

New PEUGEOT e-EXPERT Hydrogen

**HYDROGEN IN SERIES
PRODUCTION AT PEUGEOT**





Pushing its requirement to drastically reduce the local emissions of its vehicles ever further, **PEUGEOT has become one of the very first manufacturers** to offer in **series production**, from 2021 onwards, in the compact utility van segment, in addition to its combustion and battery electric models, **an electric version powered by a hydrogen fuel cell**.

The new **PEUGEOT e-EXPERT Hydrogen** has therefore become the latest symbol of the brand's "**Extended power of choice**" strategy, which gives each customer the option to choose from a wide range of engines, the one that is best suited to his or her own use.

The hydrogen fuel cell electric version is testament to the rapid deployment of the Peugeot EXPERT range's electrified offering. After the introduction in 2020 of the battery-powered e-EXPERT model, which was voted **International Van of the Year** in early 2021 and is the sixth PEUGEOT vehicle to win this prestigious award since 1992.

The new PEUGEOT e-EXPERT Hydrogen includes a new "**mid-power plug-in hydrogen fuel cell electric**" system, innovative and specific to STELLANTIS, made up of :

- **A fuel cell** which produces the electricity needed to drive the vehicle thanks to the hydrogen on board the tank,
- **A high-voltage lithium-ion rechargeable battery** with a capacity of 10.5 kWh that can be recharged from the electricity grid and which also powers the electric engine during certain driving phases.



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The new PEUGEOT e-EXPERT Hydrogen stands out with :

- Its ability to cover all distances **without local CO2 emissions**.
- Its ability to **fill up with hydrogen in 3 minutes** for a **range of over 400 km** in the WLTP homologation cycle (currently undergoing approval),
- **A charging socket** for the high-voltage battery,
- **2 lengths** available (Standard and Long) with the same loading volume characteristics as the diesel and battery electric versions.
- **Up to 6.1m³ load volume**
- **Up to 1100 kg payload,**
- **Up to 1000 kg towing capacity.**

With a strong personality, silent access to city centres, no CO₂ emissions and no compromise in terms of useful performance, the new PEUGEOT e-EXPERT Hydrogen is an additional mobility offer. To answer the expectations and needs of professional customers as well as numerous urban communities concerned with preserving the quality of life of their inhabitants.

The new PEUGEOT e-EXPERT Hydrogen will first be offered to our **professional customers (direct sales), in France and Germany, from the end of 2021**. It will be **produced in France, in Valenciennes, and then transformed in the Stellantis competence centre dedicated to hydrogen technology in Germany, in Rüsselsheim**.



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The market and customers

The compact van segment market represents more than 750,000 vehicles per year in Europe. The PEUGEOT Expert has increased its market share every year since its launch in 2016.

Combining electric propulsion with the ability to **fill up with hydrogen in 3 minutes for a range of over 400 km WLTP** (Worldwide harmonized Light vehicles Test Procedures, vehicle undergoing approval), **hydrogen fuel cell technology** is the answer to the ever-increasing number of complex needs and uses of professionals, **guaranteeing greater freedom to carry out their activities**. It ensures :

- **Greater autonomy**, which is crucial given that the vast majority of compact vans operate in suburban areas and densely populated city centres, where the need for zero-emission solutions is becoming ever more pressing,
- The full preservation of one of the core functions of light commercial vehicles: **the transport of large and heavy objects**,
- Unprecedented **logistical flexibility and optimised use**.

PEUGEOT e-EXPERT Hydrogen is designed around a "**mid-power plug-in hydrogen fuel cell electric**" solution, which combines the advantages of hydrogen, battery technology and electric traction.

The hydrogen in the tank powers the fuel cell, which produces the electricity needed to drive the vehicle over long distances, while the high-voltage battery provides, among other things, the power needed to ensure dynamic performance. The entire system is integrated into the vehicle to ensure that no compromises have been made in terms of volume or payload.

Hydrogen is now becoming **a major pillar of the energy transition** with the announcement of a range of international projects. In Europe in particular, the ecosystem is developing and the European Clean Hydrogen Alliance is investing an estimated €60 billion to promote this solution.

