Getting Started Guide

Design and Create 3D PDF Documents
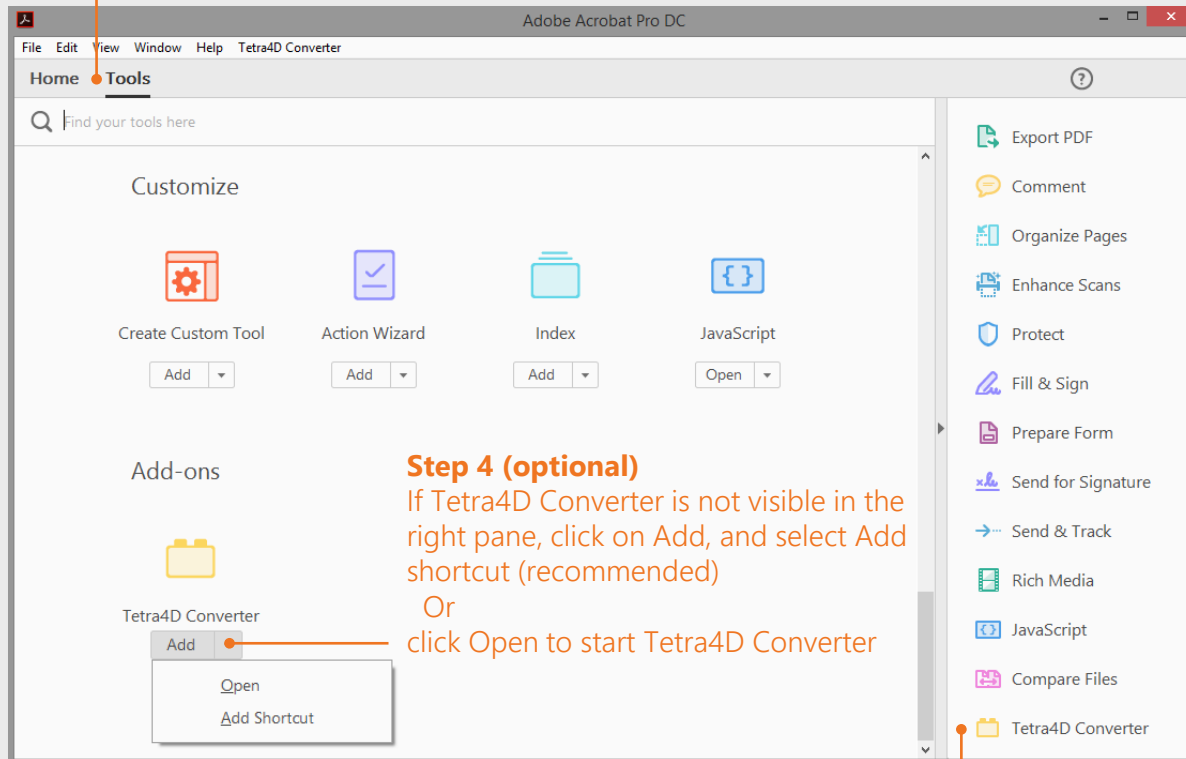
Tetra4D Converter - Add in for Adobe® Acrobat® Pro

