

XCIENT Fuel Cell



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.



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 system 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.

* Driving range and charging times can vary depending on external factors.



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 fuel cell system generates electricity while driving, refueling XCIENT Fuel Cell is fast, convenient and simple.



Field Proven Reliability
Safety Proven on Swiss Roads
As of July 2023, XCIENT Fuel Cell has logged over 7 million km in Switzerland providing real-life customer service. It is equipped with various safety systems including gas leak detection systems for safe driving.



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 system 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.



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).



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.



8-inch LCD Infotainment System

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



Vehicle on Warning

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



Rear-View Monitor

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



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.



Multi-Stage Heating and 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.



Start Button and 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.



Auxiliary Brake and Manual Shift

The advanced control stalk gives you one finger control over the level of braking power. Auxiliary brake and manual shift prevent the driver's fatigue while operating the pedals.



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 cell system. 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.



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 cell system 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.

Hyundai's XCIENT Fuel Cell fleet in Switzerland achieved 7 million km of driving in real-life customer operations. (as of July 2023)

Special Satisfaction of Driving Green



Greater Mileage

Over 400 km 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.



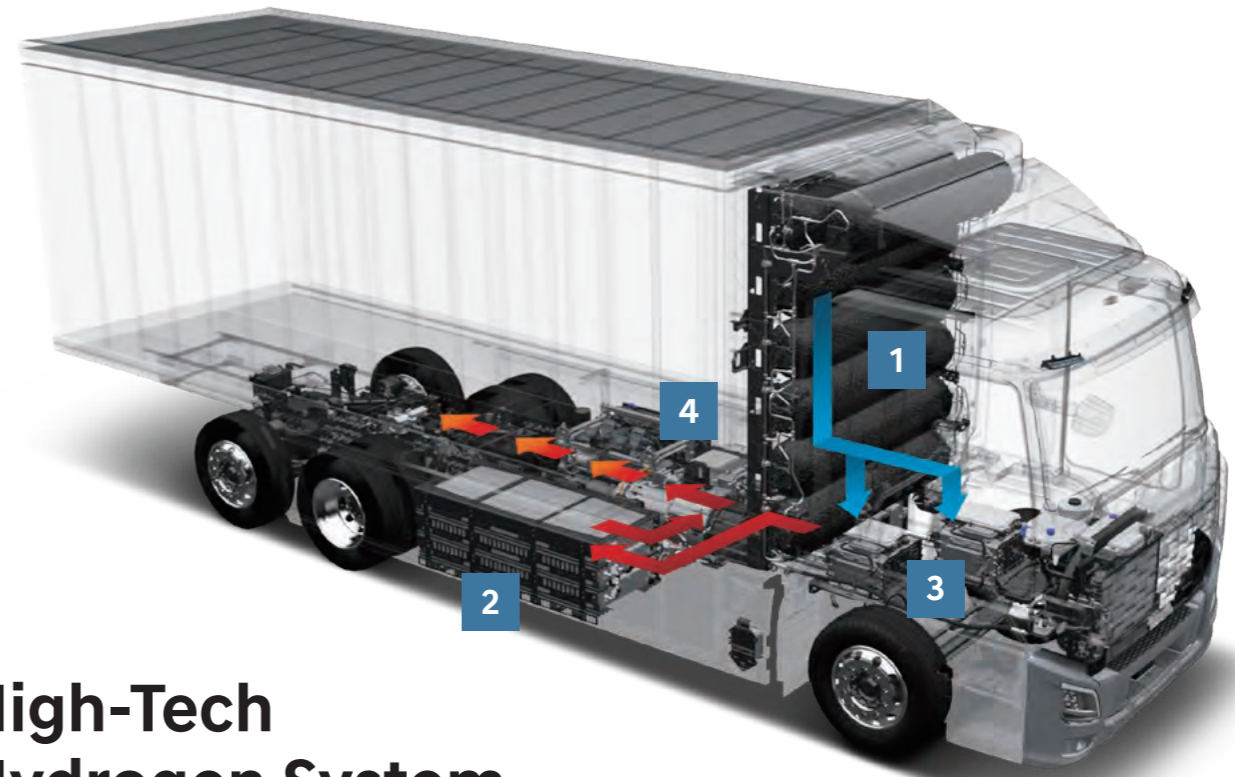
Big Savings

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.



