

eM-Assembler – eMPower for manufacturing process management

Product assembly planning

fact sheet

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► Summary

eM-Assembler is a powerful tool that facilitates part assembly and disassembly planning processes. Using original CAD data, you can conduct a static analysis and detect design errors early in the design phase of the process. You can create optimal insertion and extraction paths and define the best assembly and disassembly sequence of operations. eM-Assembler also enables you to examine service and maintenance procedures prior to building the first physical prototype.

Features:

- 3D visualization
- Use of original CAD data
- Creation of insertion and extraction paths
- Static collision analysis
- Dynamic collision detection
- Complete assembly sequence definition using Gantt charts and tree diagrams
- Simulation including human, robot and tool resources

Benefits:

- Detect design errors at early planning stages
- Geometrically validate assembly sequence
- Reduce number of physical prototypes
- Reduce cycle times at planning and ramp-up stages
- Integrate human and ergonomic information into design

Planning a product assembly sequence

eM-Assembler enables you to define the optimal sequence of operations for product assembly and disassembly. Dynamic charts and timelines enable you to view assembly possibilities and limitations, and define the best sequence of operations accordingly.

Conducting a static analysis

eM-Assembler enables you to conduct static analysis of an assembly. Using powerful analysis tools, you can calculate distances between parts and focus on problematic zones within the path. The system highlights collisions, violations and near misses in red or yellow throughout the process. You can create a cross-section in wire frame or solid in order to study closely assembly possibilities and limitations.

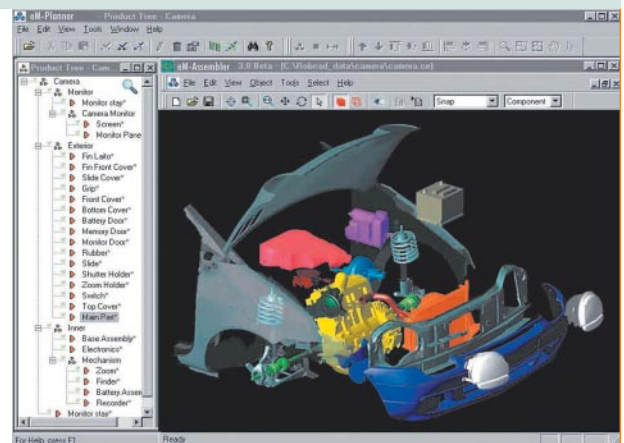
Creating an insertion/extraction path

Using eM-Assembler, you can create a path to insert and extract a part. This is done by moving the part into its location, while the system automatically records a path. The product also creates paths automatically in complex assemblies.

Performing dynamic analysis

eM-Assembler allows you to analyze the process while the simulation is running so that you can detect collisions during insertion of a part as it would happen in real life – either during manufacture or service. The Stop-On-Collision feature automatically stops the simulation upon detecting collisions and violations, allowing you to note and fix problems throughout the process.

eM-Assembler is fully compatible with UGS Tecnomatix™ eM-Human and eM-Workplace. Together, these products enable you to analyze kinematics, robot movement and human motion, as well as to determine the optimal tool, robot or device needed for the part assembly process.



TECNOMATIX

eM-Assembler Advanced

eM-Assembler Advanced provides advanced interference, assembly and volume analysis as well as standard and kinematics modeling.

eM-Assembler Light

eM-Assembler Light enables the design, analysis and verification of simple assembly and disassembly processes. The system facilitates sequence-of-operations simulation, and easily creates and simulates paths for parts. It enables static and dynamic collision detection and 2D and 3D sectioning analysis.

eM-Assembler View

eM-Assembler View enables the simulation and visualization of processes created by eM-Assembler. It provides views of the product hierarchy, review of detected collisions, and communicates intent through on-screen annotations.

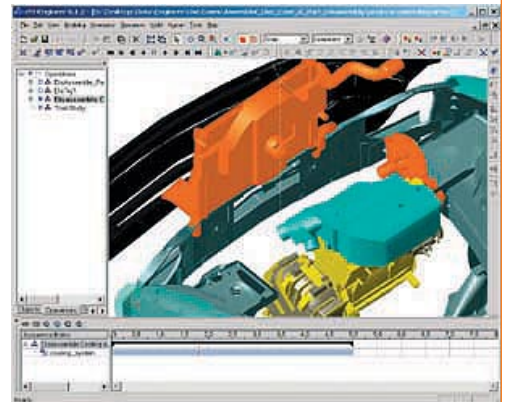
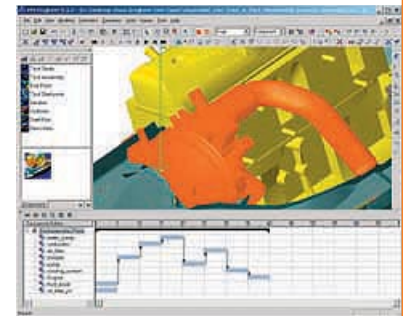
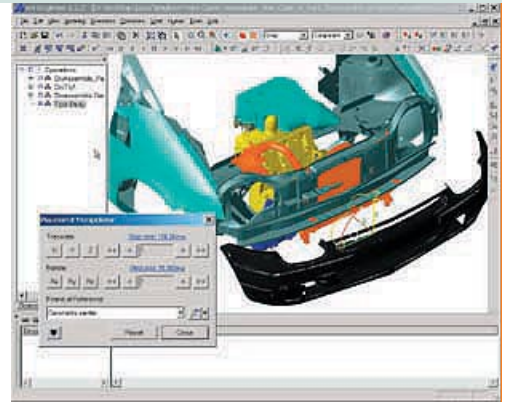
eMPower solutions for MPM

The Tecnomatix eMPower suite makes up an end-to-end collaborative solution that enables the planning, design, analysis, optimization and operation of manufacturing processes – letting users create and share manufacturing information across the enterprise and throughout the supply chain.

eMPower solutions help manufacturers implement effective MPM strategies – from sharing product and process designs, to joint process planning and engineering by teams in distributed locations – helping planners to make decisions such as where, how and with what resources to manufacture products.

Leading manufacturers around the world are adopting Tecnomatix eMPower solutions to expand revenue potential by reducing costs, accelerating product introductions, shortening time to volume and optimizing production execution.

For more information about UGS Tecnomatix solutions, visit www.ugs.com.



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