TETRA⁴ᴰ

Step 1
After the installation of Tetra4D Converter, start Acrobat

Step 2
Click on Tools in the main Acrobat toolbar to access to the Acrobat features and to the installed Add-ons
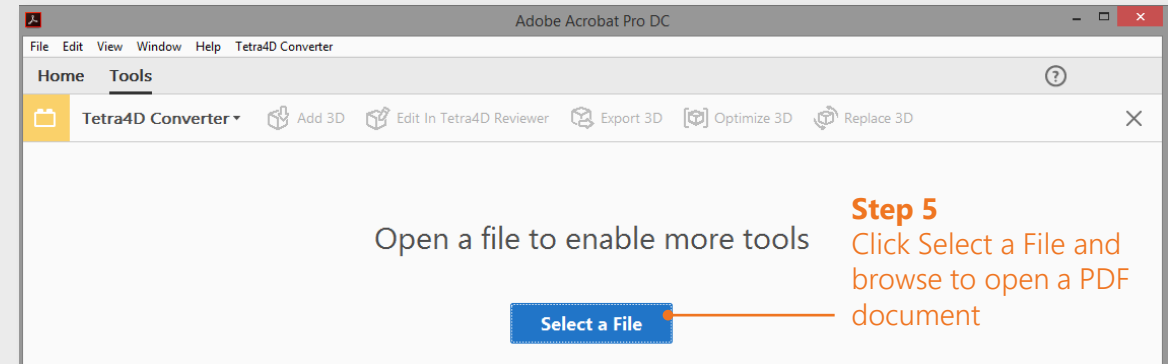
Step 4 (optional)
If Tetra4D Converter is not visible in the right pane, click on Add, and select Add shortcut (recommended)
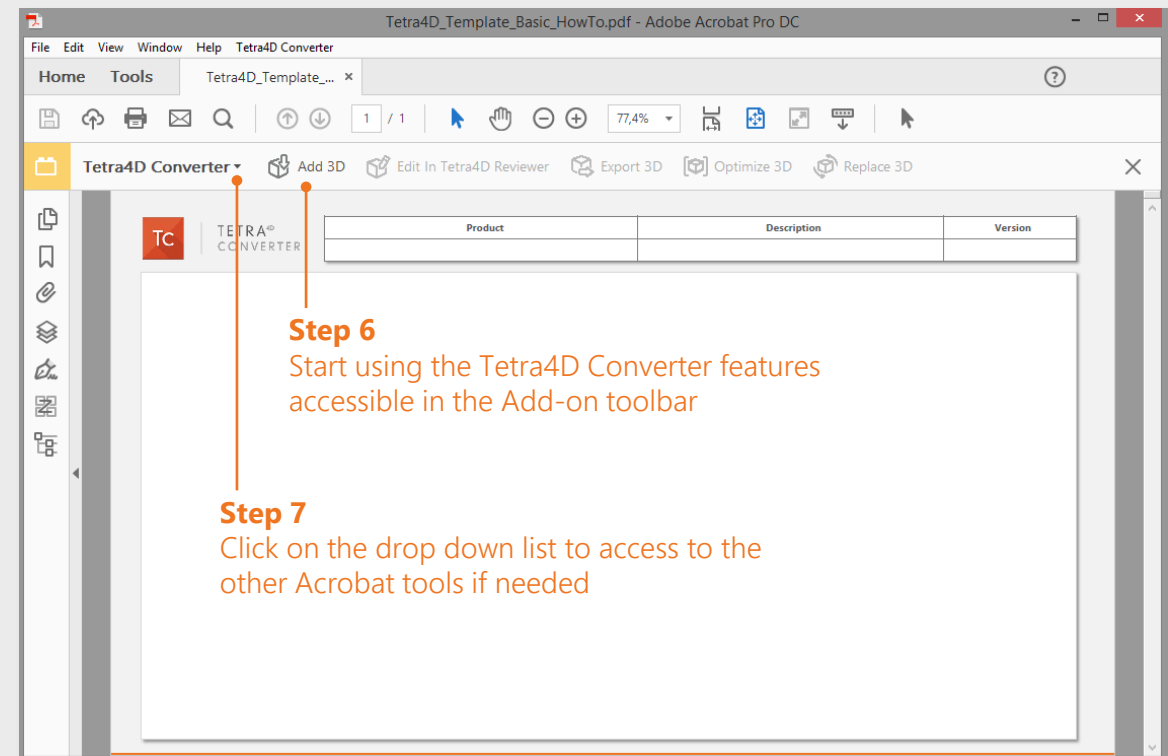 Or
click Open to start Tetra4D Converter

