

DEP MeshWorks is a powerful CAE platform that accelerates 2D and 3D mesh generation, enabling accurate and efficient simulation across a wide range of CAE applications. It supports various mesh types, including tetrahedral, hexahedral, mid-surface, and sheet metal meshes. With AI/ML-powered feature recognition, template-based meshing, and automated mid-surface and batch meshing tools, users can generate high-quality meshes with minimal CAD cleanup. Unique capabilities like automatic thickness assignment, mesh repair, and mid-surface capture ensure both precision and speed. Furthermore, specialized meshing tools for tires, gears, and rotors deliver automation and accuracy unmatched in the industry.

DEP MeshWorks

Detroit Engineered Products (DEP) is a global engineering solutions and product development company, founded in 1998 in Troy, Michigan. Over the years, DEP has expanded its footprint to Europe, China, Korea, Japan, and India. At the core of DEP's innovation is its proprietary platform, DEP MeshWorks, which enables accelerated product development by drastically reducing design and simulation cycle time. Leveraging a unique combination of engineering expertise and digital transformation, DEP supports customers across automotive, aerospace, healthcare, energy, and industrial domains.

With DEP MeshWorks at the center of our offerings, DEP empowers organizations to accelerate product development, reduce costs, and bring superior products to market faster than ever before.



AI/ML-Powered

Superior Quality

Advanced Hexa Tools

Cost-Time Efficiency

Accurate Thickness

Comprehensive Meshing

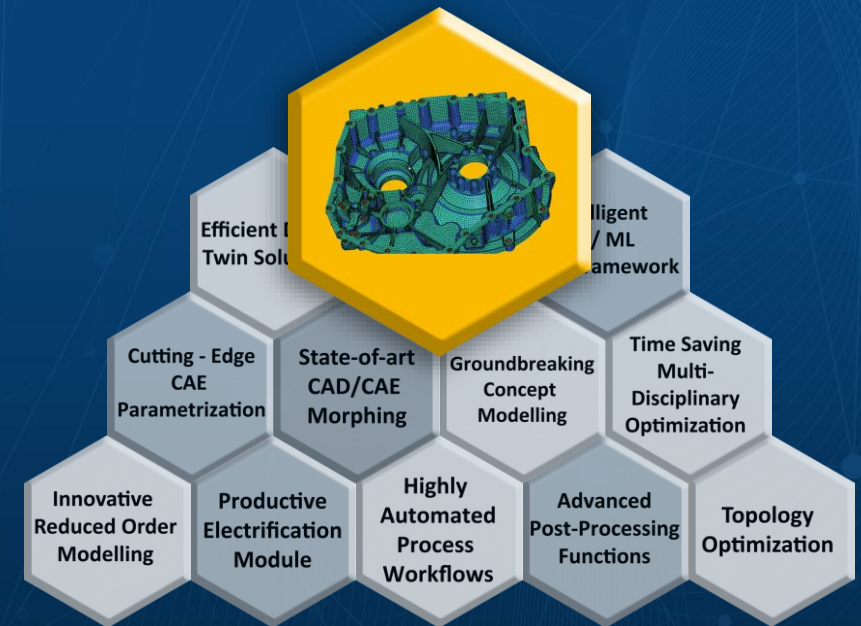
Mesh Reusability

Rapid Meshing

Next-Gen Meshing

Advanced AI Powered Meshing Engine for
Powerful and Accurate 2D & 3D Models

• Built for Speed • Designed for Accuracy • Powered by Automation



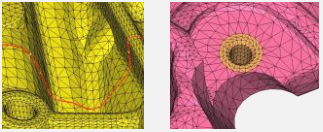
Comprehensive 2D and 3D Meshing

MeshWorks provides robust 2D and 3D meshing capabilities, enabling the rapid generation of high-quality tetra, hexa, mid-plane, sheet metal, and plastic meshes directly from complex CAD data. Its advanced geometry handling, powerful batch meshing tools, and morphing-integrated meshing ensure consistency and speed across large-scale simulation models.

Robust Features for all types of Meshing

Tetra Meshing

- Automated, high-quality tetra mesh generation for complex geometries with advanced layer and feature-specific control.
- Depth meshing enables precise volume control, while rapid mesh edits accelerate design iterations.
- Uniqueness:** MeshWorks achieves 30–40% time savings over traditional tools by minimizing manual post-processing through its automated and intelligent workflow.



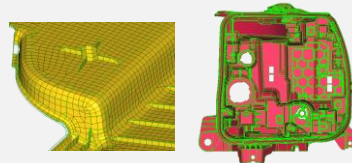
Hexa Meshing

- Supports layered and extruded meshing with tools like Hex Cutter and Solid Fuse for faster, high-quality mesh creation.
- Enables rapid mesh modifications and significant time savings—up to 50%—in modeling workflows.
- Uniqueness:** MeshWorks offers depth meshing with intelligent cake slicing and parametric extrusion, enabling it to handle complex geometries with exceptional precision.



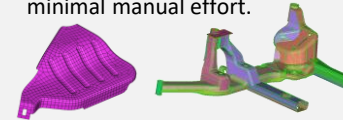
Midplane Meshing

- Automatically generates tetra for thick zones and shell mesh for thin areas, ideal for plastics and thin-wall castings.
- Depth meshing enables hybrid meshing with advanced automation and accurate mid-plane feature capture.
- Uniqueness:** MeshWorks enables fully connected hybrid mesh generation, ensuring seamless integration between thick and thin zones without the need for manual intervention.



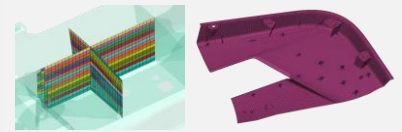
Sheet Metal meshing

- Advanced depth meshing and flow correction tools improve accuracy and enable high-quality, structured meshes with smooth transitions.
- Rapid mesh modification and automation features, including the Interactive Batch Mesher, streamline updates and support manual or automated corrections.
- Uniqueness:** MeshWorks enables automated thickness assignment and feature capturing, delivering optimized, production-ready meshes with minimal manual effort.



Plastic meshing

- Automated mid-plane meshing, thickness assignment (including ribs with drafts), and rib creation tools enhance accuracy and efficiency.
- Validation and CAD mesh comparison features ensure mesh quality and enable reuse of elements for faster modeling.
- Uniqueness:** MeshWorks' feature replication capability ensures design consistency across models while reducing manual effort.



DEP MeshWorks Value Proposition to Users



Template based meshing

- Enables high customization and control in mesh creation.
- Ensures accurate feature capturing.
- Delivers high-quality reseeded for better mesh quality.
- AI/ML-driven intelligent algorithms enhance automation, enabling smart detection, correction, and optimization throughout the meshing process.



Industry-Wide Application

- Robust performance across automotive, aerospace, consumer goods, railway, marine, bio-med, industrial equipment, and tire industries.
- Handles very high-complexity geometries (e.g., hot stents, ship structures with 3000+ welds).



Ease of Use

- Simple, intuitive interface with click-based slicing and meshing (e.g., cake-slicing method for hexa mesh).
- AI/ML-powered automation enables intelligent thickness assignment, planarity correction, and mesh cleaning, reducing user effort and ensuring high-quality results.



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