

# 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 kernel 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® 2026), DXF, DWF.

## **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' dialog box in CST CAD Navigator. The dialog has a dark blue sidebar on the left with several icons. The main area displays a list of files with 3D preview images. The files listed are:

- 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

At the bottom of the dialog, there is a text input field containing 'C:\Users\softgold01\Documer' and a 'Browse' button. Below that is a dark blue bar with the 'Import' button.

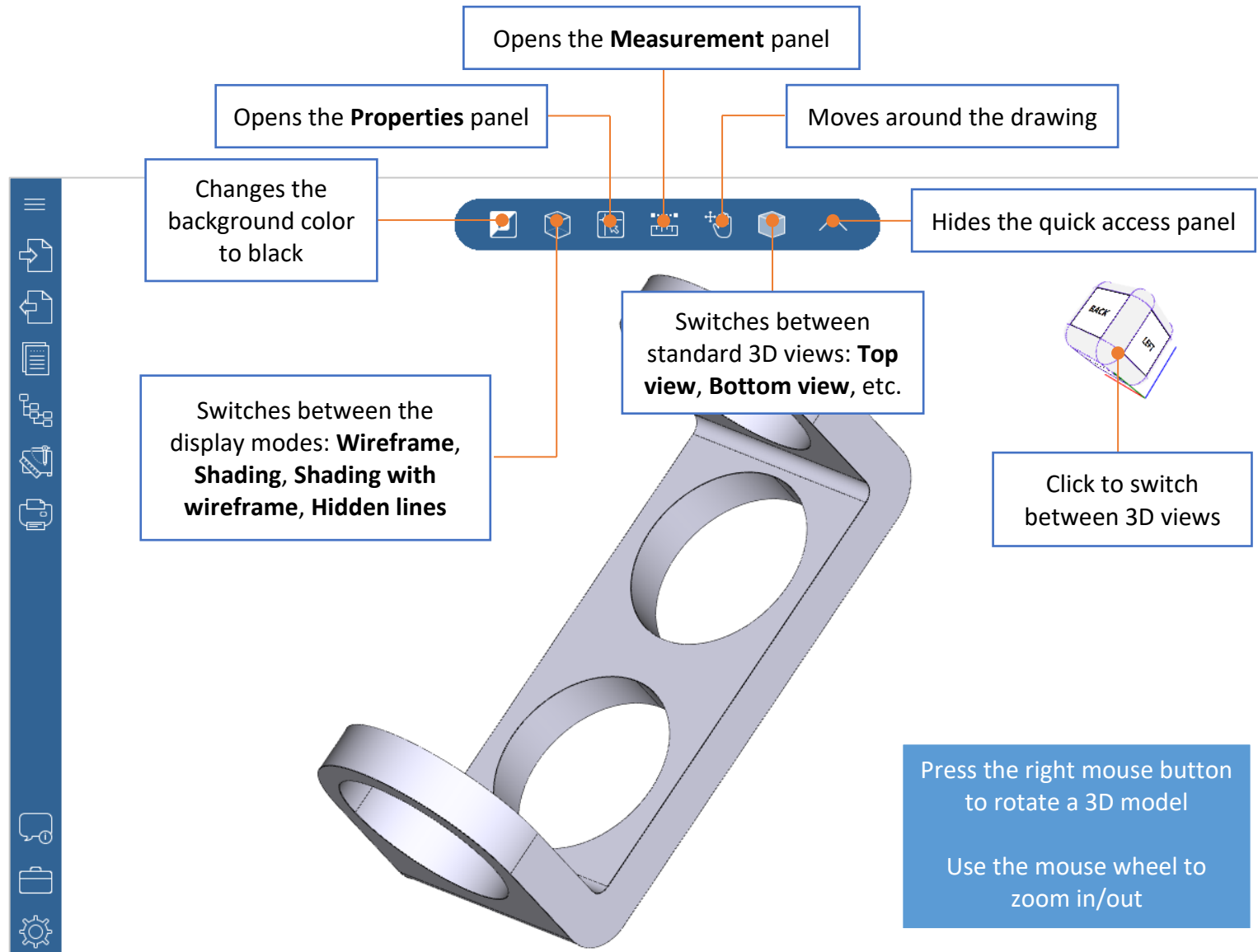
Callout boxes provide the following instructions:

- Open the Import panel**: Points to the top icon in the sidebar.
- Click the Browse button**: Select a file. Points to the 'Browse' button.
- Click the Import button**: Points to the 'Import' button.
- Double-click on a file preview image**: Points to the preview image of the first file.

