

## A 3D printing centre in a car factory

- SEAT's 3D lab prints three-dimensional parts for all phases of a vehicle's development and production process
- Customised tools and door mirrors leave this laboratory where elements that would take weeks to produce with the usual system are manufactured in 15 hours
- The future lies in customising parts for the customer and even printing spare parts

**Martorell, 28/07/2020.** Made without moulds, with no design limitations and 10 times faster. 3D printing has infinite applications and the automotive industry has been among the first to embrace it to save time and gain flexibility in all phases of a vehicle's development and production. This is how SEAT's 3D Printing LAB works.

**The limits are in the imagination.** *"If you can imagine it, we can make it."* This is the motto of the 3D printing lab located in the SEAT Prototype Centre. With this in mind, its 9 printers work for all divisions of SEAT, such as design, production and logistics, producing all kinds of elements. **"One of the advantages is that we can apply infinite geometries and carry out any type of high-precision design for all areas of the factory, however complicated it may seem. And all in times that are impossible to achieve with the normal process"** says Norbert Martín, head of SEAT's 3D Printing LAB.

**No moulds and no waiting.** In addition to design versatility, the main advantage of using 3D technology is the speed with which the parts are manufactured. In the normal process, to make a mirror for example, a mould has to be made first, and this can take weeks. In addition, it would be a unique model and if you wanted to vary it in the slightest you would have to make another mould. With 3D printing, however, this preliminary phase disappears. The technicians receive a file with the design and send it to be printed as if it were a document. In 15 hours the part is ready. **"Using traditional technologies it would take weeks to have a part and with 3D printing it's ready from one day to the next. This enables us to make several versions in the same week, which can be tested and modified again to improve them"**, explains Norbert.

**From utensils to facemask strap extenders.** 80% of the parts that are printed are prototypes for vehicle development, but custom tools and utensils for the assembly line, custom logos for motor show vehicles and showcars, and even facemask strap extenders and door pulls to assist in the prevention of coronavirus are made here. *"Thanks to this technology we help in the development of the product and also in the manufacturing and assembly, since we supply tailor-made tools that are lightweight and ready to be used by the line workers. We have even printed facemask strap extenders and accessories for opening doors with your arms so that you don't have to use your hands"* Norbert says.

**From nylon to carbon fibre.** There are several kinds of additive manufacturing printers: multijet fusion, sintering, laser, filament fusion or even UV light curing. Depending on what needs to be printed, it is more appropriate to use one technology or another, as each printer makes the parts using a specific material. In addition to the exact shape, a specific weight can be achieved or that the material can withstand temperatures of up to 100°. **"An example of the technology we**

**use for creating tools is the continuous filament fabrication printer (CFF). Here we use not only plastic, but also carbon fibre to reinforce it and provide a much lighter and stronger tool that can withstand many cycles”** according to the head of SEAT’s 3D Printing LAB.

**A 3D printed future.** The technology already exists and its applications are endless. Now the focus is on new customer-centred applications with customised parts, special series or hard-to-find spare parts. **“If, for example, you need a part from one of our historic models that is no longer in production, we can print it”** concludes Norbert.

### The 3D LAB in figures

- 9 printers: 1 HP Jet Fusion printer, 1 SLS, 6 FFF, and 1 Polyjet (UV light)
- 50 parts produced on average daily
- 24 hours a day in operation
- 80 kilos of polyamide powder per month and 12 rolls of nylon, ABS and other technical thermoplastics
- Parts are created from 0.8 micron layers

### 3D milestones

- 1980: First patent
- 1999: Transplant of the first printed medical implant
- 2008: The first prosthetic leg is created
- 2009: The bio-print that enables the first blood vessel to be printed
- 2011: First flight of a 3D printed unmanned aircraft
- 2011: Gold and sterling silver jewellery is printed
- 2012: First implant of a printed prosthetic jaw
- 2019: Bioprint of a human heart

**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.

## SEAT Communications



**Gemma Solà**  
Content&Platforms Management  
M/ +34 639 944 087  
gemma.sola@seat.es



**Vanessa Petit**  
Content Generation  
M/ +34 680 153 938  
vanessa.petit@seat.es

PRENSA • PREMSA • PRESSE • NEWS • STAMPA

