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World premiere at 2018 IAA Commercial Vehicles: I.D. BUZZ CARGO based on the I.D. family provides look ahead to a new era of light commercial vehicles

- **I.D. BUZZ CARGO has the potential to write history as one of the most advanced transporters**
- **Spacious electric transporter concept vehicle based on the Modular Electric Drive Kit (MEB)**
- **With the biggest battery the MEB makes ranges of over 550 km (WLTP) possible**
- **Digital cargo system connects cockpit and cargo space and brings superfast "Internet of things" on board**
- **In "I.D. Pilot" mode the I.D. BUZZ CARGO concept vehicle drives using full automation (level 4) to its next place of use**
- **230V socket provides workers' tools with power for hours with no additional generator**
- **A large solar roof extends the daily range of the I.D. BUZZ CARGO by up to 15 km**

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". The most innovative zero-emission transporter of our time could be launched into the market as early as 2021. Meanwhile, the concept vehicle offers a glimpse into the middle of the next decade with its alternative, fully-automated "I.D. Pilot" driving mode (level 4).

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. The new I.D. BUZZ CARGO was designed to be just as close to production level. The I.D. BUZZ was developed jointly by Volkswagen Commercial Vehicles and Volkswagen Passenger Cars. Volkswagen Passenger Cars focused on the van (people carrier) and Volkswagen Commercial Vehicles on the cargo version. Both models are members of the I.D. Family – a new generation of fully connected electric vehicles delivering the ranges of today's petrol vehicles, a progressive design-DNA and impressive space. Another key unique selling point of the I.D. Family is the scalability of its batteries. The models can be delivered with



different battery sizes according to the vehicles purpose of use and budget. And this applies also to the future I.D. BUZZ CARGO, which like all models in the I.D. Family is based on the Modular Electric Drive Kit (MEB). With the MEB it is possible – dependent on battery size and the model concerned – to achieve ranges of about 330 to over 500 km (as per WLTP).

Era of electric mobility begins

This concept vehicle shows how Volkswagen Commercial Vehicles is launching into the new era of electric mobility. Back in August, the company already presented the brand's first all-electric van with the world premiere of the new e-Crafter. While the e-Crafter launched as a panel van with an overall length of 5,986 mm and a maximum payload of 1.75 tonnes, the I.D. BUZZ CARGO concept is positioned in the size class beneath the Crafter. The payload (maximum load) of the concept vehicle is 800 kg; the I.D. BUZZ CARGO is 5,048 mm long, 1,976 mm wide and 1,963 mm tall. Its wheelbase measures 3,300 mm. By the way, the rear overhang was extended by 106 mm, making the cargo version of the I.D. BUZZ significantly longer than the van shown in Detroit.

Transporter's exterior differs from that of the van

Outside, the I.D. BUZZ CARGO concept is differentiated from the people carrying version by a new solar roof, wide-opening rear wing doors and a new rear bumper. With a view towards optimising utilisation of the cargo space with shelving systems, there is no sliding door on the driver's side – and this is typical of transporters. The front doors and sliding door open electrically. Unlocking the vehicle from the outside is activated via a sensor solution. The I.D. BUZZ CARGO recognises authorised persons via a digital key which is sent to the van from a smartphone. Instead of the 22-inch wheels of the Detroit concept vehicle, new 20-inch wheels are used with size 235/55 tyres. With these specifications, the I.D. BUZZ CARGO meets the requirements of a utility-oriented transporter – but in this case with a progressive type of design.

The solar module on the roof fits into this picture. The photovoltaic system generates so much energy that it is able to extend the range of the I.D. BUZZ CARGO by up to 15 km a day. So the longer the concept vehicle stands in the sun, the further it can drive later.

