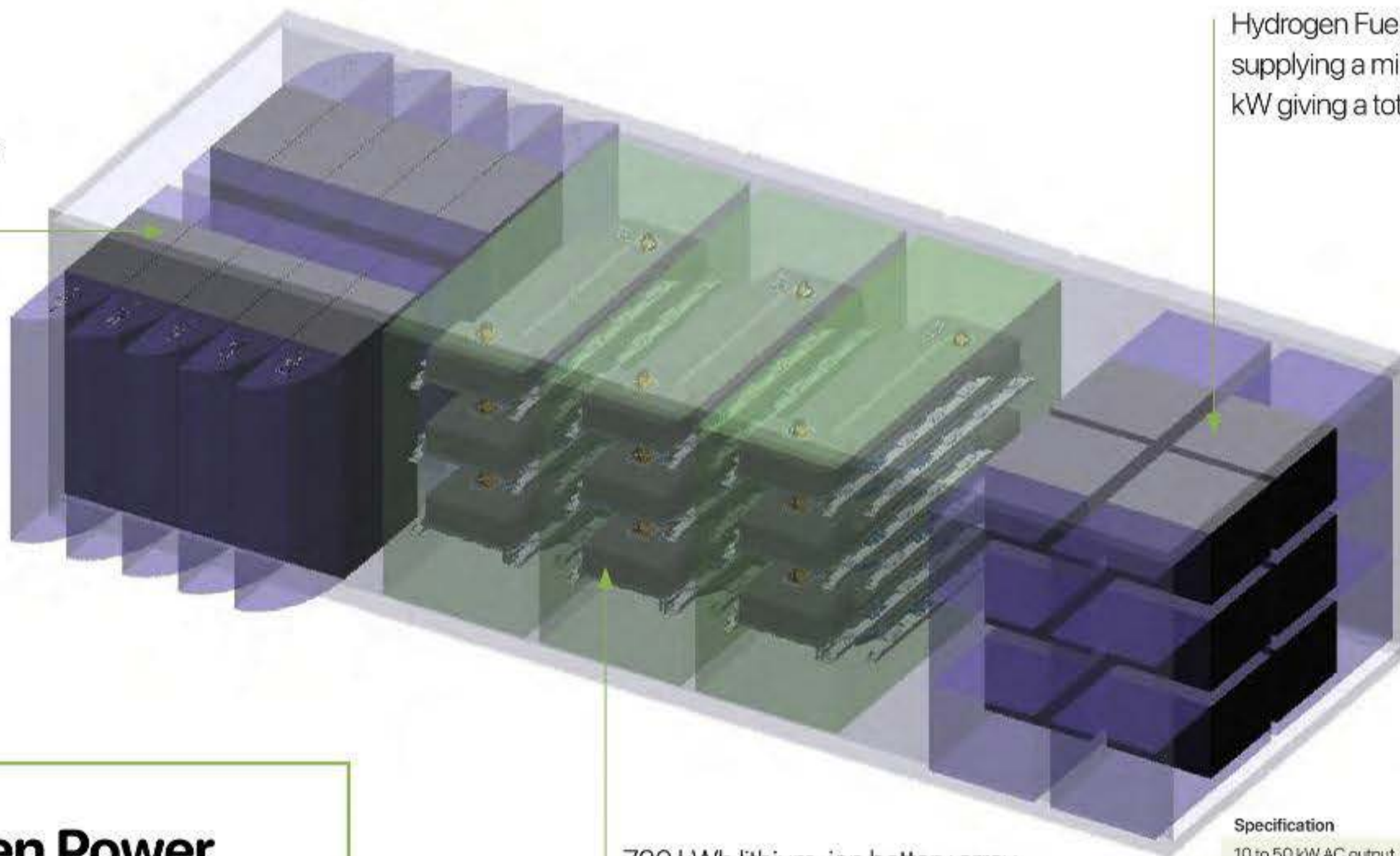
Hydrogen Fuel Cells are always on-line, requiring no switching and making them ideal for emergency power systems.

### Scalable Solutions

Fuel cell modules are scalable and available in a range of standard sizes - 250 kW, 750 kW, and 1.5 MW. (The 1.5 MW module is shown below.)

Alternatively, you can have a custom module(s) system designed to meet your precise needs.

Inverters to deliver the required power output(s).



Hydrogen Fuel Cells, each supplying a minimum of 80 kW giving a total of 1.76 MW.

### Hydrogen Power Module 1.5 MW

Quick to deploy and scalable to any power requirement, this power module is powered by Hydrogen Fuel Cells with built-in inverters and support battery storage. Connect to your facility for primary, load-shedding, or UPS power. Just add Hydrogen – you're ready to go.

720 kWh lithium-ion battery array providing continual power and high efficiencies.

Specification	
10 to 50 kW AC output, 100 kWh battery, 10 foot pod	
250 kW AC output, 120 kWh battery, 20 foot pod	
500 kW AC output, 200 kWh battery, 20 foot pod	
750 kW AC output, 400 kWh battery, 40 foot pod	
1 MW AC output, 600 kWh battery, 40 foot pod	
Made to exact custom specifications	

