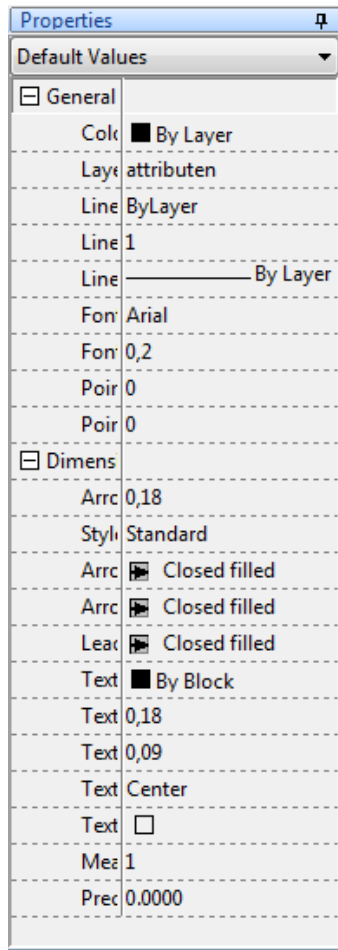
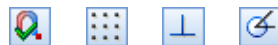
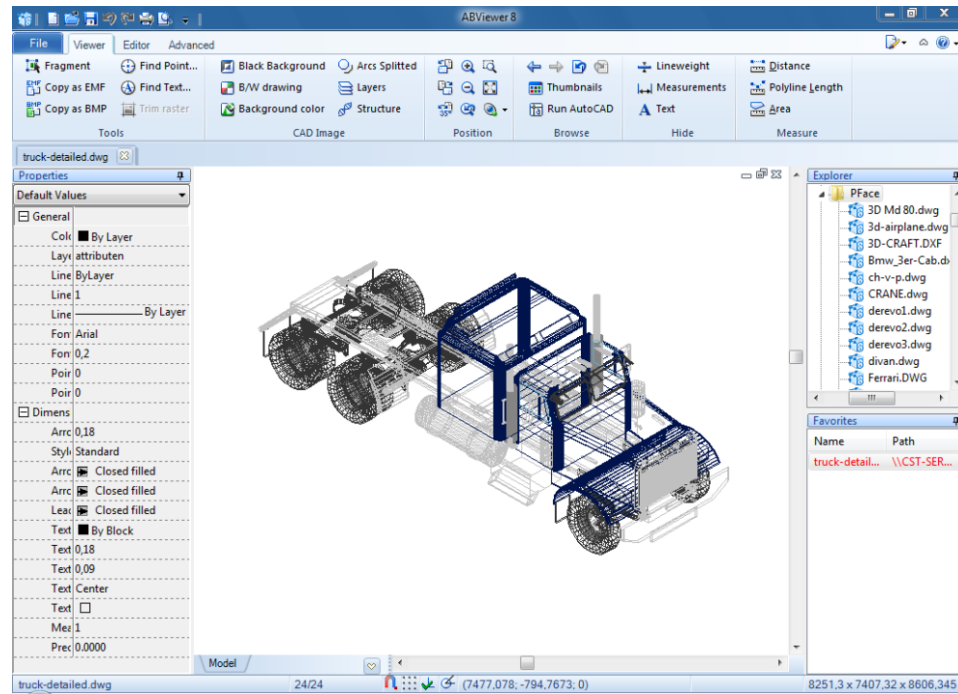


# The Main Window of ABViewer

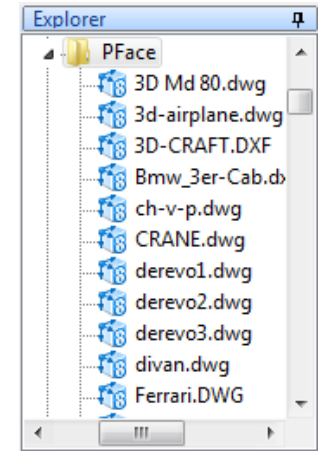
The **ribbon** facilitates searching for commands and provides you with a quick access to all the instruments of the program without overloading the working space with additional toolbars. All the commands are grouped according to their functions and are situated in the corresponding tab. By default there are four tabs: File, Viewer, Editor and Advanced. There is a possibility of switching to a classical view of menus and toolbars.



