DS Viewer

User's Guide

Version 5 Release 19

Special Notices

CATIA® is a registered trademark of Dassault Systèmes.

Protected by one or more U.S. Patents number 5,615,321; 5,774,111; 5,821,941; 5,844,566; 6,233,351; 6,292,190; 6,360,357; 6,396,522; 6,459,441; 6,499,040; 6,545,680; 6,573,896; 6,597,382; 6,654,011; 6,654,027; 6,717,597; 6,745,100; 6,762,778; 6,828,974; 6,904,392 other patents pending.

DELMIA® is a registered trademark of Dassault Systèmes.

ENOVIA® is a registered trademark of Dassault Systèmes.

SMARTEAM® is a registered trademark of SmarTeam Corporation Ltd.

Any of the following terms may be used in this publication. These terms are trademarks of:

Java	Sun Microsystems Computer Company
OLE, VBScript for Windows, Visual Basic	Microsoft Corporation
IMSpost	Intelligent Manufacturing Software, Inc.

All other company names and product names mentioned are the property of their respective owners.

Certain portions of this product contain elements subject to copyright owned by the following entities:
Copyright © Dassault Systemes
Copyright © Dassault Systemes of America
Copyright © D-Cubed Ltd., 1997-2000
Copyright © ITI 1997-2000
Copyright © Cenit 1997-2000
Copyright © Mental Images Gmbh & Co KG, Berlin/Germany 1986-2000
Copyright © Distrim2 Lda, 2000
Copyright © Institut National de Recherche en Informatique et en Automatique (INRIA
Copyright © Compaq Computer Corporation
Copyright © Boeing Company
Copyright © IONA Technologies PLC
Copyright © Intelligent Manufacturing Software, Inc., 2000
Copyright © SmarTeam Corporation Ltd
Copyright © Xerox Engineering Systems
Copyright © Bitstream Inc.
Copyright © IBM Corp.
Copyright © Silicon Graphics Inc.
Copyright © Installshield Software Corp., 1990-2000
Copyright © Microsoft Corporation
Copyright © Spatial Corp.
Copyright © LightWork Design Limited 1995-2000
Copyright © Mainsoft Corp.
Copyright © NCCS 1997-2000
Copyright © Weber-Moewius, D-Siegen
Copyright © Geometric Software Solutions Company Limited, 2001
Copyright © Cogito Inc.
Copyright © Tech Soft America
Copyright © LMS International 2000, 2001

Raster Imaging Technology copyrighted by Snowbound Software Corporation 1993-2001

CAM-POST ® Version 2001/14.0 © ICAM Technologies Corporation 1984-2001. All rights reserved

The 2D/2.5D Display analysis function, the MSC.Nastran interface and the ANSYS interface are based on LMS International technologies and have been developed by LMS International

ImpactXoft, IX Functional Modeling, IX Development, IX, IX Design, IXSPeeD, IX Speed Connector, IX Advanced Rendering, IX Interoperability Package, ImpactXoft Solver are trademarks of ImpactXoft. Copyright ©2001-2002 ImpactXoft. All rights reserved.

This software contains portions of Lattice Technology, Inc. software. Copyright © 1997-2004 Lattice Technology, Inc. All Rights Reserved.

Copyright © 2005, Dassault Systèmes. All rights reserved.

Web Viewer

Navigating
Printing
Annotating
Measuring
Sectioning
Managing Products
Modifying 3D Viewer Settings
Modifying 2D Viewer Setting
Customizing Toolbar Layout
Accessing Tessellation Error Messages
Tablet PC Support
Web Viewer Toolbars
Web Viewer Shortcut Menu

Navigating

This section contains the following information about understanding Navigating:

About Navigating
When Navigating
How to Navigate
How to Navigate in Examine Mode
How to Navigate in Walk Mode
How to Navigate in Fly Mode
How to Zoom
How to Zoom into a Designated Area
How to Pan
How to Rotate
How to Fit All in Viewer
How to Display the Previous View
How to Display the Next View
How to Set the Shading with Material and Edges
How to Use Predefined Views

About Navigating

The navigation tool allows you to examine documents in three different modes: Examine, Walk, and Fly Mode. You also have the features of zooming, panning, rotating, view displays, and visualization.

Navigating allows you to manipulate a document in the viewer, providing different visual perspectives. You can also utilize the ViewerSpace, which provides additional viewpoints.

When Navigating

The **Examine Mode** allows you to examine a document from two different perspectives, internal and external. You can also change your orientation around objects in the document.

The **Walk Mode** allows you to navigate about a document along the horizontal plane. A simulation of walking through a structure, moving forward, backward, turn right and turn left.

The **Fly Mode** allows you to move about the document along the horizontal view plane. You have the options to move upward, downward, forward, backward, turn right and turn left.

Zooming allows you to move the document closer or farther away in the view space. It is also possible to select a specific area and expand the view.

Panning is a feature that allows you to move across the ViewerSpace.

Rotating is a feature that allows you to move documents about the vertical and horizontal axes.

Fitting All In Viewer displays the entire set of documents in the full ViewerSpace.

Displaying the Previous View allows you to manipulate documents. You can save views as they are created and retrieve in the current view.

Displaying the Next View allows access to any view that was created subsequently to the current view.

Set the Shading with Material and Edges is a feature that allows you to change the visual characteristics of the document in the ViewerSpace.

This feature provides different perspectives of the document.

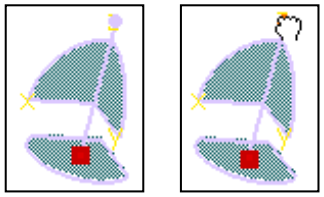
Predefined Views is a feature allowing predefined view points to a document in the ViewerSpace.

How to Navigate

The following directions and information will demonstrate the navigating feature in a document.

There is now a Compass in the Web Viewer.

- The Compass serves to indicate the orientation of your viewer content.
- It can also be used to rotate the viewpoint by dragging the orientation point.



When navigating in 3D, the Navigation Mode enables you to examine your documents in three different modes: Examine, Walk and Fly Mode.

When you enter either Walk or Fly mode, the projection mode is automatically set to **perspective**. While you are navigating in these modes, it will not be possible to modify the projection mode.

How to Navigate in Examine Mode (3D only)

Examine is the default navigation mode. You can examine your document as you would from the outside by moving around the document's perimeter (rotate), or as you would from within, modifying your orientation (pan) or moving closer to different objects (zoom in, zoom out).

1. In the **View** toolbar, click the **Navigation Mode** selection button and select the **Examine Mode** button from the proposed navigation list.
2. Examine your document as desired using the **Zoom**, **Rotate** and **Pan** commands.

How to Navigate in Walk Mode (3D only)

In **Walk mode**, you can walk forward and backward as well as turn right or left as you walk along the horizontal plane.

Note: it is easier to walk through documents in contexts where you would find a virtual ground, e.g. in buildings, planes or ships.

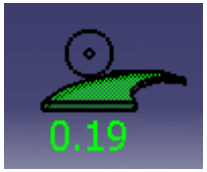
1. Click the **Navigation Mode** selection button and select the **Walk Mode** button from the proposed icon list.

2. Press and hold down the Middle Mouse Button to define the horizontal view plane.
   A green arrow appears and is oriented in the direction in which you will walk.

3. While holding the button down, drag to the left or to the right, to determine the direction in which you wish to walk.
   The arrow is re-oriented in the direction in which you will walk.

4. When you are oriented in the direction in which you wish to walk, click the Left Mouse Button while still holding the Middle Mouse Button down to begin walking.
   You begin to walk forward in the chosen direction.
5. Still holding the Middle Mouse Button down, drag left or right to change direction.
   Dragging to the left lets you view the object as if you had turned your head to the left; dragging to the right produces the same effect in the opposite direction.
6. Drag the cursor back towards the center of the view to continue your walk forward in the new direction.
7. Click the Left Mouse Button again to reverse direction.
   You begin to walk backwards, away from the target.

Pressing the Page Up and Page Down keys modifies your speed. The speed is indicated under the green arrow and in the status bar.



How to Navigate in Fly Mode (3D only)

In fly navigation mode, you can move upward or downward on any horizontal view plane as you move forward or backward, turn right or left.

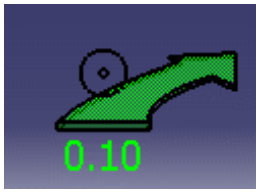
1. Click the Navigation Mode selection button and select **Fly Mode** button from the proposed icon list.

2. Press and hold down the Middle Mouse button to define the initial horizontal view plane.
   A green arrow indicating the direction in which you will be flying appears along with a circular target located at the center of the view.

3. While holding the button down, drag to the left or to the right to determine the direction in which you wish to fly.
   The arrow is re-oriented in the direction in which you will walk.

4. When in the direction in which you prefer to fly, click the Left Mouse button while still holding the middle button down to begin flying.
   You begin to fly forward in the chosen direction.
   The speed at which you first approach the object depends on the initial distance from the object, and is calculated automatically. The speed is optimized so that you reach your target in approximately 10 seconds.
5. While holding the Middle Mouse button down, drag left or right, or up or down, to change direction.
   You fly in the direction in which you drag. The further you drag away from the center of the view, the greater the change in direction.
6. Drag the cursor towards the center of the view to continue flying forward in the new direction.
7. Click the Left Mouse button again to reverse direction.
   You begin to fly backwards, away from the target. When flying backwards, the up and down directions are reversed.

Pressing the Page Up and Page Down keys modifies your speed. Speed is indicated in the status bar.



How to Zoom

Zooming enables you to move closer to the documents that you are viewing in the ViewerSpace or to move further away.

1. Click **Zoom In Out** button and drag upward to zoom in or downward to zoom out. By using the Zoom button, you can move closer or further away from the content of the viewer.

In Examine mode, you can use the following shortcut to zoom interactively:

1. Press and hold the Middle Mouse button.
2. Click and release the Left Mouse button.
3. Release the Left Mouse button.
4. Drag the pointer upward to zoom in or downward to zoom out.
5. Release the left mouse button to discontinue.

How to Zoom into a Designated Area

Zooming into a designated area enables you to draw a rectangle around the portion of the document that you wish to zoom. That portion will then fill the entire ViewerSpace.

1. Click the **Zoom Area** button.
2. Hold down the Left Mouse Button and drag the mouse downward and toward the right in order to designate the area into which you wish to zoom.
   A rectangle indicates the designated area.
3. Release the left mouse button. You will immediately zoom into the designated area upon release. The designated area will fill the entire ViewerSpace.

How to Pan

Panning enables you to move transversally across the ViewerSpace.

1. Click the **Pan** button button.
2. Press the Left Mouse button and drag the pointer to the left or to the right.
   Your eye moves transversally left when you drag the pointer to the right or transversally right when you drag the pointer to the left.
3. Release the left mouse button to discontinue.

In Examine mode, you can use the following shortcut to pan interactively:

1. Press and hold the Middle Mouse button.
2. Drag the pointer vertically or horizontally to pan across the document.
3. Release the left mouse button to discontinue.

How to Rotate (3D only)

Rotating enables you to turn your documents around the vertical or horizontal axis.

Note: the buttons in this documentation are presented only to facilitate the communication of how to execute the given functionality. All buttons in your user interface will be defined by you.

1. Click the **Rotate** button.
2. Press the Left Button and drag the pointer vertically to rotate the eye around the horizontal axis or horizontally to rotate the eye around the vertical axis.
3. Release the Left button. *The eye is rotated accordingly.*

In **Examine Mode**, you can use the following shortcut to rotate interactively:

1. Press and hold the Middle Mouse button.
2. Press and hold the Left Mouse button.
3. Drag the pointer vertically or horizontally to rotate the eye around the horizontal or vertical axis.
4. Release both buttons to discontinue.

How to Fit All in Viewer

Fit All in Viewer enables you to reframe the entire set of documents to fit in the ViewerSpace while simultaneously maximizing the use of the ViewerSpace space.

Click the **Fit All In** button.
The entire document or set of documents is reframed to fit in the ViewerSpace.

How to Display the Previous View

As you manipulate your documents, the different views you create are saved in a stack that can contain as many as twenty views. You can access any view in the stack that was created previously to the current view.

Click the **Previous View** button. *The previous view appears.*
You can click the **Previous View** button repeatedly in order to access any of the previous views in the stack in the inverse order of their creation.

How to Display the Next View

As you manipulate your documents, the different views you create are saved in a stack that can contain as many as twenty views. You can access any view in the stack that was created subsequently to the current view.

Click the **Next View** button. *The next view appears.*
You can click the **Next View** button repeatedly in order to access any of the subsequent views in the stack in the order of their creation.

How to Set the Shading with Material and Edges (3D only)

You can set the visualization mode of the document in the ViewerSpace.

Click the **Shading with Material and Edges** button and choose a visualization mode from the proposed list of buttons which represent the following visualization modes:

Wireframe (NHR)

Shading (SHD)

Shading with edges

Shading with edges and hidden edges

Shading with material

Shading with material and edges

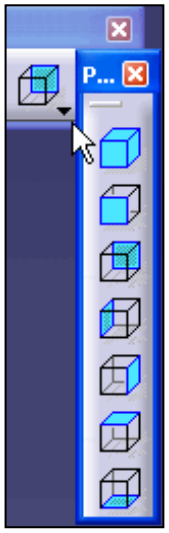
The visualization mode of the document in the ViewerSpace changes accordingly.

The button appearing in the toolbar will correspond to the current visualization mode.

How to Use Predefined Views (3D only)

The **Predefined Views** option allows you to apply pre-defined viewpoints to a document in the 3D viewer (i.e.: **Top**, **Bottom**, **Left**, **Right**, **Front**, **Rear**, and **Isometric**).

The **Predefined Views** button is available on the horizontal tool bar. When selected the sub-command set of options will appear.



Isometric View

Front View

Back View

Left View

Right View

Top View

Bottom View

When you click on each viewpoint, the 3D document will reposition to the selected view.

Note: This is only available in the 3D viewer.

Printing

This section contains the following information about understanding Printing:

About Printing

When Printing

How to Choose the Printer

How to Modify the Page Setup.

How to Modify the Print Options

How to Preview the Page to be Printed

How to Modify Printer Properties

How to Launch the Print

About Printing

The printing feature provides you with the capability of printing documents with multiple graphic options. You can customize the printed output depending upon the presentation requirements.

When Printing

You have several print set-up options prior to printing a document. The printer selection, print scale, and document position on the sheet are accessible in the set-up.

There are several page set-up options:

- paper size
- margins
- orientation
- preview

The user also has several printing options:

- color
- print quality
- line thickness - available on HPGL driver / printer only

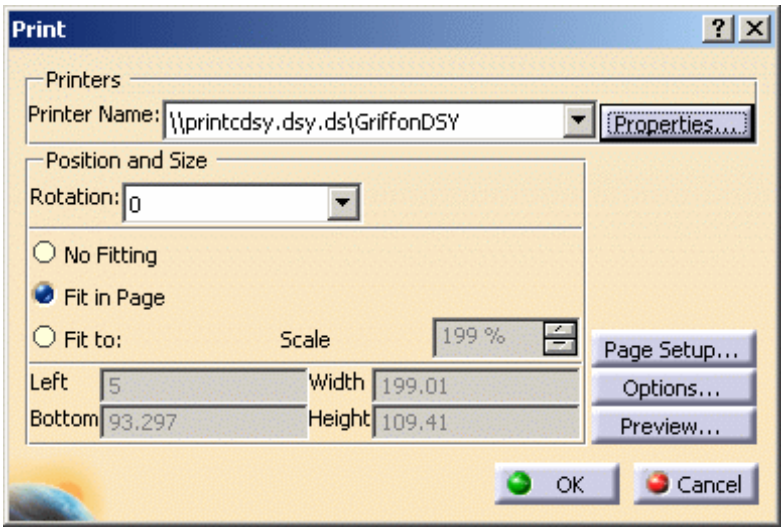
Note: The buttons in this documentation are presented only to facilitate the communication of how to execute the given functionality. All buttons and icons in the user interface will be defined by you.

How to Choose the Printer

You can choose a printer by following the steps below:

1. Click the **Print** button. *The **Print** dialog box appears.*

   The **Image Size** is presented for information only.



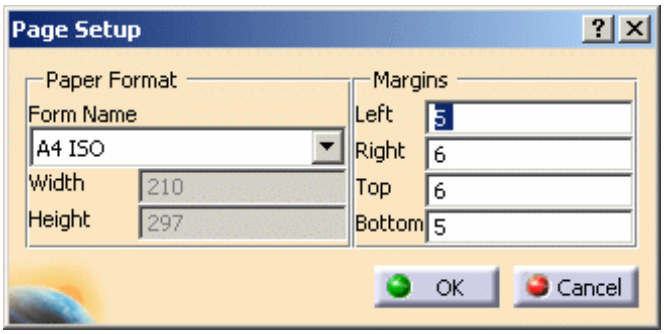
2. To choose a printer, click the **Printer Name** selection button and choose a printer from the proposed list.

3. To modify the **Scale**, click either the **No Fitting** option, the **Fit in Page** option or the **Fit To** option (fit to percentage of the page). If you choose the **Fit To** option, enter the desired percentage of the page in the **Fit To** text-entry field.
4. To modify the **Position**, enter the desired left offset in the **Left** text-entry field and the desired bottom offset in the **Bottom** text-entry field.
5. To modify the **Rotation**, click the **Rotation** selection button and choose one of the values from the proposed list (Rotation: 0, Rotation 90, Rotation 180 or Rotation 270).

How to Modify the Page Setup

You can modify the page setup by following the steps below:

1. Click the **Page Setup** button from the **Print** dialog box. *The **Page Setup** dialog box appears.*

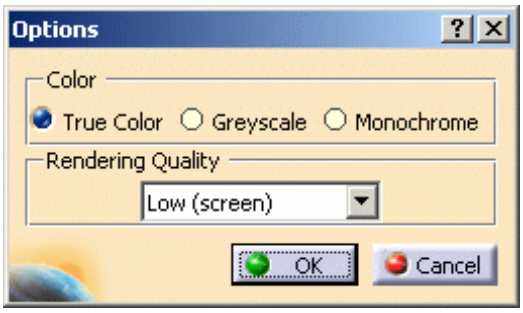


2. To modify the **Paper Size**, enter the desired width in the **Width** text-entry field and the desired height in the **Height** text-entry field.
3. To modify the **Margins**, enter the desired **Left**, **Right**, **Top** and **Bottom** offsets in the corresponding text-entry fields.
4. Click **OK** to validate.

How to Modify Print Options

You can modify the print options by following the steps below:

1. Click the **Options** button from the **Print** dialog box. *The **Options** dialog box appears.*

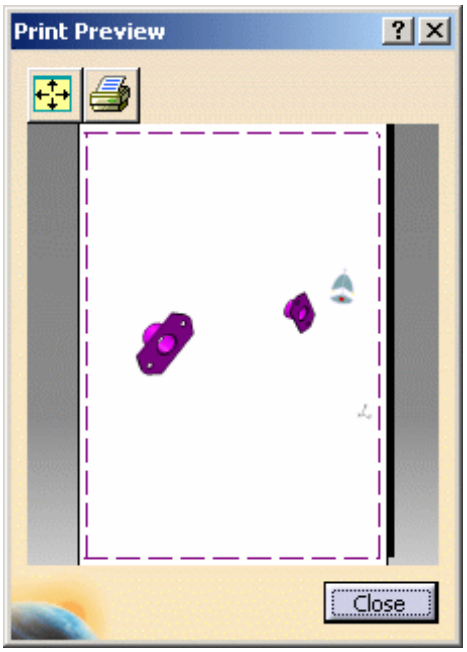


2. To modify the **Color**, choose one of the options (True Color, Grayscale, Monochrome) by clicking the corresponding option button.
3. To modify the **Rendering Quality**, click the **Rendering Quality** selection button and choose one of the values from the proposed list (Low, Medium, High).
4. Click **OK** to validate.

How to Preview the Page to be Printed

You can preview the page by following the steps below:

1. To preview the page to be printed, click the **Preview** button from the **Print** dialog box. *The **Print Preview** dialog box appears.*

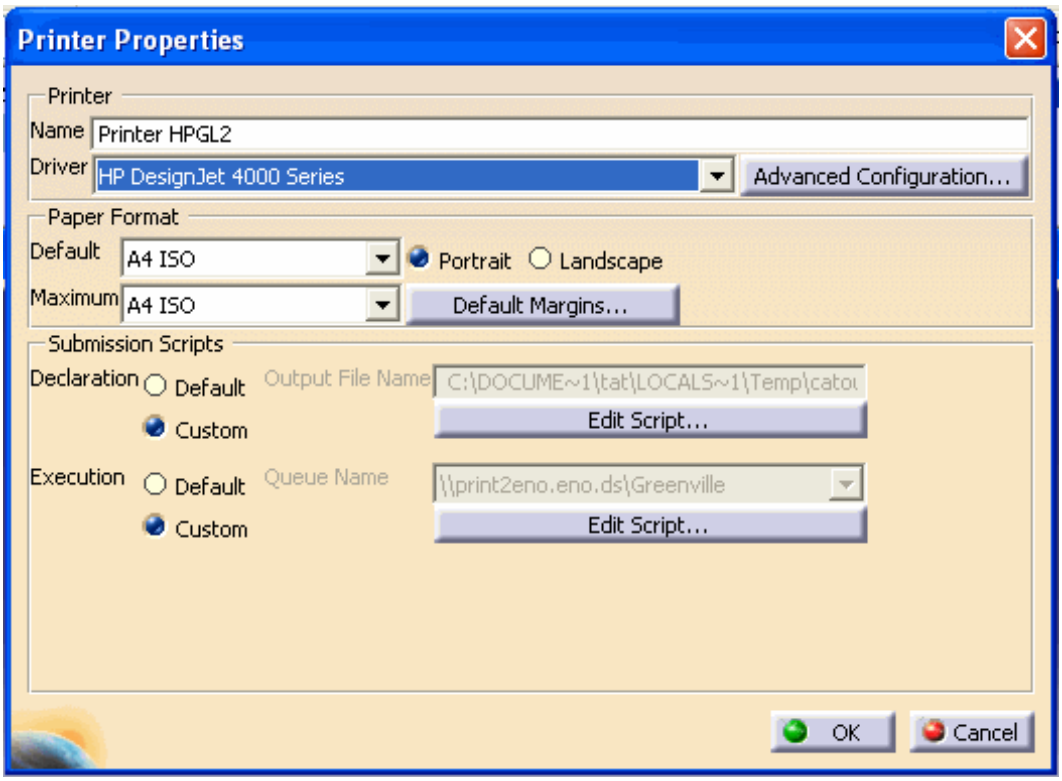


2. To reframe the image, click the **Fit All In** **button**.
3. To print the image, click the **Print** **button** (note: modifications to the image that you make in the preview page will not be taken into account).
4. Click **Close** to close the dialog box.

How to Modify Printer Properties

You can modify printer properties by following the steps below:

1. To preview the printer properties of the page to be printed, click the **Properties** button from the **Print** dialog box. *The **Properties** dialog box appears.*



2. To select a driver for your printer, click the **Driver** selection button and choose a driver from the proposed list. The list varies with your operating system, please see your system administrator to define which printers require which drivers.

Note: The DesignJet 4000 Series printers are available for generating HPGL2 files.