Interior with three seats in the front and computer workstation

The interior has also been tailored for commercial use – down to the smallest detail. From the driver's cab to the rear, the I.D. BUZZ CARGO exhibits an entirely independent concept. Instead of two single seats,



the concept vehicle is equipped with the driver's seat and a double bench-seat on the front passenger side – a typical commercial vehicle solution. The middle seat can be folded down. This opens up a workplace, at which the driver can take care of organisational matters via an integrated laptop. In the automated "I.D. Pilot" mode this can even be done on the move. The driver activates the autonomous mode at level 4 of the corresponding VDA classification (VDA = German Automotive Industry Association) by simply pushing on the steering wheel for a few seconds. It then retracts into the redesigned instrument panel. Thereafter the driver's seat can be turned 15 degrees to the right in order to enable the on-board computer to be operated from the ideal ergonomic position.

There is no cockpit in the conventional sense in the I.D. BUZZ CARGO. Instead, key information is projected onto the road in 3D via its AR head-up display. This positions the information precisely in the driver's line-of-sight, allowing the driver to concentrate fully on road traffic. AR stands for augmented reality, a technology that shows electronically generated images in real space. Other information is displayed on a tablet; features such as infotainment and climate control functions are also operated via this portable tablet. The main controls for driving, meanwhile, are located on the steering wheel. Its inner section is not fitted with spokes and buttons – as is normal today – rather it has a touchpad with a variety of fields. The conventional steering wheel becomes a multifunctional steering wheel. Rear view mirrors are also a thing of the past in the I.D. BUZZ CARGO, with cameras projecting images onto small screens in the cab. Some elements are not changes: like in the T6 Transporter, there are numerous storage options in the dash panel, because the I.D. BUZZ CARGO was primarily designed to simplify working in the vehicle.

"Internet of Things" will now be on-board in the cargo space

The cargo compartment begins behind the first seat row and a bulkhead. Like the rest of the transporter, it was "re-thought". Volkswagen Commercial Vehicles is bringing the "Internet of Things" on board in this van. In cooperation with the German equipment specialist Sortimo, a new shelving system has been developed for the cargo area and fitted with sensors and a lighting system. This shelving system is connected to the intelligent I.D. BUZZ CARGO via a customer-specific function control unit and a CAN interface. The data is transferred by WLAN to tablets in the cargo space and cockpit. By means of a mobile radio network, the functional control unit might communicate with a company's job or order management system, theoretically making it possible to track all articles on the shelves. This enables precise online management of the type and quantity of freight and equipment in the zero-emission Bulli.



Further data is provided by the already available ConnectedVan fleet management system.

During autonomous driving it is possible to accept, schedule and process orders from the driver's workplace. Thanks to the connected shelving system's data it is also possible to perform order-related stock checks while on the move. Quick taking of orders is made possible in the I.D. BUZZ CARGO through a flexible procurement planning system. It is also possible to perform optimum, flexible route planning taking customer appointments into account. Meanwhile the Pick-by-Light function, for example, illuminates the position on the shelf of any tool being searched for so that it can be found faster. Thanks to the Safety Check function any unsecured tools or missing parts are indicated before the start of the journey. Last but not least, any components taken out get automatically registered, working times recorded and invoices issued. A large light (0.8 m²) integrated in the roof makes access to the items even easier and quicker

The new shelving concept has been thought through in minute detail and yet is surprisingly simple in its construction: the entire system can be adapted individually to the cargo compartment of the I.D. BUZZ CARGO, enabling optimal space utilisation. This is why the I.D. BUZZ CARGO concept has "only" one sliding door on the passenger side; the space on the opposite wall of the load compartment is needed as a storage area and for shelving systems like the Sortimo.

High-volume space with a small turning circle

Like all members of the I.D. Family, the I.D. BUZZ CARGO is characterised by an exceptionally large interior, with its innovative package enabled by the MEB. The battery is integrated into the vehicle floor, lowering the vehicle's centre of gravity and significantly improving handling. The transporter's axles have been shifted outwards, because no space is required for a combustion engine at the front, and the compact electric motor with its gearbox is mounted on the rear axle. This creates additional space (up to 0.2 m³) in the front of the concept vehicle. The electric motor drives the multilink rear axle. As an alternative, an electric all-wheel drive version with improved traction and performance can be implemented – as in the van. A rear axle steering system from the Detroit concept van was also adapted to the I.D. BUZZ CARGO; in conjunction with the large turn-in angle of the front wheels, this results in an extremely small turning circle of less than 10.0 metres – ideal for manoeuvring in the city.

