

CST CAD NAVIGATOR USER GUIDE

by CADSOFTTOOLS

CST CAD Navigator is the CAD application compatible with Windows, macOS, and Linux. Under its user-friendly interface, there is a powerful core enabling quick viewing of 2D drawings and 3D models. The software makes it easy to import and export files, get dimensions, and create section views.

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WHAT FILE FORMATS ARE SUPPORTED?



CST CAD Navigator supports both 2D and 3D file formats. It enables to open:

CAD FORMATS

DWG (up to Autodesk AutoCAD® 2022), DXF.

VECTOR FORMATS

PDF, SVG, CGM, PLT, HPGL, HGL, HG, HPG, PLO, HP, HP1, HP2, HP3, HPGL2, HPP, GL, GL2, PRN, SPL, RTL, PCL.

3D FORMATS

IGES, IGS, STEP, STP, STL, X_T, X_B, SLDPRT, SAT, FSAT, SAB, OBJ, BREP, SMT, IPT.

RASTER FORMATS

PNG, BMP, JPG, JPEG, TIF, TIFF, GIF.

HOW TO OPEN A FILE?



When you run CST CAD Navigator for the first time, click **Browse**, select your file and then click **Open**. On subsequent run of the application, your recent files are displayed. To view one of them, double-click on it or select it and click **Import**.

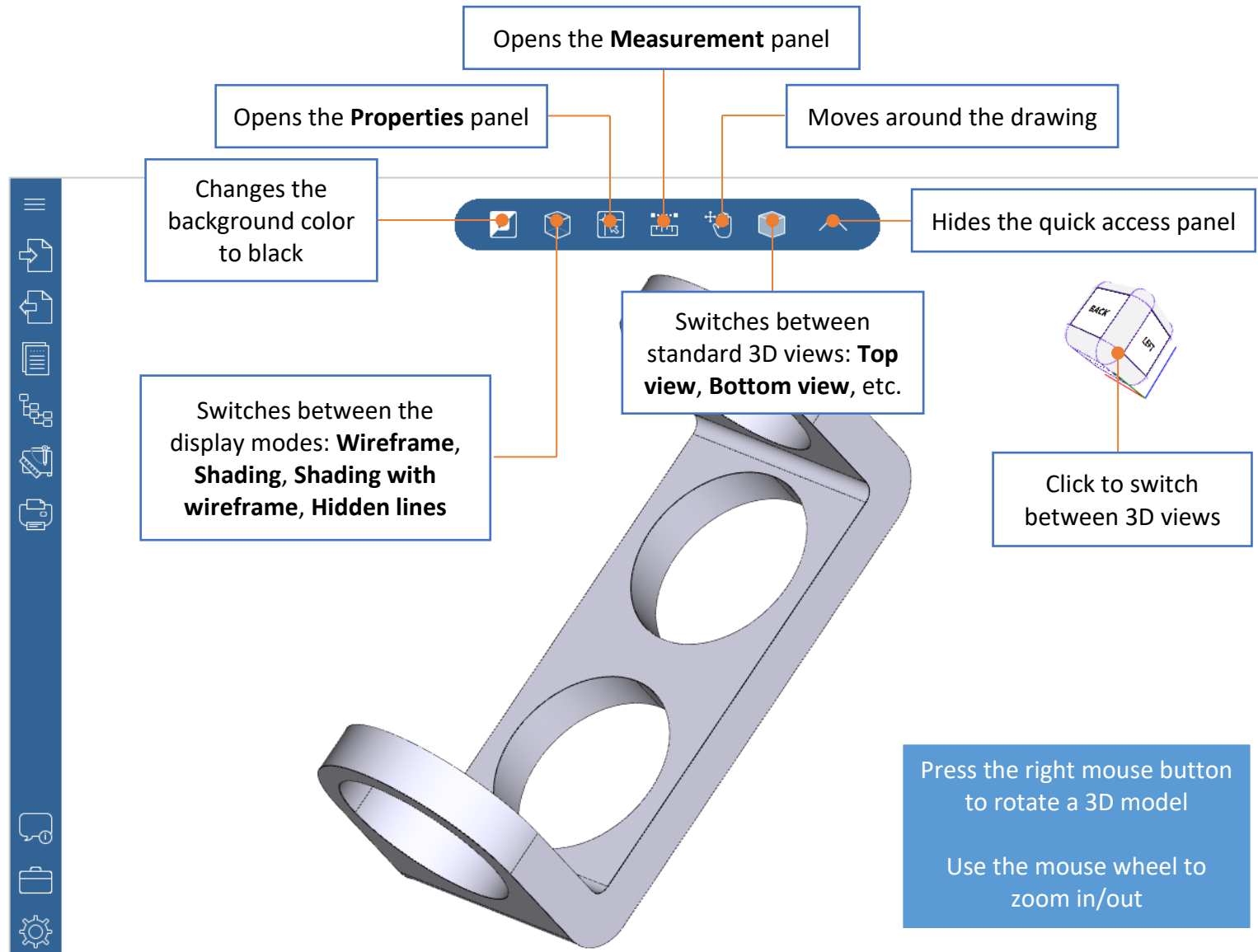
The screenshot shows the 'Import' panel in CST CAD Navigator. The panel has a dark blue sidebar on the left with several icons. The main area displays a list of files with 3D preview images. Callout boxes provide instructions:

