ZWCAD 2026 Release Notes

Overview

ZWCAD 2026 mainly includes improvements in four aspects: basic quality improvement, design efficiency improvement, intelligent application, and API. The specific contents are as follows:

New Features&Enhancements	Description
Parameterization	Based on ZWSOFT's self-developed ZGS geometric constraint engine, it supports the addition of geometric constraints and dimension constraints (parameters) to two-dimensional geometric shapes and flexiblocks, as well as performing geometric position relationship constraints and size constraints.
ZWCAD Toolbox	The functionality is enhanced with improvements to the two major modules of layers and dimensions, and addition of the practical functions such as layer switching, dimension merging, and dimension text dodge. The presentation has been updated to accommodate different user interface preferences, including operating panels, menus, and toolbars.
Block Improvement	New features include quick attribute editing, changing individual block names, and in-place editing and saving of blocks. Additionally, bidirectional compatibility has been implemented for flexiblocks across other CAD software.
Plot Improvement	Comprehensive reconstruction of SMARTPLOT, adding functions such as automatic matching of image frames, image frame libraries, multi-document printing, automatic search for image frames, batch generation of layouts, and automatic cropping of disassembled images; Improve the printing efficiency of PDF, DWF, and physical printers; Compatible with PC3 format files.
Interactive function improvement	The FIND function has been panelized, and the SMARTSEL panel usability has been improved. A new selection menu and Ribbon panel has been added, supporting direct selection of objects from the drawing area; Additional features include chain selection and ADDSELECT functions. The command-line keyword click function has been added.

Dimension Improvement	The DIM command flow has been optimized, and the dimension grip menu has been implemented. Support the creation of centerlines and center markers has been added.
Display Improvement	Resolved hardware acceleration issues and display problems caused by various graphics cards and hardware environments. Also resolved with issues of smooth display of lines and the highlighting of selection order.
Improvement of Efficiency in 3D Drawings	Reduced the usage of memory and video memory resources by ZWCAD in a 3D environment. Improved the overall operational efficiency of 3D drawings.
Intelligent Block	Implemented three new functions: smart matching, batch blocking, and object counting, supporting batch operations and unified processing of identical graphics (including rotated and scaled objects) in the current drawing. A similar graphic search function has been added to facilitate the reuse of historical drawings.
GeoService: Coordinate system compatibility	Achieved read compatibility with over 900 coordinate systems. Added support for attaching RCS formatted point clouds using geographic. A location marker entity has been added.
Improved compatibility of FAS/VLX plugins	Improved LISP's support for VLX and FAS plugins. Resolved issues with 36 industry plugins that could not convert or load. Focused on addressing the issue of third-party encrypted fas/vlx files failing to load in ZWCAD.

Parameterization

Support adding geometric constraints and dimension constraints (parameters) to 2D geometric shapes and flexiblocks, performing geometric position relationship constraints and size constraints, making it easy for users to quickly generate components of different sizes and reuse them in different projects by adjusting constraint parameters.

Support the creation and editing of Geometric and Dimensional Constraints

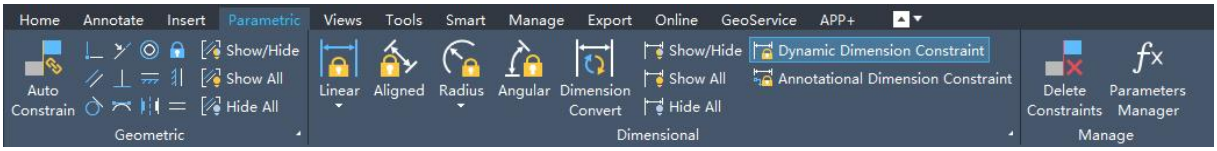

Figure 1. Parameterization tab

Support Drawing Parameterized flexiblocks

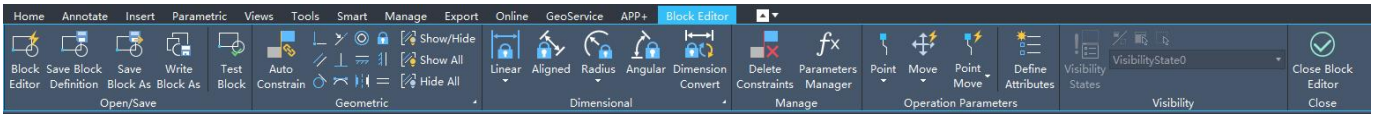

Figure 2. Parameter Block Editor tab

Parameter Manager

It supports the management of operation parameters, dimension constraint parameters, user parameters, and attributes in graphics, including defining parameters, deleting parameters, etc.

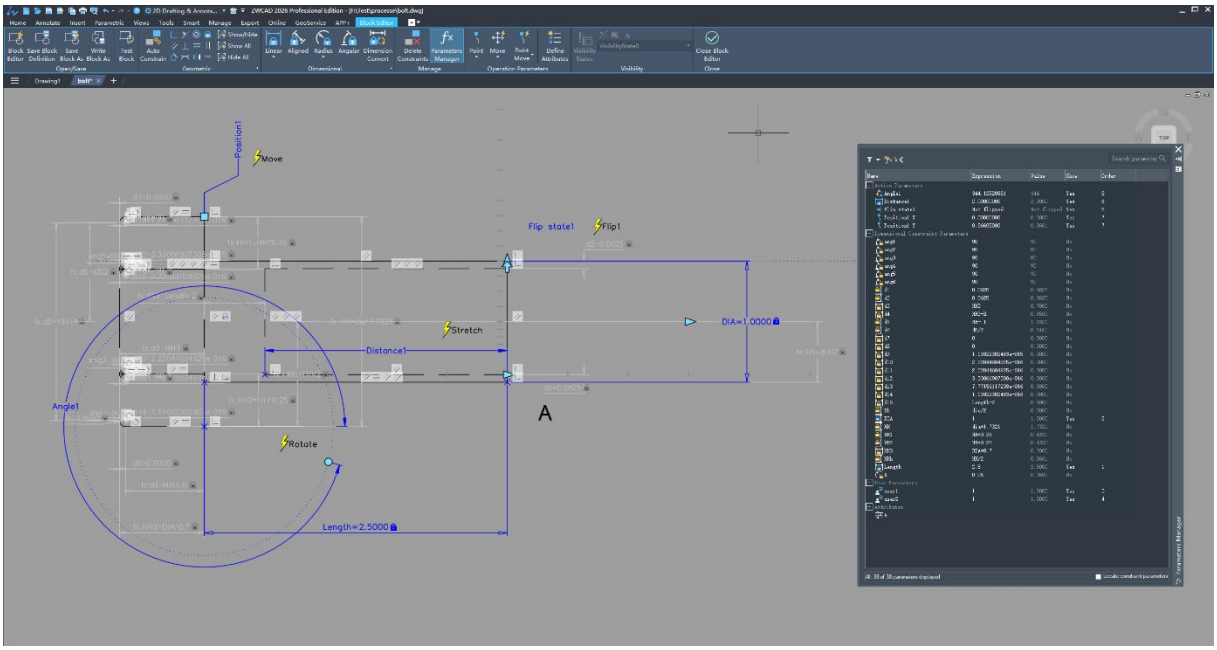

Figure 3. Manage parameters in graphics

Constraint Settings

It supports setting geometric constraints, dimensional constraints/dimensional constraint parameters, and automatic constraints.

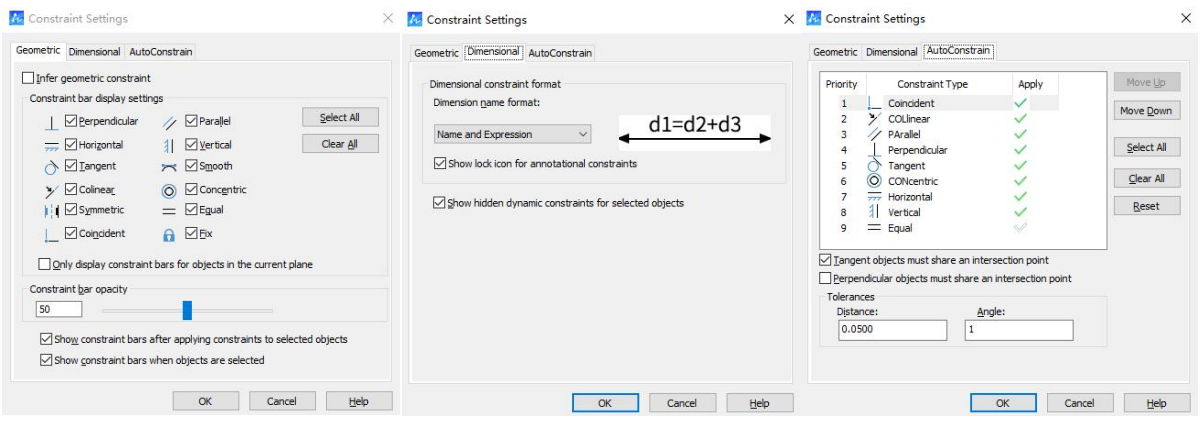

Figure 4. Constraint Settings dialog box

ZWCAD Toolbox

The ZWCAD Toolbox integrates various high-frequency drawing functions such as layers, dimensions, and text. The panel supports drag and drop, docking, and custom layout settings, providing designers with a personalized drawing experience.

