

HYUNDAI
TRUCK & BUS

Hyundai Motor Company
<https://trucknbus.hyundai.com/hydrogen/en>
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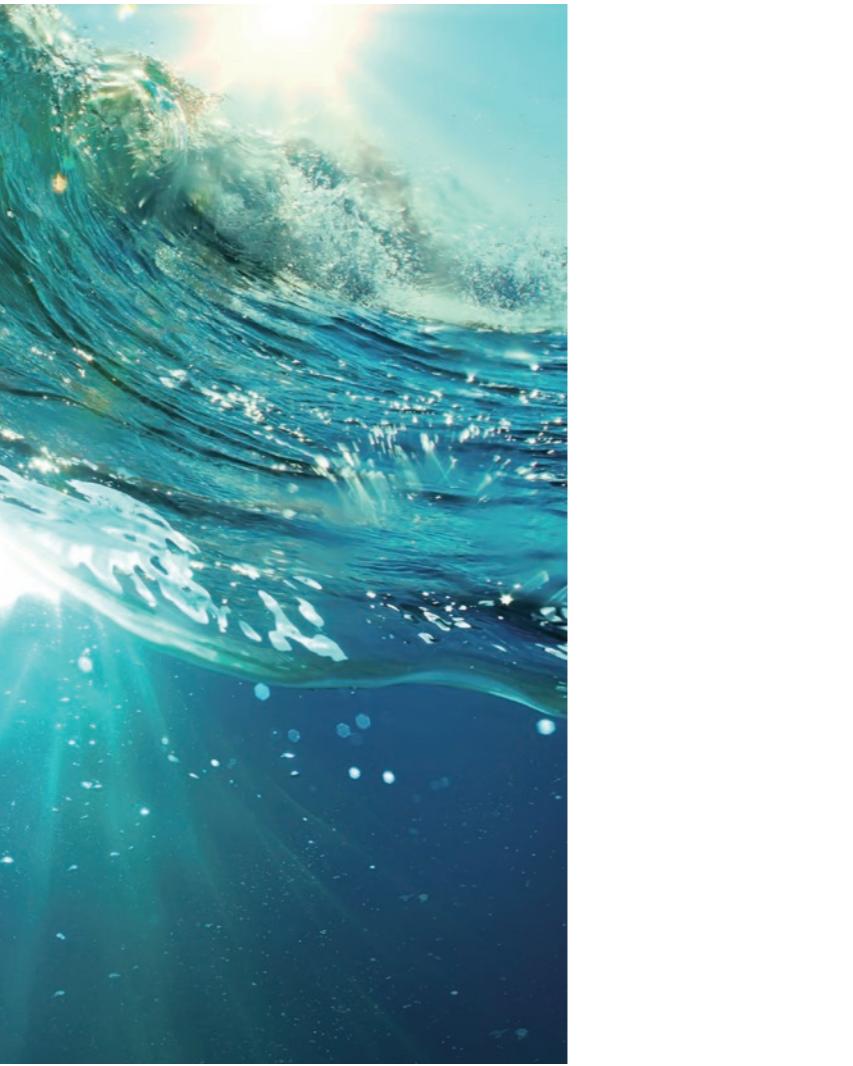


XCIENT Fuel Cell

HYUNDAI
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Uncompromising Performance with Zero CO₂.

