

Mechanical Design solutions



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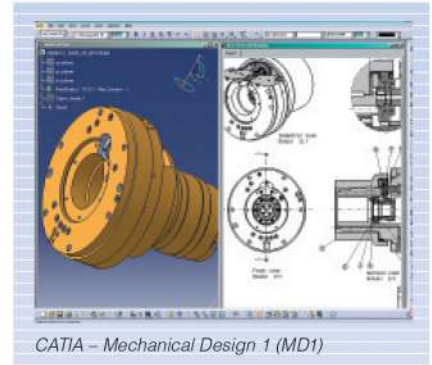
From concept to detailed design and onto drawing production, CATIA V5 mechanical design solution set accelerates the core activities of product development. Its products also address sheet metal and mold manufacturing requirements through dedicated applications that dramatically enhance productivity and reduce time-to-market.

The main highlights include:

- **An advanced 3D product creation package** – This package includes comprehensive part and assembly design features, as well as associative drawing extraction capabilities. Designers will also find all the two-dimensional (2D) drafting capabilities required for efficient drawing production
- **Productive and intuitive design of sheet metal parts** – The feature-based approach offers a highly productive and intuitive design environment. It allows for concurrent engineering between the folded or unfolded representation of the part to deliver increased levels of productivity.
- **Rapid, cost-effective creation of mold tools** – CATIA Mechanical Design products provide dedicated tools to address the plastic injection process. They also provide a fast splitting tool that takes a surface or solid part and separates it into a core and cavity with sliders and loose cores. These applications greatly enhance design productivity through advanced mold simulation features for the production of assembly drawings and the machining of mold assemblies.
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- **Simple and quick creation of all types of structures** – This capability addresses preliminary and detailed design requirements for products such as heavy machinery and equipment, tooling jigs, shipbuilding foundations and manufacturing plant foundations.
- **Specification-driven modelling, generative applications and controlled associativity** – These features deliver highly productive and robust engineering change management. Engineering changes can be associatively propagated through the entire product definition and with related lifecycle processes. This dramatically reduces development time and costs, while eliminating any risk of human error or design inconsistency.

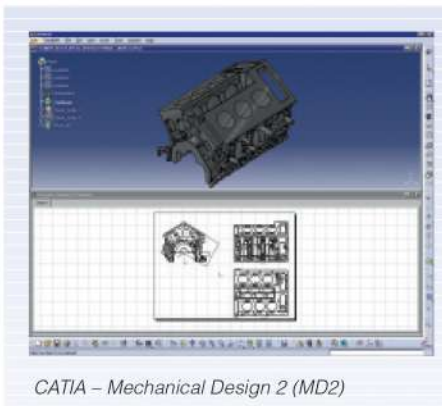
CATIA – Mechanical Design 1 (MD1)

Provides the tools needed to perform 3D part and assembly design and generate production drawings. In addition, it includes integrated realtime rendering capabilities and supports data exchange using common industry standards, including the CADAM drawing data format.



CATIA – Mechanical Design 2 (MD2)

Provides in one seat all the necessary tools to perform advanced 3D design of parts and assemblies in the context of the full scale digital mock-up, and generation of production drawings. In addition, it includes integrated realtime rendering capabilities.

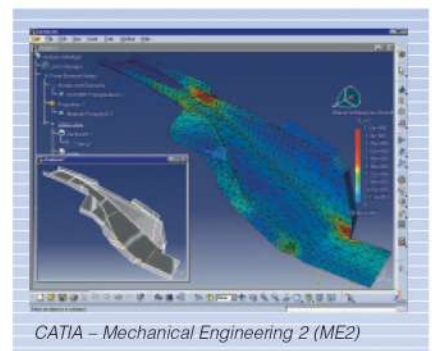


As a CATIA P2 configuration, MD2 offers advanced 3D orientation features, such as fly-through navigation and advanced specification graph display and manipulation. Customers benefit from its built-in interoperability with other CATIA V5 solution sets. It is the configuration of choice for existing CATIA V4 customers because it offers integration tools that are compatible with CATIA V5, as well as data interfaces to the most frequently used industry standards. Customers also benefit from a seat definition that can be seamlessly upgraded by the addition of shape design capabilities, allowing for the design of more complex parts using hybrid-modelling methodologies.

