EJECTION SEAT TRAINERS

ACME True Q® Seats

Ultra-Realism is Key

ACME's Dynamic Motion Seats are the perfect way to add motion cues to fighter cockpit trainers. Customers can answer other training needs with the seats too. True Q® seats are great trainers for ingress/egress and ejection training. The key is the realism of the seats.

ACME reproduces the look and the feel of the actual ejection seats in the True Q® motion seats. The true-to-life fidelity provides the highest level of training. Pull/push forces, and travel distances for levers, handles, and knobs are like those in the jet. Colors, textures, rigidity are like the actual seat too. ACME uses a range of actual aircraft components such as the harnesses, buckles, connectors, restraints and cushions to maximize fidelity. We use Martin-Baker design data under license to ensure the seats are just like those in the aircraft.

Let's look at True Q® seats for both Ingress/Egress and Ejection Trainers.

True Q® Ingress/Egress Trainers

Safety is paramount with rocket-powered ejection seats. Crews, both fliers and maintainers, need training to safely interact with the seat. Crews need to know how to safe and arm the ejection seat and how to recognize an armed ejection seat. Crews need to learn to connect harnesses, restraints, communications, G-suits, oxygen lines, set transponders and more. Crews can practice these tasks safely and realistically on the True Q® seat installed in the cockpit mock-up. Or, put the seat right on the ground and have crews train while seeing the seat from all angles. Train right in the office before getting to the flightline.

True Q® seats include a range of sensors that enable the instructor to monitor the crew's action and seat status. There's no doubt if the crew removes the safety pins and actuate the arming levers are actuated. The seat reports status to the instructor interface. The sensors provide a great way for the instructor to watch the students arm or safe the seat.

Crews can strap all the way into the seat and practice emergency egress. Practice getting away fast for simulated engine fires or smoke in the cockpit. Rescue crews can practice extracting incapacitated crew from the seat. All realistically, and all monitored by the instructor.

True Q® Ejection Trainer

Bailout! Bailout! Bailout! If it comes down to those three words, crews must be ready (and capable) to act instantly. Milliseconds count during an ejection. Any mistake could be disastrous.

The key is realistic repetitions for the ejection event. Crews must practice until the procedure is instantaneous. ACME True® seats are great for safely and realistically training for ejection. And, they can save you a ton in infrastructure costs. Here's how it works:

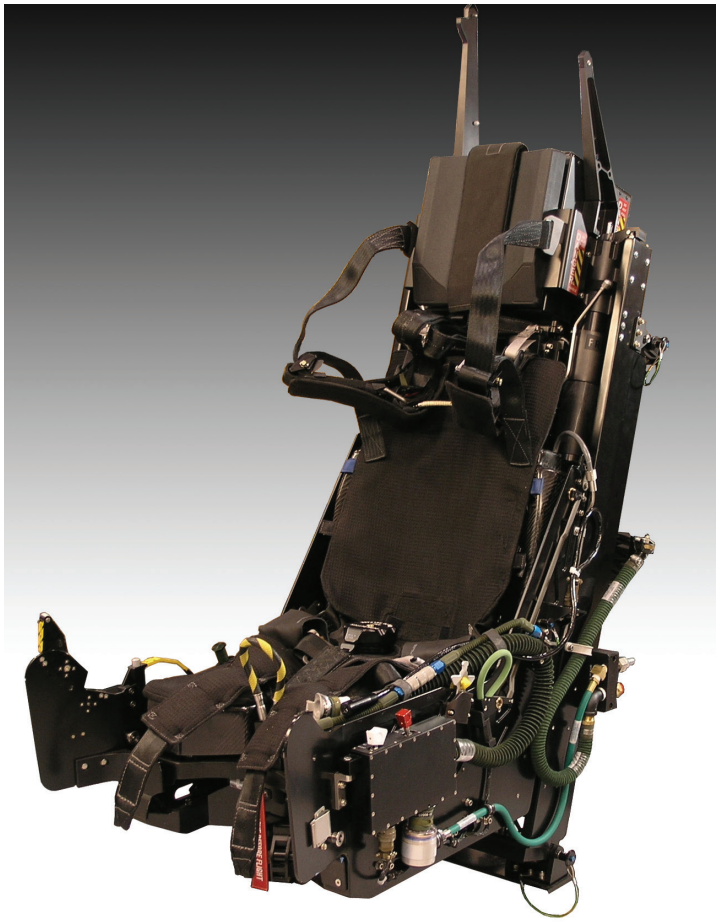
As we discussed earlier, ACME's seats provide the look, feel, and function of the actual ejection seat. So, crews can get connected to the seat as they will be when flying.

In the best case, crews have time to prepare to eject. They can get their body into the optimal position, prepare and then eject. In the True Q seat, crews can practice positioning too. The seats can include sensors to monitor when the crew is back against the seat and headrest. The seats can retract the harnesses and leg restraints if desired.

The handle forces match the jet. Crews learn what it takes to pull-to-eject, how hard to pull that handle and how far.

And, with the vertical actuator, the seat confirms an ejection event. True Q® seats can accelerate upwards at 1.8gs so the crew knows they've ejected. The vertical cue is the important difference between ACME and other ejection trainers. The difference in the vertical cue is safety and cost.

Some ejection trainers launch the crews up the rails and up a gantry frame. Some trainers cycle seats upwards 10' feet or more. ACME believes the key is the ejection cue, not the travel. Crews need the cue to ensure the ejection occurred, not to train the actual travel. An actual ejection is so fast, it's beyond human response. The trainer with 15' rails can't emulate the ejection speed or the forces. And there's no training event during the rocket firing the seat from the jet. It's pull and GO! So why run 10' up



True Q® Mk-16 Type Dynamic Motion Seat

Ultra-realistic replica ejection seat with as-actual harnesses, buckles, handles, and levers, and full suite of sensors makes an excellent Ejection Trainer.

the rails? 'Ejecting' outside the trainer cockpit could hurt the crew. And then there's the deceleration and the potential for injury when lowering the seat and crew back into the cockpit.

Plus, trainers with the ejection frames need large rooms with tall ceilings. That limits where you can travel and costs more for specialized rooms. The rail systems need extra maintenance for the frame and the extraction components.

The key is the vertical cue. Did the crew 'eject'? True Q is the safe and cost effective option for ejection training.

Call for Details or to Discuss your Project Needs

Talk with ACME about True Q® seats for ingress/egress trainers or ejection trainers. We can tailor the right seat with the right cockpit for a realistic, effective trainer. Call for specifics related to your fighter jet system.