



Press Release

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Practical Training

Flight attendants train on door trainers from TFC with servo technology from the automatization provider Baumüller

We know them all as calm and friendly service personnel: the flight attendants of national and international airlines. But friendliness alone is not enough in this job where the ladies and gentlemen are responsible for all of their passengers on board. The flight personnel must demonstrate absolute competence, especially in terms of safety.

In regular safety training sessions, the flight attendants practice how to behave in the air, during landings and when on the ground – in every situation. Modern simulators make these trainings possible so that action plans not only can be theoretically learned, but can also be practically trained. The North Rhine–Westphalian company TFC Simulatoren & Technik GmbH manufactures cabin, service and door trainers that cabin crews can use to train under extremely realistic conditions.

Regulate quickly and precisely with servo technology

Baumüller equips these realistic door trainers of the manufacturer with servo drives that simulate different situations. The functionalities of the handle and the movements of lifting the door and pivoting the door can be set exactly with up to three servo drives per door. "Previously we used hydraulic solutions," says Thomas Reichelt, production manager at TFC, "but the servo-electric solutions can be regulated much more precisely and faster than the hydraulic systems."

This gives the training personnel the opportunity to simulate a hard-to-move door within fractions of a second. TFC chose the servo drives from the Nuremberg-based manufacturer Baumüller, which consist of the compact DSC servomotors and the flexible converters b maXX 5000, among other reasons due to the extensive safety of the Baumüller products. By using optional safety modules, designers can equip the drives with different safety features.

The door is the heart of the simulator and its operation is one of the key points of the safety training. However, the simulators can also simulate other conditions that the flight attendants could confront. Visual means or movements are used, for example, to simulate dangerous situations and smoke or fire. In addition, all door trainers are equipped with video cameras for an effective training. The training personnel can then use the recordings from these cameras to perform feedback and evaluation units after the training runs.

TFC offers the door trainers as custom solutions for all types of planes and their customers include well-known airlines such as Condor, Air France or Alitalia.

Compact and flexible

The DSC motors from Baumüller are up to 30 percent more compact than conventional servo motors and are also easy to assemble at angled points thanks to the rotatable plug for the main and encoder adapter. The permanent field synchronous servo motors have an excellent power density and have very good concentric and metering characteristics. At a high torque density, the motors of the DSC series achieve maximum speeds of up to 6,000 rpm.

The b maXX 5000 converters allow standardized and complex automatization solutions in a power range from 1 to 315 kW and with four different safety modules allow for flexible adaptation to the requirements of different applications. The double axis contained in the compact b maXX 5000 drives the Baumüller DSC motors, thus meeting the customer's technical requirements.

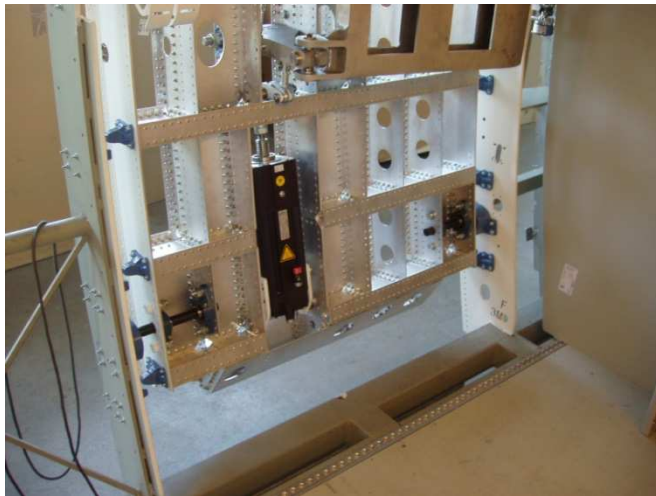


Fig. 1: There are up to three DSC servomotors from Baumüller in a TFC door trainer



Fig. 2: The door trainer simulates conditions such as door blockages, fire and other hazards that occur during emergency situations, such as hard landings or crashes



Fig. 3: The compact motors of the DSC series are operated with converters of the series b maXX 5000, which have optional safety functions and either a single or double axis depending on the application requirements



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Based in Nuremberg, Baumüller is a leading manufacturer of electric automation and drive systems. Around 1,800 employees are planning, developing, fabricating and installing intelligent system solutions for mechanical engineering and e-mobility at six production locations and 40 branches worldwide – from the user interface to motion control software as per PLCopen, software modules and controls all the way to converters, electric motors and the entire service program for automation solutions.

Baumüller's full range of services also includes the areas of service, installation, assembly and relocation. Baumüller is one of the leading automation partners in mechanical engineering worldwide.

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