Interface level

The ZWCAD Toolbox is docked on the left side of the interface by default. The panel can be opened by clicking the icon button of the quick access toolbar or executing the TOOLBOX command. It supports floating or fixing on the left and right sides of the drawing area to meet different user habits.

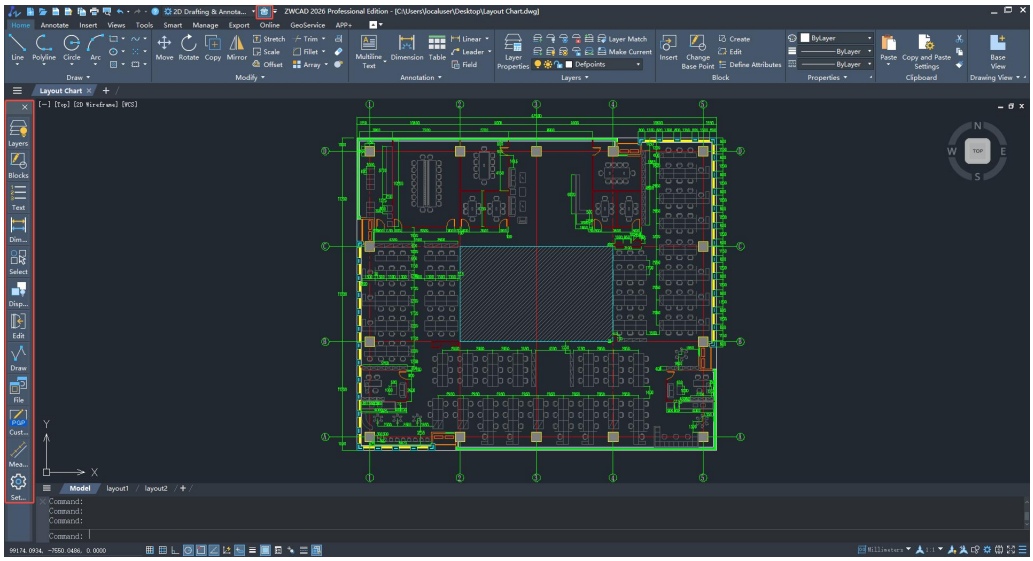

Figure 5. ZWCAD Toolbox panel

It supports the display and setting of command shortcuts for the menu list of the Toolbox in custom configurations.

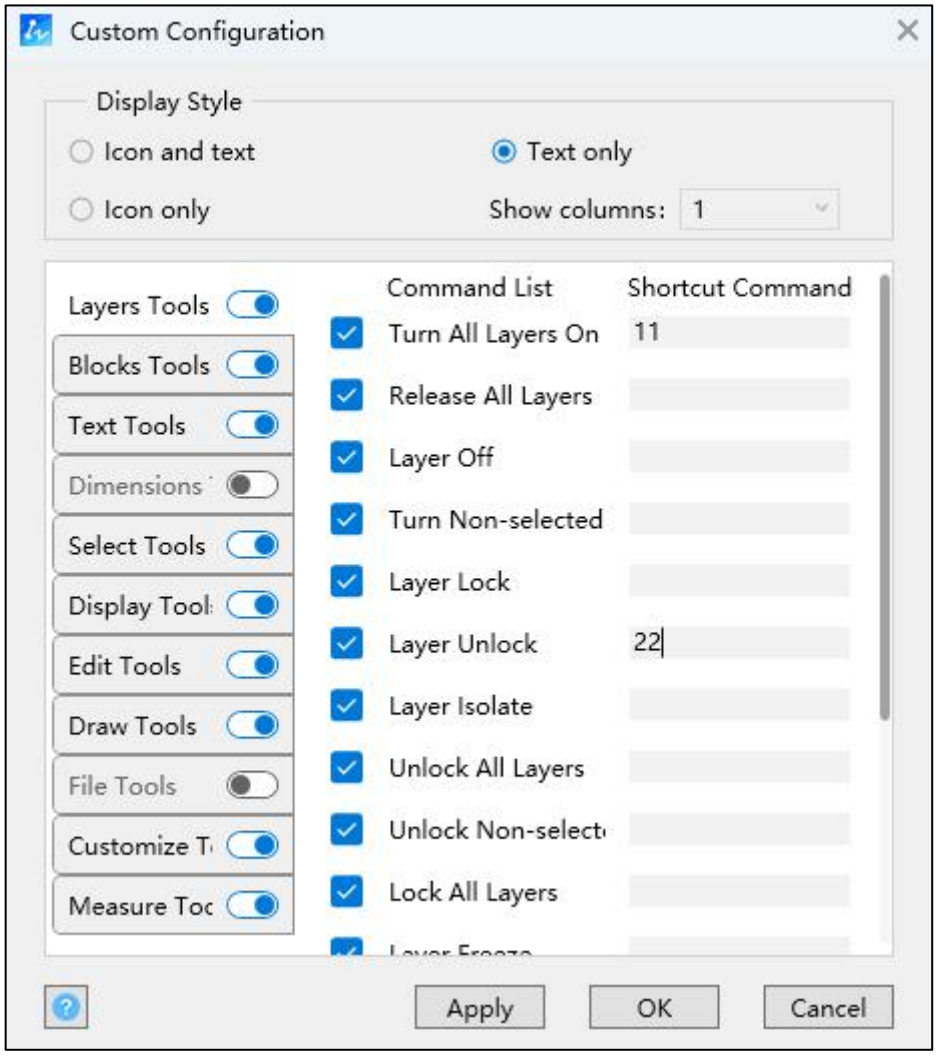

Figure 6. Custom Configuration dialog box

Functionality

Added a Layer Switch function: Execute the LAYSWITCH command to set shortcut keys for easy layer switching via command.

Added the Object Automatic Dimension function: Execute the OBJECTDIMENSION command to automatically add dimensions to objects such as lines, polylines, 3D polylines, regions, and area boundaries.

Added Dimension Text Dodge: Execute the DIMTEXTDODGE command to automatically reposition dimension text to prevent overlap.

Added the Dimension Merge function: Execute the DIMMERGE command to merge multiple aligned or corner dimensions in the same dimension line direction.

Block Improvement

Improved the correctness of block display, creation, reuse, in-place editing, block editing,

grip editing, cropping, general modification, attribute editing, block masking, and compatibility with flexiblocks.

Quick Attribute Editing

Added the ATTIPEDIT command, which allows quick editing of attribute text in attribute blocks. By double-clicking attributes with the CTRL button, users can reduce the number of operation steps and improve attribute editing efficiency.

Support Modifying Block Names

Added the CHGBNAME command. For scenarios where all, part, or individual block names need to be modified, the block can be directly selected, and the right-click menu can be used to select Change Block Name for operation, reducing user operation steps and improving design work efficiency.

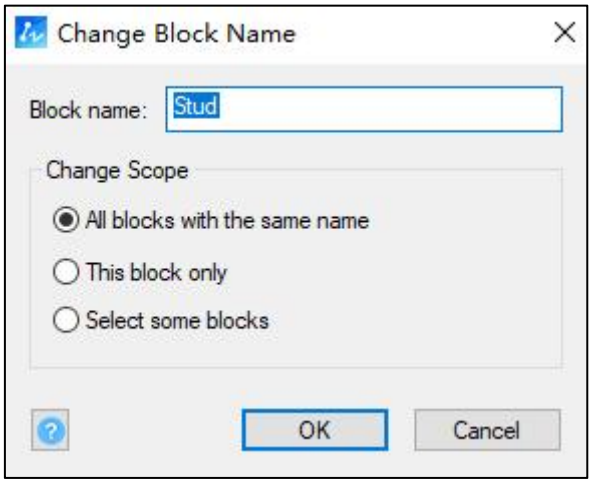

Figure 7. Change Block Name dialog box

Support Saving as a New Block after Editing a Block

Modifications to a block can be applied to a new block without affecting the original. Users can define the new block's name and base point or modify the base point without changing the block name, with the changes being applied to all instances of the original block.

