



**Commercial
Vehicles**

• presse • news • prensa • tisk • imprensa • prasa • stampa • pers • 新闻 • news •

CONTENT

Volkswagen Commercial Vehicles

News: 2018 IAA Commercial Vehicles

In brief – short version

Five zero-emission world premieres
by Volkswagen Commercial Vehicles at the 2018 IAA Page 02

In detail – long version

World premiere I: I.D. BUZZ CARGO Page 05

World premiere II: Crafter HyMotion Page 06

World premiere III:  – ABT e-Transporter Page 09

World premiere IV:  – ABT e-Caddy Page 11

World premiere V: Cargo e-Bike Page 12



Volkswagen Commercial Vehicles is electrifying the 2018 IAA with five new zero-emission models

- **I.D. BUZZ CARGO based on the I.D. Family provides look ahead to a new era of light commercial vehicles**
- **Crafter HyMotion with hydrogen fuel cell can achieve driving ranges of up to 500 km**
- **ABT e-Caddy to arrive on market in mid-2019 with a range of around 220 kilometres**
- **Battery system of the ABT e-Transporter has scalable design: customers can choose between 208 and 400 km range**
- **Volkswagen Commercial Vehicles presents the world's most advanced electric commercial bike for the city with the Cargo e-Bike**

Hannover, 19 September 2018 – Volkswagen Commercial Vehicles is electrifying the industry with an electric mobility campaign. At the 69th IAA Commercial Vehicles show (20 to 27 September), the specialist in innovative transport solutions is presenting no less than five new zero-emission vehicles – creating a new matrix of electric mobility for commercial use. Making their world debuts are the I.D. BUZZ CARGO, ABT e-Transporter, ABT e-Caddy, the Cargo e-Bike and the Crafter HyMotion which is equipped with a hydrogen fuel cell drive system.

World premiere I: I.D. BUZZ CARGO

Exactly one month ago, Volkswagen introduced the first new model in its electric mobility campaign, the new e-Crafter, with pre-sales of the electric van beginning this month. The electric campaign is now gaining momentum at the 2018 IAA Commercial Vehicles show. One highlight is the I.D. BUZZ CARGO¹ concept – the first commercial vehicle to be based on the new I.D. Family and the modular electric drive kit (MEB). It embodies a new progressive design DNA, extremely good space, an automated driving mode ("I.D. Pilot"), a digitalised cargo system and long ranges. The MEB enables ranges from approximately 330 to more than 550 km (per WLTP) – depending on the battery size and the specific model.



World premiere II: Crafter HyMotion

Volkswagen Commercial Vehicles is also demonstrating a new alternative fuel direction with the world premiere of the Crafter HyMotion¹ – a van with a hydrogen fuel cell drivetrain. The Crafter HyMotion was specially designed for longer journeys: the longer the daily distance covered, the greater the appeal of the hydrogen fuel cell in large commercial vehicles. The tanks integrated in the Crafter HyMotion have a capacity of 7.5 kg hydrogen. This enables the 4.25-tonne van to cover driving ranges of more than 500 km. The time required to refill the Crafter HyMotion is comparable to that for conventionally powered models. This fact makes the new zero-emission version especially attractive for business use. Despite its significantly longer driving range, the Crafter HyMotion offers an even larger payload than the e-Crafter. The Crafter HyMotion is still a concept vehicle – but as soon as the infrastructure is right, the van could launch with its zero emission electric motor. The Crafter HyMotion is the second concept vehicle from Volkswagen Commercial Vehicles to feature a hydrogen fuel cell; it follows the Caddy Maxi HyMotion, which was first introduced in the "Hydrogen Road Tour" in 2009.

World premiere III: ABT e-Transporter

Volkswagen Commercial Vehicles has offered its Transporter model series for eight decades. Now the brand is connecting the best-selling vehicle's drive system with electricity: in the world premiere of a taxi concept – the ABT e-Transporter¹. This concept car, designed together with the company Abt e-Line GmbH, is a zero-emission van designed to generate electricity at IAA Commercial Vehicles. The battery system of the ABT e-Transporter is constructed to be scalable so that it can satisfy the needs of a wide variety of potential applications and budgets in a possible production model. In its base configuration, the Transporter comes with a lithium-ion battery that has an energy capacity of 37.3 kWh; the second battery version offers an energy capacity of 74.6 kWh. Driving ranges of the two versions are between 208 and 400 km.

