

ZWExtender



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ZWExtender

Load

In order to load ZWCAD faster, ZWExtender isn't active at all time. If you want to use the application during your project, please use this command to load its content into the ZWCAD. You can also run ZWCAD with ZWExtender by opening it from the desktop's icon.

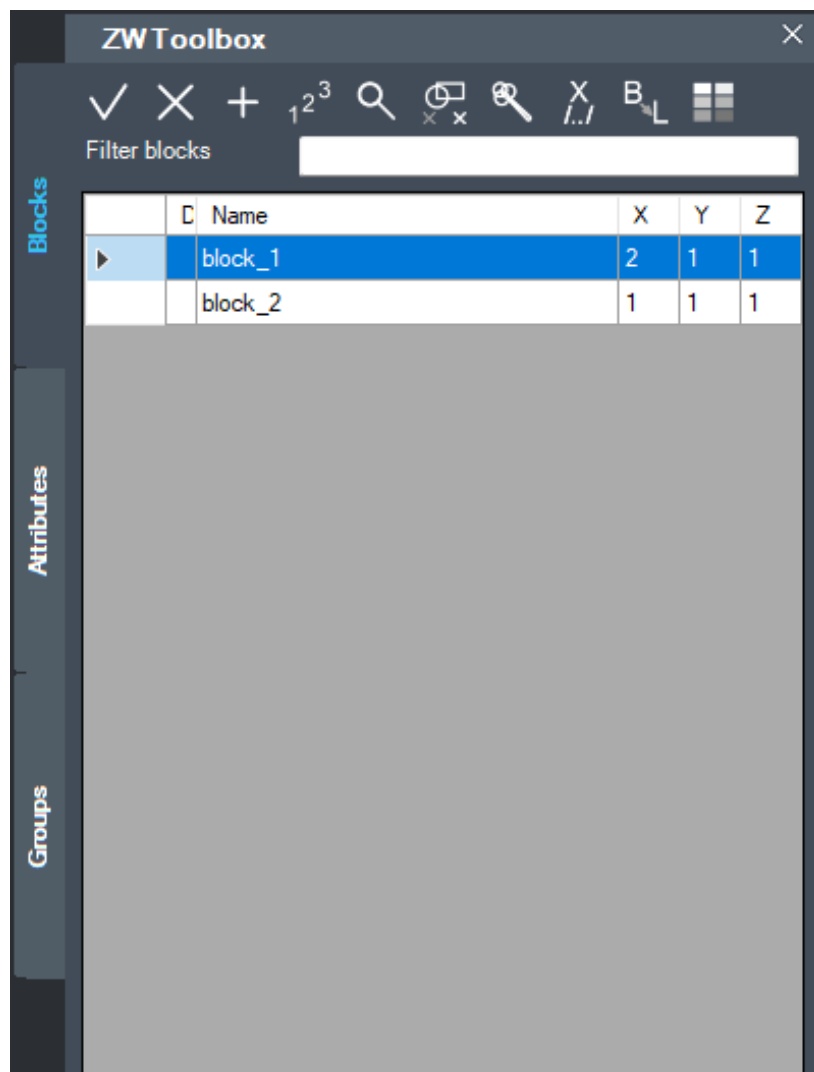
ZWExtender

This function opens a panel, that is used to manage blocks and groups. You can switch between them in the tabs.

Blocks

Blocks panel

Blocks and attributes can be managed in this tab, as well as the scale they're in.



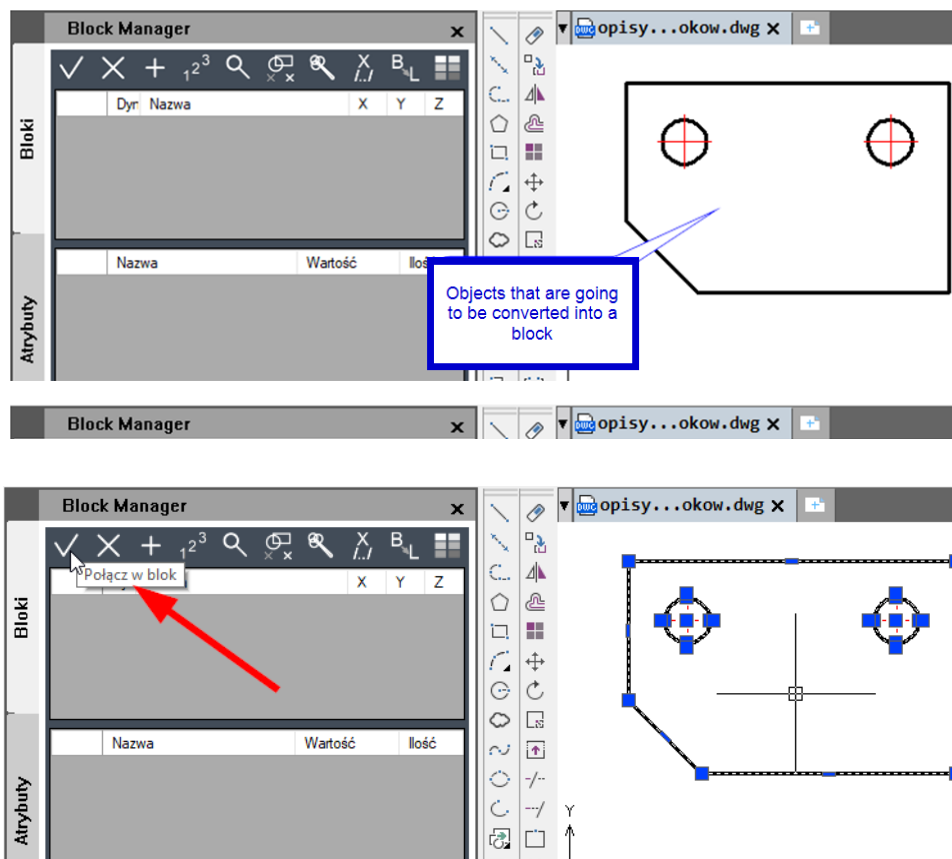
Attributes tab is divided into 3 parts from top to bottom:

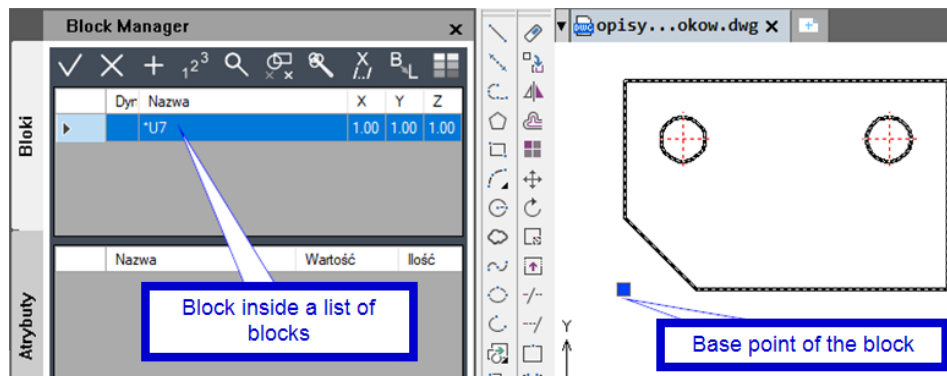
- List of blocks.
- List of attributes in the selected block.
- List of values of the selected attribute with the number of occurrences. Here we can easily change the value of an attribute.

Create the block

To create a block we need to select objects. We can do this before or after selecting the function to create a block. After creating a block, a new row will appear in the table. The name of the block will be given automatically and will start with an asterisk (these are so-called anonymous blocks).

The pictures below show individual steps of creating a block in the application.





Explode the block

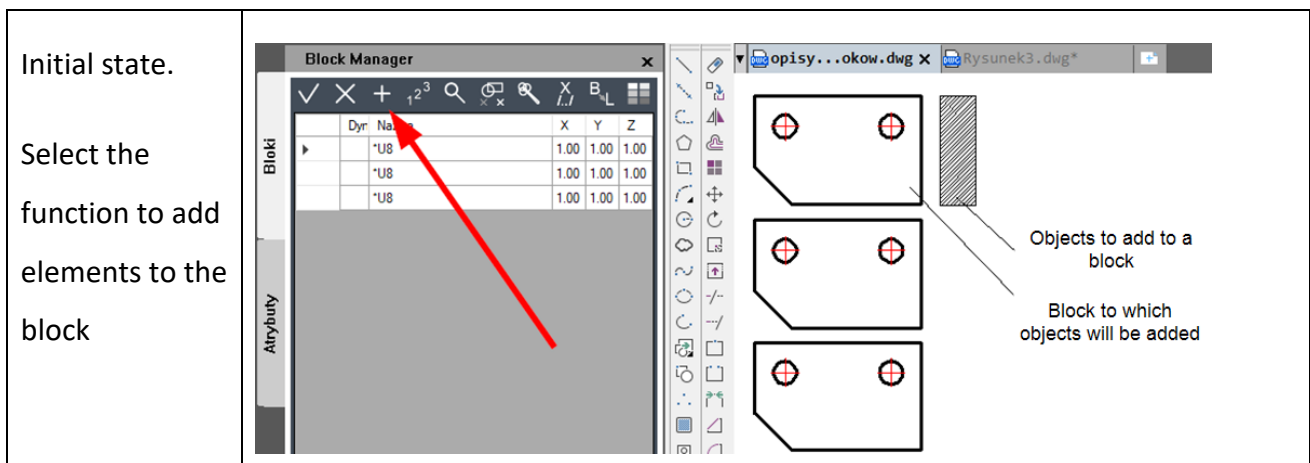
The function for exploding blocks makes the objects cease to form a whole. Standard Explode – after being exploded, the objects will be placed on the same layer as they are in the block.

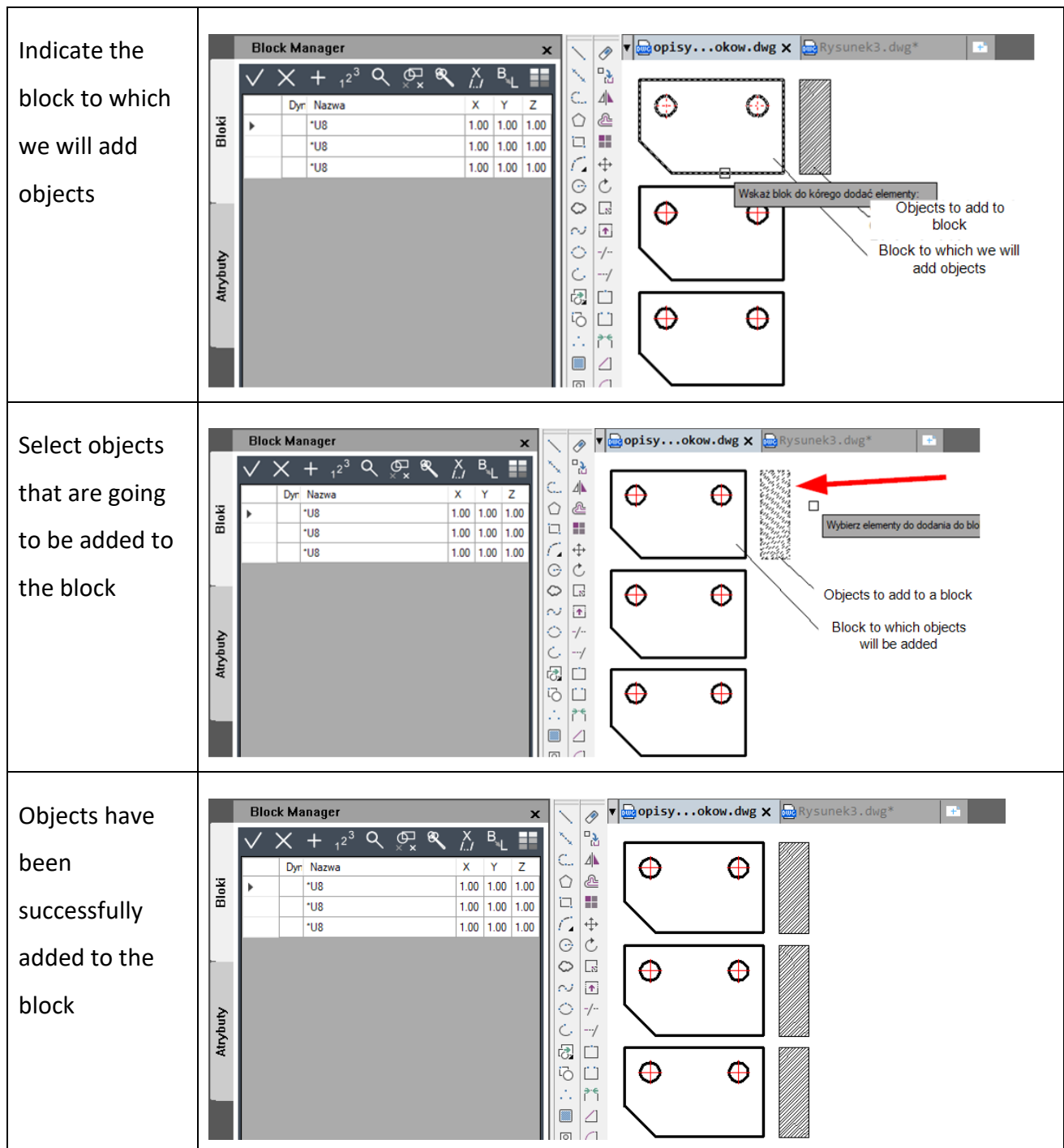
Click on the required function and indicate a block or blocks to be exploded.

Add to the block

This function adds new objects to an existing block. Before using the function, select a block to which the new objects are to be added, and then select the function for adding objects to the block. The icon on the left represents this function.

The pictures below show the individual steps for adding items to the block:





Count blocks

This function allows you to quantify blocks that are in the drawing.

After choosing the block counting function, we have two options:

- Press Enter immediately – the function will count all blocks in the drawing.
- Select a part of the drawing with a window – the function will only count blocks from the selected elements.

Example result of the block counting function:

```

Wybierz obiekty:
Block.....Count
-----
Motor.....23
Wattmeter.....25
Transformer.....25
Voltmeter.....9
Inductor.....9
Bell.....9
Buzzer.....9
Cell.....9
Diode.....9
Ground.....9
Speaker.....9
Polecenie:

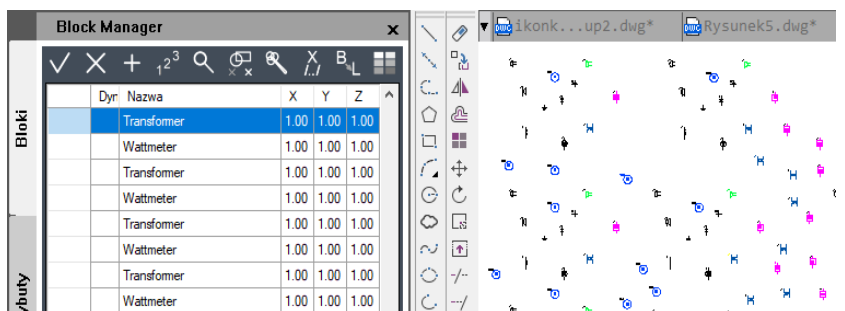
```

Zoom the view to selected entities

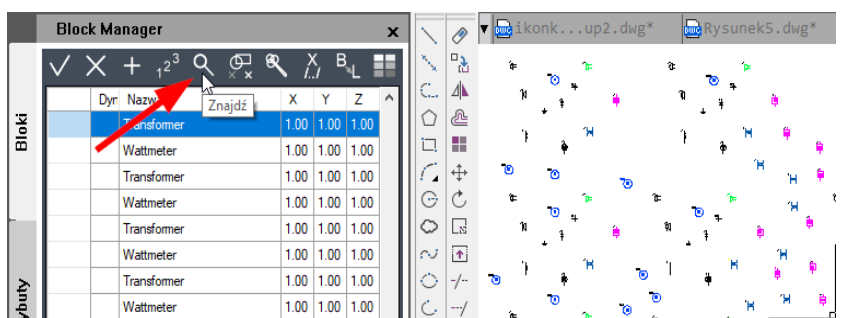
With this function we can quickly locate blocks in a drawing.

Select a block in the table and then click the magnifying glass icon. The block you are looking for will be enlarged to fill the whole screen. Individual steps to use the function are shown below.

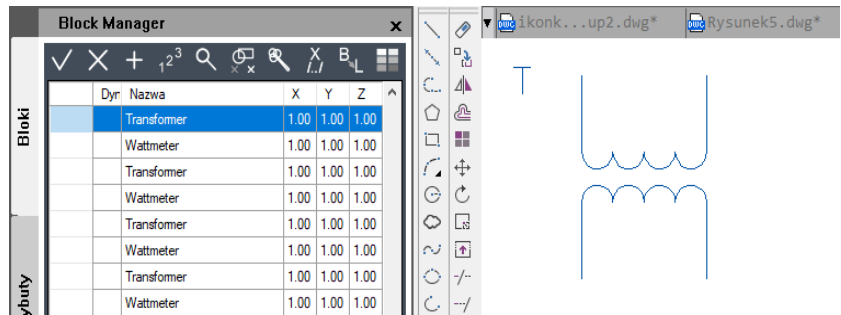
In the picture we have several defined blocks.



Select the desired block in the table and click on the magnifying glass icon.

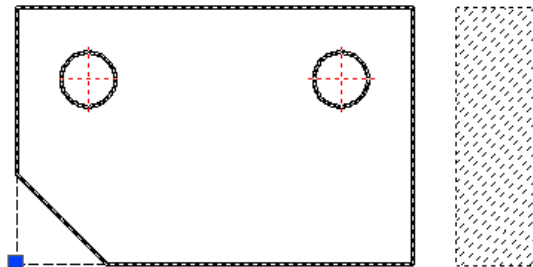


The view of the drawing will change so that the block you are looking for is placed entirely on the screen.



Modify base point

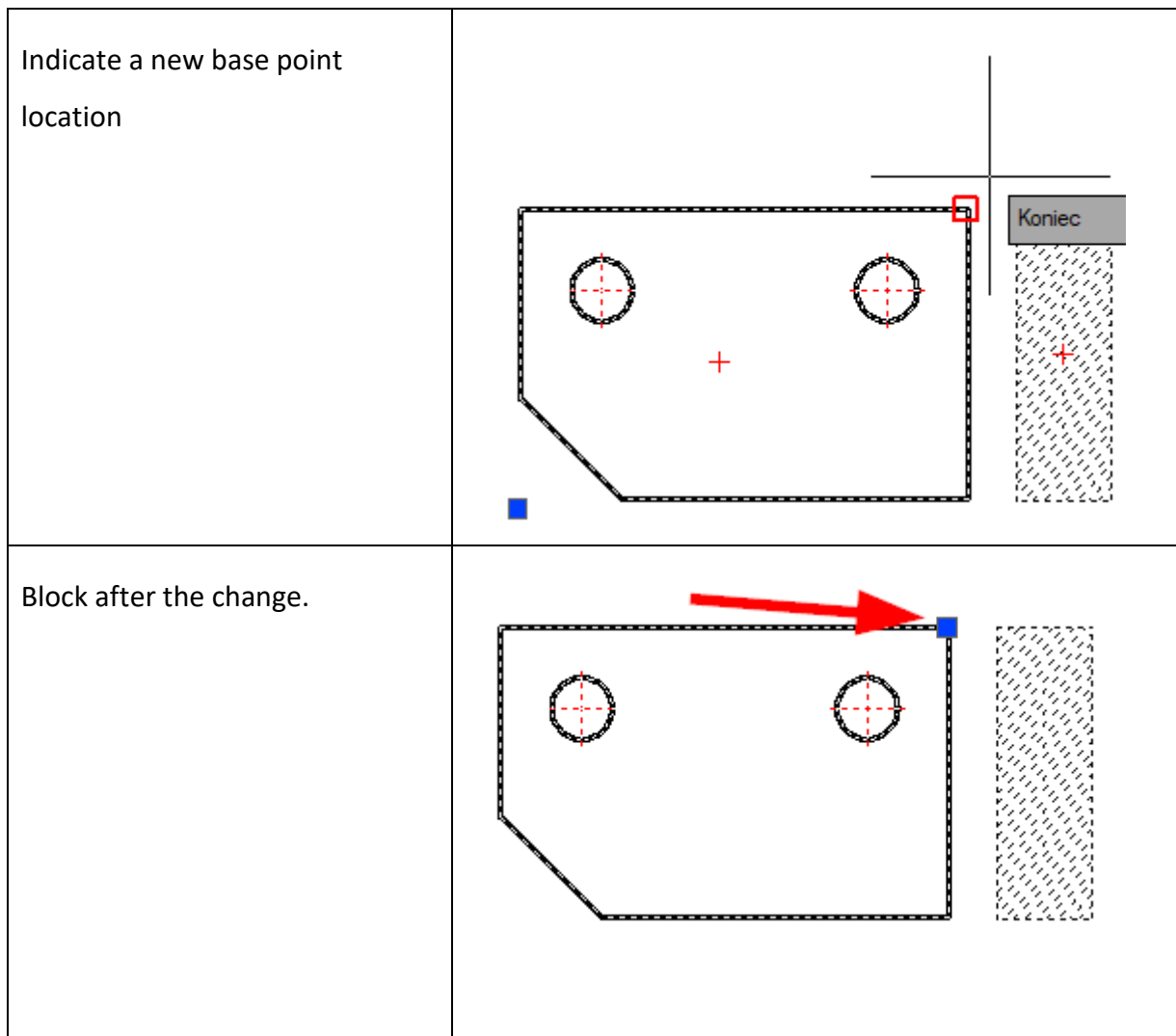
The function changes the position of the block base point. If you create a block using Block Manager function, the base point is automatically set in the lower left corner of the covering rectangle.



To change the base point of a block, select a function, indicate the block and the new base point position.

The individual steps are shown in the figures below.

Initial state	
Select the function to change the base point, and select the block you want to change.	

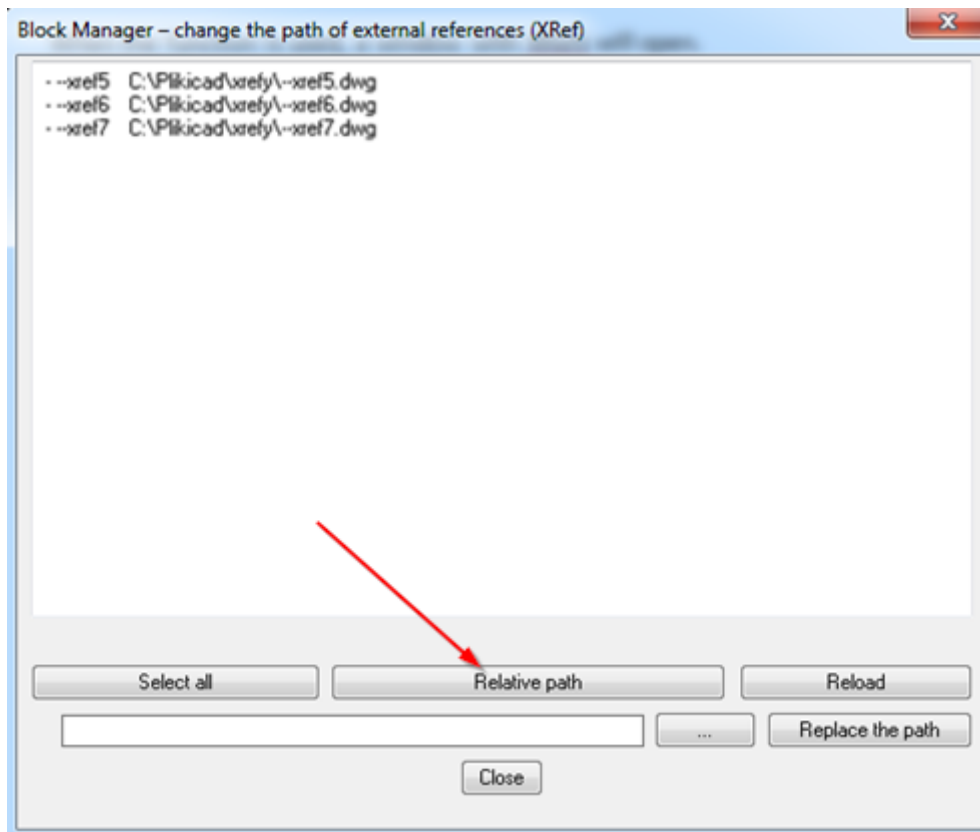


Remove unused blocks

The function allows you to delete unnecessary blocks from a drawing, which will speed up work and reduce the size of DWG file.

Set relative path to for XRefs

This function allows you to change the access path to external references – XRefs. When the function is used, a window with XRefs will open.



Simply point to one or more Xref and use the Relative Path button. This will change the file path.