Support Partial Area Block Replacement

The block replacement in the selected area can be quickly adjusted according to actual needs, enhancing the flexibility of the design.

Flexiblocks Compatibility Improvement

It enhances the compatibility of flexiblocks, automatically identifies and repairs compatibility differences, and allows for bidirectional editing and lossless interoperability in mainstream CAD.

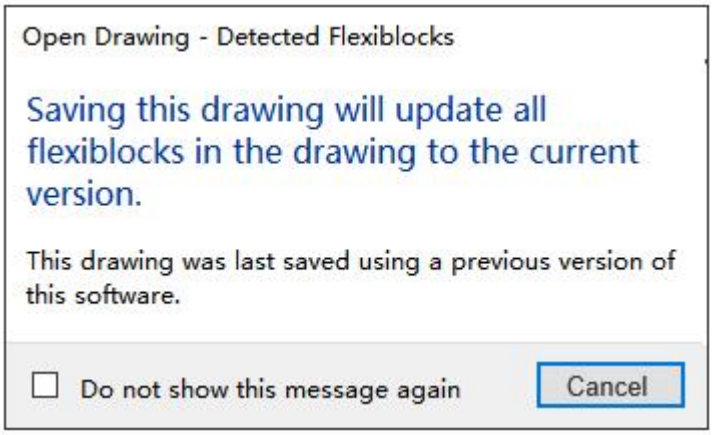

Figure 8. Detected Flexiblocks dialog box

Plot Improvement

The SMARTPLOT function has been fully upgraded, the interactive interface has been restructured, and the visualization of functions has been enhanced. In terms of functions, it now supports the automatic matching of image frames, the automatic search for image frames within documents, the search for image frames for multiple drawing documents, batch generation of layouts according to scale, and automatic cropping according to the range of image frames when disassembling images. Optimization of auxiliary functions: adding printing order, enhancing black and white printing, etc. In addition, the new version has improved the printing efficiency of PDF, DWF, and physical printers and is also compatible with PC3 format files.

SMARTPLOT Reconstruction

The function panel has been simplified with the addition of a preview for the frame list.

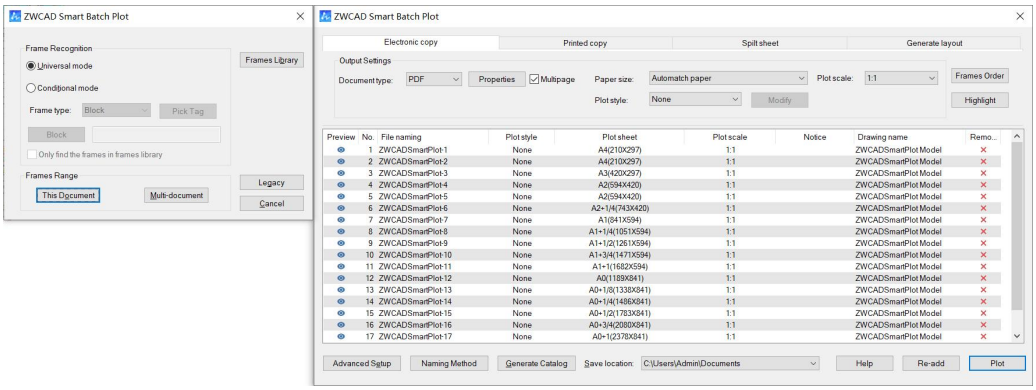

Figure 9. SMARTPLOT dialog box

SMARTPLOT supports the automatic matching of image sheets and paper.

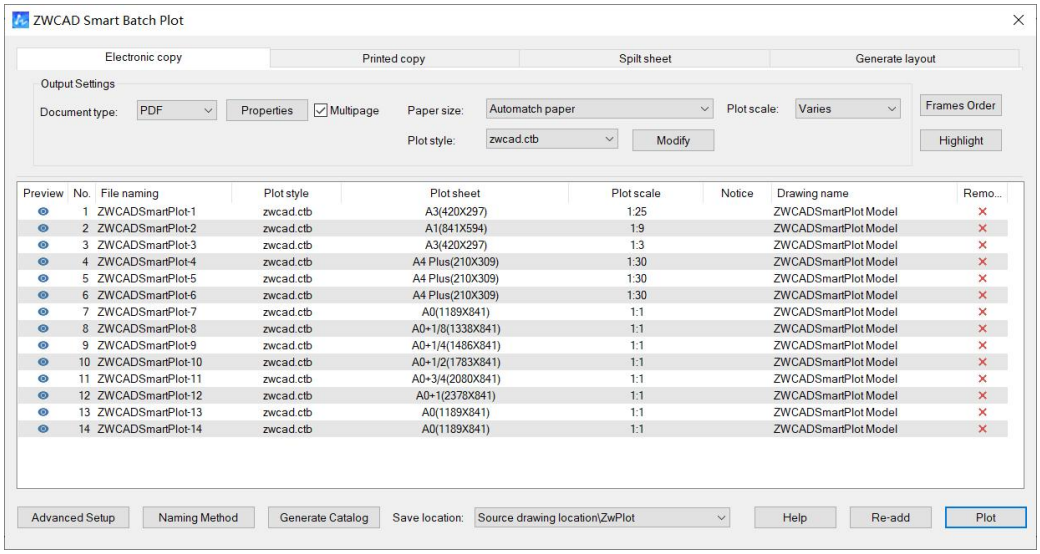

Figure 10. Example of automatic matching of image frames

It also provides rich and flexible naming methods for image frames, supporting custom naming methods based on image frame information and freely combining prefixes, suffixes, numbers, and drawing information.

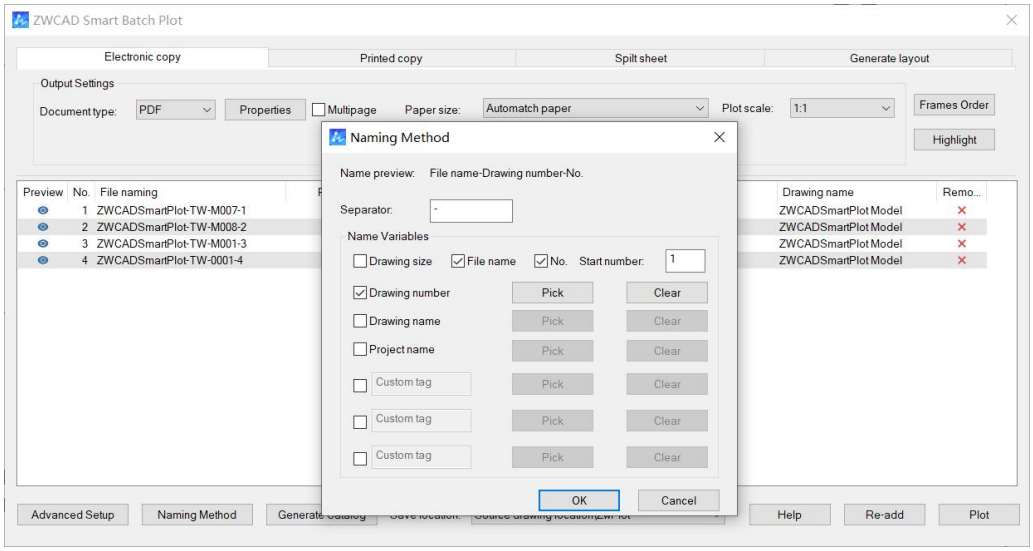

Figure 11. Naming Method dialog box

The multi-document search function has been optimized, supporting searching for frames in multiple documents according to specified conditions and supporting specifying the automatic search range for frames.

SMARTPLOT supports the automatic batch generation of layouts while also supporting application printing ratios and page settings.

