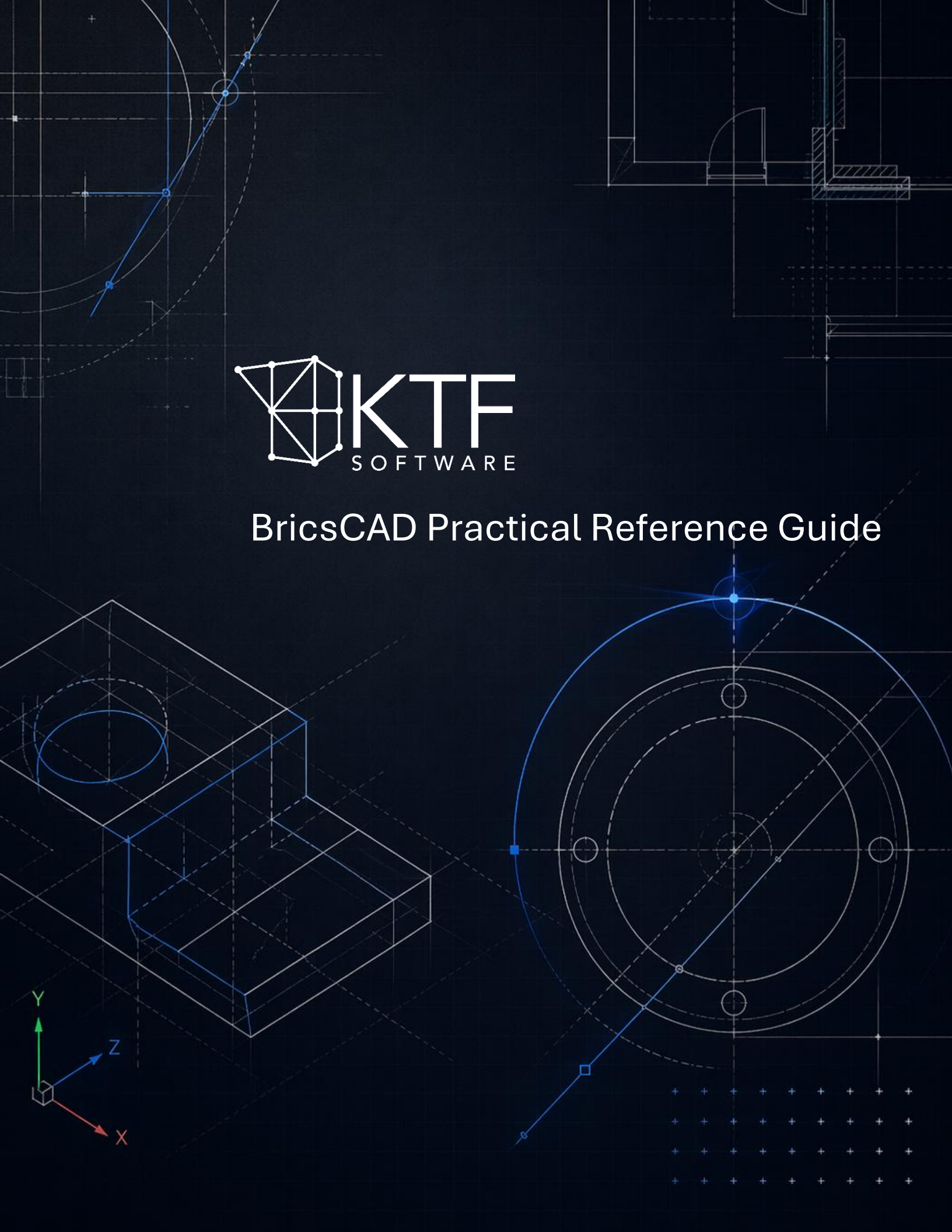
KTF SOFTWARE

BricsCAD Practical Reference Guide

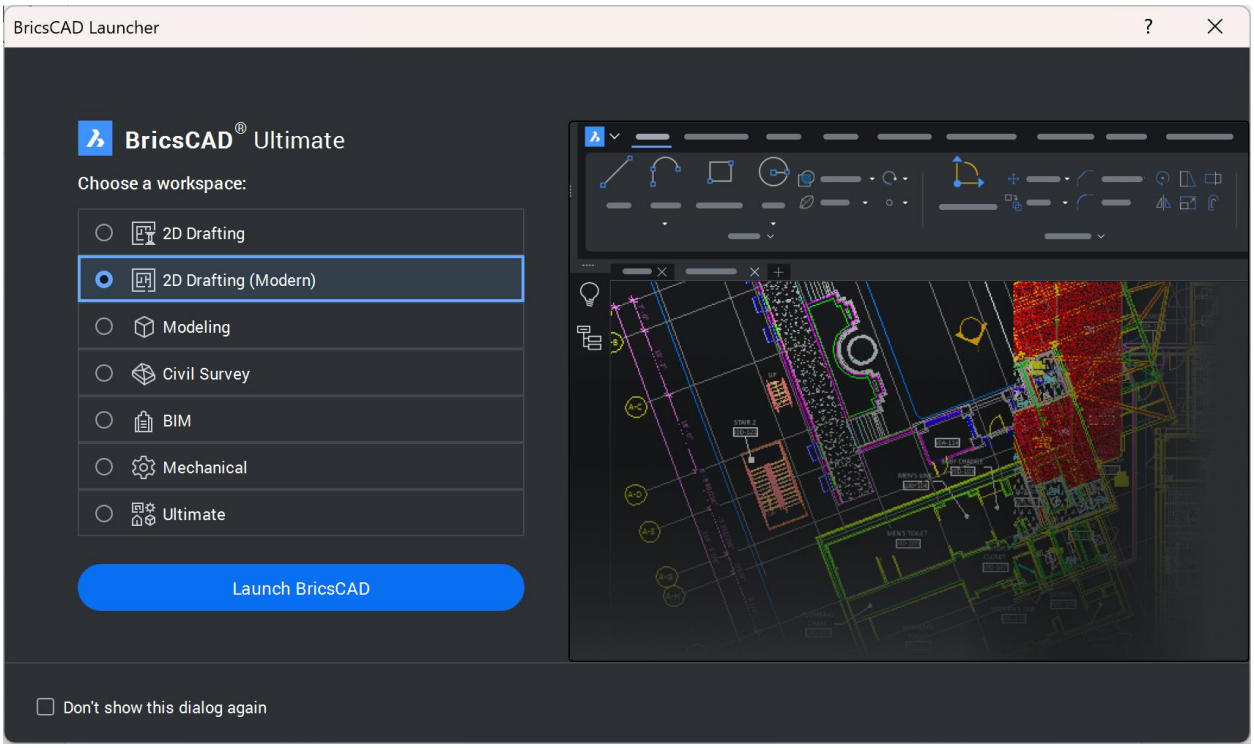


This guide is designed to assist you when you get stuck and to serve as a quick reference for tools and concepts you may have forgotten.

User Interface

The Launcher

The Launcher is the first thing that you see when you open BricsCAD. It allows you to choose a workspace.

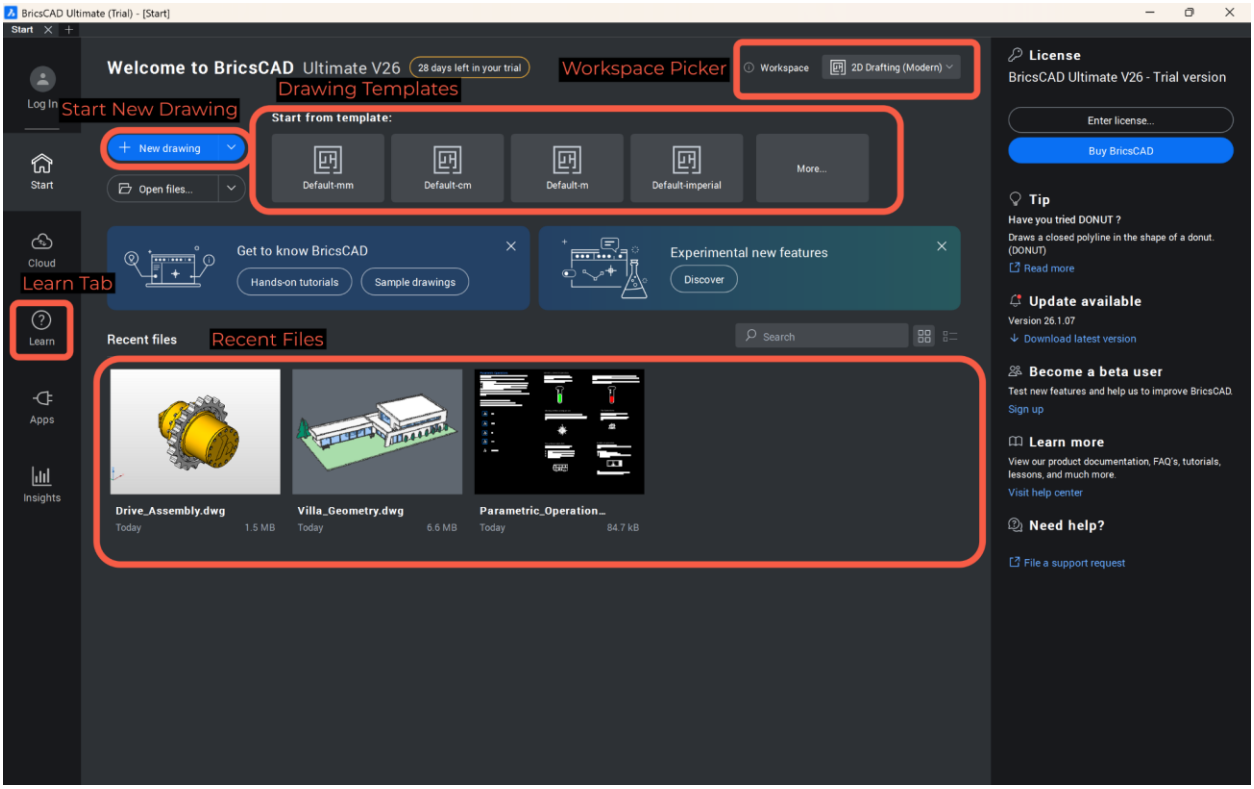


Workspace	Description
2D Drafting	AutoCAD clone
2D Drafting (Modern)	Simplified layout with more BricsCAD tools
Modeling	3D workspace
Civil Survey	Civil tools
BIM	AEC and Architectural
Mechanical	Sheet Metal and Assembly Design
Ultimate	All BricsCAD Tools

Start Screen

The start screen allows you to select a new or recent drawing.

You also have access to useful resources like the Learn Tab, where you can find drawings and help articles.

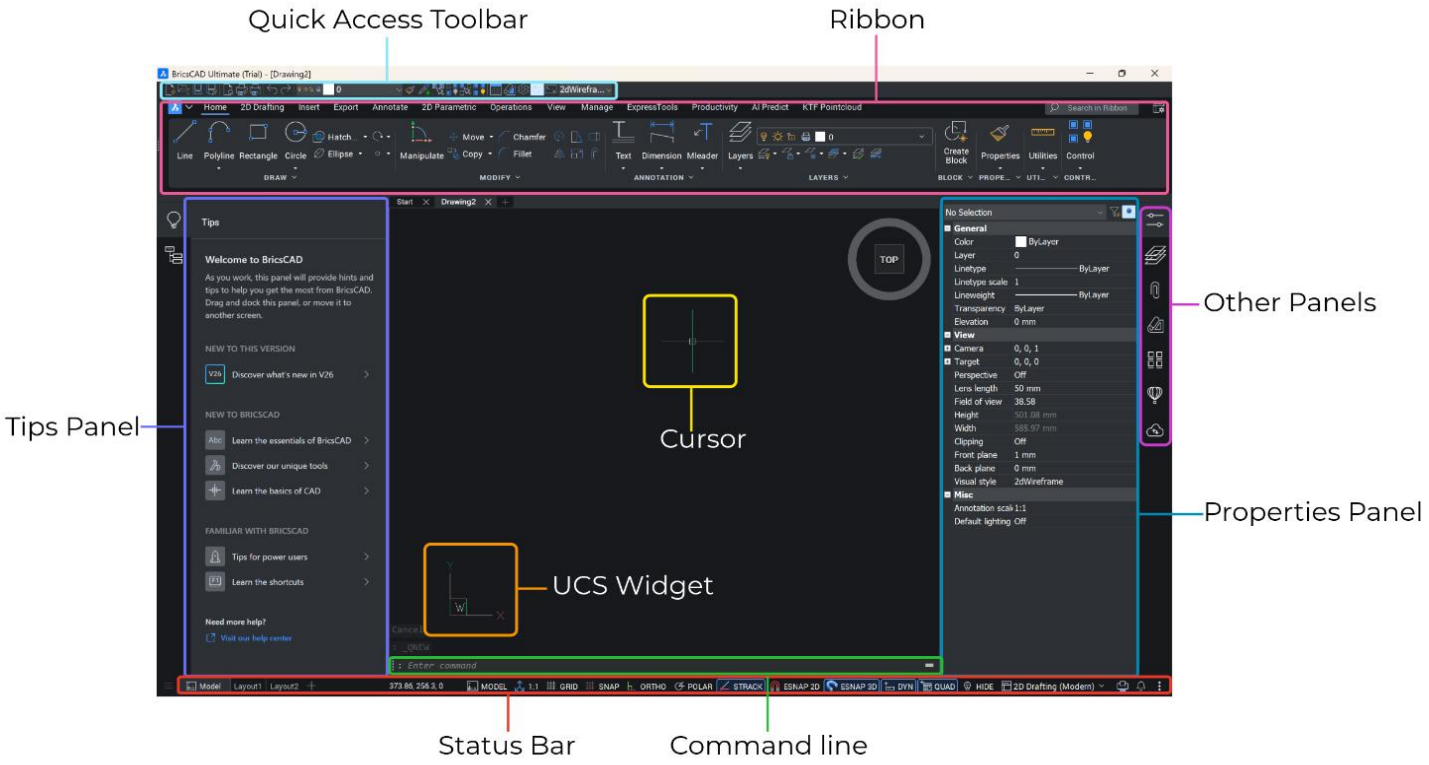


Key items

- **Drawing Templates** - pick from a selection of pre-made templates (See Templates DWT)
- **Learn Tab** - Learning Resources
- **Recent Files** - Displays recently opened files
- **Start New Drawing** - starts last used template
- **Workspace Picker** - change the current workspace

Main Workspace

Once you start a new drawing you will see the main interface.



Key items

- **Command Line** - the most important part! Use this to "tell" BricsCAD what you want it to do.
- **Cursor** - the mouse.
- **Panel (Properties)** - view information about the drawing or any currently selected entities.
- **Panel** (**Tips)** - displays context-based tips.
- **Panels (Other)** - click to view other panels.
- **Quick Access Toolbar** - most commonly used commands.
- **Ribbon** - Visual display of most commands.
- **Status Bar** - left: switch between model space and paper space, right: quick access to frequently used settings.
- **UCS Widget** - shows the orientation of the current drawing.