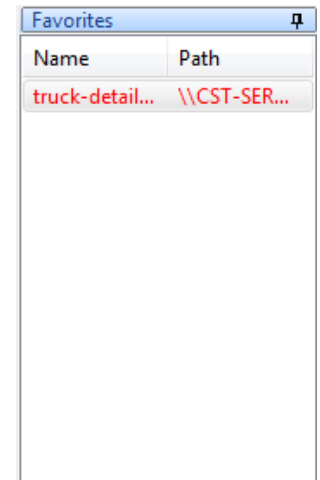
The panel **Properties** represents the properties of the chosen element and lets the user redefine them. At the moment when no entity is chosen it defines the properties of the element to be created.



Backup modes: **Snap, Grid, Ortho and Polar Tracking** help to switch snap on, to represent a grid with a specified step, to execute an orthogonal construction of objects and to turn the packup lines of tracking on. The modes under consideration are used while creating and editing the elements and fasten the process of creating the entities relative to some other elements of the drawing.



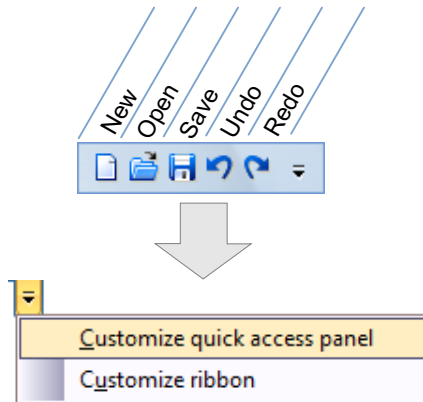
The panel **Explorer** is used to search for the files in the directories or to load them into the program window. It is possible to read files from ZIP archives.



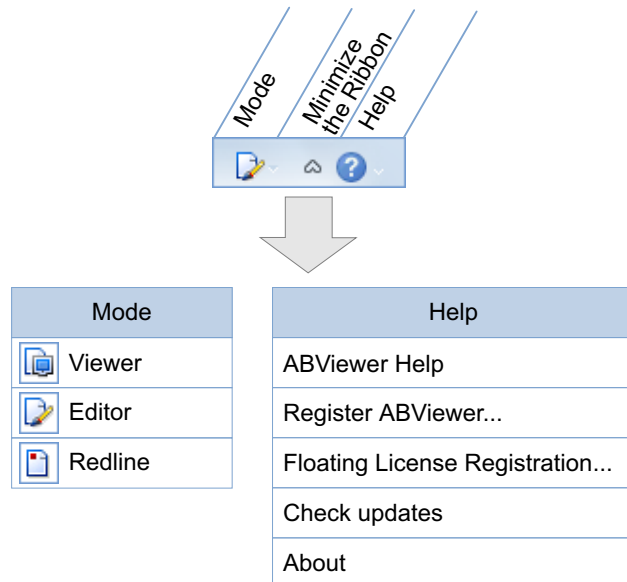
The panel **Favorites** is used to form a list of favorite files. This allows to print them without their preliminary opening in the program window.

# The Ribbon

In the left upper corner you can see the quick access panel. Pressing the down directed arrow activates a list of commands to get access to the dialog box of editing the ribbon and the quick access panel.



In the right upper corner of the program window there are the commands providing access to the help menu as well as allowing the user to choose the mode of the work and the registration of the program.