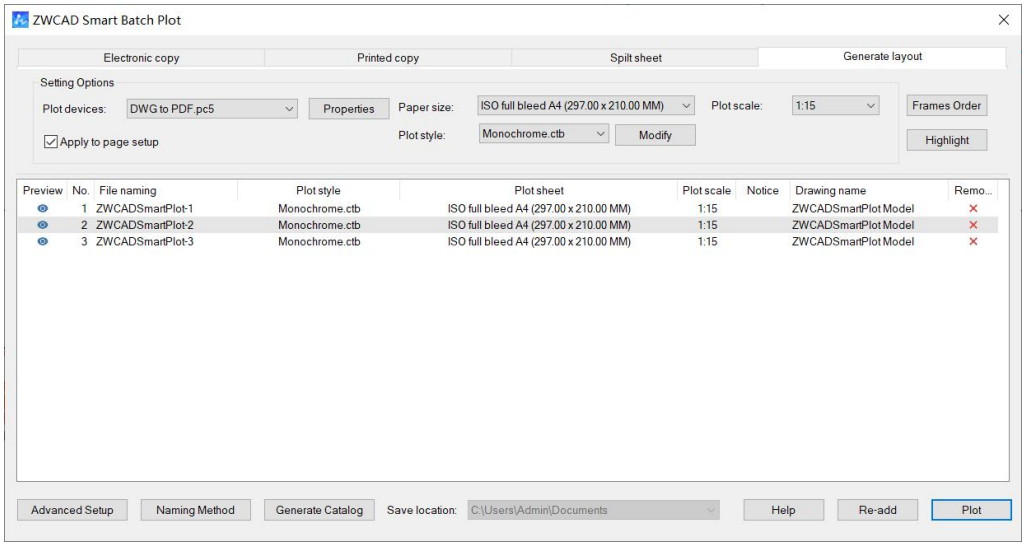

Figure 12. Example of generating layout results

Split drawings can be automatically cropped. References and base maps that exceed the frame range can be directly cropped according to the frame range during disassembly.

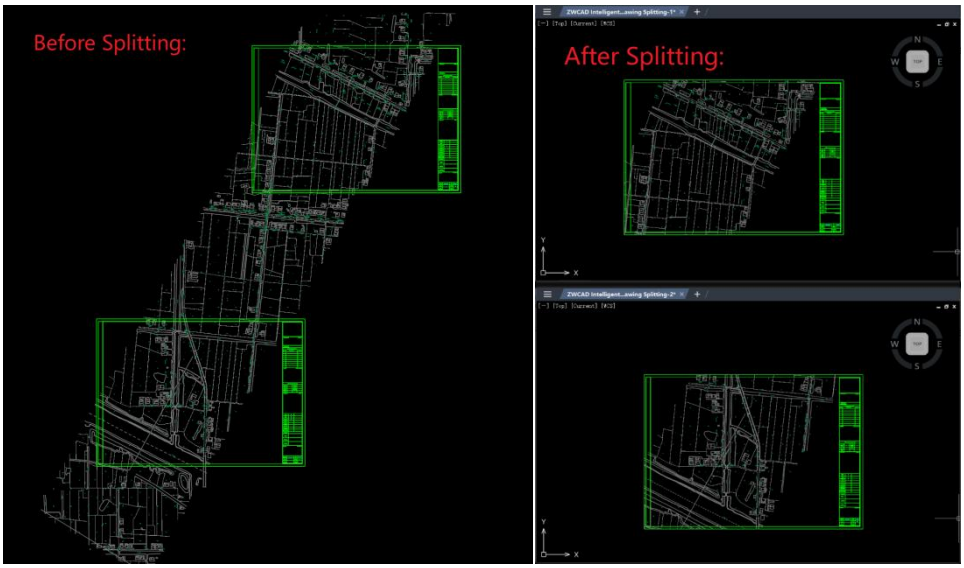

Figure 13. Example of disassembly diagram

The frames library function has been optimized, allowing preset common frame output configuration and automatically searching for common frames.

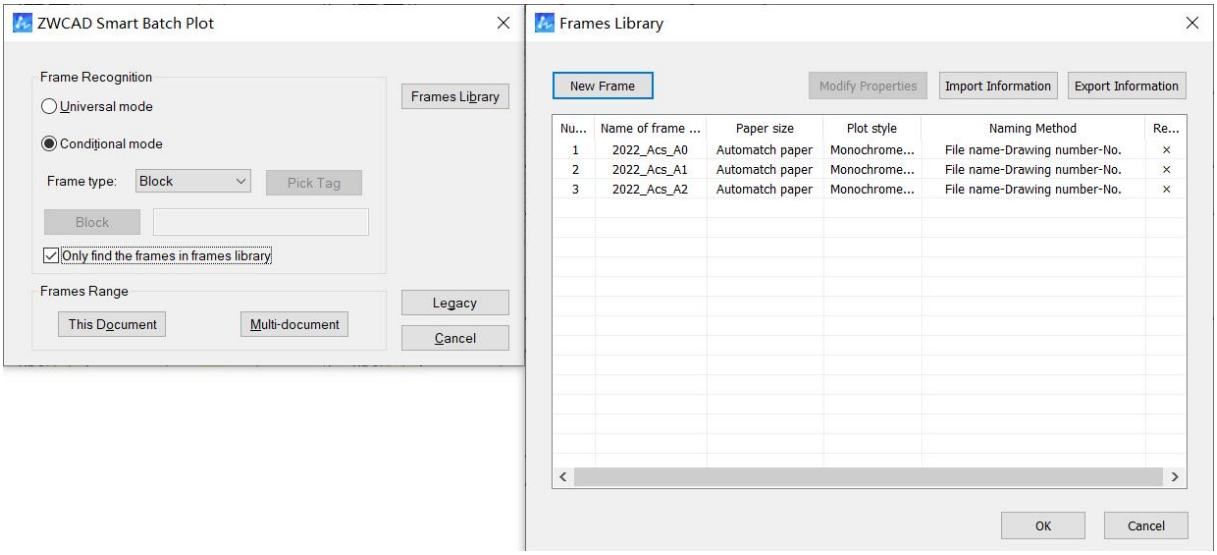

Figure 14. Frames Library dialog box

Multiple recognition orders have been added, supporting 8 arrangement orders and selection orders, while also allowing manual adjustment of the frames order in the preview list.

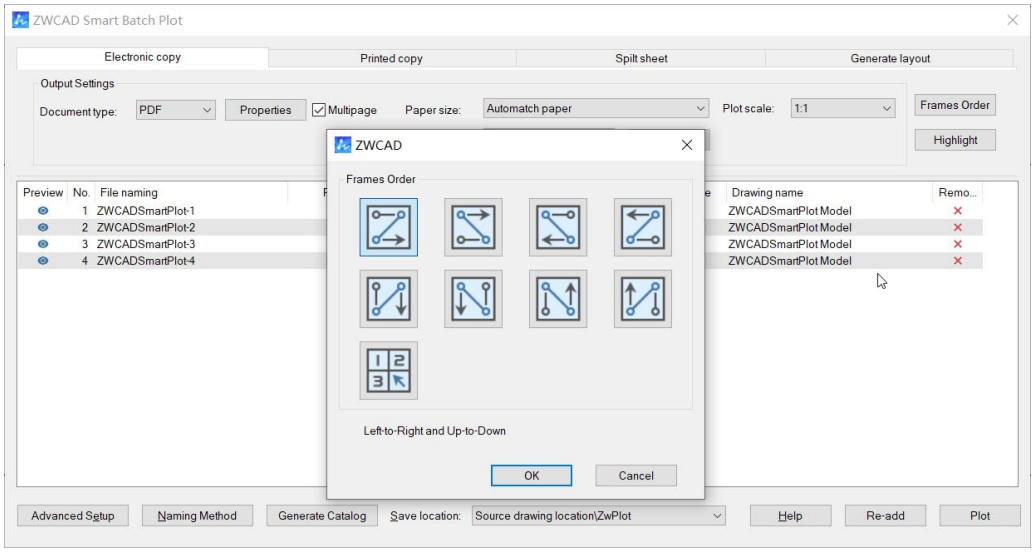

Figure 15. Frames Order dialog box

Improved Printing Efficiency for PDF, DWF, and Physical Printers

The size of PDF and DWF files generated by ZWCAD has been compressed, with a compression rate of over 50% for complex graphic files. A new print quality option has been added to quickly specify the desired image quality.