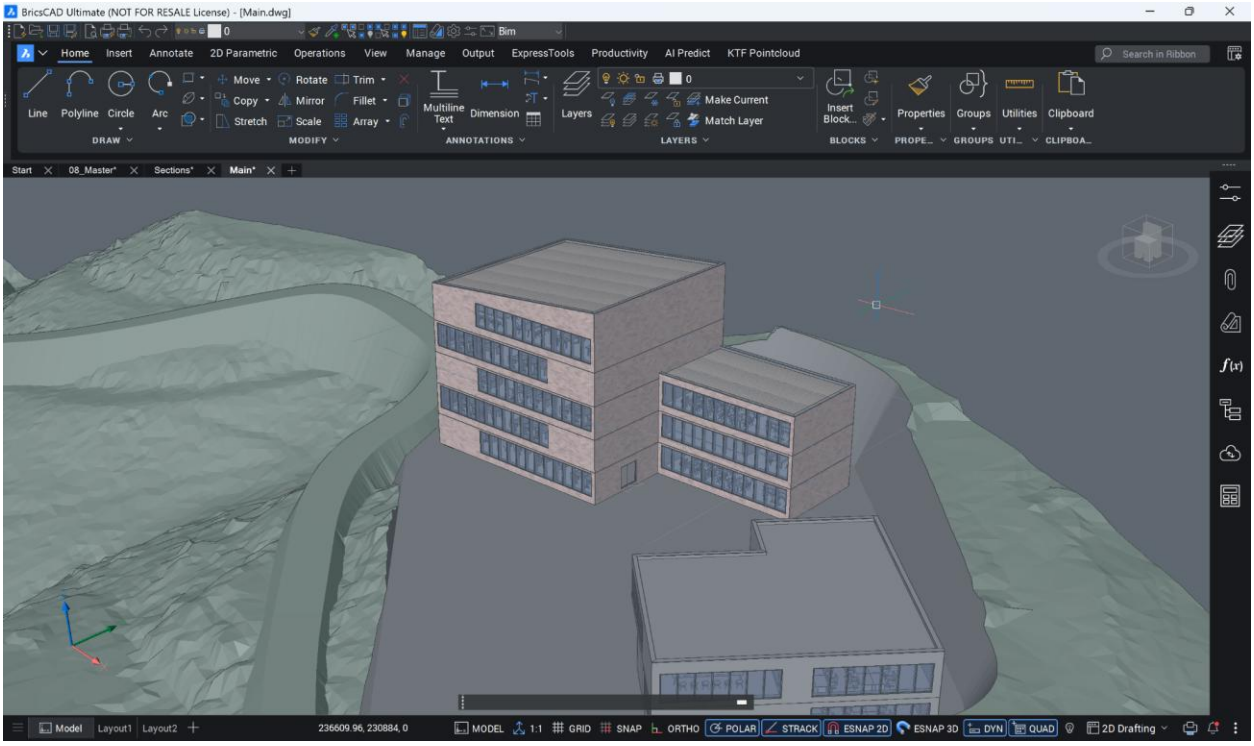
Model Space Vs Paper Space

There are 2 main “drawing areas” in BricsCAD: Model Space and Paper Space.

Model Space is where drawings are created while Paper Space is used to plot and print. Think about model space being the main image and paper space being a collection of different views (like screen shots) of the main drawing area.

Model Space

Model Space is where you create and edit your drawing.



Key points:

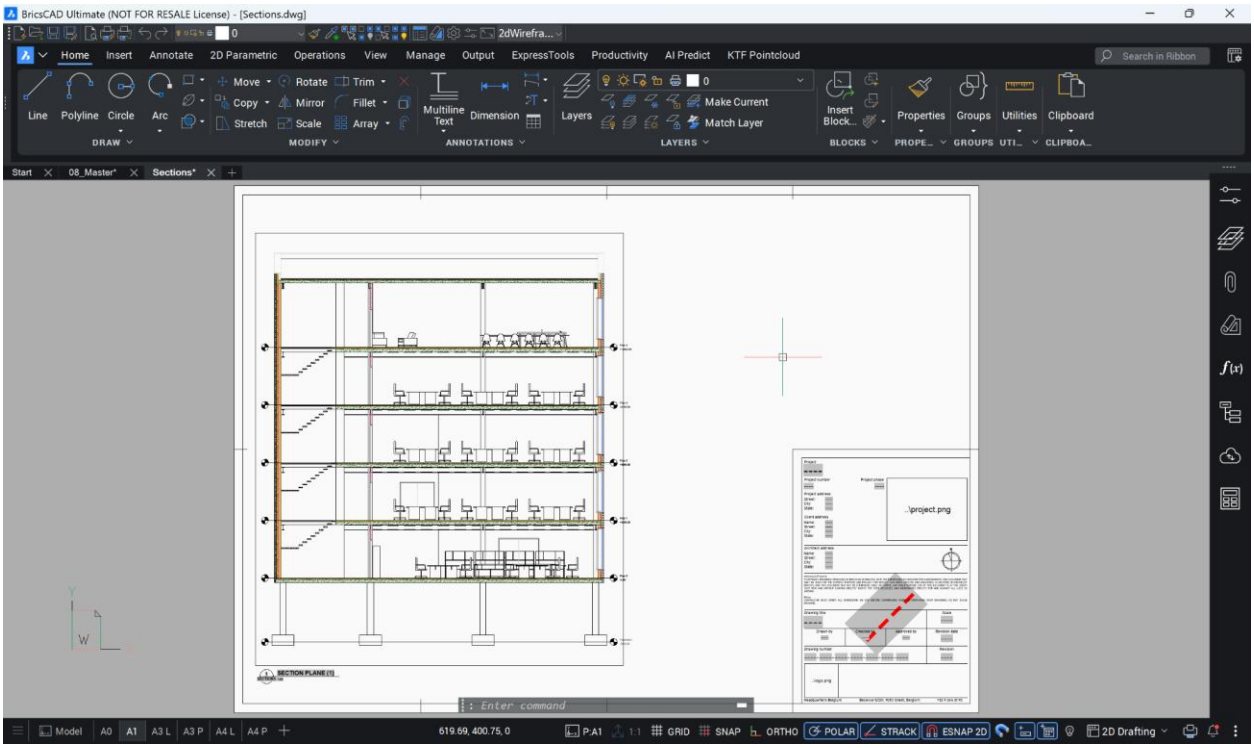
- Draw everything at full size (1:1 scale)
- Used for designing and drafting
- Contains the actual entities (lines, shapes, etc.)

Examples:

- Drawing a house floor plan at real-world size
- Creating a mechanical part with exact measurements
- Drawing a site layout with correct distances

Paper Space

Paper Space is used to prepare drawings for printing or plotting.



Key points:

- Represents a sheet of paper
- Contains viewports that show views of Model Space
- Allows different scales on the same page
- Contains titles, notes, dimensions and title blocks

Examples:

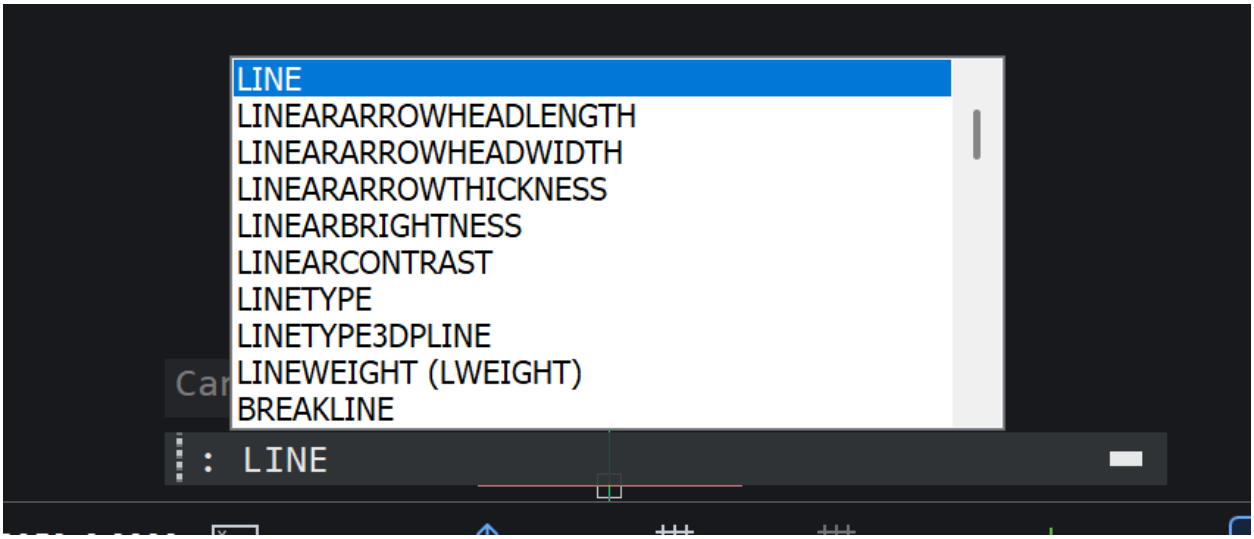
- One viewport showing a full floor plan at 1:100
- Another viewport showing a detailed at 1:20
- A title block, drawing name, scale, and revision notes

Accessing Commands

There are 5 main ways to access commands in BricsCAD.

Sorted in order of importance...

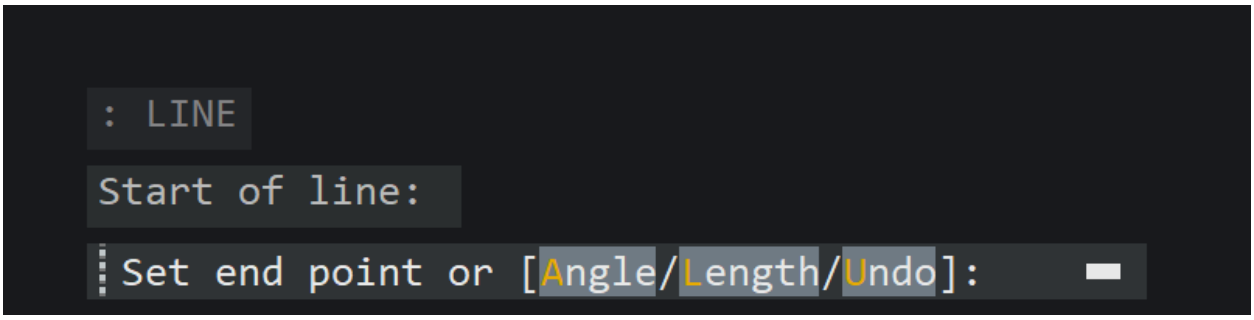
Command Line



The Command line allows you to access 100% of the commands in BricsCAD. It does not change between workspaces.

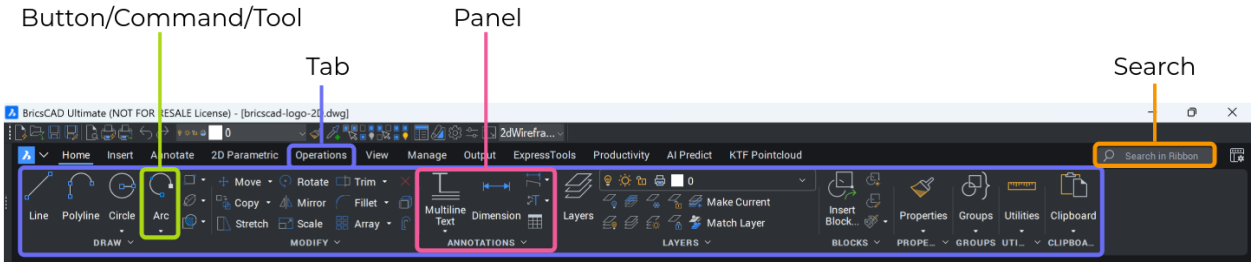
To use it type in a command name and press 'Enter'. Additional information is displayed for sub-options and instructions on what to do for each command.

You can also click on command options when they are highlighted:



Here it is possible to click 'Angle', 'Length' and 'Undo'.

Ribbon

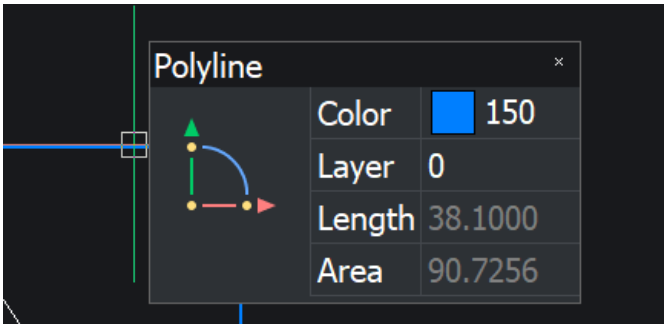


The Ribbon is located at the top and contains most of the tools that you will need.

Ribbons are different depending on the workspace.

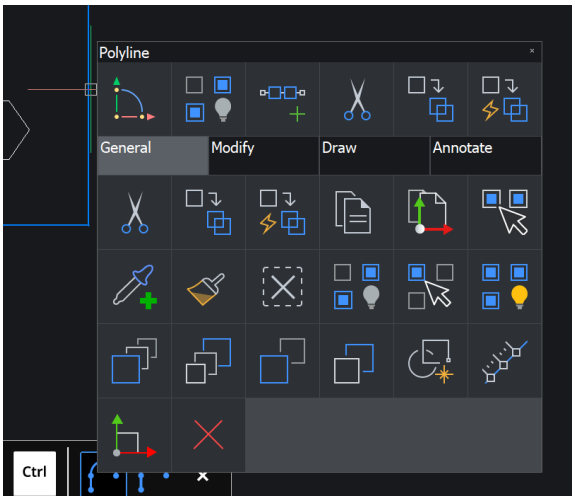
To use, click on a tool and follow the instructions in the Command line.

Quad



The Quad appears on hover, it gives you access to tools relevant to the selected entity/entities.

Hover over the icon to open more options:



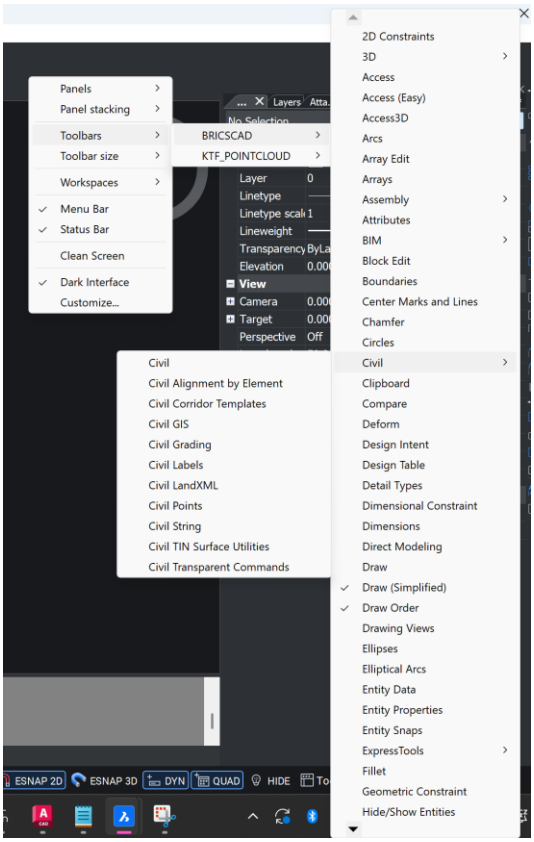
Turn the Quad On/Off

Turn the Quad on/off in the Status bar or with the F12 shortcut.