Step 3
Click Tetra4D Converter in the right pane (all the installed and activated add-ons should be listed)
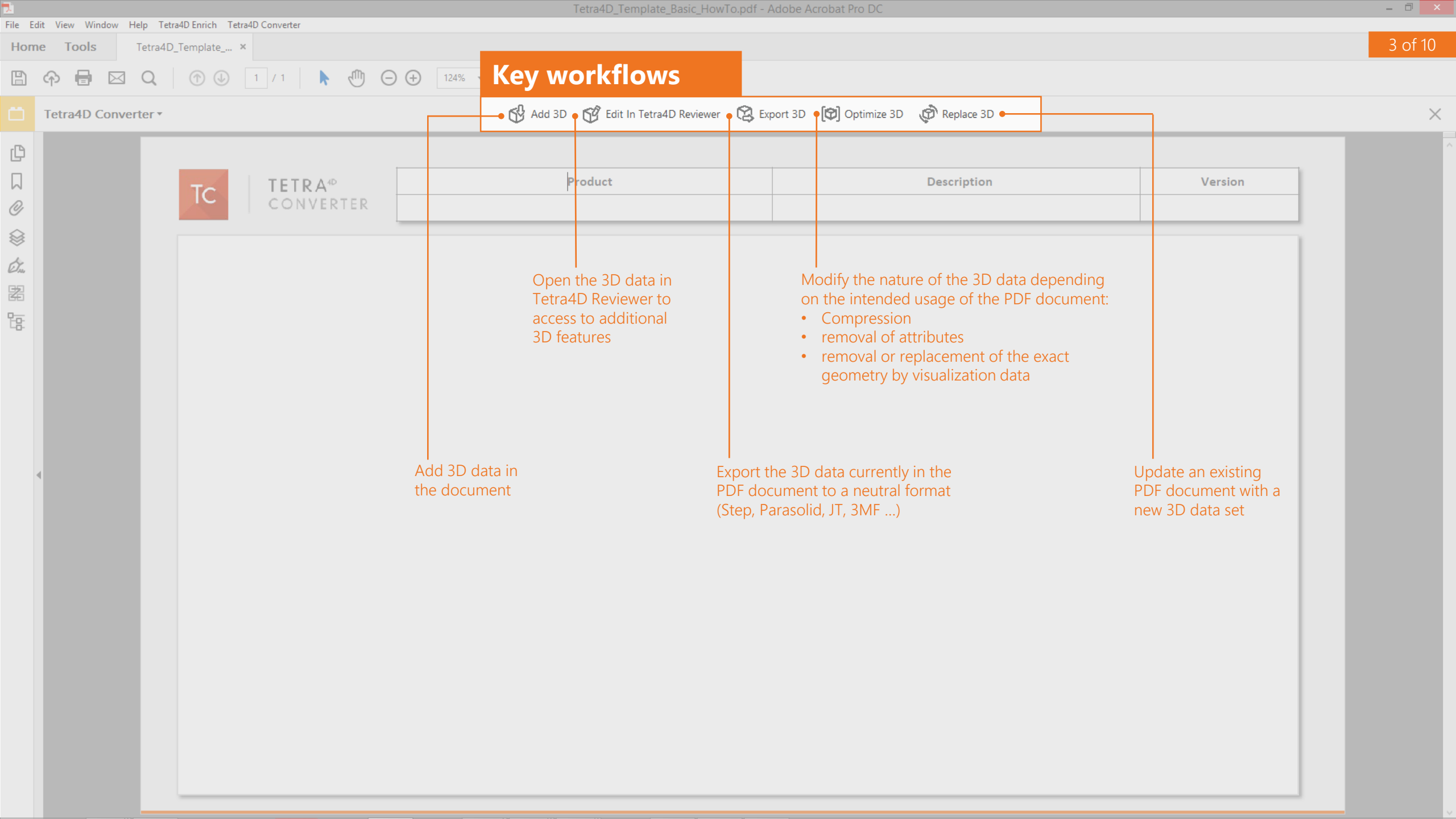
Step 5
Click Select a File and browse to open a PDF document

Step 6
Start using the Tetra4D Converter features accessible in the Add-on toolbar

Step 7
Click on the drop down list to access to the other Acrobat tools if needed

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Adobe Acrobat Pro DC

File Edit View Window Help Tetra4D Converter

Home Tools

Tetra4D Converter ▾   Add 3D   Edit In Tetra4D Reviewer   Export 3D   Optimize 3D   Replace 3D

Open a file to enable more tools

Select a File

Adobe Acrobat Pro DC

File Edit View Window Help Tetra4D Converter

Home Tools

Find your tools here

Customize

Create Custom Tool   Action Wizard   Index   JavaScript
Add   Add   Add   Open

Add-ons

Tetra4D Converter
Add
   Open
   Add Shortcut

Export PDF
Comment
Organize Pages
Enhance Scans
Protect
Fill & Sign
Prepare Form
Send for Signature
Send & Track
Rich Media
JavaScript
Compare Files
Tetra4D Converter

Tetra4D_Template_Basic_HowTo.pdf - Adobe Acrobat Pro DC

File Edit View Window Help Tetra4D Converter

Home Tools   Tetra4D_Template_...