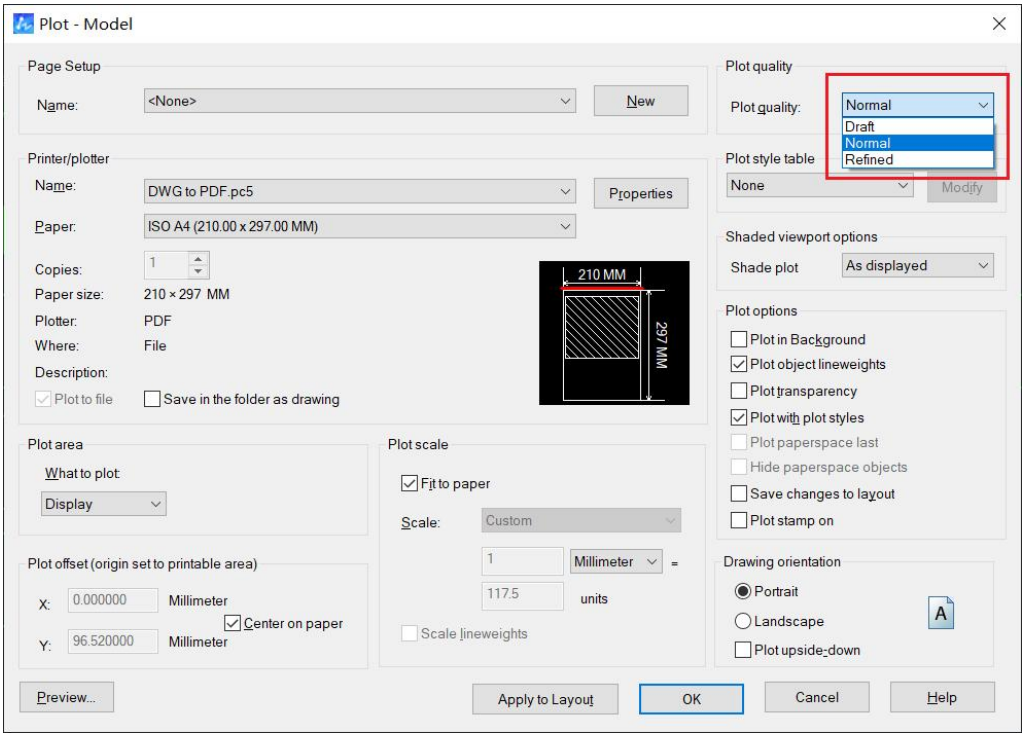

Figure 16. New print quality option added to the Plot dialog box

Compatible with PC3 files

It supports direct reading of PC3 printing configuration files saved by friendly merchants. It supports direct reading of PMP files saved by friendly merchants and achieves mutual compatibility, improves software compatibility, and reduces replacement obstacles.

Interactive function improvement

FIND Function Optimization

Text search supports panel-based operations, allowing for editing of search content while searching. It also supports the shortcut key 'CTRL+F'.

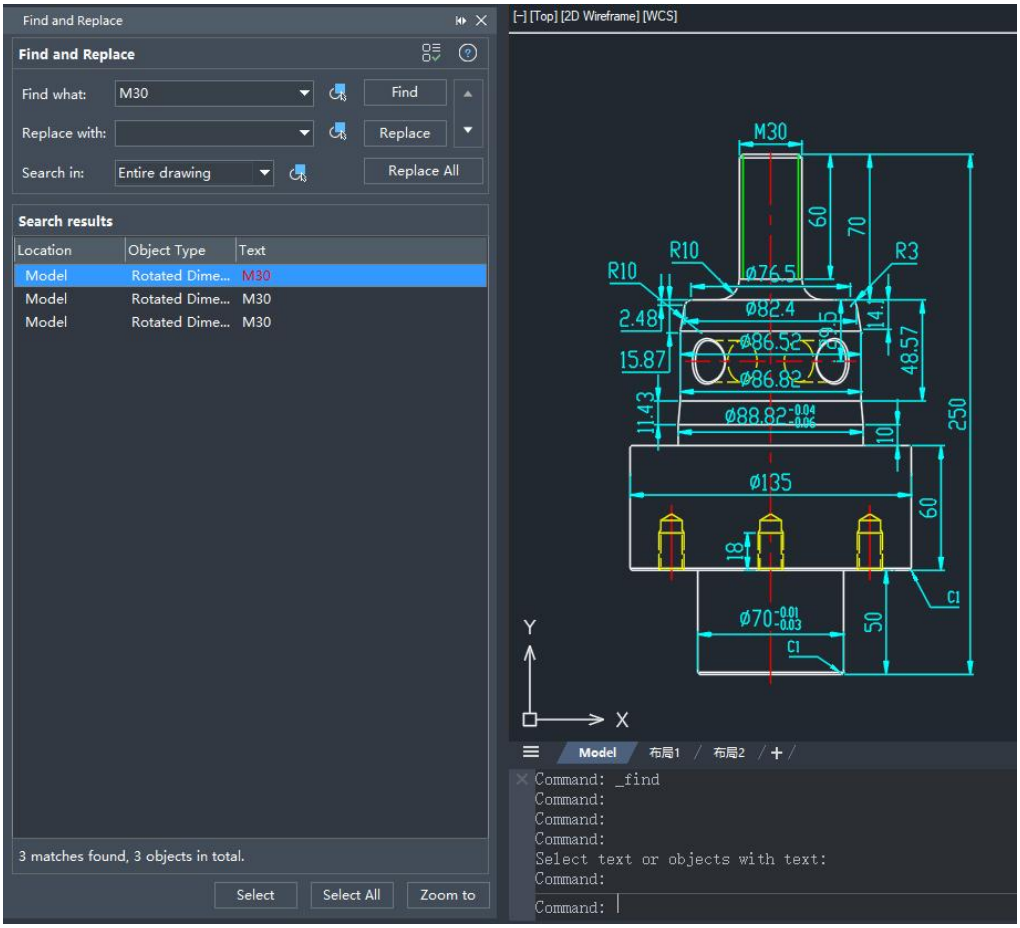

Figure 17. Find and Replace panel

FILTER Function Optimization

The FILTER dialog is separated from the FIND dialog, and the dialog design and operation process are more streamlined.

SMARTSEL Function Optimization

Filtering primitive objects supports panelized operations, and users can perform compound filtering based on object types and attributes.

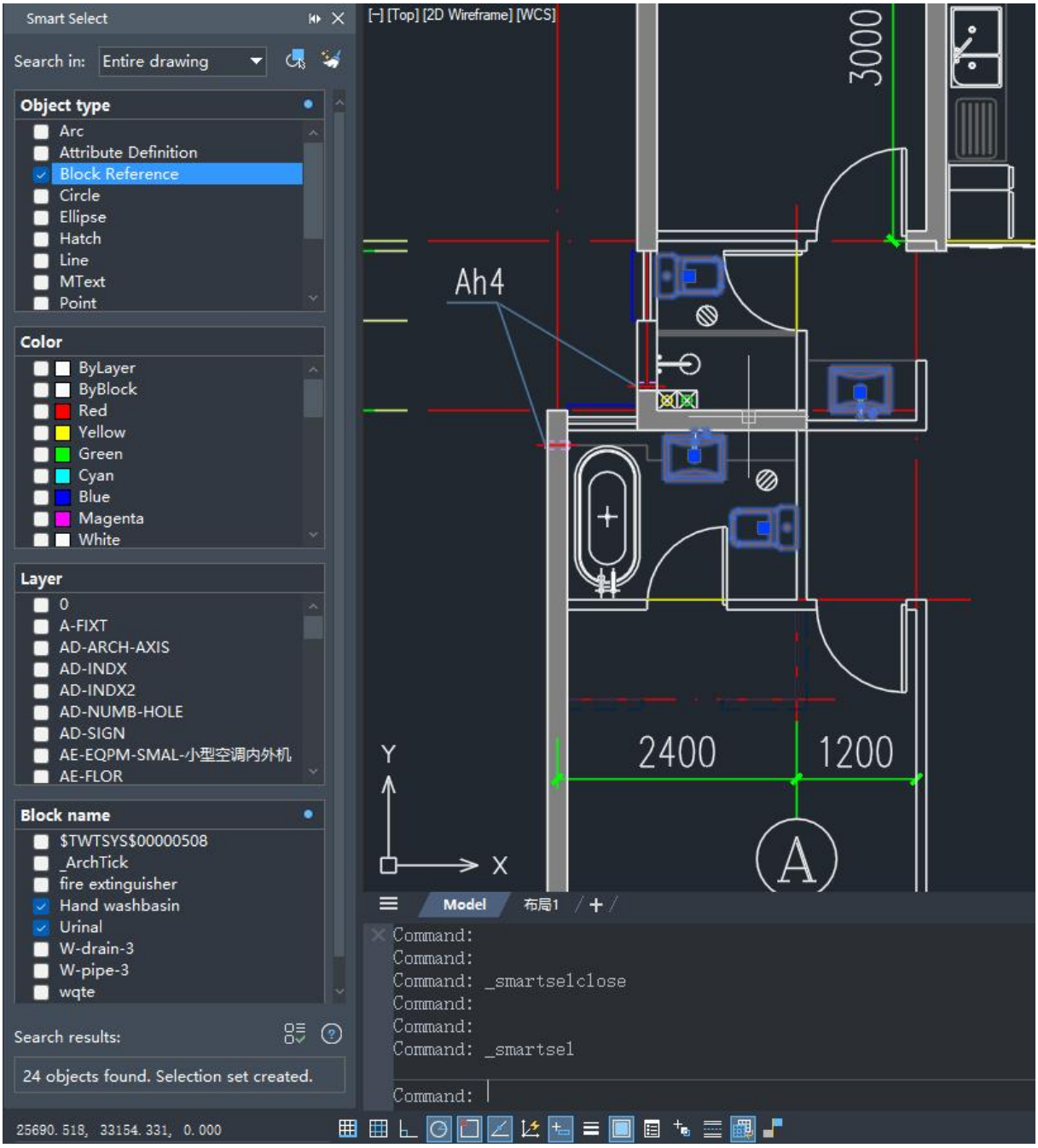

Figure 18. Example of Smart Select with composite filtering

Selecting Objects for Filtering in the Drawing Area

By clicking on objects in the drawing area, directly filter objects with the same attributes such as layer, color, line type, block name, etc. It supports selecting menus and ribbon panels.

