2020 CAP
User Guide

Table Of Contents

About 2020 CAP

2020 CAP is a suite of labor-saving tools that help you visually search through thousands of furniture products, then place those products into AutoCAD drawings. You can output those drawings in Plan View or 3D View.

Use 2020 CAP to:

- Create large-scale project drawings directly within AutoCAD
- Accurately space plan with complex furniture lines using accurate Design Automation tools
- Rapidly draw walls, doors, windows, curved walls, reflected ceiling plans, custom windows and doors directly within AutoCAD
- Create Standards — groups of product that are combined to represent complete assemblies like workstations
- Export drawings into 2020 Worksheet for product optioning and pricing

2020 CAP is an AutoCAD-based design tool. For first-time start-up, launch AutoCAD, then start CAP Designer. CAP Designer supports the most recent versions of AutoCAD.

Hints and procedures

As in other Windows applications, there are many ways to perform tasks in 2020 CAP Designer. You can:

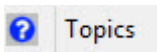
- Use the CAP Designer menu to select the command
- Click on icons in the available toolbars

Procedures in this help file show you only one way or performing a task so that you can quickly learn how to use the application.

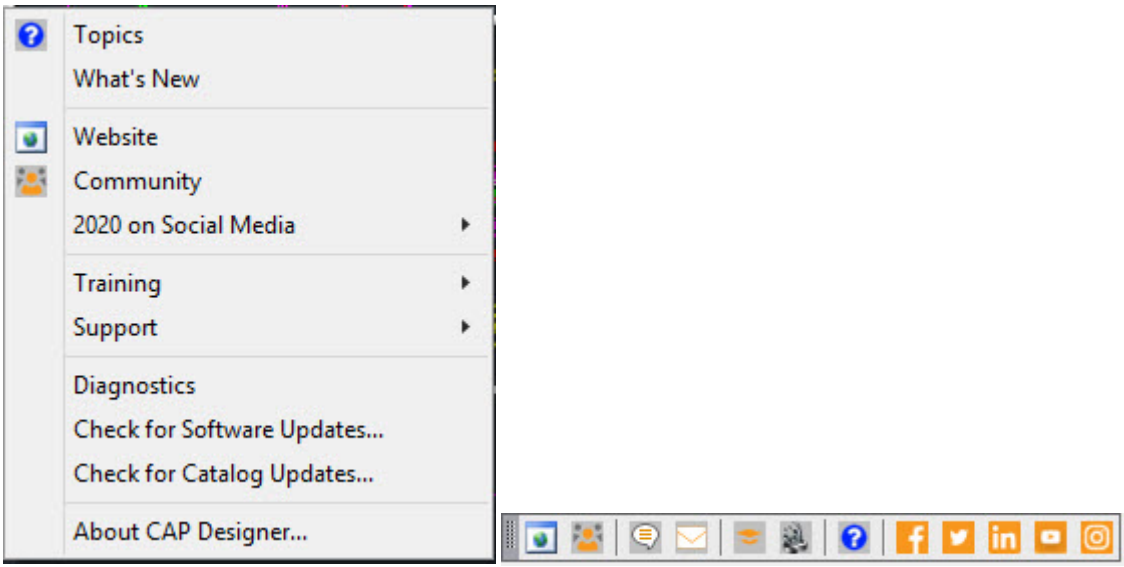
Note: Make sure all the CAP Designer toolbars are displayed for procedures directing you to click icons.

Using Help

The following sections describe how to use options from the CAP Designer **Help** menu and the CAP Designer help **Toolbar**.

The question mark - **Topics** option/icon 

takes you to the Contents page of this help file.

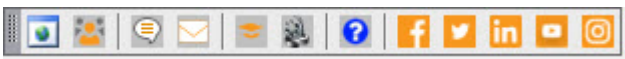


See also:

- Help toolbar
- What's new
- Website
- Community
- 2020 on Social Media
- Training
- Support
- Diagnostics
- Check for software updates
- Check for catalog updates
- About CAP Designer

Help toolbar

The Help toolbar offers the same options as the Help menu.

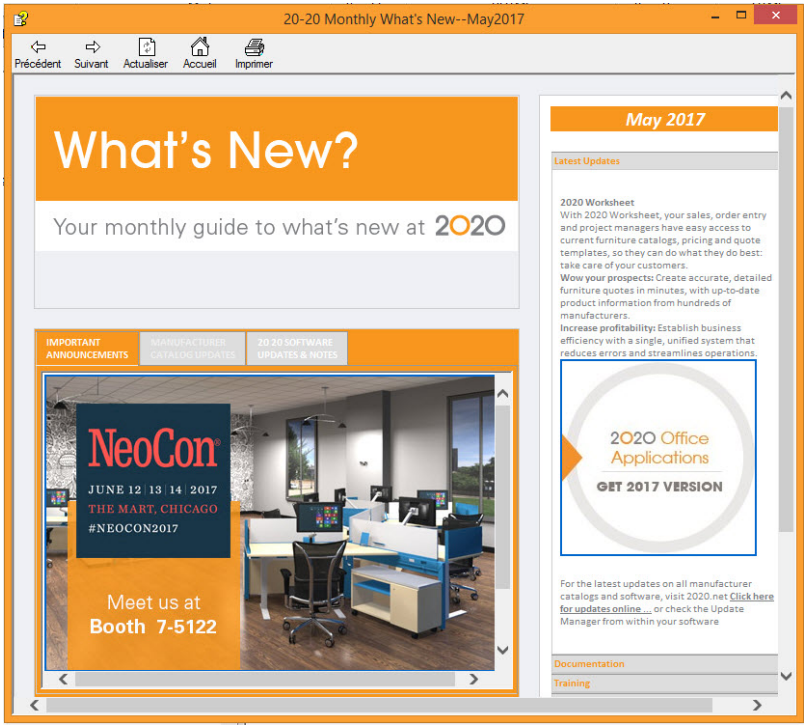


You can move this toolbar as you would for other CAP Designer toolbars within AutoCAD by clicking and holding the dotted line on its left.

What's new

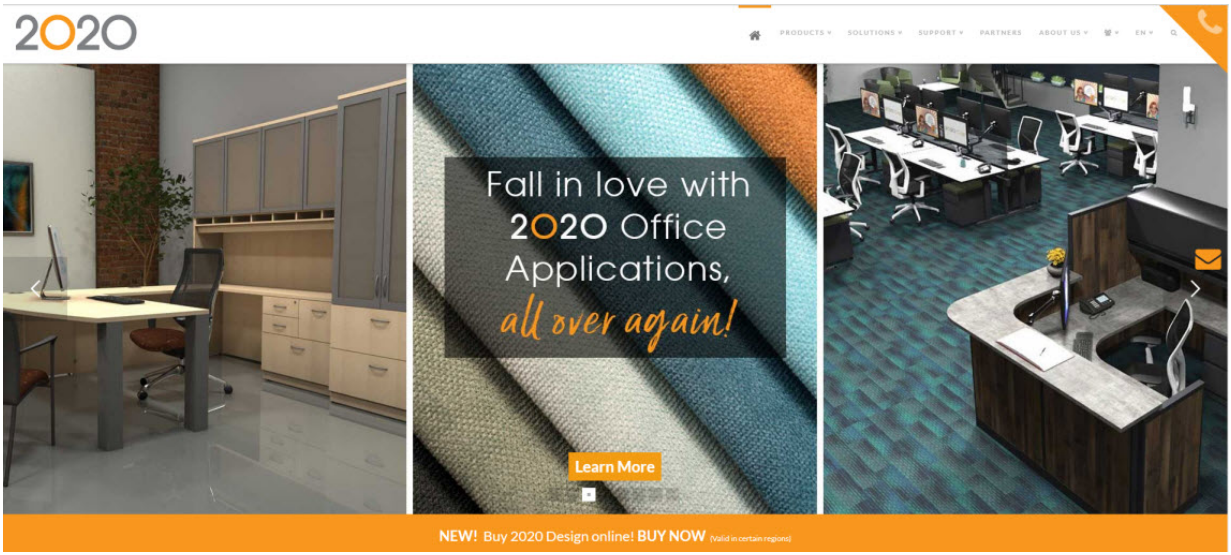
From the **Help** menu, click **What's New**. From the window shown below, you can:

- view announcements on 2020 Technologies commercial software
- read about and download manufacturer catalog updates
- view information about new commands, software fixes and known issues
- download software or catalog updates. See also Check for software updates, Check for catalog updates
- download PDF versions of the 2020 Technologies commercial software user manuals
- download PDF files of Release Notes (What's New) as they become available
- find training courses for 2020 Technologies software
- view a list of upcoming industry events in which 2020 Technologies will participate
- obtain 2020 Technologies' contact information


20-20 Monthly What's New--May2017
Précédent
Suivant
Actualiser
Accueil
Imprimer
What's New?
Your monthly guide to what's new at 2020
IMPORTANT ANNOUNCEMENTS
MANUFACTURER CATALOG UPDATES
20 20 SOFTWARE UPDATES & NOTES
NeoCon
JUNE 12 | 13 | 14 | 2017
THE MART, CHICAGO
#NEOCON2017
Meet us at
Booth 7-5122
May 2017
Latest Updates
2020 Worksheet
With 2020 Worksheet, your sales, order entry and project managers have easy access to current furniture catalogs, pricing and quote templates, so they can do what they do best: take care of your customers.
Wow your prospects: Create accurate, detailed furniture quotes in minutes, with up-to-date product information from hundreds of manufacturers.
Increase profitability: Establish business efficiency with a single, unified system that reduces errors and streamlines operations.
2020 Office Applications
GET 2017 VERSION
For the latest updates on all manufacturer catalogs and software, visit 2020.net Click here for updates online ... or check the Update Manager from within your software
Documentation
Training

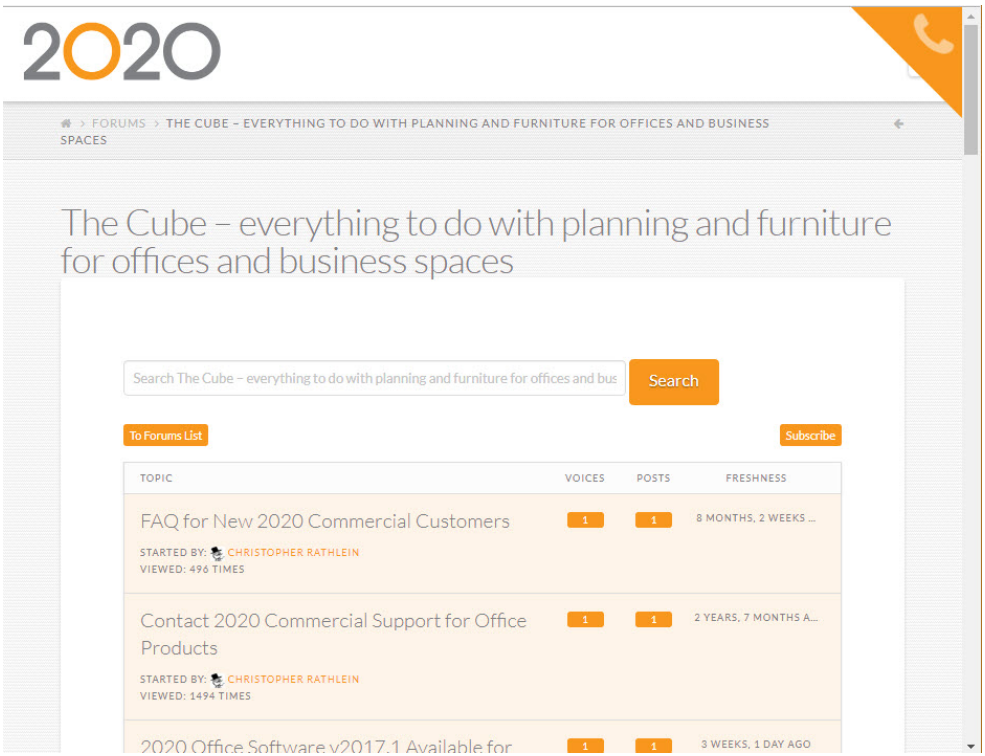
Website

This Help option takes you to the 2020spaces.com web site.



Community

This Help option takes you to the Cube forum of the 2020spaces web site where you can find and share information on 2020 Commercial Software (Office) products and its community.



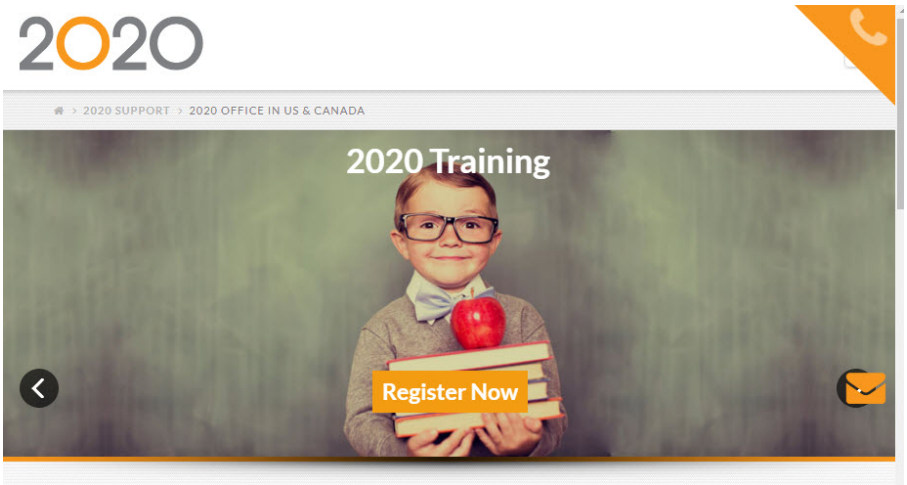
2020 on Social Media

As this is the trend in software applications, the options offered take you to various 22020 social media plate-forms so you can stay informed and share as you deem appropriate.

Training

The **2020 Training** option takes you to the 2020 Training page of the 2020 website where you can see scheduled training, sign up for classes, and learn more about what each class offers.

The **Training Videos** option takes you to the e-learning page of the 2020 website where you can watch videos that provide basic information about the CAP Designer functionality.

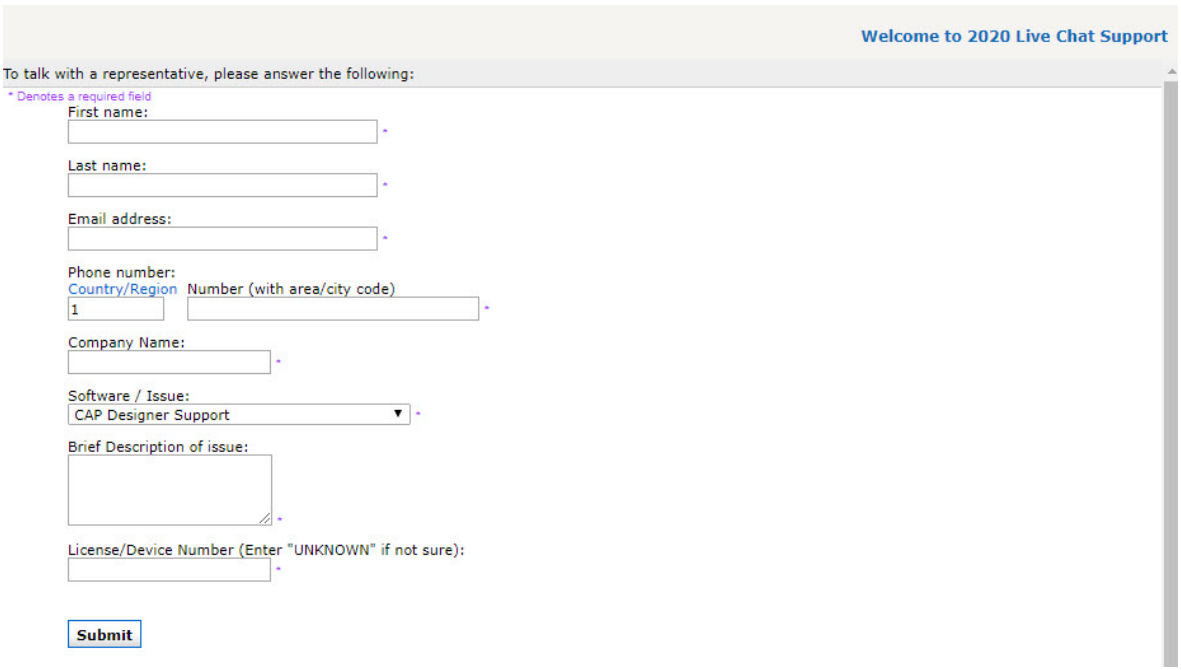

2020
2020 SUPPORT
2020 OFFICE IN US & CANADA
2020 Training
Register Now

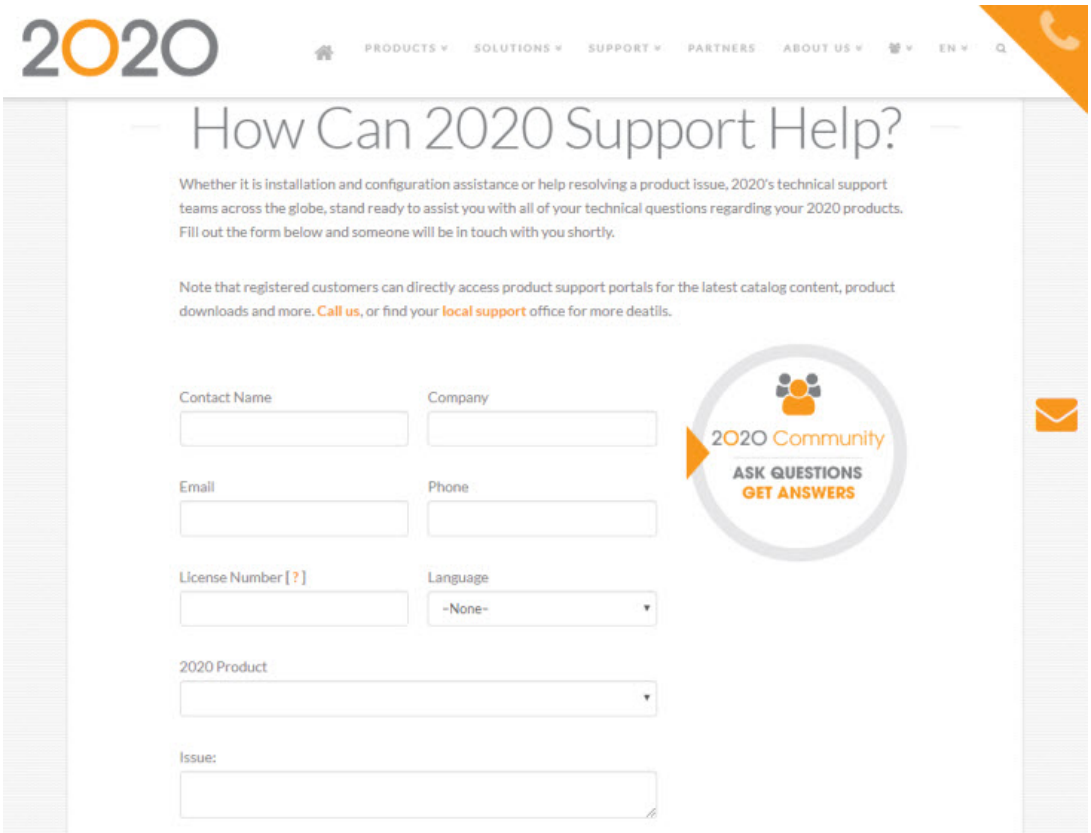

2020 Cap
2-20 Community
Classroom Training
Welcome to e-Learning!
2020 Training
eLEARNING
Table of Contents
Introduction
AutoCAD Settings
Modify and Select
Lauching CAP and Browsing
Search and Quick Search
Applying Options
Converting to and Viewing in 3D
Creating a Worksheet
Contact Us!

Support

The **Live Chat** option opens a web page where you are required to enter information in preparation for starting a live chat with a Support agent.

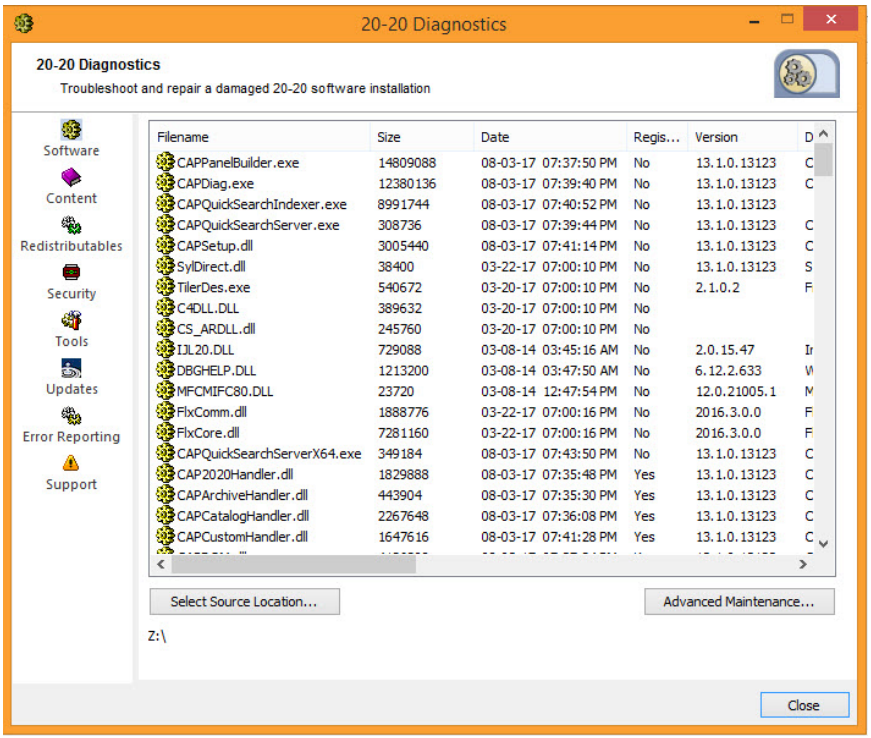
The **Email Us** option opens a web page where you can send 2020 an e-mail regarding an issue and to access the 2020 Community page.




2020
PRODUCTS
SOLUTIONS
SUPPORT
PARTNERS
ABOUT US
EN
How Can 2020 Support Help?
Whether it is installation and configuration assistance or help resolving a product issue, 2020's technical support teams across the globe, stand ready to assist you with all of your technical questions regarding your 2020 products. Fill out the form below and someone will be in touch with you shortly.
Note that registered customers can directly access product support portals for the latest catalog content, product downloads and more. Call us, or find your local support office for more deatils.
Contact Name
Company
Email
Phone
License Number [?]
Language
-None-
2020 Product
Issue:
2020 Community
ASK QUESTIONS
GET ANSWERS

Diagnostics

The **Diagnostics** command from the **CAP Designer, Help** menu is used by technical support to troubleshoot 2020 software.



Check for software updates

From the **Help** menu select **Check for Software Updates**.

The **Update Manager** appears. From here you can view updates for your system, view update descriptions and download and install updates.

For help on Update Manager click on the **Help** link on the bottom right of the Update Manager window.

Check for catalog updates

From the **Help** menu select **Check for Catalog Updates**.

The **Update Manager** appears. From here you can view catalog updates for CAP Designer, update descriptions, time and file size.

For help on Update Manager click on the **Help** link on the bottom right of the Update Manager window.

About CAP Designer

To verify your version number and other information about the program, choose **CAP Designer**, **Help**, **About CAP Designer**.

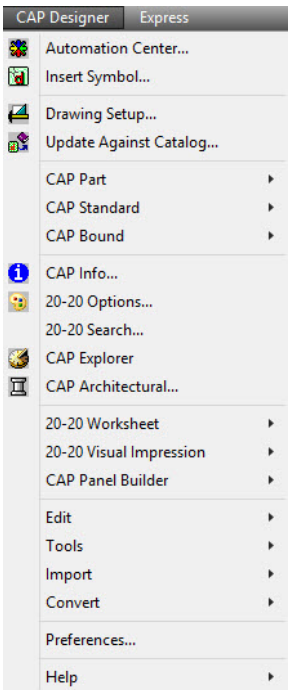
Start CAP Designer

1. Launch AutoCAD.

   *Make sure you are running in **AutoCAD Classic mode** to see the CAP Designer menu.*

2. On the command line, type CAP.

   Notice that CAP Designer does not override AutoCAD menus. The **CAP Designer** menu at the top right contains all CAP Designer functions. This menu will always display when AutoCAD starts, whether or not you have launched CAP Designer.



Drawing Setup Wizard

Use the Drawing Setup Wizard to create a new drawing under a project folder and to set up the plot size and scale of a new, current or existing drawing.

1. Select **Drawing Setup**  from the CAP Designer menu.

   The Drawing Setup Wizard opens with three options:

   New Drawing — to create a new drawing and apply setup. This drawing will be saved under a project folder. For more information about this option see Create a new drawing under a project in the Projects section
   Current Drawing — to modify setup of a drawing that is already open
   Existing Drawing — to open a drawing and modify setup

   If you opened a blank drawing, select **Current Drawing**.

2. Select the **Plot Size** and **Plot Scale** you think you might use. If you use a different size or scale when you actually plot it doesn't matter. This is simply setting up your beginning paper size.
3. Click **Finish**.

Projects

Project Support is a way of setting up and maintaining your drawings and worksheets. Users and administrators can easily organize their worksheets, drawings, and associated data under a **Project** folder. In addition, Project Support has the ability to set defaults for all of your Worksheets to be the same or set defaults on a per project basis.

To use projects in CAP Designer, see Create a new drawing under a project.

For more information about how Projects are used in 2020 Worksheet, see the Projects section in the 2020 Worksheet help.

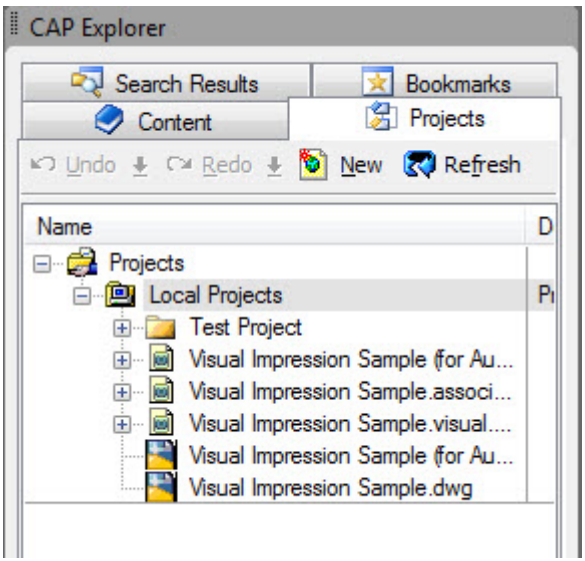
Create a new drawing under a project

Launch the Drawing Setup Wizard.

1. Select Drawing Setup  in the CAP Designer menu.
2. In the **Drawing Setup Wizard**, click **New Drawing**.
3. In the **Select Project** dialog box, decide where to store the new drawing.
   Note: The Wizard creates a default folder called **My Projects**. The purpose of **My Projects** is to create a shortcut to project folders that you are working in. The benefit is that you don't have to go through several layers of sub-folders to get to your project folder. Project folders removed from this list are not deleted.
4. To create a new project folder, click **All Projects**, then click the **New** button.
5. A *new project folder* appears. Type the name for this project.
6. Click **Next** to continue.
7. Use the **Drawing Setup** screen to setup the drawing **Plot Size** and **Plot Scale**.

8. Click **Next** to continue.
9. In the last dialog box, enter a *unique file name* then click **Finish** to close the Wizard and open the new drawing in CAP Designer.

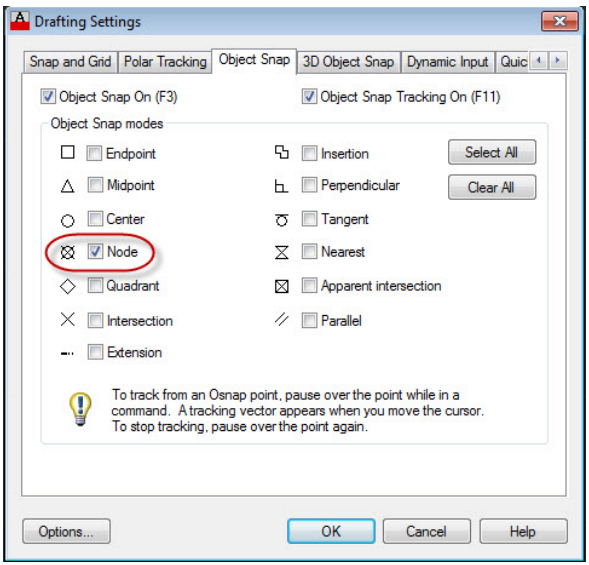
You can access the drawing from the **Projects** tab of the Explorer pane. Simply double-click on the drawing to open it.



AutoCAD settings

Before using CAP Designer, make sure to set AutoCAD **OSNAP** settings to **Node** and to toggle **ORTHO** on.

1. Right-click on the **Object Snap icon**  at the bottom of the AutoCAD window and select **Settings**.
2. Make sure that the ONLY object snap mode checked is **Node**. CAP is designed to utilize Node snapping. While occasionally other types of snapping are required to complete a layout, you can turn on those other snap nodes as needed. By limiting your snap node to node only, you limit the possibility of incorrectly snapping parts together.



3. Make sure that the **Ortho Mode**  is also on. In **Ortho Mode** mode, cursor movement is constrained to the horizontal or vertical axis. Note that in some instances you might need to turn **Ortho Mode** off.

Note: More information about **Object Snap** and **Ortho Mode** is available within AutoCAD's help system.

Toolbars

With the 2020 CAP Designer toolbars you can perform frequent tasks quickly by clicking icons.

You can easily customize toolbars. See the following topics for more information:

- Show or hide a toolbar
- Move a toolbar

There are several built-in toolbars in 2020 CAP Designer, each representing a category of commands. You may change their position to suit your needs. See the topics below for information on each toolbar.

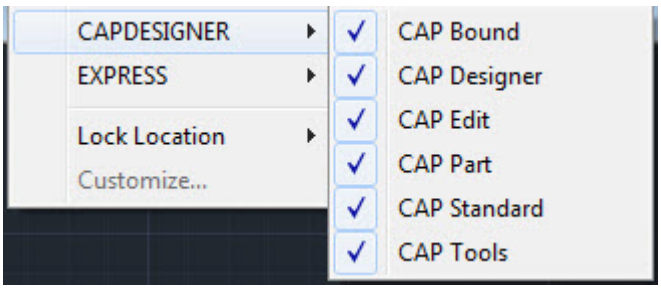
Buttons with a small black triangle in the lower-right corner are flyout toolbars that contain related commands. With the cursor over the icon, hold down the left button on your mouse until the flyout toolbar displays.

