



Volkswagen

# ELECTRIC TO THE MAX **THE RECORD-CHASING ID. R**



ID. R World Premiere  
Nürburgring, 24 April 2019



**Dear Media Representatives,**

Last year, the fully-electric ID. R made history on Pikes Peak in Colorado Springs. For the first time in the history of this iconic hill climb, with a heritage stretching back over 100 years, the all-time record was set by an electric race car. Developed by Volkswagen Motorsport, the ID. R is now set to face new challenges – on no-less legendary racetracks and roads in Europe and Asia.

As the racing ambassador for the future electric production cars in the ID. family, the ID. R combines Volkswagen's technical expertise in the field of electric drive technology with the emotion and fascination of motor racing. The aim of the forthcoming outings with the ID. R is to underline, in completely different conditions to those on Pikes Peak, what Volkswagen cars with electric drive technology are already capable of.

The ID. R is symbolic of Volkswagen's electromobility offensive, which kicks off with the world premiere of the first model in the ID. range. By implementing this strategy, we are making electric cars attractive and affordable for as many people as possible. The Volkswagen brand will launch more than 20 fully-electric models by 2025.

When it comes to technology and performance, the ID. R race car is spearheading electromobility 'made by Volkswagen'. In the following pages, we will introduce you to the next evolutionary stage of the record-breaking Pikes Peak car and the ambitious plans we have for it. I hope you enjoy the read.

**Dr. Frank Welsch**

**Member of the Board of Management in charge of  
development of Volkswagen passenger cars**

# ELECTRIC TO THE MAX

## **THE RECORD-CHASING ID. R**

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**#challengeacceptID**





Last year, the ID. R emphatically demonstrated the potential of the electric drive technology on Pikes Peak.

# THE ID. R IS BACK THE HUNT FOR RECORDS GOES ON

**2019 holds new challenges in store for the ID. R: after record-breaking outings on Pikes Peak and in Goodwood, the fully-electric race car now goes in pursuit of more records on the Nürburgring-Nordschleife and Tianmen Mountain in China.**

Pikes Peak and Goodwood were merely the beginning. Volkswagen Motorsport is out to add more international benchmarks to the two records that Romain Dumas set last year at the wheel of the fully-electric ID. R, at the "Race to the Clouds" in the USA and the "Festival of Speed" in England. In summer 2019, Volkswagen's first fully-electric race car will take aim at the lap record for electric cars on the Nürburgring-Nordschleife. Dumas will be back in the ID. R in September 2019, when he attempts to climb the road to the mystical Heaven's Gate on Tianmen Mountain, China, faster than video gamers in the "China Challenge" online race simulation.

When the ID. R takes on these new challenges, it will be able to call upon continuously-developed technology. This primarily includes even more efficient electric drive technology and optimised aerodynamics, tailored to the conditions at each respective track. The latest evolution of this iconic racer is again powered by two electric motors with a system performance of 500 kW (680 PS).

The all-time record on Pikes Peak in June 2018 saw Volkswagen Motorsport lay down its first big marker in one of the most ambitious projects in its illustrious history. "There was no predecessor to the ID. R. We literally started with a blank sheet of paper," recalled François-Xavier Demaison, Technical Director at Volkswagen Motorsport, at the start of the project in October 2017.

## **Pikes Peak: Electric drivetrain beats combustion engine**

Just 250 days later, Dumas completed the 20-kilometre hill climb up Pikes Peak, Colorado, in 7:57.148 minutes. In doing so, he smashed the previous record held by a car with combustion engine by more than 16 seconds. Never in the history of this iconic hill climb, which was first held back in 1906, had a car scaled the 4,302-metre peak in less than eight minutes. The next record followed just a few weeks later. In July 2018, Dumas and the ID. R set a new record for electric cars – and



took overall victory – at the “Goodwood Festival of Speed” in England. The winning time was also the fastest for 15 years and the third-fastest of all time.

### **In pursuit of actual and virtual records**

Volkswagen continues to pursue its sustainable electromobility strategy in 2019. One key element of this strategy is the ID. range of products, based on the MEB platform (Modular Electric Drive Kit), which was designed exclusively for electric drive technology. As the racing ambassador to the ID. family, the ID. R is emphatic proof that cars with electric drive technology can be extremely efficient, high-performance, and also stir emotions.

First up for the ID. R in summer 2019 is an assault on the record for electric cars at the legendary Nürburgring-Nordschleife. Built in 1927 and now 20.832 kilometres in length, the tarmac rollercoaster in the Eifel region of Germany is regarded as the most difficult racetracks in the world. Former Formula 1 world champion, Sir Jackie Stewart, respectfully referred to it as the “Green Hell”.

A lap record on the Nordschleife, which, outside of motor racing, is also used as a test circuit by virtually every automobile manufacturer, is seen as a major accolade for race cars and sports production cars. The current record for electric cars

stands at 6:45.90 minutes, set by Britain’s Peter Dumbreck at the wheel of a NIO EP9 in 2017.

### **Linking heaven and earth**

According to Chinese folklore, Tianmen Mountain, which is located roughly 1,300 kilometres as the crow flies from the capital Beijing, forms the link between heaven and earth. The so-called “Heaven’s Gate” is a natural breach in the mountain, roughly 7,000 m<sup>2</sup> in size. One of the most spectacular roads in China winds its way up to this natural arch. It features 99 hairpins and a climb of about 1,000 metres. Never before has a car with the potential of the ID. R climbed Tianmen Mountain, meaning no official record yet exists.

In order to set a benchmark for driver Romain Dumas to aim for, Volkswagen China has launched a unique competition. The “China Challenge” allows video gamers to take on a virtual online simulation of the eleven-kilometre “Tianmen Shan Big Gate Road” and set a target time in the process. In September 2019, Dumas will attempt to better the fastest time in real life.

High speed and a “home outing” for Volkswagen on the Nürburgring-Nordschleife, followed by unknown territory and a labyrinth of corners on Tianmen Mountain – the record attempts on such totally different tracks will allow the ID. R to once again demonstrate the versatility of the electric drive-train, “made by Volkswagen”.



At the Goodwood Festival of Speed, Romain Dumas and the ID. R drove the fastest time for 15 years – and set a new e-record in the process.



The most striking modification to the ID. R in 2019 is the new rear wing, which reduces the height of the electric race car by roughly 22 centimetres.

# THE CONTINUOUSLY DEVELOPED ID. R BETTER IN EVERY ASPECT

**Volkswagen is driving electromobility forward at pace. The racing spearhead of this type of drive is the fully-electric ID. R. The thoroughbred sports car has been the subject of continuous development ahead of its upcoming outings.**

The demands could hardly be more different. Following last year's spectacular outings on Pikes Peak (USA) and in Goodwood (England), the ID. R is now set to face new challenges in 2019: the Nürburgring-Nordschleife (Germany) and Tianmen Mountain (China). After successfully conquering a hill climb to over 4,000 metres above sea level and a 1.86-kilometre sprint, the most demanding racetrack in the world and a narrow, winding road with an average of nine hairpins per kilometre now await the electric race car in the coming months.

The variable technical layout of the ID. R means the car can be set up optimally for the new challenges. "Based on the Pikes Peak spec, we can continue to systematically develop the ID. R for the Nürburgring-Nordschleife and Tianmen Mountain, and to make it even more efficient. The biggest changes for the Nordschleife are in the aerodynamics and the way the electric drivetrain manages its energy. We are also making many detailed adjustments to the ID. R to ensure it is prepared for the

specific demands of the Nordschleife," says François-Xavier Demaison, Technical Director at Volkswagen Motorsport.