I.D. BUZZ CARGO as mobile workshop



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Driving up to loading ramps is made easier by the wide-opening, symmetrical rear wing doors. When the wing doors are opened, a workbench can be folded out. Even high-performance work tools can be supplied with power there from 230V electrical sockets (16A) via the battery. This has been implemented to ensure that the I.D. BUZZ CARGO is not just a means of transportation, but also a standalone mobile workshop.

The zero-emission drive in detail

The electric drive of the I.D. BUZZ CARGO consists mainly of the electric motor with power electronics and 1-speed gearbox integrated into the driven rear axle, the lithium-ion battery and auxiliary units integrated in the front body. The flow of high-voltage energy between the motor and the battery is controlled by the power electronics. Here, the direct current (DC) stored in the battery is converted into alternating current (AC). A DC/DC converter supplies the on-board electronics with 12 volts. As noted, it is possible to equip the I.D. BUZZ CARGO with different size batteries according to the vehicle's use profile. If the transporter covers fairly normal distances in the city on a daily and weekly basis, a lithium-ion battery with an energy capacity of 48 kWh is recommended. If greater range is needed, the energy capacity can be increased up to 111 kWh.

Volkswagen Commercial Vehicles has combined the battery in the I.D. BUZZ CARGO being presented in Hannover with a 150 kW electric motor. The vehicle's top speed is electronically limited to 160 km/h. As mentioned above, an all-wheel drive system like the one implemented in its sibling model is just as conceivable.



The battery is generally charged overnight at a vehicle depot

The high-voltage battery of the I.D. BUZZ CARGO is charged by cable connection. Using fast charging systems operating at 150 kW direct current, the 48-kWh battery can be charged to 80 per cent capacity in 15 minutes; for the largest battery expansion stage with an energy capacity of 111 kWh it takes 30 minutes. As an alternative, the high-voltage battery can be charged from any conventional household socket, charging stations with a wide variety of power outputs or wallboxes. Although the Bulli can be charged at 2.3 kW via a normal 230V mains, Volkswagen Commercial Vehicles offers wallboxes that operate at much higher power levels up to 11 kW. They are especially advisable for charging batteries to 100 per cent at a company's vehicle depot overnight (when electricity prices are often lower).

The battery system of the future production version has also been prepared for inductive charging, likewise with 11 kW of charging power. The concept vehicle has this technology already. In this case, the van is positioned – via electronic control – over a “charging plate” during parking. As soon as the control unit of the charging plate in the pavement has set up a communications channel with the vehicle, contactless energy can be transferred through an electromagnetic field generated between two coils (one in the floor of the parking space and one in the vehicle).

Design of a 21st century icon

There is no other van in the world today with a design which is nearly as familiar, successful or unique as that of the Bulli. Over seven decades and six vehicle generations, Volkswagen Commercial Vehicles has refined and sharpened its design, continually reinventing it while never losing sight of the DNA of the model series. With the debuts of the I.D. BUZZ and I.D. BUZZ CARGO, the upcoming decade will see the advent of another series of all-round vehicles to supplement the “T6” – the Transporter, Caravelle, Multivan and California. This series will project the design of the original transporter into the future. It signifies a new, strong branch on the tree of an automotive icon.

What defines the design of the I.D. BUZZ CARGO is the interplay of familiar and new elements of the Bulli DNA. The front end, in particular, with a characteristic “V” and a typically friendly “face” clearly reflects a Bulli – yet it is a completely new interpretation. Instead of the round headlights of the original model, the I.D. BUZZ CARGO has interactive LED systems, which not only turn night into day, but also communicate interactively with pedestrians – like eyes. Another style-defining feature is the short front body overhang. Just as style-defining is the roofline



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with its charismatic front extension over the windscreen, although each detail has been re-interpreted and implemented.

When it is dark outside, this creates a unique night design with the backlit VW logo on the front of the vehicle and the LED daytime running lights in the headlights and front bumper. The I.D. BUZZ CARGO is also unmistakable from the back. Here, it is the slender LED lights and large painted surfaces that typify the iconic design.

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