

CATIA SHEET METAL

ACCELERATING DESIGN OF SHEET METAL COMPONENTS, FROM DESIGN TO MANUFACTURING



BENEFITS

FAST AND EFFICIENT DESIGN OF SHEET METAL COMPLEX PARTS

EASILY APPLY COMPANY-DEFINED STANDARDS TO ENSURE DESIGN QUALITY

CREATE RIGHT FIRST TIME SHEET METAL PARTS THANKS TO DESIGN IN CONTEXT OF THE VIRTUAL PRODUCT

TAKE INTO ACCOUNT MANUFACTURABILITY CONSTRAINTS EARLY IN THE DESIGN PHASE AND SPEED UP ASSEMBLY DESIGN

FROM RAPID PROTOTYPING IN BEND PART DESIGN, CONTINUE IN GENERATIVE

SHEETMETAL DESIGN FOR MORE DETAILED FEATURES

Engineers need to design sheet metal components rapidly and compliantly with company rules and standards for efficient manufacturing. They have to create it right the first time and to experience smooth exchanges between suppliers and contractors. Industrial companies are constantly striving to reduce design-to-manufacturing cycles for complex sheet metal parts, while ensuring they are standard compliant.

SHEET METAL PROCESS COVERAGE

Conceptual Design:

- Put ideas directly into an industrial context early on with a highly productive universal hybrid modeling tool
- Imagine in the concept phase without going into too much detail
- Quickly create folded parts simply by pushing and pulling faces

Detailed Design:

- Complete 3D-based technological features representation (stamps, cutouts,...)
- Easily apply company-defined standards to ensure design quality
- Recognize and modified external sheet metal parts (STEP & IGES)
- Create right first time sheet metal parts thanks to design in context of the virtual product
- Manage the forming process directly in 3D, with an intuitive way
- Take into account manufacturability constraints early in the design phase and speed up assembly design

Manufacturing Preparation:

- Use company standards through templates and parameters tables enables the capture of knowledge and avoids errors. Manufacturability is guaranteed.
- Automatic flattening view generation from the 3D design part
- Part manufacturing view encloses manufacturing specifications derived from engineering specifications

CATIA SHEET METAL OFFER

CATIA Bend Part Design: for bent parts

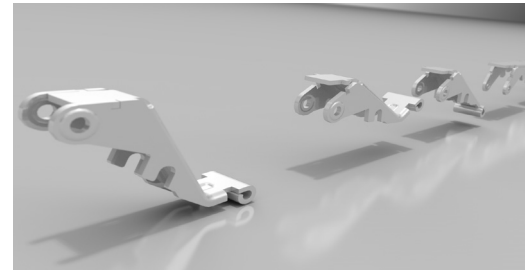
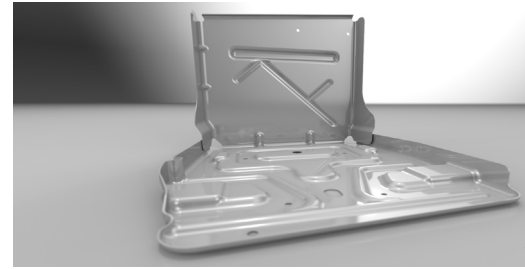
- Easy to use, direct manipulations
- Fast and accurate design capabilities
- Unfold of any type of bent parts after step import.
- Folded and unfolded parts available at any time
- Online collaborative service

CATIA Generative Sheet Metal: for complex sheet metal parts

- Associative and dedicated sheet metal feature-based modeling
- Concurrent engineering between the unfolded or folded 3D shape representation
- Access to company-defined standards tables
- Manage the forming process directly in 3D, with an intuitive way
- Dedicated drawing generation capabilities for manufacturing as well as seamless nesting and cutting export

CATIA Aerospace Sheet Metal: for complex hydro-formed sheet metal parts

- Support complex surfaces flanges
- Aerospace dedicated design features such as joggle, joggle on web, flanged cut out, surfacic web
- Accelerated design and knowledge integration
- Integration of side and joggle compensation



"Since 80% of our products are made of sheet metal, we established a close partnership with Dassault Systèmes with the aim of adapting our specific sheet metal needs to CATIA functionalities. We immediately benefited from an over 50% reduction in design time."

Andreas Maehler,
responsible for global CAD PDM, CLAAS.

Manufacturing advantages pay off: Another clear and measurable benefit of implementing PLM is the reduction in lead-time for creating prototypes. For resin components, lead times were reduced by 90% by implementing 3D design and introducing a molding machine. For sheet metal components, time spent creating exploded drawings was eliminated with the implementation of CATIA Sheet Metal.

Panasonic Home Appliances

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