

Škoda Technology and Development Centre: The perfect place for Škodians' pioneering spirit

- › One of the most modern technology parks in Central Europe: the Škoda Technology and Development Centre is one of the Czech carmaker's key departments and the birthplace of all new developments
- › Driving technological innovation and developing efficient powertrains to future-proof Škoda for the era of transformation – with innovative BEVs and advanced ICE vehicles
- › The centre covers an area of 230,000 m² and has room for over 2,000 staff

Mladá Boleslav, 25 April 2023 – Škoda Auto's Technology and Development Centre is one of the carmaker's key departments, driving future innovations and advanced development. During the transition to e-mobility, models with modern and highly efficient internal combustion engines and plug-in hybrid powertrains will continue to be a mainstay of Škoda's model portfolio. The Technology and Development Centre will play a crucial role here, driving technological advances in this area, taking sustainable mobility to a new level, and steering the brand's transition towards e-mobility. Because of its high level of expertise and impressive track record, Škoda assumed responsibility for the Volkswagen Group's global MQB A0 platform and took the lead for the joint development of the Škoda Superb and Volkswagen Passat models. In addition, Škoda is gradually taking over responsibility for the Volkswagen Group's entire EA 211 engine range. The Technology and Development Centre is where the foundations for the production of new vehicles are laid. It's where prototypes are developed and manufactured, and components tested. In addition to mechanical trials, staff also conduct many other types of tests, for example in climate chambers and chemical laboratories. The Centre is located at Škoda Auto's headquarters in the Česana district of Mladá Boleslav.

Johannes Neft, Škoda Auto Board Member for Technical Development, says: "The Technology and Development Centre has played a key role in Škoda Auto's success in recent years. It has a large number of employees coming together for intense and very efficient collaboration in a single place that offers the perfect blend of skills, knowledge and experience. By expanding this centre, we have built optimal technical facilities and concentrated our expertise, thus creating a perfect environment where Škodians can exercise their pioneering spirit to maximum effect."

The role of the Technology and Development Centre

The various departmental units in Škoda Auto's Technology and Development Centre deal with three main areas. Area one is responsible for the development, production and testing

of prototypes. Here, staff test individual components for vehicle chassis and bodies as well as mechanical and electrical components for Škoda vehicles and other Volkswagen Group models. The second area is focused on the optimisation and measurement of chemical and physical processes. This also includes measurements of exhaust emissions and driving performance under various climatic conditions in test labs as well as acoustic and noise tests. Area number three deals with the development of automotive software. Other centres support these three main areas, for example for engine development, design and prototype construction. Within this structure, individual departmental units do detailed work on specific requirements, such as corrosion protection, brake systems or assistance systems. Based on the Centre's high level of technical expertise and an impressive track record built over many decades, Škoda has been awarded the joint development of the new generations of the Škoda Superb and Volkswagen Passat. In recent years, Škoda has also been responsible for the current global MQB A0 platform and has assumed responsibility for the development of the Volkswagen Group's entire EA 211 engine range.

Škoda Design has designed many award-winning models

Škoda Design, which is part of the modern Škoda Technology and Development Centre, has a storied history. Over the course of its existence, it has brought many successful, award-winning models into the world. The Škoda Design department has been led by a number of top designers. Among them was Chief Designer Belgian Dirk van Braeckel, who created the first generations of the Octavia, Fabia and Superb. His successor, Thomas Ingenlath, designed the second generation of the Octavia and the Roomster, for example. He also gave Škoda cars a distinctive element: tail lights with a characteristic C graphic. His successor, Jens Manske, designed the second-generation Superb and the first Yeti SUV, praised for its practicality and visual originality. Manske was replaced in 2008 by Slovak Jozef Kabaň, who gave the cars a new look characterised by simple and sharp lines, inspired by Czech culture. Kabaň designed the Kodiaq and the third generations of the Fabia, Octavia and Superb, for example. In 2017, he was succeeded by Škoda Auto's current chief designer, Oliver Stefani.