# 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:

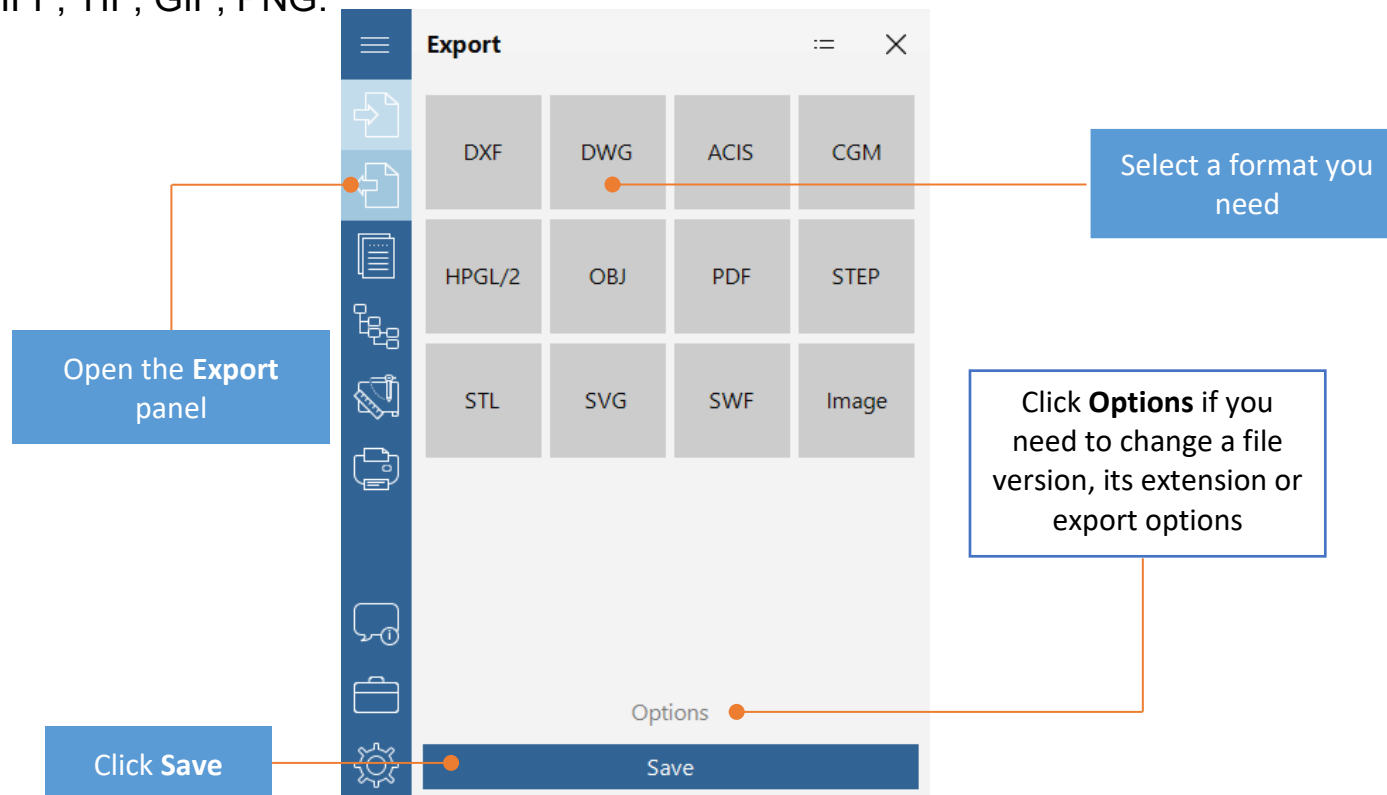
**CAD FORMATS:** DWG and DXF (versions 2000, 2004, 2010, 2013, 2018).

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

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

**RASTER FORMATS:**

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



# HOW TO CONVERT PDF TO DWG/DXF?



Using CST CAD Navigator, it is possible to convert PDF files to editable DWG or DXF files. To change the conversion settings, go to the [Settings panel](#).

The image illustrates the steps to convert a PDF to DWG or DXF in CST CAD Navigator. It shows two panels: the **Tools** panel and the **Export** panel.

