





3d JUUMP ACE

3D Juump Ace User Manual

[UM_EN] version 2.5

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Introduction

1 - Reading guidelines

In order to point out the changes since the previous version, green and red spots have been added:

Green spots ● indicate  information.

Red spots ● indicate an  has been operated on information formerly provided.

Microsoft store symbol  indicates that there is a Microsoft store version of 3D Juump Ace.

The words in blue and italics letters refers to a 3DJuump Ace technical terminology.

The highlighted words in blue are a hyperlink to another chapter in the user manual, for example: [License manager](#).

2 - Scope

3D Juump Ace is a 3D viewer that allows you to import and improve *on virtually all native CAD files on the market*.

More than just a 3D viewer, with 3D Juump Ace *analyze, measure 3D assemblies and modify* your files.

3D Juump Ace is also a *3D files converter*. You can export your 3D models to provide input to a third-party platform (virtual reality, augmented reality, training, etc.). 3D Juump Ace lets you *publish 2D illustrations* for your technical or commercial documentation.

Please don't hesitate to visit our website (<https://www.realfusio.com>) and our Support webpage (<https://www.realfusio.com/3d-juump-support/>) for additional information.

3 - Copyright

All pages and all photos of this User Manual are copyrighted material and may not be used without expressed written permission of AKKA INGENIERIE PRODUIT. 3D data used to illustrate this manual and accompanying 3D Juump Ace interface are copyrighted and belong to AKKA Technologies, here in referred to as © AKKA.

Installation ●

1 - Host requirements

Minimum configuration requirements to install and run 3D Juump Ace are:

- **OS:** Windows 7, 8, 8.1 or 10 / 64-bit
- **Processor:** 1.2GHz Dual Core
- **Memory:** 2GB RAM
- **Hard drive:** 1GB
- **Keyboard and mouse** for a full use

An administrator account is mandatory to install 3D Juump Ace. Please note that the administrator account is only required upon installation. Once installed, 3D Juump Ace can be started from any regular account of the host computer.

3D Juump Ace can run on a broad range of CPU, from a mobile to a high-end x86-64 Central Processing Unit (CPU). The CPU power required for an optimal experience of the software depends on the complexity of the visualized 3D content and the availability of a Graphics Processing Unit (GPU). Thanks to an optional Software rendering mode, a GPU is not mandatory to run 3D Juump Ace. However, this mode causes intensive computations to be performed on the CPU, which may slow the system down on low-to-mid range configurations.

In the **General** settings panel, as covered in the chapter [Program settings](#), the user can manage the renderer parameters to be applied, whether a [Hardware](#) or a [Software](#) renderer is preferred.

The different settings between the Hardware accelerated (GPU) and Software rendering modes are developed in Section [General settings](#).

1.1 - Hardware renderer

In Hardware rendering mode, 3D Juump Ace benefits from the help of the computer's GPU. This is the preferred rendering mode for computer equipped with a GPU installed with an OpenGL 3.0 and above driver. Any NVIDIA GeForce 8 and above, AMD Radeon 4xxx and above or Intel HD4000 and above may fit.

1.2 - Software renderer

In case the computer is not equipped with a compatible GPU, 3D Juump Ace defaults to its Software rendering mode. Some 3D-intensive features may not be available in Software rendering mode or may work slightly differently than in Hardware rendering mode. This is explicitly noted in the description of the feature.

2 - Installation process

2.1 - Install classic version

To install 3D Juump Ace 2.4:

- Double click on the installer (requires administrator privileges):
 - *3DJuump Ace X64-setup-admin-2.x.xxx.exe* for the 64-bit version
- Validate the license agreement
- If required, change the installation folder

- Then, if needed, modify the program folder in the start menu and choose if you want to create a shortcut on the desktop
- Click on the *Install* button to start the installation

The installer will deploy 3D Juump Ace application, plus any dependencies (including *Visual C++ Redistributable*).

Note: an alternative installer is also available for standard users lacking administrator privileges. This installer does not deploy any *Redistributable* hence it is only usable on computers already equipped with both of the following:

- Visual C++ Redistributable 2019 x64
- Visual C++ Redistributable 2010 x64

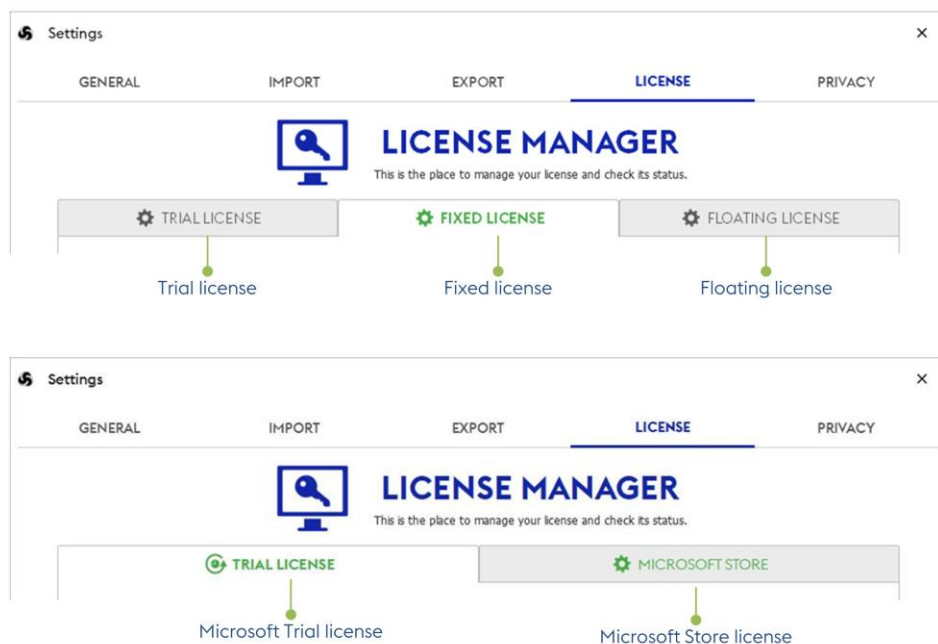
2.2 - Install Microsoft Store version

The Microsoft Store for Windows 10 version of 3D Juump Ace can be installed only using [Microsoft Store](#).

Please go to [Microsoft Support](#), in section 'Microsoft Store and applications' for details concerning installation and subscription management through your Windows account.

3 - License Manager



The **License Manager** window reflects license information mandatory to access 3D Juump Ace.



License Manager / Trial, fixed, floating or Microsoft store license

To connect to 3D Juump Ace, 4 options are available, renewable and modifiable in the [License manager](#):

- **Trial license:** License for new users for a time-limited evaluation
- **Fixed-license:** License associated with a single and Designated Computer

- **Floating-License:** Shareable License. A Floating-License allows use 3D Juump Ace on any computer linked to a Token network
- **Microsoft Trial license:**  Trial license when you get 3D Juump Ace on Microsoft Store for Windows 10
- **Microsoft Store license:**  3D Juump Ace License bought on Microsoft Store for Windows 10

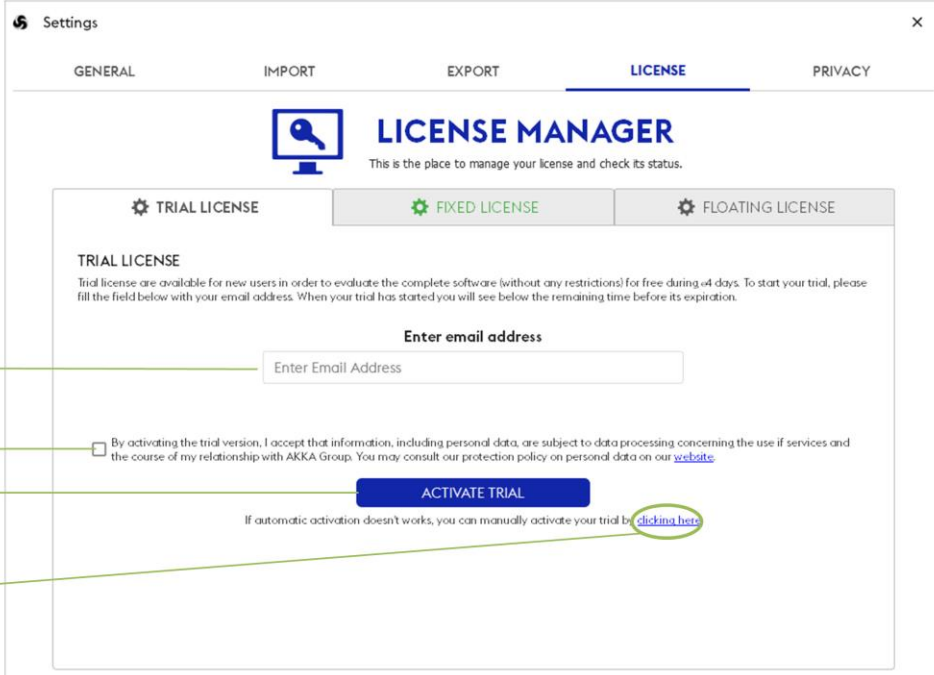
3.1 - Trial license

Trial license is available for new users in order to evaluate the complete software for a time-limited evaluation. Then the trial version is completed, a license subscription is required to continue running the application. There are several types of licenses.

To activate the trial license there are 2 possibilities:

- **Automatic activation:** if you are connected to internet, you can automatically activate the trial license by sending us your email address
- **Manual activation:** you can also send us an email, we'll send you back an activation code. Simply input this activation code to activate the trial license

3.1.1 - Automatic activation of Trial version



The screenshot shows the 'Settings' window with the 'LICENSE' tab selected. Under 'TRIAL LICENSE', there is a text box labeled 'Enter email address' with a green dot and line pointing to it from the label 'Enter email address'. Below this is a checkbox labeled 'Accept data processing' with a green dot and line pointing to it from the label 'Accept data processing'. To the right of the checkbox is a small text block explaining data processing. Below the checkbox is a blue button labeled 'ACTIVATE TRIAL' with a green dot and line pointing to it from the label 'Activate trial'. Below the button is a link 'clicking here' circled in green, with a green dot and line pointing to it from the label 'Manual activation'.

Trial license / Automatic activation

- **Enter email address:** send us your email address to activate your Trial license
- **Accept data processing:** in order to activate your Trial license, you must accept that some data will be sent to AKKA. Please refer to our [policy on personal data on our website](#)
- **Activate trial:** activate your trial license, once your email filled and you accepted the data processing

- **Manual activation:** If automatic activation doesn't work, you can manually activate your trial

3.1.2 - Manual activation of Trial version

Settings

GENERAL IMPORT EXPORT **LICENSE** PRIVACY

LICENSE MANAGER
This is the place to manage your license and check its status.

TRIAL LICENSE FIXED LICENSE FLOATING LICENSE

TRIAL LICENSE
Trial license are available for new users in order to evaluate the complete software (without any restrictions) for free during 14 days. To start your trial, please fill the field below with your email address. When your trial has started you will see below the remaining time before its expiration.

Send us an email ● Send an email to 3djump.ace.licensing@realfusio.com with the request code **BF986FA0** to get an activation code.

Enter your activation code ●

Accept data processing ● ☐ By activating the trial version, I accept that information, including personal data, are subject to data processing concerning the use of services and the course of my relationship with AKKA Group. You may consult our protection policy on personal data on our [website](#).

Activate trial ● **ACTIVATE TRIAL**

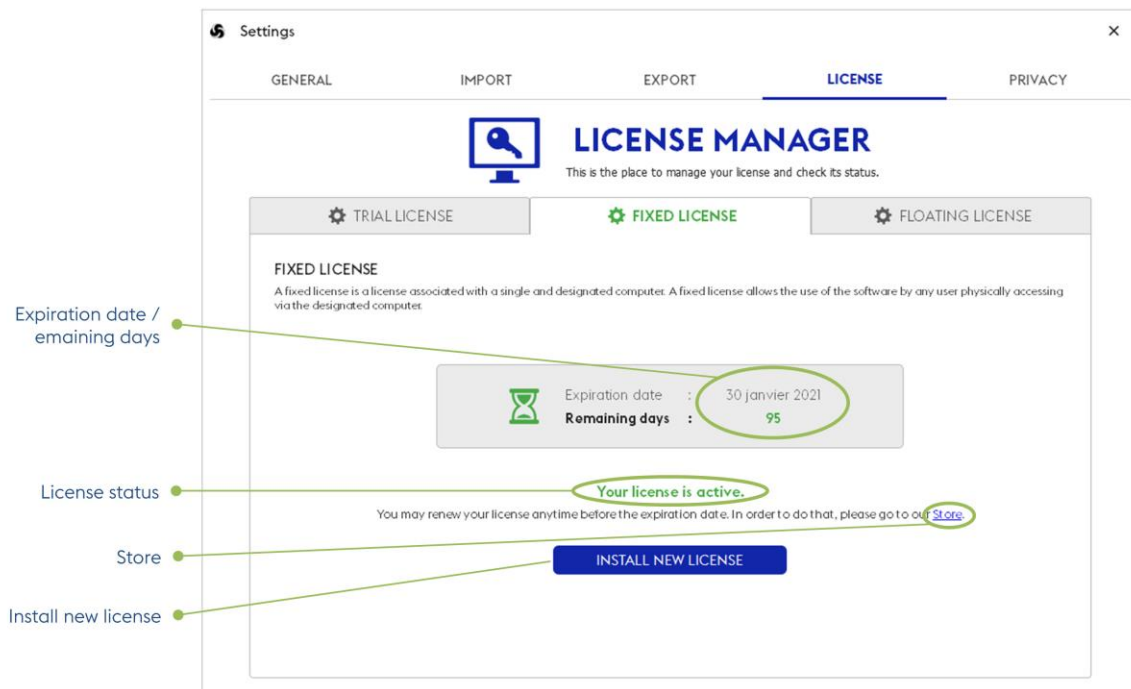
Automatic activation ● You can automatically activate your trial by [clicking here](#)

Trial license / Manual activation

- **Send us an email:** if you have a problem connecting 3D Juump Ace to internet directly, you can ask us for an activation code by sending us an email
- **Enter your activation code:** You must enter the activation code we sent you answering your email request
- **Accept data processing:** in order to activate your Trial license, you must accept that some data will be sent to AKKA. Please refer to our [policy on personal data on our website](#).
- **Activate trial:** click here to activate your trial license
- **Automatic activation:** Come back to Automatic activation of your Trial license

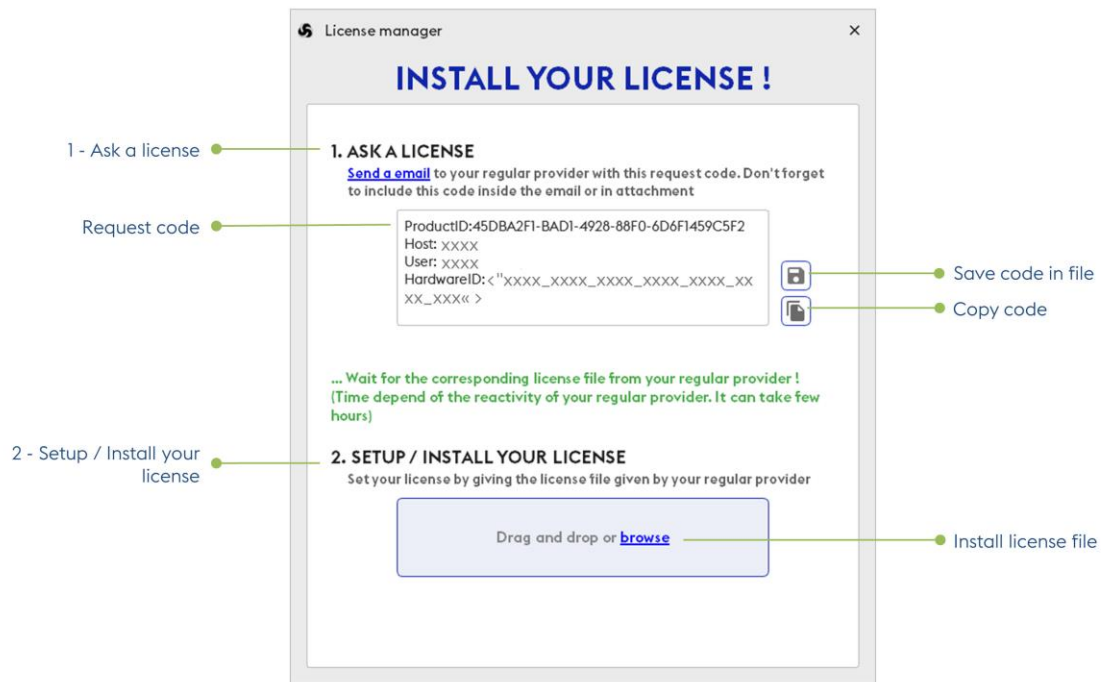
3.2 - Fixed license

A Fixed-license is a License associated on a single and designated computer.



License Manager / Fixed license

- **Expiration date / Remaining days:** Indicates the expiration date of your license and the number of remaining days
- **License status:** Precise the current status of your license: not set (not installed license), active or expired
- **Install new license:** Launch the installation panel of your Fixed-license. It will guide you to ask us your license and to install it
- **Store:** Direct access to our web-store to renew your subscription



Fixed license / Ask and install a license

- **1 - Ask a license:** Send us the Request code at sales@realfusio.com, either by sending us the saved file or by copy/paste the code directly in your email
- **Request code:** Unique identification of your computer where installing the license
- **Save code:** Save the Request code in a file to send it by email
- **Copy code:** Copy the Request code in the clipboard. Then simply paste it in your email to send us
- **2 - Setup / Install your license:** Once we will send you the license file, simply install it here to activate your Fixed-License
- **Install license file:** Click here then select the license file we sent you or simply drag-and-drop the license file here

3.3 - Floating-license

A Floating-license is a sharable license. Here, a *License-server* must exist on your network; It'll deliver a *Token* which will unlock your 3D Juump Ace license during the time of your session. If no token is available when you launch the software, you will not be able to use it.

You may want to use 3D Juump Ace with no connection to your network, and then no access to the license server. To do so, you can *borrow a token* for time-limited period.

Settings

GENERAL IMPORT EXPORT **LICENSE** PRIVACY

LICENSE MANAGER
This is the place to manage your license and check its status.

TRIAL LICENSE FIXED LICENSE **FLOATING LICENSE**

FLOATING LICENSE
A floating-license is a shareable license. A floating-license allows use of 3D Juump Ace on any computer linked to a token server. One user can use several floating-licenses simultaneously, generating therefore the assignation of the corresponding number of tokens. The floating-license should be borrowed for a defined period. If you want to use this kind of license, please fill in the fields below. Do not hesitate to ask for your IT department to get the right info: server address, number of available tokens (simultaneous users), the policy about borrowing,

Server adress : 6200@xxx.xxx.xxx.xxx

Server status : ONLINE

License status : VALID

License type : TOKEN

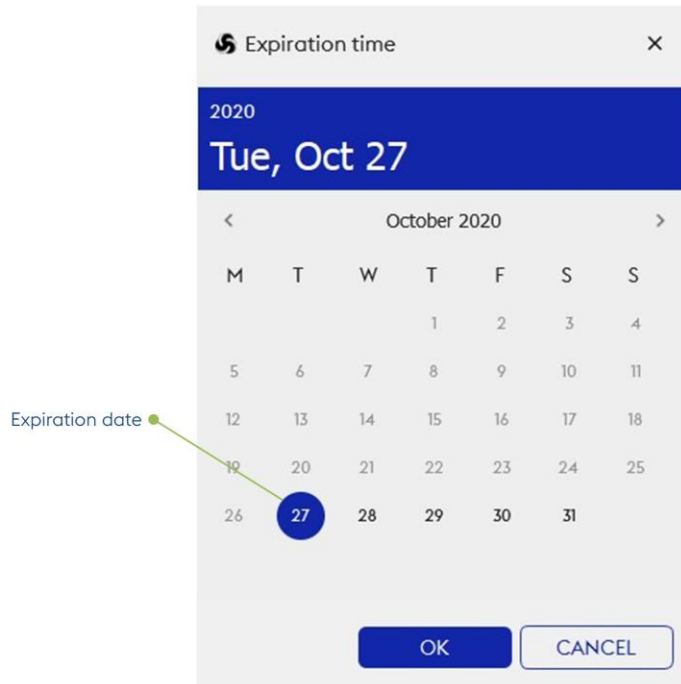
Want to go offline? **BORROW**

License Manager / Floating license

- **Server address:** Enter here the server address provided by your administrator. To do so, enter the name of the server running the Network license manager. Use port@servername to specify a port (eg.: 9200@LICENSE-SERVER)
- **Server status:** Precise the current status of the license server: offline or online
- **License status:** Precise the current status of your license: valid or not
- **License type:** Type of in-use license: Token or Borrow
- **Borrow:** Tool enabling to borrow a token for a defined period. See [Borrow a Token](#)

3.3.1 - Borrow a Token

When you want to go off-line with a Floating-license of 3D Juump Ace, you need to borrow a token. You need to precise the end-date of the borrowed period using a calendar widget.



Floating license / Borrow Token expiration date

- **Expiration date:** Define the date until when the token is going to be used / borrowed

3.3.2 - Borrowed Token

When you have borrowed a token, the status in the License Manager is changing accordingly. Then, you can also revoke the token to make it available to other persons before the planned date. You can also update the borrow in order to extend the offline period.



Floating license / Token revoke or Update

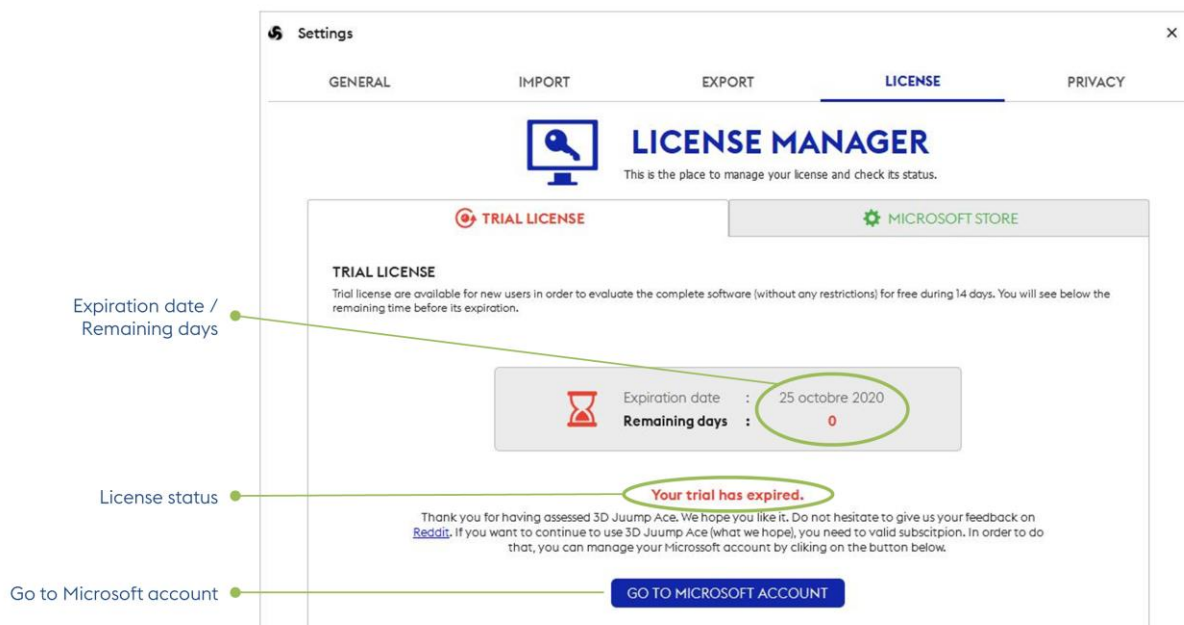
- **License status:** When using a Borrow Token, precise the date until when the currently borrowed token is valid
- **License type:** Indicates the type of license
- **Revoke:** Tool enabling to revoke your token anticipating the end date
- **Update:** Tool enabling to renew your token for a longer period of time

3.4 - Microsoft Store for Windows 10

3D Juump Ace is accessible directly on the [Microsoft Store for Windows 10](#). In this case, the License Manager display the current status of your subscription. Nevertheless, in order to have more details and to manage your subscription, you need to directly go to your [Microsoft account](#).