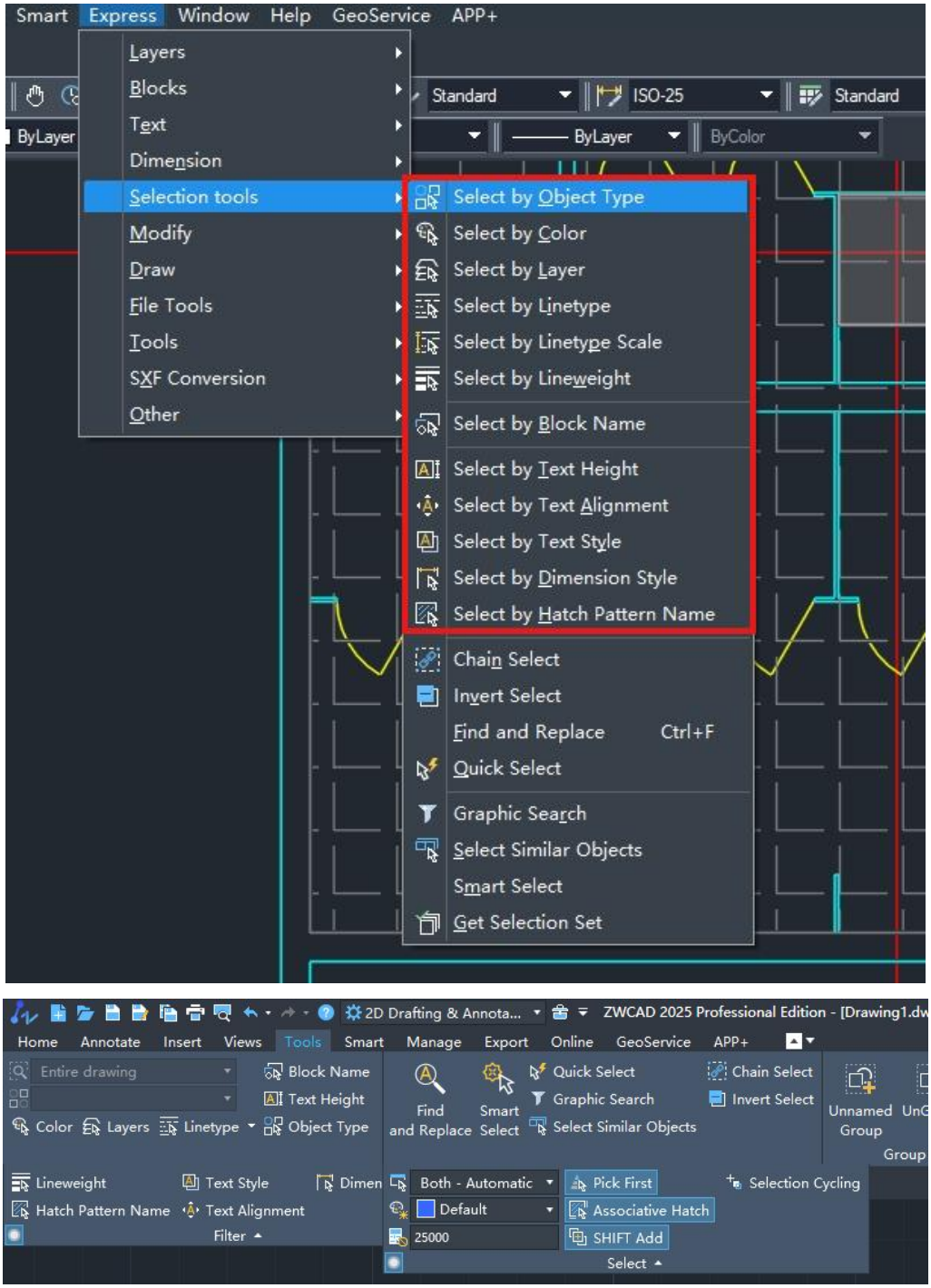

Figure 19. Select menu and ribbon panel

Chain Selection Function Selection

Through the chain selection function, the connected loose wires can be quickly selected in batches.

Command Line Keyword Clicking

During command execution, users can click a keyword on the command line to activate the command branch.

Dimension Improvement

The dimension functions mainly have the following improvements: optimization of the DIM command process, support for setting dimension exclusive layers, implementation of dimension grip menus, and support for creating centerlines and center marks.

DIM

The revamped DIM command supports intelligent recognition of selected objects and continuously creates dimension types that best fit the current context within the same command flow.

The supported objects include:

- Linear segment: supports creating horizontal/vertical/aligned dimensions
- Arc segment: supports creating radius/diameter/arc length/angle dimensions
- Circle: Supports creating diameter/radius/arc length/angle dimensions
- Linear dimension: supports creating continuous/baseline linear dimensions
- Angle dimension: supports creating continuous/baseline linear dimensions

Support Setting Dim Layers

It supports users to individually specify layers for dimensions, which can be set through the Ribbon menu or the system variable DIMLAYER.

Dimension Grip Menu

Implement dimension text pinch menu and dimension clip size line pinch menu, simplify dimension text editing operations, and provide simple and fast entry points for baseline dimension, continuous dimension, flipping arrows, and other operations.

Support the Creation of Centerlines and Center Marks

New Centerline and Center Mark functions have been added, supporting the creation of associated centerlines for selected line objects or center marks for selected circles or arcs, and the ability to adjust the appearance of centerlines/center marks.

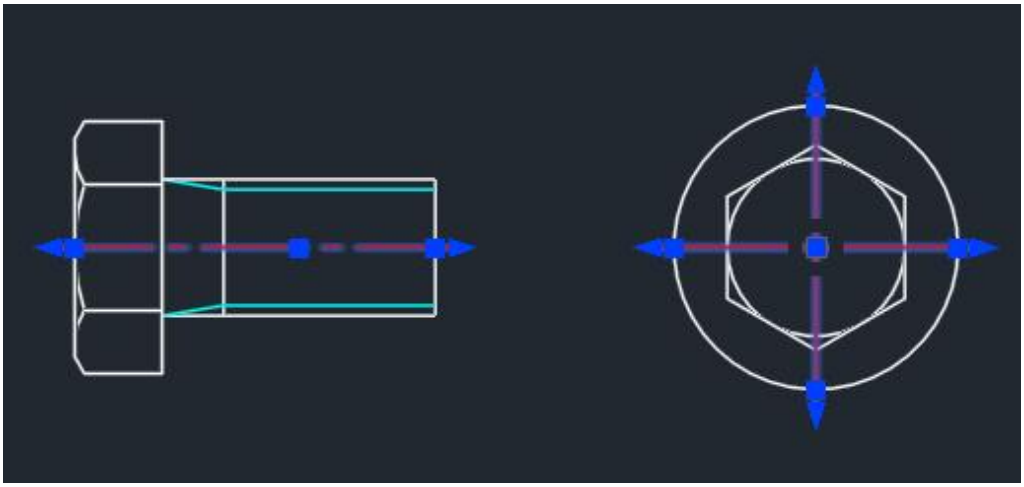

Figure 20. Example of drawing centerline and center mark

Display Improvement

Resolved the Issue of Highlighting Overlapping Objects When Selected

When objects overlap completely or partially, select the object and highlight the bottom shape.

Highlighting Effect Enhancement

By adjusting the highlight color, increasing contrast, and optimizing edge anti-aliasing, the user design experience is significantly improved. By combining hardware acceleration and rendering optimization techniques, the smoothness and accuracy of highlight display are further improved, making design work more efficient and intuitive.

Optimization of Hardware Acceleration Function

Resolve display issues and inability to turn on graphics cards under hardware acceleration.

