

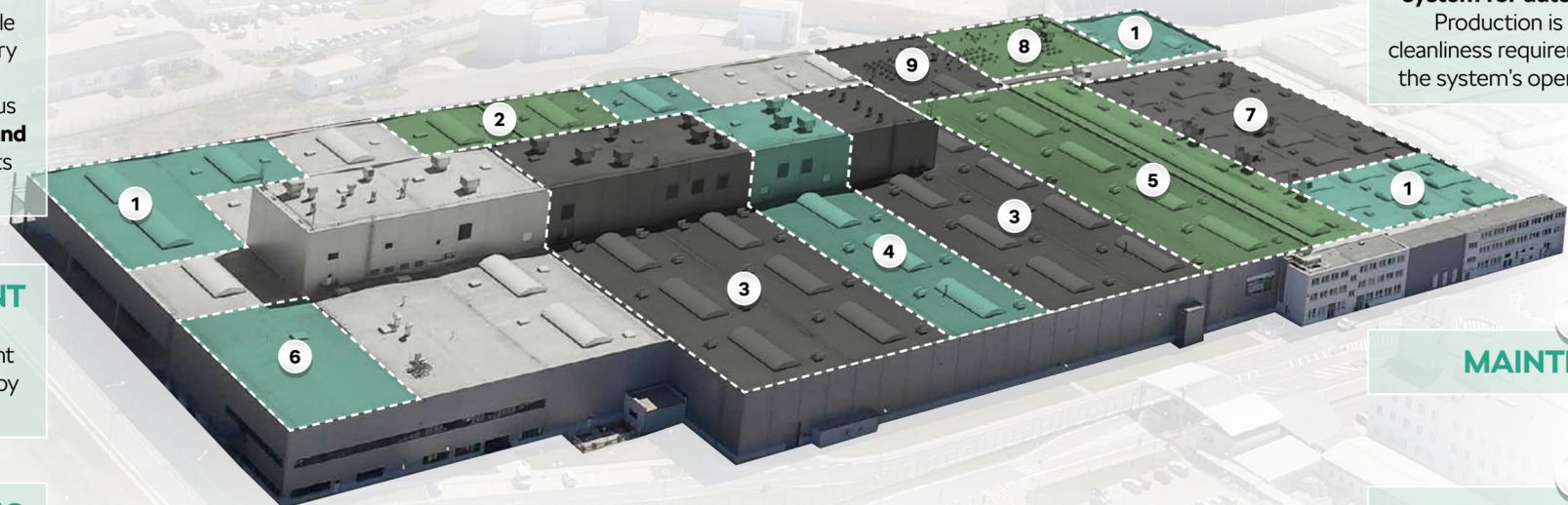
# ŠKODA AUTO VRCHLABÍ HAS PRODUCED ITS THREE MILLIONTH DSG

THIS YEAR, ONE OF THE MOST MODERN PLANTS IN EUROPE CELEBRATES ITS **155-YEAR** ANNIVERSARY

This year, the ŠKODA AUTO plant in Vrchlabí is celebrating 155 years since its founding in 1864. The site's first ŠKODA car was built in 1946. The location has always been known for incredibly precise and advanced production, which is why it was chosen in 2012 to produce one of the most modern gearboxes: the dual-clutch **7-speed automatic gearbox with direct-shift technology**. The plant manufactures **2,200 units per day**, and produced the **three millionth DQ200 gearbox** in 2019.

## Modern operation in the foothills of the Krkonoše Mountains

The Vrchlabí plant works to an **accuracy of 1 micrometre**, which is thinner than a human hair.



### 1 LOGISTICS

In logistics, the car company uses Omron autonomous robots. While moving around the plant, these robots are able to recognize obstacles and if necessary change their route to reach their destination as quickly as possible. Thus they **further increase work safety and the efficiency of transporting parts and equipment** around the plant.

### 7 MECHATRONICS

Mechatronics is **an intelligent control system for automatic gearboxes**. Production is subject to strict cleanliness requirements as this affects the system's operation and reliability.

### 2 PROCESSING EQUIPMENT

Processing equipment ensures the selection, storing, replenishment and care of process materials used by **the engineering equipment**.