3. To change the paper format, click on the **Default** selection button and the **Maximum** selection buttons to select the paper sizes available.
4. You can modify the document orientation by clicking either the **Portrait** or **Landscape** action buttons.
5. You can change the margins of the document by clicking the **Default Margins** button. *The **Default Margins** dialog box appears.*

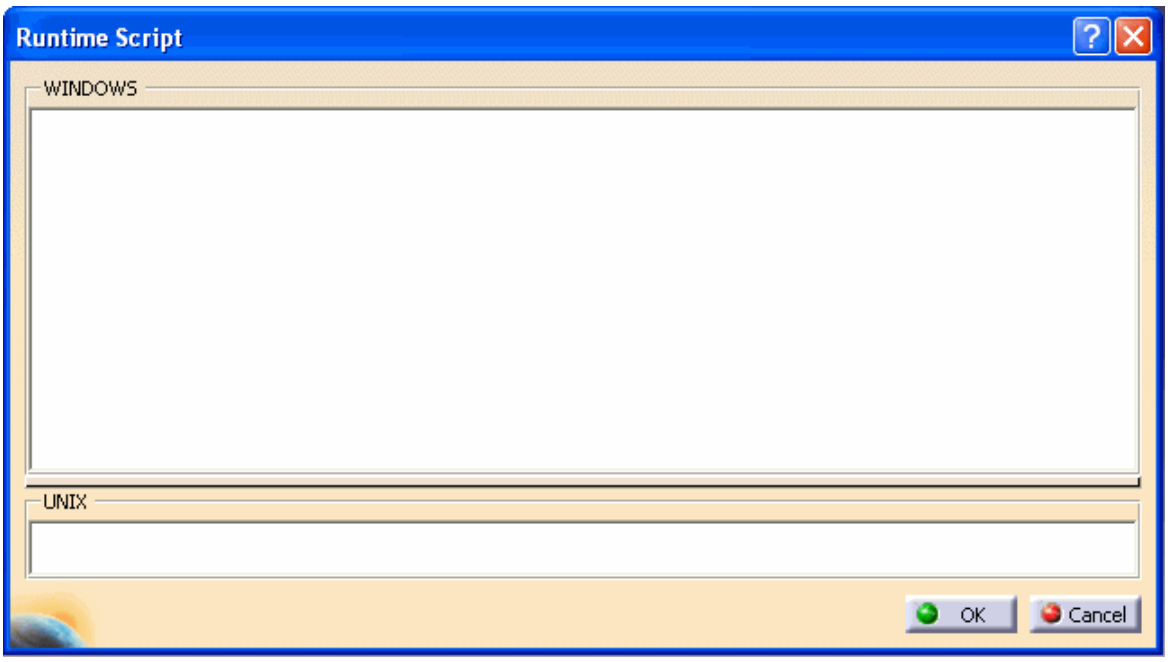
   1. To change the margin settings, enter the desired margin in each of the text-entry fields. The settings are in millimeters (mm).
   2. Click **OK** to validate or **Cancel** to discard changes.

6. In the **Submission Scripts** group box, you can set the desired options activated when the print job is submitted.

   This group box lets you specify:

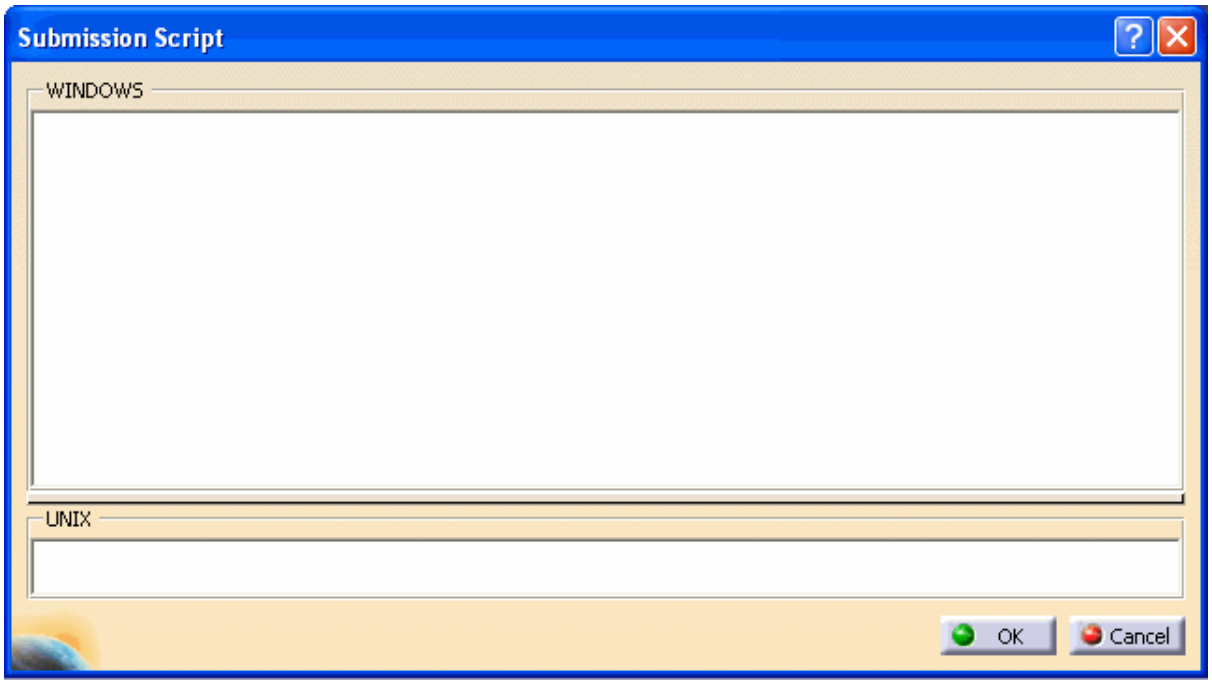
- the default output file name: each time you print a document, an output file is created at the location you specify in the text field
- the default queue name: this field lets you choose which print queue to send the print job to.

7. The **Custom** options let you specify the location of your own submission scripts. Clicking these buttons activates the **Edit Script...** action buttons to let you modify the script in the Runtime Script window.
    1. To change the **Declaration** script default, click on the **Default** option button. *The **Output File Name** text-entry field will be accessible.*
    2. Enter your script specifications. Please see your system administrator for script specifications.
    3. Click the **Custom** option button to customize your script. The **Edit Script...** action button becomes available.
    4. Click the **Edit Script...** action button. *The **Runtime Script** dialog box will appear.*



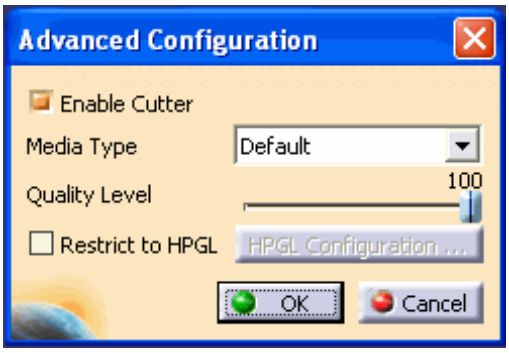
    1. Enter your script specifications. Please see your system administrator for script specifications.
    2. Click **OK** to validate or **Cancel** to discard changes.

5. To change the **Execution** script default, click on the **Default** option button. *The **Output File Name** text-entry field will be accessible.*
6. Enter your script specifications. Please see your system administrator for script specifications.
7. Click the **Custom** option button to customize your script. The **Edit Script...** action button becomes available.
8. Click the **Edit Script...** action button. *The **Submission Script** dialog box will appear.*

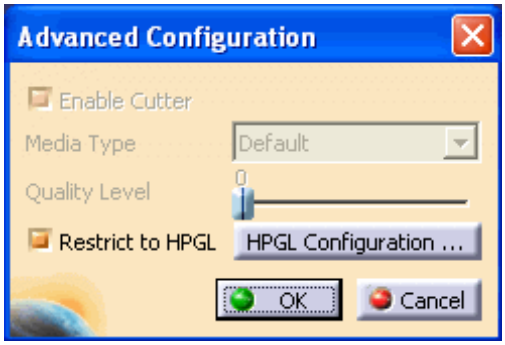


1. Enter your script specifications. Please see your system administrator for script specifications.
2. Click **OK** to validate or **Cancel** to discard changes.

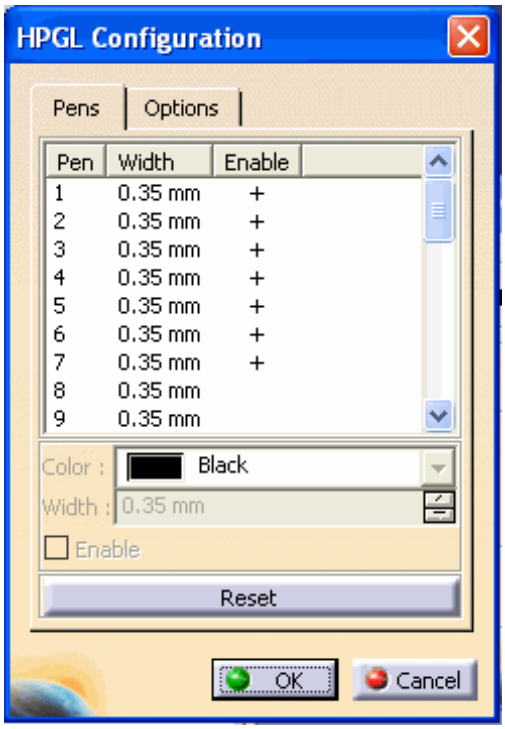
8. To access the advanced configurations, click on the **Advanced Configuration** button. *The **Advanced Configuration** dialog box appears.*



1. To enable or disable the paper cutter, click the **Enable Cutter** action button.
2. To select a media type, click the **Media Type** selection button.
3. To adjust the quality level of the print, adjust the slider to your preference. The quality level ranges from 0-100, 100 being the best quality level.
4. To restrict the HPGL, click the **Restrict to HPGL** action button. *The **HPGL Configuration** button becomes active.*



5. Click on the **HPGL Configuration** button. *The **HPGL Configuration** dialog box appears with the Pens information being listed.*



6. To change a pen line width or color, select a pen from the list.
   1. You can change the color by clicking the **Color** selection button and choosing a color that is available.
   2. You can change the pen line width by using the increment/decrement buttons.
   3. Click the **Reset** button to accept the changes.
7. To enable or disable a pen you can click on the Enable action button.
8. Click **OK** to validate or **Cancel** to discard changes.

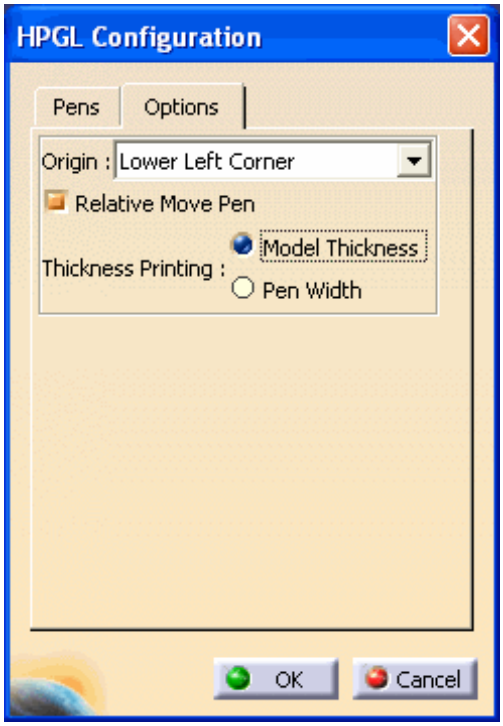
Note: Line Thickness

Changing model line thickness can be accomplished, based upon the HPGL pen definitions, color, and thickness.

To accommodate various model line thicknesses a HPGL printer must be created and selected.

For creation of the HPGL printer, refer to *Graphics Format > Customizing > Users Guide > Catia Infrastructure*.

9. Click on the **Options** tab for additional pen options. The **Options** dialog box appears.



1. You can change the beginning origin of the pen. Click the **Origin** selection button and select a location from the listing.
2. You can also activate the Relative Move Pen option if you want the pen to move relative to current coordinates.
3. Printing thickness can be accommodated by clicking the Model Thickness action button or Pen Width action button.

- **Model Thickness** - The line thickness will be defined by the model construction.
- **Pen Width** - The line thickness are defined by the pen line widths in the HPGL Configuration.

4. Click **OK** to validate or **Cancel** to discard changes.

9. Click **OK** to validate or **Cancel** to discard changes.

Various document customization options are available depending on the printers available. Options include: page size, document orientation, and graphics quality.

For more information on print properties, see the documentation of your operating system and printer vendor.

How to Launch the Print

To print the document with the defined settings, click **OK** from the **Print** dialog box.

Annotating

This section contains the following information about understanding Annotations.

About Annotating

When Annotating

How to Create an Annotation / Annotated View

How to Save Annotations

How to Move Annotations

How to Resize Annotations

How to Delete Annotations

How to Retrieve an Annotated View

How to Use Annotated View Management

How to Retrieve a Specific Annotated View

About Annotating

The annotation feature provides you with the opportunity to graphically note and identify information on the document. As a communication tool, annotating assist the user with a secondary source of data.

You can do the following with the annotation function:

- Draw straight lines, freehand lines, circles, arrows and rectangles.
- Include text in the annotated view.
- Automatically link annotations internally to the model. The saved annotations will also be available in the "**Favorites**" tree within your active favorites folder.

When Annotating

You have several geometric options as well as a text option when the **Annotate** button is selected.

The geometric options are:

- **drawing a straight line**, point to point
- **drawing a free line**, multiple points
- **drawing a circle**, point to point
- **drawing arrows**, various lengths
- **drawing rectangles**, point to point
- **creating text**, font and size

You also has the options of **Moving**, **Resizing** and **Deleting Annotations.**

After annotations are created you can save the document as an **Annotated View**. As additional views are created you can manage the views through the viewer environments. Views can be shared through the environment while in the 3D meeting mode. You can also **Add** new views, **Delete** selected views, **Modify** names of views, and **Display** properties of selected views. Your have the option of sending selected views to meeting participants with the **Send** feature in 3D meeting mode.

Note: Only one view can be selected at a time.

How to Create an Annotation / Annotated View

You can create geometric annotations such as lines, rectangles, circles, arrows, free-lines using annotations. You can associate as many annotations as you wish to an annotated view.

The following steps demonstrate how to create annotations:

1. In the toolbar, click the **Annotate** button. *The **Annotation** toolbar appears.*

2. Create an annotation using one of the following annotation types:

to draw a line

to draw a rectangle

to draw a free line

to draw a circle

to draw an arrow

1. Click the corresponding button and place the cursor at the point where you wish to place the annotation.
2. Click the Left Button and drag the Mouse while continuing to hold the Left Button.

The corresponding geometrical figure is dynamically drawn.

3. To create a text annotation:

   1. Click the **Add Annotation Text** button.
   2. In the ViewerSpace, click the point at which you wish to create the text annotation. *The **Annotation Text** dialog box appears*

   3. Select the desired font style by clicking the **Down Arrow** and selecting a font.
   4. Select the size of the annotation characters using the **Increment/Decrement** buttons to obtain the desired value.
   5. In the text-entry field, type the text that you wish to add as an annotation.

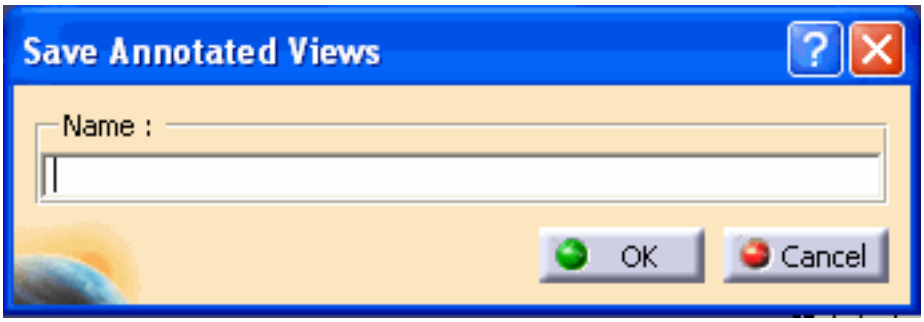
6. Click **OK** to confirm. *The annotation is created at the designated point.*
7. To exit the annotated view, click the **Exits from the Annotated View** button. *The annotated view is exited.* You can re-access this annotated view from the **Annotated Views** command (see Retrieving an Annotated View).

Note: Clicking **Cancel** will only cancel the annotations previously created before you last clicked OK or opened the dialog box.

How to Save Annotations

You can save annotations as follows:

1. To save the annotations, click the **Save Annotation** button. *A dialog box appears.* Enter the name of the annotation file being created. (A unique name is not required.)

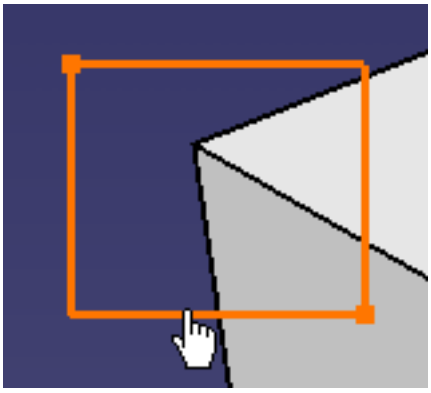


2. Click **OK** to confirm. *The annotation view is saved.*

How to Move Annotations

You can move annotations as you wish.

1. Select the annotation you want to move.
2. Place the mouse pointer anywhere on the annotation (but not on one of the manipulator boxes).

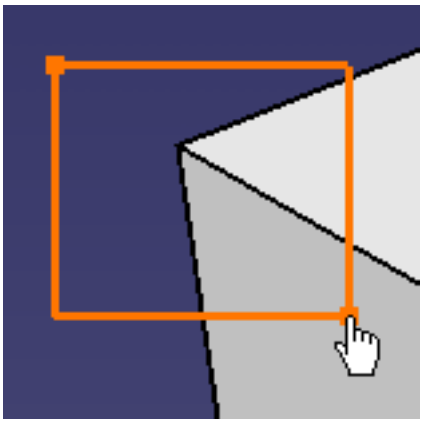


3. Drag the annotation to its new position. *The annotation is moved accordingly.*

How to Resize Annotations

Annotations in your annotated views can be resized.

1. Select the annotation you want to resize.
2. Place the mouse on any of the manipulator boxes.



3. Drag the annotation to the new size.

How to Delete Annotations

Annotations in your annotated views can be deleted.

This command will delete all annotations in your annotated view.

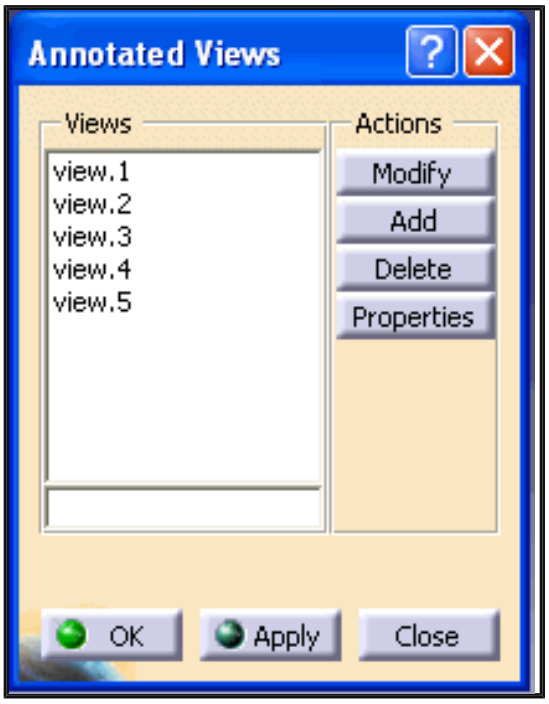
To delete selected annotations, select the annotations in the viewer, right-click and select **Remove** from the shortcut menu.

1. Click the annotation to select it (multi-selection is available by holding the Ctrl key down and clicking the different annotations to be selected).
2. Click the **Erase** button. *All annotations are deleted.*

How to Retrieve an Annotated View

Every time you annotate a document, a new annotated view is automatically created with the name view.x, where x is a counter that will continually increment.

1. Click the **Annotated Views** button. *The **Annotated Views** dialog box appears.*



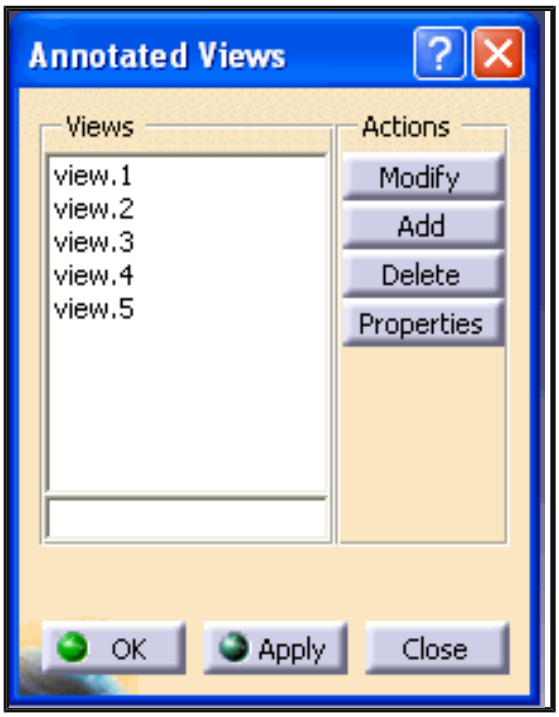
2. **To reinstate a view, double-click the view in the list. *The annotations associated to the selected view reappear.***

How to Use Annotated View Management

Annotated View Management allows you to **Add** views; **Delete** selected views; **Modify** the name of views; and display **Properties** of views.

The following steps demonstrates how to manage your annotations:

1. Click the **Annotated Views** button. *The **Annotated Views** dialog box appears.*



2. You can select one of the action buttons listed.

Add - Adds a new annotated view. This annotated view will be automatically activated in the Edit mode and selected in the annotated view list.

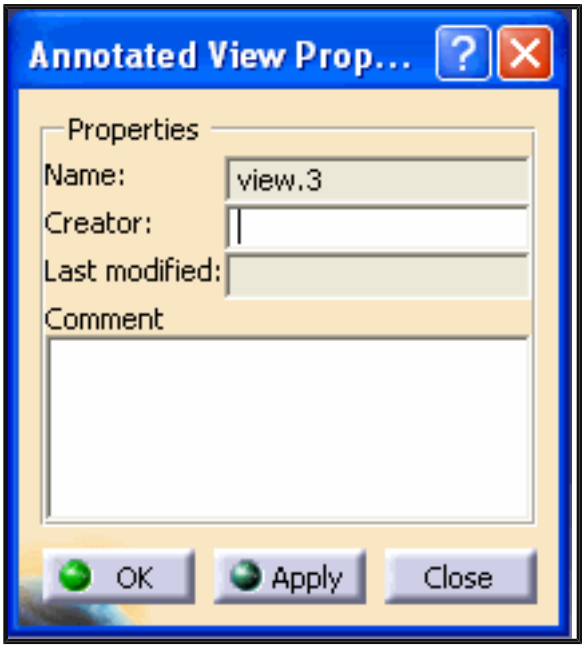
Delete - Remove a selected annotated view. If the view is being edited, it will be automatically closed before deletion.

Modify - Change the name of the annotated view. The new name will be entered in the dialog box. If the new name is empty, the annotated view will keep its old name. (A unique name is not required.)

Properties - Displays the following properties of the annotated view:

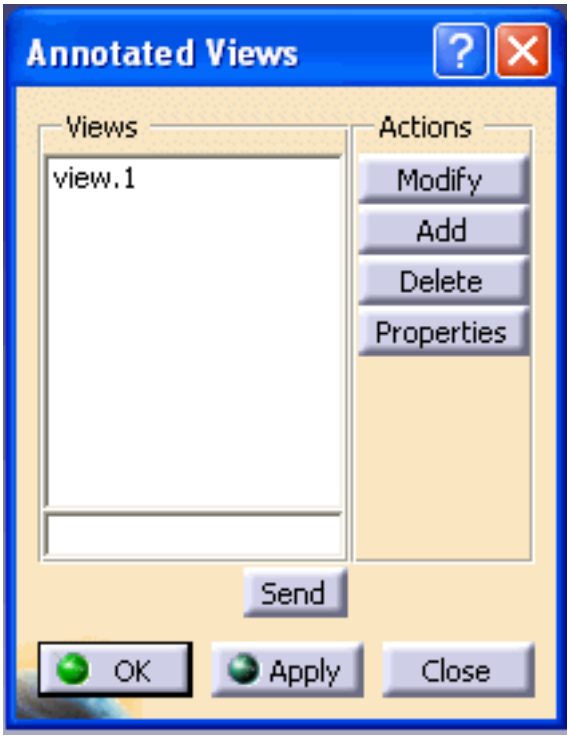
- Name of view
- Creator of the view
- Last date modified
- Comments

1. Right click on one of the views listed.
2. Click on the **Properties** button and the Annotated View Properties dialog box appears.



