

The new Audi Q7 - Considerably lighter thanks to aluminium

With the new Q7, Audi is setting standards in the premium SUV segment. Compared to its predecessor, depending on the type of engine the new Audi Q7 has shed up to 325 kilograms. Thanks to Audi's strict lightweight construction the base model still lies under two tonnes empty weight (without driver). The body alone, with its innovative multi-material construction integrating large components made of aluminium, saves 71 kilograms.

20 years of lightweight construction experience have flowed into the new Audi Q7. The new Audi Q7 model with the 3.0 TDI engine weighs only 1,995 kilograms, which is 325 kilograms – or as much as a grand piano – less than its predecessor. The Q7 with the 3.0 TFSI engine is even lighter yet; here it weighs only 1,970 kilograms. Lightweight construction measures were introduced in every area, from the power circuits to the floor of the trunk. It's the body structure which makes a difference though: a new multimaterial construction lowers its weight by 71 kilograms. With that the new Q7 ranks among the top vehicles of its segment.

High-strength parts made of heat-formed steel form the backbone of the passenger cell. In the front and rear sections of the car and in the structure there are cast parts, extruded profiles and sheet parts made of aluminium. They make up 41 per cent of the body structure. Also made completely of aluminium are the doors, which already save 24 kilograms, as are the front fenders, the bonnet and the rear truck lid. For the production of the parts and their assembly Audi is using new manufacturing techniques.

All operating elements are designed with fine surrounding aluminium borders. They match the architecture perfectly – a smaller number of buttons but with an optimum in ergonomics.

Compared with its predecessor the chassis of the new Audi Q7 is more than 100 kilograms lighter – thanks to many new features. For example the control arms of the wheel suspension units are now made of aluminium and high-strength steel, the drive shafts on the front axle are hollow, and the pivot-bearings are made of forged aluminium parts.

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