3.4.1 - Microsoft Store Trial ●

The Trial License tab displays information about your Microsoft Store for Windows 10 trial version. Trial license is available for new users in order to evaluate the complete software for a time-limited evaluation. Then the trial version is completed, a license subscription is required to continue running the application.

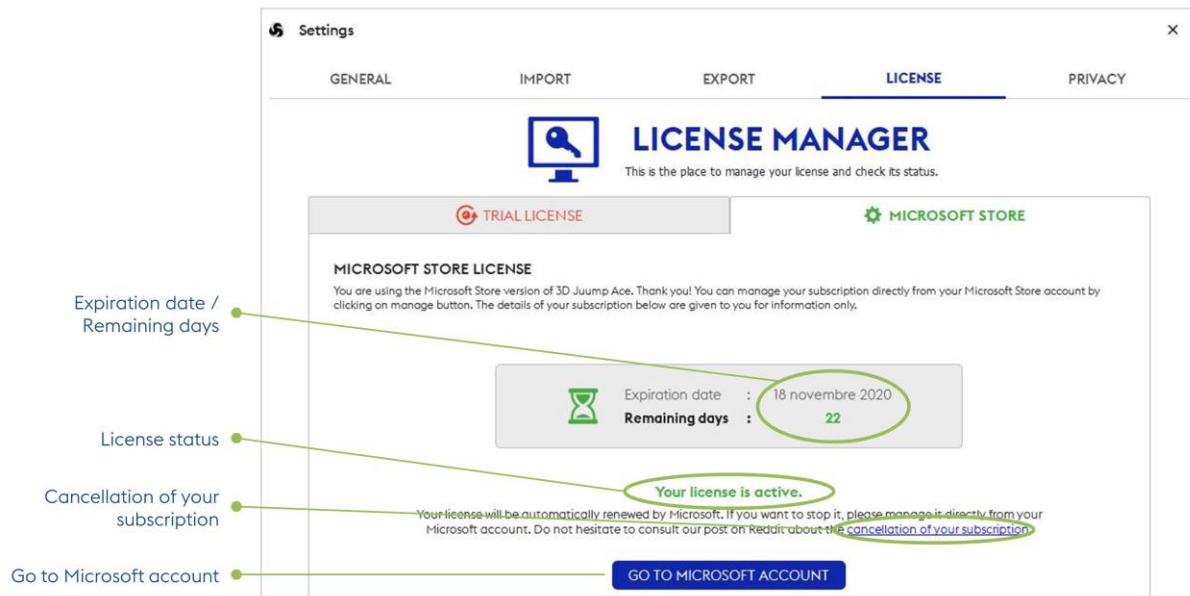


Microsoft Store for Windows 10 trial version

- **Expiration date / Remaining days:** Indicates the expiration date of your trial license and the number of remaining days
- **License status:** Precise the current status of your license: active or expired
- **Go to Microsoft account:** To access to your Microsoft account

3.4.2 - Microsoft Store license

The Microsoft Store tab displays information about your Microsoft Store for Windows 10 trial version.

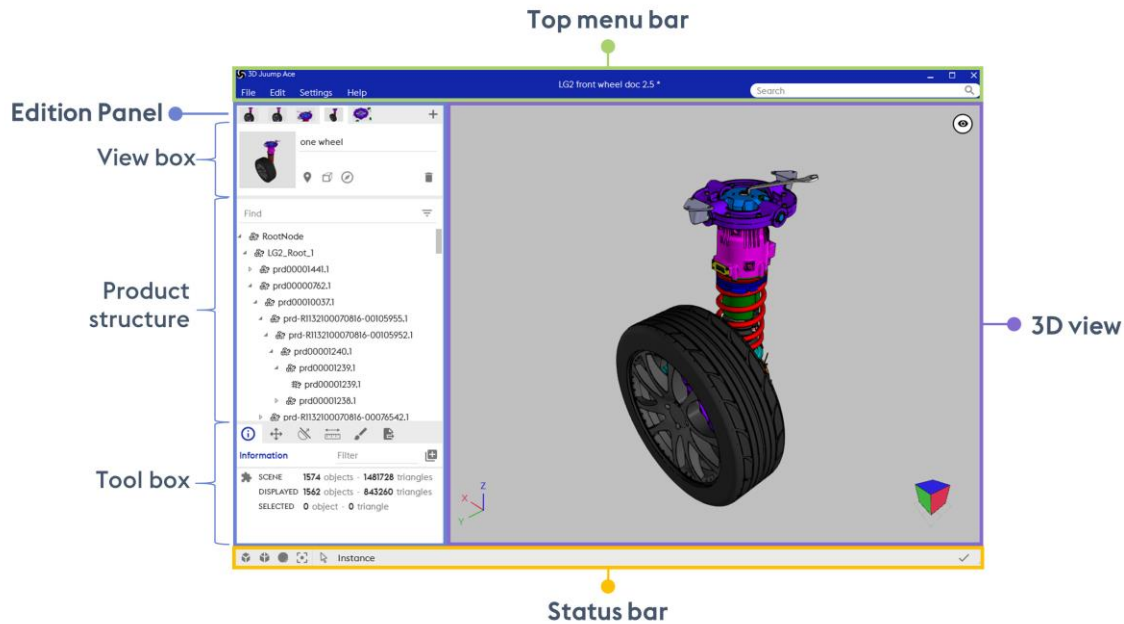


Microsoft Store license for Windows 10

- **Expiration date / Remaining days:** Indicates the expiration date of your license and the number of remaining days
- **License status:** Precise the current status of your license: active or expired
- **Cancellation of your subscription:** Your license will be automatically renewed by Microsoft. If you want to stop it you can manage it directly from your Microsoft account
- **Go to Microsoft account:** To access to your Microsoft account

Main window

The main window of 3D Juump Ace gives access to all its fonctionnalities.



Main window of 3D Juump Ace - © Akka

Top menu bar: Give access to the Main menus : [File](#), [Edit](#), [Settings](#), [Help](#) and to search box [Search box](#) ; please refer to [Top Menu Bar](#) chapter

Edition panel: Create [views](#), browse the [product structure](#), use authoring [tools](#); please refer to [Edition panel](#) chapter

View box: Create, edit, manage new views/thumbnails; please refer to [View box](#) chapter

Product structure: Organize in a hierarchy the designated elements as displayed in the 3D view; please refer to [Product structure box](#) chapter

Tool box: List of tool enabling interaction with the designated elements as displayed in the 3D view; please refer to [Tool box](#) chapter

Status bar: Enable/disable features in the 3D View; please refer to [Status bar](#) chapter

3D view: Move camera, select objects; please refer to [3D view](#) chapter

Top menu bar

Top menu bar: Give access to the [Main menu](#) and to search box [Search box](#).



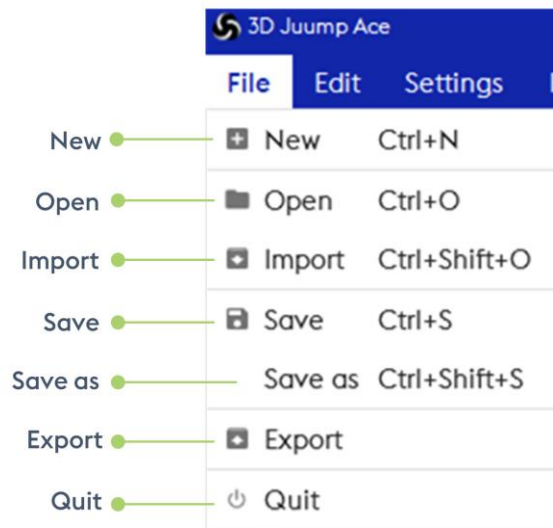
Top menu bar

1 - Main menu

The **Main menu** enables the user to manage [File menu](#), [Edit menu](#), [Settings menu](#), [Help menu](#)

1.1 - File menu ●

The **File menu** entry is dedicated to file input and output. 3D Juump Ace is able to export 3D data in some of popular 3D file formats.



FILE menu

New: Clear the current project and open a dragged and dropped native CAD file, .juump or .ace3d project file

Open: Clear the current project and open a native CAD file, a .juump or a .ace3d project file. A formerly saved file can also be simply dragged and dropped to 3D Juump Ace.

Import: Add a native CAD file to the current project 3D Juump Ace is able to process the following formats: acis, asc Medusa 3D, Autodesk 3DS, Autodesk FBX, CADDs, CATIA V4, CATIA V5, CATIA V6, COLLADA, I-DEAS, IGES, Inventor, JT-Format, NX Unigraphics, OBJ, Parasolid XT-Format, ProEngineer, ROBCAD, STEP AP 203/214, STL, Solidworks, Straessle EUKLID, VDA, VRML, DAE, GLTF 2, GLB, OpenNurbs Rhino 3D ● and ACIS ●.

💡 In the case of a ProEngineer file import, external references load existing latest version.

💡 While import/open operating, clicking on the displayed X does not cancel but interrupts the launch/import.

Save: Save the current modifications to the current .ace3d project file

Save as: Save the current project to a new .ace3d file

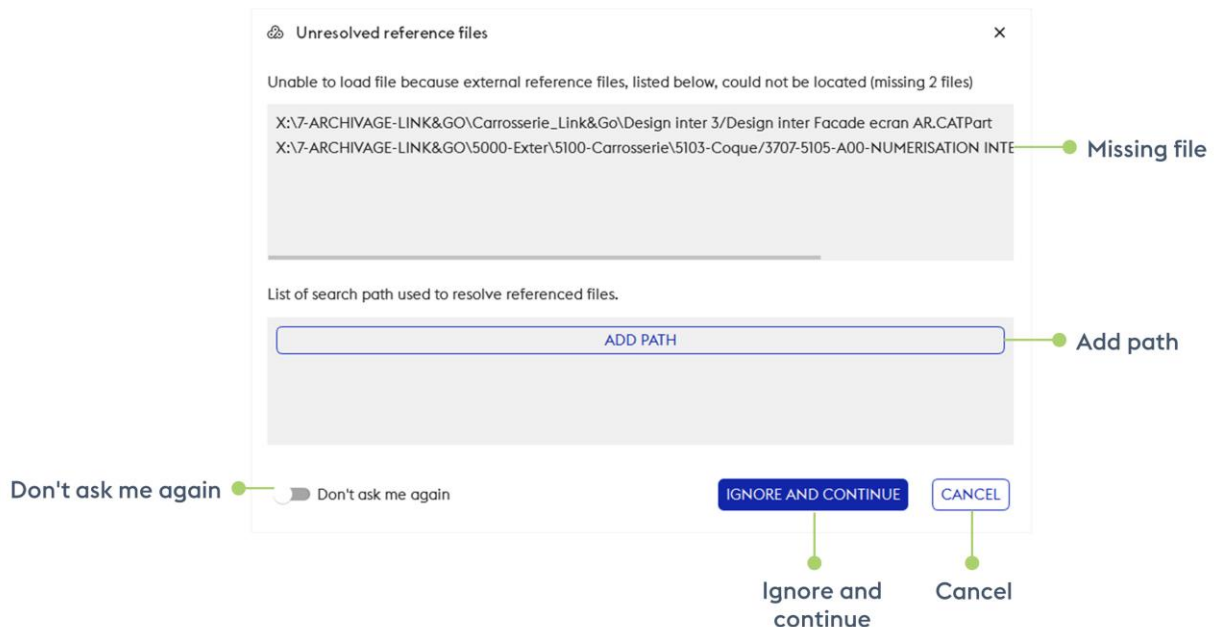
Export: Export the current project to a 3D file. 3D Juump Ace is able to process the following formats: JPG, PNG, TIFF, Scalable Vector Graphics, Drawing eXchange Format, Comma-separated value CSV, Autodesk FBX, JT, OBJ, STEP, STL binary, VRML97, VRML97 Compressed, 3DS, DAE (Collada files), GLTF 2, GLB (GLTF 2 binary) and SAT (ACIS) ●.

Quit: Exit the program

1.1.1 - Unresolved reference files

In some cases, questions regarding file reference resolution are required.

Unresolved reference files error message might appear when (mainly CatProduct/CatPart) file(s) cannot be loaded because external references could not be located.



File / Open / Unresolved reference files

Missing file: Issued file

Add path: Indicate the path to access the missing file

Continue: Step further (step up to next missing path or application launch) once path has been added properly and successfully

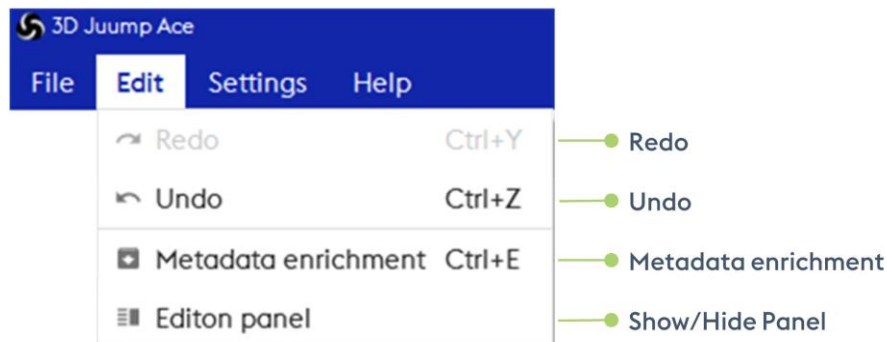
Don't ask me again: Apply selected setting for the whole batch

Ignore and continue: Ignore currently displayed missing path and continue loading

Cancel: Cancel loading

1.2 - Edit menu

The **Edit menu** entry gives access to the functions : Redo, Undo, Metadata enrichment and show/hide panel.



EDIT menu

Redo: restore the previous action

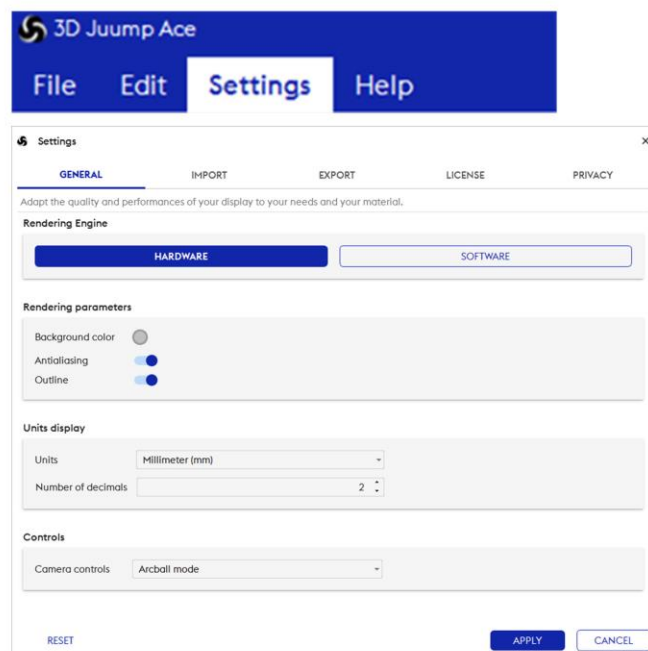
Undo: cancel the previous action

Metadata Enrichment: allows to enrich the data

Show/Hide panel: allows to show/hide the latteral Edition panel

1.3 - Settings menu

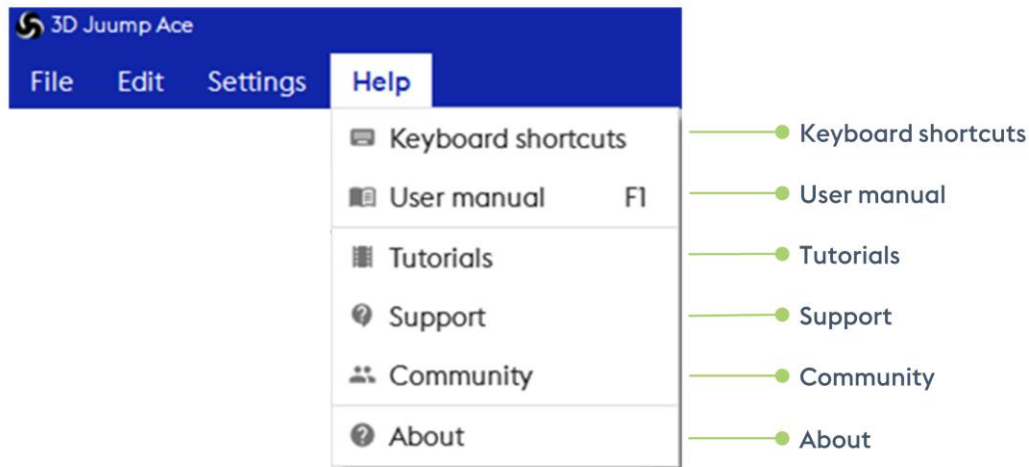
The **Settings menu** entry gives access to the program settings. They are covered in Chapter [Program settings](#).



SETTINGS menu

1.4 - Help menu

The **Help menu** button grants access to the list of keyboard shortcuts, to the User manual, to the tutorials, to the support contact, the community and displays the About information.



HELP menu

Keyboard shortcuts: Tool enabling to quickly perform general operations such as, non-exhaustively, save the document, select/unselect objects, show/hide authoring tools

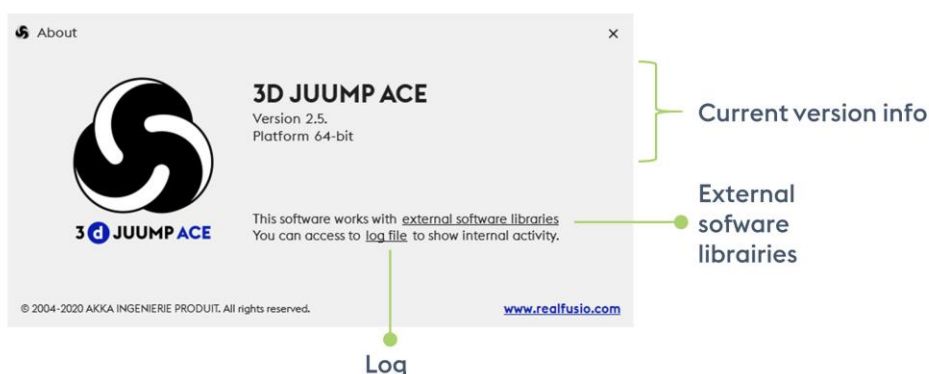
User Manual: Technical documentation explaining full functionalities of the software

Tutorials: Technical video explaining full functionalities of the software

Support: Pop-up providing the support contact for any question on the application. This contact link is customisable in settings file, by administrator see “Administrator Manual”

Community: Exchange space between software users

About: Pop-up displaying current log, current version of 3D Juump Ace information



HELP menu / About window

Current version info: Information re. the version of the software currently used

External software libraries: Software component distributed or sold by a third entity

Log: Record of events that occurred in the software runs since last launch

2 - Search box ●

The **Search box** gives access to the search engine. It's used to perform queries in order to identify objects whose text data contain a given string entered by the user.



Search box

Search: Tool enabling to look for a 3D object by means of a particular word or phrase /group of words (mainly by Metadata). Search is computed on the name of the objects and all its metadata.

2.1 - Free text search

A **Free text search** returns objects of which any metadata contain the typed value

To launch a *Free text search*, type the value to search and press *Enter*: eg. abc to get all objects containing abc.

💡 The value is not case sensitive; eg. abc will return parts named ABC

2.2 - Advanced search

An **Advanced search** is a search narrowed by a series of different filters.

Search engine uses PCRE query syntax.

String search: Return value(s) containing spaces

To launch a *String search*, use quotes; eg. "front left wheel".

Search on metadata: Return value(s) depending on metadata specification

To launch a *Search on metadata*, use colon; eg. :s_component_responsible=Joe.

Then, a Search on metadata can be sharpened, adding a second (or more) query(ies).

Contains metadata search: Match with metadata containing typed value

To launch a *Contains metadata search*, use simple equal; eg. :name=abs123 to match with all objects for which metadata name contains abs123.

Excluding metadata search: Match with metadata with any value not matching

To launch an *Excluding metadata search*, use operators <>; eg. :color<>blue to match with all objects for which color metadata differs from blue.

Relational operator metadata search: Match with metadata containing numerical value depending on an operator query

To launch a *Relational operators metadata search*, use =, <>, <, <=, >, >=; eg. :weight>42.

Logical combinator metadata search: Match with metadata combining 2 or more several value(s) and/or alternatives

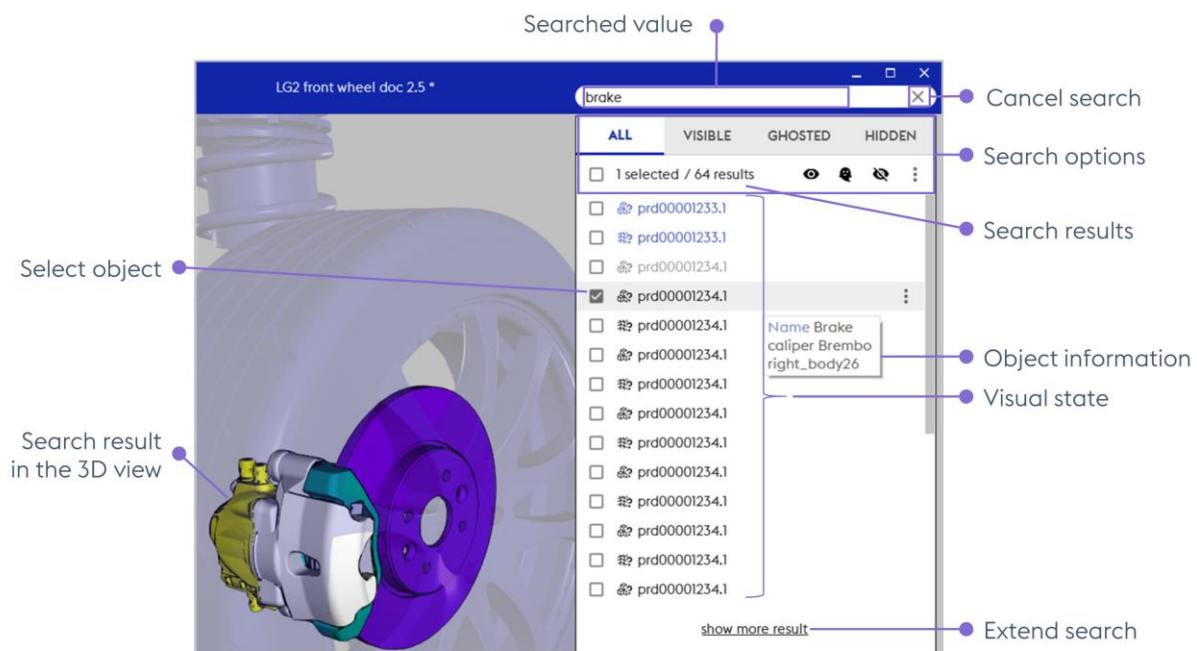
To launch an *And/or metadata search*, combine with "()", "and" & "or" operators; eg. (:price<1.23) and (:name=="red cabbage").

💡 Priority is given from left to right and, although it is not mandatory, upon bracketing

2.3 - Searched results visualization ●

Once search has been executed, the results appear in the 3D view and in a drop-down windows. By default, the result list is displayed for all spaces (visible, ghosted and hidden). Now, it's possible to limit the result list to one of these spaces by selecting the appropriate tab.

