ptc

DATASHEET

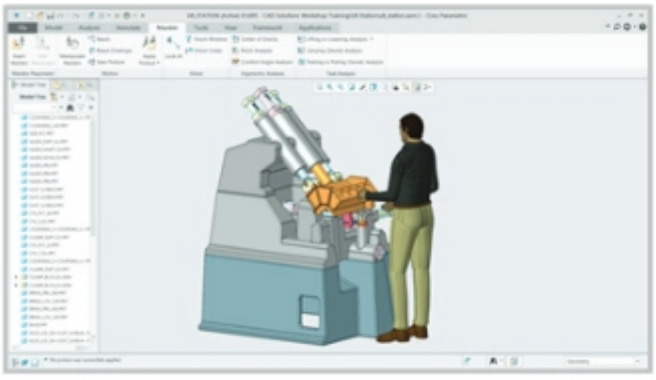
Creo® Human Factors and Human Factors Analysis Extensions

Connect Products with People – with digital human modeling.

Ergonomics design tools help engineers understand how humans interact with products, during the early stages of the development process. This saves time and reduces budget. Creo Human Factors and Human Factors Analysis extensions help to ensure that products meet customer requirements, are comfortable to use and conform with health, safety and workplace standards.

Digital human modeling supports a human-centric approach to design, by allowing an engineer to add a 3D digital human to their 3D CAD product model. A digital human model – also called a manikin – is an advanced 3D mechanism that provides an accurate representation of human physical characteristics, such as size, shape, vision, movement, strength, and comfort. The manikin can be customized for a specific gender and ethnic demographic and fully manipulated in real time, thereby helping the designer better understand the interaction of people and a product. This can be applied to a consumer, machine operator, installer, or assembler.

Traditional human modeling tools, originally designed for human factors specialists, can be difficult to use and expensive. Creo Human Factors Extensions make powerful digital human modeling capabilities more accessible to non-specialists, so all designers can understand human/product interactions earlier in the design process and optimize their designs in less time.



Digital human modeling supports a human-centric approach to design

Creo's easy-to-use Human Factors and Human Factors Analysis Extensions are digital human modeling solutions based on ISO standards.

PTC's Human Factor extensions are fully integrated into the Creo design environment, allowing you to leverage existing Creo design, simulation, and analysis capabilities.

Human Factors Extension

Key Benefits

- Reduce time, budget and obsolescence associated with physical prototypes
- Ensure conformance with safety, health, ergonomics, and workplace standards
- Optimize products for your identified target audience within the overall global market
- Communicate and share complex human-product interaction issues using a strong, clearly communicable, visual simulation solution

Visualize human interaction and identify clearance issues early in the design process

Assess vision and reach of manikin with the product

Capabilities & specifications

Quickly insert and customize digital human models

- Using the dedicated manikin environment, quickly and easily insert a manikin into Creo and, if needed, customize based on gender, nationality, size, and other associated variables
- Anthropometry support for a wide range of global populations, to help the design engineer assess and maximize the product's potential in the global marketplace
- Digital Human Model structure conforms to the H-ANIM standard: ISO/IEC 19774
- Manikin libraries are included to help you capture and reuse manikin data

Visualize clash, collision, distance, clearance, and more

- Visualize line of sight, enabling you to "see" what the manikin can see (Peripheral, Binocular, Optimal, Accurate)

Reach functionality

- Identify and analyze gaps between reachable and intended target.

Reach envelopes help identify the area inside the manikin's reach zones

- Available for each arm and variable trunk positions
- Allows you to instruct the manikin to perform a reach, to validate design considerations such as comfort, clearance, and accommodation
- Supports four different reach envelopes (index finger, middle finger, thumb and center of palm)

Human Factors Analysis Extension

Creo Human Factors Analysis Extension includes advanced assessment and vision field analysis tools, to test your designs against quantitative human factors and workplace standards.

Key Benefits

- Simulate human-product interactions such as pushing, pulling, lifting, lowering and more
- Communicate and share complex human-product interaction issues using advanced reporting capabilities
- Ensure conformance with safety, health, ergonomics and workplace standards and guidelines

Use the Manikin Editor to create and share your own customized manikin population models.

Please visit the PTC support page for the most up-to-date platform support and system requirements.

For more information, visit: PTC.com/product/creo or contact your local sales representative.

Language support

English, French, German, Italian, Korean, Japanese, Spanish and Chinese (Simplified and Traditional)

Capabilities & Specifications

For advanced assessments of human-product-workplace interactions, such as manual handling, workplace layout and repetitive movements, Creo Manikin Analysis Extension provides designers and Human Factors experts with the ability to validate their designs against quantitative Human Factors and workplace standards such as:

- Material Handling (RULA)
- Pushing/Pulling (Snook)
- Lifting/Lowering (Snook)
- Carrying (Snook)
- Lifting/Lowering (NIOSH)

Repeatable Analyses for Different Target Audiences

Visual field analysis tool and reflection analysis tool for visibility standards. Confirm intended visibility and identify potential gaps in coverage.

Applicable for analysis of cameras, displays and manikins.

Visual field analysis confirms visibility and identifies gaps.

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>>> THE CREO ADVANTAGE:

Creo is the 3D CAD solution that helps you accelerate product innovation so you can build better products faster. Easy-to-learn Creo seamlessly takes you from the earliest phases of product design to manufacturing and beyond. You can combine powerful, proven functionality with new technologies such as generative design, augmented reality, real-time simulation, additive manufacturing and the IoT, to iterate faster, reduce costs and improve product quality. The world of product development moves quickly, and only Creo delivers the transformative tools you need to build competitive advantage and gain market share.