

---

# ZWCAD Mechanical 2023 Release Notes

## Overview

ZWCAD Mechanical 2023 has the following new features and improvements:

New Features	Description
<a href="#">Convert AM objects to ZWM objects</a>	Convert frames, title blocks, balloons and BOM created by AutoCAD Mechanical to ZWM entities, and edit them with ZWCAD Mechanical.
<a href="#">SDK for PLM Integration</a>	Provide ZWCAD Mechanical SDK for PLM integration, which support the PLM system get data from title block and BOM table.
<a href="#">Sheet Set Manager</a>	Powerful tool for drawings management and paper plotting.
<a href="#">Grip editing of 3D entities</a>	Use grips to change a 3D entity's shape.
<a href="#">Optimization for table module</a>	New functions and improvements have been added in table module.
<a href="#">Support for 3D mouse</a>	Use a 3D mouse to edit and view 3D entities.
<a href="#">Support for Adobe® PostScript</a>	Export EPS files by Adobe® PostScript plotter.

Improvements	Description
	PDF: when print to PDF file, some extra lines generated
<a href="#">MECHO-207</a>	ZWMSCAREA: ZWMSCAREA take no effect to radius dimensions and diameter dimensions
<a href="#">MECHO-211</a>	The label position does not take effect after changing in standard setting
<a href="#">MECHO-203</a>	Hole Chart: It did not take the last saved label position setting as the default setting

<a href="#">MECHO-55</a>	Schematic diagram has been added to tooltip.
<a href="#">Optimization for calculator</a>	<ol style="list-style-type: none"> <li>1. Support calculation in Imperial units.</li> <li>2. More functions and variables can be identified.</li> </ol>
<a href="#">Quick menu for Object Snap</a>	Right-click object snap button to open quick menu.
<a href="#">Preview for font replacement</a>	Preview window for you to check whether the big font can show the text correctly.

## New Features

### Convert AM objects to ZWM objects

With command ZWMACADMCONVERT in ZWCAD Mechanical, we could convert frames, title blocks, balloons and BOM created by AutoCAD Mechanical to ZWM entities, and edit them with ZWCAD Mechanical.

At the time being, ZWMACADMCONVERT can only convert drawings with ISO standard created by AutoCAD Mechanical. For other standards, please contact ZWSOFT technical team to configure the MechcadDwgConvert.xml file.

### SDK for PLM Integration

Provide ZWCAD Mechanical SDK for PLM integration, which support the PLM system get data from title block and BOM table.

### Sheet Set Manager

Sheet Set Manager is a powerful tool to manage and plot drawings, especially useful for projects with a large number of drawings. Note that Sheet Set Manager is only used for managing drawings in layout, so it requires you to arrange one drawing in one layout.

Below are the highlights of Sheet Set Manager:

- 1) Manage drawings with the tree structure. All drawings are listed on the panel clearly.

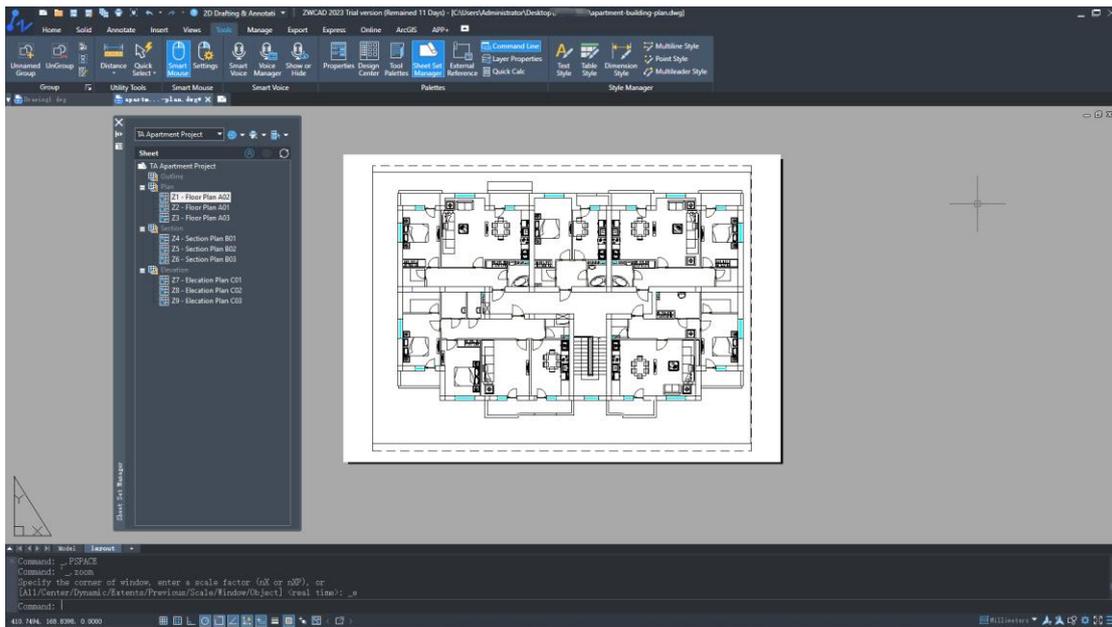


Figure 1. You can check each drawing from the structure tree clearly

- 2) View and edit drawings more conveniently. Right-click a drawing to trigger the menu for you to choose to edit or view the drawing.

