



ALIBRE DESIGN™

THE FIRST CHOICE IN 3D CAD.

Alibre Design 6.0 is a low-cost application for 3D parametric solid modeling. With it, you can create precise 3D mechanical designs, and generate and detail 2D associative drawings. Alibre Design is a complete application with many extras not found in other mid-range solid modeling applications—like integrated data management, a BOM editor, online data sharing and real-time collaboration, as well as a direct connection to the Alibre Assistant for expert, on-demand support. Easy to learn and use, Alibre Design lets you be productive immediately.

Alibre Design Professional is an extended version of Alibre Design 6.0 that includes even more features:

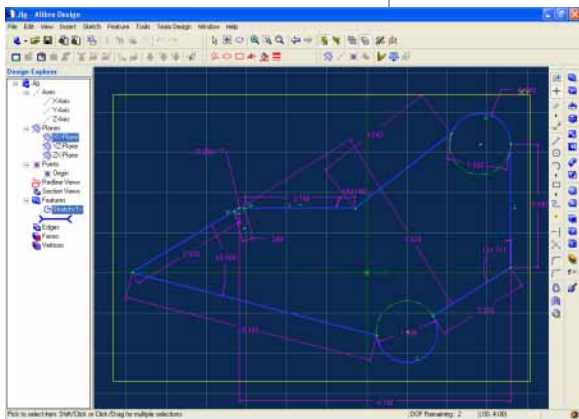
- Integrated sheet metal design supporting fold and unfold, tabs, flanges, hems, jogs, cuts and dimples.
- Alibre PhotoRender for generating high-quality photorealistic images.
- Alibre Part Library featuring millions of standard and manufacturer parts.
- First-pass linear static finite element analysis with ALGOR DesignCheck.
- 3D milling, drilling and customizable post-processors with VisualMill 3.0 from MecSoft for one year.



PART AND ASSEMBLY MODELING

Sketching. In Alibre Design, all 3D geometry starts with a 2D sketch. Pick a plane or face; then create a sketch and use it for feature creation. Both design and construction geometry can be created with these sketching tools:

- Line
- Circle
- Ellipse
- Elliptical Arc
- Arc (center pt./start pt./end pt., tangent arc, 3 pt. arc)
- Rectangle (normal, 3 pt.)
- Spline Curve with advanced editing of control points or interpolation points, as well as tangency control, knot insertion and deletion, import/export support and more.



Sketch Constraints. The intelligent sketcher automatically detects and infers relationships between sketch entities and construction geometry, capturing sketch constraints on the fly. Sketch constraints can also be applied manually to create the following parametric relationships:

- Fixed
- Vertical
- Horizontal
- Intersection
- Symmetric
- Coradial
- Concentric
- Collinear
- Coincident
- Midpoint
- Equal
- Tangent
- Perpendicular
- Parallel

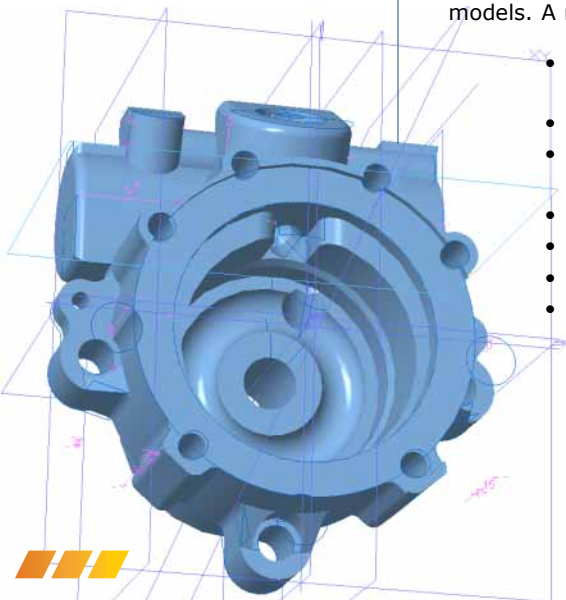
Sketch Operations. After you create a sketch, you can edit and refine it using the following operations:

- Extend
- Trim
- Mirror
- Offset
- Fillet
- Chamfer
- Pattern (linear or circular)
- Copy

Dimensioning. Dimensions can be placed to parametrically define and constrain sketches. Each dimension has an associated parameter that also can be precisely defined. You can input an absolute value, or drive dimensions from equations that reference other sketch dimensions, or from an external spreadsheet. A status display indicates the remaining degrees of freedom to aid in correctly constraining your sketch. You can automatically dimension and fully constrain the sketch at once using the auto-dimension tool.

