



# Complete Features Guide

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*Accomplish your designs faster!*

**GstarCAD 2018**



# GstarCAD 2018 Complete Features Guide

<b>1. Performance optimization</b> .....	4
1.1 Common File Operation .....	4
1.2 Common Editing Operation .....	4
<b>2. Editing Functions Optimization</b> .....	5
2.1 Array Options <b>New</b> .....	5
2.2 Clip <b>New</b> .....	7
2.3 Synchronize Attributes <b>New</b> .....	9
2.4 Layer Settings <b>Enhancement</b> .....	10
2.5 Reverse <b>New</b> .....	10
2.6 Frame Selection <b>Enhancement</b> .....	11
<b>3. Display Effect Optimization</b> .....	11
3.1 Command Preview <b>Enhancement</b> .....	11
3.2 Hatch to Back <b>New</b> .....	13
3.3 Snap Geometric Center <b>Enhancement</b> .....	13
3.4 Show Dynamic Grip Menu <b>Enhancement</b> .....	14
<b>4. 3D Function Optimization</b> .....	15
4.1 Section Plane <b>New</b> .....	15
4.2 3D Display <b>Enhancement</b> .....	16
<b>5. Detail Functions Improvement</b> .....	16
5.1 Command Line <b>Enhancement</b> .....	16
5.2 Status Bar <b>Enhancement</b> .....	17
5.3 Ribbon <b>Enhancement</b> .....	18
5.4 Add Selected <b>New</b> .....	18
5.5 Multiple <b>New</b> .....	19
5.6 Change to ByLayer <b>New</b> .....	17
<b>6. Plot Functions Optimization</b> .....	20

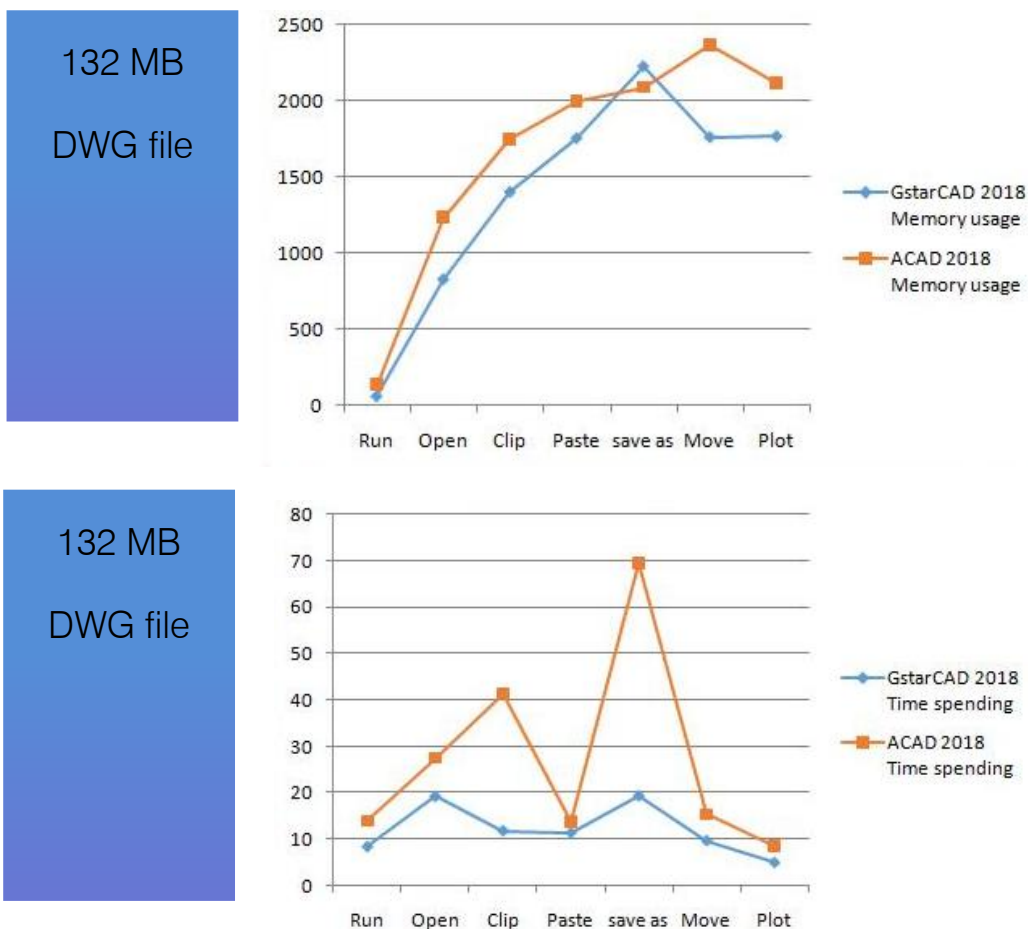
6.1 Plot Transparency <b>Enhancement</b> .....	20
6.2 Shade Plot <b>Enhancement</b> .....	20
6.3 Display Plot Styles <b>Enhancement</b> .....	21
6.4 Windows Printer <b>Enhancement</b> .....	21
<b>7. Files, Security and Register</b> .....	<b>22</b>
7.1 DWG Convert <b>New</b> .....	22
7.2 Security <b>New</b> .....	23
7.3 Register <b>Enhancement</b> .....	23
<b>8. Unique Innovative Functions</b> .....	<b>24</b>
8.1 Area Table <b>Innovative</b> .....	24
8.2 Free Scale <b>Innovative</b> .....	25
8.3 Auto Layer <b>Innovative</b> .....	26
8.4 Define Layout Viewport from Model Space <b>Innovative</b> .....	27
8.5 Attribute Increment <b>Innovative</b> .....	28

With great software performance and more efficient design tools, GstarCAD 2018 offers brand new experience in both architectural and mechanical design!

- Based on a good running speed and stability, GstarCAD 2018 has a further optimization and improvement in operating performance, surpassing other similar software in terms of common and daily used editing operations.
- GstarCAD 2018 supports the latest DWG 2018 format. Open, write, and save the latest DWG version together with more compatible features.
- To improve drafting skill efficiency, depending on the feedback needs, this new version provides more productive features and practical innovations that help to accomplish your designs faster.

## 1. Whole performance optimization

GstarCAD 2018 greatly improves "OPEN", "QSAVE", "PLOT" and other drawings commonly used operations and "MOVE", "TRIM", "PASTE", "DYNAMIC SELECTION" and other solid operating performance.



## 1.1 Common File Operation

GstarCAD 2018 greatly improves the whole performance no matter in small drawings less than 10M or big drawings more than 100M. Compared with AutoCAD® 2018, it has greater superiority in time spending and memory using.

Function	Explain	Time	Memory
RUN	Booting software	62%	44%
OPEN	Opening drawing file	68%	69%
QSAVE	Quick save drawing file	35%	92%
PLOT	Drawing plotting	60%	63%

## 1.2 Common Editing Operation

GstarCAD 2018 deeply optimizes most commonly used functions such as “CLIP”, “PASTE”, “MOVE”, “ORBIT” and many others. This version has more fluent process of solid selection in common editing operation.

Function	Explain	Time	Memory
CLIP	Selecting solid time in “CLIP” & Memory consumption	37%	76%
PASTE	Pasting solid time & Memory consumption	85%	87%
MOVE	Selecting solid time in “MOVE” & Memory consumption	54%	66%
ORBIT	The experience of pan process	More fluent	

Note: Percentage: GstarCAD 2018 / ACAD 2018

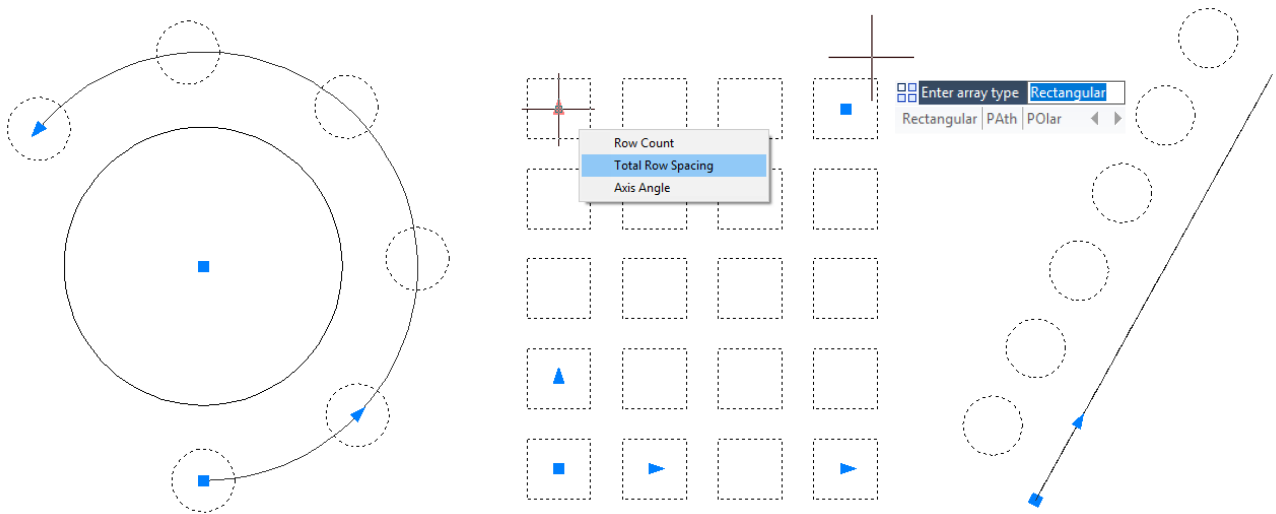
Comparison of drawings: three levels of drawings in 10M / 50M / 100M

## 2. Editing Functions Optimization

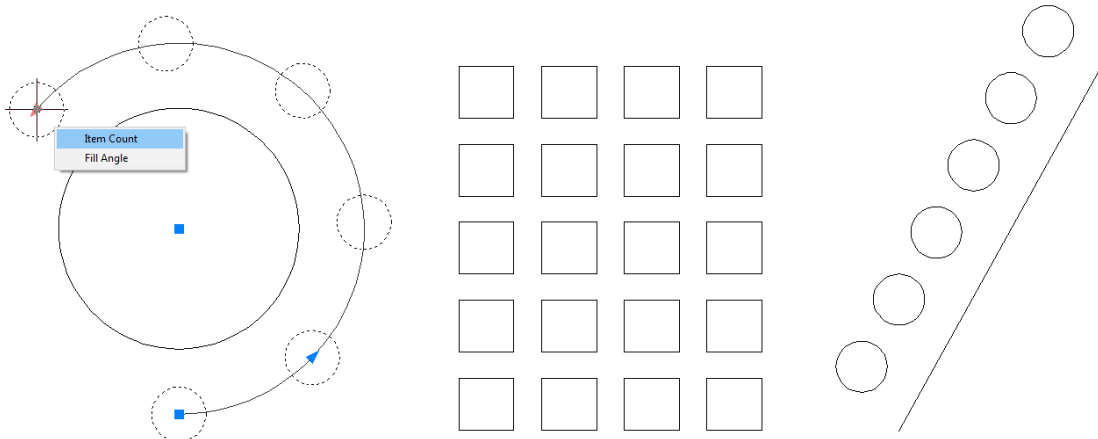
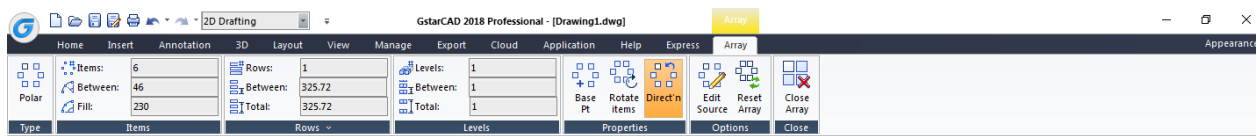
### 2.1 Array Options New