--xref5 C:\Plikicad\xrefy\--xref5.dwg	➔	--xref5 ../--xref5.dwg
--xref6 C:\Plikicad\xrefy\--xref6.dwg		--xref6 ../--xref6.dwg
--xref7 C:\Plikicad\xrefy\--xref7.dwg		--xref7 ../--xref7.dwg

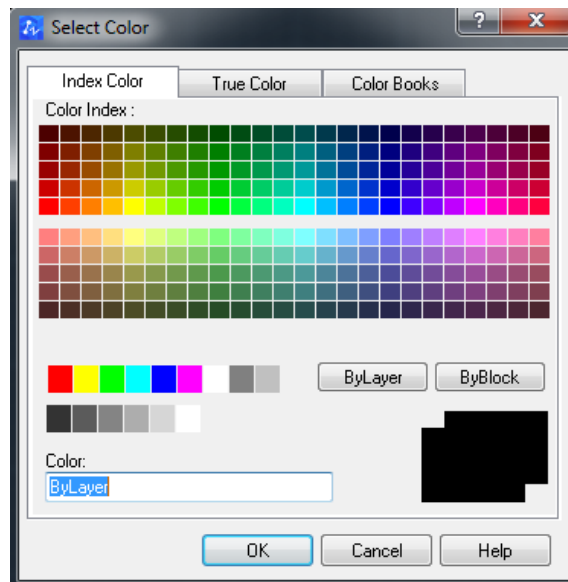
Extra explode

The function for exploding blocks makes the objects cease to form a whole. Explode with transfer to layer – a new layer such as the block name will be created and all objects from the exploded block will be moved there.

Click on the required function and indicate a block or blocks to be exploded.

Modify color

With this function you can change the colour of all elements inside the blocks. Select the function, select a block and specify a new colour from the colour palette.



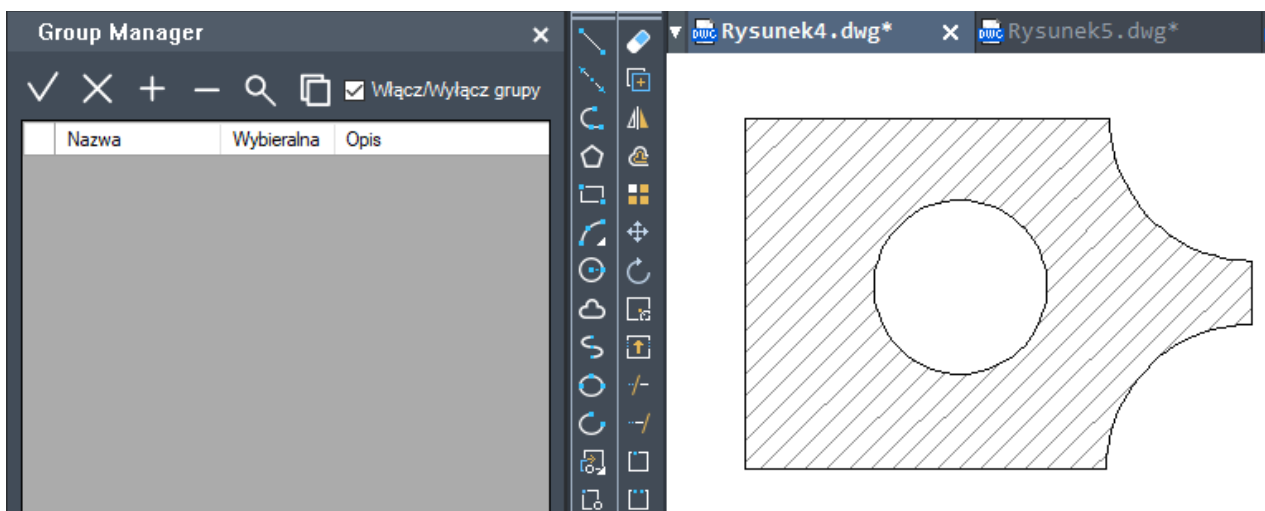
Once approved, all elements of the block will change their colour.

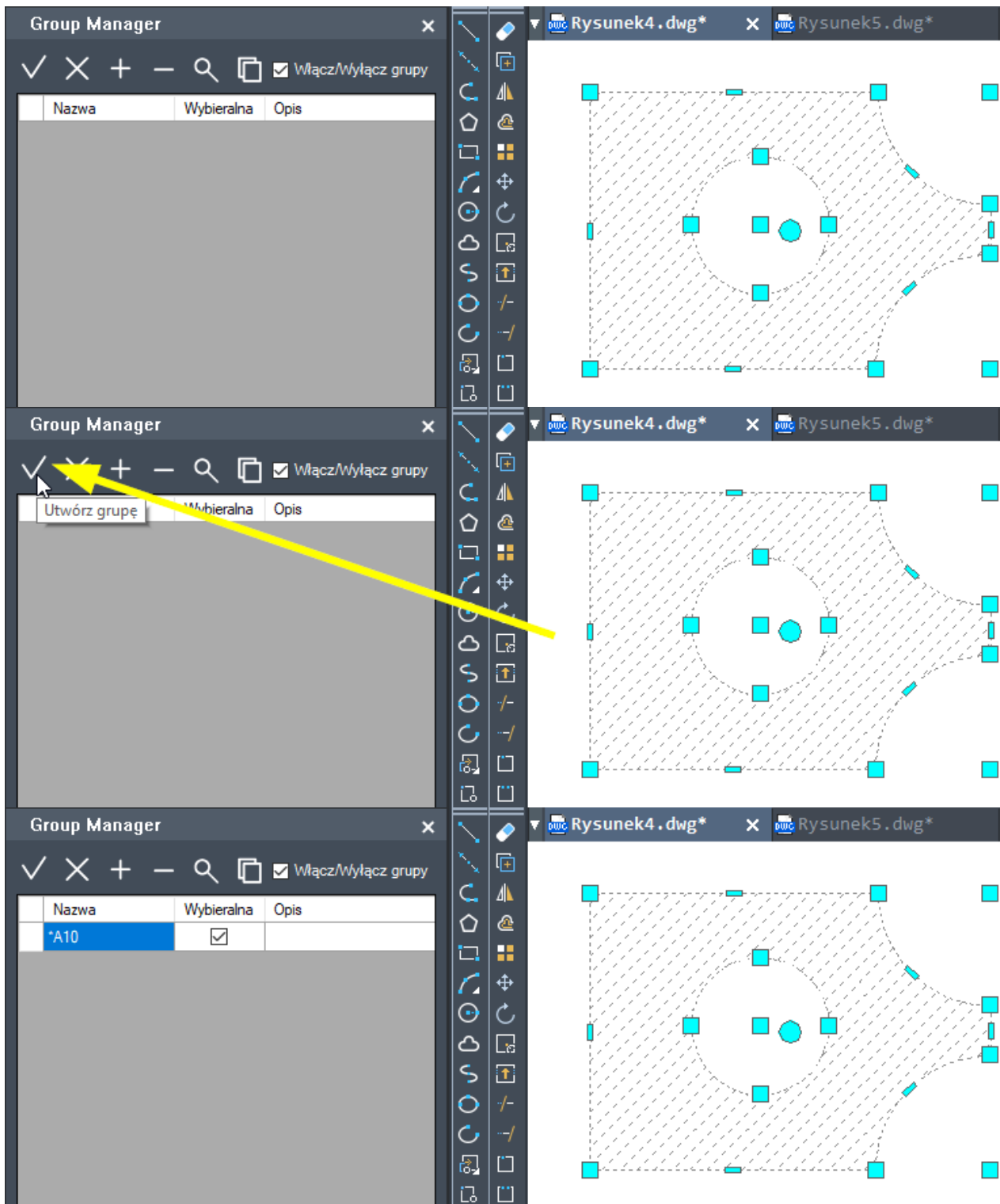
Groups

Create group

Once a group is created, a new field will appear in the table. The name of a group will be added automatically and it will begin with a star (these are called anonymous groups). The button in the second column decides whether a group will be selected as one object or as a whole. The third column is a description of a group, which by default is set to be empty.

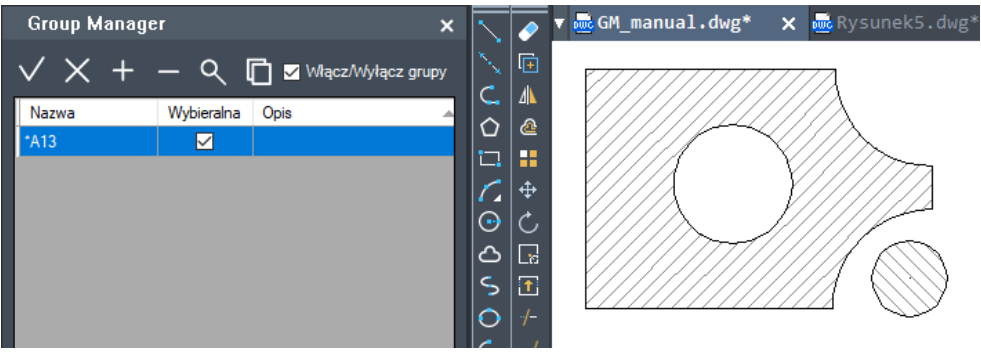
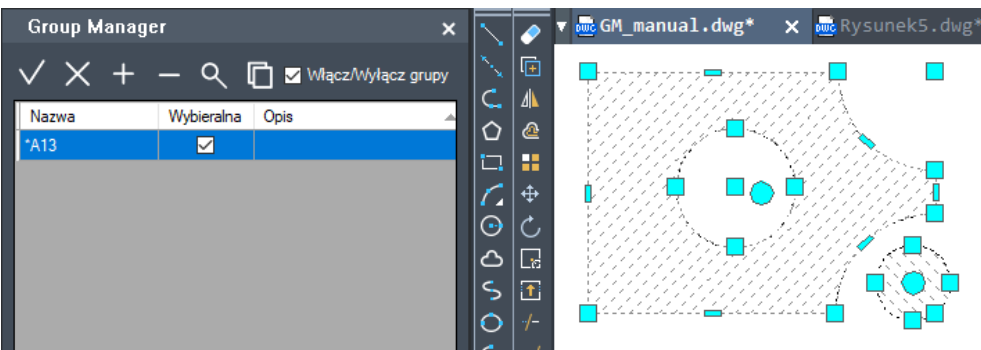
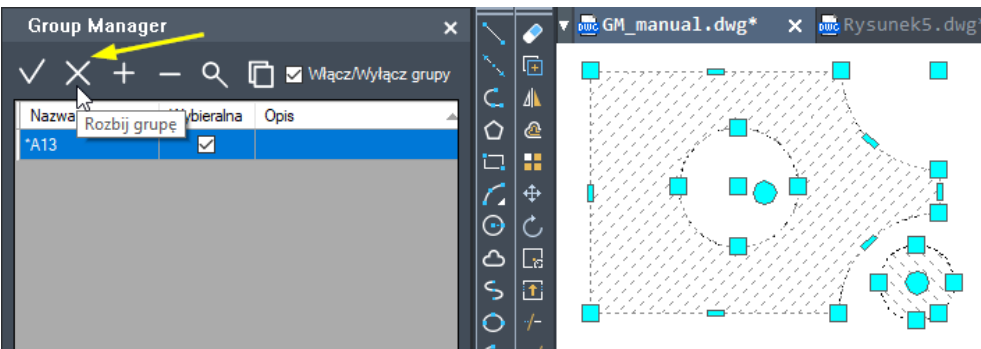
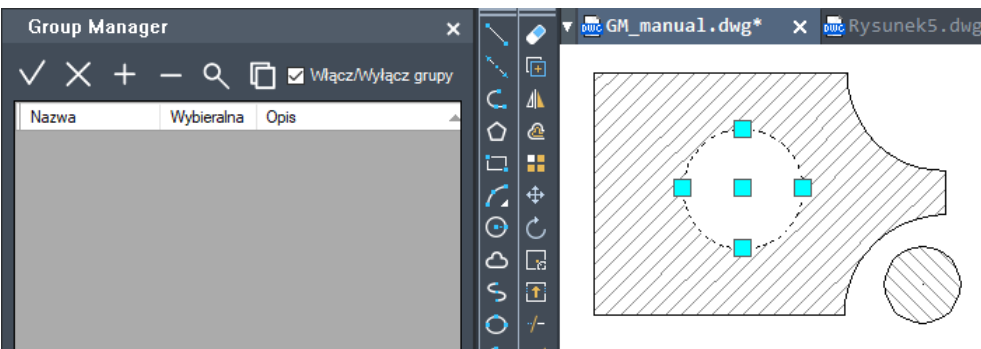
On the drawings below you can see the steps of creating a group in Group Manager.





Explode selected group

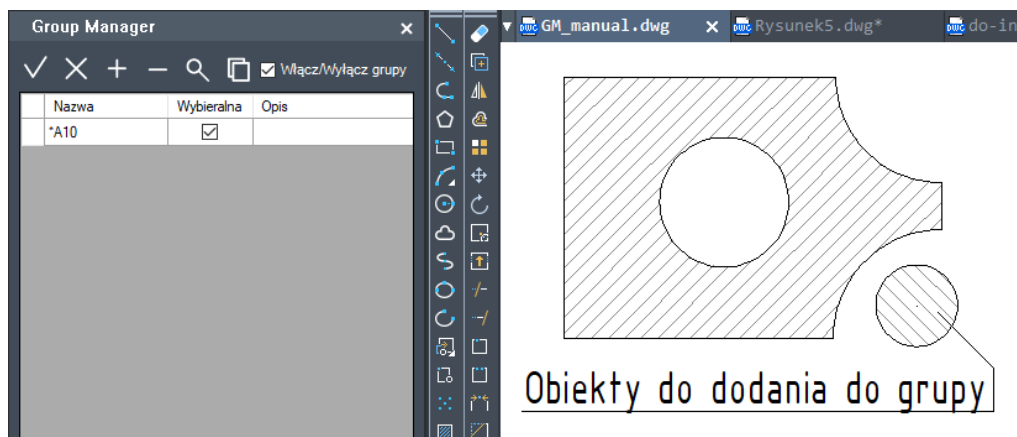
Exploding groups allows users to select single elements rather than a whole group. After exploding a group, some elements which are whole will remain unchanged. Instruction on how to explode groups can be found on the screenshots below:

Starting state. One group is created with the following name: *A13	
Select the group which will be exploded	
Click on the button representing the explode function	
The group will disappear from the list. Objects will remain unaltered.	

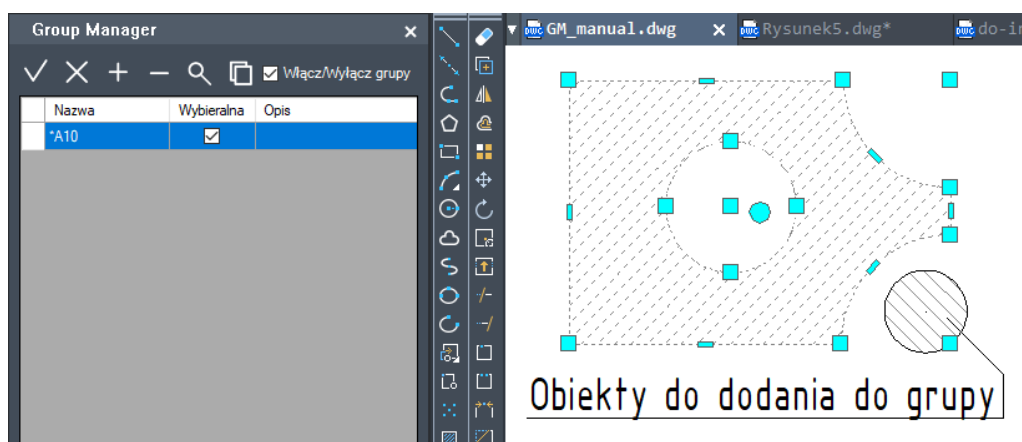
Add element to group

This function adds new objects to an existing group. Before using this function, it is necessary to select a group to which new elements will be added and then select the function to add elements to an existing group. On the drawings below, you can see the steps of adding elements to an existing group.

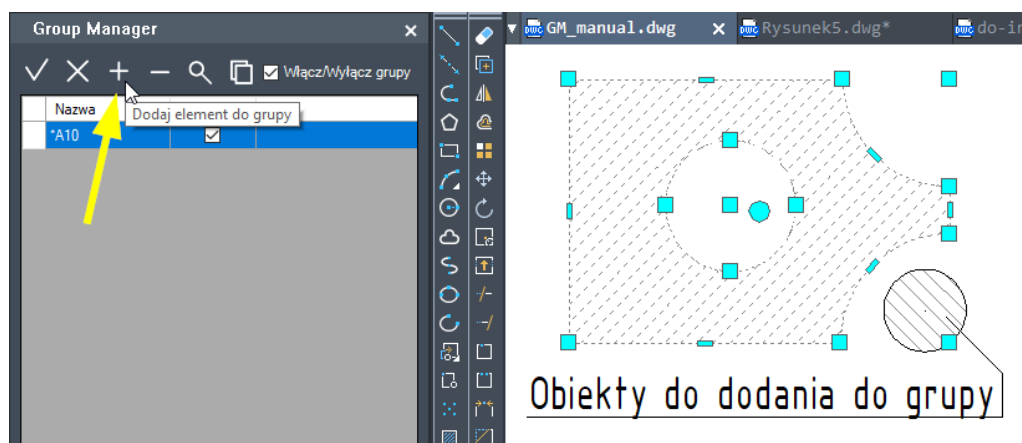
Starting state

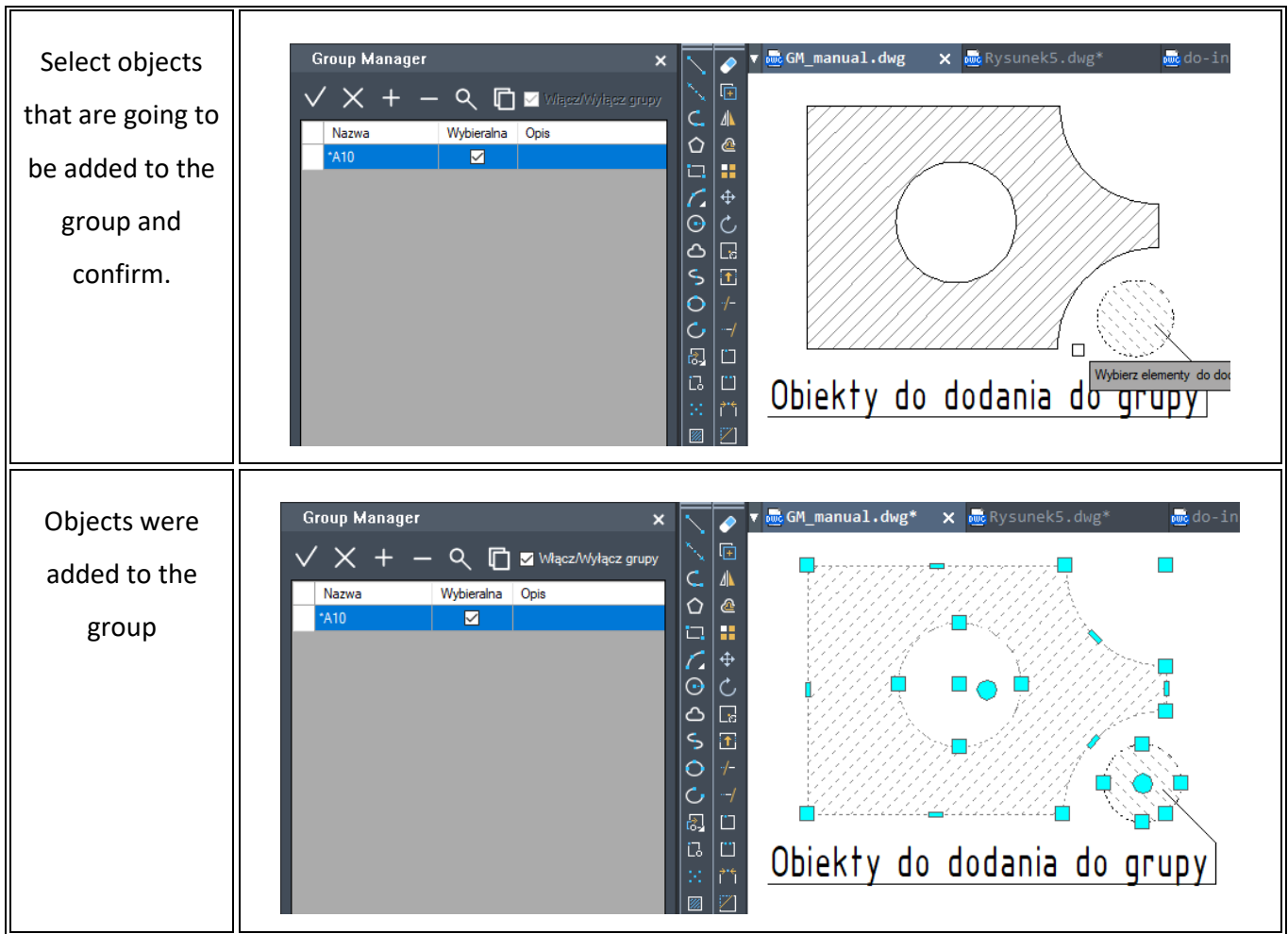


We're selecting a group that will have elements added to it.



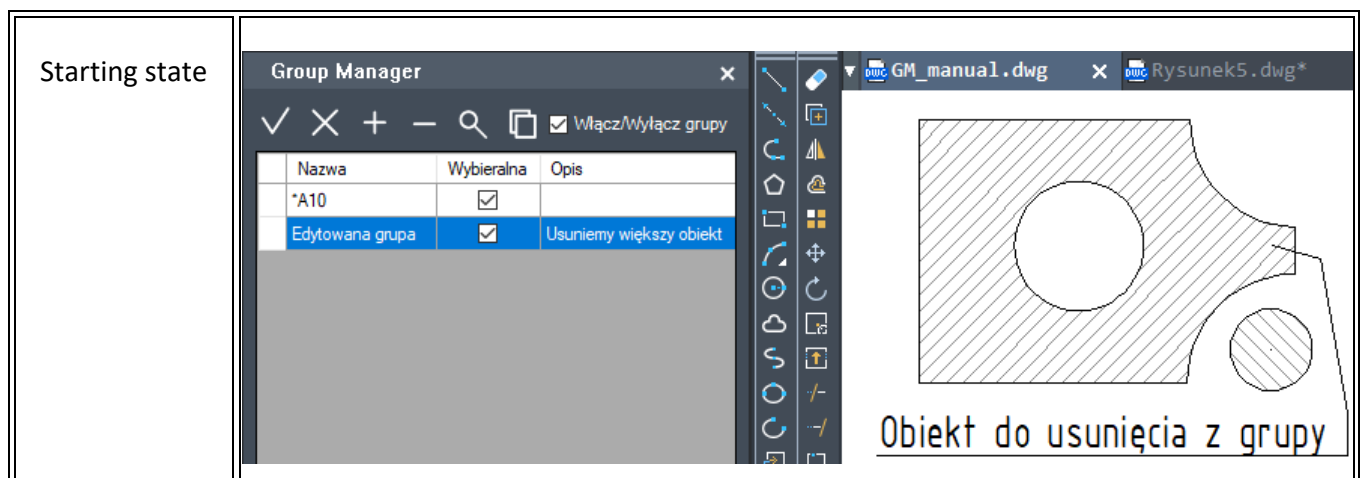
Click on Add elements to an existing group function.