**Tools Panel:** Contains icons for Measurement, View, PDF Conversion, and other tools. The **PDF Conversion** icon is highlighted with a blue box and the text: "Click **PDF Conversion** (this tool is also available at the starting page of the application and on the **Import** panel)".

**Export Panel:** Shows a list of file formats. The **DWG** and **DXF** options are highlighted with a blue box and the text: "Select a file format you need". The **DXF** option is specifically labeled "AutoCAD™ DXF" and the **DWG** option is labeled "AutoCAD™ DWG".

**Save Button:** A blue box at the bottom right of the Export panel is labeled "Click **Save**".

**Annotations:** A blue box at the top left says "Open the **Tools** panel". A blue box at the top center says "When conversion is complete, open the **Export** panel".

# 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 panel icon. 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?

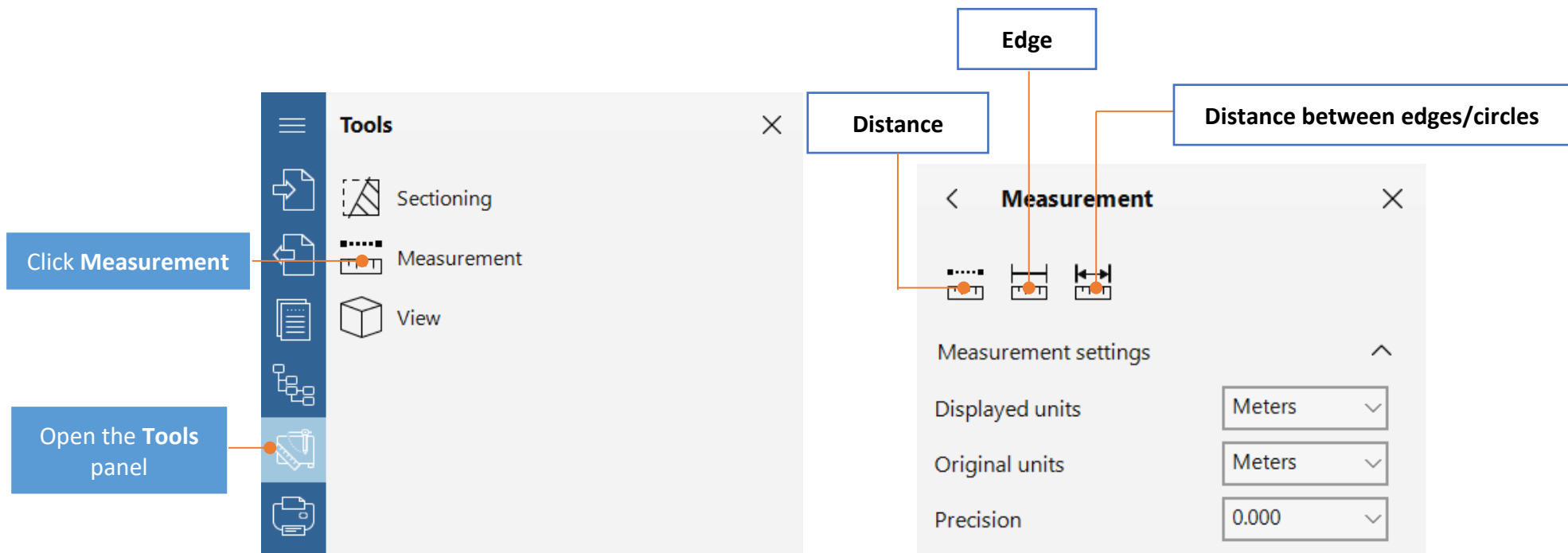


CST CAD Navigator provides three measuring tools to get dimensions of 3D models: **Distance**, **Edge**, and **Distance between edges/circles**.

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.