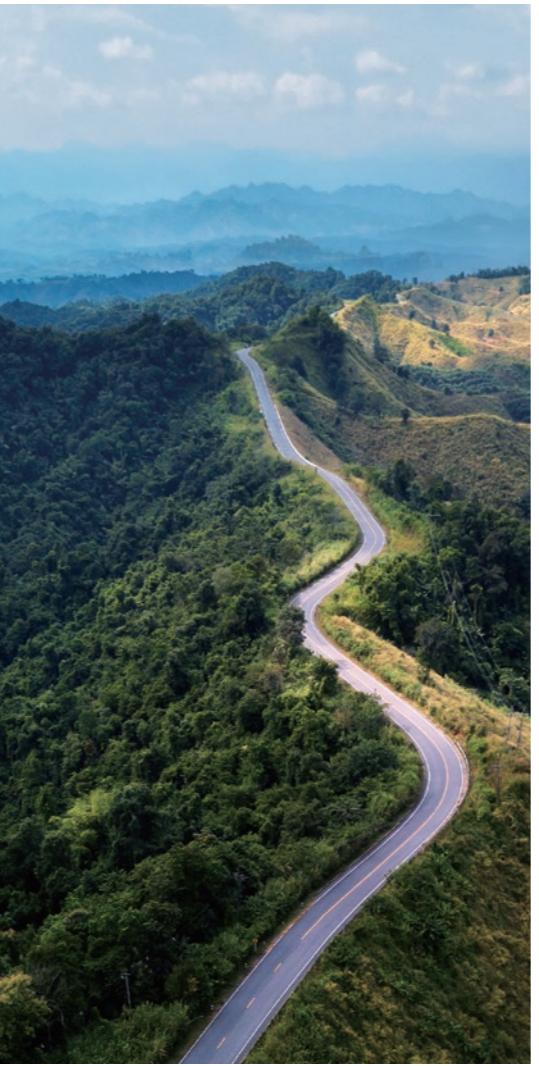
The heart of the XCIENT Fuel Cell is its powerful fuel cell — a twin array of 90 kW stacks — that delivers 180 kW of pure, clean power and a driving range of 400 km with improved durability. XCIENT Fuel Cell requires less time to recharge, you'll be back up and running in a short time. And it's safe. The bulletproof hydrogen storage tanks have multiple levels of protection to safeguard them against accidental leaks and punctures. And perhaps the most beautiful feature of all is the fuel cell stack that produces only a single byproduct — pure H₂O.



Ultimate Eco-friendliness

Zero pollutants: H₂O only

Pressurized hydrogen gas passes through the fuel cell membrane, where it reacts with oxygen to create a chemical reaction that produces electricity and pure H₂O as its byproducts. Generating zero pollutants, XCIENT Fuel Cell is a good news for our planet.



Extra Green Miles

Over 400 km in actual driving

XCIENT Fuel Cell's driving range is unrivaled among eco-friendly trucks. You can drive confidently all-day long knowing that XCIENT Fuel Cell has been field-proven to deliver over 400 km on a single charge.



Higher Efficiency

Perfect for any daily operation

XCIENT Fuel Cell makes daily operation easier with its high charging efficiency. Since charging is done in short time and the stack system generates electricity while driving, refueling XCIENT Fuel Cell is fast, convenient and simple.



Field Proven Reliability

Safety proven on Swiss roads

As of March 2022, XCIENT Fuel Cell has logged over 3 million km in Switzerland without a single safety incident. It is equipped with various safety systems including gas leak detection systems for safe driving.

Hydrogen and Hyundai. Progress for the future.

Take a big step into the future with Hyundai and hydrogen power—the driving force behind our new and revolutionary XCIENT Fuel Cell truck. Hydrogen is the fuel of the future and is good news for our planet: It's incomparably clean, safe, and renewable. And best of all, hydrogen supplies are practically limitless, making it the perfect solution for trucking and sustainable, zero-emissions mobility.





Boldly leading the way.

With its distinctive V-shaped grille, XCIENT Fuel Cell can be recognized as the new boss on the road.

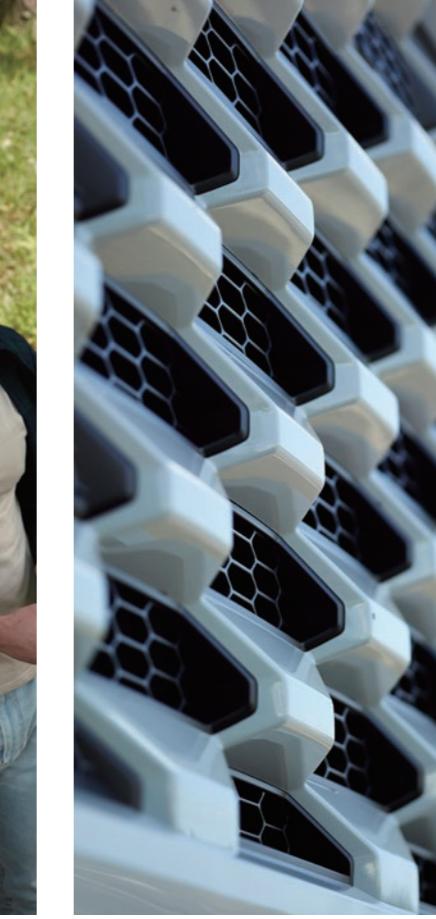
Every design detail packs a visual punch and high functionality, from the extra-wide LED headlamps to the chrome-coated wheels.