## **Simulations speed up development**

Just 250 days passed between the start of the ID. R project and victory on Pikes Peak on 24 June 2018 – that alone must be some kind of record. Volkswagen Motorsport has even less time this year to prepare for its assault on the record lap time for electric cars on the Nordschleife. With the pressure on, the team led by Dr. Benjamin Ahrenholz, Head of Calculation/Simulation at Volkswagen Motorsport, has played a significant role in the preparations.

"We use simulations in several areas in order to continue developing the ID. R. We save a lot of time this way. The computer performance required for the many calculations is so high that we receive support from the Volkswagen Production Development department in Wolfsburg. If necessary, we can call on their computer network with several hundred processors," says Ahrenholz.



For example, when designing optimised chassis components, structure simulation was used to calculate the loads that the chassis of the ID. R will have to cope with on the Nordschleife. The driving dynamics simulation allows Romain Dumas to practice and find the optimum strategy for managing battery power. At the same time, the computer also completes virtual laps of the Nordschleife in order to test the effects of various different set-ups and energy management strategies.

### **The engineers are given free rein**

Before the further developed ID. R was subjected to the air-flows in the wind tunnel, the aerodynamic simulation had already calculated the effects of dozens of different wings, spoilers and flaps. The battery simulation is primarily used to research different energy management strategies, which control the power output and charging during the lap (regeneration). "For an engineer, the nice thing about the challenges on the Nürburgring-Nordschleife and Tianmen Mountain is that we are given completely free rein. We can develop the most efficient solutions without being restricted by regulations," says Willy Rampf, technical consultant to the Volkswagen Motorsport team.

The basis of the ID. R remains unchanged from that of last year. The 2019 evolution of the Pikes Peak winner is also powered by two electric motors with a system performance of 500 kW (680 PS). The drive concept, with one electric motor per axle, as well as the lithium-ion batteries in the ID. R are comparable to the technology to be used in the ID. product family – Volkswagen's range of fully-electric production vehicles, set to be launched over the coming years. The design, with its light signature, also underlines the role of the ID. R as a racing ambassador to the ID. family.

While Tianmen Mountain poses similar demands to Pikes Peak in terms of aerodynamics, the outing on the Nürburgring-Nordschleife demands a totally new strategy in this regard. "The Nordschleife has a lot of straights, the longest of which is almost three kilometres," says Dr. Hervé Dechipre, the engineer responsible for the aerodynamics of the ID. R. "The air is also far thicker than it was at such a high altitude on Pikes Peak. For this reason, we have developed a completely new aerodynamic configuration for the ID. R, with less downforce for the Nordschleife."







### Formula 1 technology in the ID. R

Without DRS (Drag Reduction System) activated, the ID. R generates roughly twice as much downforce as a Formula 1 car. Activating DRS reduces aerodynamic drag by about 20 percent. Compared to the record-breaking run on Pikes Peak in 2018, the aerodynamic drag generated by the ID. R without DRS activated is roughly 33 percent lower.

In order to reduce aerodynamic drag, the ID. R has been given a fully-enclosed underbody and a front spoiler tailored to high speeds. The most distinctive feature is the modified rear wing. It is significantly flatter than it was for the record-breaking run in June 2018. However, as higher downforce is required in the slower of the 73 corners on the Nürburgring-Nordschleife, the rear wing also uses technology that has become a familiar feature in Formula 1 – a drag reduction system, DRS for short. “Switches on the steering wheel allow the driver to change the setting of the main elements of the rear wing,” explains Dechipre. Steeply-angled airflow control areas help generate greater downforce at lower speeds, while a flat wing reduces aerodynamic drag on the straights. “The difference in downforce is about 20 percent,” says Dechipre.

Unlike in Formula 1, where the primary goal of DRS is to make overtaking easier, the system on the ID. R will help the car manage the energy stored in its batteries more efficiently on its solo lap of the Nordschleife. DRS is particularly important on “Döttinger Höhe”, the three-kilometre straight at the end of a Nordschleife lap. The adjustable rear wing allows the ID. R

to achieve its top speed faster and using less energy. Furthermore, less energy is required to maintain the maximum speed throughout the entire final sector of the circuit.

#### **More efficient energy management**

“Döttinger Höhe” is also particularly important for the energy management of the ID. R. “When the ID. R arrives at ‘Döttinger Höhe’, it has already covered roughly 18 kilometres. Our goal is to still have enough battery charge at our disposal to allow Romain to take the whole straight at full power, right through to the finish,” says Marc-Christian Bertram, Head of Electronics/ Electronics at Volkswagen Motorsport.

In order to achieve this, the software in the ID. R has been completely re-programmed. One factor that did not come into play in 2018 was DRS. “We practically started from scratch again with the energy management,” says Bertram. The technicians also spent the tests in Spain and France working meticulously to find the optimal strategy for energy regeneration on the Nordschleife. The energy regenerated under braking is less than on Pikes Peak, due to the different characteristics of



the tracks. In the US, the ID. R generated roughly 20 percent of the energy required on board, while the goal for the Nordschleife is about ten percent.

“Another important change from 2018, with regard to the chassis set-up, is our new tyre partner Bridgestone,” adds Cedric Delnatte, ID. R project lead. “Finding the right set-up was a key aspect of our preparations. However, we were able to gain a lot of the knowledge required in this regard during tests at racetracks other than the Nordschleife.”

### **More durable and lighter: The new brake disks**

Aspects of the brake system on the 2019 ID. R are also new. Carbon-fibre brake disks have been installed for the record attempt at the iconic German circuit. These are not only more robust than the ceramic disks used previously, but they also help to reduce the so-called ‘unsprung’ mass.

This refers to the mass of all the parts of the car that are not supported by the chassis springs. In the case of the ID. R, these include the wheels and brakes. The unsprung mass affects handling. Rule of thumb: the lower the unsprung mass, the better the driving properties.

Romain Dumas, who will once again be at the wheel of the ID. R for the outings on the Nürburgring-Nordschleife and Tianmen Mountain, is extremely impressed by the job that the engineers at Volkswagen Motorsport have done. “It is hard to believe that the 2019 ID. R is better and more efficient in every aspect than the car with which I set the record on Pikes Peak in June 2018,” says the Frenchman. “Back then, we did not know exactly what awaited us. So we had to make compromises in certain places. For the Nordschleife, we will be closer to the limit with the whole car. That obviously also puts more demand on me as a driver. For example, the centrifugal forces I am subjected to in the corners will be far greater.”

The record attempt on the Nürburgring-Nordschleife will be as much a home outing for Dumas as it will for Volkswagen Motorsport. “The Nordschleife is by far the most beautiful racetrack in the world – I love it,” says the four-time winner of the Nürburgring 24 Hours, giving an insight into his personal tastes when it comes to motor racing. “We will only break the record for electric cars if we are perfectly prepared. However, I am sure that we will be precisely that.”

Nürburgring-Nordschleife instead of Pikes Peak.  
Racetrack instead of hill climb. The aerodynamics of  
the fully-electric ID. R have been further developed  
accordingly.