High-Tech Hydrogen System

Hydrogen Tank **1**
31 kg H₂
 (350 bar)

Battery **2**
72 kWh
 (3 x 24 kWh each)

Stack **3**
180 kW
 (2 x 90 kW each)

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.

* AER is measured based on a specific driving environment and a representative driving route according to Hyundai's test standards and may vary depending on the temperature, road conditions, number of passengers, driving habits, charging infrastructure, and charging pressure.
 * The charging performance can differ based on various factors such as the types of chargers, outside temperature, and the battery charge status.

Stylish and Versatile. The Elongated XCIENT Fuel Cell.

The new flush-type front panel and aerodynamic bumper design give the vehicle a sleek, contemporary look. These modern and eco-friendly adjustments have increased fuel efficiency by enhancing aerodynamic properties and improved maneuverability by decreasing the turning radius. The expanded wheel-based lineup gives customers more options to choose from.





**Carry More per Trip.
Suitable for Any Business.**

The XCIENT Fuel Cell 4x2 model is a versatile all-around model for most applications, but if you need more cargo space, Hyundai offers a 6x2 model. The 6x2 model includes a rear tag axle for increased flexibility and operating capacity. Choose the perfect model for your business from our eight different wheelbase lineups. The air suspension-reinforced ladder frame chassis of XCIENT Fuel Cell maintains all of the strength and rigidity required for transportation while remaining lightweight, allowing the safe transportation of heavier loads in a variety of road conditions. It also has a digital cluster and trailer lamp switch that displays cargo weight distribution in real-time for 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.



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)



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.



Trailer Lamp Switch

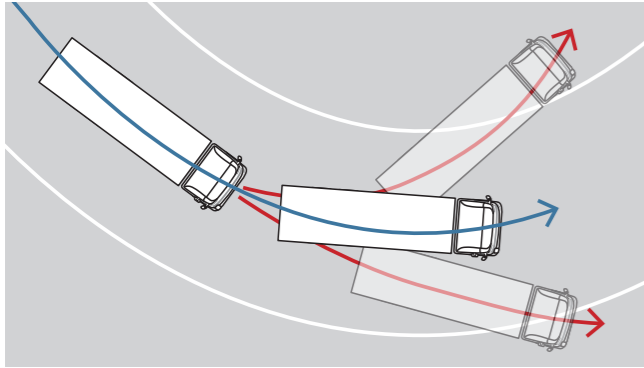
Trailer lamp hook-up is fast and straightforward. The switch turns on the trailer lamps and confirms functionality.

Safer Driving with Advanced Technology.



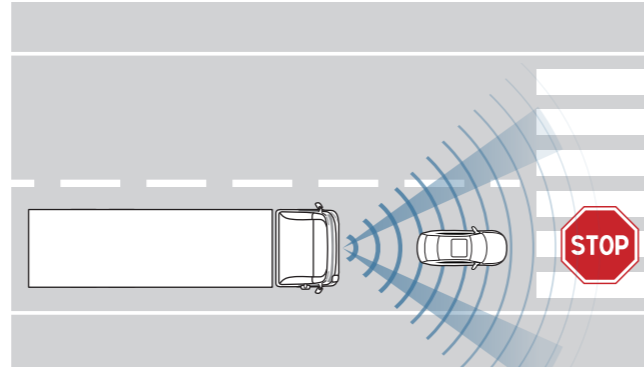
XCIENT Fuel Cell makes no compromises in safety matters. Active and passive safety systems provide comprehensive, all-around protection.

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.



