Volkswagen

Geneva International Motor Show, 2019

ID. BUGGY – The world premiere

Note: You can find this press release and the picture motives for the ID. BUGGY online at www.volkswagen-newsroom.com

1 = Concept car

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Comeback of a lifestyle: The world premiere of the electric ID. BUGGY

Important facts – Key points for the ID. BUGGY[1]

- **Summer cruiser:** ID. BUGGY takes the idea of the legendary dune buggies into the age of electric mobility.
- **Pure driving pleasure:** With the ID. BUGGY concept car, Volkswagen is showing a new, leisure-oriented facet of electric mobility.
- **Born in California:** The dune buggy was invented in the 60s on the west coast of the USA based on the Beetle.
- **Statement:** "The purist design is the modern, retro-free interpretation of an icon" (Klaus Bischoff, Chief Designer)
- **Floating body:** The body seems to visually float above the chassis and 18-inch wheels.
- **Based on MEB:** Safety chassis with zero-emission drive and battery based on the modular electric drive matrix (MEB)
- **No roof, no doors:** Weatherproof interior with two integrated seats and fully digital cockpit
- **Flexible quick-charging station:** The Volkswagen Group Components Division introduces revolutionary e-vehicle charging system in Geneva
- **Opportunity for external manufacturers:** ID. BUGGY can be built by start-ups in a wide variety of versions

ID. BUGGY – Compatible with the beaches of the world

Wolfsburg / Geneva, March 2019. This car is a leap in time: the ID. BUGGY. A snap of the fingers – and suddenly it's as if someone has catapulted the concept of the Californian dune buggies of the 60s and the associated lifestyle into the future. "The purist design of the ID. BUGGY is the modern, retro-free interpretation of an icon. Unmistakably a buggy. And yet completely reconceived," outlines Volkswagen Chief Designer Klaus Bischoff. A zero-emission

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high-tech vehicle for the summer, the beach, the city – visually and technically a new facet of the modular electric drive matrix (MEB). Volkswagen is showing the ID. BUGGY for the first time at the 89th Geneva International Motor Show (7 to 17 March 2019). Concurrently, the company is taking the opportunity of the trade show premiere to present a flexible charging station that is close to series production and is set to revolutionise charging infrastructure.

From boxer to electric motor. The parallels between the beach buggies of the past and the new ID. BUGGY shorten a period of five decades to a blink of an eye. All buggies from the 60s featured a high degree of modular variability – based on the chassis of the legendary Beetle with a four-cylinder boxer engine running at the rear. Small series manufacturers stretched a cover made of glass-fibre reinforced plastic (GFRP) over the chassis and engine of the Beetle, thus writing automotive history. The ID. BUGGY is tied to this cult concept with the technical possibilities of the modern age. The basis here is the progressive chassis of the MEB. Integrated in the vehicle floor: a high-voltage battery. This lithium-ion battery powers the 150 kW / 204 PS electric motor in the rear. An additional electric motor in the front axle is also conceivable in order to realise a four-wheel drive with an "electric propshaft".

No roof, no doors. The MEB provides a good opportunity to combine the sharpest proportions with the new design DNA of e-mobility. The ID. BUGGY shows this par excellence. The clear, sculptured design language expresses the unique feeling of freedom when driving the buggy. To be able to feel the wind, a fixed roof and doors were deliberately dispensed with. This is why the resilient and minimalist design of the interior is characterised by waterproof materials. The concept car is a pure 2-seater; however, the ID. BUGGY can also be converted to a 2+2-seater.

Powered by Volkswagen, built by X. The composite body, manufactured in a mixed aluminium/steel/plastic construction, is self-supporting. Thanks to the modular design, the upper body area can be detached from the MEB

chassis. A clear signal to small series manufacturers and start-ups: As in the past, Volkswagen is opening up to external producers with the ID. BUGGY concept. The offer: On this basis you can build the emission-free dune buggy for a new era – no matter whether for Santa Barbara in California, the Yalong Bay in China or St. Peter-Ording in Germany. In general, the MEB also has the potential to become the new technical basis for e-mobility for many automobile manufacturers. Background: At the beginning of 2019, Volkswagen announced for the first time that it intended to also make the MEB accessible to competitors as an electric vehicle platform.