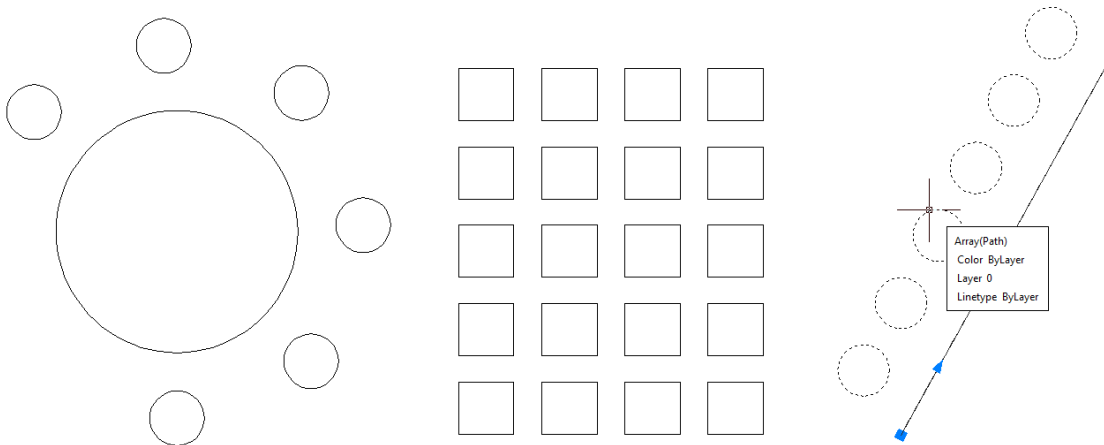
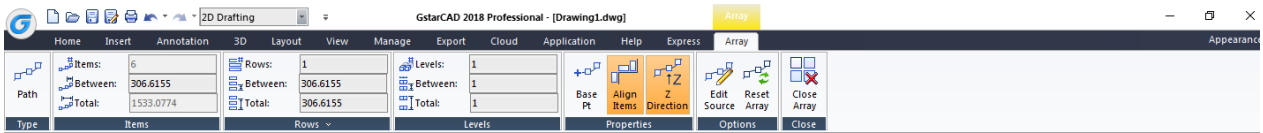
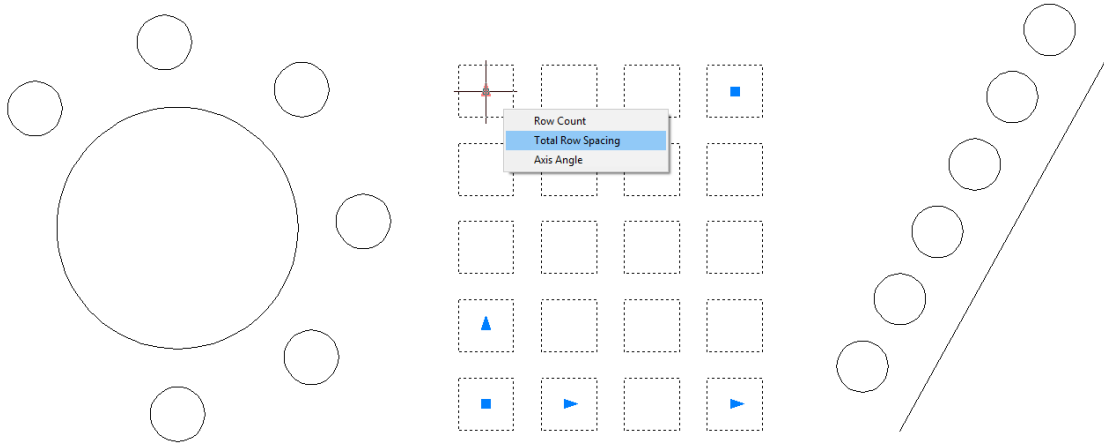
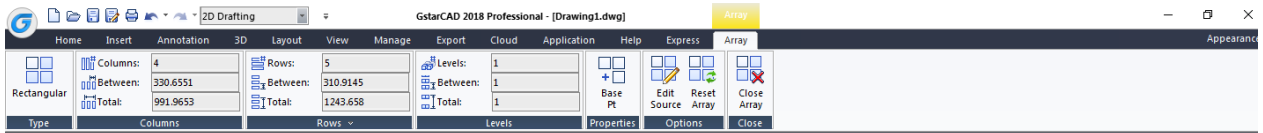
Command name: ARRAY

New array options are available to create copies of objects arranged in rectangular and polar pattern. The new array is as a whole (dynamic block). It can be dynamically adjusted the number of ranks, spacing and other related parameters through Ribbon Panel and Multifunctional Grips.



Each element in an array is called array project, which can contain multiple objects. You can also specify blocks as source objects for arrays. If you choose the path array, you also need a straight line, a polyline, a three-dimensional polyline, a spline, a helix, an arc, a circle, or an ellipse to use as a path. For different array types, the Ribbon panel provides different parameter setting options.





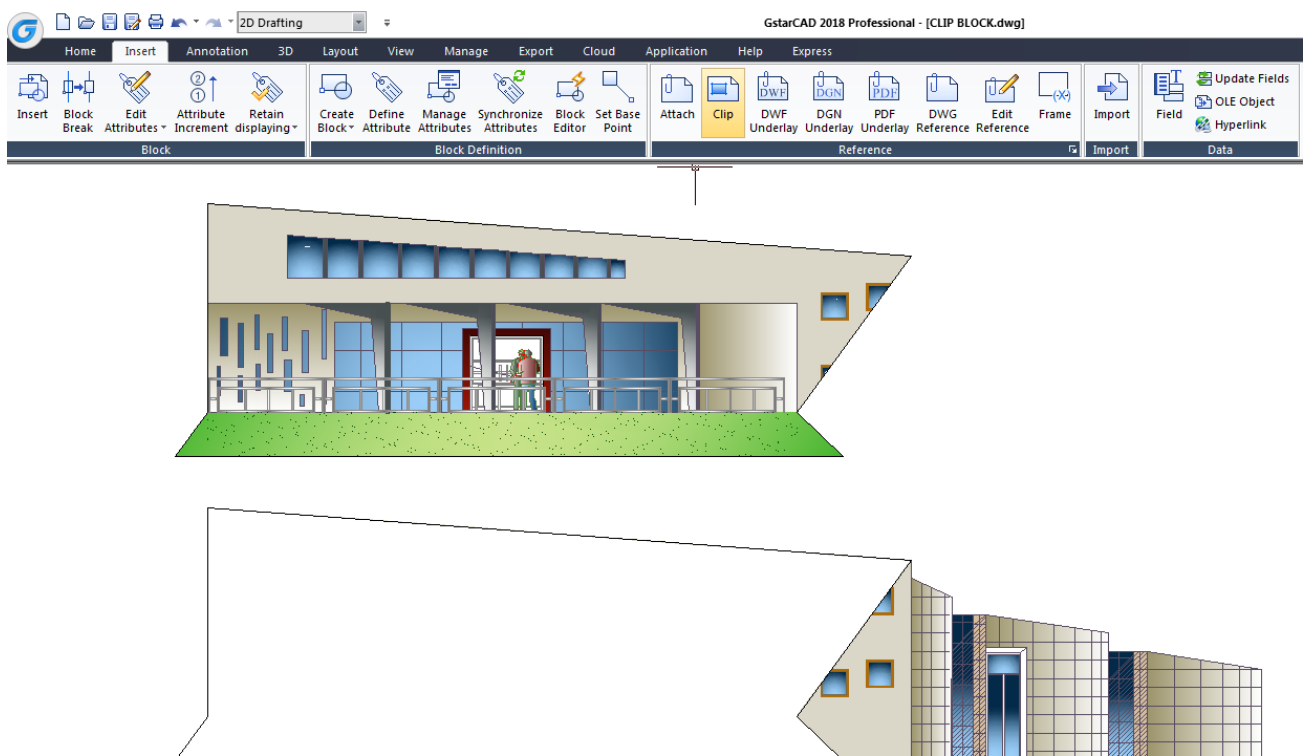
ARRAYRECT, ARRAYPOLAR, ARRAYPATH, ARRAYCLOSE, ARRAYEDIT and ARRAYCLASIC commands are supported.

Function	Command name	Description
Rectangle	ARRAYRECT	Distribute the copy of the sub-objects to any combination of rows, columns, and elevations.
Polar	ARRAYPOLAR	A copy of the sub-objects evenly distributed around the center or axis of rotation in a polar array.
Path	ARRAYPATH	A copy of the sub-objects evenly distributed along a path or partial path.
Close Array Editing	ARRAYCLOSE	Save or drop the change to the source object of the array and exit array edit status.
Array Editing	ARRAYEDIT	Edit the associated array object and its source object.

## 2.2 CLIP New

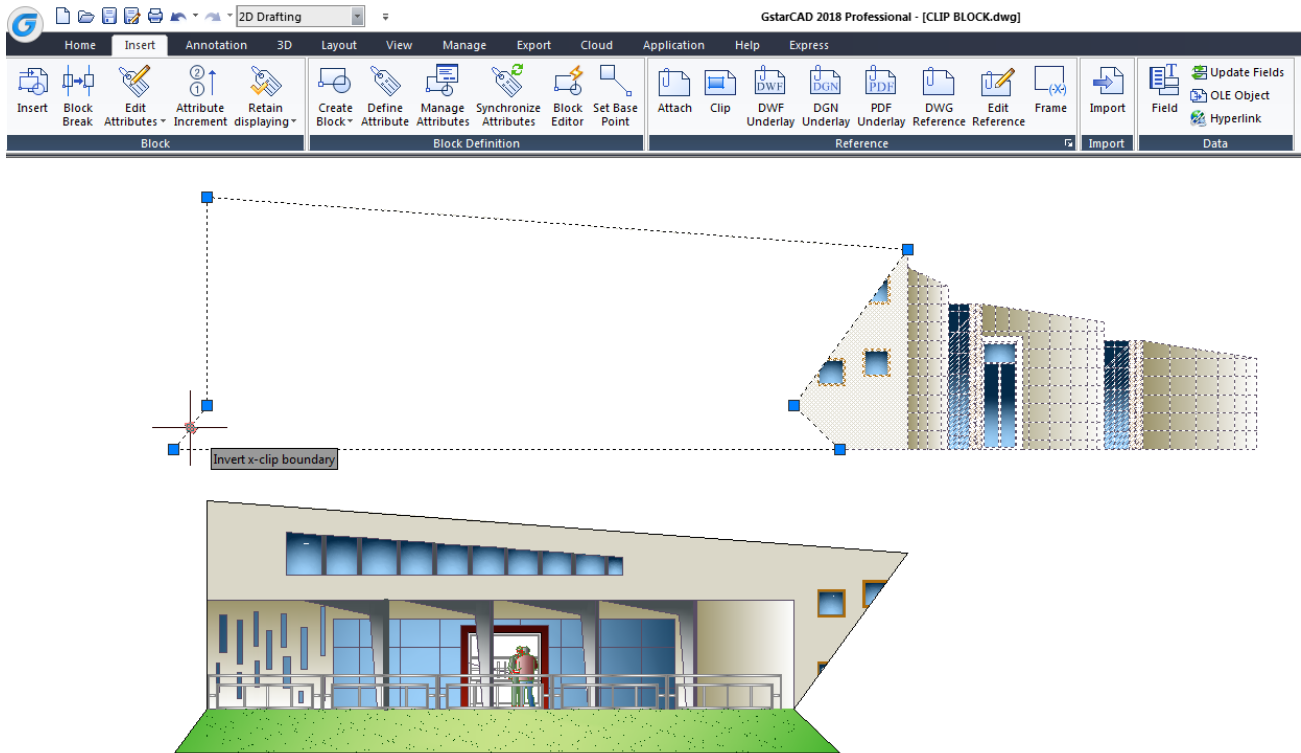
### Command name: CLIP

- The new CLIP command crops a block, external reference, image, viewport, and underlay (PDF or DGN) to a specified boundary.
- The new CLIP command can be used to replace XCLIP, IMAGECLIP, VPCLIP, PDFCLIP and DGNCLIP command.
- The list of prompts varies depending on whether you are clipping an underlay, image, external reference, viewport or block.
- The clip boundary can be a polyline, a rectangle, or a polygon whose vertexes are limited within the global scope of the underlay. Each underlay can only have one boundary, but each copy of one underlay can have its own different boundary.
- The visibility of a clipped boundary is controlled by FRAME system variable.

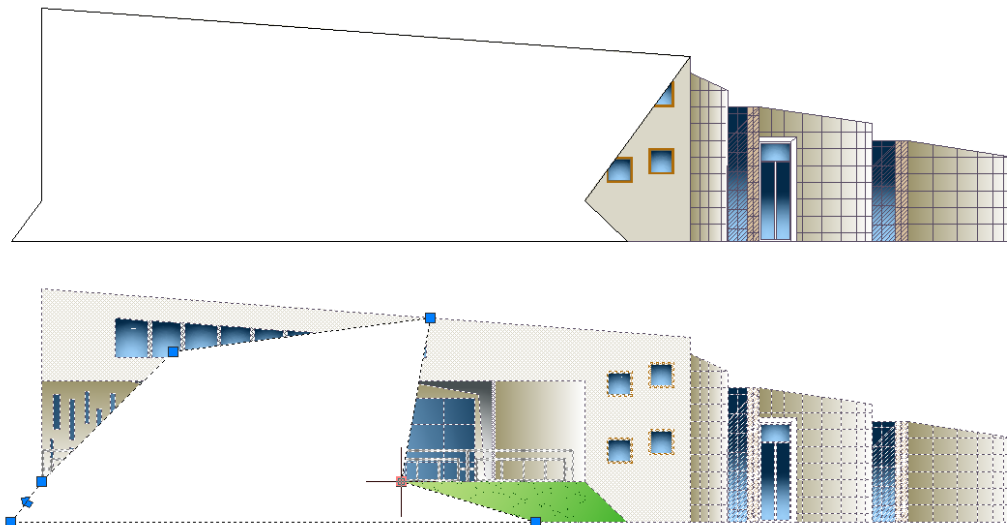




**Editing the clipped boundary:** The external reference or block after clipped can be moved, copied, or rotated like an external reference or block which is not be clipped. When the clipping boundary is no longer needed, you can delete the clipped boundary from the selected object, so the object is displayed with its original boundary. You can also invert the area to be hidden inside or outside the clipping boundary. With grips located at the midpoint on the first edge of the clipping boundary, you can invert the display of the clipped reference inside or outside the boundary.