- Allsteel Tiler toolbar - see the help file on Manufacturer-specific information.

- CAP Bound toolbar
- CAP Designer toolbar
- CAP Edit toolbar
- CAP Part toolbar
- CAP Standard toolbar
- CAP Structure Builder toolbar - for Kimball's Xsite product line only. See the help file on Manufacturer-specific information.
- CAP Tools toolbar
- Help toolbar
- CAP Utilities toolbar - for Knoll Currents and Equity products only. See the help file on Manufacturer-specific information.
- Steelcase - Answer toolbar - see the help file on Manufacturer-specific information.
- Steelcase - Privacy Wall toolbar - see the help file on Manufacturer-specific information.

Show or hide a toolbar

1. Right-click in empty area of the AutoCAD toolbar area then select **CAPDESIGNER**.



2. Select the toolbar name to toggle the toolbar on and off.

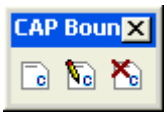
   If it is off (no checkmark next to the name), click it and the toolbar will appear on your screen (a checkmark will also appear next to its name). Selecting it again will turn it off.

Move a toolbar

You can display or hide toolbars, and you can save your selections as a workspace. You can also create your own toolbars.

A toolbar can be *floating* or *docked*. A floating toolbar is displayed anywhere in the drawing area, and you can drag a floating toolbar to a new location, resize it, or dock it. A docked toolbar is attached to any edge of the drawing area. A toolbar docked at the top edge of the drawing area is located below the AutoCAD toolbars. You can move a docked toolbar by dragging it to a new docking location. Click-hold the left edge of the toolbar to move it around. To dock/undock a toolbar, double-click on the left ledge.

CAP Bound toolbar



Icon	Name	Description	Help topic
	Make Bound	Create a CAP bound	Make a bound
	Edit Bound	Edit the CAP bound title and text placement	Edit Bound title and text placement
	Undo Bound	Remove a CAP bound	Remove a CAP bound

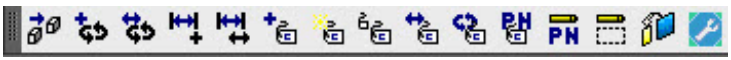
CAP Designer toolbar

Icon	Name	Description	Help topic
	Automation Center	Set of manufacturer-specific automation tools	See the help file on Manufacturer-specific information
	Insert Symbol	Place a product in the drawing using the **Insert Symbol** dialog	Place a product using Insert Symbol
	Part flyout	Click and hold to access the **Make Part**, **Edit Part** or **Undo Part** commands.	Custom items
	Standard flyout	Click and hold to access the **Make Standard**, **Edit Standard** or **Undo Standard** commands.	Standard (Typicals)
	Bound flyout	Click and hold to access the **Make Bound**, **Edit Bound** or **Undo Bound** commands.	Bounds
	CAP Info	View an item's information and options.	View item information
	2020 Options	Add finishes or options to parts in the drawing.	Specify options

	CAP Explorer	Show or hide the Explorer pane.	Explorer Pane
	CAP Panel Builder	Construct and manage configurations of stack panel products.	Panel Builder
	Create Worksheet	Create a worksheet file based on the current drawing.	Create a worksheet Create an associated worksheet
	Update with Associated Worksheet	Update the current drawing against its associated worksheet or update an associated worksheet against the current drawing.	Update with associated worksheet
	Show Associated Worksheet	Show the worksheet associated to the current drawing.	Create an associated worksheet
	Create Take-Off Window	Select an area in the drawing that will be included in worksheets and draw schedules	Create a take-off window
	Create a Schedule	Select the objects and information that will be included in the schedule.	Create a draw schedule from the drawing
	Define Scene	Group items together to define a scene to be visualized in Visual Impression.	Define a scene for Visual Impression

	Visualize Scene	Visualize a scene defined in the current drawing in Visual Impression.	Visualize a scene in Visual Impression
	Update Against Visual Worksheet	Update the items in the current drawing from a worksheet that was created from this drawing.	Update against a visual woksheet
	Update Against Catalog	Updates the information of parts in the drawing against manufacturer catalogs.	Update Against a Catalog

CAP Edit toolbar

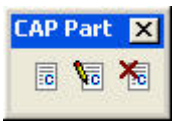


Icon	Name	Description	Help topic
	Change 3D Height	Place an item at a different 'Z' height.	Change 3D Height
	Copy Rotate	Combines the AutoCAD Copy and Rotate commands in a single step.	Copy Rotate
	Move Rotate	Combines the AutoCAD Move and Rotate	Move Rotate

		commands in a single step.	
	Offset Copy	Combines the AutoCAD Offset and Copy commands in a single step.	Offset Copy
	Offset Move	Combines the AutoCAD Offset and Move commands in a single step.	Offset Move
	Append Tag	Adds text to the end of a tag.	Append Tag
	New Tag	Change a tag.	New Tag
	Change Tag Size	Modify the text height of a tag.	Change Tag Size
	Move Tag	Change a tag's position.	Move Tag
	Rotate Tag	Rotate a tag.	Rotate Tag
	Show Part Number/Tag	Toggle the attribute display between Tag and Part Number.	Show Part Number/Tag
	Highlight by Part Number	Marks occurrences of a part number and reports the number of symbols found in the drawing.	Highlight by Part Number

	Highlight by Select	Marks occurrences of a part number when you select one of the symbols in the drawings.	Highlight by Select
	Block Replace	Replace a part number with another within all or a selected area of the drawing.	Search and Replace a part
	Block Info Edit	Replace user-specified data on an item	Search and replace item data

CAP Part toolbar

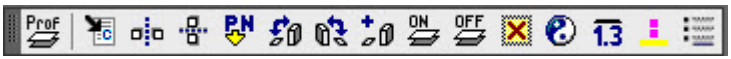


Icon	Name	Description	Help topic
	Make Part	Create a custom part that can be stored in a custom catalog.	Create a new CAP Part
	Edit Part	Edit the information of a custom part.	Edit a CAP Part
	Undo Part	Breaks up a CAP part - similar to the AutoCAD Explode command.	Undo a CAP Part

CAP Standard toolbar

Icon	Name	Description	Help topic
	Make Standard	Create a Standard.	Create a CAP Standard (Typical)
	Edit Standard	Edit a Standard's name, description or user-defined tag values .	Edit a standard's information
	Undo Standard	Break up a Standard.	Redefine a CAP Standard Replace a CAP Standard Edit a standard's information

CAP Tools toolbar



Icon	Name	Description	Help topic
	Layer Profiles	Helps you manage layers by allowing you to save layer settings in layer profiles.	Layer Profiles
	Assign	Assign user-defined tag values to the **Alias 1**, **Alias 2**, **Alias 3, Building, Floor, Department, and Person** columns .	Assign Alias values
	Mirror Last Block - X	Mirrors the last part placed along a vertical line (||).	Mirror Last Block x
	Mirror Last Block - Y	Mirrors the last part placed along a horizontal line (=).	Mirror Last Block y
	Insert by Part Number	Insert a part into a drawing by typing in the part number.	Insert by Part Number
	Convert Plan to 3D	Converts the symbols on the drawing from plan view to 3D view.	Convert Plan to 3D

	Convert 3D to Plan	Converts the symbols on the drawing from 3D view to plan view.	Convert 3D to Plan
	Copy Plan to 3D	Copies the symbols on the drawing then converts them to 3D.	Copy Plan to 3D
	Layer On	Turns previously turned off layers back on.	Layer On
	Layer Off	Allows you to turn off layers by selecting symbols on the drawing	Layer Off
	Ghost/Unghost 3D	Click once to change solid CAP 3D symbols so that they display as an outline or ghost of the product. Click again to unghost a product.	Ghost 3D / UnGhost 3D
	Strip Options	Remove the options from one or many parts	Strip Options
	Send to Custom Catalog	Add a symbol to a Custom Catalog	Add to a custom catalog
	Area Tag	Automatically or manually put sequential letters or numbers to the **Alias** values of items on the drawing.	Assign sequential Alias values

	Set Displayed Tags	Change the visibility of existing Alias values.	Change visibility of Alias values
	Show Non-Plan Item List	Display the Non-Plan Item List, a list that contains parts that do not have symbols on the drawing.	Show Non-Plan Item List

Explorer pane

The **Explorer** pane is a powerful navigation and selection utility that lets you browse multiple furniture catalogs at one time, as well as find all the files that you will use and create.

The **Explorer** pane consists of four tabs: **Content**, **Projects**, **Search** and **Bookmarks**.

See the topics below in the **2020 Worksheet** help for details on using each tab:

- Content: displays manufacturer catalogs
- Projects: navigates to all project folders containing worksheet files and CAP Designer drawings
- Search Results: allows you to search for products and displays products found after a search.
- Bookmarks: shows the bookmarks saved on your system

See the following topics to display, hide or move the **Explorer** pane and its tabs:

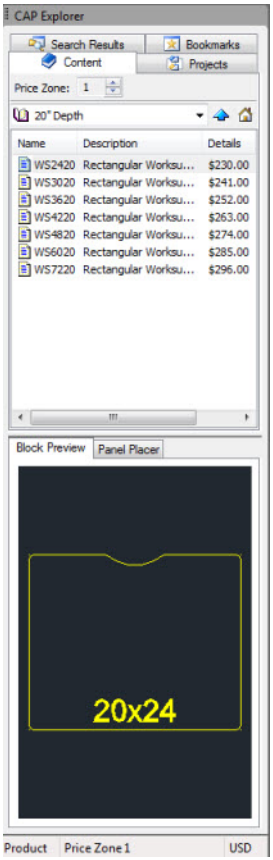
- Display the Explorer pane
- Move the Explorer pane
- Auto-hide feature
- Show or hide Explorer pane tabs

See also Place a product using the Explorer

Display or hide the Explorer pane

When you start CAP Designer, the **Explorer** pane is automatically docked to the left of the drawing window and full height.

You can resize in width by mousing over the right edge and then click-hold to resize.



To display or hide the **Explorer** bar, click  on the CAP Designer toolbar

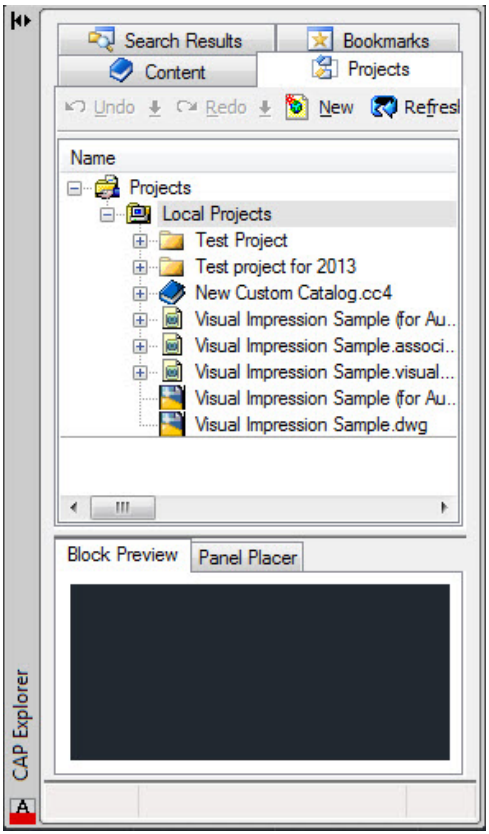
Note: If you do not want the **Explorer** bar displayed automatically when you start CAP Designer, access the **Preferences** dialog from the **CAP Designer** menu then clear the **Show Explorer palette on CAP Designer start-up** checkbox in the **General** tab.

Move the Explorer pane

You can move and configure the **Explorer** pane according to your preferences.

Explorer is normally docked at left of the screen but you can undock it and drag it elsewhere for convenience.

1. Click and drag on the title bar at the top.
2. Drag the **Explorer** pane to the location you want. The window can float above the AutoCAD screen or dock to any edge. In the image below, the **Explorer** pane is floating above the AutoCAD drawing area.



3. To dock/undock CAP Explorer to its previous spot, double-click the title bar.

Note: When **Explorer** is docked you can resize the window by dragging on the vertical bar between it and the AutoCAD drawing. When **Explorer** is floating you can use the **Auto-hide** feature. **See** Auto-hide feature.

Show or hide Explorer pane tabs

By default, all of the **Explorer** pane tabs are visible when you display it.

To turn the tabs on/off, refer to the Preferences.

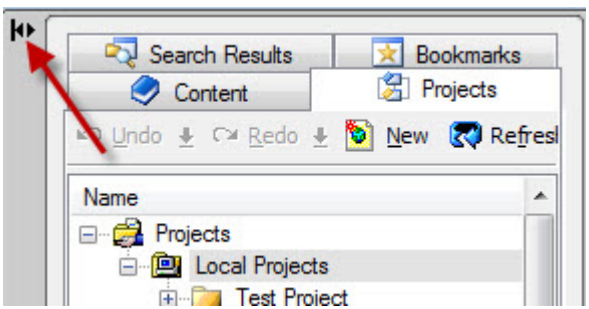
Instead of hiding **Explorer** bar tab this way, a more efficient way to work with the **Explorer** bar is to set it to auto hide.

1. From the **CAP Designer** menu select **Preferences.**
2. Click the **Explorer** icon  on the left pane.
3. Check/uncheck **Search** and **Bookmarks** under Select Which Tabs to Display.

Auto-hide feature

When the **Explorer** bar is floating, you can put it on auto-hide to see more of your AutoCAD screen.

1. Click the **Auto-hide** button.



The **Explorer** pane will collapse and only the title bar will be visible.

2. To display the Explorer pane as you work on your drawing, hover over the title bar. To cancel the Auto-hide feature, click again on the **Auto-hide** button.

Preferences

Some CAP Designer preferences are linked to 2020 Worksheet preferences. The Common, Explorer, QuickSearch, Content, Folders+Files and User preferences are the same as in 2020 Worksheet. If you make changes to these tabs in CAP Designer, the changes will be applied to 2020 Worksheet as well.

See:

- General preferences
- Advanced preferences
- Automation preferences

For the other tabs, see the following topics in the **2020 Worksheet** help:

- Common preferences
- Explorer preferences
- QuickSearch preferences
- Content preferences
- Folders and files preferences
- User preferences

General preferences

1. From the **CAP Designer** menu select **Preferences**.

   By default, **Preferences** opens to the **General** tab.

2. Change any of the following and then click **Apply**.

Preference	Description
Load CAP Designer	Select how you want CAP Designer to launch automatically. **on AutoCAD start-up**: Check if you want CAP Designer to launch whenever you start AutoCAD. **on CAP command invocation**: This is the default setting. CAP Designer starts when you use any CAP Designer function such as a command from the **CAP Designer** menu, any of the CAP Toolbar buttons, or typing CAP in the command line.
Automatically Load Layer Profile	You can set CAP Designer to load a Layer Profile group upon launch. Click  to search for the layer profile (*.prf) document.
Miscellaneous	Use "**My Projects**" to organize large project trees: obsolete function

	Show Explorer palette on CAP Designer start-up: automatically open the Explorer bar when CAP Designer is launched
Tooltips	If **Show tooltips for CAP Parts and CAP Standards** is checked, you will see a tooltip indicating the Part Number, Mfg and Cat whenever your mouse pointer hovers over the CAP part. If the mouse pointer is over a Standard you will see the standard name and description.
Panel Placer	If the setting **Switch between Panel Placer...** is checked, when you insert a panel that belongs to a panel line supported by Panel Placer, the Block Preview will switch to the Panel Placer tab.

Advanced preferences

Use the **Advanced Preferences** to control how products are previewed and inserted into a drawing from the Explorer pane.

1. From the **CAP Designer** menu select **Preferences**.
2. Click **Advanced** on the left.
3. Change any of the following and then click **Apply**.

Preference	Description
Insert	This controls how products appear in the Preview Pane and how they are inserted into the drawing. You may choose to preview products in 3D or Plan View.
Units	Check your preference of measurement units.
Prompt	Check **None**, or check the prompts you want to appear when you drag and drop parts from Explorer into the drawing. For example, you may have Designer automatically prompt you to change the **Tag** of the item you are inserting into your drawing.
Block Preview	**Display Block Preview**: Toggle the Explorer preview feature ON or OFF. If ON, Explorer displays a Preview of the part you have selected, in Plan View or 3D. **Show Insertion Point**: Toggles the Insertion Point feature ON or OFF. If ON, the preview window shows the Insertion Point as a yellow X (on lower left in drawings above) **2D Optimized (fastest)**, **Wireframe**, **Hidden Line (slowest)**, **Flat Shaded**, **Flat Shaded with Wireframe** - these options are functional only if you have checked 3D View. They control appearance of the 3D preview in Explorer.

Restore last location in the content when using Insert Symbol	Checked by default. Check this so that the Insert Symbol dialog box will remember the last selection made so you will not have to always start selecting from the manufacturer level.
Add non-Plan Item List table automatically to the drawing	When at least one part exists in the Non-Plan Item list, display the NPIL table on the drawing.

Automation preferences

These settings allow you to control the behavior of Kimball Xsite tools. For more information, **see** the Help on CAP Designer Manufacturer-Specific information.

Import Giza files

If you have an existing Giza file (.cdb), instead of recreating a drawing, you can import it into AutoCAD through CAP Designer.

1. Create a blank design.
2. From the **CAP Designer** menu select **Import**, and then **Giza...**.
3. In the **Open** dialog, select the file you want to import then click **Open**.
4. If there are parts that are not present in the CAP Designer catalogs, you will see a confirmation message:
   Click **Yes** if you still want to import the item, **No** if not, **Yes To All** to import all the parts that are not yet supported, or **No To All** if you do not want to import all the parts that are not yet supported.

5. The Import Log appears. Click the **Successfully Imported Items** tab to see which items were imported and click the **Items with Warnings or Errors** tab to view items with warnings or errors.
6. Click **Save Log** if you want to save this log as a text file for viewing later on.

   In the **Save As** dialog, type in the file name then click **Save**.

   You will be prompted if you want to view the log. Click **Yes** or **No**.
7. Click **Close**.

Convert a Design Express drawing

Make sure to save a backup of the Design Express drawing before converting it.

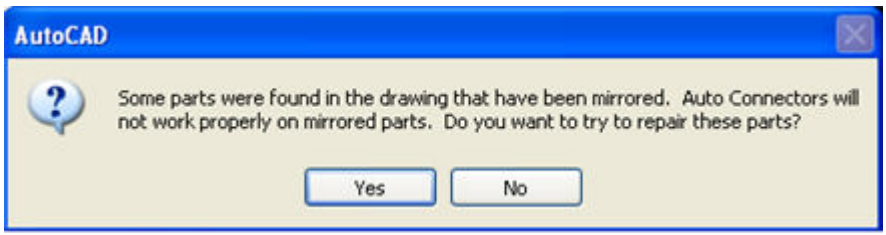
1. Locate and open your existing Design Express file in DWG format.
2. From **CAP Designer** menu select **Convert** then **Design Express symbols**.
3. Ensure that the **Project Path** dialog box is pointing to the folder that contains both your DWG file and the Design Express project files.
4. Select how you want to convert your drawing. Your options are:

   Leave Design Express graphics and apply CAP attributes - This option will keep your existing Design Express planning symbols in your drawing. However, each symbol will be updated with the new CAP Studio symbol attributes so that you can perform a "takeoff" into 2020 Worksheet for specification.
   It is recommended to choose this option if you no longer need to work on the design.

   Swap Design Express graphics to CAP graphics (when available) - This option will completely exchange each Design Express planning symbol with an equivalent CAP Studio planning symbol. The new CAP Studio symbol will have the new CAP attributes attached.

It is recommended to choose this option if you still need to work on the design. Note that you may have to make some adjustments to the drawing because of the change in graphics.

5. Click **OK**.
6. Once the drawing file is completely converted, a log file will appear. This log file lists all the symbols that were converted successfully and which symbols contained errors or warnings.
7. If mirrored parts were found in the drawing, you will see the message below:



Click **Yes** to repair these parts using the CAP Frame Validation tool.

8. Once the conversion is complete, you can modify the drawing or send it to 2020 Worksheet for specification.

We recommend that you save this new, converted drawing in a new location on your computer with a new file name. Doing this will allow you to go back to your original Design Express file in the future, if necessary.

Note: When converting a Design Express drawing to a CAP Studio drawing:

- Panel assemblies are converted to Standards.
- 3D graphics from Design Express are not converted. However, if you choose to swap/replace the Design Express symbols with CAP Studio symbols, the symbols can be converted to 3D. In this case some 3D components may need to be altered to set a new "Z" height.

- Groups are not removed so certain CAP commands such as Block Replace will not work unless PICKSTYLE is set to 0. Symbols from existing Design Express catalogs cannot be added to a converted drawing. The Design Express symbols are not available in CAP Studio. When adding new symbols to a drawing, only use CAP Studio catalog libraries.

Place products in a drawing

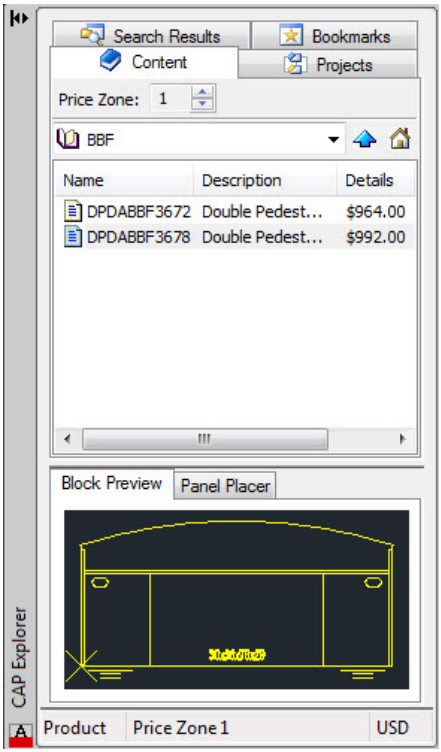
In this section, you will learn how to place products in a drawing using CAP Designer.

See:

- Place a product using the Explorer
- Place a product using Insert Symbol
- Place non-graphic items
- Place panels using the Panel Placer
- Place products from an archived catalog
- Insert by Part Number
- How to place items properly

Place a product using the Explorer

1. If the Explorer pane is not displayed, click  on the CAP Designer toolbar.
2. On the **Content** tab, click the manufacturer you want. Keep selecting until you drill down to the product.
3. Hover your mouse over a single product and you will see its preview (if available) in the **Block Preview** pane.



Notice the X on one corner of the product — this is the Insertion Point around which the product will pivot when you place it in the drawing.

Note: If you cannot see the X on the corner(s) of the product, verify your CAP Designer **Preferences** > **Advanced** settings. Uncheck Show Insertion Point, check it back on and then click OK. If the X still does not appear when placing an item, the AutoCAD setting for nodes may not be set properly. Type **DDPTYPE** and in the following window, click the **X** choice and click **OK**.

If there is no symbol available for the product, you can still add a block graphic that will represent the part in the drawing. See Place non-graphic items.

4. Click on the product name (not the Preview) and drag it to position in the drawing.

   Notice the Insertion Point.

5. Click once to place the product.
6. Rotate the product then click again.
7. To place the same product without choosing another command, right-click.

   Note that the right-click setting - repeat the last command must be set in AutoCAD User Preferences. For details see your AutoCAD help.

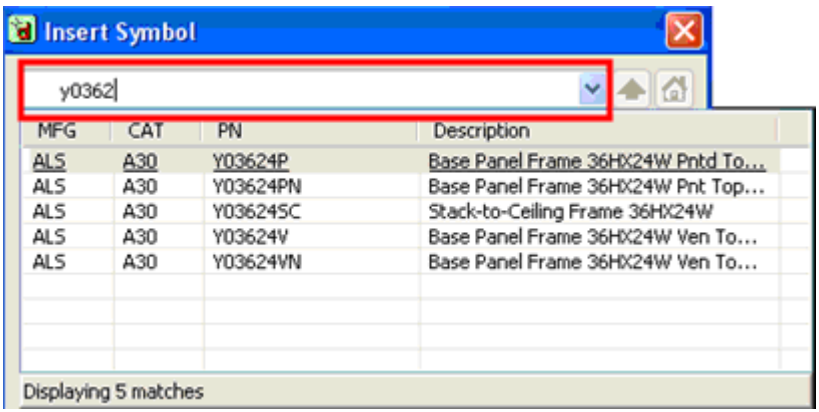
Note: You can also use the **Projects**, **Search Results** or **Bookmarks** tab to place products on the drawing. **See** Use QuickSearch from the Content tab for a quick way of finding a part number without having to drill down to the product.

Place a product using Insert Symbol

If you prefer to use a pop-up dialog box to insert symbols, this feature will provide you with that capability. This feature is helpful if you do not want Explorer to take up too much space on your screen.

1. Click  on the CAP Designer toolbar.
2. In the **Insert Symbol** dialog box, click on the manufacturer. Keep clicking until you drill down to the product.

   Note: If you know the beginning of the part number you can type it in and the QuickSearch feature will display a list of possible matches, up to a maximum of 50. This list will contract as you type in more of the part number. Select an item from the list by clicking on it.



3. Click **Show Preview** to show the block preview.

   If there is no symbol available for the product, you can still add a block graphic that will represent the part in the drawing. See Place non-graphic items.

4. Click on the product to select it.

   The dialog box will disappear and the crosshairs in AutoCAD will appear with the symbol that you selected.

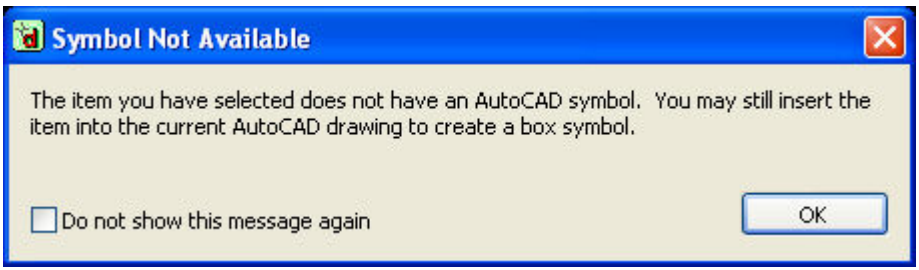
5. Click to place the symbol on your drawing.
6. Rotate the symbol then click again.

Notes:

- After placing a symbol into your drawing, right-click to immediately place the same symbol in your drawing.
- By default, the dialog box will remember the last selection made so you will not have to always start selecting from the topmost level. If you want to change this setting, from the **CAP Designer** menu select **Preferences**, then click the **Advanced** tab. Clear the checkmark beside **Restore the last location in the Content when using Insert Symbol.**
- If you disabled **QuickSearch** through **Preferences**, you will not see a list of matches as you type in the Part Number.

Place non-graphic items

1. When you hover your mouse pointer over a part does not have an AutoCAD symbol, the message box below appears:



2. Check **Do not show this message again** in order to insert the part into the drawing.
3. If you are placing the product from Explorer, drag and drop the part to the drawing. If you are using Insert Symbol or Insert by Part Number, click on the part.
4. Click to place the block graphic on your drawing. The block graphic will contain the tag if it is present in the catalog, otherwise it will have the part number.

   Note that this block graphic has no special significance and will not be used to determine the actual size of the part.

Note: You can also drag and drop a non-graphic item to the Non-Plan Item List.

Place panels using the Panel Placer

The Panel Placer allows you to easily place panels at specific angles on your drawing. For a list of manufacturers, see the What's New file. The Panel Placer also allows you to place panel configurations created from Panel Builder.

This tool restricts the angle at which panels will be placed, only displaying angles supported by the line. It also automatically leaves a gap in between panels if the line does not allow panels to connect corner to corner.

You can choose the panel that the tool will place, as well as choose a new starting point for the tool to begin placement.

1. Place a panel on the drawing using either the Explorer or the Insert Symbol command.

   If the panel you selected belongs to a panel line supported by Panel Placer, the Block Preview will switch to the Panel Placer tab.

   Note: If you do not want the Block Preview to automatically switch to the Panel Placer tab, you can turn the option off in **CAP Designer Preferences**, **General** tab.

   The Placer displays the part number of the current panel and the next panel (panel to be placed).

   By default, the panel to be placed next is the same as the current panel.
2. If you want to change the next panel, hover your mouse over the part in Explorer. The Panel Placer validates whether a valid part is selected from the Explorer and displays "Select a valid part" if the part is not valid.

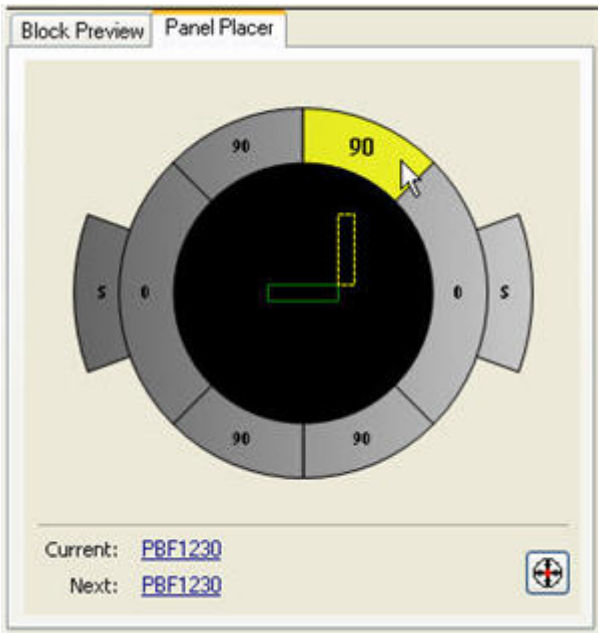
   Note: If the panel you want to place next is already somewhere in the drawing, click the hyperlink beside **Next** then select the panel from the drawing.
3. If you want to change the current panel, click the hyperlink beside **Current**. Select the panel on the drawing.

   The Panel Placer validates whether a valid part is selected in the drawing and displays "Select a valid part" if the part is not valid.

Note: Click the  button if you want to center the AutoCAD window on the current panel in the drawing.

