

Hola!



SEAT: 70 years of innovations

- In 1955, SEAT registered **the company's first** patent for a child restraint system
- Design and functionality: the SEAT logo opens the boot
- Originality: the invisible door-handle for the 2nd generation SEAT Leon

Martorell, 11/12/2020. With more than 300 active patents, SEAT has a wide history of innovation through its 70 years. Three main inventions revealed the fundamental aspects of SEAT, such as its forward-looking vision - the child safety seat of 1955 -; its vindication for functional design with - the logo-handle - of the facelift of the second generation SEAT Ibiza; or its firm commitment to style, with - the hidden door handle - of the second generation SEAT Leon.

Child restraint system (1955)

The first patent in the 70 years of SEAT history - SEAT ES221068A patent - , was sealed in 1955; it described a child safety seat made up of two metal frames, articulated in such a way that they could fold on themselves like a book, which made the seat portable, but above all safer than seating the children in the rear seats without any restraint system (which was common practice at the time). Its design already applied many of the current concepts for an effective child restraint system. The iron rods along with two fabric straps that limited the maximum angle between the bench and the backrest, guaranteed the stability of the child seat. These strips allowed folding and were not dangerous in case the child hit its head with them. The child's comfort was considered "with a backrest and a base made of flexible material, which could be fabric, plastic or similar".

The patent called for two large-opening hooks at the top, allowing the child seat to be hung from the back of an adult seat, especially from a motor vehicle. It also had two smaller hooks, allowing the seat to be used outside the car, suspended like a swing.

The child's body needs a proper retention system to restrain its movements as well. The patent drawings show a 3-point seat belt. The lap belt is made up of two straps that are joined by a buckle that is difficult for a child to manipulate. This belt employs a flexible or elastic material which makes it adjustable to adapt to the child's body size and keep it firmly attached. A vertical third strap is placed between the legs of the child, attached to the belt and anchored on the seat, an anti-sub strap similar to competition harnesses, which prevents the body from slipping under the belt.

Logo-handle of the trunk (1999)

In the utility model application ES1042196U, SEAT invents a lock cylinder with a very special cover for several reasons. Uncovering the lock requires pressing the top of the lid with your fingers or thumb. In doing so, the cap tilts and allows you to use the other fingers to assist the rotation, and upon completing 90 degrees, it also operates the latch, releasing the tailgate. At the same time, the cover itself serves as a handle to lift the gate with a natural upward movement of the arm.

The lid is functional and practical, but the master touch to this mechanism was to add the finishing touch by the designers, giving the lid the right style. Specifically, the cover was the “S” feature of the SEAT logo and it saw its first serial application on the facelift of the second generation of Ibiza. This utility model, which could also be motorised, has been used in the vehicles of the brand until today, such as the current generation of SEAT Ibiza and the all-new SEAT Leon.

Door handle in the rear quarter glass (2007)

The rear quarter glass that appears in many cars behind the rear windows allows the expansion of the area of vision for the rear occupants. In most designs, there is a noticeable gap between the rear glass and the rear quarter. However, the SEAT designers decided that they could give continuity to the glazing surface of the rear area in the second-generation SEAT Leon. That allowed gaining style and dynamism in the lines of the vehicle.

The Patent ES 2271826 T3 describes how to enlarge the transparent area of the rear glazing and at the same time, achieve a space to hide the door opening handle. To preserve functionality, the rear quarter glass was made of transparent thermoformed polycarbonate, with a complex shape that allows the insertion of fingers to operate the hidden handle, located in the door, in a vertical position next to the rear window. With this solution, the rear door panel of the second-generation SEAT Leon appeared clean and clear, without a handle. As a result of this patent, the eye perceived the SEAT Leon created by the designer Walter de Silva as a two-door car, while keeping the practicality of its four doors.

SEAT is the only company that designs, develops, manufactures and markets cars in Spain. A member of the Volkswagen Group, the multinational has its headquarters in Martorell (Barcelona), sells vehicles under the SEAT and CUPRA brands, while SEAT MÓ covers urban mobility products and solutions. SEAT exports 81% of its vehicles, and is present in more than 75 countries. In 2019, SEAT sold 574,100 cars, posted a profit after tax of 346 million euros and a record turnover of more than 11 billion euros.

SEAT employs over 15,000 professionals and has three production centres – Barcelona, El Prat de Llobregat and Martorell, where it manufactures the Ibiza, Arona and Leon. Additionally, the company produces the Ateca in the Czech Republic, the Tarraco in Germany, the Alhambra in Portugal and the Mii electric, SEAT’s first 100% electric car, in Slovakia. These plants are joined by SEAT:CODE, the software development centre located in Barcelona.

SEAT will invest 5 billion euros through to 2025 in R&D projects for vehicle development, specially to electrify the range, and to equipment and facilities. The company aims to make Martorell a zero carbon footprint plant by 2050.

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