You can select one or several element in the search result and modify directly its visibility, focus on in PS or 3D or even tag it.



Visualize results © akka

Searched value: Value that has been typed in the search box

Cancel search: Cancel last search by clicking on the cross

Search results: Indicates the number of selected objects and the number of objects found as result. By default, the list of results is limited to 50 objects, but more results can be displayed by clicking on **Show more results**

Select object: Check one or several object to select it/them in the list. Element are identified in the [3D view](#) and in the [Mini-Id-card](#)

Object information: stay still few seconds in order to display a short object information

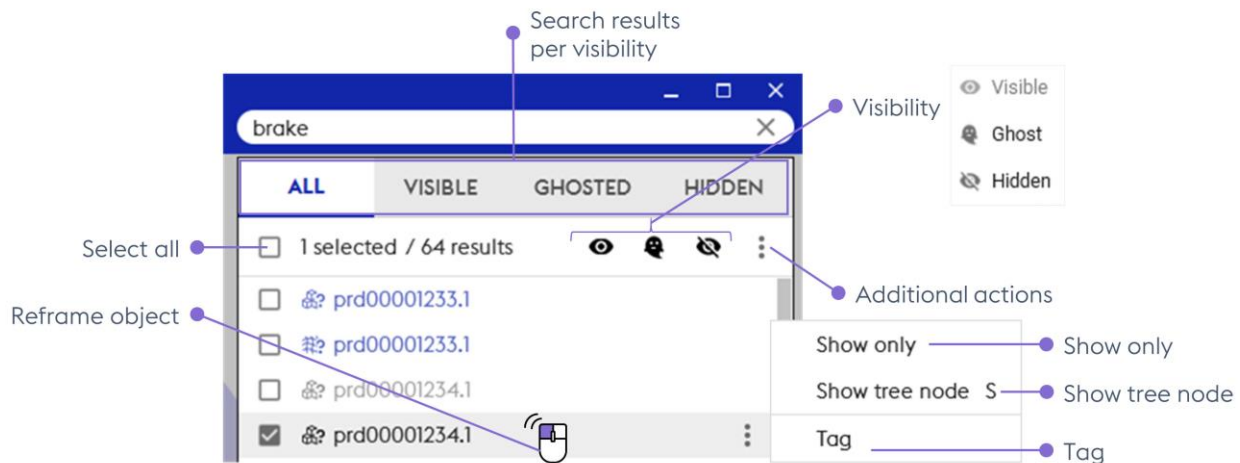
Visual state: Visual state of each found element (black when visible, purple when ghosted, grey when hidden). In addition, a specific icon identify the type of the object (geometry, part, assembly, etc.)

Search result in the 3D view: The 3D view is updated with the result of the search; objects returned by the search are set visible to highlight them and others are dimmed in ghost

Extend search: Display more than the by-default 50 results found

2.4 - Searched results use ●

The new Search provides multiple possibility to analyse the result, select objects and execute quick actions on this selection.



Visualize results © akka

Search results per visibility: By default, the result list is displayed for all spaces (visible, ghosted and hidden). Then, it's possible to limit the result list to one of these spaces by selecting one

Visibility: Once one or more objects have been selected in the search result list, you can directly change the visibility mode by clicking on the corresponding icon (opened eye for visible, ghost icon to ghost and stroke eye icon to set invisible)

Select all: Select at-once all objects

Reframe object: A double left click enables to both select and centre the camera in the [3D view](#) on a searched element. Element flashes in yellow in the 3D view, is identified in the [Mini-Id-card](#) and the content is scrolled in the [Product structure](#) until the corresponding element is visible; this allows the user to quickly find the location of an object in the hierarchy

Additional actions: additional actions are available on the right side of a selected object and on the right side of all selected objects. It allows to execute direct actions on selection.

Show only: hide all non-selected objects

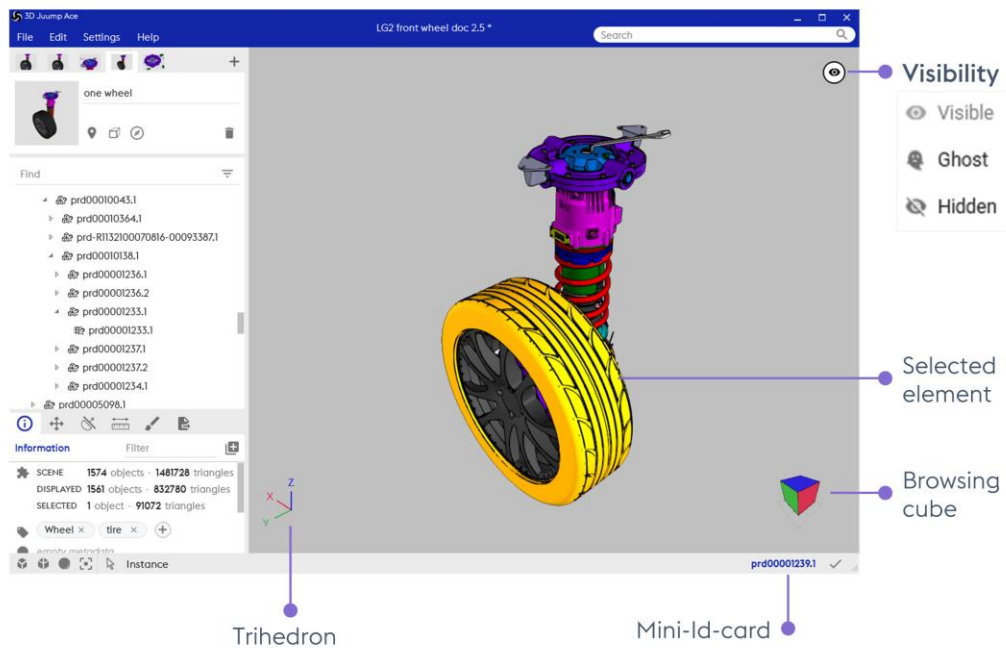
Show tree node: to focus the product structure view on the selected object

Tag: Create/Edit keyword assigned to an object (see Section [Tag](#)).

3D view ●

1 - Main view

The **3D view** shows the geometry of the imported objects.



3D view - © Akka

● **Visibility mode:** enables to see the elements which have previously been ghosted and/or hidden. This function is also accessible via **W** keyboard shortcut

Visible: Enables to display the visible elements

Ghost: Enables to display the ghost elements

Hidden: Enables to display the hidden elements

Trihedron: The trihedron allows to quickly locate the X, Y and Z axes of the model

Selected element in the Mini-Id-card: Displays the name of the selected element

Browsing cube: Tool enabling to navigate in the 3D view on a simple click; please refer to [Browsing cube](#)

Selected element: Designated element with which the user wants to interact

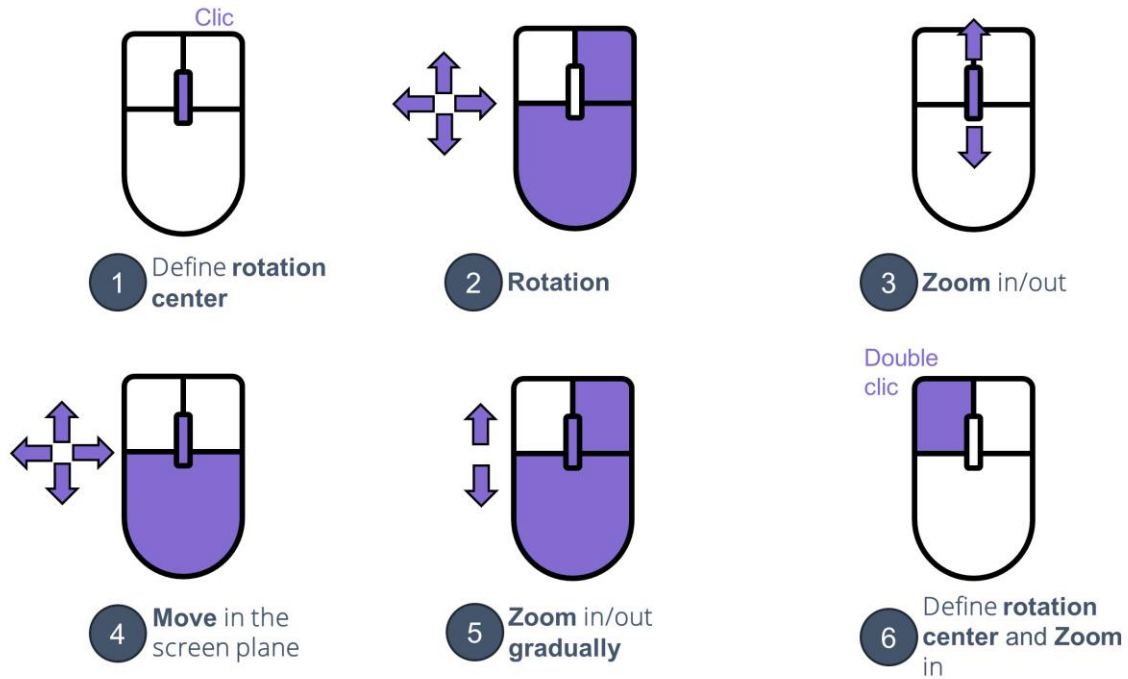
👉 Selecting an object in the 3D view also selects the corresponding element in the product structure; its metadata is automatically displayed in the Mini-Id-Card. Conversely, selecting an element in the product structure highlights the corresponding object in the 3D view.

2 - Navigation ●

The **Navigation** enables the user to move the objects in the 3D view using his mouse only. Different mode can be set in the application [General settings](#).

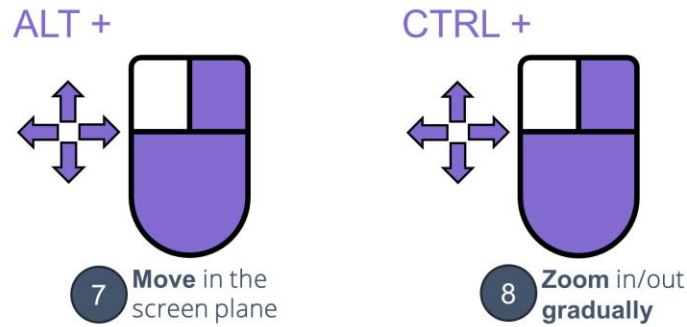
2.1 - Orbit Mode (default mode)

The camera controls are designed to make it easy to rotate around an object and look at it from different viewpoints. The camera is always looking at a point called the *centre of interest* which the user can change at any time.



Navigation / Orbit Mode browsing

- (1) Define rotation center:** Defines the rotation center of the 3D view. Object is automatically centered in the plan
- (2) Rotation:** Rotates the object in the 3D view
- (3) Zoom in/out:** Increases/decreases the magnification of the designated object
- (4) Move in the screen place:** Moves the object in the image plan (pan)
- (5) Zoom in/out gradually:** Increases/decreases gradually the magnification of the designated object
- (6) Define rotation center and Zoom in:** Defines the rotation center on an object and increases the magnification of the centered designated object



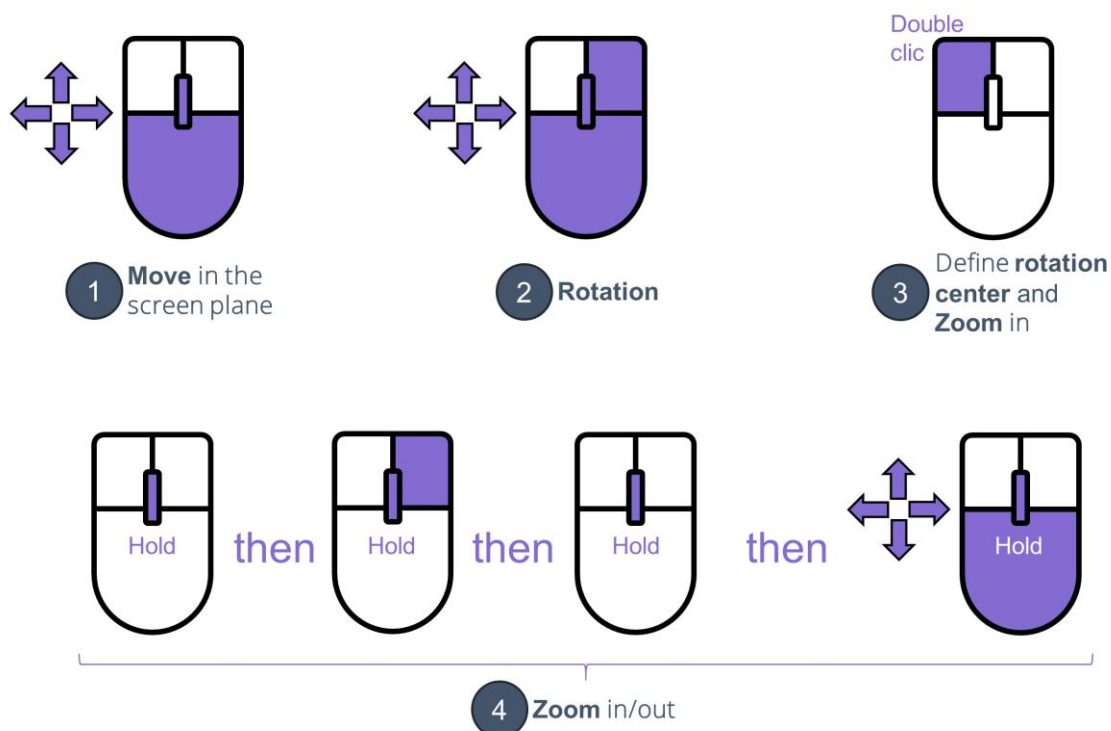
Navigation / Orbit Mode Navigation with keyboard

(7) Move in the screen plane: Moves the object in the image plan (pan)

(8) Zoom in/out gradually: Increases/decreases gradually the magnification of the designated object

2.2 - Examine Mode ●

This camera control is similar to some popular CAD software applications.



Navigation / Examine Mode Navigation

(1) Move in the screen plane: Moves the object in the image plan (pan)

(2) Rotation: Rotates the object in the 3D view

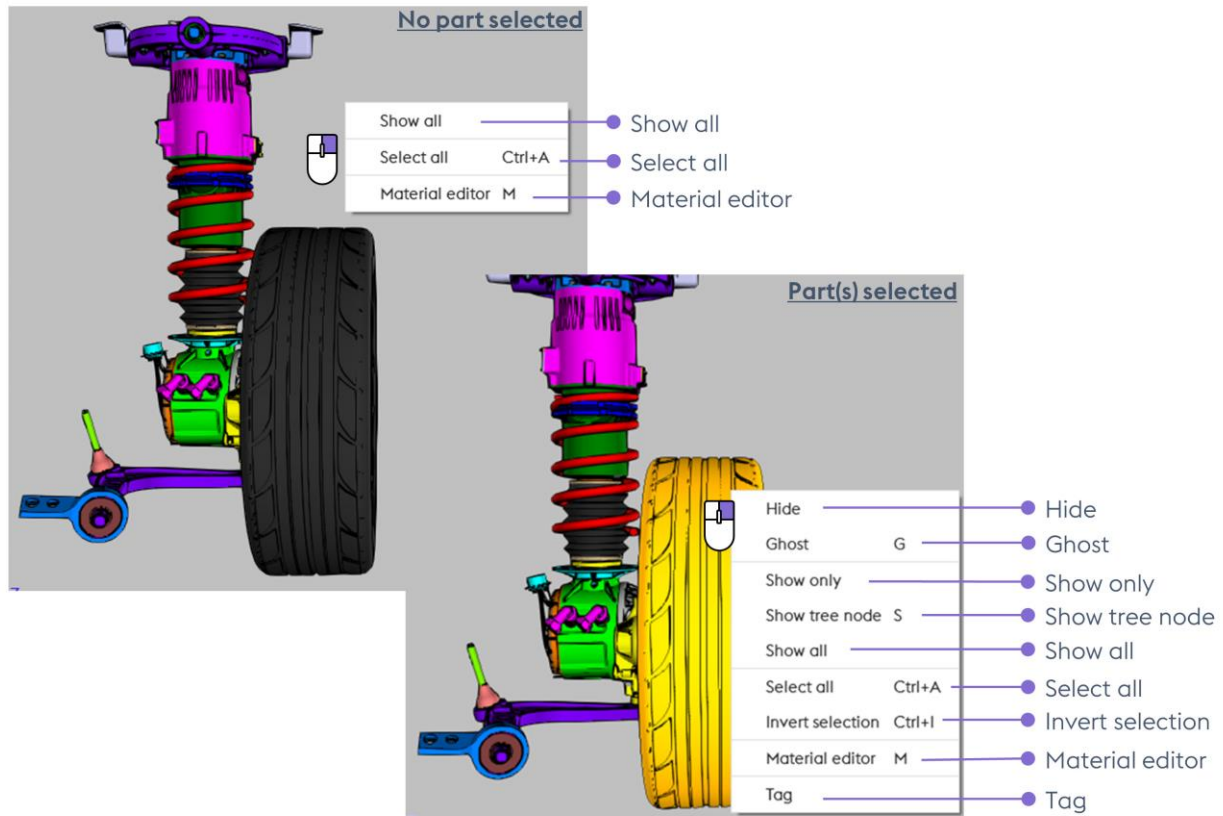
(3) Define rotation center and Zoom in: Defines the rotation center on an object and increases the magnification of the centered designated object

(4) Zoom in/out: Increases/decreases the magnification of the designated object

3 - Edit 3D visible objects

The **3D view context menu** grants access to the element(s) display features.

Accessible via a right click, the menu differs whether an element is selected before the click or not.



3D view / Edit visible objects - © Akka

Show all: Display all elements

Select all: Select all elements

Material editor: Pop-up the tool enabling to modify elements appearance, applying another element's information or creating a new model (see Section [Material tools](#))

Hide: Hide the corresponding object(s) in the 3D view

Ghost: Enable ghost rendering mode for the corresponding object(s)

Show only: hide all non-selected objects

● **Show tree node:** to focus the product structure view on the selected object

Invert selection: Select elements formerly unselected in the selection and unselect elements formerly selected in the selection

Tag: Create/Edit keyword assigned to an object (see Section [Tag](#))

4 - Browsing cube

The **Browsing cube** is a tool enabling to align the camera further predefined orientations. It also allows to redefine the ground that will impact the camera behaviour.

It is located at the bottom right of the screen.



Navigation / Browsing cube

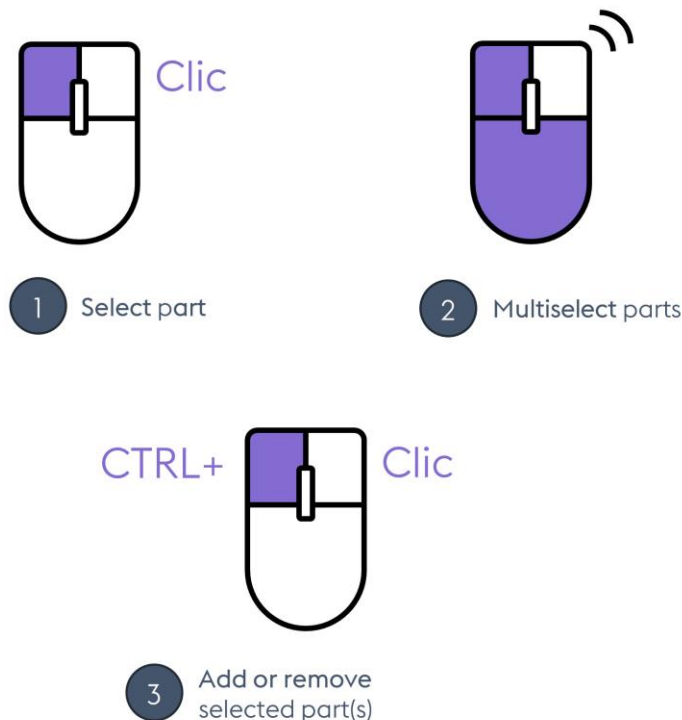
Front view: Align the camera direction with the x, y or z axis, via a left click on a face of the browsing cube

45° view on 2 or 3 axis: Align the camera direction with an intermediate axis, via a left click on an edge or a corner of the browsing cube

The **World orientation modifier** enables to select which axis is used as the ground normal vector via a right click on a face of the Browsing cube.

5 - Selection

The **Selection** enables the user to choose which object(s) he wants to interact with.




Navigation / Objects selection

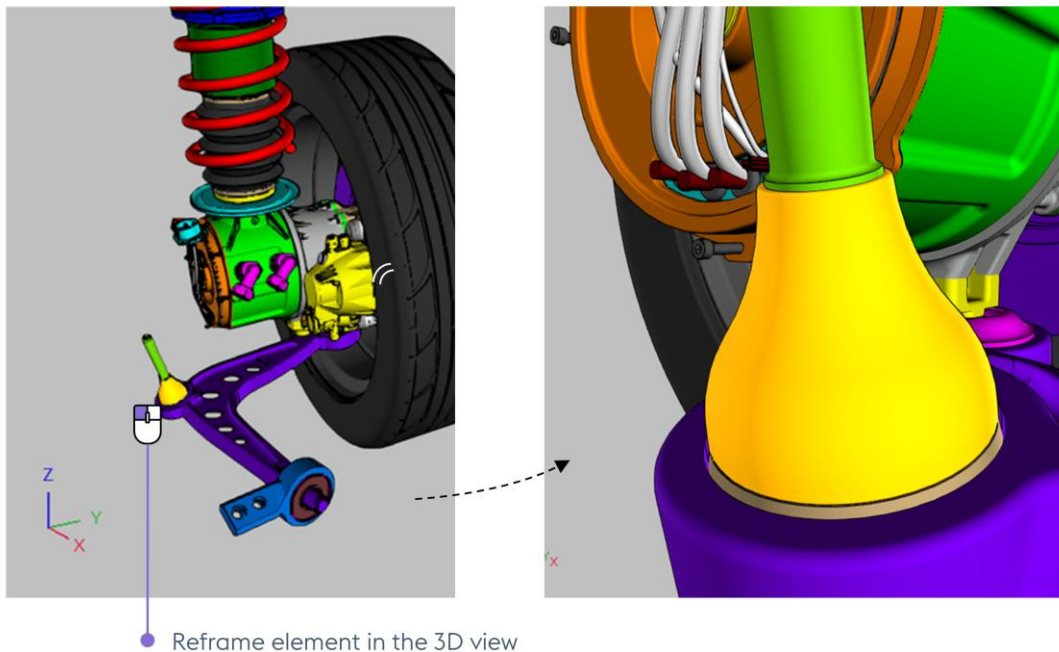
(1) Select object: Select the object pointed by the mouse cursor

(2) Multiselect objects: Create a selection rectangle / release left mouse button to select every object in the rectangle

(3) Add/remove selected object(s): Add (resp. remove) the selected objects to (resp. from) the current selection

 **Selected element in the 3D view:** Once an element has been selected with a left click in the 3D view, it flashes, the corresponding element is highlighted in the [Product Structure](#) and its metadata is automatically displayed in the [Mini-Id-card](#).

6 - Reframe ●



Navigation / Reframe

Reframe 3D and product structure: double-click on the targeted object in the 3D center the camera in the 3D view on and in the [Product Structure](#)

● **Reframe element in the 3D view only:** use the space bar as a shortcut to center the selected objet(s) only in the 3D view. This method gets two main advantages: fit to mutiple objects at once and do not move the product structure

Status bar

The **Status bar** grants access to the [Quick access features](#) and to the [Mini Id card](#). It can be found at the bottom of the main window of 3D Juump Ace.

1 - Quick access features

The **Quick access features** is a box grouping shorter alternative routes to operate with the camera visualization.



