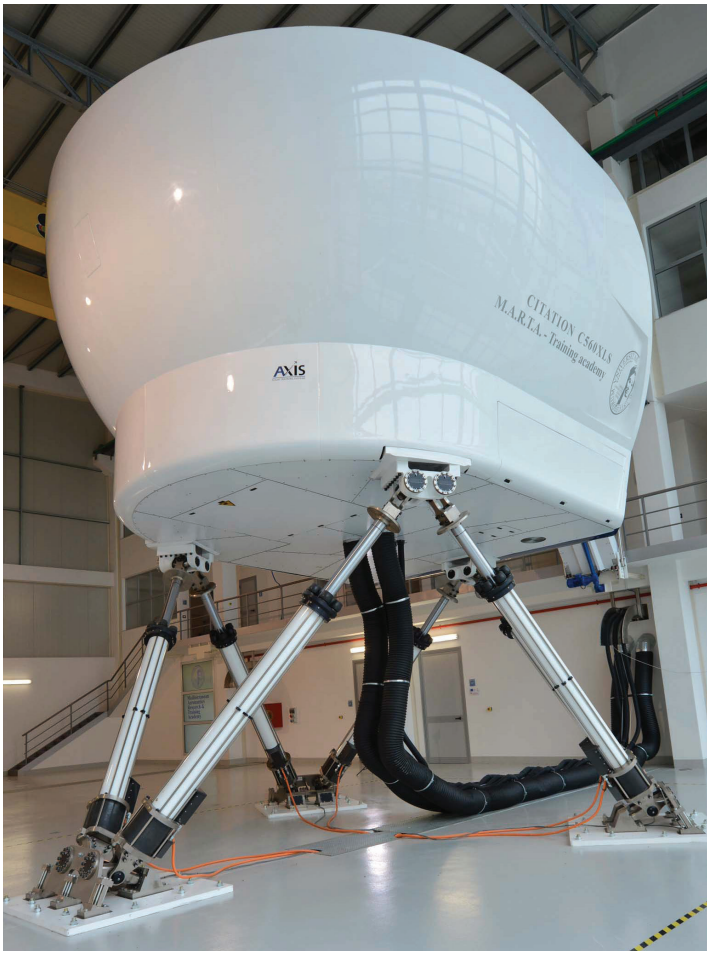
ACE Dampers And Safety Bumpers Absorb Forces In Motion Simulators

E2M Technologies specializes in designing and manufacturing electric motion technology, including linear and rotary actuator systems and multi-degree-of-freedom simulator platforms. From training commercial pilots to testing amusement park roller coasters, the company's mechatronic products and systems serve a variety of industries requiring complex simulation, such as flight simulation, ground vehicle simulation, entertainment and testing.

Because the size, weight and speed parameters vary from application to application, constructing simulator platforms is a complex process. Not only do the loads differ, but movement profiles often occur simultaneously in the X, Y and Z axes. In order to absorb these forces and avoid structural damage—especially in the case of an emergency stop—E2M integrated profile dampers and safety bumpers from ACE Controls into the design of its simulators.



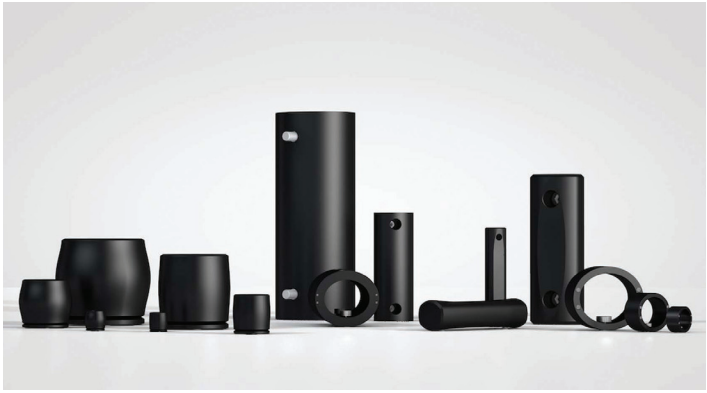
E2M Technologies specializes in electric linear and rotary actuator solutions for applications requiring complex simulation.

Dampers And Bumpers Provide Maximum Safety.

Because E2M's motion systems need to be able to support several tons, ACE engineers recommended a combination of two products to provide the maximum force absorption in the event of an emergency stop. They selected profile dampers and safety bumpers from the TUBUS TA and TC families, respectively.

ACE profile dampers and safety bumpers add safety to E2M's simulator platforms.

TUBUS TA profile dampers provide high energy absorption up to 73% between 2 and 2,951 Nm. Made out of copolyester elastomer, a material that stands up to repeated loading, these compact components provide consistent damping in a variety of applications, including linear slides, pneumatic cylinders, handling modules, hydraulic devices, conveyor systems, cranes and more.



TUBUS profile dampers and safety bumpers are durable, compact and available in almost 150 models.

TUBUS TC safety bumpers, also made of copolyester elastomer, were developed for crane systems and meet OSHA and CMAA international industry standards. As such, these rugged components provide high energy absorption up to 64% between 450 and 17,810 Nm—even in emergency stop situations. This feature, coupled with the ability to support dynamic loads up to 978,000 N, makes TC safety bumpers ideal for capturing the ofen-extreme forces of E2M's motion simulators.

"Individual motion systems from our company can weigh up to 20 tons," says Pieter Campagne, E2M designer. "With a traversing speed of 1 m/s, these systems can quickly generate drive forces up to 200 kN. Should an emergency arise, we need to be able to absorb these forces without damaging the system structure. Thanks to ACE, we can do just that."

To learn more, please visit: www.acecontrols.com