Part Modeling. Alibre Design is a parametric (or dimension-driven), feature-based modeling system. Alibre Design utilizes advanced component technology, incorporating the ACIS modeling kernel and D-Cubed constraint manager to create precise 3D solid models. A rich set of 3D form features are supported:

- Extrude boss (normal and thin wall)
- Extrude cut (normal and thin wall)
- Revolve boss (normal and thin wall)
- Revolve cut (normal and thin wall)
- Loft boss
- Loft cut
- Sweep boss (normal and thin wall)
- Sweep cut (normal and thin wall)
- Helical boss
- Helical cut
- Fillet (fixed and variable radius)
- Chamfer (edge and vertex)
- Shell
- Draft
- Hole



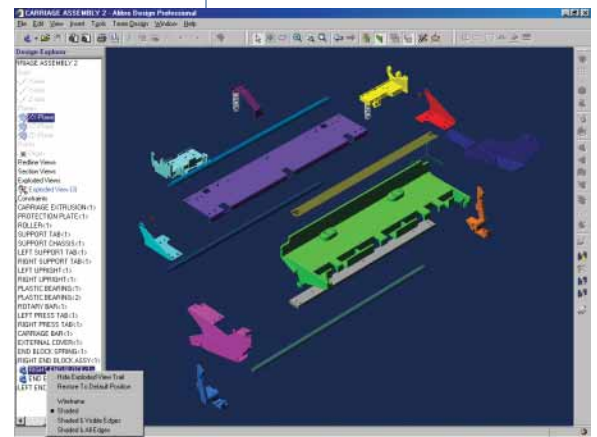


The following modeling operations provide a complete set of geometry creation and editing tools:

- Move parts (freely or precisely)
- Rotate parts (freely or precisely)
- Pattern parts
- Mirror parts
- Anchor parts
- Hide individual parts
- Insert multiple part instances
- Check for interferences
- Create exploded views:
 - Automatically explode assemblies to preset distances
 - Drag parts to the desired position
- Open larger assemblies quickly with "light assembly loading." Display information loads first; then geometry, constraints, history and feature details when needed.

Assembly Modeling. In the assembly workspace of Alibre Design, users can accurately position, constrain and dimension parts relative to each other to quickly develop complete assemblies.

- Choice of assembly design method:
 - Bottom-up: Design parts individually and then combine them to create an assembly.
 - Top-down: Start with a new assembly and design all the parts within the assembly. Any existing part can be referenced while designing or editing others.
- Ability to create, insert and edit parts in the context of the assembly
- Choice of assembly constraint types:
 - Mate (w/optional offset)
 - Align (w/optional offset)
 - Tangent
 - Orient
 - Angle

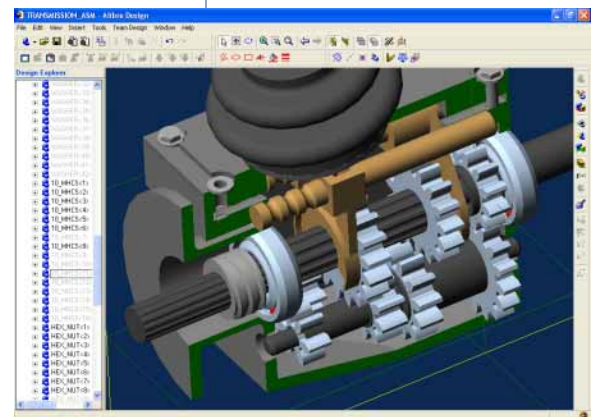


Constraints can also reference construction geometry and features with constituent parts. Furthermore, the Auto Constrain tool in Alibre Design automatically applies align and mate constraints for fast, intuitive assembly. You can also manipulate, build or interrogate parts using the following assembly operations:

- Mirror
- Pattern (linear and circular)
- Remove face
- Offset face
- Move face
- Suppress
- Edit
- Reorder
- Rollback/roll forward

Additional Modeling Highlights:

- Calculate physical properties for a part or assembly, such as volume, mass, surface area, center of mass, inertial tensor and principal axes of inertia.
- Create 3D section views. Make precise measurements on the sectioned geometry or create a new sketch from the sectioned edges.
- Save and reuse sketches with the Catalog feature.
- Generate a new sketch or reference figures from existing geometry using the project-to-sketch function.
- Insert annotations to communicate manufacturing information (notes, datums and datum targets, weld symbols, surface finish, etc.)



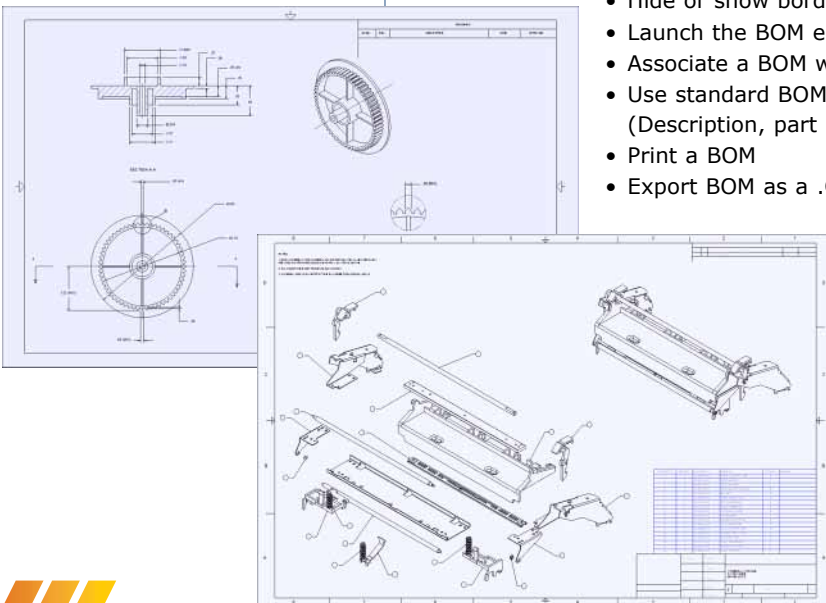
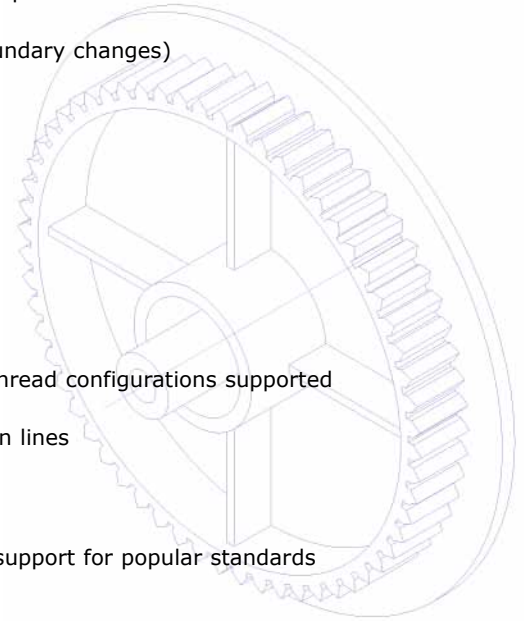
2D DRAWING CREATION AND DETAILING

Generate and detail 2D associative drawings in drawing workspaces. Automatically create standard 2D orthographic views (such as front, top, right) from the part or assembly. Associativity is maintained between drawings and 3D models: geometry and dimensions changed in the model are reflected in the drawing, and vice versa. Standard drawing templates (ANSI, DIN, ISO) are available, or you can create your own templates according to your company practices or preferences.