CATIA – Mechanical Engineering 2 (ME2)

Provides in one seat all the necessary tools to perform advanced 3D engineering of parts and assemblies in the context of the full scale digital mock-up, and generation of production drawings. It also includes intuitive stress-testing functions, which makes the early pre-validation of parts available to all designers.

As a CATIA P2 configuration, ME2 offers advanced 3D orientation features, such as fly-through navigation and advanced specification graph display and manipulation. Customers benefit from its built-in interoperability with other CATIA V5 solution sets. It is the configuration of choice for existing CATIA V4 customers because it offers integration tools that are compatible with V4, as well as data interfaces to the most frequently used industry standards. Customers also benefit from a seat definition that can be seamlessly upgraded by the addition of shape design capabilities, allowing for the design of more complex parts using hybrid-modelling methodologies.

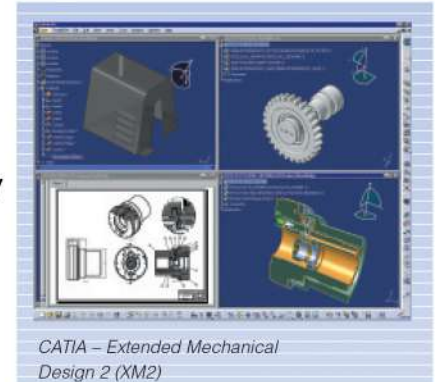


CATIA – Extended Mechanical Design 2 (XM2)

Provides a 3D product creation package perfectly suited to various domains such as Industrial Machinery or Consumer Goods. This includes comprehensive part and assembly design features, as well as associative drawing extraction capabilities. Designers will also find that it has all the 2D drafting features necessary for efficient drawing production.

As a CATIA P2 configuration, XM2 offers advanced 3D orientation features such as the analysis of the degrees of freedom of a component. This enables a quick understanding of how the component is graphically constrained. Basic knowledge capabilities also allow designers to import and use corporate knowledge stored in rule databases to ensure the consistency and quality of their designs.

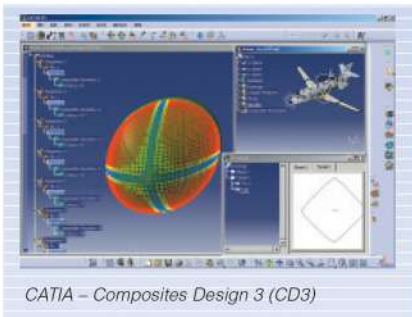
To meet industrial-scale needs, the configuration has been reinforced with sheet metal design production capabilities and advanced wireframe and surfacing features. Customers benefit from its built-in interoperability with other CATIA V5 solution sets. It is the configuration of choice for existing CATIA V4 customers because it offers integration tools that are compatible with V4 and data interfaces to most frequently used industry standards including CADAM drawings.



CATIA – Extended Mechanical Design 2 (XM2)

CATIA – Composites Design 3 (CD3)

Provides all the tools needed to design composites parts for the purposes of a digital mock-up. In addition to its highly productive core product, CATIA – Composites Design 3 (CPD), CD3 delivers advanced mechanical and surfacic tools to underpin the efficient management of design changes. These tools are supported by knowledgeware solutions, which enable the capture and reuse of corporate know-how and standard rule bases. CD3 therefore supports the user throughout the design cycle.



CATIA – Composites Design 3 (CD3)

This composites design solution is fully integrated into the CATIA V5 Product Process Resource model that offers a perfect fit with the design-to-manufacturing process and therefore can help companies deliver the right-to-market products.

CATIA – Aerospace Sheet Metal Design 3 (SL3)

Provides all the necessary tools to perform advanced and specific 3D design of sheet metal parts used in the aerospace industry in one seat. It also delivers a full portfolio of productive and innovative Design and Drafting solutions to the user, including applications concerning shape design, image rendering and interfaces. The framework of this solution provides the user with overwhelming product and process integration expertise, where the highest productivity potential is focused on specific aerospace sheet metal processes.



CATIA – Aerospace Sheet Metal Design 3 (SL3)