

H-CELL 2.0

Hybrid fuel cell system for model R/C vehicles

- Real-working model of futuristic technology
- Compatible with TAMIYA TRF416/416X/417 chassis
- Uses HYDROSTIK™ solid hydrogen cartridges
- Ability to refuel cartridges using HYDROFILL™



TAMIYA TRF416/416X/417 chassis, motor, servos, speed controller, receiver, transmitter or other accessories can be purchased at your local hobby store.

 **Horizon**
Fuel Cell Technologies

H-CELL 2.0

hydrogen fuel cell hybrid power kit

A NEW POWER CATEGORY IN HOBBY RC

The **H-CELL 2.0** represents a step-change in hobby model racing which so far either uses nitro-gasoline powered combustion engines, or powerful batteries with low capacity. Not only does Horizon's H-cell improve usability by greatly extending runtimes, but a new tech miniature category is now available for all those passionate about technology and engineering. Now hobbyists get to experience tomorrow's automotive technology on a 1:10 scale, produce and store their own hydrogen, and get to experience the complete independence of renewable fuel when using solar or wind power.



HYDROFILL™

the **HYDROFILL™** is the first step towards consumer-generated renewable fuel, offering fast-charge and high-autonomy electrically powered products or even real-size electric cars. With this innovation, Horizon is proposing that users no longer need to wait for the infrastructure for hydrogen. With devices such as the **HYDROFILL™** users actually BECOME the infrastructure.



HYDROSTIK™

Horizon's new **HYDROSTIK™** solid hydrogen cartridge has a battery shape and contains a special metal alloy that allows hydrogen to be stored as a solid, as part of the alloy matrix.

Storing hydrogen in metal hydride creates the highest volumetric energy density of any form of hydrogen storage – even higher than liquid hydrogen. Unlike ordinary compressed hydrogen tanks however, the pressure inside the canister is very low (below 10 bars in normal temperature conditions, and not exceeding 20 to 30 bars at elevated temperatures) making this device the safest and most practical means of storing hydrogen today. The **HYDROSTIK™** has the additional advantages of being refillable (from pressurized gas bottles, or from water-electrolysis devices such as Horizon's **HYDROFILL™**). The cartridge is non-toxic, eco-friendly, and competitive on cost/capacity with existing battery devices.

Specifications	
Peak power	150W (with battery): 18A / 8V
Capable speed	>60km/h
Nominal power	30W / 8V
Total Energy (hybrid)	45Wh
Fuel cell weight	400g
H2 cartridge weight	90g
Total weight (no battery)	717g
Total weight with battery*	890g
Fuel cell size	8 x 6.4 x 3.45 (cm)
Control box size	8.5 x 8 x 2.5 (cm)
Battery charging voltage	8.4V
Battery charging current	3A
Normal operating time	60 min (2 cartridges + fully charged battery)
Operating temperature	5°C - 35°C
H2 cartridge size	Ø22 x 81mm x 2 units
H2 cartridge weight	90g x 2 units
Hydrogen energy	11Wh per HYDROSTIK™ cartridge (X2)
Cartridge recharge	4 hours per cartridge using HYDROFILL™
HYDROFILL™ refueler	60W input per refill hour (AC or solar panel options)

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