- Open the Import panel:** Points to the top-left icon in the sidebar.
- Click the Browse button:** Points to the 'Browse' button at the bottom right of the file list.
- Select a file:** Points to the file list area.
- Click the Import button:** Points to the 'Import' button at the bottom center of the panel.
- Double-click on a file preview image:** Points to the preview image of the file '3.72.051.sat'.

File Name	Path
3.72.051.sat	C:\Users\softgold01\Documents\CADSoft Tools\cstCadNavigator 1\Samples\3.72.051.sat
3.55.020.sat	C:\Users\softgold01\Documents\CADSoft Tools\cstCadNavigator 1\Samples\3.55.020.sat
gimbal.sat	C:\Users\softgold01\Documents\CADSoft Tools\cstCadNavigator 1\Samples\gimbal.sat

HOW TO NAVIGATE AROUND A FILE?

CST CAD Navigator enables to quickly navigate around your 2D drawing or 3D model.





WHAT ARE THE EXPORT FORMATS?

CST CAD Navigator enables to save files to the following formats:

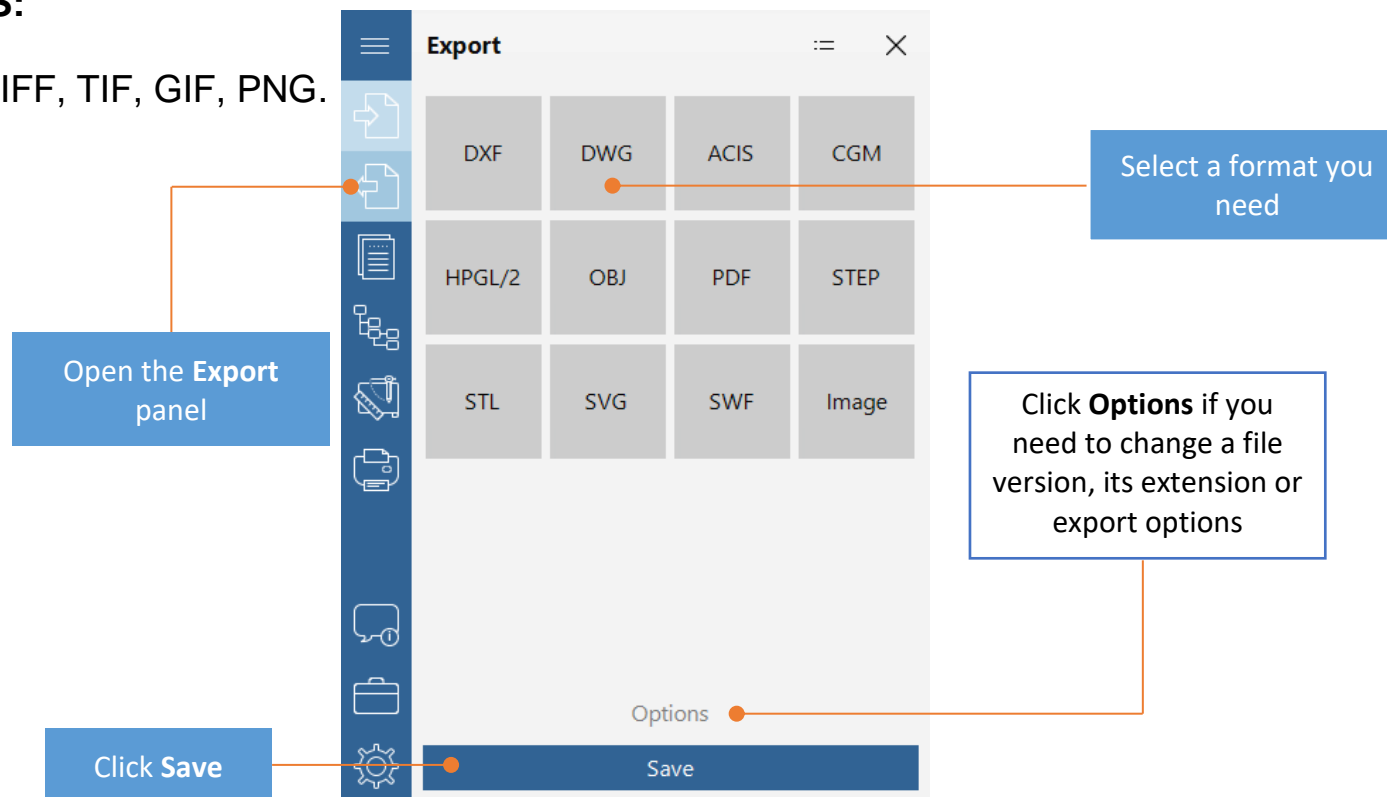
CAD FORMATS: DWG (versions 2000, 2004, 2010), DXF.