- Custom view types:
 - Detail views (automatic update when detail boundary changes)
 - Section views (normal and stepped)
 - Broken views
 - Auxiliary views
 - Exploded views
- Multiple font types and styles
- Layers and layer attributes (visibility and color)
- Drawing operations:
 - Move and scale views
 - Hide parts in assembly views
 - Move views to other sheet
 - Create threaded holes with callouts, standard thread configurations supported
 - Centerline creation and editing
 - Show or hide centerlines, tangent edges, hidden lines
 - Balloon callouts
 - Rotated text
- Dimensioning:
 - Control dimension styles and appearance with support for popular standards (ANSI, DIN, JIS)
 - Modify driving dimensions
 - Insert reference dimensions
 - Delete dimensions

Bill of Materials (BOM). In Alibre Design, you can generate BOMs that are directly associated with an assembly or subassembly model. An intuitive spreadsheet interface lets you create new BOM tables. Associativity between the BOM and the assembly ensures accuracy throughout the design and manufacturing process; if the assembly changes, the BOM is updated automatically.

- Customize table properties (column headings, font sizes and colors, row and column appending and manipulation, sorting, etc.)
 - Customize BOM templates
 - Hide or show borders
 - Launch the BOM editor directly from the drawing workspace
 - Associate a BOM with a drawing sheet without displaying it
 - Use standard BOM Headings (Description, part name and number, revision, supplier, material, etc.)
 - Print a BOM
 - Export BOM as a .CSV file for use in spreadsheets or MRP systems



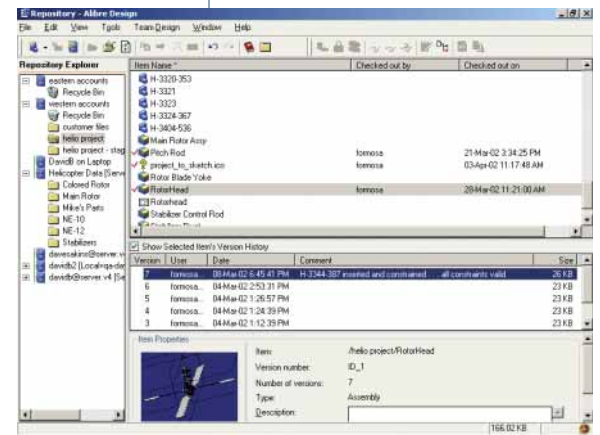
Interoperability. Whether it's 2D or 3D, parts or assemblies, Alibre Design lets you import and export data in a wide range of formats. Additionally, Alibre Design is based on STEP (Standard for the Exchange of Product Model data), ensuring robust interoperability with all other major CAD systems—there is no proprietary data format. The open STEP standard provides a common data format that is not controlled by any single CAD vendor. As a result, Alibre Design users can generate data without tying their future to any particular application.

Import: STEP (AP 203/214), SAT (ACIS), IGES, DXF/DWG (2D only)

Export: STEP (AP 203/214), SAT (ACIS), IGES, STL, DXF/DWG (2D only), CSV (BOM)

Integrated Data Management. The Repository provides a location to organize and securely store data on your hard drive, a network drive or a secure Alibre server.

- Create multiple local repositories and folders to organize data.
- Store non-native files (i.e., Word or Excel documents, other CAD files, etc.). Open these files in their application directly from the Repository.
- Establish access rights, give your contacts the ability to copy, open, modify or move the data.
- Check items in and out. Others cannot edit checked-out items.
- Version tracking. A new version can be created each time a design is saved. Roll back to earlier versions or purge all previous versions.



Team Design Sessions. Multiple Alibre Design users can communicate directly and work on the same sketch, model or drawing in real time. Use Team Design sessions to work with the Alibre Assistant for real-time support on actual design data, or conduct spontaneous design sessions with your customers or coworkers. You can create and modify geometry together, in addition to measuring and viewing. Simple compact commands are sent directly between users' systems and executed locally for optimal performance during team sessions.

- Work with others in real time to create, edit or review models and drawings.
- Invite the Alibre Assistant to a session for on-demand help and technical guidance.
- Communicate using text chat or voice over IP technology.
- Insert redlines and mark-ups during sessions. Save the mark-ups with the design including the time, date and author.

Interface. Alibre Design offers a familiar Windows user interface. Users can move easily among the various areas of the application, such as workspaces and repositories. The Home window provides centralized, easy access to the entire application.