Under the mesh-type V-shaped grille, the fixed grille steps provide the driver with a secure foothold for service checks.

The lower aperture maximizes airflow over the fuel cell stack for improved cooling performance.



V-shaped matte chrome garnish



Mesh-type radiator grille



Fixed grille steps



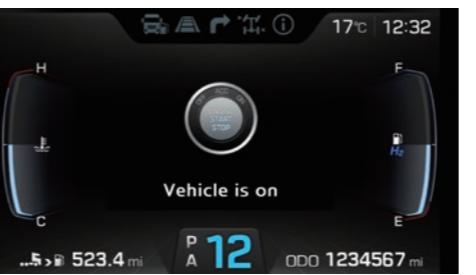
Effortless driving.

Driving is hard work, but XCIENT Fuel Cell makes a difficult job a lot easier with a suite of smart design features. It starts with the driver-oriented layout of the cockpit that is designed to minimize hand and eye movement, thus reducing driver fatigue. The infotainment system is controlled by an 8-inch touchscreen that allows for intuitive menu scrolling and feature selection. And to promote driver alertness, the steering wheel is fitted with a new haptic feedback system that triggers warning vibrations in dangerous situations.



Newly designed cluster

The newly designed cluster displays a wide range of information in a colorful graphic format with razor-sharp clarity that's easy on the eyes.



Vehicle on warning

When the driver leaves the driver's seat with the engine running a warning icon pops up as a safety precaution.



8-inch LCD infotainment system

The easy-to-use touchscreen enables intuitive menu scrolling and feature selection including mirroring your smartphone apps.



Rear-view monitor

The extra-wide-angle lens let you see everything behind you when backing up thus reducing the risk of damage.



Motor-assisted steering + Haptic warning

It feels heavier at high speed, lighter at low speed, and vibrates to alert the driver of potential trouble (included with Lane Departure Warning, Forward Collision-Avoidance Assist, Smart Cruise Control).



Driving comfort rises to the next level.

Cabin comfort and convenience approach perfection in XCIENT Fuel Cell as the layout and execution build on various experiences and accumulated know-how in commercial vehicle design.

Every control is driver-oriented for minimal effort and simple, intuitive operation.

In utility mode, you can enjoy multimedia and HVAC functions while minimizing fuel consumption.



Start button & Smart key

Advantages of the Smart Key include push-button start and two-stage door unlocking that prioritizes driver door opening. You can also check the lamp status with the lamp check button on the remote control key.



Energy-saving utility mode

Use this energy- and money-saving feature during rest stops or when facing long queues. It shuts off power to the drivetrain and steering system to reduce fuel consumption. At the same time, full electrical power is maintained for cabin lighting, HVAC, and multimedia systems.



Wireless mobile charger

The convenient wireless smartphone charger eliminates the need for cables. The system includes safety circuitry that automatically shuts off the charging current to prevent your device from overheating.



Retarder & Regenerative braking

For convenience and energy savings, the advanced control stalk gives you one finger control over the level of regenerative braking power and the retarder brake: operate both simultaneously for maximum braking power.



Multi-stage heating & ventilated seat

This seat provides the perfect seating position for all body types and with minimal effort as all seat controls are motorized. The seat floats on a cushion of air that gently smooths out the bumps and imperfections of the roadway.



Accelerate into a new era.