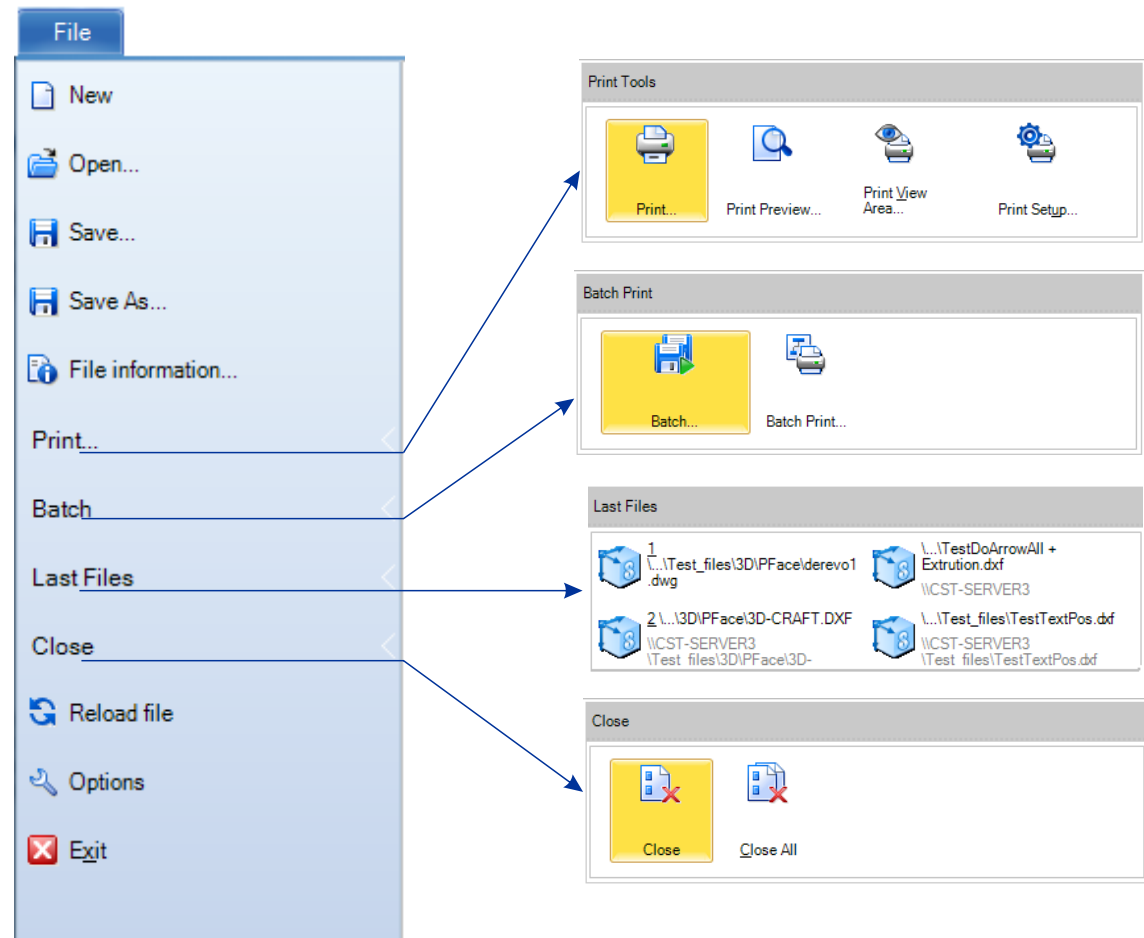


The File tab of the Ribbon contains commands, performed over the files of drawings like creating a new one or opening an existing drawing. Moreover this tab has instruments allowing to print and convert a file or a group of files.

The activation of the commands, which have an icon opposite to them leads to opening a corresponding dialog box, where additional settings are made. Such commands are Open, Save as..., Properties and Options.

Menu items, which don't have icons, are a group of commands. When they are chosen a list of commands contained in this group appears on the right of the item.

Such commands as New, Save, Reload File don't open dialog boxes and don't contain subcommands, they fulfill the operations of creating, saving and reloading the file in the window of the program