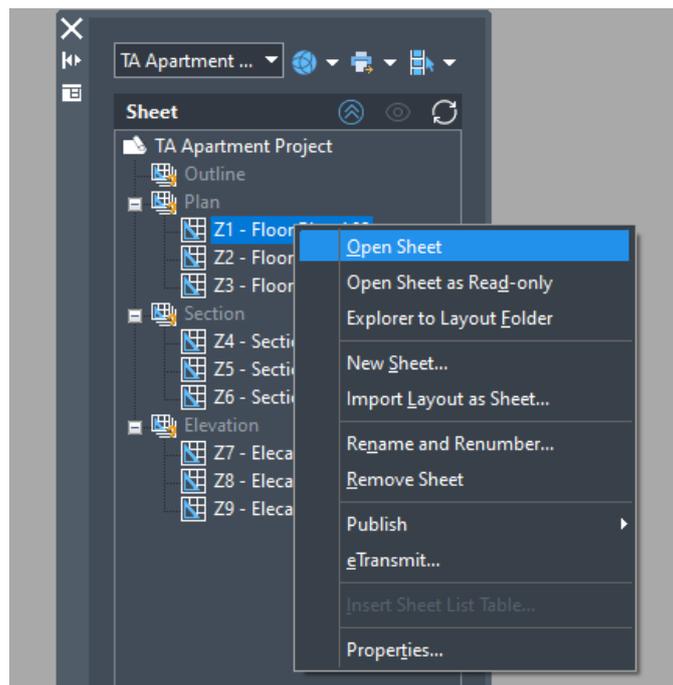


Figure 2. Right-click menu helps user to open drawing quickly

- 3) Create a sheet list table in one click. It can automatically create a sheet list table based on the structure tree and insert it into the drawing. You can choose all drawings or some of the drawings to create the table.

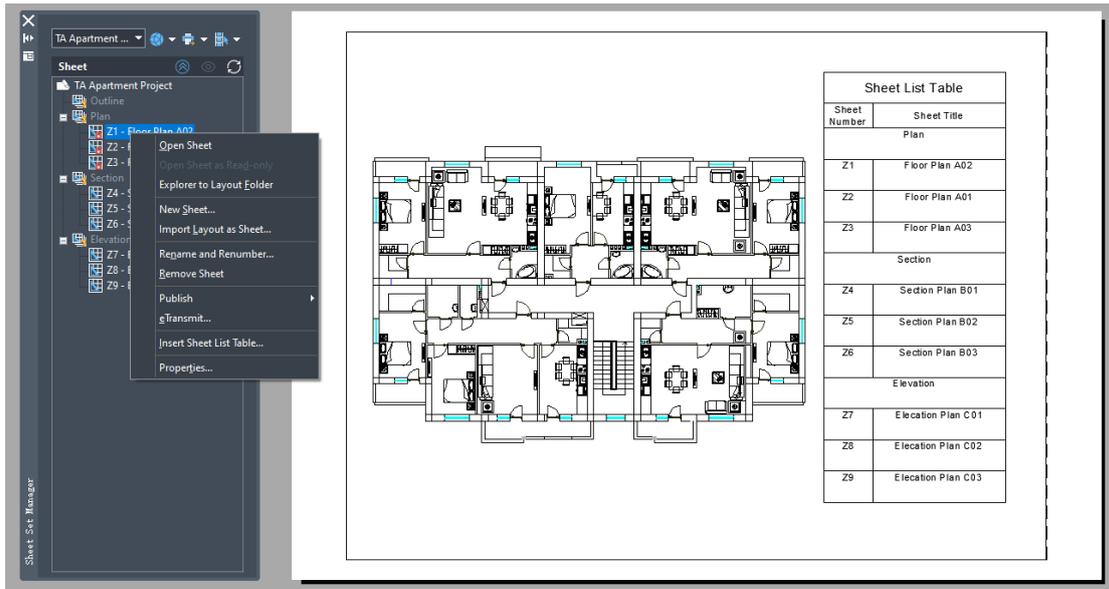


Figure 3. One click to create a sheet list table

- 4) Modify fields of multiple drawings. You can modify these fields without opening the drawings. Moreover, you can customize your own fields based on different needs.

