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Heat, cold and wind speeds up to 250 km/h: Volkswagen inaugurates new Wind Tunnel Efficiency Center

- Vehicle tests carried out under real-world climate conditions, realistically simulating actual driving
- Lower drag reduces fuel consumption and emissions
- Brand CEO Diess: optimum test conditions for the product and model offensive

Wolfsburg – In the course of its largest model and technology offensive to date, the Volkswagen brand today opened a new Wind Tunnel Efficiency Center in Wolfsburg, which is one of the most modern and efficient in the industry. The center, with a floor area of 8,800 m², is also certified for measurements in accordance with WLTP (Worldwide Harmonized Light Vehicle Test Procedures). Vehicles can be tested at wind speeds of up to 250 km/h, simulating real traffic conditions with a view to reducing drag, fuel consumption and emissions. In addition, driving simulations under all the climatic and environmental conditions normally experienced throughout the world can be conducted – at temperatures between -30°C and +60°C.



Inside the new Wind Tunnel Efficiency Center: The fan of the new aerodynamic/aeroacoustic wind tunnel has diameter of eight meters.

Today, Volkswagen inaugurated the new Wind Tunnel Efficiency Center in Wolfsburg with the Board of Management, the Works Council, the project team and those responsible for construction.

Dr. Herbert Diess, CEO of the Volkswagen brand, emphasizes: “By 2020, we will renew our entire product portfolio as well as expanding it in key segments. All in all, our development teams are working on more than 50 vehicle projects.” The Wind Tunnel Efficiency Center offers optimum conditions for further improving the consumption figures of the growing model range, among other items.

Works Council Gerardo Scarpino says: “Technical Development at Wolfsburg is the heart of Volkswagen. More than 10,000 colleagues are

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working on the technology of the future here. With the new Wind Tunnel Efficiency Center, we will be safeguarding the future of many jobs in Wolfsburg. In order to use the new technology efficiently, we need highly qualified, experienced employees. We have precisely these colleagues here at Volkswagen."

As regards aerodynamic testing, Board Member for Technical Development Dr. Frank Welsch emphasizes: "These tests are a key factor in improving efficiency and reducing emissions. Thanks to the new center, we are also outstandingly well positioned for the future with respect to other development areas such as aeroacoustics and electric vehicle range."

In the aerodynamics and acoustics wind tunnel, especially the flat belt balance ensures that real-world driving operation can be simulated. Each individual wheel of the vehicle is positioned on its own flat belt. This allows turning motions of the wheels in a way, which is similar to driving on the road. The balance, with integrated camera system, aligns each model tested fully automatically in less than five minutes. The previous system required about 30 minutes. And the acoustic insulation of the tunnel makes it one of the quietest automotive wind tunnels in the world. At a wind speed of 160 km/h, the tunnel only reaches a sound pressure level of 65 decibels, comparable with TV operated at a reasonable volume or normal speech.

The thermal wind tunnel, which will be able to simulate snow in addition to rain and sunlight following a pilot phase, will allow significantly more real-life tests than its predecessor. The main component of the tunnel is a highly advanced all-wheel-drive roller dynamometer, which also meets all the requirements for road tests.

With the new center, the Volkswagen brand will significantly reduce the cost of tests previously carried out in remote areas. In addition, cooperation between development areas such as vehicle safety, design, acoustics and comfort will be facilitated as a result of the shorter distances involved; this also applies to the central workshop area. The foundation stone for the center was laid in June 2014. Wind tunnels are still essential for homologation and a wide variety of detailed improvements to vehicles. For example, an aerodynamic drag value can be determined in about 20 minutes. A computer calculation would take days.

About the Volkswagen brand: "We make the future real"

The Volkswagen Passenger Cars brand is present in more than 150 markets throughout the world and produces vehicles at over 50 locations in 14 countries. In 2016, Volkswagen produced about 5.99 million vehicles including bestselling models such as the Golf, Tiguan, Jetta or Passat. Currently, 196,000 people work for Volkswagen across the globe. The brand also has 7,700 dealerships with 74,000 employees.

Volkswagen is forging ahead consistently with the further development of automobile production.

E-mobility, Smart mobility and the digital transformation of the brand are the key strategic topics for the future.