Professional drivers who have logged thousands of hours behind the wheel of XCIENT Fuel Cell are unanimous in their high praise for its quiet, powerful performance and the light but precise feel of its motor-assisted hydraulic steering system. Fleet owners applaud the durability and the low maintenance requirements of the fuel stack. And to keep everyone safe, Advanced Driver Assistance Systems such as Forward Collision-Avoidance, Lane Departure Warning System, and Smart Cruise Control are quietly working behind the scenes to add convenience and prevent mishaps.

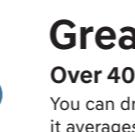


The cumulative mileage of XCIENT Fuel Cell passed 3 million km in Swiss fleet operations.
(as of March 2022)

Ready for work with field-proven efficiency and durability.

With its short recharging time and field-proven operation in Switzerland where it has boasted a range over 400 km on a single charge, XCIENT Fuel Cell has set the standard for eco-friendly driving efficiency. Its field-proven fuel stack is compact, efficient, and more capable than ever. Its powerful 350 kW e-motor provides torque delivery that matches any diesel powerplant in the comparable vehicle weight class. The triple battery array that can store up to 72 kWh of energy assures stable performance. For uncompromising safety, hydrogen tanks are wrapped in multiple layers of carbon fiber and have passed the 1.5 m drop, penetration, fire, and burst pressure tests to meet stringent European standards.

Special satisfaction of driving green



Greater mileage

Over 400km in real-world conditions

You can drive XCIENT Fuel Cell confidently all-day long knowing it averages over 400 km on a single charge.



Higher efficiency

Flexible operation to meet driver needs

XCIENT Fuel Cell can travel a long distance with a short refueling time, providing the efficiency and flexibility that drivers need.



Big savings

Eco and cost-friendly

Unlike diesel engine vehicles, XCIENT Fuel Cell does not require urea and engine oil which saves operational costs.

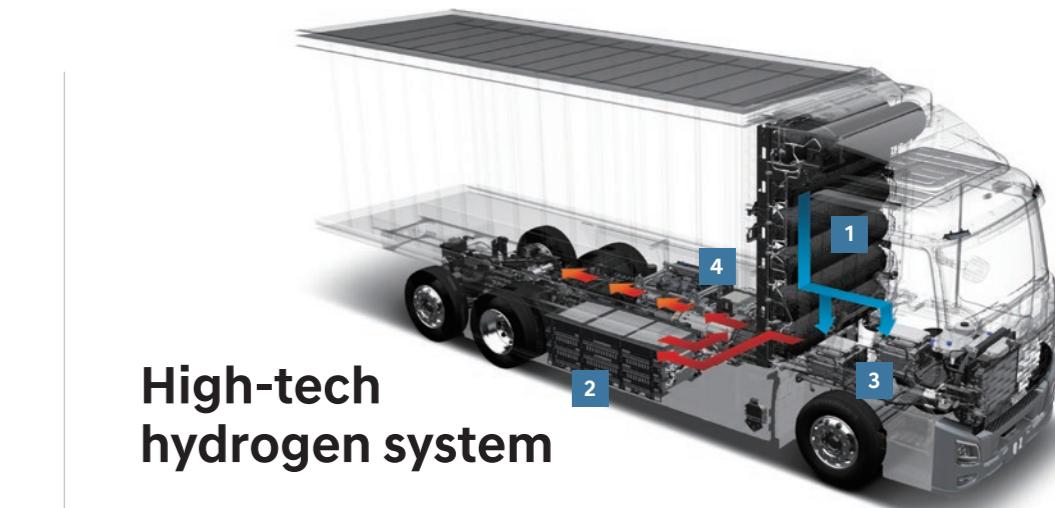


Stress-free driving

Quieter daily driving

XCIENT Fuel Cell generates minimal levels of noise and vibration for smoother operation and reduced stress and fatigue.

* Driving distance and charging time may vary depending on driving environment, charging infrastructure, etc.



High-tech hydrogen system

Hydrogen Tank 1

31 kg H₂
(350 bar)

Battery 2

72 kWh
(24 kWh x 3 ea)

Stack 3

180 kW
(90 kW x 2 ea)

Motor 4

350 kW / 2,237 Nm



Hydrogen safety mechanism

The hydrogen storage and delivery system is perfectly safe thanks to rigorous testing. Testing for ballistic penetration, open flame, repeated exposure to temperature extremes and gas permeation assure perfect safety.