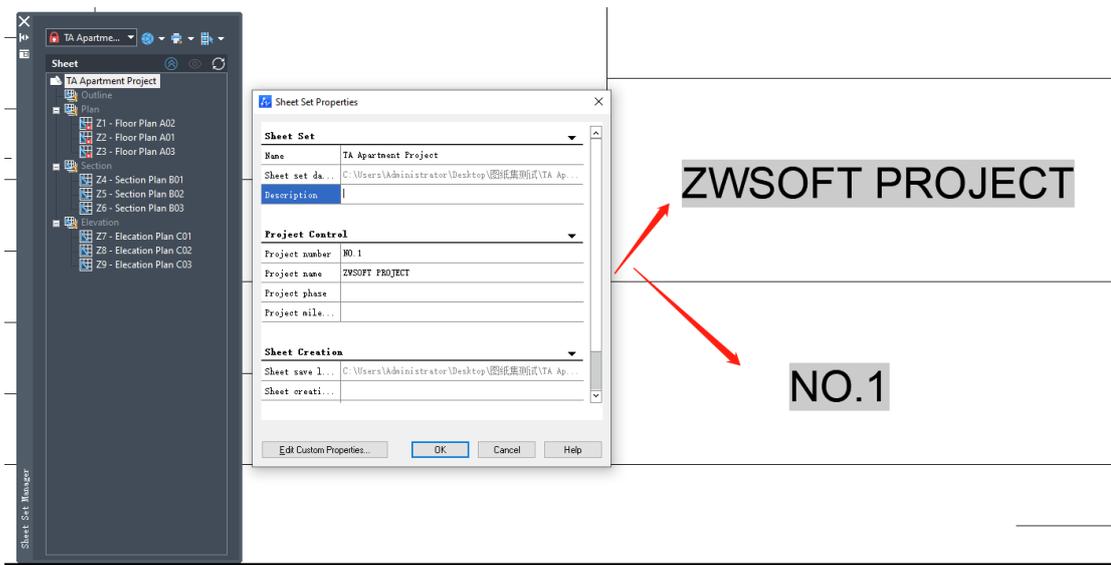


Figure 4. Fields in Sheet Set Manager

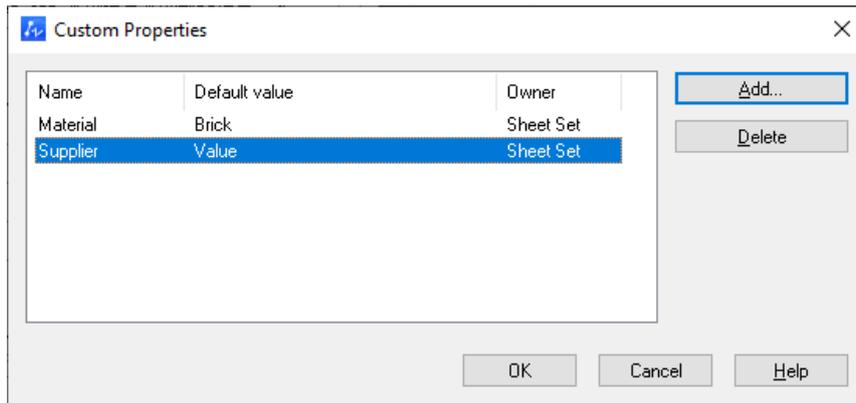


Figure 5. Customize your own fields

- 5) Archive or plot your drawings in a few steps. From the structure tree, you can select plotting drawings directly, or set up a publish list and right-click the drawings to print. Sheet Set Manager supports physical printing and virtual printing like PDF, DWF, and DWFX.