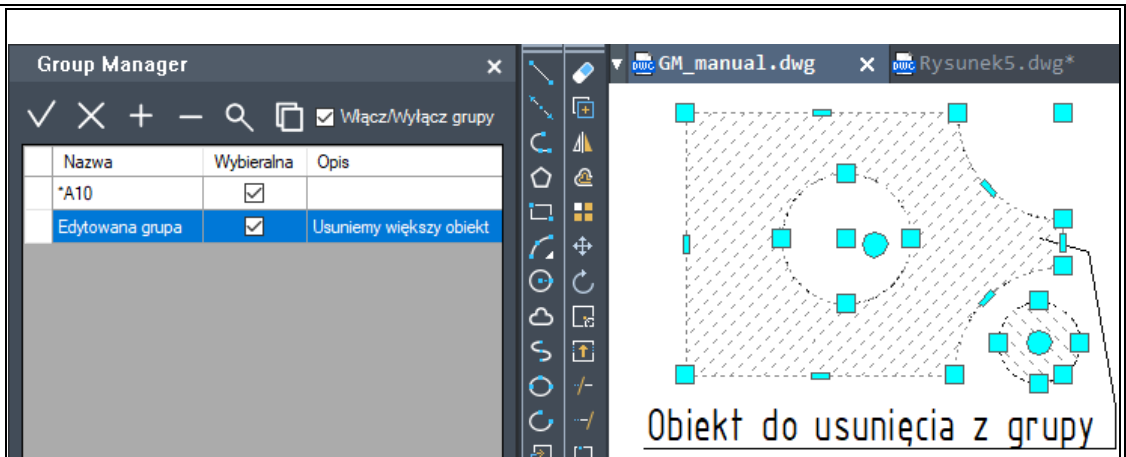


Remove entity from group

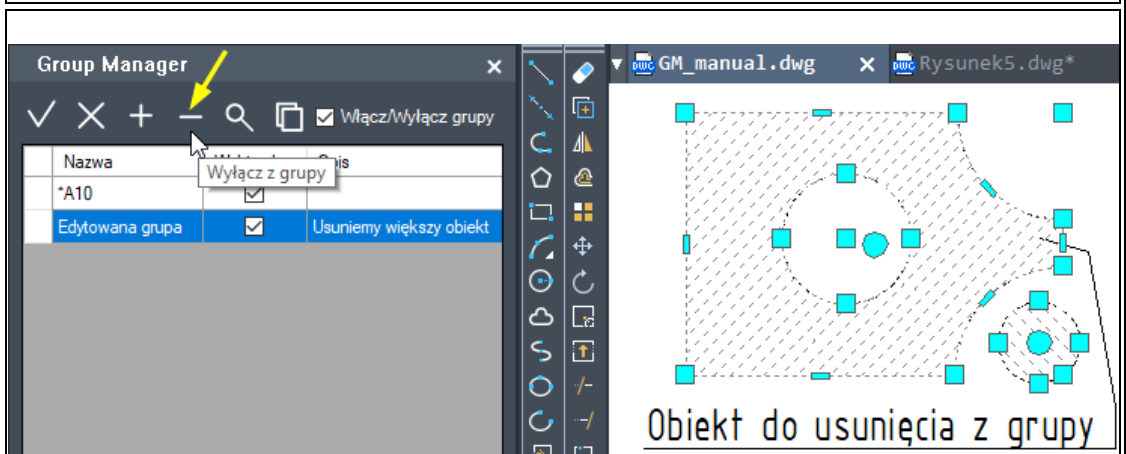
This function removes selected objects from an existing group. In order to remove elements from a group, firstly select a group, click on Remove elements from a group function and select elements that are going to be removed. The steps to remove elements from a group are presented below:



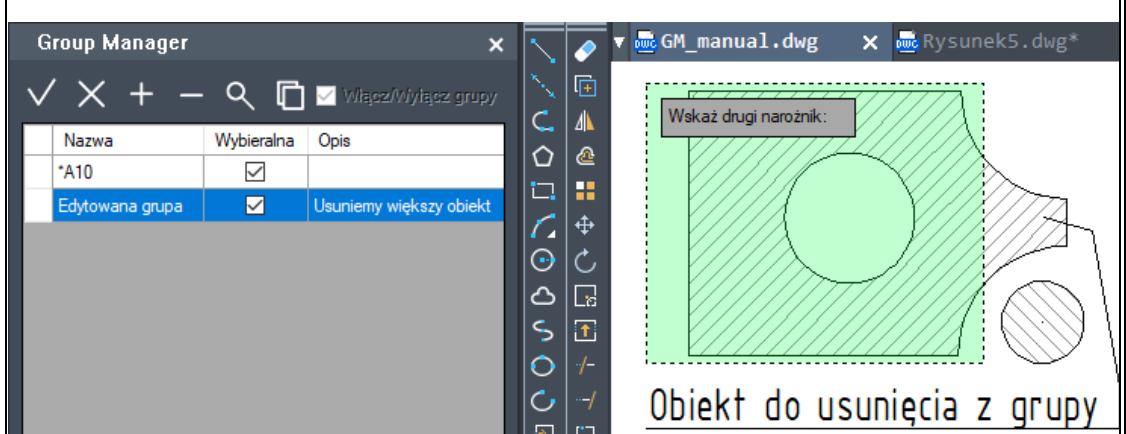
Selecting a group from which elements will be removed.



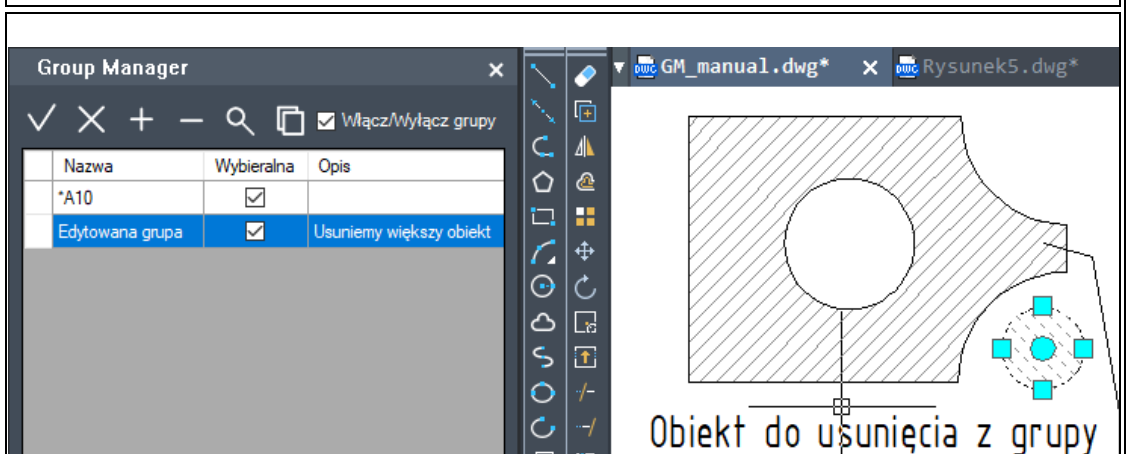
Select the function Remove elements from a group



Select elements

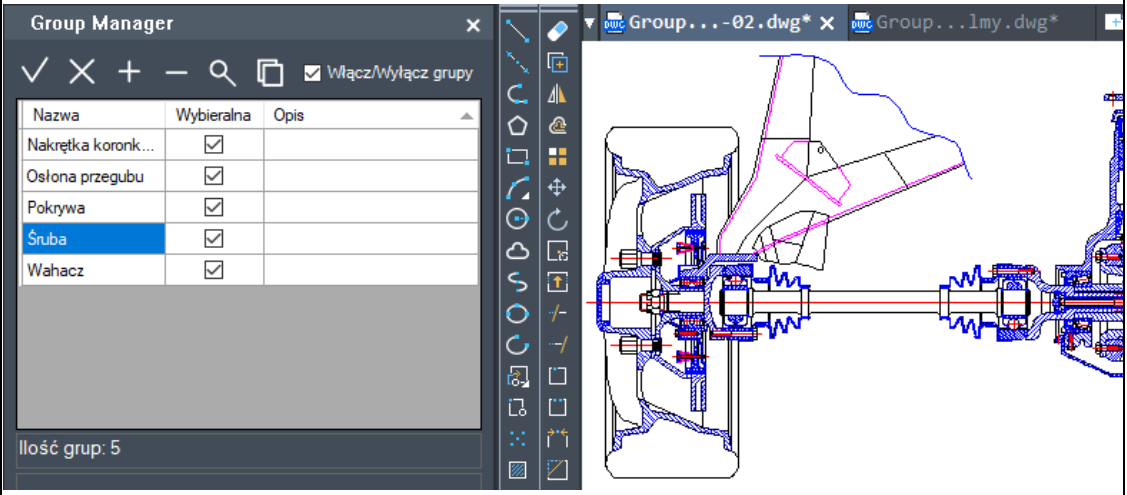
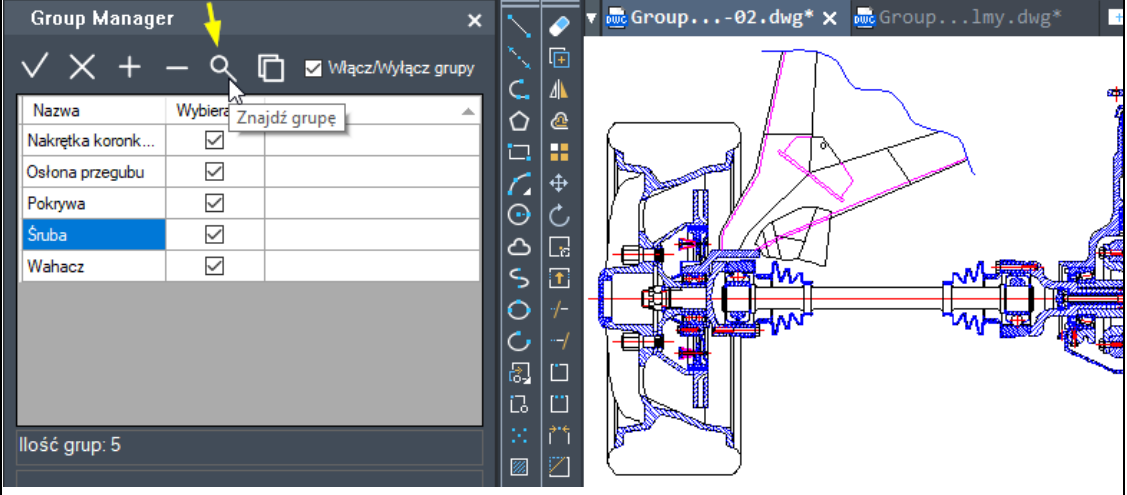
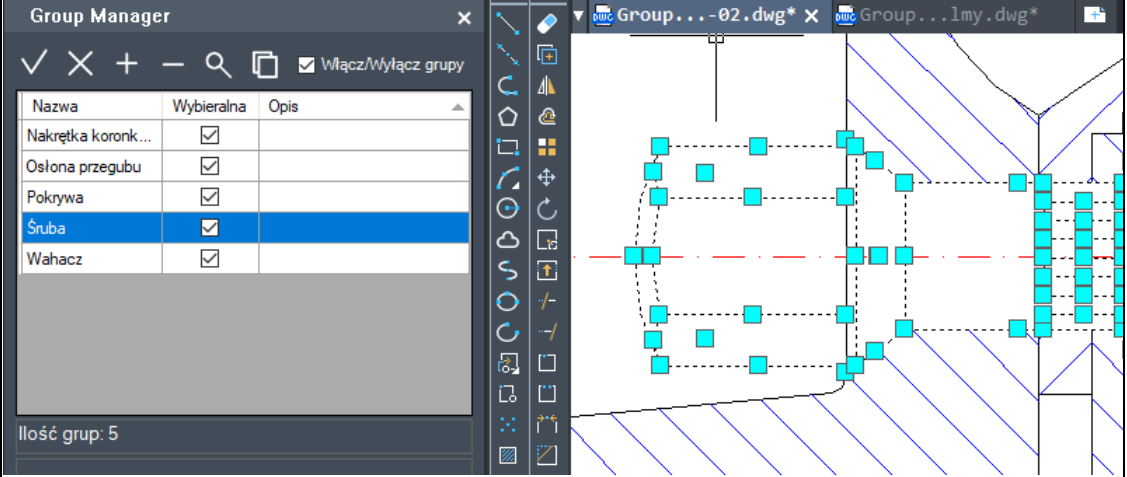


The group will no longer include previously selected elements



Find the group

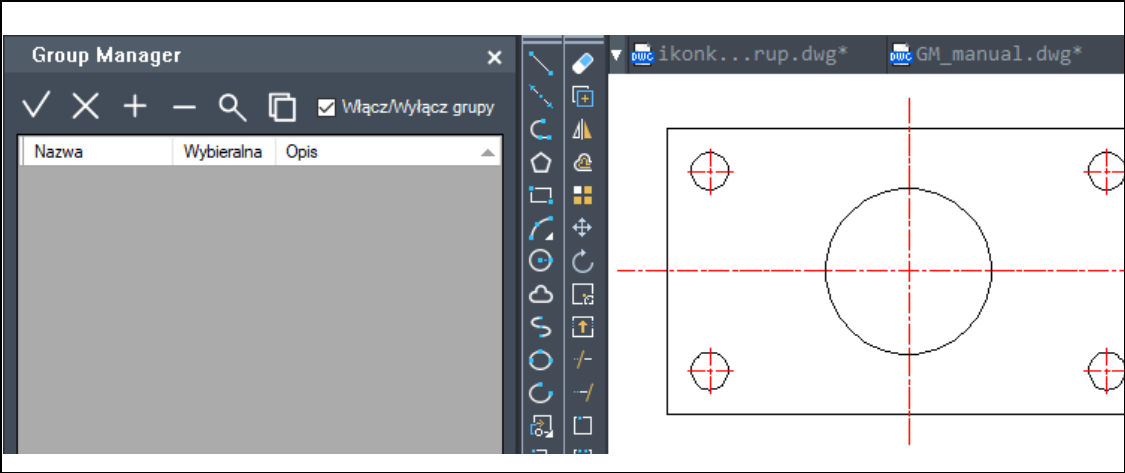
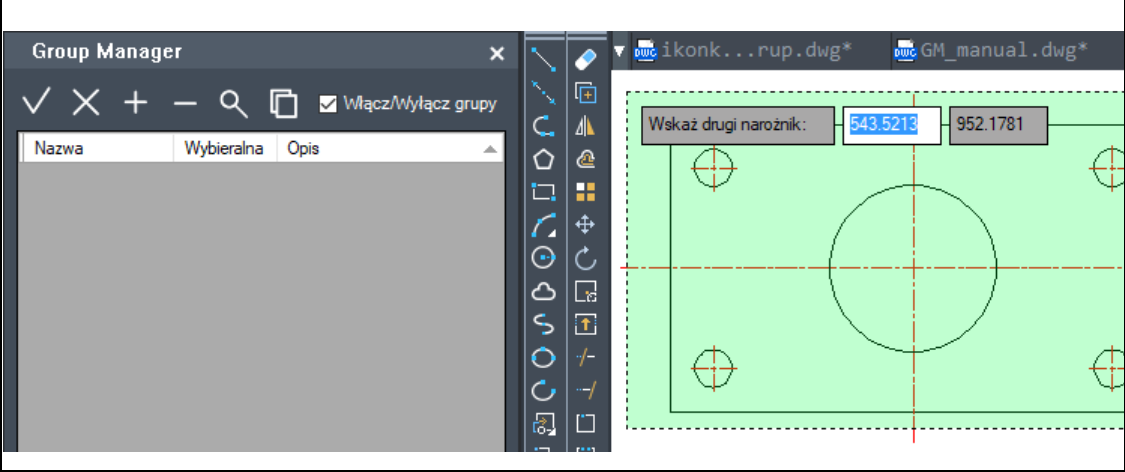
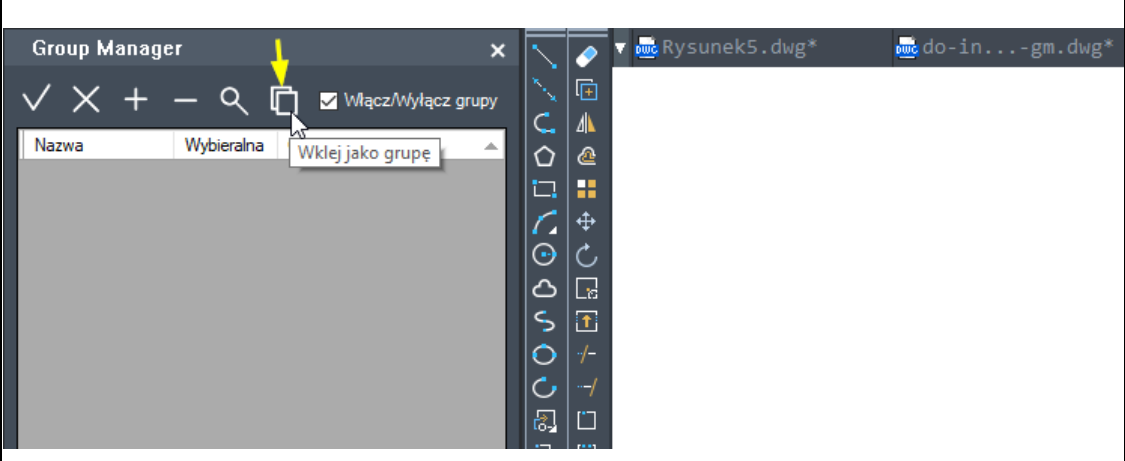
Using this function we can quickly find groups within a drawing. Select a group in the table and then click on the magnifying glass icon. The selected group will be magnified so that it is presented on the whole drawing. To find out how to do it, please look at the screenshots below:

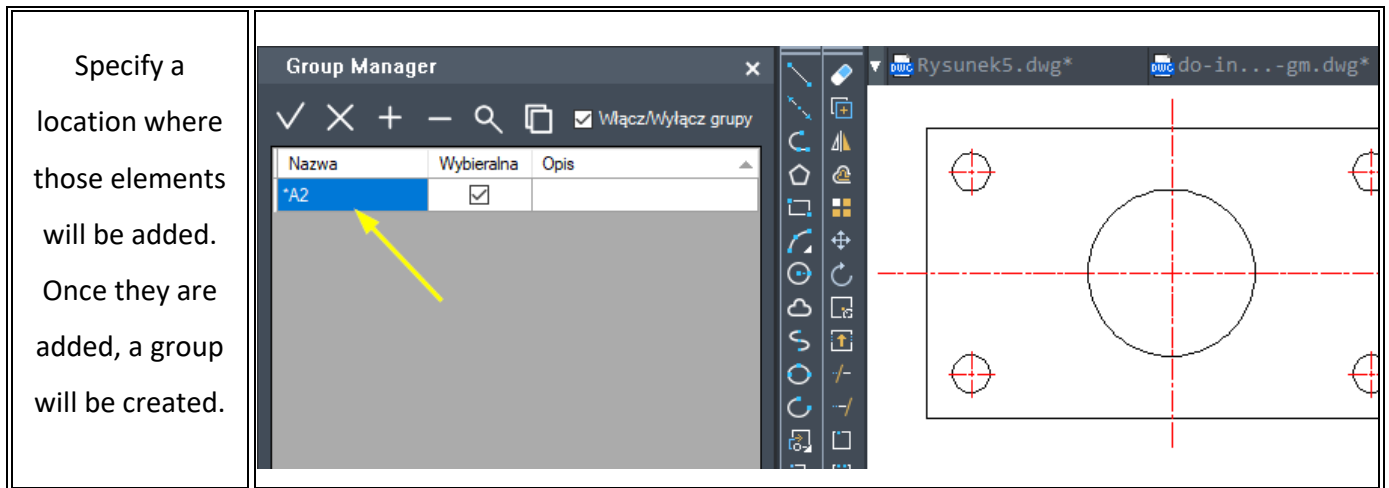
An example drawing includes a few groups.	
Select the group that you want to find and click on the icon.	
The drawing will change. It will represent the selected group.	

Paste as group

This function allows users to paste drawing objects into a drawing and to create a group from them. Such functionality is useful when copying objects from one CAD Project to another.

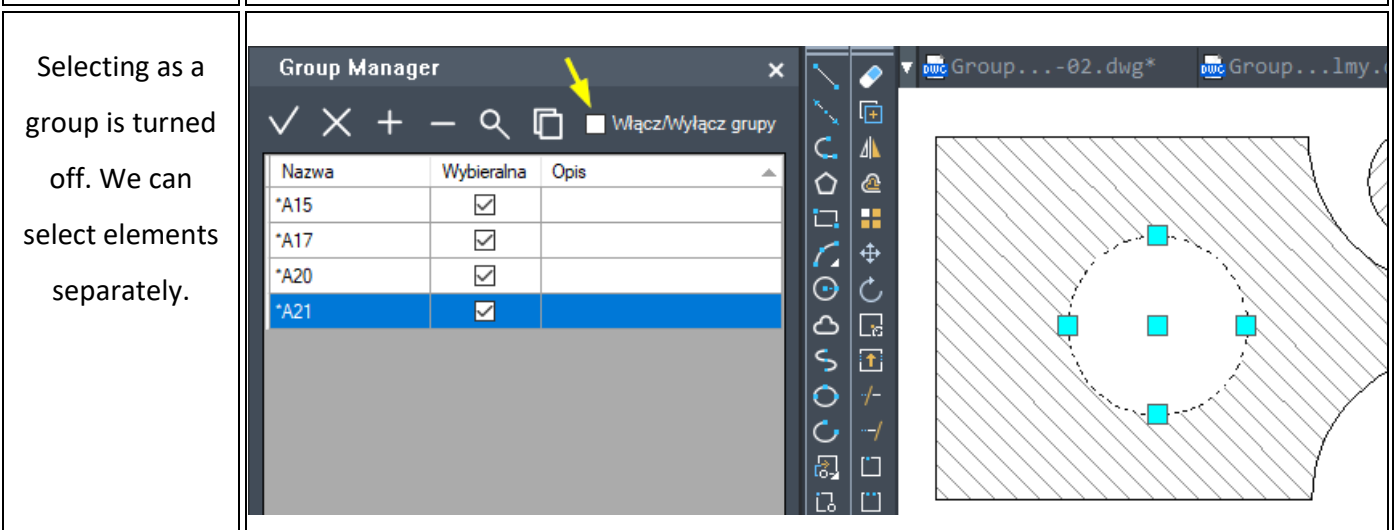
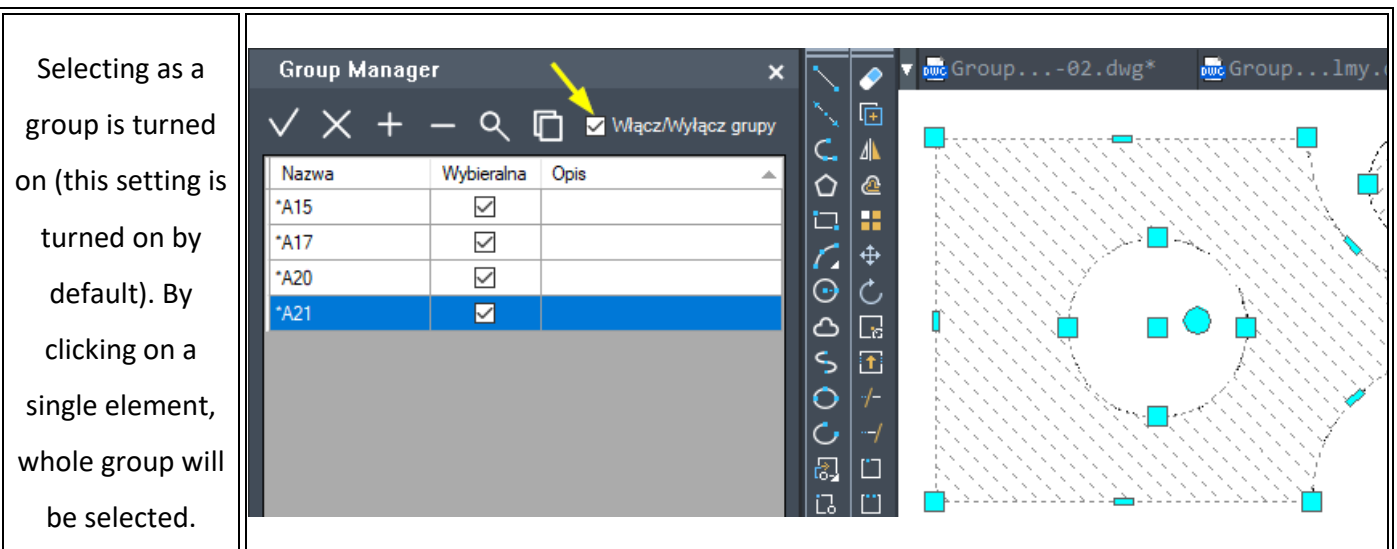
To see how to use this function, please look at screenshots below:

We are in the drawing from which we want to copy elements.	
Select elements to copy.	
Go back to another drawing and click on this icon.	



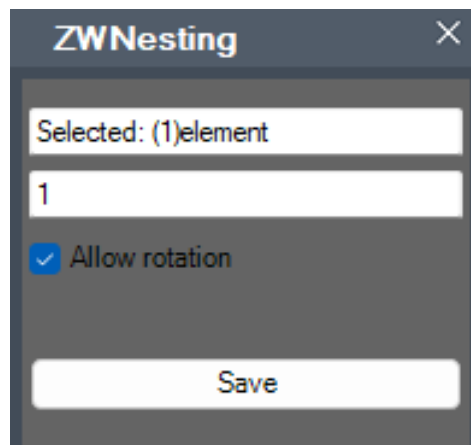
On/Off groups

We can choose whether groups will be selected as a whole or as separate entities. To see what checking the box does, please refer to the screenshots below:



ZWNesting

The program offers the possibility of choosing the number of copies for drawing elements. Select the ZWNesting panel, in the first window select the elements of the drawing, after that select the number of copies in the window below. If you don't choose the number of copies for the item, this element will be placed in the area in one copy. The selected elements could be blocked if the window Allow rotation is empty.