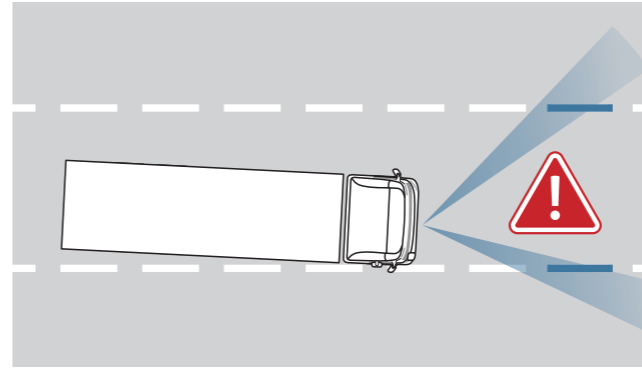
Vehicle Dynamic Control (VDC)

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)

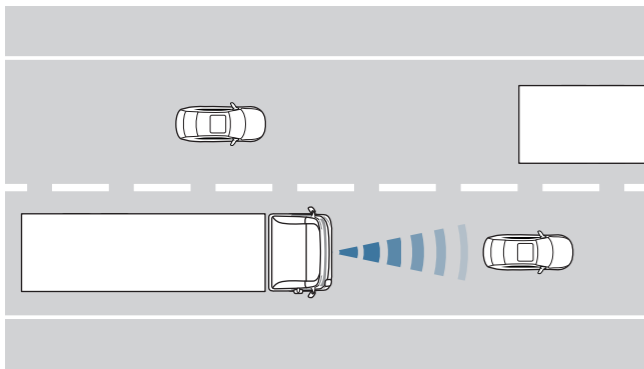
FCA automatically applies the brakes whenever it detects the risk of a collision with a pedestrian, vehicle, or cyclist.



Lane Departure Warning (LDW)

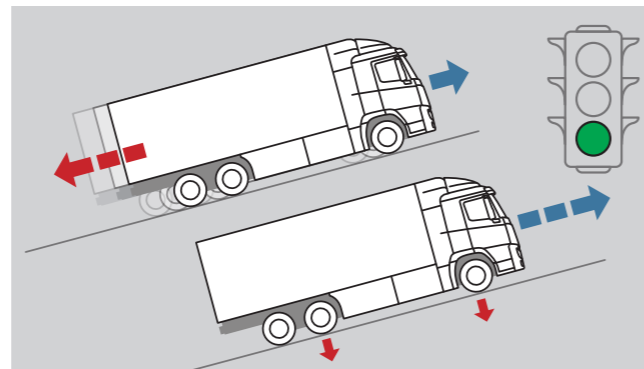
On detecting an unintentional lane departure, the system warns the driver by sending vibrations through the steering wheel.

* The advanced driver-assistance system (ADAS) only assists drivers and bears no responsibility for vehicle operation. Always operate and drive the vehicle with caution.
 * Depending on the environment, surrounding conditions, and driving and operating conditions, the ADAS may be stopped, not operated, or subjected to unnecessary operation. Please refer to the Owner's Manual for more information and limitations.
 * Specifications are applied differently depending on the trim and optional specifications. If the option is not selected, the corresponding function is not provided.



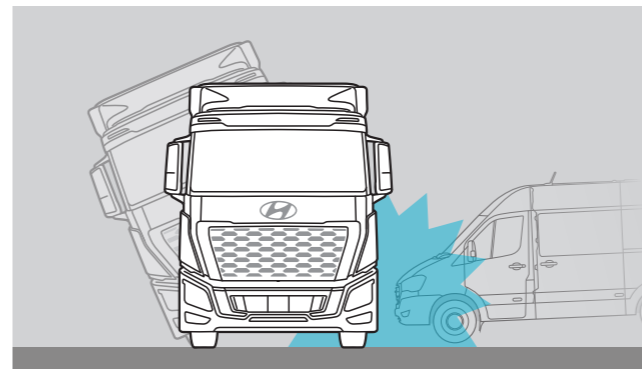
Smart Cruise Control (SCC)