### 8 MAINTENANCE

### 3 MECHANICAL MACHINING

### 4 HEAT TREATMENT

All parts are vacuum cemented using helium overpressure at **960°C**.

### 5 ASSEMBLY

Fully assembled gearboxes are checked at test benches, which expose them to speeds of **up to 180 km/h**.

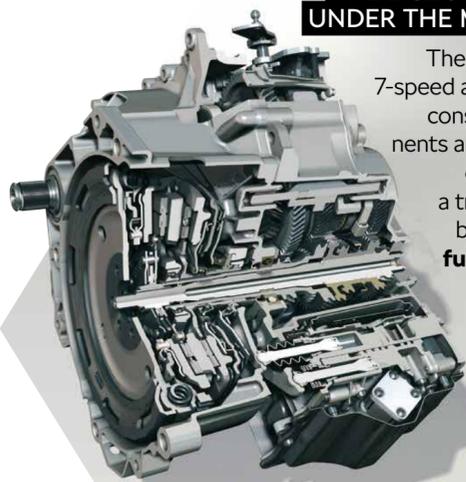
### 6 QUALITY ANALYSIS

A climatic chamber is used to analyse gearbox operation in simulated conditions ranging from **-40°C to +180°C**.

### 9 MEASURING CENTRE

This entire section is separated from its surroundings by an expansion joint, which prevents vibrations interfering with the measurements. Up to **800** are conducted each day, **24 hours a day, 7 days a week**.

### THE DQ200 GEARBOX UNDER THE MICROSCOPE



The efficient DQ200 7-speed automatic gearbox consists of 352 components and excels at **fast gear changes**. Compared to a traditional automatic gearbox, it also provides **greater fuel efficiency**. It is available in 22 versions, and thanks to its modern design, only weighs 72 kg; this makes it **8 kg lighter** than the original 6-speed DSG.

**72 kg**  
**352** components  
**22** versions

## 7 historic steps

on the way to **state-of-the-art** 7-speed gearbox production

### 1864

**Factory foundation**  
The Ignaz Theodor Petera and Sons Company produced carriages and sleighs, mainly out of wood, iron and leather.

### 1908

**Custom bodywork production started**  
Thanks to the development of the automotive industry in the region, custom bodywork production began in 1908.

### 1946

**The first ŠKODA from Vrchlabí**  
The ŠKODA 1101/1102 'TUDOR' became the first serially produced ŠKODA car to come from Vrchlabí. In 1952, the ŠKODA 1200 and 1201 models followed.



### 1968

**The legendary ŠKODA 1203**  
Serial production of the ŠKODA 1203 began on 20 November, 1968 at a renovated plant.



### 2008

**The millionth car**  
The millionth car produced since VW's involvement in 1991 rolled off the line in Vrchlabí. It was an OCTAVIA COMBI 2.0 TDI. The plant also produced other models, such as the OCTAVIA RS and OCTAVIA SCOUT.

### 2018

#### Digitalisation and Industry 4.0

Further modernisation means futuristic production processes can be used. For example, an autonomous transport robot now works alongside humans at the plant.



### 2012

#### Modernisation and the New Era

Modernisation and the new era  
The investment of 250 million euros in state-of-the-art production technology and logistics enabled modern operations capable of meeting the demands of gearbox production.

### DID YOU KNOW THAT...?

The Vrchlabí plant was awarded the **'Factory of the Year' award in 2015** for its rapid preparation for production of the DQ200 gearbox and its dynamic development. It is one of the most prestigious awards in the European manufacturing industry.

The unique **ŠKODA FELICIA FUN** leisure pick-up was manufactured also in Vrchlabí. The half-utility vehicle, half-convertible with SUV features was introduced in September 1996. Almost 4,000 cars were produced, and it is currently sought after as a recent classic.



**A formula racing car was built in Vrchlabí in the 60s** as well. The ŠKODA F3 prototype was powered by a modified ŠKODA 1000 MB engine. Its 1.0-litre four-cylinder with an aluminium block generated a power output of up to 66 kW, allowing the car weighing just 410 kg to reach 210 km/h.