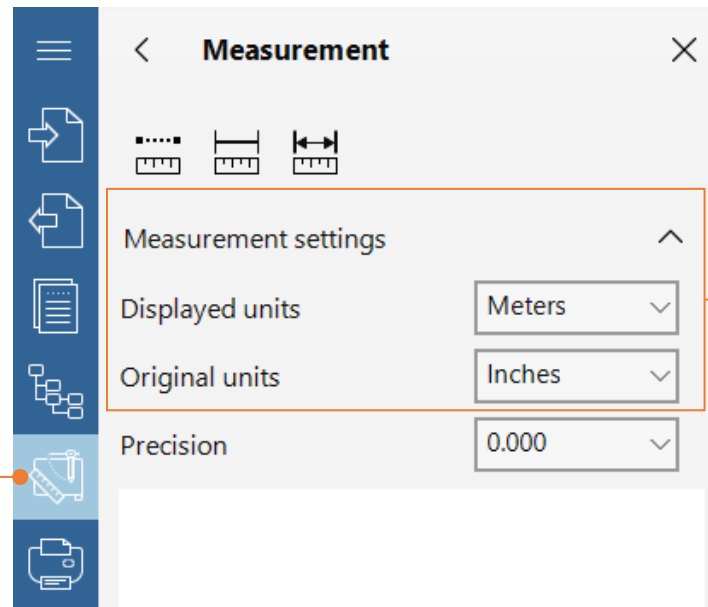


# HOW TO CHANGE THE MEASURING UNITS?



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**

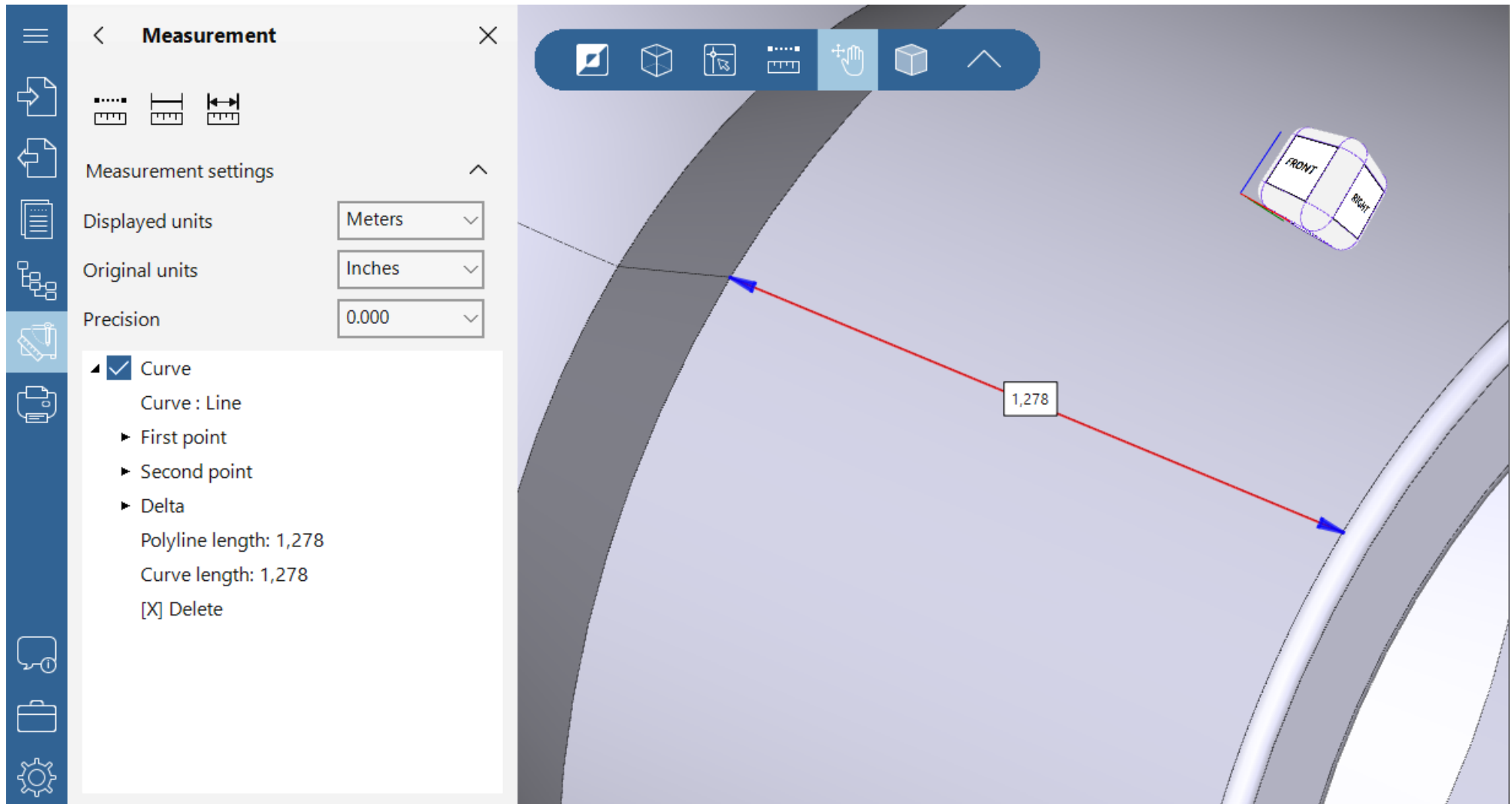


Set the units in the **Measurement settings** section

# 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.

**Open the Tools panel**

**Click Sectioning**

**Click the Add plane button**

Creates a section in one of the default planes: YZ, XZ, XY

Deletes a plane

Displays all the added section planes

**Tools**

- Sectioning
- Measurement
- View

**Sectioning**

Planes

- 0
- 1
- 2

Position

X 0

Y 0

Z 0

Parameters

Distance 0

Azimuth 90