Toolbars

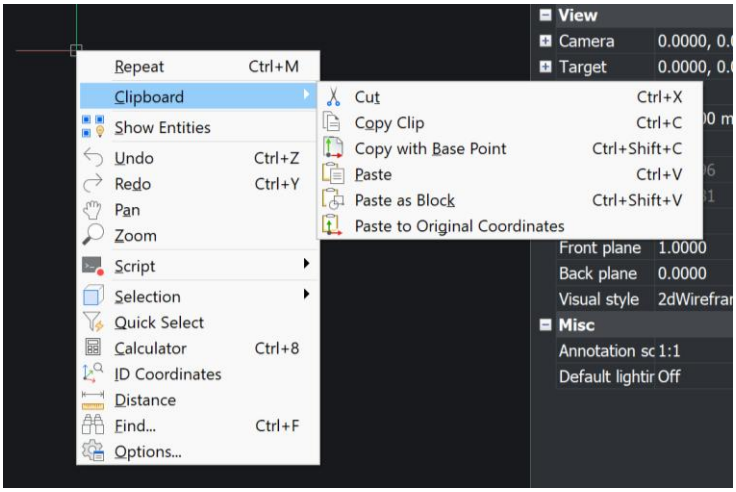
Toolbars are similar to the ribbon. They contain a set of “tools” and can be dragged and repositioned to any location.

To add toolbars, right-click anywhere on the workspace (not in the drawing area) and select the Toolbar by name.

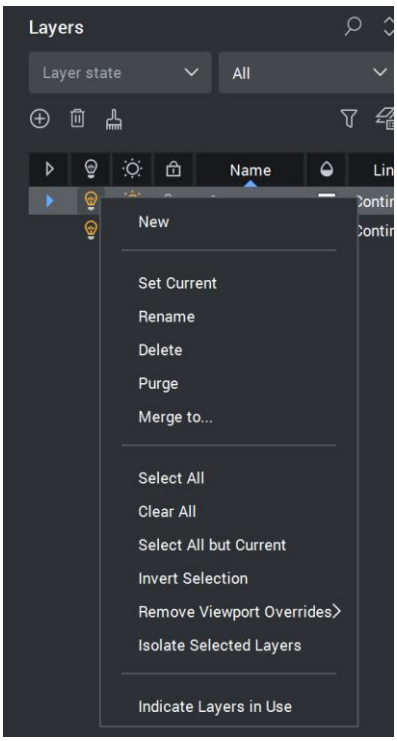


Right-click "context menu”

The context menu, as the name would suggest, is context sensitive. It changes based on the location of the mouse and the entity/entities that are selected.



It works like any other right-click menu in any other program. In model space, it contains many of the most frequently used commands. On parts of the interface, such as a panel, it provides other options.



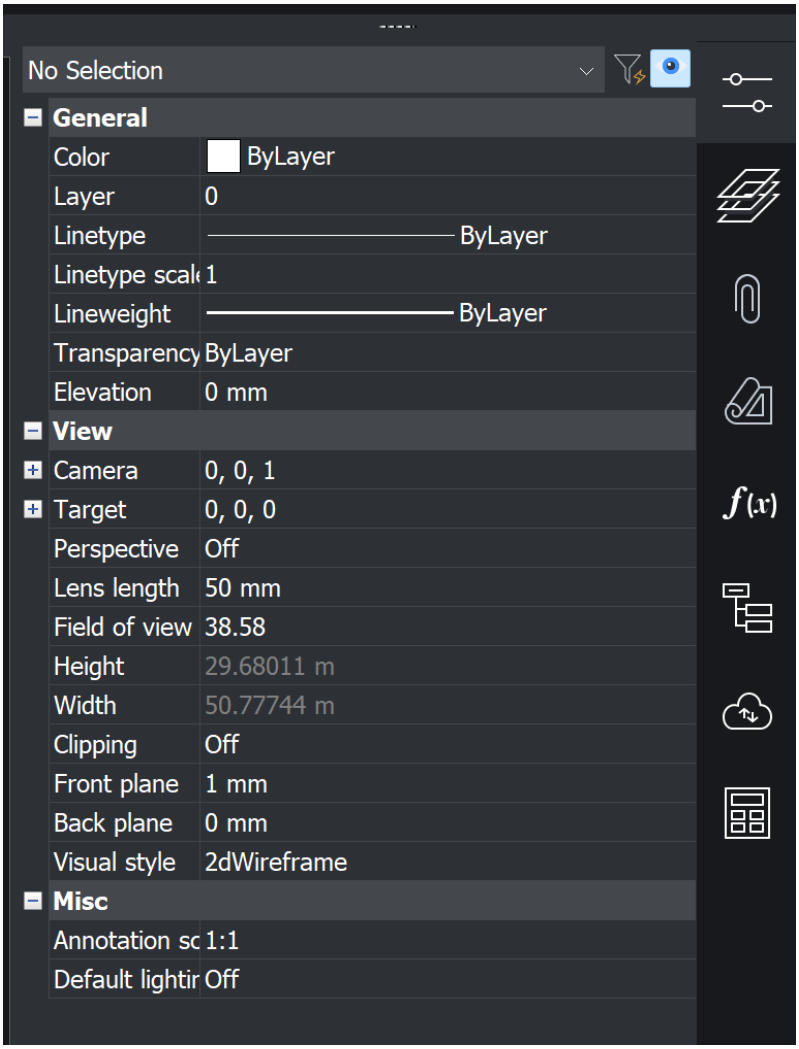
Panels

There are a large number of panels available in BricsCAD.

Some key panels include:

Properties Panel

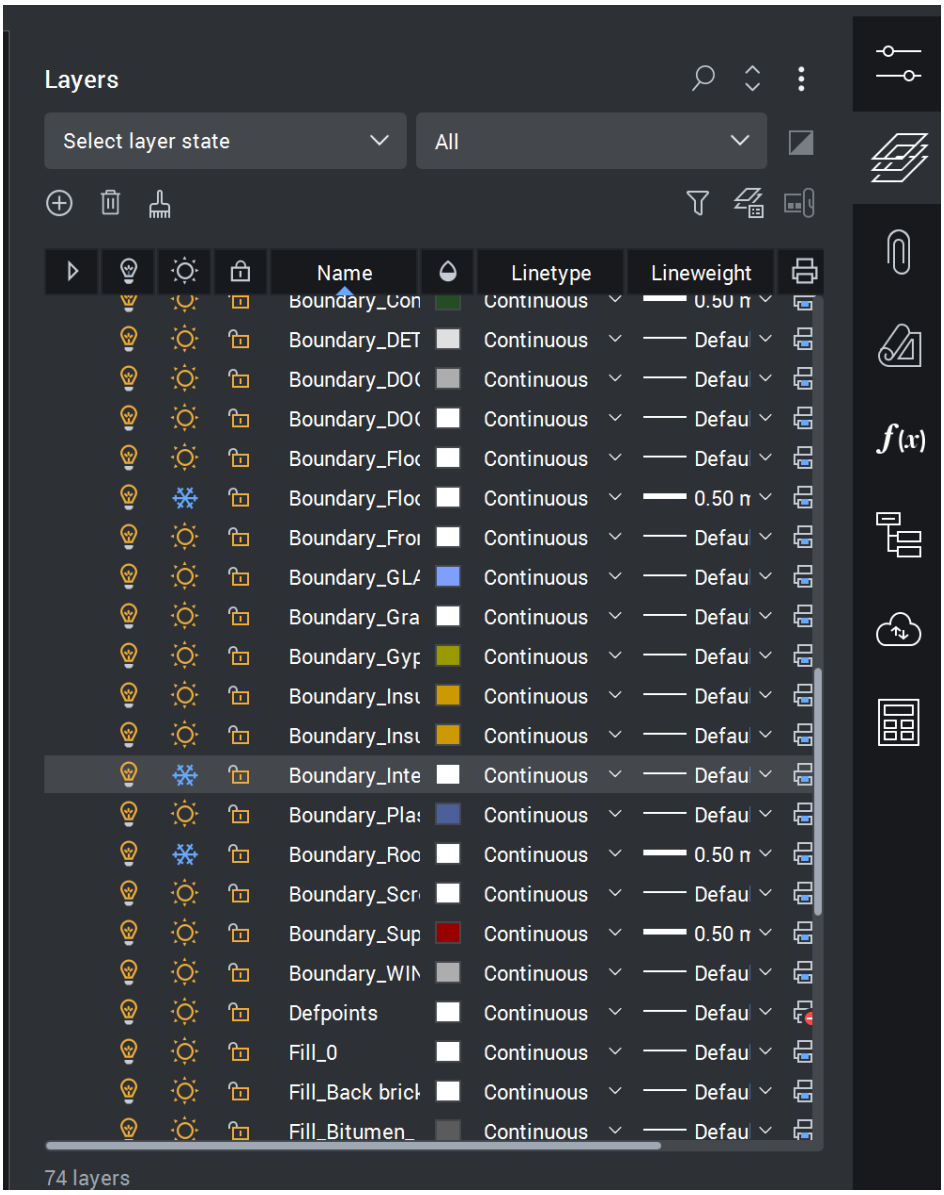
Overview and limited edit of properties, on the selected entity/entities such as layer, color, geometry, constraints, and meta data. Also displays information on the current drawing when nothing is selected.



Layers Panel

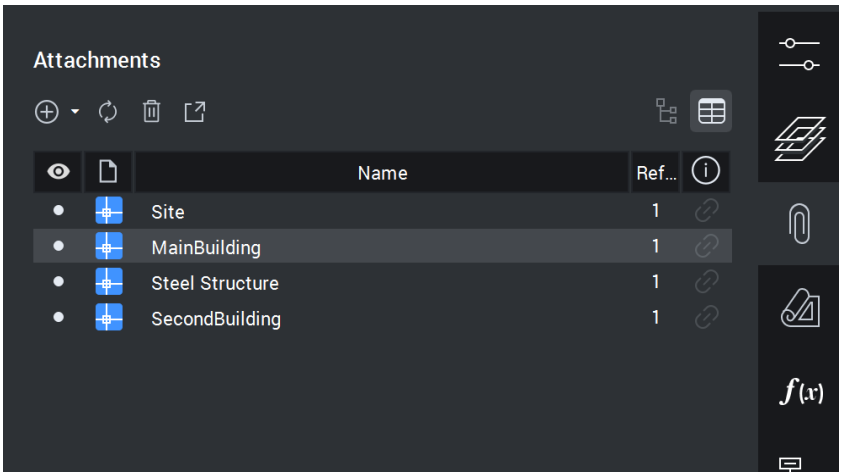
Used to create and manage layers, control visibility, colors, and linetypes to keep drawings organized and readable.

Some options are different in model space and paper space.



Attachments Panel

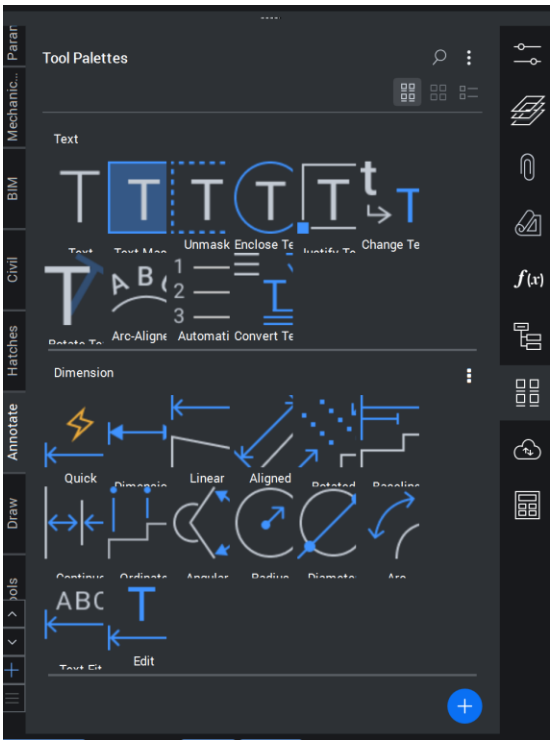
Manages external references including DWGs, images, PDFs, and point clouds, within the current drawing.



Tool Palettes

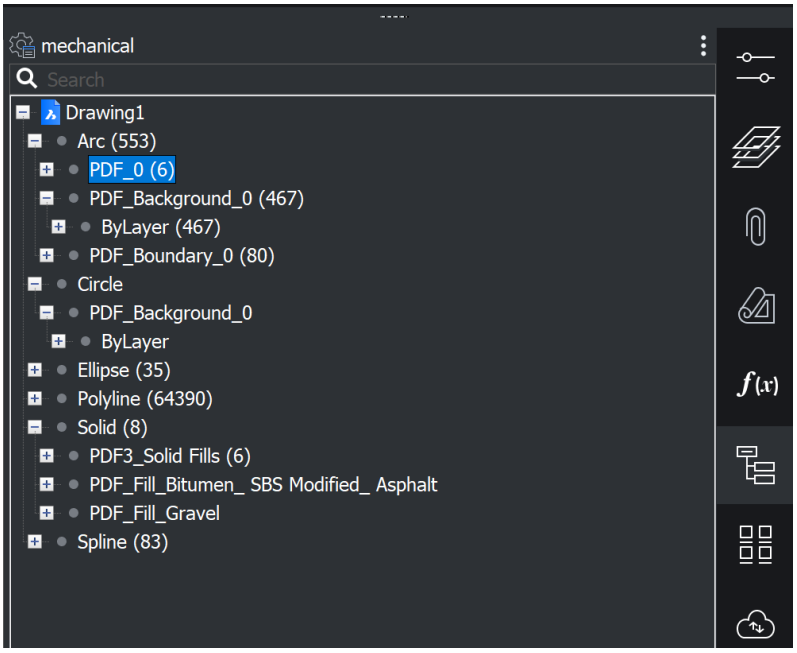
Provides drag-and-drop access to blocks, hatches, commands, and custom tools for faster and more consistent drafting. It is possible to set entity layers, colours, line weights and other properties.

You can create your own palettes and share tool palettes with other user.



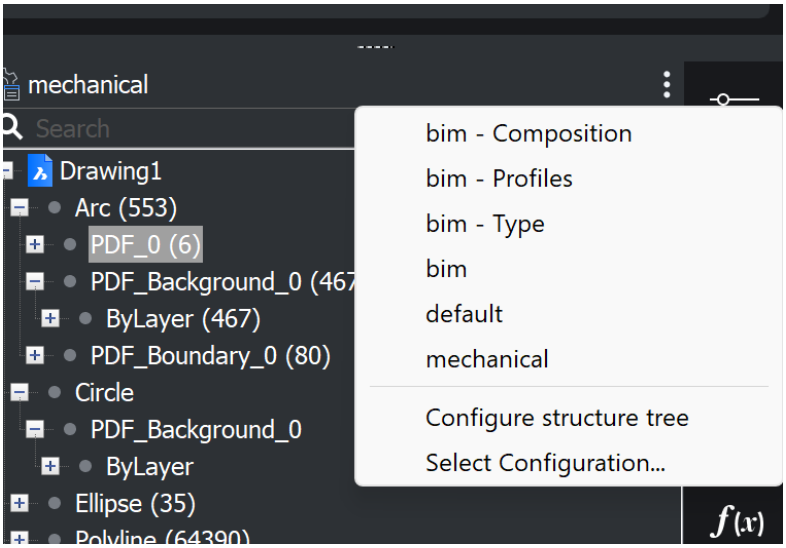
Structure Browser (Unique to BricsCAD)

Displays a tree-view of drawing content such as blocks, components, parametric relationships, and BIM elements, making complex models easier to understand and navigate.



