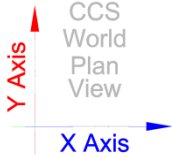


KeyWild CAD Library

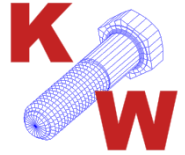


http://www.keywild.com/cad_library

A Public Domain CAD Library

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"Engineering is the art of planning and forethought."



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"No good deed goes unpunished." — Oscar Wilde

Library Description:

This is a collection of files to be used in CAD ([Computer Aided Drafting](#)) systems as "insert blocks".

All of these files were created with the software DRAFTSIGHT available for download at the URL:

<http://www.3ds.com/products/draftsight/free-cad-software/>

Draftsight is **FREE** software package available for Windows, Linux and Mac operating systems. Anyone may download, install and use this software after a simple on line registration. It is produced by Dassault Systèmes and distributed under an agreement with Solidworks. DraftSight is a two dimensional CAD system with some 3D (Three Dimensional) capabilities. This software is very similar to the previous generation of the classic AutoCad software produced by Autodesk. These blocks (".dwg" files) should be compatible with the following CAD software (*among others*):

- Draftsight
- Ares Commander
- IntelliCAD
- AutoCAD
- Corel CAD
- TurboCAD
- ViaCAD
- BricsCAD

Note that Draftsight can be used to export these DWG files to other formats such as SVG, EMF, EPS, JPG, PNG or PDF for use in other software such as: GIMP, PhotoShop, Corel Draw, Paint.Net or Illustrator.

Revision History:

23 July 2013:

This is a minor revision.

A new section has been added for the World Map. It now includes a full detail map, scripts and data. The documentation has been updated to reflect the additions/changes.

4 July 2013:

This is a minor revision. Mainly the Hex Head Fasteners were expanded to include up through 1 inch nominal diameter parts. In order to do that the master drawing format had to be increased in size. It is now a full ANSI "E" drawing format.

An additional row was added to Miscellaneous section for the World Data Map.

Web Links were moved/added to the bottom of the page.

1 July 2013:

This is a Major Revision (*toss everything and start over*).

Legal disclaimer has been totally rewritten and included in each PDF document.

Web Page index.htm has been totally rewritten with new layout and frames.

New file naming convention uses UNC, UNF, ### as thread series designators (this simplifies script and batch file maintenance).

2D Hex Head fasteners have new layouts for that lend themselves to automating the process of exporting the individual blocks. All thread fasteners were added to the master drawings. "Under head" transition for all tread fasteners was revised for all blocks to reflect 60 degree conical transition. PDF documentation file added. All Dwgs included in single 7Z archive. Added sampler file.

3D Hex Head fasteners models added to new Library section. Software included to generate models not included in distribution files. PDF documentation file included.

Miscellaneous section added for Rulers and Ammo.

Default archive format changed to 7z.

(Actual release date is 29 June 2013)

1 June 2013:

Establish web page with preliminary 2D DWG files for 1/4, 5/16, 3/8, 7/16 and 1/2 inch Hex Head fasteners.

File/Block Naming Convention:

Each file needs a unique name when it is inserted into a drawing. I also feel that the name should indicate the contents of the file in a human readable form. Coming up with a naming convention and directory structure is one of the most challenging aspects of this project (*creating the actual data files is time consuming but simple*). The lack a mono-spaced font for directory management in Windows is not my problem --- that is a Microsoft failure. Good or bad what follows is what I came up with.

Each block name is made up of segments separated by underscores ("_"). Where applicable, the first segment is two letters that indicate if the file is created in the Inch or Metric System: **IN** for inched based hardware or **MM** for metric based hardware or structural shapes. For Symbols the first character is **S** followed by a character designator for the type of symbol (**SO** is symbol, organization chart). See the documentation for specific sections for additional block naming conventions.

First Two Characters	Meaning	Comment
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IN	Inch based Hardware	
MM	Metric Based Hardware	
SO	Symbol, Organization chart	
SE	Symbol, Electrical	Electronic and Logic included
SH	Symbol, Hydraulic	Plumbing included
MS	Miscellaneous	Other things (rulers)
KW	Keywild CAD Library Specific	Title block, Icons, Layouts, Etc.

Note all work was done on a Microsoft Windows operating system that is NOT sensitive to characters case in filenames. The character case of file names/blocks may NOT be consistent.

Distribution Files –

All distribution files will have “**KeyWild_CAD_Library**” as the beginning of the file name.

All distribution files will have a release date as the ending portion of the filename. The format of the date shall be “_YYYYMMDD”.

YYYY 4 digit year of release

MM 2 digit month of release

DD 2 digit day of release

See the documentation for specific sections for additional file naming conventions.

All distribution DWG files will be compressed with the open source file archive “[7-ZIP](http://www.7-zip.org/)” using the **LZMA2** compression format. This achieves an order of magnitude greater compression than the Previous ZIP archive format. Free software for decompressing the files can be found at the URL:

<http://www.7-zip.org/>

Documentation Information:

The spreadsheet file “Fastener_Dimensions.xlsx” has all the dimensions used to create fastener blocks. Dimensions were resourced from a number of places. The primary reference work used to verify those dimensions was the twenty-fifth edition of Machinery’s Handbook (©1996, Industrial Press Inc., New York, ISBN 0-8311-2595-0). Although that reference is somewhat dated these dimensions are by design fairly constant.