3. Click the **Comment** window and information can be changed or added.
4. Click the **OK** button to accept, the **Apply** button to apply to annotation in the viewer, or the **Close** button to close the dialog box.

3. After the necessary changes are made, click one of the option buttons located at the bottom of the window.



Apply - Modifies (if needed) and activates the selected annotated view in view mode (No Annotation toolbar available).

OK - Modifies (if needed) and activates the selected annotated view in edit mode (Annotation toolbar available).

Close - Finishes the command and deactivates the active annotated view.

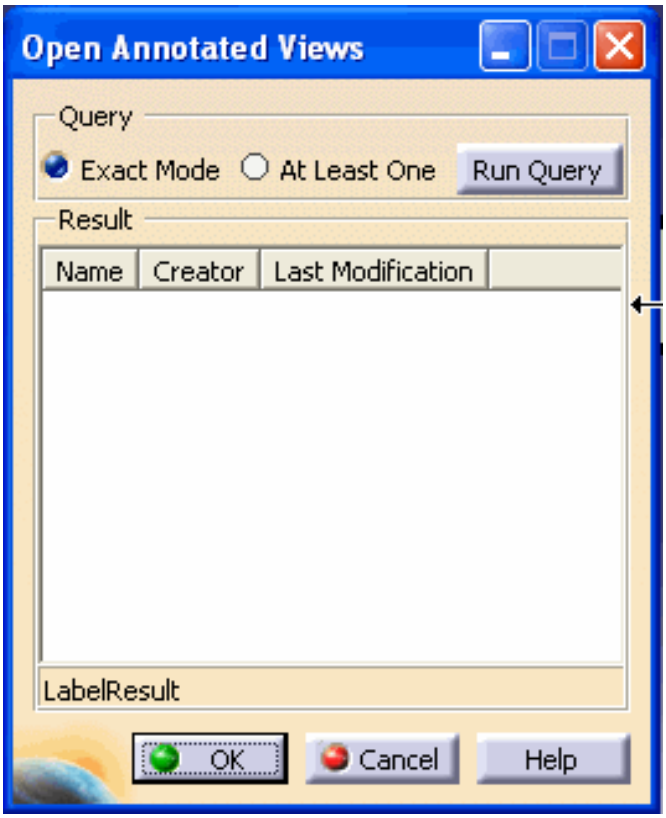
Send - Sends the selected annotated views to meeting participants. The user who sends the annotated view must be the publisher in the meeting. (Button only available in 3D meeting mode).

Note: **Double Click** will activate the selected annotated view in view mode (No Annotation toolbar available).

How to Retrieve a Specific Annotated View

You can retrieve specific annotated views by query mode by following the steps below:

1. Click the **Open Annotations** button.
   The Open Annotated Views dialog box appears.

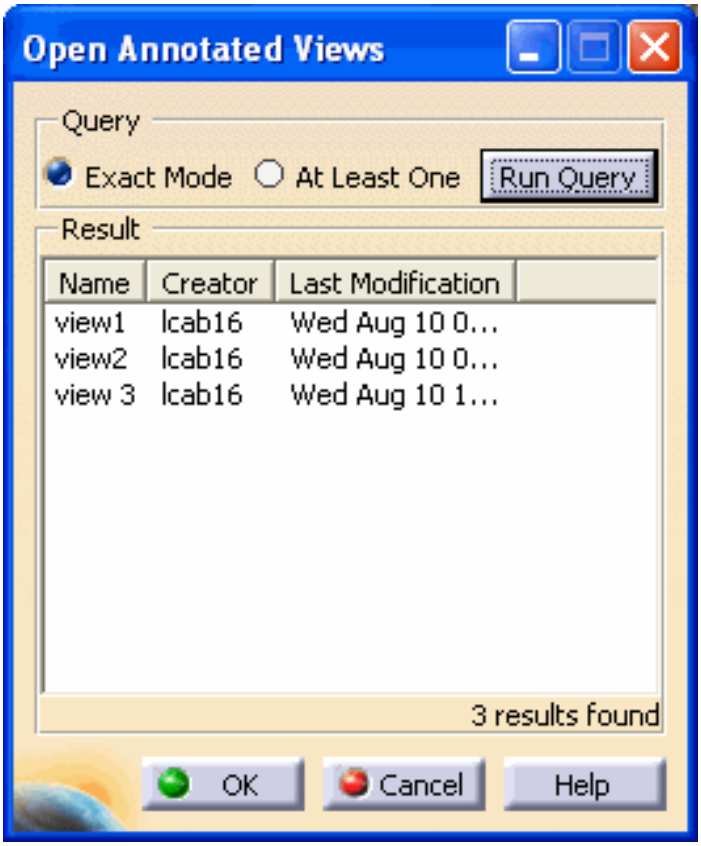


2. Select a query mode by clicking the **Exact Mode** action button or the **At Least One** action button.

   The **Exact Mode** action will display the annotated view that refers to the loaded models in the viewer with the exact content.

   The **At Least One** action will display the annotated views that refers to at least one of the the loaded models in the viewer.

1. Click **Run Query** button. *The results will appear in the dialog box.*



The name of the view, the creator and the last time modifications were made will appear.

4. Select a view from the list and click **OK**. The view will be listed and can be retrieved in the Annotated Views dialog box.

Measuring (3D only)

This section contains the following information about Measuring (3D only).

About Measuring

When Measuring

How to Measure Between Points

How to Measure Items

About Measuring

Measuring provides the ability to obtain approximate or exact measurement units of an object's geometric constitution. With this function, you can measure 3d type CATIA V5 files such as .CATPart, .CATProduct, .model, and .cgr. This function allows you to customize your results and display only what is required.

When Measuring

The ability to measure between two points is available with the **Measure Between** option. You can select two points on the viewer and the distance will be calculated. The results can be customized to your preferences.

Items can be measured with the **Measured Item** option. The measurement result will be based upon the geometric type of the item. For example, a line will be measured in length. The results can also be customized to your preferences.

This functionality will not work if you've displaced the products using the transformation command.

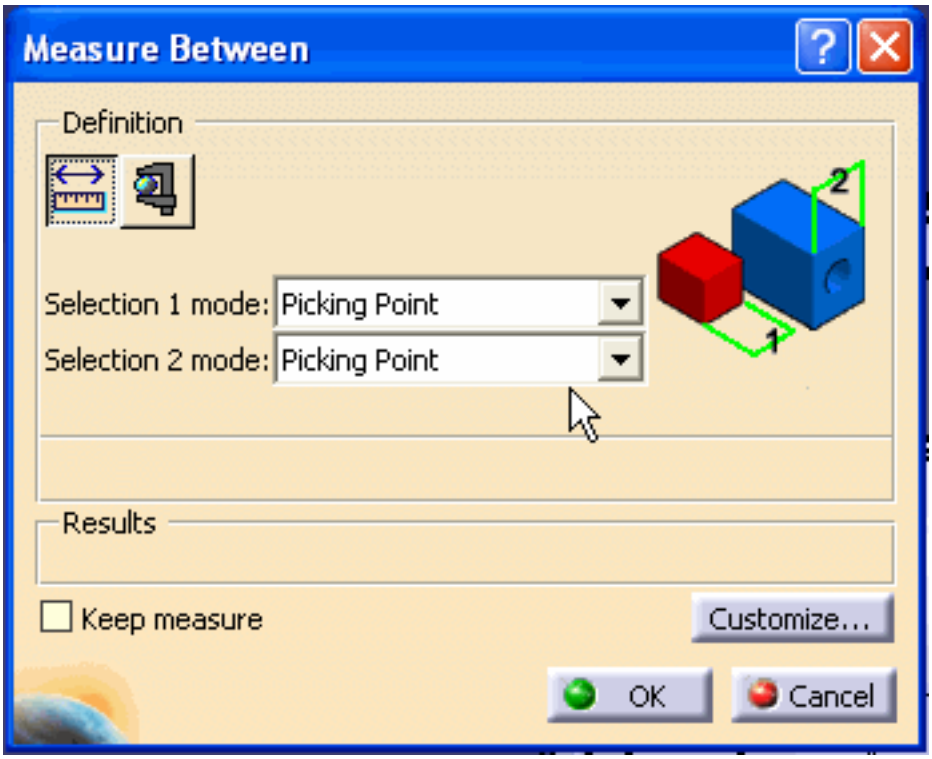
The following table summarizes exactness per geometry type:

Geometry Type	Exact / Inexact
Line	exact
Arc	exact, excepting length
Curve	inexact
Plane	exact, excepting area and center of gravity
Cylinder/cone	exact, excepting area and center of gravity
Sphere	exact, excepting area and center of gravity

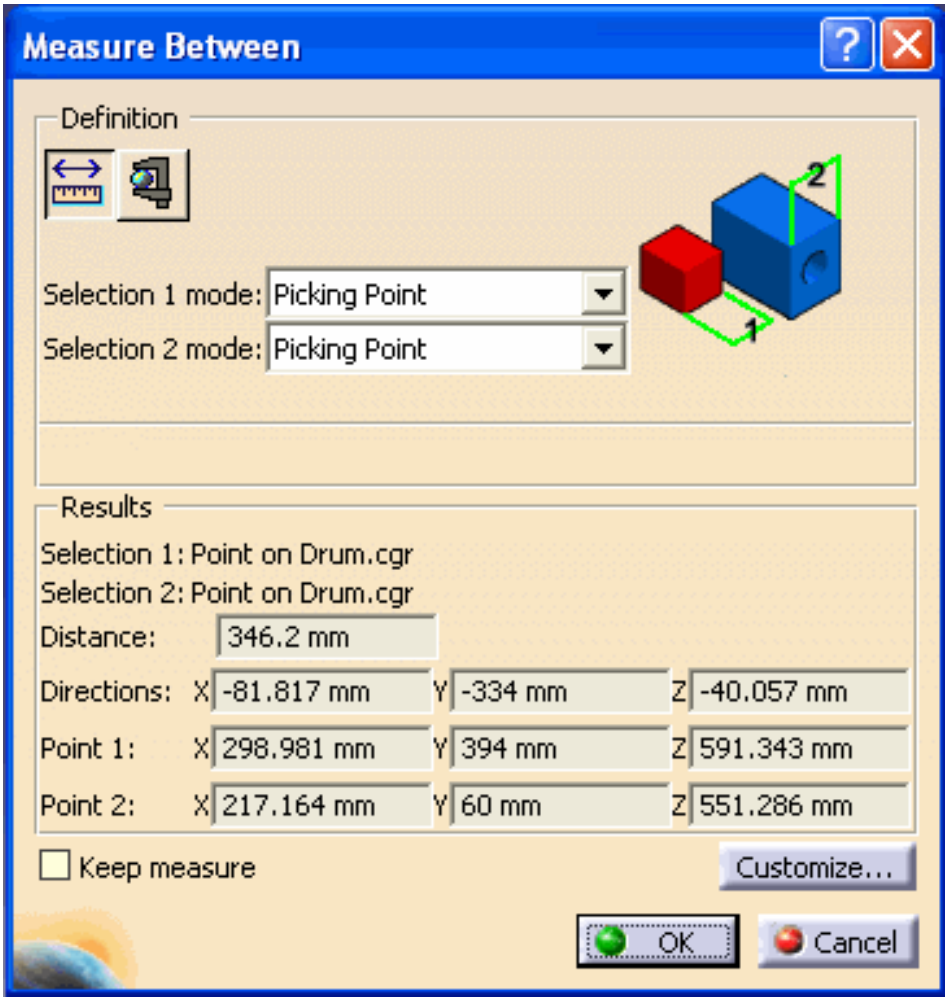
How to Measure Between Points

You can measure between points by following the steps below:

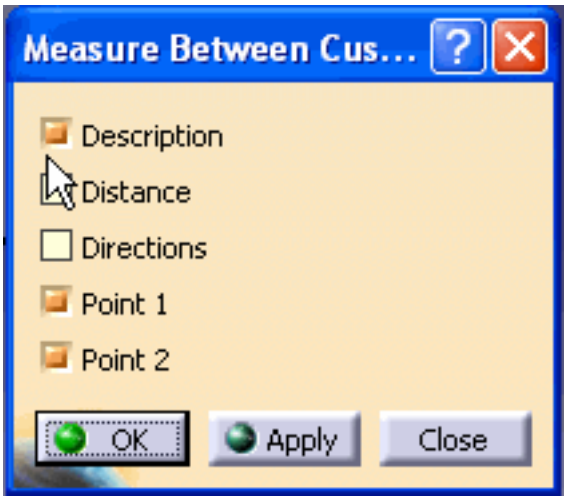
1. Click the **Measure** button.
2. Click the **Measure Between** button. *The **Measure Between** dialog box appears.*



3. Select a first point.
4. Select a second point. *The measure result appears in the dialog box. The measure result is also displayed in the ViewerSpace.*



5. To keep a measure in the viewer, check the **Keep measure** checkbox before performing the following measure.
6. To customize Measure Between settings, click the **Customize** button and check the different measures you wish to see appear in the Results.



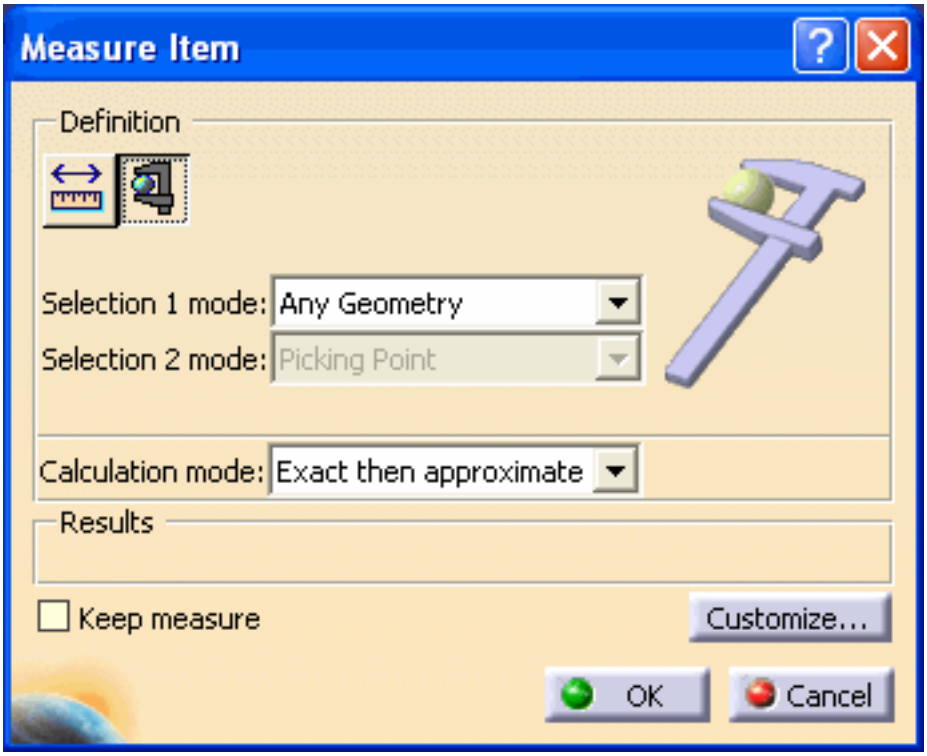
7. To close the command and erase all measures created since last entering the command, click the **Cancel** button.

8. To close the command and keep all measures created since last entering the command, click the **OK** button.

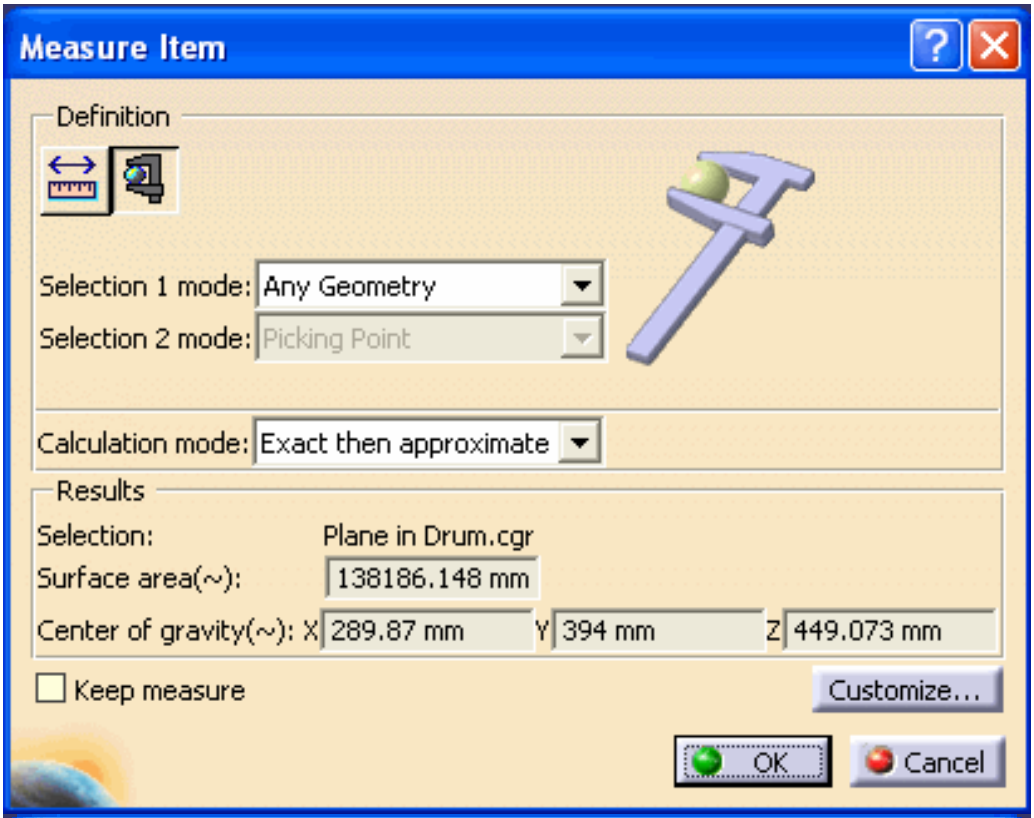
How to Measure Items

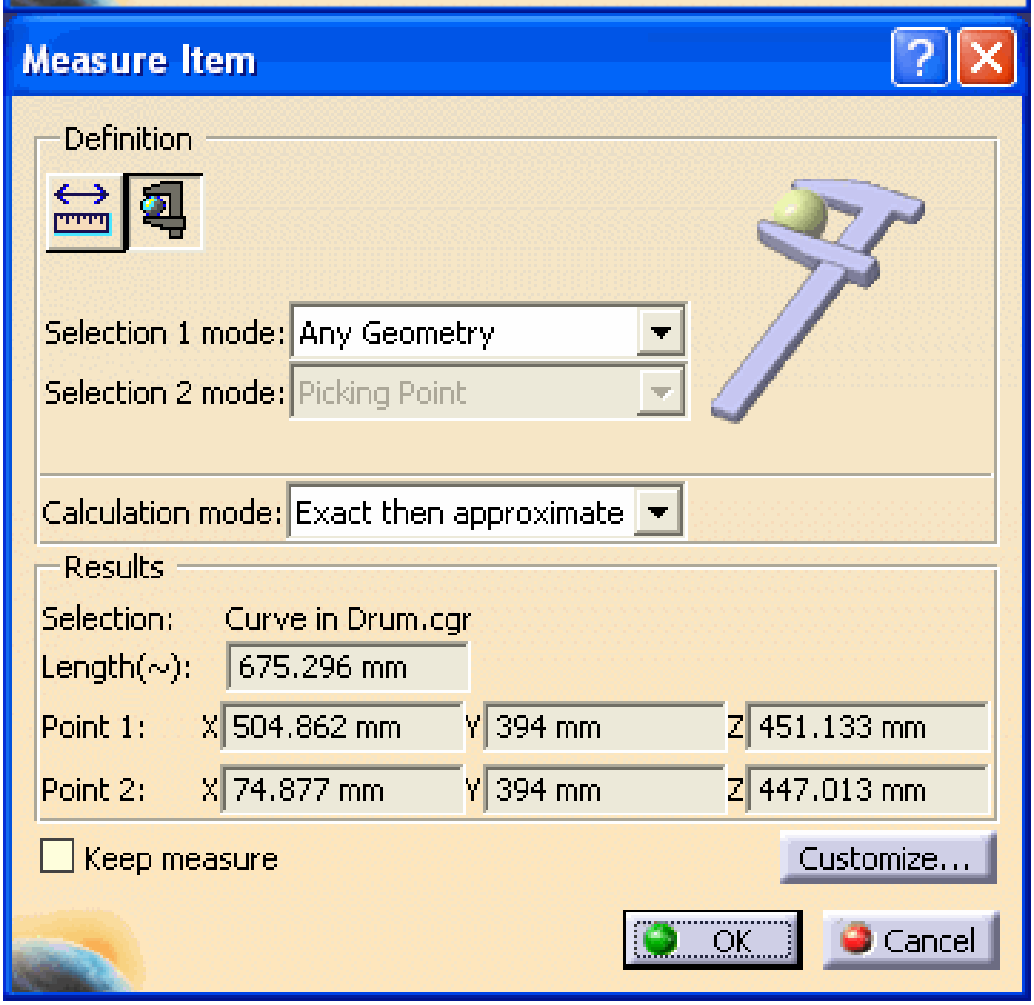
You can measure items by following the steps below:

1. Click the **Measure** button. *The **Measure** dialog box appears.*
2. In the Measure dialog box, click the **Measure Item** button. *The **Measure Item** dialog box appears.*



3. Select a mode option from the **Selection 1 mode** drop-down list.
4. Set the desired calculation mode in the **Calculation mode** drop-down list box.
   Note: If you set Exact for the calculation mode, only the measure exact values are displayed both in the Result window and the ViewerSpace
5. Select the item in the geometry of the ViewerSpace. *The measure result corresponding to the selected item type appears in the dialog box. The measure result is also displayed in the ViewerSpace.*
   Note: The measure result displayed in the ViewerSpace differs according to the item type, e.g. the length will be displayed for a line, the surface area will be displayed for a cylinder.

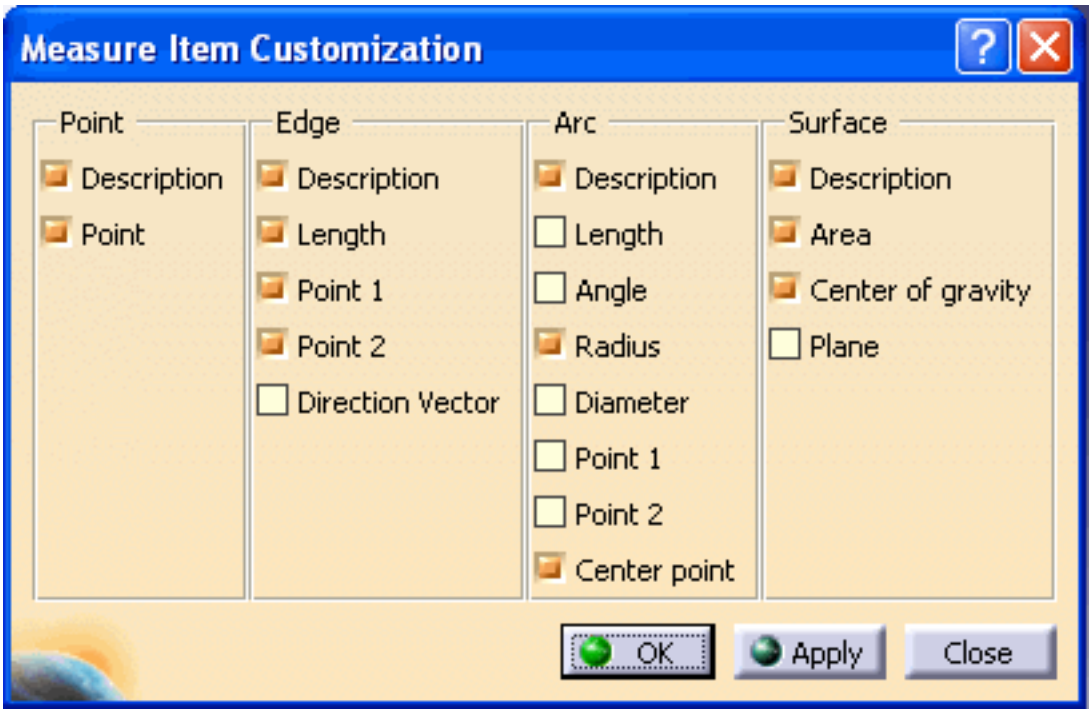




6. To keep a measure in the viewer, select the **Keep Measure** checkbox before

performing the following measure.