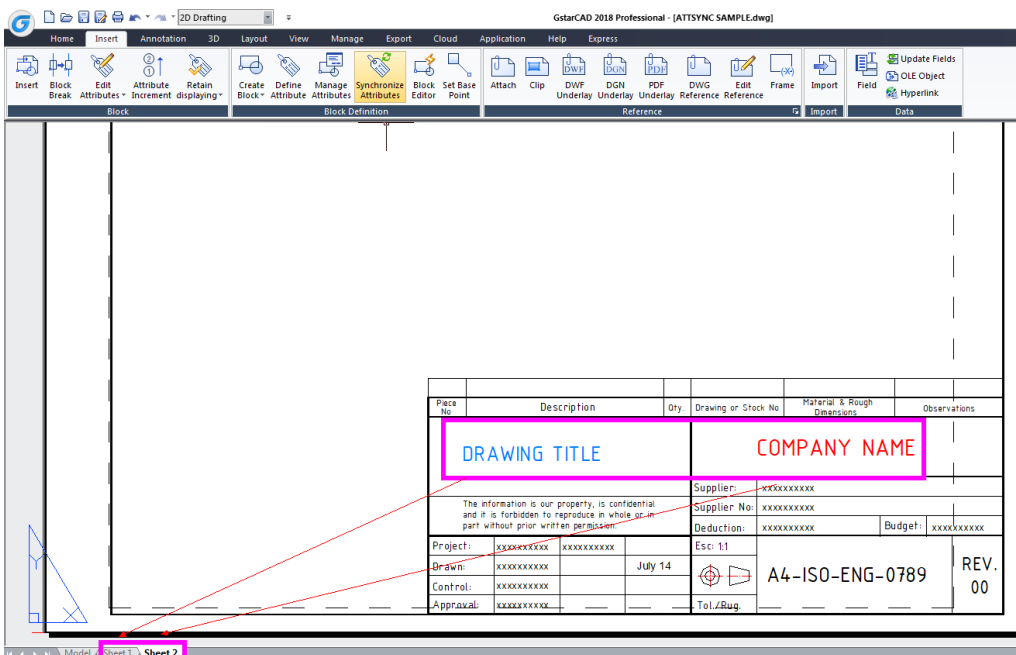
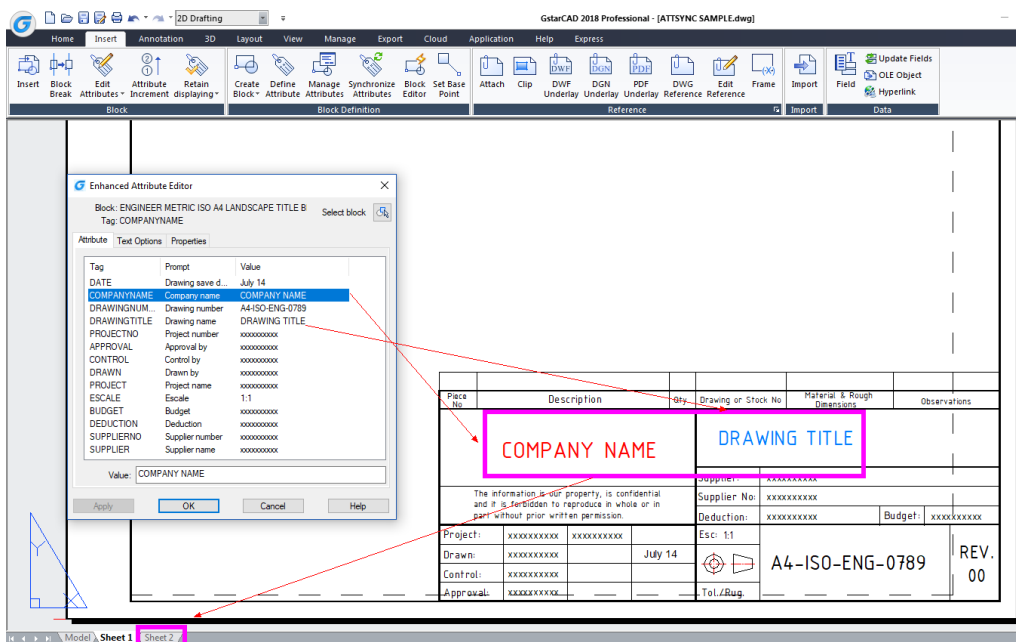
**Adjusting the size of the clipped boundary:** If you want to change the clip boundary's shape and size of the external reference and block, you can use grips to edit the vertexes just like using grips to edit other objects.



## 2.3 Synchronize Attributes New

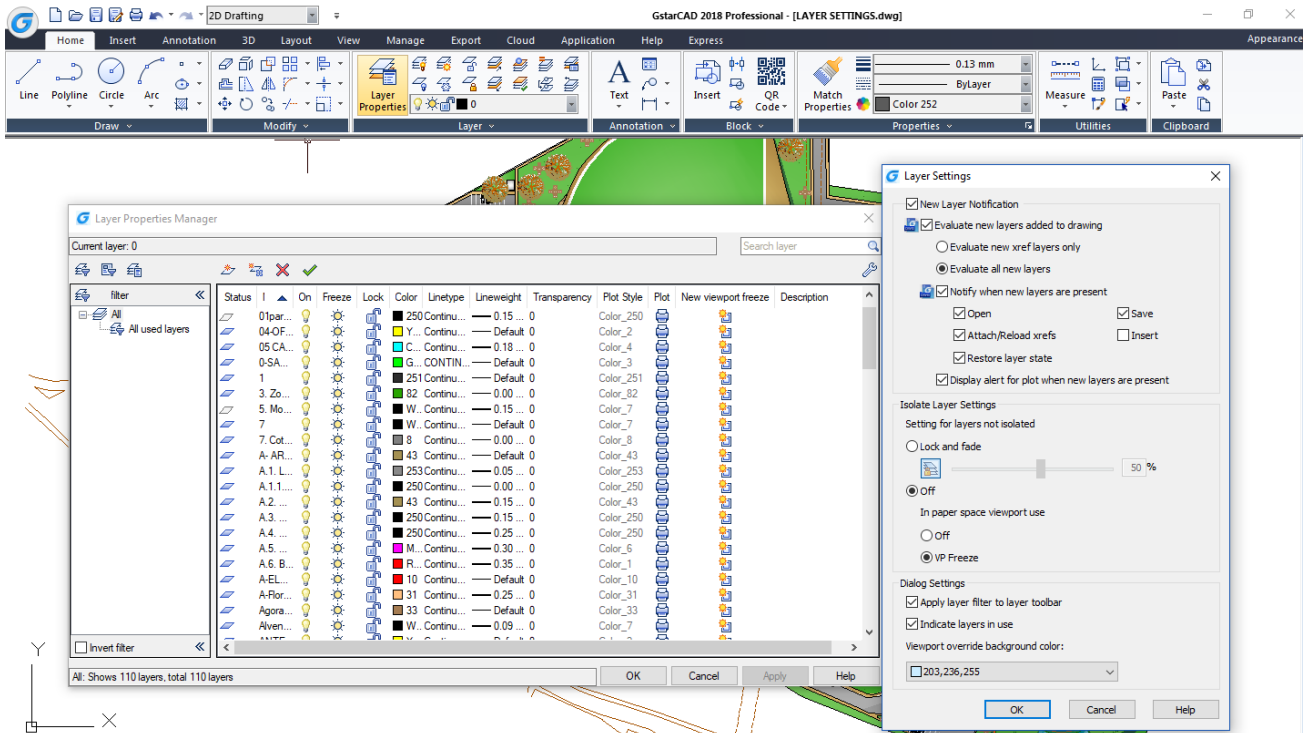
Command name: ATTSYNC

The ATTSYNC command applies attribute changes in block definitions to all block references of the same name. You can use this command to update instances of blocks containing attributes that were redefined using the BLOCK or BEDIT commands. ATTSYNC does not change any values assigned to attributes in existing blocks. ATTSYNC removes all changes of format or features that are made by ATTEDIT or EATTEDIT commands. And it also deletes all extended data associated with blocks and might affect dynamic blocks and blocks created by third-party applications.



## 2.4 Layer Settings Enhancement

The layer properties manager dialog box has been enhanced by adding the Layer Settings option. It Controls when notification occurs for new layers, layer behavior when some layer is isolated, whether layer filters are applied to the Layers toolbar, and the background color of viewport overrides in the Layer Properties Manager.



## 2.5 Reverse New

**Command name: REVERSE**

REVERSE command reverses the direction of selected lines, polylines, splines and helixes. This is very useful for wide polylines that contain text or have different startwidth and endwidth. Vertices of selected objects are reversed. For example, when a linetype with text is specified with relative rotation in a LIN file, the text in the linetype might be displayed upside down. Reversing the vertices of the object changes the orientation of the text.



## 2.6 Frame Selection Enhancement

System Variable name: FRAMESELECTION

FRAMESELECTION variable controls whether the hidden block and the external reference cropping border are selected.

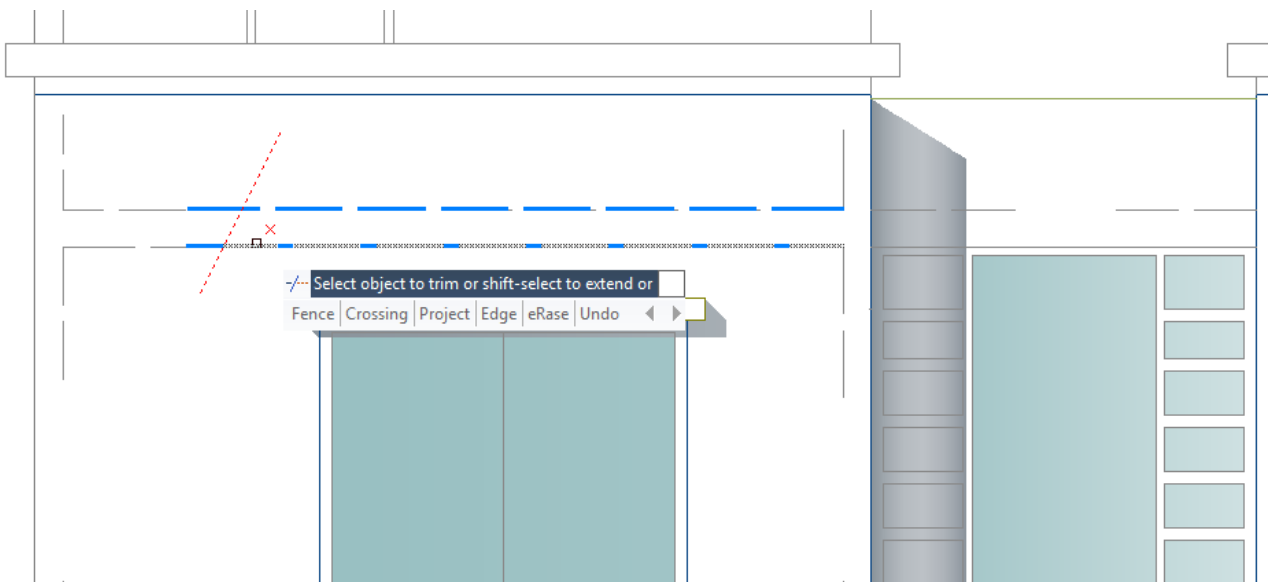
## 3. Display Effect Optimization

### 3.1 Command Preview Enhancement

The command preview provides you a quick feedback of the active command. It shows you exactly how the objects will look when the “TRIM”, “EXTEND” and “HATCH” command is executed. As you make changes within the command, you can instantly preview the final result.

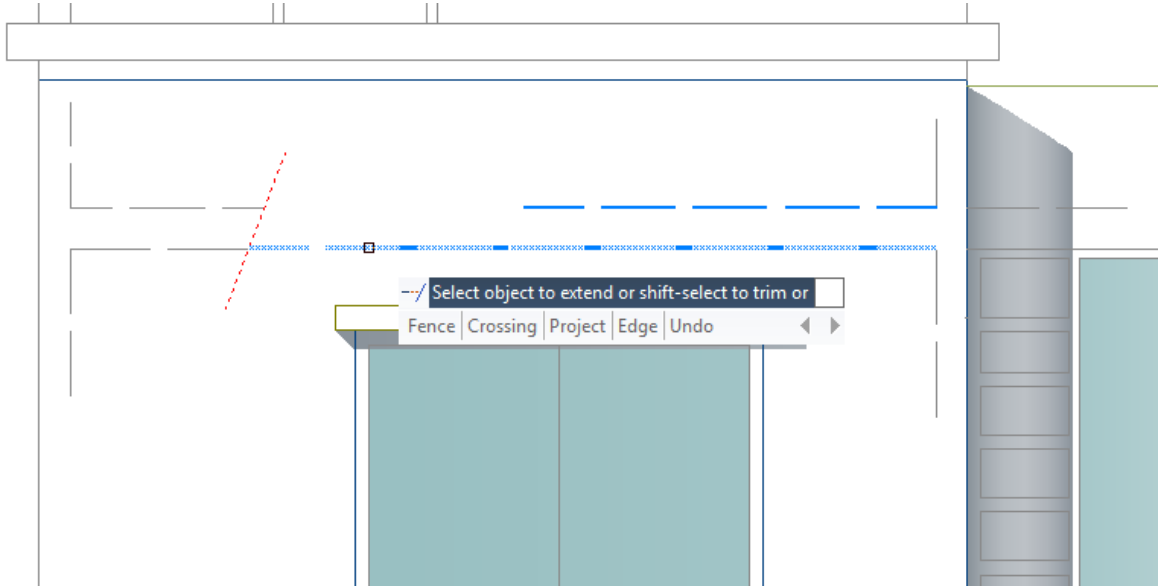
#### Trim preview

When prompted to select the object to be trimmed, the cursor stays on the object, the part of the trimmed color is grayed out, and a red cross appears above the cursor, indicating that the segment may be trimmed. If the effect is correct, left-click mouse to trim the object.