World premiere IV: ABT e-Caddy

The second model designed jointly by Abt e-Line GmbH and Volkswagen Commercial Vehicles is the ABT e-Caddy¹, which is also being shown in a world premiere at the IAA. It will arrive on the market in the middle of next year. Volkswagen Commercial Vehicles is also presenting the ABT e-Caddy as a taxi, and for good reason: it is based



**Commercial
Vehicles**

• presse • news • prensa • tisk • imprensa • prasa • stampa • pers • 新闻 • npecca •

on the extended Caddy Maxi and therefore offers ample space for five people plus luggage. With a range of up to 220 km (forecast NEDC figures), the zero-emission vehicle has been ideally tailored for urban use in the environmental restriction zones of European cities. An 82-kW electric motor operates in the ABT e-Caddy. The electric motor is supplied with electricity from a lithium-ion battery. Energy capacity: 37.3 kWh. The ABT e-Caddy, which has a top speed of 120 km/h, will be one of the most spacious electric vehicles in its class with a cargo compartment volume of 4.2 m³.

World premiere V: Cargo e-Bike

Volkswagen Commercial Vehicles is also writing history at IAA 2018 with the brand's first electric bike: the Cargo e-Bike – a "last mile deliverer" that is the most advanced of its kind in the world. Market introduction of the three-wheel cycle will be in 2019. The Cargo e-Bike¹ is a pedelec (pedal electric cycle) that adds power assistance to its rider's pedalling with a 250 Watt (48V) mid-mounted motor at speeds up to 25 km/h. Advantages of a pedelec: It can be used anywhere, even in pedestrian zones. Energy for the electric motor is supplied by a lithium-ion battery. The drive and rugged architecture of the cargo bike are designed for a maximum payload of 210 kg (including rider). This vehicle – the smallest Volkswagen commercial vehicle ever – is equipped with two wheels at the front, with the load platform positioned low between them. Mounted on this load platform is a cargo box with a storage volume of 0.5 m³. Innovative kinematics of the front axle ensure that the goods being transported on the load platform do not tilt with the cargo bike when cornering, rather they remain horizontal and thereby stable. This tilt-levelling technology is an innovation. The new electric Cargo e-Bike will be produced at the Volkswagen Commercial Vehicles plant in Hannover.

1) Note: The vehicle has not yet gone on sale and therefore Directive 1999/94 EC does not apply.



WORLD PREMIERE I: I.D. BUZZ CARGO

First commercial vehicle to be based on the I.D. Family: electrically powered I.D. BUZZ CARGO provides look ahead to a new era of transporters

- **I.D. BUZZ CARGO has the potential to write history as one of the most advanced transporters**
- **New, digital cargo system in transporter's cargo compartment brings the "Internet of Things" on board**

Hannover, 19 September 2018 – It is the most familiar of all transporters: the Bulli. Now, with the world premiere of the new I.D. BUZZ CARGO, Volkswagen Commercial Vehicles is showing how an electrically powered and completely redeveloped Bulli might enrich the range of transporters. And as a supplementary model to the best-selling "T6". Meanwhile, the concept vehicle offers a glimpse into the middle of the next decade with its alternative, fully-automated "I.D. Pilot" driving mode.

The transporter concept being presented at the IAA Commercial Vehicles in Hannover (20 to 27 September) is a progressive sibling of the I.D. BUZZ. That concept, which was presented in 2017 in Detroit, enthused people around the globe and will go into production starting in 2022. Designed to be just as progressive is the new I.D. BUZZ CARGO. It is the first transporter to be based on the I.D. Family – a new generation of electric vehicles that impresses with long ranges, a progressive design-DNA and remarkably good space. The new modular electric drive matrix (MEB) represents the common technical matrix for the I.D. models. A new feature in the cargo compartment of the I.D. BUZZ CARGO is a fully digitalised cargo system with which Volkswagen Commercial Vehicles is bringing the fastest "Internet of Things" on board.

Another unique selling point of the I.D. BUZZ CARGO is the scalability of its batteries. The models can be delivered with different battery sizes according to the vehicle's purpose and budget. The MEB enables ranges from approximately 330 to more than 550 km (per WLTP) – depending on the battery size and the specific model.