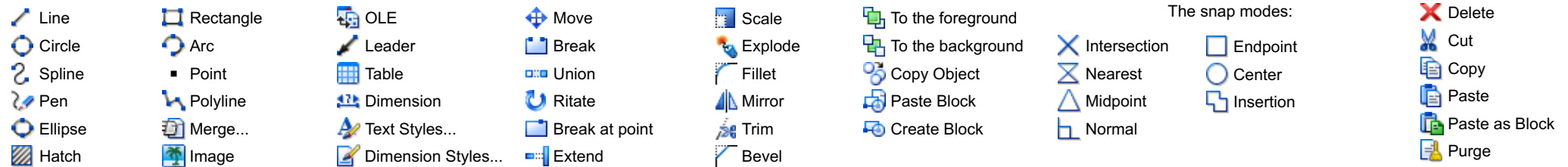
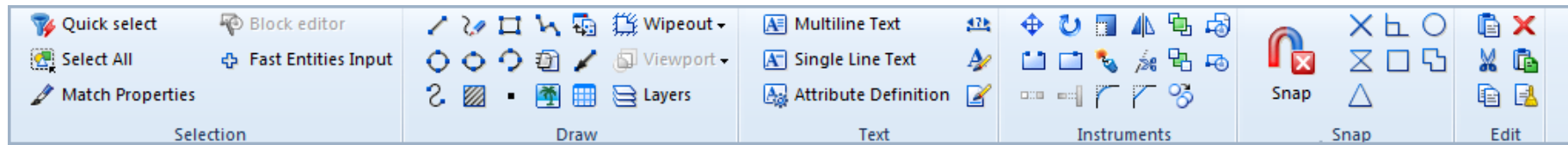


# The Ribbon

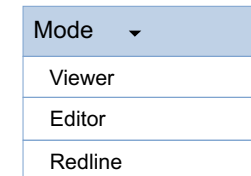
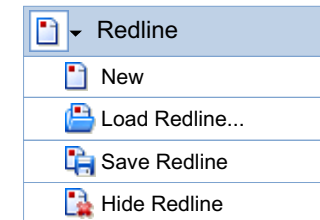
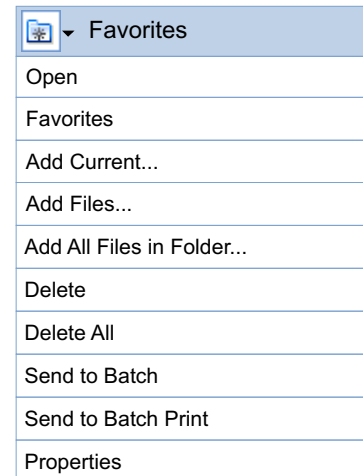
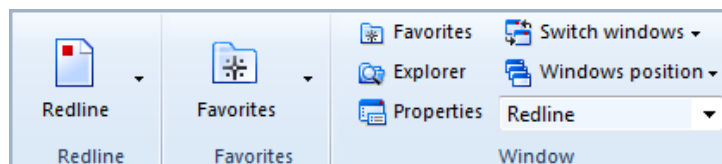
## Viewer Tab



## Editor Tab



## Advanced Tab

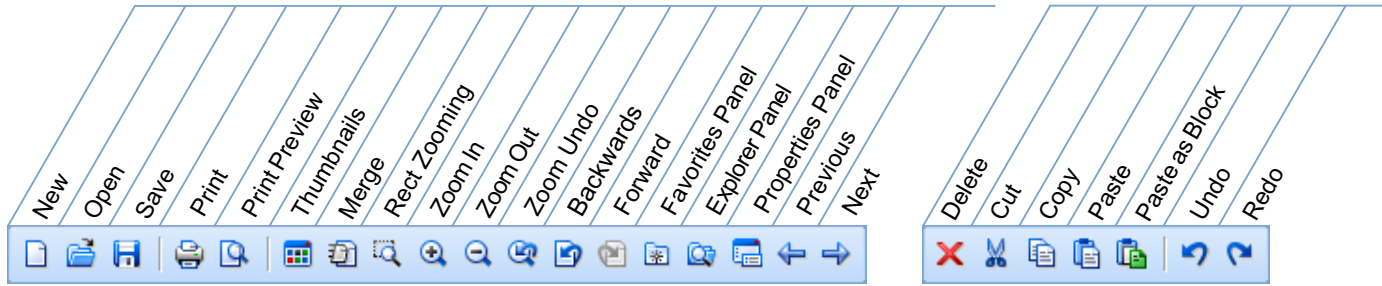


Advanced Tab contains a group of commands Redline. They are activated by switching to the mode Redline and allow to fulfill saving and loading the redline file as well as to manage the visibility of the markups in the current drawing.

