

EW EAST/WEST

AN INNOVATIVE COMPANY

East/West Industries

Use Case – 3D Printed Soft Jaws

Customer Profile

East/West Industries, Inc. is an aerospace designer and manufacturer with a targeted focus on producing aircraft seats and products that save aircrew lives. Founded in 1968, this woman-owned business serves major aircraft OEMs such as Boeing, Lockheed and Sikorsky, among others, and is the recipient of multiple quality and supplier awards.

Challenge

Soft jaws are used in machining operations to hold complex or irregularly shaped parts. They typically require more time and effort to make than standard hard jaws with simpler shapes. For East/West Industries, fabricating soft jaws with standard milling machines is too slow and labor-intensive. CNC machining is a faster alternative but it consumes the same resources that support revenue-generating production work. Both solutions ultimately add delay to the production schedule.

Solution

Instead of machining the soft jaws from metal, East/West Industries 3D prints them on a Fortus 450mc™ using FDM® Nylon 12CF carbon fiber material. This enables the parts to be produced faster and for lower cost. It also avoids the opportunity cost of using CNC machines that would normally be dedicated to production. No manpower is required while they are being printed, and complex shapes are easier and faster to produce than machined metal jaws. The carbon fiber material also provides a non-marring holding surface.

Impact

For a typical soft-jaw application, East/West Industries saves 50% on the cost of producing the jaws by virtue of 3D printing's virtually labor-free fabrication. 3D printing also reduces soft jaw readiness time by two days. Combining these savings across all the components needed to build a lifesaving system accelerates product readiness by up to two weeks, a valuable advantage in a competitive industry.



Soft jaws 3D printed in FDM Nylon 12CF carbon fiber material and the machined part these jaws hold during machining.

Time Savings



Tool Production
2 Days

Product Readiness
2 Weeks

Total Production Cost Savings



50%