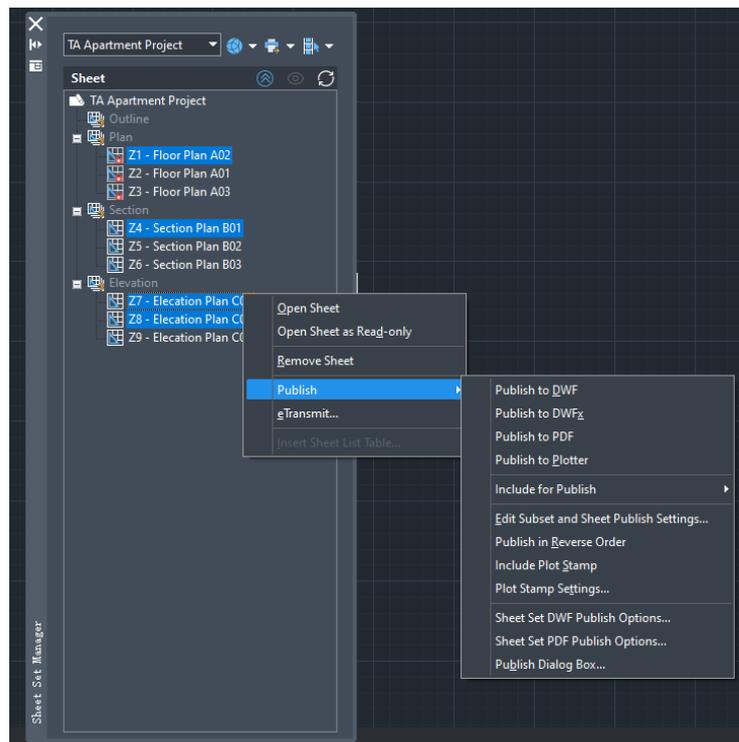


Figure 6. Choose drawings to plot or archive

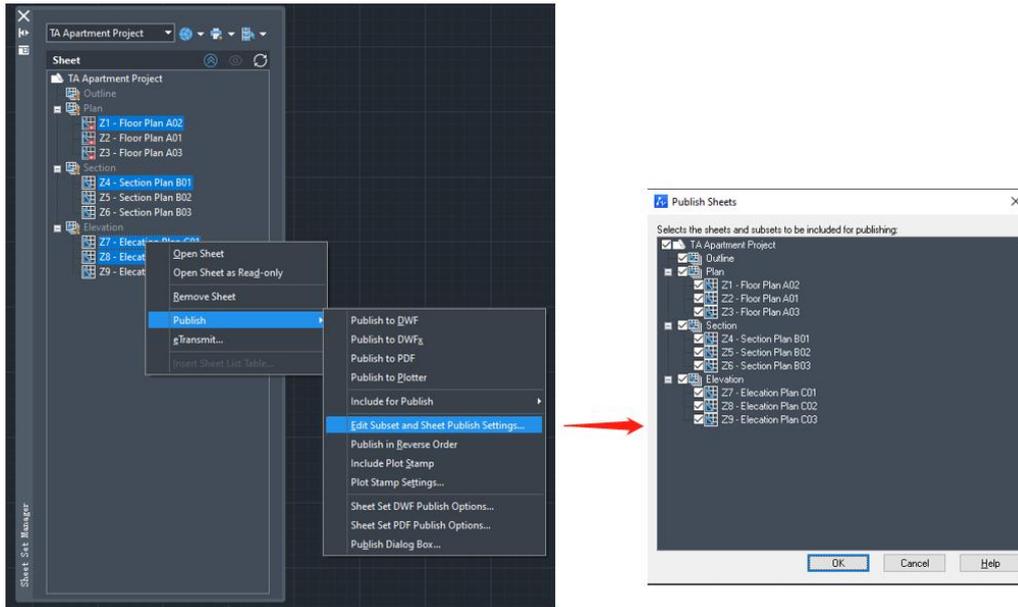


Figure 7. Set up a publish list to print

## Optimization for table module

The table function has been further optimized. The following functions have been added in this version:

- 1) New context menu: When you click a table cell, the context menu will appear on the ribbon, helping users set up content in the cell more easily.

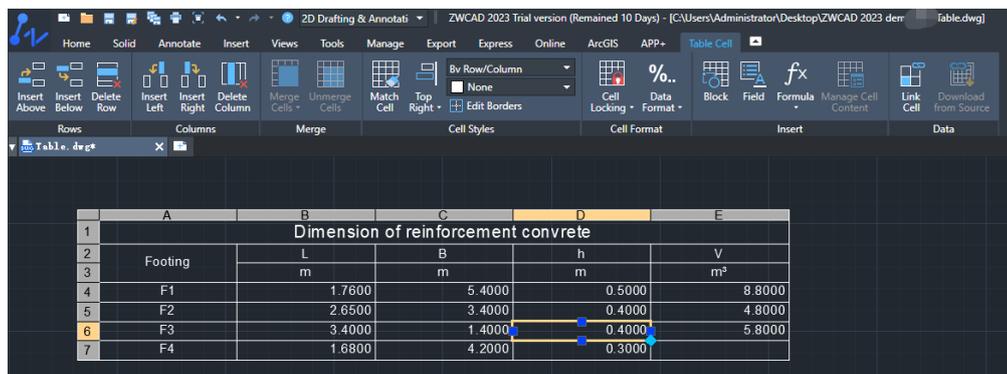


Figure 8. Context menu on ribbon

- 2) New function “Match Cell” is like a format painter. You can copy a cell format to other cells. It now supports formats like background color, frame style and text alignment method.

	A	B	C	D	E
1	Dimension of reinforcement concrete				
2	Footing	L	B	h	V
3		m	m	m	m <sup>3</sup>
4	F1	1.7600	5.4000	0.5000	8.8000
5	F2	2.6500	3.4000	0.4000	4.8000
6	F3	3.4000	1.4000	0.4000	5.8000
7	F4	1.6800	4.2000	0.3000	

Figure 9. A format painter icon appears when you use "Match Cell"

3) Support block insertion in the table. You can insert multiple blocks in one cell.



Figure 10. Blocks can be inserted in table

4) Borders properties can be adjusted.