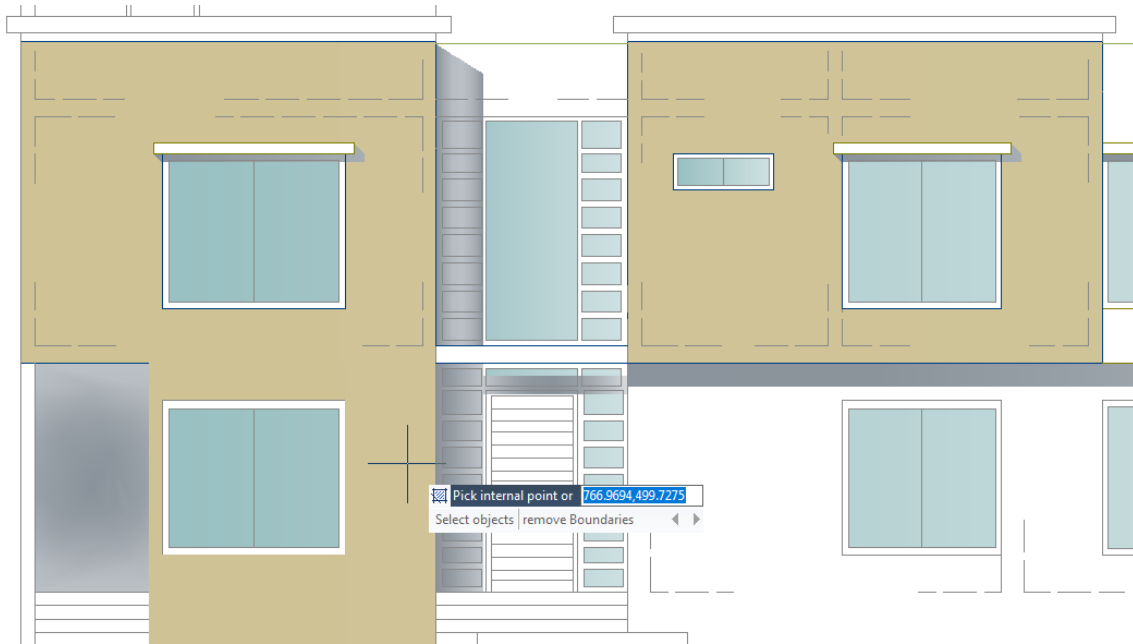
### Extend preview

When prompted to select the object to be extended, the cursor stays on the object, the object is highlighted, and the effect of the extension is displayed. If the effect is correct, click the object to confirm the extension.



### Hatch preview

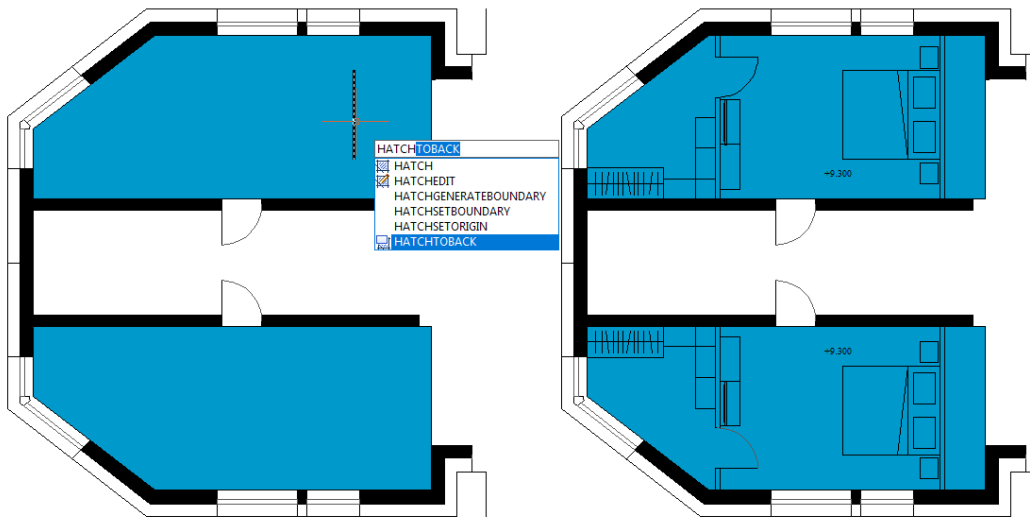
After picking point and selecting the object, it will display directly the hatch effect, which is used to confirm whether the area, pattern, scale and other settings are correct.



### 3.2 Hatch to Back [New](#)

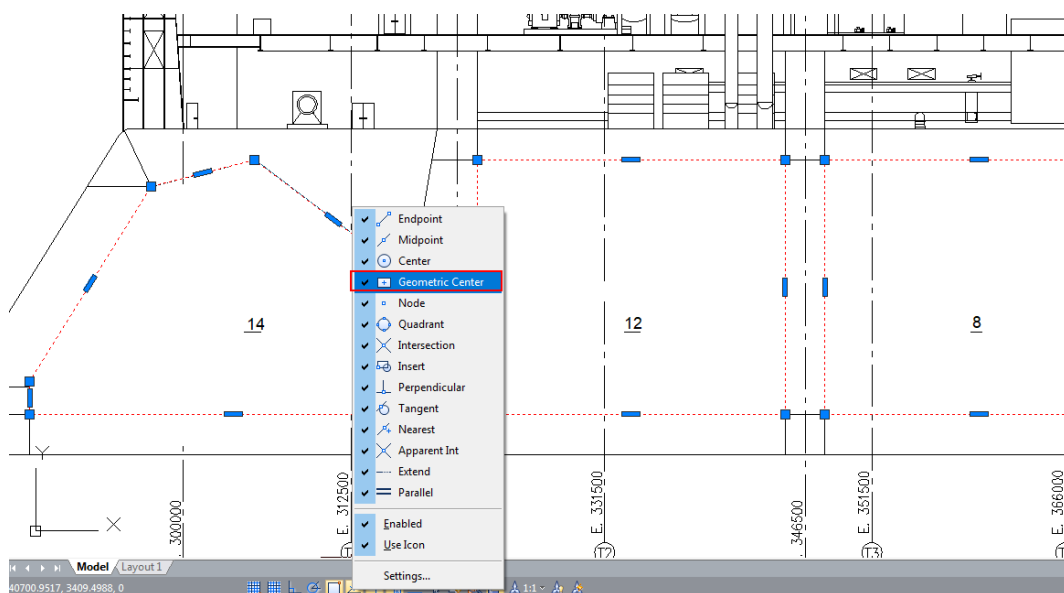
Command name: HATCHTOBACK

In order to avoid the filling pattern blocks text, label or other graphics on the drawing, you can set the display order of all the fill patterns after all other objects. Selects all hatches in the drawing, including hatch patterns, solid fills, and gradient fills, and sets their draw order to be behind all other objects. Hatch objects on locked layers are also modified.



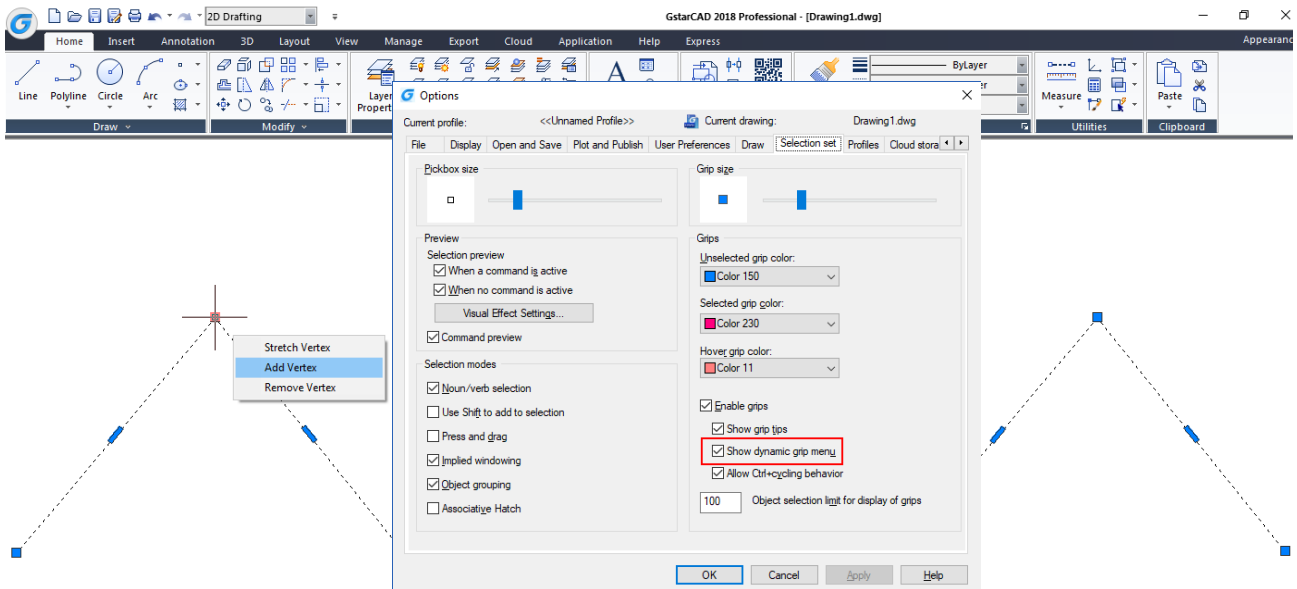
### 3.3 Snap Geometric Center [Enhancement](#)

A new snap option (Geometric Center) has been added to improve the snap center of any kind of polygonal object.



### 3.4 Show Dynamic Grip Menu Enhancement

“Show Dynamic Grip Menu” option is added into selection set tab of options dialog box. This option controls the display of dynamic menu when pausing over a multifunctional grip. You can also switch this option through GRIPMULTIFUNCTIONAL variable.

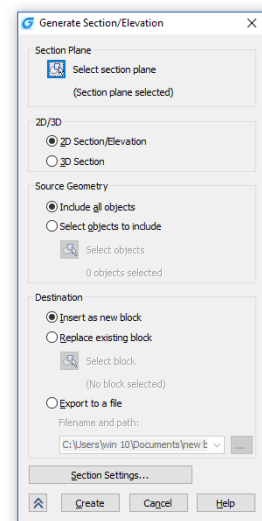
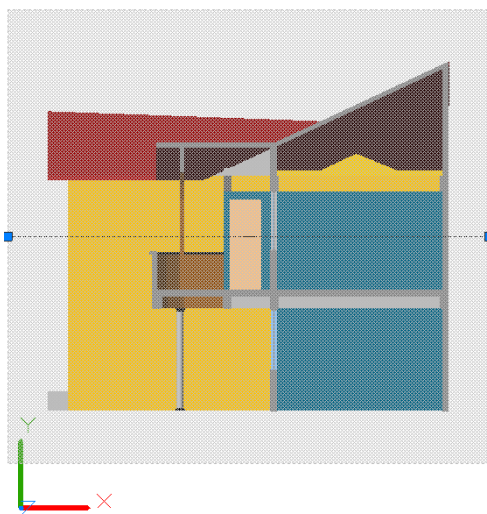
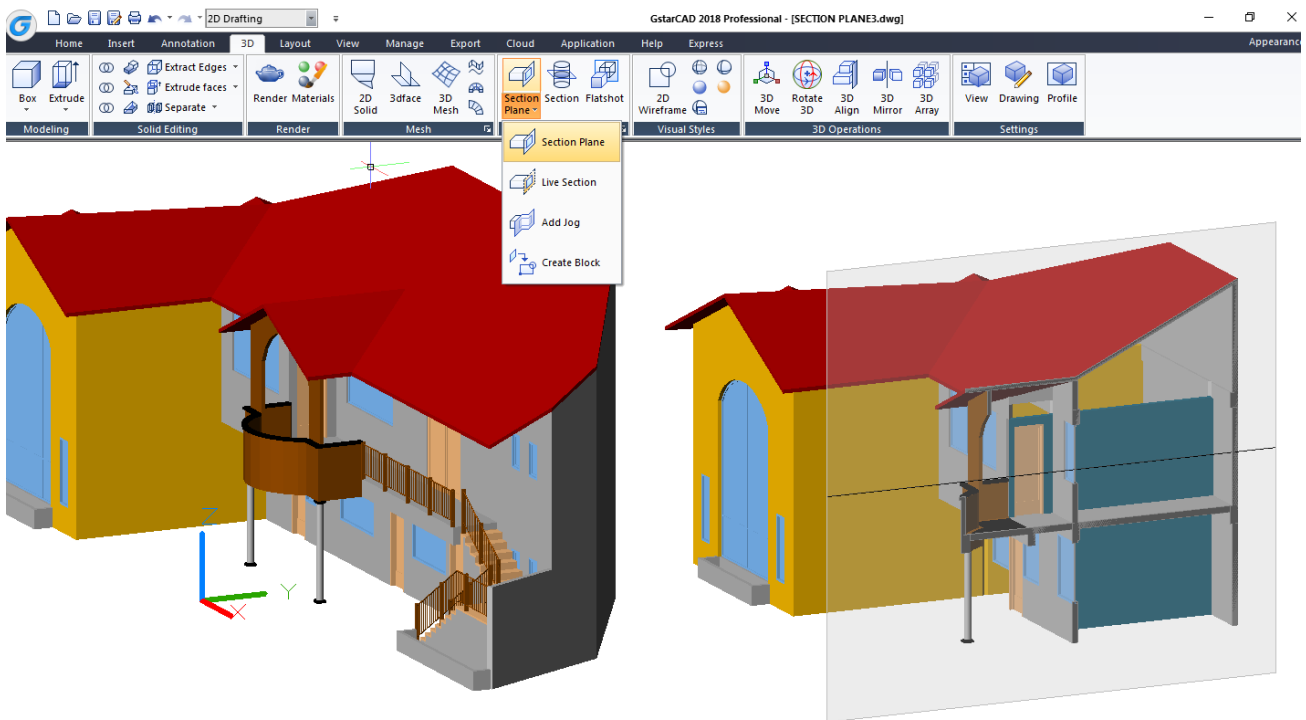