Inclination 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 features a vertical toolbar on the left with icons for file operations, a list of planes (0, 1, 2), and a 'Position' section with input fields for X, Y, and Z coordinates. Below the 'Position' section is a 'Parameters' section with sliders and input fields for Distance, Azimuth, and Inclination. Three callout boxes provide instructions: one points to the X, Y, and Z input fields, another points to the sliders, and a third points to a button with a globe icon. Two other callout boxes point to buttons with a globe icon and a square icon with a dot, explaining their functions.

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

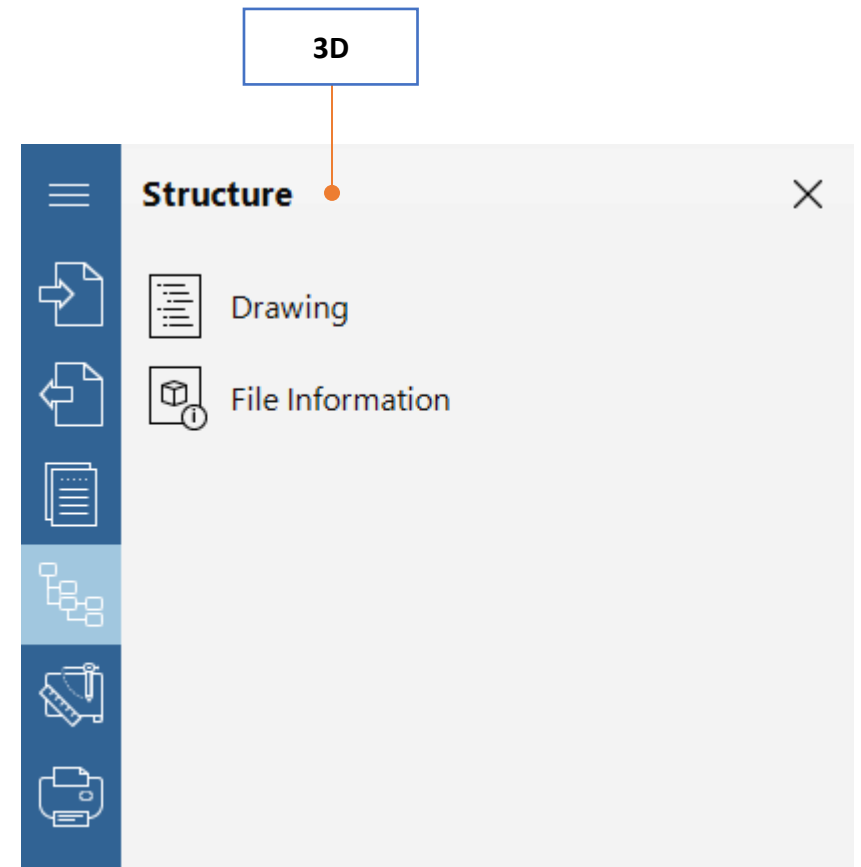
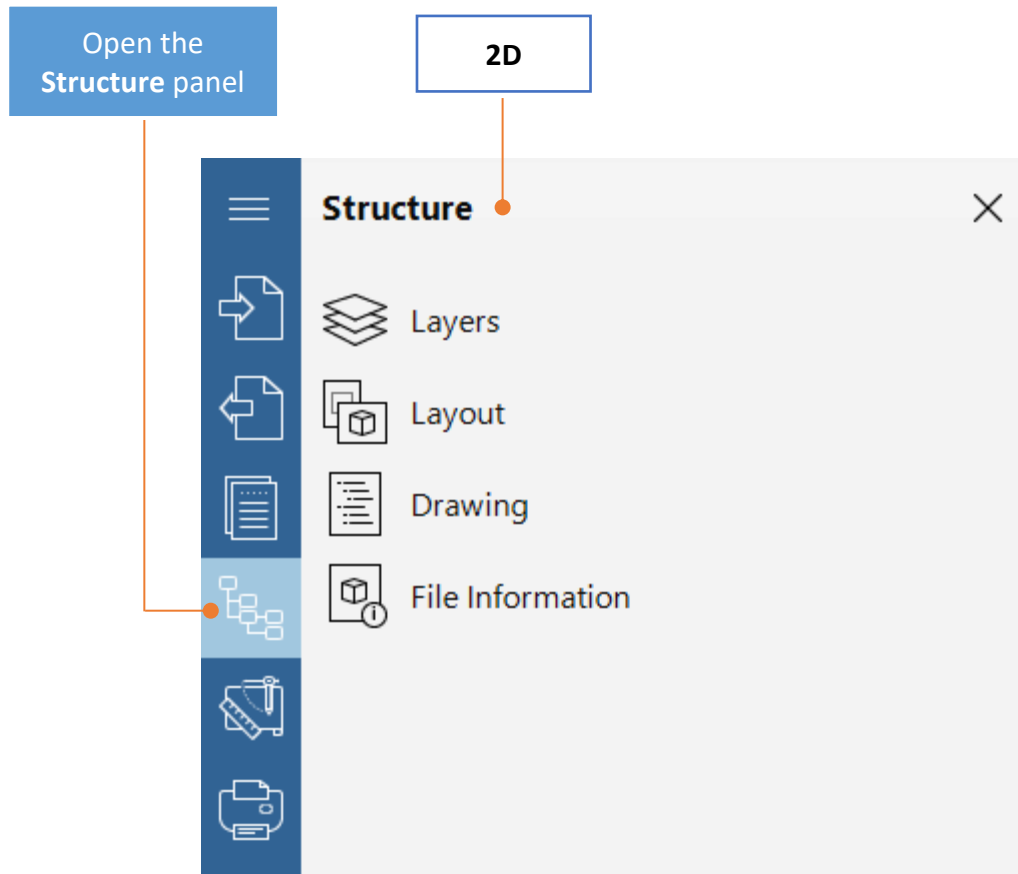
# HOW TO SEE THE STRUCTURE OF A FILE?