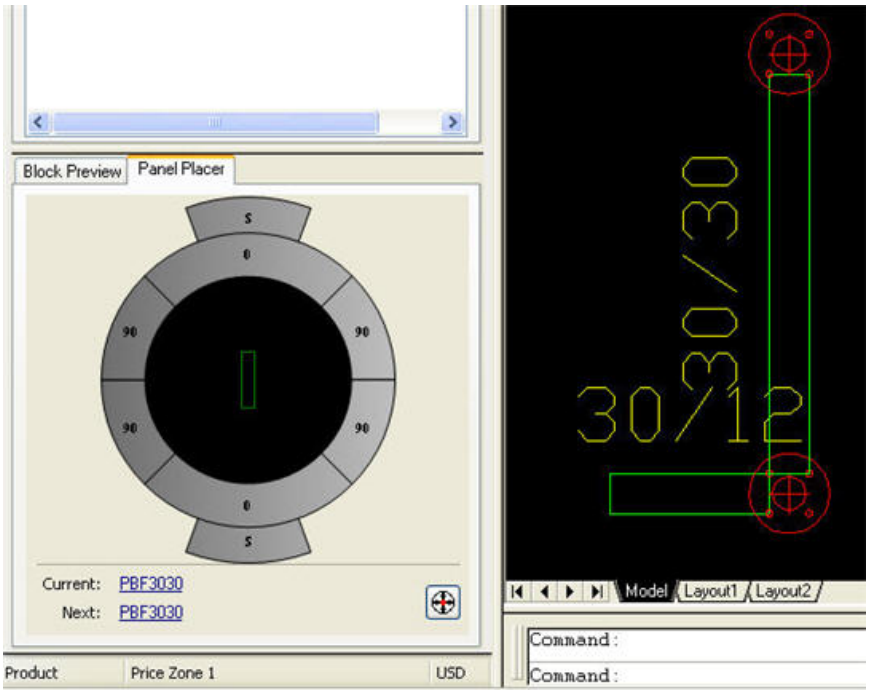
4. If you hover your mouse pointer over an angle button you will see where the next panel will be placed.

   The **S** buttons add a spacer between the current and next panel.



5. Click the angle.

   The buttons of the Panel Placer will rotate to align with the current panel, so subsequent panels you will place will be in reference to that angle.


Block Preview
Panel Placer
S
0
90
90
90
90
0
S
Current: PBF3030
Next: PBF3030
Product
Price Zone 1
USD
30/30
30/12
Model
Layout1
Layout2
Command:
Command:

Place products from an archived catalog

The steps for adding products from an archived catalog are the same as adding from the current catalog. See Use multiple versions of the same catalog in the 2020 Worksheet help for instructions on archiving a catalog.

1. Add the product from the archived catalog. You can drag and drop from the Explorer bar or use Insert.
2. Click CAP Info  to view the item's information. Notice that the **MFG** code appears as though the item came from the actual manufacturer, not the archived catalog's **MFG** code. This is normal. After you create a worksheet, display the **Alt MFG** column in the worksheet to view the **MFG** code of the archived catalog. This is how you can differentiate the archived catalog from the current one.

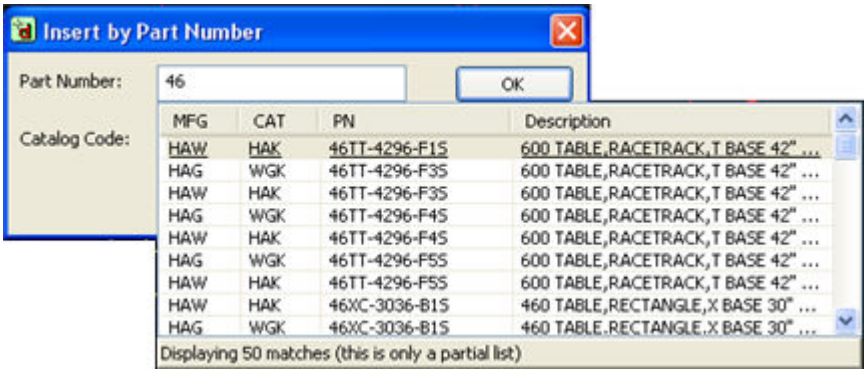
Note: For more information, see Add products from an archived catalog in the Worksheet help.

Insert by Part Number

Use this command to insert a part by typing in the part number.

1. Click  on the CAP Tools toolbar**.**
2. In the **Insert by Part Number Dialog** box, start typing the part number.

   As you type in the part number, the QuickSearch feature will display a list of possible matches, up to a maximum of 50. This list will contract as you type more.



Note: If you want the program to show only matches from a specific catalog, type the **Catalog Code** first.

3. Select the product from the list.

   The **Part Number** and **Catalog Code** are filled out automatically.

4. Click **OK**.

   If there is no symbol available for the product, you can still add a block graphic that will represent the part in the drawing. See Place non-graphic items.

5. Place the product on the drawing.

Note: If you disabled **QuickSearch** through **Preferences**, you will not see a list of matches as you type in the Part Number.

How to place items properly

To properly place items in a drawing you need to know how to "snap" items together. Begin by selecting panels from the Explorer bar and "snapping" them together using their connection nodes. CAP Designer symbols have connection nodes in a variety of convenient locations.

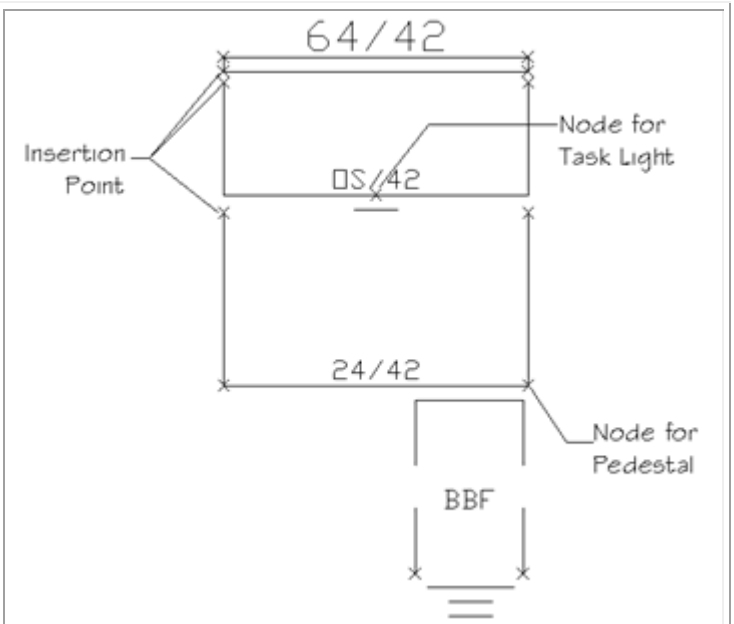
- Panels have nodes on each corner.

- Worksurfaces have nodes on the rear to connect to the panels.

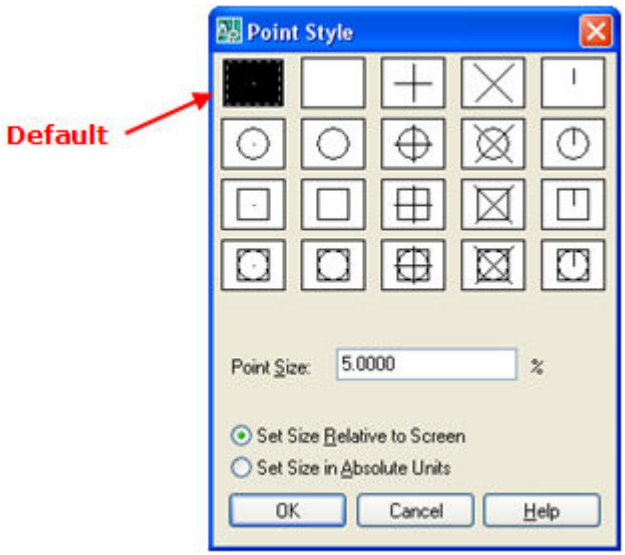
- Worksurfaces also have nodes on the front to connect to pedestals.

- Overhead storage units have nodes in the center for task lights.

Note: Each Manufacturer provides symbols with different locations for nodes. The graphic is a general suggestion as to where nodes may be located. Each Manufacturer may vary slightly.



You can view the nodes by typing DDPTYPE at the command prompt and pressing Enter. Change the point type to an X or a circle.



You must type the REGEN at the command prompt to have the changes take affect.

Search for products

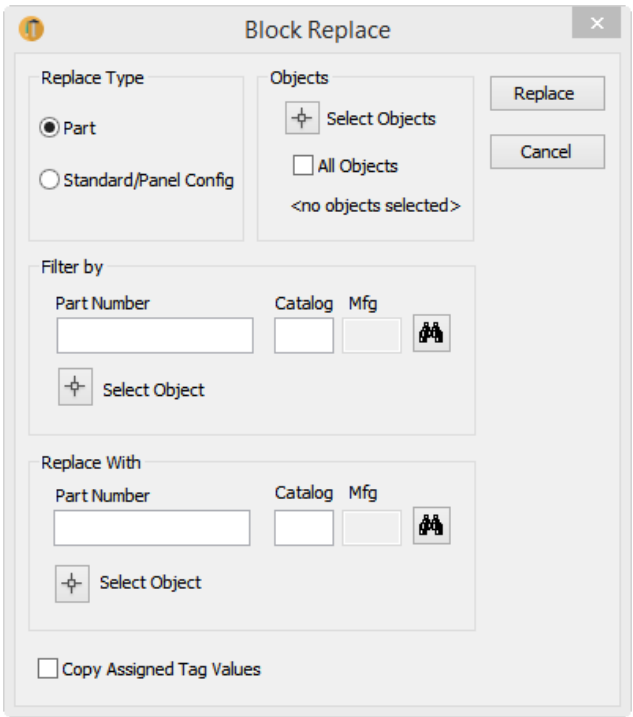
You can search for products in several ways:

- Search and replace one part
- Search and replace a standard or a panel configuration
- Search and replace item data
- QuickSearch
- 2020 Search

Search and replace one part

Use **Block Replace** to quickly replace a part with another. The replacement part will inherit and display any visibility settings of the original symbol.

1. Click the Block Replace  icon in the CAP Edit toolbar.



2. Under **Replace Type**, select **Part**.

3. Under **Objects**, choose to search among **Select(ed) Objects**  or **All Objects**. Select Objects takes you back to the drawing temporarily.

4. Under **Filter by**, start typing the **Part Number** and the QuickSearch feature will display a list of possible matches, up to a maximum of 50. This list will contract as you type more.

   Note: If you want **QuickSearch** to look only in a certain catalog, type in the **Catalog** code first

before you type the **Part Number**.

OR, click the **Search Catalog** icon  to browse the installed catalogs.

OR, click  **Select Object** to select the object on the drawing.

5. Under **Replace With** use the options explained in **Step 4** to choose the replacement part.
6. Check **Copy Assigned Tag Values** if the part has an appended tag.
7. Click **Replace**.

Note: If you disabled **QuickSearch** through **Preferences**, you will not see a list of matches as you type in the Part Number.

Search and replace a standard or a panel configuration

Use **Block Replace** to quickly replace a standard or a panel configuration with another. The replacement item will inherit and display any visibility settings of the original symbol.

1. Click the Block Replace  icon in the CAP Edit toolbar.
2. Under **Replace Type**, select **Standard/Panel Config**.
3. Under **Objects**, choose to search among **Select(ed) Objects**  or **All Objects**. Select Objects takes you back to the drawing temporarily.
4. Under **Filter by**, start typing the **Standard Name** and the QuickSearch feature will display a list of possible matches, up to a maximum of 50. This list will contract as you type more.

   OR, click the **Search Part** icon  to browse the saved standards or panel configurations.

OR, click  **Select Object** to select the object on the drawing.

5. Under **Replace With** use the options explained in **Step 4** to choose the replacement standard/config.
6. Check **Copy Alias Tag Values** if the block/part as an appended tag.
7. Click **Replace**.

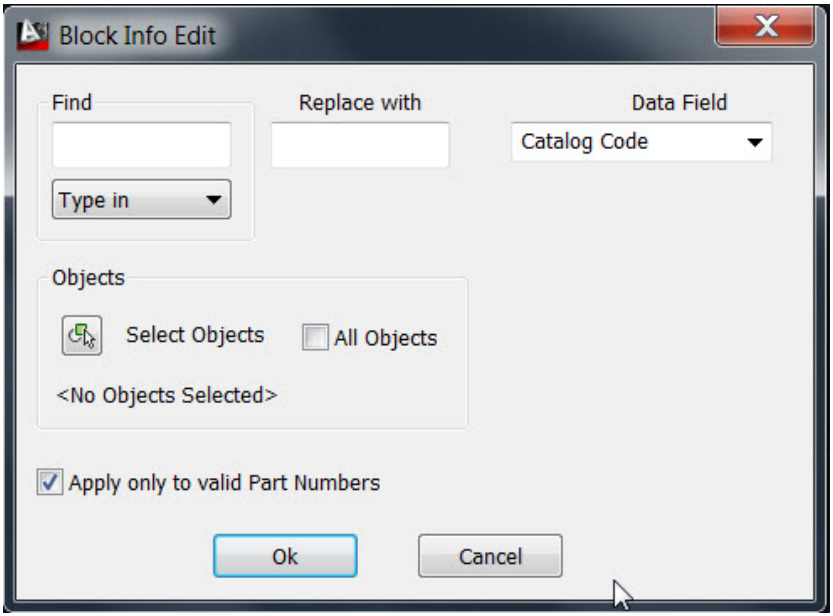
Note: If you disabled **QuickSearch** through **Preferences**, you will not see a list of matches as you type in the Standard Name.

Search and replace item data

Use the **Block Edit Info** to reassign item information based on your preferences and in blocks, individually or throughout an entire design. You can change information such as the Cat code, Mfr code and Alias tags.

Here's a business situation where Block Edit Info may be very useful : Some product lines are made up items that are a subset or a group of subsets from other product lines whose purpose is to quick ship or apply special pricing. This causes extra work for designers in completing the space plan in one product line and then place the order from another product line. Associated Worksheets do not allow users to change the Cat or Mfr code within the Worksheet, so Block Edit Info allows swapping of any selected objects up to en entire design.

1. Click  on the CAP Edit toolbar.

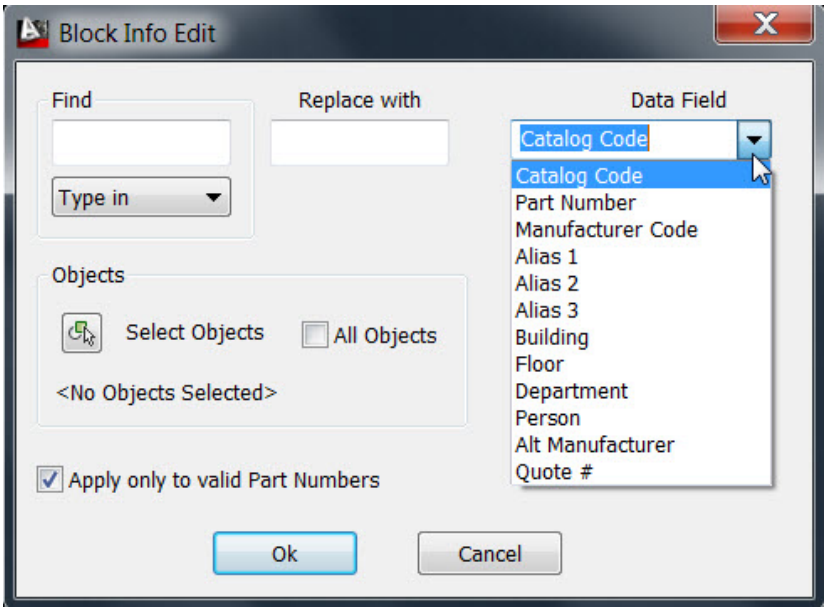


2. Under **Find**, click the arrow down and select:

   Type in to type in the text or code based on the Data Field you select.
   All items to replace all items with the replacement information based on the Data field selected.
   Empty field to replace all empty fields with the replacement information based on the Data field selected.

3. Under **Replace with**, type in the text or code based on the Data Field you select.

4. Under **Data field**, select the item data to be replaced.



5. Under Objects, click **Select Objects** and make your selection on the drawing or click **All Objects**.
6. Check **Apply only to valid Part Numbers** if you are replacing the Catalog Code or to replace the Part Number value to validate the new PN in the catalog.
7. Click **OK**.

QuickSearch

CAP Designer's QuickSearch feature displays a list of possible matches as you type in a part number. This feature is available from the Explorer pane's **Content** tab, the **Insert Symbol** dialog box, the **Insert by Part Number** dialog box and the **Block Replace** dialog box.

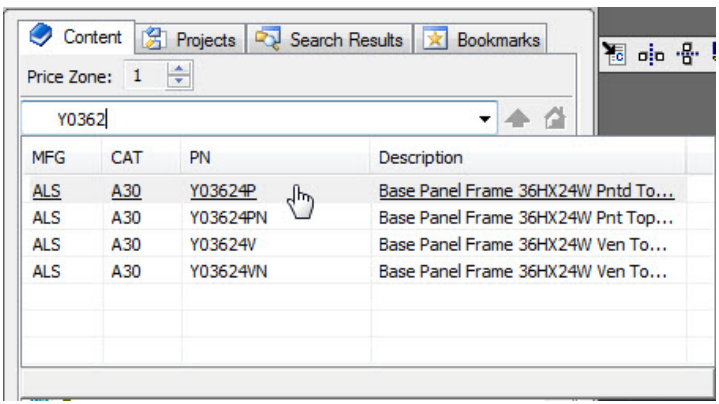
See Use QuickSearch from the Content tab

To change QuickSearch behavior, go to the **CAP Designer** menu, select **Preferences**, then click **QuickSearch**. For more information see QuickSearch preferences in the 2020 Worksheet help.

Use QuickSearch from the Content tab

1. In the Explorer pane's Content tab, begin typing in a part number in the **QuickSearch** field.

   As you type in the part number, the program will display a list of possible matches, up to a maximum of 50. This list will contract as you type more.



2. Select an item from the list by **double-clicking** on it.

Note: By default, QuickSearch displays a maximum of 50 matching parts. This number can be changed in the **Preferences** dialog. See QuickSearch preferences in the 2020 Worksheet help for details.

2020 Search

2020 Search is a tool to search for products in: manufacturer's catalogs, custom catalogs, and 2020 worksheets.

This tool is useful when searching multiple catalogs for products with a common element (panels, for example). **2020 Search** displays the search results in the Explorer pane's **Search** tab.

To access **2020 Search**, from the **CAP Designer** menu select **2020 Search.**

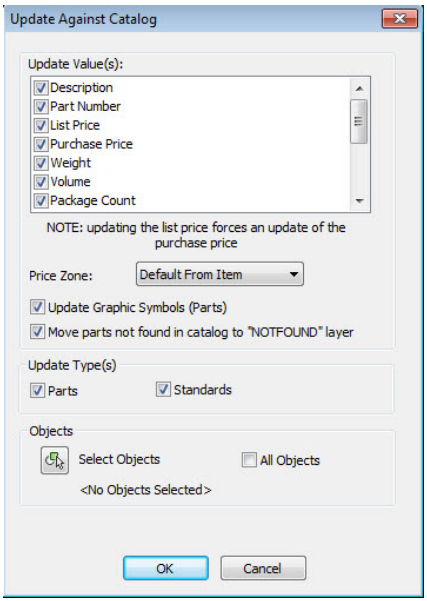
See the following topics in the **2020 Worksheet** help for the two types of criteria you can use to search:

- Search by part number
- Search by part description

Update against a catalog

Updating against a catalog applies information from the manufacturer catalog to your drawing. Catalog information includes data such as part numbers, part descriptions, list prices, weights and volumes. **Update Against Catalog** will also allow you to update against different price zones.

1. Click  on the CAP Designer toolbar.
2. Under **Update Value(s)**, select the data to update. By default, all fields are checked.



3. Select the **Prize Zone**.
4. Check if you want to **Update graphic symbols**.
5. Check if you want to **Move parts not found in catalog to the "NOTFOUND" layer**.

6. Under **Update Type(s)**, check whether you want to update **Parts** and/or **Standards**.
7. Check **All Objects** to update all objects on the drawing.

   Or, click **Select Objects**  to choose objects on the drawing. Press Enter to confirm your selection.
8. Click **OK**.

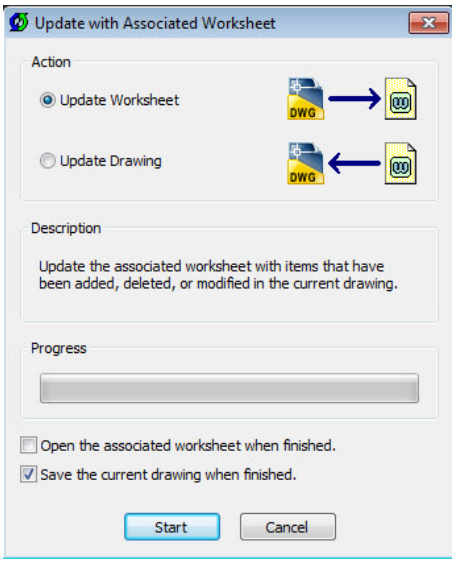
See also Update against a visual woksheet

Update with associated worksheet

If you created an associated worksheet for the drawing, you can:

- update the drawing if you made changes to the worksheet
- update the worksheet if you made changes to the drawing

1. Click  on the CAP Designer toolbar.
2. Select whether you want to update the associated worksheet based on the current drawing, or update the current drawing based on the associated worksheet. CAP Designer determines which file is newer and automatically selects the appropriate action.



3. If you selected **Update Drawing** and you want to open the associated worksheet after updating it, check **Open the associated worksheet when finished**.
4. Click **Start**.
5. If the associated worksheet is open with unsaved changes, you will see a warning message before the command proceeds with an update worksheet or update drawing. Read the warning carefully before clicking **Yes** or **No**.
6. If there were items added to the worksheet before you updated the drawing, you will see a message asking you if you want to add a non-plan item list table to the drawing. Click **Yes** if you want to place the table. Display the non-plan item list in order to send non-plan items to the drawing.

   If items were deleted in the worksheet before you updated the drawing, these items will also be removed from the drawing.

Note: Standards created in Worksheet are considered as non-planned. When you update the drawing against the associated worksheet, the Standard will be listed in the Non-plan item list.

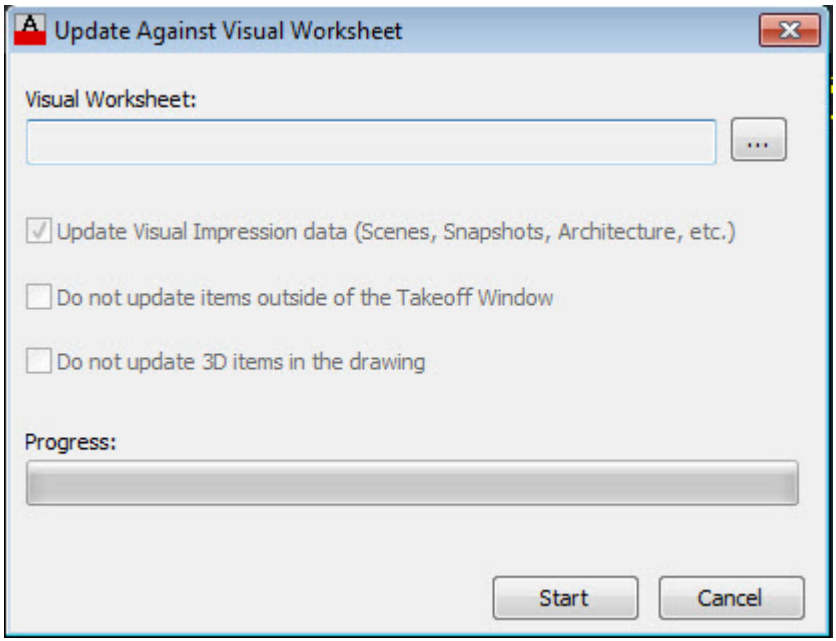
If you created the associated worksheet based on a take-off window in the drawing, this region will be taken into account during the update. For example, if you added a part to the drawing that is not within the take-off window, then updated the worksheet, that part will not be added to the worksheet.

Update against a visual woksheet

If you created a visual worksheet for the drawing, you can update the drawing with any finish changes made in 2020 Worksheet or Visual Impression. Those changes will then appear in subsequent visualizations. **Update against Visual Worksheet** does not transfer any product additions, deletions, or changes made in the Worksheet. It allows users to use Worksheet with Visual Impression to make changes without impacting the integrity of the original drawing.

All worksheets "know" what drawings they originated from. Worksheets created through a "Save as" of the original worksheet retain the drawing relationship, allowing you to update a drawing from other versions of the original worksheet. This is helpful when different scenarios of options are presented to the customer for feedback. In creating versions of the original worksheet and specifying each scenarios with different finishes, any of the versions can be used to update the drawing.

1. Click **Update Against Visual Worksheet** on the CAP Designer toolbar.
2. Under **Visual Worksheet**, select the worksheet you want to update against.



3. Choose whether you want to update:
   - scenes, snapshots or other from the worksheet to the current drawing.
   - items not included in the current Takeoff
   - 3D items in the current drawing
4. Click **Start**.

See also:

- Update against associated worksheet
- Visual Impression for 3D specification

Layers

CAP Designer provides the following tools to manage layers:

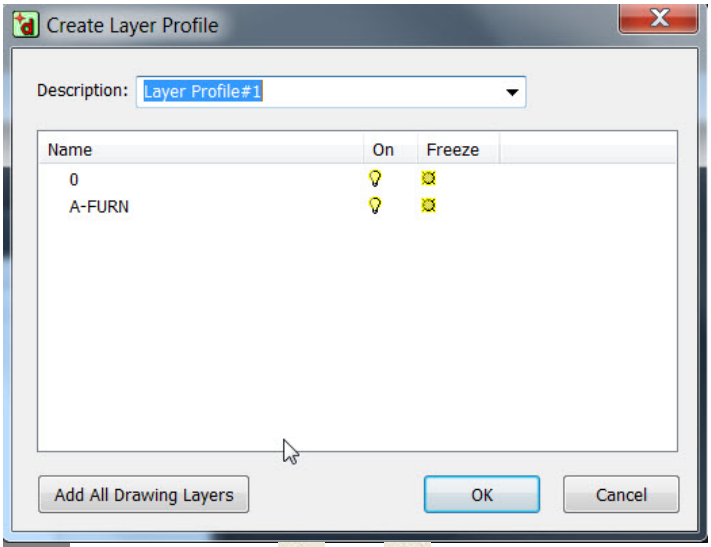
- Layer Profiles
- Layer On
- Layer Off

Layer Profiles

The Layer Profile Manager helps you manage layers by allowing you to save settings in layer profiles. With the help of a layer profile you can easily create installation plans, presentation plans and in-house documents with consistency.

1. Click 

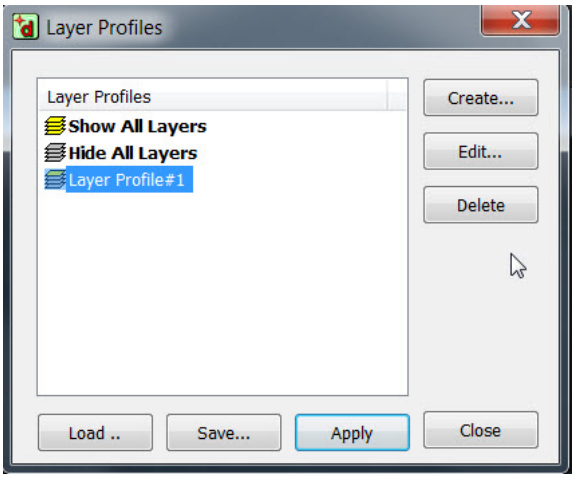
on the CAP Tools toolbar.
2. In the **Layer Profiles** dialog, click **Create**.
3. In the **Create Layer Profile** dialog, give the layer profile a **Description**, and click the light bulb under **On** to show or hide layers.



Note: You can use the ON and OFF buttons on the CAP Tools toolbar to turn on and off layers quickly before calling **Layer Profiles**. Then, when you open **Layer Profiles** the settings you just made will come up when you create a profile.

4. Click **OK**.

   The new profile you just created is now under **Layer Profiles**.



5. Continue creating the layer profiles you would like to use in your drawing.
6. In order for you to see your layer settings take affect within your drawing, highlight the **Layer Profile** and click **Apply**. You will see the layers automatically turn on and off based on the layer profiles you established.
7. You must save your layer profile to reuse it the next time you open the drawing. Click the **Save** button. This will open up a window where you can save your layer profile.

   After saving your layer profile you can also use it on other drawings. All you have to do is open **Layer Profiles**, highlight the layer profile you would like to apply to your drawing and click **Apply**.

Note: You can set CAP Designer to load a layer profile upon launch. From the **Preferences** dialog, on the **General** tab under **Automatically Load Layer Profile** browse to the layer profile you want to load. This could be a great way to create consistency within an office for establishing drawings. Everyone within an office could use a common layer profile.

Layer On

Layer On turns previously turned off layers back on.

Click  on the **CAP Tools toolbar**.

Layer Off

Use this command to turn layers off by simply selecting symbols on the drawing.

1. Click  on the CAP Tools toolbar**.**
2. Select a symbol on the drawing. The layer is turned off.

   You can keep selecting layers. Press Esc or Enter when done.

   To turn all layers back on, click  .

Combine AutoCAD commands

The following CAP Designer commands combine AutoCAD commands in a single step:

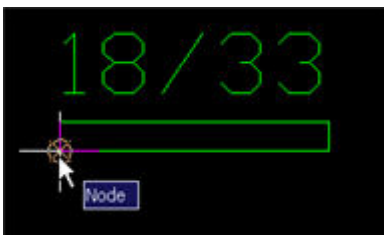
- Copy Rotate
- Move Rotate
- Offset Copy
- Offset Move

Copy Rotate

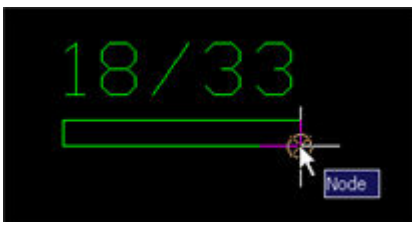
Copy Rotate combines the AutoCAD Copy and Rotate commands in a single step.

Before doing **Copy Rotate,** make sure that **Osnap** mode is on in AutoCAD, with the **Node** mode checked in **Object Snap Settings**. It is also recommended to turn on **Ortho** mode.

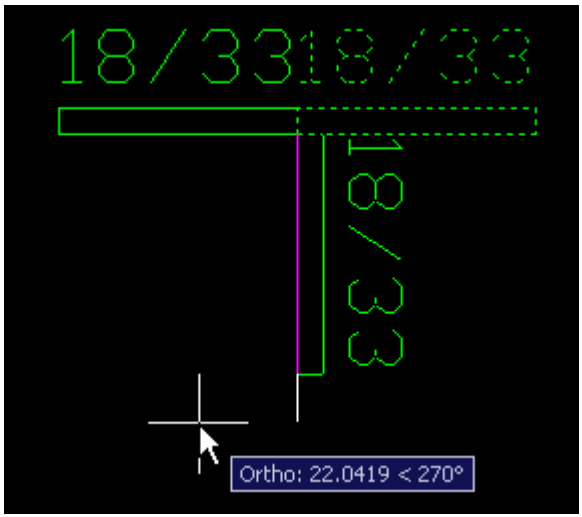
1. Click  on the CAP Edit toolbar.
2. Select the object(s) on the drawing.
3. Press **Enter** to confirm your selection.
4. Specify the base point.