7. To customize Measure Item settings, click the **Customize** button and check the different measures you wish to see appear in the Results.



8. To close the command and erase all measures created since last entering the command, click the **Cancel** button.
9. To close the command and keep all measures created since last entering the command, click the **OK** button.

Sectioning (3D only)

This section contains the following information about Sectioning in 3D only:

About Sectioning

When Sectioning

How to Create a Section Cut

How to Modify the Section Cut Position by Specified Increments

About Sectioning

Sectioning provides you the option to create sections of a part and position that part to your specifications. Section cuts provide access to the internal features of a part.

When Sectioning

When creating a section cut a grid is created using **Normal Constraints** with X, Y, Z axis for location.

The grid can be:

- translated or rotated with the **Edit Position** commands
- located by defining three points anywhere on the part. using the **Position by 3 points** command

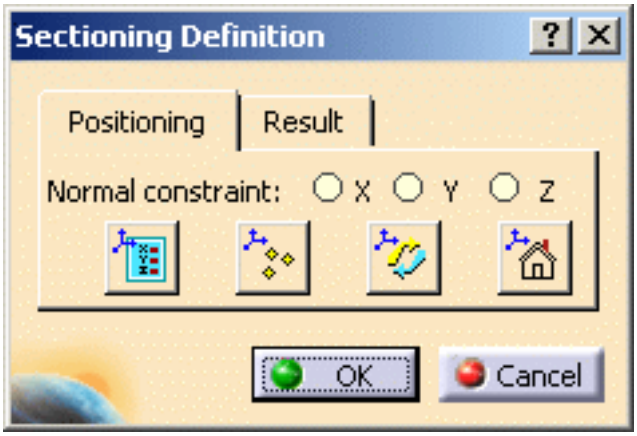
The section cut can be:

- inverted by selecting the **Invert Normal** command
- returned to its original position with the **Reset Position** option
- modified by specific coordinates and translated or rotated by specific increments.

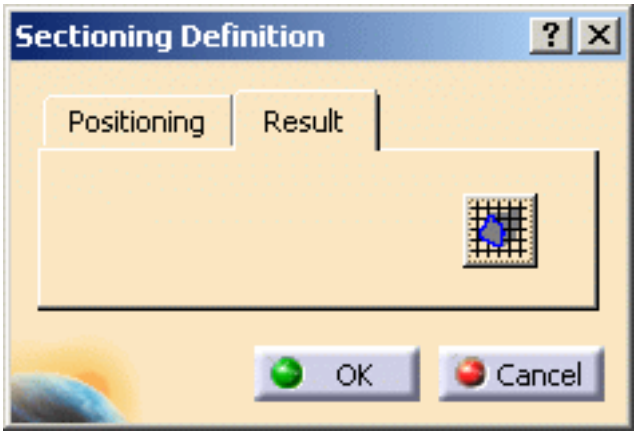
How to Create a Section Cut

You can create section cuts of your documents.

1. Click the **Section** button.
   The Sectioning Definition dialog box appears.
   A section cut of the document is created.



2. To specify the orientation of the grid, click the **Normal constraint** radio button corresponding to the desired orientation axis (X, Y or Z).
3. To translate the grid, click and drag.
4. To rotate the grid, click any arrow manipulator and drag.
5. To translate and/or rotate the grid by specified increments, click the **Edit Position** button. See Modifying the Section Cut Position by Specified Increments below.
6. To define a section cut by three points of your own choice, click the **Positioning by 3 Points** button and select the three points anywhere on the loaded objects.
7. To invert the normal line, click the **Invert Normal** button.
8. To return to the original section cut, click the **Reset Position** button.
9. To have the orthogonal view, click the **Result** tab and click the **Orthogonal View** button.



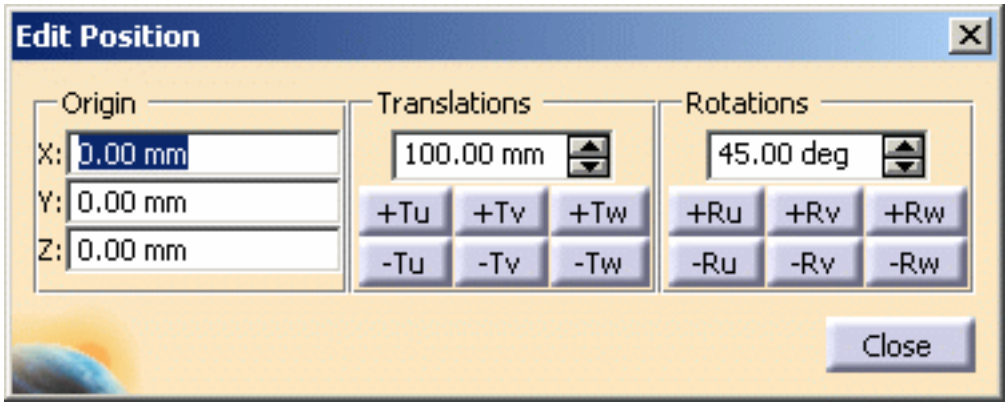
10. To exit the Section functionality and to leave the Section Cut grid in the viewer, click the **OK** button.
11. To exit the Section functionality and to remove the Section Cut grid from the viewer, click the **Cancel** button.

How to Modify the Section Cut Position by Specified Increments

You can translate and/or rotate the section cut by specified increments using the Edit Position dialog box. You can also designate the section cut position explicitly by entering the x, y, and z values.

1. Click the **Edit Position** button.

   The Edit Position dialog box appears.



Modifying the section cut position by explicitly specifying coordinates

2. In the Origin X text-entry field, enter the desired x coordinate.
3. In the Origin Y text-entry field, enter the desired y coordinate.
4. In the Origin Z text-entry field, enter the desired z coordinate.

Translating the section cut position by increments

5. Enter the **Increment value** (in millimeters) in the text-entry field of the Translation group box.
6. Click the +Tu and -Tu buttons to translate the section cut along the x-axis, click the +Tv and -Tv buttons to translate the section cut along the y-axis, click the +Tw and -Tw buttons to translate the section cut along the z-axis.

Rotating the section cut position by increments

7. Enter the **Increment value** (in degrees) in the text-entry field of the Rotation group box.
8. Click the +Ru and -Ru buttons to rotate the section cut around the x-axis, click the +Rv and -Rv buttons to rotate the section cut around the y-axis, click the +Rw and -Rw buttons to rotate the section cut around the z-axis.

Exiting the Edit Properties dialog box

9. Click the **Close** button to exit the dialog box.

When you load large models and are using the grid for visualization purposes, the interval between lines of the grid will be adjusted as necessary to fit the entire model in the viewing space. Therefore, the interval might not correspond to the interval specified in the Settings. (If you zoom in close enough that the specified interval can be used, the grid interval will automatically revert to the specified value.)

Managing Products

This section contains the following information about Managing Products:

About Managing Products
When Managing Products
How to Open the Product List
How to Change Product List View Size
How to Load 2D Multi-Sheet Documents
How to Hide and Show Products
How to Remove Products
How to Modify Graphic Properties
How to Enable Selection Actions
The Viewer Window

About Managing Products

The Product List enables you to customize the view of product assemblies in the Web Viewer. It appears as either a free-floating dialog box or is immersed in the ViewerSpace (see *Modifying Viewer Settings*).

You can use the **Enable Selection Actions** button in the viewer to see the Logical Subset of a Shortcut Menu (LSCM). By using LSCM, you will have the context of viewer properties and will be able to perform functions available in the toolbar, and the shortcut menu of the **Favorite** or **Search** windows.

Un-select the **Enable Selection Actions** button when you do not need to see the LSCM. It will make the default menu load faster in the ViewerSpace.

When Managing Products

You can hide and display products in the product list using the **Show**, and **Hide** command. Products can also be removed using the **Remove** function.

The **Graphics Properties** of objects in the viewer can be also be modified. You can select the object color, modify line thickness, or select line type and surface transparency with this feature.

When selecting the **Enable Selection Action** function, the list of selected parts is retrieved from the server. Depending on your environment, the menu display may take a few moments to load. For more information on your system setup, see your System Administrator.

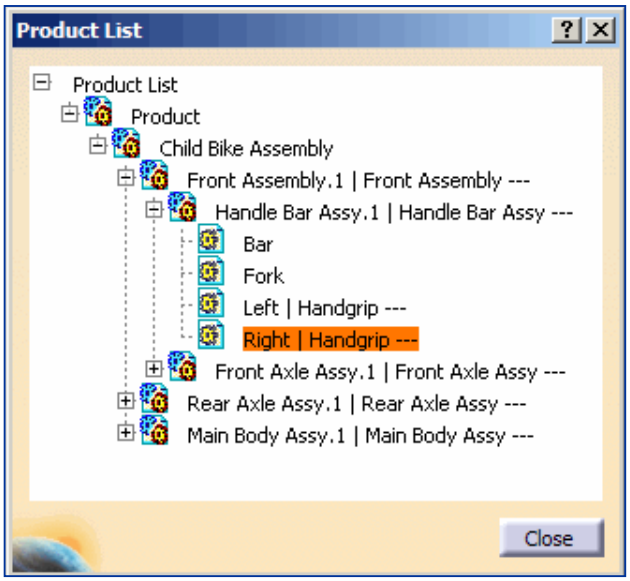
How to Open the Product List

You can open and manage a product list by following the steps below:

Before proceeding, load an assembly product into the Web Viewer. Refer to the *Loading an ENOVIA V5 Assembly in the Web Viewer* chapter on how to load an assembly.

1. Click the **Product List** button in Web Viewer horizontal toolbar. *The **Product List** dialog box appears or the Immersive Product List appears in the ViewerSpace. See the Modifying Viewer Settings chapter for more information on setting up the **Product List**.*

   Product List dialog box.



Immersive **Product List.**

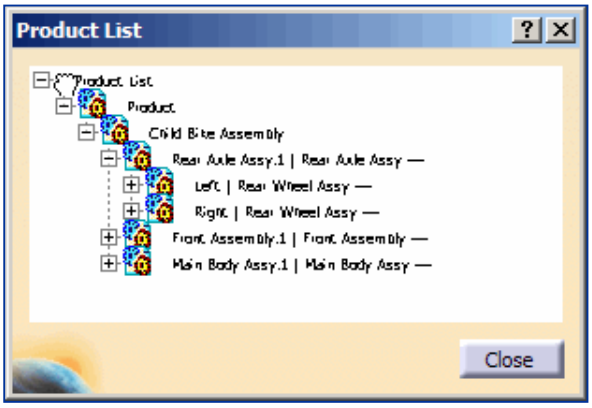
How to Change Product List View Size

You can change the **Product List** view size by following the steps below:

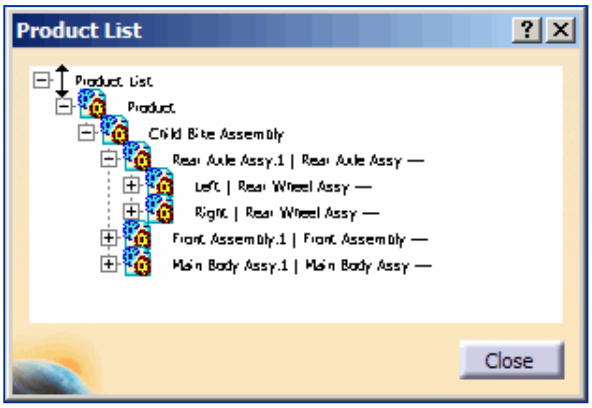
Before proceeding, load an assembly product into the Web Viewer. Refer to the *Loading an ENOVIA V5 Assembly in the Web Viewer* chapter on how to load an assembly.
Make sure the Product List is displayed.

The Product List and its contents may appear very hard to read when the product is running using Japanese OS, or any other language. (This is not the case when using the English OS.) To adjust the view size of the Product List, do the following:

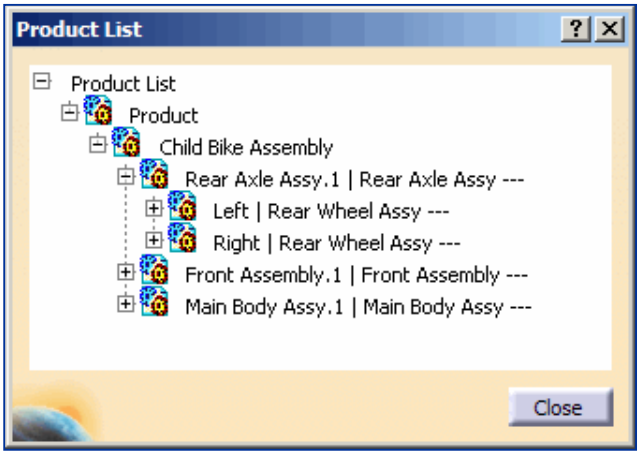
1. Left-click and hold on the **Product List**.



2. While holding the left mouse button, click and hold on the middle mouse scroll button.



3. While holding the left mouse button and the scroll button, drag the mouse up and down.
*The **Product List** view size is zoomed out when you drag the mouse down, and zoomed in when you drag the mouse up.*

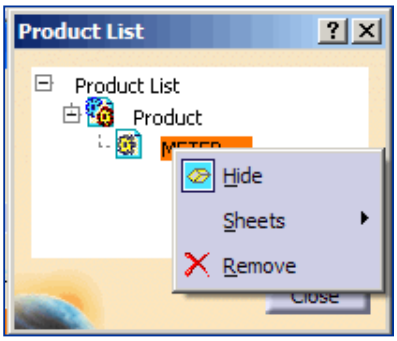


4. Release the mouse scroll button and the left mouse button when **Product List** view size is readable.

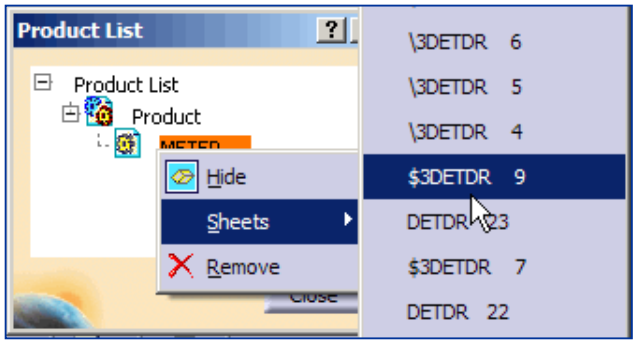
How to Load 2D Multi-Sheet Documents

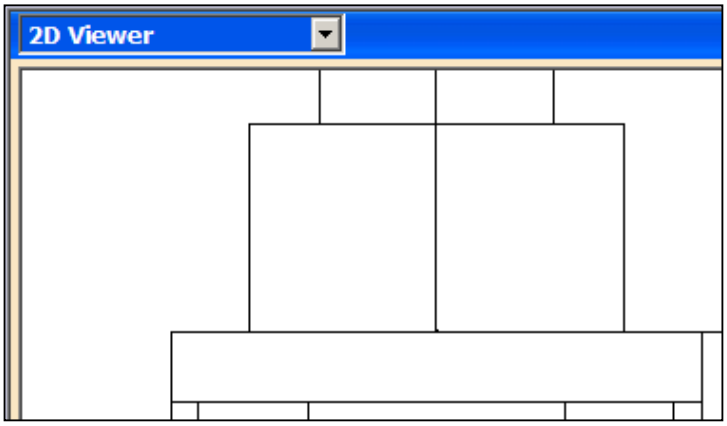
When loading multi-sheet 2D documents, all sheets are tessellated and sent to the viewer. You can access the sheets by selecting **Sheets** from the document shortcut menu.

1. From the **Product List**, select the document that contains the sheets you want to access.
2. Right-click and select **Sheets** from the shortcut menu to display the sheets attached to the document.



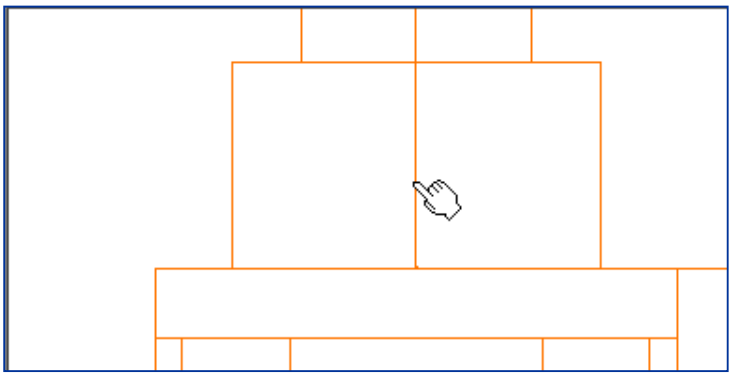
3. Select the document from the **Sheets** list. Only one sheet can be selected at a time. *The **Sheets** list will appear. Selected sheet is displayed in **2D Viewer** (This sheet is a geometrical example used for the purposed of showing the functionality that can be done with sheets in **2D Viewer**).*



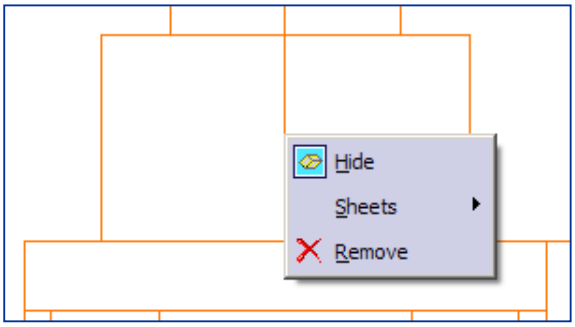


Multiple sheets can also be accessed inside the ViewerSpace.

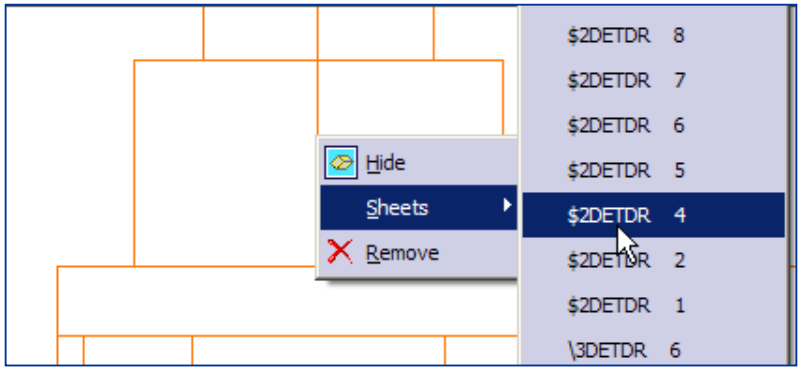
1. Click and select the geometry in the document.



2. Right-click the geometry and select **Sheets** from the shortcut menu to display the sheets attached to the document. *The **Document** shortcut menu will appear.*



3. Select the document from the **Sheets** list.



Only one sheet can be selected at a time. The **Sheets** option will only appear if multiple sheets are available.

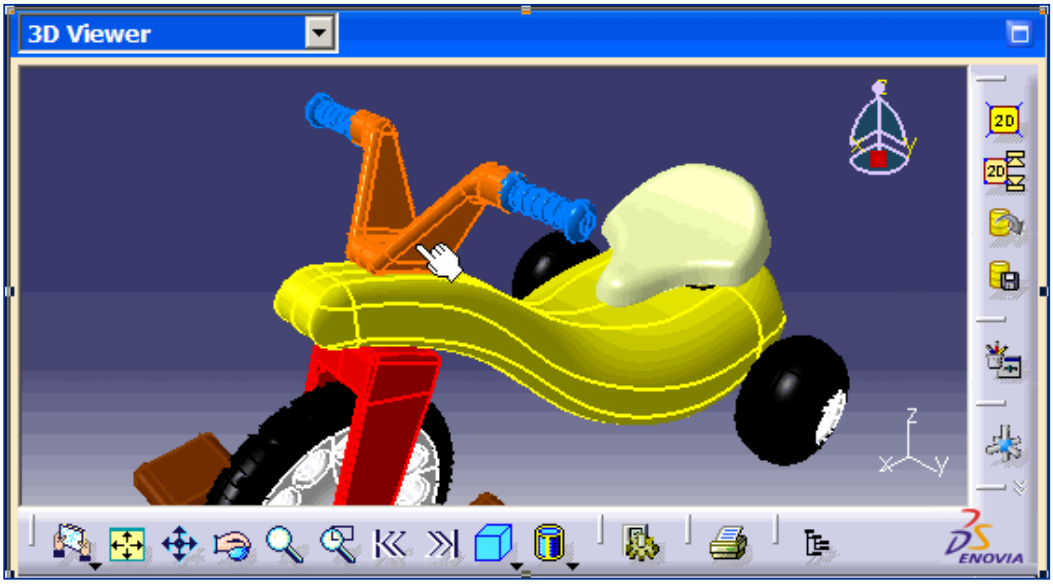
This feature pertains to V5 multi-sheet documents (CATProduct, CATDrawing, and 2D V4 Model).

Note: 2D layouts are not supported in the Web Viewer.

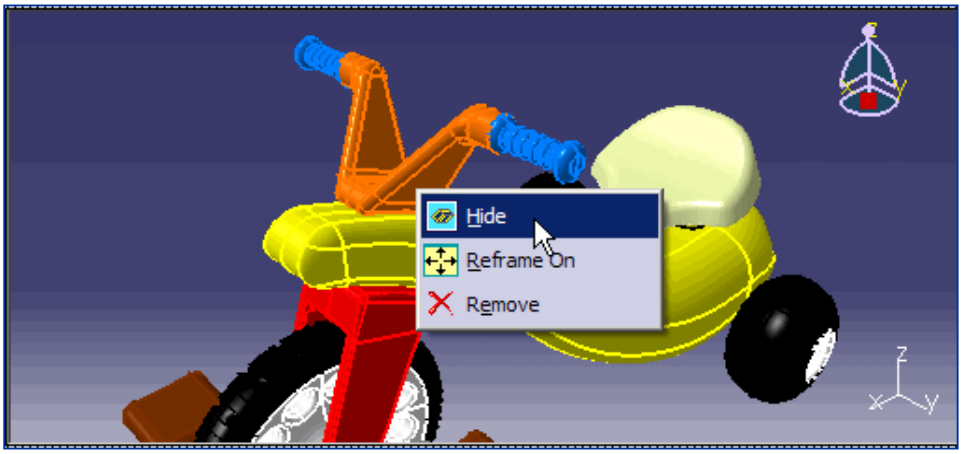
How to Hide and Show Products

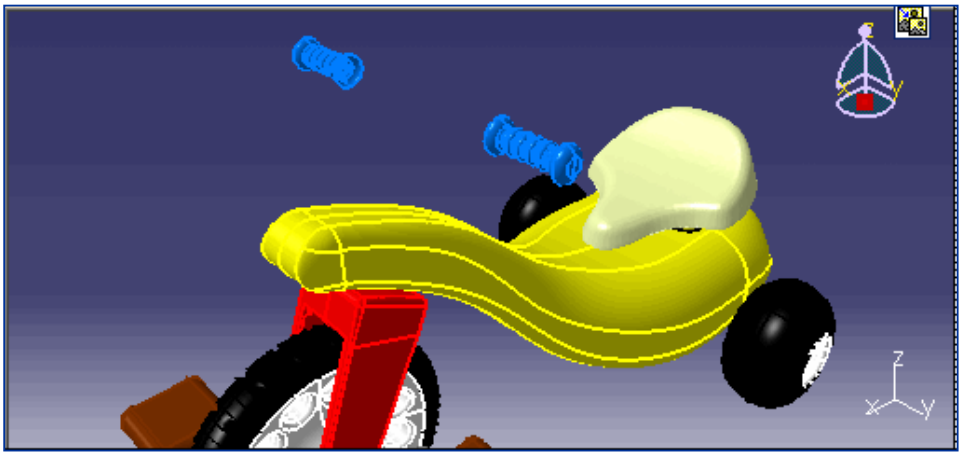
You can hide a visible product or re-display a hidden product.

