

# Why Hydrogen for Heavy Road Transport?

Refueling time and range are important factors definitely for the operation of heavy duty trucks. In this regard, hydrogen is the best suitable fuel for heavy duty trucks by ensuring a short refueling time and long distance driving while promoting the zero-emission solution.

## Eco-friendly and still energy-efficient solution for transportation

### Easy Fueling

Xcient Fuel Cell can be charged within 8-20 minutes\* per single charge, ensures smooth operation.



\*Based on 350 bar tank pressure

\*May change depending on outer tank temperature

### Long Range

Xcient Fuel Cell reaches a drive range around 400 km\* per charge, thereby providing the ideal solution for long-distance operation.



\*in the 4 x 2 rigid body configuration while towing an 18-ton trailer

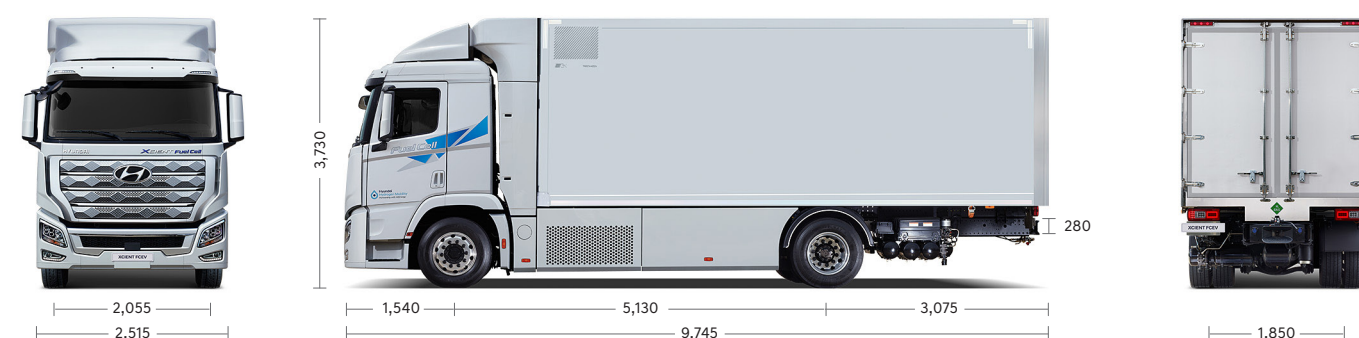
\*Depends on several conditions

## Main Specifications

Item Model	Xcient Fuel Cell
Vehicle Type	Cargo (Chassis Cab)
Cab Type	Day Cab
Drive System	LHD / 4 x 2
<b>Dimensions [mm]</b>	
Wheel Base	5,130
Overall (Chassis Cab)	
Length	9,745
Width	2,515 (2,550 with side protector), Maximum allowable width 2,600
Height	3,730
<b>Weight [kg]</b>	
Max. Gross Combination Weight	36,000 as pull-cargo
Max. Gross Vehicle Weight	19,000 as rigid truck
Front / Rear	8,000 / 11,500
Empty Vehicle Weight (Chassis Cab)	9,795
<b>Calculated Performance</b>	
Drive Range	Accurate range to be confirmed later
Max. Speed	85 km/h
<b>Powertrain</b>	
Fuel Cell Stack	190kW (95kW x 2EA)
Battery	661V / 73.2kWh
Motor / Inverter	350kW / 3,400Nm
Transmission	ATM 4500R / 6 forward and 1 reverse speed
Rear Axle ratio	4.875
<b>Hydrogen Tank</b>	
Filling Pressure	350 bar
Capacity	32.09kgH2 (available hydrogen amount at SOF 100%)
<b>Brake</b>	
Service Brake	Disc
Auxiliary Brake	Retarder (4-Speed)
<b>Suspension</b>	
Type Front / Rear	Air (2-bag) / Air (4-bag)
Tires Front / Rear	315/70R22.5 / 315/70R22.5
<b>Safety</b>	
Front Collision-avoidance Assist (FCA)	Standard
Smart Cruise Control (SCC)	Standard
Electronic Braking System (EBS) +Vehicle Dynamic Control (VDC)	Standard (ABS is included in VDC)
Lane Departure Warning (LDW)	Standard
Air Bag	Option

\*Hyundai Motor Company reserves the right to change specifications and equipment without prior notice.

## Dimensions



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# XCIENT Fuel Cell



# Our Journey towards Zero Emissions has started

The era of fossil fuel may have gifted us convenience, but it is affecting the beauty of the world around us and the air we breathe.

Hyundai is one of the first to see the potential of hydrogen as an alternative energy which can replace fossil fuels for a more sustainable future.

It represents the 100% zero-emission on a well-to-wheel basis where the hydrogen is produced from renewable energy.

A new chapter of Xcient Fuel Cell, the future of logistics without environment pollution, starts now.



## Technology & Performance

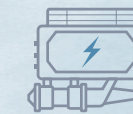
Eyes are on Hyundai's fuel cell heavy duty truck running on the road based on its technological strength. Xcient Fuel Cell promises powerful driving on every road, just like how trucks should be.

### FCEV powertrain developed by Hyundai's unique technology

#### Fuel Cell System

The core device enabling electrochemical reaction of hydrogen and oxygen to produce electric energy

\*Max. power 190kW (95kW stack X 2)



#### High-Voltage Battery Pack

It supports fuel cell system by storing or discharging electricity. The battery pack further allows recuperation during braking.

\*Battery pack capacity 73.2kWh (24.4kWh X 3)



#### Hydrogen Storage System

Seven equally-sized tanks for the maximum range at the lowest possible cost

\*Tank capacity 32.09kg (available hydrogen amount at SOF 100%)



#### Driving Motor

Generates driving force from electric energy supplied from the stack and battery

\*Max. power 350kW



## Bringing the Future Closer to Us

To get this truck running on the road, a complete H2 ecosystem is necessary.

Here's the entire set of factors on this value chain including the hydrogen supplier, hydrogen refueling station, customer and truck. Let's find how we approached in Switzerland as the first step.

### First Step in Switzerland

#### Build Partnerships

Build partnerships with hydrogen value chain players and various stakeholders to form a hydrogen community. 1,600 hydrogen trucks will be operated in Switzerland by 2025.

#### Well-to-Wheel Zero Emission

100% Green Hydrogen produced from renewable energy sources. It represents the 100% zero-emission on a well-to-wheel basis.



#### How to Operate

Consumers use services and operate hydrogen vehicles in the form of 'Pay-Per-Use'.

\*This pay-per-use plan includes fuel refueling, service charge, two-year warranty and six-year replacement (fuel cell, high voltage battery only).