Improvement of Efficiency in 3D Drawings

For 3D drawings with over 1 million triangular facets, the general operation graphics memory is reduced by more than 30%. Peak memory usage is decreased by over 25% when opening images. The efficiency of the 3D model browsing is improved by over 50%. General editing efficiency is increased by 90%. Save efficiency has been boosted by 10%; Closing drawings is 10% faster. Or 3D drawings with more than 100w triangular facets, the usage of general operation graphics memory is reduced by more than 30%; Reduce peak memory by more than 25% during image opening; Improve the efficiency of 3D model browsing operation by more than 50%; General editing efficiency increased by 90%; Save efficiency increased by 10%; Closing drawings increases efficiency by 10%.

Intelligent Block

Support Smart Matching Function

Added the SMARTMATCH command, which supports batch selection of the same graphic, including the same graphic selection for different positions, scales, angles, mirrors, and object categories. Matching parameters can be set through the Smart Match dialog box, making it convenient for users to choose.

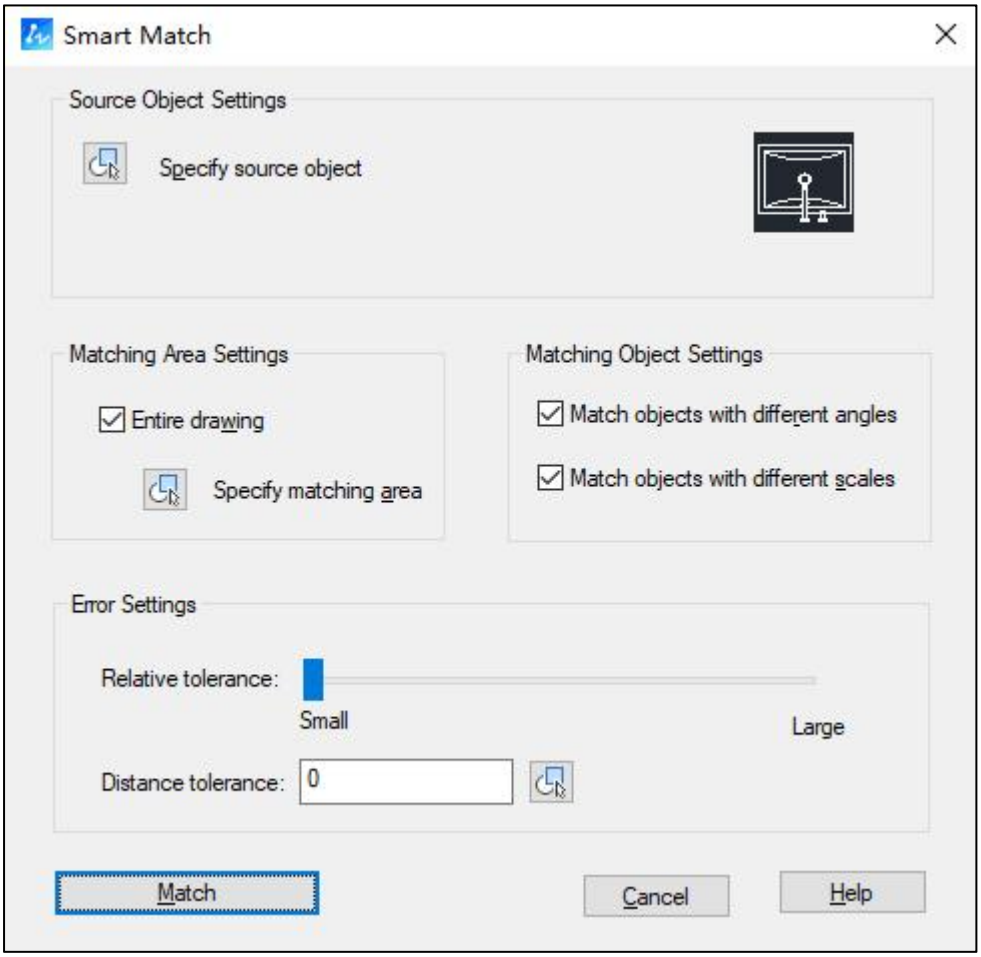

Figure 21. Smart Match dialog box

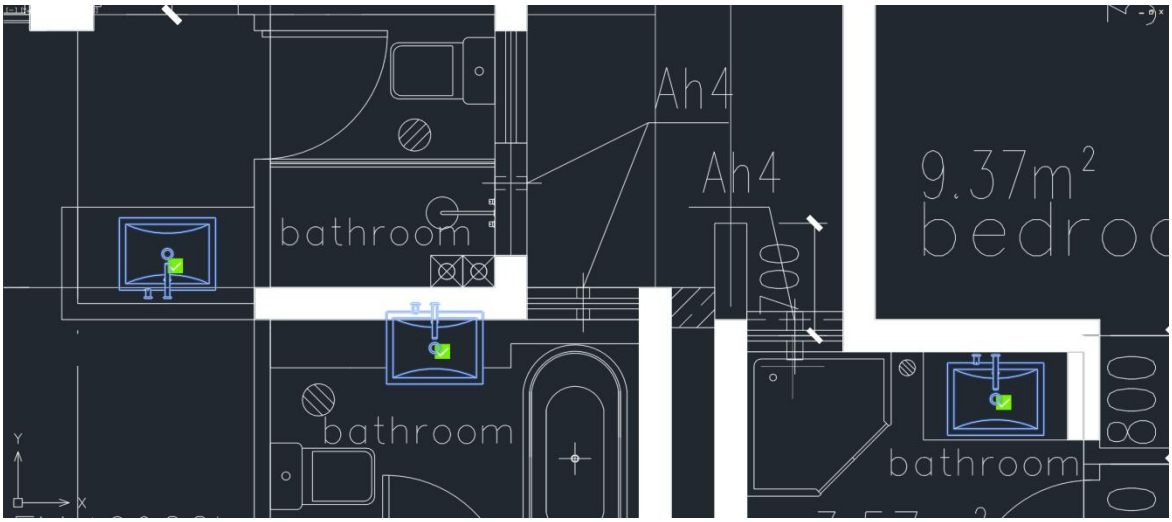

Figure 22. Example of Smart Match results

Support Batch Block Function

Added the BATCHBLOCK command, which supports filtering intelligently matched graphics and creating new blocks or replacing them with existing blocks through the Batch Block dialog box. Users can batch edit the same graphics in blocks to reduce repetitive operations.