VECTOR FORMATS: PDF, CGM, SVG, SWF, HPGL/2.

3D FORMATS: IGES, STEP, STL, OBJ, ACIS.

RASTER FORMATS:

JPG, JPEG, BMP, TIFF, TIF, GIF, PNG.



HOW TO MEASURE A 2D FILE?



CST CAD Navigator provides two measuring tools to measure 2D files: **Distance** and **Polyline Length**.

Using the **Distance** tool, you can get the distance between two points.

Using the **Polyline Length** tool, you can get the length of a polyline part, its total length, or area.

The image shows a screenshot of the CST CAD Navigator software interface. On the left, the **Tools** panel is open, showing icons for Sectioning, Measurement, and View. A callout box labeled "Open the Tools panel" points to the Tools icon in the sidebar. Another callout box labeled "Click Measurement" points to the Measurement icon in the Tools panel. On the right, the **Measurement** panel is open, showing two tool icons: Distance and Polyline Length. Callout boxes labeled "Distance" and "Polyline Length" point to these respective icons. Below the icons, the Measurement settings are displayed, including "Displayed units" (Centimeters), "Original units" (Millimeters), and "Precision" (0.0000). A callout box labeled "Open the Snap panel to turn on/off different types of snaps" points to the Snap section, which is expanded to show options for Line, First point, Second point, and Delta. The current distance is shown as 9,5094, and there is a [X] Delete button.

HOW TO GET DIMENSIONS OF A 3D MODEL?

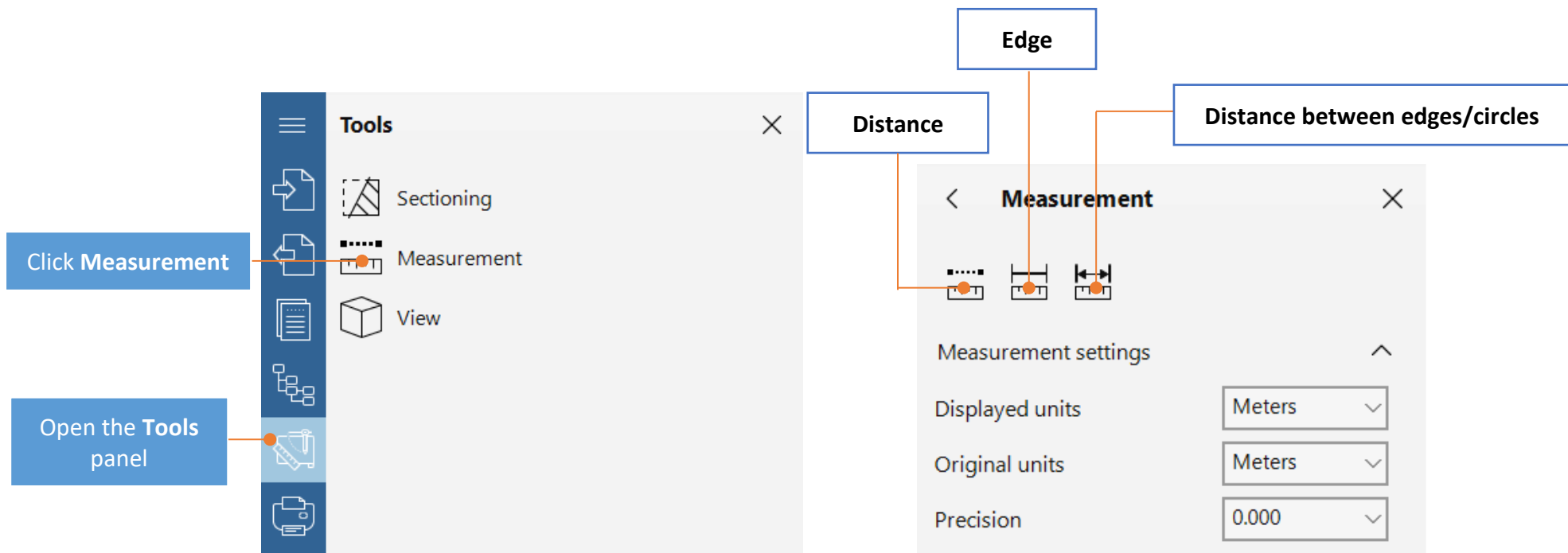


CST CAD Navigator provides three measuring tools to get dimensions of 3D models: **Distance**, **Edge**, and **Distance between edges/circles**.