Carry more per trip. Suitable for any business.

The 4x2 model is a versatile all-rounder for most applications, but if you need extra cargo capacity, Hyundai offers the 6x2 model equipped with a rear tag axle for added flexibility and a larger operating capacity. You can select the model that perfectly fits your business. XCIENT Fuel Cell's reinforced ladder-frame chassis with air suspension is light but retains all of the strength and rigidity required to transport the heaviest loads and take on the most challenging road conditions. We also offer a digital cluster that displays the cargo weight distribution in real-time and the trailer lamp switch, for greater convenience and peace of mind.

4x2 GVW 19.5 tons / GCW 38 tons 6x2 GVW 27 tons / GCW 42 tons

(GVW: Gross Vehicle Weight / GCW: Gross Combination Weight)

Selectable line-up

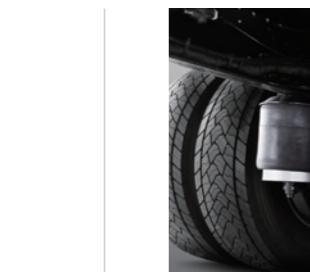
With a choice of the 4x2 or 6x2, you can choose the model that best fits your business.

Lighter weight

The lighter cabin weight realizes increased cargo capacity and better driving efficiency.

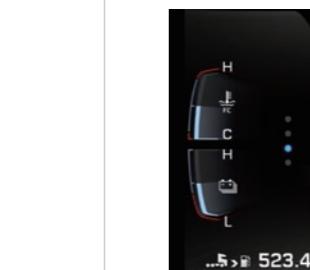
Load more

Reductions in the cabin weight and new features that protect against overloading help facilitate maximum carrying capacity.



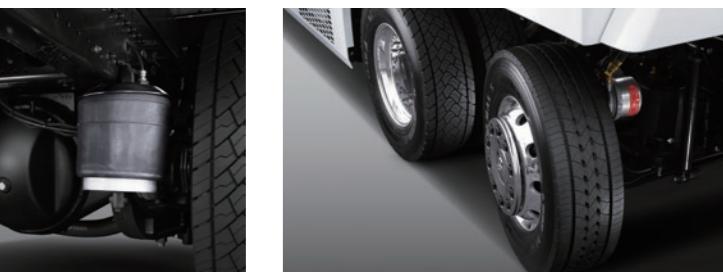
Front and Rear air suspension

The air-cushioned suspension maintains vehicle stability for improved ride comfort and allows the cargo bed height to be adjusted for easier loading and unloading.



Weight distribution graphic display

This handy feature lets you keep an eye on the cargo weight distribution over your front and rear axles for safer transport.



Rear axle steering

Drop the tag axle to maximize your load carrying capacity or raise it for greater efficiency when transporting smaller loads. It also offers a short turning radius. (6x2)



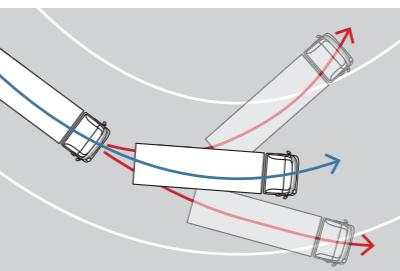
Trailer lamp switch

Trailer lamp hook-up is fast and straightforward. The switch turns on the trailer lamps and confirms functionality.

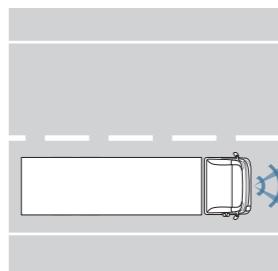


Safer driving with advanced technology.