# TECHNICAL DATA VOLKSWAGEN ID. R (2019)

## ENGINE

|              |                       |
|--------------|-----------------------|
| DESIGN       | Fully-electric engine |
| POWER OUTPUT | 500 kW (680 PS)       |
| TORQUE       | 650 Nm                |

## POWER TRANSMISSION

|             |                                                            |
|-------------|------------------------------------------------------------|
| FINAL DRIVE | Permanent four-wheel drive with active torque distribution |
|-------------|------------------------------------------------------------|

## CHASSIS

|                 |                               |
|-----------------|-------------------------------|
| FRONT/REAR AXLE | Double wishbone suspension    |
| TYRES           | Bridgestone Potenza 330-40/18 |





## BODY

### DESIGN

Safety/crash structure at front,  
carbon monocoque with steel roll cage

## DIMENSIONS AND WEIGHT

|                     |                          |
|---------------------|--------------------------|
| LENGTH/WIDTH/HEIGHT | 5,219/2,350/979 mm       |
| TRACK WIDTH         | 1,600 mm                 |
| WHEELBASE           | 2,850 mm                 |
| WEIGHT              | <1,100 kg (incl. driver) |

## PERFORMANCE FIGURES

|              |                            |
|--------------|----------------------------|
| ACCELERATION | 0–100 km/h in 2.25 seconds |
| TOP SPEED    | 270 km/h                   |

# "THE ID. R HAS ALREADY CREATED A BIG BUZZ"

**Volkswagen Motorsport Director Sven Smeets looks ahead to the forthcoming outings with the ID. R and explains the role of the fully-electric race car as the racing spearhead of Volkswagen's electromobility strategy.**

**How do you rate last year's success with the ID. R?**

**Sven Smeets:** We showed with the ID. R what emotions electric cars can awaken. The response to the all-time record on Pikes Peak was truly overwhelming. The project has also created a huge buzz internally. We have managed to significantly raise awareness of the future production models in the ID. family. The message is getting through that electric cars are not only environmentally-sound, but can also be high-performance and captivating.

**After Pikes Peak, you now head to the Nordschleife this year.**

**How did you come up with this new challenge for the ID. R?**

We want to use the ID. R again to show that Volkswagen is building electric cars that are capable of taking on the biggest challenges a car can face. The Nürburgring-Nordschleife was

the next logical step. No other racetrack is more demanding or more captivating than the "Green Hell".

**What are the differences in preparations for Pikes Peak and the Nordschleife?**

The hill climb on Pikes Peak was basically new territory for us: we did not know the route, our car was brand-new, and the logistics were tricky too. In contrast, we know the Nordschleife quite well and our car has been continuously developed, meaning we have a lot more experience with it. Our driver Romain Dumas has won the 24-hour race here four times in the past. On the whole, the preparations are more predictable, but the record attempt remains a big challenge, both for the car and the driver.



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*“The message is getting through that electric cars are not only environmentally-sound, but can also be high-performance and captivating.”*

Sven Smeets,  
Volkswagen Motorsport Director





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*“The motorsport industry is also going through a period of change and I see us as a pioneer in the field of electric drive technology with the ID. R.”*

Sven Smeets,  
Volkswagen Motorsport Director

**Have you set yourselves a time to aim for on the Nordschleife? Are your sights set on the all-time record?**

Our goal remains to set a new record for fully-electric cars. That alone is a big enough challenge, as the Nordschleife fully deserves its reputation as one of the toughest racetracks in the world. We will have to ensure that the ID. R has the perfect set-up – for example, it is important to manage the electrical energy optimally on the many full-throttle sections. However, it is difficult to set a target time before we have driven a single metre on the Nordschleife.

**The next challenge awaits as soon as September, on Tianmen Mountain in China. What are you out to achieve there?**

Tianmen has a mystical status in China, where it is known as “Heaven’s Gate”. Special promotions there are raising a lot of awareness in Asia. The primary goal of the ID. R’s outing on Tianmen Mountain is to support Volkswagen’s e-strategy in China, which is really picking up speed in 2019. This campaign will be supported by what I think is a great idea: the “China Challenge”, which will be run in advance of the ID. R’s run. This online competition gives gamers the opportunity to drive the road up Tianmen Mountain at race speed in the virtual world.

**Electromobility is the topic of the future at Volkswagen. How do you view the role of the ID. R in this regard?**

Development is progressing with rapid strides in the field of e-mobility. The outings with the ID. R show Volkswagen’s clear commitment to electromobility and underline the huge potential of the electric drive technology. The motorsport industry is also going through a period of change and I see us as a pioneer in the field of electric drive technology with the ID. R. Within a very short period of time, we have developed a huge amount of know-how with e-drives, which we are only too happy to share with our colleagues in production development.

**To what extent are Volkswagen Motorsport and the Production Development department at Volkswagen working together in the field of e-mobility?**

The cooperation with Volkswagen’s Production Development department is a very important element in the continuous development of the ID. R – for us, and for our colleagues. For example, we are engaged in intense exchanges on the development and manufacture of battery systems – the range of new ideas is huge, and we can produce real innovations with our motorsport prototypes. At the same time, we are able to call on the technical resources of the Technical Development department in Wolfsburg for the continuous development of the ID. R, which significantly speeds up our work.

# PIONEER FOR SUSTAINABLE MOBILITY

**Volkswagen is taking responsibility by initiating a step-by-step conversion of vehicles, production and other value creation stages to achieve CO<sub>2</sub>-neutral status in the coming years.**

The Volkswagen Group is continuing to drive systemic change in individual mobility and is aiming resolutely for the introduction of electric drivetrains. Volkswagen will be introducing nearly 70 new e-models to the market by 2028. The number of electric vehicles projected for the next decade is set to rise to 22 million.

Volkswagen has also affirmed its support for the objective of restricting global temperature increase to less than two degrees by 2050, as agreed at the Paris climate summit. With this in mind, the Group intends to achieve CO<sub>2</sub>-neutrality by 2050. This will be the case for the fleet, for production and for management as well. By 2025, the CO<sub>2</sub> footprint of the vehicle fleet is to be reduced by 30 percent across the entire life cycle, compared with the figures from 2015.

To achieve this, the Volkswagen Group will be investing more than 30 billion euros in electromobility by 2023, with the upcoming electro offensive alone set to cost the Volkswagen

brand 9 billion euros. Volkswagen views the transformation to battery-powered electric drive systems as an important way of reaching those climate-related objectives. The proportion of electric vehicles in the fleet is to rise steadily, reaching at least 40 percent by 2030.

Following on from the ID. R, racing forerunner of Volkswagen's ID. product family, the first production model based on the new MEB electro platform (modular electric drive matrix) will be constructed at the Volkswagen factory in Zwickau. During regular production operations, the factory will be converted from the current 100 percent focus on combustion engines to 100 percent electric drive technology.

This process is a global first, representing the first complete, comprehensive transformation of a major automotive factory to e-mobility. From 2022 onwards, fully-electric vehicles will also roll off the line at the Volkswagen factories in Emden and



