

Experiencing a car through all five senses

## An orchestra in movement

- / A team of SEAT engineers is dedicated to analysing the sounds made by the car to ensure they convey the greatest feeling of quality
- / The Acoustics department studies the sound of the engine, exhaust, doors, windscreen wipers and indicator lights, among others

Martorell, 06/05/2016. – What makes a sound a pleasant one? “The right sound mustn’t be excessively loud or stand out among the rest. And the pitch should neither be too high or too low”. This is how Núria Pellisé describes it – she is an engineer in SEAT’s Acoustics department who works eight hours a day analysing all the sounds made by a car to ensure the comfort of its passengers.

The Acoustics department is in charge of studying the sounds heard by a driver and the other passengers when they are in the car: the engine, windscreen wipers, indicator lights and doors, among others. This work is performed to enhance the comfort and quality of the models before they go on sale. For example, Núria points out that the sound made by the door closing is very important because that is one of the first impressions a driver gets when settling into the car. According to her, that sound has to be a “soft click that conveys quality” and must give an impression of a “tight fit”.

It may seem that any decision made within the realm of the senses is quite subjective. On the other hand, all measurements are made using a dummy that is equipped with two microphones with an equalisation that simulates the human ear for standardised recordings. After recording the different sounds, these specialists analyse the various possibilities in a listening room with high definition equipment and select the most appropriate solution that conveys the highest quality.

When asked whether SEAT has any distinct sound, Núria explains that owing to the dynamic nature of the brand, a specific exhaust system was designed for the CUPRA models that gives them a special sporty sound that is distinctly recognisable.

The work they do increases the soundproofing and comfort of every model: **“Compared with the previous version, the Leon features a series of additional measures that make the engine seem further removed from the driver”**. This is how the sound of a car is created; a carefully chosen composition where nothing is left to chance.

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), exporting more than 80% of its vehicles, and is present in over 75 countries. In 2015, SEAT’s turnover amounted to over 8.3 billion euros, the



highest in its history, and the company achieved worldwide sales of more than 400,000 units for the first time since 2007.

SEAT Group employs more than 14,000 professionals at its three production centres – Barcelona, El Prat de Llobregat and Martorell, where it manufactures the highly successful Ibiza and Leon. Additionally, the company produces the Alhambra in Portugal, the Mii in Slovakia and the Toledo in the Czech Republic.

The multinational has a Technical Centre, which operates as a knowledge hub that brings together 1,000 engineers who are the driving force behind innovation for Spain's largest industrial investor in R&D. In line with its declared commitment to environmental protection, SEAT undertakes and bases its activity on sustainability, namely the reduction of CO2 emissions and energy efficiency.

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