Using the **Distance** tool, you can get the distance between two points, between a point and surface, between two parallel surfaces.

Using the **Edge** tool, you can get the length of an edge and the radius of a circle or a circular arc.

Using the **Distance between edges/circles** tool, you can get the distance between two parallel edges or between two circle centers.

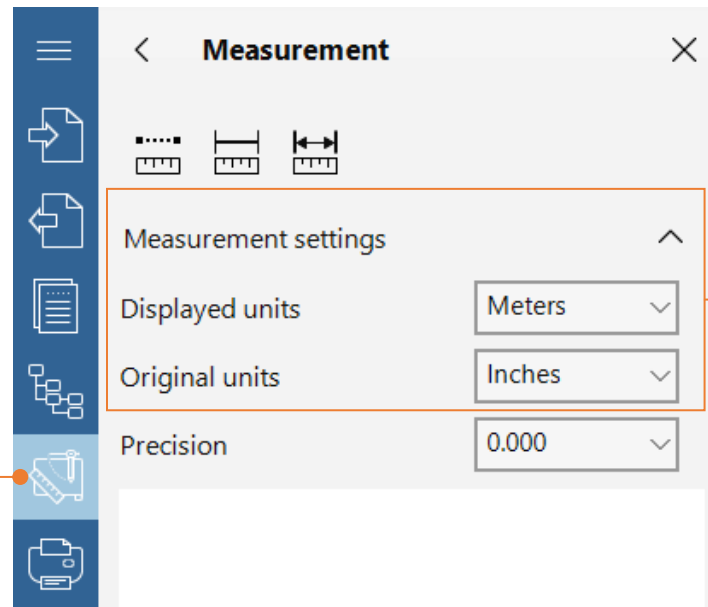


HOW TO CHANGE THE MEASURING UNITS?



You can change the measuring units in the **Measurement settings** section. Set the original units of a drawing/3D model (units in which it was created) and the units in which you want the measurement results to be displayed.