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Tetra4D Converter ▾   Add 3D   Edit In Tetra4D Reviewer   Export 3D   Optimize 3D   Replace 3D

TETRA CONVERTER

Product	Description	Version

Key workflows

Add 3D · Edit In Tetra4D Reviewer · Export 3D · Optimize 3D · Replace 3D

Product	Description	Version

TETRA4D CONVERTER

Open the 3D data in Tetra4D Reviewer to access to additional 3D features

Modify the nature of the 3D data depending on the intended usage of the PDF document:
- Compression
- removal of attributes
- removal or replacement of the exact geometry by visualization data

Add 3D data in the document

Export the 3D data currently in the PDF document to a neutral format (Step, Parasolid, JT, 3MF …)

Update an existing PDF document with a new 3D data set

File   Edit   View   Window   Help   Tetra4D Enrich   Tetra4D Converter

Home   Tools   Tetra4D_Template_...

Tetra4D Converter ▾

Add 3D   Edit In Tetra4D Reviewer   Export 3D   Optimize 3D   Replace 3D

Step 7
Save the document

Add 3D data in the PDF document

TETRA⁴ᴰ
CONVERTER

Step 1
Click Add 3D

Product   Description

Step 2
Drag a rectangle to position the 3D view

Step 4
Select the Visualization / High Quality predefined conversion settings
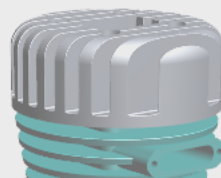
Step 5
Change the pre-defined settings to the values shown below

Step 3
Browse and select the 3D file to import
Micro engine.CatProduct

Tetra4D Converter

3D Conversion Settings

Collaboration   +   -

Description   CATIA V5 : The Collaboration conversion
settings are recommended for 3D-based
collaboration workflows. Using this preset will

▷

| General | Document | Import | Optimize |

Display

Default Background Color: ■

Default Lighting: Lights from File

Default Rendering Style: Solid

Default Animation Style: Loop

Default View

Projection   Perspective

Orientation   Acrobat

Navigation

☑ Add Default Views   Left, Top, Front, Right, B‹

☑ Show 3D toolbar by default   ☐ Open model tree by default

Default Script

<None Selected>   Browse...   Clear

☐ Don't display dialog during conversion

OK   Cancel

Tetra4D Converter

3D Conversion Settings

Custom   +   -

Description   CATIA V5 : Custom is selected whenever you
change any of the conversion settings. Click
the '+' button to save these settings for future

▷

| General | Document | Import | Optimize |

Display

Default Background Color: ☐

Default Lighting: Lights from File

Default Rendering Style: Solid

Default Animation Style: Loop

Default View

Projection   Perspective

Orientation   Catia V5

Navigation

☑ Add Default Views   Left, Top, Front, Right, B‹

☑ Show 3D toolbar by default   ☐ Open model tree by default
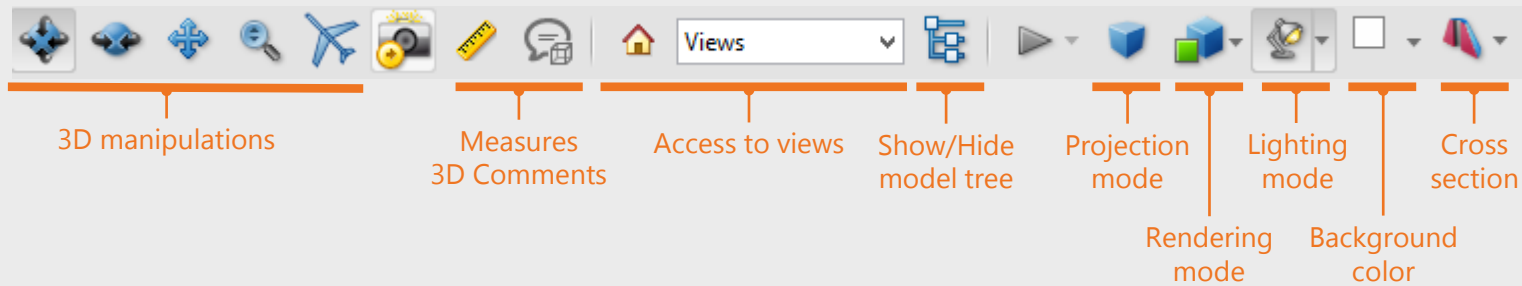
Default Script