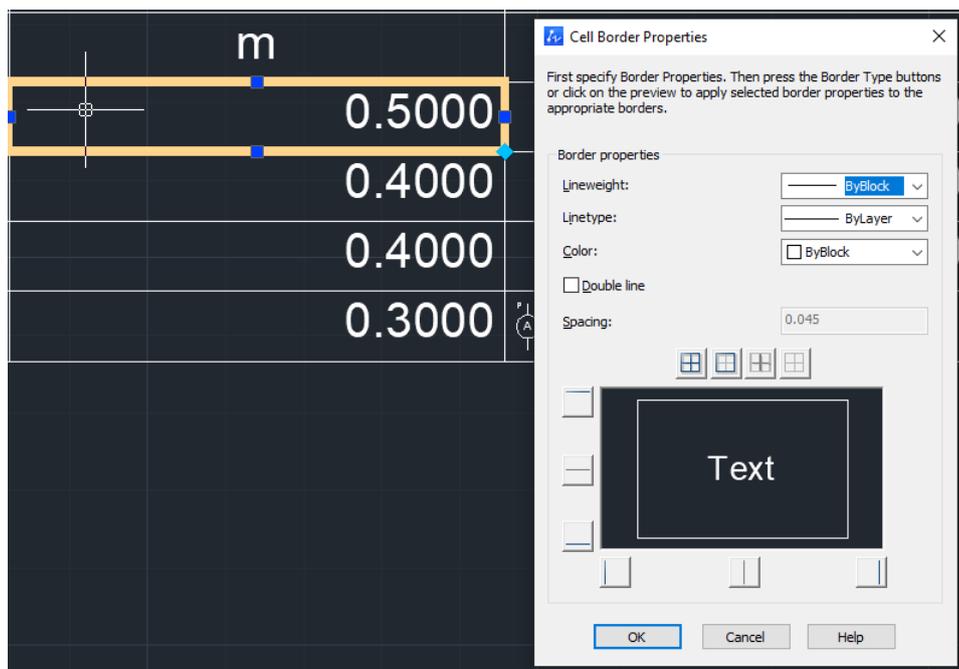
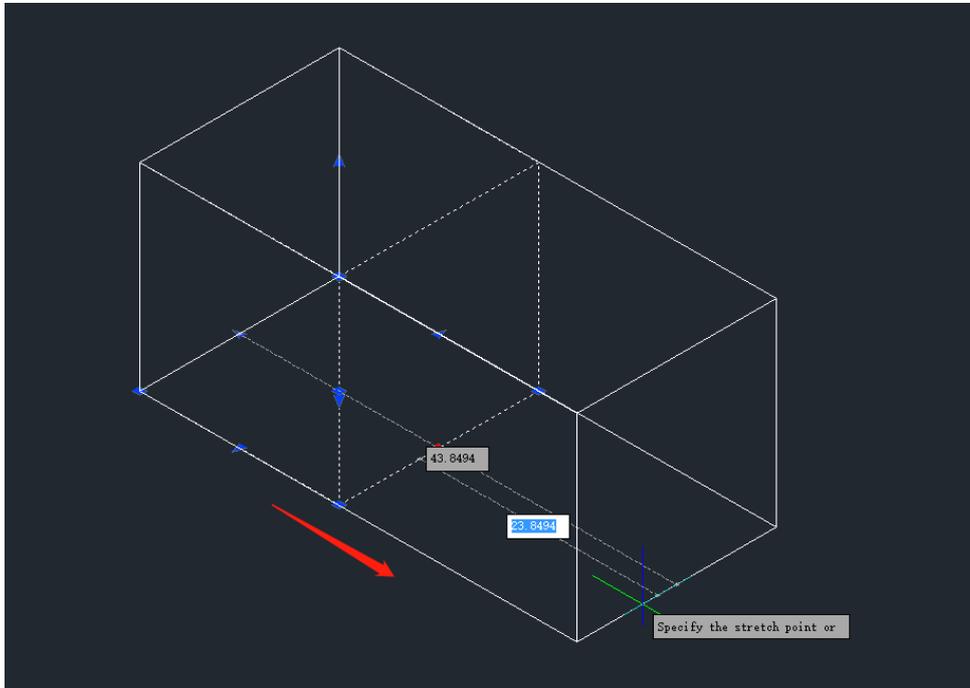


Figure 11. Cell Border Properties Panel

---

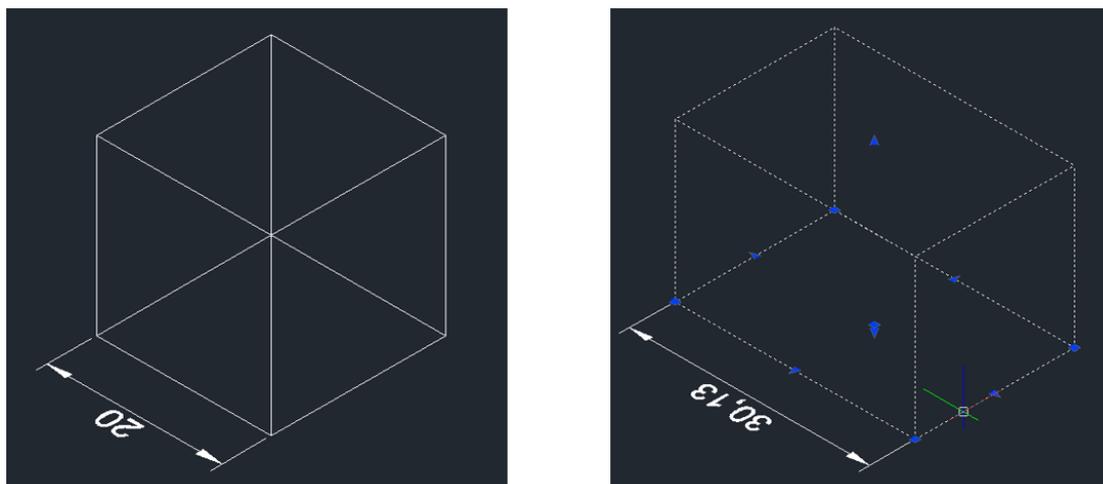
## Grips editing of 3D entities

3D solids (primitive and solid entities) can be changed in shape and size by dragging the grips. With this function, our 3D capabilities have improved dramatically.