Open the **Tools** panel and click **Measurement**

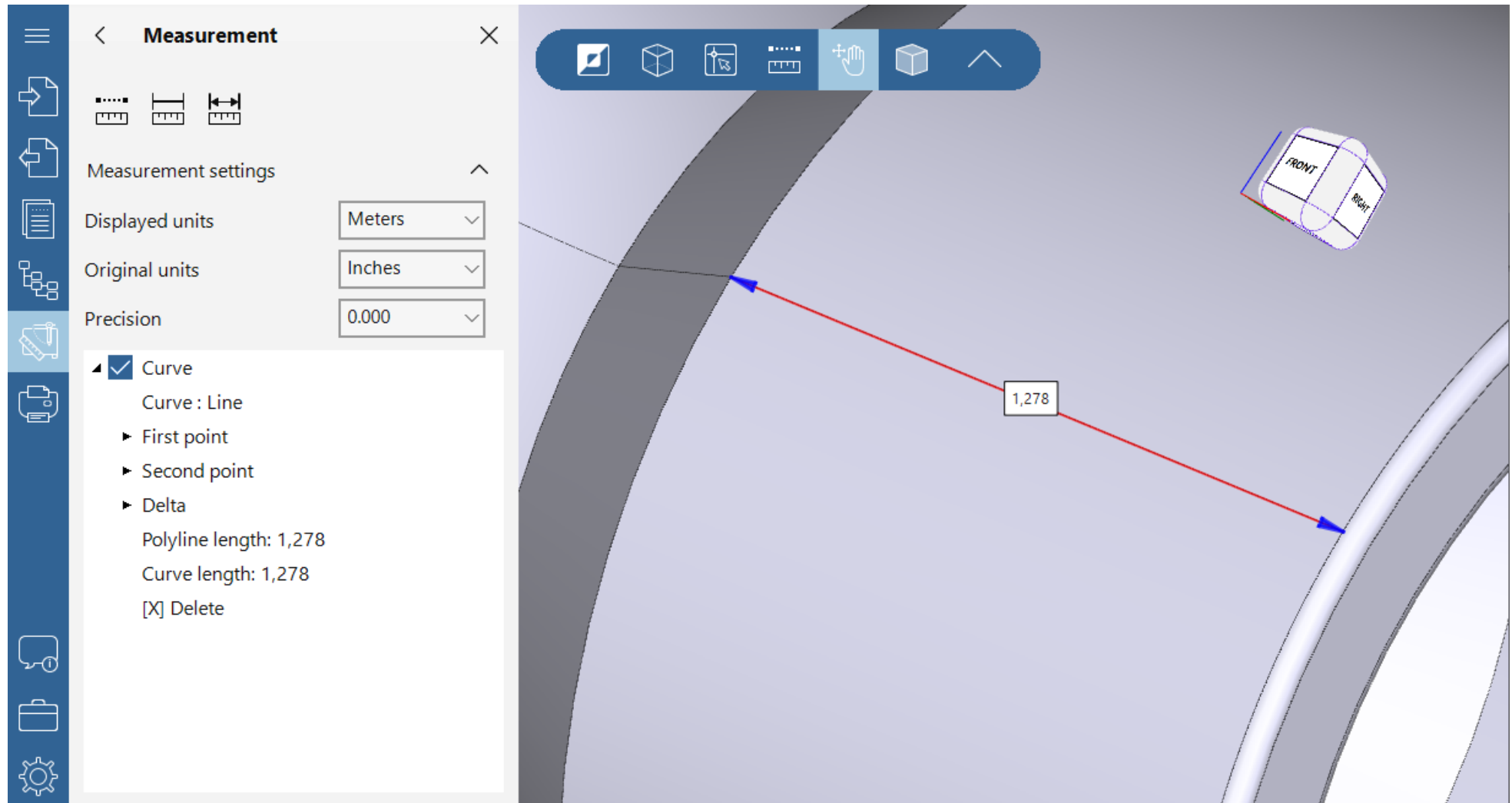


Set the units in the **Measurement settings** section

HOW TO GET THE DISTANCE BETWEEN TWO POINTS?



Activate the **Distance** tool, then click to specify the first and the second points on a 3D model. The result will be shown in **Measurement** panel on the left and on a 3D model itself.



HOW TO CREATE A SECTION VIEW OF A MODEL?



CST CAD Navigator has a dynamic section tool. With its help, you may create a section view of a 3D model and see its hidden elements. Sections do not modify geometry and are fully customizable.

The image illustrates the steps to create a section view in CST CAD Navigator. It is divided into two main parts: opening the tool and configuring it.

Step 1: Opening the Tools Panel

- Open the Tools panel:** A blue callout box points to the Tools icon in the left sidebar.
- Click Sectioning:** A blue callout box points to the Sectioning tool icon within the Tools panel.

Step 2: Sectioning Tool Configuration

The **Sectioning** panel is shown with the following components and callouts:

- Click the Add plane button:** A blue callout box points to the plus sign icon in the top toolbar.
- Creates a section in one of the default planes: YZ, XZ, XY:** A blue callout box points to the YZ, XZ, and XY icons in the top toolbar.
- Deletes a plane:** A blue callout box points to the minus sign icon in the top toolbar.
- Displays all the added section planes:** A blue callout box points to the list of planes (0, 1, 2) in the **Planes** section.

Parameters Section:

- Position:** Input fields for X (0), Y (0), and Z (0).
- Parameters:**
 - Distance:** Slider and input field (0).
 - Azimuth:** Slider and input field (90).
 - Inclination:** Slider and input field (0).

HOW TO ADJUST A SECTION PLANE'S POSITION?



To adjust a section plane's position, move the sliders or specify the coordinates of the central point in the X, Y, Z fields.

The screenshot shows the 'Sectioning' tool interface. It includes a 'Planes' list with items 0, 1, and 2, where item 2 is selected. Below this is a 'Position' section with input fields for X, Y, and Z, all set to 0. At the bottom is a 'Parameters' section with sliders and input fields for Distance (0), Azimuth (90), and Inclination (0). Three callout boxes provide instructions: 'Specify the coordinates of the central point' points to the X, Y, and Z input fields; 'Change the parameter values of the section by moving the sliders or entering the value' points to the sliders and input fields in the Parameters section; and two boxes on the right point to icons: 'Reverses the direction of the selected plane' points to a double-headed arrow icon, and 'Displays the 3D model parts that were cut' points to a 3D model icon.