Forerunner of an ID. model? At the same time, the ID. BUGGY illustrates the broad spectrum of emission-free mobility that can be achieved with the modular electric drive matrix within the Volkswagen brand: After the ID. (compact class), ID. BUZZ (van), ID. CROZZ (SUV) and ID. VIZZION (saloon), the new ID. BUGGY is the fifth concept car based on MEB, with which Volkswagen has used to confirm the multifaceted nature of the ID. Family. Unlike the four first concept cars, the ID. BUGGY has consciously been designed without an assisted driving system. It was conceived as a summer cruiser and to be especially fun to drive over short distances. The concept car shows by way of example that there is also room for a zero-emission vehicle with reduced equipment – of whatever type – in the future product range of the ID. Family.

Key aspects

Exterior design – Pure Buggy, pure ID.

Firm proportions. The ID. BUGGY was designed for driving over unpaved tracks, dunes and beaches. You can see it on every millimetre and from every perspective. But of course, this Volkswagen is also predestined for warm evenings in the city. "Summer in the City" – live and via Bluetooth speaker. The driver and front passenger observe the striking raised wings; in the middle of the vehicle, the lowered sill panel openings continue the line of the wings; in the rear-view mirrors, the shoulder of the rear end rises up high. The surrounding line of free-standing wings, sill panel openings, raised front bonnet and an even higher rear end – painted in a matt but radiant Fern Green – surrounds the car. The area below – also surrounding the car – is in dark Grey Tech Blue, a textured paint. The effect of these two colours is brilliant: It allows the green part to visually float above the dark blue area. This is new and light – but still pure Buggy, pure ID. The open zero-emission concept car is 4,063 mm long, 1,890 mm wide and 1,463 mm high. Quite short are the front (686 mm) and rear (727 mm) overhang. The wheelbase between the axles is 2,650 mm.

Friendly front end. Volkswagen is one of the few car manufacturers whose vehicles' brand association can be immediately identified even without a classic radiator grille. This is because the design is genetically traced back to the Beetle and Transporter. Cars without any kind of radiator grille. They didn't need it with their air-cooled rear engines. The same is true for the ID. Family. Because their electric motors do not need an airstream. This also characterises the front end of the ID. BUGGY – a completely new vehicle immediately recognisable as a Volkswagen. This conciseness of design also makes the ID. BUGGY unique. And more than that: With this concept car, the team headed by Klaus Bischoff created a completely new approach for a summer cruiser. The surrounding line of the front bonnet actually seems to float above the massive bumper. The same is true for the three-dimensional LED headlamps with their oval daytime running light and pupil-like dipped

and main beams. Visually, there is the impression that the LED ovals also float freely and are only firmly connected to the car in the area of the front bonnet. The VW logo on the bonnet is also designed as an LED element. Two red, robust steel eyelets are integrated in the bumpers to rescue other vehicles or the ID. BUGGY itself, if it can no longer drive. LED turn signals are integrated in the side and top of the rear-view mirror caps. All the details together make up the friendly, confident face of a new all-terrain vehicle. Last but not least, a solid aluminium underbody guard ensures that the front axle and ancillaries are not damaged during off-road driving.

Floating silhouette. In the same way as the front bonnet, the top side section of the body seems to float. With its distinctive character line, it runs above the 18-inch wheels and off-road tyres (255/55 BFGoodrich at front and 285/60 BFGoodrich at rear® All Terrain T/A). In the area of the sill, this line drops and rises again at the rear. The side sill panel runs parallel to it. At the same time, it assumes the function of an additional underbody guard; here, too, the choice of material was aluminium (coated with a chrome effect paint). Ground clearance under the axles is 240 mm. Everything is cleanly and yet emotionally designed. A few lines that create a must-have feeling. In the centre, the open silhouette provides a view of the backrests of the integral seats and the multifunctional ID. steering wheel. The roof frames are in Grey Tech Blue. The reinforced windscreen frame together with the Targa bar, which is also open at the side, provides rollover support. There is no roof in the classic sense. However, a black tarpaulin can be stretched between the windscreen frame and the Targa bar as a sun sail or light weather protection.

