CADRA-LIB Integrated Component Library of parts, catalogs and symbols

Looking to improve your productivity in CADRA? CADRA-LIB has the solution(s) to complete your design with all the commercial parts you need. No more wasting time to properly represent commercial parts, with CADRA-LIB they are at your fingertips replacing manual lookup in a paper catalog. All your CADRA users will find the parts they need in a central “common place”. All CADRA-LIB parts are parametric, leveraging CADRA FlexDesign features. In CADRA-LIB all the reference points are available providing for faster design. CADRA-LIB can help you obtain the construction table for straight and conic gears. CADRA-LIB is Metric system based.

Why Choose CADRA-LIB?
- Use of your supplier’s catalog of parts.
- Avoid costly mistakes, by eliminating unavailable parts usage.
- Allows you to pick only parts that are currently available. Reducing inventory and saving expenses.
- Connects with the CADRABOM database which will automatically generate your bill of materials.
- Connects with CADRAEDM for workflow and document management

Improve Design and Documentation Quality
The CADRA FlexDesign Productivity Features allow time to explore alternatives and focus on clarity and accuracy of the imported 2-1/2D models for increased drafting and documentation quality.

Benefits from Using CADRA-LIB
- All your Parts in one place
- Fully integrated into CADRA
- Saves Time & Real time upgrades
- Point and click to find all your parts
- Reduce production "hiccup’s"
- CADRA menus and files

CADRA Drafting Engine
- 2-1/2D view-based drafting
- Full 3D wireframe support

Benefits from Using CADRA-Add-ons
- Add 3D solid modeling to 2-1/2D
- Photorealistic visualization of design intent

CADRA Productivity Features
- QuickDim intelligent dimensioning
- QuickPick rapid selection and insertion of parts, layers, and overlays
- QuickHatch for crosshatching
- QuickTrim for trimming and cornering
- FlexDesign adds dimension-driven variation and design capabilities
- Planar, step and complex sectioning with cross-hatch control
- Preview of geometry to be created
- In-place figure editing
- In-drawing foreign language text
- Plot preview, plots PDFs
- Bi-directional HPGL format
- Microsoft Office integration (OLE)
- In Drawing Documentation Tools

Design Automation
- Macro programming language
- Visual Basic Object model interface
- CADRA-BOM bill of materials automation
- CADRA-EDM data management facility
- Read and/or write to CADAM, CADDs, DWG, DXF, IGES, PDF, HPGL, MICROCADAM, CATIA, and CCD
LIBRARY CONTENTS (10,000+ parts)

- Machining Symbols (old standard, general old standard, new standard)
- Form and Position tolerances
- ISO System of Limits and Fits for shafts and holes plus a program for the check of tolerances
- Shafts generation
- Parallel splines (UNI 8953): medium and light type
- Seals for dynamic applications (Angst+Pfister): type A (12-300mm)
- Ring-joint facing, type “O-ring” (Angst+Pfister) for shafts and holes (static and dynamic seals)
- Retaining rings for shafts (UNI 7435) and roles (UNI 7437)
- Ring nuts SKF: KM and KML types, with or without tab washer
- Holes: threaded (metric ISO threads), GAS threaded (UNI-ISO 228), threaded blind, centered 60° (UNI 3220), threaded centered 60° (UNI 3221)
- External metric ISO threads (ISO 4755), with or without undercuts
- Seats for head cap screws
- Bearings (SKF): deep groove ball, self-aligning ball, angular contact ball, cylinder roller, needle roller bearings, spherical roller, taper roller single row, thrust ball, cylindrical roller thrust
- Hexagon socket head cap (UNI 5931): screws and bolts (M3-M48)
- Hexagon head: screws (UNI 5739) and bolts (UNI 5737) (M3-M64)
- Hexagon socket countersunk head (UNI 5933): (screws M3-M20) and bolts (M5-M16)
- Hexagon socket set screws: with flat point (UNI 5923, M3-M24), with dog point (UNI 5925, M3-M24), and with cone point (UNI 5927, M3-M24)
- Hexagon nuts: thick (UNI 5587-68, M3-M64), normal (UNI 5588-65, M3-M64), lock (UNI 5589-65, M6-M64) Washers: normal (UNI 6592, M3-M64), spring (UNI 5589-65, M6-M64)
- Pins: parallel (DIN 6325-DIN 7, UNI 1707), parallel with threaded hole (DIN 7979, UNI 6364), taper (DIN 1, UNI 7283), taper with threaded hole (DIN 7979, UNI 7284), elastic - heavy type (UNI 6873)
- Feather keys – seats: normal (UNI 6604), stub (UNI 7510)
- Gear calculation: straight-tooth gear, helical standard manikin
**CADRA at a glance...**