# 4. 3D Function Optimization

## 4.1 Section Plane New

Command name: SECTIONPLANE

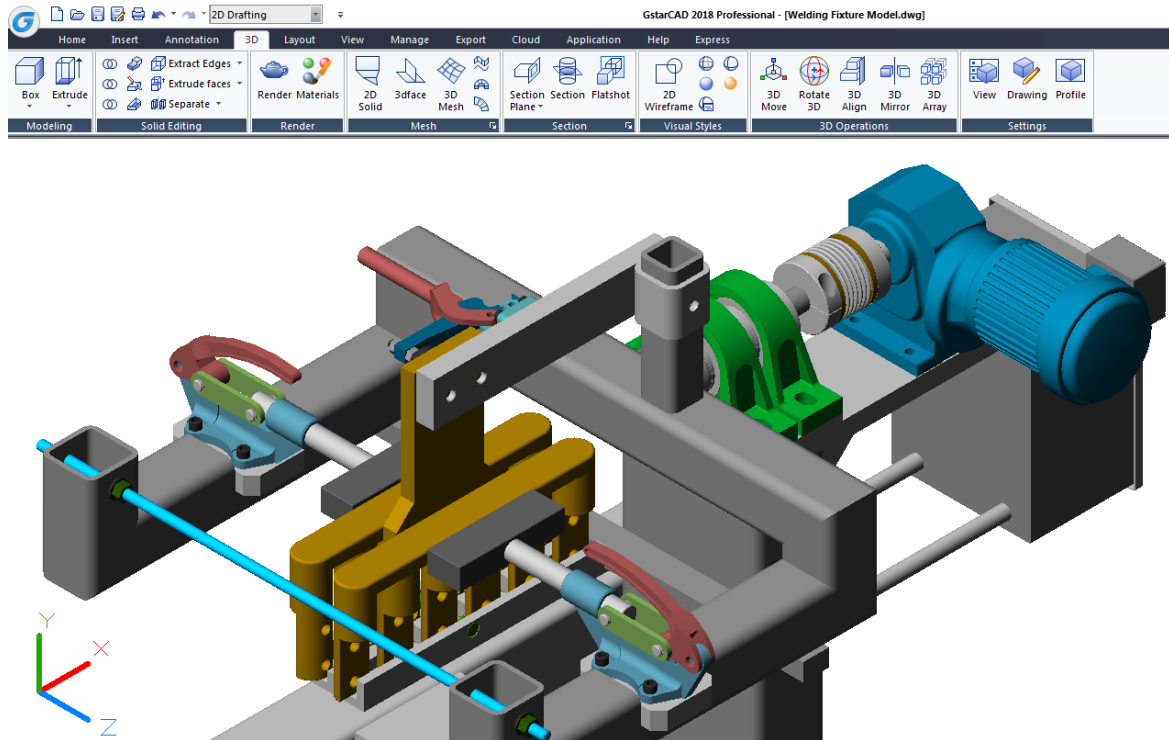
With the SECTIONPLANE command, you can create a section object that acts as a cutting plane through solids, surfaces, or regions. If you turn on live sectioning, moving the section object throughout the 3D model in model space reveals inner details in real-time. LIVESECTION, SECTIONPLANEJOG, SECTIONPLANETOBLOCK and SECTIONPLANESETTINGS commands are supported.





## 4.2 3D Display Enhancement

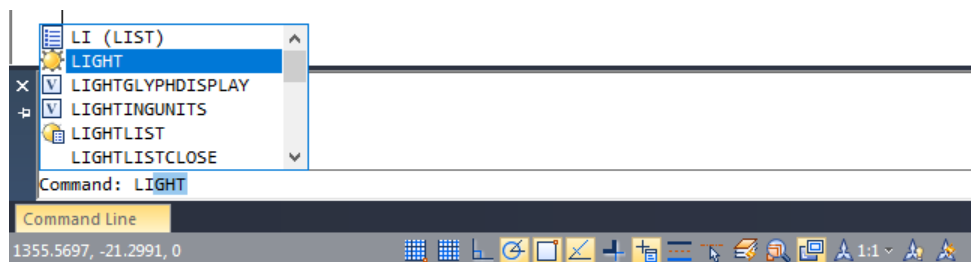
GstarCAD 2018 comprehensively optimizes the selection of 3D solid sub-objects, shade & hide plotting resolution, snap in 3D shading status and 3D display.



## 5. Detail Function Improvement

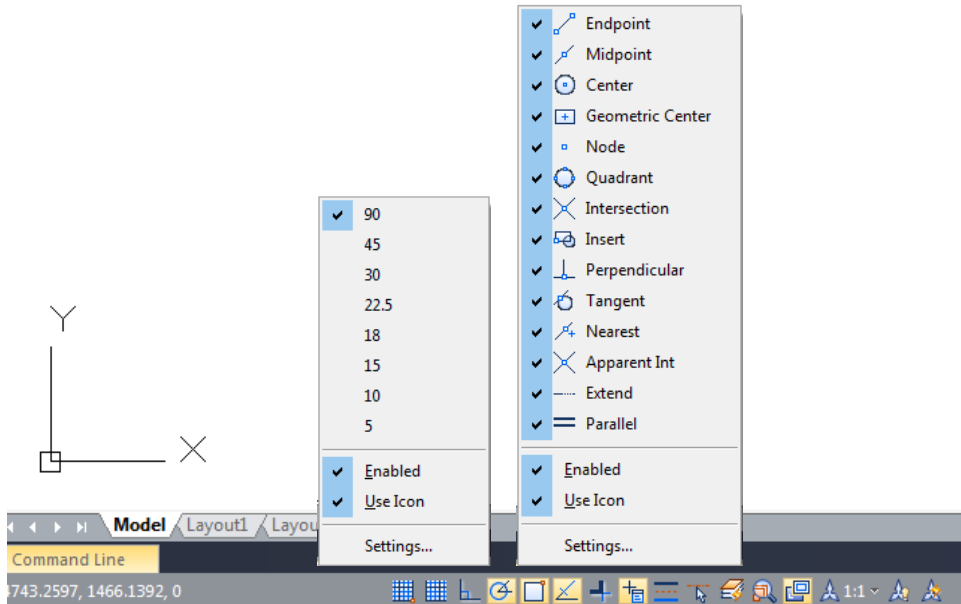
### 5.1 Command Line Enhancement

Now when you enter a command at the command line, a list of related commands and variables are displayed. There is no need to enter the whole name of a command or system variable.



## 5.2 Status Bar Enhancement

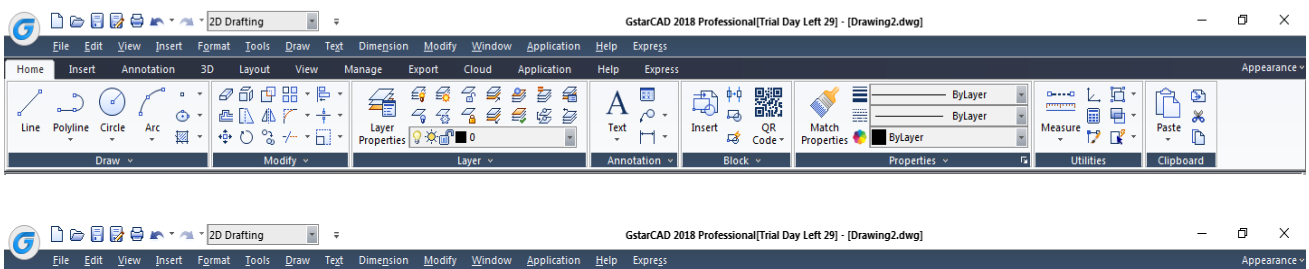
Now in the status bar, when right click the polar track, the object snap and object track button will display a menu with related setting options.



## 5.3 Ribbon Commands Enhancement

Command name: RIBBON/RIBBONCLOSE

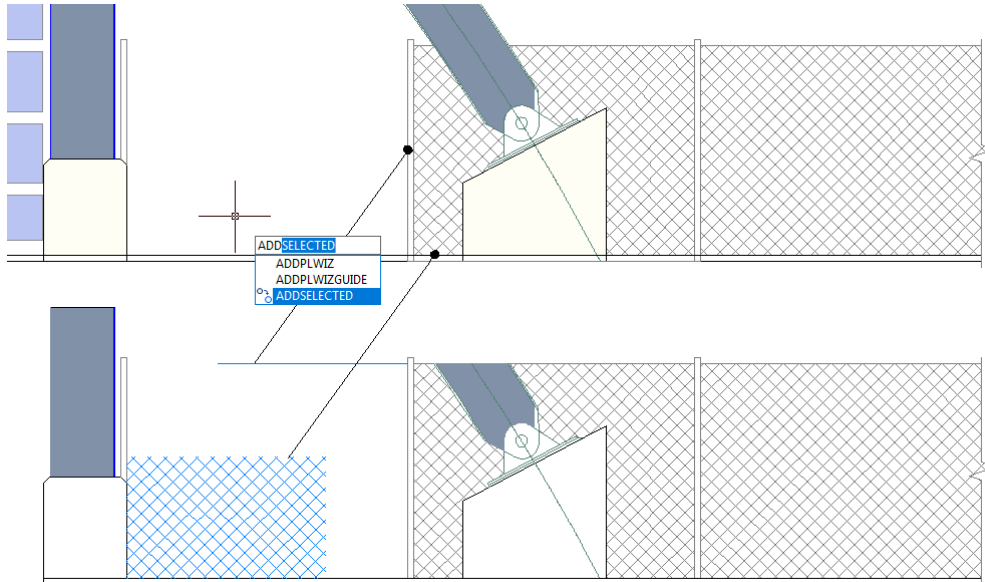
Now you can use the RIBBONCLOSE and RIBBON command to hide and display the ribbon respectively.



## 5.4 Add selected New

Command name: ADDSELECTED

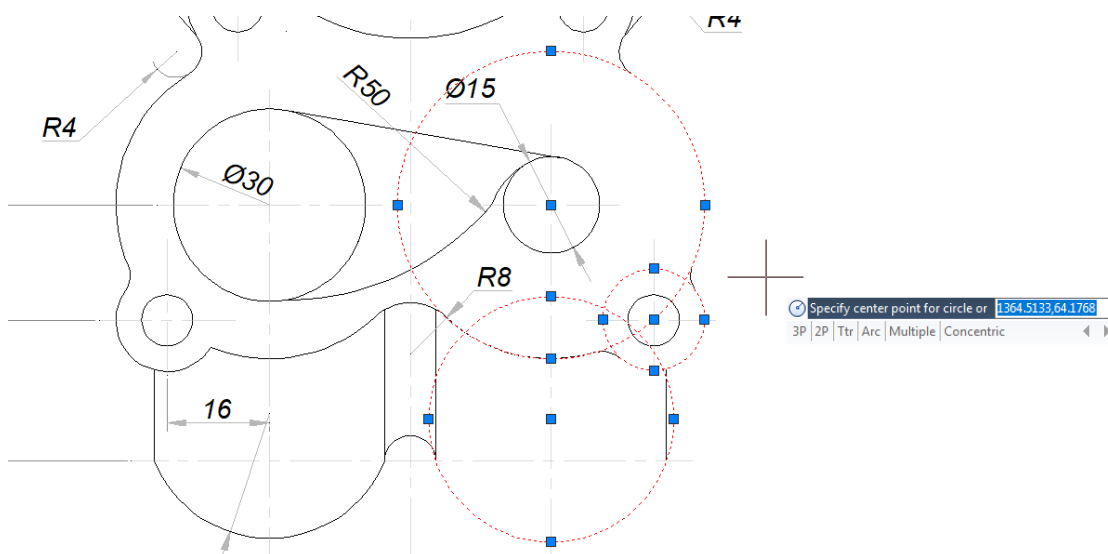
This new command creates a new object of the same type and properties as selected object but with different geometric values.