Status bar / Quick access features

Back-face culling: Enable/disable back-face culling, do not render triangles facing away from the camera

Centre camera: centre the camera on the scene

Mini-Id-card: Display the metadata of the 3D object currently selected

X-Ray: Enable/disable X-Ray mode, automatic ghosting of close geometries

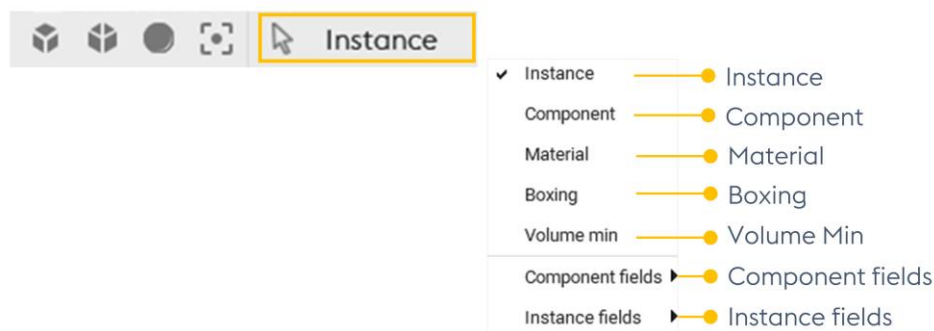
Rendering mode: Modify the display of the 3D View, either as normal or wireframe

Picking selector: Enable to configure selection parameters. Please refer to [Picking selector](#) for more information regarding its functionalities

💡 **Multiselection of objects:** in this event, the Id-card toggles to a message mentioning the number of selected objects.

2 - Picking selector

The **Picking selector** allows to define the criteria to select objects. It will be automatically applied in the Product structure.



Status bar / Picking selector

Instance: Tool enabling to select designated instances

Component: Tool enabling to select designated components

Boxing: Tool enabling to filter on a 3D box. See [below](#)

Volume Min: Tool enabling to select object smallest that a given size. See [below](#)

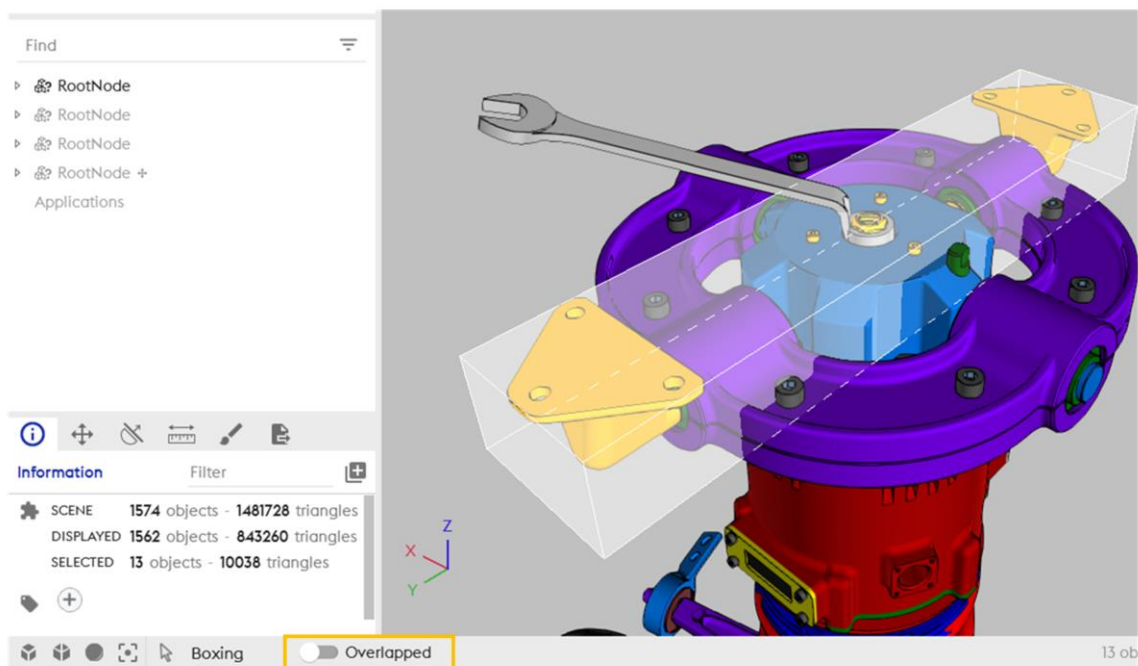
Material: Tool enabling to select elements sharing the same material

Component fields: Tool enabling to select components sharing the same specific component metadata value. Select on metadata type in the submenu, then click a component in the scene will select all components holding the same value for this metadata

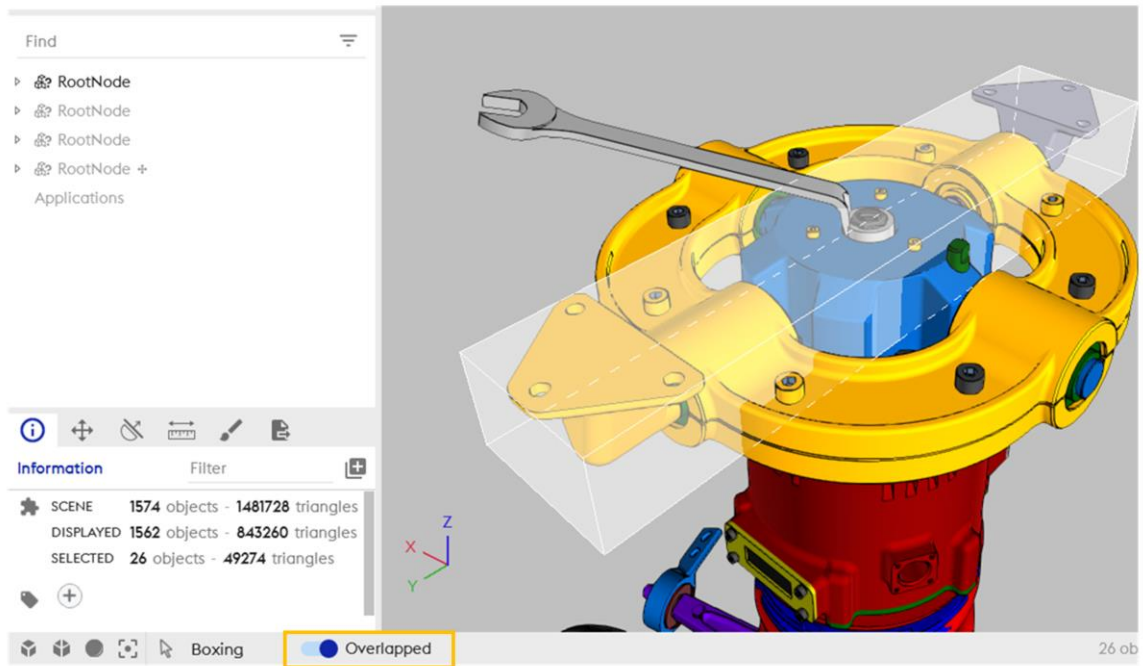
Instance fields: Tool enabling to select instances sharing the same specific instance metadata value. Select on metadata type in the submenu, then click a component in the scene will select all instances holding the same value for this metadata

3 - Boxing

Tool enabling to filter on a 3D box. Click on an element and a 3D box appears around this designated element. When Overlapped is active, it also select the elements next to the designated element. The box can be extended by holding the CTRL key and selecting another object



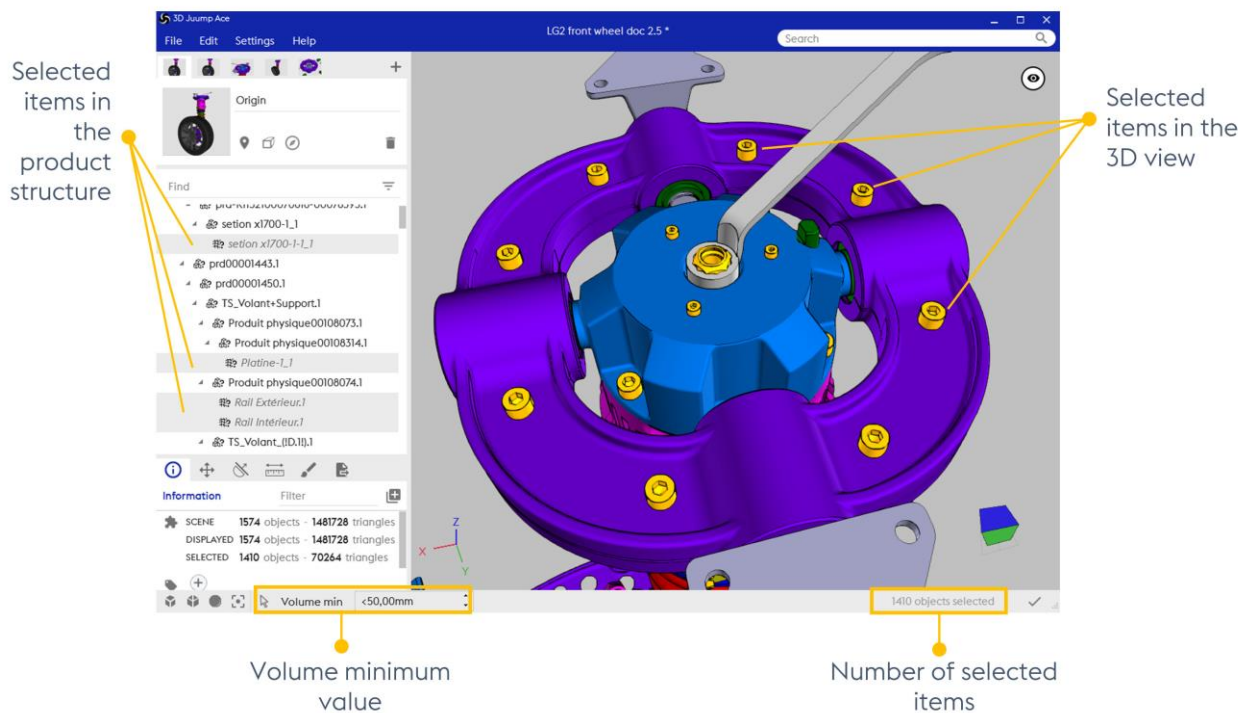
Status bar / Picking selector / Boxing with and without overlapped



Status bar / Picking selector / Boxing with and without overlapped

4 - Volume Min

Tool enabling to select all the items whose size is inferior to the selected value. You can insert it manually with the scrolling arrow or by selecting an element in the 3D view.



Status bar / Picking selector / Volume Min

Selected items in the product structure : shows the components corresponding to the selection result in the product structure

Selected items in the 3D view: shows the components corresponding to the selection result in the 3D view

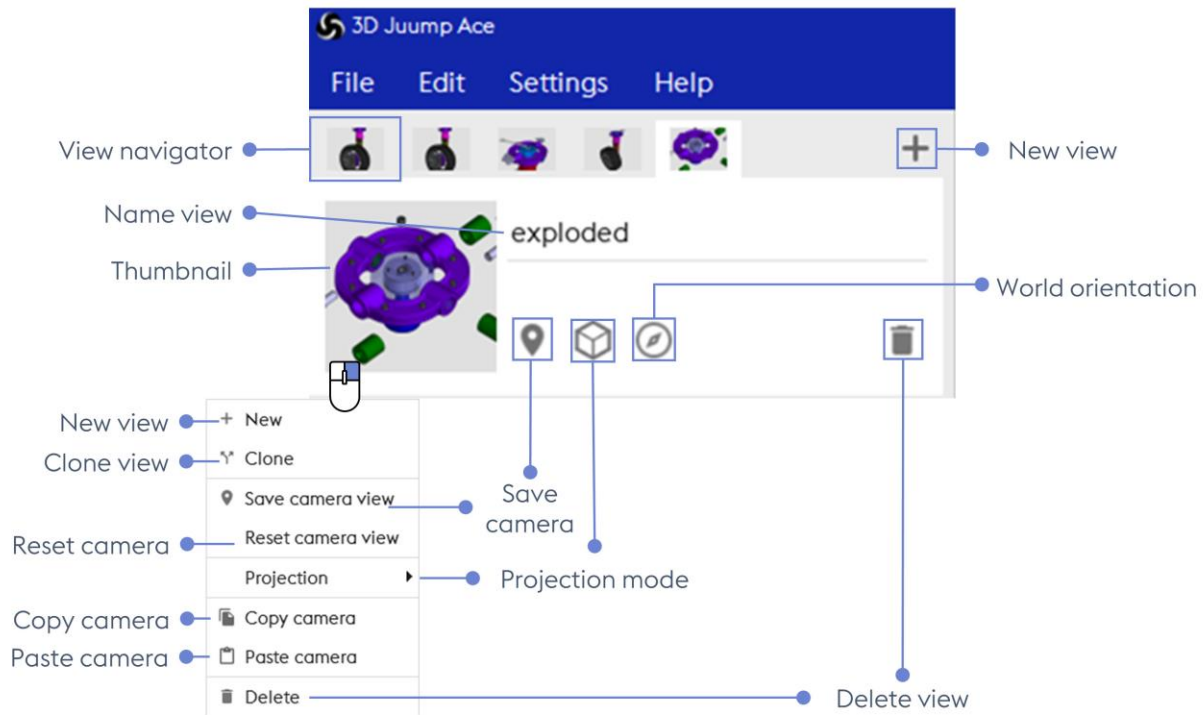
Volume minimum value: shows the requested minimum volume value. You can also use the field to set a precise minimal volume value; this will automatically select all corresponding objects in the scene. You can also select an object in 3D or product structure, the volume of this object is used as input filter value

Number of selected items: shows the number of components corresponding to the selection result

View box

The **View Box** groups features enabling to interact with the Thumbnail and the 3D view mechanisms.

A user is free to create any number of views for a given project. However, only one view may be active at once: this view is referred to as the *current view*. Any change to the camera, object (transformation or material), cut plane or measurement is stored in the current view. In the View widget, the user can activate and manage Views.



View box

💡 A right click on the thumbnail displays a context menu

View navigator: Navigate between the different views formerly created

Name view: Create / Edit name of the current view. Any view created is given the default name "Untitled view". The user is free to rename views by clicking on their name text field

Thumbnail: Small picture drafting the content of the related View from a given point of view; it also enables to recentre the 3D view on the saved view

New view: Create a new view with default parameters

Clone view: Create a new view with the same parameters as the current view

Save camera: Save camera position and orientation to the current view, this operation creates/modifies the thumbnail

Reset camera: Reset the camera view in the thumbnail

Projection mode: Select either an orthographic or a perspective view

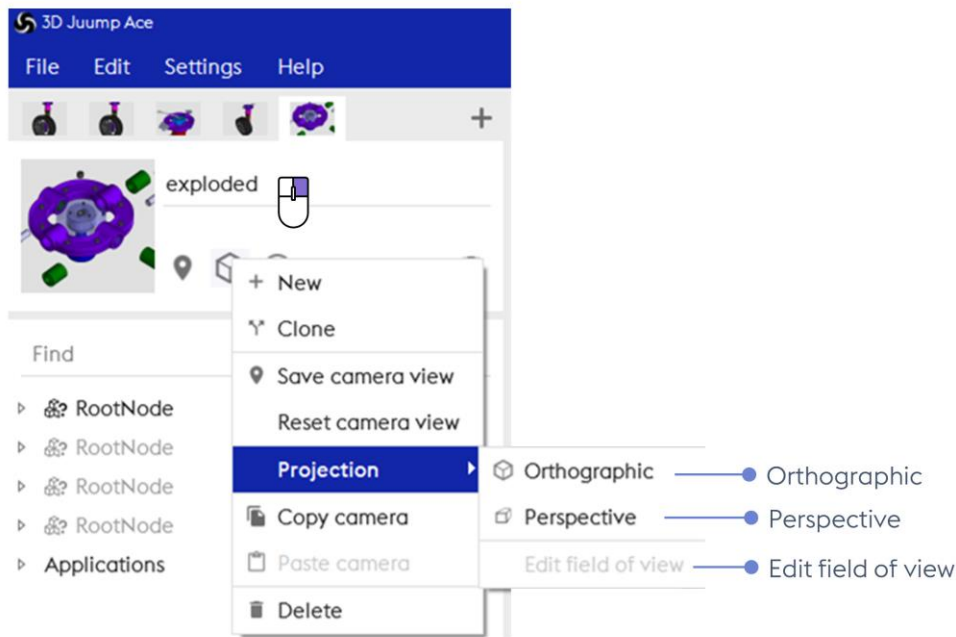
Copy camera: copy the current camera view

Paste camera: paste the copied camera view

World orientation: Align the world with an object

To *fix the world orientation*, click on the compass icon in the status bar, then select one or several objects to be aligned with the world's frame. Upon selecting objects, a pop-up message appears at the bottom of the 3D view asking for the user to confirm the new orientation. Click the *Validate* button to enforce the new world orientation or click on the compass icon again to discard changes.

Delete view: Delete current view.



Projection

Projection mode: Select either an orthographic or a perspective view

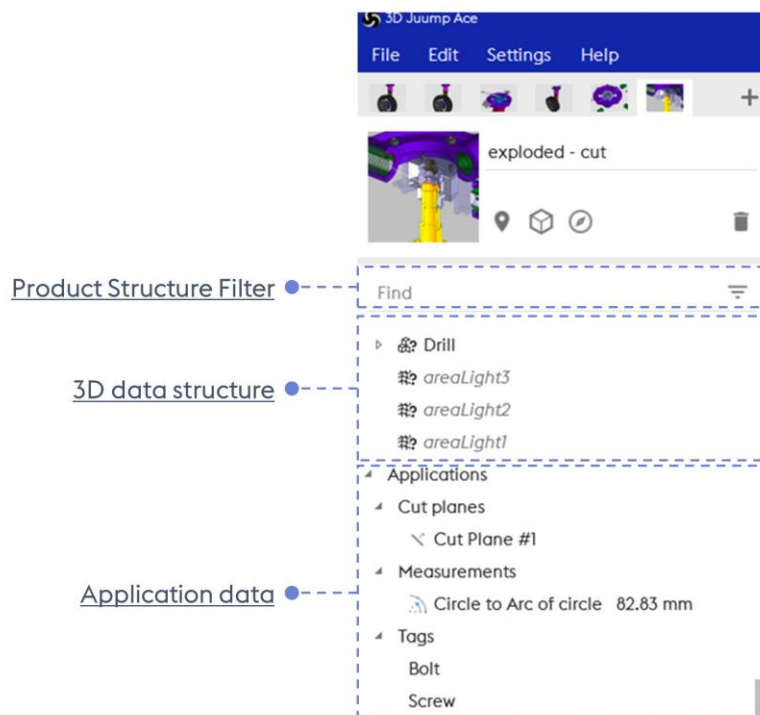
Orthographic: Projection in which exact views of an object are two-dimensional views

Perspective: Projection of points by straight lines drawn through them from some given point to an intersection with the plane of projection

Edit field of view: In perspective projection mode, adjust the vertical field of view

Product structure box ●

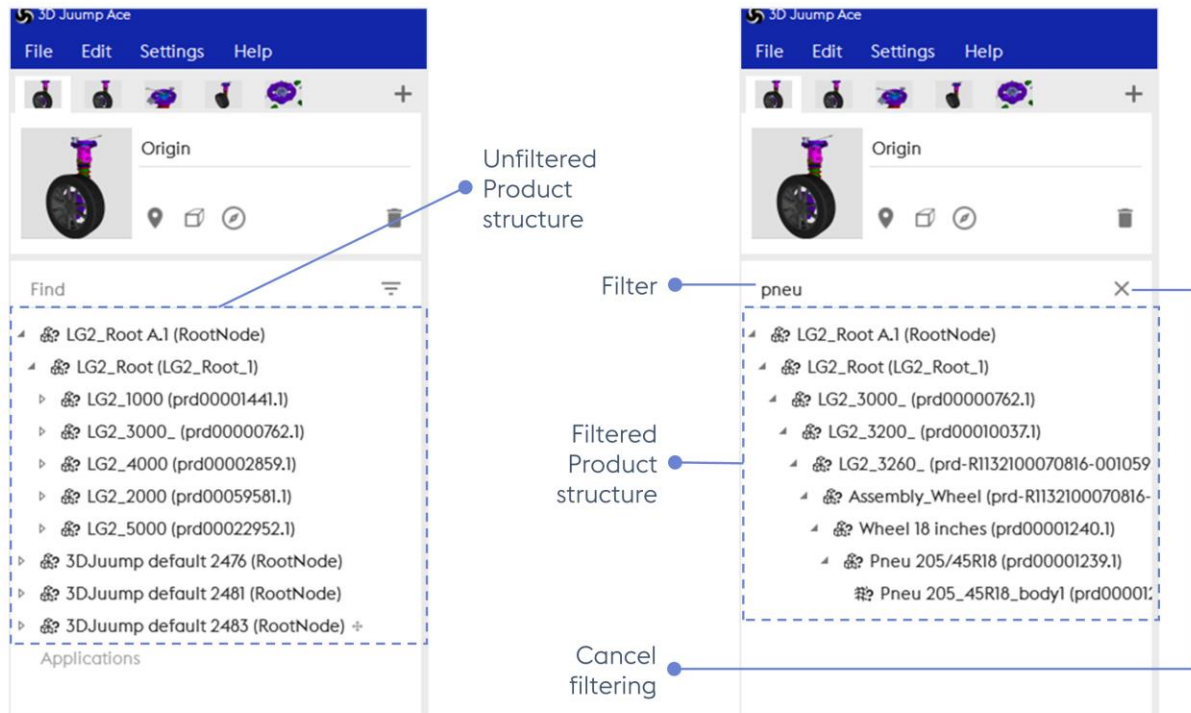
The **Product structure** box shows the hierarchy of the project's 3D data and application data.



Product structure

1 - Product Structure Filter ●

The Product Structure could be very long and deep to display and navigate in. A filtering mechanism allow to limit the Product Structure display on relevant objects.



Product Structure Filter

Unfiltered Product Structure: the full product structure as it has been imported

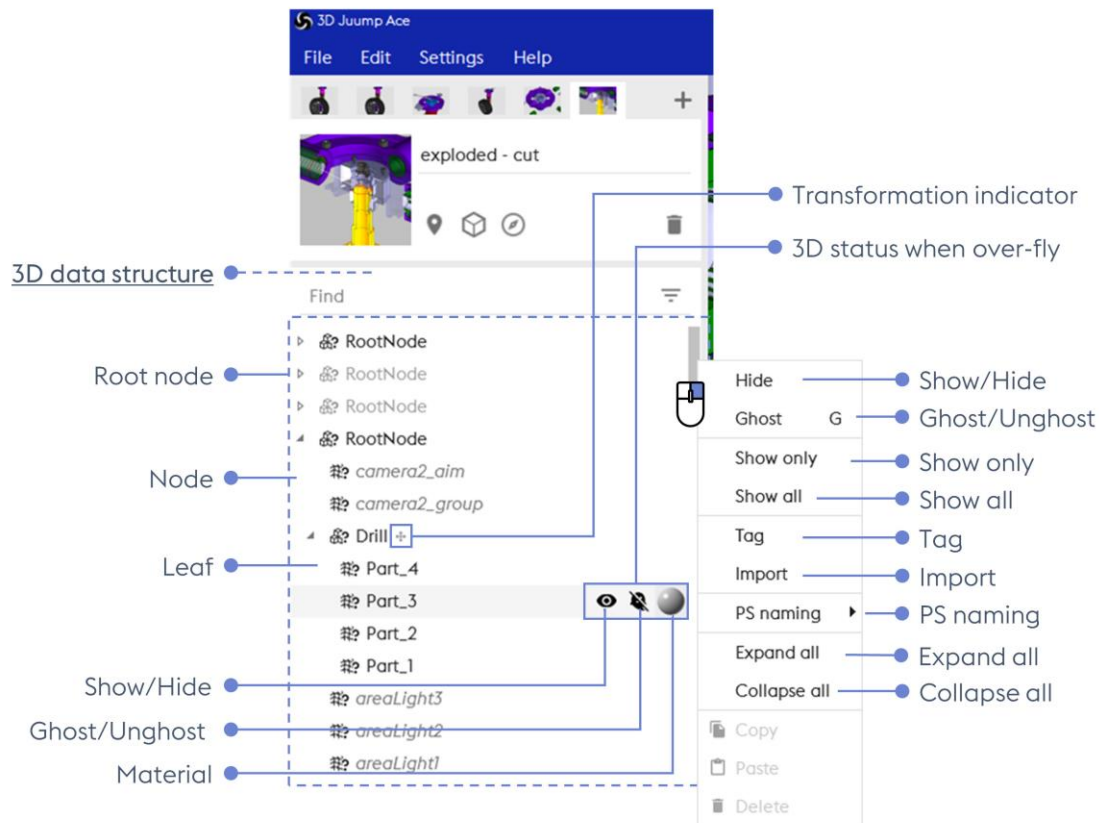
Filter: text to filter on; the filtering is based on the node and leaf names

Filtered Product Structure: the product structure displayed after being filtered

Cancel filtering: remove the filter on the Product Structure

2 - 3D data structure

In this representation, each row element corresponds either to a *node* or to a *leaf* of the hierarchy. Nodes can be expanded or collapsed by clicking on the triangle icon located on the left of the product structure element. The icons are hidden by default and only appear on hovering. The lines corresponding to hidden or ghosted objects appear in grey.