Background

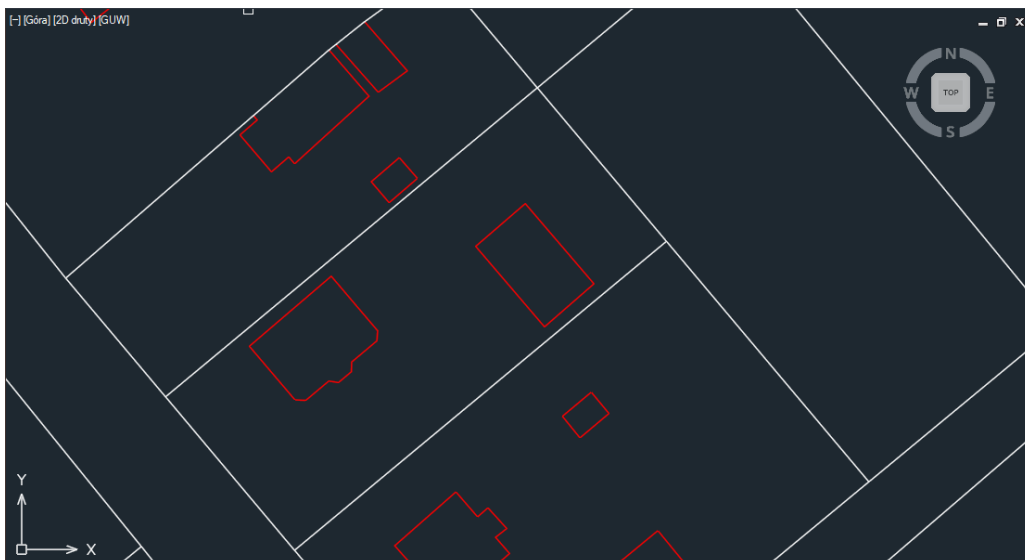
Background color: white

This function allows you to change the programme's background colour to white by clicking on the command.



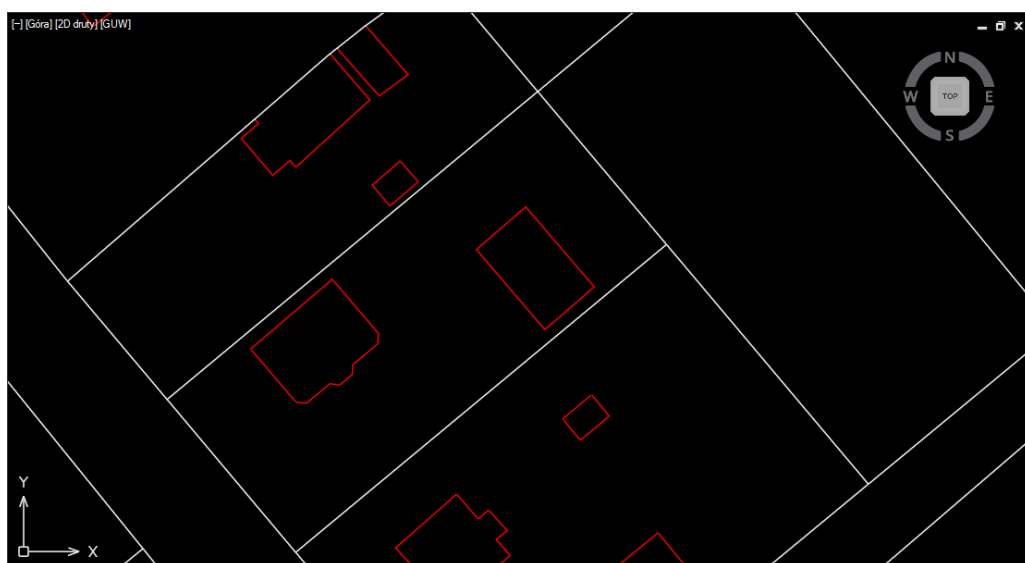
Background color: grey

This function allows you to change the programme's background colour to grey by clicking on the command.



Background color: black

This function allows you to change the programme's background colour to black by clicking on the command.



Backup save

Backup save

This feature allows you to save a file with an automatic backup (the backup is formatted as follows "name_year-month-day_hour.minute.second").

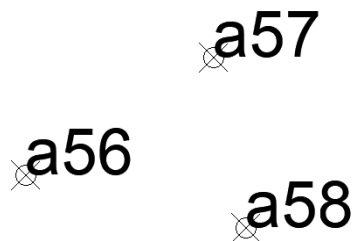
 Project.dwg
 Project.dwl
 Project_2017-09-27_10.02.40.dwg

Coordinates

Insert points with description and automatic numbering

You will have to enter a name of a series and the first number. Next points selected by you will have text included with a description which includes the name of a series and a number of the next point.

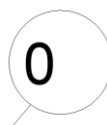
1. After running the command, you have to choose a data point in the command bar.
2. Enter the series number and enter the start number.
3. Insert a point in the drawing.
4. The program allows you to automatically insert points by indicating the location.



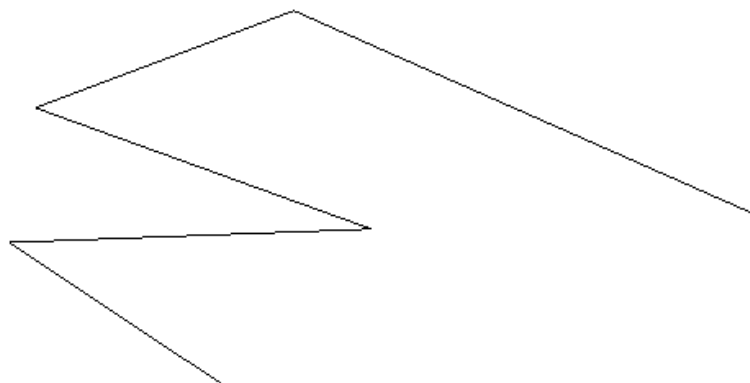
Number polyline vertices

This function is used to automatically number polyline vertices from a selected starting number, e.g. a2. It is possible to create a block in which next numbers will be added. An example of usage is presented below:

1. Select a block with an attribute which will appear on vertices of the numbered polyline, for example:

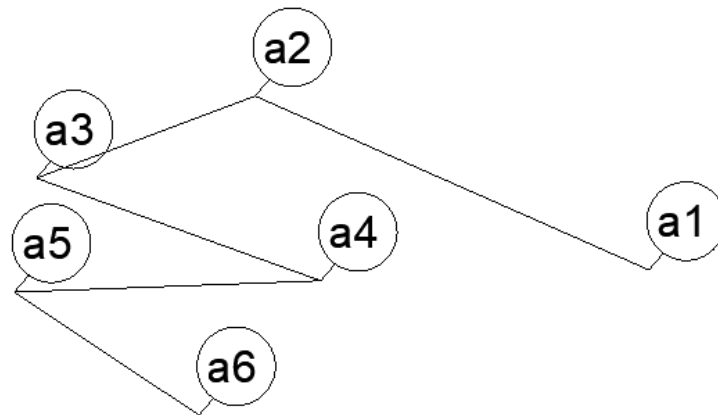


2. Now select a polyline to describe vertices, for example:



3. In the command bar name the series, e.g. a
4. Enter the starting number (it is set to 1 by default), in this example we will use 2.

Confirm with enter and the result will be presented below:



Export selected coordinates to CSV file

Firstly, you will be asked to select points. Once all the wanted points are chosen, you will have to select a file path where you want the points to be saved. The format of coordinates stored in the file will be following: ;X;Y;Z:

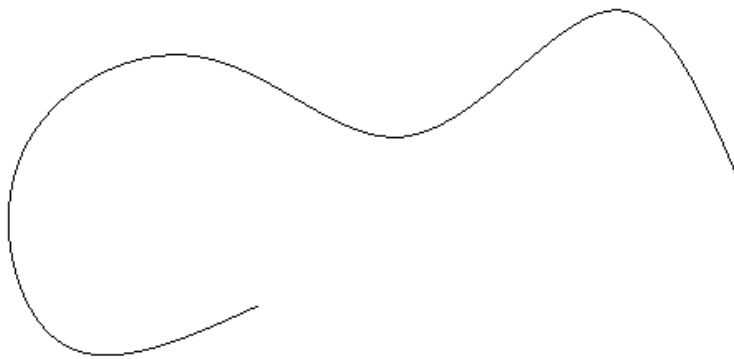
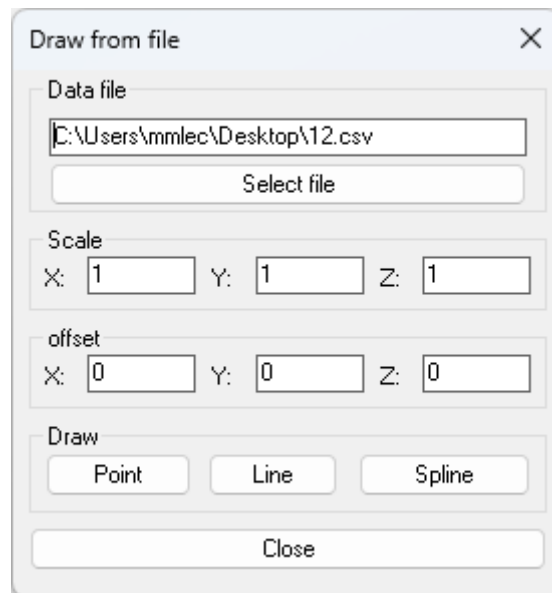
- coordinates will be separated by semicolon (;),
- decimal places will be separated by commas (,).

1. After running the command, you need to choose the points on the drawing and confirm by pressing Enter.
2. A window will appear which lets you name and save the file.
3. Previously saved data will be displayed in a new file.

	A	B	C
1	7429765.6	5549120.5	0.0000
2	7429767.3	5549118.8	0.0000
3	7429767.1	5549117.4	0.0000
4	7429764.8	5549117.0	0.0000
5	7429766.8	5549117.9	0.0000
6	7429767.5	5549117.2	0.0000
7	7429769.3	5549119.0	0.0000
8	7429762.0	5549120.1	0.0000

Draw from the coordinates in the csv file

This function allows you to insert points into the drawing with coordinates from a text file, connect the lines (with a straight line) or by using a spline.



Export objects coordinates to CSV file

After running the command, ZWExtender will ask you to select objects with descriptions that need to be exported. Then, you have to select the destination path in which the file will be saved. It is possible to save the coordinates of objects such as: line, polyline and point. The correct filename extension in which the file should be saved is .csv. The format in which the coordinates are stored is as follows: Description;X;Y;Z

- coordinates will be separated by semicolon „ ; ”
- decimal places will be separated by commas „ , ”
- Description will be added to elements which were inserted by using the function.

Example of a line of data:

d5;83,1082;1271,6697;0

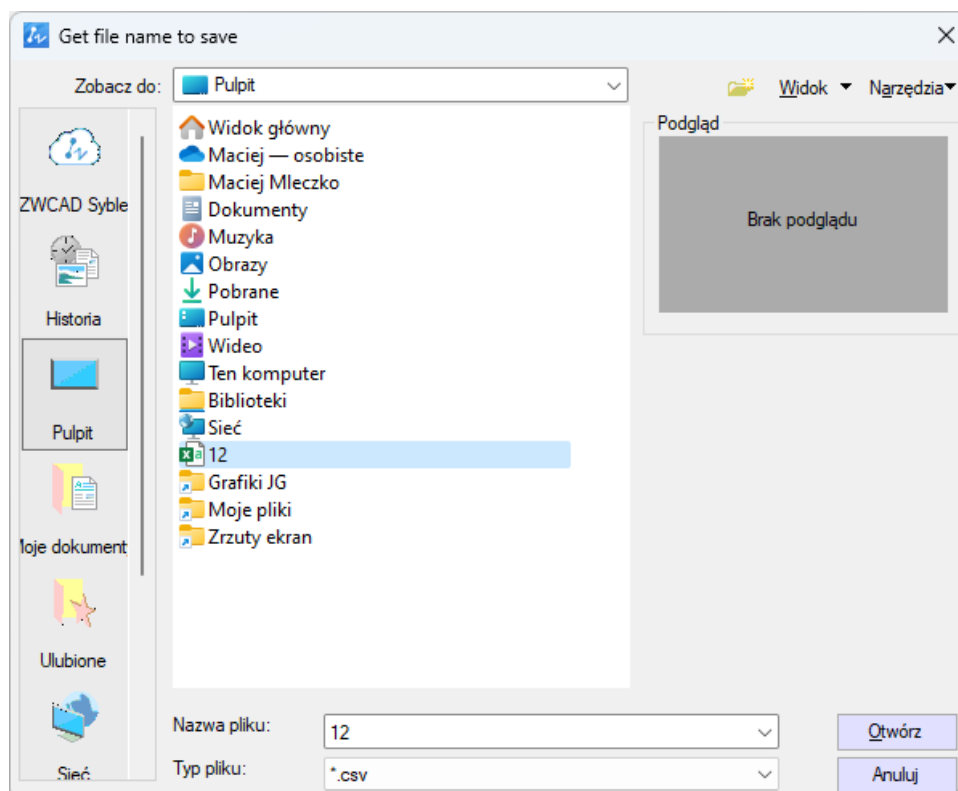
1. After running the command, ZWExtender will ask you to select the objects.
2. Confirm with Enter and then find a location on your disk, enter the name of the file and click save.
3. The coordinates of chosen objects will be visible in the new file.

	A	B	C	D
1	35/36	7429766.6	5549118.1	0.0000
2	35/35	7429766.8	5549118.6	0.0000
3	35/34	7429767.9	5549118.5	0.0000
4	35/33	7429768.9	5549117.2	0.0000
5	35/32	7429769.2	5549118.2	0.0000
6	35/31	7429770.2	5549118.2	0.0000
7	35/30	7429769.9	5549120.1	0.0000
8	35/29	7429768.8	5549121.3	0.0000
9	35/28	7429767.9	5549121.6	0.0000
10	35/27	7429766.9	5549120.8	0.0000
11	35/23	7429766.3	5549116.8	0.0000

Import points from CSV file

After running the command, you need to select a file which contains the coordinates of points. The file needs to be in the .csv format.

1. Run the command and select the file which contains the coordinates.



The points must be saved in a .csv file, with 4 columns. First column contains names of the points, and the next ones stand for XYZ coordinates.

	A	B	C	D
1	35/61	280.0082	175.8990	0.0000
2	35/60	280.7975	143.1453	0.0000
3	35/59	303.2909	116.3110	0.0000
4	35/58	339.9908	92.6336	0.0000
5	35/57	370.3768	62.2477	0.0000
6	35/56	419.7046	49.6198	0.0000
7	35/55	471.4001	55.1445	0.0000
8	35/54	503.3646	68.9563	0.0000
9	35/53	532.1720	72.9025	0.0000
10	35/52	599.6524	56.3283	0.0000
11	35/51	620.5674	99.7368	0.0000
12	35/50	620.9621	151.0377	0.0000
13	35/49	595.3116	188.5269	0.0000
14	35/48	563.7418	203.1279	0.0000
15	35/47	452.4583	222.4644	0.0000

2. The points will be loaded into a drawing.



Symbols

Change circles to another signs

This function transform circles into objects such as: points, crosses, circles of a selected size, stars and blocks. In order to change an object, you need to enter the diameter of circles which are going to be changed. The type of a mark that it will be changed to and its color. By doing this all of the circles of a given diameter will be changed to a set mark.

Change circles to marks

Diameter to change
Select

Mark

Mark type
Point

Block name

Mark size

Mark color

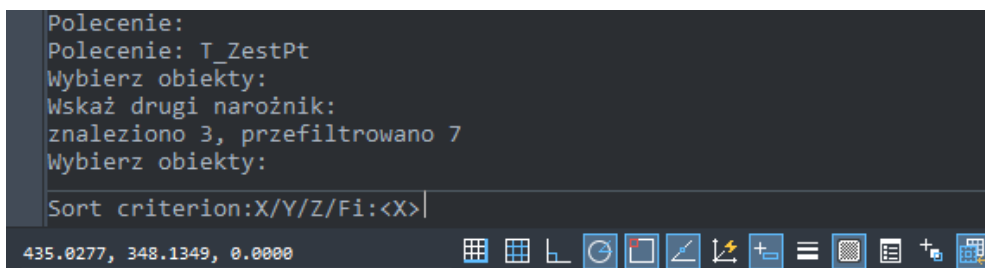
Run
Close

Create a report of points, circles and blocks

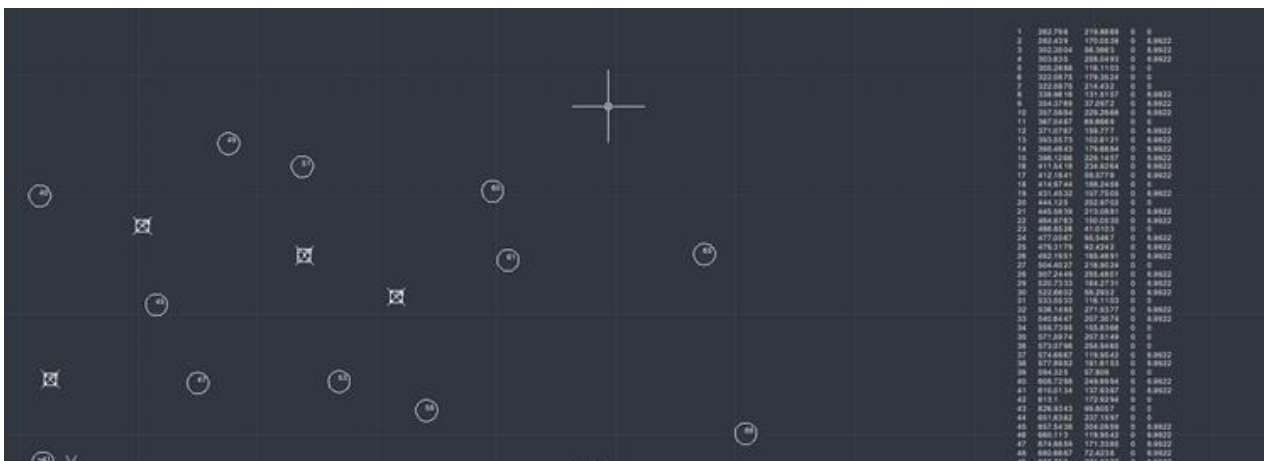
This function will ask you to select points, circles and blocks. Afterwards, you will be asked to choose a sorting criteria: do the selected elements in the collection have to be sorted by using the coordinates of X,Y,Z, by the size of the circles or the scale of the blocks. The collection is inserted into the drawing, alongside numbers next to each element. Those are then added to each point, circle and block. An example of such drawing before using this function is as follows:



1. Once you run the command, please select the points and circles.
2. You then need to set a sorting criteria.



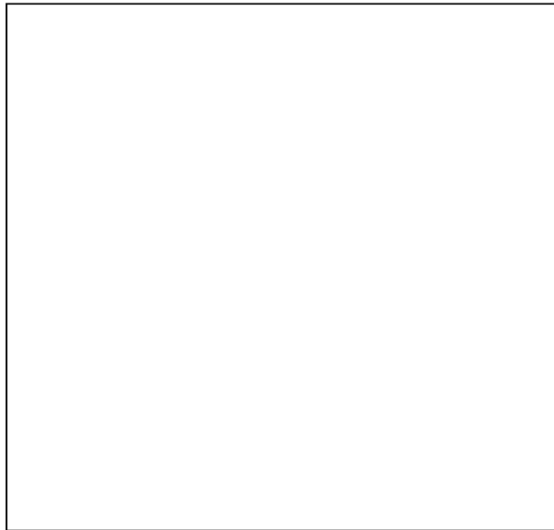
3. Choose a point for the report.



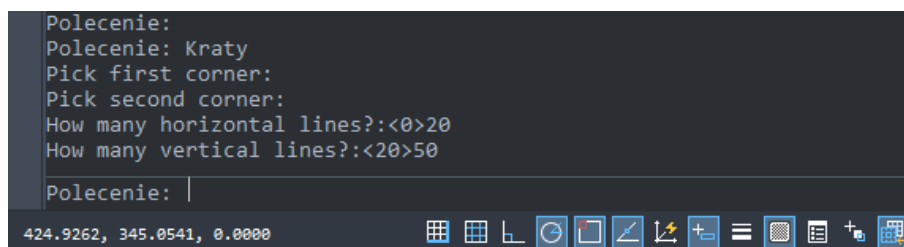
Draw grating

This function allows the user to draw vertical and horizontal lines on a selected area. After running this command, the application will ask you to indicate the scope of the drawing grid and then it will ask you for the amount of horizontal and vertical lines.

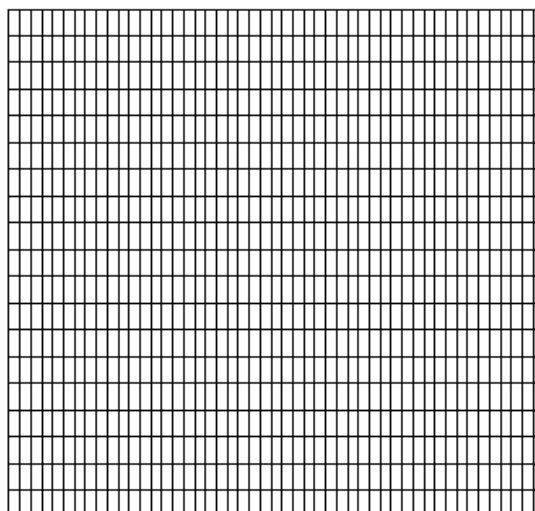
1. Please specify two corners of the area where you want gratings to be done.



2. You have to specify the number of rows and number of columns.



3. The effect is as follows:



Scale

Scale drawing from inch to mm

If a picture is drawn in the metric scale of inches, and you have to convert it to millimeters, you can use this function in order to do so. This picture will be increased 25.4 times.

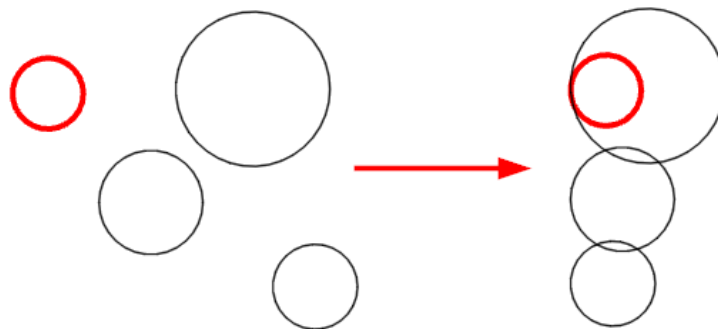
Scale drawing from mm to inch

If a drawing is in millimeters and you need to convert it to inches, you can do this by pressing the correct icon. The example shows the picture reduced 25.4 times.

Alignment

Alignment

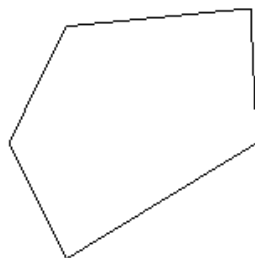
This function allows you to align selected objects to the edge specified in the command line. Once run, you must specify the direction using the command line, after which all selected objects will be moved to the edge.

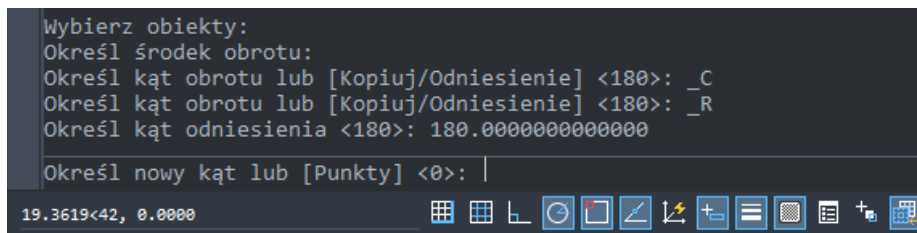


Editing

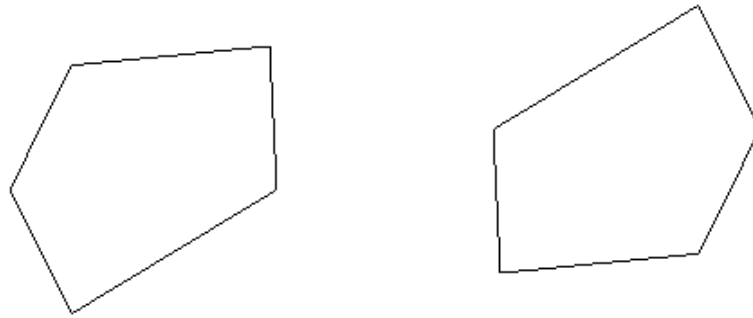
Copy by rotation

This function is similar to the standard ZWCAD command Rotate. It will ask the user to select objects, center point, reference and rotation angle.





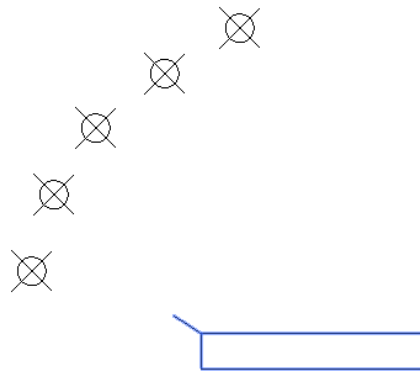
Rotation will be done on a copy of a selected object.