1. From the **Product List** or in the ViewerSpace, select the product you want to hide.



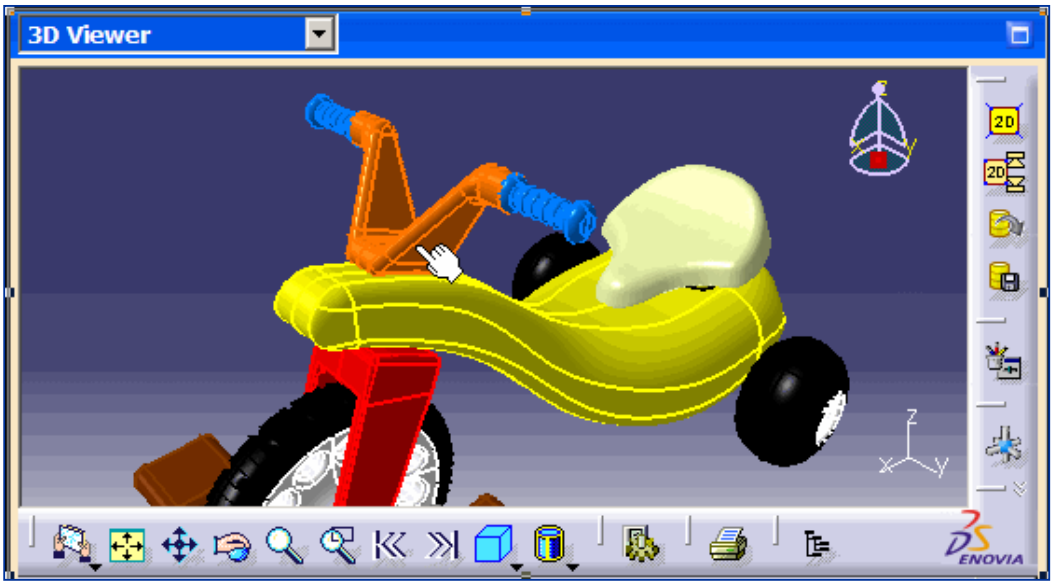
2. Right-click the selected product and select **Hide** from the shortcut menu. *The product is hidden. It disappears from the ViewerSpace.*





3. To show the product, select it by clicking it in the **Product List**.

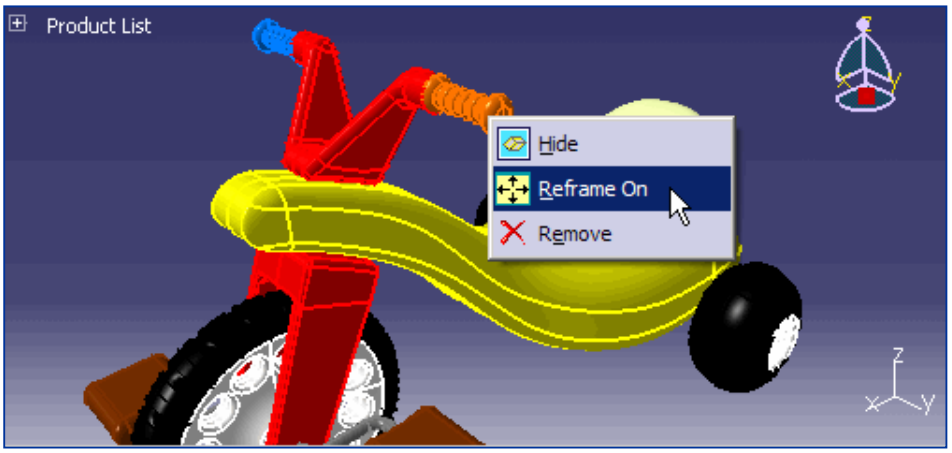
4. Right-click the selected product and select **Show** from the shortcut menu. *The product reappears in the ViewerSpace.*

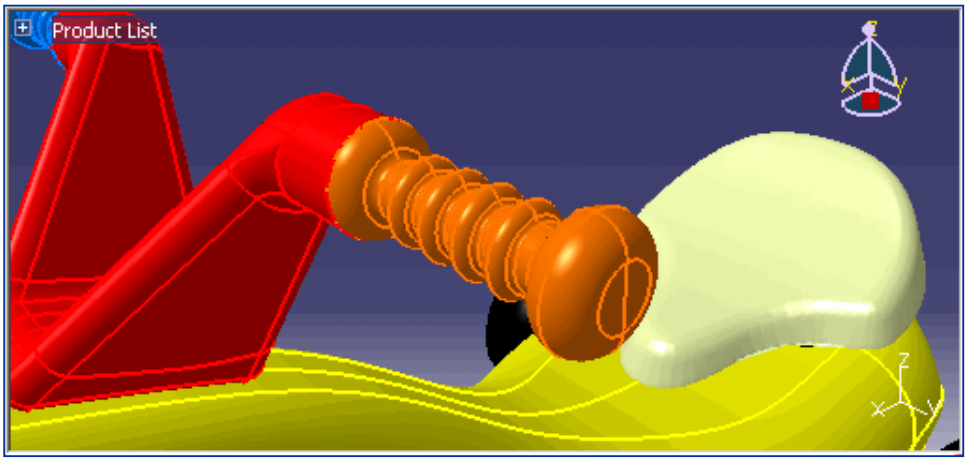


How to Reframe Products

You can reframe a product in the Web Viewer by bringing the selected part of the product closer for observation in the Viewer.

1. Select the product by clicking it in the Product List or in the ViewerSpace.
2. Right-click the selected product and select **Reframe On** from the shortcut menu. *The Product is reframed inside the Web Viewer.*

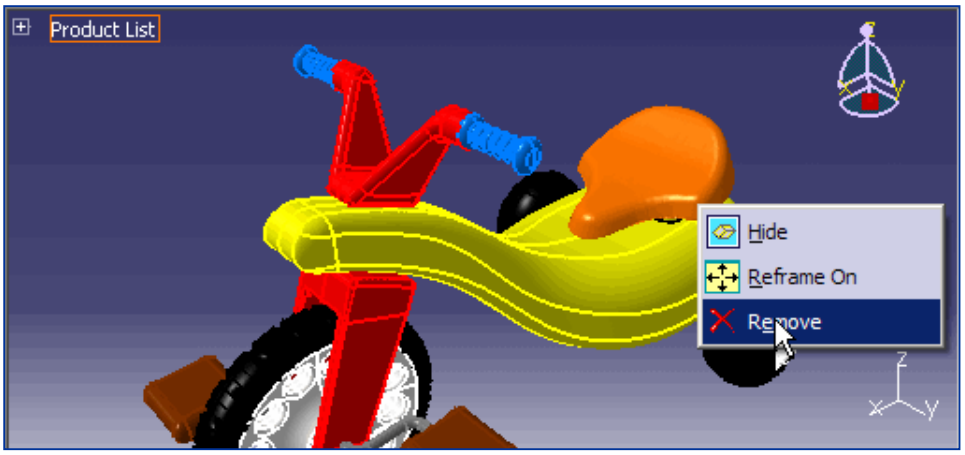


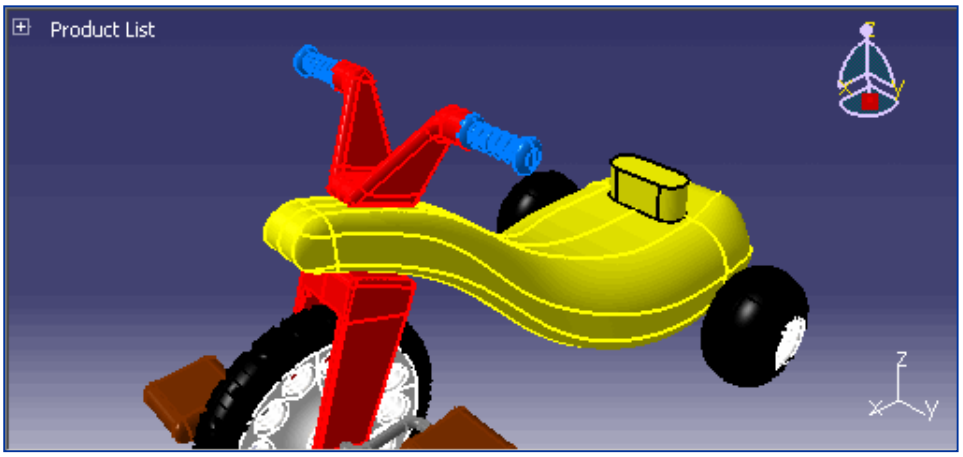


How to Remove Products

You can remove parts of the product from the Web Viewer. **Remove** function only removes the parts of the product from the Viewer, it does not remove the parts of the product from the server where the product is loaded from for viewing in the Web Viewer. Re-load the product into the Viewer to see it complete with parts.

1. Select the product by clicking it in the Product List or in the ViewerSpace.
2. Right-click the selected product and select **Remove** from the shortcut menu. *The Product is removed from the Web Viewer.*

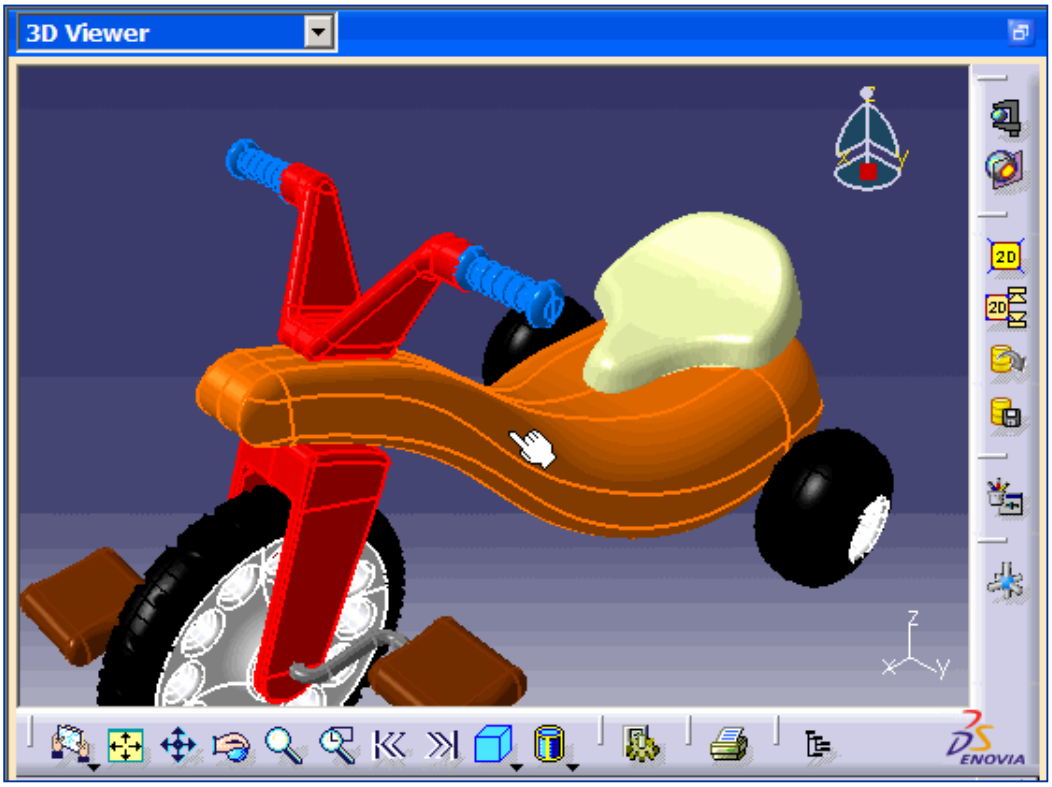




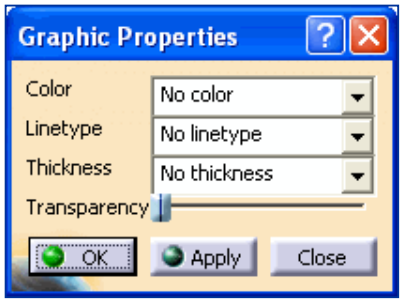
How to Modify Graphic Properties

You can modify the **Graphic Properties** of objects in the viewer. This feature allows you to change the appearance of any part of the product in the Viewer.

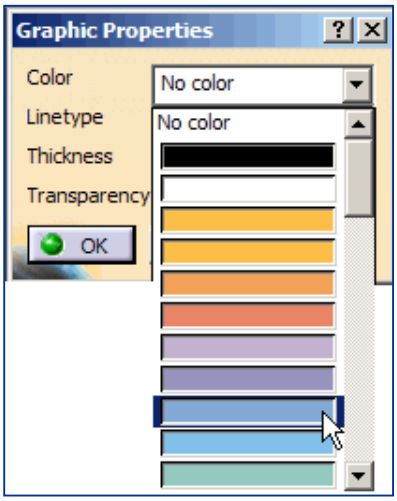
1. Select an object by clicking it in the ViewerSpace.



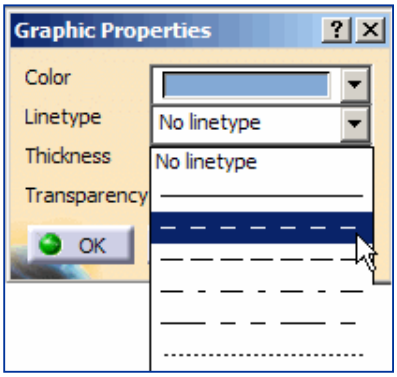
2. Click the **Graphic Properties** button. *The **Graphic Properties** dialog box appears.*



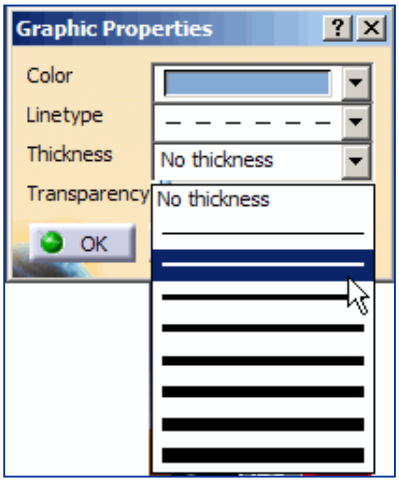
3. To modify the color, click the **Color** selection button and select a color from the proposed list.



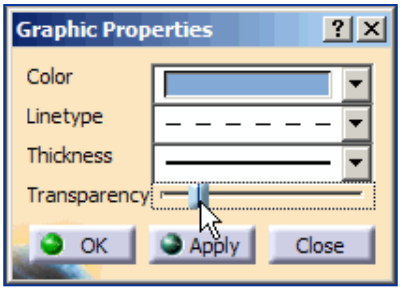
4. To modify the line type, click the **Linetype** selection button and select a line type from the proposed list.



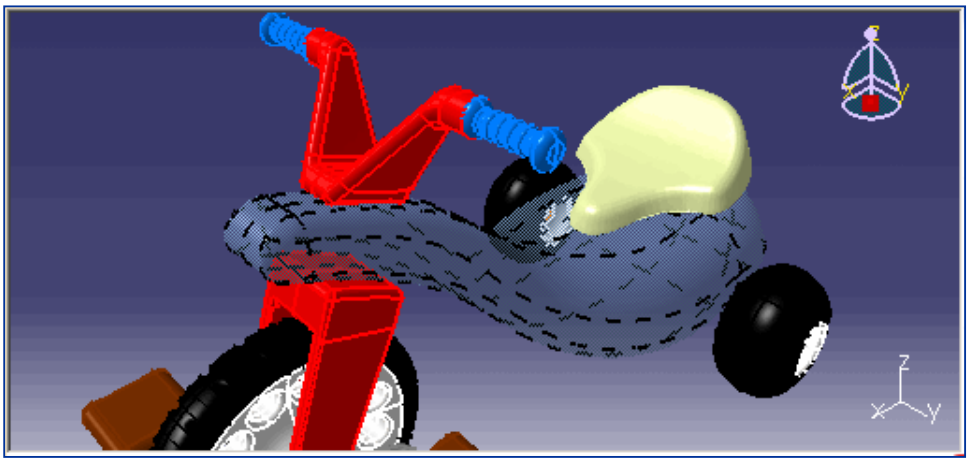
5. To modify the line thickness, click the **Thickness** selection button and select a thickness from the proposed list.
Note: Line thickness can only be modified for text of font type **STROKE**. For all other font types, modifying the line thickness will have no effect.



6. To modify the Transparency, drag the **Transparency** slider (the extreme left of the slider corresponds to zero transparency, or solid, and the extreme right corresponds to complete transparency).



7. To validate the modifications, click the **OK** button. *The modified object is displayed.*

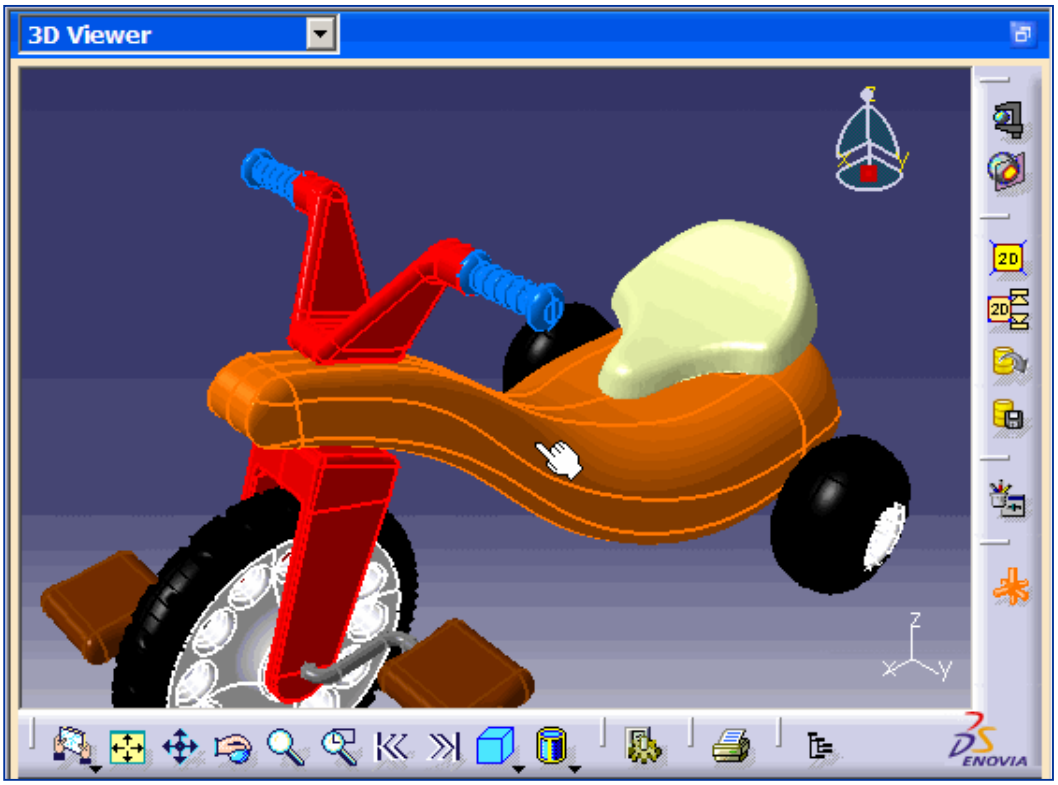


8. To close **Graphic Properties** window, click the **Close** button.

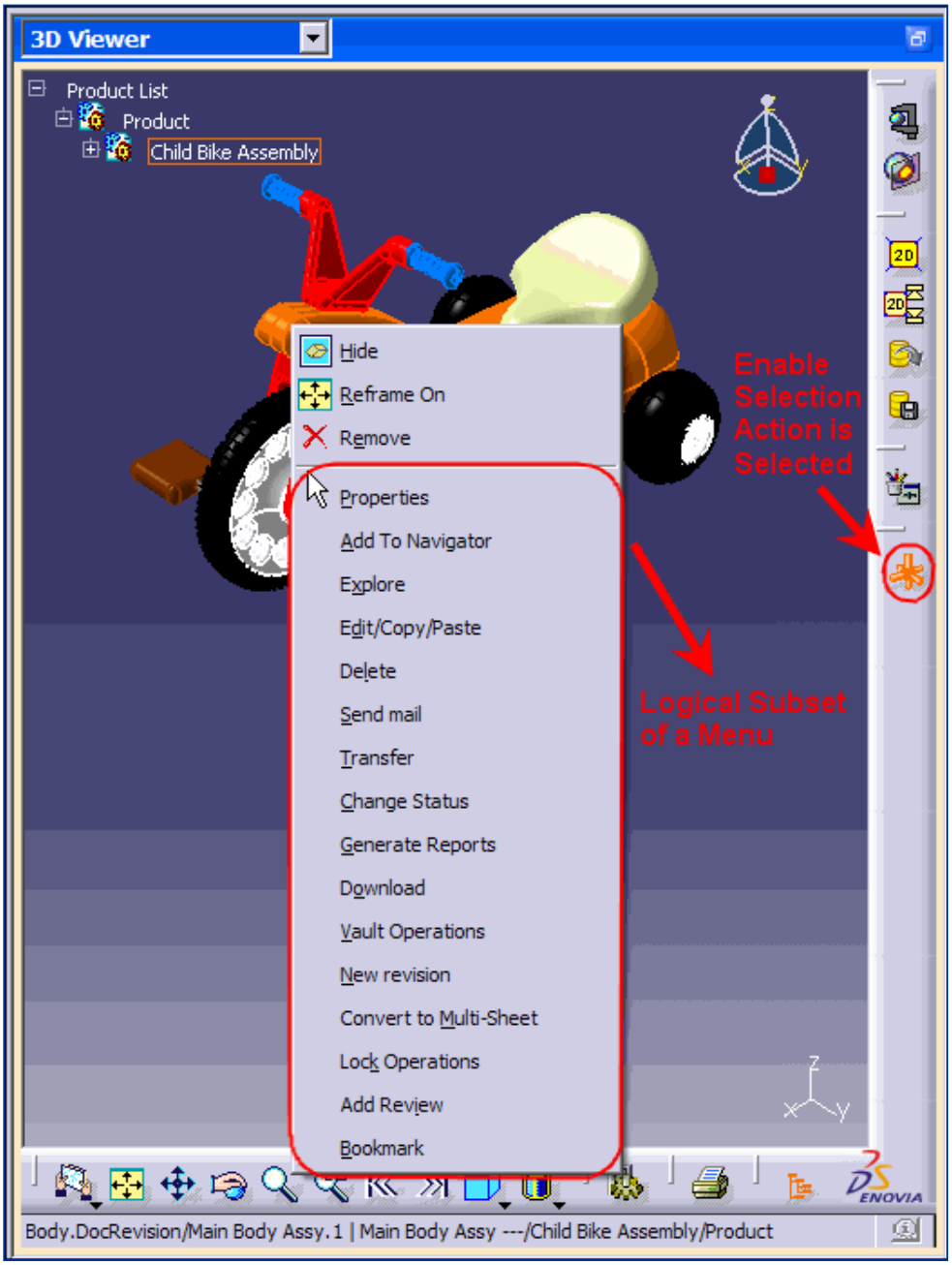
How to Enable Selection Actions

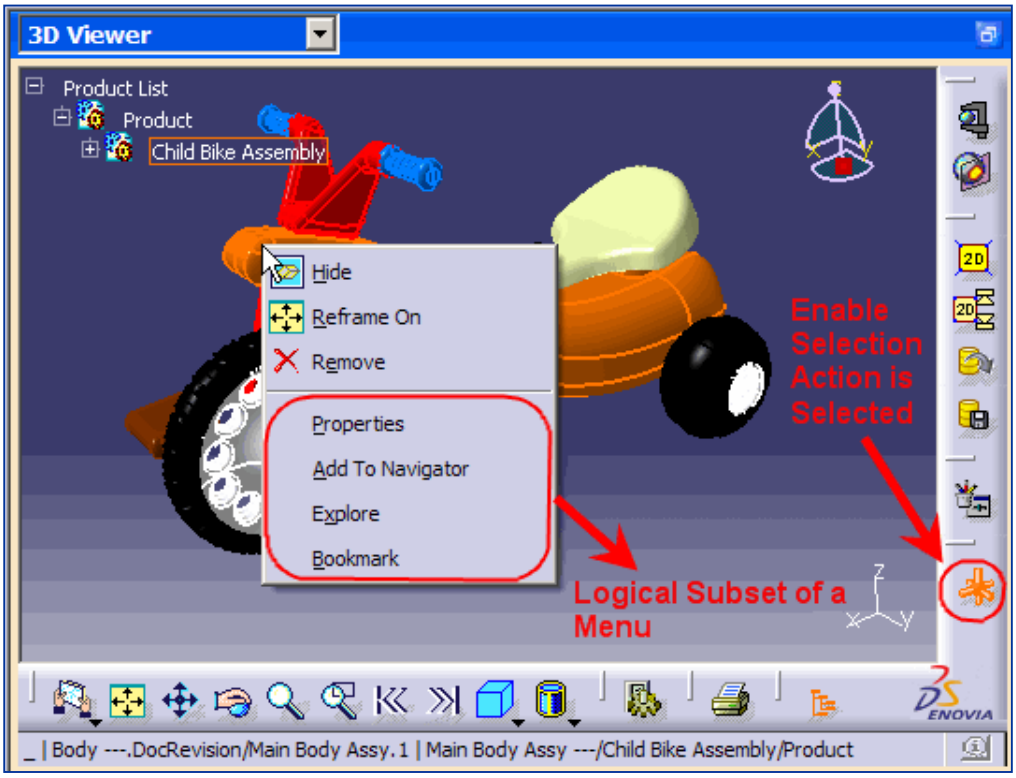
You can enable selection actions menu in the viewer to see the Logical Subset of a Shortcut Menu (LSCM). By using LSCM, you will have context of a viewer properties and will be able to perform functions that are available in the toolbar, and the chortcut menu available in the **Favorite** or **Search** windows. Disable the **Enable Selection Actions** function when you do not need to use it for faster menu load in the ViewerSpace.