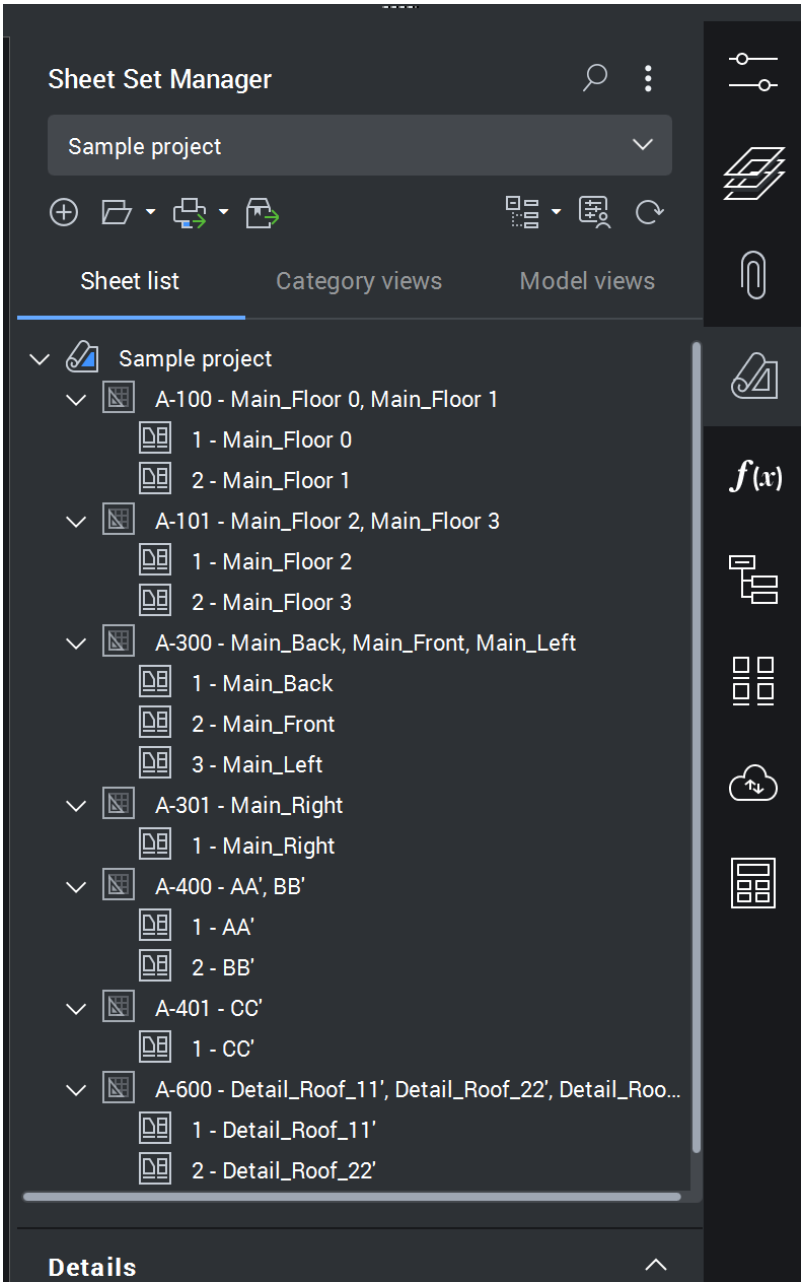
You can change the structure and view as required. The default view sorts by layer-type, but the mechanical view sorts by entity type. You can also create your own.

Click the three dots to change the structure:



Sheet Sets Panel

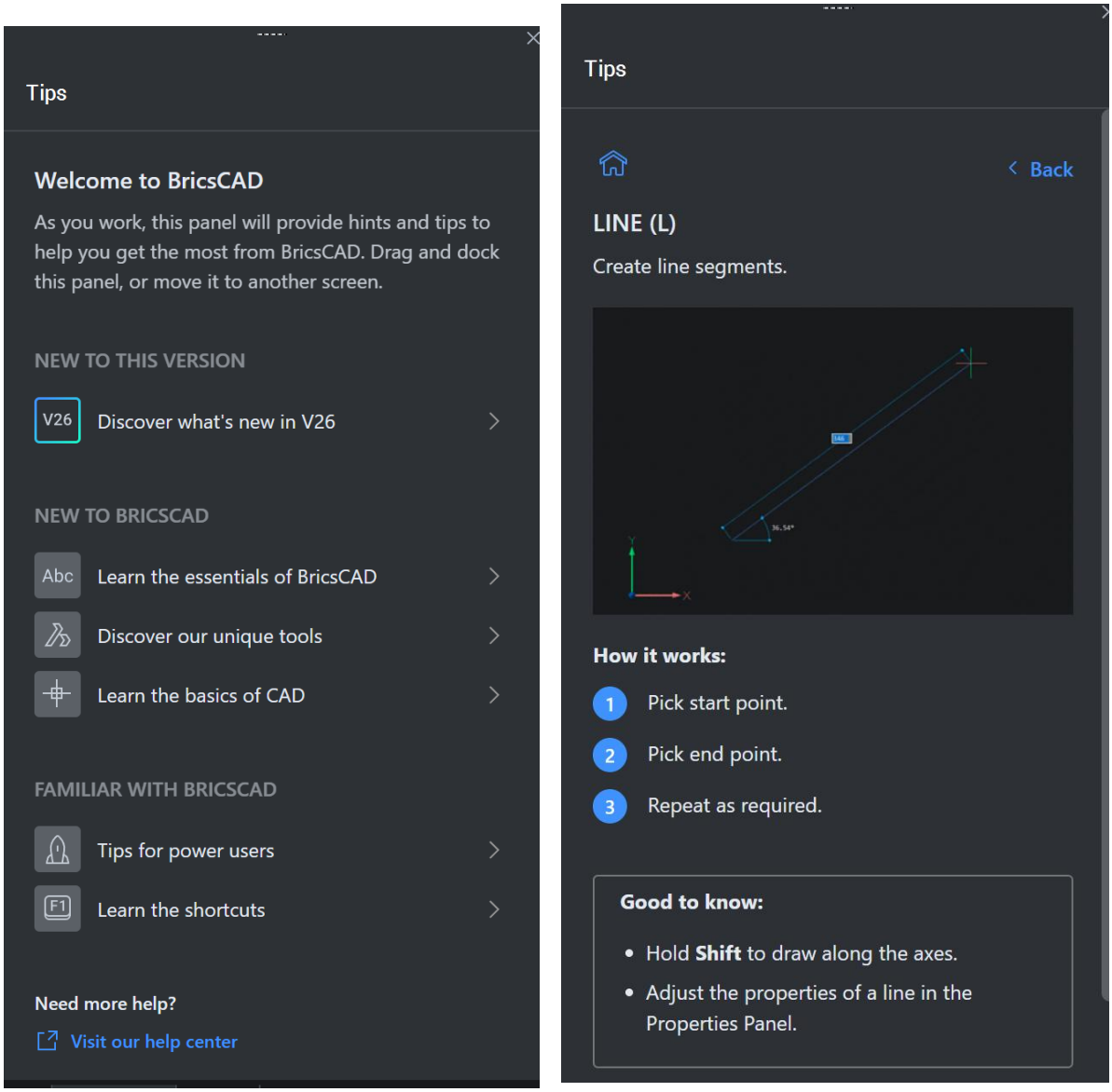
Organizes paper-space layouts into structured sheet sets (like a book). You can add different layouts from different dwg files into the same sheet set.



Tips Panel

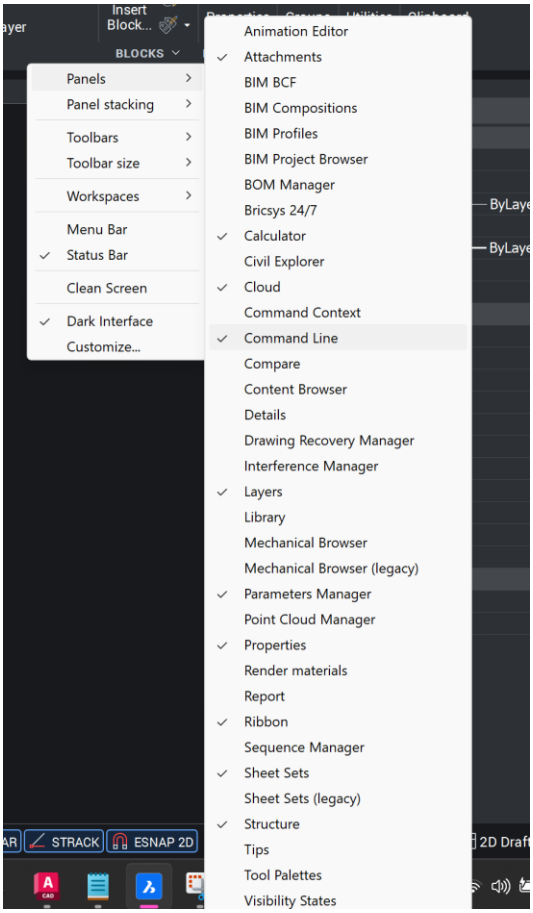
Shows helpful hints, suggestions, and workflow guidance, especially useful for new users learning BricsCAD features.

When a command is active, the Tips panel updates to give relevant information.



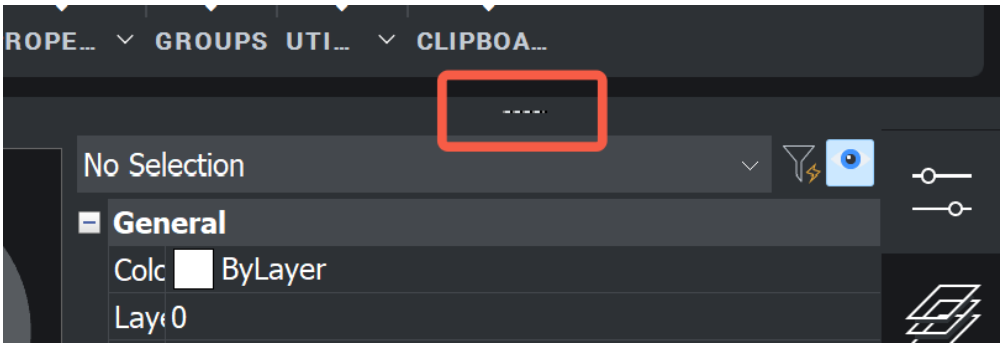
Turn a panel on/off

To turn a panel on or off right-click anywhere outside of the drawing window and select the panel from the context menu.



Reposition a panel

To reposition a panel, click the three dots and drag the panel to a new location.

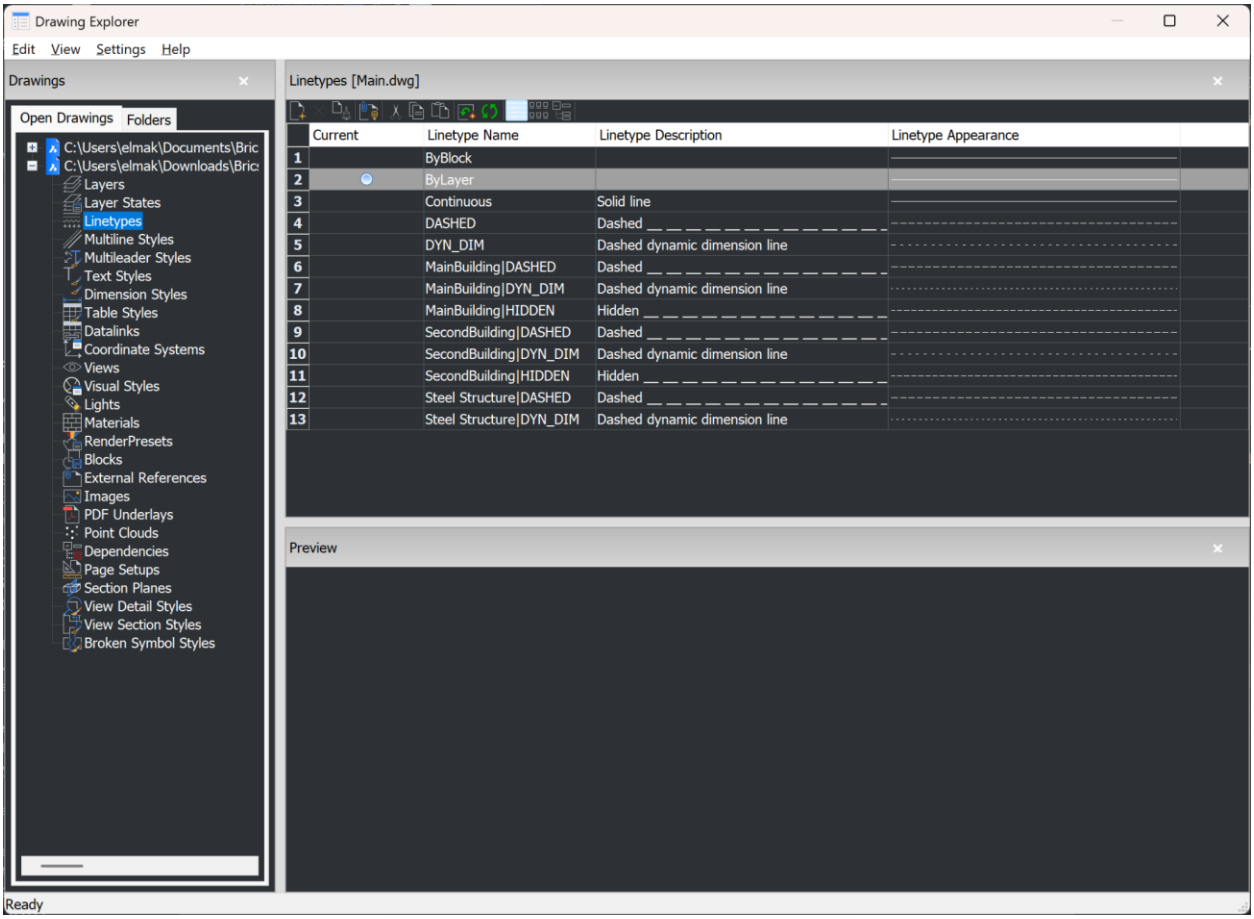


Drawing Explorer

The Drawing Explorer is unique to BricsCAD. It's a central management panel used to view, organize, and edit named elements within a drawing, such as layers, blocks, dimension styles, text styles, layouts, and external references. It provides a structured, tree-based interface that allows users to control properties, settings, and organization without modifying geometry directly.

It is also possible to copy elements from one open file to another using the Drawing Explorer.

Enter EXPLORER to open the Drawing Explorer.



Drawing

The main purpose of BricsCAD is to create and edit drawings, so let's explore this!

Drawing Setup & Templates

The default file type used by BricsCAD is DWG (**D**ra**W**in**G**). A DWG file contains both the drawing geometry and a wide range of settings that define how the drawing is created, displayed, and printed.