## 5.5 Multiple New

Command name: MULTIPLE

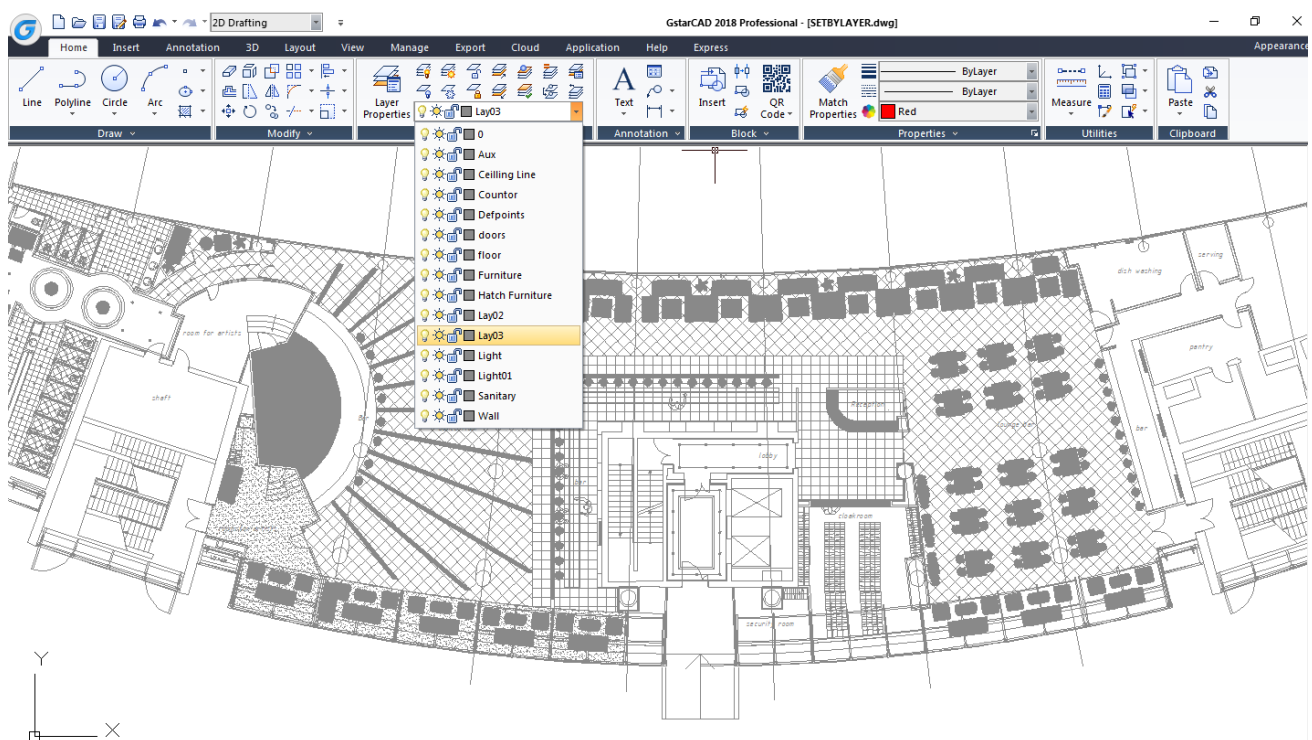
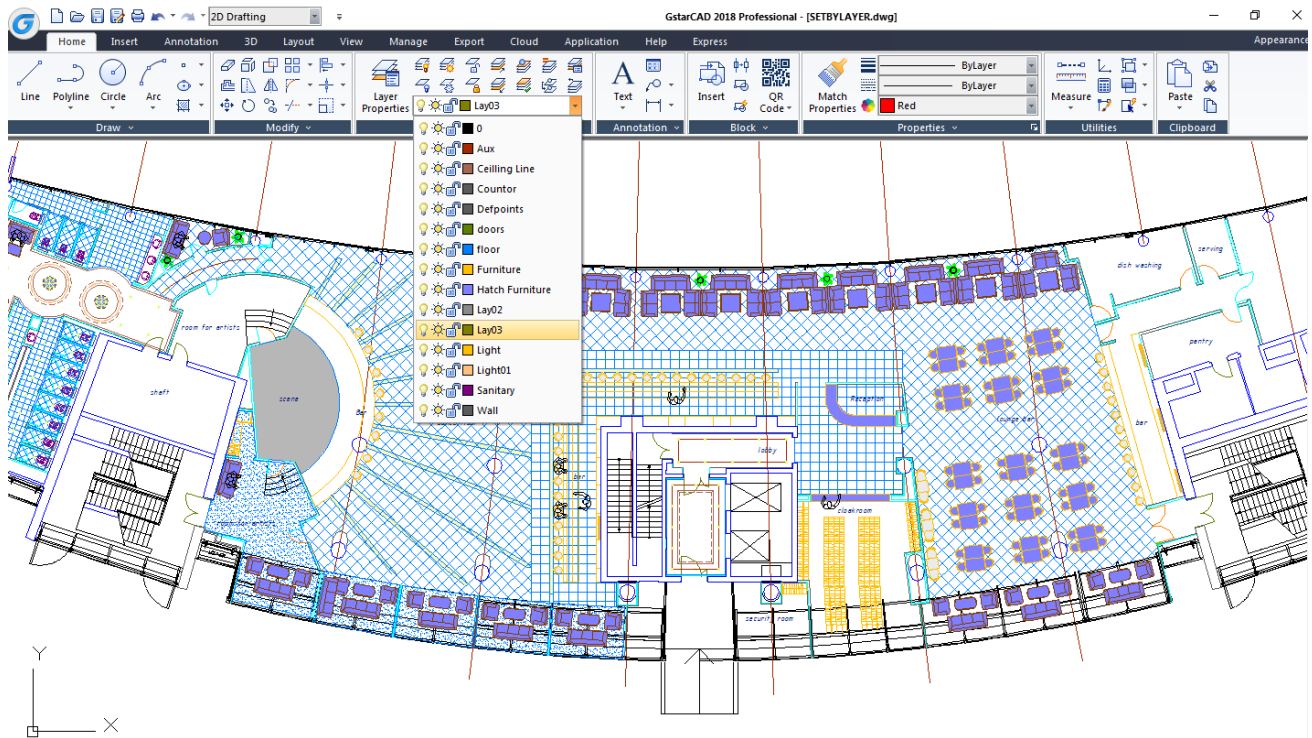
This command executes a command repetitively, avoiding press enter or space bar key. Because this command only repeats command names, all parameters must be specified each time.



## 5.6 Change to ByLayer New

Command name: SETBYLAYER

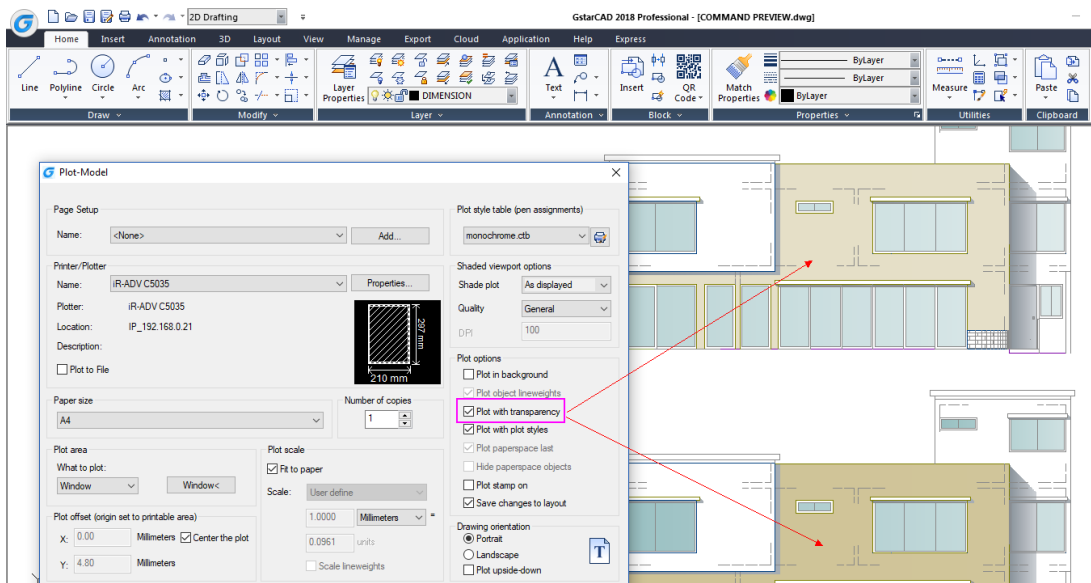
Changes the property overrides of the selected objects to ByLayer. You can specify which properties are changed to ByLayer, including color, linetype, lineweight, and materials.



## 6. Plot Function Optimization

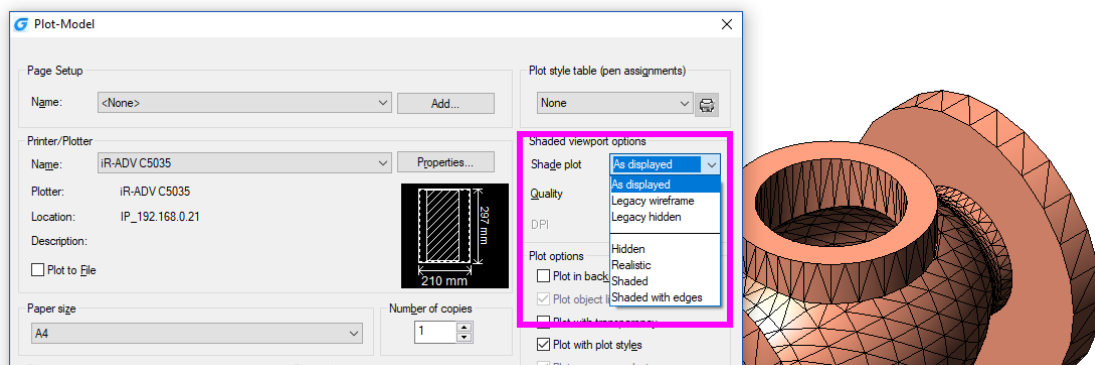
### 6.1 Plot Transparency Enhancement

Plot Transparency option in plot dialog box, specifies whether object transparency is plotted. This option should only be used when plotting drawings with transparent objects. For performance reasons, plotting transparency is disabled by default. This option can be overridden by the PLOTTRANSPARENCYOVERRIDE system variable.



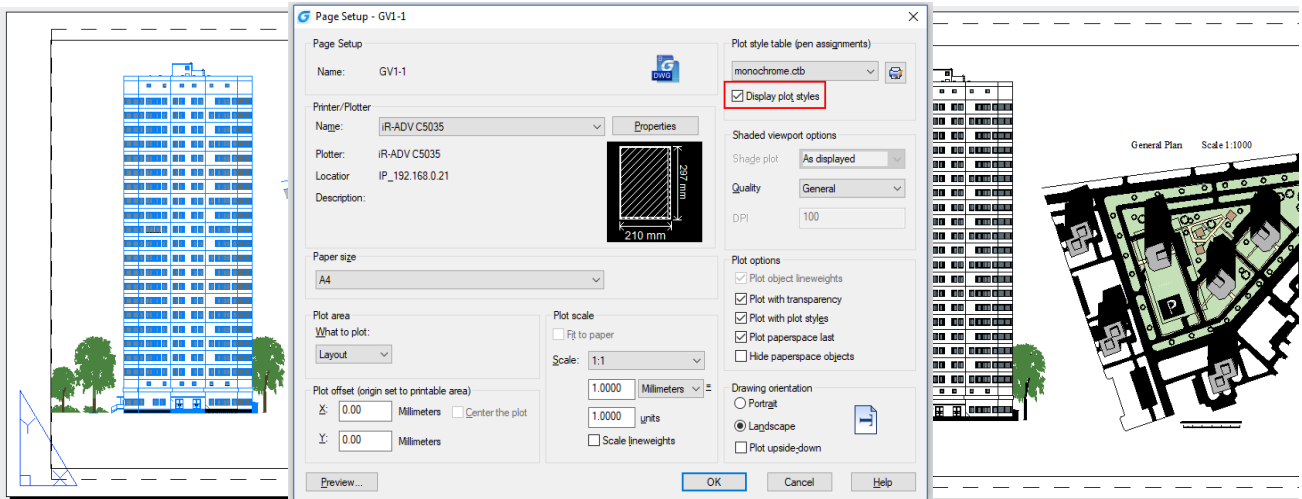
### 6.2 Shade Plot Enhancement

Shading Plot option specifies how views are plotted. From the shade plot drop-down menu, you can select; As displayed, Legacy wireframe, Legacy hidden, Hidden, Realistic, Shaded and Shaded with edges option. And from Quality drop-down menu, you can select; Draft Preview, General, Presentation, Maximum and User define option.