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

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

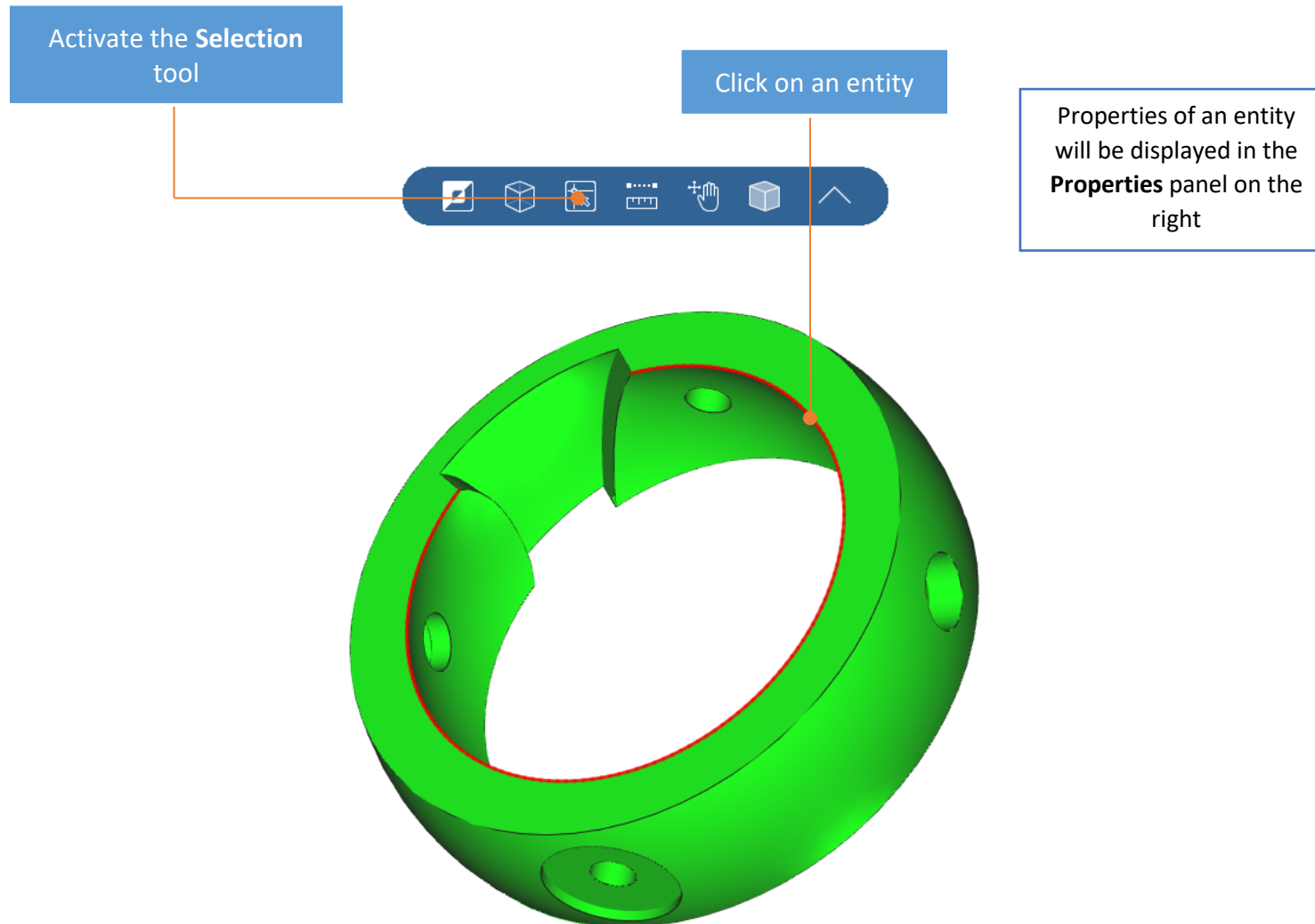
3D: **Drawing, File Information.**