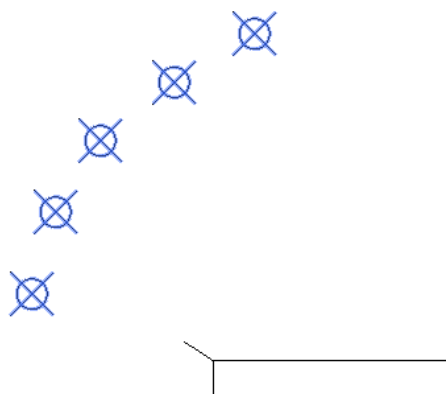
Array through selected points

This function will ask the user to select elements to copy and select point objects.

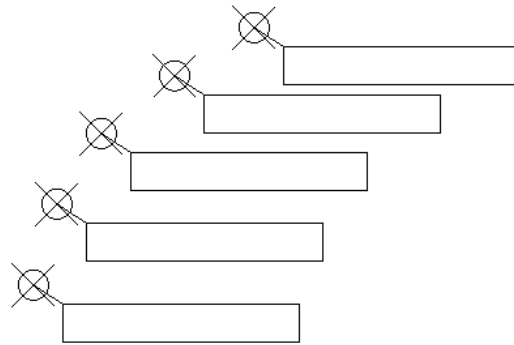
1. Specify the base point of the copied item.



2. In each selected point, a copy of items will be inserted.



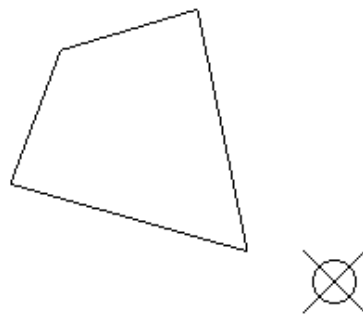
The results of the operation is presented on the picture below:



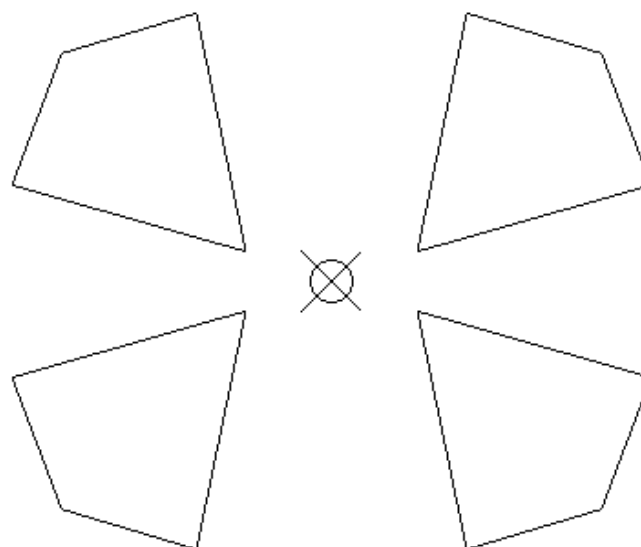
Mirror vertically and horizontally about a picked point

Function will make a mirror image of each selected object by X and Y axis.

1. After activating the command, you have to identify the item that you want to copy and then a base point as the center point of the reflection element.



2. You will get 3 copies.

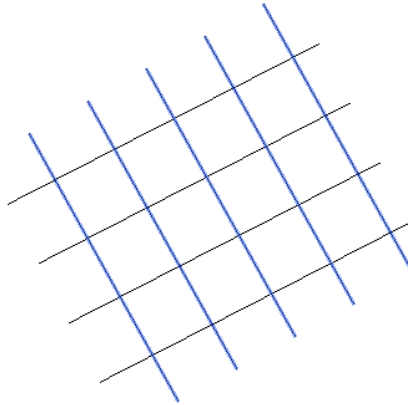


Arrows

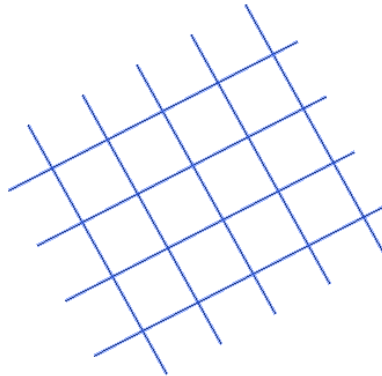
Add arc

The function automatically allows us to add an arc to the indicated leaders.

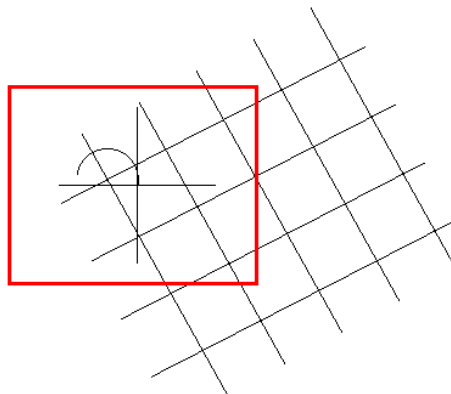
1. After activating the function, indicate the elements on which you want to insert the arcs:



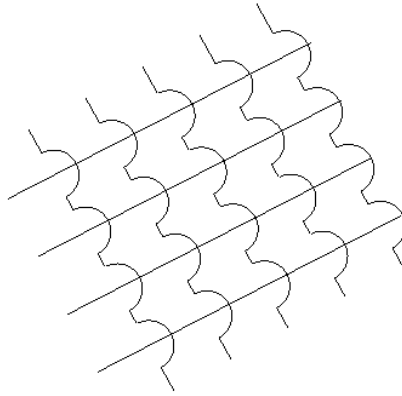
2. Then select the crossing element:



3. Next - under the cursor - you will see a preview of the arc:



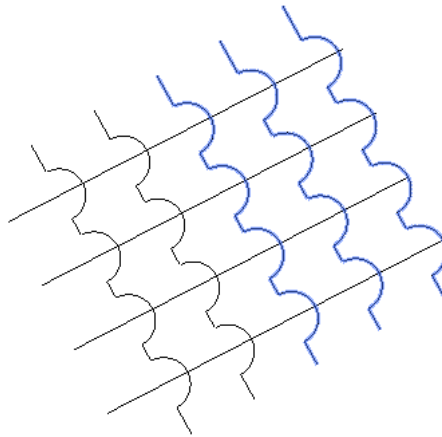
4. When you specify the size and direction will be inserted into all previously marked leaders:



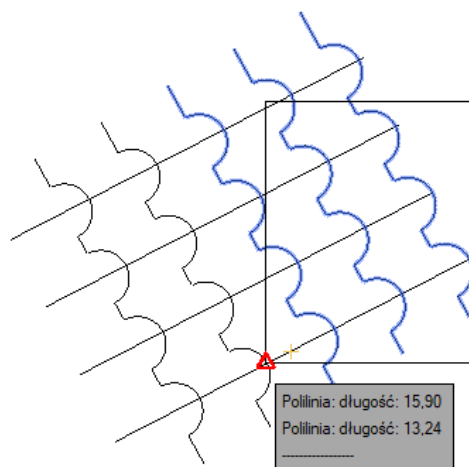
Remove arc

We can easily remove the arc with the points that were created on the selected elements.

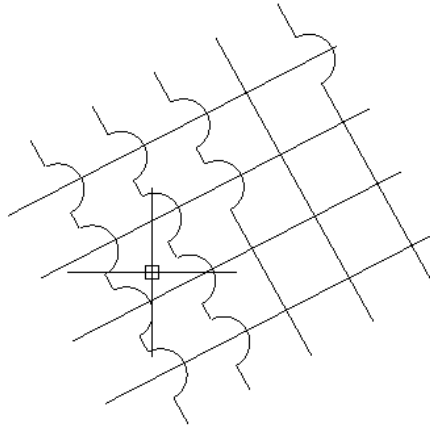
1. To do this, after activating the function, specify the elements on which you want to remove the arcs and additional points:



2. Click the base point and select the area you want to remove.



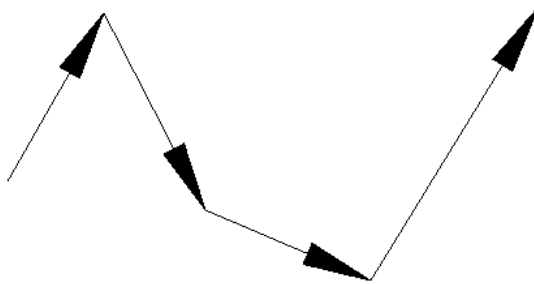
3. The selected items will return to their original shape:



Draw arrows along picked points

The arrows are drawn between the points that the user chooses.

1. The first step after activating the command is choosing the starting point of an arrow which is to be inserted.
2. Following that, choosing different points will allow you to connect them with arrows.



UCS

UCS:Export

You can use this function to export coordinate systems from your drawing.

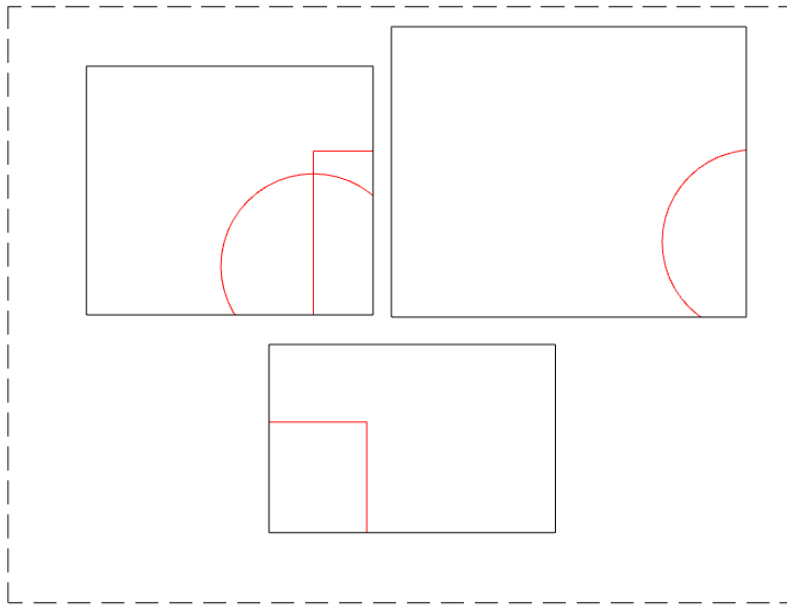
UCS:Import

With this function you can import coordinate systems from a TXT or DWG file.

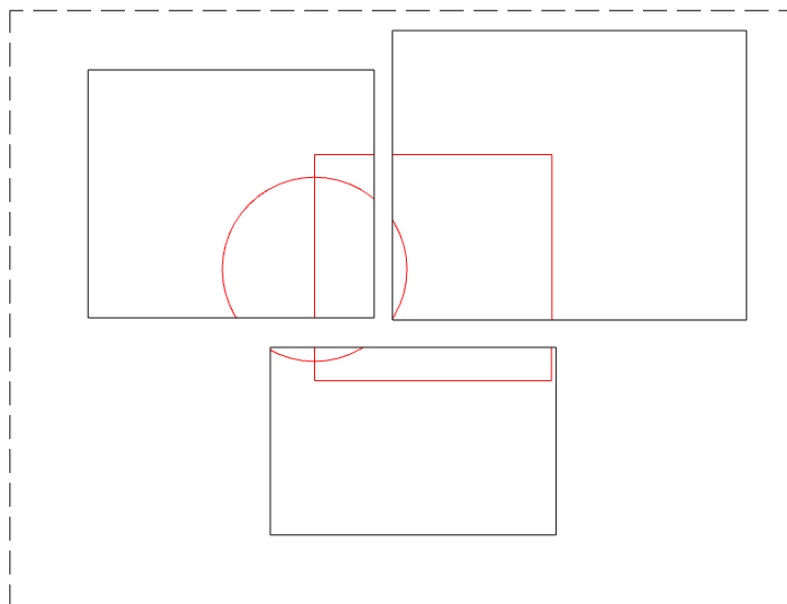
Viewports

Viewports synchronize

With this function you can combine viewports to make combined image based on selected frame. After running the command, select main viewport that will be your base. Then select any number of other viewports, that will be adjusted to serve as extension of the base one. Here is an example of some viewports in layout before using the command:



And that's the final effect:

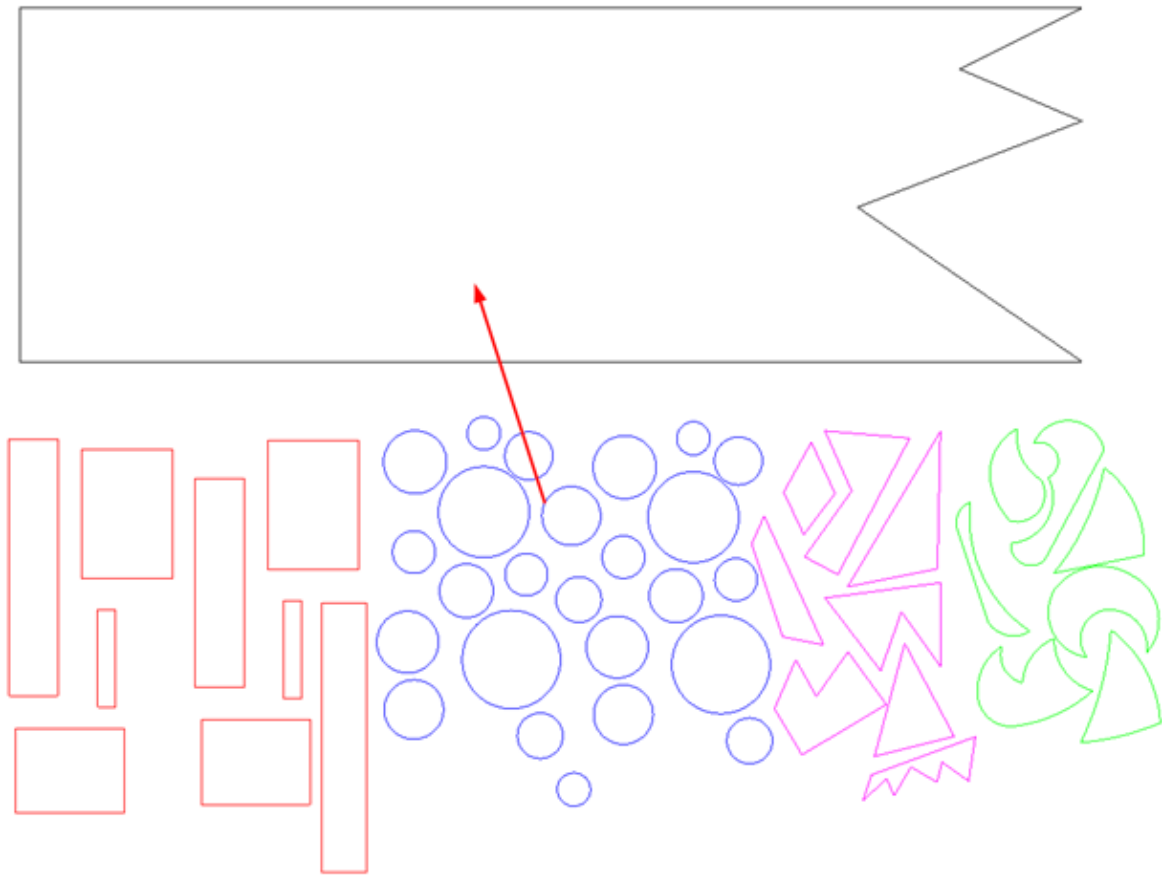


Nesting

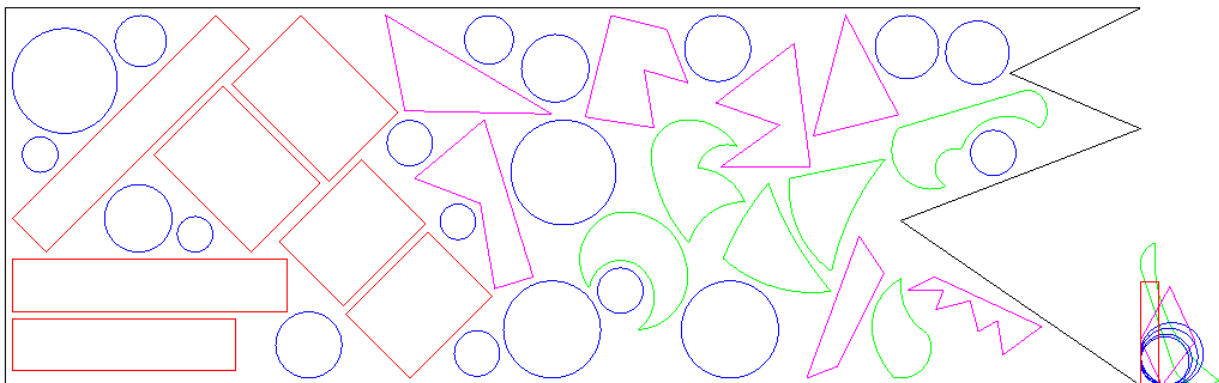
Nest objects

With this command you can nest objects in an area of your choice.

1. The program will ask for an object – a polyline frame which represents an area on which elements will be placed.
2. Afterwards, the program will ask for elements from a drawing, which will be placed in the area.



3. Now the elements will be placed in the selected area:

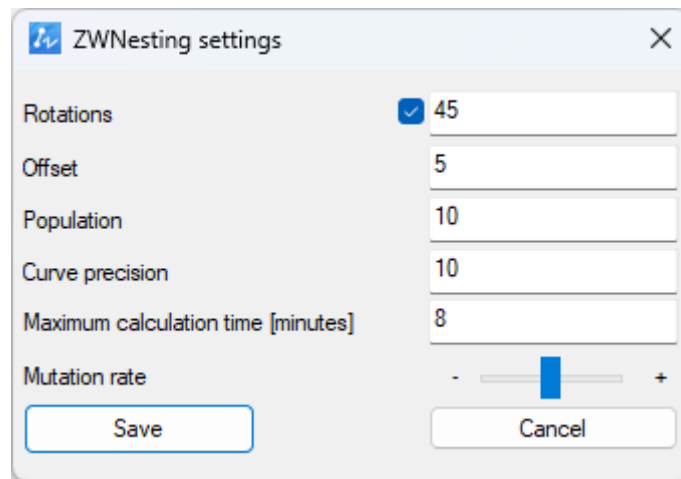


Objects that weren't fit into the selected area will be placed next to it. Furthermore, in the Command tab you will find information about the process of nesting.

```
Calculation time: h:00, m:04, s:03
Amount of elements: 45
Length of material used: 44.64
Efficiency: 26.32%_REGEN
```

Settings

This commands opens a settings for the ZWNesting addon. Here are the options available to be changed:



- Rotations – Define a rotation angle of elements that are to be placed in a layout. The program will try to fit them by rotating them a number of times.
- Offset – Extra length between elements. Margins should be entered in the same units that the drawing is in. The program tries to place the elements as precisely as possible, in most cases the tolerance margin does not exceed $\pm 10\%$.
- Population – In order to maximize effectiveness of the program, there is an option to choose a number of iterations that will be completed. The program will try different layouts and will choose the one that has the best effect. If more iterations are set, the likelihood of a better result is high. However in order to create more iterations, more time is required. Smaller amount of iterations might be faster, but the result will not be as good as it could be with a higher iterations amount.
- Curve precision – every element, type of arc, circle or a polyline must be simplified in order to calculate it. Increasing this parameter will yield more precise results but the performance might suffer as the program will have to carry out more operations. Decreasing this parameter will improve loading times but results will not be as accurate.
- Maximum calculation time [minutes] – this setting limits the time of calculation process. If the calculation isn't finished around the set time, the process will end.
- Mutation rate - ZWNesting by default tries to fit all big elements at the beginning and then fit all the smaller ones. The user can change the default settings by moving the slider to the right, which priorities smaller elements from the bigger ones. Whereas moving the slide to the left will lower the priority of smaller elements. By default its set to the balanced state.

Measurements

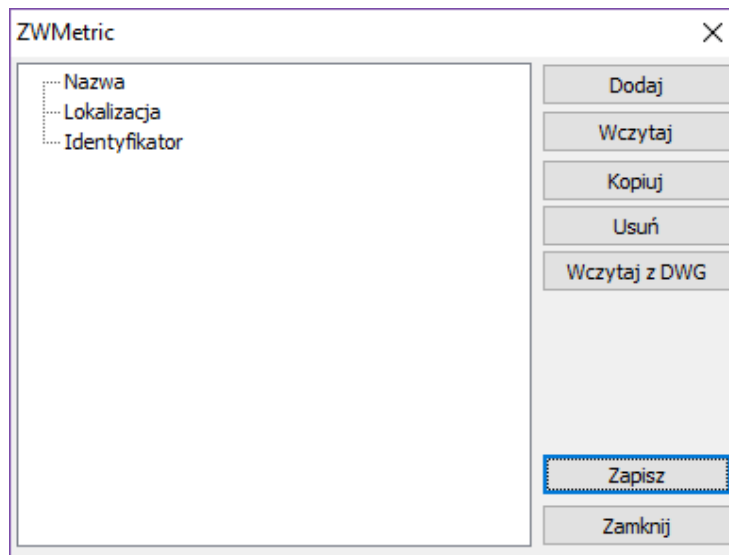
Object marking

This command lets you mark an area in a drawing. It is possible to add a description as well as additional settings.

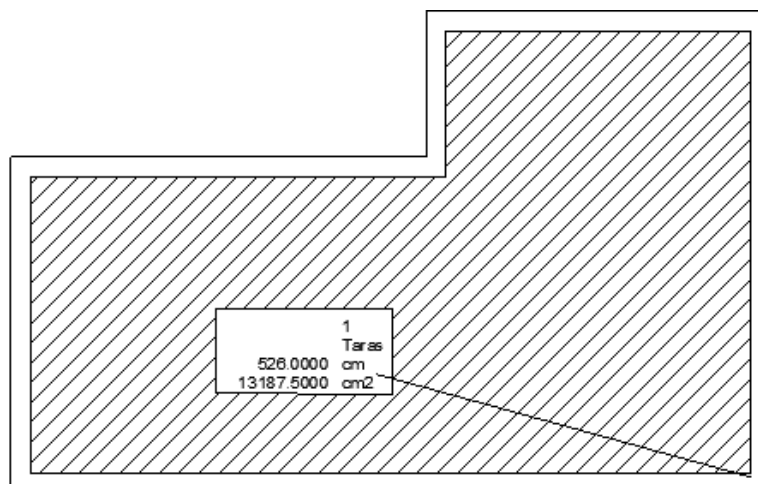
The 'Area' dialog box is shown with the following settings:

- filtr:** Empty text input, 'Filter' button.
- Sort:** 'A-Z', 'Z-A', '1-2', '2-1' buttons.
- Area List:**
 - Balkon
 - Słup
 - Mieszkanie 1
 - Taras
 - Hall
 - Pomieszczenie gospodarcze
 - Mieszkanie 2** (selected)
 - Pokój 1
- New description:**
 - Empty text input
 - Buttons: Remove, Change, Add, Load, From list
- Autonumber:**
 - ☒ Turn on
 - Number: 31
- Lokalizacja:** Budynek1 (dropdown)
- ID:** ID1 (dropdown)
- Edit attributes:** Button
- Expresion:**
 - Empty text input
 - Legend: @L - length, @A - area
- Dodaj hatch:** ☒
- Buttons:** OK, Close

After activating the function, enter New description by entering it and clicking on Add. Then please enter the type of Location and the identifier by clicking on Edit attributes. A window will appear in which you should expand the given tab and after click Add enter the name of the Location and the name of the Identifier. After entering, click Save.

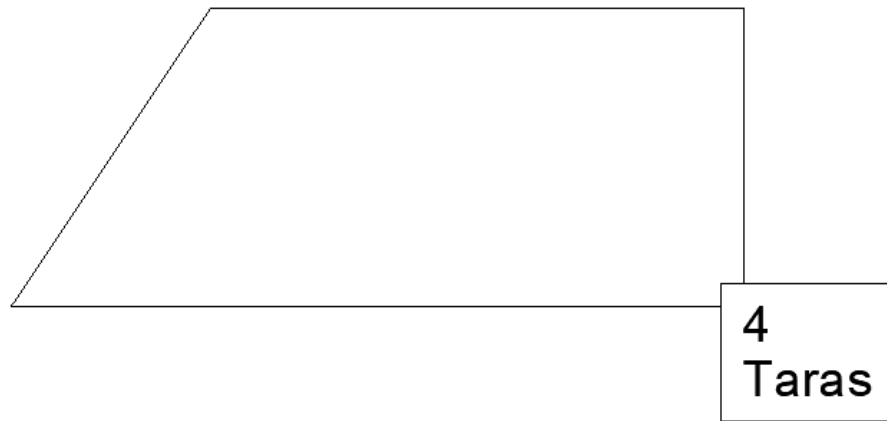


Then the program will ask the user to indicate the external out lines of the measured surface. In the next step, it will ask you to indicate the area to be excluded from the calculation. These outlines must be polyline objects. Then the user will be asked to draw a descriptive line, at the end of which a descriptive block will be inserted. The block will contain the description selected in the window, the numerical value of the surface of the selected area, the length of its perimeter and if so specified in the settings, as well as the attributes: location, identifier and name. If the appropriate box is selected in the window, a hatch inside the external surface outline will also be added to the drawing.