A DWG file may include:

- Drawing geometry (lines, arcs, polylines, hatches, blocks, etc.)
- Units and scale settings
- Layers (names, colors, line types, line weights, and visibility states)
- Line types and line weights
- Dimension styles
- Text styles
- Entity styles
- Annotation scales
- Layouts and paper space settings
- Viewports and viewport configurations
- Plot and print settings (plot styles, page setups)
- Blocks and external references (Xrefs)
- Drawing metadata and custom properties

Templates (DWT)

DWT (**D**ra**W**ing **T**emplate) files are not to be confused with DWG files. A DWT is used as a starting point for new drawings. It contains predefined standards and commonly used content.

A DWT file may include:

- Predefined layers with standard naming, colors, and line weights
- Dimension, text, and entity styles
- Line types and hatch patterns
- Annotation scales
- Layouts with preset page setups
- Viewports configured at common scales
- Title blocks and drawing borders
- Standard symbols, notes, and blocks
- Company or project-specific standards
- Plot styles and print configurations

Commands

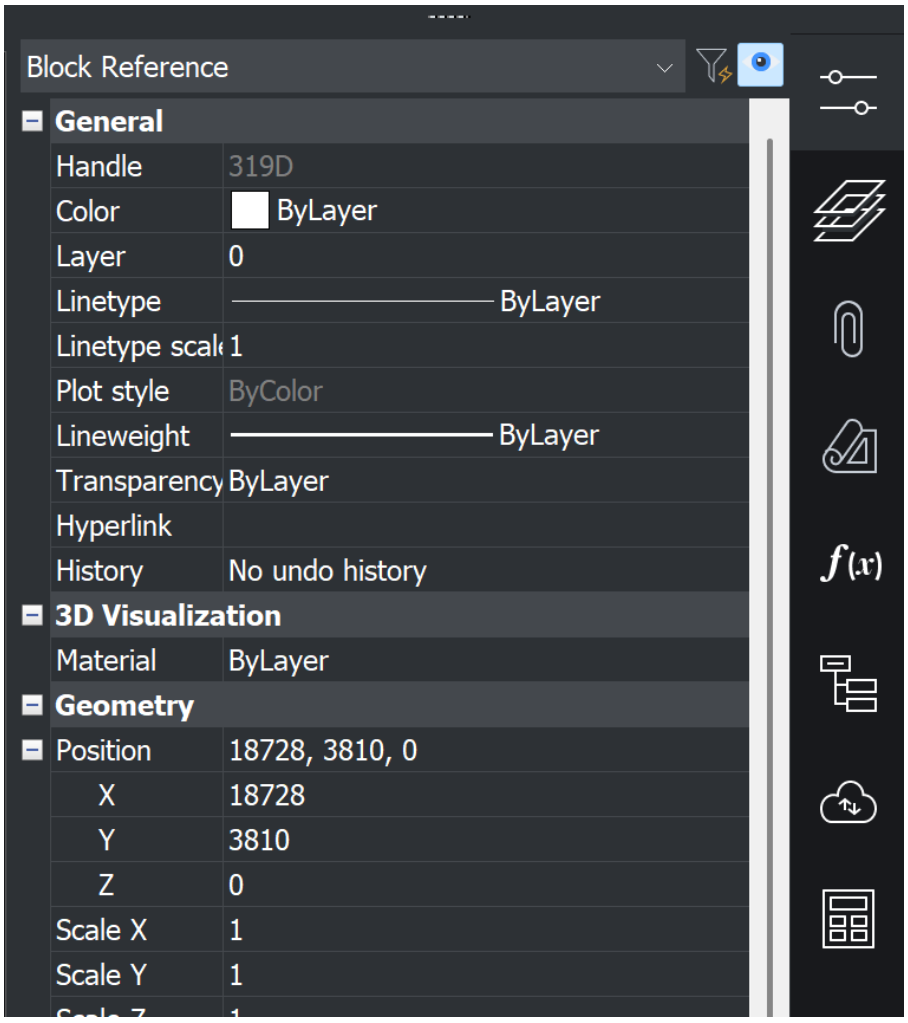
Commands, sometimes also referred to as “tools”, give us a way to “tell” BricsCAD what to do. They generally have pretty straightforward names, like “Line” or “Trim” and can be entered directly into the Command line, or through other input methods, see “Accessing Commands”.

In documentation they are generally written in all Caps e.g. ‘POLYLINE’ or ‘ROTATE’.

Entities

Entities (known as ‘Objects’ in AutoCAD) are objects that appear in Model space or Paper space, e.g. hatches, lines, curves, blocks, polylines and more.

Some entities may appear the same, but often have different properties. You can see the different properties by selecting the entity and opening the Properties Panel.



Example of the properties for a Block Reference

Key entities to be aware of

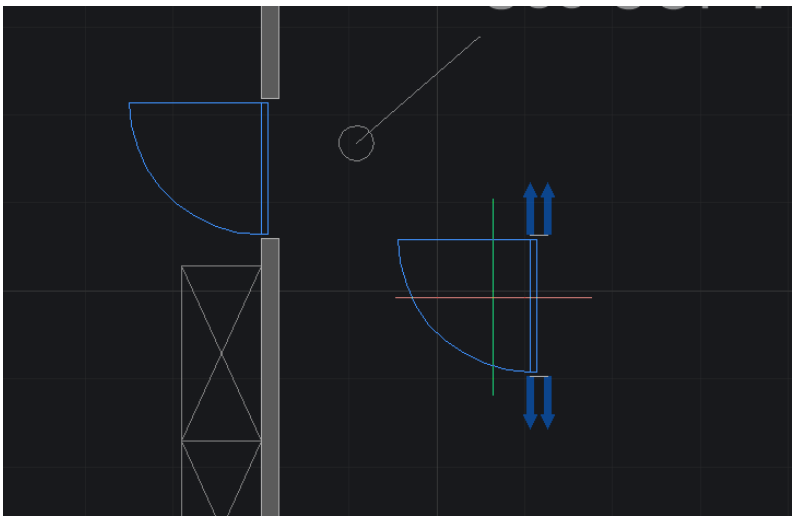
Entity	Command Name(s)	Description	Key Notes / Differences
Line	LINE	A straight segment between two points.	Simple and lightweight. Each line is independent unless joined into a polyline.
Polyline (PLINE)	PLINE	A connected series of line and/or arc segments treated as one entity.	Can have width and be closed. Preferred over multiple lines.
LWPolyline	PLINE	Lightweight version of a polyline (default).	Uses less memory; functionally the same in most workflows.
Rectangle	RECTANGLE	Creates a four-sided shape.	Not a true entity, created as a closed polyline.
Arc	ARC	A curved segment defined by center, radius, or angles.	Can exist alone or as part of a polyline.
Circle	CIRCLE	A closed curve defined by a center point and radius.	Often used for holes or symbols; not a polyline.
Hatch	HATCH	Applies a pattern or solid fill within a closed boundary.	Associative hatches update when the boundary changes.
Block	BLOCK, WBLOCK	A collection of entities combined into a reusable entity.	Editing the block definition updates all instances.
Insert Block	INSERT	Places a block into the drawing.	Can be scaled, rotated, and mirrored on insertion.
Viewport	VPORT, MVIEW	A window into model space placed in paper space.	Paper space only. Controls scale and layer visibility.
Text	TEXT, DTEXT	Single-line text entity.	Best for short labels. Limited formatting.

MText	MTEXT	Multiline, paragraph-style text.	Supports wrapping, alignment, and rich formatting.
Dimension	DIM, DIMLINEAR, DIMALIGNED, DIMANGULAR, etc.	Measurement annotations.	Associative; controlled by dimension styles.
Leader	LEADER	A line pointing to an annotation.	Basic leader with limited formatting.
Multileader	MLEADER	Leader with built-in text or block.	More flexible and standardized than LEADER.
Point	POINT	A single coordinate marker.	Display controlled by point style (DDPTYPE).
Spline	SPLINE	A smooth, free-form curve.	Harder to edit precisely than arcs or polylines.

BricsCAD Unique Commands

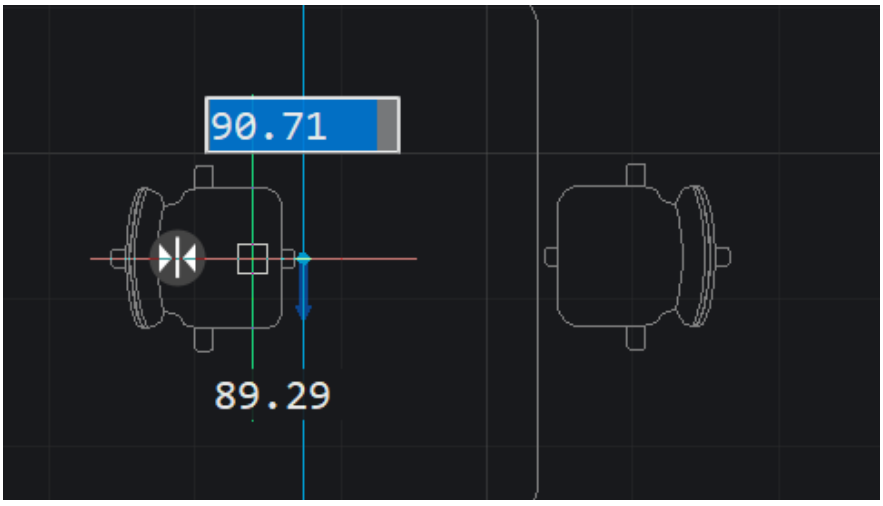
BricsCAD has a number of unique commands, including but not limited to...

COPYGUIDED



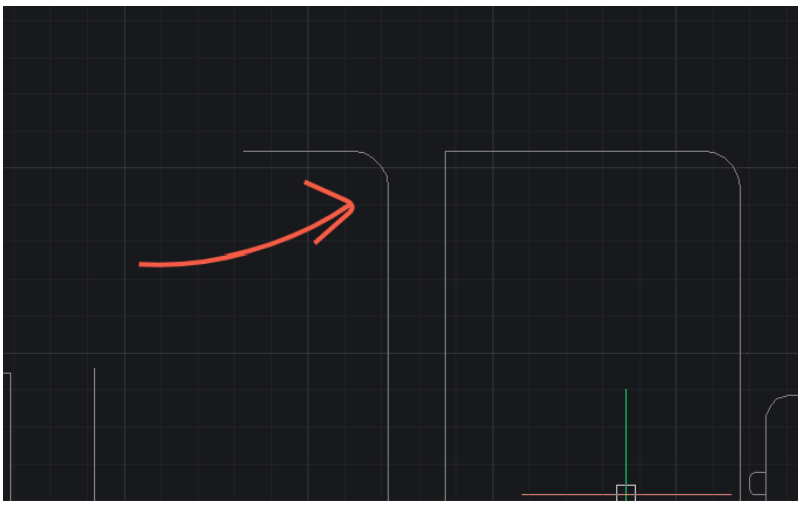
Creates copies of entities by snapping to detected geometric patterns such as alignment, spacing, or direction. These entities do not need to be a block.

MOVEGUIDED



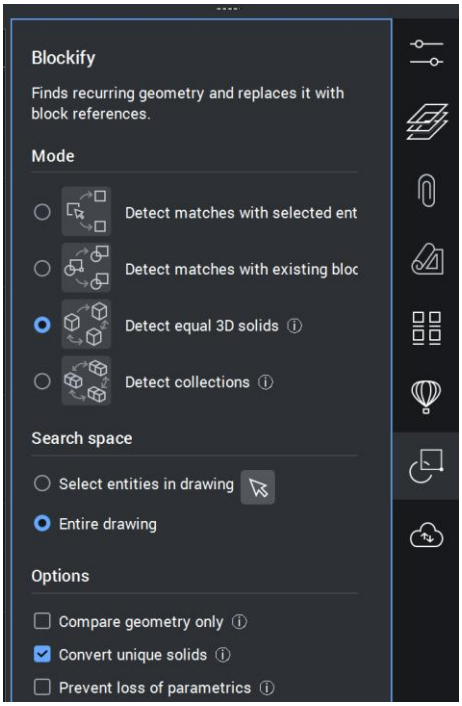
The same as COPYGUIDED, however moves the entities and “heals” the area left behind.

CONNECT



Closes gaps between lines, polylines, and curves with a zero radius to create continuous geometry.

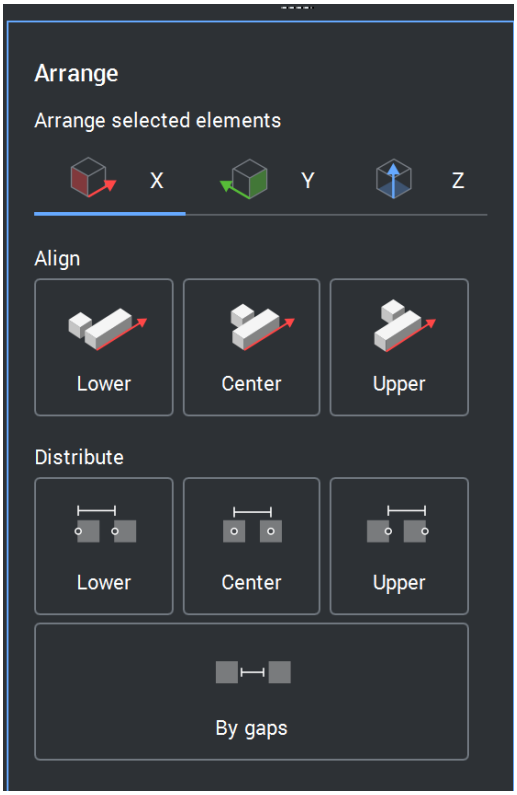
BLOCKIFY



Detects repeated geometry and converts it into block definitions, also matches exploded blocks to any references in the file and converts them, reducing file size and improving consistency.

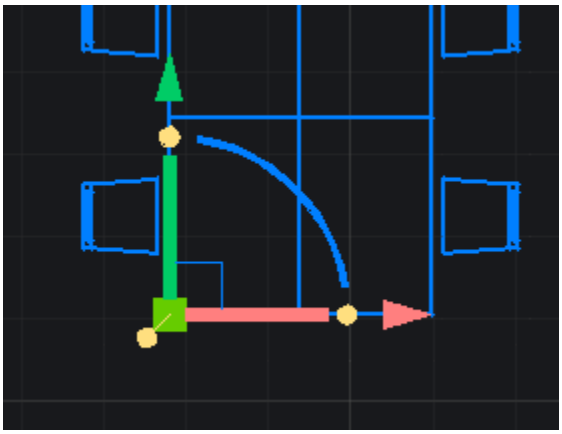
Similar to AutoCAD's "Convert to Block" feature. However, BLOCKIFY is more powerful and more automated, which is why it's often highlighted as a unique BricsCAD strength.

ARRANGE



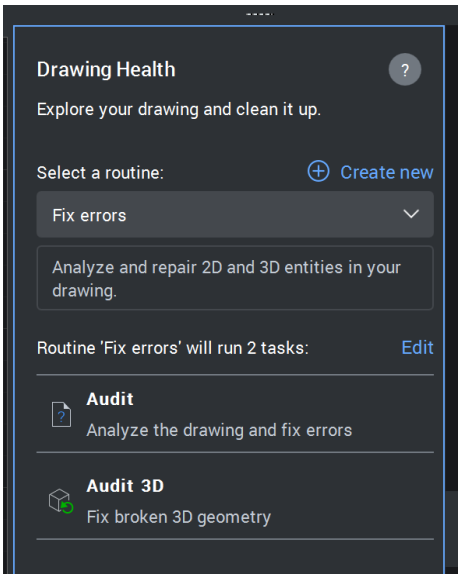
Aligns and distributes selected entities evenly based on spacing, orientation, or reference geometry.