# HOW TO SEE PROPERTIES OF AN ENTITY?



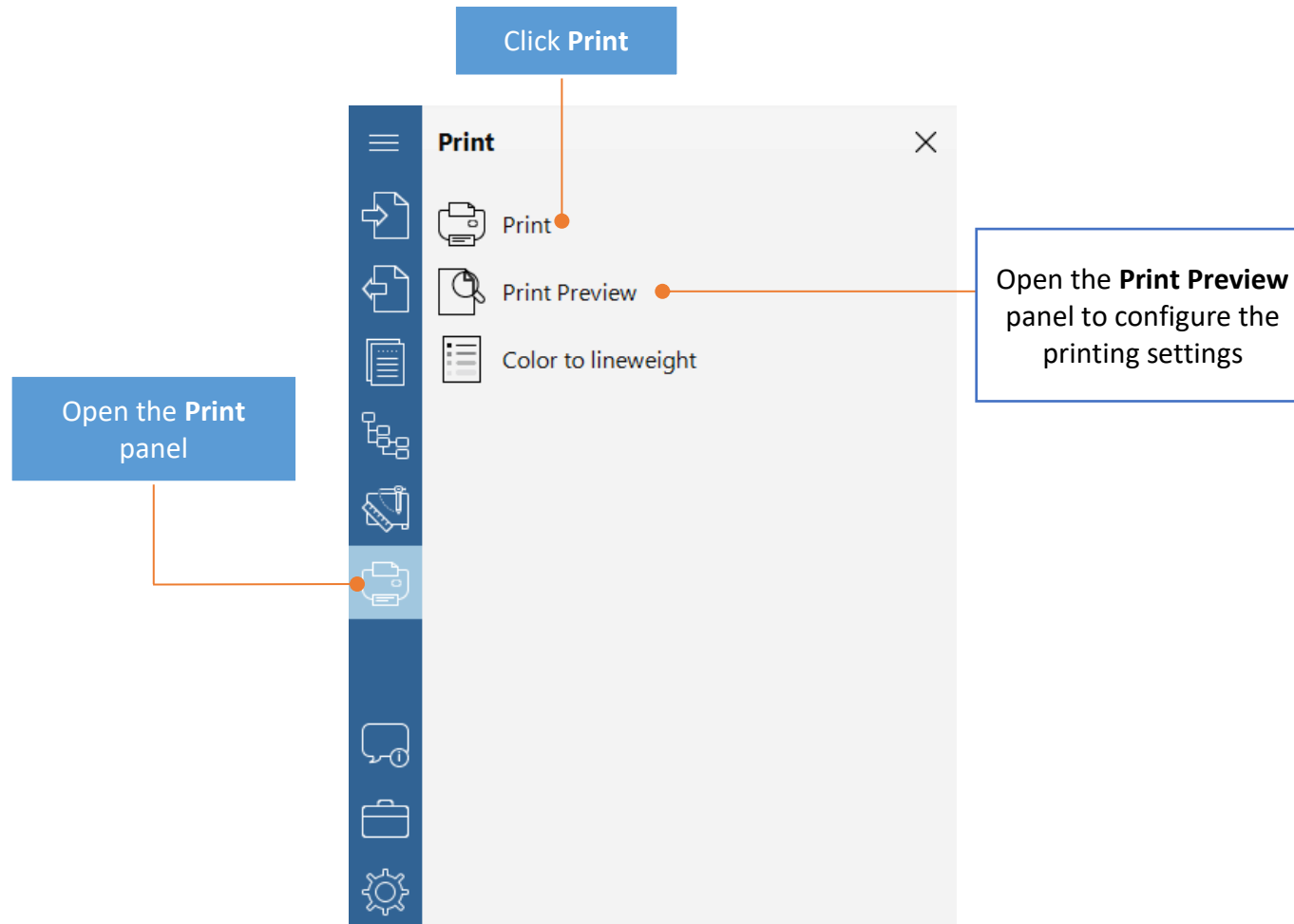
To see properties of an object, use the **Selection** tool from the quick access toolbar.