<None Selected>   Browse...   Clear

☐ Don't display dialog during conversion

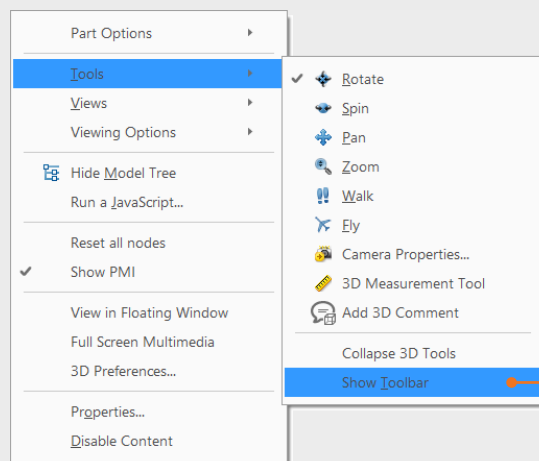OK   Cancel

Step 6
Click on OK to validate the settings and read the CAD file

File Edit View Window Help Tetra4D Enrich Tetra4D Converter

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Tetra4D Converter ▾   Add 3D   Edit In Tetra4D Reviewer   Export 3D   Optimize 3D   Replace 3D

Manipulate the model and change display settings with mouse buttons and 3D Toolbar features

	Description	Version

3D manipulations

Measures
3D Comments

Access to views

Show/Hide
model tree

Projection
mode

Rendering
mode

Lighting
mode

Background
color

Cross
section

Views

Step 1
Click in the 3D
annotation to activate it

Part Options
Tools
Views
Viewing Options

Hide Model Tree
Run a JavaScript...

Reset all nodes
✓ Show PMI

View in Floating Window
Full Screen Multimedia
3D Preferences...

Properties...
Disable Content

✓ Rotate
    Spin
    Pan
    Zoom
    Walk
    Fly
    Camera Properties...
    3D Measurement Tool
    Add 3D Comment

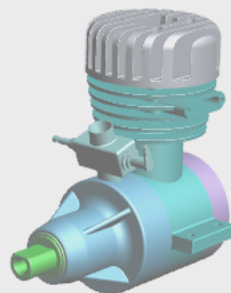Collapse 3D Tools
Show Toolbar
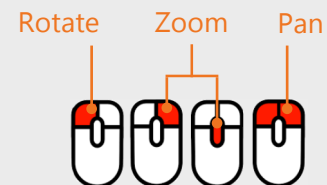
Step 3
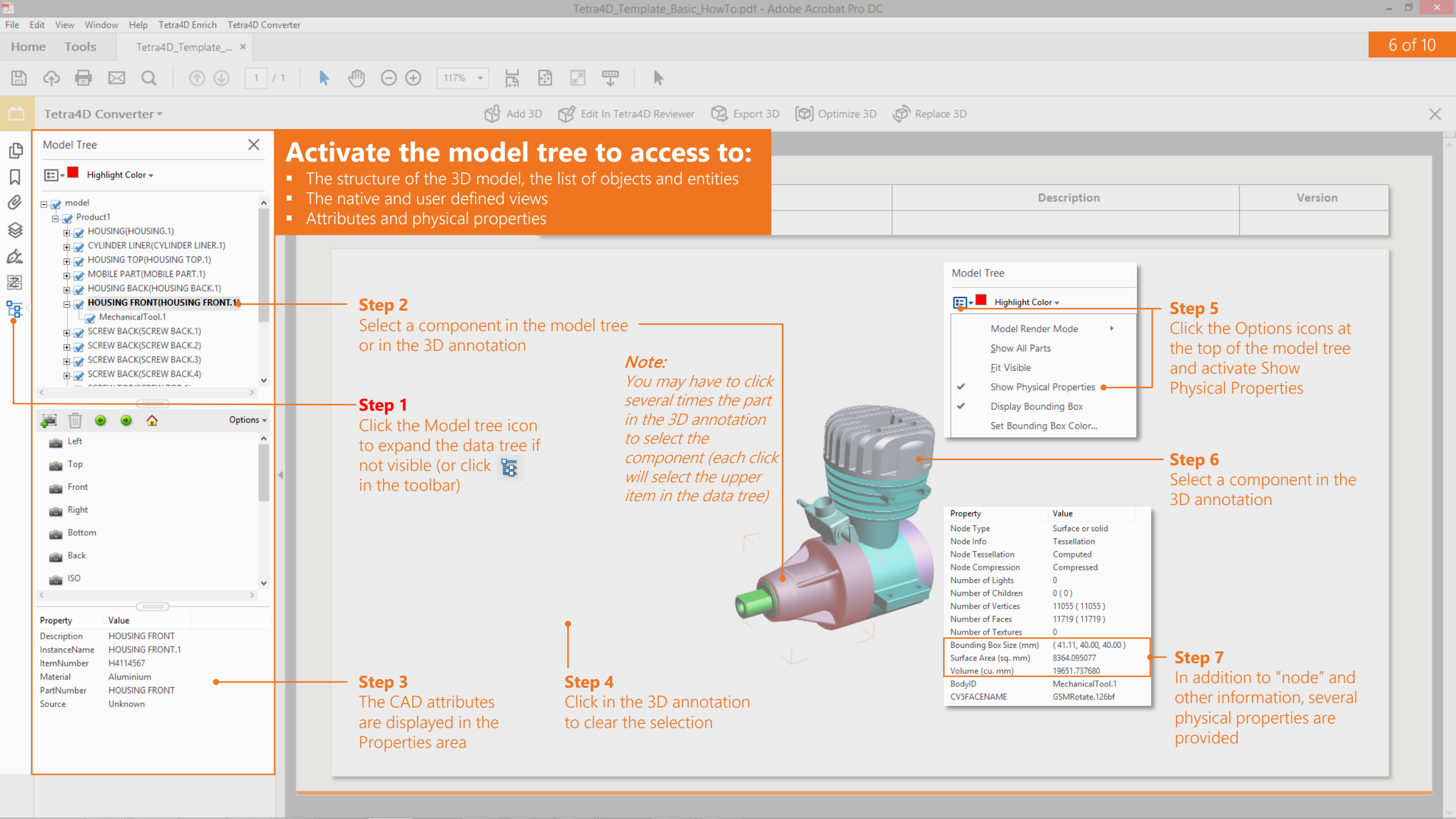Use the mouse buttons
to manipulate the 3D