For more information on the I.D. BUZZ CARGO, see the separate press kit at www.vwn-presse.de



WORLD PREMIERE II: CRAFTER HYMOTION

Crafter HyMotion is a large, long-range transporter with a hydrogen fuel cell

- **The Crafter concept, powered by a hydrogen fuel cell, achieves ranges of up to 500 km**
- **The near-production Crafter HyMotion could be available for sale as soon as the filling station infrastructure is in place**

Hannover, 19 September 2018 – Volkswagen Commercial Vehicles has just recently presented the first large electric van with the world premiere of the e-Crafter. Now, just one month later, the next zero-emission version of the highly contemporary panel van is celebrating its world premiere at IAA Commercial Vehicles in Hannover: the Crafter HyMotion – a van with a fuel cell drive. Unlike the e-Crafter, which can be ordered now, the Crafter HyMotion is still a concept vehicle. Nonetheless, its technical concept is near-production.

HyMotion stands for the terms "hydrogen" and "motion" – i.e. driving with hydrogen. The Crafter HyMotion was designed to cover longer distances with zero emissions. The e-Crafter, on the other hand, was developed for delivery services, service businesses and tradesmen who mainly travel short distances in the city with its lithium-ion battery and ranges of up to 173 kilometres (WLTP) . The longer the daily distances to be covered, the more appealing the fuel cell drive becomes in the field of large commercial vehicles, because its ranges are long and its fuel stops are very short – both of which are especially important criteria in the delivery of just-in-time goods. The vehicle's maximum payload is the same as that of today's diesel vehicles.

The tanks integrated in the Crafter HyMotion have a capacity of 7.5 kg hydrogen. This enables the 4.2-tonne van to cover driving ranges of more than 500 km. Instead of the large traction battery of the e-Crafter, a smaller lithium-ion battery with an energy capacity of 13.1 kWh is at work in the Crafter HyMotion. The fuel cell system that delivers 30 kW of power serves as a range extender. Meanwhile, the Crafter HyMotion utilises the same 100-kW electric motor and gearbox as in the e-Crafter. The van's fuel consumption is 1.4 kg hydrogen per 100 km. A driving range example: the Crafter HyMotion would only need to refill with fuel once on the 623 km route from Hannover, the capital of Lower Saxony, to the Bavarian metropolis of Munich. Duration of the filling stop: four minutes.



Fuel cell drives like the one in the Crafter HyMotion are still significantly more expensive than all-electric drives. However, forecasts based on analyses by the Volkswagen Group indicate that manufacturing costs for these two zero-emission drive systems are likely to equalise by 2025. By then, the infrastructure of hydrogen filling stations will also have improved substantially. Take the example of Germany: today there are 50 filling stations across Germany. By the end of this year there will already be around 100. The network is expected to grow to 400 filling stations by 2023. This means that the infrastructure will be good enough within the next five years to make commercial vehicles with hydrogen fuel cells relevant in business practice. Between 2025 and 2030, the number of hydrogen filling stations could rise to as many as 1,000 across Germany. If, at the same time, prices for components of this pioneering drive system drop, this could enable a market breakthrough by hydrogen fuel cells from 2025. Volkswagen Commercial Vehicles is prepared for this eventuality with innovative vehicle concepts like the Crafter HyMotion.

Mode of operation of the fuel cell

This can be explained in two sentences: a hydrogen fuel cell utilises energy from the chemical reaction between hydrogen (H₂) and oxygen (O) to generate electrical energy. The "exhaust gas" is nothing more than clean water vapour.

Explained in detail: the central element of each individual fuel cell is a proton-conducting membrane – several of which are combined to form a stack. Each membrane is positioned between the anode and the cathode. Hydrogen flows on the anode side, and air flows into the cell on the cathode side. In this process, hydrogen reacts with oxygen and combines to form water at the cathode. Here, the fuel cell converts the chemical energy of an oxidation process – also known as "cold combustion" – directly into electrical energy.

Overview of the Crafter model series

Volkswagen Commercial Vehicles has one of the most innovative and efficient large vans in the form of the current Crafter. There is hardly another commercial vehicle in this class that offers better space, economy, more optimal payloads, a similarly innovative range of assistance and infotainment systems, more connected online fleet management systems or a comparably large range of drive systems and body variants.