# HOW TO PRINT A FILE?



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



# HOW TO GENERATE G-CODE FROM DWG/DXF?



CST CAD Navigator generates universal G-code compatible with a wide range of CNC machines. It provides numerous settings to customize and optimize G-code to meet your specific requirements.

The image shows a software interface for generating G-code. On the left, a 'Tools' panel is open, listing various functions: Exploded view, Measurement, View, PDF Conversion, and G-code Generation. A callout box 'Open the Tools panel' points to the panel's header. Another callout 'Click G-code Generation' points to the G-code Generation icon. The main window displays a 'G-Code' dialog with a preview of a part and a 'Settings' tab. The settings include: Machine type (Milling), Precision (0.001), Drawing units (mm), Machine units (mm), Feed along XY (450), Optimize code (checked), and Convert only visible layers (unchecked). A callout 'Set the required settings' points to the Settings tab. At the bottom, a callout 'To get a G-code file, click Generate G-code' points to the 'Generate G-code' button. A 'Close' button is also visible.

Open the Tools panel

Click G-code Generation

Set the required settings

To get a G-code file, click **Generate G-code**

Tools

- Exploded view
- Measurement
- View
- PDF Conversion
- G-code Generation

G-Code

Properties Processing Queue Settings

General

Machine type: Milling

Precision: 0.001

Drawing units: mm

Machine units: mm

Feed along XY: 450

Optimize code

Convert only visible layers

Block numbering

Passes direction

Formatting

Generate G-code Close

# HOW TO CONFIGURE SETTINGS?



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

Open the **Settings** panel

Select a group of settings you need

**Settings**

- Common
- Import settings
- Export settings
- PDF conversion settings
- Visualization
- Measurement
- Snap
- Fonts
- Associations
- Proxy server

# HOW TO CONVERT MULTIPLE FILES?



You can convert a group of files in CST CAD Navigator with the specified settings.

**Open the Tools panel**

**Click Batch**  
(this tool is also available at the starting page of the application)

**Add or remove files from the batch list**

**Select export format**

**Configure export settings**

**Select output directory**

**Click Start**

**Batch**

Files:

- C:\...Entities.dxf
- C:\...linetype.dxf
- C:\...A4\_circle
- C:\...asf-logo
- C:\...celary04

Preview

Format Settings Log

- DXF AutoCAD™ DXF
- DWG AutoCAD™ DWG
- CGM Computer Graphics Metafile
- PDF Portable Document Format
- SVG Scalable Vector Graphics

Output directory:  **Browse**

**Start**