The commands from the group "Favorites" allow to manage the list of favorite files.

In addition to that this panel also has the commands for the access to the floating panels "Favorites", "Explorer" and "Properties".

# The Classical View of the Instruments Panel



Standard

Edit

Commands, containing supplementary options. To get use of them press the down-directed arrow.



The command "Viewport".  
Supplementary Options include the methods of the Viewport area setting: rectangle, polyline, object



The command Wipeout.  
Supplementary Options include the methods of creating wipeout and define the visibility of its borders:

- rectangle, polyline
- show, hide



The command Text  
Allows to create:

- Multiline Text
- Single Line Text
- Attribute Definition



The command "3D Orbit".  
contains a set of standard orthogonal and isometric views. To return to the initial view there is a command "Initial View".  
It also allows to set the display the mode of 3D images viewing.

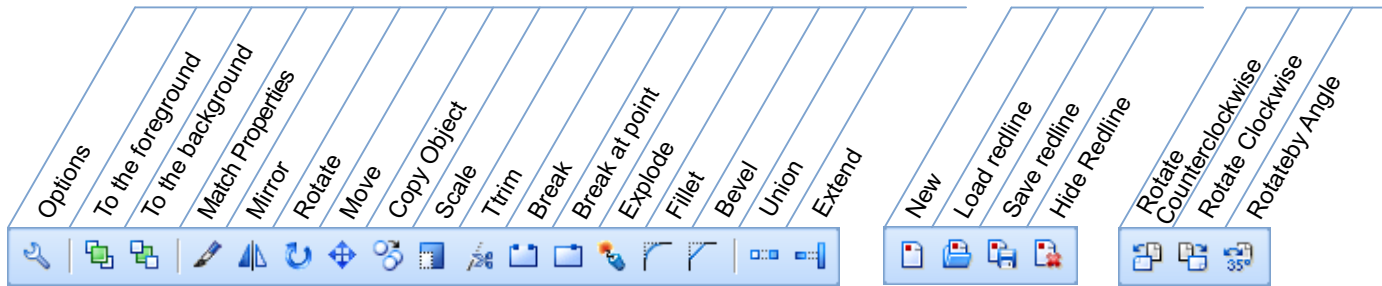


Mode

CAD Image

View and Select

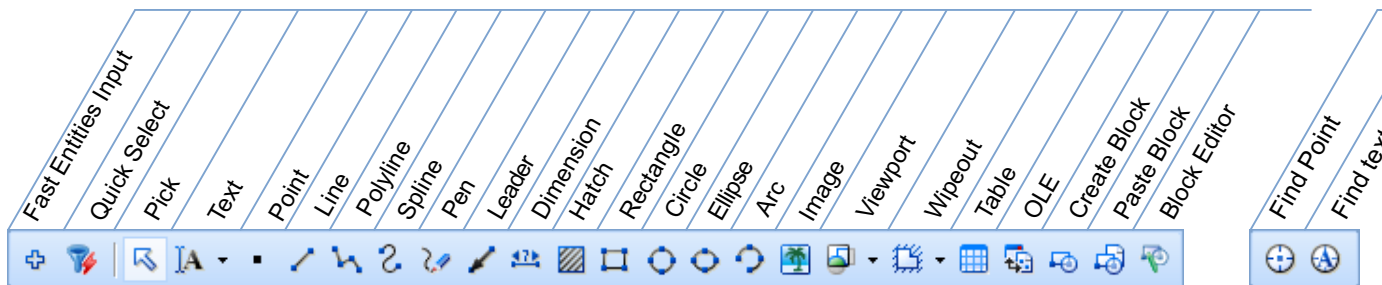
Measure



Instruments

Redline

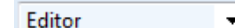
Rotation



Draw

Search

The choice of the program mode: Viewer, Editor, Redline.