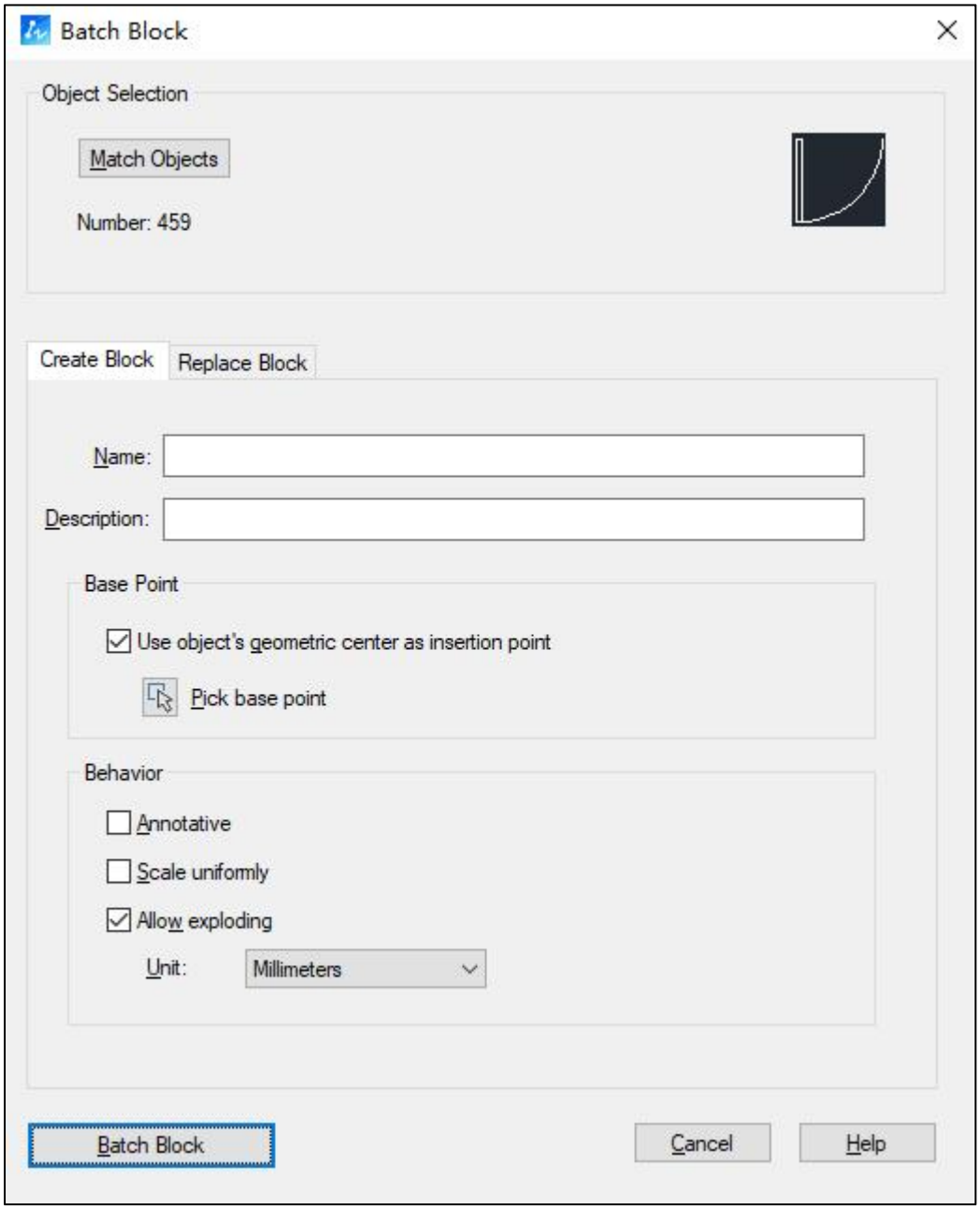

Figure 23. Batch Block dialog box

Support Object Counting Function

It supports counting the number of multiple groups of intelligently matched elements through the Object Count palette and creates statistical tables to reduce user counting and tabulation work.

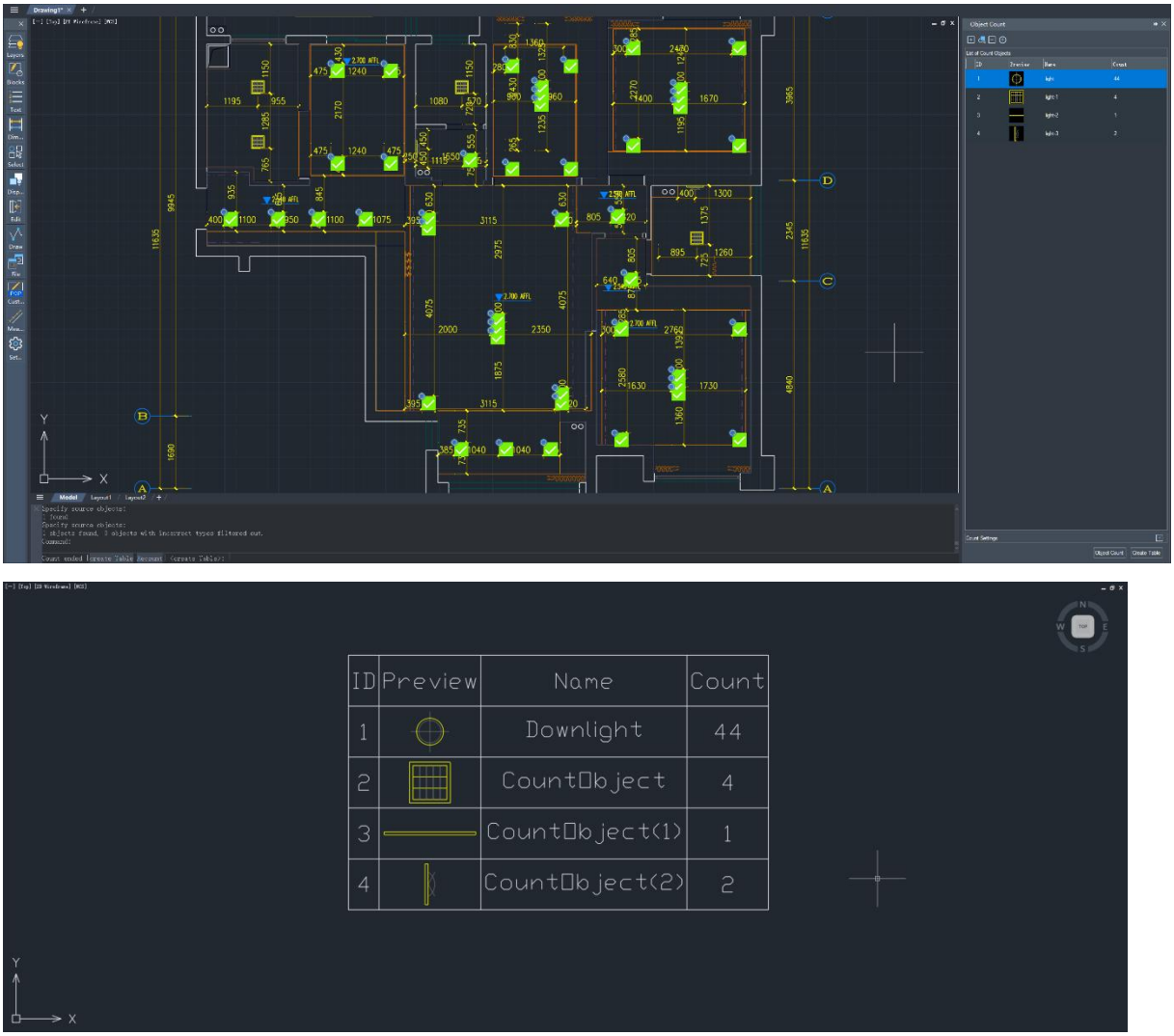

Figure 24. Example of Object Count results

Support a Similar Graphic Search Function

Added SIMILARSEARCH and SIMILARSEARCHCLOSE commands, supporting the search for similar blocks of existing objects in local drawings through the Similar Search palette, and reusing the blocks, replacing manual comparison and search.

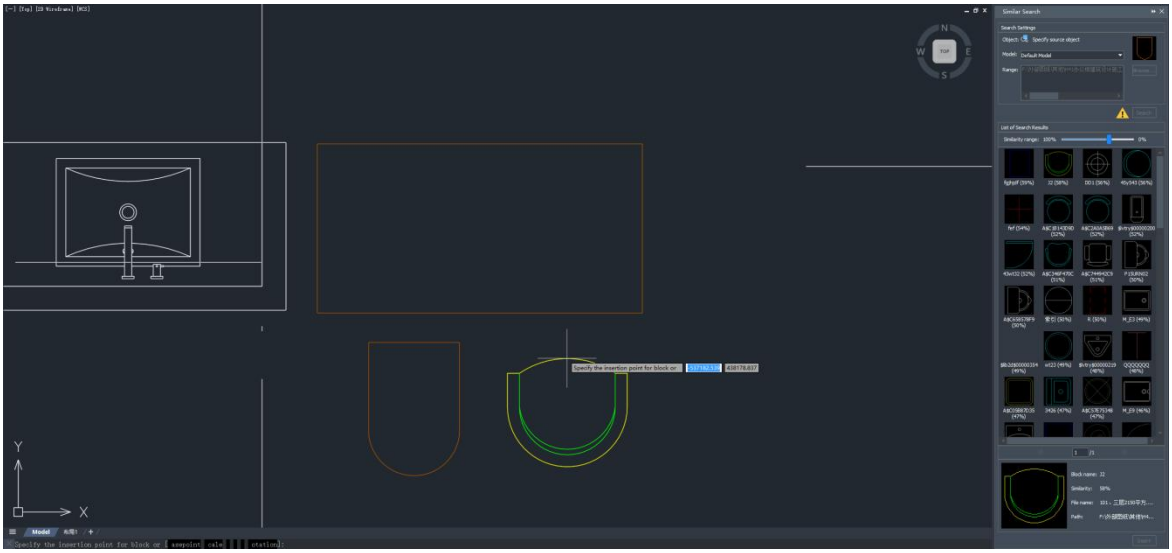

Figure 25. Example of Similar Search results

GeoService: Coordinate System Compatibility Achieved

The compatibility with mainstream competitors' coordinate systems has been enhanced, enabling ZWCAD to read over 900 coordinate systems saved by competing software.

The update also supports using geographic location to attach RCS formatted point clouds. Additionally, a new function for location marker entities has been introduced, allowing users to add location markers in drawings that include geometric location, geographic location, textual description, and other information.

Enhancement in FAS/VLX plugin Compatibility

The LISP binary instruction set has been upgraded to enhance ZWCAD's ability to parse FAS binary code, improving compatibility with FAS/VLX files. This update also supports LISP encryption schemes based on FAS binary code, providing stronger protection for LISP developers to secure their source code. Additionally, ZWCAD now supports loading and using a wider range of FAS/VLX plugins.