3D data structure

RootNode: Top node of an imported system. Several RootNode may exist when importing multiple 3D data in the same scene

Node: Basic element of a hierarchy; using the image of a tree, a node is a junction to branch(s)

Leaf: Termination element in the tree (with no child nodes). The Leaf usually represent a geometrical object

Show/Hide: Show or hide the corresponding object(s) in the 3D view

Ghost/Unghost: Enable/disable ghost rendering mode for the corresponding object(s)

Material: Display the material of the corresponding object(s) (see Section [Material tools](#))

Transformation indicator: Indicate a transformation has been operated on the designated object

3D status when over-fly: Shows the status of the selected object: visible or hidden, ghosted or not and the type of materials

👉 A right-click on an element of the [Product structure](#) opens a context menu, which holds the following actions:

Show/Hide: Show or hide the corresponding object(s) in the 3D view

Ghost/Unghost: Enable/disable ghost rendering mode for the corresponding object(s)

Show only: Hide every other object

Show all: Display all the elements


Tag: Create/Edit keyword assigned to a object


Import: Import a file at the same level as the selected object.

PS naming: Select the text field to be displayed in the Mini-Id-card identifier. Information here-in referenced depend on input data

● **Expand all:** Expand all nodes of the data structure down to leafs

● **Collapse all:** Collapse all nodes of the data structure up to root node(s)

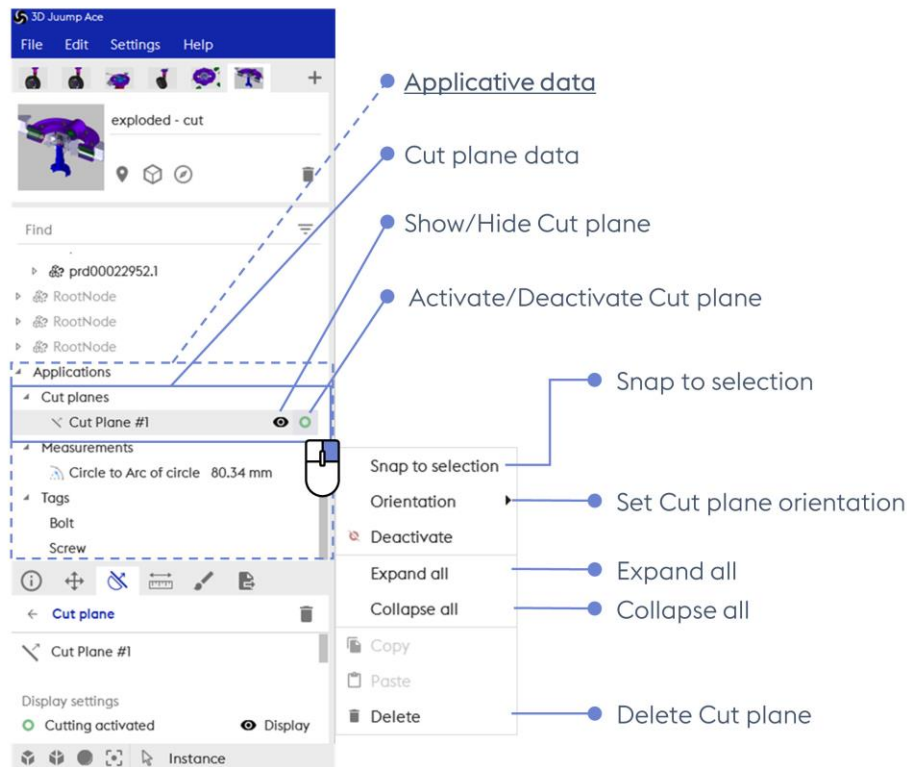
 **Selected element in the Product structure:** Selecting an element in the [Product structure](#) also selects the corresponding part in the [3D view](#); its metadata is automatically displayed in the [Mini-Id-Card](#).

 **Reframed element in the Product structure:** To centre the camera in the [3D view](#) on a designated element, double-click on the element in the [Product structure](#).

3 - Applicative data

The **Applications**, last node located at the very bottom of the list of the [Product structure](#), groups tools interacting and already applied in the 3D view, such as [Creating and erasing cut planes](#) or [Measurements](#) for instance. A left click on the triangle at the beginning of each group of applications gives access to the scrolling list of accessible linked applications.

3.1 - Cut plane applicative data



Cut plane / Application - © Akka

Cut plane applicative data: List of cut planes applied in the 3D view

A left click on a designated Cut plane in the [Product structure](#) selects the cut plane, highlights it in grey in the list and the frame automatically appears in the [3D view](#). This enables to interact with the Cut plane (see Section [Cut plane editor](#)).

Show/Hide cut plane: Show or hide designated cut plane graphical representation

Activate/Deactivate cut plane: Activate or deactivate the designated cut plane; when deactivated, a cut plane has no effect on the geometry of objects

A right click on a designated Cut plane in the [Product structure](#) or in the 3D view selects the cut plane and provides access to a context menu.

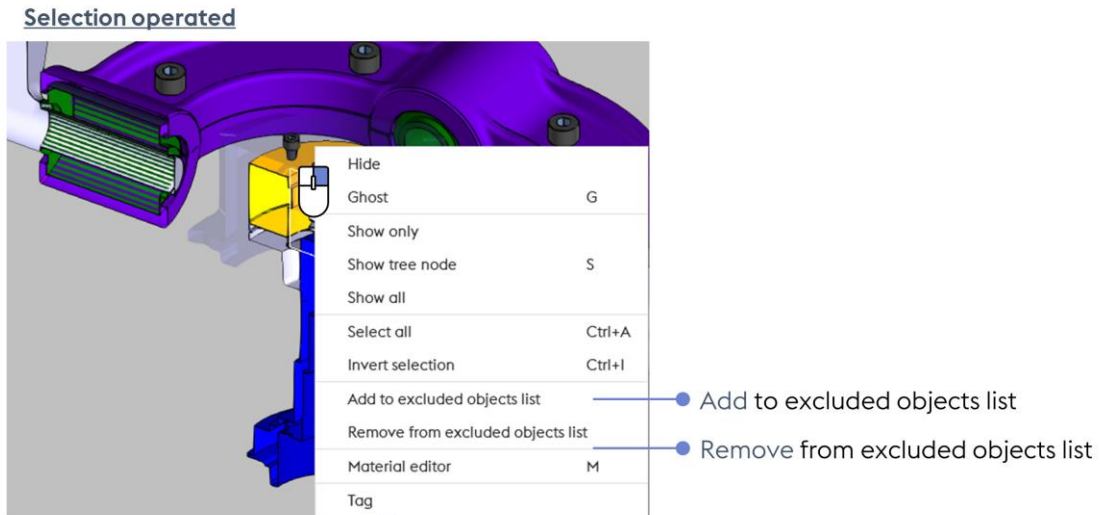
Snap to selection: Switch application of the cut plane to a different object

Orientation: Select along which axis (x, y or z) the normal of the cut plane is aligned

Deactivate/Activate: Deactivate or activate the cut plane; when deactivated, a cut plane has no effect on the geometry of objects

Delete cut plane: Manage cut plane, enabling to delete the designated cut plane

Shall an object being selected AND a cut plane cutting this particular element, a specific context menu is available via right click.



Cut plane / Selected and cut element Context menu - © Akka

Add (to excluded objects list): Add the selected object(s) to the list of objects uncut

Remove (from excluded objects list): Remove the selected object(s) from the list of objects uncut

3.2 - Measurement applicative data

Measurement applications: List of measurements performed in the 3d view

A left click on a designated Measurement in the [Product structure](#) selects and displays the measure in the [3D view](#). This enables to interact with the designated measure (see Section [Measurements](#))

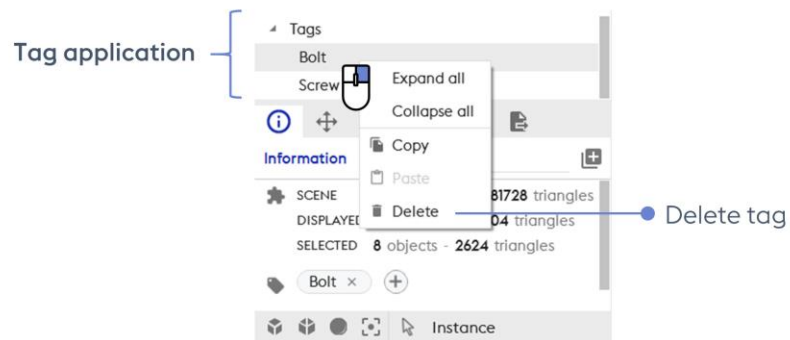
A right click in the [Product structure](#) gives access to a context menu.

3.3 - Tag applicative data

Tag application: List of tags available within the 3D view

A left click on a designated Tag in the [Product structure](#) selects and displays all the objects containing the designated tag in the [3D view](#). This enables to interact with the designated tag. Please refers to [Tool box/Information/Tag](#) for more information.

A right click in the [Product structure](#) gives access to a context menu.

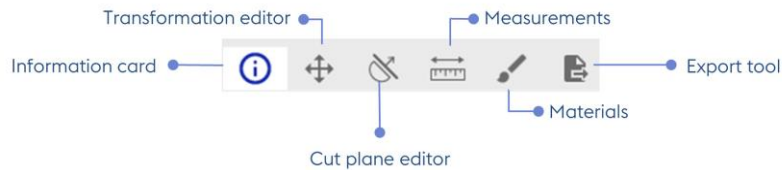


Tag Application - © Akka

Delete tag: Manage tag, enabling to delete the designated tag from all the objects sharing it

Tool box ●

In the **Toolbar** located at the bottom of the Toolbox, the user can change the active tool. It can be selected among one of the following tools:



Detailed toolbar

Information card: List information and metadata of selected object

Transformation editor: Move objects along axes from frames

Cut plane editor: Create and edit cut planes

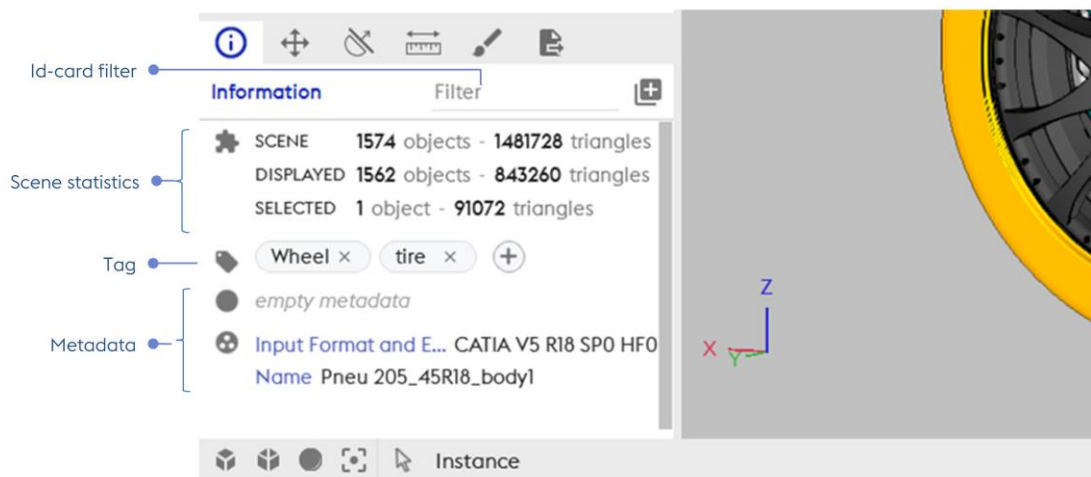
Measurements: Measure lengths or diameters of geometrical features, and distance between objects

Materials: Modify elements appearance, applying another element's information or creating a new model

Export tools: Export images, vectored illustration, metadata or 3D data

1 - Information card

The *Information* dialog displays the metadata and the tag(s) of the 3D object currently selected.




Toolbox / Information card - © Akka

Id-card filter: Perform search of a particular value on the object metadata

Tag: Create/Edit keyword assigned to an object

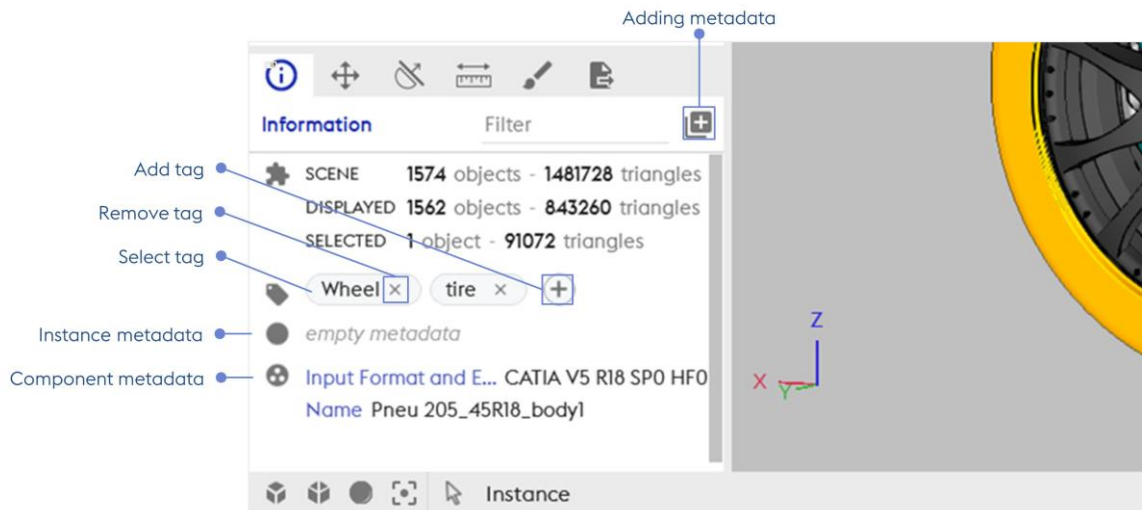
Metadata: Provide data that defines the selected object but not represented in 3D

Scene statistics: indicates the number of objects and triangles selected in the scene and information about these objects

 **Multiselection of objects:** in this event, the Id-card toggles to a cleared mode and displays only the list of all the tags of objects currently selected.

1.1 - Tag

A **Tag** allows to set a label one or various selected objects with a keyword to easily find it or them when necessary. Please refer to [Tag applications](#).



Toolbox / Information card

Select Tag: It can be used to manipulate multiple-objects together. Select an existing Tag in order to manipulate multiple objects together (**Selected object(s)** in the 3D zone)

Adding tag: create a tag you select the required object(s), click on **adding a tag** and identify it (them) with a **keyword**. The tag appears then in the product structure box

Instance metadata: Metadata linked to the currently selected object

Component metadata: Metadata linked to the component

Adding metadata: New import metadata tool, to enrich your 3D

1.2 - Metadata enrichment ●

Further the format, the Metadata originate from 3D files; they can be imported from CSV or FBX files.

Metadata enrichment

The metadata enrichment procedure adds to 3D parts of the digital mock up, the content of the input file as metadata.

Metadata csv file to import: lq2 wheel exported csv from ace.csv

Import options

Column separator: ,

String delimiter: "

Has header: ☒

Select pivot column: C_created

Select metadata key: C_created

1973 components metadata and 0 instances metadata will be enrich.

IMPORT CANCEL

Toolbox / Adding metadata

Metadata csv file to import: Name of the metadata csv file to import

Import options: for formatting the csv file

Select pivot column: to map with selected metadata key in 3D scene

Column separator: value separation character in the csv file

String delimiter: Chain delimiting character

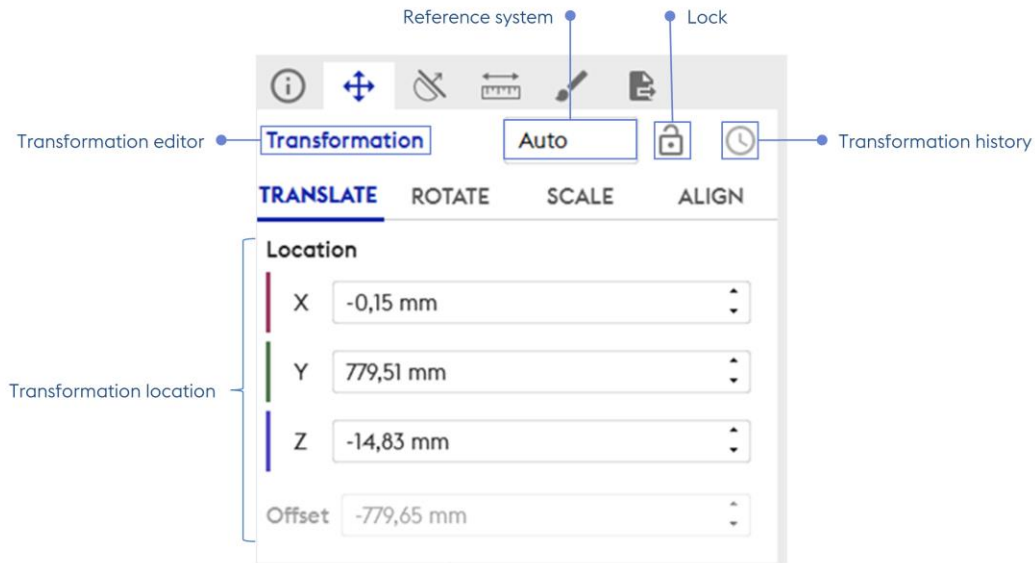
Has header: if the first line of the csv file is the header. Ignores the first line of the csv, it is the name of the column

● **Select metadata key:** Choice of the key metadata to associate in the 3d file, could be a component or instance metadata

Components and instances: Number of components and instances that will be enriched with metadata from CSV file

2 - Transformation editor

In the transformation editor we can find tools like translate, rotate, scale, and align.



Toolbox / Transformation editor / Tools

2.1 - Translate

The **Translate tool** enables to translate objects along axes from frames; basically, when the Transformation editor is activated, the user can move objects around the scene

Reference system: Enable to configure the translation manipulator displayed

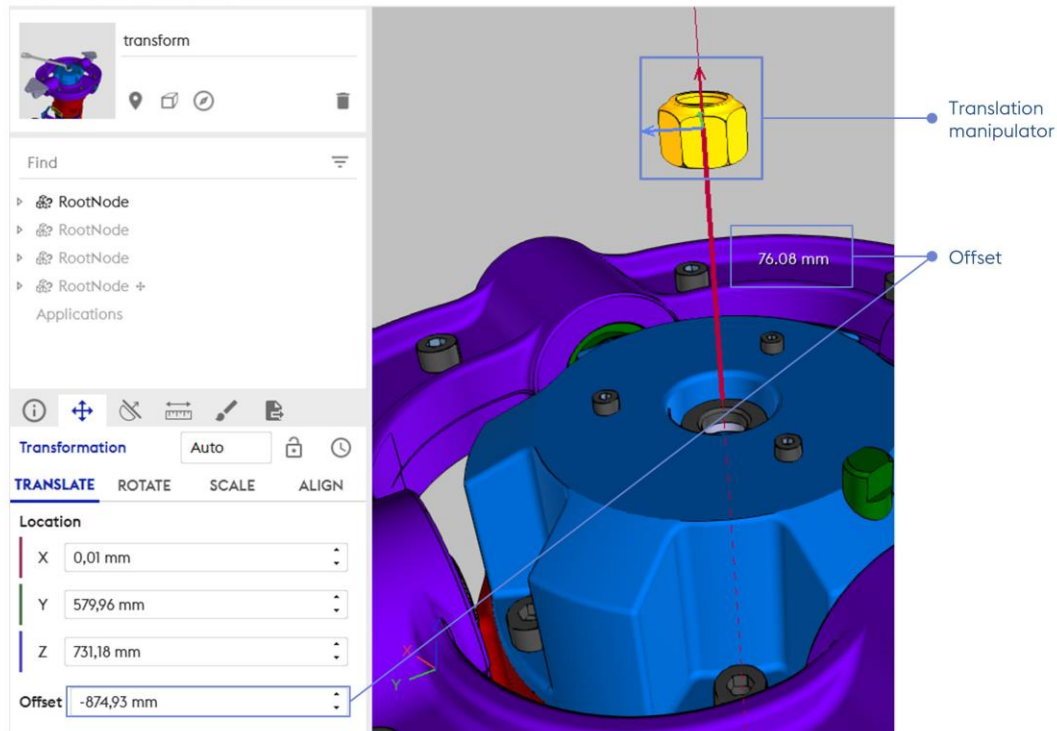
Lock: Active / Inactive transformation mode

Transformation history: contains the list of single changes in objects position made by the user from the creation of the current view

💡 The orientation of the translation manipulator defines in which directions the user can move the selected object(s). The user can change the orientation of the translation manipulator by modifying the [Reference system](#).

Transformation location: Information enabling to locate your transformed selection in the DMU

Selecting an object or a group of objects with the Transformation editor as the active tool will make a translation manipulator appear in the 3D view at the centre of the selection.