Powerful rear end. The rear end is very high and wide – typical for a buggy. It looks clean and cool, light and yet robust. Here, too, the surrounding character line continues. Painted in Fern Green, the upper section of the rear seems to float above the lower dark blue section. Just like the LED headlights at the front end, the three-dimensional LED tail light clusters at the rear have an oval design. The outer rim is integrated in the area painted in

the car colour at the top – the effect of which is that the lower 60 per cent visually floats above the black body level. The interface for battery charging is located underneath the illuminated VW logo at the rear. A solid bumper cross beam runs below it – also fitted with red eyelets as an attachment point for ropes. Next to it are the LED turn signals. Finally, on the lowest level there is another aluminium underbody guard.

Interior concept – Minimalistic, resilient

Resilient open space. The world of the 60s dune buggies and the new era of electric mobility merge on board the ID. BUGGY into a retro-free interpretation of the classic. The minimalist interior is characterised by easy handling and waterproof materials. The clean surface design, like the exterior, is resilient. All elements surrounding the exterior are a continuation of the body painted in Fern Green. Colour-coordinated: the upper areas of the backrests in Fern Green Accent. The majority of the interior trim is finished in Grey Tech Blue as a robust soft-touch paint. They withstand the drive on the beach unscathed like a summer rain shower in the city. This is particularly true for the floor plate with anti-slip knobs. The driver and passenger sit on integral seats; headrests and belt guides are integrated into the backrests. They also have an unusually large amount of space, as the ID. BUGGY – despite its modular shortened wheelbase – also has the typical large open space of the ID. Family due to its compact electric drive and axles arranged further to the outside. This open space always provides room that is about one class above that of comparable cars with a conventional drive.

Hexagon steering wheel. The driver takes hold of the multifunction steering wheel (flattened hexagon) with controls in the crossbar (in Fern Green Accent). The controls react to touch (capacitive), but at the same time light pressure is required to prohibit accidental activation of functions. The Phone and Media functions are controlled using illuminated fields. The outer rim of the steering wheel is covered with water-repellent leather (Nappa Silver

Grey colour). The inner rim is designed in Grey Tech Blue. This dark blue soft-touch paint also characterises the luggage compartment at the rear, where the load is secured with adjustable tensioning straps.

Digital instruments. The minimalistic digital cockpit has been designed to match the character and design of the ID. BUGGY: With the "Hey you" display in the cockpit, the concept car greets its driver and draws attention to the fact that it is ready for operation. The Volkswagen designers and engineers have kept the entire operating logic intuitive. Some simple examples: if the driver changes the gear position (D, N or R) by clicking a small wheel on the right side of the steering column forward or backward, this gear change is displayed as a rotational movement directly in the Digital Cockpit – the clicking motion and visualisation unite. Another example of intuitive operating logic is the pedal cluster: The triangular arrow symbol for "Start", as known from consumer electronics, is incorporated in the accelerator pedal, while the brake pedal is provided with a vertical double bar for "Stop". Symbols that are understood worldwide.

Electric drive – Zero emissions, as you like it

Variable configuration. The zero-emission drive of the I.D. BUGGY is made up of the electric motor integrated in the rear axle together with the power electronics and 1-speed gearbox, the high-voltage flat battery arranged in the car floor to save space and the additional units integrated in the vehicle front end. The electric motor delivers 150 kW / 204 PS. The character of the sporty ID. BUGGY matches the engine that provides a maximum torque of 310 Nm from standstill. This means that the electric vehicle always provides enough power on the rear axle, even off-road. With full acceleration on paved slopes, the concept car reaches 100 km/h after just 7.2 seconds. The maximum speed is electronically controlled at 160 km/h. As an alternative to the rear drive, it is also possible to fit a second electric motor in the front axle of the ID. BUGGY. In this case, an "electric propshaft" would distribute the power of the 4MOTION four-wheel drive between the front and rear axles in fractions of a second as soon as this is necessary for reasons of driving dynamics.

Focused on performance. Regardless of rear drive or four-wheel drive, power electronics control the high-voltage energy flow between the engine and battery. The power electronics convert direct current (DC) stored in the battery into alternating current (AC). The on-board electronics are supplied with 12V via a DC/DC converter. The position of the battery in the vehicle floor has a positive effect on the neutral handling properties of the ID. BUGGY, as the centre of gravity is moved down.