1. Click the **Enable Selection Actions** button in the viewer and select the object by clicking it in the Product List or in the ViewerSpace. *Selected object is highlighted.*

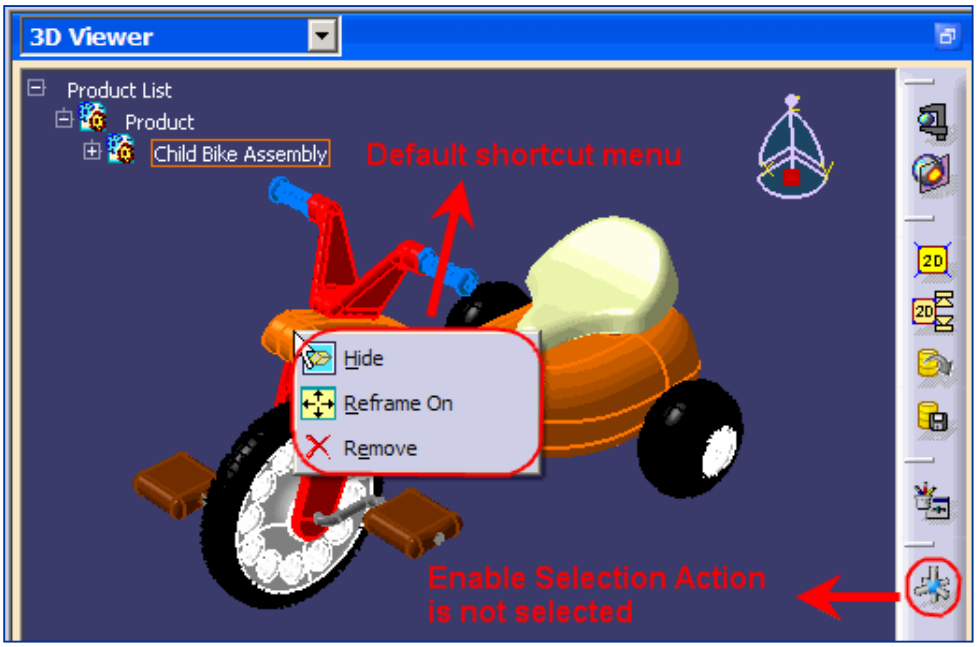


2. Right-click the selected object. Logical Subset of a Shortcut Menu *(LSCM) is populated. The shortcut menu appears with the LSCM that you will have in a context of a viewer properties.*


3D Viewer
Product List
Product
Child Bike Assembly
Hide
Reframe On
Remove
Properties
Add To Navigator
Explore
Edit/Copy/Paste
Delete
Send mail
Transfer
Change Status
Generate Reports
Download
Vault Operations
New revision
Convert to Multi-Sheet
Lock Operations
Add Review
Bookmark
Enable Selection Action is Selected
Logical Subset of a Menu
Body.DocRevision/Main Body Assy.1 | Main Body Assy ---/Child Bike Assembly/Product

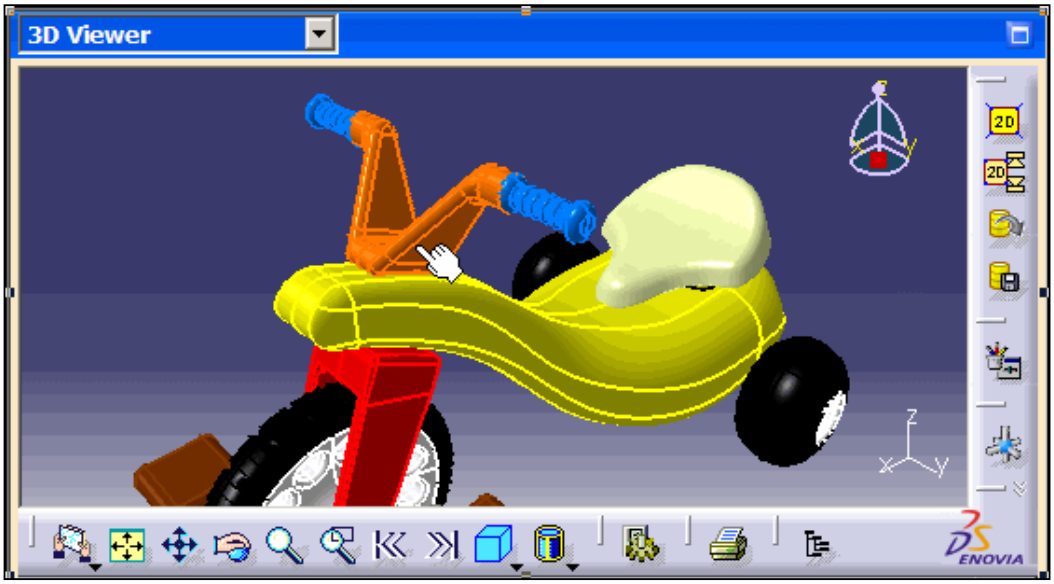


3. To display a default shortcut menu, select the **Enable Selection Actions** button again. *Default menu appears.*



The Viewer Window

Viewer Window



Horizontal Toolbar

Button	Button Name	Description
	Examine Mode, Walk Mode, Fly Mode	Sets the modes in the Navigator. See How to Navigate in Examine Mode, Navigating in Walk Mode, Navigating in Fly Mode
	Fit All In	Zooms in or out so all the geometry fits in the available space. See How to Fit All in Viewer
	Pan	Pans the view. Lets you move entire geometry in the Viewer. See How to Pan
	Rotate	Rotates the view. See How to Rotate
	Zoom In Out	Zooms in or out by dragging up or down. See How to Zoom
	Zoom Area	Zooms in on the area defined by dragging a bounding outline. See How to Zoom into a Designated Area
	Previous View	Returns to previous view. See How to Display the Previous View
	Next View	Switches to next view. See How to Display the Next View
	Isometric View	Applies standard isometric view. See How to Use the Predefined Views
	Shading with Edges	Displays geometry views in shading mode with edges. See How to Set the Visualization Mode
	Settings	Displays the viewer settings. See How to Modify 3D Viewer Settings
	Print	Prints the active document. See How to Print

	Product List	Displays the product list. See How to Hide and Show Products

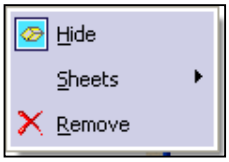
Vertical Toolbar

Button	Button Name	Description
	Measure	Measures selected item or distance between two points. See How to Measure
	Section	Manages product sections and cuts. See How to Create a Section Cut
	Annotate	Crates a new annotated view. See How to Create an Annotated View
	Annotated Views	Displays the Annotated Views List. See How to Retrieve an Annotated View
	Open Annotations	Opens annotated views with annotations. See How to Retrieve a Specific Annotated View
	Save Annotations	Saves annotated views with annotations. See How to Save Annotations
	Graphic Properties	Modifies the graphic properties. See How to Modify Product Graphic Properties
	Enable Selection Actions	Enable actions on selection. See How to Enable Selection Actions

Shortcut menu for the 3D Viewer.

Button	Button Name	Description
	Hide	Hides the part of the geometry from the view in the Web Viewer. See Managing Products, How to Hide and Show Products
	Reframe On	Zooms in, and brings the selected part of the geometry into the center of the viewer. See Managing Product, How to Reframe Products
	Remove	Removes the part of the geometry from the viewer until the product, or geometry is re-loaded. See Managing Products, How to Remove Products

Shortcut menu for the 2D Viewer.



Button	Button Name	Description
	Hide	Hides the part of the geometry from the view in the Web Viewer. See Managing Products, How to Hide and Show Products
Sheets	Sheets	Displays the sheet list. See Managing Product, How to Reframe Products
	Remove	Removes the part of the geometry from the viewer until the product, or geometry is re-loaded. See Managing Products, How to Remove Products

Modifying 3D Viewer Settings

This section contains the following information about Modifying 3D Viewer Settings.

About Modifying 3D Viewer Settings

When Modifying 3D Viewer Settings

How to Modify 3D Viewer General Settings

How to Modify Units Settings

How to Modify Annotation Settings

How to Modify Measure Settings

How to Modify Section Settings

How to Modify Product List Settings

How to Modify Performance Settings

About Modifying 3D Viewer Settings

The ability to modify the 3D viewer settings provides you the opportunity to manage the visual display of a 3D model and the viewer performance in the following areas:

- Color enhancement
- Model view display
- Measurement display
- Grid properties
- Product list editing
- System performance and efficiencies

You can change the general settings of the viewer including background and model display. Annotation settings provide the user with the opportunity to modify the model line weights and style. Performance settings can be adjusted for performance or visual enhancement depending on your needs.

The unit settings can also be modified for calculation and measurement purposes. Measure settings affect the display characteristics of the measurements and can be adjusted to your preference. You can change section settings, which affect the grid properties. Product Lists can also be included or modified in the model.

When Modifying 3D Viewer Settings

You can modify the 3D viewer settings by selecting the **Settings** button located in the horizontal toolbar. Upon clicking the button a dialog box will appear with the following options:

3D Viewer - You can change the background color and pattern of the viewer. The 3D model view display can be repositioned by projection, axis position, rotation, and animation speed.

Units - You can change the numeric display of measurements and calculations. Trailing zeros, exponential notation, and decimal location can be modified.

Annotations - The Annotations option affects the line characteristics in a model, including color, weight, and font.

Measure - Measurement notations can be modified by changing line width and text color.

Section - The spacing between grid lines and adding grid labels can be changed with the Section option.

Product List - - You can generate or modify a product list for the model.

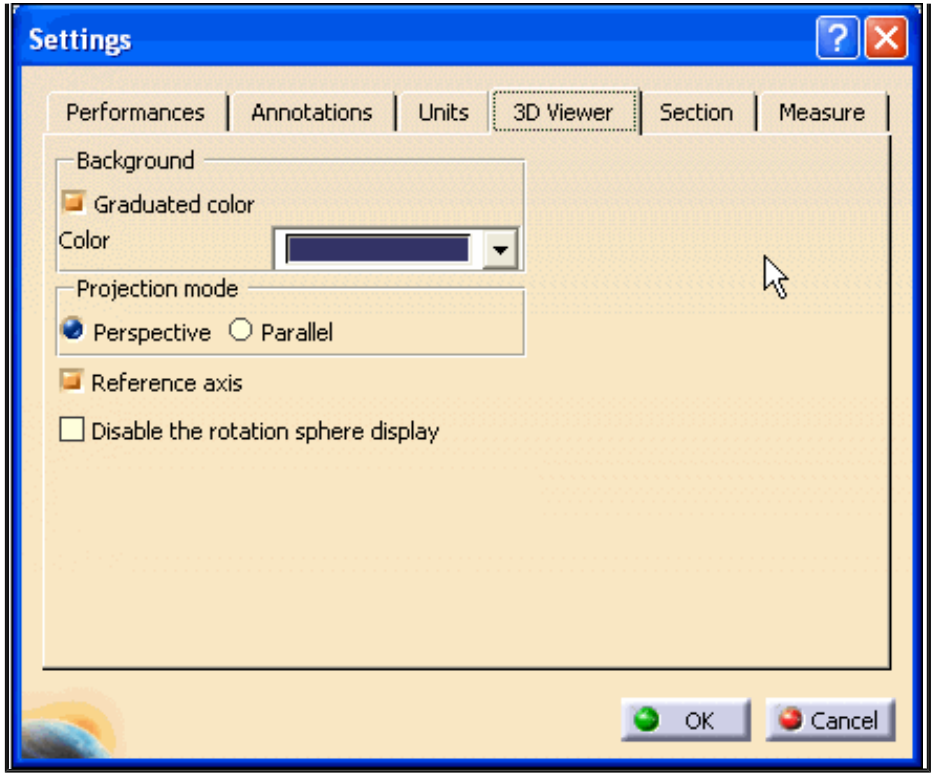
Performances - You can change the system performance characteristics by modifying detail levels, pixel culling, surface lighting, and back face culling.

Note: The tabs in the **Settings** dialog box are added dynamically when the corresponding object is first added to your view. **Settings** dialog box will show the last tab opened previously during the session. Use left arrow, located next to tabs, to view all of the available options. Tabs are shown in the alphabetical order.

How to Modify 3D Viewer Settings

You can modify the 3D viewer settings by following the steps below:

1. In a 3D Viewer, click the **Settings** button. *The **Settings** dialog box appears.*



2. Click the **3D Viewer** tab from the **Settings** dialog box.
3. Modify the settings as described below.

Background color

Modify the Background color to the color of your choice.

Click the **Color** selection button and choose the desired standard color from the proposed list.

Graduated color

On - the background color will be graduated
Off - the background color will be solid

Projection mode

perspective - view with perspective
parallel - view in parallel

Note: When you are working in either Walk or Fly mode, the projection mode is automatically set to **Perspective** and the **Projection mode** setting will be grayed.

Reference axis

On - display reference axis
Off - do not display reference axis

Rotation sphere display

On - display bounding sphere when rotating
Off - do not display bounding sphere when rotating

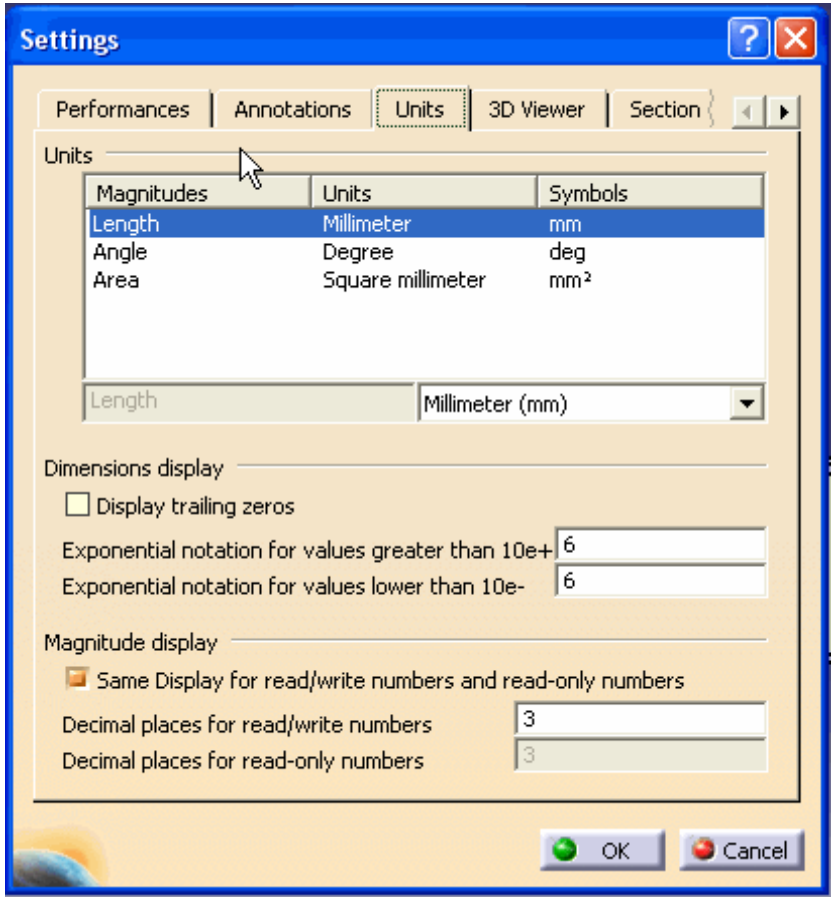
Note: The calculated animation time for a given product impacts the number of animation steps. The longer the calculated duration, the fewer steps. In the case where the animation would take too much time, there will be no viewpoint animation.

4. To apply the modified settings and close the **Settings** dialog box, click the **OK** button at the bottom-right of the dialog box.

How to Modify Units Settings

You can modify the unit settings by following the steps below:

1. Click the **Units** tab from the **Settings** dialog box.



2. Modify the settings as described below.

Units

1. In the **Magnitude** column, click the magnitude type to modify the unit of measure.
2. At the lower-right of the Units area, click the units selection button and select a value from the proposed list.

Display trailing zeros

True - display trailing zeros of analyze results
False - do not display trailing zeros of analyze results

Exponential notation for values greater than 10e+

Enter the power of 10 for large analyze results to be displayed in scientific notation, e.g. the default value 6 indicates that results will be displayed in scientific notation as of the value1,000,000 (10 raised to the 6th power).

Exponential notation for values lower than 10e-

Enter the power of 10 for small analyze results to be displayed in scientific notation, e.g. the default value 6 indicates

that results will be displayed in scientific notation as of the value 0.000001 (10 raised to the -6th power).

Same display for read / write numbers and read only numbers

On - display in similar manner (as defined for read/write numbers)
Off - display each in its own manner

Decimal places for read / write numbers

Enter the number of decimal places you wish to be displayed for numbers that appear in text-entry fields (numbers that you can write).

Decimal places for read only numbers

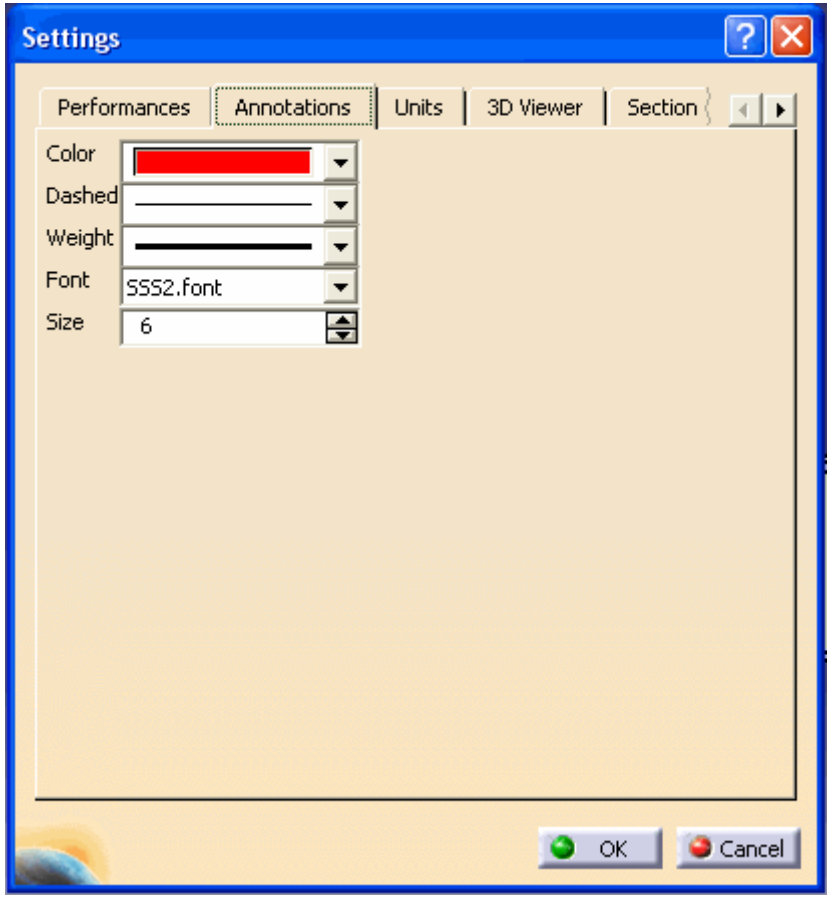
Enter the number of decimal places you wish to be displayed for results (numbers that you can only read).

3. To apply the modified settings and close the **Settings** dialog box, click the **OK** button at the bottom-right of the dialog box.

How to Modify Annotation Settings

You can modify annotation settings by following the steps below:

1. Click the **Annotations** tab from the **Settings** dialog box.



2. To modify the **Color**, **Dashed**, **Weight** or **Font** settings, click the appropriate selection button and choose the setting from each proposed list.

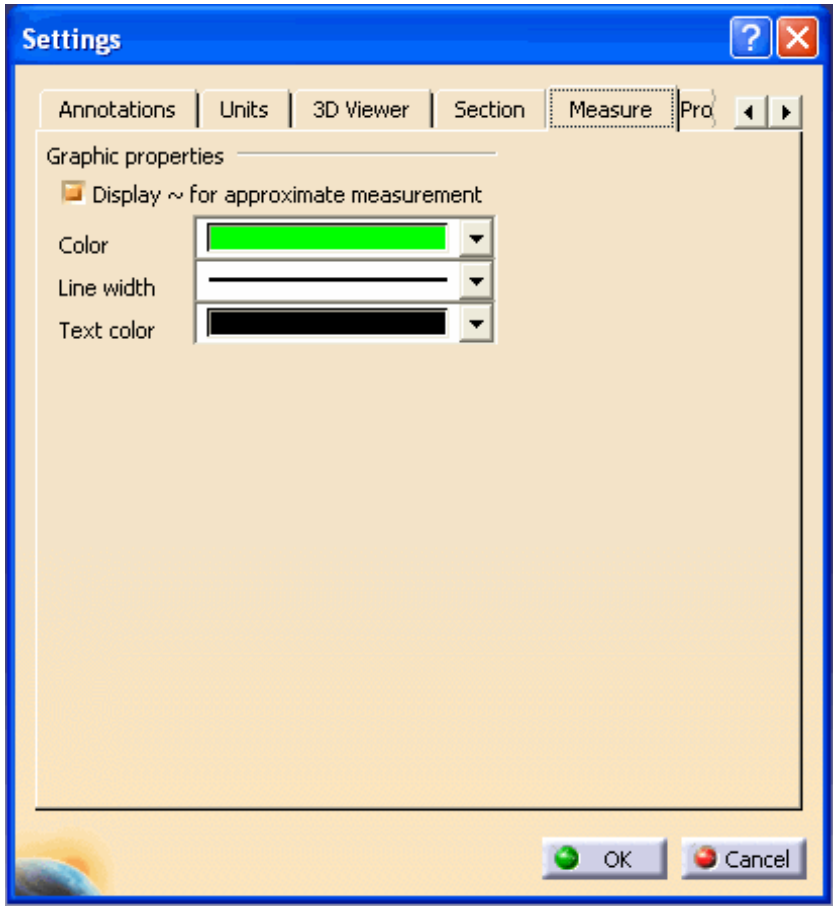
Note: Line thickness (weight) can only be modified for font type STROKE. For all other font types, modifying the line thickness will have no effect.

3. To modify the annotation size, enter the desired value in the **Size** text-entry field or use the **Increment / Decrement** buttons to obtain the desired value.
4. To apply the modified settings and close the **Settings** dialog box, click the **OK** button at the bottom-right of the dialog box.