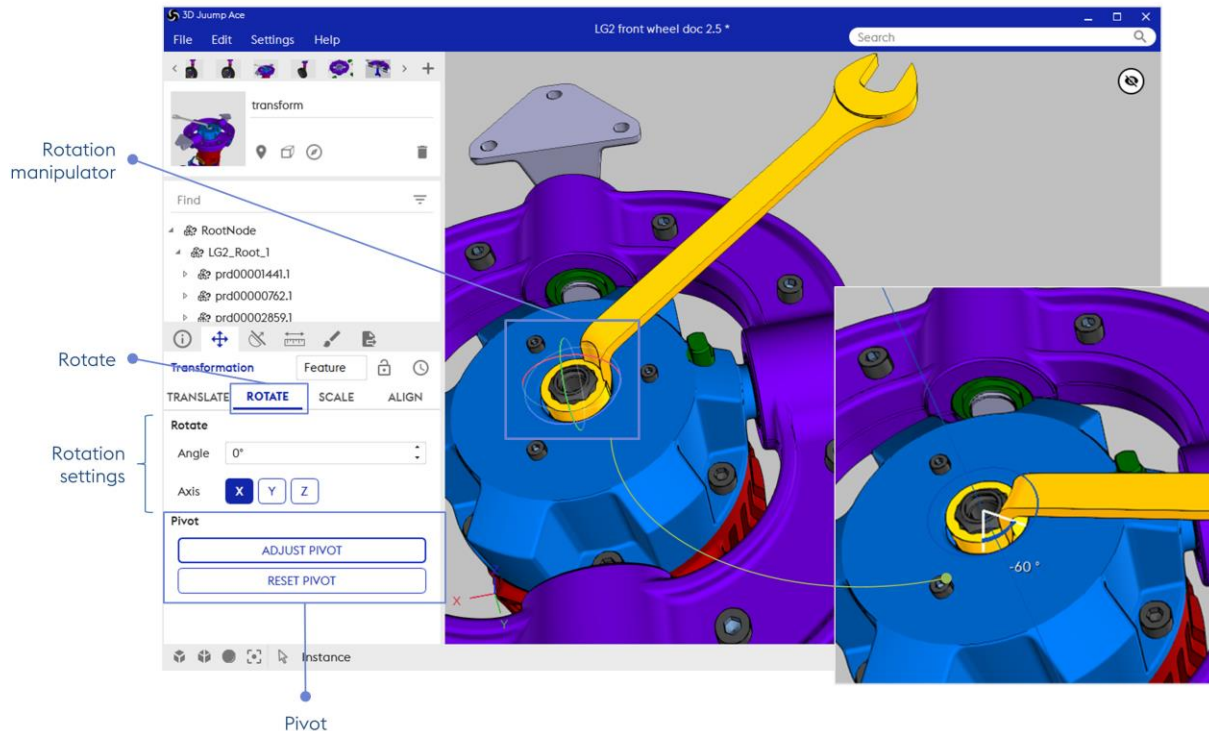
Toolbox / Transformation editor / offset

Translation manipulator: Provide access to the selected object (s) movements, by drag & drop

Offset: When selecting an axis of the manipulator or at the end of the translation this box recovers the focus, so you can edit the offset translation of the object(s)

2.2 - Rotate

The **Rotate tool** enables to rotate objects around their original pivot or around a new selected Pivot.



Transformation editor / Rotate - © Akka

Rotate: Spin designated element(s) around an axis using the Rotation Manipulator

Rotation Manipulator: Graphical handler to adjust the selected objects rotation; click-and-drag one of the axis circle to rotate.

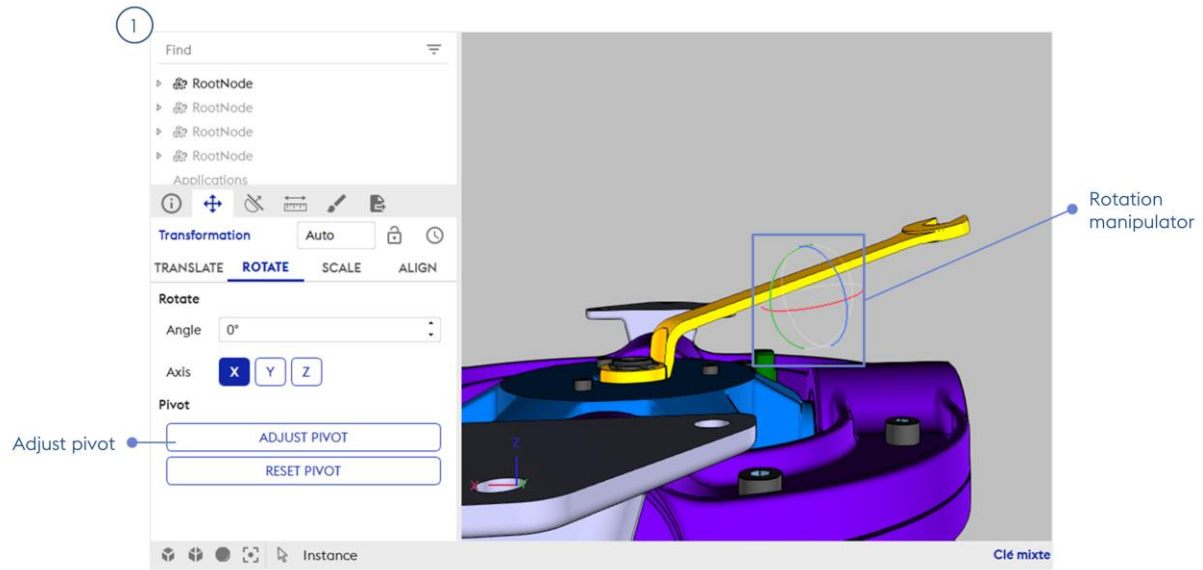
Rotation settings: Select the specific *axis* on which an *angle* must be manually applied

Angle: Space (usually measured in degrees) between two intersecting lines or surfaces at or close to the point where they meet

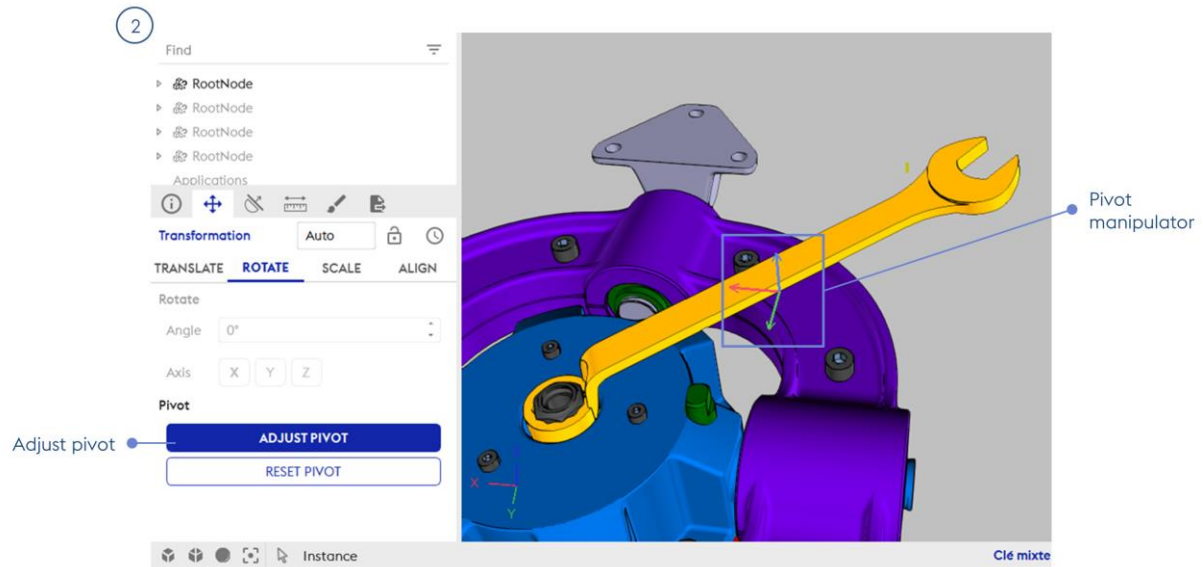
Axis: Cartesian coordinate system indicating in which direction designated element will be moved (X, Y, Z - please refer to [Reference system](#) for more information)

2.2.1 - Adjust rotation pivot

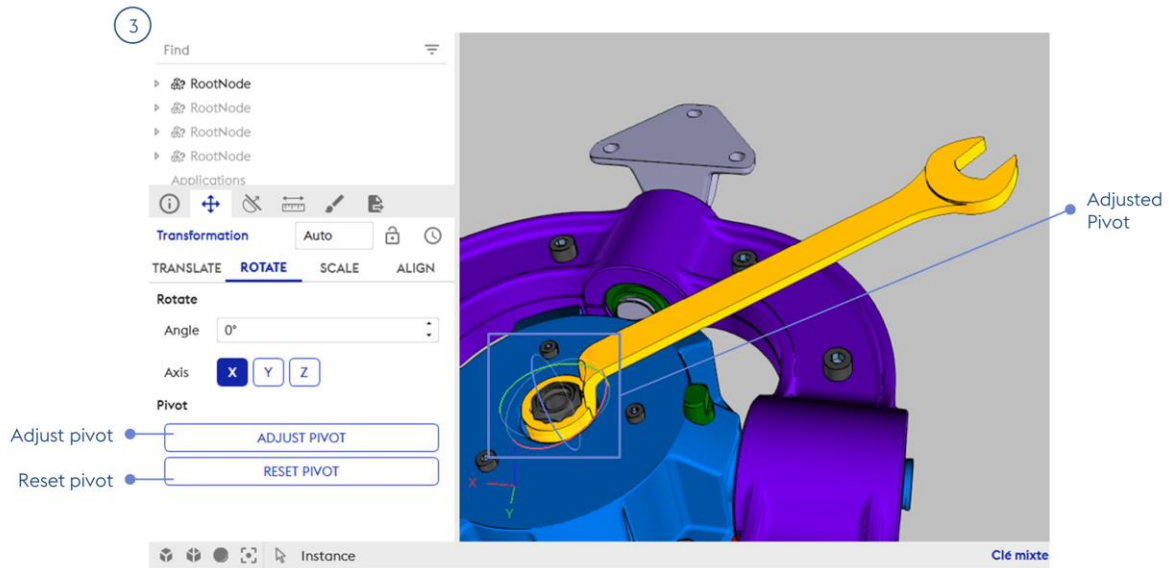
The **Pivot** can be modified in order to adjust the objects rotation centre precisely.



Transformation editor / Adjust rotation pivot - © Akka



Transformation editor / Adjust rotation pivot - © Akka



Transformation editor / Adjust rotation pivot - © Akka

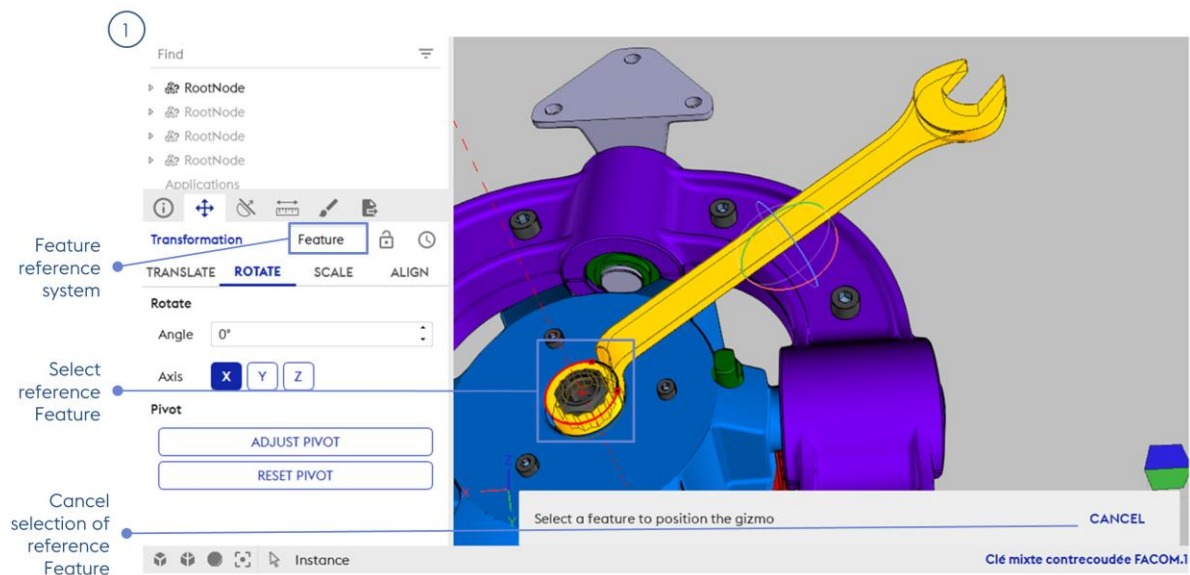
Adjust Pivot: Select the function then move the Pivot frame, and validate the new position by clicking again on **Adjust Pivot**. Now, you can rotate the selected objects through this new point of reference

Adjusted Pivot: Once the button **Adjust Pivot** has been clicked, the manipulator changes to allow to rotate the selected Object(s) around the new pivot."

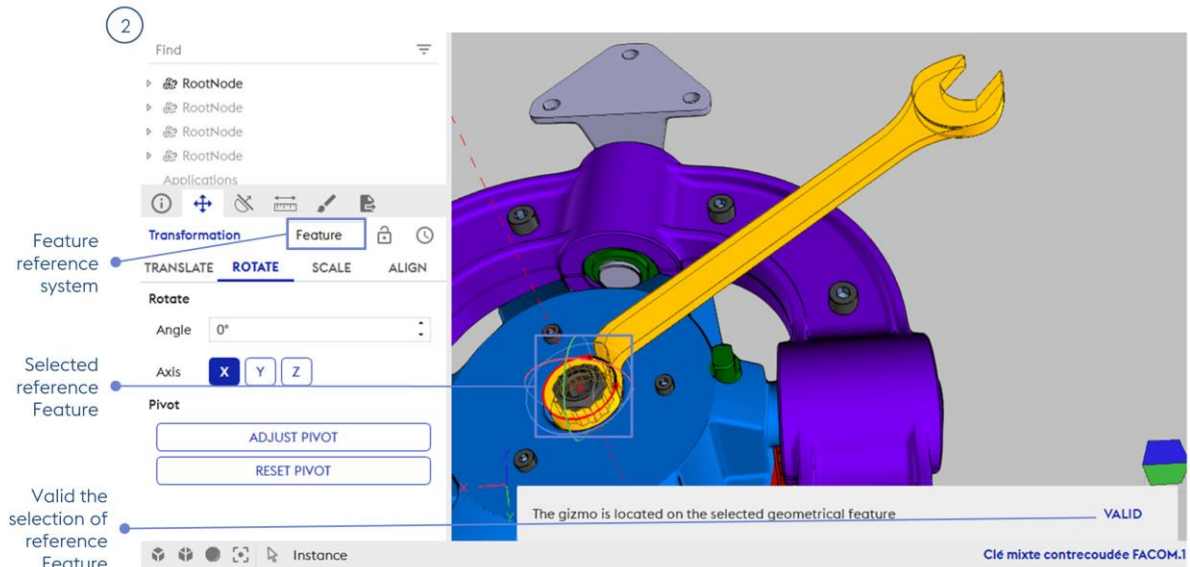
Reset Pivot: Reset the Rotate Pivot to its initial position

2.2.2 - Adjust rotation pivot using Feature reference system

The **Pivot** can be modified in order to adjust the objects rotation centre precisely using Feature reference system.



Adjust pivot / Feature reference system - © Akka



Adjust pivot / Feature reference system - © Akka

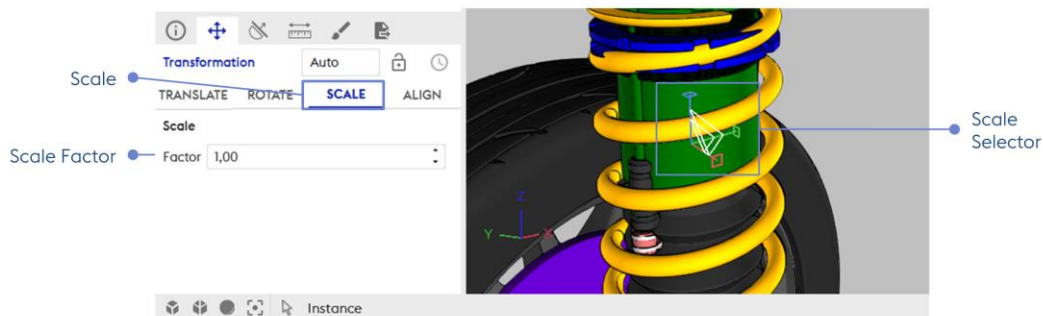
Feature reference system: Changing [Reference system](#) enables to configure the frame displayed. Select “Feature” in order to be able to use geometrical element of an object as reference. This will be used to adjust precisely the pivot or rotation of the selected object

Select Feature reference: Select in the 3D one geometrical element of an object (vertex, segment, faces or axis) to select its reference system

Valid: Confirm pivot adjustment; the rotation manipulator is now adjusted to the precise pivot

2.3 - Scale

The **Scale tool** enables to scale objects either uniformly.



Transformation editor / Scale - © Akka

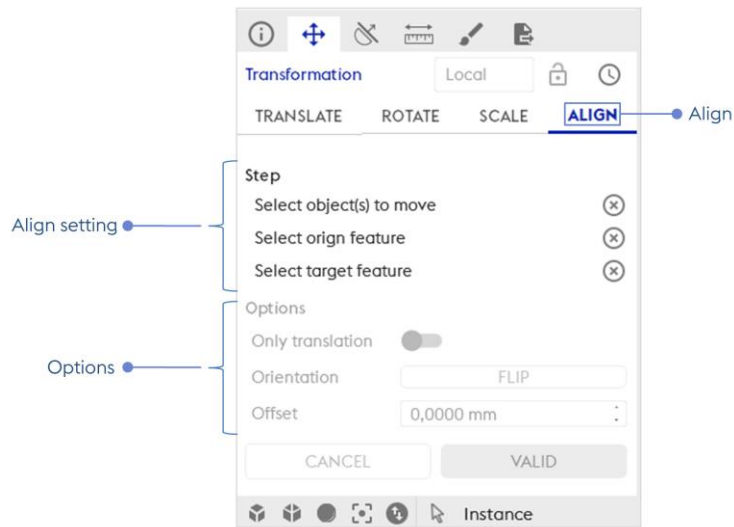
Scale: Adjust objects size of a scale factor by using the Scale Selector

Scale selector: Graphical handler to adjust the scale; click-and-drag one of the axis handle to scale

Scale factor: Input scale factor manually to adjust it precisely

2.4 - Align

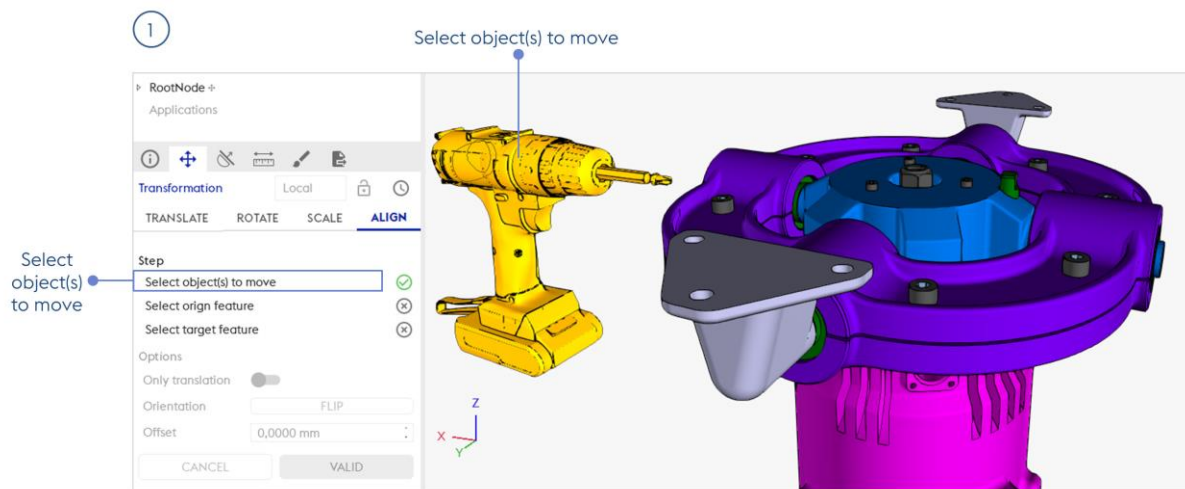
The align button allows you to align one object with another using one geometrical element (vertex, segment, faces or axis).



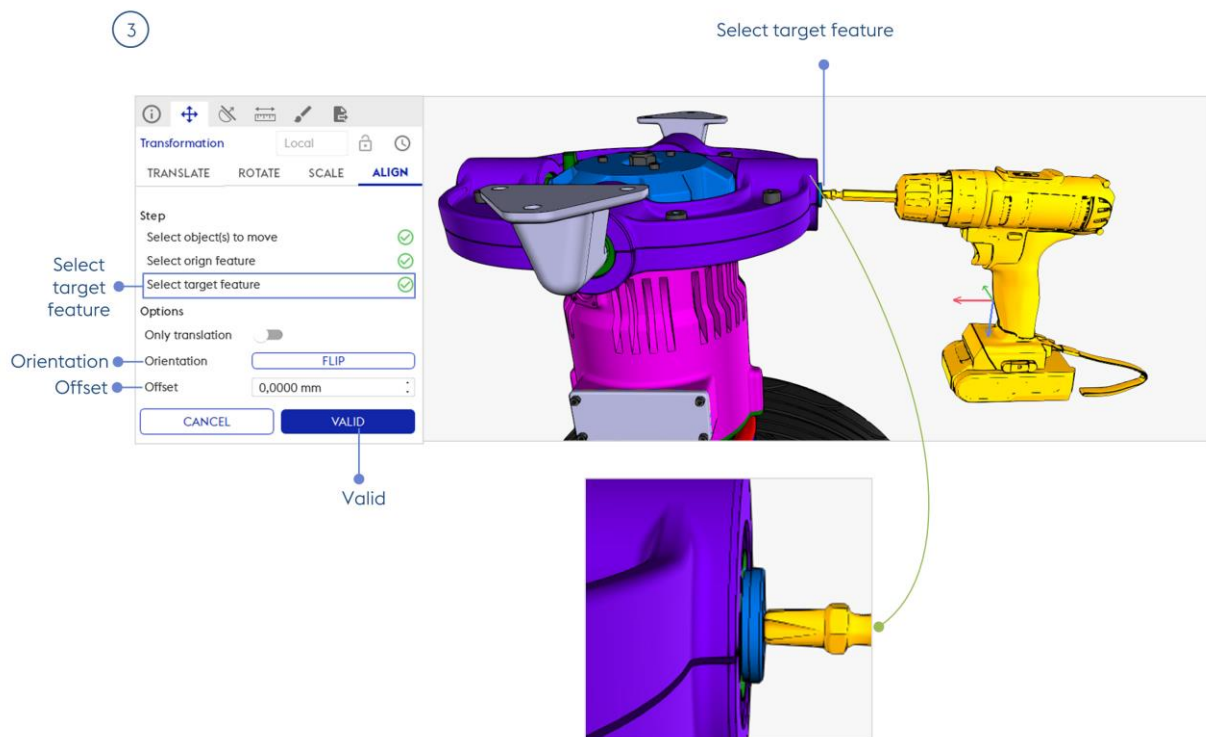
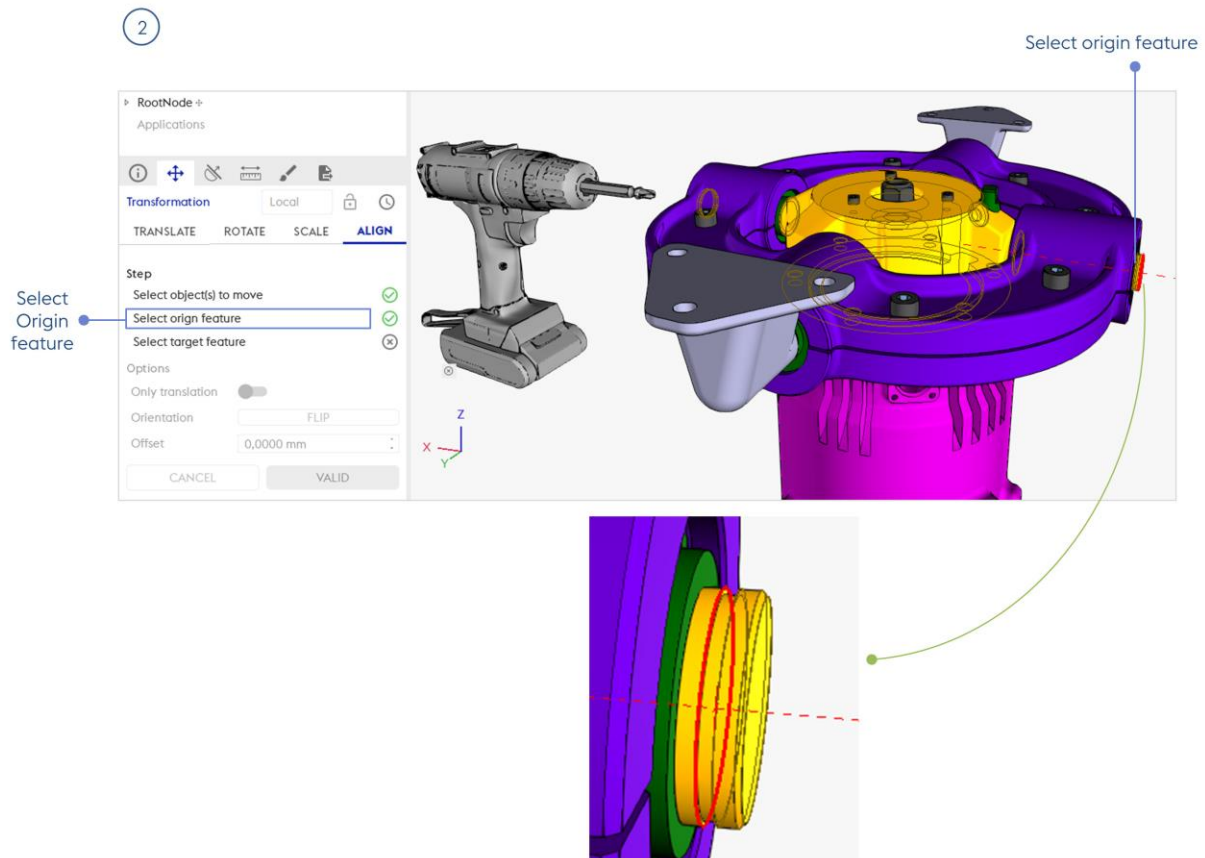
Transformation editor / Align - © Akka

Align settings: Align tool parameters.