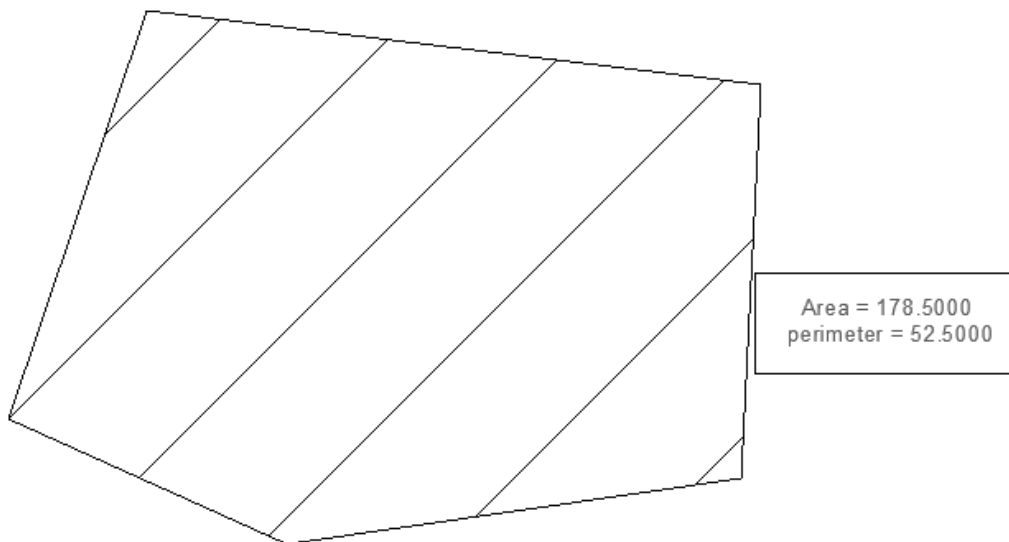
Area outline

The function can be used to add a description of an area to a drawing. You need to start a function, and choose a description you want to add. After that set up points that will create a space you want labelled. The function ends when you close an area or you click right mouse button.



Area labeling

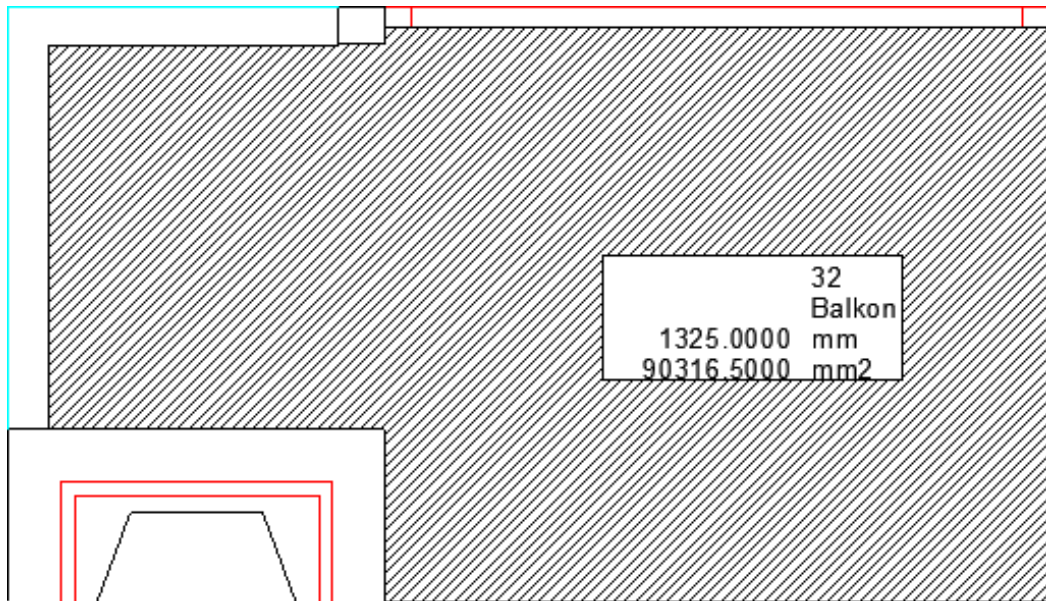
The function allows you to input an area value in a description block defined on an area by points. The area should be selected in the same way as in the previous function. Once finished, confirm by Enter and specify next points of the description line.



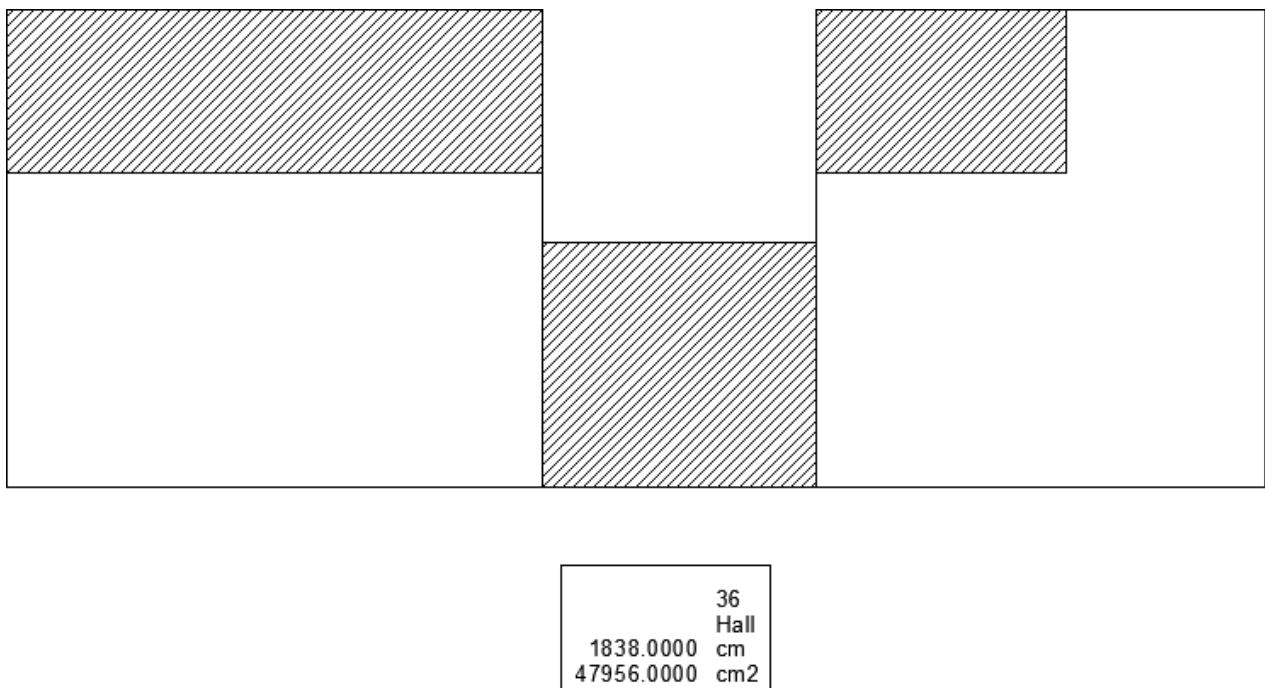
The text settings in the description block and background are available in the settings. With this function, you can quickly measure the perimeter and surface area of the selected area.

Area

By using the function you can define an area by specifying a point within an object that we would like to describe. Once activated, a window will appear where you will have to define the name of the area, auto numeration and hatching. Afterwards, specify a point within a closed area which is going to be described.



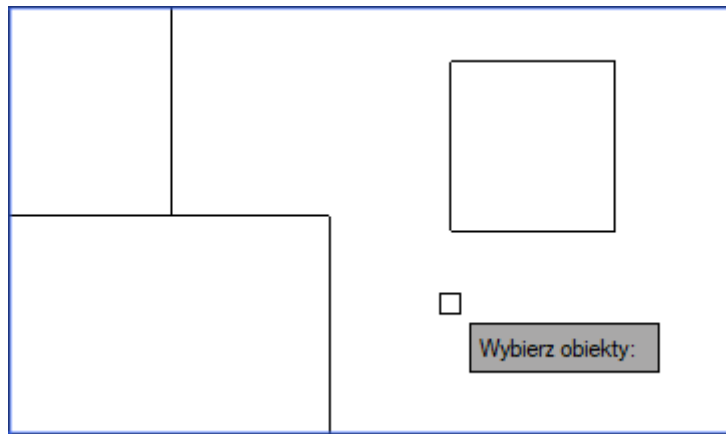
The command lets you specify more than one area. On the example below we can see a few closed areas. When activated, Area by Point will let you specify points within closed areas. Once done confirm by pressing Enter.



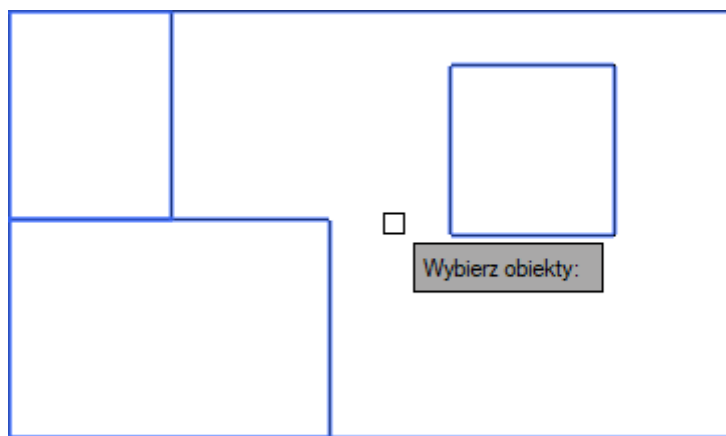
It's necessary to specify a desired place for your description block. The size of description and desktop properties can be found in the settings.

Area measurement

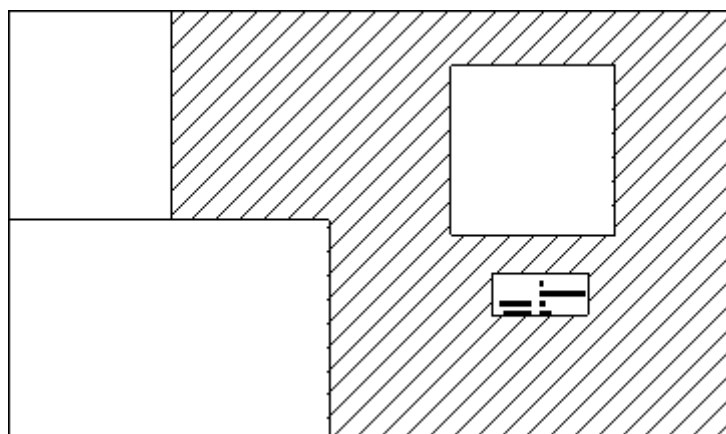
With this function you can mark an area by selecting a frame. After running the function, you need to click on the area you want to be labeled, and click Enter.



Now select areas you want to be excluded from the marking and confirm with Enter.



Lastly, choose a place to enter the description frame.



Length measurement

This function works analogically to the function Area Measurement with one difference. Only the lines will be calculated, not the whole area of a selected object. Once the function is activated, you need to define the name.

Length [X]

filtr

Sort

Linia projektowana
Taras
Taras2

New description

Autonumber
☒ Turn on Number

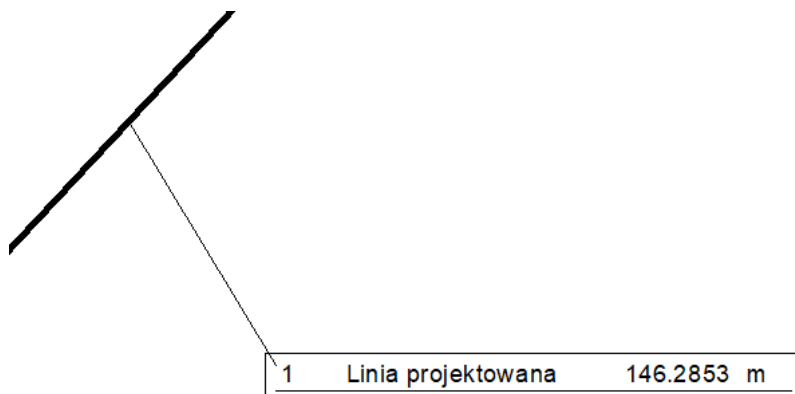
Lokalizacja

ID

Expresion
Expresion
@L - length, @A - area

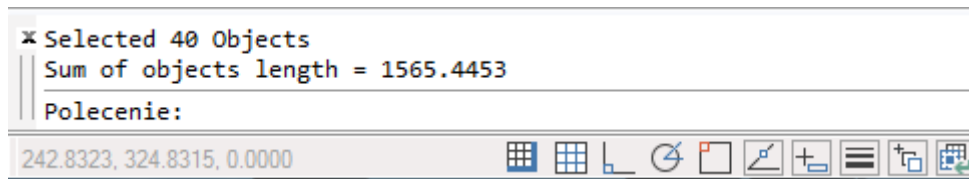
☒ Dodaj hatch

Now choose next objects as well as the insertion point of the description line. When you insert a descriptive line at the end is inserted description of the object taking into account its circuit. When you select the Line Measurement function, indicate linear objects. Their total length will be measured and inserted into the external reference with the name and sequence number.



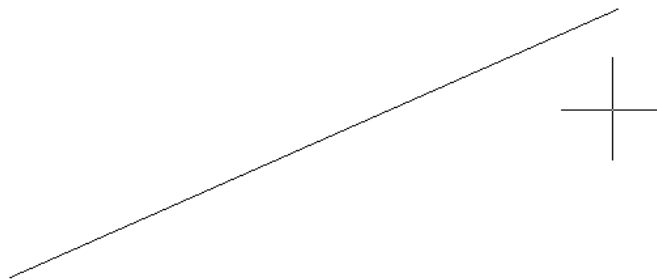
Total length

User selects objects, then application calculates sum length of all lines, polylines, arcs and circles.

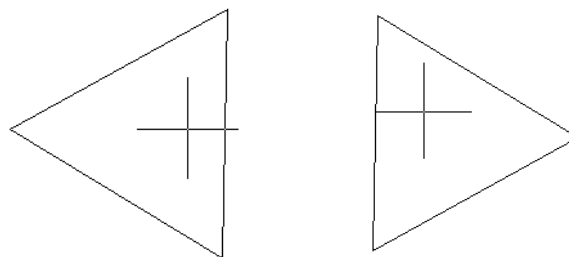


Draw a triangle from three given side lengths

This function lets you automatically draw triangles of specified sizes, as well as giving you the option to fit the object to an existing shape. Once the command has been activated, specify the starting point of the triangle and its direction. Now specify the distances of following sides. The size can be defined by entering a value in the command bar or by using the cursor.



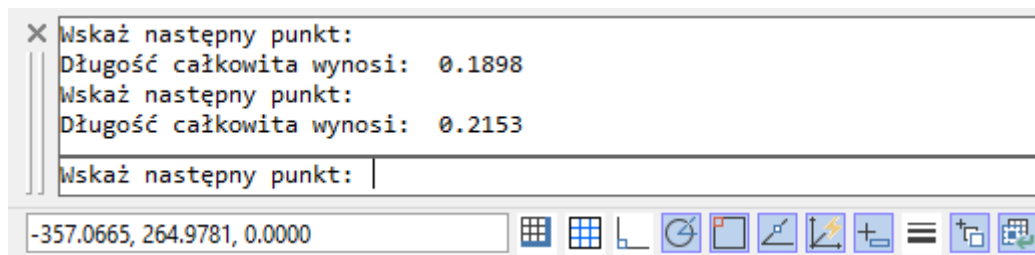
Now specify distances of next sides. The size can be defined by entering a value in the command bar or by using the cursor.



Once distances are entered choose a direction of the triangle.

MDist

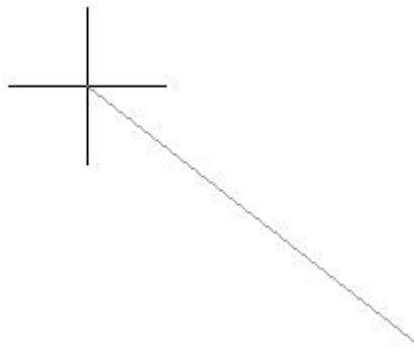
This command doesn't add up the lengths of the selected objects, but rather the distances between two points as indicated by the mouse cursor. The programme calculates and displays the sum of all distances between the selected points in the command line.



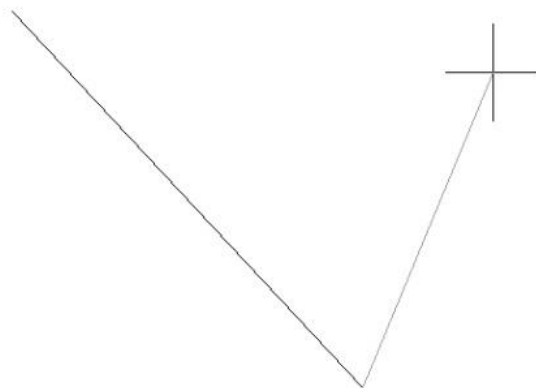
By selecting points one by one – for example, the outline of a building – its total perimeter will be displayed. The units used to calculate the total length are the same as those specified in the overlay settings. If the overlay units are changed, the total length will be adjusted to match the current overlay units.

Draw a triangle from a given angle and two side lengths

This function is used to create a triangle with an angle and length of two sides of your choice. Once activated you will have to specify the top of the angle and the direction of the first side of the triangle.



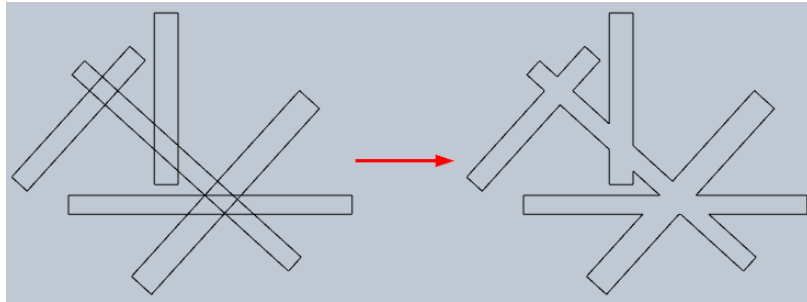
Now enter the length of the first side, an angle, and the length of the second side.



The angle needs to be entered in degrees or you can choose the function Measure from the toolbar. After typing in the shortcut Z, you need to determine the start and end of two lines in between which the angle will be measured. Once all data has been entered, the last side of the triangle will be added and by using the cursor you should choose the direction of the triangle.

Sum of polylines

This function allows you to create an area based on the elements you have drawn. By default, a region is created, but you can change the settings or the type of element created in the options. Once you have launched the function, select the elements you are interested in and confirm by pressing Enter. An area will be created based on the outline.



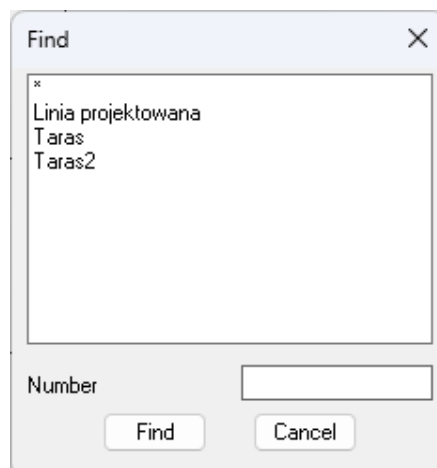
Draw a line matching an object length

This command allows you to draw a line the same length as selected objects, such as a polyline, spline or circle. Simply run the function, then select the objects you want to use. After that, all you need to do is click where you want the line to be placed.



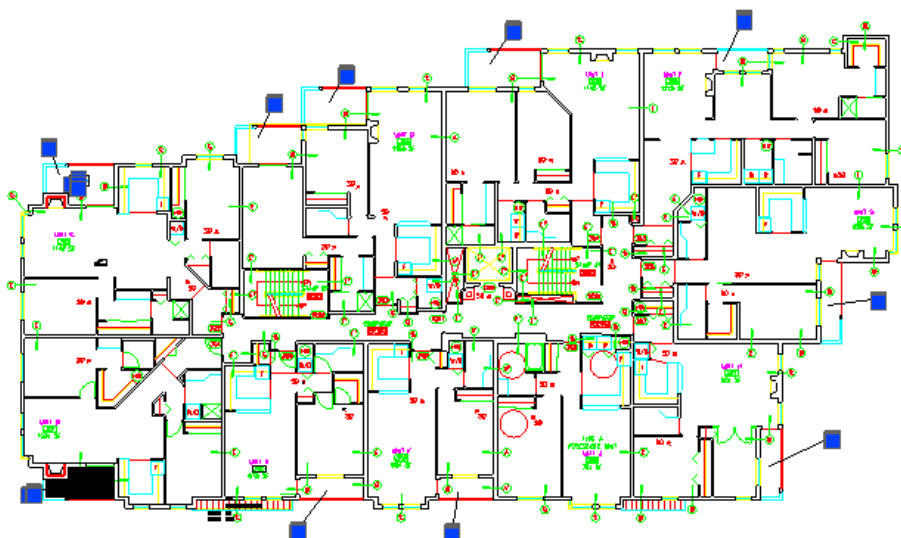
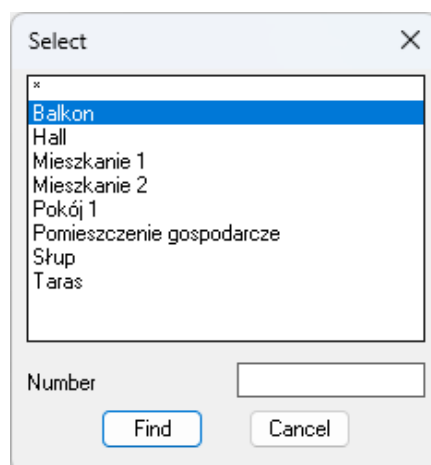
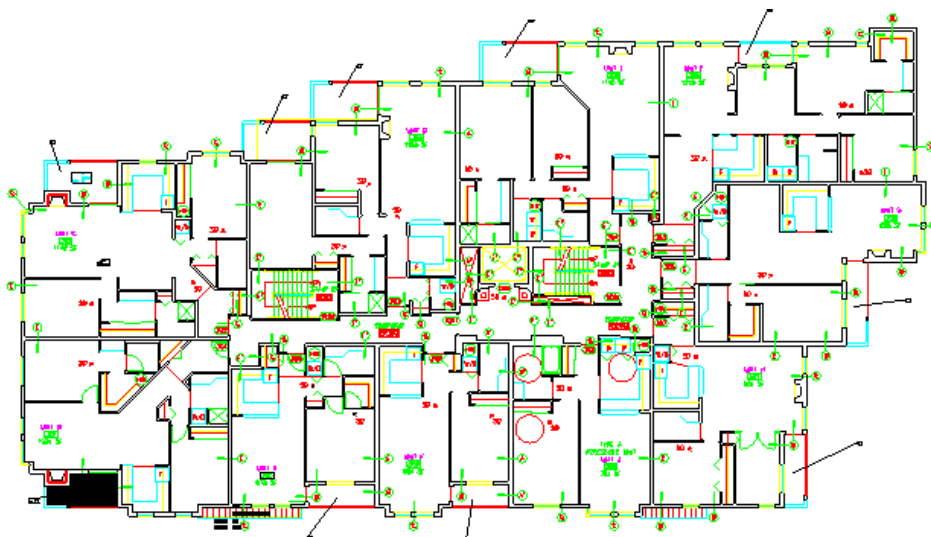
Search

This function finds all description blocks where description attribute has the same or similar value as selected description text. Then the view is centered to a description block. After pressing space, another element with the same description will be found.



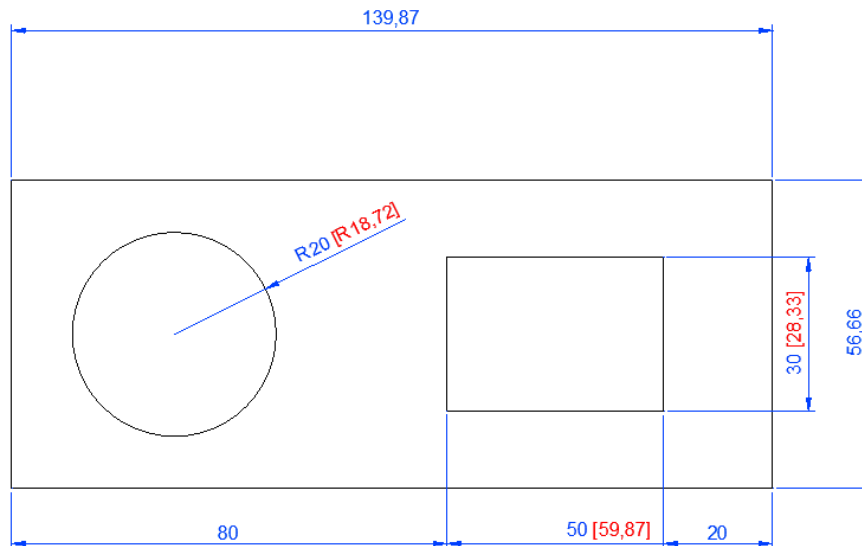
Select

This function selects all description blocks where attribute description is the same as selected by the user. When you select an item and click Find, the program selects all items in the drawing area indicated by the user.