5. Specify the second point. This will be the point where the copied object will be inserted and rotated.



6. When the copied object appears, rotate it.



The object is now copied and rotated.

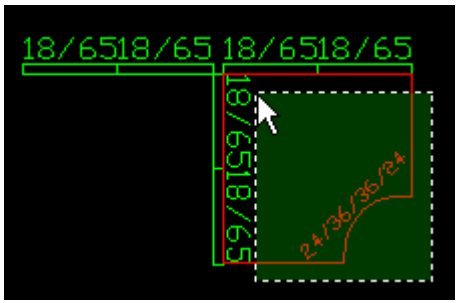
Move Rotate

Move Rotate combines the AutoCAD Move and Rotate commands in a single step.

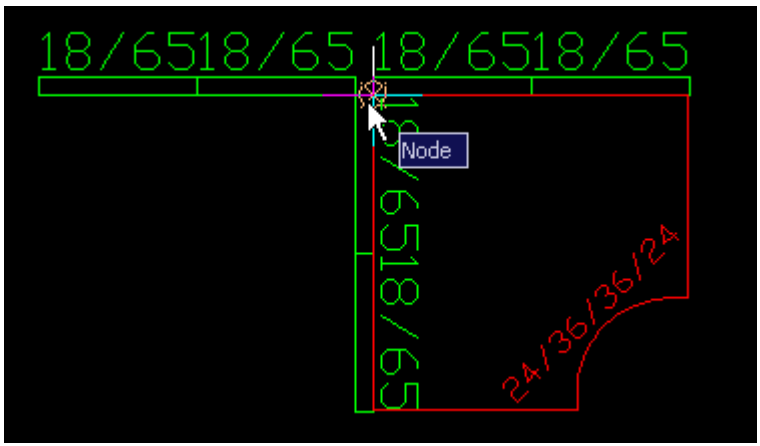
Before doing **Move Rotate,** make sure that **Osnap** mode is on in AutoCAD, with the **Node** mode checked in **Object Snap Settings**. It is also recommended to turn on **Ortho** mode.

1. Click  on the CAP Edit toolbar.

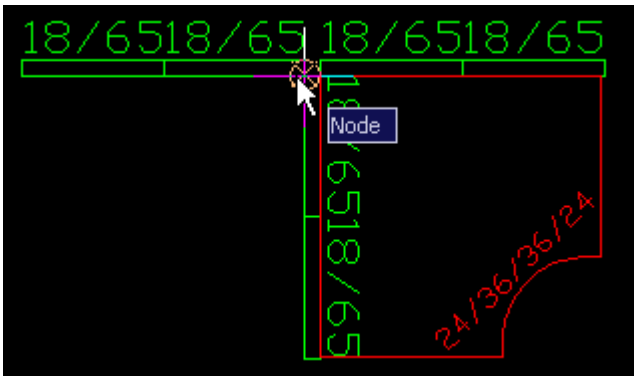
2. Select the object(s) on the drawing.



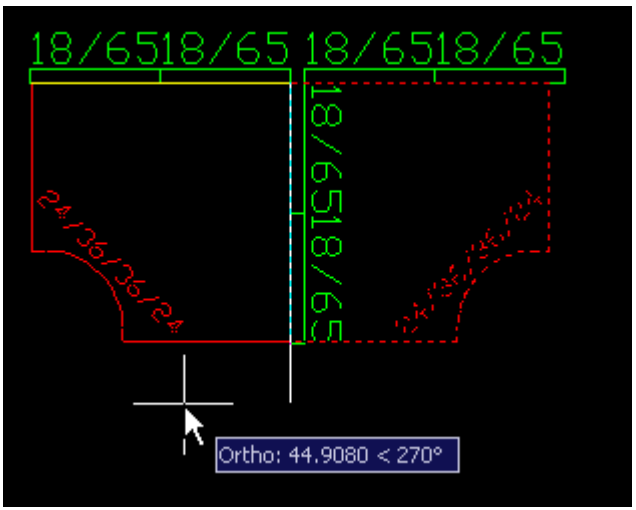
3. Press **Enter** to confirm your selection.
4. Specify the base point.



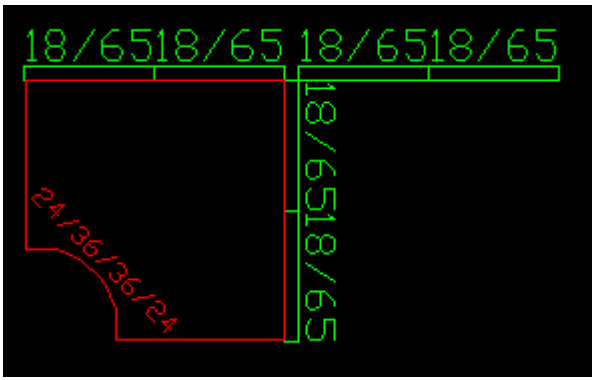
5. Specify the second point. This will the point where the object will be moved and rotated.



6. When the object appears, rotate it.



The object is now moved and rotated.



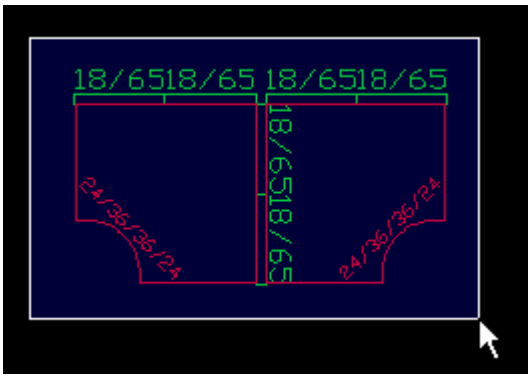
Offset Copy

Offset Copy combines the AutoCAD Copy and Offset commands in a single step.

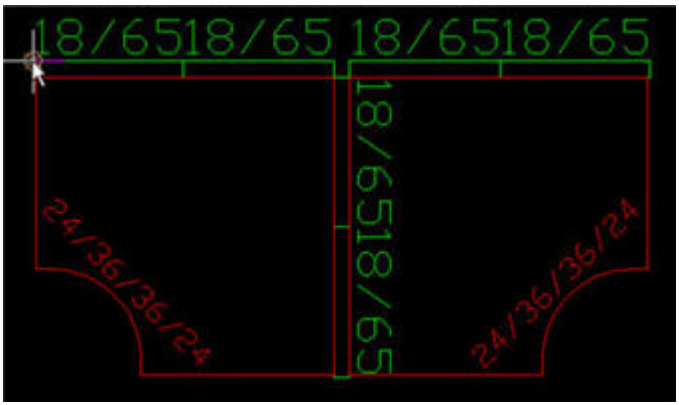
Before doing **Offset Copy,** make sure that **Osnap** mode is on in AutoCAD, with the **Node** mode checked in **Object Snap Settings**. It is also recommended to turn on **Ortho** mode.

1. Click  on the CAP Edit toolbar.

2. Select the object(s) on the drawing.



3. Press **Enter** to confirm your selection.
4. Specify the base point.



5. Specify the point to offset from. Note that this must be in line with the first point.

6. On the command line, enter the offset distance. Specify the distance in inches.

```
Select objects: Specify opposite corner: 8 found
Select objects:
Select base point.
Select point to OFFSET from:
Enter OFFSET (@X,Y): @60,0
```

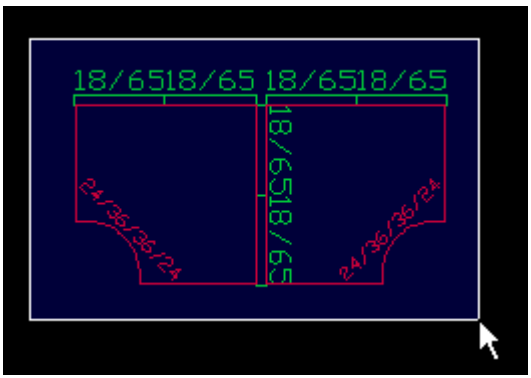
The object is now copied and offset by the distance you specified.

Offset Move

Offset Move combines the AutoCAD Move and Offset commands in a single step.

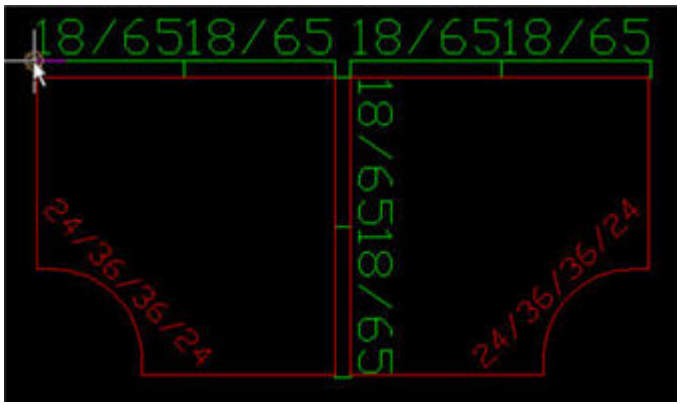
Before doing **Offset Move,** make sure that **Osnap** mode is on in AutoCAD, with the **Node** mode checked in **Object Snap Settings**. It is also recommended to turn on **Ortho** mode.

1. Click  on the CAP Edit toolbar.
2. Select the object(s) on the drawing.



3. Press **Enter** to confirm your selection.

4. Specify the base point.



5. Specify the point to offset from. Note that this must be in line with the first point.

6. On the command line, enter the offset distance. Specify the distance in inches.

```
Select objects: Specify opposite corner: 8 found
Select objects:
Select base point.
Select point to OFFSET from:
Enter OFFSET (@X,Y): @60,0
```

The object is now moved and offset by the distance you specified.

Highlight parts in the drawing

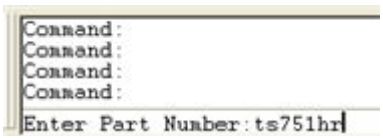
CAP Designer provides two commands to help you locate and count parts in a drawing:

- Highlight by Part Number
- Highlight by Select

Highlight by Part Number

Highlight by Part Number locates and highlights all occurrences of a particular part number and reports the number of symbols found in the drawing.

1. Click  on the CAP Edit toolbar.
2. Enter the part number on the command line.



The parts are highlighted on the drawing and the number of symbols found are displayed on the command line.

Note: Enter Regen on the command line to deselect.

Highlight by Select

Highlight by Select marks all occurrences of a symbol when you select one of the symbols in the drawings.

1. Click  on the CAP Edit toolbar.
2. Select a symbol on the drawing.
3. Press **Enter** to confirm your selection.

   The parts are highlighted on the drawing and the number of symbols found are displayed on the command line.

Note: Enter Regen on the command line to deselect.

Tags

A **Tag** is a label on the drawing that is used by clients or installers to determine what is on the plan or what is to be installed.

CAP Designer provides several useful tools for tagging CAP symbols:

- Append Tag
- New Tag
- Change Tag Size
- Move Tag
- Rotate Tag
- Show Part Number/Tag

Append Tag

Append Tag adds text to the end of the selected object's tag. For example, you may want a certain object to be tagged differently from others in order to draw attention to it in the drawing.

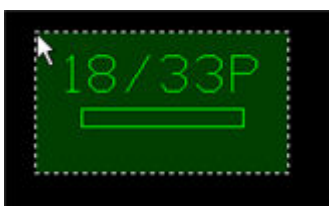
1. Click  on the CAP Edit toolbar.
2. Select the object(s) on the drawing.
3. Press **Enter** to confirm your selection.
4. Type in the text you want added to the tag.
5. Click **OK**.

   The text is appended to the tag.

New Tag

Use the **New Tag** command to change an object's tag. For instance, you may want to print out a drawing for a client or an installer, so you will use **New Tag** to give more meaningful labels to objects on the drawing.

1. Click  on the CAP Edit toolbar.
2. Select the object(s) on the drawing.



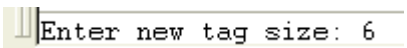
3. Press **Enter** to confirm your selection.
4. Type in the new tag.

5. Click **OK**.

Change Tag Size

In order to make tags more visible, use **Change Tag Size** to modify the text height.

1. Click  on the CAP Edit toolbar.
2. Enter the text height of the tag on the command line.



3. Select the object(s) on the drawing.

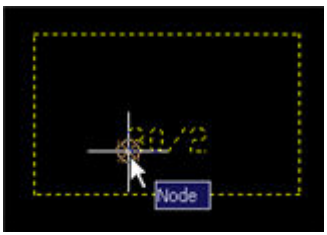
4. Press **Enter** to confirm your selection.

   The text height of the selected object's tag is resized.

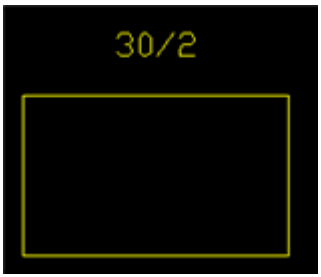
Move Tag

Use **Move Tag** to change a tag's position. You can use this command instead of clicking on the tag's grips.

1. Click  on the CAP Edit toolbar.
2. Select the object(s) on the drawing.
3. Press **Enter** to confirm your selection.
4. Select the base point of the tag.



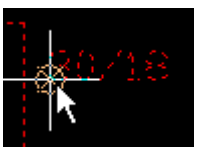
5. Move the tag.



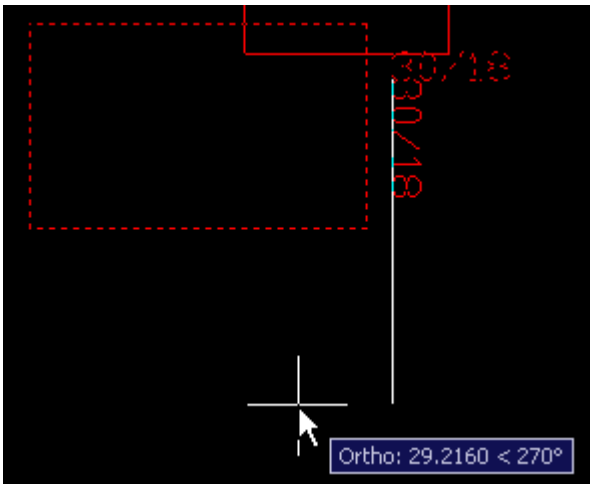
Rotate Tag

Use **Rotate Tag** to rotate a selected object's tag.

1. Click  on the CAP Edit toolbar.
2. Select the object(s) on the drawing.
3. Press **Enter** to confirm your selection.
4. Select the base point of the tag.



5. Rotate the tag.



Show Part Number/Tag

Show Part Number/Tag switches the attribute display between **Tag** and **Part Number**.

1. Click  on the CAP Edit toolbar.
2. Select the object(s) on the drawing.
3. Press **Enter** to confirm your selection.

   To switch back to Tag display, redo the **Show Part Number/Tag** command.

Mirror items

To quickly mirror and move the last item placed on the drawing, use the CAP Designer **Mirror** commands:

- Mirror Last Block x
- Mirror Last Block y

Mirror Last Block x

Mirror Last Block x mirrors and moves the last part placed along a vertical line (||).

1. Click  on the CAP Tools toolbar.
2. Specify the point of displacement.

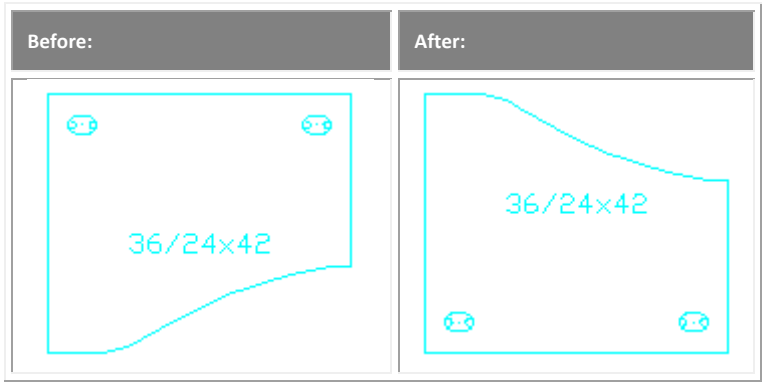

Turn ORTHO on to limit cursor movement to the horizontal or vertical axis.

Mirror Last Block y

Mirror Last Block y mirrors then moves the last part placed along a horizontal line (=).

1. Click  on the CAP Tools toolbar.
2. Specify the point of displacement.

   Note: Turn ORTHO on to limit cursor movement to the horizontal or vertical axis.



Plan and 3D views

This section shows you how to use CAP Designer to view your drawings in 3D.

See:

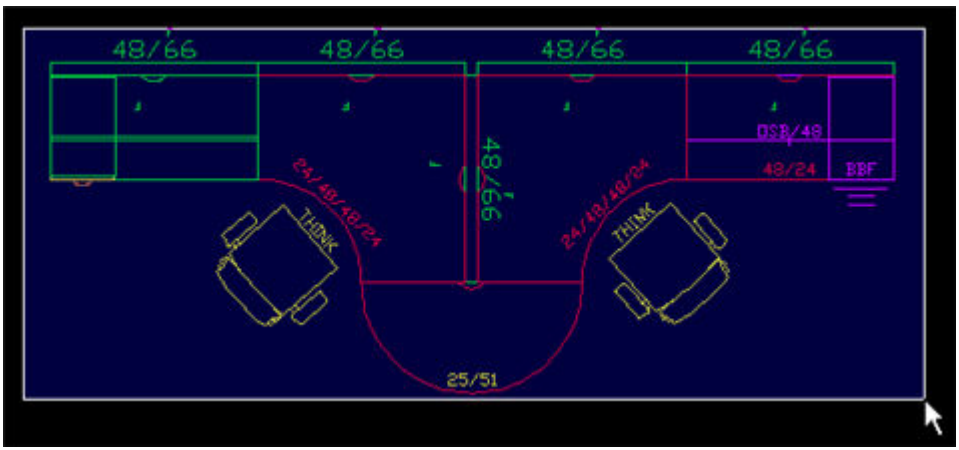
- Convert Plan to 3D
- Convert 3D to Plan
- Copy Plan to 3D
- Change 3D Height
- Ghost 3D / UnGhost 3D

Convert Plan to 3D

This command converts the symbols from plan view to 3D view.

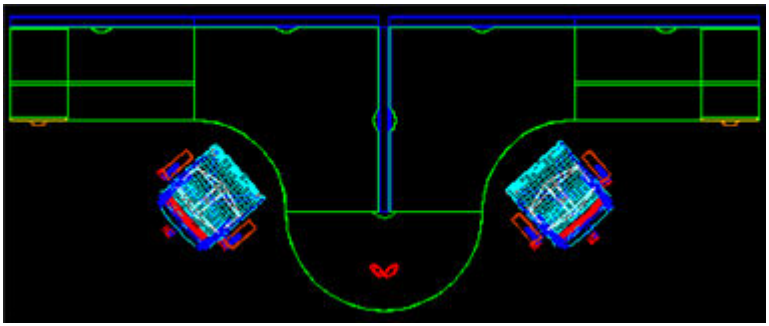
Before following the steps below, build the workstation using Plan View symbols.

1. Click  on the CAP Tools toolbar.
2. Select the objects on the drawing.

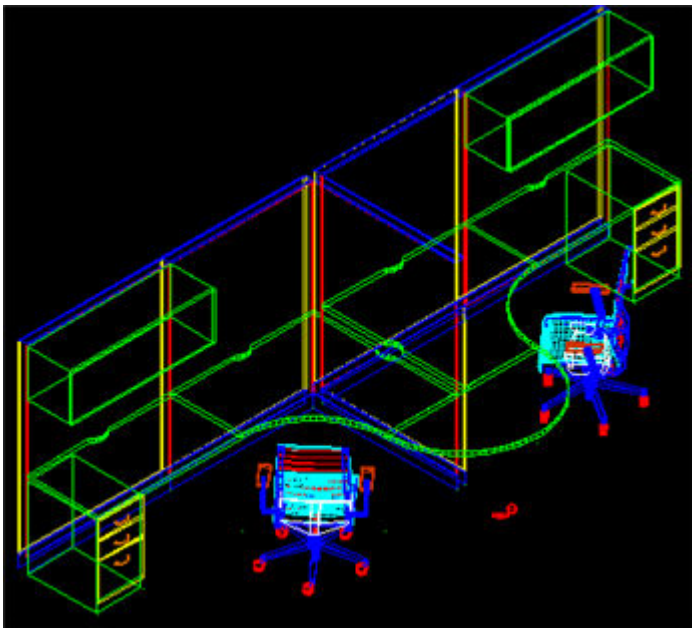


3. Press Enter to confirm your selection.

   The objects you selected are converted to 3D, top view. Notice that the tags have disappeared.



Note: To change the view, from the AutoCAD **View** menu select **3D Views.** Select the view — for example, **SW Isometric**.



4. To change to hidden lines, type `Hide` on the command line.

   Note that you cannot zoom in or out when Hidden lines is on.

5. Type `Regen`.

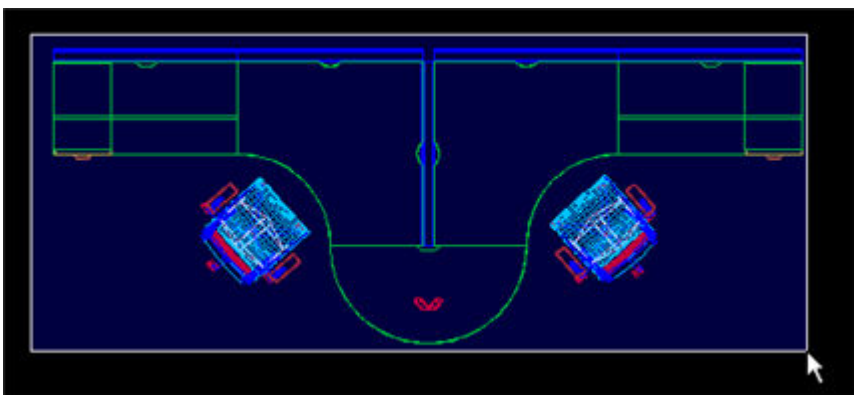
See also Convert 3D to Plan

Convert 3D to Plan

This command converts the symbols from 3D view to Plan view.

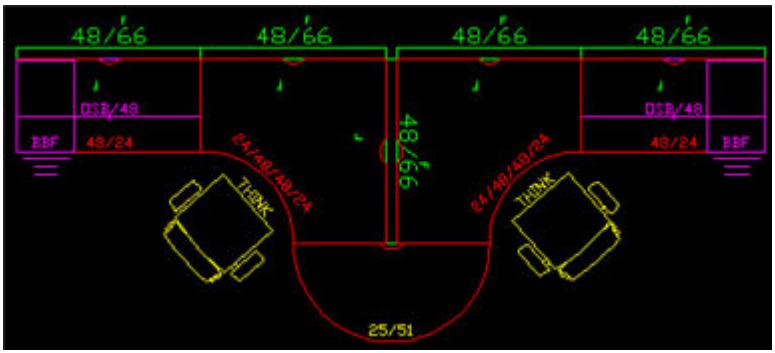
For information about converting plan to 3D, see Convert Plan to 3D.

1. Type `Plan` and press Enter twice to return to top view.
2. Click  on the CAP Tools toolbar
3. Select the objects on the drawing.



4. Press Enter to confirm your selection.

   The objects you selected are converted to Plan view. Notice that the tags have reappeared.

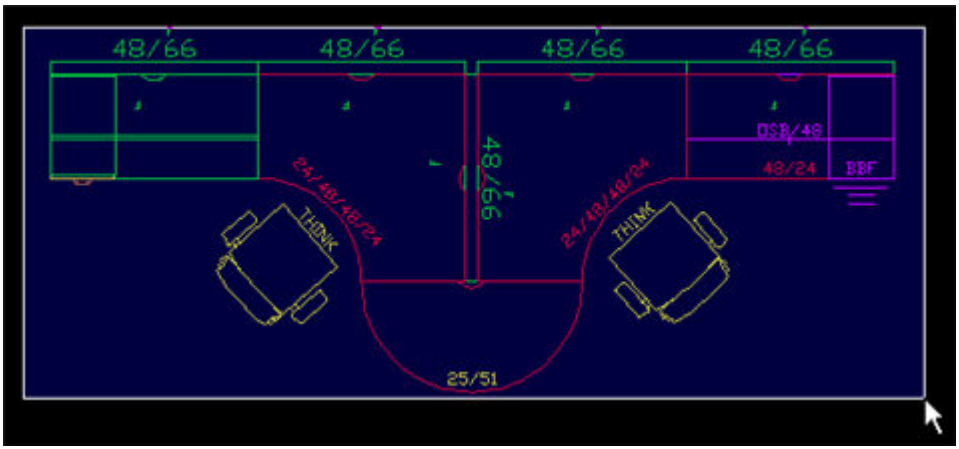


See also Convert Plan to 3D

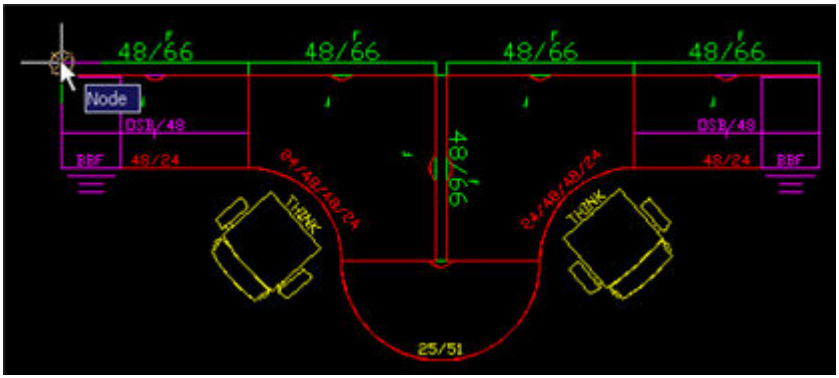
Copy Plan to 3D

This command copies the symbols on the drawing, then converts them to 3D.

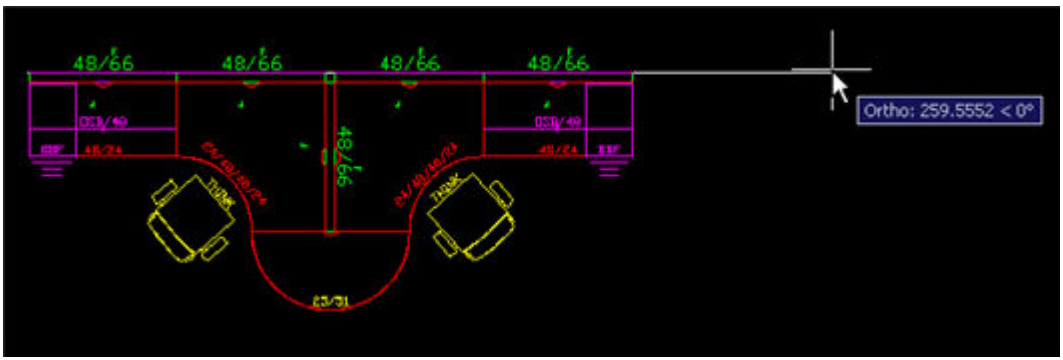
1. Click  on the CAP Tools toolbar.
2. Select the objects on the drawing.



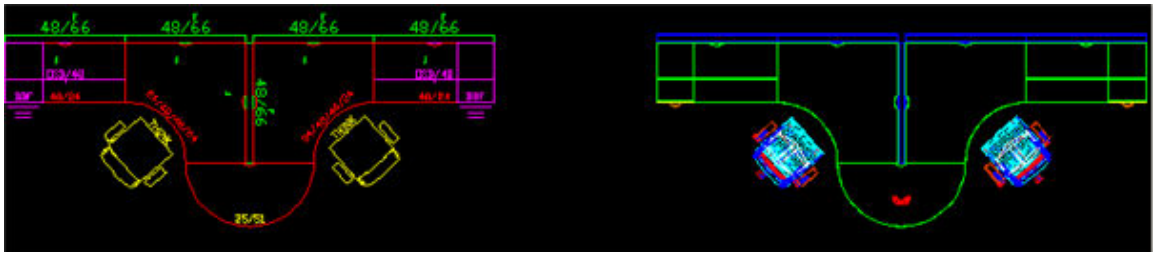
3. Press Enter to confirm.
4. Select the base point.



5. Select the point where the copied symbols will be placed.



The copied symbols are converted to 3D view.



Notes:

- To change the view, from the AutoCAD **View** menu select **3D Views.** Select the view — for example, **SW Isometric**.
- If you cancelled the command after specifying the base point, a copy of your selection is still created, so you will have duplicate symbols on your drawing. To verify this, select an object and click CAP Info.

Change 3D Height

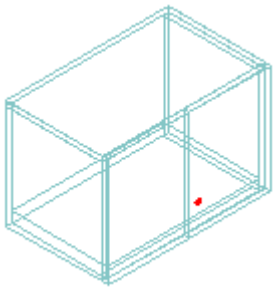
There are often times when an item needs to be placed at a different 'Z' height. For example, if you want to stack two overhead cabinets, place one at the default height, then place the second overhead and use change 3D height to move it up above the first.

Other ways you could use this command would be to put work surfaces or connectors at a special height.

To place an overhead cabinet above another:

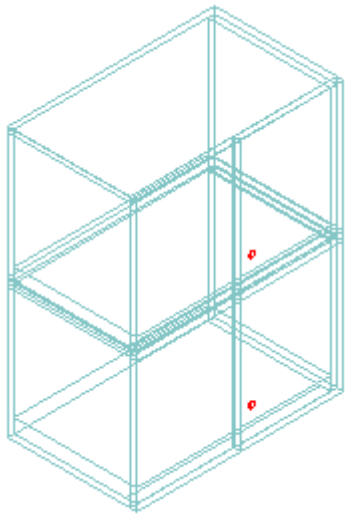
1. Put two overhead cabinets on the drawing so they overlap.
2. Convert from plan to 3D.

   The plan is converted to 3D, top view.
3. From the AutoCAD **View** menu select **3D Views**, **SW Isometric**.



4. Click  on the CAP Edit toolbar.
5. Select one of the overhead cabinets then press Enter to confirm your selection.
6. In the **Edit Default Height** dialog, enter the new default height in inches:
7. Click **OK**.