MANIPULATE



Allows direct editing of 2D and 3D geometry using grips to move, copy rotate, scale and mirror geometry.

DRAWINGHEALTH



Programmable routines designed to “clean up” dwg files. Gives you the possibility to combine multiple tools into one routine including Audit, Purge, Optimize, Findoutliers and more!

FINDOUTLIERS

Detects and moves or removes entitieslocated far from the main drawing area that can cause zoom, performance, or plotting issues.

Entity Snaps

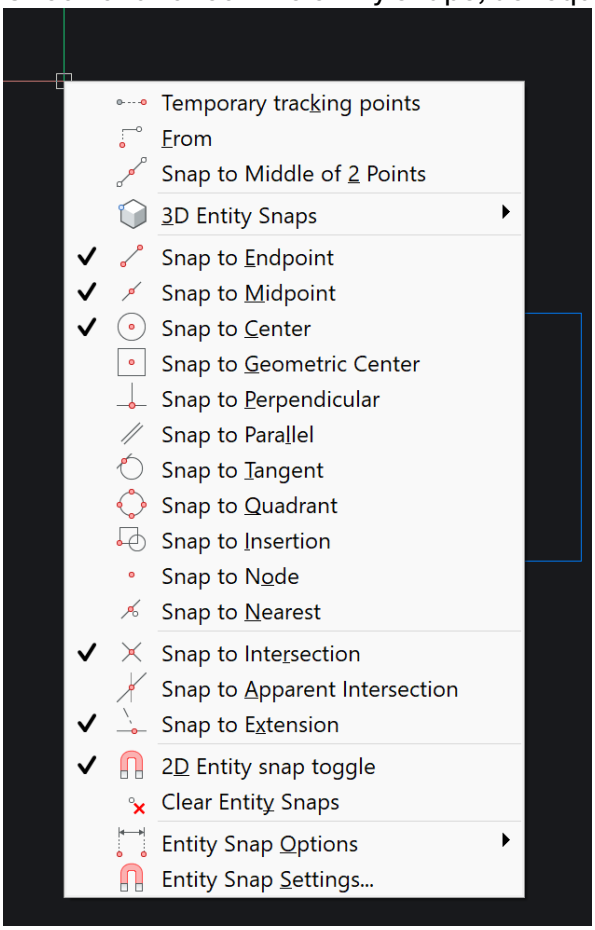
Entity snaps allow you to precisely select specific points on existing entities, such as endpoints, midpoints, centers, or intersections, when creating or editing geometry. (Known as 'Object Snaps' in AutoCAD).

You can turn them on and off.

Turn an Entity Snap on or off permanently

Method 1:

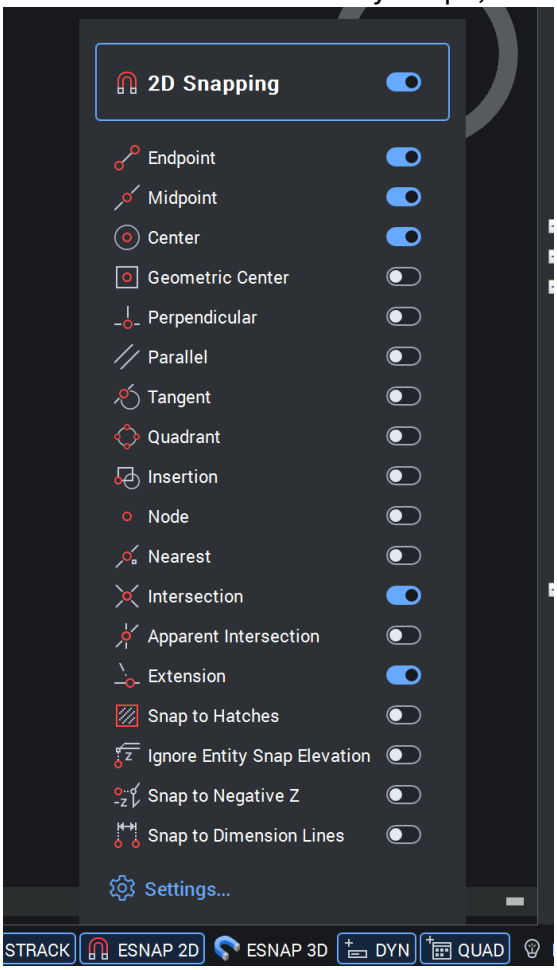
1. Hold shift and right-click the mouse.
2. Check or uncheck the entity snaps, as required.



Method 2:

1. Right-click ESNAP 2D or ESNAP 3D in the status bar.

2. Check or uncheck the entity snaps, as required.

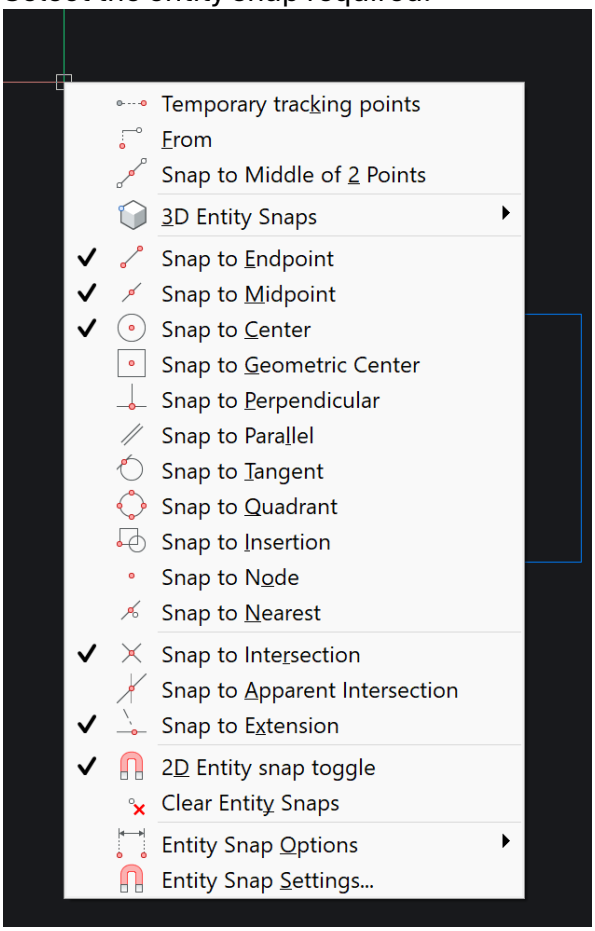


Turn an Entity Snap on during a command

It's also possible to set a temporary entity snap during a command.

1. Launch a command.
2. When the command reaches the step where you will need the snap, hold shift and right-click the mouse.

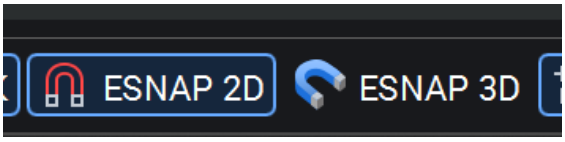
3. Select the entity snap required.



The snap will now be dominant until the next step in the command.

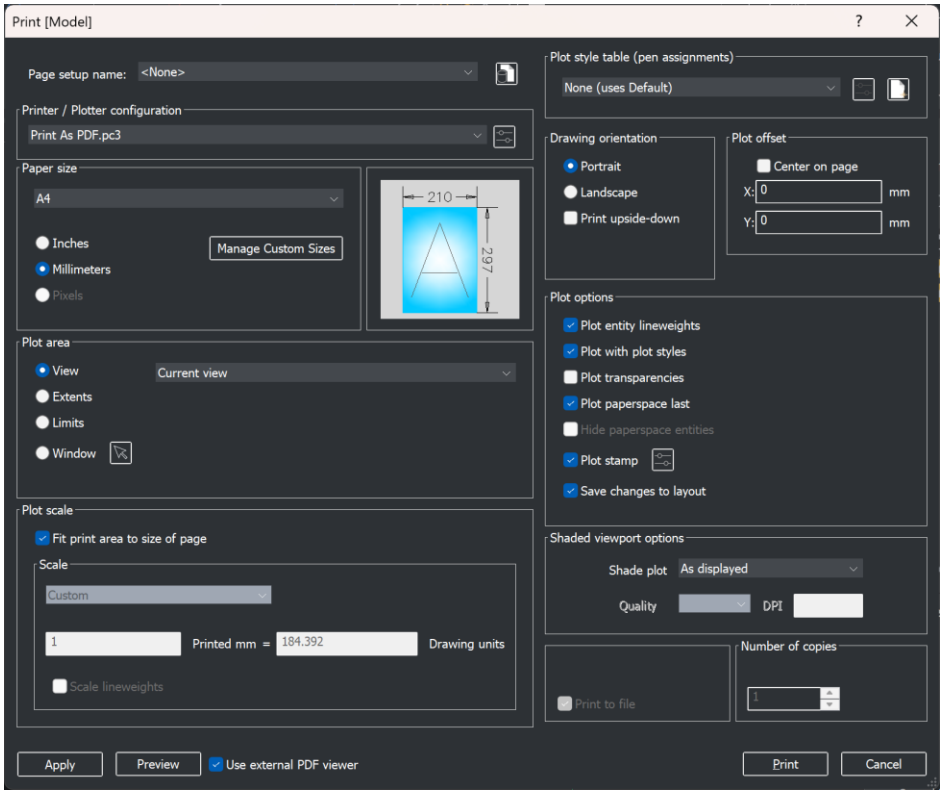
Turn All Entity Snaps Off

1. Click ESNAP 2D or ESNAP 3D in the status bar.



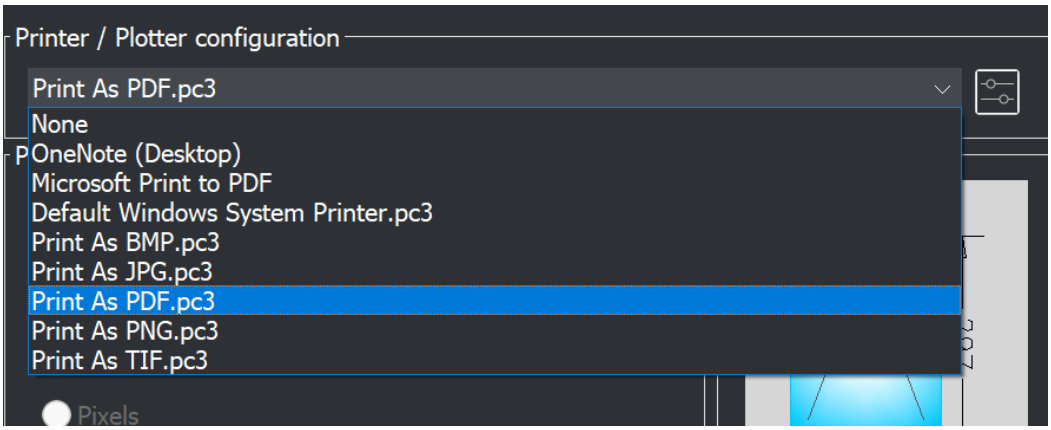
Printing and Plotting

To share drawings you can print or publish to a PDF.

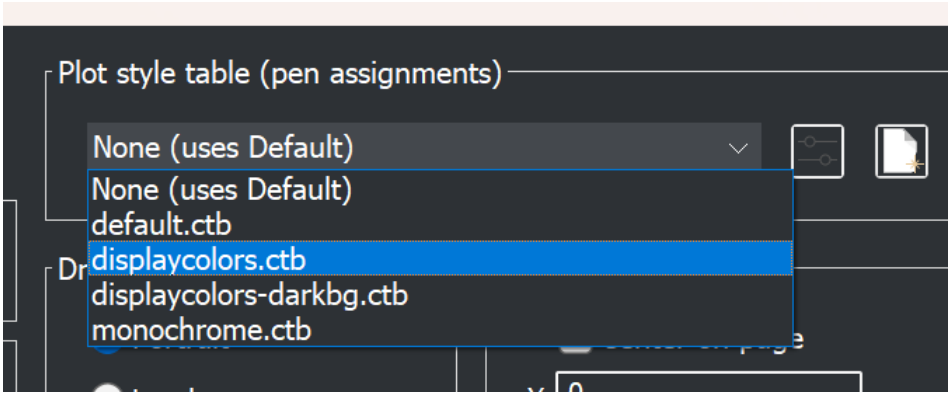


Use the Print As PDF.pc3 option

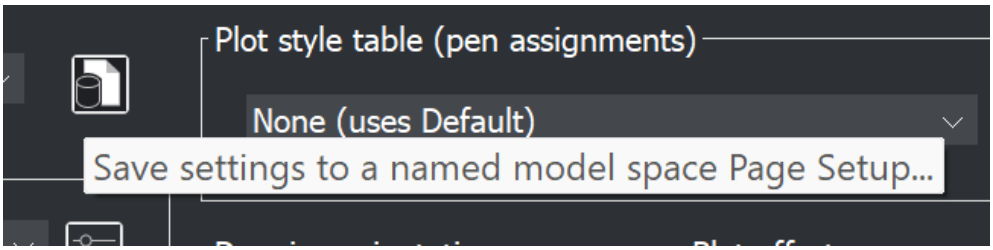
Do not use Microsoft Print to PDF - it can lose vector information, layers and other important information.



Set the colour options as required:



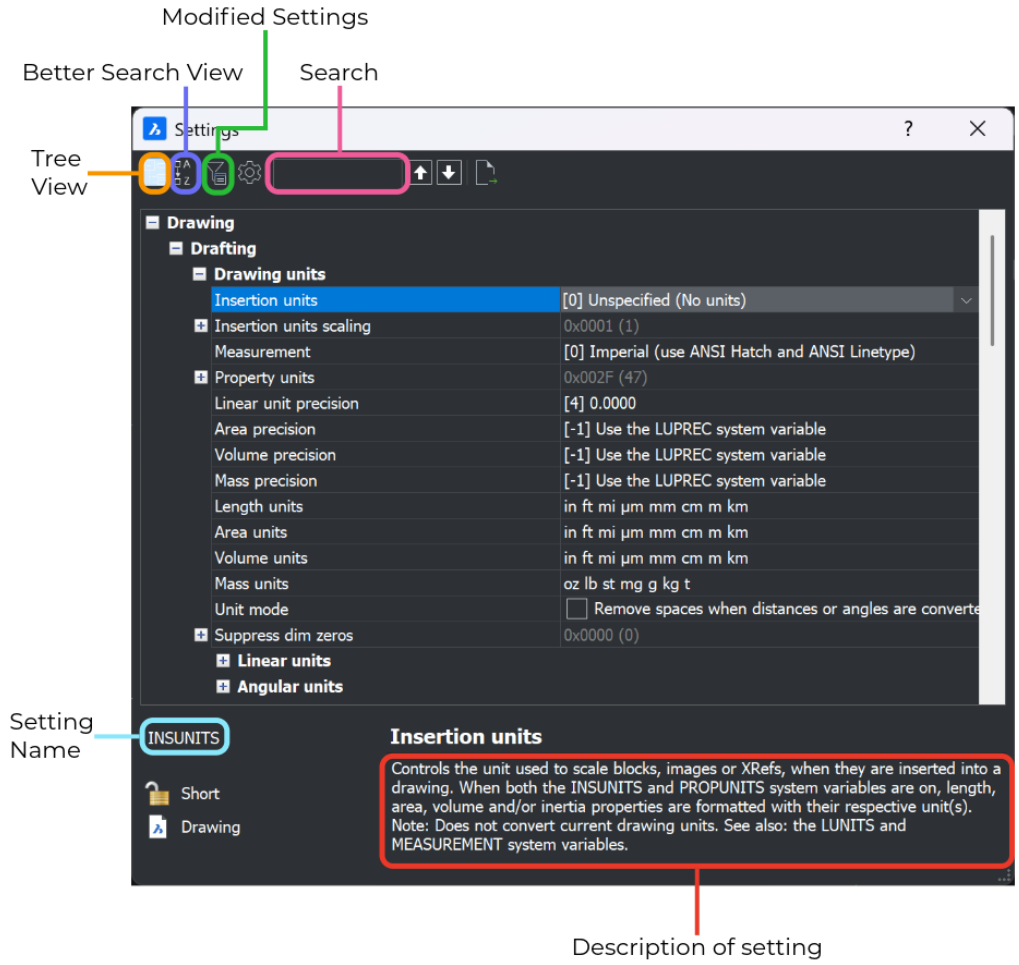
Print Settings can be saved for later use:



Settings

The Settings dialog contains all the settings in one location. To open it enter ‘SETTINGS’ in the Command line.