Specify the coordinates of the central point

Change the parameter values of the section by moving the sliders or entering the value

Reverses the direction of the selected plane

Displays the 3D model parts that were cut

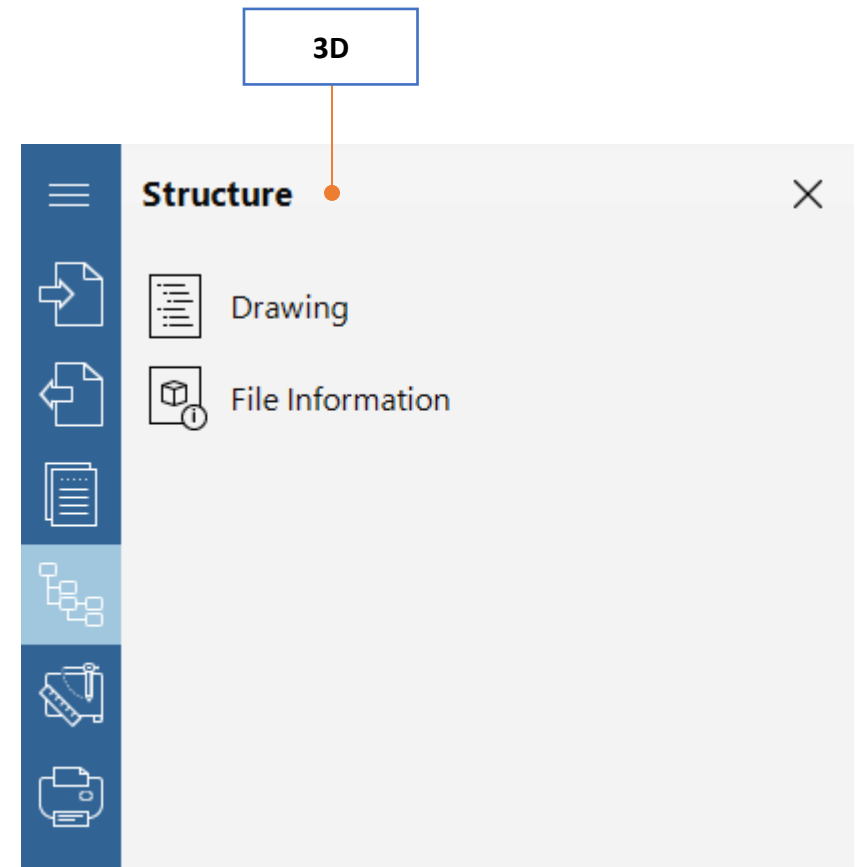
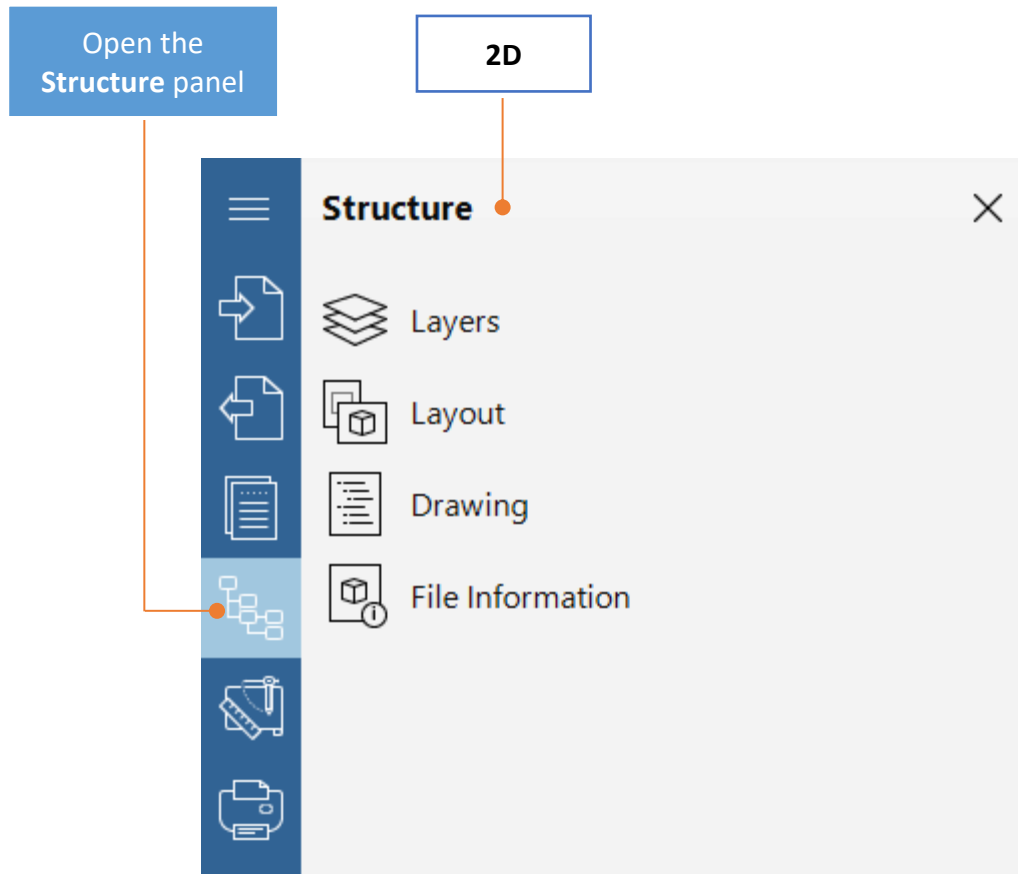
HOW TO SEE THE STRUCTURE OF A FILE?