# Positioning of the Drawing in the Program Window.

## Navigation

The mouse, the keyboard and the scroll bars are used.  
 With the help of the keyboard and the scroll bars the navigation is fulfilled only vertically or horizontally.  
 The pointing device "Mouse" allows to fulfill navigation in any direction in the screen plane.

## Scaling

The mouse wheel is mostly used, the tools located in the section **Position** of the tab **Viewer** are also made use of.



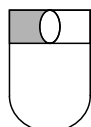
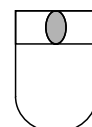
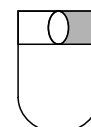
**Rect Zooming.** The drawing part being scaled is marked with the selection rectangle with the help of the left mouse button.

**Fit drawing to window.** Scales the drawing according to the size of the view area. Double click on the mouse wheel leads to the same result.

**Zoom in.** A single zoom in/out of the drawing relative to the center of the view area. The buttons "+" and "-" on the keyboard fulfill the same commands.

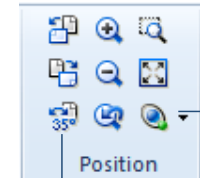
**Zoom out.**

**Zoom undo.** Reverses the last scaling coefficient applied to the drawing.

Element selection	Scaling	Scrolling
		
One click on the element selects it. <b>Shift + click on the elements</b> allows to select several elements. <b>Ctrl+holding pressed+drag</b> copies an element <b>Ctrl + Rectangular selection:</b> zoom in.	<b>Turning the mouse wheel</b> changes the scale. <b>Double click</b> scales the drawing to fit the window. <b>Holding pressed</b> scrolls the drawing in the program window.	<b>Holding pressed:</b> scrolling the drawing in the program window  <b>A single click</b> calls the contextual menu of the chosen element

## Rotation, 3D Orbit

The keyboard, the instruments of the panel **Position** of the **Viewer** tab are used.



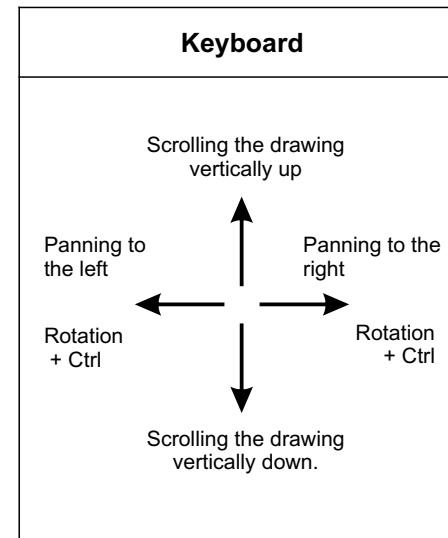
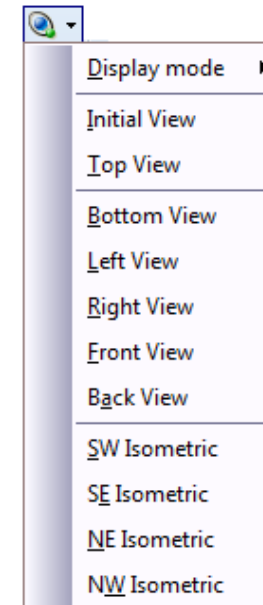
**3D Orbit.** The command gives access to the list of the standard orthogonal and isometric views, allows to set the display modes for the 3D models of the drawings and calls the 3D Orbit axis.

**Rotate Counterclockwise** Rotates the drawing counterclockwise or clockwise by the 90 degrees angle correspondingly. The combinations "Ctrl+left arrow" and "Ctrl+right arrow" on the keyboard fulfill the same commands.

**Rotate Clockwise**

**Rotate by angle.** Allows to rotate the image by a certain angle relative to the axes X, Y, Z. The parameters of the rotation are entered into the dialog box "Rotate by Angle", which opens automatically after the command is called.

Clicking in the icon of the instrument **3D Orbit** activates the axis **3D Orbit**.  
 Clicking on the arrow next to the icon calls the list which is depicted on the image below.