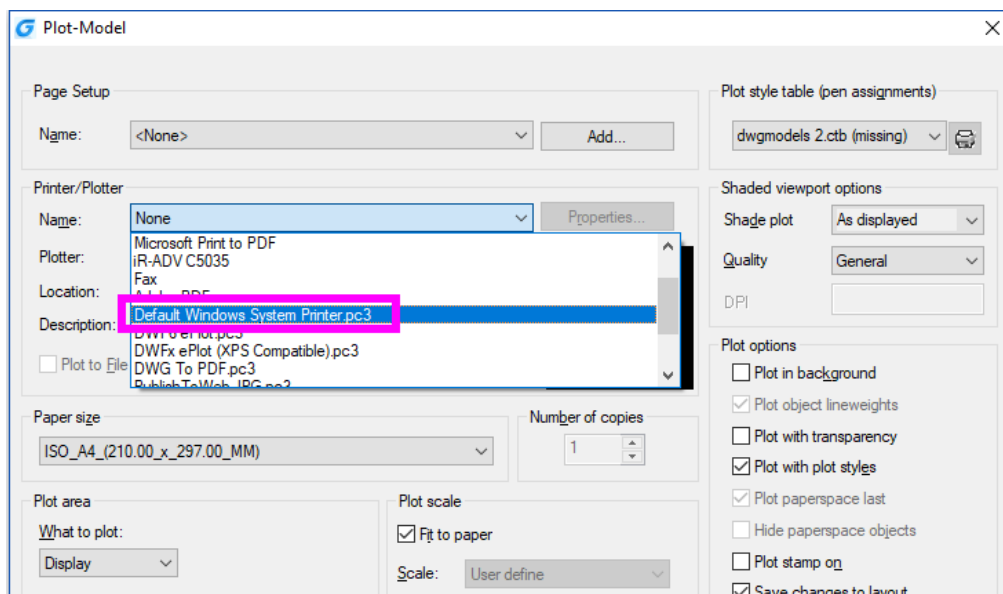
## 6.3 Display Plot Styles Enhancement

The Page Setup manager for layout supports the Display Plot Styles option. You can assign different plot style tables to each layout in your drawing. Using plot styles gives you great flexibility because you can set them to override other object properties or turn off the override as needed.



## 6.4 Windows Printer Enhancement

Now “Default Windows System Printer” is supported into plot dialog box, so the drawings opened or copied to any machine will automatically use the current machine's default system plot driver.

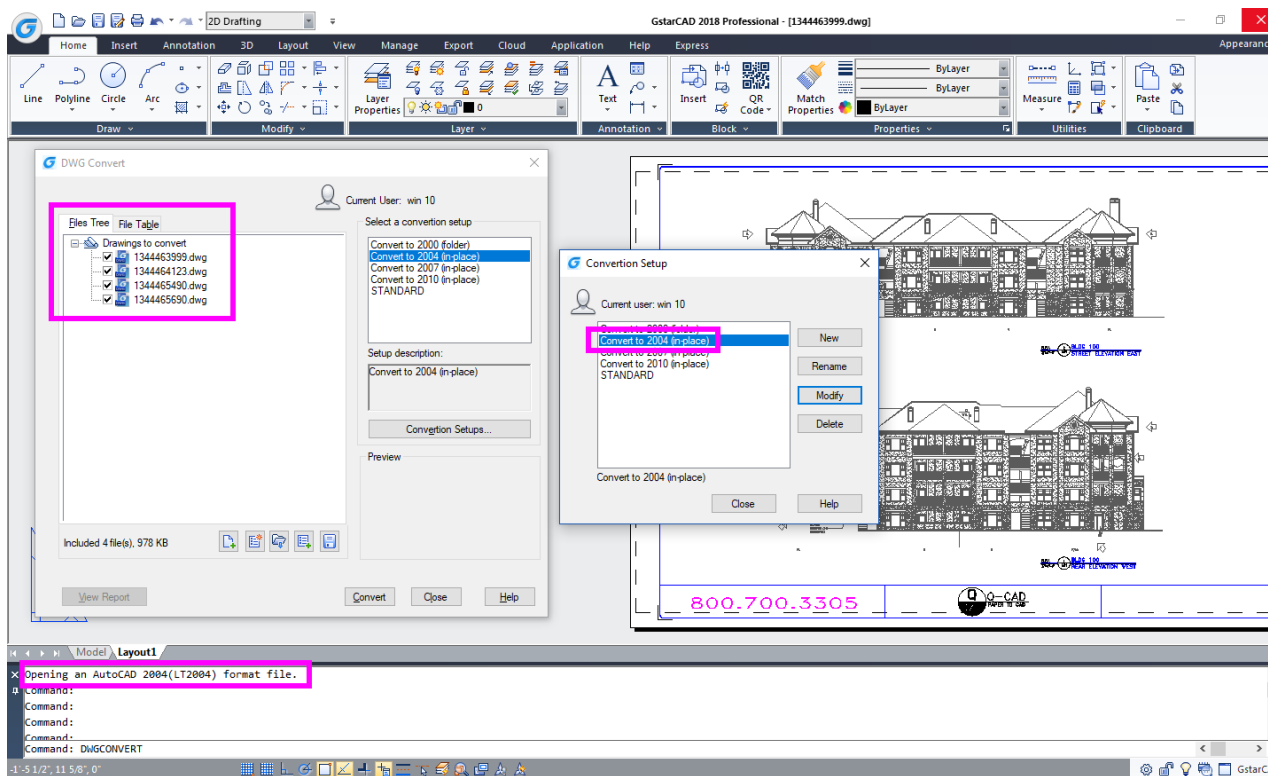


# 7. Files, Security and Register

## 7.1 DWG Convert New

### Command name: DWGCONVERT

Converts one or a bunch of selected drawing files to an older or current dwg version available. The newly generated file can overwrite the original file, and it can also be compressed into a self-extracting EXE file or a ZIP file to facilitate batch format conversion of the entire project drawing. The DWG file format can be changed in the following version: (AutoCAD 2013/ AutoCAD 2010/AutoCAD 2007/AutoCAD 2004/AutoCAD 2000/AutoCAD R14 (AutoCAD LT 98/AutoCAD LT 97). If you want to share drawings created in later versions with users who use earlier versions of the product, you can go to "File menu" > "DWG Convert" option or execute DWGCONVERT command to start performing batch conversion to an earlier version of the format. You can choose different conversion package type; In place (overwrite files), Folder (set of files), self-extracting executable (\*.exe) and Zip (\*.zip).



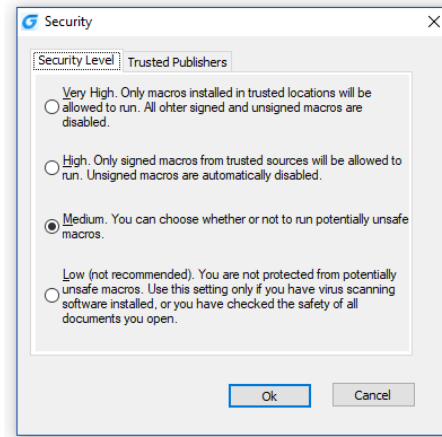
When you save or convert files to an earlier version, the converting tool excludes information specific to the current version or converts them to other types. When converting the graph, the log file lists the information that is lost or changed.

**Tip:** Because converting a DWG file format to an earlier version may cause some data to be lost, it is recommended that you'd better specify a different file name to avoid overwriting the current graphics file. During a project period, multiple DWG files may be converted. DWG convert provides a way to name and save the conversion settings. The default conversion settings' name is "Standard". From this setting, you can create one or more new conversion settings with appropriate names. You can then modify as needed. For repetitive conversions, you can save a DWG file that you want to convert to a list, called a batch control list. You can also open and view the batch control list (\*.bcl file) in a text editor (for example, notepad).

## 7.2 Security New

Command name: SECURITY

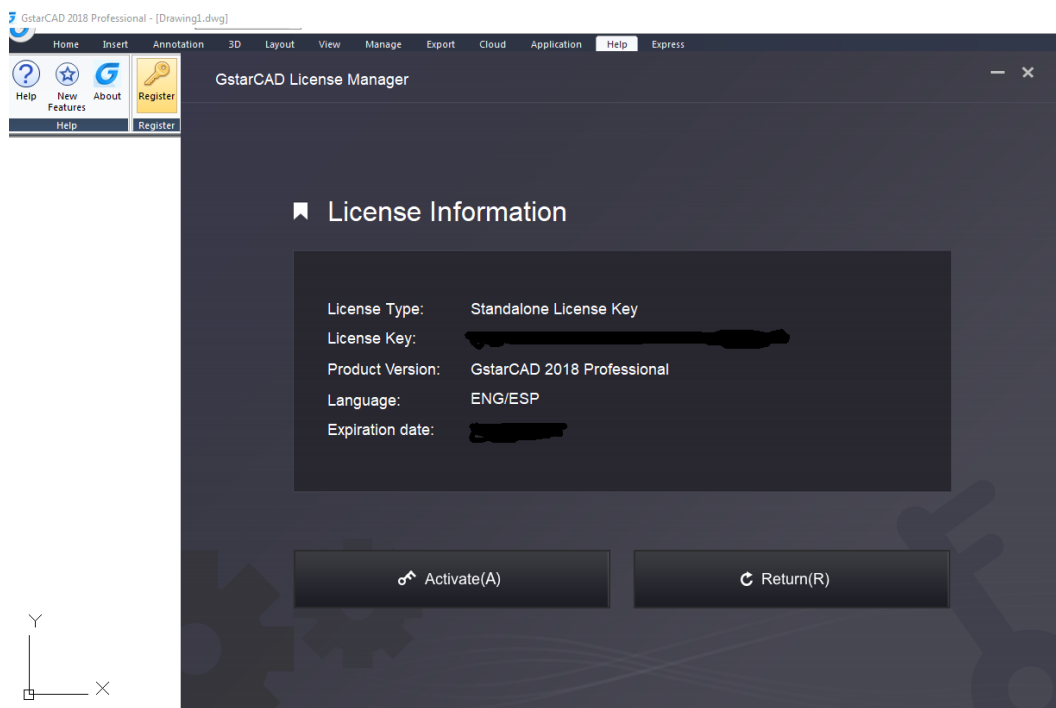
Sets the system security monitoring level, and display or delete the current trusted publisher certificate.



## 7.3 Register Enhancement

Command name: REGISTER

GstarCAD 2018 has an overall optimization on the original product register process and interface, which comprehensively enhances users' experience of the product register process.





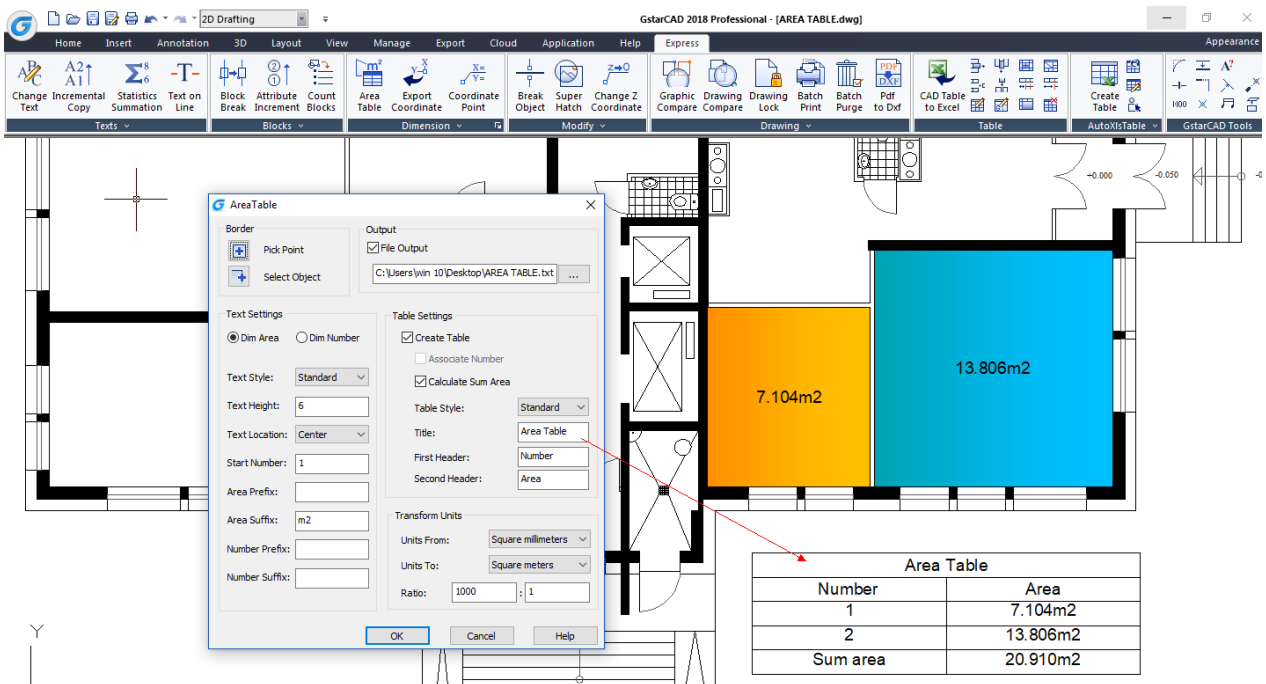
## 8. Unique Innovative Function

### 8.1 Area Table Innovative

Command name: AREATABLE

AREATABLE command automatically dimension and count the area of an enclosed object and export the result to a table in the current drawing area.