How to Modify Measure Settings

You can modify measure settings by following the steps below:

1. Click the **Measure** tab from the **Settings** dialog box.



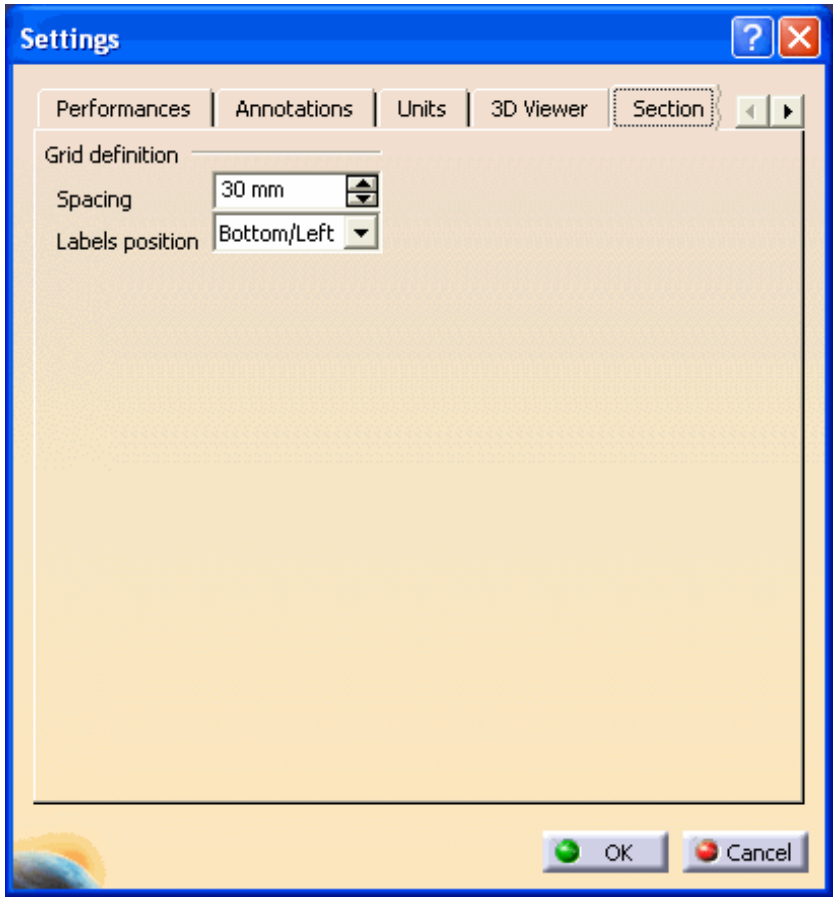
2. To modify the **Color** (measure color), **Line width** or **Text color** settings, click the appropriate selection button and choose the desired setting from the proposed list.
3. To see the "~" symbol to indicate approximate measures, select the **Display ~ for approximate measurement** checkbox.
4. To apply the modified settings and close the **Settings** dialog box, click the **OK** button at the bottom-right of the dialog box.

How to Modify Section Settings

You can modify section settings by following the steps below:

When you load large models and are using the grid for visualization purposes, the interval between lines of the grid will be adjusted as necessary to fit the entire model in the viewing space. Therefore, the interval might not correspond to the interval specified in the Settings. (If you zoom in close enough that the specified interval can be used, the grid interval will automatically revert to the specified value.)

1. Click the **Section** tab from the **Settings** dialog box.

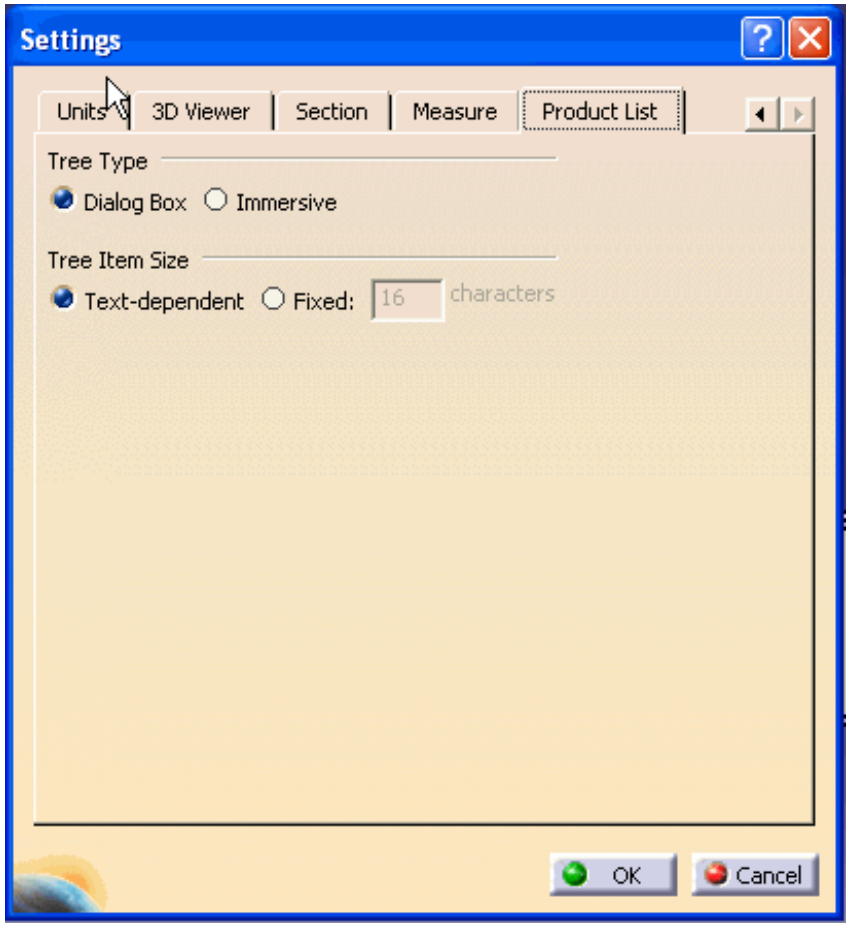


2. To modify the spacing value between grid lines, enter the desired value in the **Spacing** text-entry field or use the increment/decrement buttons to obtain the desired value.
3. To modify the positioning of the grid labels, click the **Labels position** selection button and choose the desired setting from the proposed list.
4. To apply the modified settings and close the **Settings** dialog box, click the **OK** button at the bottom-right of the dialog box.

How to Modify Product List Settings

You can modify product list settings by following the steps below:

1. Click the **Product List** tab from the **Settings** dialog box.

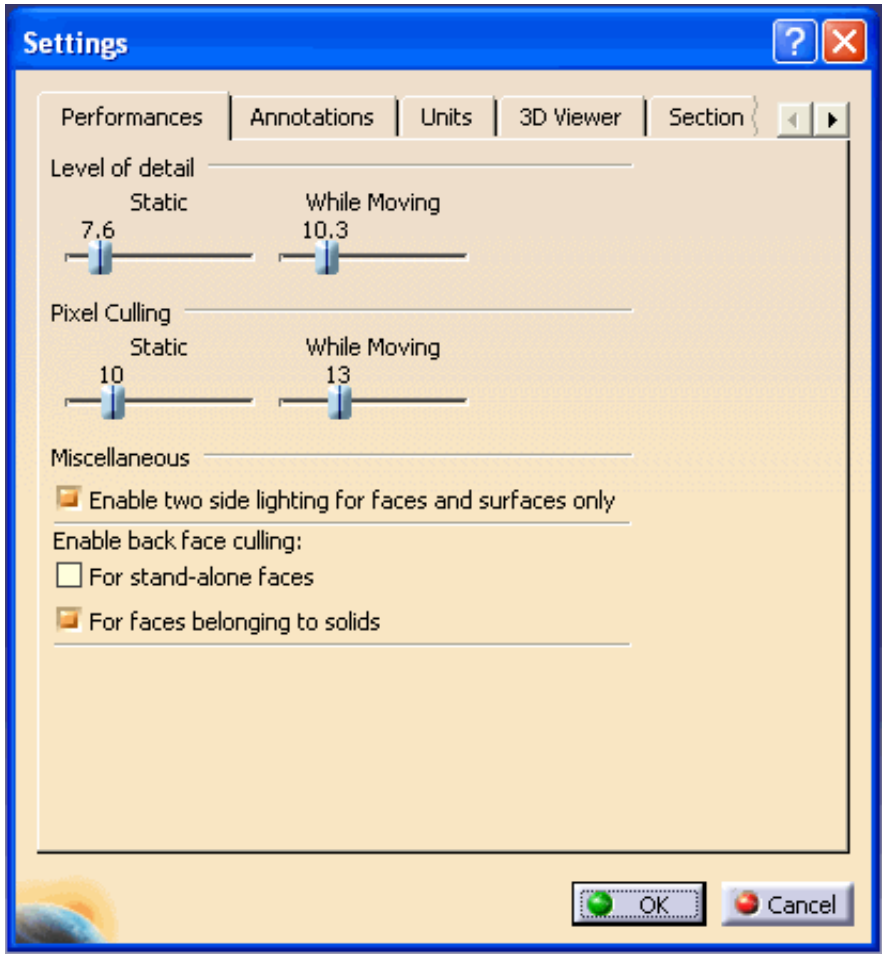


2. To work with a free-floating dialog box, click the **Dialog Box** option button, or, to work with a product list immersed in the Web Space, click the **Immersive** option button.
3. For the Product List text to be self-determining, click the **Text-dependent** option button, or, in order to determine a fixed size for the Product List text, click the **Fixed** option button and enter a character size in the **characters** text-entry field.
4. To apply the modified settings and close the **Settings** dialog box, click the **OK** button at the bottom-right of the dialog box.

How to Modify Performance Settings

System performance can be improved by modifying the performance settings and adjusting the display quality of the viewer. You can modify performance setting by following the steps below:

1. Click the **Settings** button. *The Performance **Settings** page will be the first settings page displayed.*



2. The **Level of Detail** option provides the ability to vary the viewer display performances of a model.

- **Static** provides the option of adjusting the amount of detail in a model. Move the slider to increase the value and reduce the level of detail. Values range from 0 (fully-detailed view) to 40 (minimal detailed view).
- **While Moving** provides the option of moving larger parts more quickly. Move the slider to increase the speed of moving a part. If the mouse is released after moving the part, the normal level of detail will be redisplayed. Values range from 0 (normal part speed) to 40 (maximum speed).

Upon releasing the mouse in both instances the model will reappear.

Note: In both cases, the higher the value, the lower the level of detail. Normally, the **Static** will have a lower value and the **While Moving** will have a higher value, providing increased display performance of the viewer.

When using the **Level of Detail (LOD)** option, ensure that the CGR files contain **LOD** information. This is done during the CGR creation.

When working with a model that has several colors applied (for example: a different color for each surface) using a static or dynamic level of detail, only one color will be displayed for performance reasons. The dominant color used in the model will be the color used in the display.

3. The **Pixel Culling** option performs similarly to **Level of Detail**, however it defines the size in pixels of objects to be hidden or displayed, and affects the display performances of a model in the viewer.

   - **Static** provides the option of adjusting the pixel quantities to be displayed in the viewer. The smaller the value the more details with smaller pixel quantities appear. The larger the value and only the features with the larger pixel quantities will appear. A larger value will display only the details of the model with that minimal pixel size and the view will be generated faster. Values range from 0 (fully-detailed view) to 40 (minimal detailed view).

Note: Selection points may not be visible when the **Pixel Culling - Static** is set to the maximum value.

   - **While Moving** provides the option of moving larger parts more quickly. Move the slider to increase the speed of moving a part. If the mouse is released after moving the part, the Static size will reappear. Values range from 0 (normal part speed) to 40 (maximum speed).

4. The **Enable two side lighting for faces and surfaces only** option that helps you to visualize the two sides (i.e. front side and back side) of a face or surface by lighting them.
5. The **Enable back face culling** option provides different selection options for surfaces to be displayed.

   - **For stand-alone faces** provides a view of only the front face of the surface without displaying the back sides of faces or surfaces. This option also helps clarify the model displaying the faces and surfaces used to define the model.

   - **For faces belonging to solids** provides the option of displaying the faces and surfaces used to define the model. If this option is selected, back sides of faces or surfaces belonging to solids are not displayed.

Note: Some of the performance settings (**Pixel Culling** and **Level Of Detail**) will enhance performances. Whereas, **Back Face Culling** will have an impact on the performances mainly because the faces that were not previously drawn (because they were not visible) will be systematically rendered. This decrease in the performance is totally dependent upon the model size.

Modifying 2D Viewer Settings

This section contains the following information about Modifying 2D Viewer Settings.

About Modifying 2D Viewer Settings

When Modifying 2D Viewer Settings

How to Modify 2D Viewer General Settings

How to Modify Units Settings

How to Modify Annotation Settings

How to Modify Product List Settings

About Modifying 2D Viewer Settings

The ability to modify the 2D viewer settings provides you the opportunity to manage the visual display of a 2D model and the viewer performance:

- Color enhancement
- Model view display
- Product list editing

You can change the general settings of the viewer, including background and model display. Annotation settings provide you the opportunity to modify the model line weights and style.

The unit settings can also be modified for calculation and dimensional purposes. Product Lists can also be included or modified in the model.

When Modifying 2D Viewer Settings

You can modify the 2D viewer settings by selecting the **Settings** button located in the horizontal toolbar. Upon clicking the button a dialog box will be displayed with the following options:

2D Viewer - You can change the background color and pattern of the viewer. The 2D model view display can be can also be repositioned by projection, axis position, rotation, and animation speed.

Units - You can change the numeric display of measurements and calculations. Trailing zeros, exponential notation, and decimal location can be modified.

Annotations - The Annotations option affects the line characteristics in a model including color, weight, and font.

Section - The spacing between grid lines and adding grid labels can be changed with this option.

Product List - - You can generate or modifies a product list for the model.

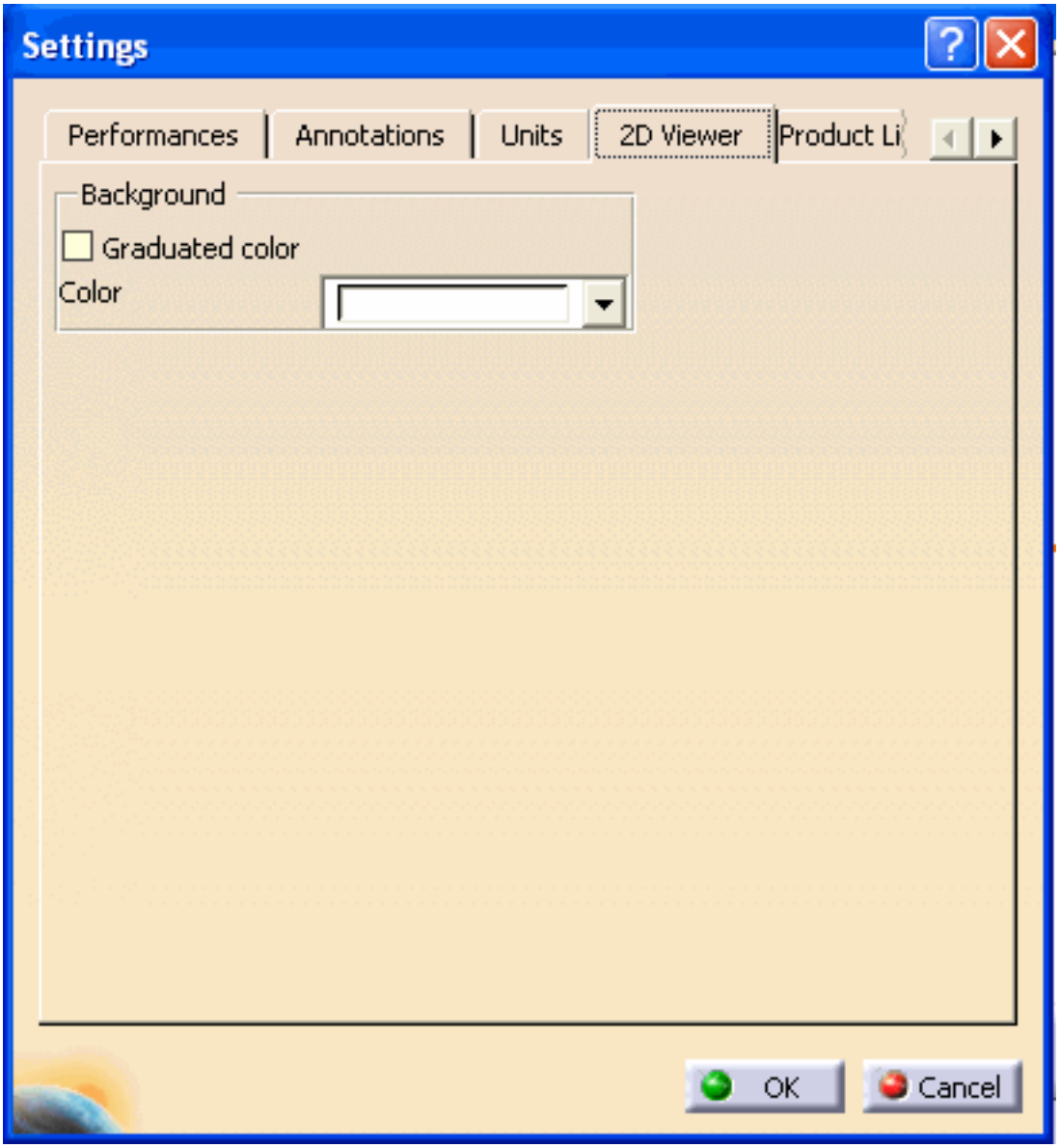
Note: The tabs in the **Settings** dialog box are added dynamically when the corresponding object is first added to your view. **Settings** dialog box will show the last tab opened previously during the session. Use left arrow, located next to tabs, to view all of the available options. Tabs are shown in the alphabetical order.

Note: if the Measure and/or Section commands have been previously accessed in a 3D Viewer during the current session, these tabs will appear in the 2D Viewer Settings dialog box. However, they are not relevant in the 2D context.

How to Modify 2D Viewer General Settings

You can modify the 2D viewer settings by following the steps below:

1. In a 2D Viewer, click the **Settings** button. *The **Settings** dialog box appears.*



2. Click the **2D Viewer** tab.
3. Modify the settings described below.

Background color

Modify the Background color to the color of your choice:

Click the **Color** selection button and choose the desired standard color from the proposed list.

Graduated color

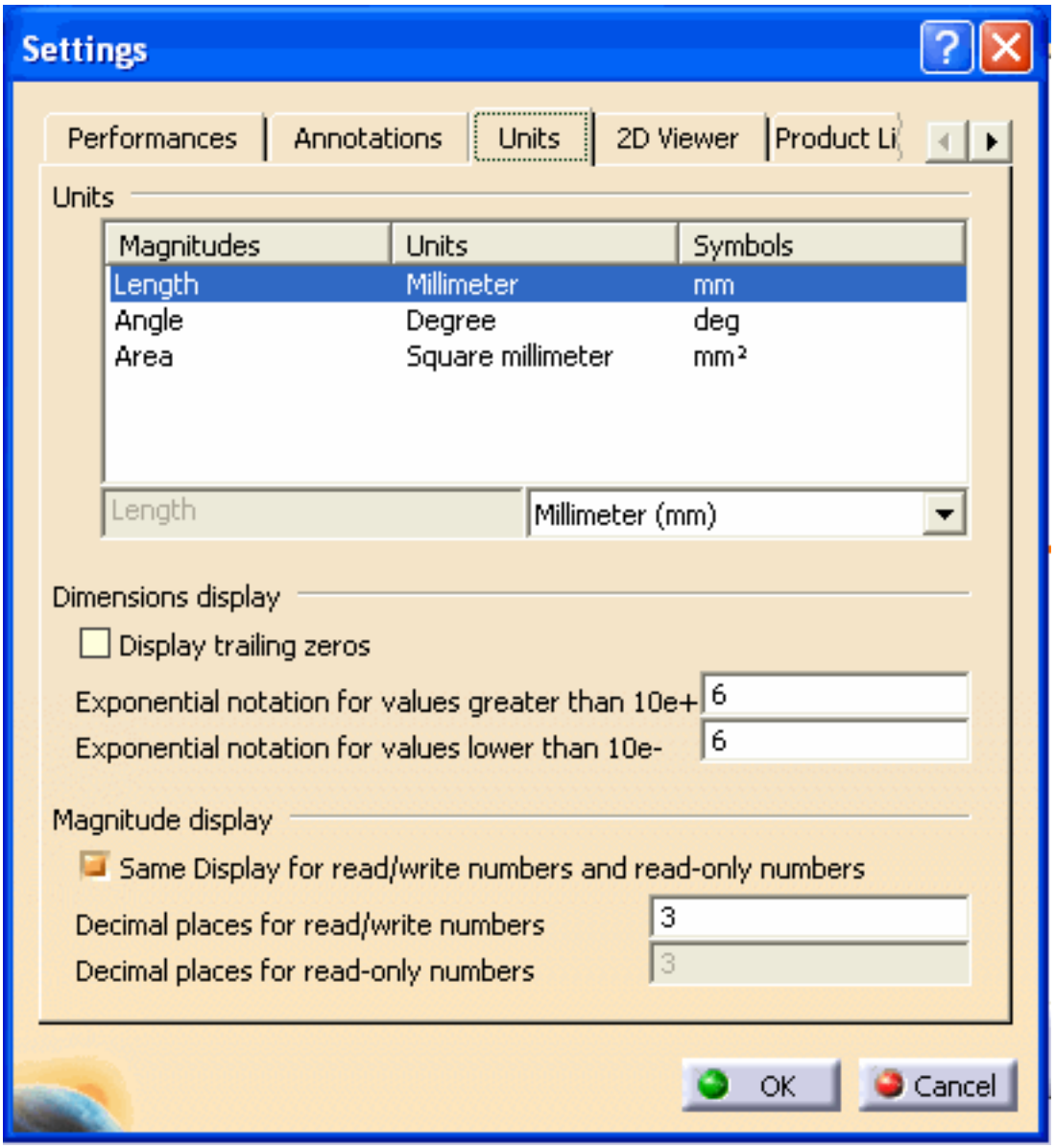
On - the background color will be graduated
Off - the background color will be solid

4. To apply the modified settings and close the **Settings** dialog box, click the **OK** button at the bottom-right of the dialog box.

How to Modify Units Settings

You can modify the units settings by following the steps below:

1. Click the **Units** tab from the **Settings** dialog box.



2. Modify the settings as described below:

Units

1. In the **Magnitude** column, click the magnitude type to modify the unit of measure.
2. At the lower-right of the Units area, click the units selection

button and select a value from the proposed list.

Display trailing zeros

True - display trailing zeros of analyze results
False - do not display trailing zeros of analyze results

Exponential notation for values greater than 10e+

Enter the power of 10 for large analyze results to be displayed in scientific notation, e.g. the default value 6 indicates that results will be displayed in scientific notation as of the value1,000,000 (10 raised to the 6th power).

Exponential notation for values lower than 10e-

Enter the power of 10 for small analyze results to be displayed in scientific notation, e.g. the default value 6 indicates that results will be displayed in scientific notation as of the value 0.000001 (10 raised to the -6th power).

Same display for read/write numbers and read only numbers

On - display in similar manner (as defined for read/write numbers)
Off - display each in its own manner

Decimal places for read / write numbers

Enter the number of decimal places you wish to be displayed for numbers that appear in text-entry fields (numbers that you can write).