   The overhead cabinet you selected is now placed at the height you specified:



For other applications of this command, see:

CAP Frame Validation Tool

Corrections to make when converting to 3D

Ghost 3D / UnGhost 3D

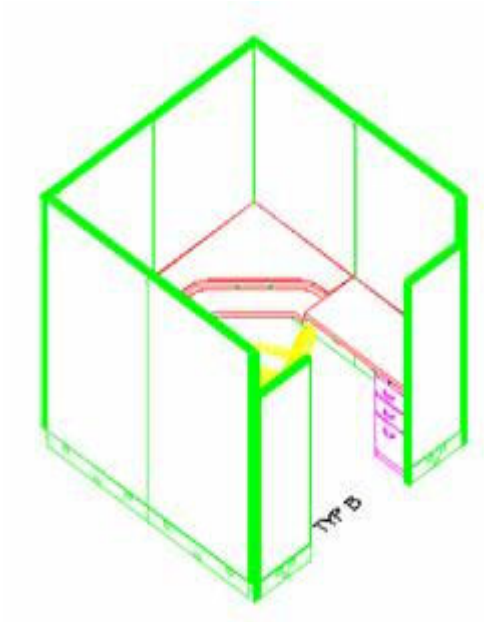
Ghost 3D / Unghost 3D changes solid CAP 3D symbols so that they display as an outline or ghost of the product. Using the Ghost button on an already ghosted symbol will return it to solid.

For example, if you are viewing a workstation in 3D using Hidden lines or Shaded views, you can ghost some panels in order to see through it.

Before following the steps below, build a workstation using Plan View symbols.

1. Convert the plan to 3D.

   The plan is converted to 3D, top view.
2. From the AutoCAD **View** menu select **3D Views**, **SW Isometric**.
3. Enter `Hide` on the command prompt to switch to hidden lines.

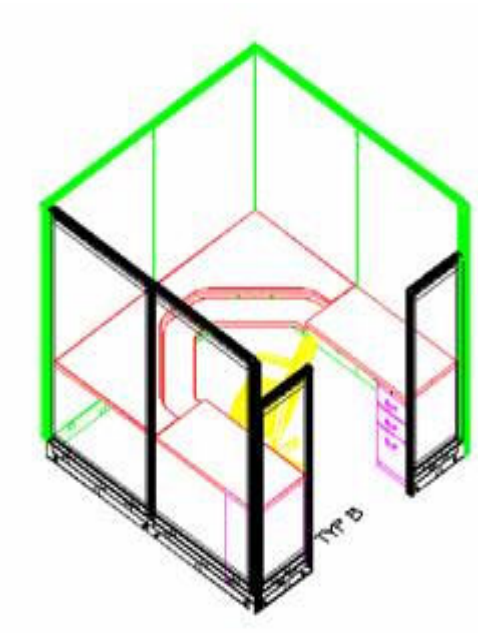


4. Click  on the CAP Tools toolbar.
5. Click the panels you want to ghost.

   The panels are now displayed in white.

6. Enter `Hide` on the command prompt again.

   Notice that you can now see through the panels you selected.



Alias values

Alias values are additional information that you can assign to a CAP part. For example, you may want to assign miscellaneous information to the **Alias 1** value of a CAP part.

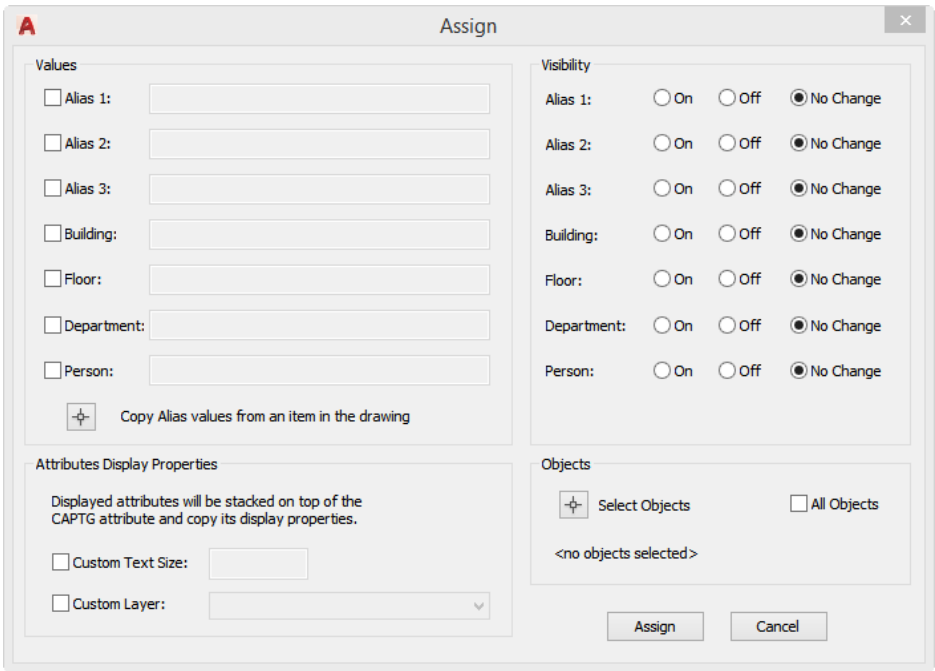
See the following topics:

- Assign user-defined values
- Change the visibility of user-defined values
- Assign sequential user-defined tag values

Assign user-defined tag values

Use this command to assign values to **specific tags**. This information can be viewed in CAP Info and carries over to 2020 Worksheet.

1. Click  on the CAP Tools toolbar.



2. Check any of the user-defined tag fields and type in the information you would like to assign.
3. If you want the value to be visible in the drawing,under **Visibility**, click **On** beside the appropriate **user-defined tag column**.

   Note: If the Visibility status is set to "On", the user-defined tag value will be made into a displayed attribute within AutoCAD.
4. Under **Attributes Display Properties**, enter the custom text size and layer in which the user-defined tag values will be displayed.

Note: You will not be able to create a layer within this dialog. The layer that you wish to place the value on must already exist within the drawing to appear in the drop-down list.

If no selections are made under **Attributes Display Properties**, the chosen user-defined tag values will assume the same characteristics as the item's normal tag (layer, color, height, font, etc.).

5. Click  to determine a specific area within a drawing you would like to apply to.

   This information will be visible through the **CAP Info** dialog box while in a drawing.

   When you do a worksheet take off, by turning on the equivalent column within the worksheet, you will see the information you assigned carry over to 2020 Worksheet.

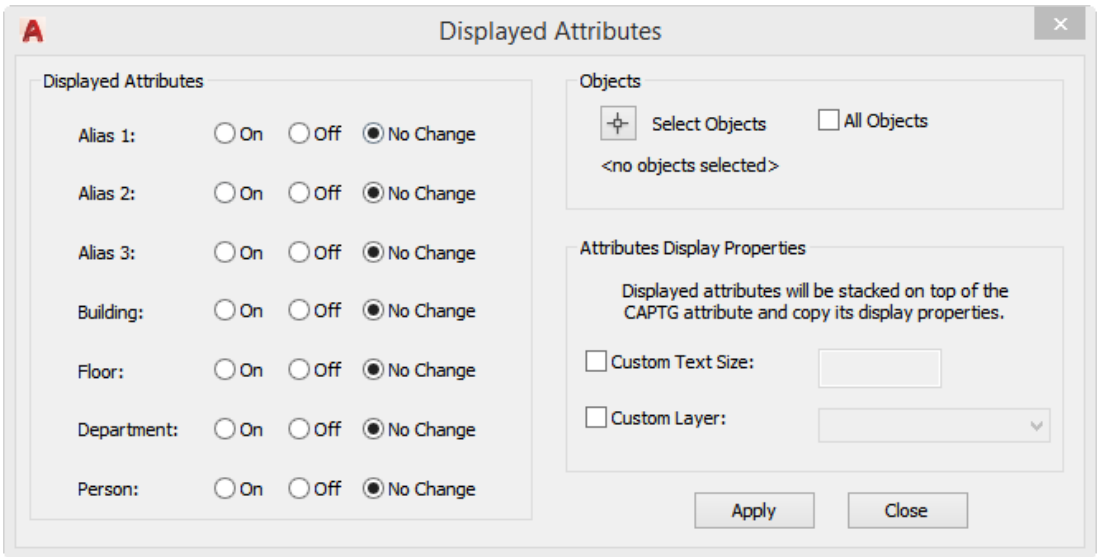
Note: You can assign a user-defined tag to a CAP Standard. Assign in CAP Designer is used for individual parts within the standard.

To change the visibility of Alias values that are already assigned, see Change the visibility of user-defined tag values.

Change the visibility of user-defined tag values

To change the visibility of existing user-defined tag values, use the **Set Displayed Tags** command.

1. Click  on the CAP Tools toolbar.
2. Turn **On** each **user-defined tag** to display the value or **Off** to hide it.



3. Under **Attributes Display Properties**, check **Custom Text Size** and enter the text size to specify a text height for the Alias value.
4. Check **Custom Layer** then select the layer to place the **user-defined tag** on a specific layer within the drawing.

Note: You will not be able to create a layer within this dialog. The layer that you wish to place the Alias value on must already exist within the drawing to appear in the dropdown list.

If no selections are made under Attributes Display Properties, the chosen user-defined tag values will assume the same characteristics as the item's normal tag (layer, color, height, font, etc.).

5. Click  and you will be returned to the drawing and prompted to select items in the drawing.
6. Select the items on the drawing then press Enter.

   Notice that the visibility of the user-defined tag values of items you selected have been changed. The **Displayed Attributes** dialog will reappear for any further changes in **user-defined tag** visibility you wish to make.
7. Click **Close**.

Assign sequential user-defined tag values

The **Area Tag** command allows you to automatically or manually put sequential letters or numbers to the **user-defined tag** values of items in the drawing. You can also add a prefix and suffix to the **user-defined tag** value.

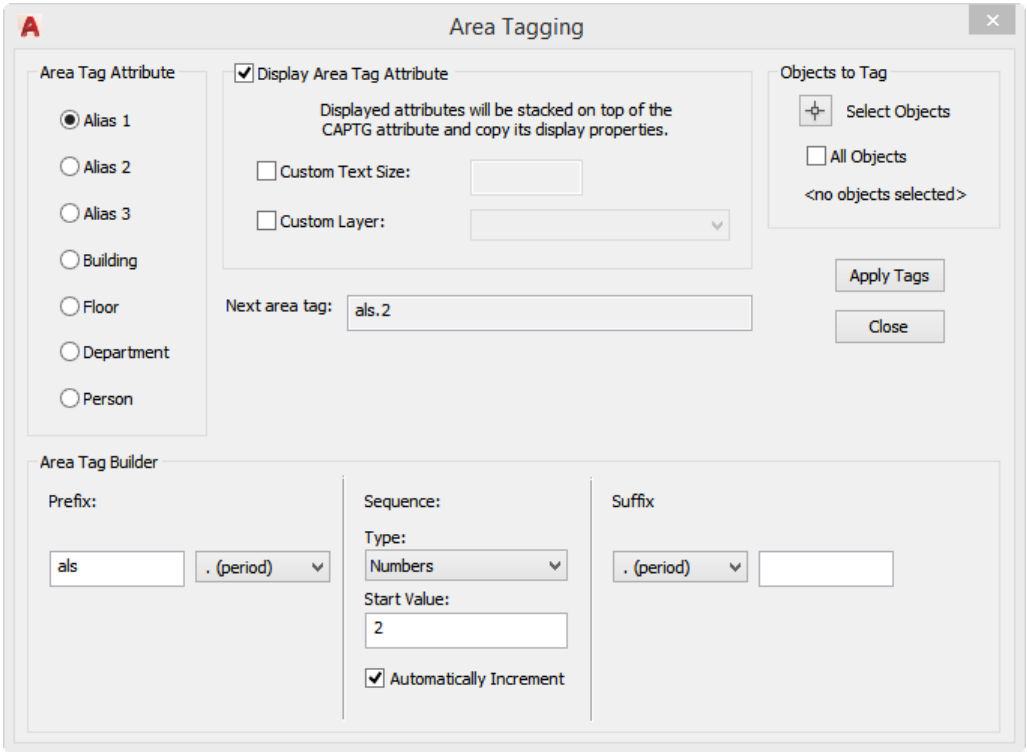
1. Click  on the CAP Tools toolbar.
2. Under **Area Tag Attribute**, select the **user-defined tag** value you want to create or modify.
3. Check **Display Area Tag Attribute** to make the **user-defined tag** value visible.
4. If necessary, check **Custom Text Size** and enter the text size to specify a custom text height for the **user-defined tag** value.
5. If necessary, check **Custom Layer** then select the layer to place the **user-defined tag** on a specific layer within the drawing.

   Note: You will not be able to create a layer within this dialog. The layer that you wish to place

the **user-defined tag** value on must already exist within the drawing to appear in the drop-down list.

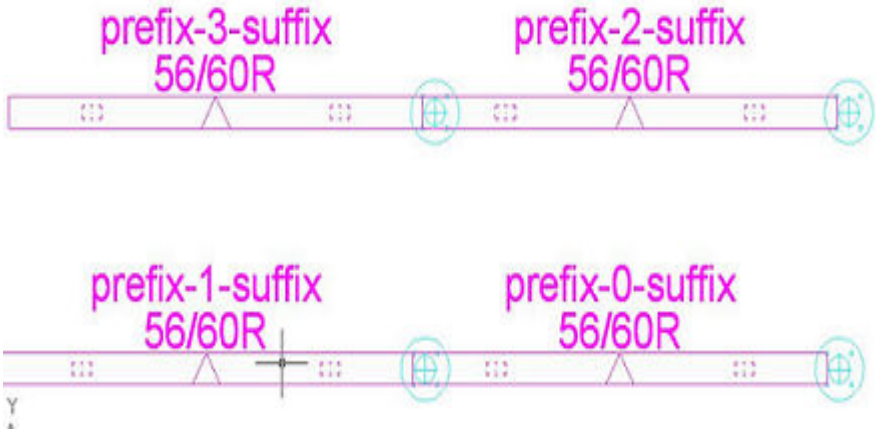
If no selections are made for **Custom Text Size** and **Custom Layer**, the chosen **user-defined tag** values will assume the same characteristics as the item's normal tag (layer, color, height, font, etc.).

6. Under **Area Tag Builder**, type the prefix, along with its separator (a period, comma, dash or underscore), the type of **Sequence** you wish to use (uppercase letter, lowercase letters, numbers or none), and the **Suffix**, along with its separator (a period, comma, dash or underscore).
7. In the center of the dialog, the **Next Area Tag** field displays what the next assigned value will be according to what you selected under **Area Tag Builder**.



8. After all of the choices have been made within this dialog, click **Select** and you will be returned to the drawing and prompted to select items in the drawing.
9. Select the items on the drawing then press Enter.

   The **Alias** values are displayed on the drawing:



The dialog will reappear for any further changes you wish to make.

10. Click the **Close** button to close the dialog.

Note: If you choose items one at a time, the function will sequentially number each item as it is selected. If you select multiple items by actually clicking on each item individually, the items will be assigned values from lowest to highest in the order of selection. If you select multiple items by drawing a window around multiple items, the application of the Alias values is dependent on the order of placement of items into a drawing.

Custom catalogs

Use custom catalogs to store and reuse items that you create in CAP Designer and CAP Worksheet in one file. Custom catalogs are project files that capture, manage, and reuse furniture specifications and typical workstations.

As with standard catalogs, drill down to the custom catalog. The difference is that **you** can create these catalogs and select the products to be included.

Among the benefits of custom catalogs are:

- You can share the catalog with other users by saving it on a network drive, giving people access to specials and standards (typicals).
- You can add finishes to items in a Worksheet in custom catalog. When you place the symbols from the catalog they will be already optioned when you use them in your drawing.

Custom catalogs include three types of information.

- Individual product
- Groups of products or standards (typicals)
- Specials

You can use custom catalog information from Worksheet or from CAP Designer. For more details about creating and managing custom catalogs, see the Custom catalogs section in the 2020 Worksheet help.

To add an item to a custom catalog from CAP Designer, see Add a symbol to a custom catalog.

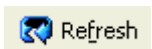
Add a symbol to a custom catalog

If you want to add a symbol that you use frequently to a Custom Catalog you can do so from the Explorer pane or from the drawing.

Example - add a chair to a custom catalog

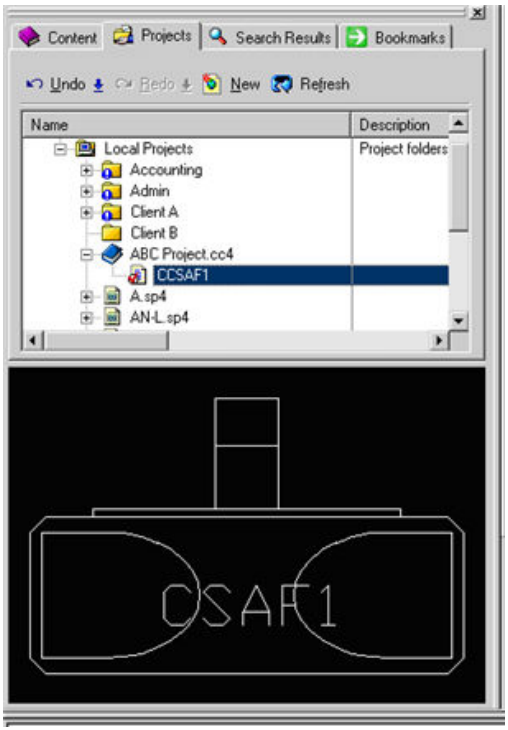
1. Place a chair in your drawing.
2. Click  on the CAP Tools toolbar.
3. Select the chair.
4. In the **Add to Custom Catalog** dialog, select a **Custom Catalog** (ending with .cc4).

   If you want to create a new Custom Catalog, right-click on **Local Projects** or a folder under **Local Projects** and select **New**, **Custom Catalog**.
5. Click **Add Part**.

   If you selected a standard instead of a part, click **Add Standard**.
6. In the **Explorer** bar's **Projects** tab, click 

to see the part listed under the **Custom Catalog**.

7. To place a symbol from the **Custom Catalog** select it and drag it into your drawing.



You can add specials (2D or 3D) to the Custom Catalog as well. You are prompted to add the CAP Part to the Catalog during the creation and you can add it using the Add to Custom Catalog command.

Custom items

Many times you will have custom products that are not available in a manufacturer's catalog. In order for the software to count these, you must turn them into Smart Parts.

1. Modify an existing symbol (Undo a CAP Part) or draw a new symbol.
2. Create a new CAP Part.

If you draw a new symbol, you must draw it on the correct layer. For example, you should draw a worksurface on the **A-FURN-P-WKSF** layer.

See:

- Create a new CAP Part
- Edit a CAP Part
- Undo a CAP Part

Create a new CAP Part

Before creating a part, you must draw a new symbol or modify an existing symbol (see Undo CAP Part).

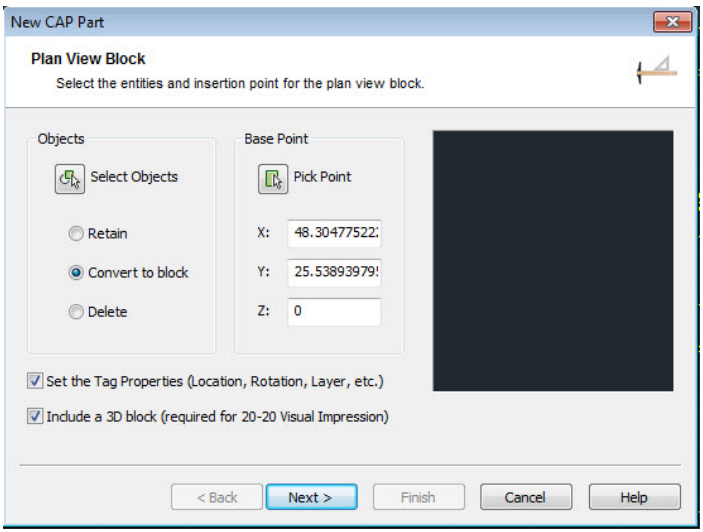
The Make New Part Wizard guides you through all the steps involved in creating a part.

To start the wizard,  on the CAP Part toolbar and then refer to the following topics:

- Select objects and the insertion point
- Specify tag properties
- Enter part information
- Save the part in a custom catalog

Select objects and the insertion point

After clicking the Make Part icon in the CAP Part or CAP Designer toolbar, the Plan View Block pane of the Make Part wizard is displayed.



1. To select the objects for the part, click  . This sends you to the drawing.
2. Select the objects to include in the CAP Part. Make sure you use a crossing or a window to select everything including the nodes.
3. Press Enter to confirm your selection.

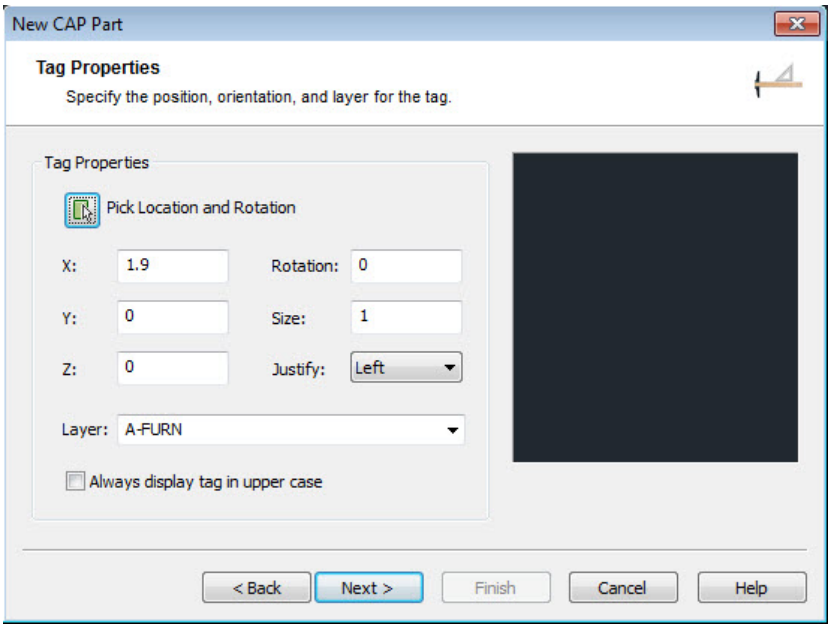
   You will be brought back to Plan View Block pane of the Make Part wizard where you will see a preview of the selected parts.
4. Click any of the following options:

   Retain: Retains the selected objects as distinct objects in the drawing after you create the block.
   Convert to block: This is the default selection. It converts the selected objects to a CAP Part.
   Delete: Deletes the selected objects from the drawing after you create the block.
5. Select the insertion point (Base Point) for the part by clicking the **Pick Point** icon  and then click at the desired Insertion Point on the drawing.

   You will be brought back to the **Plan View Block pane** and the selected coordinates will appear.
6. To set the tag properties, make sure to check **Set the Tag Properties**. Otherwise, the wizard will skip keep the current settings.
7. To include a 3D block for the part and be able to visualize it in Visual Impression, make sure to check **Include a 3D block**.
8. If you are creating a part for an existing block, this option is not available.
9. Click **Next**.
10. Go to Specify the tag properties or to Enter part information.

Specify the Tag Properties

1. On the **Tag Properties** pane of the Make Part Wizard, click the **Pick Location and Rotation** icon  to select where you want the Part's tag to appear. This sends you back to the drawing. You can also enter the **X, Y, Z**... coordinates manually.
2. In the drawing, click at the desired Text Location point and press ENTER.
   Once you are back to the Tag Properties pane, the selected location coordinates appear.



3. Modify any of the following:

   Rotation to manually change the text angle. 0 is horizontal, 90 is vertical.
   Size to modify the text height. Panels typically have a height of 4"; interior components have a height of 2.5".

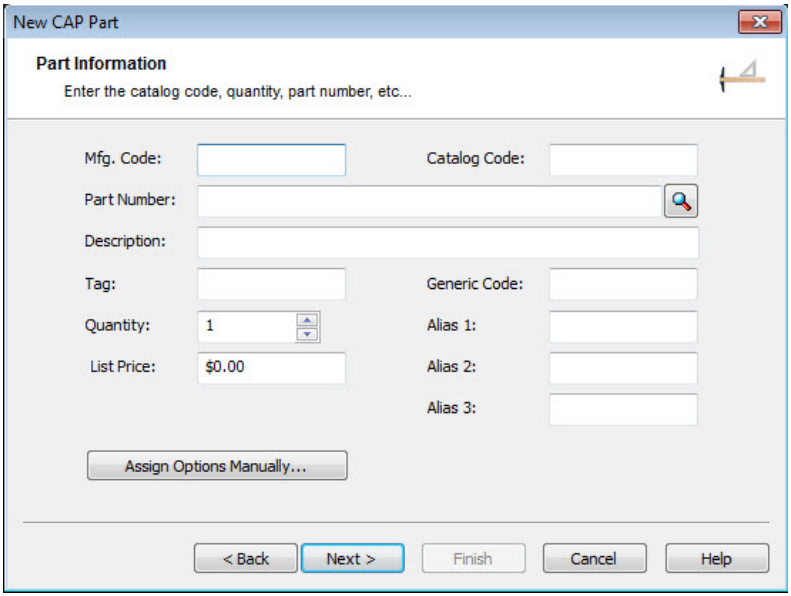
Justify to choose a **Left**, **Right** or **Center** justification for the text.
Select the **Layer** you wish the tag to be on.
You can also check the box **Always display tag in upper case**.

4. Click **Next**.
5. Select the objects for the block if the **3D Block** pane appears, plus check or uncheck **Show layers using separate colors** for the preview.
   Go to Enter part information if you chose not to define a 3D block for the objects.

Enter part information

1. On the **Part Information** pane of the Make Part wizard, enter the part information.

   Note: If you are modifying an existing symbol, you must keep the identical **Mfg Code**, **Catalog Code** and **Part Number** if you want to keep 2D and 3D graphics.



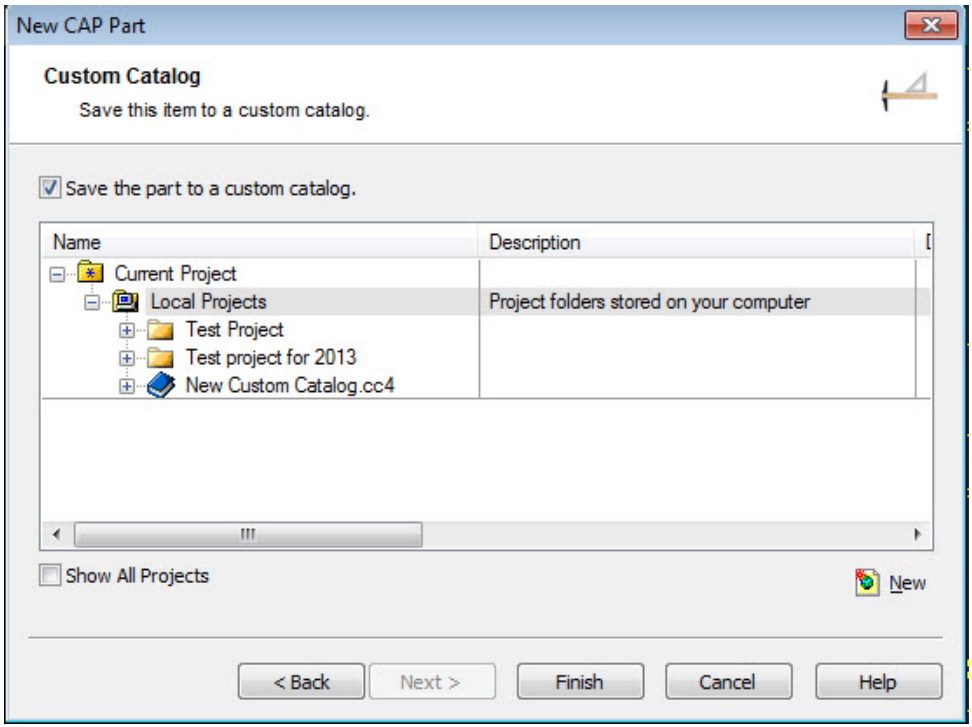
If you know the **Catalog Code** and the **Part Number** of a similar item you can type them in and click  to fill in the **Part Description** and **List Price**.

2. To add options (finishes) and attributes (tagging, pricing) for this part, click **Assign Options Manually** and then refer to Options and Attributes topics in the Worksheet help.
3. Click **Next** to continue and go to Save the part in a custom catalog.

Save part in a custom catalog

For information about custom catalogs, see the Custom Catalogs section in the 2020 Worksheet help.

1. On the **Custom Catalog** pane of the Make Part Wizard, check **Save the part to a custom catalog**. If this option is unchecked, the CAP Part will be saved in this drawing only.



2. Select the appropriate **Custom Catalog** to store the new CAP Part.
   Click the New icon to create a new project or a new custom catalog.
3. Click **Back** to review the information or **Finish** to complete.

Now this custom CAP Part will get counted when you create a worksheet. You can do this for any custom item including plants, computers, artwork, etc.

Edit a CAP Part

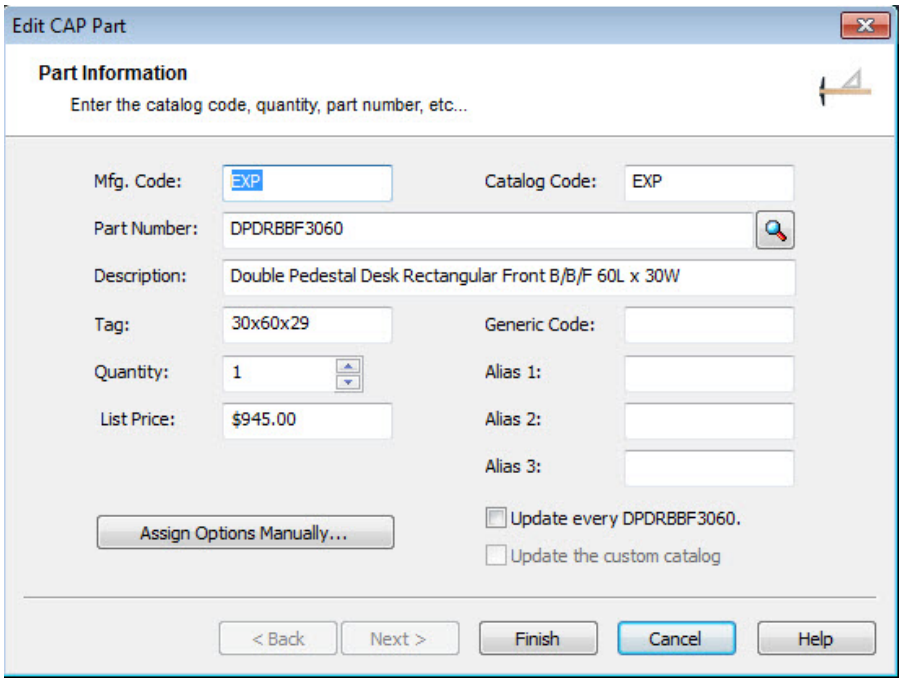
Use this command to modify the part information of a custom part.