Česana has been the home of Škoda development since 1951

The Technology and Development Centre is located in the Česana district of Mladá Boleslav, named after an old yarn factory. The predecessor of the current centre occupied this site from 1951 onwards. Originally, the buildings were only on the right side of the Jizera River. Over time, the facilities were modernised and the scope of activities expanded, especially after Škoda became part of the Volkswagen Group. In 1999, the Construction Centre was built on the original site. In 2008, a new Technology Centre building was added, and in 2014 a new Engine Centre building. The latest expansions included construction of an Emissions Testing Facility in 2019.

Highlights of the Technology and Development Centre

Almost all of Škoda Auto's automotive development work is done at the Technology and Development Centre. As a rule, all activities belonging to one specific area are housed under a single roof. One example is the new facility for the construction of test vehicles and prototypes, which opened in 2021. The three-storey building accommodates a parts warehouse, a body shop, a paint shop and an assembly hall. As the site is located in the floodplain of the Jizera River, the building has been constructed on piles, for safety reasons. The entire Technology and Development Centre site covers an area of 230,000 m². The Engine Centre's test stands alone occupy 13,000 m², added to which there are 4,573 m² of office space. There are 15 engine dynamometers, six engine test stands and five gearbox test stands in this area. Five transformer stations ensure a constant power supply. There is also a test stand for high-performance engines and gearboxes for Škoda Motorsport vehicles. In addition, the centre offers unique workplaces such as a noise chamber, a climate chamber and a light tunnel. In 2017, Škoda Auto opened an advanced roller laboratory. It has three chassis dynamometers that can be used for petrol, diesel, hybrid and electric vehicles with a power output of up to 300 kW.

Two emissions centres and modern materials

Škoda's Technology and Development Centre includes two emissions centres. Emissions Centre North has been in operation since 1997. In Emissions Centre South, which opened in 2017, staff have three test chambers at their disposal for both combustion engines and electric or hybrid vehicles. All are equipped with a chassis dynamometer that simulates the car's inertial mass, tyre rolling resistance and aerodynamic air resistance. The expansion of electric mobility has also resulted in new parameters being measured, in particular energy consumption and battery range. Škoda models achieve perfect aerodynamic drag values among their competitors and are among the top performers in their respective segments. Škoda Auto is also pursuing the development of sustainable materials for the interior and exterior of its vehicles and considers sustainability an essential element in the development of new products. Škoda vehicles have bodies made of high-strength steel, for example, which saves weight. Advanced composite materials help reduce fuel and energy consumption. In this context, Škoda combines plastics with sugar beet fibres, glass fibres or mineral fillers. In collaboration with BASF, Škoda has developed an innovative paint in which one of the four paint layers can be significantly thinner while maintaining the same quality and durability. Used batteries from Škoda iV vehicles enter a second life as stationary energy storage units.

Škoda Auto employs 2,000 highly skilled staff

The Technology and Development Centre currently employs 2,000 staff working in 11 different departments. The jobs cover more than 25 different professions in total. In 1986, before the Škoda parent plant in Mladá Boleslav was integrated into the Volkswagen Group, the department had just 500 employees. After the largest single expansion in 2008, which saw the Centre grow by 70 percent, staff numbers increased to around 1,500 people.

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Škoda Auto

- › is successfully steering through the new decade with the Next Level - Škoda Strategy 2030.
- › aims to be one of the five best-selling brands in Europe by 2030 with an attractive line-up in the entry-level segments and additional e-models.
- › is emerging as the leading European brand in important growth markets such as India or North Africa.
- › currently offers its customers twelve passenger-car series: the Fabia, Rapid, Scala, Octavia and Superb as well as the Kamiq, Karoq, Kodiaq, Enyaq iV, Enyaq Coupé iV, Slavia and Kushaq.
- › delivered over 731,000 vehicles to customers around the world in 2022.
- › has been a member of the Volkswagen Group for 30 years. The Volkswagen Group is one of the most successful vehicle manufacturers in the world.
- › independently manufactures and develops not only vehicles but also components such as engines and transmissions in association with the Group.
- › operates at three sites in the Czech Republic; has additional production capacity in China, Russia, Slovakia and India primarily through Group partnerships, as well as in Ukraine with a local partner.
- › employs 45,000 people globally and is active in over 100 markets.