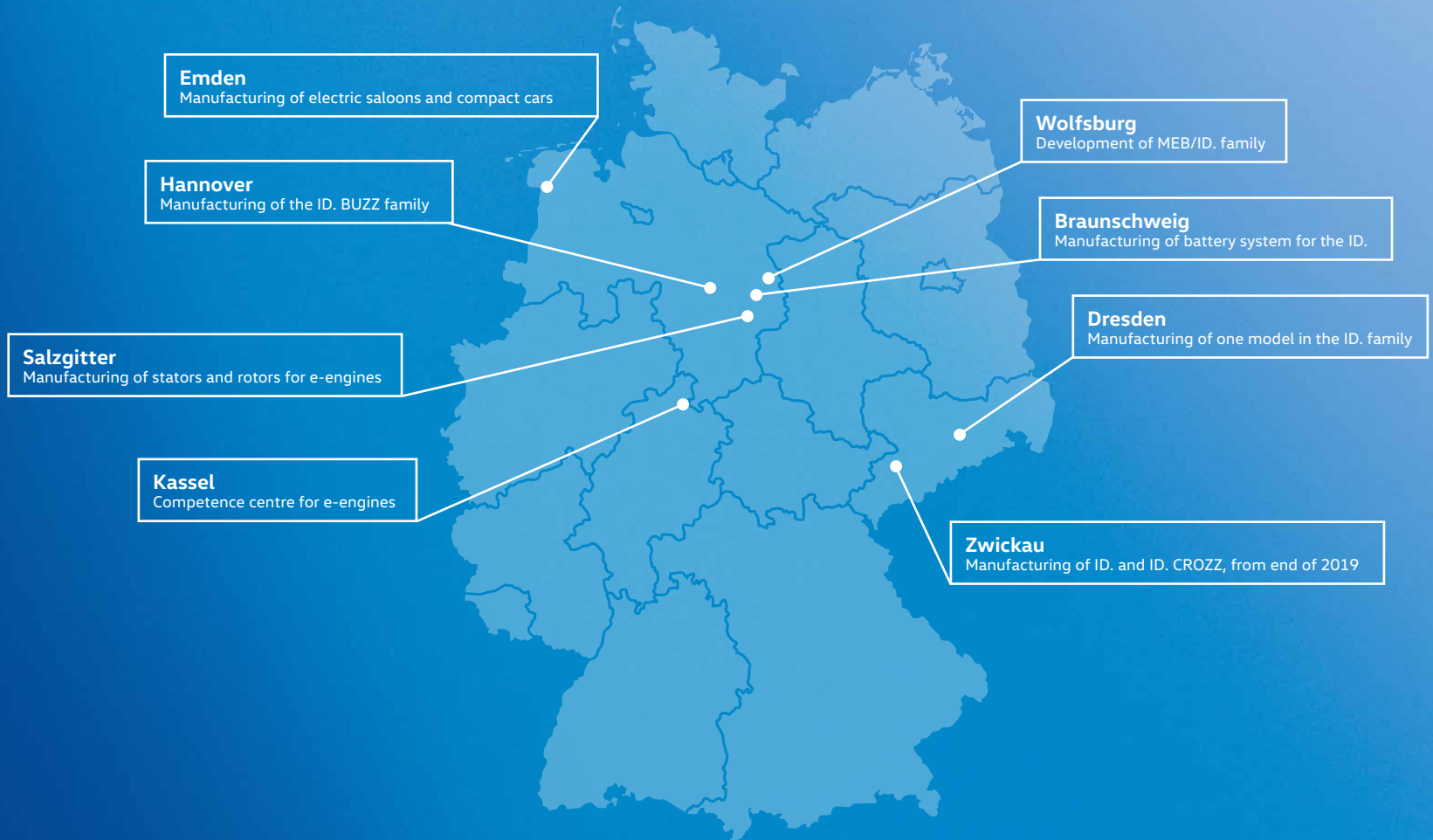


### Efficient reuse

The batteries in the ID. range of models consist of many cells. They fill almost the entire area of the car floor, between the two axles. Each battery is efficiently recycled and reused in its so-called “second life” – such as in mobile charging stations.



# Volkswagen locations in Germany involved in MEB production



Hannover. Together, these three locations will form the largest high-performance e-production network in Europe.

Opening up the MEB to other manufacturers will extend the reach of the platform and can lead to significant cost reductions for electric vehicles, thanks to economies of scale. The cooperation planned with Aachen-based e.GO Mobile AG is an example of one such partnership.

Volkswagen has selected LG Chem, SKI, CATL and Samsung as strategic battery cell suppliers to safeguard the electro offensive. Volkswagen is also looking ahead to the potential of increased demand and investigating opportunities for involvement in battery cell production in Europe. Volkswagen is also working on increasing battery cell expertise at the company's own Center of Competence in Salzgitter. The Volkswagen factory in Braunschweig is producing the battery systems for e-vehicles based on the MEB.

#### **The ID. family, a milestone in CO<sub>2</sub>-neutral mobility**

Attractiveness, a wide range of options, sustainability and affordability are of prime importance for the Volkswagen electric cars, alongside the key values of emotionality and digitisation. The first compact car from the fully-electric ID. family

will be followed by the production versions of the ID. CROZZ, ID. BUZZ, ID. VIZZION and ID. ROOMZZ concepts.

The brand launch of the ID. family will mark the start of the largest e-offensive in the automobile industry and will be a milestone in the history of climate-neutral mobility. The pioneering role is reserved for the compact ID., which will go into production in Zwickau at the end of the year: the first electric car produced by the Group will be CO<sub>2</sub>-neutral throughout its life cycle, assuming that customers consistently charge the battery with renewable energy. The carbon footprint of the ID. for the production phase will be reduced by more than one million tonnes of CO<sub>2</sub> per year. That corresponds approximately to the climate-related impact of a coal-fired power station supplying 300,000 households with electricity.

#### **Europe-wide network of fast-charging stations**

The market launch for the first ID. derivative will be preceded by a succession of solutions to the issues facing private and commercial e-mobility customers – including movable assets, billing and digital additional services and complete consulting packages. All of this underlines Volkswagen's intention to become the leading provider of sustainable mobility.



It will also be possible to maintain CO<sub>2</sub>-neutrality when using the ID. – assuming that customers choose to use sustainably-generated electricity. The new Volkswagen subsidiary Elli will be offering a wide range of wallboxes and charging solutions with sustainably-generated energy in time for the market launch of the ID. in 2020.

Volkswagen is also working with the joint venture IONITY to build up a high-performance and sustainable fast-charging network in Europe. The first target is the construction of 400 fast-charging stations on motorways across Europe. Around 100 of these will be in Germany, at intervals of approximately 120 kilometres.

Customers will be able to choose between various wallbox variants for safe, quick and easy charging at home. These variants are set to include 11-kW wallboxes, while the introduction of fast 22-kW wallboxes with a charging time of three to four hours is also planned. Volkswagen will also increase the number of charging points available at employee car parks from 1,000 to 3,500 by 2020.

In this timeframe, all Volkswagen dealers and service partners in the EU will be equipped with charging stations that will be available for customers and the public. The Volkswagen mobility

platform “We” will allow customers to search for charging stations and provide a payment service with “We Charge”.

### **Efficient reuse**

The lithium-ion battery is not just an important part of the success strategy for the ID. R race car, but is also a vital element of the Volkswagen e-offensive. The new and independent Volkswagen Group Components brand will assume end-to-end responsibility for the battery – from building expertise in cell production to recycling. Once the life cycle of the vehicle is complete, the battery can be reused in second life concepts – or established recycling procedures will transform it into a valuable source of raw materials.

In this case, the lithium-ion battery will be a treasure trove of scarce raw materials that can be reused once its operational life has come to an end. From 2020, Volkswagen will recycle batteries at the component location in Salzgitter to put valuable materials back into circulation. In addition to the recovery of aluminium, steel and copper, this process will focus on the retrieval and reuse of nickel, manganese and cobalt. The long-term objective is to reuse up to 97 percent of all recyclable material when the market starts to return large quantities of batteries at the end of the next decade.



This is what the future looks like: efficient charging at an IONITY fast-charging station.



# THE ID. FAMILY A LOOK AHEAD INTO THE FUTURE

**The fully-electric models from the ID. product family embody the technological and social evolution of individual mobility.**

The countdown has begun: from 2020, Volkswagen will move into a new automobile age with the ID. family. The brand will be introducing an entire family of fully-electric models to the road for the very first time. The range will include the first compact ID., the SUV coupé ID. CROZZ<sup>1</sup>, the multi-variable full-size lounge SUV ID. ROOMZZ<sup>1</sup> and the luxury class limousine ID. VIZZION<sup>1</sup>, as well as the production edition of the ID. BUZZ<sup>1</sup> – the electric reincarnation of the legendary “Bulli” van. The open ID. BUGGY<sup>1</sup> represents dynamic, limitless driving enjoyment and provides the opportunity for future development of other vehicles on the MEB platform.