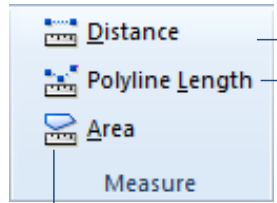
Display mode ▾

- Initial View
- Top View
- Bottom View
- Left View
- Right View
- Front View
- Back View
- SW Isometric
- SE Isometric
- NE Isometric
- NW Isometric

# Measuring the Elements of the Drawing

## General Information

Measuring elements is fulfilled with the help of a group of instruments situated under the Section **Measure** of the tab **Viewer**. The results of the performed measurements are displayed in the panel **Measure**.



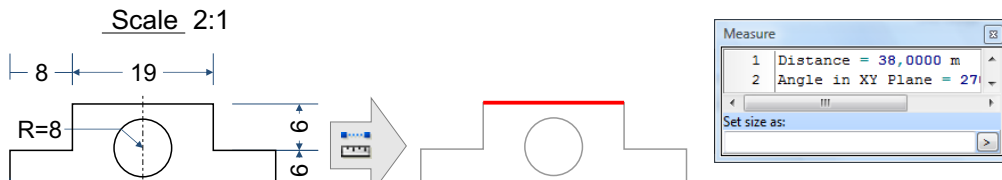
**Distance** measures distance between two selected points on the drawing.

**Polyline length** allows measuring a curvilinear outline as well as the angle formed by the first three apexes of the specified outline.

**Area** allows measuring the area and the perimeter of the outline marked with black while measuring.

At the moment when the instrument **Distance** is selected, in the bottom part of the panel appears the field "Set size as...". A new value for the measured distance is entered into this field, on the basis of this value the scale factor is automatically calculated as a ratio of the entered value to the real value of the measured distance.

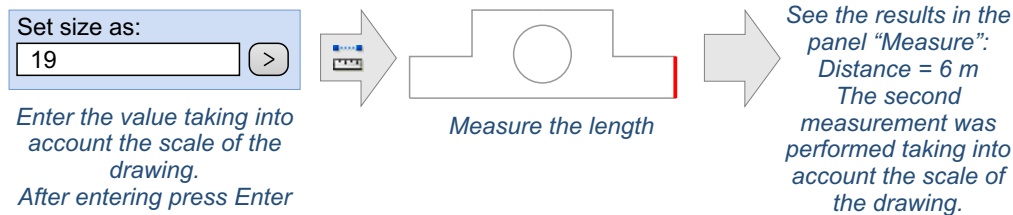
An example of using the function "Set size as...":



Scale 2:1

The initial drawing

Measure the length of the detail side marked with red ( $l=19$ ) and view the results in the Measure panel (38 units as the scale of the drawing is 2:1)



Set size as:

19

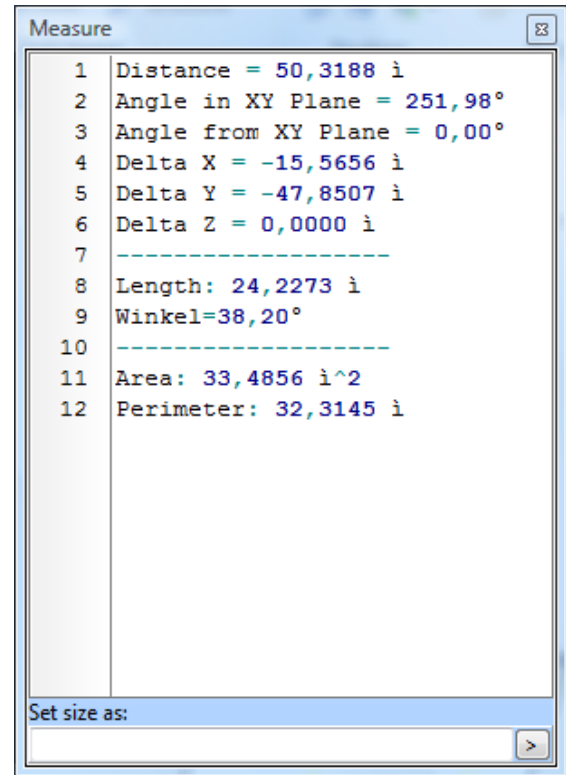
Enter the value taking into account the scale of the drawing. After entering press Enter

Measure the length

See the results in the panel "Measure": Distance = 6 m  
The second measurement was performed taking into account the scale of the drawing.