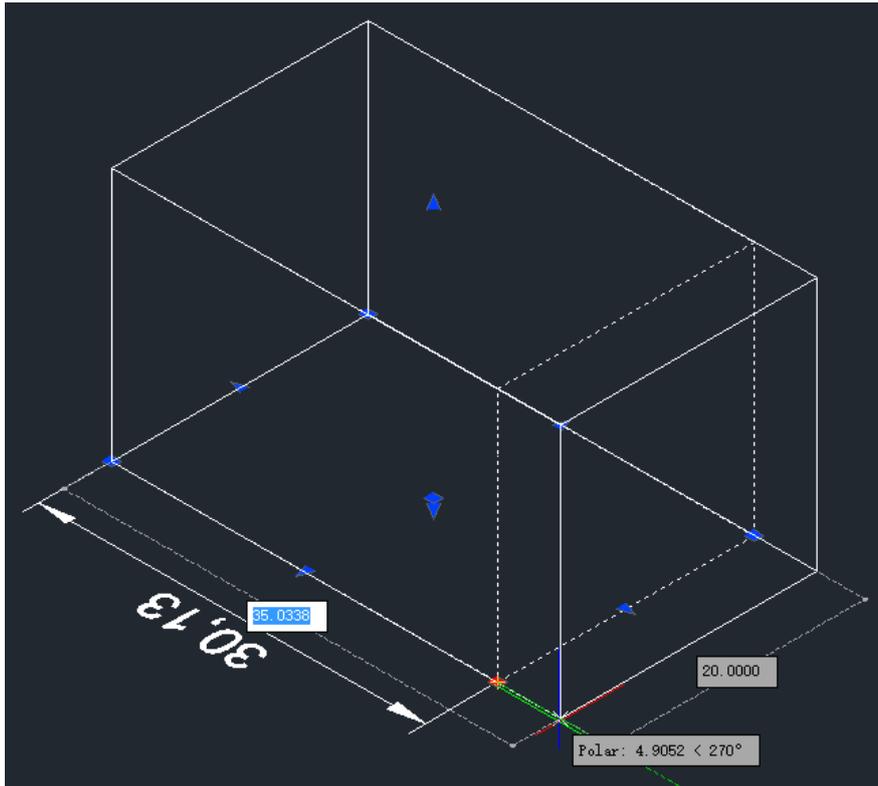


*Figure 12. Drag the grip to change 3D solid's shape*

Dimensions of a 3D solid are associated. The dimensions will change automatically as the 3D solid's shape is changed. Moreover, if your dynamic input is activated, when you hover your cursor over the grip, the relevant geometric information will appear.



*Figure 13. Dimension will change when you change 3D solid's shape using grips*



*Figure 14. When cursor hovers over the grip, geometric information will appear*  
A new column is added to properties panel; you can modify data on it.

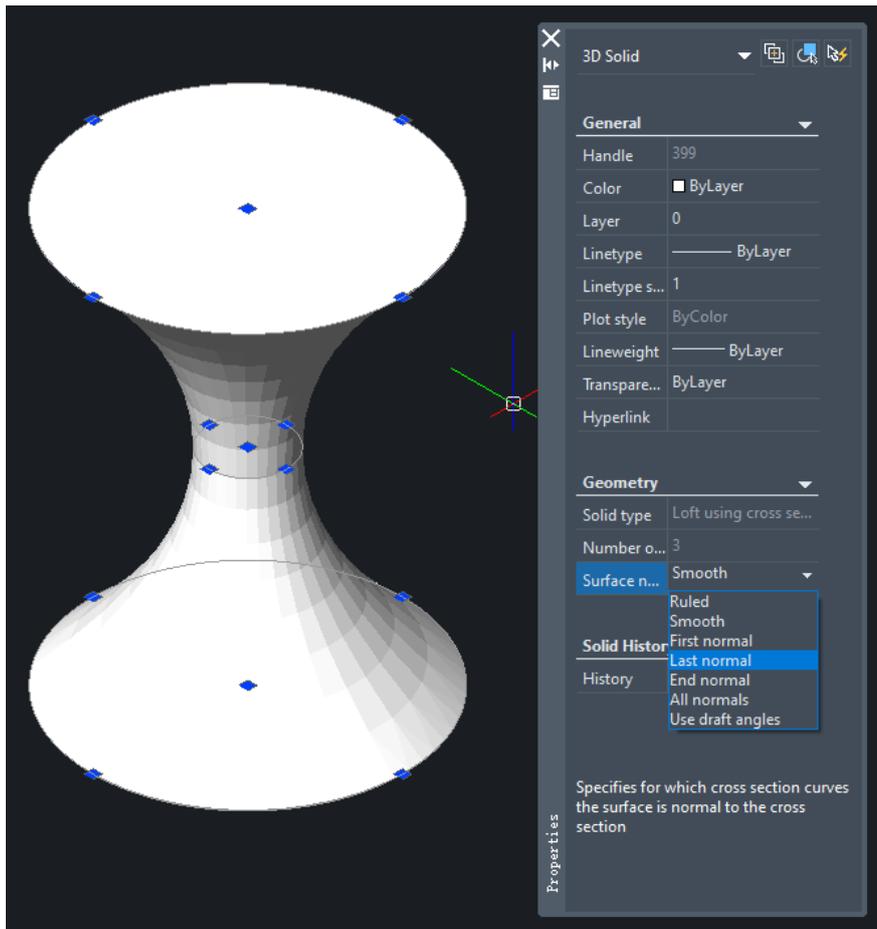


Figure 15. Modify 3D solid through properties panel

## Support for 3D mouse

3D mouse models from 3Dconnexion® are compatible with ZWCAD Mechanical 2023. For now, we support 3 models: SpaceMouse Enterprise, SpaceMouse Pro, and Space Pro. Users can bind ZWCAD Mechanical's commands to mouse buttons to carry on frequently used commands.

## Support for Adobe® PostScript

Models including Adobe® PostScript Level 1, PostScript Level 1 Plus, and PostScript Level 2 can be added to the plotter list. You can add these plotters through the "Add-A-Plotter Wizard".

