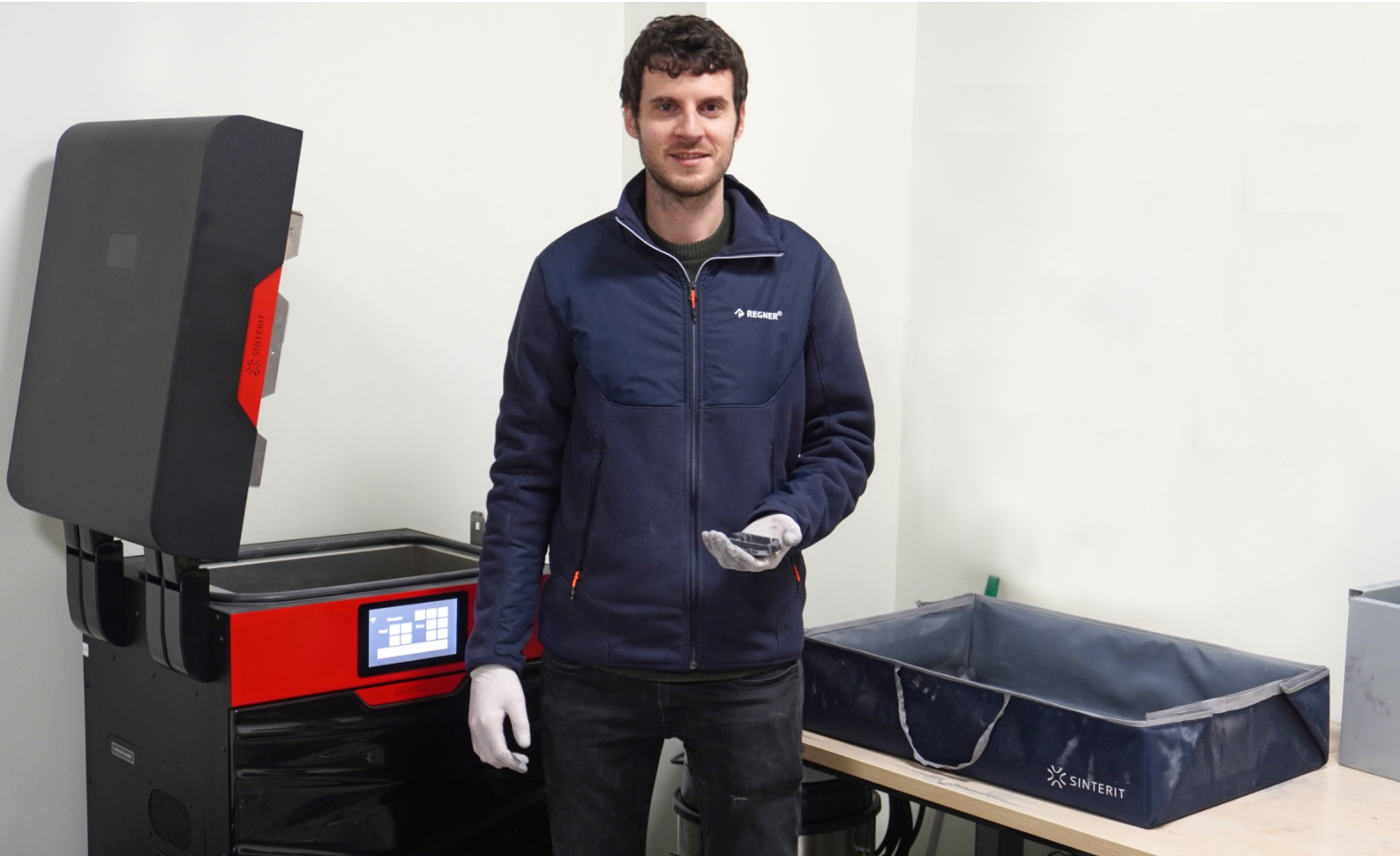


Application: **Prototyping, End-Use Parts**
Industry: **Healthcare / Medical, Electronics,
Aerospace / Automotive / Traction**



Motion control solutions that better meet the requirements of each client

cutting delivery times in half

better product **flexibility**

building small batches of custom products, no matter how complicated the design is



BACKGROUND

REGNER® is a well-known OEM provider of motion control solutions, from control boxes to linear actuators, that bases its success on providing world-class support in a market that moves very quickly.

The development of mechatronic systems usually takes many months, considering the homologation and certification processes. The Catalan company prides itself on cutting these delivery times in half, thanks to its flexible manufacturing system and agile R&D and engineering processes that provide high added value solutions.

Their products are widely used in the healthcare market. Most powered wheelchairs worldwide, from Europe to Australia are equipped with their technology to prevent many circulation problems for people who have suffered a spinal injury or due to aging. Electric linear actuators allow movement in a variety of postures, increasing comfort and quality of life for people with limited mobility.

REGNER® also applies this technology in other industries, such as robotics, special vehicles, industrial equipment, or home automation, where electric motion brings technical advantages compared to veteran technologies like hydraulics or pneumatics.

But it is not only a question of time but above all of the performance. The REGNER® portfolio of linear actuators ranges from high-duty devices for moving loads up to 6000 N to thumb-sized smart motion solutions. The actuator housing is a key feature that not only provides protection from the external environment but also acts as a gearbox and carrier for the internal parts.