Decimal places for read only numbers

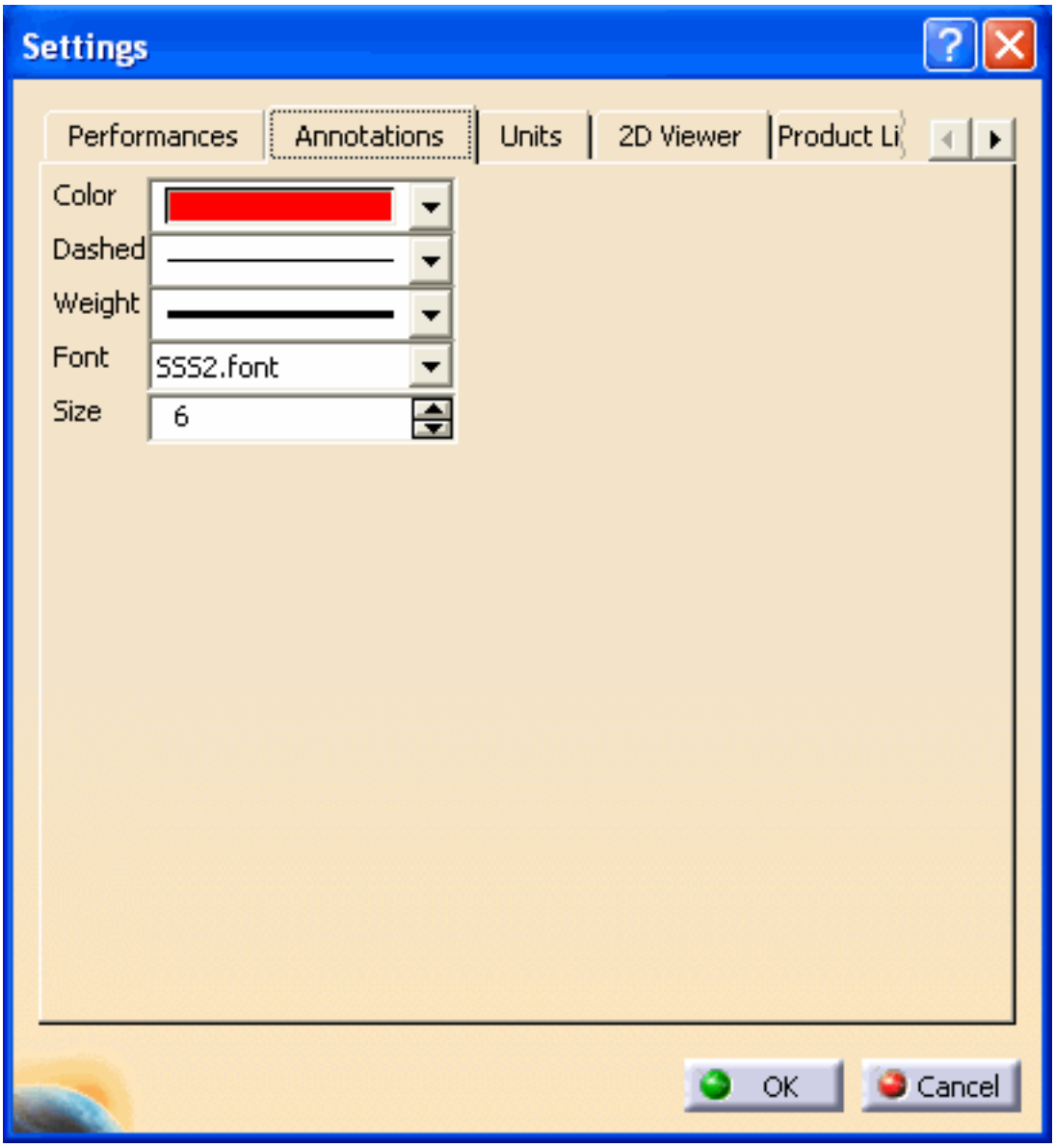
Enter the number of decimal places you wish to be displayed for results (numbers that you can only read).

3. To apply the modified settings and close the **Settings** dialog box, click the **OK** button at the bottom-right of the dialog box.

How to Modify Annotation Settings

You can modify the annotation settings by following the steps below:

1. Click the **Annotations** tab from the **Settings** dialog box.



2. To modify the **Color**, **Dashed**, **Weight** or **Font** settings, click the appropriate selection button and choose the desired setting from the proposed list.

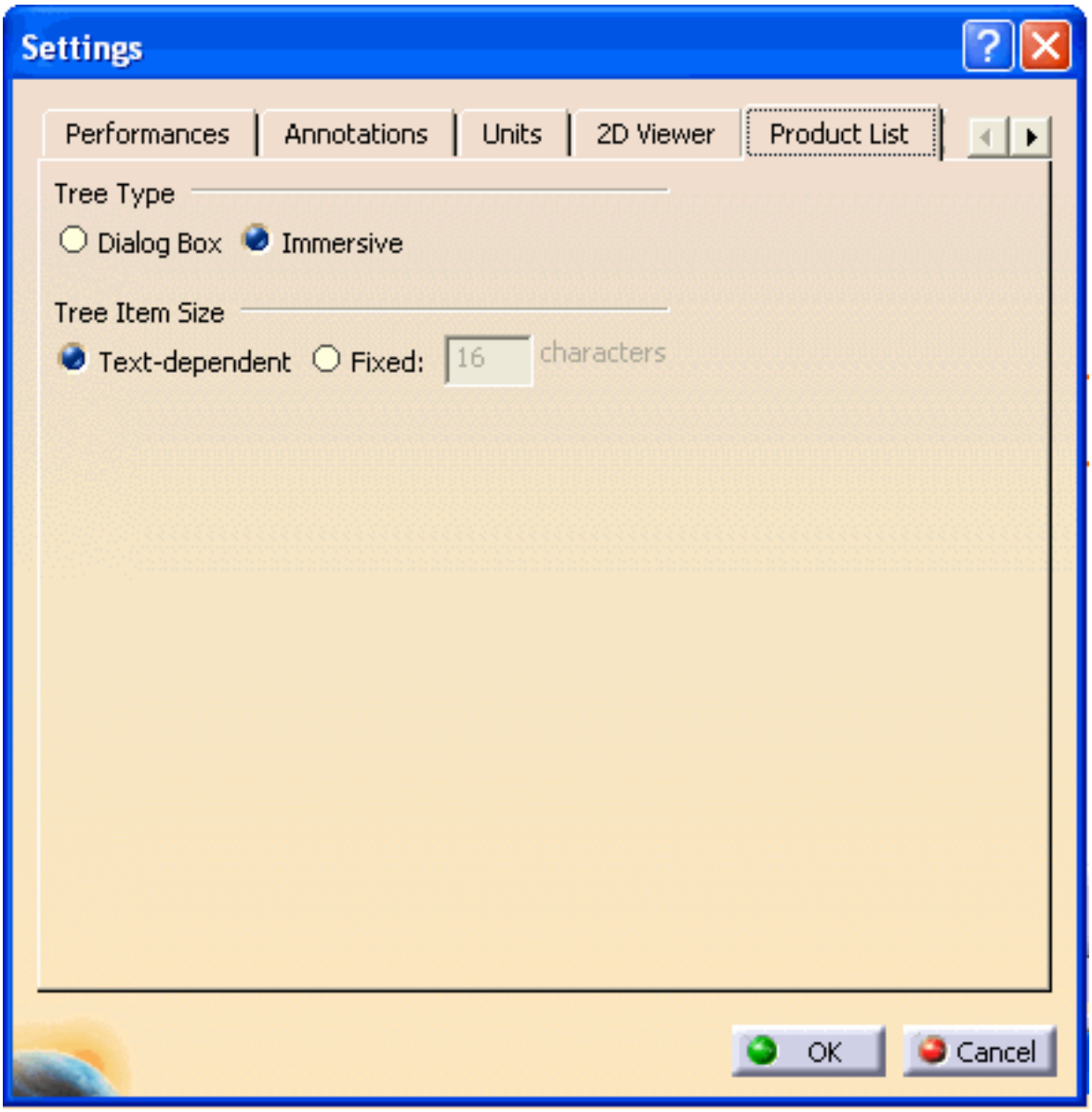
Note: Line thickness (weight) can only be modified for font type STROKE. For all other font types, modifying the line thickness will have no effect.

3. To modify the annotation size, enter the desired value in the **Size** text-entry field or use the increment/decrement buttons to obtain the desired value.
4. To apply the modified settings and close the **Settings** dialog box, click the **OK** button at the bottom-right of the dialog box.

How to Modify Product List Settings

You can modify the product list settings by following the steps below:

1. Click the **Product List** tab from the **Settings** dialog box.



2. To work with a free-floating dialog box, click the **Dialog Box** option button, or, to

work with a product list immersed in the Web Space, click the **Immersive** option button.

3. For the Product List text to be self-determining, click the **Text-dependent** option button or, in order to determine a fixed size for the Product List text, click the **Fixed** option button and enter a character size in the **characters** text-entry field.
4. To apply the modified settings and close the **Settings** dialog box, click the **OK** button at the bottom-right of the dialog box.

Customizing Toolbar Layout

This section contains the following information about Customizing Toolbar Layout.

About Customizing Toolbar Layout

When Customizing Toolbar Layout

How to Move a Toolbar

How to Hide a Toolbar

How to Show a Toolbar

About Customizing a Toolbar

Customizing your toolbars provides the option of repositioning and displaying the tools used most often. This feature provides the ease of access and simplifies your navigation and viewer pane.

When Customizing a Toolbar

Customizing your toolbars provides you the options:

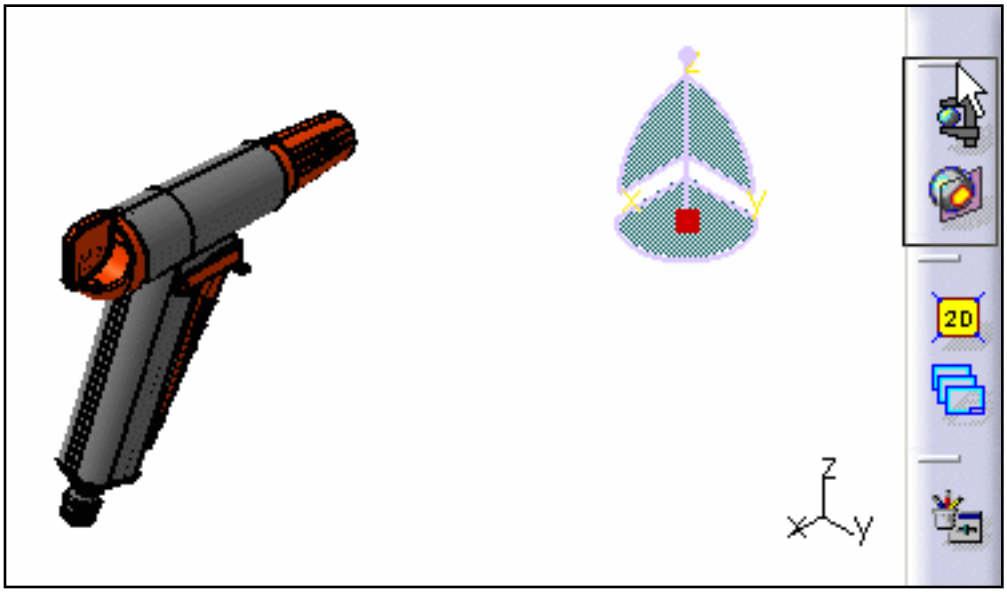
- to move a toolbar about the viewer pane
- hide infrequently used toolbars
- show frequently used toolbars

How to Move a Toolbar

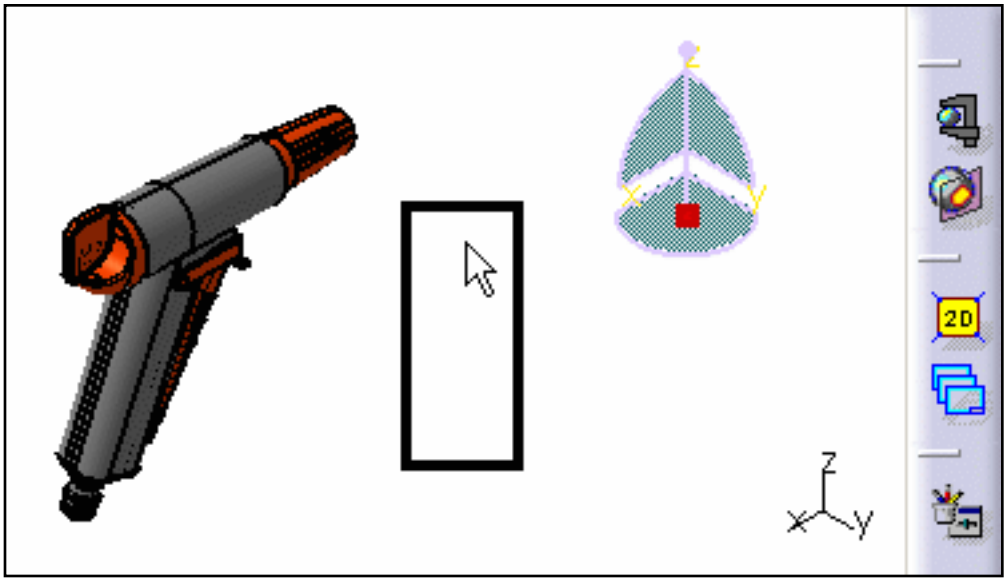
You can customize the toolbar layout by following the steps below:

You can move a toolbar from its docked position in the toolbar area to any location of your user pane.

1. In the toolbar area, click the handle of the toolbar you wish to move. *A rectangle appears around the selected toolbar.*



2. Drag the toolbar to the desired position.



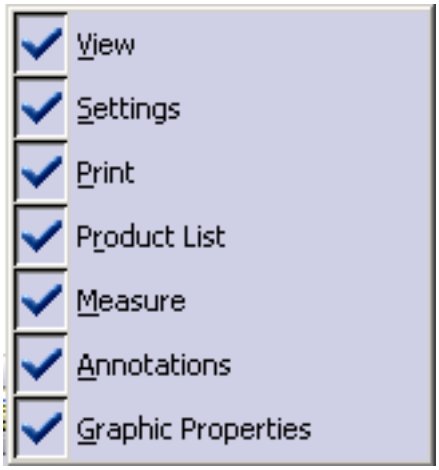
3. Release the mouse button. *The toolbar is moved accordingly.*

You can also relocate a toolbar to any desired location in the toolbar area.

How to Hide a Toolbar

You can hide any chosen toolbar.

1. In the status message area, right-click. *The toolbar status dialog box appears.*

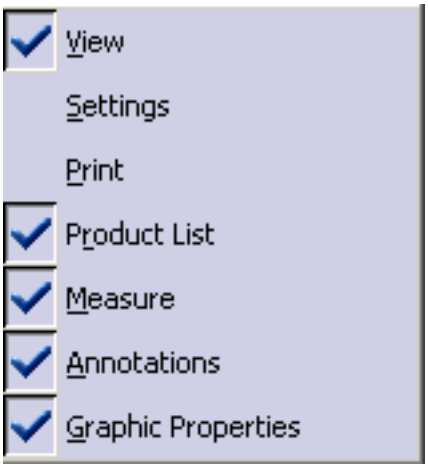


2. Uncheck the toolbar you wish to hide. *The dialog box closes.The designated toolbar is removed from the user interface.*

How to Show a Toolbar

You can choose to redisplay a hidden toolbar.

1. In the status message area, right-click. *The toolbar status dialog box appears.*



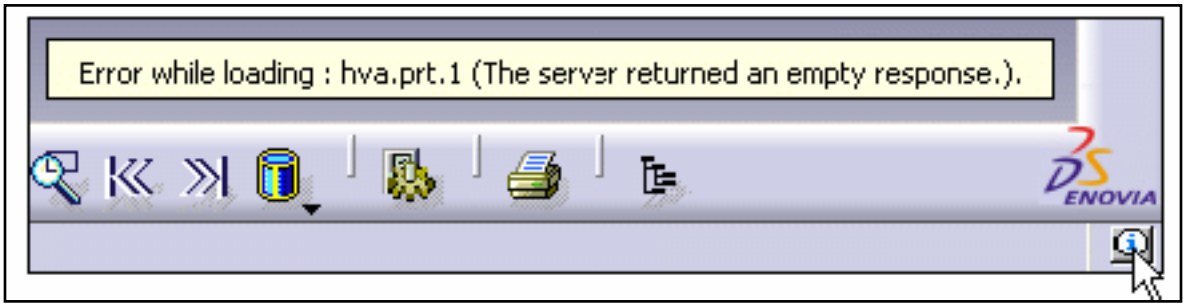
2. Check the toolbar you wish to show. *The dialog box closes. The designated toolbar is redisplayed in the user interface.*

Accessing Tessellation Error Messages

Messages generated by tessellation errors are accessible via an information button at the bottom-right corner of the Web Viewer.

At the beginning of your session, the information button is deactivated. If a tessellation error occurs, the button is activated and will remain so until the end of your session.

1. If a tessellation error occurs and the information button at the bottom-right corner of the Web Viewer is activated, click the button in order to see the error message.
   The error message appears in the Viewer Space.



2. To remove the message, click anywhere within the message box.

The stack of messages has a maximum size of 6. Each click on the button will step you backwards in the stack of messages.

Tablet PC Support

This section contains the following information about Tablet PC Support:

About the Tablet PC Support

When Using the Tablet PC Support

How to Implement the Tablet PC Support

How to Navigate Using the Tablet PC Support

How to Enter hand-written Annotations using the Tablet PC Pad

About the Tablet PC Support

Tablet PC Support explains how to perform viewing operations using the Tablet Pen on a Tablet PC. You can use the pad to visualize both 2D and 3D objects.

When Using the Tablet PC Support

When you are using the the Tablet PC you can create a transformation pad on the viewer that represents the tablet. You can customize the pad using the **Tablet PC** option. The pad size, transparency and position can be adjusted. You can navigate about your model using the Tablet PC Pad.

Text can also be added with the **Annotation Text** option.

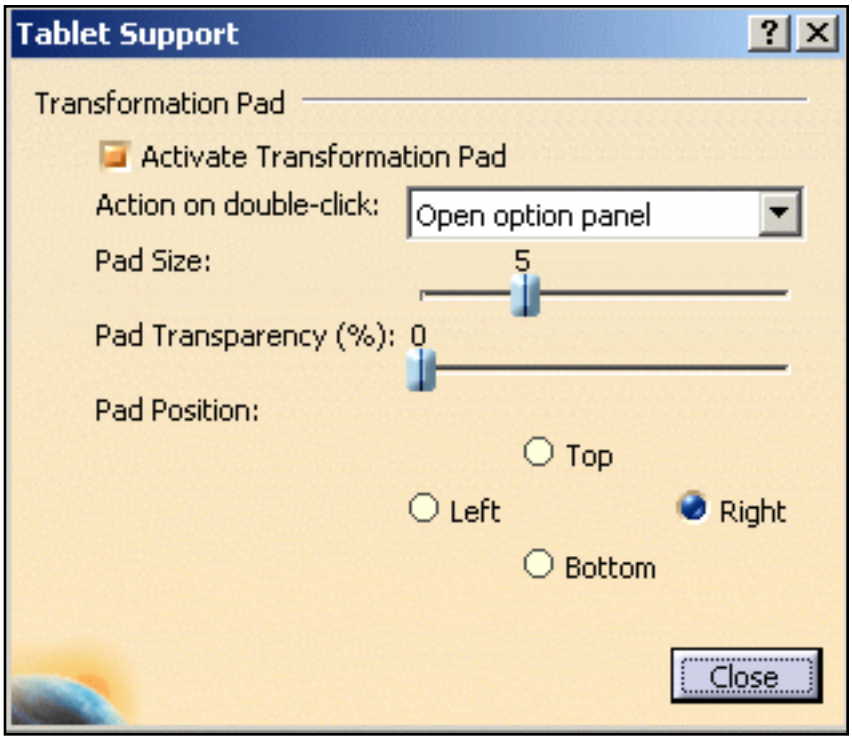
How to Implement the Tablet PC Pad

You can use the tablet PC Support by following the steps below:

Tablet PC is only supported for the Standalone version of the Web Viewer.

This functionality is available only on Windows XP Tablet PC edition.

1. In the toolbar, click the **Tablet PC** button. The Tablet Support dialog box appears.



2. To activate the transformation pad, click the **Activate Transformation Pad** checkbox.
3. To customize the double-click action, click the **Action on double-click** selection button and select one of the options from the proposed list:

- Open option panel: open the Tablet Support dialog box directly in the geometry area
- Reframe: fit all the geometry into the available space
- Center location: center the geometry at a specific location
- No action: no action will be performed

4. To customize the pad size, drag the **Pad Size** slider button.
5. To customize the pad transparency, drag the **Pad Transparency** slider button.
6. To customize the pad position, click the Top, Bottom, Left, or Right option button in order that the pad be positioned accordingly in the viewer.
7. Click **Close** to confirm.

The pad will have the following aspect when it appears in the viewer:

How to Navigate using the Tablet PC Pad

1. To rotate, drag the Tablet Pen over the circle button.
2. To translate, drag the Tablet Pen over the square button.
3. To zoom in, drag the Tablet Pen from right to left over the rectangle button.
4. To zoom out, drag the Tablet Pen left to right over the rectangle button.

How to enter hand-written annotations using the Tablet PC Pad

1. In the **Annotation** toolbar, click on **Text** icon to start the annotation text command.
   The Annotation Text dialog box appears.
   OK and Cancel buttons are displayed in the viewer, with the following message: "Please write your annotation text in the viewing area."
2. Write the annotation text in the ViewerSpace.
3. Wait for the automatic recognition or start it by clicking the **OK** button in the Annotation Text dialog box.
   The hand written text is replaced by the recognized text centered at the same location.
4. Optionally drag the created annotation to the desired location.

Web Viewer Toolbars

This section contains the Web Viewer toolbars and their action buttons.

3D Horizontal Toolbar

3D Vertical Toolbar

2D Horizontal Toolbar

2D Vertical Toolbar

Annotation Toolbar

Measure Toolbar

Sectioning Toolbar

Tablet PC

3D Horizontal Toolbar

Button	Description
	See How to Navigate in Examine Mode, Navigating in Walk Mode, Navigating in Fly Mode
	See How to Fit All in Viewer
	See How to Pan
	See How to Rotate
	See How to Zoom
	See How to Zoom into a Designated Area

	See How to Display the Previous View
	See How to Display the Next View
	See How to Use the Predefined Views
	See How to Set the Visualization Mode
	See How to Modify 3D Viewer Settings
	See How to Print
	See How to Hide and Show Products

3D Vertical Toolbar

Button	Description

	See How to Measure
	See How to Create a Section Cut
	See How to Create an Annotated View
	See How to Retrieve an Annotated View
	See How to Retrieve a Specific Annotated View
	See How to Save Annotations
	See How to Modify Product Graphic Properties
	See How to Enable Selection Actions

2D Horizontal Toolbar

Button	Description
	See How to Fit All in Viewer
	See How to Pan
	See How to Zoom
	See How to Zoom into a Designated Area
	See How to Display the Previous View
	See How to Display the Next View

	See How to Modify 3D Viewer Settings
	See How to Print
	See How to Hide and Show Products

2D Vertical Toolbar

Button	Description
	See How to Create an Annotated View
	See How to Retrieve an Annotated View
	See How to Retrieve a Specific Annotated View
	See How to Save Annotations
	See How to Modify Product Graphic Properties

	See How to Enable Selection Actions

Annotation Toolbar

Button	Description
	See How to Create an Annotated View
	See How to Create an Annotated View
	See How to Create an Annotated View
	See How to Create an Annotated View
	See How to Create an Annotated View
	See How to Create an Annotated View
	See How to Create an Annotated View
	See How to Create an Annotated View

Measure Toolbar

Note: The Measure buttons appear in the Measure dialog box, not in a dedicated toolbar. Measuring is only available in a 3D Web Viewer.

Button	Description
	See How to Measure Between Points
	See How to Measure Items

Sectioning Toolbar

Note: The Sectioning buttons appear in the Sectioning Definition dialog box, not in a dedicated toolbar. Sectioning is only available in a 3D Web Viewer.

Button	Description
	See Sectioning
	See Sectioning
	See Sectioning
	See Sectioning
	See Sectioning

Tablet PC

Button	Description
	See How to Navigate using the Tablet PC Pad
	See How to Navigate using the Tablet PC Pad
	See How to Navigate using the Tablet PC Pad

Web Viewer Shortcut Menu

Shortcut menu for the 3D Viewer.

Button	Description
	See Managing Products, How to Hide and Show Products
	See Managing Product, How to Reframe Products
	See Managing Products, How to Remove Products

Shortcut menu for the 2D Viewer.

Button	Description
	See Managing Products, How to Hide and Show Products

Sheets ▸	See Managing Product, How to Reframe Products
✕	See Managing Products, How to Remove Products