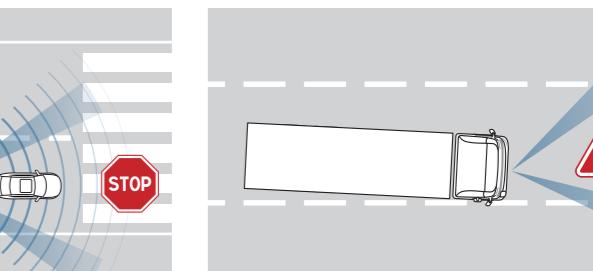
Xcient Fuel Cell makes no compromises in safety matters. Active and passive safety systems provide comprehensive, all-around protection. The new ADAS (Advanced Driver Assistance Systems) is the driver's best friend that works proactively to keep you out of trouble. In case of a rollover or the detection of a trace amount of hydrogen due to a gas leak, solenoid valves are automatically actuated, shutting off the hydrogen gas supply from the storage tank, thereby preventing secondary accidents.



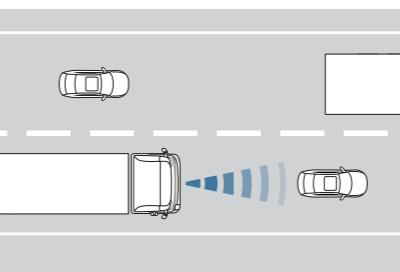
Vehicle Dynamic Control (VDC)
On detecting wheel slippage, VDC stabilizes the vehicle by automatically regulating torque output and braking individual wheels, thus helping the driver maintain directional control and reducing the risk of a rollover.



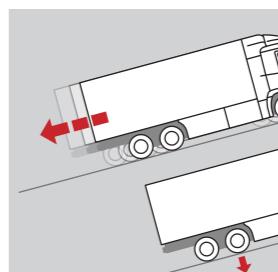
Forward Collision-Avoidance Assist (FCA)
FCA automatically applies the brakes whenever it detects the risk of a collision with a pedestrian, vehicle, or cyclist.



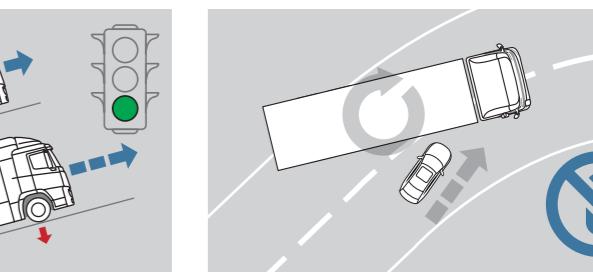
Lane Departure Warning (LDW)
On detecting an unintentional lane departure, the system warns the driver by sending vibrations through the steering wheel.



Smart Cruise Control (SCC)
SCC maintains the speed preset by the driver and ensures that you are always a safe distance away from the vehicle ahead.



Easy Hill Start System (EHS)
EHS prevents the vehicle from rolling back when starting on steep slopes, providing safe and easy driving.



Improved crash safety
When the unavoidable does happen, power is automatically cut off to the high voltage cables, and the hydrogen tank is shut off to minimize the risk of electric shock and secondary events.

Join the movement. Ride the hydrogen wave.

Why wait any longer? XCIENT Fuel Cell provides an exemplary sustainable mobility solution.

It delivers field-proven powerful performance, outstanding reliability, and great driving efficiency.

Drive XCIENT Fuel Cell and join Hyundai in its commitment to the progress for a better, greener world.



Features



LED-type Wide Headlamps



Fog Lamps



Electric-heated Outside Mirrors



Easy-access Front Maintenance Panel



315/70 R22.5 Tyres



ECAS System



Easy-access door steps



Door Courtesy Lamps



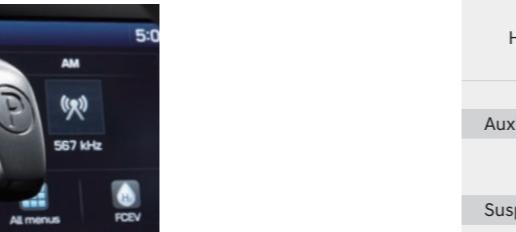
12 V / 24 V Power Outlets



USB / iPod and AUX ports



Gear Change Knob + Mode Switch



Air-type Parking Brake



Full Auto Air-conditioner



Useful storage receptacles



Roll-type Curtain / Driver Side Sunvisor



Driver's Airbag

Exterior Color options



Creamy White (YAW)



Hyper Silver (Z5S)