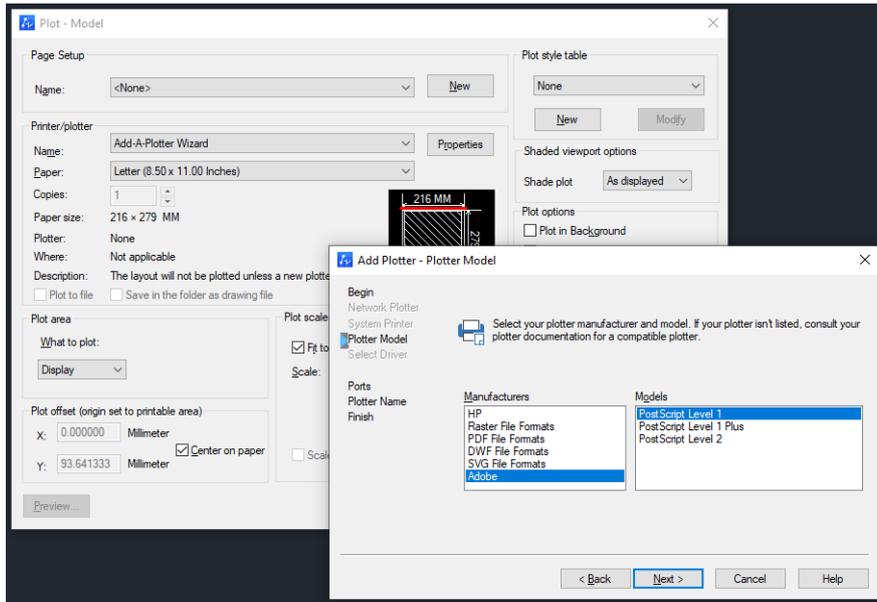


Figure 16. Adobe® manufacturer is added in the list

After adding, you can see the plotter model in plotter list.

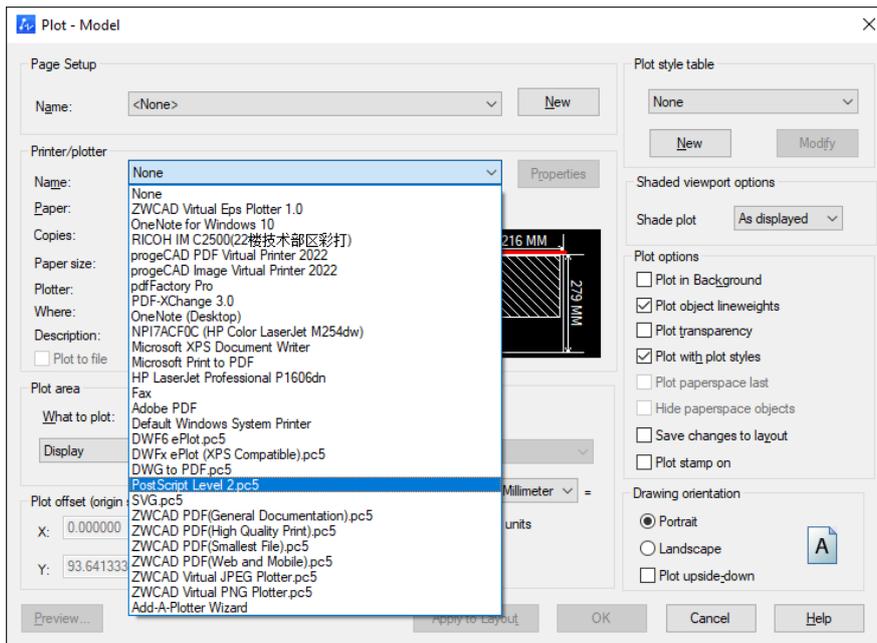


Figure 17. PostScript can be chosen from the plotter list.

Properties of the plotter can be modified as well, you can set PostScript special settings in the panel.

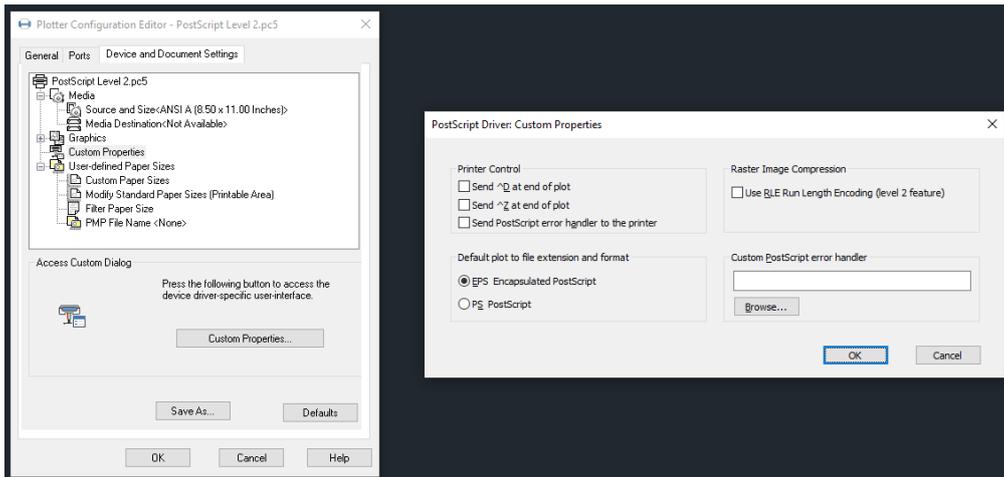
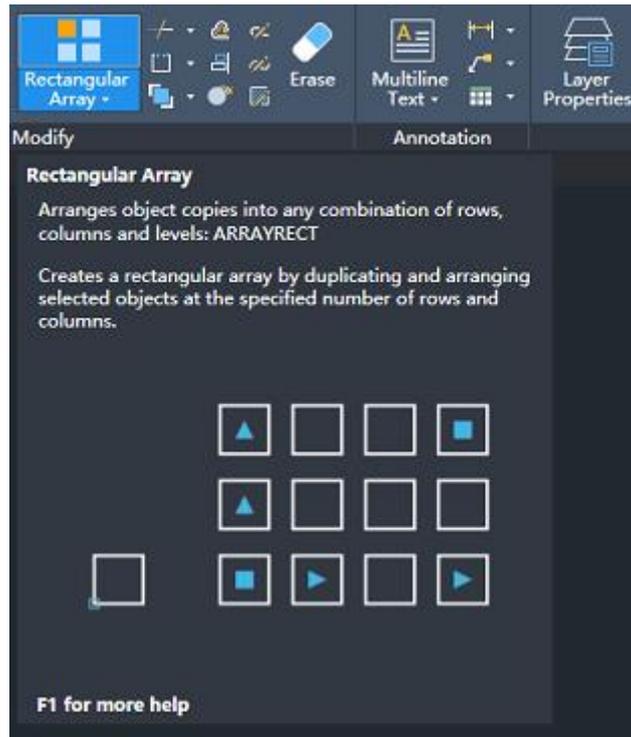