Options: Align tool options.



Transformation editor / Align step 1 - © Akka



Follow the next steps to align easily two objects:

Select object(s) to move: Select the object(s) to move

Select Origin feature: Select a geometrical element (vertex, segment, faces or axis) as reference element to align

Select target feature: Select a geometrical element (vertex, segment, faces or axis) as reference element to be aligned on

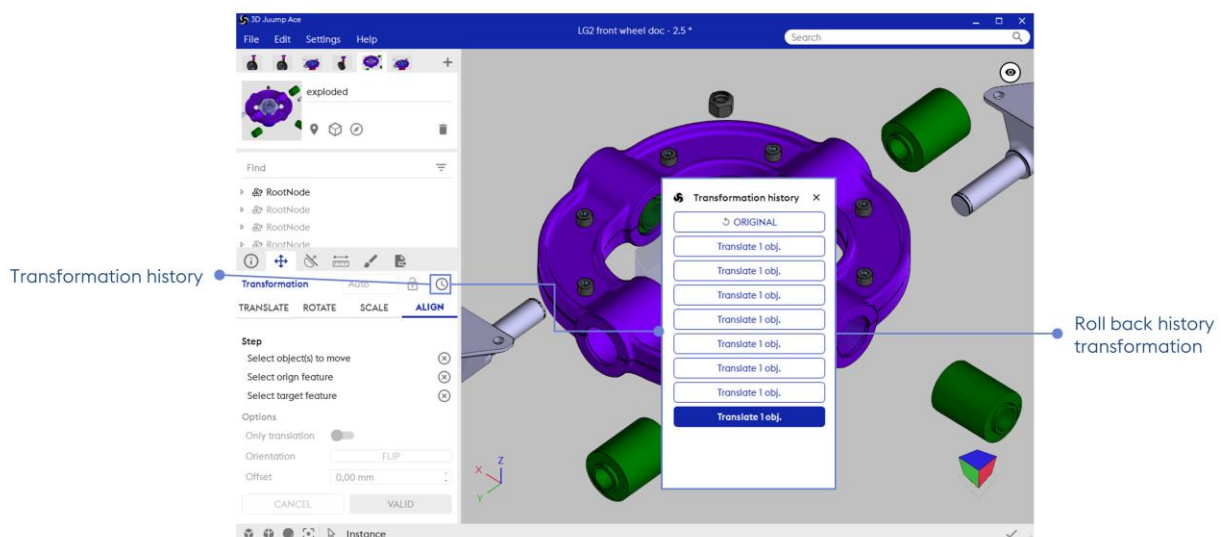
Orientation: Optionally, invert the orientation of the aligned object, if not appropriate at first try

Offset: Optionally, adjust the aligned object along the axis of certain distance

Valid: Finalize the manipulation. You're ready for another alignment!

2.5 - Transformation history

The **Transformation history** contains the list of single transformation applied on objects by the user from the creation of the current view.

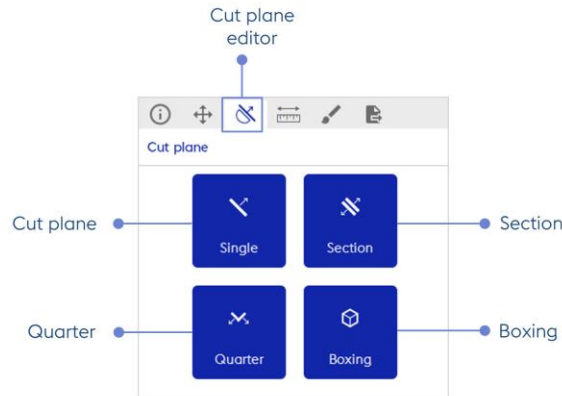


Transformation history example - © Akka

Roll back history transformation: Restore every object to the position they had after the corresponding move was performed by clicking on an element of the list

3 - Cut plane editor

The **Cut plane editor** enables the user to create and edit cut planes. Users can move and rotate cut planes freely in the scene and the set of objects which get cut through can be specified individually for each cut plane.



Cut plane editor - © Akka

Cut plane: Create a single cut plane performing a full section of the geometry

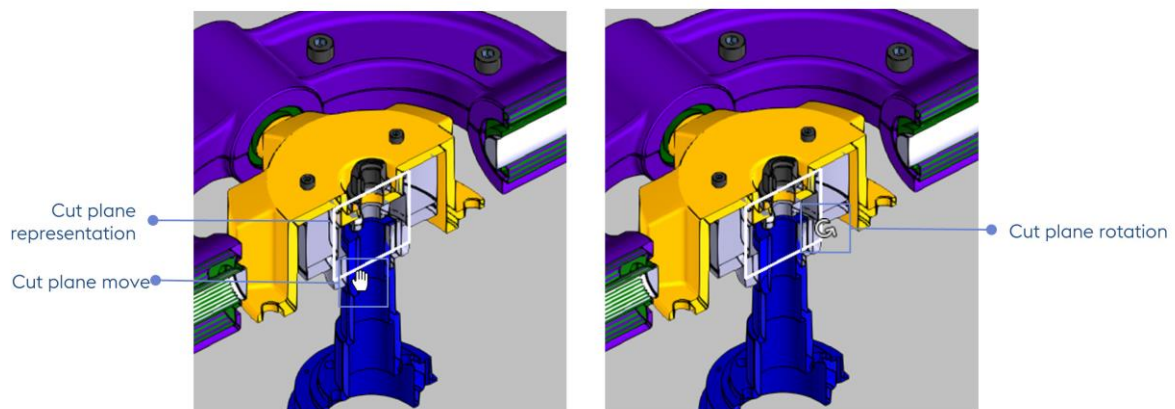
Section: Create a compound of two parallel cut planes isolating the geometry between them

Quarter: Create a compound of two orthogonal cut planes performing a quarter section of the geometry

Boxing: Create a compound of six cut planes forming a box

3.1 - Moving cut planes in the 3D view

The position and the orientation of a cut plane can be edited from the 3D view. Cut planes are graphically represented by squares or rectangles in the 3D view. The user can interact with these representations in order to select, move or rotate cut planes. Each graphical representation of a cut plane can be enabled or disabled from the Product structure view (see Section [Applications data](#)).

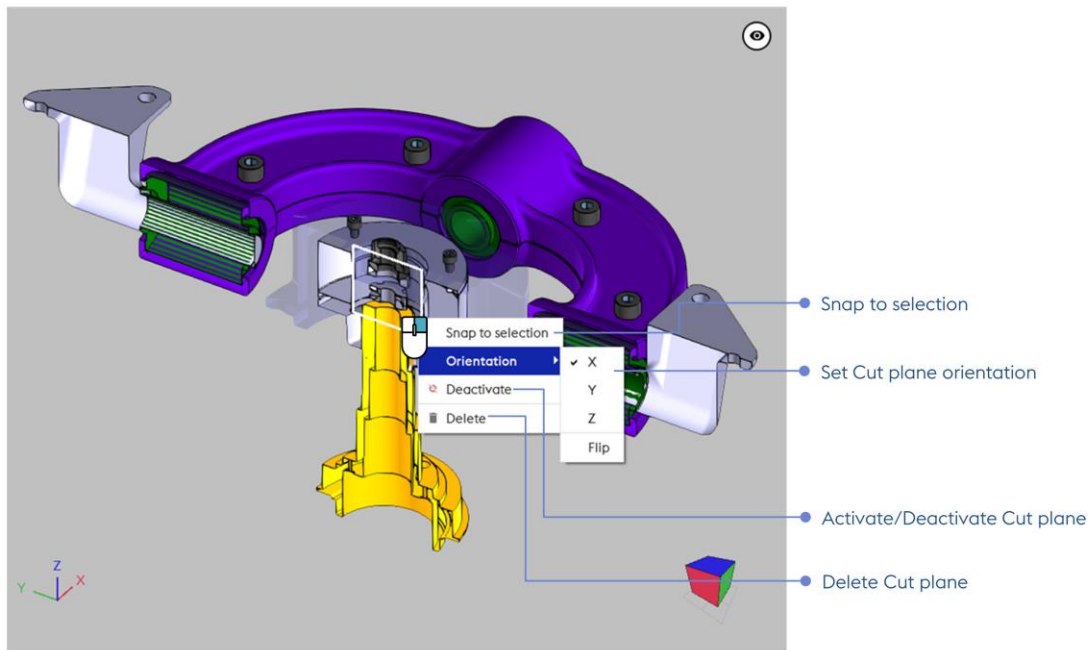


Cut plane representation, move and rotate - © Akka

Cut plane representation: Graphical representation of cut planes in the 3D view

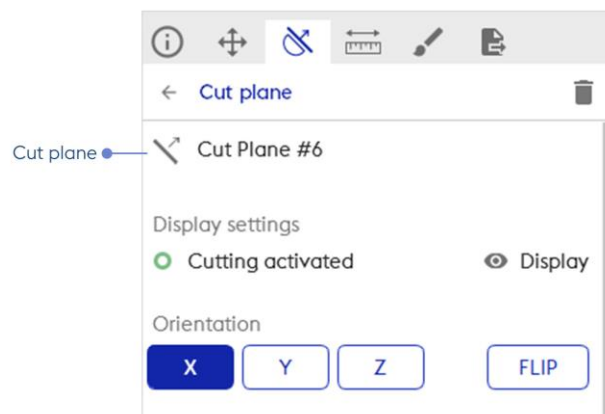
Cut plane move: Inside the graphical representation of a cut plane, click and hold the left mouse button while moving the mouse to drag the cut plane along its normal vector

Cut plane rotation: On an edge of the graphical representation of a cut plane, click and hold the left mouse button while moving the mouse to rotate the cut plane



Cut plane contextual operations - © Akka

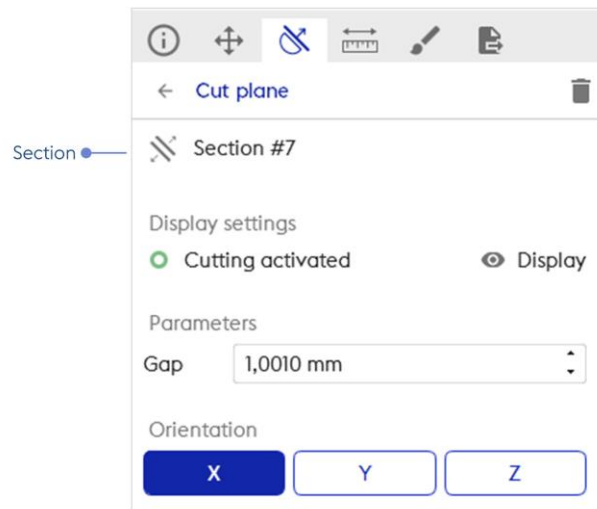
3.2 - Cut plane



Cut plane - © Akka

Cut plane: Create a single cut plane performing a full section of the geometry

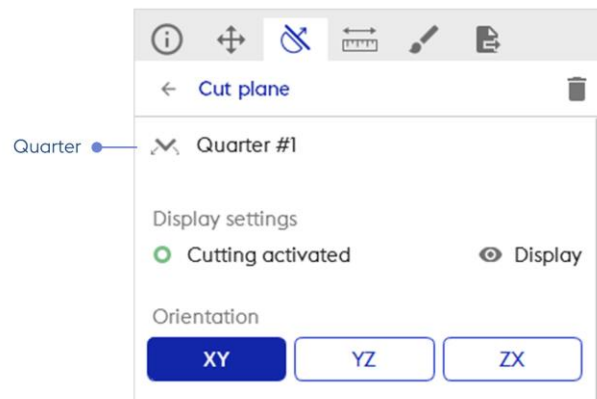
3.3 - Section



Section - © Akka

Section: Create a compound of two parallel cut planes isolating the geometry between them

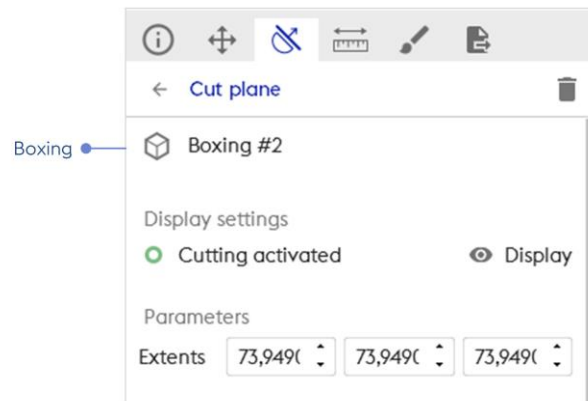
3.4 - Quarter



Quarter - © Akka

Quarter: Create a compound of two orthogonal cut planes performing a quarter section of the geometry

3.5 - Boxing

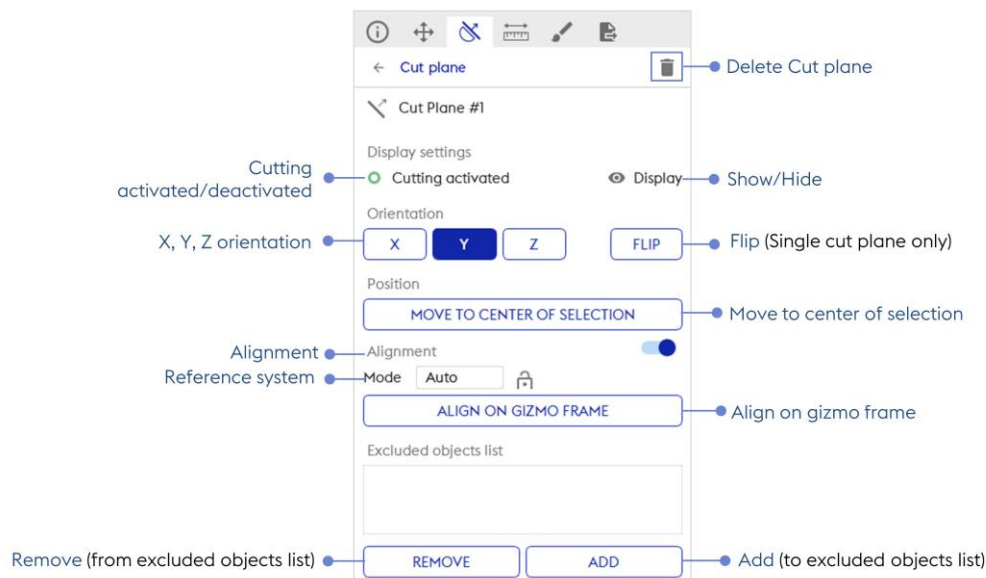


Boxing - © Akka

Boxing: Create a compound of six cut planes forming a box

3.6 - Editing cut plane

Selecting a cut plane in the [3D view](#) or in the [Product structure](#) will make the cut plane editor become the active tool and the parameters of the selected cut plane will be editable in the Cut plane editor. Available parameters depend on the type of the cut plane. The definition of each parameter is detailed below.



Cut plane edition / Parameters

Cutting activated/deactivated: Activate or deactivate the cut plane; when deactivated, a cut plane has no effect on the geometry of objects

X/Y/Z orientation: Select along which axis (x, y or z) the normal of the cut plane is aligned

Alignment: Alignment of the cutplane with the selected mark (world in this case)

Reference system: The [Reference system](#) enables to adjust more precisely the cut plane manipulator. For example, you can use “Feature” and select a face in order to move the cut plan parallel to this face

Remove (from excluded objects list): Remove the selected objects from the list of objects getting cut

Add (to excluded objects list): Add the selected objects to the list of objects getting cut

The **Excluded objects list** is the list of the objects that shall not to be cut by the cut plane by default

Align to gizmo frame: Fix the orientation of the cut plane so that it gets aligned with the current frame; the current frame depends on the reference system (see Section [Reference system](#) and the currently selected objects

Move to centre of selection: centre the cut plane and the current selection of objects

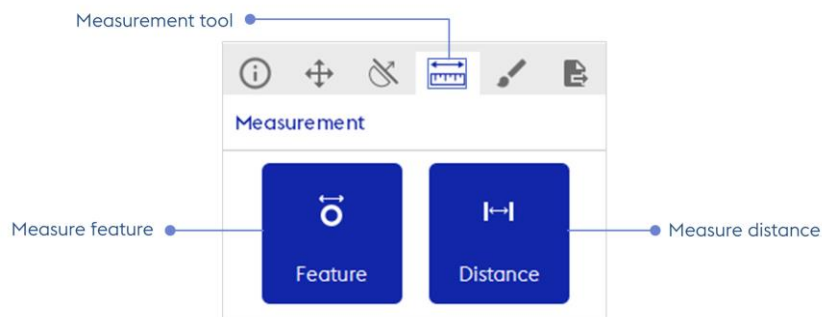
Flip (Single cut plane only): Flip the normal of the cut plane

Show/Hide: Display or hide the cut plane graphical representation in the 3D View

Delete cut plane: Manage cut plane, enabling to delete the selected cut plane

4 - Measurement tool

The **Measurement tool** allows the user to perform various types of measurements. By default, the Measurement tool enables to locate geometric features and their dimensions.



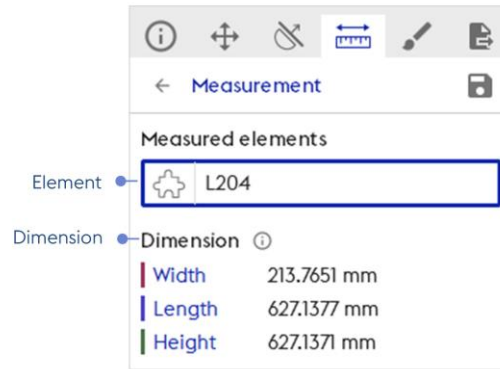
Measurements



All measurement values are indicative and non-contractual. All the reported values in the measurements tool have limited precision due to floating point round-off errors and the approximation made when using tessellated surfaces. In the estimation of measurement errors, the input data is considered to have absolute precision. In most cases, however, the input data is subject to floating point round-off errors, resulting from inaccuracies in geometric transformations or clamping in the source file data format. Thus, **any measurement error computed by 3D Juump Ace may differ from its actual value.**

4.1 - Measure feature

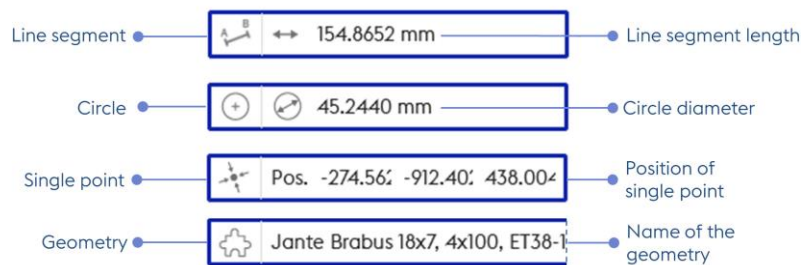
When the Measurement tool is active, clicking on an object with the left mouse button in the [3D view](#) will select it. Toggling option to *Measure item* indicates a single element measure.



Measurements - Measure feature

Element: It can be a line, a circle, a single point, a geometry

Dimension : box dimension providing the **width**, **length** and **height**.



Measurements - Type of element to measure

Line segment: Edge with the shape of a straight line on the surface of an object; available measurements: length of the line segment

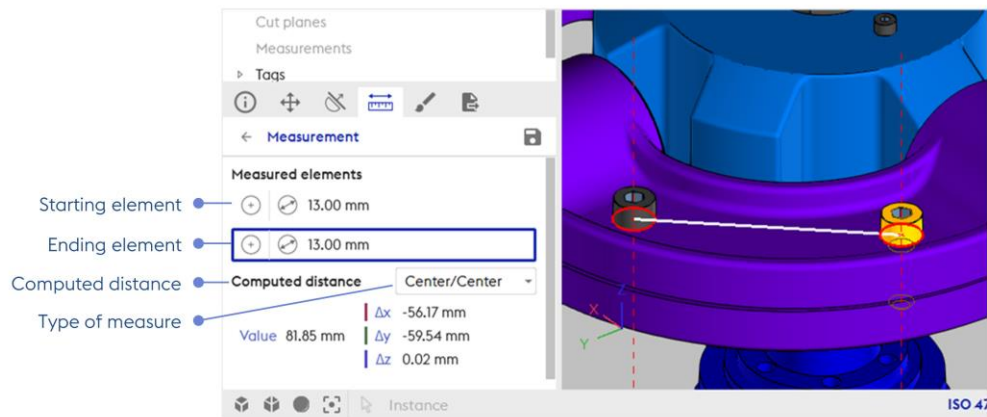
Circle: Edge with the shape of either a full circle or a circular segment on the surface of an object; available measurements: diameter, angle measure of the arc and centre of the circle

Single point: Salient point on the surface of an object; available measurement: position of the point in the scene.

Geometry: 3D object

4.2 - Measure distance

When the Measurement tool is active, clicking on an object with the left mouse button in the [3D view](#) will select it. Toggling option to *Measure distance* computes the minimum distance between this element and any other designated geometric feature (object, circles or single points).



Measure distance - © Akka

Starting element: Initiate the measure by selecting the origin element in the 3D view (either a geometry, a point or a feature)

Ending element: Close the loop of the measure by selecting the destination element in the 3D view (either a geometry, a point or a feature)

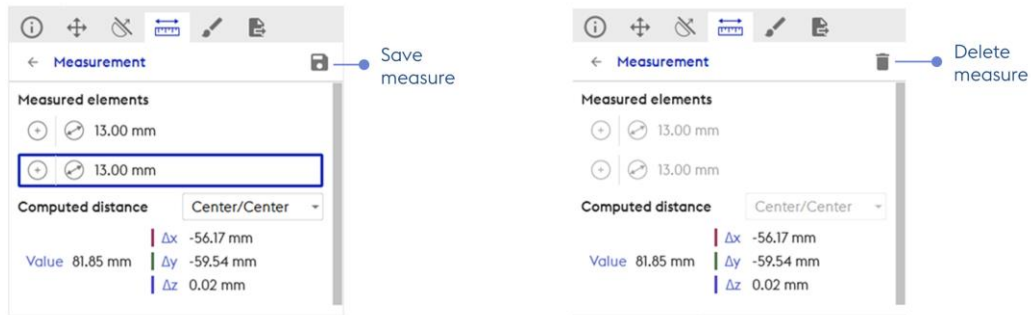
Computed distance: Display computed distance

Type of measure: Depending on the characteristics of the selected elements, several types of measure may be available to choose from. For instance, when one of the selected elements is a circle feature, it is possible to measure either from its centre or from the nearest point on the circle:

- Point: measure to/from the selected point,
- Line: measure to/from the nearest point on a line,
- centre: measure to/from the centre of a circle,
- Circle: measure to/from the nearest point on a circle,
- Axis: measure to/from the nearest point on an axis (the axis of a circle for instance),
- Plane: measure to/from the nearest point on a plane (the plane of a circle for instance),
- Geometry: measure to/from the nearest point on a geometry object
- Box: measure to/from the nearest point of a box (the bounding box of a geometry for instance).