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



Roof Side Endout Markers



Roof Spoilers



Fixed Grille Steps



Mesh Type Radiator Grille with V-Shaped Matte Chrome Garnish



LED Type Wide Headlamps



Fog Lamps



ECAS System



Easy Access Front Maintenance Panel



Body Colored Outside Mirrors



Electric Heated Outside Mirrors



Water-Repellent Coated Pull Down Door Glasses



Welcome Lamp

Features



Easy Access Door Steps



Door Courtesy Lamps



315/70 R22.5 Front and Tag (6x2) Tyres



315/70 R22.5 Rear Tyres



Full Auto Air Conditioner



Gear Change Knob + Mode Switch



Auxiliary Brake and Manual Shift



Air Type Parking Brake



12 V / 24 V Power Outlets



USB / iPod and AUX Ports



Roll Type Curtain / Driver Side Sunvisor



Driver's Airbag

Lineup



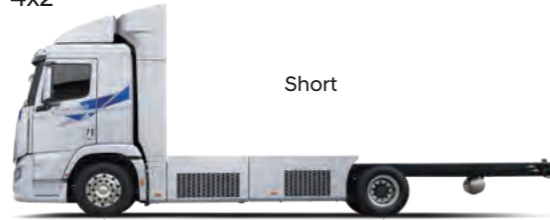
2,055
2,540



1,845 (2,055: 6x2)

3,730 (3,900: With Add-On Spoiler)

4x2



Short

5,130
9,780

6x2



Short

5,000
9,780
1,350



Medium

5,330
9,780



Medium

5,330
11,550
1,350



Long

5,530
9,780



Long

5,530
11,725
1,350



Long Plus

5,730
9,780



Extra Long

5,970
12,035
1,350

Exterior Color Options



Creamy White (YAW)



Hyper Silver (Z5S)



Strong Grey (P7A)

Specifications

		4x2				6x2 (Steering Tag)			
Dimensions (mm)		Short	Medium	Long	Long Plus	Short	Medium	Long	Extra Long
Wheel Base		5,130	5,330	5,530	5,730	5,000 + 1,350	5,330 + 1,350	5,530 + 1,350	5,970 + 1,350
Overall (Chassis Cab)	Length	9,780	←	←	←	9,780	11,550	11,725	12,035 **
	Width	2,540 (With Side Protector. EU and CH)				2,540 (With Side Protector. EU and CH)			
	Height (Std. Spoiler / Add-On Spoiler)	3,730 / 3,900				3,730 / 3,900			
Weight (kg)									
* Max. Gross Vehicle Weight		19,500				27,000			
Front / Rear		8,000 / 11,500				8,000 / 19,000			
Max. Gross Combination Weight		38,000				42,000			

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

** Allowed to exceed European overall length regulations (≤12m) according to elongated cab regulations.

Calculated Performance		
Max. Speed	km/h	85
Max. Gradeability	Tanθ	4x2: 0.28 / 6x2: 0.23
Powertrain		
Fuel Cell System	Max. Stack Power	180 kW (2 x 90 kW Each)
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	
Tyre and Wheel		
Tyre (Front / Rear / Tag)	315 / 70 R22.5	
Wheel (Front / Rear / Tag)	22.5 x 9.00	

Cab	
Type	Electric Driven Hydraulic Tilting
Mounting	Air Full Floating
Seat	Multifunction Type
Electrical Equipments	
Lamps	Head Lamps (LED, Low Beam Only)
	Front Combination Lamps (LED)
	Front Fog Lamps
	Front End Outline Marker Lamps (LED)
	Rear Combination Lamps
	Rear Fog Lamps
	Rear End Outline Marker Lamps
	Rear Side Marker Lamps
	Daytime Running Lamps (LED)
	License Plate Lamp
	Back-Up Lamp

- The values above 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 standard.
- Hyundai Motor Company reserves the right to change specifications and equipment without prior notice.
- The color may vary slightly from the actual colors due to differences in print quality.
- Please consult sales consultants for full and accurate information.