Note: If you need to modify the symbol, the insertion point or the tag location, you will need to undo the part then create it.

1. Click  on the CAP Part toolbar.
2. Select the part on the drawing.
3. Press Enter or right-click to confirm your selection.
4. On the **Edit CAP Part** dialog box, modify the part information.

   Notes:

   - If you created the part by modifying an existing symbol, you must keep the identical **Mfg Code**, **Catalog Code** and **Part Number** if you want to keep 2D and 3D graphics.
   - If you know the **Catalog Code** and the **Part Number** of a similar item you can type them in and click the **Search** button  to fill in the **Part Description** and **List Price**.



5. Click **Finish**.

Undo a CAP Part

1. Insert a symbol from the Explorer pane that is similar to the one you want to create.
2. Click  on the CAP Part toolbar.

   When you undo a CAP Part, it will strip all attributes, but not the nodes from the object.
3. Select the part on the drawing.
4. Press Enter to confirm your selection.
5. Modify the symbol by using the AutoCAD Stretch command or erasing unwanted lines.

   Now, with the symbol drawn or modified, you must make it smart. See Create a new CAP Part.

Product specification with 20-20 Options

Specify options for one product

You can add finishes (options) to your furniture in the drawing either as you place the symbol or after you put it in the drawing. To do this you will use 2020 Options, the same specification tool used in 2020 Worksheet.

Note: Adding options to the drawing is not necessary in most instances. If you have a certain product that has different finishes than other furniture with the same part number, it will help when you finish the drawing then create a worksheet. However, adding the options to the drawing is much more time consuming than doing it in 2020 Worksheet.

To specify options before placing the symbol:

1. From the Explorer pane's Content tab, drill down to the product you want to specify.
2. Instead of dragging it into the drawing, left-click on the individual product.

   The **2020 Options** dialog box opens.

To specify options in the drawing:

1. Click  on the CAP Designer toolbar
2. Select the object in the drawing.

   The **2020 Options** dialog box opens.

Note: You can also select an item, right-click on it and select **Specify** from the menu.

See the following topics in the **2020 Options** help for instructions on specifying options:

- Customize the 2020 Options dialog
- Select options
- Skip options
- Change options
- Apply default options automatically
- Preview options
- Preview structural options

Note: For a quick way to remove options from parts on the drawing, use the Strip Options command on the CAP Tools toolbar.

Strip Options

You can remove the options from one or many parts very quickly using **Strip Options**.

1. Click  on the **CAP Tools toolbar**.
2. Select the object(s) on the drawing.
3. Press **Enter** or right-click to confirm your selection.
   The options are removed from the selected CAP parts. To verify, select the part then click **CAP Info**  on the CAP Designer toolbar.

Visual Impression for 3D specification

Using 2020 Visual Impression in addition to CAP Studio, Giza Studio, and Worksheet benefits everyone in the sales cycle. It keeps the designers in control of product configuration and design while allowing those who are interfacing with the customer the ability to make required tweaks needed to close the sale. Customers are now able to “see” what they are getting rather than “interpret” it from floor plans, brochures, and product catalogs.

2020 Visual Impression simplifies both the learning curve and the time needed to create high quality presentations making visualization feasible for every project.

All users of 2020 Visual Impression can create high quality presentations using the assets built into the process of visualizing the scene. These assets are collected in one place for the user to save, copy or drag-and-drop into their favorite presentation software, such as Microsoft PowerPoint.

In addition to specifying finishes in Worksheet, 2020 Visual Impression allows the user to visually specify items and see the finishes apply to the item as they are being specified. Users can experiment with color schemes by applying finishes to products and changing them until the desired results are achieved. The resulting specifications can be saved back to the worksheet or drawing file.

Using 2020 Visual Impression, finishes can be changed and manipulated to meet the customer's preferences. Product or configuration changes can be annotated and sent back to design for required drawing revisions. This smooth's the communication path between those who are creating the drawings and those presenting to the customers and making revisions for the final order.

See:

- Define a scene for Visual Impression
- Visualize a scene in Visual Impression
- Manage scenes

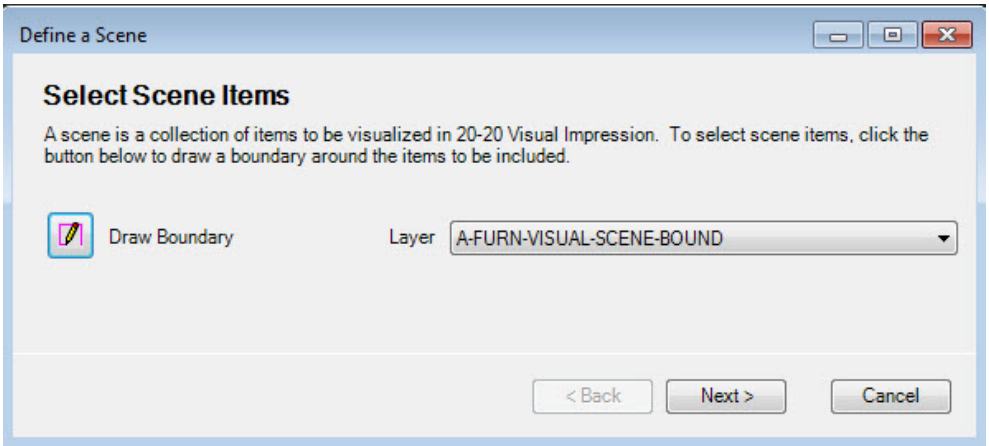
Define a scene for Visual Impression

Visual Impression can treat the entire drawing as a scene, but performs best when your drawing is organized into scenes around different points of interest that you want to call attention to. Performance can vary by machine and by the complexity of the items you include in your scene.

Visual Impression saves your room configuration back to CAP Designer. If a scene is not defined and the room information is applied back to the entire drawing, future product additions to the drawing may appear outside of the original room dimensions. If scenes are defined in the drawing and you make additions that move outside of the room dimensions, the scene can be deleted allowing you to redefine your scene from scratch. If you anticipate additions to your drawing, it is best to define scenes before you go onto Visual Impression. Scene components also may be resized and/or moved to allow for more furniture items that might appear outside of the saved room's dimensions.

To define a scene for Visual Impression:

1. Click the **Define Scene** icon  in the CAP Designer Toolbar.



2. Click the **Draw Boundary** button to go back to the design, define the boundary around the items you want to be part of the scene and then press Enter.
3. Back to the Define a Scene dialog box, select a **Layer** for that scene and then click **Next**.
   Enter a **Name** and a **Description** for the scene and click **Finish**.
   A scene boundary tag is displayed in Floor Plan view.

See also:

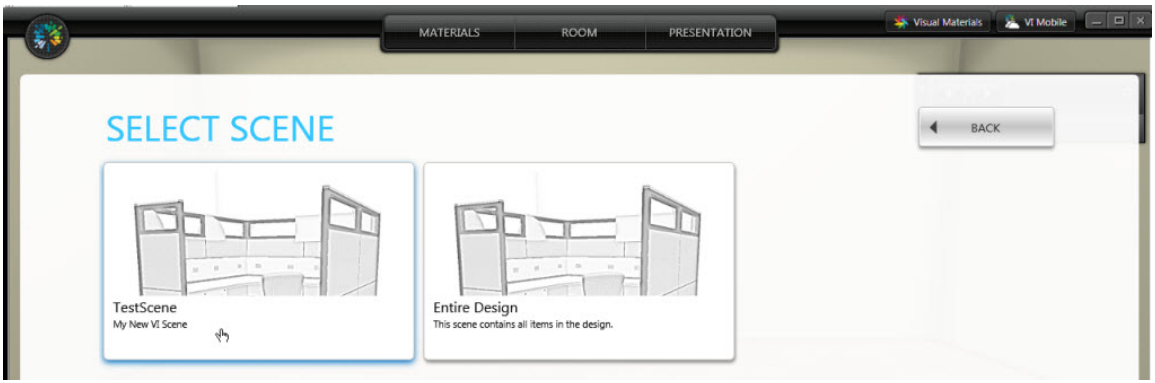
- Visualize a scene in Visual Impression
- Manage scenes
- Update against a visual woksheet

Visualize a scene in Visual Impression

For best 3D results in Visual Impression, you should define a scene first.

To visualize a scene in Visual Impression:

1. Click the **Visualize Scene** icon in the CAP Designer Toolbar.
2. When Visual Impression opens and displays the Select Scene pane, choose a scene.
   Click BACK to return to your drawing in CAP Designer.



3. Specify your products in 3D using all the presentation tools.
   Refer to the Visual Impression Quick Tour Help file to learn about 3D specification.
   To learn about training, contact commercial.support@2020.net.

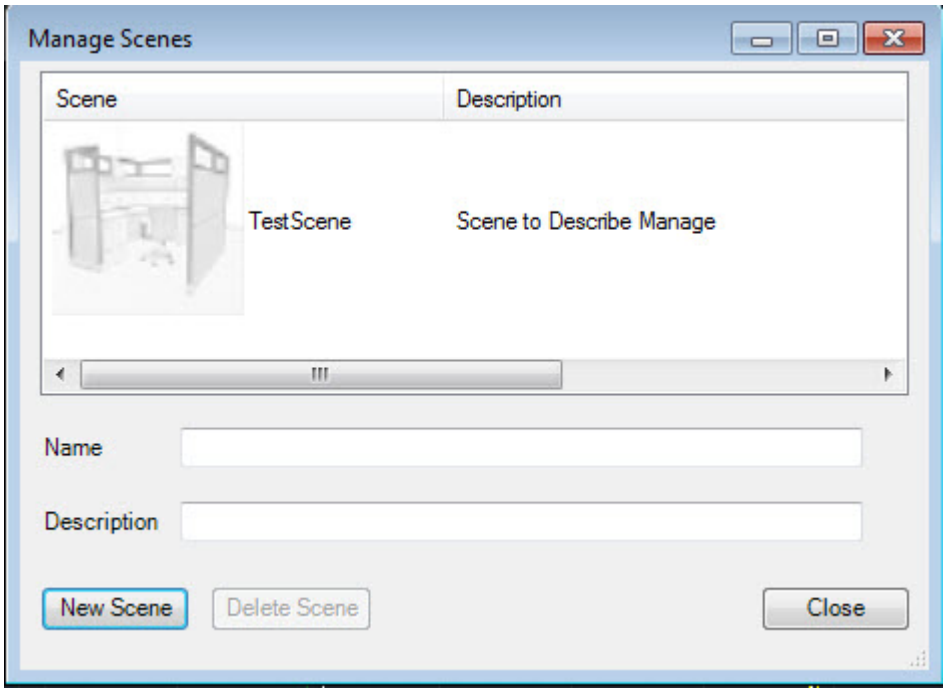
See also:

- Define a scene for Visual Impression
- Manage scenes

Manage Scenes

You can add or delete a scene for Visual Impression. This helps you organize, name and keep all scenes as you manage your drawing.

1. From the **CAP Designer** menu, choose **2020 Visual Impression**, **Manage Scenes**.
2. Click **New Scene** or select a scene and click **Delete Scene** (no confirmation asked).

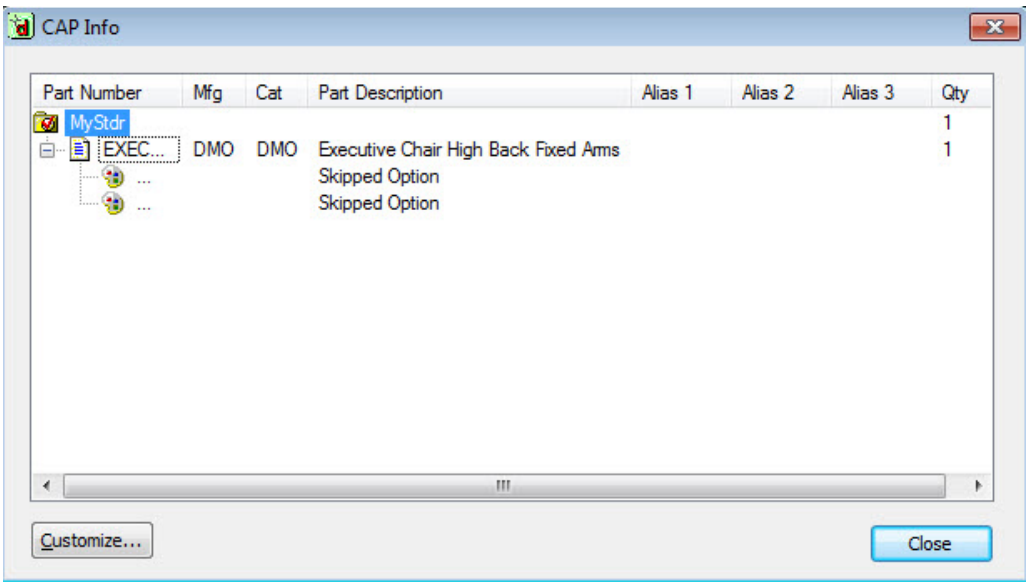


3. Click **Close** when done.

View item information

After adding finishes to an item you may need to check them or you may wish to confirm that you placed the right part in the drawing. An easy tool to use for this is **CAP Info**.

1. Click  on the CAP Designer toolbar.
2. Select the symbol or symbols you want information on. A dialog box will give you the information about that furniture.



Note: This is simply an information box - you cannot edit anything here.

3. You can customize the view of the CAP Info dialog box by clicking the **Customize** button. The **Customize Columns** dialog box will appear.

You can turn a column on or off by checking or clearing its check box. Click **OK** when done. For new column settings to take effect, you must close the **CAP Info** dialog box and call it again.

Show Non-Plan Item List

If you want some items to be priced, but you do not want them to appear on the drawing, use the CAP Designer **Non-Plan Item List** (NPIL). For example, you may *not* want to show electrical items such as outlets, because they clutter your design, so you will add them to the non-plan item list.

To display the Non-Plan Item List, click  on the CAP Tools toolbar.

The **Non-Plan Item List** pane appears.

See:

- Add a part to the Non-Plan Item List
- Add NPIL table to drawing
- Edit a non-plan item
- Specify a NPI part
- Send a NPI Part to the drawing
- Refresh the Non-Plan Item List
- Delete an NPI part
- Delete all non plan items

Note: When you update a drawing with its associated worksheet, items that were added in the worksheet are placed in the Non-Plan Item List.

Add a part to the Non-Plan Item List

1. Click  on the NPIL toolbar.
2. In the drawing, select the products that you want to add to the Non-Plan Item List.

   Notice that the products disappear from the drawing and the part information is displayed in the NPIL.
3. Specify the insertion point and the rotation angle for the Non-Plan Item List legend on the drawing.

Non Plan Item List

Part No.	Mfg	Qty	Description
EXHB	EXP	1	Executive High-Back Chair
DPDABBF3672	EXP	1	Double Pedestal Desk Arc Front B//B/F 72L x 36W
EXMB	EXP	1	Executive Mid-Back Chair

Note: If you do not see the Non-Plan Item List table, you will need to check the preference **Add non-plan item list table automatically to the drawing** in Advanced Preferences. You can also add the table by clicking  .

Add NPIL table to drawing

If there is at least one part in the Non-Plan Item List, the NPIL table is displayed on the drawing. If it is not displayed, do the following:

1. Click  on the NPIL toolbar.
2. Specify the insertion point and the rotation angle for the Non-Plan Item List legend on the drawing.

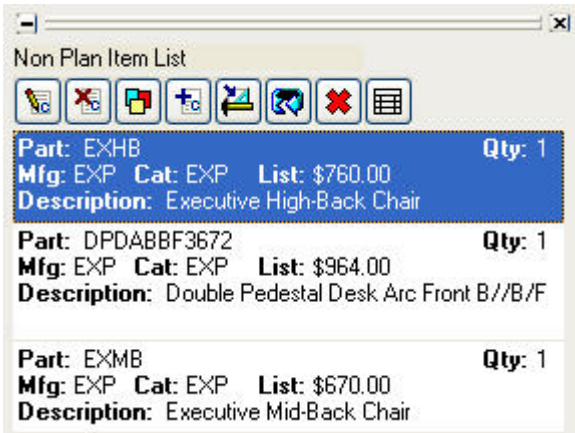
Non Plan Item List

Part No.	Mfg	Qty	Description
EXHB	EXP	1	Executive High-Back Chair
DPDABBF3672	EXP	1	Double Pedestal Desk Arc Front B//B/F 72L x 36W
EXMB	EXP	1	Executive Mid-Back Chair

Note: To always display the NPIL table on the drawing if there is at least one part in the NPIL, you will need to check the preference **Add non-plan item list table automatically to the drawing** in Advanced Preferences.

Edit a non-plan item

1. Click on the item line in the Non Plan Item List.



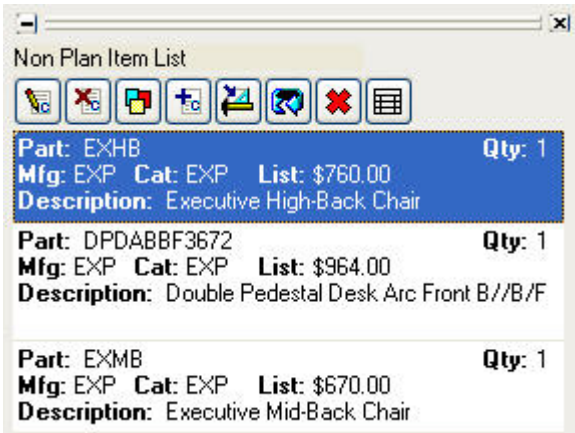
2. Click  .
3. Modify the part information.

   Important: You must keep the identical **Mfg Code**, **Catalog Code** and **Part Number** if you want to keep 2D and 3D graphics. For instance, you may want to send the part back to the drawing later on.

   Note: If you know the **Catalog Code** and the **Part Number** of a similar item you can type them in and click  to fill in the **Part Description** and **List Price**.
4. Click **Finish**.

Specify a NPI part

1. Click on the item line in the Non Plan Item List.



2. Click  on the NPIL toolbar.
3. Specify the item in the 2020 Options dialog box and then click **OK**.

See the following topics in the **2020 Options** help for instructions on specifying options:

- Customize the 2020 Options dialog
- Select options
- Skip options
- Change options
- Apply default options automatically
- Preview options
- Preview structural options

Send a NPI Part to the drawing

1. Click on the item line in the Non Plan Item List.
2. Click  .
3. Specify the insertion point and the rotation angle of the part on the drawing.

   Notice that the part is no longer in the NPIL. The NPIL legend on the drawing is also updated.

Refresh the Non-Plan Item List

If the Non-Plan Item List and the NPIL table on the drawing do not seem to have the same information, click  to synchronize the information.

Delete a NPI part

Note: There is no confirmation message when you click **Remove Item** so make sure you really want to delete the selected part.

1. Click on the item line in the Non Plan Item List.
2. Click  on the NPIL toolbar.

   The part is no longer in the NPIL. If the NPIL table is on the drawing it is also updated.

Delete all non plan items

1. Click  on the NPIL toolbar.
2. Click **Yes** when you see the confirmation message.

   If you displayed the NPIL table on the drawing, it is also removed.

Worksheets

One of the most useful features of CAP Designer is the ability to generate a bill of materials or worksheet from a drawing. A worksheet is also known as a "take off".

CAP Designer furniture symbols are "smart" in that they have special attributes that can be translated into a worksheet. Those attributes are Mfg Code, Catalog Code, Part Number, Default Height, Quantity, Generic Code and Tag.

See the following topics for information about Worksheet-related commands:

- Create a take-off window
- Create a visual worksheet 
- Create an associated worksheet
- Update with associated worksheet
- Update against a visual woksheet
- Create an ASCII file
- Create a CAPSIF file
- Compare a drawing to a worksheet

Create a take-off window

A take-off window is a polygonal region that you define on the drawing. When you create a worksheet or a draw schedule, you can choose to include only items that are within this region.

1. Click  on the CAP Designer toolbar.
2. Follow the instructions on the AutoCAD command prompt to specify the vertices of the take-off window polygon.

   When done, the program converts the window into a block with a tag labeled "Take-Off Window".

Note: Every time you run the command, the program erases the current take-off window. There may only be one take-off window in the drawing.

See also:

- Create a worksheet
- Draw a schedule from the drawing

Create a worksheet

You can create two types of worksheets, visual and associated.

A visual worksheet can be used in Visual Impression to visualize defined scenes and to select finishes.

This is the default type for all worksheets created from a drawing.

You can use this type of worksheet to update the specification data of items in the drawing it was created from.

An associated worksheet allows items to be specified and new items added, but existing items cannot be replaced or deleted.

This worksheet can be used in Visual Impression to visualize defined scenes and to select finishes.

You can use this type of worksheet in CAP and in Worksheet to sync item specification between the drawing and the worksheet.

See also:

- Update against a visual woksheet
- Update with associated worksheet

Create a visual worksheet

You should create a visual worksheet if you plan on using in Visual Impression to visualize defined scenes and to select finishes.

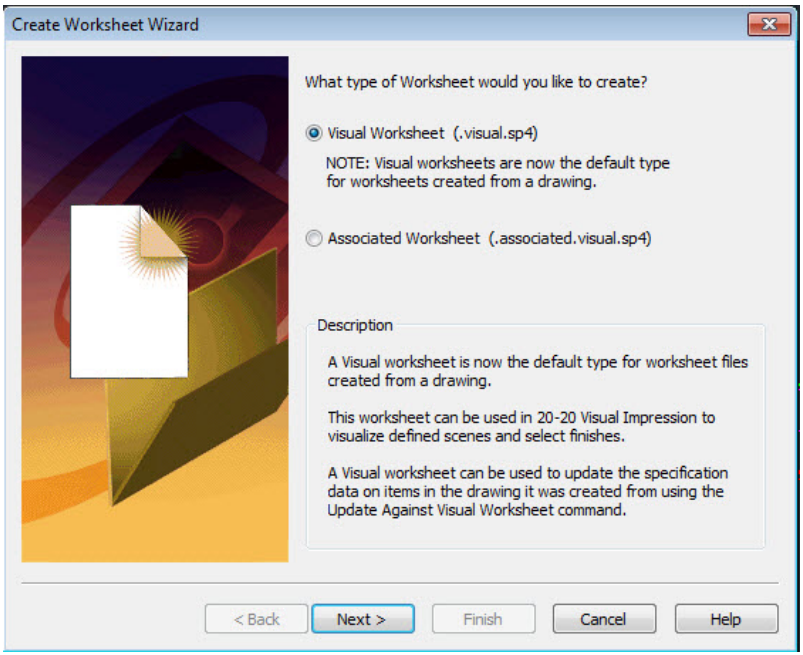
This is the default type for all worksheets created from a drawing.

You can use this type of worksheet to update the specification data of items in the drawing it was created from.

To create a visual worksheet:

1. Click  on the CAP Designer toolbar.

   This launches the **Create Worksheet Wizard** with **Visual worksheet** already selected.
   Click **Next**.



2. On the second Create Worksheet Wizard dialog box, you will select the objects and information to include in the worksheet.

   If you created a take-off window on the drawing, **Objects within the Take-Off Window** is selected by default so that only items within the take-off window are included.
   If you want to pull all items from the drawing, select **All Objects**.

To select items, click the **Selected Objects**  icon. This returns you to the drawing.
In the drawing, select the items you want to include in the worksheet.
Press Enter to confirm your selection and return to the Wizard.
If you incorporated 3D blocks into your drawing that you do not want to show up in the final worksheet, check **Ignore 3D Objects**.

By default, the following options are all selected so that they are pulled into the worksheet:

CAP Bounds (Outline Levels): These are products grouped by certain designations such as departments, sections, or floors.
CAP Standards: A single group of items that make up a typical unit, such as a workstation.
CAP Parts: Any product from the Mfg Catalog, custom parts created using the **CAP Part, New** command or symbols brought from a Custom Catalog.
Accelerate Entities: - Furniture placed using the Accelerate program.
Non-Plan Item List (NPIL) - List containing items that are not shown in the drawing

3. Click **Next**.

4. In the next Create Worksheet Wizard dialog box, beside **Location**, click  to select the folder to store this worksheet in.
Enter a **File Name** and click **Save**.

Enter an optional **Title** to appear in Worksheet Properties as the worksheet title.
Leave **Update Against Catalog** checked.
Check the **Update Value(s)** you want updated when creating the worksheet.
Select a **Price Zone** for the list price update.
Check whether you want to use the Custom catalog to update **custom parts** and **custom standards**.

Click **Back** to review information or click **Next** to create the worksheet.

5. The last Create Worksheet Wizard dialog box appears.
   You can choose to open the worksheet in **2020 Worksheet** or in **2020 Visual Impression**.
   Select **Do not open the file** to open the worksheet later.
6. Click **Finish**.

See also Create an associated worksheet

Create an associated worksheet

An associated worksheet allows items to be specified and new items added, but existing items cannot be replaced or deleted.

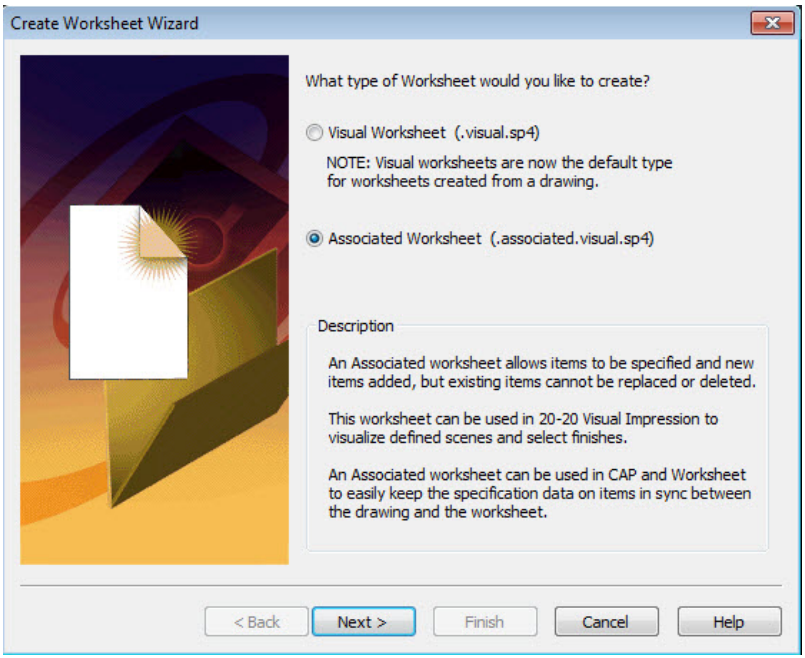
This worksheet can be used in Visual Impression to visualize defined scenes and to select finishes.

You can use this type of worksheet in CAP and in Worksheet to sync item specification between the drawing and the worksheet.

To create a visual worksheet:

1. Click  on the CAP Designer toolbar.

   This launches the **Create Worksheet Wizard**. Select **Associated Worksheet**.
   Click **Next**.



2. On the first Create Worksheet Wizard dialog box, you will select the objects and information to include in the worksheet.

   If you created a take-off window on the drawing, **Objects within the Take-Off Window** is selected by default so that only items within the take-off window are included.
   If you want to pull all items from the drawing, select **All Objects**.

   To select items, click the **Selected Objects**  icon. This returns you to the drawing.
   In the drawing, select the items you want to include in the worksheet.
   Press Enter to confirm your selection and return to the Wizard.
   If you incorporated 3D blocks into your drawing that you do not want to show up in the final

worksheet, check **Ignore 3D Objects**.

By default, the following options are all selected so that they are pulled into the worksheet:

CAP Bounds (Outline Levels): These are products grouped by certain designations such as departments, sections, or floors.
CAP Standards: A single group of items that make up a typical unit, such as a workstation.
CAP Parts: Any product from the Mfg Catalog, custom parts created using the **CAP Part, New** command or symbols brought from a Custom Catalog.
Accelerate Entities: - Furniture placed using the Accelerate program.
Non-Plan Item List (NPIL) - List containing items that are not shown in the drawing

3. Click **Next**.

4. In the next Create Worksheet Wizard dialog box, beside **Location**, click  to select the folder to store this worksheet in.
Enter a **File Name** and click **Save**.

Enter an optional **Title** to appear in Worksheet Properties as the worksheet title.
Leave **Update Against Catalog** checked.
Check the **Update Value(s)** you want updated when creating the worksheet.
Select a **Price Zone** for the list price update.
Check whether you want to use the Custom catalog to update **custom parts** and **custom standards**.

Click **Back** to review information or click **Next** to create the worksheet.

5. The last Create Worksheet Wizard dialog box appears.
You can choose to open the worksheet in **2020 Worksheet** or in **2020 Visual Impression**.
Select **Do not open the file** to open the worksheet later.

6. Click **Finish**.

See also Create a visual worksheet

Note: You can open the associated worksheet at any time by clicking  on the CAP Designer toolbar. CAP Designer saves the current drawing and updates the associated worksheet first before opening it.

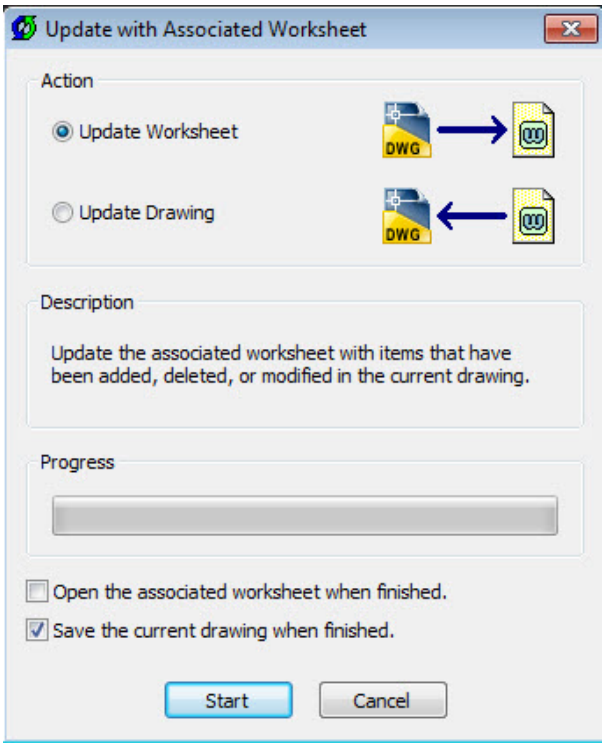
If you make changes to the drawing or the worksheet later on, make sure they are both are up-to-date by calling the Update with associated worksheet command.

Update with associated worksheet

If you created an associated worksheet for the drawing, you can:

- update the drawing if you made changes to the worksheet
- update the worksheet if you made changes to the drawing

1. Click  on the CAP Designer toolbar.
2. Select whether you want to update the associated worksheet based on the current drawing, or update the current drawing based on the associated worksheet. CAP Designer determines which file is newer and automatically selects the appropriate action.



