

# Horizon 400kW Fuel Cell Driving Rockcheck Heavy-Duty Trucks to New Heights

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/EINPresswire.com/ -- Rockcheck Group recently unveiled their new heavy-duty fuel cell truck equipped with a 400kW fuel cell from Horizon, currently under test before market launch. With the world's most powerful single-stack fuel cell system on board, zero-emission commercial vehicles are reaching new heights. Horizon is bolstering its already strong position in the market with the new fuel cell, and plans to leverage the technology globally after the recent acquisition of Hyzon Motors intellectual property.

The new Rockcheck heavy truck platform is designed around the core principles of "high efficiency, economy, and reliability," featuring multiple innovations within the fuel cell stack and system, Type IV hydrogen storage tanks, electric drive axles, and optimised overall vehicle weight. The hydrogen propulsion system was co-developed by Horizon and Rockcheck. It relies on well-proven Horizon heavy duty fuel cells containing patented graphite-metal hybrid bipolar and proprietary hydrogen circulation module, boasting electrical efficiency of 49-60%, far exceeding traditional engines. Combined with a dual-motor rear axle direct drive achieving over 93% transmission efficiency and an intelligent telematics management system, it forms a high-power, energy-efficient powertrain core.



Rockcheck Heavy Duty Truck Powered by 400kW Horizon Fuel Cell



The Horizon 400kW unit is the most Powerful Automotive Fuel Cell in the World

The vehicle also benefits from advanced cooling and waste heat recovery capabilities, achieving substantial energy savings and overcoming the technical challenge of rapid cold starts at temperatures as low as -35°C. An innovative lightweight design features in the 35MPa-450L Type IV hydrogen storage system



Horizon logo file

produced by Tianhai Hydrogen Energy. This system reduces weight by 500kg compared to traditional systems. Paired with a 750MPa high-strength steel frame, the overall vehicle weight is limited to less than 10 tons, significantly improving payload utilisation efficiency.

Particularly noteworthy is the vehicle's hydrogen consumption, potentially as low as 7kg per 100km when fully loaded, delivering significant economic advantages in long-haul logistics operations. The recently developed fuel cell system from Horizon is not only suitable for on-highway heavy-duty trucks, but can decarbonise diverse applications such as large mining trucks and locomotives, and a wide range of diesel-burning equipment. It will further accelerate the transition to hydrogen in achieving vital emission reductions.

#### About [Horizon Fuel Cell](#) Group

Horizon Fuel Cell was founded in 2003, with a focus on fundamental innovation in materials and systems-level technology for fuel cells and electrolyzers. Horizon is a world leader in key technologies across the hydrogen value chain, making hydrogen viable through the provision of best-in-class equipment, and is a global leader in eliminating diesel from heavy duty applications.

#### About Rockcheck Group

Rockcheck Group was formed in 1988, and is headquartered in Tianjin, China. With over 10,000 personnel, the company is one of the top 500 enterprises in China. Rockcheck has a sense of urgency around ESG, and is investing heavily in environmental protection and social welfare. Rockcheck sees their decarbonisation efforts as part of a broader technology-enabled modernisation that positions the group well on the international stage.

Stefani Sun

Horizon Fuel Cell

+1 585-200-9227

[email us here](#)

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