Strong Gray (P7A)

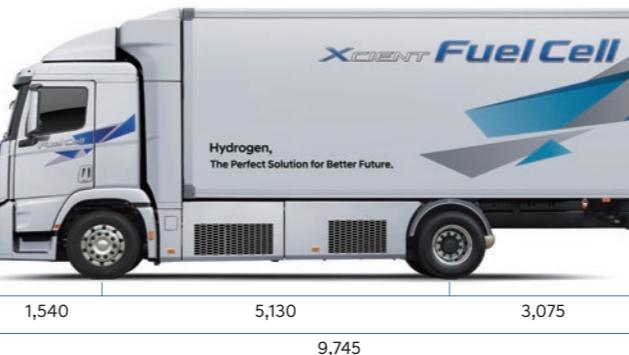
Specifications

Type	4 x 2 Cargo		6 x 2 Cargo	
Dimensions (mm)				
Wheel base	5,130	9,745	5,000 + 1,350 (Tag)	←
Overall (Chassis cab)	2,540 (With side protector, EU & CH)	3,730 (With standard spoiler) / 3,900 (With add-on spoiler)	←	←
Wheel tread	Front / Rear	2,055 / 1,845	2,055 / 1,845 / 2,055	←
Overhang (Chassis cab)	Front / Rear	1,540 / 3,075	1,540 / 3,205 (RR1-FRM)	
Weight (kg)				
* Max gross vehicle weight	19,500	8,000 / 11,500	27,000	
Front / Rear			8,000 / 11,500 / 8,000	
Max gross combination weight		38,000	42,000	

* Max. GVW includes the front and rear axle loads based on the permissible tire load.

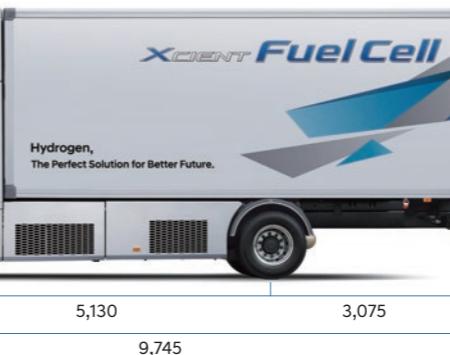
Calculated performance		
Max. speed	km/h	85 kph
Max. gradeability	tanθ	4x2: 0.28 / 6x2: 0.23
Powertrain		
Fuel cell system	Max. Stack power	180 kW (90 kW x 2 ea)
HV battery	Type	Lithium-ion
	Nominal voltage	630 V
	Energy capacity	72 kWh
Motor	Net. Power / torque	350 kW (476 ps) / 2,237 Nm
Auxiliary brake		
Retarder + regenerative braking	Retarder: oil operated	Regenerative braking: electric operated
Suspension		
Type	Front / Rear	Air spring
Transmission		
Type	Automatic transmission (5 forward and 1 reverse speed)	
T.G.S. (Transmission Gear Shift)	Multi function switch RH lever shift	
Tire & wheel		
Tire (Front / Rear / Tag)	315 / 70 R22.5	
Wheel (Front / Rear / Tag)	22.5 x 9.00	

- Above values are based on internal testing results and are subject to change after final validation.
- Some of the equipment illustrated or described in this catalog may not be supplied as standard equipment and may be available at extra cost.
- Hyundai Motor Company reserves the right to change specifications and equipment without prior notice.
- The color plates shown may vary slightly from the actual colors due to the limitations of the printing process.
- Please consult your dealer for full information and availability on colors and trims.



2,055

2,540



5,130

9,745

3,075

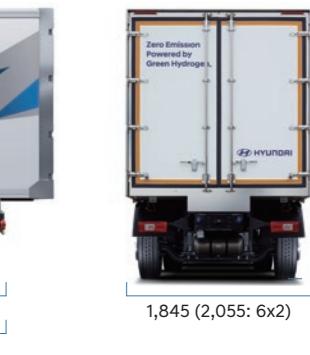


1,540

5,000

3,205

9,745



1,845 (2,055: 6x2)

3,730 (3,900: With add-on spoiler)