Preliminary settings for the measuring instruments are performed in the tab **Measure** of the dialog box **Options** which can be called with the help of the hotkey **Ctrl+Shift+F11**.

## The Panel "Measure"



Parameters of the instrument "Distance".

Parameters of the instrument "Polyline length"

Parameters of the instrument "Area".

The function "Set size as...". It appears only for the instrument Distance.

## The context menu of the panel "Measure".


The data in the panel received from the drawing after performing the measurements can be selected with the left mouse button and then copied. Apart from that clearing the panel is provided.

All these commands are represented in the contextual menu of the panel "Measure", which is called with the help of the right mouse click.

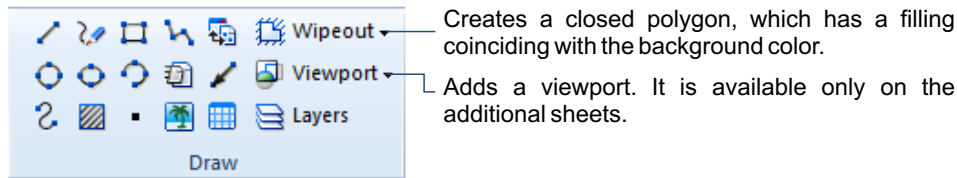
Copy	Ctrl+C	— copies the selected text.
Select all	Ctrl+A	— selects all the values in the panel received after the measurements.
Clear	Del	— clears the panel " <b>Measure</b> ".
Go to...	Alt+G	— sets the cursor to the beginning of the specified line according to their numeration in the panel " <b>Measure</b> ".
Precision		— sets the precision of rounding the data that were received from the drawing.

# Creating a New File.

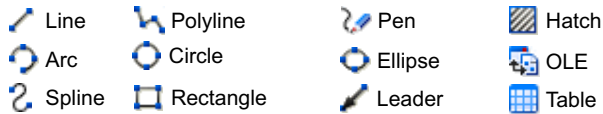
To create a new file take use of the command New which can be activated by the following means:

- **File Tab > New**
- Quick Access Panel > 
- Ctrl+N

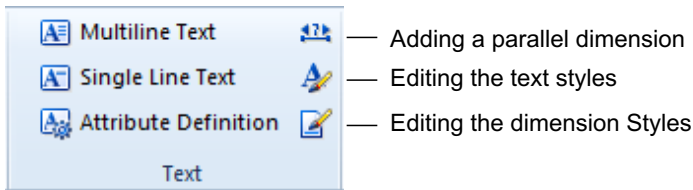
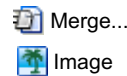
Adding elements of the drawing is performed with the help of the drawing instruments which are situated in the section **Draw** of the tab **Editor**. The instruments for adding text and dimensions can be found nearby under the section **Text**.



## Geometrical Objects



## External Links:



The precision of drawing is reached with the help of entering the necessary values into the window of the dynamic input and snap, which provides the precise abutment of the drawing points to the objects on the drawing.

## The Dynamic Input

The Usage of the dynamic input allows to achieve precision while creating and editing objects.

After choosing an entity in the section Draw you will see the window of dynamic input near the mouse cursor in the working field where you can enter the coordinates of the first point of an object. One can enter additional parameters: length, angle, height of the chord and others.

### The Usage

**Tab** switches to the next field and fixes the changes.  
- if there were no changes in the field it switches to the next field without performing any changes.  
- if the value in the field was changed, while switching to the next field it applies the edited data.

**Shift+Tab** acts like the button **Tab** but switches to the field above.  
releases a lock from the fields the values of which were fixed.

**Backspace** It is also used for the forced block of the values regardless of the fact whether they were changed or not.

**Enter** Confirms creating an entity point. Accepts the current values in the dynamic input form regardless of the fact whether they were fixed or not.

For example, this is the window of the dynamic input for the entity "Line":