Thanks to these governmental plans, the number of hydrogen stations in Europe is constantly increasing and the PEUGEOT brand is working directly with energy suppliers to provide packaged offers.



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Next gen e-Van Hydrogen efficiency : a new generation technology

Based on the EMP2 (Efficient Modular Platform), the **new PEUGEOT e-EXPERT Hydrogen is a fully electric vehicle, combining two on-board sources of electrical energy :**

- **A hydrogen fuel cell**, located in the engine compartment at the front of the vehicle, which supplies electricity to the electric engine by recombining the hydrogen contained in the tank with oxygen from the air. It emits only water vapour through the exhaust pipe.
- A permanent magnet **electric motor** with a maximum power of 100 kW, delivering 260 Nm of maximum torque. Located on the front axle, this electric drive train is similar to that of the PEUGEOT e-EXPERT (battery-electric model), which stands out in particular with a gearbox adapted to the loading constraints inherent to the use of commercial vehicles.
- **A high-voltage lithium-ion battery**, located under the cab seats, with a capacity of 10.5 kWh and a power of 90 kW.
- **A three-phase on-board charger of 11 kW**, located in the engine compartment.
- **A tank system consisting of 3 hydrogen storage tanks located under the floor**, with a total capacity of 4.4 kg at a pressure of 700 bar.





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The new PEUGEOT e-EXPERT Hydrogen offers **a range of over 400 km** according to the WLTP (Worldwide harmonized Light vehicles Test Procedures, vehicle undergoing approval), of which about fifty on the charge of the high voltage battery.

Filling up with hydrogen is quick and easy, taking just three minutes via a hatch on the left rear wing.



The high-voltage battery (10.5 kWh) is recharged via the charging socket on the front left wing. The **11 kW three-phase on-board charger** ensures the following charging times:

- from an 11 kW Wall Box (32A): full charge in less than one hour,
- from a reinforced socket (16A): full charge in 3 hours,
- from a standard socket (8A): full charge in 6 hours,



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The **different operating phases** of the "mid-power plug-in hydrogen fuel cell electric" system are as follows :

- **At start-up and at low speed:** the high-voltage battery alone provides the electric engine with the power it needs for traction,
- **At steady speed:** the fuel cell supplies the energy directly to the electric engine,
- **During acceleration, overtaking or hill climbing:** the fuel cell and the high-voltage battery are combined to supply energy to the electric engine,
- **During braking and deceleration,** the electric engine recharges the high-voltage battery.

Power is available from the moment the car is started for immediate responsiveness, with no vibration, no noise, no gear shifting, no smell, and of course, no CO₂ emissions. Water vapour from the exhaust pipe is the **only emission from the system**.

To ensure the safety of pedestrians, in town and up to 30 km/h, a sound signal goes off to indicate the vehicle is approaching in forward and reverse gear.

To ensure that users enjoy their vehicle with complete peace of mind, the **high-voltage battery is guaranteed for 8 years or 160,000 km** for at least 70% of its charge capacity.



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Next Gen e-Van abilities, Functionality without compromise

The new PEUGEOT e-Expert Hydrogen combines compact exterior dimensions with maximum load capacity. The location of the hydrogen tanks under the floor makes it possible to **keep the load volume intact**, in every respect identical to that of the diesel and battery electric versions.

This location also ensures safety, while ensuring, thanks to an **optimal weight distribution**, the pleasure and enjoyment of driving, like on the combustion engine versions.

There is full suspension comfort thanks to the specific shock absorber and spring settings, which guarantee the best performance when empty or loaded.

The driver of the new PEUGEOT e-Expert Hydrogen will be comfortable in all situations, with a specially adapted power steering system, making it easier to enjoy and, as always, a turning circle of 12.4 m (Standard version between kerbs).

Two van versions of the new PEUGEOT e-Expert Hydrogen are available :

- Standard 4.95 m,
- Long 5.30 m.

The useful volume, up to 6.1 m³, as well as the space for the driver and passenger in the two-seater cabin, are exactly the same as those of the internal combustion engine versions.

