



AMST Simulates the Frontiers of Aerospace with PTC Creo

by Geoff Hedges

How many of us, when we step into the cabin of an airplane, stop to consider the pilots’ training or their ability to navigate catastrophic disasters? Certainly, the more anxious among us do. But most of us needn’t worry—thanks, in part, to companies like Austria Metall Systemtechnik (AMST).



AMST’s Human Training Centrifuge

As an industry leader in simulation equipment for civil and military flight education, AMST develops a wide range of aircrew training equipment. These innovative products offer pilots the opportunity to practice flight maneuvers while experiencing the physical discomfort of high altitudes, spatial disorientation, and G-forces—all from the safety of the ground. That means pilots can make and learn from their mistakes without risking crew members, passengers, or aircraft.

You can see an example in the [AMST Desdemona](#), an agile and dynamic motion simulator that helps pilots train for the sometimes drastic effects of spatial disorientation and motion sickness:



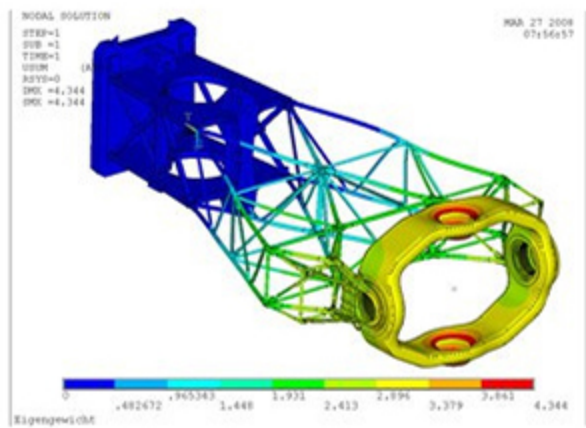
The responsibility of training future pilots is a heavy burden. So how does a company step up to the challenge, while still innovating to secure a market advantage? At AMST, the answer lies in part with an end-to-end product development system from PTC, including design, simulation, and lifecycle management solutions.

Design and simulation for the real world

AMST uses [PTC Creo Parametric](#) to create its 3D digital models. PTC Creo is the standard in 3D CAD software, providing the broadest range of powerful yet flexible 3D CAD capabilities for design of parts and assemblies.

Then, to ensure models perform well under real-life conditions, AMST relies on [PTC Creo Simulate](#). Products at AMST endure extra challenging conditions; for example, the human training centrifuge pictured above generates rapid onset rates and sustained G-forces like those typical of modern fighter aircraft. AMST could use physical prototypes to ensure designs are reliable, safe for the student, and lasting (AMST guarantees structural design for 30 years)—but that’s prohibitively expensive.

With PTC Creo Simulate, engineers have a structural, thermal and vibration analysis solution with a comprehensive set of finite elements analysis (FEA) capabilities so they can study how 3D virtual prototypes will perform *before* they ever make the first physical part. It supplies valuable insight that helps speed time-to-market, while increasing product durability, reliability, and safety.



Structural design is guaranteed for 30 years based on static strength and fatigue strength assessment, dynamic analysis, and application of advanced materials at AMST.

Completing the picture

To pull it all together, AMST uses [PTC Windchill PDMLink](#) as the central hub for its product development, so the company’s change management process is fully transparent and auditable. It also makes it easy for AMST to share product data across all its departments, comprised of roughly 100 employees who plan, design, and build the company’s complex equipment in Ranshofen and Braunau, Austria.

As Christian Baicher, the CAD/PLM Administrator at AMST says, “The pervasiveness of an integrated solution for all areas helps us not only to operate within ever stricter budget and time constraints, but also raises our competitiveness, most of all through achievement of the highest quality with increased innovation.”

To find out more about how PTC Creo can optimize your product designs, join us for a website featuring PTC Creo simulation solutions. [Get dates and register here.](#)



Posted in [Creo Customers](#) , [Boston Engineering](#) , [PDM Customer](#) , [Creo](#) , [Robotic Tuna](#)



CAD Software

Explore our CAD Capabilities

- [Industrial Design](#)
- [Concept Design](#)
- [Routed Systems Design](#)
- [3D Design](#)
- [Simulation](#)
- [Leveraging Design Data Across the Organization](#)
- [Computer Aided Manufacturing \(CAM\)](#)
- [Designing in a Multi-CAD Environment](#)

CAD Products

- [Creo](#)
- [Creo Parametric](#)
- [Creo 4.0](#)

Quick Links

[Creo](#)
Demos and essentials

[Events](#)
Live and virtual events

[Case Studies](#)
Explore the benefits

Write a Comment Share your thoughts

Name *

Email *

Comment *

COMMENT