There are different types of settings. Some are for the drawing, some for the workspace and some are “global Settings”.



Settings are saved as a “Profile” - See Problems & Issues.

Problems & Issues

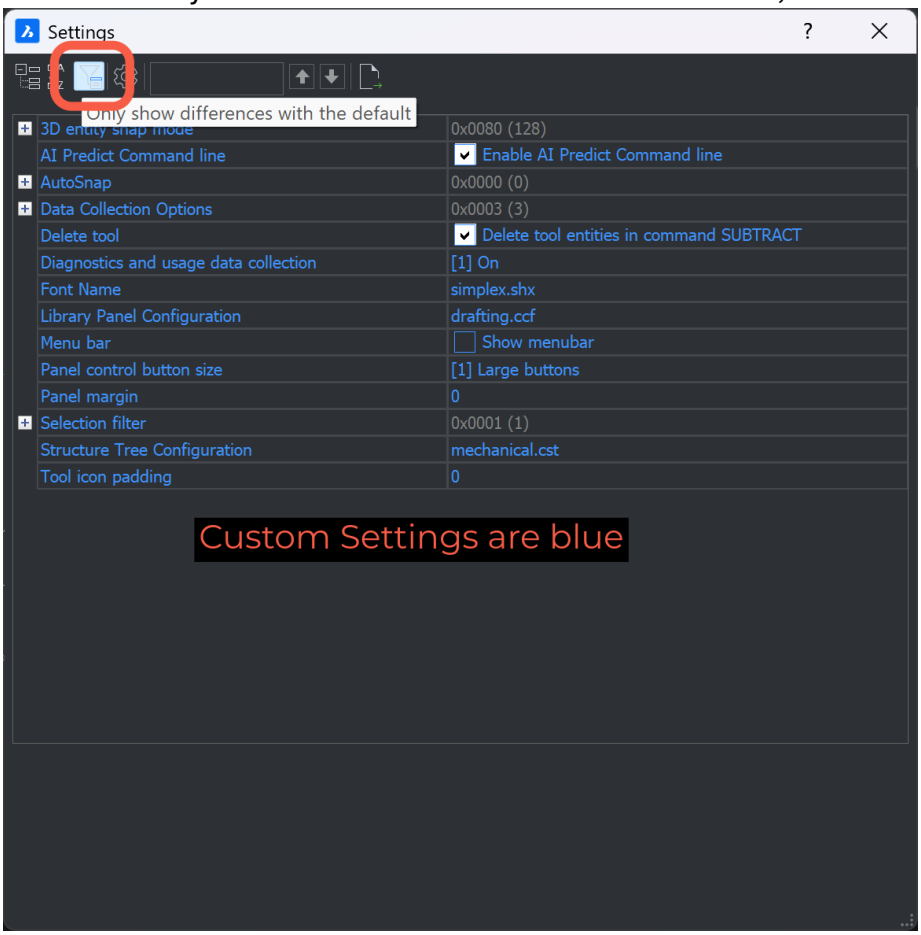
The majority of problems can be resolved using the following 2 options:

Restore Settings

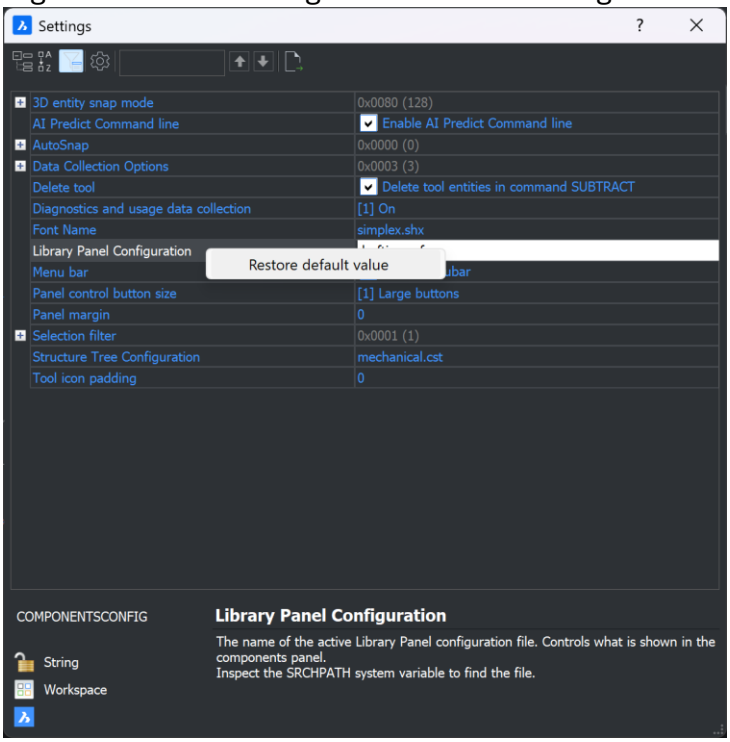
There are so many settings in BricsCAD, it can be easy to accidentally turn them on or off, which can stop you from working.

Find & Restore 1 Modified Setting

1. Open the Settings dialog
2. Click the 'Only Show differences with the default' button, 3rd from the top-left.

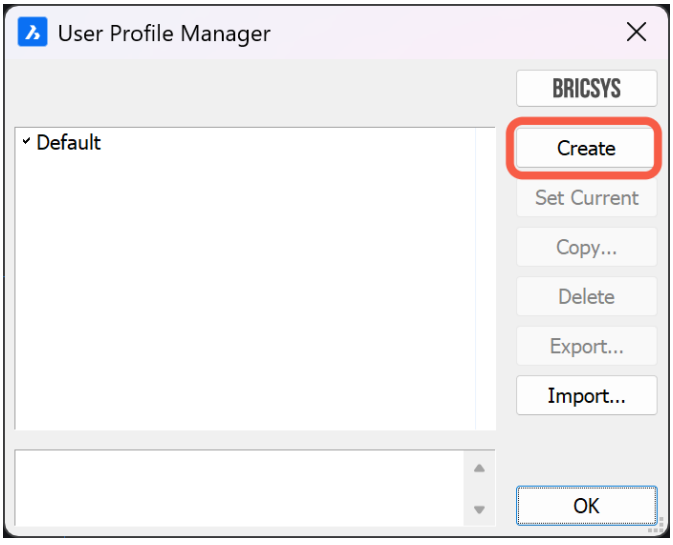


3. Right-Click on a setting to restore the setting to default.

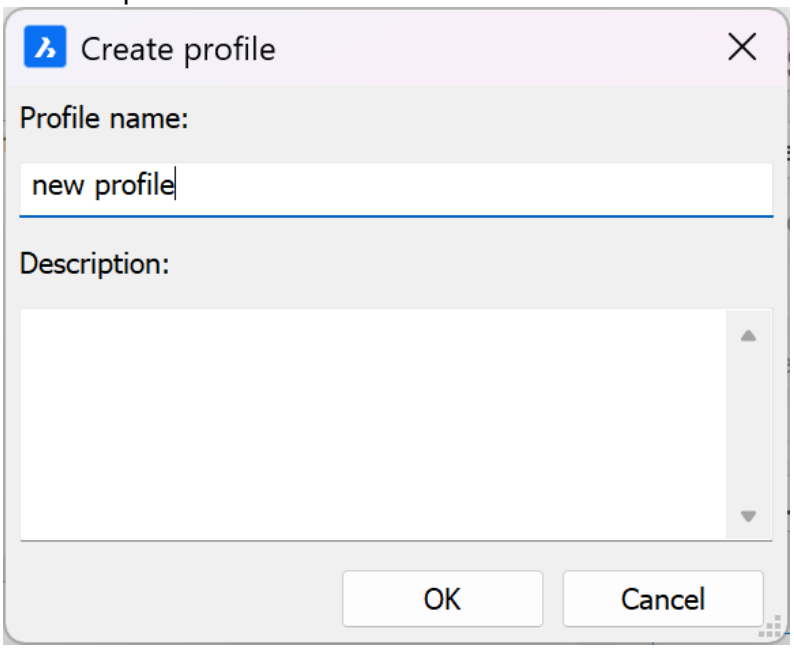


Restore all Settings to Default

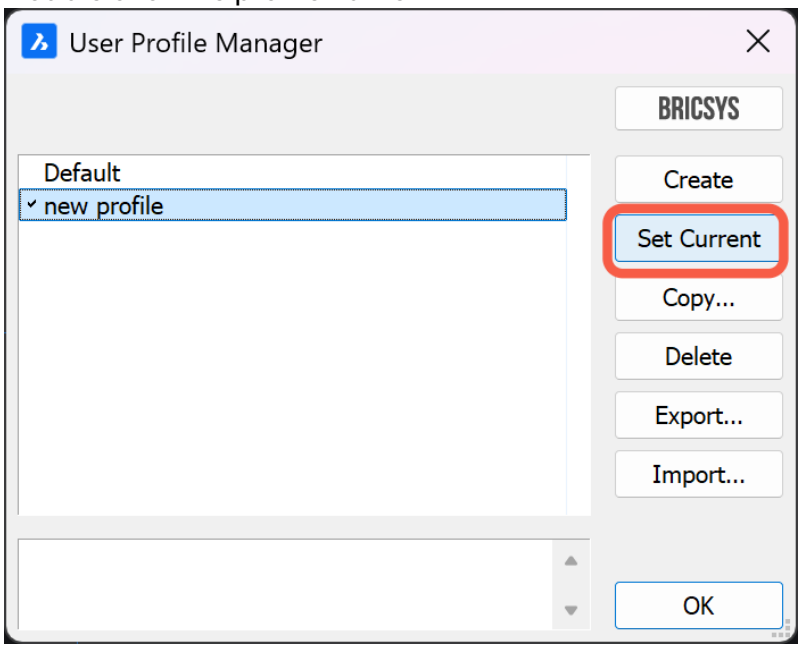
1. Open the Profile Manager dialog (PROFILEMANAGER)
2. Click “Create’



3. Give the profile a name



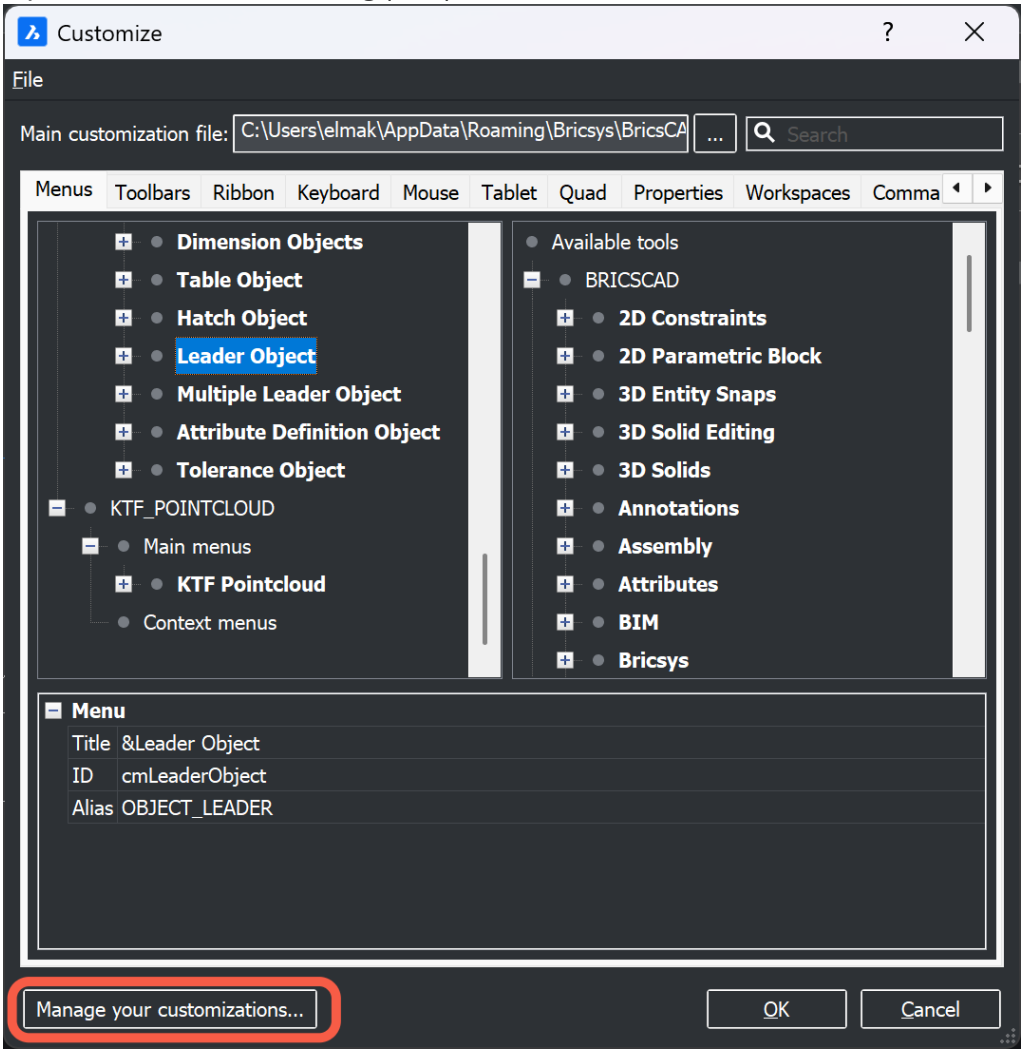
4. Click OK
5. Set the new profile as default:
    - Select the profile and click ‘Set Current’
    - Double click the profile name



Restore the CUI (Interface)

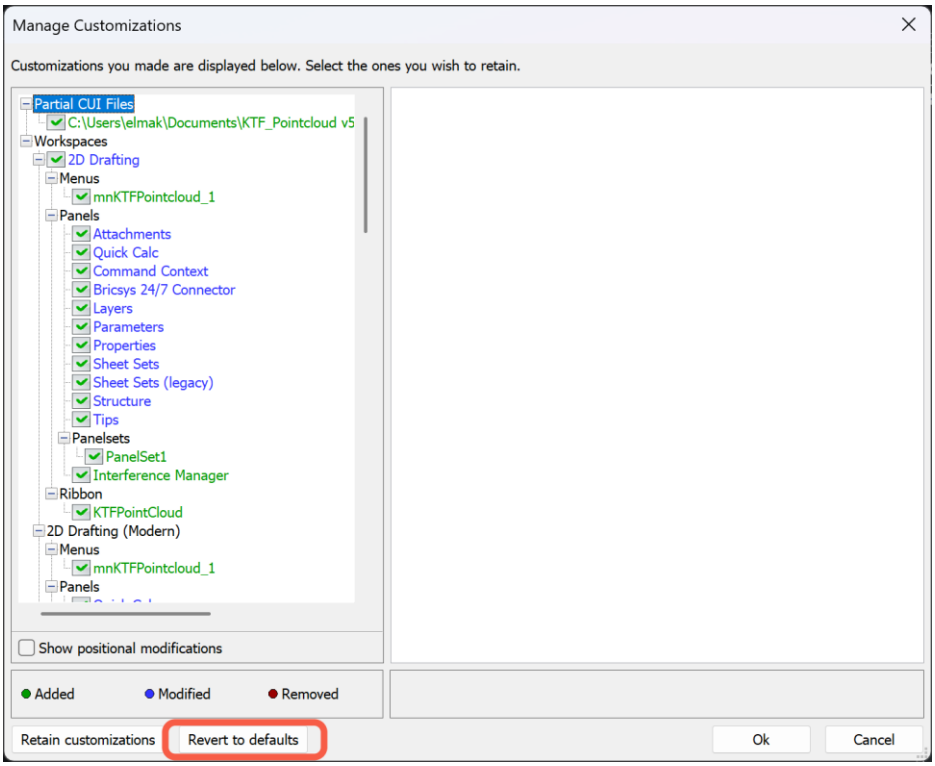
Another common issue is that parts of the interface have “gone missing”. You can easily restore your UI to OOTB with the following steps.