The maximum payload of 1100 kg is specific to the hydrogen electric version.

The towing capacity is maintained, with the possibility of towing up to **1000 kg** of load.





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In order to simplify the offer and the choice, only one **level of finish** is available for the new PEUGEOT e-Expert Hydrogen. It comes with all the necessary comfort and safety features :

- 2 individual seats in the cabin,
- 2 sliding doors,
- 17-inch wheels,
- Electric parking brake with hill start assist,
- Manual air conditioning,
- Visiopark 1, 180 degree reversing camera,
- 7-inch touchscreen central display with Peugeot Connect (TomTom 3D navigation, Bluetooth and mirrorscreen compatibility including Apple CarPlay™ and Android Auto™ connection protocols.

Next Gen e-Van Hydrogen by PEUGEOT

The new PEUGEOT e-Expert still has the muscular, robust and rewarding style of the internal combustion versions, with several distinctive features.

On the outside :

- an "e-Expert Hydrogen" monogram at the rear,
- " Hydrogen" monograms on the front doors,
- a hydrogen filling hatch on the left rear wing,
- an electric charging hatch on the left front wing,
- a specific intermediate grille,
- a 40 mm higher suspension.





Inside :

- an analogue instrument cluster with colour matrix adapted to the technology,
- specific graphics for the central touchscreen with TomTom Traffic 3D Navigation,
- e-Toggle automatic transmission control,
- a driving mode selector that allows you to choose between Eco, Normal or Power modes,
- an electric parking brake.

The cockpit of the new PEUGEOT e-EXPERT Hydrogen

In the driver's seat, the **central console** is designed to accommodate :

- the "e-Toggle" gearbox control, perfectly integrated and ergonomic, it gives access to the Park / Reverse / Neutral / Drive and Brake functions,
- the 3 driving modes selector, Eco / Normal / Power,
- the electric parking brake control,
- a storage compartment in the upper part,
- a side storage net next to the electric parking brake support.



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The new PEUGEOT e-Expert Hydrogen offers **3 driving modes** from the mode selector :

- Eco (60 kW, 190 Nm): for better range,
- Normal (80 kW, 210 Nm): optimal for everyday use,
- Power (100 kW, 260 Nm): optimises performance when carrying heavy loads.

Two braking modes are available, with suitable battery regeneration types :

- moderate, for a similar feeling to a combustion engine vehicle,
- increased (accessible via the "B" push button for "Brake" located on the gearbox control), for enhanced deceleration when the accelerator pedal is released.



The new PEUGEOT e-Expert Hydrogen is equipped with an **electric parking brake**. In addition to freeing up floor space, this automatic function brings comfort and peace of mind to everyday driving.

The **handset** has changed to share the information needed to manage a fuel cell electric vehicle :

- a power meter for displaying the level of energy consumption (ECO, energy optimisation or POWER, maximum power or CHARGE for energy recovery),
- a hydrogen level gauge,
- a battery charge level gauge,
- a colour matrix for displaying on-board computer information and range.



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The new PEUGEOT e-EXPERT Hydrogen is therefore the **first PEUGEOT production vehicle** to offer an **electric version with a hydrogen fuel cell**. With this new vehicle, which perfectly embodies the "**Extended power of choice**" strategy, **PEUGEOT is going even further in the electrification** of its models.

Technological innovation, **in line with the expectations and needs** of customers and the market, **without compromising** on either **useful performance** or **driving pleasure**. And of course, **without any local CO² emissions**.

Press Contact

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About PEUGEOT

PEUGEOT is a creative and global top-of-the-range generalist brand. Its values are Excellence, Allure and Emotion. Present in more than 160 countries with 10,000 points of sale, PEUGEOT sold nearly 1,200,000 vehicles worldwide in 2020. In 2021, after celebrating its 210th anniversary, PEUGEOT is ushering in its new identity with a coat of arms that emphasises its personality and timelessness. In addition to a full range of electrified passenger and commercial vehicles, PEUGEOT has developed a new concept of Neo Performance. The 508 PEUGEOT Sport Engineered is the first in this new line of efficient and high-performance vehicles.

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