Rotate   Zoom   Pan

Step 2
If the 3D Toolbar is not
visible, make a right-click
inside the 3D annotation and
select Tools > Show Toolbar

File   Edit   View   Window   Help   Tetra4D Enrich   Tetra4D Converter

Home   Tools   Tetra4D_Template_...

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Tetra4D Converter ▾

Add 3D   Edit In Tetra4D Reviewer   Export 3D   Optimize 3D   Replace 3D

Activate the model tree to access to:
- The structure of the 3D model, the list of objects and entities
- The native and user defined views
- Attributes and physical properties

		Description	Version

Model Tree

Highlight Color ▾

- model
  - Product1
    - HOUSING(HOUSING.1)
    - CYLINDER LINER(CYLINDER LINER.1)
    - HOUSING TOP(HOUSING TOP.1)
    - MOBILE PART(MOBILE PART.1)
    - HOUSING BACK(HOUSING BACK.1)
    - **HOUSING FRONT(HOUSING FRONT.1)**
      - MechanicalTool.1
    - SCREW BACK(SCREW BACK.1)
    - SCREW BACK(SCREW BACK.2)
    - SCREW BACK(SCREW BACK.3)
    - SCREW BACK(SCREW BACK.4)

Options ▾

- Left
- Top
- Front
- Right
- Bottom
- Back
- ISO

Property	Value
Description	HOUSING FRONT
InstanceName	HOUSING FRONT.1
ItemNumber	H4114567
Material	Aluminium
PartNumber	HOUSING FRONT
Source	Unknown

Step 2
Select a component in the model tree
or in the 3D annotation

Step 1
Click the Model tree icon
to expand the data tree if
not visible (or click
in the toolbar)

Note:
*You may have to click
several times the part
in the 3D annotation
to select the
component (each click
will select the upper
item in the data tree)*

Step 3
The CAD attributes
are displayed in the
Properties area

Step 4
Click in the 3D annotation
to clear the selection

Model Tree

Highlight Color ▾

Model Render Mode
Show All Parts
Fit Visible
✓   Show Physical Properties
✓   Display Bounding Box
Set Bounding Box Color...

