REGNER®
Improving lives through technology

Picture credits: HOSTELCO

CREATING A LINEAR ACTUATOR SYSTEM TO AUTOMATE DISPLAY CABINETS

Opening and closing refrigerated display cabinets manually might soon be a thing of the past. Working closely with CAFF, a premier name in refrigeration for the foodservice industry, REGNER® has innovated by building a linear actuator system that enables safe and precise movement for glass cabinets.

At REGNER®, we are often come across those who are curious to know how the engineering solutions process works. The process's focal point is at collaboration. We work closely with our clients within a multidisciplinary team.

We like to say that ideas are important, but execution is everything. CAFF, a well-known manufacturer for industrial refrigeration sees it the same way as us. CAFF products can be found in numerous refrigerators, cold rooms, working tables and counters in restaurants, hotels and cafés in more than 50 countries all over the world.

In January this year, they sought us out for an actuator solution to be presented at the April 20th HOSTELCO trade-show, the leading Spanish event that presents a rather wide selection of the newest and the up-and-coming products and services in the hotel and restaurant equipment industry. CAFF wanted to automate the opening and closing of the refrigerated display cabinets instead of using lift-up hardware driven by gas springs. So, our work began from the moment it was proposed.

The actuator system developed by REGNER® during the HOSTELCO trade fair. Picture credits: REGNER & HOSTELCO.

We started to analyze the strength of the idea to identify precisely what challenges we were facing:

1. We had to design an optimal way to achieve the maximum degree of glass opening

2. We had to enable a smooth movement through two sleek actuators that had to work simultaneously in order to avoid any vibration or torsion.

3. Finally, we had to make it possible though a robust and cost-effective electric control box which enables synchronization made possible with high-precision programming.

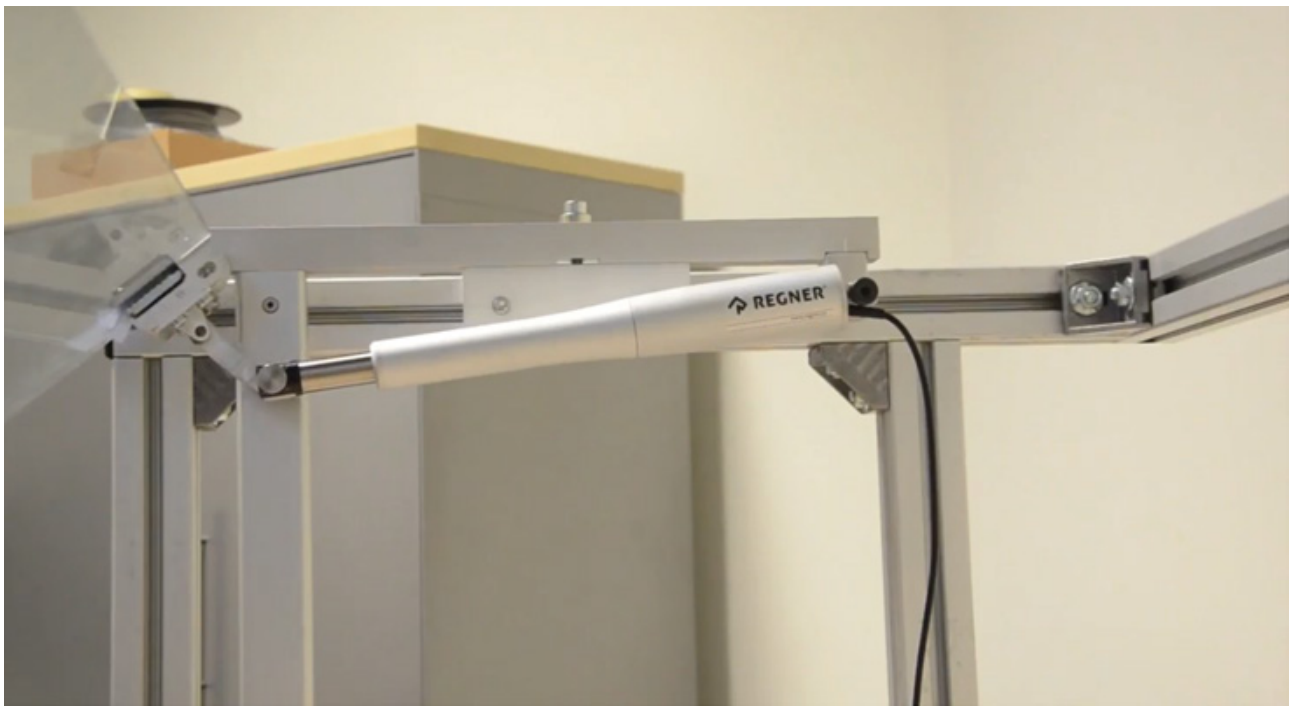
From there we actioned four stages to bring this idea into built form:

1. First up, we defined the brief and together we discussed our vision for the project. Then the designers went to work on creating multiple possibilities. In schematic design, our team researched and presented the concept of the actuator solution for the "smart cabin". We then got back to CAFF with our findings to be sure before moving on.

2. Once given the go ahead, we began to create the CAD files by generating 3D models for rendering purposes; so, we could rotate and analyze the engineering solution from all angles and shared it with CAFF.

3. After the creative stage we entered into the electrical and mechanical engineering phase where the assembly design was finalized to create production-ready files and bill of materials.

4. Finally, we created the prototype to test functionality and general appearance of the solution.



Video Link: **https://www.youtube.com/watch?v=i9imB8RLUa4**

BUILT FOR EFFICIENCY AND EASY CLEANING, THE LINEAR ACTUATOR SYSTEM ACHIEVES THE MAXIMUM DEGREE OF GLASS OPENING

You must be passionate and meticulous to do this. There are times that our engineers have to try so many different ways to find the right solution. The CAFF project was no exception. But ultimately, it is worth it when you put your prototype in front of the CAFF team, and their eyes light up and they smile. Then they presented our solution at HOSTELCO and people kept smiling which can only lead REGNER's team to think: We have got it! Not every company is able to get to that point.