DimSpy

This command allows you to locate and mark incorrect dimensions in a drawing. Run the command and select the area of the drawing to be checked, or select 'A' for 'All'. Dimensions in the drawing that have been arbitrarily set and don't correspond to the actual dimensions will be marked by the correct dimension in square brackets next to the current one.

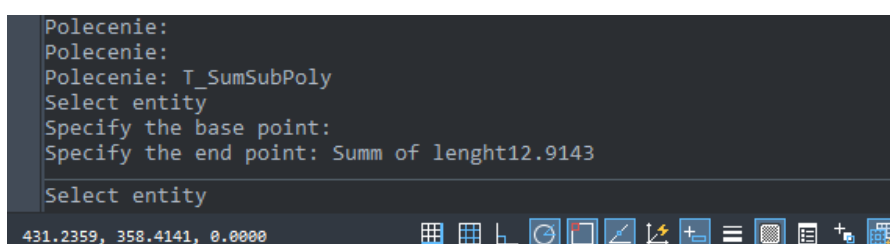


This allows you to manually adjust the elements to the required size, after which you can select the command again and remove the red annotations. You should also remember to clear the drawing using the relevant function in the Dimension tab or via the command `_DIMREASSOC`.

Measure curve length between picked points

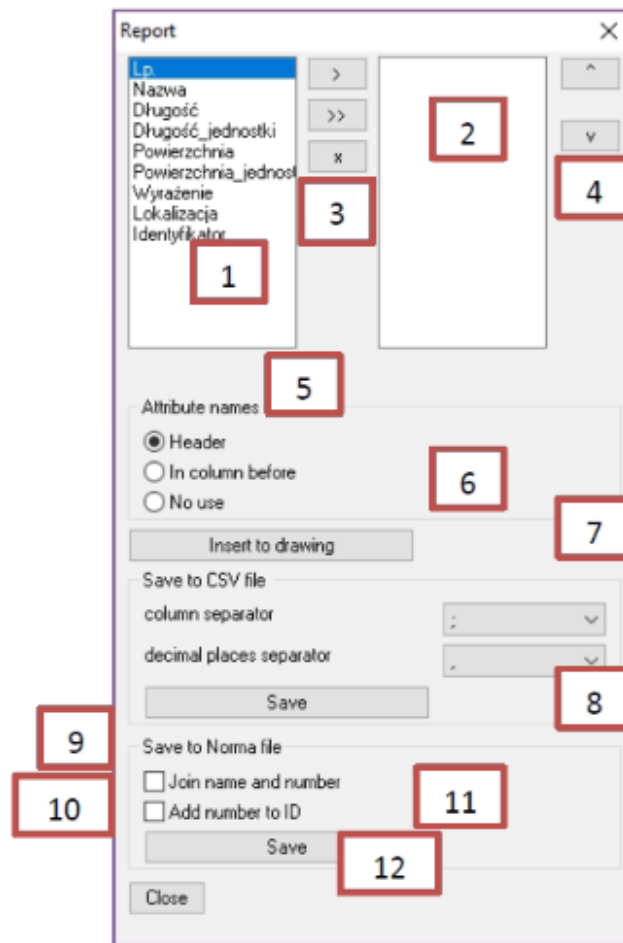
This function calculates the lengths of curves between the points you click. It works on lines, polylines, arcs and splines.

1. Once the command has been activated, select a curve.
2. Then select two points on the curve between which the length of the curve will be calculated.
3. Once the second point has been selected, the length of the curve between the selected points will be displayed on the command bar.



Report

With this function, you can create a report of your measurements.



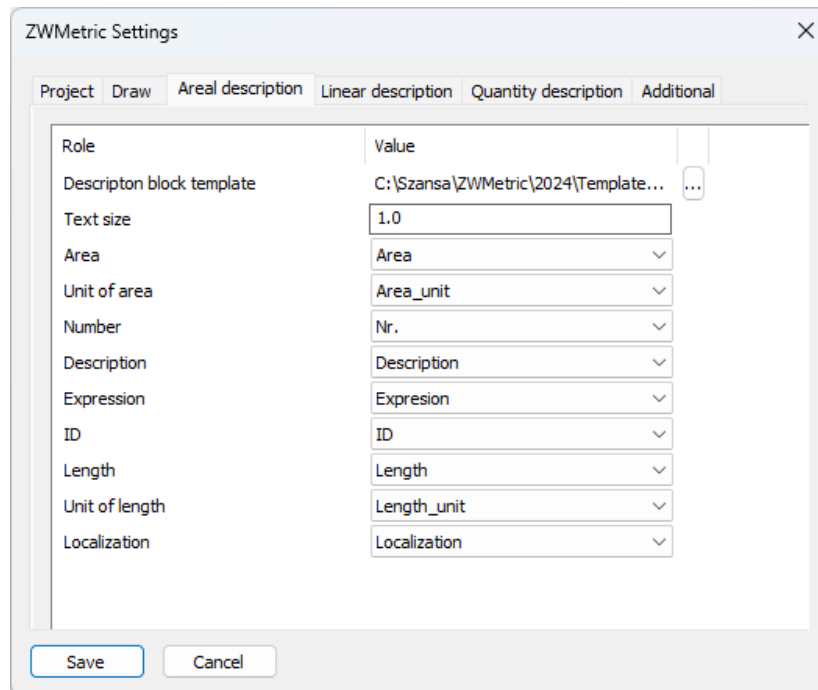
In the window shown above we can see:

1. List of all attributes defined in selected block.
2. List of all attributes names, which will be considered in created report.
3. A button which lets user to select attributes to report.
4. With this buttons, you can decide order of columns.
5. Options to define, where will be headers of columns in report.
6. After clicking this button, a report will be inserted into drawing.
7. Settings to save data to text file. It lets user to decide which mark will be columns and decimal places separators in saved file.
8. By this button you can save report data in external text file (with extension .csv).
9. Setting to define if save to Norma file format will be with number and description join in the same column.
10. Setting to define if save to Norma file format will be with number and ID join in the same column.

11. By this button a report will be saved in external text file with format corresponding with application Norma.
12. A button to close the report window.

ZWMetric settings

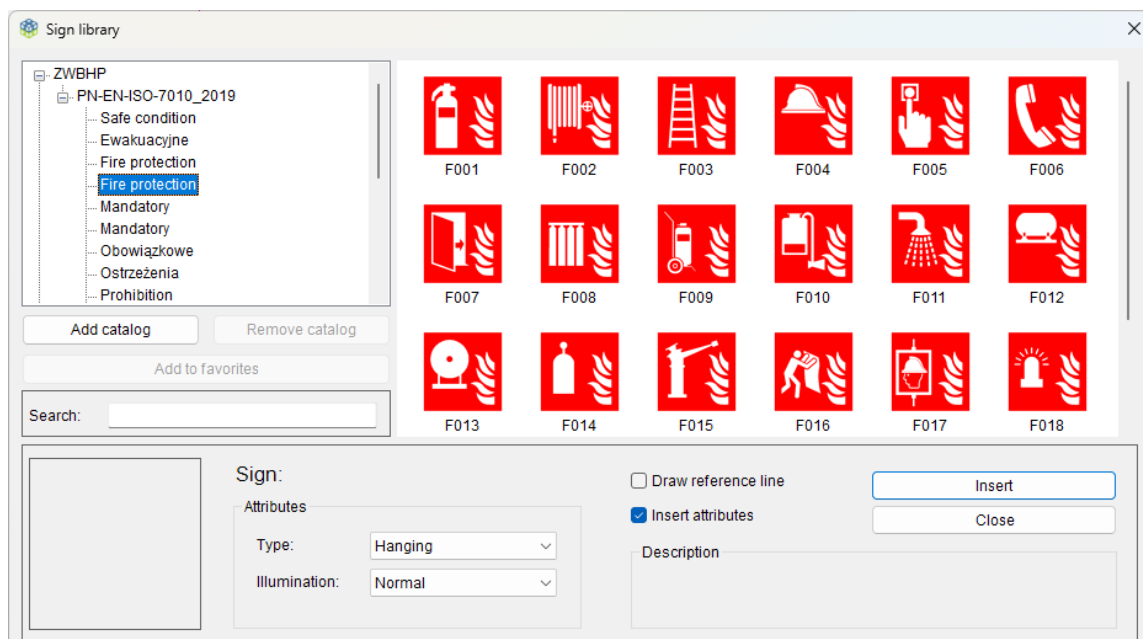
This command lets you change the settings of ZWMetric.



Sign library

Sign library

With this command you can insert safety symbols to the project.

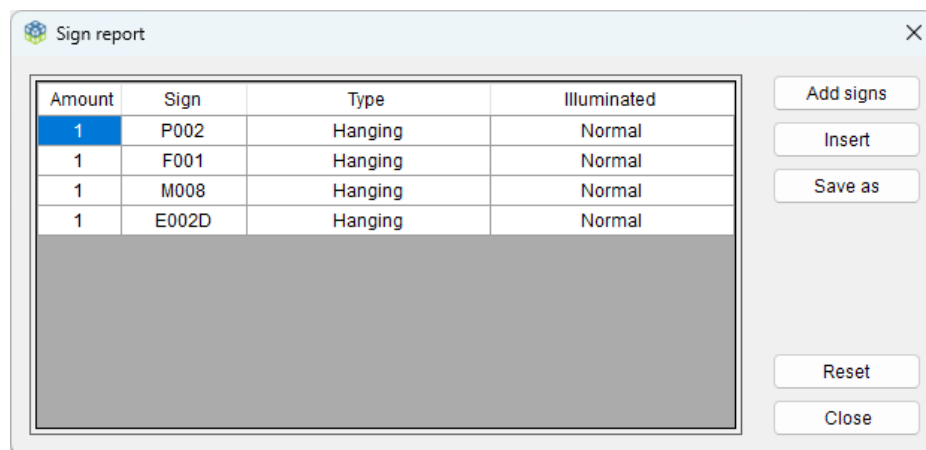


You can choose any of the categories on the left, and after choosing a symbol in the main window, you can insert it by clicking Insert. You can also mark a sign as favourite, so it can also be found in Favourites category.

There are also options to select attributes or reference line. You can also create your own catalogue and use your own blocks.

Block report

You can make a table with all signs in the project, or with chosen ones only. Start the command, select what signs you want and click Enter. Then specify a place where the table should be placed.



Sign report				
Preview	Amount	Sign	Type	Illuminated
	1	P002	Hanging	Normal
	1	F001	Hanging	Normal
	1	M008	Hanging	Normal
	1	E002D	Hanging	Normal

H&S

HS

The function opens Health and Safety ribbon.

ZWExtender

Activation

A trial period that lasts for 30 days with full functionality is available after installation of the application.

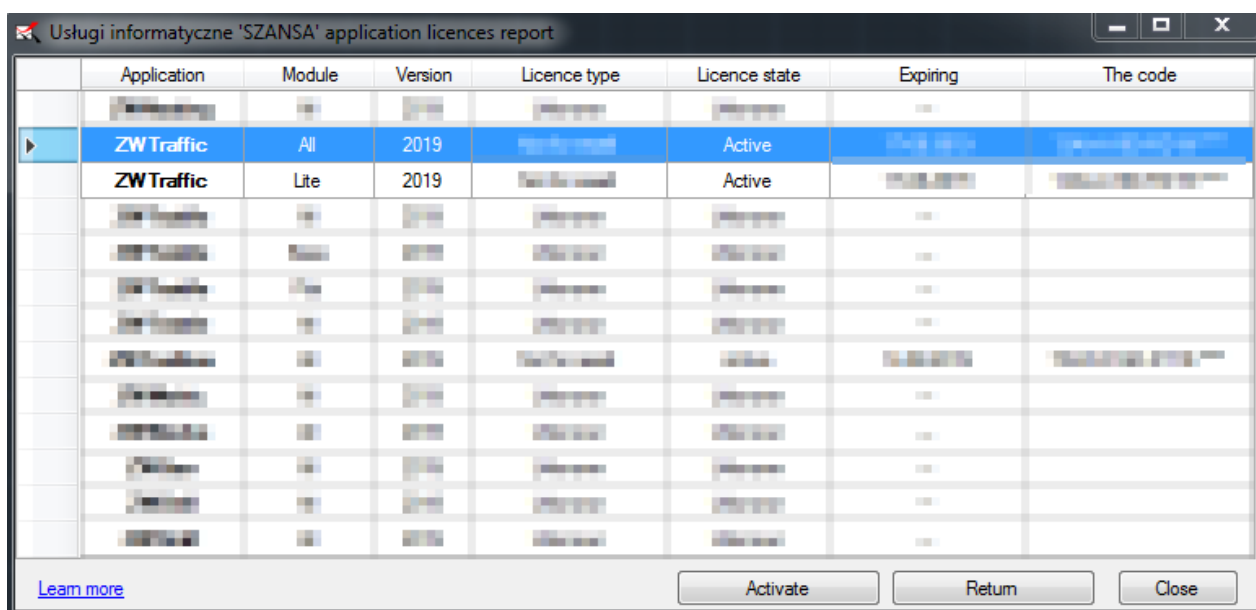
Activation must be completed on an account with administrative privileges.

Once the trial period of 30 days runs out, a licence will be needed in order to use the program. After receiving the payment, an e-mail with an activation code will be sent. Activation is available directly in ZWCAD or by using the function Activation from menu of the application. It is also possible to activate the program from its installation folder. By default located in:

C:\Szansa\Aktywator\2026\EN and run Aktywator 2026.exe.

In operating systems such as Windows Vista, Windows 7, Windows 8 and Windows 10 it is necessary to right click on ZWCAD icon and select Run as Administrator.

Full licence code is only visible on the licence certificate that is sent out during completion of the order due to security reasons. Once Activator has been launched, the following window will be displayed:



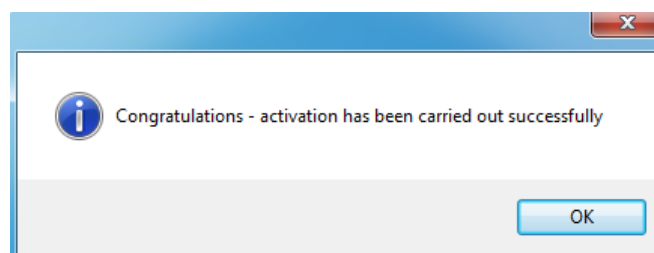
Please click on **Activate**.

A choice between activating the application online or offline will be present.

Online activation

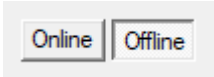
In the field **Activation code** please type in the information sent during realization of the order, afterwards click on **Activate**.

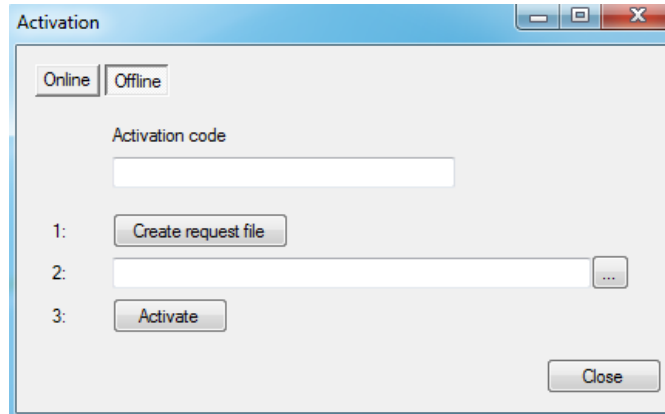
An information window will pop up confirming the activation.



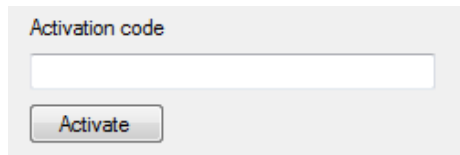
Once ZWCAD is launched, all functions of the program should be loaded and available.

Offline activation

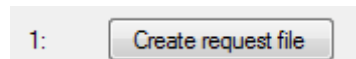
In the **Offline** tab  additional steps are required to complete the activation.



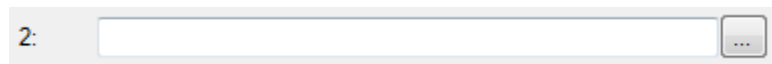
In the field **Activation code** please type in the information sent during realization of the order.



Afterwards it is necessary to click on Create a request file, it will create an additional file which needs to be saved on the desktop or in any other directory of the computer.

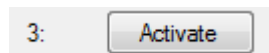


The file needs to be sent in a form of an attachment to, pomoc@zwcad.pl and a reply will consist of response file which then needs to be loaded in the activator:

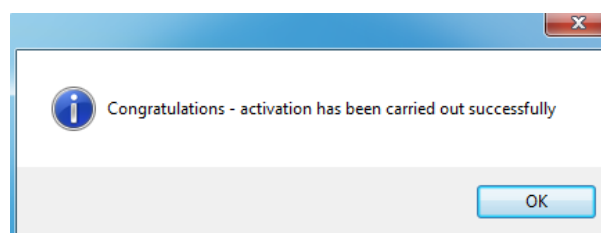


Response file needs to be saved on the computer and its localization needs to be determined by clicking on the following icon .

Once the response file is loaded, click on **Activate**.



An information window will pop up confirming the activation.

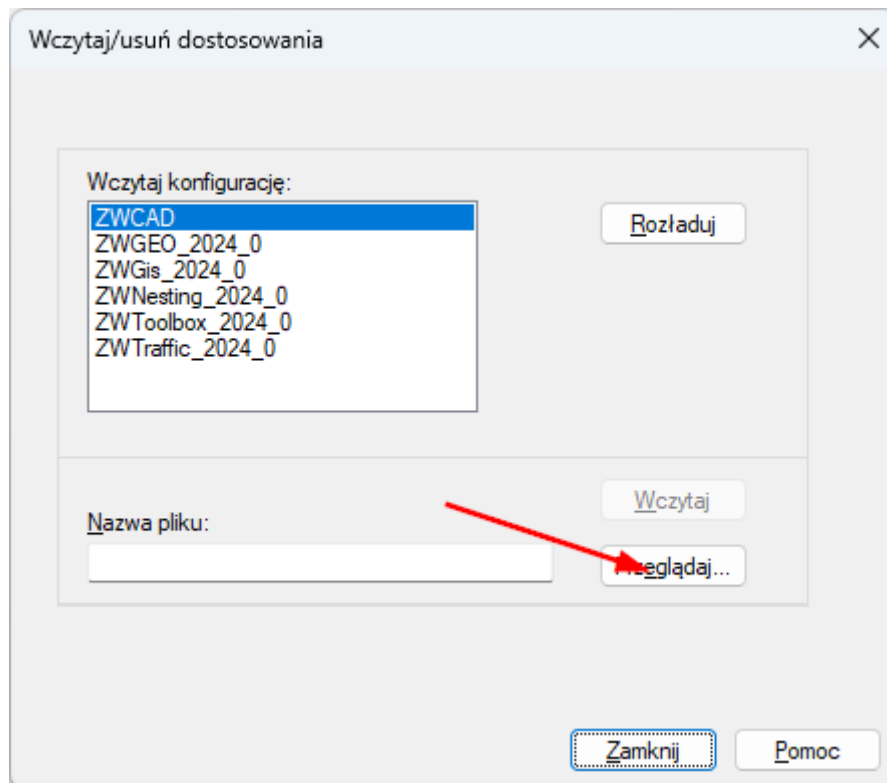


Once ZWCAD is launched, all functions of the program should be loaded and available.

Manual menu load

After installing the overlay, it should load automatically after running ZWCAD 2026. The functions should be available and the toolbar with the icons should be displayed. If after running ZWCAD the application doesn't appear, please follow these steps:

- Run the command `_menuload`.
- Press the button and select the file `ZWExtender.cuix` located in `C:\Szansa\ZWExtender\2026\EN`. Confirm the file by clicking Add.

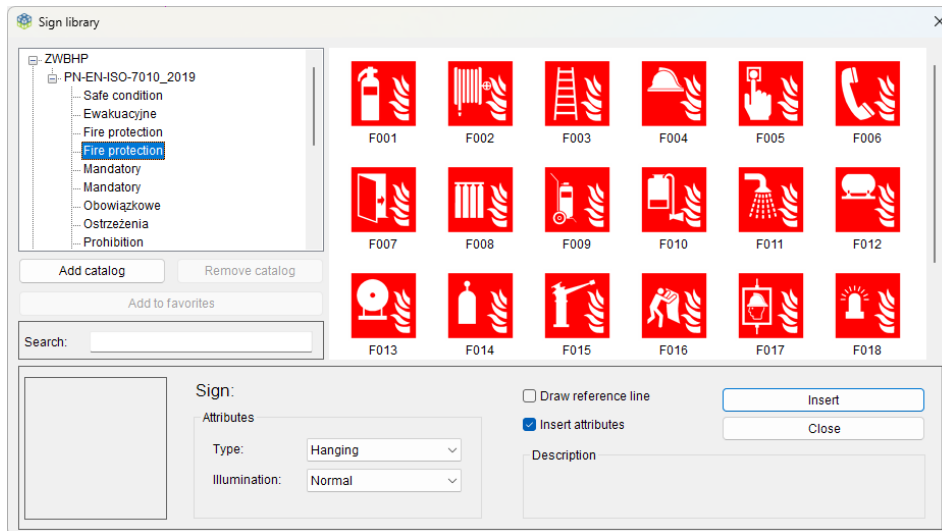


H&S

Symbols

Sign library

With this command you can insert safety symbols to the project.

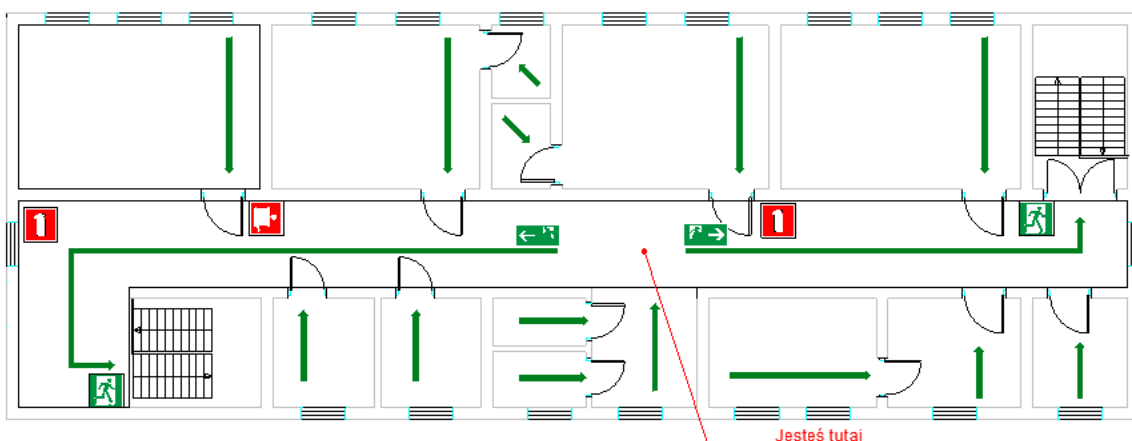


You can choose any of the categories on the left, and after choosing a symbol in the main window, you can insert it by clicking Insert. You can also mark a sign as favourite, so it can also be found in Favourites category.

There are also options to select attributes or reference line. You can also create your own catalogue and use your own blocks.

You are here

You can use this command to insert symbol, with location of person watching the plan, which is red dot with a line. At the end of the line, "You are here" appears.

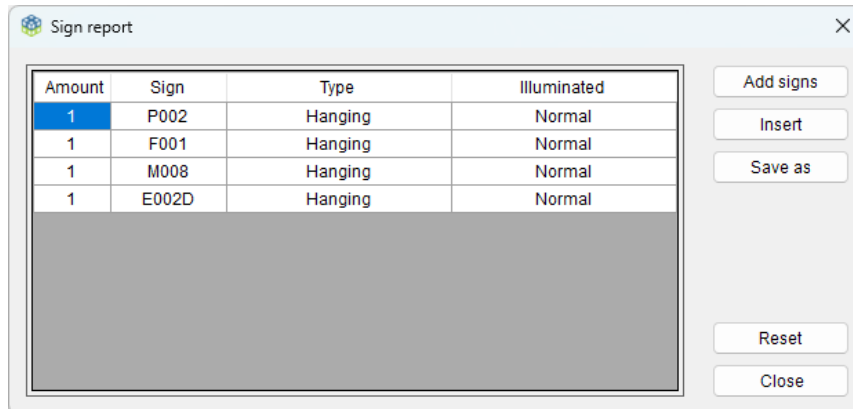


You can also change size and colour of the function, similarly to Emergency safe route.