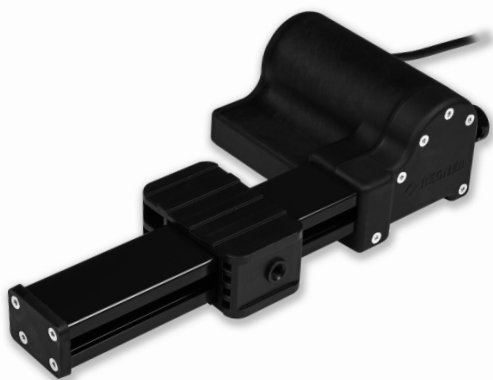
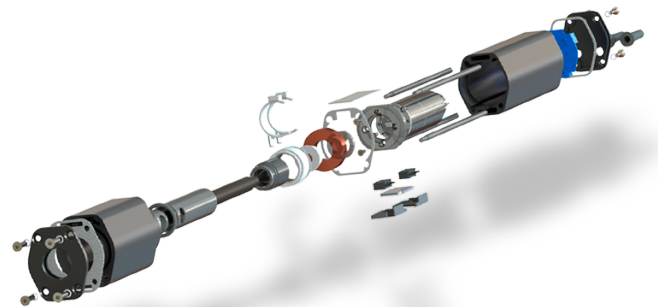


Customer:	Lluís Llenas, Mechanical Design Engineer, REGNER®
Country:	Spain
Industry:	Healthcare / Medical, Electronics, Aerospace / Automotive / Traction
Application:	End-Use Parts, Prototyping
Uses:	Pre-Production Prototype, Mold Parts
Top reasons:	Reactivity, Durability, Low System Cost, Complexity

PROBLEM

Each actuator is designed from scratch to better meet the requirements of each customer. Although they may have a similar appearance, the housing design is thoroughly developed and tested to meet specific requirements and deliver the highest performance. This is a precise job considering the many moving parts involved in a linear actuator. Friction or wear can lead to failure. The parts of a linear actuator must have a high level of resistance and optimal surface properties.

Lluís Llenas is part of the mechanical development department at REGNER® and he is also responsible for prototype production. In fact, he is an experienced specialist in this field and holds postgraduate studies in 3D prototyping. At the company's headquarters in Girona, in northeastern Spain, many prototyping machines have been used in recent years. The company first used a Fused Filament Fabrication (FFF) 3D printer and a few years later switched to a photopolymerization machine. With these printers, the company produced thousands of prototypes, but the durability and finish of the printed parts made it impossible to perform reliable testing of the products and were not good enough to be used as pre-production for their products.

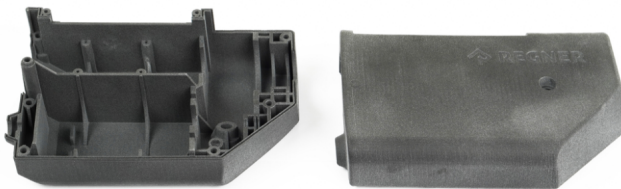


Customer: **Lluís Llenas, Mechanical Design Engineer, REGNER®**
Country: **Spain**
Industry: **Healthcare / Medical, Electronics, Aerospace / Automotive / Traction**
Application: **End-Use Parts, Prototyping**
Uses: **Pre-Production Prototype, Mold Parts**
Top reasons: **Reactivity, Durability, Low System Cost, Complexity**

SOLUTION

„The FFF and SLA parts are a good choice to get a physical impression of the designs and to assemble rough prototypes. But when it comes to producing reliable prototypes to be verified in our fatigue tests or to send functional samples to our customers for validation, SLS is the only acceptable choice.” Lluís Llenas

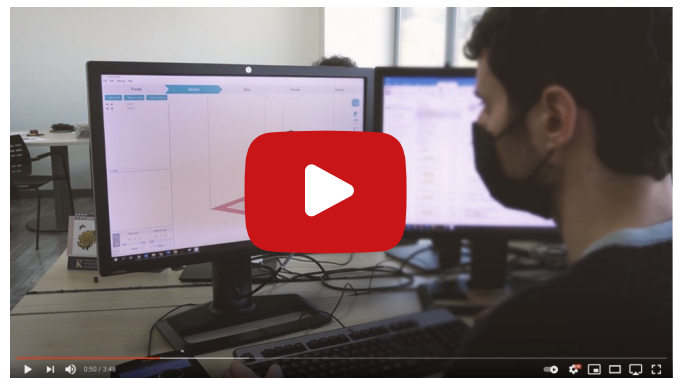
Before using Lisa PRO, REGNER® relied on external suppliers to produce SLS and Multijet Fusion prototypes for testing and pre-production runs, only using their services when necessary. Now, this has changed and the company can manufacture its SLS prototypes in a matter of hours, speeding up the company's development processes to the maximum. But the linear actuator company has also taken a step forward in the flexibility of its products. It is now able to build small batches of custom products, no matter how complicated the design, while keeping the costs low and in record time.



„The Lisa PRO 3D printer has updated the services we offer to our customers. In the past, short runs were not an option for us. Now we can be more flexible and agile than ever.”



Lluís Llenas



See Lluís' movie on YouTube

SLS Printing Prototypes - REGNER® Motion Control

cutting delivery times in half

better product **flexibility**

building small batches of custom products, no matter how complicated the design is

Equipment used by REGNER®:

Lisa PRO 3D printer

Sandblaster

Powder Sieve

Material used:

PA12