**Commercial
Vehicles**

• presse • news • prensa • tisk • imprensa • prasa • stampa • pers • 新闻 • npecca •

When it made its debut in autumn 2016, the Crafter was offered with front-wheel drive and a maximum gross weight of 3,500 kg. Since then, Volkswagen Commercial Vehicles has been systematically extending the number of drive and body combinations so that it can offer tailor-made solutions for all conceivable transport tasks. For example, both rear-wheel drive and all-wheel drive (4MOTION) have been available in the Crafter since mid-2017. The youngest offspring of the model series is the new e-Crafter. As a panel van it is ideally suited for urban delivery transport. The launch of this innovative zero-emission van in the market coincides with the IAA on 20 September 2018. Just as for the e-Crafter, Volkswagen Commercial Vehicles is also offering the Crafter as a panel van, a kombi, single and double cab (pickup, tipper and chassis) as well as a box body. In addition, two wheelbases (3.64 and 4.49 metres) and various overall lengths are available. The Crafter is designed for a gross weight of 3,000 to 5,500 kg, depending on the drive, engine and gearbox combination.

The Crafter TDI vehicles are powered by four-cylinder turbodiesel engines, and the e-Crafter, as mentioned, by an electric motor. A particulate filter and SCR catalytic converter reduce emissions of the efficient TDI engines. These engines are available at the output levels of 75 kW / 102 PS, 90 kW / 122 PS, 103 kW / 140 PS and 130 kW / 177 PS.



WORLD PREMIERE III:  – ABT E-TRANSPORTER

Electric ABT e-Transporter offers a first glimpse of the future of the best-selling "T6"

- **All-electric ABT e-Transporter makes its debut as a taxi concept at the IAA Commercial Vehicles**
- **Two different battery sizes enable ranges from 208 to 400 kilometres (NEDC)**

Hannover, 19 September 2018 – At the IAA 2018, Volkswagen Commercial Vehicles is taking the successful "T6" generation of Transporters into the electric era with the world premiere of the ABT e-Transporter. The zero-emission all-round vehicle is still a concept vehicle – both technically and visually. But within a year, the concept car could become a production model. At the IAA, Volkswagen Commercial Vehicles is presenting the ABT e-Transporter concept as a silent-running large taxi with up to nine seats.

This concept car is a technological forerunner – it is the first version of the best-selling van to be powered entirely by electricity. The battery system of the ABT e-Transporter is built to be scalable so that it can satisfy the needs of a wide variety of potential applications and budgets in a possible production model. In its base configuration, the Transporter has a lithium-ion battery with an energy capacity of 37.3 kWh; the second battery version offers an energy capacity of 74.6 kWh. Driving ranges with these two batteries are between 208 and 400 km (predicted NEDC figures).

A fully discharged 37.3-kWh battery can be charged to 100 per cent within five hours and ten minutes at a charging power of up to 7.2 kW, and using the quick charge method at 40 kW of power it can even charge it to 80 per cent in 49 minutes. Charging times are twice as long for the large battery version (74.6 kW instead of 37.3 kW).

ABT e-Line GmbH has developed the zero-emission transporter in cooperation with Volkswagen Commercial Vehicles. ABT e-Line GmbH is a company of the ABT Group to which the well-known company ABT Sportsline GmbH also belongs – a company that is extremely successful in the fields of vehicle upgrades and motorsports and is considered a pacesetter in electric mobility for both motorsport and road vehicles. Team ABT has competed successfully in the FIA Formula E racing series, for example, in which it has already won in the driver classification with Lucas Di Grassi and in the team classification as well.



**Commercial
Vehicles**

• presse • news • prensa • tisk • imprensa • prasa • stampa • pers • 新闻 • npecca •

This has led to the creation of the ABT e-Transporter – a zero-emission vehicle with tremendous practical utility. The 120-km/h transporter with its two battery variants offers a storage volume of 6.7 m³. Maximum payload is 1,050 kg with the smaller battery or 750 kg with the larger battery. Its gross vehicle weight rating is 3,200 kg in both variants.

The ABT e-Transporter is based on the larger wheelbase version (3,400 mm) of the "T6". The overall length of the concept vehicle is 5,406 mm. In addition to the taxi being shown in Hannover (Caravelle for passenger transport), other conceivable derivatives include a closed panel van (flexible use of cargo compartment) and a kombi (different seat and cargo compartment variants).



WORLD PREMIERE IV:  – ABT E-CADDY

The electrically powered ABT e-Caddy will launch with zero emissions in 2019

- **New ABT e-Caddy will cover distances of up to 220 kilometres on a single battery charge**
- **120 km/h ABT e-Caddy is based on large Caddy Maxi and offers 4.2 m³ of cargo space**

Hannover, 19 September 2018 – Volkswagen Commercial Vehicles will launch the all-electric ABT e-Caddy into the market in mid-2019. The new zero-emission model is celebrating its world premiere at the IAA Commercial Vehicles in Hannover. With a range of up to 220 km (forecast NEDC figure), the ABT e-Caddy has been ideally tailored for urban use in European cities – for commercial uses of all kinds as well as personal use.