Figure 18. PostScript special settings

## Improvements

### Tooltip upgrade

When you hover the cursor on the icon in ribbon, a dialog, which is tooltip, will pop up. Now a diagram will appear in tooltip, along with the text description, helping users understand how to use the function more easily.



*Figure 19. Upgrade Tooltip*

## Optimization for calculator

1. The calculator now supports Imperial units. Users can directly enter the Imperial units to calculate.
2. It supports new formulas, like "ill", "ilp", "plt", and "ang". Developers could invoke new functions to develop programs.

```
Command: CAL
Expression or [? (for help)]: 5"*3"
15 sq.in.
Command:
```

*Figure 20. Calculation of imperial*

## Quick menu for Object Snap

The quick menu will pop up when users right-click the object snap button, helping them choose the object snap type more easily.

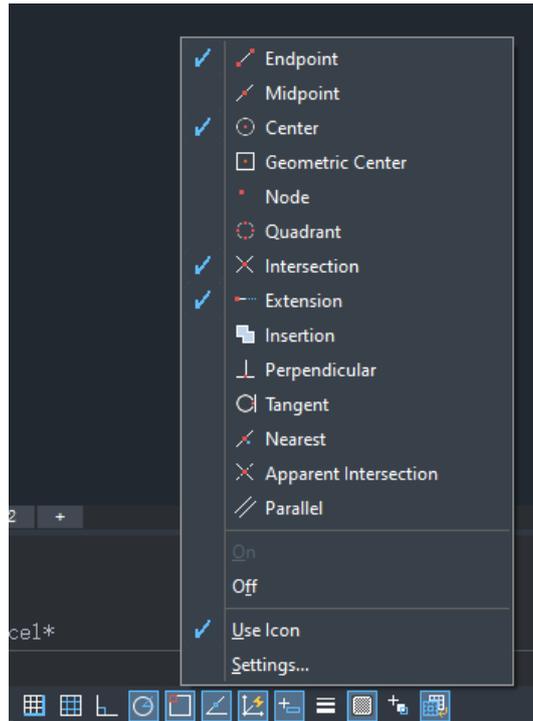


Figure 21. quick menu of Object Snap

## Preview for font replacement

There might be lack of fonts for some drawings, which can lead to wrong display for certain text. Normally we would use a big font to replace the lost font. With this preview window, you can check whether the big font can show the text correctly before you apply it, reducing the possibility of replacing fonts again and again. Currently it can identify languages of Chinese simplified, Chinese traditional, Japanese, Korean.

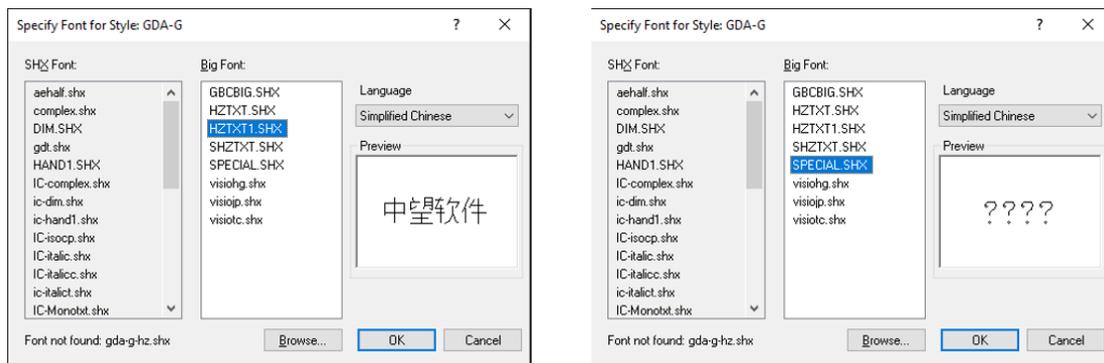


Figure 22. From preview window you can check whether the text show correctly