Step 5
Click the Options icons at
the top of the model tree
and activate Show
Physical Properties

Step 6
Select a component in the
3D annotation

Property	Value
Node Type	Surface or solid
Node Info	Tessellation
Node Tessellation	Computed
Node Compression	Compressed
Number of Lights	0
Number of Children	0 (0)
Number of Vertices	11055 (11055)
Number of Faces	11719 (11719)
Number of Textures	0
Bounding Box Size (mm)	(41.11, 40.00, 40.00)
Surface Area (sq. mm)	8364.095077
Volume (cu. mm)	19651.737680
BodyID	MechanicalTool.1
CV5FACENAME	GSMRotate.126bf

Step 7
In addition to "node" and
other information, several
physical properties are
provided

Create views

- Views store the current state of the 3D annotation:
  Camera, visible parts, rendering mode, projection mode, lighting…

Step 1
Select a component or sub-assembly in the model tree and make a right-click

Step 2
Select the Isolate function
(only selection will remain visible)
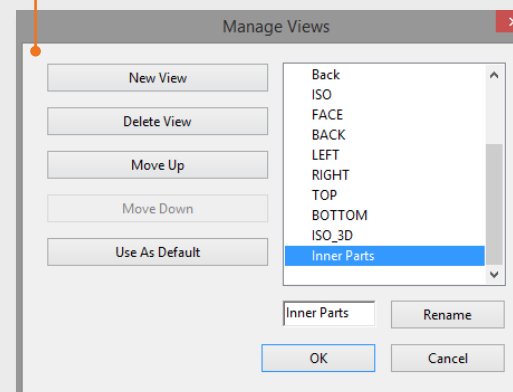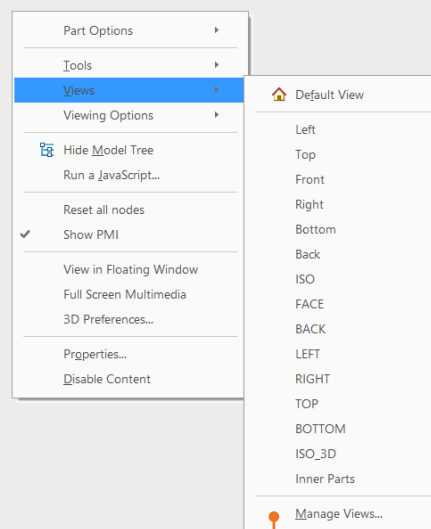
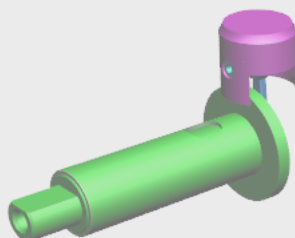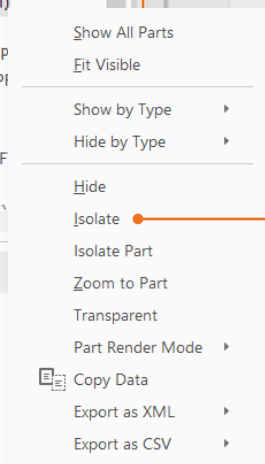**Step 3**
Click on the
Create view icon

Step 4
Access to the new view at the bottom of the list of views
Make a double-click on it to rename it.
(alternative in Step 5)

Step 5
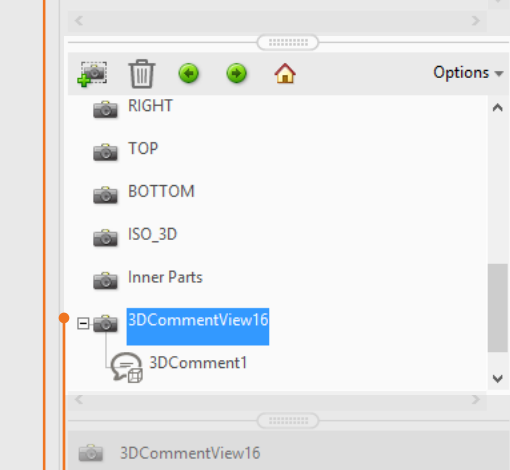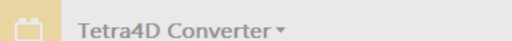Make a right-click in the 3D annotation

Step 6
Select the menu
Views > Manage views…

Step 7
Select a view in the Manage view dialog and click on the buttons to reorder the views, delete one or rename one

File Edit View Window Help Tetra4D Enrich Tetra4D Converter

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Tetra4D Converter

Add 3D Edit In Tetra4D Reviewer Export 3D Optimize 3D Replace 3D

Model Tree

Highlight Color

- model
  - Product1

	Product	Description	Version

Define a 3D comment

- 3D Comments are text comments linked to parts
- Comments are saved in Views

Views

Step 1
Click "Add 3D Comment"

Enter Comment String

3D Comment: Comment

OK   Cancel

RIGHT
TOP
BOTTOM
ISO_3D
Inner Parts
3DCommentView16
3DComment1

Options

3DCommentView16

Step 4
Define the comment and press OK

Step 6
Press ESCAPE key one time to close the 3D Comment feature

Comment

Step 3
Click to define the position of the comment

Note
When 3D Comment feature is active, press ALT KEY while using the mouse buttons to Rotate, Zoom and Pan

Rotate   Zoom   Pan

Step 5
Note that a view is automatically created to enable to access to the comment afterwards

Step 2
Click on a part to define the attachment point

File   Edit   View   Window   Help   Tetra4D Enrich   Tetra4D Converter

Home   Tools   Tetra4D_Template_...