The **Structure** panel includes the following sections:

2D: **Layers, Layout, Drawing, File Information.**

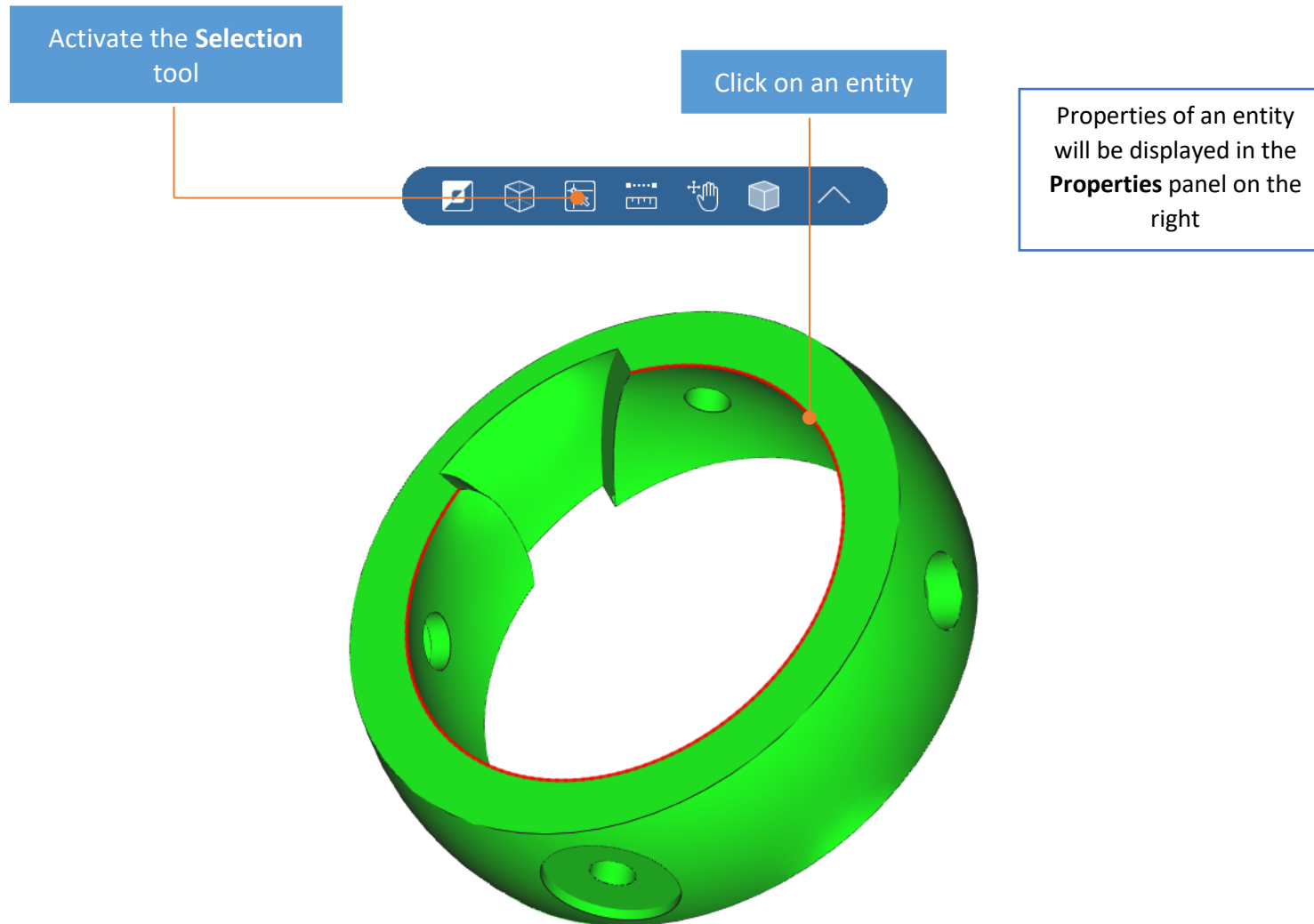
3D: **Drawing, File Information.**



HOW TO SEE PROPERTIES OF AN ENTITY?