In Hannover, Volkswagen Commercial Vehicles is presenting the ABT e-Caddy in the form of an extremely spacious taxi for five people plus luggage. The drive system for the ABT e-Caddy was developed by ABT e-Line GmbH. The ABT e-Transporter concept vehicle, which is also being introduced in a world premiere at the IAA Commercial Vehicles, was also created in the framework of this strategic partnership with Volkswagen Commercial Vehicles.

An 82-kW electric motor powers the front wheels of the ABT e-Caddy, supplied with electricity via a lithium-ion battery with an energy capacity of 37.3 kWh. In this system, the flow of energy between the motor and battery is managed by power electronics. In the ABT e-Caddy, power is transmitted via an automatic single-speed gearbox. A fully discharged battery can be charged to 100 per cent in less than six hours at a charging power of up to 7.2 kW (e.g. at wallboxes). Using the quick charge method at 40 kW, the battery can be charged to 80 per cent capacity in just 49 minutes.

The 120-km/h ABT e-Caddy will launch as a Maxi with the long wheelbase (320 mm longer) and will be one of the most spacious electric vehicles in its class with a cargo volume of 4.2 m³. Its maximum payload is 635 kg. The ABT e-Caddy can be configured as a commercial vehicle in the form of the panel van (no windows at rear) and kombi (with rear windows) – or as a passenger carrying vehicle.



**Commercial
Vehicles**

• presse • news • prensa • tisk • imprensa • prasa • stampa • pers • 新闻 • рресса •

WORLD PREMIERE V: CARGO E-BIKE

Volkswagen Commercial Vehicles is presenting the world's most advanced electric cargo bike

- **The Cargo e-Bike is equipped with innovative axle kinematics which keep the goods being transported level**
- **The three-wheel pedelec can be ridden without a driver's licence and will launch in 2019**

Hannover, 19 September 2018 – Volkswagen Commercial Vehicles will be offering innovative zero-emission vehicles in nearly all market segments. With this goal in mind, the brand has developed its first electric cargo bike: the Cargo e-Bike. It was designed for use in downtown areas, production plants, businesses of all types and hotels – the list of potential applications is limitless. A progressive last-mile deliverer with a market launch date as soon as next year.

The Cargo e-Bike from Volkswagen Commercial Vehicles is a pedelec that adds power assistance to the rider's pedalling with its 250 watt (48V) mid-mounted motor at speeds up to 25 km/h. The advantages: the cargo bike can be used without a driver's licence or insurance and can be used practically anywhere. The energy for the electric motor is supplied by a lithium-ion battery (energy capacity: 500 Wh). The bike's range is up to 100 kilometres.

The three-wheel Volkswagen Commercial Vehicle has an axle with two wheels at the front and the cargo platform positioned low between them. The rear of the pedelec is designed like a normal bicycle. A cargo box with a storage volume of 0.5 m³ can be mounted to the load platform. The cargo bike is 2,060 mm long, 890 mm wide and 1,100 mm tall (height of handlebars). The drive and the rugged architecture of the lightweight 40-kg cargo bike have been designed for a payload of up to 210 kg (including rider).

The innovative kinematics of the front axle ensure that the goods being transported on the load platform do not tilt with the cargo bike when cornering, rather they remain horizontal and thereby stable. This tilt-levelling technology is an innovation in the segment of cargo bikes.

Ingenious detailed solutions like the new kinematics are a common thread that runs through the entire design concept of the Cargo e-Bike. The bike's track width was intentionally limited to less than 900



**Commercial
Vehicles**

• presse • news • prensa • tisk • imprensa • prasa • stampa • pers • 新闻 • npecca •

mm so that it is even possible to ride through door frames. The combination of its track width, a relatively long wheelbase of 1,350 mm and the low centre of gravity of its load platform result in a high degree of safety against overturning. Ride comfort is optimised by wide balloon tyres (20-inch at front, 24-inch at rear) from Continental ("Revolution" type). The solutions implemented by Volkswagen Commercial Vehicles combine to create a new generation of electric cargo bikes whose utility and ride properties will set the benchmark in this field.

The innovative Cargo e-Bike will be produced at the Volkswagen Commercial Vehicles plant in Hannover. A new production area with a floor area of 240 m² was set up for this purpose. SOP – Start of Production – is scheduled for the very near future.