Flexible quick-charging stations – Revolution in charging infrastructure

Charging anywhere in the world. In Geneva, the Volkswagen Group brand is demonstrating how charging can be realized and revolutionized in the future at any location – whether on the beach, at festivals, in the city or wherever: With the trade show premiere, a flexible quick-charging station. This can be set up temporarily or installed permanently.

Powerbank for e-vehicles. The concept for these mobile charging stations, which is close to series production, works on the principle of a powerbank, like the ones millions of people use for their smartphones when travelling – only much larger and more powerful. The charging capacity is up to 360 kWh (DC quick-charge technology with a maximum capacity of 100 kW). If the power level of the batteries installed in the charging station falls below a defined value, the discharged charging station is simply replaced for a charged one. However, if it is connected permanently to the mains supply, the battery pack permanently recharges.

Charging station as a building block of the energy revolution. If the station charges with electricity produced from renewable resources – such as solar or wind energy – this new charging station for the first time allows the sustainable electricity to be stored temporarily. This will make electric mobility CO_2-neutral. Countries such as Germany, which feed in a high proportion of sustainably produced electricity into the grid following on from the energy revolution, will now for the first time be able to store a portion of this energy, as soon as the grid of quick-charging stations together reaches a defined volume.

One battery, two lives. The flexible quick-charging station is also twice as sustainable, As the station's battery pack is technically related to that of the future ID. Family. This concept offers not only the advantage of scalability in versions with different capacities – but also a secondary use for older ID. models. Background: If a vehicle battery falls below a defined residual capacity during its life cycle, it is replaced. If this battery then passes an extensive test, if can be used in a mobile charging station and thus reused.

Production in Germany starting in 2020. Flexible fast charging stations will help to accelerate the expansion of the charging infrastructure. In 2020 Volkswagen Group Components will launch the production of new charging stations in the German component plant in Hanover and at the same time bring to the market the first models of the new ID. Family.

The historic ideal – California Dreamin'

Born in California. The idea of the buggy was born in California. Self-built racers with V8 engines cruised over the dunes of the Pacific beaches there for the first time in the 1950s. At some point, the first Beetle chassis with rollover bars and a Boxer engine in the rear appeared on the beaches. This sight gave Bruce Meyers, until then busy with the construction of boats and surfboards, the idea of a lightweight GFRP body. In 1964 the American presented his first model: a bright red thing called "Old Red". In the dunes of Pismo Beach, a laid-back setting between San Francisco and Los Angeles, he wrote automotive history with it. As an engineer, artist, boat builder and surfer, he brought the perfect combination of profession and vocation to create a new type of vehicle that would soon inspire hundreds of thousands of people as a dune or beach buggy. At the beginning of the 70s, buggy mania also broke out in Europe. The breakthrough is largely thanks to three editors of the German magazine "Gute Fahrt": The trio obtained a design certificate from TÜV and at the same time gained the long-standing Volkswagen partner Karmann for the production and construction of the "Karmann GF Buggy". From now on, all buggies approved in Germany benefited from the model certificate. Until the peak of the buggy boom in the 80s, many other suppliers entered the market in Europe. One of the best-known and most successful small-series manufacturers was Apal from Belgium.

Technical data – Design parameters

Technical basis	Modular electric drive matrix
Status	Concept Car

Drive / range / driving performances

Drive:	Electric motor, rear drive (optional all-wheel drive)
Max. output electric motor:	150 kW / 204 PS
Max. torque electric motor:	310 Nm
Acceleration (0-100 km/h):	7.2 s
Top speed:	160 km/h (controlled)

Body

Length:	4,063 mm
Width:	1,890 mm
Height:	1,463 mm
Wheelbase:	2,650 mm
Front / rear overhang:	686 / 727 mm
Ground clearance:	240 mm
Front axle track:	1,589 mm
Rear axle track:	1,598 mm
Wheels/tyres:	VA 255/55 R18, HA 285/60 R18
Colours:	Fern Green, Grey Tech Blue

Vehicle interior / luggage compartment

Seats:	Two front integral seats
Luggage compartment:	Flexible use, with tensioning straps
Colours:	Fern Green, Fern Green Accent, Grey Tech Blue