The basis for all six models is the MEB vehicle architecture (modular electric drive matrix), conceived and designed for fully-electric drive systems. The drive concept for the first ID. derivative and the ID. BUGGY stipulates a rear-axle electric motor, while the other four models each have an electric motor on the front and rear axles – making them into all-wheel-drive vehicles. Drive can be provided by the rear axle alone, or by both axles. Whenever required for reasons of drive dynamics, power is distributed to the four wheels within milliseconds via an electric cardan shaft.

<sup>1</sup>Study



This drive control allows the ID. cars to adjust swiftly to virtually any situation, whether racing through fast turns on tarmac roads, or – with the permanent all-wheel-drive options provided by the ID. CROZZ and the ID. ROOMZZ – through snow or mud on dirt tracks.

The entire drivetrain is contained in a compact unit. Thanks to the battery integrated into the vehicle floor and their low centre of gravity, the ID. vehicles boast even weight distribution and pleasant, balanced driving dynamics. The capacity of the high-voltage batteries varies from model to model. Customers will also have the option of choosing increased storage capacities.

The floor-mounted batteries are charged via a cable. The rapid loading system supports charging performances of up to 125 kW, and ensures that battery charge can reach 80 percent within around 30 minutes.

#### **The design of the ID. family**

Visionary design with a human focus – and exuding a fascination for electromobility – is at the core of the vehicles in the ID. family, all of which are based on the MEB platform. The charismatic front end is as intriguing as the flowing, sculptured surfaces of the outer skin. The large wheels were chosen deliberately for enhanced expressiveness: They are one of the primary design features that characterise electromobility by Volkswagen.



The ID. family





All the cars in the ID. family are based on the new MEB platform (modular electric drive matrix).

The new language of form corresponds to innovative technical solutions: the ID. family concept cars do not have fixed centre pillars. Instead, the front and rear doors join to form a protective composite when closed. The rear doors open backwards to allow easy access to the open space. This is where the traditional workspace for the driver becomes the interactive centre of a lounge-like digital living space. The fully automated "ID. Pilot" mode emphasises the spatial effect of this open concept.

In 2020, the production model for the first member of the ID. family will herald Volkswagen's offensive in the electric car segment. It will be just over four metres in length, similar to the study. The front and rear ends are separated by a considerable wheelbase to give the impression of size, despite its compact outer length. In contrast, the crisp chassis overhangs are noticeably shorter.

Depending on the battery package, the range according to the new WLTP procedure will be between 330 and 550 kilometres.

Either way, for the majority of customers – such as commuters travelling short distances – the battery charge should easily last a week or more.

#### **The ID. BUZZ: a legend reborn**

The production variant of the ID. BUZZ is set to hit the market in 2022, transporting the feeling of freedom from the legendary "Bulli" into the next era of mobility. Volkswagen Head of Design, Klaus Bischoff, explains: "We have not used the ID. BUZZ as a retro design on 22-inch rims. Instead, we conceived the logical next step in the development of what is certainly the most successful van design in the world."

The zero-emission all-wheel drivetrain in the ID. BUZZ consists of two electric motors, one on the rear axle and one on the front (150 kW each). The electro-Bulli is a spatial miracle, providing up to eight seats and two luggage compartments, front



and rear. The steering wheel has been completely redesigned: the functionality by far outstrips that of a typical multi-functional steering wheel. It does without traditional design elements such as spokes and buttons, replacing these with a type of touchpad that employs capacitive panels.

The ID. range also boasts another new feature: the heads-up display. It uses augmented reality to perform navigation tasks in the ID. BUZZ. Information, such as directions from the navigation system, is projected virtually 7 to 15 metres ahead of the front of the car.

### **The ID. CROZZ crossover**

The production model of the ID. CROZZ is scheduled for launch at the end of 2020. The four-door coupé and sport utility vehicle (SUV) with 4MOTION four-wheel drive powertrain is characterised by a wide front end and contoured wings. The 4.625-metre ID. CROZZ appears powerful and masculine, thanks to the high-gloss black roof area. The two electric motors generate a system performance of 225 kW (305 PS). The car can reach speeds of up to 180 km/h and travel up to 500 kilometres on one battery charge.

The ID. CROZZ boasts a variable, lounge-style space concept. The occupants can look forward to four separate integral seats

with luxury levels of legroom. It is also possible to completely fold away the rear seats for efficient maximization of the available space. The newly-developed CleanAir system provides the best in tailored air conditioning on board. Regardless of environmental conditions, in-car air will always be of the highest quality.

### **The luxury ID. VIZZION limousine**

The ID. VIZZION transfers the design DNA of the ID. models to the world of grand limousines. The controls transport you to 2030, while automated driving to level 4 could well be available on certain routes in 2025. Speech and gesture controls allow the ID. VIZZION to drive completely autonomously. As a smart device, the car becomes the chauffeur, as there are some situations in which it does not require the driver's attention. This allows the ID. VIZZION to provide its passengers with the freedom they need on the road – to relax, to communicate, or to work.

The electric all-wheel drivetrain shows that the future is very much now, as its two motors produce a system performance of 225 kW and a range of up to 600 kilometres.





The ID. CROZZ (top) combines the authority of an SUV with the dynamics of a coupe. The ID. VIZZION transfers the design DNA of the ID. models to the world of large saloon cars.

## The ID. family

The chassis design of the ID. ROOMZZ has the same clear, homogenous lines as the rest of the ID. family. At the same time, it is also exploring new horizons in many details.



### **The luxury ID. ROOMZZ SUV**

The ID. ROOMZZ is the multi-variable all-round model in the ID. family, based on the MEB. It is the sixth concept car and provides a first look at the upcoming production versions of the lounge-style, zero-emission SUV.

In addition to an exterior design that sparkles with seamless transitions, the special feature of this car is a new interior architecture that concentrates on individuality and variability. It has a range of seating configurations that can be adjusted to each driving mode. Top quality materials are used throughout, combined with the option to personalise the lighting elements. To allow the driver to get full enjoyment of this interior, the production version will also have the full range of IQ.DRIVE systems on board. Intelligent driver assistance will turn any drive into a relaxing journey for all passengers. The fully-electric luxury SUV will be on the market in China in 2021. Further markets will follow.

The ID. BUGGY is the reinterpretation of the thoroughbred buggy – true to the original style, without a fixed roof or conventional doors.

### **Automobile attitude to life: the ID. BUGGY**

The ID. BUGGY conveys the same attitude to life as the legendary Californian dune buggies from the 60s – with a fully-electric drivetrain and entirely MEB-based. 150 kW performance and the open-topped, doorless construction of the passenger compartment allow for dynamic movement – in harmony with nature.

The aluminium-steel-plastic body composite is self-supporting. Thanks to the modular design, the upper body area can be detached from the MEB chassis. This would allow other manufacturers to use the base to produce the emission-free dune buggy of the next era.



# ROMAIN DUMAS

## ALL-ROUND TALENT AT THE WHEEL

**Volkswagen driver Romain Dumas is a motorsport all-rounder – the Frenchman is equally at home in endurance races as he is in rallying or hill climbs. A profile.**

Were he a footballer, Romain Dumas would probably be a utility player: someone who can play any position, from goalkeeper to centre forward. However, Dumas is a racing driver. One who has driven in pretty much every category over the course of his career. His CV includes no fewer than eight victories in 24-hour races. He has triumphed in Le Mans at the wheel of Audi and Porsche LMP1 cars, and with the Porsche 911 at the Nürburgring and Spa-Francorchamps. He has also won the R-GT Cup in the World Rally Championship and started at the Dakar Rally.