- Start new designs, open existing ones and import data from other CAD systems.
- Contact the Alibre Assistant for expert guidance in real time—chat, design or troubleshoot with an Alibre representative.
- Start a chat or send a message.
- Alibre Design Professional users can activate add-ons: Alibre PhotoRender, Alibre Part Library, ALGOR DesignCheck and MecSoft VisualMill 3.0.
- The Invite An Associate feature enables users to give 30-day free trials to associates. Invitees receive an email enabling them to download Alibre Design. Once they have installed, they can connect directly with you in real time.

ALIBRE DESIGN PROFESSIONAL

An extended version of Alibre Design 6.0, Alibre Design Professional includes integrated sheet metal design and add-ons based on technology from Alibre Solution Partners.

In **sheet metal part workspaces**, you can design sheet metal parts with standard features including fold and unfold, tabs, flanges, hems, jogs, cuts and dimples. Sheet metal parts can be easily inserted into assemblies with other 3D part models.

Alibre PhotoRender allows you to generate high-quality photorealistic images of both native and imported designs. You can illustrate your design concepts more effectively and add impact to presentations and proposals.

Alibre Part Library provides access to millions of standard and manufacturer-specific components, such as fasteners, bearings, steel shapes, gears and motors. Use the simple interface to select a specific part and size; then seamlessly download the component into a new Alibre Design Professional workspace. ANSI, ISO, JIS and DIN are supported industry standards. Fifty-two manufacturer catalogs including PEM, NSK, SKF, Globe, Torrington, THK and Thomson are also supported. All components are precise 3D ACIS (.SAT) files.

Use **ALGOR DesignCheck** finite element analysis (FEA) software to verify single part designs with a first-pass engineering analysis. DesignCheck makes it easy to perform linear static stress analysis, evaluate results and prepare professional design reports. The DesignCheck interface features multiple view windows, a tree view of the model and associated data and Windows-native data input screens with real-time data checking for reasonable input. Contact the ALGOR Assistant from the Home window for real-time expert assistance.

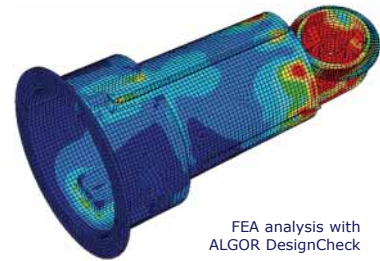
MecSoft VisualMill 3.0 is a fully functional 3D milling application which will run for one year. Export Alibre Design models directly to VisualMill, define tool paths and run simulations; then make the parts with your CNC machine. Includes basic 2-1/2 axis milling, 3 axis milling, drilling and "All-Post" technology.

THE ABSOLUTE BEST VALUE IN CAD.

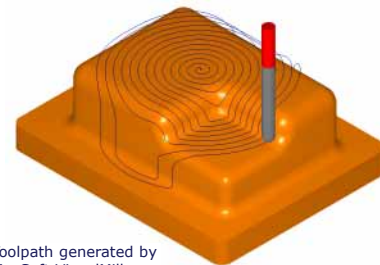
Alibre Design 6.0 includes all these features and more in an easy-to-learn, low-cost application. Alibre Design Professional further extends your capabilities, at a price that's still far below other solid modeling applications. The low price and money-back guarantee give you a no-risk way to check out Alibre Design today.



www.alibre.com



FEA analysis with ALGOR DesignCheck



Toolpath generated by MecSoft VisualMill

SYSTEM REQUIREMENTS

Recommended Operating Systems

- Windows® XP Professional or Home Edition
- Windows 2000 Professional SP2 or later
- Windows NT 4.0 SP3 or later

Other Supported Operating Systems

- Windows Me
- Windows 98 SE or later

Software Requirements

- Internet Explorer 4.01 SP2 or later
- Microsoft Virtual Machine

Internet Connection

Minimum Hardware Requirements

- Pentium® II processor
- 256 MB RAM
- 800x600 screen resolution
- Video card with DirectX support (32 MB recommended)
- 16-bit or high color
- 150 MB available hard disk space
- 250 MB Virtual memory
- CD-ROM drive
- Mouse or pointing device