Report

Block report

You can make a table with all signs in the project, or with chosen ones only. Start the command, select what signs you want and click Enter. Then specify a place where the table should be placed.

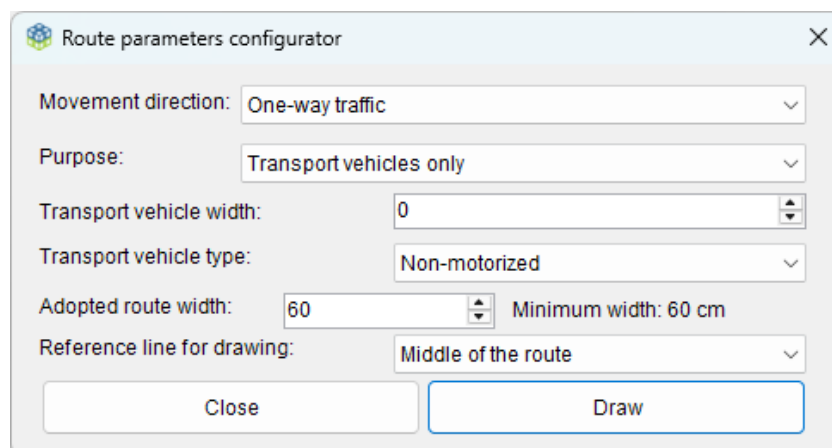


Sign report				
Preview	Amount	Sign	Type	Illuminated
	1	P002	Hanging	Normal
	1	F001	Hanging	Normal
	1	M008	Hanging	Normal
	1	E002D	Hanging	Normal

Routes

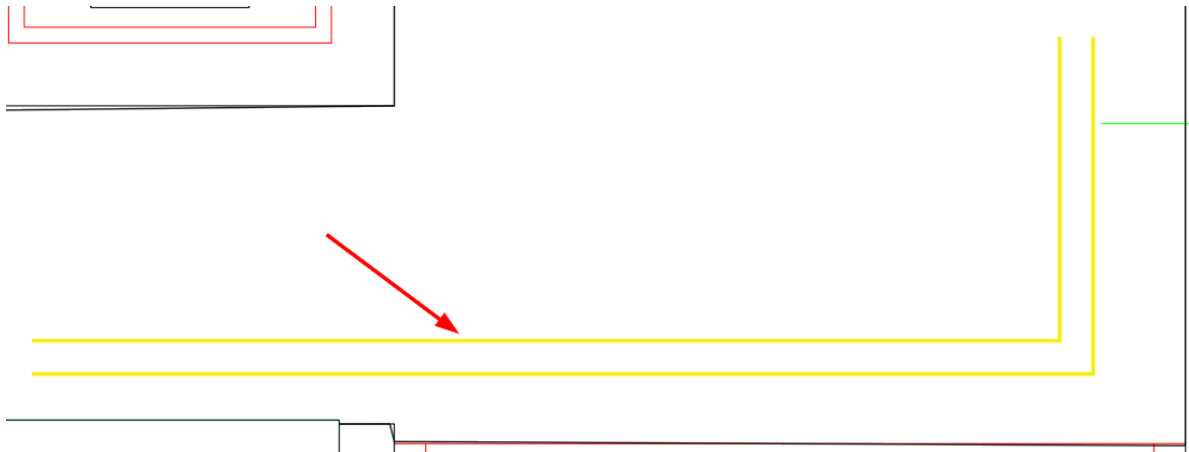
Route configurator

This function allows you to create routes using an advanced configurator. When you launch the function, the following window will appear:



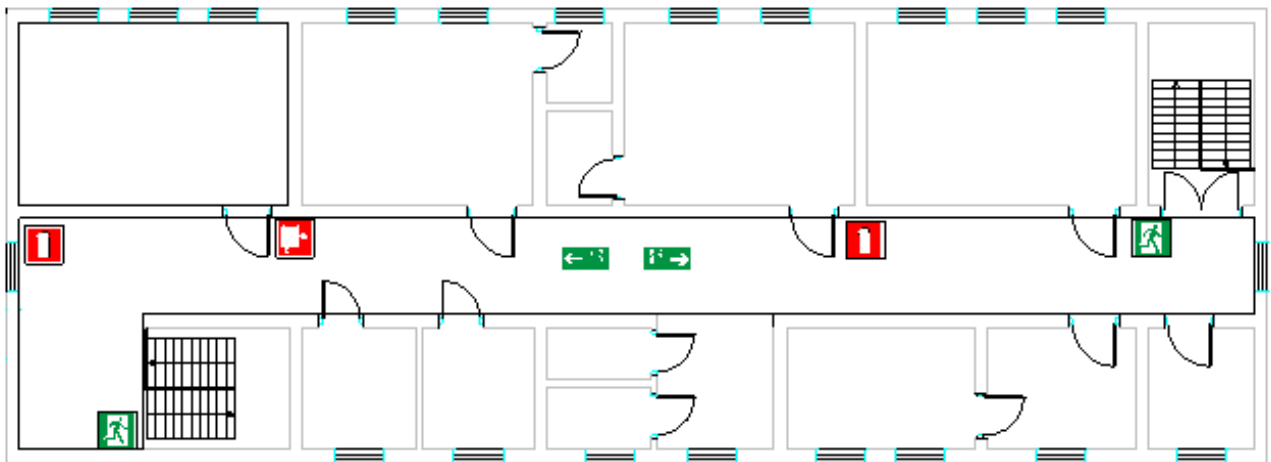
Next, we specify the subsequent points on the route, and once the command is complete,

the programme will draw two polylines in accordance with the set parameters.

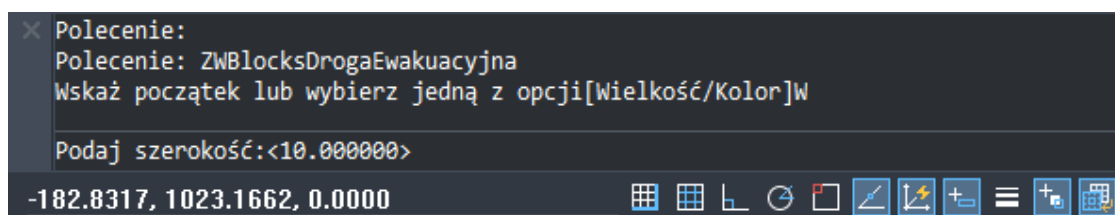


Evacuation road

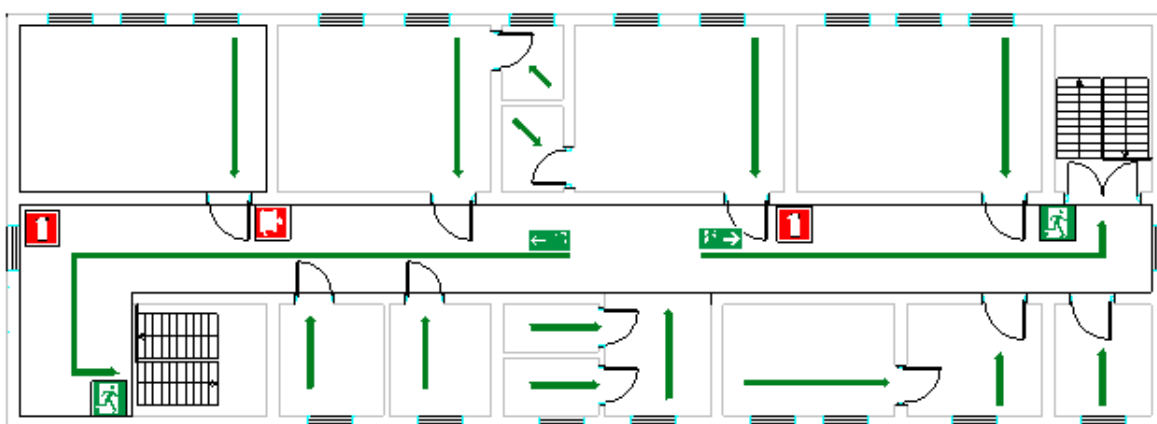
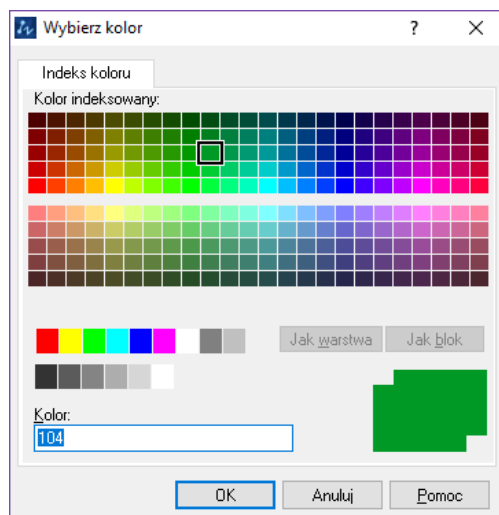
This function creates directional arrows for evacuation paths. After running the command, the user will be asked to point direction for evacuation route. Default arrow is green, with 10 units of width, but it can be changed in properties.



In order to change width of the arrow, click S, and type a new value, confirm with Enter.



In order to change colour, type C and choose a new colour, confirm with Enter



Communication

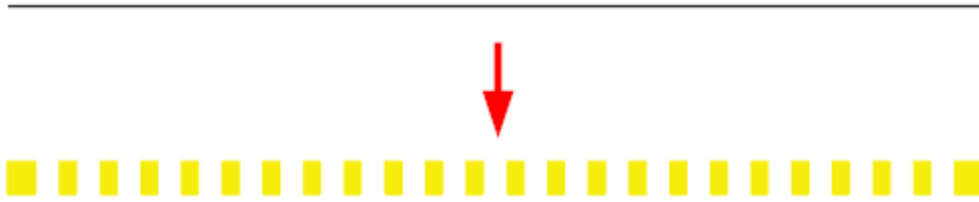
Floor marking tape - walkways and traffic lanes

This function allows you to draw or convert lines into a tape marking for crossings and traffic lanes. You must specify successive points to be drawn or select the option to specify the object to be converted.



Dashed floor marking tape - walkways and traffic lanes

This function allows you to draw or convert lines into a dashed tape marking for crossings and traffic lanes. You must specify successive points to be drawn or select the option to specify the object to be converted.



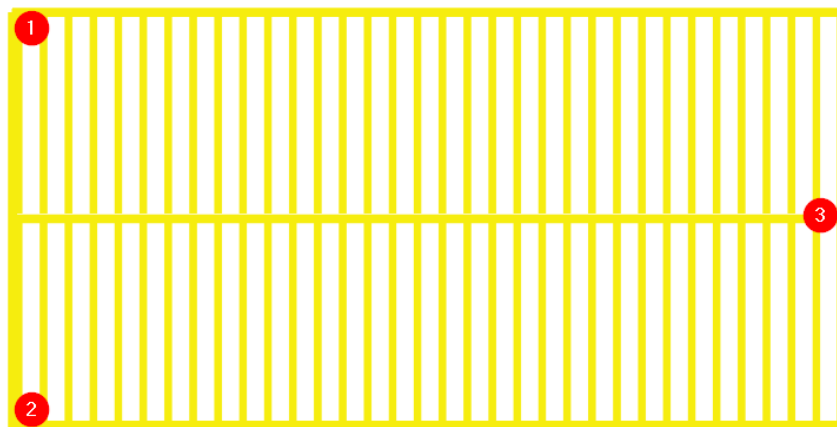
No-traffic zone

This function allows you to draw a no-entry zone. Select a polyline or choose the option for drawing in command line and select a rectangle.



Stairs

This function makes it easy to draw stairs. Select the starting point of the stairs (1), then the second point, which will determine the width (2). Finally, specify the end point (3).



The hatch scale can be changed manually after drawing.

Pedestrian crossing

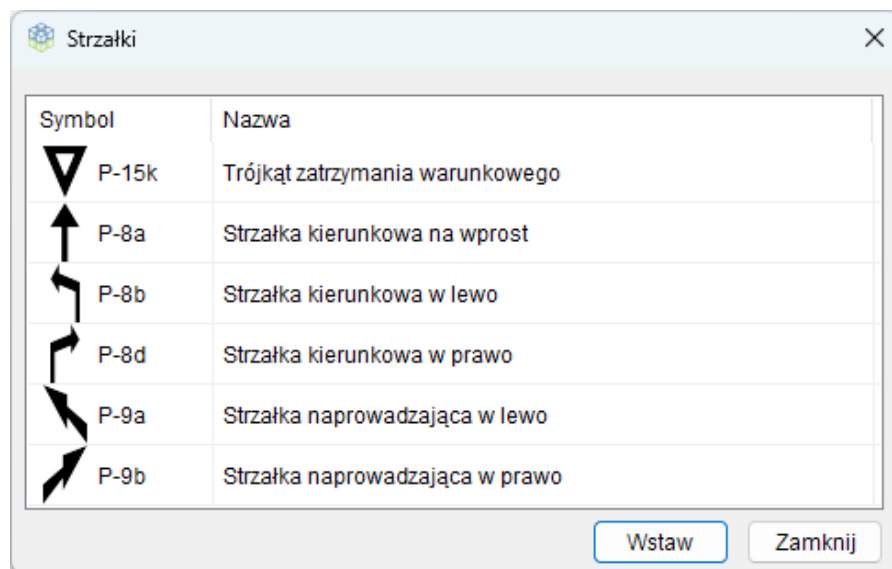
This function allows you to draw a pedestrian crossing easily. Simply select the starting point of the crossing and then the end point.



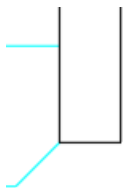
After drawing you can choose to remove the boundary.

Arrows

This command allows you to easily insert horizontal arrows onto a surface. Launch the function and select the appropriate symbol:



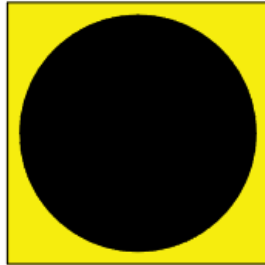
The programme will then ask you to specify a location on the drawing and a rotation angle. Once you have done this, you can insert further elements without interrupting the command.



Bumpers

Pole bumper

This function allows you to insert a bumper into your drawing with a single click.



Line bumper

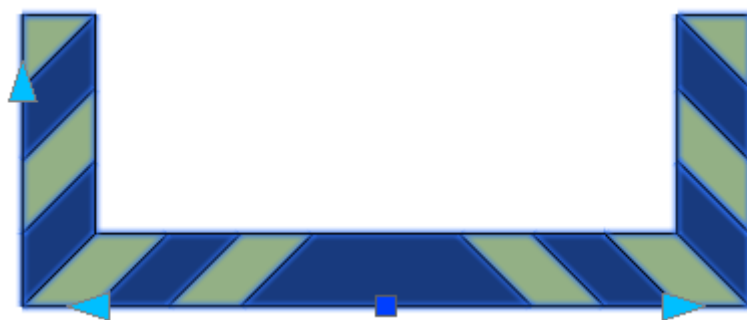
This function allows you to draw a line bumper or convert a line into one. You must specify successive points or select the option to specify the object to be converted.



Ramp

Ramp

This function allows you to insert a ramp with a single click. Simply select a location in the drawing and specify the angle of rotation. The inserted object is a parametric block.



Equipment

Floor marking tape – equipment area

This function allows you to draw or convert a line into a stripped tape that defines the area in which the equipment is located. You must specify successive points or select the option to select the object to be converted



The drawn tape is white, so it's worth changing the background colour if you have any display issues.

Floor marking tape – equipment area

This function allows you to draw or convert a line into a tape that defines the area in which the equipment is located. You must specify successive points or select the option to select the object to be converted.



The drawn tape is white, so it's worth changing the background colour if you have any display issues.

Components, finished products and waste

Floor marking tape – component storage area

This function allows you to draw or convert a line into a tape defining an area for component storage. You must specify successive points or select the option to specify the object to be converted.



Floor marking tape – finished goods storage area

This function allows you to draw or convert a line into a tape defining an area for finished product storage. You must specify successive points or select the option to specify the object to be converted.



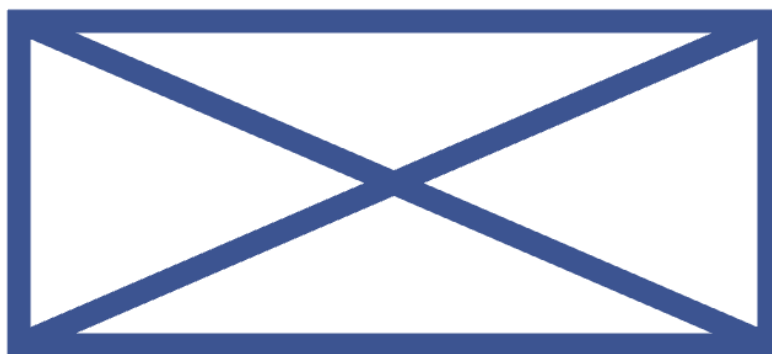
Floor marking tape – waste storage area

This function allows you to draw or convert a line into a tape defining an area for waste storage. You must specify successive points or select the option to specify the object to be converted.



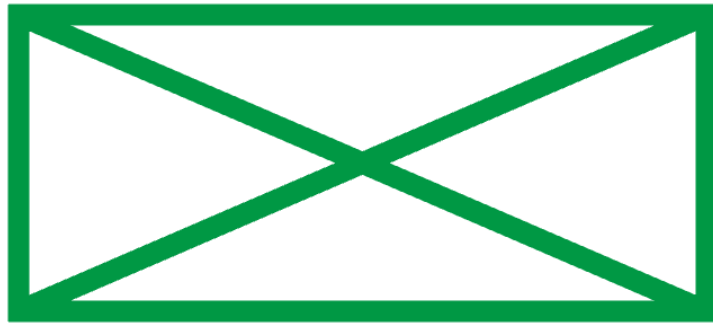
Component storage area

This function allows you to draw an area for storing components. Please specify the points at which the relevant rectangle is to be drawn.



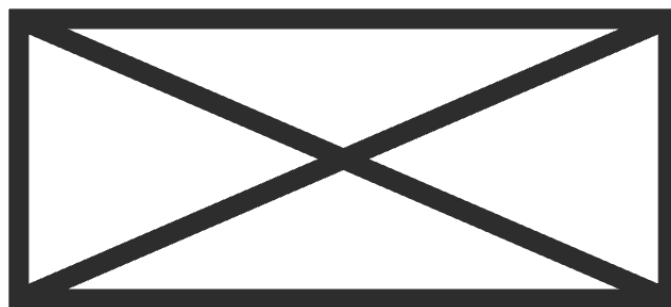
Finished goods storage area

This function allows you to draw an area for storing finished goods. Please specify the points at which the relevant rectangle is to be drawn.



Waste storage area

This function allows you to draw an area for storing waste. Please specify the points at which the relevant rectangle is to be drawn.



Control

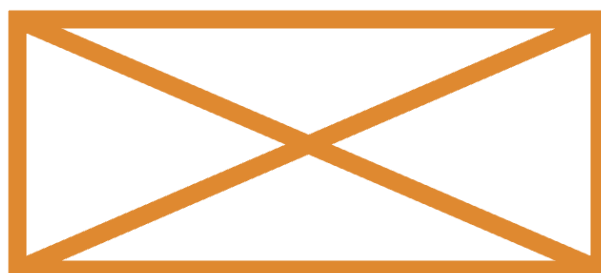
Floor marking tape – inspection materials area

This function allows you to draw or convert a line into a tape defining an area for inspection materials storage. You must specify successive points or select the option to specify the object to be converted.



Inspection materials area

This function allows you to draw an area for storing inspection materials. Please specify the points at which the relevant rectangle is to be drawn.



P.poż. i pierwsza pomoc**Floor marking tape – Fire safety hazard**

This function allows you to draw or convert a line into a tape defining an area for fire safety zone. You must specify successive points or select the option to specify the object to be converted.

**Fire safety area**

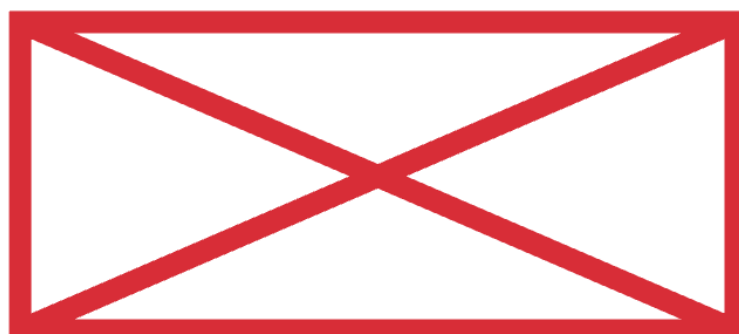
This function allows you to draw a fire safety area. Please specify the points at which the relevant rectangle is to be drawn.



You can change the hatch scale after you've drawn it. If you have trouble seeing it, it's worth changing the background colour.

Fire safety area

This function allows you to draw an area for fire safety area. Please specify the points at which the relevant rectangle is to be drawn.



Sorting

Taśma wyznaczająca pole sortowania przedmiotów zbędnych

This function allows you to draw or convert a line into a tape defining a sorting area. You must specify successive points or select the option to specify the object to be converted.



Dangerous areas

Floor marking tape – hazardous area

This function allows you to draw or convert a line into a tape defining a dangerous area. You must specify successive points or select the option to specify the object to be converted.



Hazardous area

This function allows you to draw a dangerous area. Please specify the points at which the relevant rectangle is to be drawn.

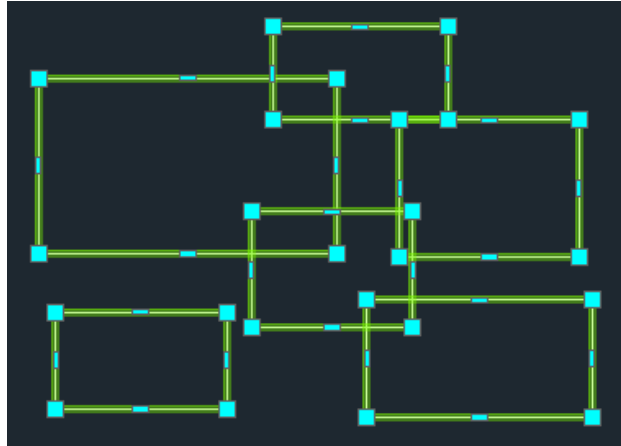


You can change the hatch scale after you've drawn it.

Settings

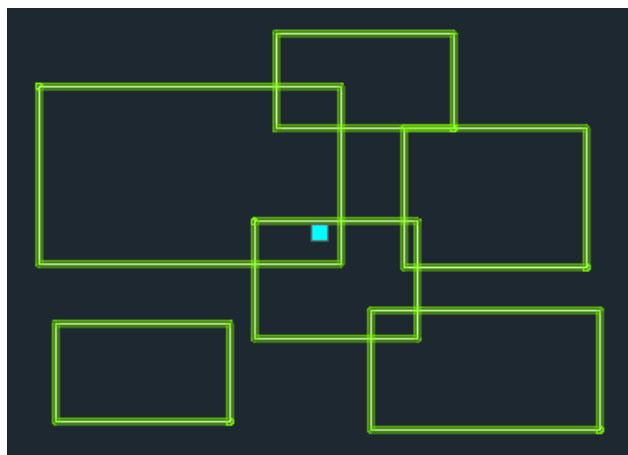
GroupDisplayMode:0

This function changes the way groups are displayed by controlling the **GROUPDISPLAYMODE** variable. This function sets the value to 0, displaying all object handles within a group.



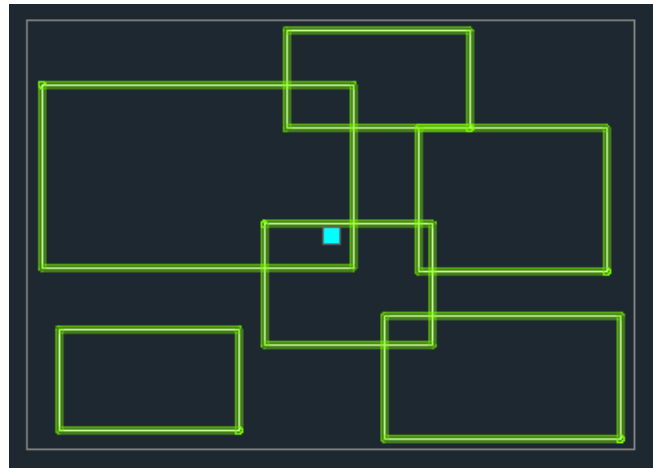
GroupDisplayMode:1

This function changes the way groups are displayed by controlling the **GROUPDISPLAYMODE** variable. This function sets the value to 1, displaying a single handle for moving the group.



GroupDisplayMode:2

This function changes the way groups are displayed by controlling the **GROUPDISPLAYMODE** variable. This function sets the value to 2, displaying a single handle for moving the group and a frame that outlines the objects.



ZWBHP settings

This function allows you to set the scale and line width options for objects drawn by the application.