However, even for the multi-talented driver from Alès in the south of France, a fully-electric prototype was something completely new. "The motors buzz quietly and there are no gears – at first, I thought I was sat in a spaceship. Only the view through the windscreen, the instruments and the centrifugal forces give you any idea of the speed you are travelling

at. It took me a while to get used to it," says Dumas, recalling his first drive in Volkswagen's ID. R in April 2018.

### **Fast learner – fast driver**

During the season, he spends nearly every week behind the wheel of a race car somewhere in the world. "Endurance races are my job, rallies and hill climbs are a hobby," says Dumas. For the last few weeks, he has been back in the cockpit of the ID. R, at tests in preparation for the record attempt on the Nürburgring-Nordschleife in summer 2019.

To cope with this packed schedule, Dumas heads to the Alps to recharge his batteries: skiing in the winter, jogging in the summer. He lives with his partner Elysia and their son Gabin near Geneva, Switzerland. However, even at home he simply cannot stay away from motorsport – his basement is home to a professional race simulator. It goes without saying that the Nordschleife is one of the must-have tracks.

## Career at a glance

|           |                                                                                                                                                                                                                                            |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2018      | <p>Victory at Pikes Peak International Hill Climb (Volkswagen ID. R)<br/>in 7:57.148 minutes (new all-time record)</p> <p>Victory at Goodwood Festival of Speed (Volkswagen ID. R)<br/>in 43.86 seconds (new record for electric cars)</p> |
| 2017      | <p>Victory at Pikes Peak International Hill Climb (Norma RD Limited)</p> <p>1st place in FIA R-GT Cup (rallying, Porsche)</p> <p>8th place at Dakar Rally (Peugeot)</p>                                                                    |
| 2016      | <p>Victory at Pikes Peak International Hill Climb (Norma RD Limited)</p> <p>World champion in FIA World Endurance Championship, incl.<br/>Victory at 24h Le Mans (Porsche)</p>                                                             |
| 2014      | Victory at Pikes Peak International Hill Climb (Norma RD Limited)                                                                                                                                                                          |
| 2010      | Victory at 24h Le Mans (Audi)                                                                                                                                                                                                              |
| 2008      | Winner of American Le Mans Series (LMP2, Porsche)                                                                                                                                                                                          |
| 2007      | <p>Winner of American Le Mans Series (LMP2, Porsche)</p> <p>Victory at 24h Nürburgring (Porsche)</p>                                                                                                                                       |
| 2003      | Victory at 24h Spa-Francorchamps (Porsche)                                                                                                                                                                                                 |
| 1995–2002 | Various Formula racing series                                                                                                                                                                                                              |
| 1992–1994 | Karting                                                                                                                                                                                                                                    |



# THE NORDSCHLEIFE CHALLENGE HUNTING A RECORD IN THE EIFEL

**The Nürburgring-Nordschleife is widely regarded as the most demanding racetrack in the world, making it exactly the right challenge for the fully-electric ID. R.**

The Nordschleife: Motorsport literature is littered with stories and anecdotes about this infamous section of the Nürburgring. Just like the origin of its nickname, the “Green Hell”. The man responsible was a certain Jackie Stewart. The three-time Formula 1 world champion had great respect for the circuit in the Eifel Mountains and on three occasions left this region of Germany as the winner of the German Grand Prix (1968, 1971 and 1973).

The Nürburgring opened on 18 June 1927 and was originally roughly 28 kilometres in length. It soon established itself as a venue for prestigious international races. It was home to Grands Prix, then epic endurance battles lasting up to 84 hours in the 1960s and 1970s. Later, the undulating stretch of tarmac around Nürburg hosted the German Touring Car Masters (DTM) and, up to 1976, Formula 1 races.

Since 1984, the newly constructed Grand Prix circuit has provided a new home to the majority of international racing se-

ries. Among the series still using the 20.832-kilometre Nordschleife are the VLN Endurance Championship Nürburgring and the WTCR – FIA World Touring Car Cup. Volkswagen competes with the Golf GTI TCR in both series, as well as in the annual highlight of the season – the 24h Nürburgring. Outside of race weekends, its 73 corners make the Nordschleife one of the most challenging and in-demand test circuits for racing production vehicles.

## **Similarities between Pikes Peak and the Nordschleife**

The Nordschleife has more than just its length in common with the route on Pikes Peak in Colorado Springs (USA), where the fully-electric ID. R made its race debut in summer 2018. “The narrow track, blind corners, the way it switches between very fast and relatively slow sections – on the Nordschleife you cannot afford to make a single mistake as a driver,” says ID. R driver Romain Dumas, describing the similarities.





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*"The narrow track, blind corners, the way it switches between very fast and relatively slow sections – on the Nordschleife you cannot afford to make a single mistake as a driver."*

Romain Dumas,  
Driver Volkswagen ID. R





## The Nordschleife Facts & figures

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**73**  
corners



**20.832 km**  
Circuit length



**6:45.90 min**  
Current lap record for  
electric vehicles

The Frenchman knows what he is talking about. Dumas has won the infamous 24-hour race at the Nürburgring on four occasions in the past. Not only that, but last June, in the ID. R, he became the first driver in a history dating back over 100 years to crack the eight-minute mark for the no-less legendary “Race to the Clouds” on Pikes Peak.

#### **A challenge for engineers and technicians**

Despite all the similarities, there are also differences between the hill climb in Colorado and the iconic circuit in the Eifel. It is those differences that pose the real challenge for the engineers and technicians. “Above all, we will have to adapt the ID. R’s aerodynamics and electric drivetrain to cope with the conditions, which will be significantly different,” says François-Xavier Demaison, Technical Director at Volkswagen Motorsport.

For example, the thin air at the Pikes Peak International Hill Climb, which starts at 2,862 metres and finishes at 4,302 metres above sea level, requires a huge rear wing. On the Nordschleife, which winds its way through the Eifel region at between 320

and 617 metres above sea level, top speed plays a major role. As such, the ID. R will, for example, be equipped with a similar drag reduction system (DRS) to the one used in Formula 1. “Reducing the aerodynamic drag in this manner allows the ID. R to reach its top speed on the long straights with minimal use of energy,” Demaison explains.

As the longest straight inevitably comes at the very end of a lap of the Nordschleife – the three-kilometre “Döttinger Höhe” – energy management also plays a vital role on board the ID. R. “The batteries must have enough power left to be able to take the final section at top speed,” says Demaison.

The current record for fully-electric vehicles stands at 6:45.90 minutes – set by Britain’s Peter Dumbreck in 2017 at the wheel of a NIO EP9. This is the equivalent of an average speed of almost 185 km/h.

# THE TIANMEN CHALLENGE REAL VS. VIRTUAL IN CHINA

**The “China Challenge” sees driver Romain Dumas take on a unique mission: to climb Tianmen Mountain faster in the ID. R than his video game rivals.**

Tianmen Mountain in southeast China is one of the most primeval mountains on the planet. Over 3,000 mighty karst pillars, several hundred metres in height, stretch up into the sky. Their summits are almost always shrouded in thick fog or low-hanging clouds. It is this seemingly extra-terrestrial landscape on the outskirts of the city of Zhangjiajie, with a population of over one million, roughly 1,300 kilometres from the capital Beijing as the crow flies, that is said to have been the inspiration behind director James Cameron’s stunning scenery in his hit film “Avatar”.