- The enclosed area or object can be marked with a number or area symbol, and the area table data can be generated at the same time.
- The area data can be exported to a text or table file.
- The values in the table can be changed automatically when the number or area size is changed.

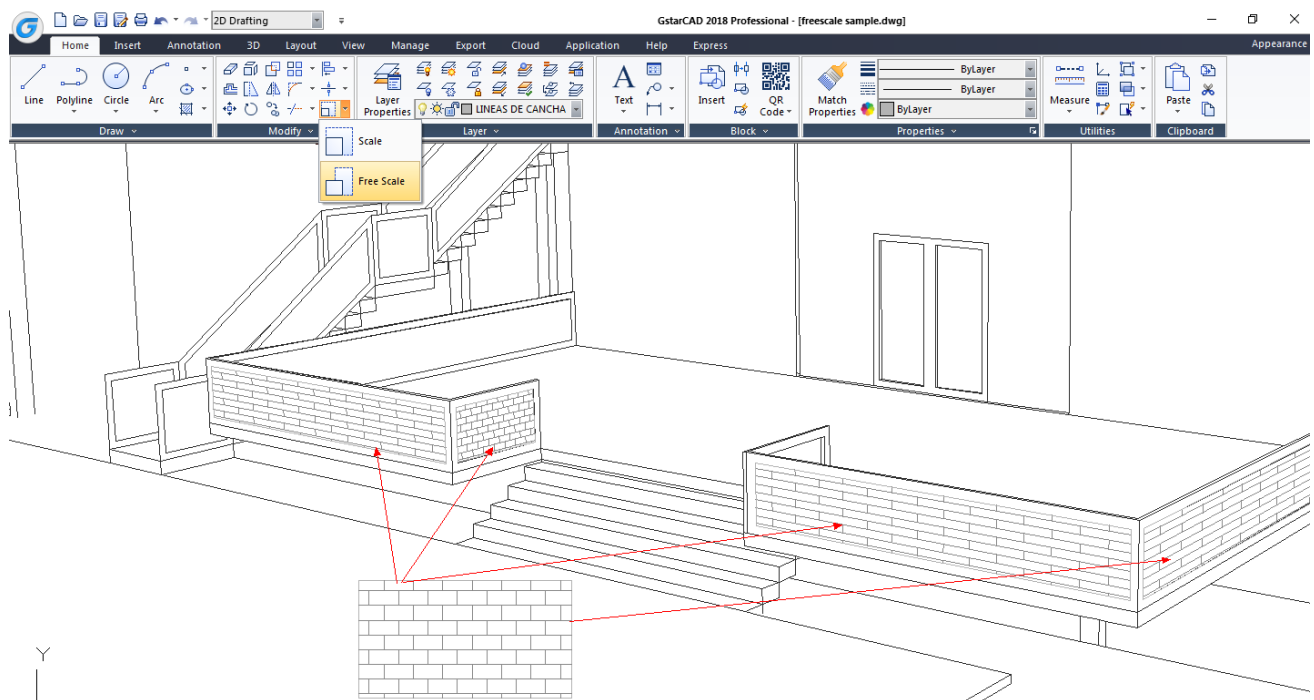


## 8.2 Free Scale Innovative

### Command name: FREESCALE

FREESCALE command scales an object without restrictions under three modes; Non-Uniform, Rectangle and Free.

- The Non-uniform scale allows to scale X and Y coordinate axis separately.
- The RectScale allows to scale an object to match a rectangle frame. The rectangle does not need to be drawn, just specify two diagonal points.
- The FreeScale allows to move or copy and scale objects in a closed quadrilateral frame to another closed quadrilateral frame, which can be used to generate a tilting hatch pattern or perspective distortion graphic.

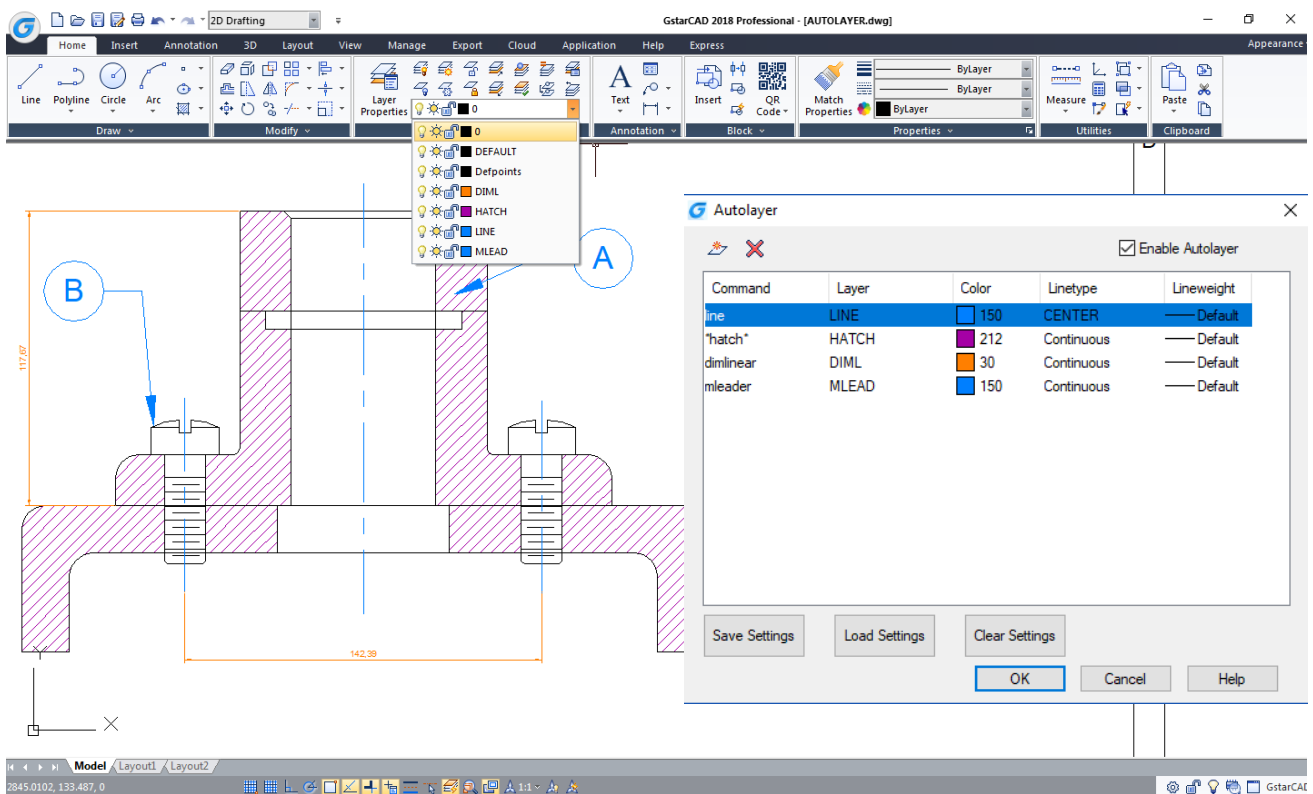


## 8.3 Auto Layer Innovative

### Command name: AUTOLAYER

AUTOLAYER command allows you to customize and predefine the associated layer of a command to streamline drafting workflow.

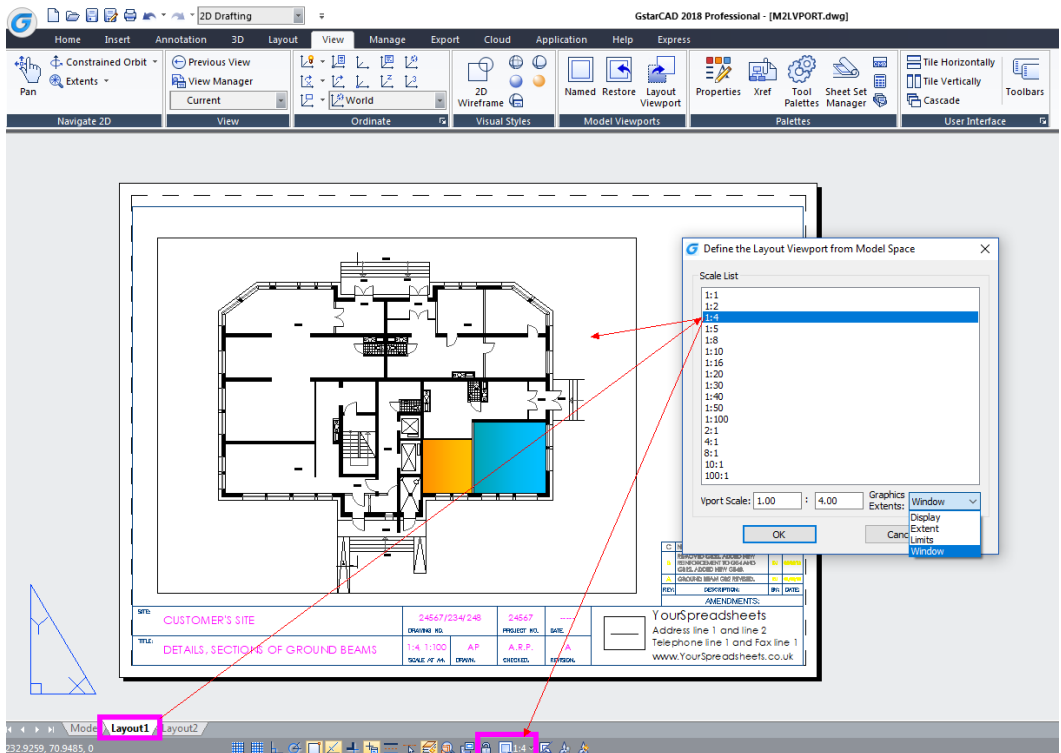
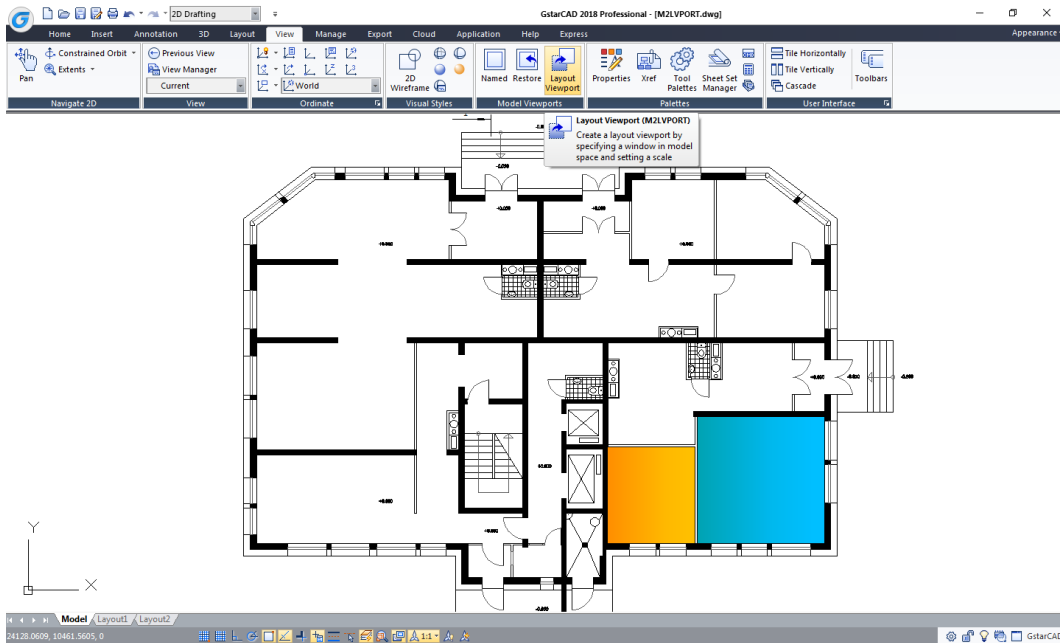
- You can create as many layers as you want.
- Each layer created must be a predefined command, which you can name its layer, select layer color, linetype and lineweight.
- After you execute the predefined command, its layer will be generated automatically.
- You can save, load and clear all layer settings from the AUTOLAYER dialog box.
- You can enable or disable the AUTOLAYER option from the status bar.



## 8.4 Define Layout Viewport from Model Space Innovative

Command name: M2LVPORT

M2LVPORT command creates a viewport on layout space by selecting objects in the model space. And then calculate the viewport size according to the set scale and locate the viewport in the layout space. You can quickly create and set a viewport of the current drawing. This command can be quickly invoked on the right-click menu of the model/layout tab.



## 8.5 Attribute Increment Innovative

Command name: ATTINC

ATTINC command helps to specify attribute of blocks with incremental value, and to modify attribute value of blocks according to the sort method. This command can increase block attribute value that contains a number or letter. When ATTINC command is on, as long as the drawing is not closed, when copying, inserting and deleting a block attribute in the drawing, the property number or letter can be updated automatically.

