

XFIT – ERGONOMICS

HUMAN-CENTRIC SOLUTIONS
FOR COMPLEX ENVIRONMENTS

RAMSIS is a leading digital ergonomics simulation platform that enables the evaluation and optimization of products, vehicles, workplaces, and operational systems based on real human variability. By combining comprehensive anthropometric data with scientifically validated digital human models, RAMSIS helps organizations design solutions that are safe, comfortable, and intuitive to use.

Using realistic 3D manikins and posture models, RAMSIS allows engineers and designers to assess accessibility, visibility, reachability, space requirements, comfort, and physical workload early in the development process. Potential ergonomic issues can be identified and resolved before physical prototypes are built, reducing development time, lowering costs, and accelerating product maturity. By integrating human-centered design principles from the start, RAMSIS supports the creation of products and environments that meet ergonomic requirements while improving user experience, safety, and operational efficiency.

SAFETY &
ERGONOMICS

EQUIPMENT &
PERFORMANCE

LOGISTICS

RAMSIS

ISIZE

SCANNING,
DATA COLLECTION,
SIZE RECOMMENDATIONS,
X-FIT

The effectiveness of digital ergonomics simulation depends on the quality and representativeness of the underlying human data. While digital human models enable accurate evaluation of products, workplaces, and vehicle environments, reliable results require anthropometric data that reflects real user populations and their physical variability.



Key Features



Digital toolchain enables data-driven decision-making across fitting, logistics, and system design



Fast and accurate automatic body measurement with 3D body scanning



Early evaluation of accessibility and visibility – Identifies design issues related to reach, access, and field of view before physical prototypes are built



Faster product maturity with reduced development cost by minimizing iterations and improving design quality from the start



Ensure that clothing, gear, or platforms are **tailored for the real human** whom they are intended for

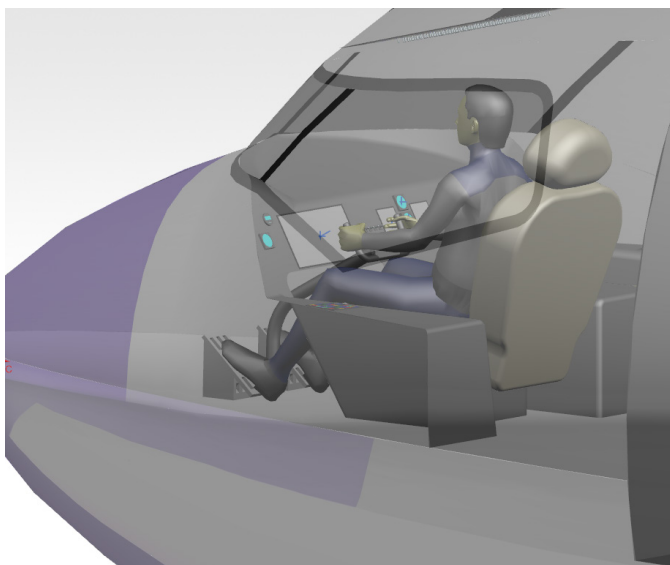
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Modern users also interact with products while wearing specialized clothing, footwear, and personal equipment that can significantly influence body dimensions, posture, and range of motion. This creates a critical challenge: systems are often designed without fully accounting for the real, equipped human. xFit provides accurate body and sizing data, while RAMSIS transforms that data into actionable ergonomic and system design insights.



RAMSIS Aircraft

RAMSIS: SIMULATION-BASED ERGONOMICS FOR COMPLEX ENVIRONMENTS

RAMSIS extends the human-centric approach into the virtual development space by enabling realistic, simulation-based ergonomic analysis. Using validated digital human models, RAMSIS allows engineers to evaluate how fully equipped users interact with vehicles, workspaces, and technical systems long before physical prototypes exist.

A key differentiator is the integration of a comprehensive equipment library, including realistic 3D models of helmets, protective gear, footwear, and electronic

devices. These elements are automatically fitted to digital manikins, accurately reflecting how equipment alters posture, movement, and spatial requirements. This allows simulations to move beyond theoretical human dimensions and represent real-world usage conditions.

This capability is especially important when addressing ergonomic challenges in vehicles and compact technical environments, where equipment can limit range of motion and affect reach, visibility, and interaction with controls. Without accurate simulation, these constraints are often only discovered late in development, leading to costly redesigns and delayed optimization.

THE FULL HUMAN DATA ECOSYSTEM

Humanetics provides a unique, end-to-end portfolio that combines high-precision body scanners, large-scale anthropometric databases, iSize population models, and RAMSIS simulation technology into one integrated solution for modern organizations. Body scanners capture accurate, real-world user data at scale, while centralized databases and iSize enable the creation of representative digital populations reflecting today's workforce. RAMSIS then brings this data into the virtual development environment, allowing realistic simulation of fully equipped users in complex operational contexts.

Together, these components create a powerful foundation for data-driven decision-making across outfitting, logistics, and system design. Organizations benefit from improved fit and comfort at the individual level, optimized supply chains at the organizational level, and safer, more efficient vehicles and equipment at the system level. This holistic approach ensures that every investment — whether in clothing, equipment, or platforms — is aligned with the real people it is designed for.