3. If you selected **Update Drawing** and you want to open the associated worksheet after updating it, check **Open the associated worksheet when finished**.
4. Click **Start**.
5. If the associated worksheet is open with unsaved changes, you will see a warning message before the command proceeds with an update worksheet or update drawing. Read the warning carefully before clicking **Yes** or **No**.

6. If there were items added to the worksheet before you updated the drawing, you will see a message asking you if you want to add a non-plan item list table to the drawing. Click **Yes** if you want to place the table. Display the non-plan item list in order to send non-plan items to the drawing.

   If items were deleted in the worksheet before you updated the drawing, these items will also be removed from the drawing.

Note: Standards created in Worksheet are considered as non-planned. When you update the drawing against the associated worksheet, the Standard will be listed in the Non-plan item list.

If you created the associated worksheet based on a take-off window in the drawing, this region will be taken into account during the update. For example, if you added a part to the drawing that is not within the take-off window, then updated the worksheet, that part will not be added to the worksheet.

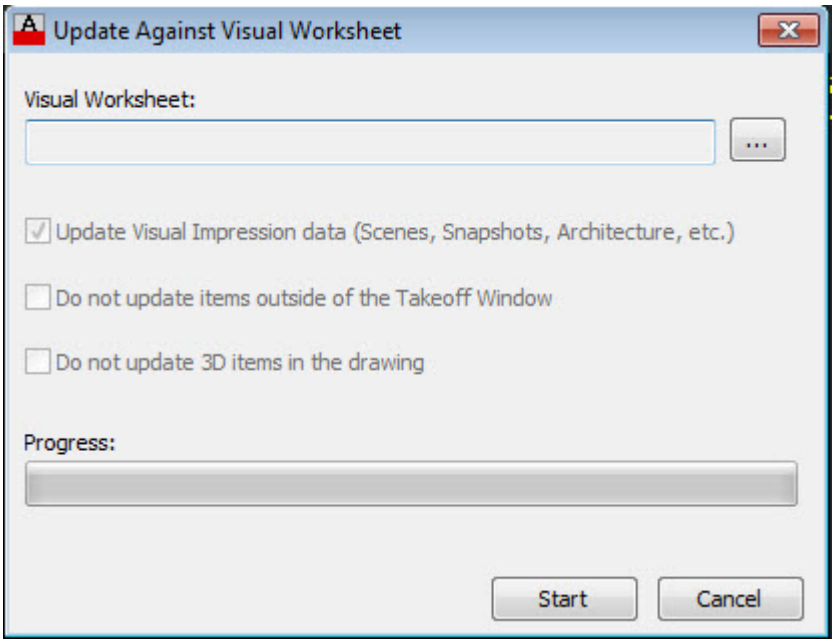
Update against a visual woksheet

If you created a visual worksheet for the drawing, you can update the drawing with any finish changes made in 2020 Worksheet or Visual Impression. Those changes will then appear in subsequent visualizations. **Update against Visual Worksheet** does not transfer any product additions, deletions, or changes made in the Worksheet. It allows users to use Worksheet with Visual Impression to make changes without impacting the integrity of the original drawing.

All worksheets "know" what drawings they originated from. Worksheets created through a "Save as" of the original worksheet retain the drawing relationship, allowing you to update a drawing from other versions of the original worksheet. This is helpful when different scenarios of options are presented to the customer for feedback. In creating versions of the original worksheet and specifying each scenarios with different finishes, any of the versions can be used to update the drawing.

1. Click **Update Against Visual Worksheet**  on the CAP Designer toolbar.

2. Under **Visual Worksheet**, select the worksheet you want to update against.



3. Choose whether you want to update:
   - scenes, snapshots or other from the worksheet to the current drawing.
   - items not included in the current Takeoff
   - 3D items in the current drawing
4. Click **Start**.

See also:

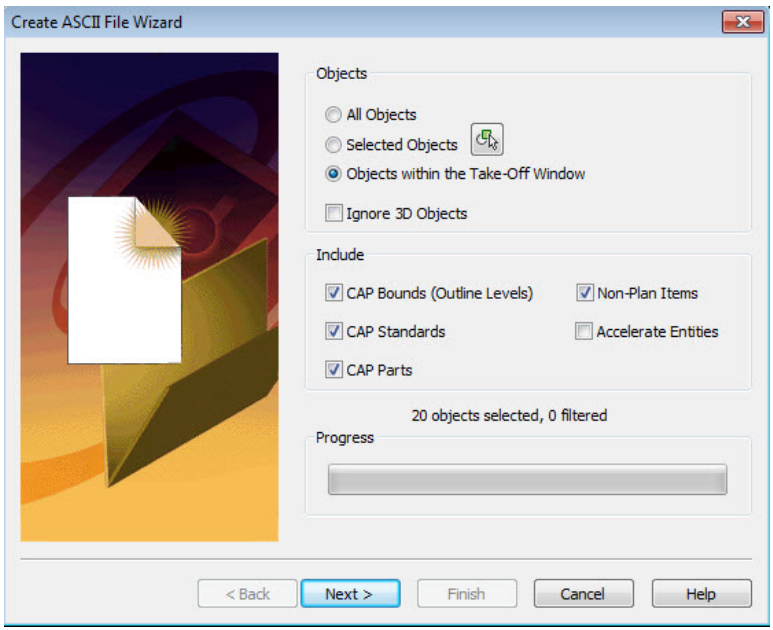
- Update against associated worksheet
- Visual Impression for 3D specification

Create an ASCII file

This command creates a parts list and saves it in a .txt file.

1. From the **CAP Designer** menu, select **2020 Worksheet**, and then **Create ASCII File**.

   This launches the **Create ASCII File Wizard**.



2. By default, all **Take Off** options are selected. This means that all the following information is pushed to the ASCII file:

   CAP Bounds (Outline Levels): These are products grouped by certain designations such as departments, sections, or floors.

CAP Standards: A single group of items that make up a typical unit, such as a workstation. This is often called a "Typical." Instead of selecting individual products and specifying each one of them, you can create a Typical, save it as a CAP Standard, then insert that CAP Standard into a drawing or worksheet.
CAP Parts: Any product from the Mfg Catalog, custom parts created using the **CAP Part, New** command or symbols brought from a Custom Catalog.
Non-Plan Item List (NPIL) - List containing items that are not shown in the drawing.
Accelerate Entities: - Furniture placed using the Accelerate program.

3. You may check **All Objects** to pull all items from the drawing. To select items, click  . This returns you to the drawing.
   In the drawing, select the items you want to include in the ASCII file. Press Enter to confirm your selection and return to the Wizard.
4. Click **Next** to continue.

   The **ASCII Information** dialog box is displayed.
5. Beside Location, click  to select the folder to store this ASCII file.

   Enter a **File Name**.
   Enter an optional **Title**.
6. Click **Back** to review information or click **Next**.

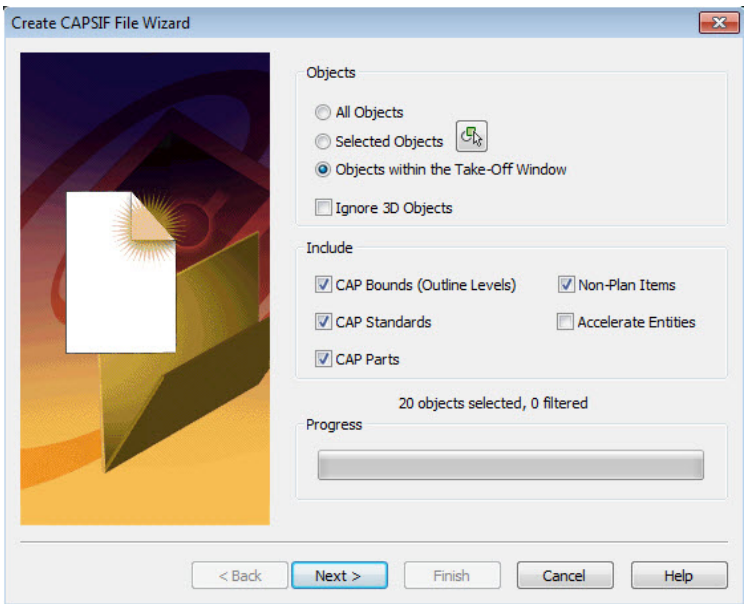
   The **Processing screen** opens, with a message saying "Please wait".
7. Once the message changes to "Complete!", click **Finish** and the ASCII file you just created will open automatically.

   If you don't wish to open the ASCII file, clear the **Open ASCII file** check box before clicking **Finish**.

Create a CAPSIF file

1. In AutoCAD, open an existing drawing.
2. From the **CAP Designer** menu, select **2020 Worksheet**, then **Create CAPSIF File**.

   This launches the **Create CAPSIF File Wizard**.



3. By default, all **Take Off** options are selected. This means that all the following information is pushed to the CAPSIF file:

   CAP Bounds (Outline Levels): These are products grouped by certain designations such as departments, sections, or floors.
   CAP Standards: A single group of items that make up a typical unit, such as a workstation. This is often called a "Typical." Instead of selecting individual products and specifying each one of

them, you can create a Typical, save it as a CAP Standard, then insert that CAP Standard into a drawing or worksheet.
CAP Parts: Any product from the Mfg Catalog, custom parts created using the **CAP Part, New** command or symbols brought from a Custom Catalog.
Non-Plan Item List (NPIL) - List containing items that are not shown in the drawing.
Accelerate Entities: - Furniture placed using the Accelerate program.

4. You may check **All Objects** to pull all items from the drawing. To select items, click  . This returns you to the drawing.
   In the drawing, select the items you want to include in the CAPSIF file. Press Enter to confirm your selection and return to the Wizard.
5. Click **Next** to continue.

   The **CAPSIF Information** dialog box is displayed.
6. Beside Location, click  to select the folder to store this CAPSIF file.

   Enter a **File Name**.
   Enter an optional **Title**.
7. Click **Back** to review information or click **Next**.

   The **Processing screen** opens, with a message saying "Please wait".
8. Once the message changes to "Complete!", click **Finish** and the CAPSIF file you just created will open automatically.

   If you don't wish to open the CAPSIF file, clear the **Open CAPSIF file** checkbox before clicking **Finish**.

Compare a drawing to a worksheet

The **Compare** feature cross-references existing components (parts and pieces) in the drawing against the worksheet that was created from that drawing. This allows you to ensure that the drawing and worksheet are alike. **Compare** indicates if there are any discrepancies between these two pieces of information. The resulting compare will produce 3 new worksheets. It can also create a report that can be printed or saved as a document.

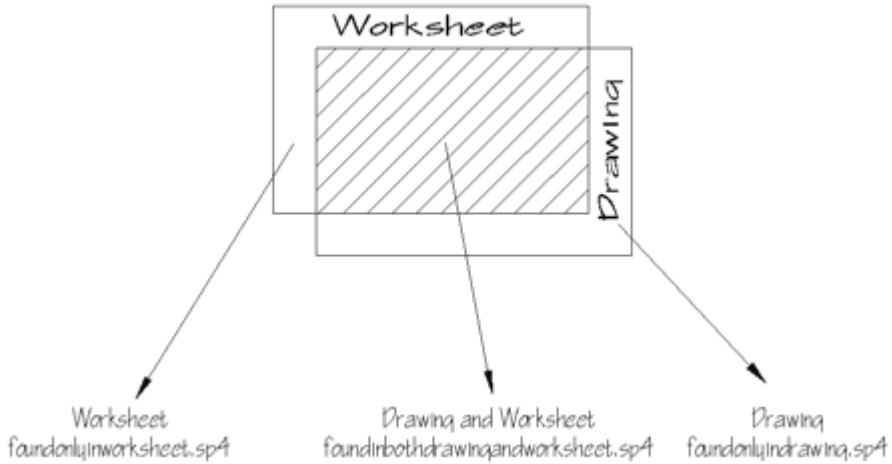
In this section, you will learn how to compare the drawing with the corresponding worksheet. Below is a listing of worksheets created, as well as an illustration of the comparison process.

- Parts found only in Drawing (foundonlyindrawing.sp4)
- Parts found only in Worksheet (foundonlyinworksheet.sp4)
- Parts found both in Drawing and Worksheet (foundinbothdrawingandworksheet.sp4)

Before you begin the Compare:

- Open your existing drawing that contains CAP symbols.
- Know the location of the worksheet file associated with that drawing.

Note: The worksheet file being compared must be closed while using Compare.



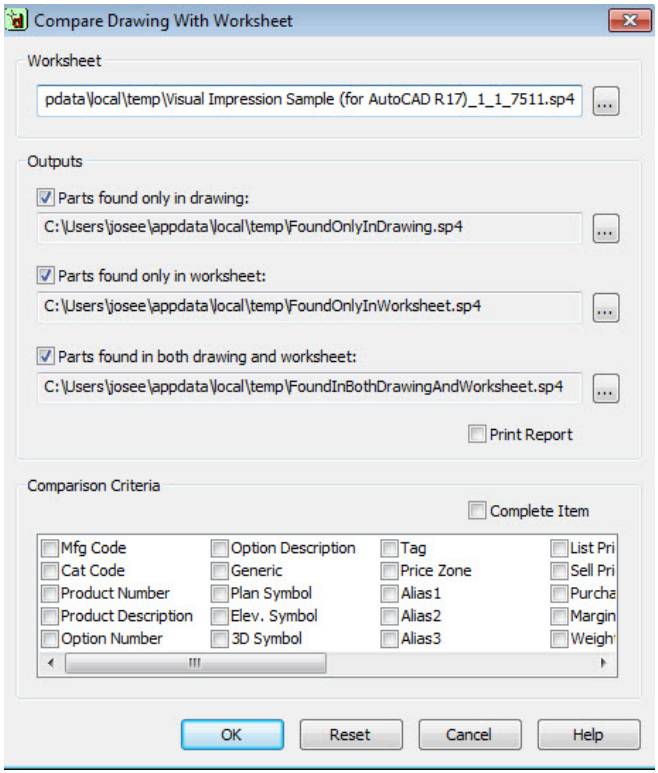
For a step-by-step exercise, see Example - compare a drawing to a worksheet.

Example - compare a drawing to a worksheet

1. From the **CAP Designer** menu, select **2020 Worksheet**, **Compare**.

   The **Compare Drawing with Worksheet** dialog box appears.

2. Under **Worksheet**, select a worksheet file by clicking … if you want to change the current file.



3. Under **Outputs**, leave the boxes checked so that the worksheet files **FoundOnlyInDrawing**, **FoundOnlyInWorksheet** and **FoundInBothDrawingAndWorksheet** are created.

   To change the location and/or name of each worksheet, click the appropriate … button.

4. Check **Print Report** if you want to print a summary sheet of the three output worksheets.

5. Under **Comparison Criteria**, check the boxes for **Mfg Code**, **Catalog Code**, **Product Number**, **Product Description**, **Option Number** and **Option Description**.
6. Click **OK**.

Once the **Compare** is done, the next step is to review the 3 output files that were created during the **Compare**.

Open any of the output files and review the information. You will be able to conclude if anything in the drawing is not found in the worksheet, if there is any product in the worksheet that is not in the drawing and lastly, which parts are found in both the drawing and the worksheet.

You could then revise either the drawing or the worksheet as necessary.

Standards (Typicals)

A CAP Standard, also known as a Typical, is a tool to select multiple furniture parts and group them so you can store, edit, and re-use the parts within a Standard as one block, or as individual parts if needed.

There are many reasons to use CAP Standards:

- Increased Efficiency: Using CAP Standards in AutoCAD adds efficiency because the single name of the Standard represents an entire group of furniture (a Worksheet file).
- Increased Accuracy: Copying and inserting a single block that represents multiple components will prevent errors of omission or duplication.
- Installation Drawings: Plotting drawings without component tags makes a more legible installation drawing (a single name represents numerous parts).
- Globally Replaceable: Another important benefit is that CAP Standards are globally replaceable.

Other considerations when creating CAP Standards:

- Panels should not be included in the CAP Standards because the standards may be attached back-to-back. Including panels could result in double the panel count.
- Each standard has a base point by which you drag the standard just before it is inserted in a drawing. When picking the insertion point, select a node on the innermost corner of the station (opposite the "door"), often in the back of a corner worksurface.
- Create the **A-STDTAGS** layer to put the tags on. Do this because a standard tag appears when you insert the standards, and you will be able to turn the tag off if it is on a separate layer.

See the following topics:

- Create a CAP Standard
- Redefine a CAP Standard
- Replace a CAP Standard
- Edit a Standard's information
- Custom Workstation
- Large Project/Take Offs

Create a CAP Standard

Follow these initial steps to create a new CAP standard:

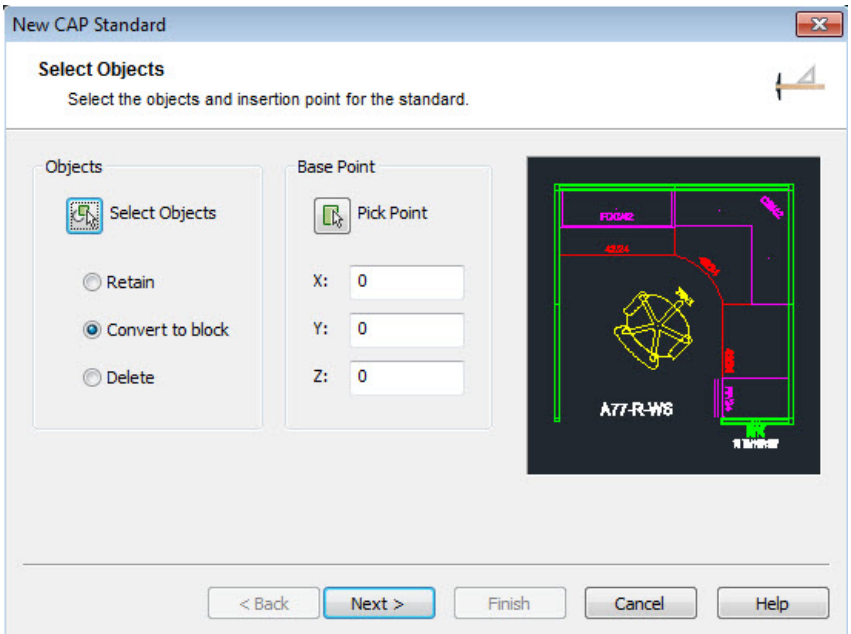
1. From the **Explorer pane**, **Content** tab, select any furniture line and create a typical workstation. Include worksurfaces, pedestals, and overhead storage you would specify in a typical workstation.
2. Create the **A-STDTAGS** layer. This layer will be used for tags, giving you more control of what you see when you plot.

3. To start the wizard, click the **Make Standard** icon  on the CAP Part toolbar and then refer to the following topics:

   Select objects and the insertion point for the standard
   Specify tag properties for the standard
   Enter standard information
   Save the standard in a custom catalog

Select objects and the insertion point for the standard

1. After clicking the Make Standard  icon in the CAP Part or CAP Designer toolbar, the **Select Objects** pane of the New CAP Standard wizard is displayed.
   The New CAP Standard wizard guides you to all the steps for creating a standard (typical).



2. To select the objects for the part, click  . This sends you to the drawing.
3. Select the objects to include in the CAP Standard. Make sure you use a crossing or a window to select everything including the nodes.
4. Press Enter to confirm your selection.

You will be brought back to Select Objects pane of the Make Standard wizard where you will see a preview of the selected parts.

5. Click any of the following options:

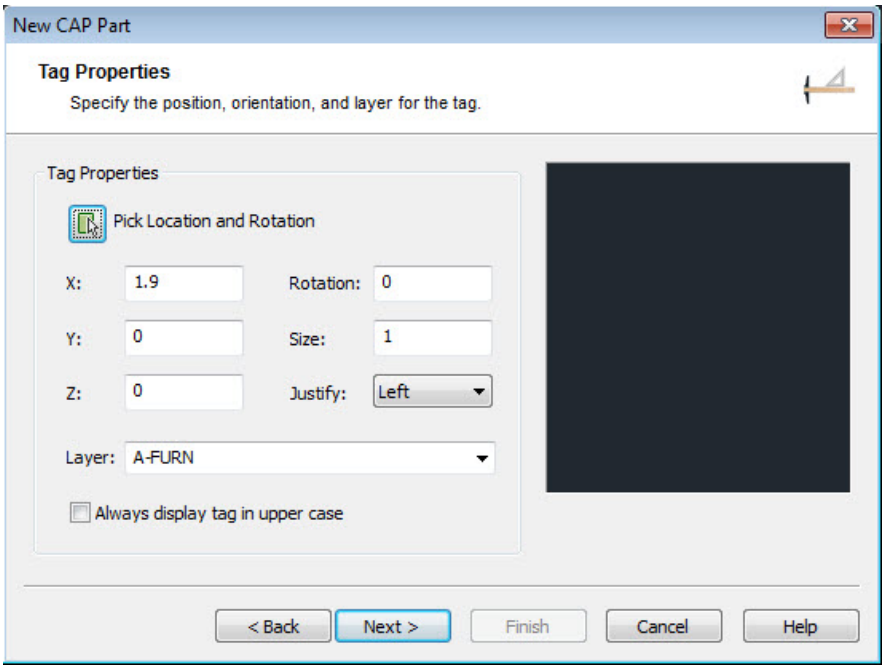
   Retain: Retains the selected objects as distinct objects in the drawing after you create the block.
   Convert to block: This is the default selection. It converts the selected objects to a CAP Part.
   Delete: Deletes the selected objects from the drawing after you create the block.

6. Go to Specify the tag properties.

Specify tag properties for the standard

1. On the **Tag Properties** pane of the Make Standard Wizard, click the **Pick Location and Rotation** icon  to select where you want the Standard's tag to appear. This sends you back to the drawing.
   You can also enter the **X, Y, Z**... coordinates manually.

2. In the drawing, click at the desired Text Location point and press ENTER.
   Once you are back to the Tag Properties pane, the selected location coordinates appear.



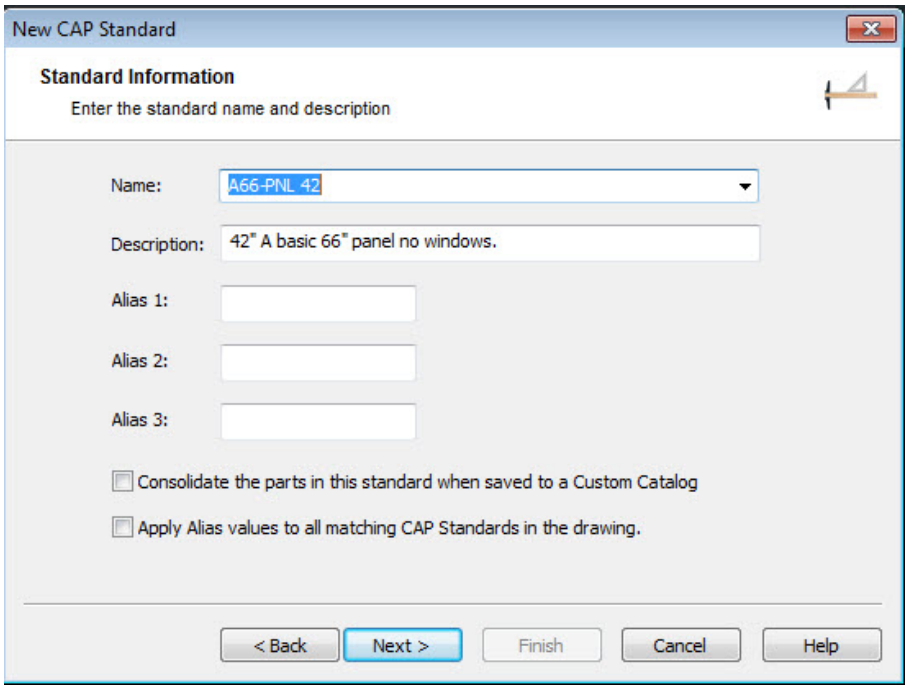
3. Modify any of the following:

   Rotation to manually change the text angle. 0 is horizontal, 90 is vertical.
   Size to modify the text height. Panels typically have a height of 4"; interior components have a height of 2.5".
   Justify to choose a **Left**, **Right** or **Center** justification for the text.
   Select the **Layer** you wish the tag to be on.
   You can also check the box **Always display tag in upper case**.

4. Click **Next** and go to Enter standard information.

Enter standard information

1. On the **Standard Information** pane of the Make Standard wizard, enter the required information.



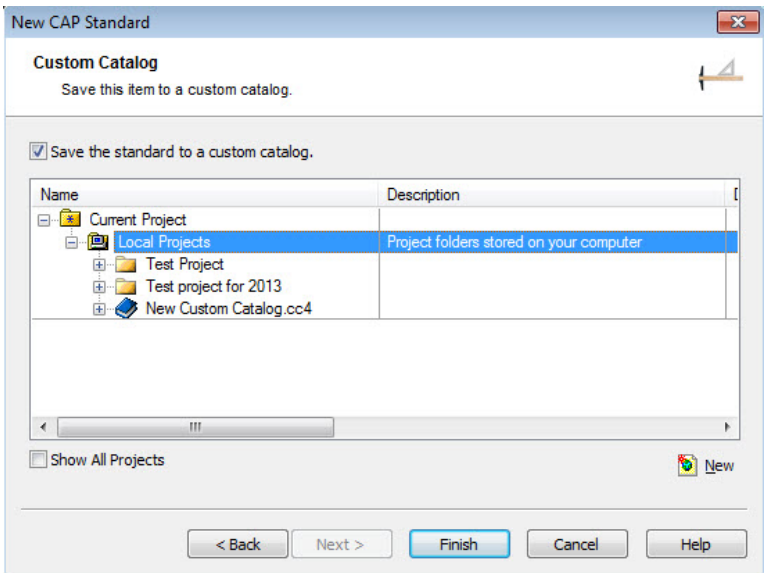
2. If you want to assign an Alias at this time to all the components of the Standard you can.
3. Check **Consolidate the parts in this standard...** so that identical items are combined into one line item.
4. Check **Apply Alias values...** to copy the alias tags to all identical standard items.
5. Click **Next** to continue and go to Save the standard in a custom catalog.

Note: For more information about consolidating parts, see Consolidate identical items in the 2020 Worksheet help.

Save the standard in a custom catalog

For information about custom catalogs, see the Custom Catalogs section in the 2020 Worksheet help.

1. On the **Custom Catalog** pane of the Make Standard Wizard, check **Save the part to a custom catalog**. If this option is unchecked, the CAP Standard will be saved in this drawing only.



2. Select the appropriate **Custom Catalog** to store the new CAP Standard. Click the New icon to create a new project or a new custom catalog.
3. Click **Back** to review the information or **Finish** to complete.

Now, this new standard will get counted when you create a worksheet. You can do this for any custom item including plants, computers, artwork, etc.

See also Edit a Standard's information

Redefine a CAP Standard

Many times in dealing with clients you will need to make revisions to furniture plans. By using CAP Standards, you can globally replace a CAP Standard within a drawing, saving time in the revision process.

There are two ways to redefine a Standard:

- Redefine using the same name.
- Redefine using a new name, and then use **Block Replace** to switch some of the original Standards with the new one. See Replace a CAP Standard for details.

To change an existing CAP Standard within a drawing, follow the steps below. Do not use the AutoCAD Explode command.

1. Click  on the **CAP Standard** toolbar.
2. Select the CAP Standard you need to revise in your drawing. Press Enter to confirm your selection.

   Notice that the tag disappears, and if you hover over the parts in the workstation, they can now be selected individually.
3. Change the workstation as needed.
4. Go through the steps of creating a new CAP Standard.

Name the new Standard with the ***same name*** as the existing Standard. Use the down arrow to the right of the name to pick the same name.

Note: Make sure when you create this new Standard that you give it the same insertion point that the previous Standard had. That way when you redefine the block it will remain at the same insertion point.

5. When you are at the point where you save the standard to a Custom Catalog, pick the Catalog that has the standard in it. Do not select the standard itself.
6. Click **Finish**.

   You will get two confirmation dialog boxes. One to replace the standard in the Custom Catalog, the other to replace the standard in the drawing.
7. Click **Yes** for both.

   Notice in your drawing that all of the CAP Standards with the same name have been revised.

Replace a CAP Standard

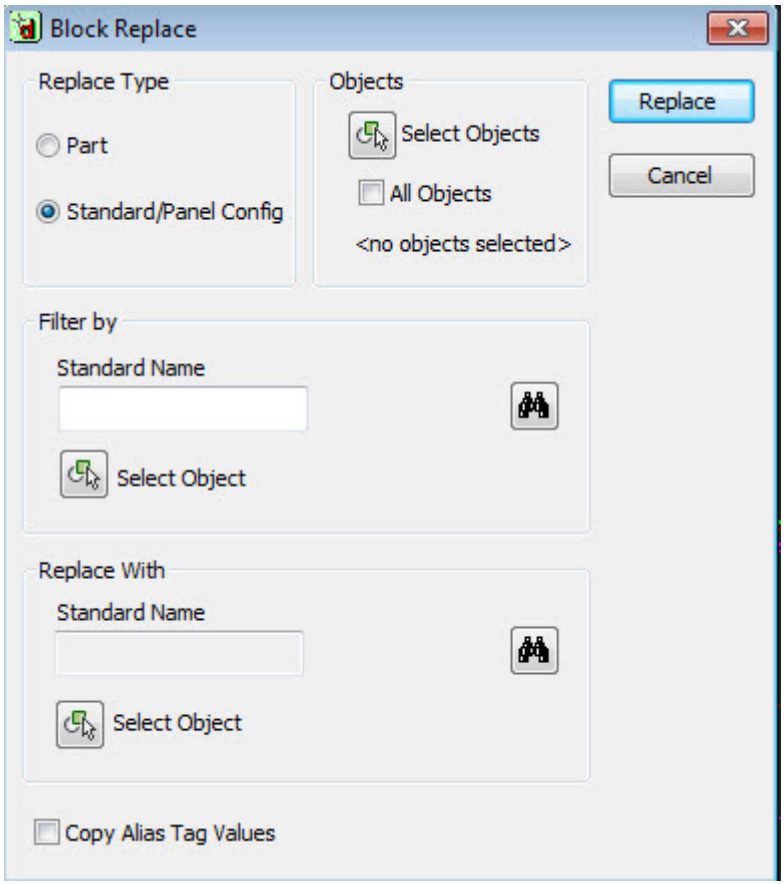
Another method for redefining a workstation is to create a new name such as TYP-A REV for the revised workstation. Then, if you need to go back to the original later you can.

1. Place a Standard on the drawing in the 0 rotation.
2. Click the **Undo Standard** icon  on the **CAP Standard** toolbar.
3. Select the CAP Standard you need to revise within your drawing. Press Enter to confirm your selection.

Notice that the tag disappears, and if you hover over the parts in the workstation they can now be selected individually.