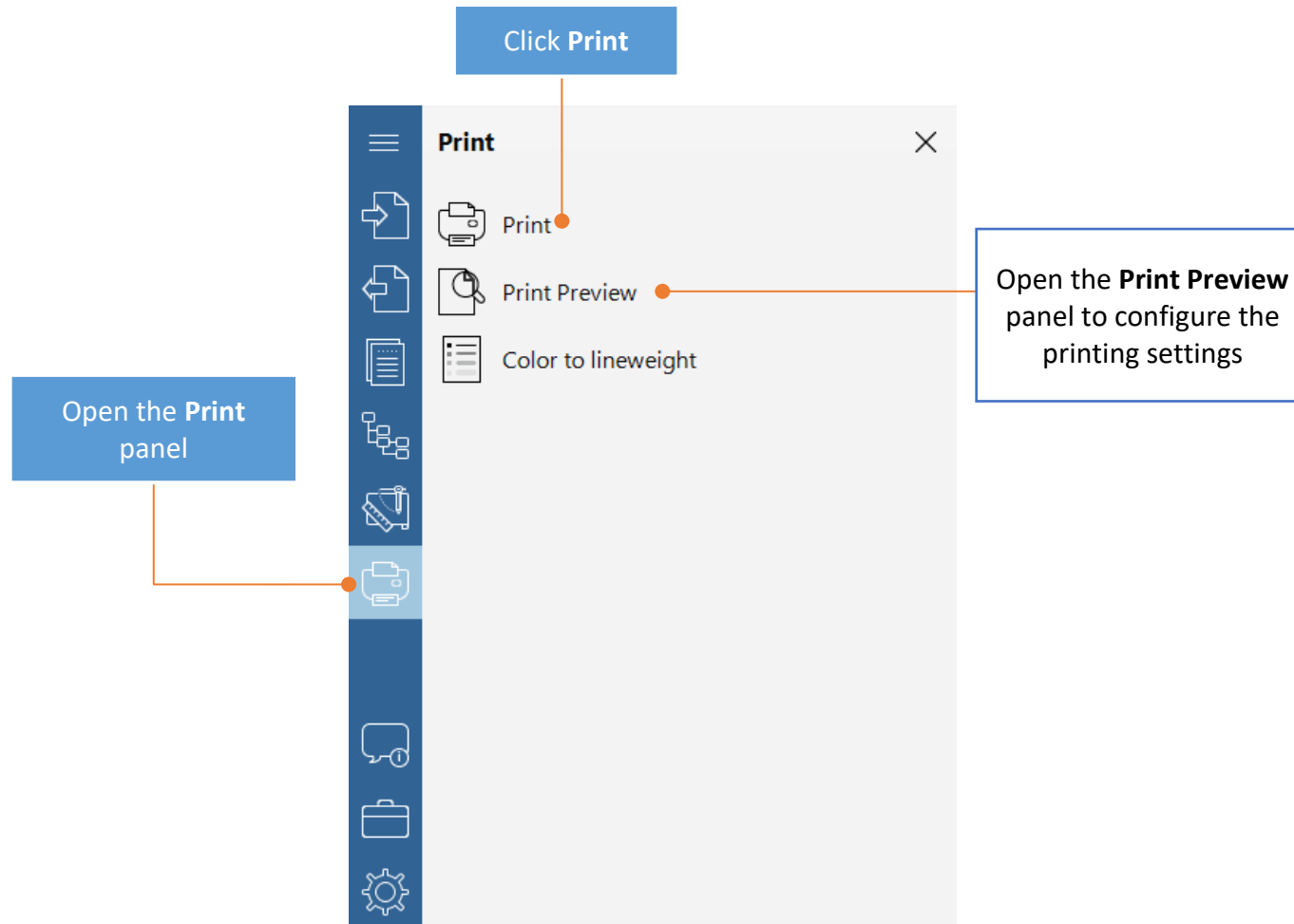
To see properties of an object, use the **Selection** tool from the quick access toolbar.



HOW TO PRINT A FILE?



CST CAD Navigator enables to configure the printing settings and print files.



HOW TO CONFIGURE SETTINGS?



You can customize CST CAD Navigator to make it better fit your needs.

The image shows a screenshot of the CST CAD Navigator interface. On the left is a vertical blue toolbar with several icons. The bottom-most icon is a gear, representing the settings. A blue callout box with the text "Open the Settings panel" has an orange line pointing to this gear icon. To the right of the toolbar is a large grey window titled "Settings" with a close button (X) in the top right corner. Inside this window is a list of settings categories: Common, Import settings, Export settings, Visualization, Measurement, Snap, Fonts, Associations, and Proxy settings. A blue callout box with the text "Select a group of settings you need" has an orange line pointing to the "Visualization" category in the list.