1. Open the Customize dialog (CUI).



2. Click ‘Manage your customizations...”
   The Manage Customizations dialog will appear.

3. Click ‘Revert to Defaults’



4. Click ‘OK’.

5. Click ‘OK’ again.

Glossary of terms

Block

A reusable collection of entities stored as a single entity. Blocks streamline repetitive geometry and reduce file size. They can be inserted, edited, and managed through the **BLOCK** and **BEDIT** commands.

CUI (Customize User Interface)

A system that allows customisation of BricsCAD's UI elements-toolbars, menus, ribbon tabs, keyboard shortcuts, and more. Saved in a .cui file.

Cursor

The mouse pointer, also known as the "crosshair".

Command

An instruction entered via the Command line, Ribbon, Toolbar, or Menu that tells BricsCAD what operation to perform (e.g., LINE, COPY, UCS, LAYER).

Context Menu

A menu that appears when you right-click, offering commands relevant to what is currently selected or where you clicked.

Coordinate System (WCS/UCS)

A mathematical system used to define locations in the drawing. BricsCAD supports multiple coordinate systems (UCS, WCS).

Dynamic UCS

Automatically aligns the UCS to planar faces or entities as your cursor moves, simplifying 3D modelling without manually redefining UCS axes.

Entity

Any drawable object in BricsCAD-lines, circles, splines, blocks, polylines, hatches, solids, etc. (Known as 'Objects' in AutoCAD.)

External Reference

A linked file, such as a DWG, image, PDF, or point cloud, that appears in a drawing without being embedded, so updates made to the original file are automatically reflected in all drawings that reference it. Also known as an “XRef”.

Layer

A logical grouping mechanism for organising entities. Layers control visibility, colour, lineweight, plotting, etc.

Model Space

The primary 3D/2D drafting environment where the actual design is created at full scale.

Paper Space

A layout environment used for plotting. Contains scaled “snapshots”, title blocks, annotations, and viewports showing scaled views of Model Space.

Right-Click Menu

The menu accessed via right-click, also known as the Context Menu.

Setting

A stored value that affects BricsCAD’s behaviour (e.g., SNAPMODE, GRIDDISPLAY, PICKBOX). Settings can be for the drawing, workspace or global.

Snap (OSNAP)

Entity Snaps lock the cursor to precise points such as endpoints, midpoints, centres, intersections, etc.

Template (DWT)

A preconfigured drawing file used to start new drawings. Templates contain layers, styles, units, title blocks, settings, and more.

Toolbar

A UI visual set of buttons that execute commands.

UCS (User CoordinateSystem)

A user-defined coordinate system. Changing the UCS adjusts the drawing plane, orientation, and axis directions for modelling or drafting.

UI (User Interface)

All visible interactive elements of BricsCAD, including menus, ribbons, palettes, toolbars, command line, and panels.

Viewport

A window in Paper Space that displays a view of Model Space. Each viewport can have its own scale, layer visibility, and visual style.

Visual Style

A collection of display settings (e.g., wireframe, realistic, shaded) that control how 2D/3D geometry appears on screen.

Workspace

A saved configuration of interface elements tailored for different task types (Drafting, Modelling, BIM, Mechanical, etc.).

WCS (World Coordinate System)

The fixed, global coordinate system for a drawing. All UCS systems are defined relative to the WCS.

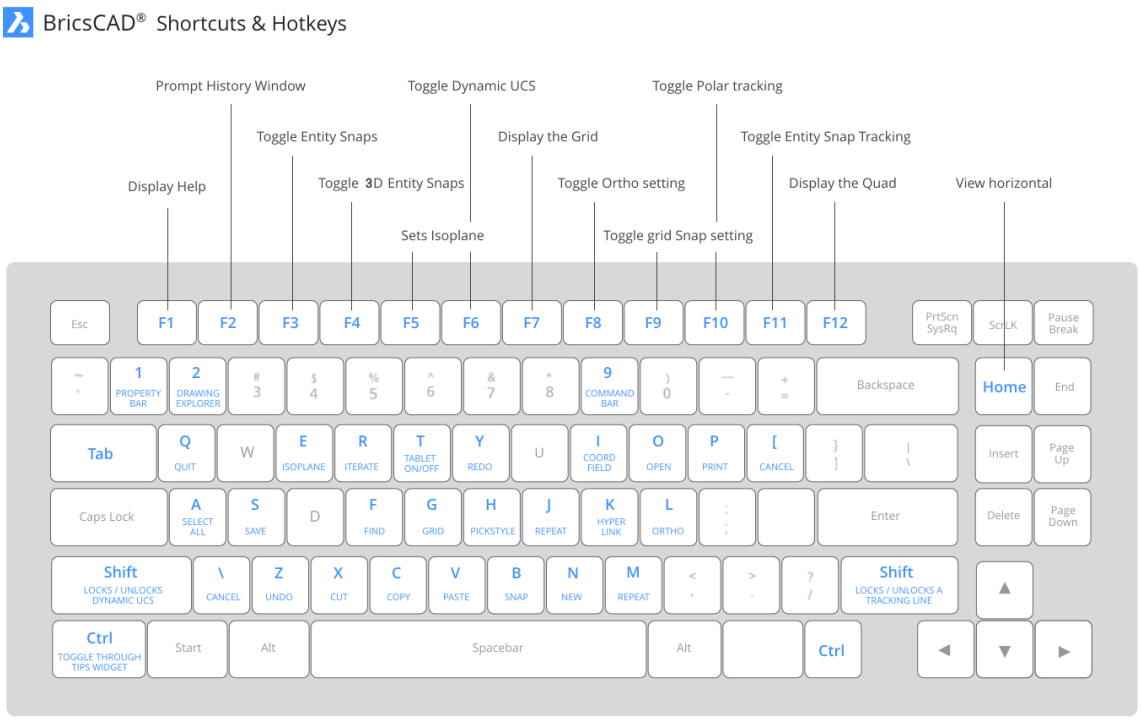
XRef

A linked file, such as a DWG, image, PDF, or point cloud, that appears in a drawing without being embedded, so updates made to the original file are automatically reflected in all drawings that reference it. Also known as an “External Reference”.

BricsCAD Commands (Quick Reference)

- Arc - A
- Array - AR
- Circle - C
- Copy - CO
- Dimension - DIM
- Ellipse - EL
- Erase - E
- Explode - X
- Fillet - F
- Hatch - H
- Line - L
- Mirror - MI
- Move - M
- Multiline Text - MT
- Offset - O
- Polyline - PL
- Rectangle - REC
- Rotate - RO
- Scale - SC
- Stretch - STR
- Trim - TR

Keyboard Shortcuts



Most Frequently Used Shortcuts

- **Cancel command** - ESC
- **Copy** - Ctrl+C
- **Cut** - Ctrl+X
- **New File** - Ctrl+N
- **Open File** - Ctrl+O
- **Ortho mode on/off** - F8
- **Paste** - Ctrl+V
- **Print** - Ctrl+P
- **Screenshot active window** - Alt+PrtScn
- **Undo** - Ctrl+Z

Keyboard	Description
F1	Opens the BricsCAD Help. Executes the HELP command.
F2	Toggles the display of the Prompt History window. See the GRAPHSCR command.
F3	Toggles the entity snaps ON/OFF. See the OSMODE setting.
F4	Toggles the 3D entity snaps ON/OFF. See the 3DOSMODE setting.
F5	Sets the isometric plane; toggles the value of the SNAPISOPAIR setting. Applies only when the SNAPSTYL setting = 1.
F6	Toggles the Dynamic UCS feature.
F7	Toggles the display of the grid (see the GRIDMODE setting).
F8	Toggles the ORTHOMODE setting ON/OFF. Disables bitcode 8 of the AUTOSNAP setting, if set.
F9	Toggles Snap ON/OFF (see the SNAP command).
F10	Toggles the Polar Tracking setting. Sets the ORTHOMODE setting OFF, if ON. Toggles bitcode 8 of the AUTOSNAP setting ON/OFF.
F11	Toggles the Entity Snap Tracking setting. Toggles bitcode 16 of the AUTOSNAP setting ON/OFF.
F12	Toggles the display of the Quad cursor menu. See the QUADDISPLAY setting.
Alt + F8	Launches the VBARUN command.
Alt + F11	Launches the VBAIDE command.
Ctrl + 1	Note: Do not use the numeric keypad. On AZERTY keyboards: do not use the Shift key when pressing the number key. Toggles the Properties panel.
Ctrl + 2	Note: Do not use the numeric keypad. On AZERTY keyboards: do not use the Shift key when pressing the number key. Opens the Drawing Explorer dialog box.
Ctrl + 9	Note: Do not use the numeric keypad. On AZERTY keyboards: do not use the Shift key when pressing the number key. Toggles the display of the Command line.

	Executes the COMMANDLINE command or the COMMANDLINEHIDE command.
Ctrl + 0	Note: Do not use the numeric keypad. On AZERTY keyboards: do not use the Shift key when pressing the number key. Toggles the display of user interface entities as specified by the CLEANSCREENOPTIONS setting. Executes the CLEANSCREENON command or the CLEANSCREENOFF command.
Ctrl + A	Selects all entities.
Ctrl + B	Toggles Snap ON/OFF (see the SNAP command).
Ctrl + C	Copies the selection to the clipboard (COPYCLIP command).
Ctrl + Shift + C	Copies the selection along with a base point (COPYBASE command).
Ctrl + E	Sets the isometric plane; iterates the value of the SNAPISOPAIR setting. Applies only when the SNAPSTYL setting = 1.
Ctrl + F	Launches the FIND command.
Ctrl+Cmd+F	Toggles the fullscreen mode.Note: This is a macOS only shortcut.
Ctrl + G	Toggles the display of the grid (GRIDMODE setting).
Ctrl + H	Toggles the value of the PICKSTYLE setting, which controls the selection of groups and associative hatches.
Ctrl + I	Sets the readout of the coordinate field in the Status bar (COORDS setting).
Ctrl + J	Repeats the previously issued command.
Ctrl + K	Attach a hyperlink to an entity or modify an existing hyperlink (HYPERLINK command).
Ctrl + L	Toggles the ORTHO setting.
Ctrl + M	Repeats the previously issued command.
Ctrl + N	Creates a new drawing (NEW command).
Ctrl + O	Opens an existing drawing (OPEN command).
Ctrl + P	Prints the current drawing (PRINT command).
Ctrl + Shift + P	Toggles the display of the Properties panel (PROPERTIES command and PROPERTIESCLOSE command).
Ctrl + Q	Quits the application; prompts to save changes (QUIT command).
Ctrl + R	Iterates through viewports.

Ctrl + S	Saves the current drawing (QSAVE command).
Ctrl + T	Turns the tablet on/off (TABLET command).
Ctrl + Tab	Shows the next document tab.
Ctrl + Shift + Tab	Shows the previous document tab.
Ctrl + V	Pastes the contents of the Clipboard. (PASTECLIP command).
Ctrl + Alt + V	Pastes the contents of the Clipboard in a specified format (PASTESPEC command).
Ctrl + Shift + V	Pastes the contents of the Clipboard as a block (PASTEBLOCK command).
Ctrl + X	Cuts the selection and puts it on the clipboard (CUTCLIP command).
Ctrl + Y	Redoes the last action undone (REDO command).
Ctrl + Z	Undoes the last action (UNDO command).
Ctrl + [	Cancels the running command.
Ctrl + \	Cancels the running command.
Ctrl + Home	Creates or opens the Start page (GOTOSTART command).
Shift + F2	Toggles the display of the Command line (COMMANDLINE command and COMMANDLINEHIDE command).
Shift + F3	Turns the Status bar on/off (STATBAR command).
Shift + F4	Turns the Scroll Bars on/off (SCROLLBAR command).
Shift + F8	Launches the Visual Basic Project Manager (VBAMAN command).
Shift + F11	Launches the VBA COM Add-In Manager (ADDINMAN command).
PgUp	Moves the view up.
PgDn	Moves the view down.
Shift + Left Arrow	Moves the view to the left.
Shift + Right Arrow	Moves the view to the right.
Shift + Up Arrow	Moves the view up. If (sub)entities are selected, the entities are nudged up (along the z-axis).
Shift + Down Arrow	Moves the view down. If (sub)entities are selected, the entities are nudged down (along the z-axis).
Ctrl + Left Arrow	Nudges the selected (sub)entities to the left (along the x-axis).
Ctrl + Right Arrow	Nudges the selected (sub)entities to the right (along the x-axis).

Ctrl + Up Arrow	Nudges the selected (sub)entities up (along the y-axis).
Ctrl + Down Arrow	Nudges the selected (sub)entities down (along the y-axis).
Tab	Navigates down into the autocomplete command list. Note: This is a cross-platform shortcut.
Tab + Shift	Navigates up into the autocomplete command list. Note: This is a cross-platform shortcut.
Ctrl + N	Navigates down into the autocomplete command list. Note: This is a macOS only shortcut.
Ctrl + P	Navigates up into the autocomplete command list. Note: This is a macOS only shortcut.

Useful Resources

Bricsys Help Center - https://help.bricsys.com

Bricsys self-guided lessons - https://learning.bricsys.com

Support Request (login required) - https://boa.bricsys.com/protected/support/GetCustomerSupportRequests.do?statusID=1000

Bricsys Forum - https://forum.bricsys.com