4. Change the workstation.
5. Create a new Standard with the **Name** TYP-A REV.
6. Once you create the new standard, click the **Block Replace** icon  in the **CAP Designer** toolbar**.**
7. In the **Block Replace** dialog box, under **Replace Type**, select **Standard.**
8. Under **Objects**, click the **Select Objects**  icon to go back to the drawing and select a standard, or check **All Objects**.
9. To narrow down, under **Filter by**, you can type a part name, search one with the Part Find tool  or select filter objects  on the drawing.

10. Under **Replace With** select the new standard as described in the previous step.



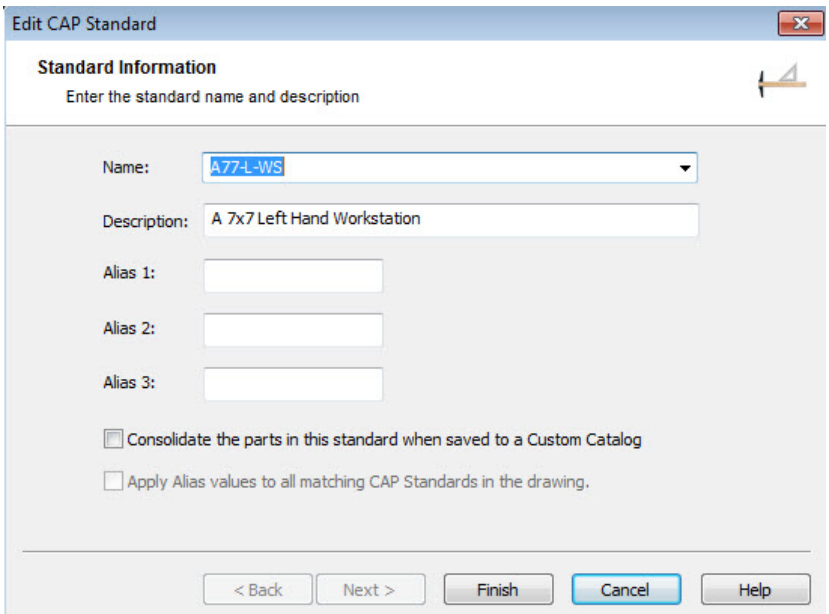
11. Check **Copy Alias Tag Values** to pull in these as well.

Note: For more information about the **Block Replace** command see Search and replace.

Edit a Standard's information

To edit a Standard's name, description or Alias values:

1. Click  on the **CAP Standard** toolbar.
2. Select the Standard on the drawing.
3. Press Enter to confirm your selection.
4. In the **Edit CAP Standard** dialog box, change the **Name**, **Description** or **Alias** fields.



5. You can **Consolidate the parts in this standard** and **Apply Alias values...** to copy the alias tags to all identical standard items.

For more details about consolidating, see the topic Consolidate identical item in the 2020 Worksheet help.

6. Click **Finish**.

Custom workstation

If a non-standard workstation is required, you can use an existing CAP standard as a base, or you can place new components from the library directly on the plan.

1. Place a CAP Standard in the area where you need it.
2. Click  on the **CAP Standard** toolbar.
3. Select the CAP Standard you need to use for the custom workstation. Press Enter or right-click to confirm your selection.

   Notice that the tag disappears, and if you hover over the parts in the workstation they can now be selected individually.
4. Erase the components that need to be changed and insert new components to complete the workstation.

   The furniture in this workstation will be counted along with the panels and other miscellaneous furniture. It will not be considered a CAP Standard any more.

Large Project/Take Offs

Using CAP Standards makes placing furniture in your drawing much easier and more accurate. Once your layout is complete, you will want to make a final count from the drawing. There are three ways to count a drawing using CAP Standards and CAP Parts:

- Simple Take Off - disables the standards and boundaries to create a total list of products using Worksheet.
- Standards Take Off - includes CAP Standards in the Worksheet.

Bounds Take Off - divide the layout into areas or departments called CAP Bounds. This is often useful if the client needs to order the furniture in phases or wants to charge a department for the furniture expense. See the topic Bounds Take Off in the **Bounds** section.

Simple Take off

The simple take off method creates a worksheet of the entire project.

1. Click  on the CAP Designer toolbar.

   This launches the **Create Worksheet Wizard**.
2. Clear the checkmark beside **CAP Bounds** and **CAP Standards.**

   This does not mean that the worksheet will not count the CAP Standards, it will simply count the components that make up the standards as CAP parts.
3. Follow the rest of the steps as described in Create a worksheet.

Standards Take Off

1. Click  on the CAP Designer toolbar.

   This launches the **Create Worksheet Wizard**.
2. Check **CAP Standards** so that standards are listed as parts in the worksheet**.**
3. Follow the rest of the steps as described in Create a worksheet.

Note: CAP Standards are represented in a worksheet as pink lines. See Standards in the 2020 Worksheet help for details.

Bounds

Draw Schedules

A draw schedule is a list of parts, which includes the Item, Tag, Mfg, Qty, Part No., Part Description, Price and Extended Price information.

You can insert a draw schedule in your drawing by selecting a worksheet or by selecting symbols in your drawing.

Once you have learned how to create draw schedules, you can use them along with the plan view and 3D view to create a presentation document.

Create a draw schedule from the drawing

This draw schedule is an AutoCAD table entity, so you will able use any AutoCAD table editing command, such as resizing columns and rows, moving the table, and manually editing text in the table.

The draw schedule is not linked to the drawing. If you make changes to the drawing, you will need to regenerate the schedule.

The Draw Schedule Wizard guides you to each step involved in creating a draw schedule.

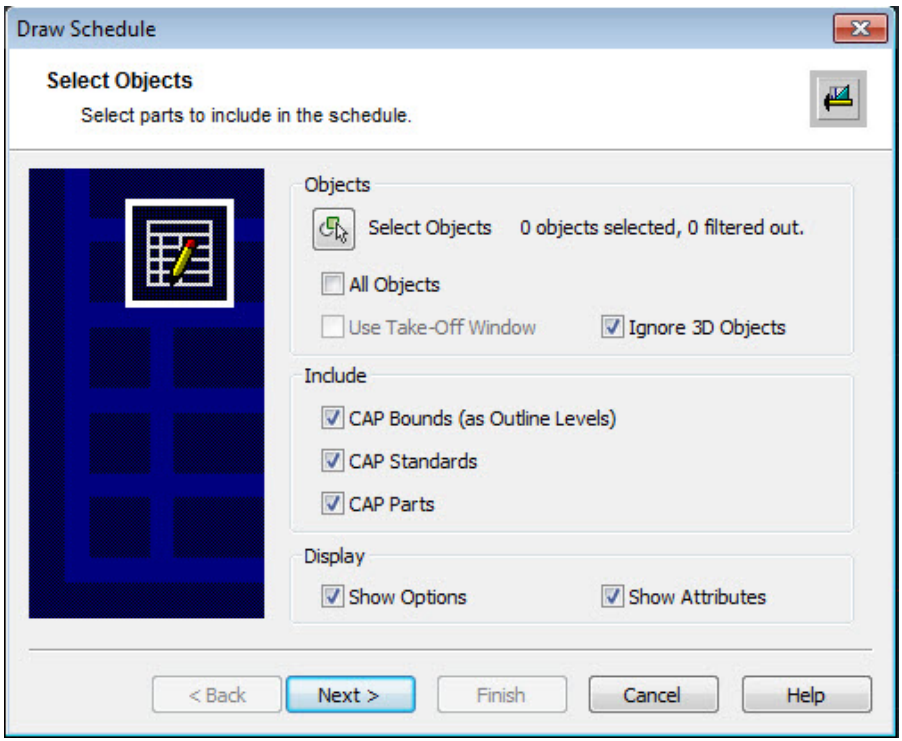
See:

- Select objects for the schedule
- Select a tile and a location
- Choose text properties
- Add or remove columns

Select objects for the schedule

To start the Draw Schedule Wizard and create a schedule from the drawing:

1. Click the **Draw Schedule** icon  on the **CAP Designer** toolbar.



2. On the Select Objects pane of the Draw Schedule Wizard, make your selection by using either of the following options (you can combine the last 3):

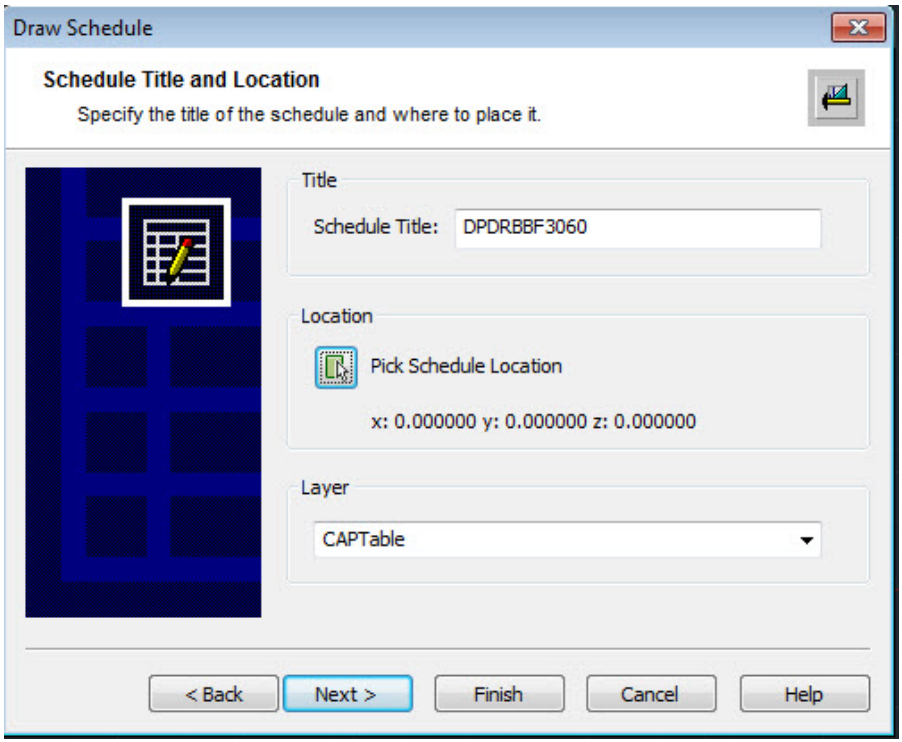
   Clicking the **Select Objects** icon  .

Selecting **All Objects to** pull all items from the drawing,
Use a **Take-Off Window**.
Ignore 3D objects from your selection.

3. Under **Include**, you can have the draw schedule list by outline level, by standard level or by parts. To view examples of each one, see Examples - draw schedules.
4. Under **Display**, choose whether you want to show options and/or attributes in the draw schedule.
5. Click **Next**.
6. Go to Select a tile and a location.

Select a tile and a location

1. In the **Schedule Title and Location** pane of the Draw Schedule wizard, type in the **Schedule Title**.

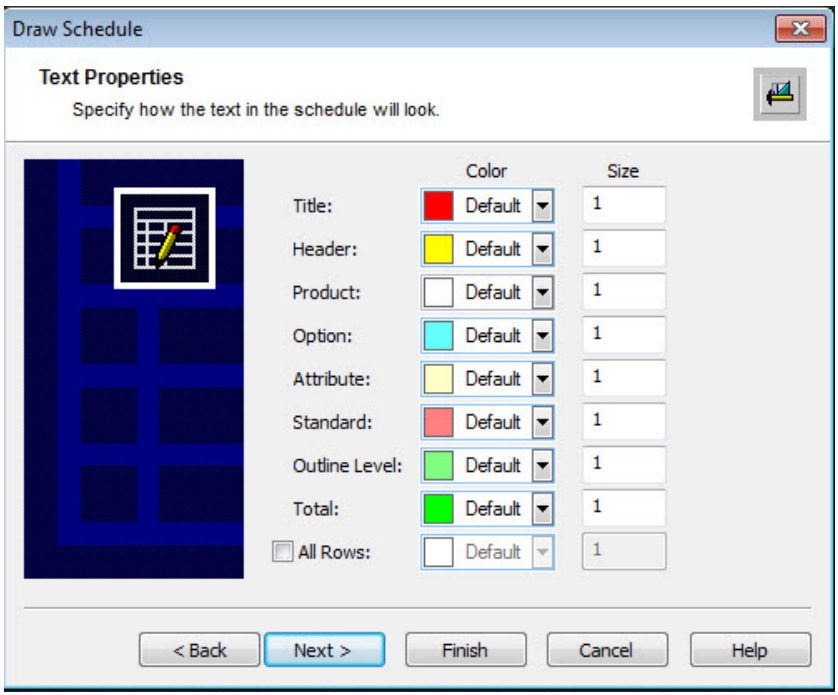


2. Click The Pick Location icon  and select a point on the drawing. You will be brought back to the dialog box.
3. Choose the **Layer**.
4. Click **Next**.

5. Go to Choose text properties.

Choose text properties

1. If you want the draw schedule components' text to be one color and size, check **All Rows** then set the color and size**.**

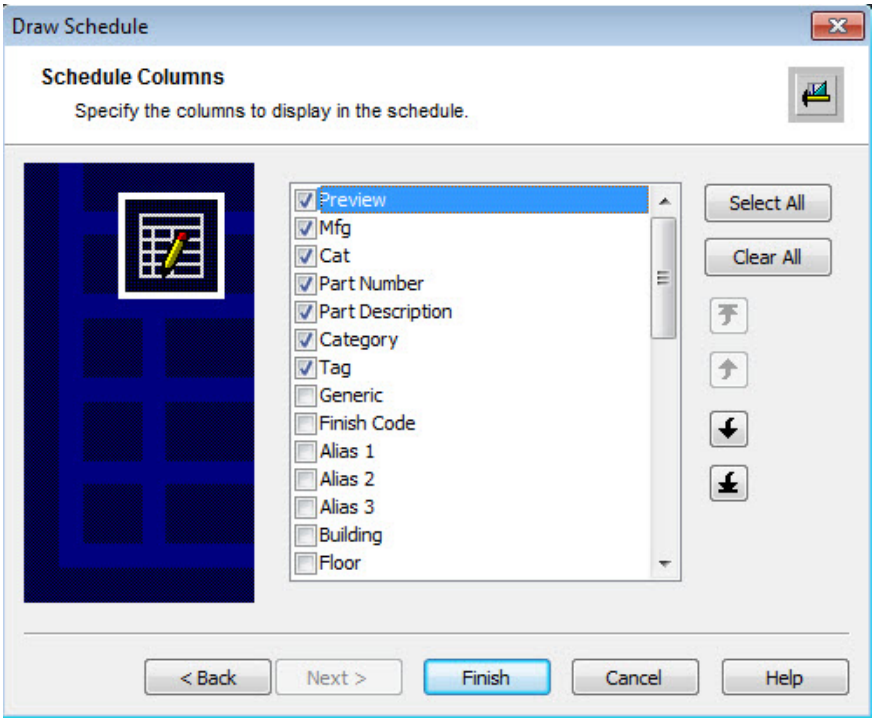


Otherwise, select the text color and size for text each component. We recommend that you change the text **Size** to **5**.

2. Click **Next** and go to Add or remove columns.

Add or remove columns

1. In the **Schedule Columns** pane of the Draw Schedule wizard, select the columns you want displayed in the draw schedule.
   You can change the column order by dragging and dropping the column names or by using arrow buttons.



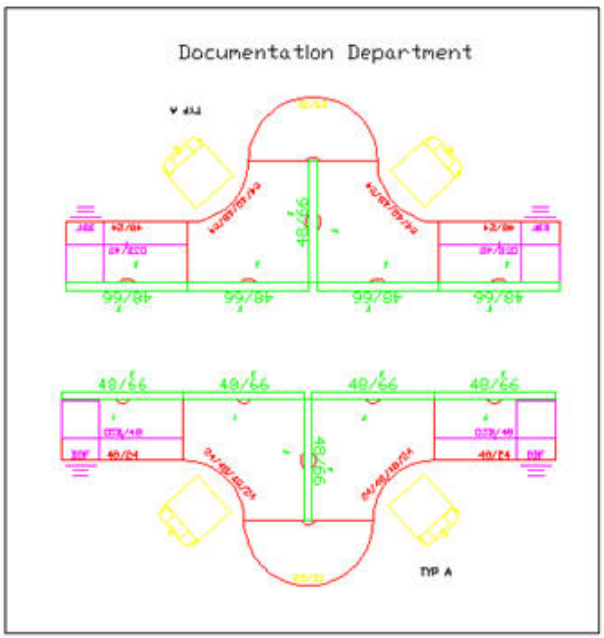
2. Click **Finish**.

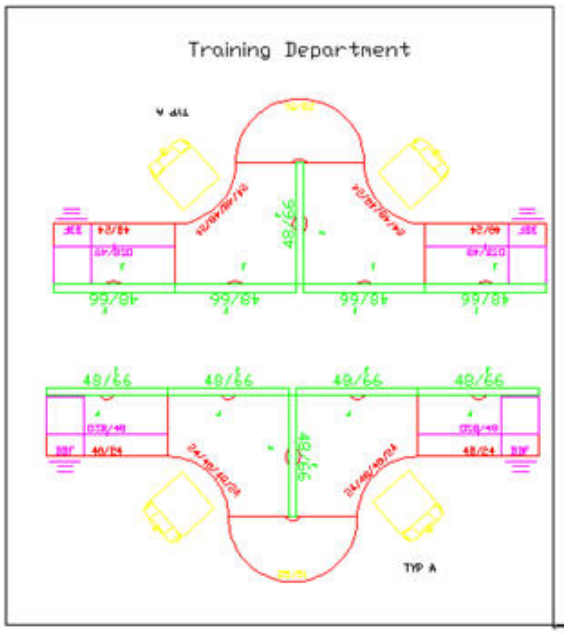
   Your draw schedule now appears within your drawing.

Note: The selections you made on each screen of the Draw Schedule Wizard will be saved so that they are automatically selected the next time you run Draw schedule.

Examples - draw schedules

In this example, there are two CAP bounds in the drawing. Within each bound there are two instances of a standard called TYP A.





Draw schedule with outlines:

Draw Schedule									
#	Preview	Mfg	Cat	Part Number	Part Description	Category	Qty	List	Ext List
1				Documentation Department					17212.00
2				Training Department					17212.00
					Grand Total				34424.00

Draw schedule with standards:

Draw Schedule									
#	Preview	Mfg	Cat	Part Number	Part Description	Category	Qty	List	Ext List
1				TYP A	Typical A workstation		4	8606.00	34424.00
					Grand Total				34424.00

Draw schedule with parts (options and attributes not shown):

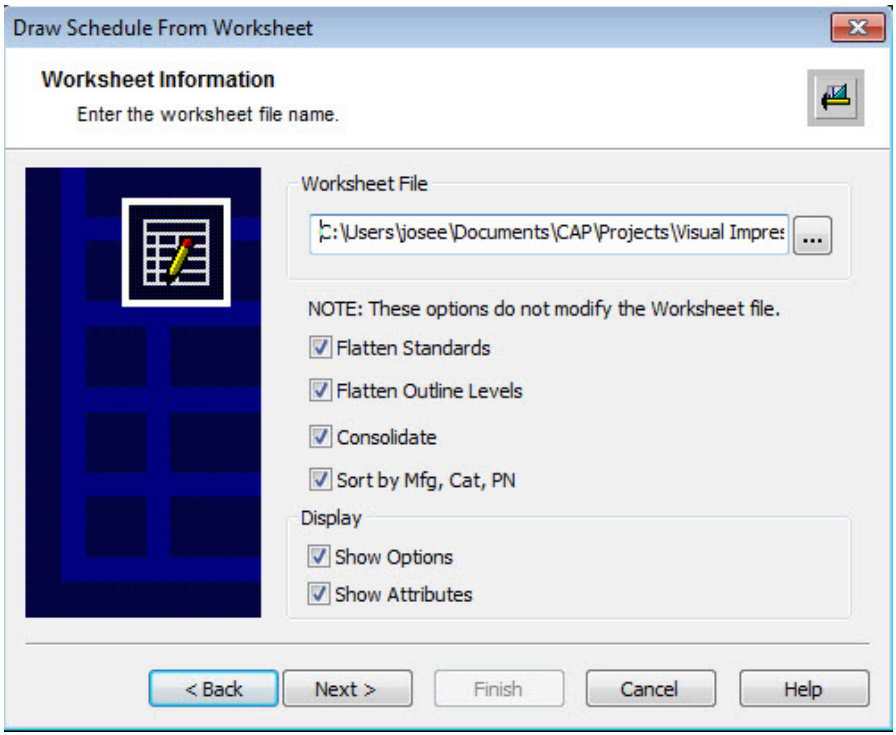
Draw Schedule									
#	Preview	Mfg	Cat	Part Number	Part Description	Category	Qty	List	Ext List
1		STC	SCN	46512010	CHAIR-THINK,NO ARM,3D KNIT, SEWN SEAT,HEAD REST,ASSEM	SEATING	8	927.00	7416.00
2		STC	TSA	TS7048BL	OVERHEAD STORAGE BIN-48W	STORAGE	8	476.00	3808.00
3		STC	TSA	TS72448CC	WORKSURFACE-CURVED CORNER, 24X48	WORKSURFACE	8	455.00	3640.00
4		STC	TSA	TS72448S	WORKSURFACE-STRAIGHT,24X48	WORKSURFACE	8	216.00	1728.00
5		STC	TSA	TS751HR	WORKSURFACE-HALF ROUND,SPNR, 25 1/2X51	WORKSURFACE	4	646.00	2584.00
6		STC	TSA	TS7664STF	PANEL-FULL TACKABLE ACOUSTICAL,66X48	PANEL	20	564.00	11280.00
7		STC	TSA	TU720BBFL	PEDESTAL-2 BOX/1 FILE DWR, 23-1/2D	FILING	8	496.00	3968.00
					Grand Total				34424.00

Create a draw schedule from a worksheet

After you have created a worksheet and specified options in the worksheet, you can bring it into your drawing as a draw schedule. The resulting draw schedule will be an AutoCAD table entity, so you will able to use any AutoCAD table editing command such as resizing columns and rows, moving the table, and manually editing any text in the table.

The draw schedule is not linked to the worksheet. If you make changes to the worksheet, you will need to regenerate the draw schedule.

1. From the **CAP Designer** menu, select **2020 Worksheet**, then **Draw Schedule from Worksheet**.



2. In the **Worksheet Information** dialog box, type in the worksheet name or click  to find the worksheet.
3. Select whether you want to flatten standards, flatten outline levels, consolidate items, and/or sort by manufacturer, category and part number.
4. Select whether you want to show options and/or attributes.
5. Click **Next**.

6. See the following topics to finish creating the draw schedule:

   Select a tile and a location
   Choose text properties
   Add or remove columns

Note: The selections you make on each pane of the Draw Schedule Wizard is saved so that they are automatically selected the next time you run the wizard.

Create a presentation document using Plan view and 3D

In this exercise, you will create a presentation document that includes a workstation in Plan view and in 3D. In the same drawing you will also use **CAP Objects** to dress up the 3D station. At the end you will add a list of products, called a draw schedule.

Before proceeding, build a workstation using Plan View symbols.

Copy the plan to 3D:

1. From the **CAP Designer** menu, select **Tools**, **Copy Plan to 3D**.
2. Select all the symbols for the plan view workstation.
3. Select a base point on the plan view workstation.
4. Select a second point off to the right. A 3D workstation appears. Notice that it has no tags.

Before viewing this 3D station in an isometric view, dress it up by adding Cap Objects to the 3D station:

1. From the **CAP Designer** menu, select **Objects**, then **Select Object** to display the **CAP Objects** dialog box of 3D objects.

2. Select an object by double-clicking it.
3. Place it on the 3D workstation (the one without tags) and rotate it with your cursor to the desired position. You can also type the rotation angle at the command prompt.
4. At the command prompt, type VP.
5. Click an angle that would be best for the workstation.
6. Now position your drawing so you are able to see both the Plan View and 3D workstations — leave room below your two workstations to place your list of products.

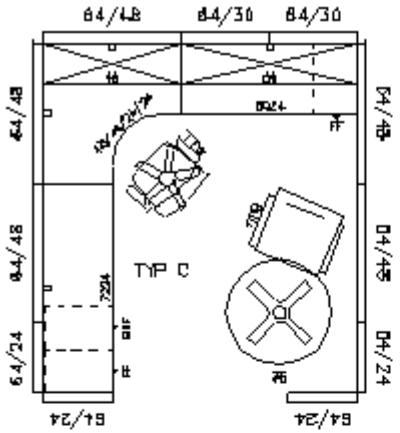
Create the worksheet file:

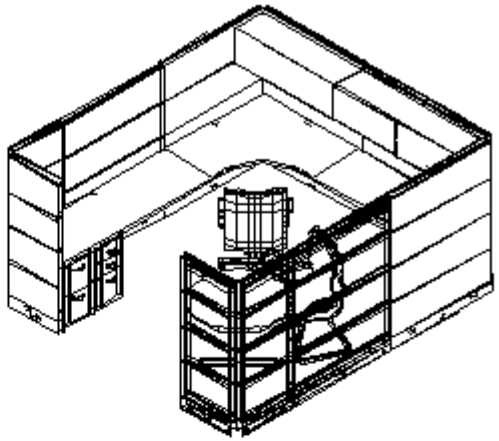
1. From the **CAP Designer** menu, select **2020 Worksheet**, **Create Worksheet File**.
2. Select the plan view workstation. Click **Next**.
3. Give the worksheet a name and a title. Click **Next**.
4. Clear the check box beside **Open Worksheet File** check box. Click **Finish**.

Create the draw schedule:

1. From the **CAP Designer** menu, select **2020 Worksheet**, **Draw Schedule From Worksheet**.
2. Select the worksheet you just made and click **Next**.
3. Do not check **Include Options** or **Include Attribute**.
4. Select a point under the standard for the location of the draw schedule.
5. Enter a **Text Size** of 4”.
6. Click **Finish**.

Put all three parts together using the AutoCAD Layout function. Your layout should look similar to the image below.





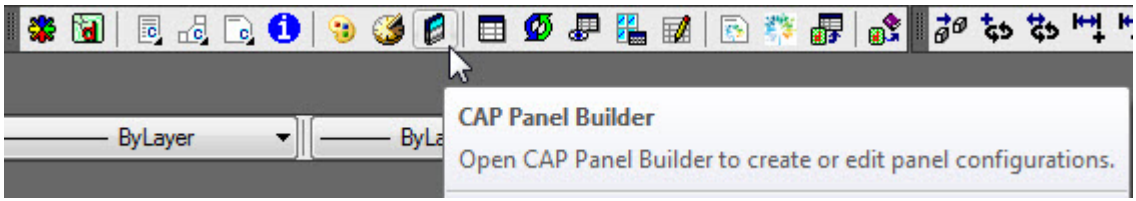
Item #	Tag	Mfg	Qty	Part No.	Part Description	Price	Extended
1	48/48/24/	KDM	1	D1L4848SSG	Worksurface, Curv Corner "L" 6 0x48x24x24, w/grommet	438.00	438.00
2	6024	KDM	1	D1R6024G	Worksurface, Rectangular 60Wx2 4D, w/grommet	246.00	246.00
3	7224	KDM	1	D1R7224G	Worksurface, Rectangular 72Wx2 4D, w/grommet	276.00	276.00
4	64/24	KDM	4	DP2T6424K	Tiled Panel, Both Sides, SmTex 64-1/16Hx24W, w/knockouts	564.00	2256.00
5	64/30	KDM	2	DP2T6430K	Tiled Panel, Both Sides, SmTex 64-1/16Hx30W, w/knockouts	598.00	1196.00
8	64/48	KDM	5	DP2T6448K	Tiled Panel, Both Sides, SmTex 64-1/16Hx48W, w/knockouts	710.00	3550.00
7	48	KDM	1	DS1C48L	*Overhead Cabinet w/Lock 47-7/ 8Wx14-1/8Dx15H	297.00	297.00
8	60	KDM	1	DS1C60L	*Overhead Cabinet w/Lock 59-7/ 8Wx14-1/8Dx15H	438.00	438.00
9	BBF	KDM	1	DS1PFL24A	*Freestanding Pedestal, 6/8/12 15Wx24D, w/Lock	450.00	450.00
10	FF	KDM	2	DS1PFL24B	*Freestanding Pedestal, 12/12 15Wx24D, w/Lock	432.00	864.00
11	36	KIS	1	ITR36QDN	Round Table, Four-Star Base 36 D, Fixed Hgt w/Casters	590.00	590.00
12	BULL	KSS	1	7A3-3-A5B-H	Bulldog Exec Armchair, Mid Grey , Advanced, H Cas	1171.00	1171.00
13	BULL	KSS	1	7AB-1-SL	*Bulldog Side Armchair, Dark G rey	520.00	520.00
						TOTAL	12287.00

Panel Builder

2020 CAP Panel Builder is designed to construct and manage configurations of stack panel products.

To access Panel Builder:

1. Click the **CAP Panel Builder** icon on the **CAP Designer** toolbar.



   The CAP **Panel Builder** module opens.

2. For help on Panel Builder, see the Panel Builder help file, accessible from the Panel Builder Help menu.

Manufacturer-specific information

The following CAP Designer features/commands apply to certain manufacturer product lines only. Refer to the appropriate topic in the help file on Manufacturer-specific information for information.

- Automation Center (Kimball, Knoll, National, Steelcase, Teknion)
- Allsteel Tiler
- CAP Structure Builder (Kimball)
- CAP Utilities (Knoll)

- Convert (Kimball, Steelcase, Inscape)
- Import Z-Axis (Herman Miller)
- Import Vary Easy Symbol (Herman Miller)
- Steelcase - Answer
- Steelcase - Privacy Wall

Command reference

The table below displays the topics to read to get help on a specific command in the **CAP Designer** menu. Note that some command groups are available as toolbars, therefore you are referred to the corresponding toolbar topic.

Command	Topic
Automation Center	See the help file on Manufacturer-specific information
Insert Symbol	Place a product using Insert Symbol
Drawing Setup	Drawing Setup Wizard
Update Against Catalog	Update against a catalog
CAP Tag	These commands are no longer used. See the Tags section for information about creating or modifying tags.
CAP Part	CAP Part toolbar
Cap Standard	CAP Standard toolbar

CAP Bound	CAP Bound Toolbar
CAP Info	View item information
2020 Options	Specify options
2020 Search	2020 Search
CAP Explorer	Display or hide the Explorer pane
CAP Architectural	CAP Architectural
CAP Panel Builder	Panel Builder
2020 Worksheet	Worksheets
Edit	CAP Edit toolbar
Tools	CAP Tools toolbar
Objects	Create a presentation document using Plan view and 3D
Import	Import Giza or Office Sales files
Convert	See the help file on Manufacturer-specific information
Preferences	Preferences
Help	Using Help