**3D Solid Models**
- SolidWorks
- SpaceClaim

**Mechanical Drafting**
Easy of use, robust, cost-effective, productive, 2-1/2D

**AutoGeometry Macro Language**
COM Interface
- Automate functionality
- Create customer integrations

**Translator Options**
- CATIA
- MicroCADAM
- CADAM
- PRE-CADAM (CAB)
- IGES
- AutoCAD (DXF/DWG)
- Gerber

**Raster Editing & Conversion**
- CALS, TIFF, Image-X, AnaTech, GTX
- Preserve Legacy drawings: Convert paper to CADRA

**Add-on Components**
- View/Check/Markup
- Component Library
- Data Management
- Automated BOM
- NC (2 to 5 axis)
- Batch Plot & Print

**Well connected to other CAD/CAM tools and netlist formats**

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**Improve Design and Documentation Quality**
The CADRA-LIB features allows time to explore alternatives and focus on clarity and accuracy of the imported 2-1/2D models for increased drafting and documentation quality.

**Reduced Cost, Faster Time to Market**
When using CADRA you immediately turn a cost savings and compress the release schedule. No need to redraw drawings with

**Low Cost of Ownership**
The efficient drawing productivity brought to your desktop by CADRA, allows exploration time for iterations, innovations, and clarity, which leads to improved product quality and faster time to market. CADRA provides an overall cost effective ownership experience, with its links into other CAD tools and availability on fresh Hardware and Operating Systems.

**Fits Existing Infrastructure**
CADRA runs on 64 bit versions of Windows 8.1 and 10 Professional and Enterprise. As well as Windows servers versions 2012 R2, 2016 and 2019. Microsoft Word documents, Excel spreadsheets, PowerPoint presentations and pictures can be embedded in CADRA drawings. Legacy data or data from other CAD programs can be imported as well using OLE (Object Linking and Embedding).

**Global Solution**
CADRA is available in multiple languages including English, French, German, Italian and Japanese. Reduction in the learning curve and data migration times are obtained through training, database conversions, programming tools, viewers, and direct interfaces with other CAD tools, as well as quick links to 3D visualization.

**Greater Productivity with CADRA**

- **CADRA Raster** – - Raster-to-vector conversion utility for converting paper drawings into CADRA files
- **CADRADirect** – A suite of CADRA translators that allow write/read of CADRA drawings
- **CADRAView/Check** – Share designs as view-only, markup, and red-line
- **CADRA Solid Modeling Integrators**: The SolidWorks and SpaceClaim integrators have bidirectional data exchange that turns solid models into accurate CADRA designs and legacy CADRA files into Solid Model sketches with ease. This can be used for documentation or cost effective 2-1/2D designs and provides photo-realistic images of CADRA designs in progress for prototyping
- **CADRANC** – 2-through 5-axis numerical control (NC) programming with full mill turn support and control of a diverse mix of CNC machines
- **CADRA Plot** – Batch plot management and file translation
- **CADRA-BOM** – Automate bill of materials (BOM) creation, reuse setup and retrieve
- **CADRA-EDM** – Data management facility
- **CADRA-LIB** – Library of components created with CADRA productivity features in mind

https://www.mentor.com/products/mechanical/cadra

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