Model Tree

Create a section

- The Cross-section feature enables to display cut parts
- There are several options to control how the section is presented
- Once defined, the section can be saved as a view

| Product | | Description | | Version |

HOUSING FRONT(HOUSING FRONT.
SCREW BACK(SCREW BACK.1)
SCREW BACK(SCREW BACK.2)
SCREW BACK(SCREW BACK.3)
SCREW BACK(SCREW BACK.4)
SCREW TOP(SCREW TOP.1)
SCREW TOP(SCREW TOP.2)

Views

Hide Cross Section

Cross Section Properties...

Step 1
Click "Toggle cross-section"

Step 2
Click "Cross Section Properties..." to display the section dialog

Step 6
Click again on "Toggle cross-section" to disable the cross-section

Options

LEFT
RIGHT
TOP
BOTTOM
ISO_3D
Inner Parts
SectionView16

Property   Value

Step 5
Section view

Cross Section Properties

☑ Enable Cross Section

Alignment
○ X-Axis
● Y-Axis
○ Z-Axis

Align to Face

Align to 3 Points

Display Settings
☑ Show Intersections
☐ Show Cutting Plane
☐ Ignore Selected Parts
☑ Add Section Caps
☐ Show Transparent

Cutting Plane Opacity: 35%

Align Camera with Cutting Plane

Position and Orientation
Offset: 0%   ☑ Flip
Tilt 1:   0°
Tilt 2:   0°

Step 3
Define the section properties, orientation and position

Step 4
Click "Save Section View" optionally to create a view that enables to retrieve the section display

Save Section View

File   Edit   View   Window   Help   Tetra4D Enrich   Tetra4D Converter

Home   Tools   Tetra4D_Template_... ✕

Tetra4D Converter ▾
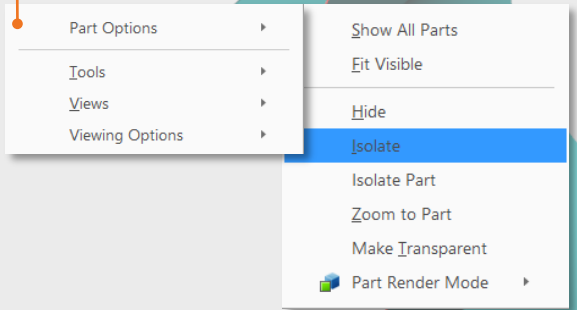
Optimize 3D   Replace 3D

Create Measures

- The 3D Measurement tools make it possible to create different types of measures, based on the 3D parts.
- Snapping filters help to select entities (linear, circular edges, planar faces...)
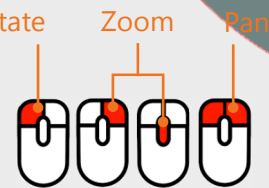- The measures are saved in views (automatically created)

MeasurementVie

Description   Version

Step 3
Click "3D Measurement Tool"

Step 1
Select the part Housing in the 3D annotation

Step 2
Make a right-click and select Part Options > Isolate

Part Options
Show All Parts
Fit Visible

Tools
Views
Viewing Options

Hide
Isolate
Isolate Part
Zoom to Part
Make Transparent
Part Render Mode

Snap Enables   Measurement Types

Step 4
Select the snap filter: Radial Edge
Select the measurement type: Radial Dimension

Snap Enables   Measurement Types

Step 7
Select the snap filter: Radial Edge
Select the measurement type: Point to Point

Step 8
Click the two circular edges
Click on the screen to position the measure

15,0 mm

R 20,0 mm

Note
Press ALT KEY While using mouse buttons

Rotate   Zoom   Pan

Step 5
Click two times on the circular edge to select it

Step 6
Position the measure by clicking in the screen

3D Measurement Tool
Radius:
Select a point or edge to begin.
1 model unit(s) = 1.0 mm

338,7 x 190,5 mm