## **The link between heaven and earth**

The Chinese believe that Tianmen Mountain forms the link between heaven and earth. The natives had no other explanation for a 131-metre high, 57-metre wide and 60-metre deep opening in the rock. The so-called “Heaven’s Gate” is of great mystical importance, as are the 999 steps that form the final “stairway to heaven”.

“Tianmen Shan Big Gate Road” starts down in the valley at roughly 200 metres above sea level and climbs to a height of about 1,300 metres. The road winds its way up the mountain like a huge, tarmac snake. Few straight sections are longer than 50 metres. In many places, the narrow road actually passes back over itself. The steep ascent includes a total of 99 hairpins, which symbolise the nine palaces in heaven.

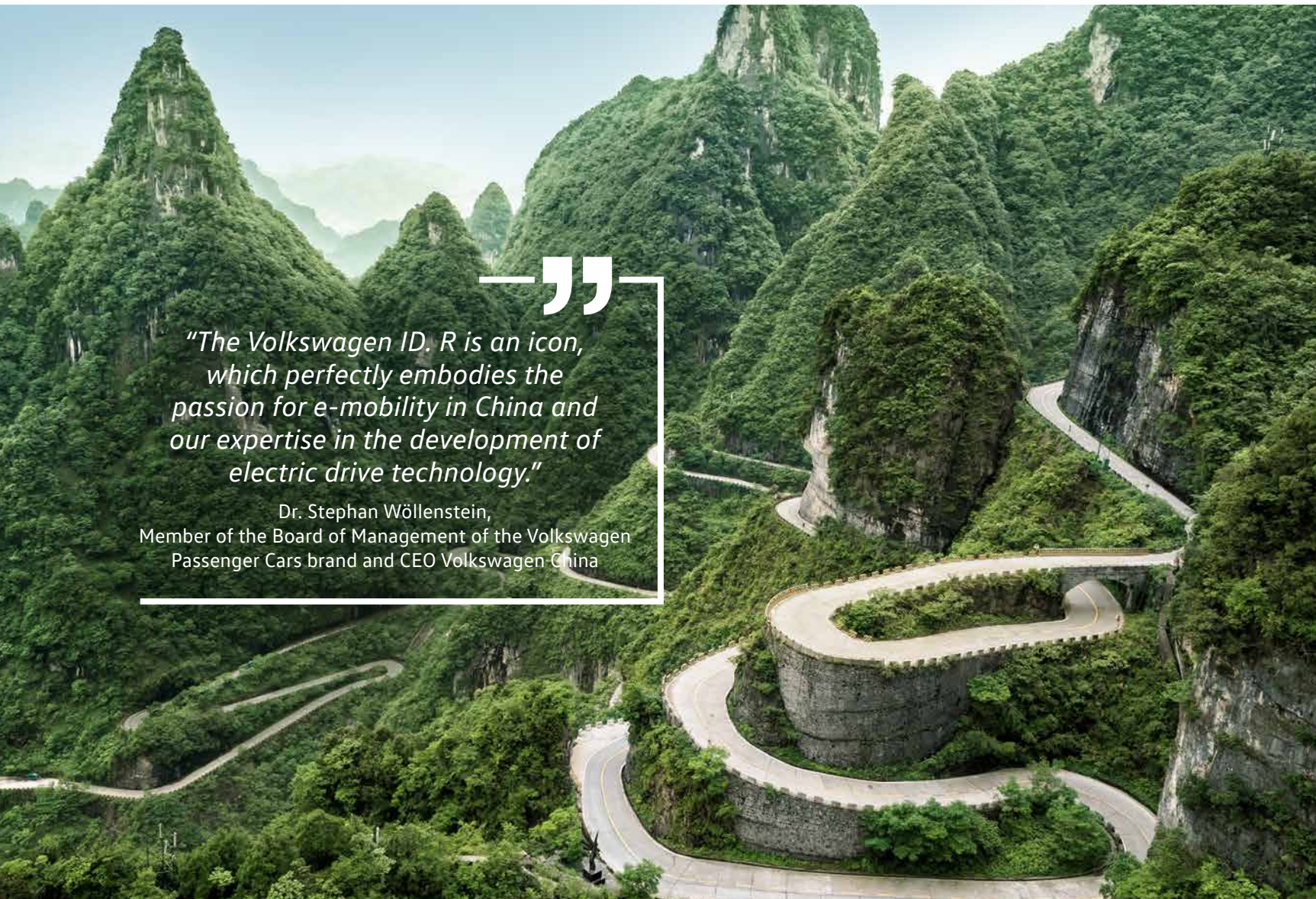
It is in this very labyrinth that the ID. R, Volkswagen’s fully-electric race car, will take on its most extraordinary challenge to date. “The Volkswagen ID. R is an icon, which perfectly embodies the passion for e-mobility in China and our expertise in the development of electric drive technology,” says Dr. Stephan Wöllenstein, Member of the Board of Management of the Volkswagen Passenger Cars brand and CEO Volkswagen China. “We can use the experience gained in the field of motorsport to further enhance that expertise, and can incorporate it into the assembly of electric production models.”



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*"The Volkswagen ID. R is an icon,  
which perfectly embodies the  
passion for e-mobility in China and  
our expertise in the development of  
electric drive technology."*

Dr. Stephan Wöllenstein,  
Member of the Board of Management of the Volkswagen  
Passenger Cars brand and CEO Volkswagen China





## Tianmen Mountain Facts & figures

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**99**

Hairpins symbolise the  
nine palaces in heaven



**11 km**

Total length of road



**1,518 m**

Overall height

Volkswagen Motorsport Director Sven Smeets adds: "Tianmen has a mystical status in China, where it is known as 'Heaven's Gate'. The route to Tianmen is one of the most extraordinary and difficult roads in the world – another special challenge for the ID. R. Our goal is to set a new milestone for electric vehicles and, in doing so, to support Volkswagen's e-strategy in China, which is really picking up speed this year."

It will certainly be the most unusual record attempt so far for the ID. R and Pikes Peak winner Romain Dumas: "The route is very winding, extremely narrow in places, and very uneven. It is certainly going to be a special experience. I am looking forward to this new challenge."

Dumas will also be up against rather extraordinary opposition. The racing driver will attempt to complete the eleven-kilometre climb faster than gamers, who can take on the route in a virtual race on video game consoles and set a target time in the process. "I am a big fan of racing simulators and very intrigued to see how the electric drivetrain will fare in reality against its virtual opponents," says Dumas.

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*"The route is one of the most extraordinary and difficult roads in the world – another special challenge for the ID. R."*

Sven Smeets,  
Volkswagen Motorsport Director

## Record-breaking cars

Modest engine power, huge top speed:  
the aerodynamically-sophisticated  
ARVW test vehicle.



# RECORD-BREAKING CARS RECORDS FOR ETERNITY

**Volkswagen vehicles have set many records. Some of them still stand to this day. Take a look in the history books.**

As well as success in motor racing, world records are a good way of showcasing the potential of new technology. The most important “World Land Speed Records” are officially approved by the International Automobile Federation, the FIA. They exist for distances from a quarter of a mile (about 402 metres) to 100,000 miles (about 161,000 kilometres), or for a period of time – up to 24 hours nowadays, up to a remarkable 168 hours in the past.

Although the importance of extreme endurance records has decreased nowadays, in light of regular tests amounting to several million kilometres, manufacturers still like to go in pursuit of records. Whether with production cars or modified vehicles, they are forever pushing the boundaries of what is possible. Volkswagen has regularly set benchmarks in this field. Here’s how.

## **ARVW, the diesel ambassador**

The success story of the diesel engine in the passenger car sector began in the 1980s. Volkswagen wanted to use its ARVW test vehicle (Aerodynamic Research Volkswagen) to show what this new technology “made in Wolfsburg” was capable of. One of the best locations to do so was the high-speed track in the Southern Italian town of Nardò. In October 1980, the five-metre long ARVW, with its aerodynamically-sophisticated plastic bodywork (cw value: 0.15), embarked on a momentous record attempt.

Despite its unimpressive power output of 129 kW (175 PS), the concept car achieved a massive top speed of 362 km/h. Even more remarkable was the fact that the ARVW set an average speed of 355.88 km/h in the first hour. The three-man team of drivers set two world and six class records, two of which still stand today<sup>1</sup>.



<sup>1</sup>As of 04/2019

### **G-Lader survives litmus test**

Volkswagen introduced a special forced-induction technology – the so-called G-Lader – in the Polo in the mid-1980s. The name refers to the inner structure of the G-Lader, which resembles the letter “G”. Technically speaking, the G-Lader was a scroll compressor. While the turbocharger is rotated by the flow of exhaust gas, the G-Lader is driven by a belt.

To promote this technology, which was new to the passenger car sector at the time, three modified Polo G40 cars with 1.3-litre engines embarked on an endurance run at the Volkswagen Group test facility in Ehra-Lessien, near Wolfsburg, in August 1985. With their power ramped up to 94 kW (129 PS), they set their sights on the 24-hour record – and broke it: the G-Lader turbocharger passed the litmus test. Over the course of the 24-hour record attempt, the team set a new average speed record for its class of car – 208 km/h – and also cracked the 5,000-kilometre mark for the first time.



### **W12 Nardo provides the basis for the Phaeton**

Shortly after the turn of the millennium, Volkswagen launched the Phaeton, a luxury-class saloon, the top-of-the-range model of which was eventually available with a twelve-cylinder petrol engine. To once again underline the brand's technological expertise, the CEO of Volkswagen AG sent another team to Nardò in pursuit of more records in October 2001. The performance of the new engine was increased to 441 kW (600 PS) – a spectacular achievement at that time. The concept car, the heart of which beat with twelve chambers, was named the W12 Coupé Nardo. Six drivers alternated at the wheel of the super sports car. By the end of the 24 hours, they had set ten world and class records.

The average speed over 24 hours was just under 300 km/h. However, those involved were plagued by the fact that they had just missed the magical 300 mark. A second attempt was authorised. In February 2002, the team actually far surpassed their own achievements and added another two records, taking their total number of world records to six. The most prestigious of those was the average speed of 322.891 km/h over a duration of 24 hours. Remarkably, the W12's records still stand today<sup>1</sup>.

<sup>1</sup>As of 04/2019



Record-breaker par excellence: the W12 Nardo quite rightly bears the name of the high-speed circuit in the Apulia region.

# A SUCCESS STORY FROM RACE TRACK TO PRODUCTION

**At Volkswagen, the letter R is intrinsically linked to success in motorsport. In the future, the Group's sporty brand will focus on cars with electric drivetrains.**

Volkswagen R – a success story, the likes of which you might find in a book: four-time world rally champions with the Polo R WRC and two titles with the Polo R Supercar in the World Rallycross Championship. Last year, a new approach was taken with the ID. R Pikes Peak. For the first time, the division responsible for Volkswagen's top performance cars was involved in a project centred around a fully-electric drivetrain. And success was not long in coming, in the form of a new all-time record on Pikes Peak.

Volkswagen R is preparing for a future in which Volkswagen will offer a whole range of electric production vehicles: the ID. family. "We will use technology developed in motor racing for performance-enhanced electric vehicles," says Jost Capito, Managing Director of Volkswagen R. "More driving pleasure with zero emissions. The close cooperation with Volkswagen Motorsport, as we saw with the ID. R Pikes Peak, is vital in this regard."

Complete vehicles like the new T-Roc R<sup>1</sup>, Golf R<sup>2</sup> and Golf R Estate<sup>3</sup>, as well as Volkswagen R's line of equipment that goes by the name R-Line, are symbolic of the performance, know-how and details transferred from motorsport to production vehicles. Developed under extreme conditions at the racetrack, the technology gives the customer every confidence that their car will still reliably do its job under even the toughest of conditions, whilst at the same time still being great fun to drive.

"Motorsport was a strong catalyst to technical innovations in the early days of the automobile. It will play a similar role in the development of high-performance electric cars in the future," says Capito, drawing parallels with the history of the combustion engine.

<sup>1</sup>T-Roc R: Production-based study. This vehicle is not yet for sale.

<sup>2</sup>Golf R: Fuel consumption, l/100 km: combined 7.2–7.0; combined CO<sub>2</sub> emissions, g/km: 164–158; efficiency class: D

<sup>3</sup>Golf R Estate: Fuel consumption, l/100 km: combined 7.2–7.1; combined CO<sub>2</sub> emissions, g/km: 164–161; efficiency class: D–C

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*“We will use technology  
developed in motor racing  
for performance-enhanced electric  
vehicles. More driving pleasure  
with zero emissions.”*

Jost Capito,  
Managing Director of Volkswagen R



# A STRONG TEAM

## VOLKSWAGEN AND ITS PARTNERS

**Motorsport is a team sport, and only a well-oiled team can win races and titles. That is why Volkswagen Motorsport settles for nothing but the best in its partners.**



In 2002, the letter “R” on Volkswagen’s first R model still stood for “Racing”. By the time R GmbH was formed in 2010 as the sporty brand within the Volkswagen Group, it had grown into a remarkable success story – with many individually customized vehicles that thrill their owners on a daily basis. “R” stands for a passion for motorsport – taken further and brought to the streets by Volkswagen R designers and engineers – and for people who long for the extraordinary. On the motorsport scene, this passion can currently be seen in the project with the fully-electric ID. R.



ANSYS is the world’s leading provider of technical simulation solutions and helps the most innovative companies in the world to significantly improve the products for their customers. Thanks to its extensive portfolio, ANSYS is able to help master the most complex design challenges and to develop products. In the case of the Volkswagen Pikes Peak project, ANSYS played a decisive role in the development of the victorious ID. R Pikes Peak by allowing the simulation of batteries, cooling systems and the resulting aerodynamic conditions on Pikes Peak, which could not be replicated in the wind tunnel.



In 2019, the world’s largest tyre manufacturer, Bridgestone, joins forces with Volkswagen on the motorsport scene for the first time. Their first goal together is to break the lap record for electric cars on the Nürburgring-Nordschleife with the ID. R and Potenza slicks. With its focus on pioneering technology and innovations, Bridgestone has for a long time been a valued partner of Volkswagen in the provision of original equipment for the entire range of vehicles. In 2017, Bridgestone was honoured in the category “Innovation & Technology” at the Volkswagen Group Awards.



From specialists in lubricants for steam locomotives to a global business: Castrol develops bespoke lubricant solutions for the automobile industry. The secret behind Castrol's success is not only more than 100 years of experience with lubricants, but also long-term partnerships with leading automobile manufacturers. Castrol has been a partner of Volkswagen Motorsport since 2005 and was instrumental in three victories at the Rally Dakar and twelve titles in the World Rally Championship, among other things. Castrol is currently a partner for all Volkswagen Motorsport projects.



Italian company OMP is one of the leading manufacturers of safety clothing and tuning accessories for the motorsport sector. OMP products are renowned for their quality and the constant pursuit of higher standards – just two of the reasons why OMP and Volkswagen Motorsport have been working closely together for years already. For the ID. R project, OMP produced the fire-proof race overall for driver Romain Dumas, as well as the seat padding and six-point harness, which were made of particularly lightweight material. Even the sponsors' logos on Dumas' race overall were printed on, rather than using the more conventional patch, in order to save weight.

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