4.3 - Save and delete measures

It is possible to save the measurements in the application data.



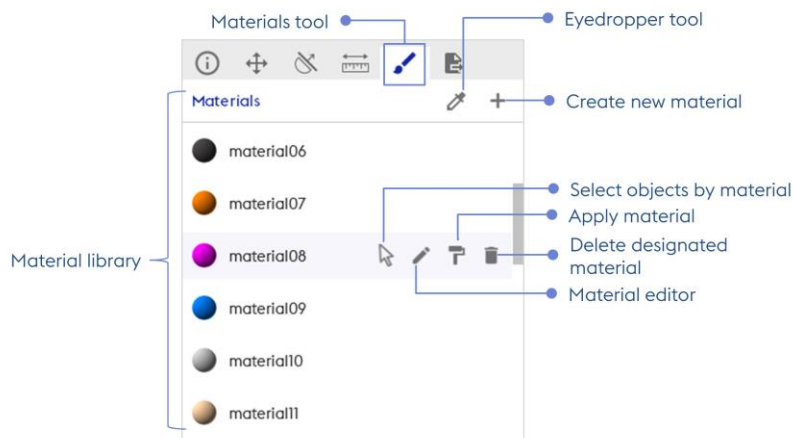
Save and delete measures - © Akka

Save measure: measure saved on application data in the product structure view box

Delete measure: delete the designated measure; in the Product structure, a right click on the designated measure pops-up a menu enabling to delete it

5 - Material tools

The **Material tools** define the appearance of objects in the [3D view](#).



Material tools

Material library: Exhaustive list of the available materials of the current project

Eyedropper tool: Select material in the 3D view and display in the Material editor

Create new material: Create a new material at the bottom of the Material editor list; the new material appears at the bottom of the *material library*

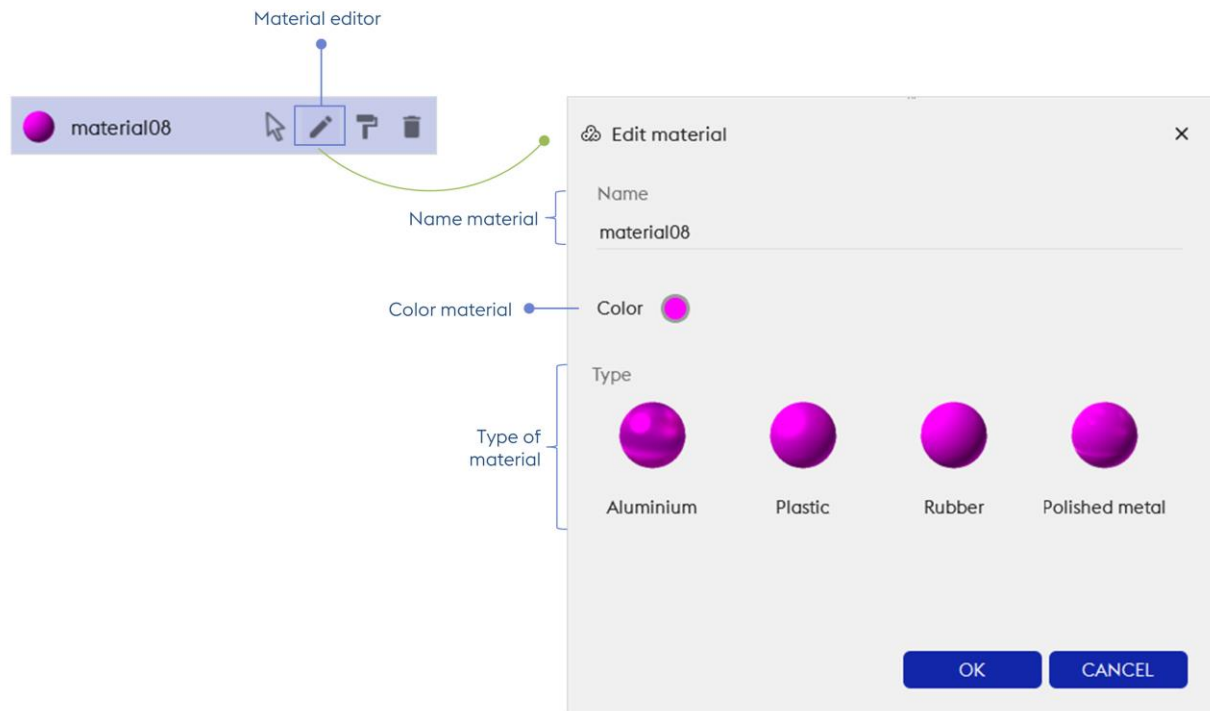
Overflying a material, the user can:

Select objects by material: Select all objects of the designated material

Apply material: Apply designated materials to the element(s) formerly selected in the 3D view

Delete designated material: Delete the designated material

Material editor: Modify the features of the designated material in the Material editor

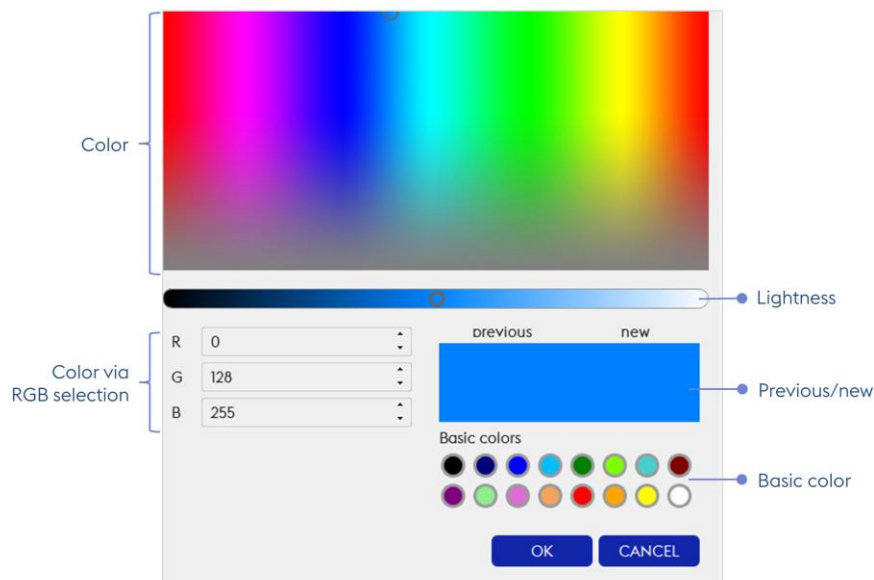


Material editor

Name material: Edit name of the current material

Color material: Indicate the color of the material currently selected and enable its modification

Type of material: Edit the type of material, choice is given between aluminium, black plastic, rubber or polish aspects



Color material

Color: Edit color of the designated material

Color via RGB selection: Choose a color using RGB color code

Lightness: Edit lightness of the designated material

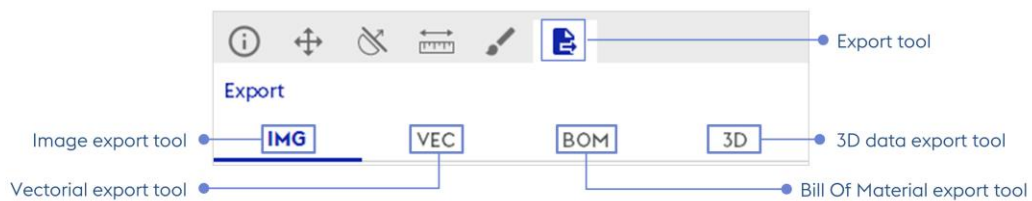
Previous/next: Compare previous color to the new one you wish to apply

Basic color: Quickly choose a basic color to apply

💡 Materials modifications are applied and saved to the view currently displayed only. Each view is Material independant from the other.

6 - Export tool ●

The **Export tool** allows to export the content of the current project to different file types. The nature of the exported content can be selected in the top bar menu of the Export.



Export tool - formats

Image export tool: Export a picture that has been created or captured in electronic form

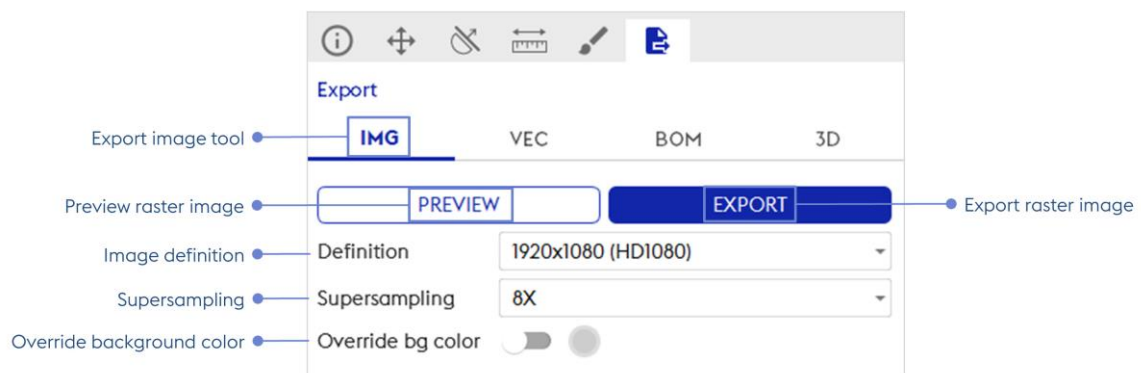
Vectorial export tool: Export digital images created through a sequence of commands or mathematical statements that place lines and shapes in a given two-dimensional or three-dimensional space

Bill Of Material export tool: Export a list of the available metadatas

3D data export tool: Export data that provide the perception of depth

6.1 - Image export tool (IMG)

In the **Image export tool (IMG)**, the user can modify export options.



Export raster image

Preview raster image: Enable to visualize criterias applied before exporting raster image

Export raster image: Enable to directly export raster image (bitmap) in PNG, JPG or TIFF format


 Image export reflects objects effectively loaded in the 3D view.

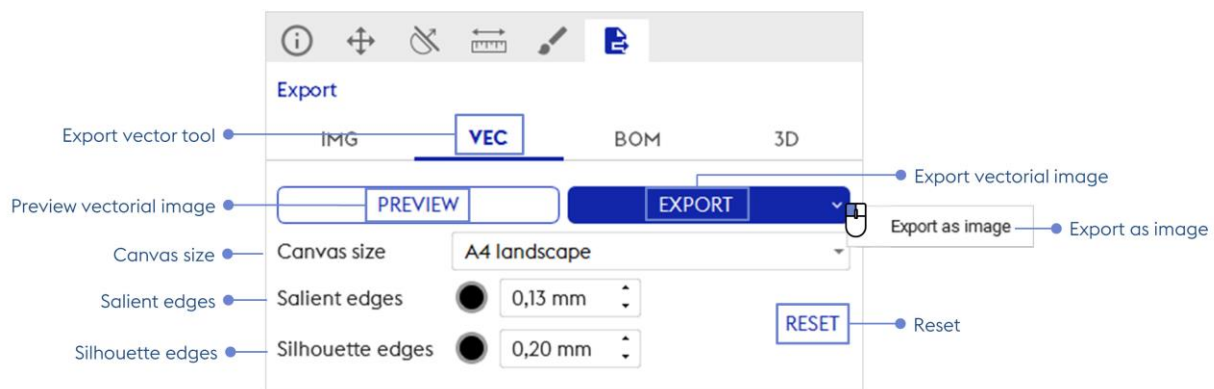
Image Definition: Output size of the raster image

Supersampling: Number of samples per pixel (larger value = better quality)

Override background color: When the option is activated, edit the background color for the export only

6.2 - Export vectorial tool (VEC)

In the **Export vectorial tool (VEC)**, the user can configure the vector image output.



Export vector image

Preview vectorial image: Enable to visualize criterias applied before exporting vectorial image
bom

Export vectorial image: Enable to directly export vectorized images in SVG or DXF format



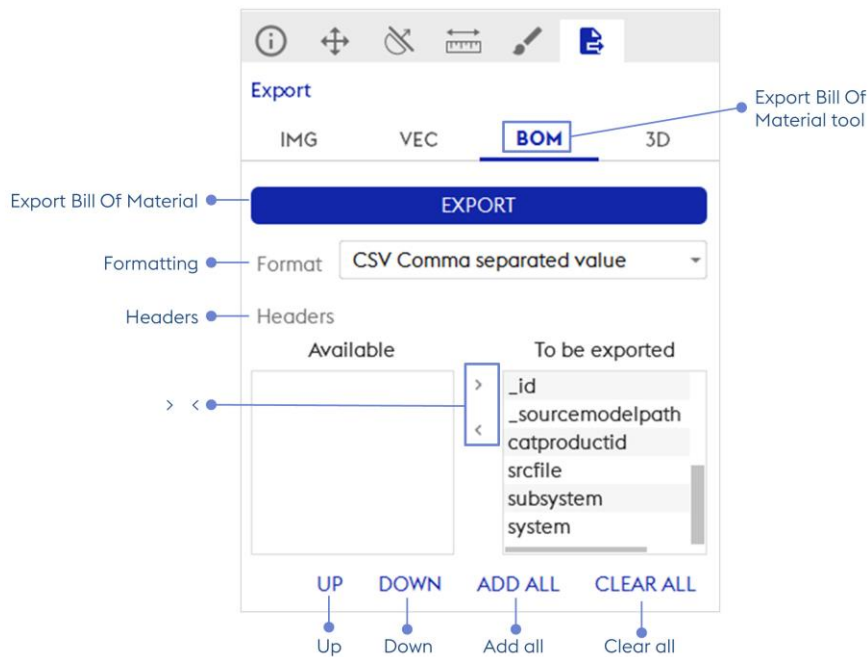
Under DXF format, salient and/or silhouette edge modifications WILL NOT be exported

Export as image: Enable to directly export image in JPG, PNG or TIFF format

Reset: Restore default settings of export

6.3 - Export Bill Of Material tools (BOM)

In the **Export Bill Of Material tools (BOM)**, each object can be exported as a CSV file. Export options for text data are available in the BOM settings panel.



Export Bill Of Material

Export Bill Of Material: Enable to export text data of objects in CSV format

Formatting: CSV export format; 2 available formats: CSV (Comma Separated Value), CSV French version (semi-colon separated value)

Headers: At the bottom of the BOM settings panel, the user can select which text field should be exported in the CSV file

➤: add the selected 'Available' metadata in the list of metadata to be exported

⬅: remove the selected 'To be exported' from the list of metadata to be exported

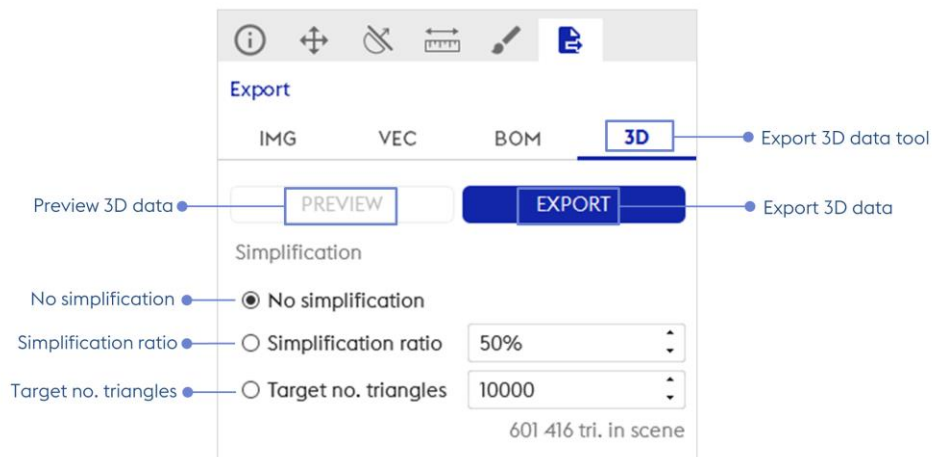
Up / Down: Move up/down the selected 'To be exported' metadata, to reorder list of metadata to be exported

Add all: Add all 'Available' metadata in 'To be exported' list

Clear all: Clear the 'To be exported' list of metadata

6.4 - Export 3D data tool (3D) ●

The **Export 3D data tool (3D)** shows the options for exporting geometry of the project in a 3D file format, where the user can choose between the simplification settings.



Export 3D data

Preview 3D data: Enable to visualize criterias applied before exporting geometries

Export 3D data: Enable to directly export geometries in Autodesk FBX, JT, OBJ, STEP, STL binary, VRML97, VRML97 Compressed, 3DS, DAE (Collada files), GLTF 2 ,GLB (GLTF 2 binary) and SAT (ACIS) ●

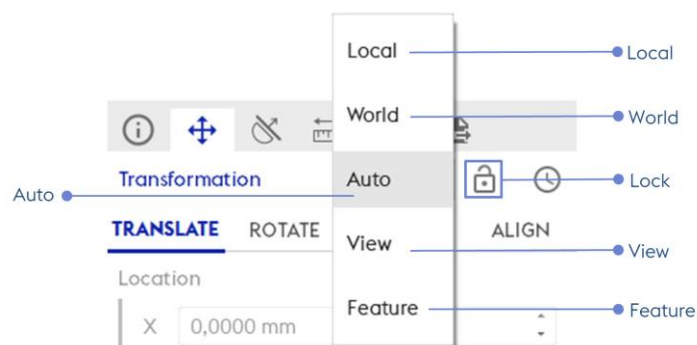
No simplification: The geometry will be exported without simplification (same amount of triangle than initially loaded at import)

Simplification ratio: The geometry will be simplified so that the final number of triangles will not exceed a the input fraction, in percentage, of the original number of triangles loaded at import

Target no. triangles: The geometry will be compressed so that the final number of triangles will not exceed the input amount of triangle

7 - Reference system

Reference system : The Reference system enables to configure the frame displayed when the Transformation editor, Cut plane editor or World orientation is activated.



Reference system

The available reference systems are listed below:

Local: Select the local referent system of the currently selected element

World: Select the world referent system

Auto: Compute a referent system aligned with the current set of selected elements (by default and recommended)

View: Select the screen; limited to the 2D of the screen

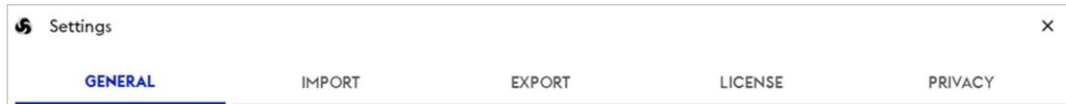
Feature: sets the mark on the axis, line or point

Lock: Freeze the marker in the plane

Program settings ●

The **Program settings** is the control panel that enables the user to configure the appearance or actions of the application.

It can be opened by clicking on the **Settings** entry in the top menu bar of 3D Juump Ace.



General settings

General: General settings of the 3D Juump Ace, including technical and aspect parameters

Import: Settings of CAD and 3D data import

Export: Export settings used by default by [Export tools](#)

License: License manager; provide status and installation of licenses

Privacy: Legal information and parameters about your personal data and privacy policy

1 - General settings

The *General settings* enables to configure the display for optimal rendering performance on his computer, depending on its hardware and drivers configuration. It allows the user to manage the unit and number of decimals in the application settings for all metric value displays. Will appear in the tools for transformations (translate, align) and 3D displacements, measurements (which once saved are displayed in the PS under Applications -> mesures) and for cut planes. They can let you adjust the cache size and folder location on your computer. Be careful, these parameters can modify 3D Juump Ace behaviour and performances.

1.1 - Rendering engine

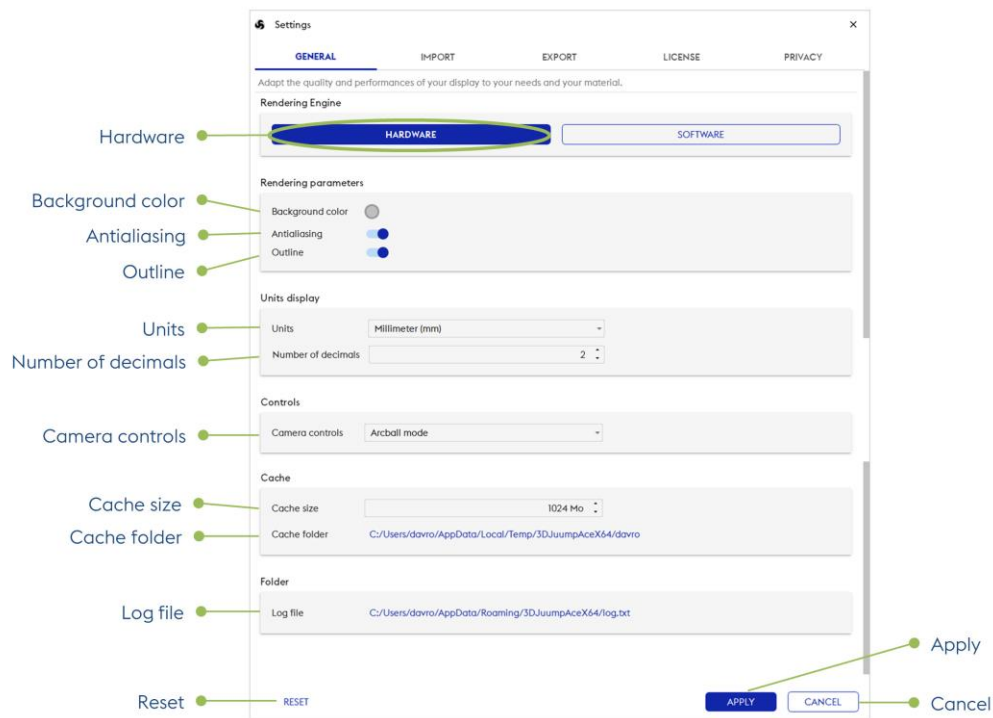
The user can choose either the *Hardware* renderer or the *Software* renderer for display. Please also refer to [Host requirements](#).

Hardware renderer: If a graphics card is available on the host computer, the hardware renderer is the recommended choice since it is likely to provide the best performance.

Software renderer: If the display hardware is not supported by the hardware renderer, the user can switch to the software renderer which does not make use of the graphics card.

In general, the Software renderer provides less performance than the Hardware renderer, except on low-range or integrated graphics hardware. In those cases, if the rendering performance is insufficient with the hardware renderer, the user may get better results by switching to the software renderer.

1.2 - Hardware renderer



General settings / Hardware renderer

1.2.1 - Rendering parameters

Background color: The color of the background; it is possible to set a transparent color for screenshots (only supported in the PNG file format)

Antialiasing (Hardware renderer only): makes rendering smoother at a small performance cost

Outline: sketches the outline of elements

1.2.2 - Units display

Units: Select the unit to use between milimeter, centimeter, meter or inch

Number of decimals: Select the number of decimal to display

1.2.3 - Controls

Camera controls: Select the navigation controller you want to use in order to navigate in 3D. Arcball mode is common to 3D Juump software products. Examine is similar to some CAD software of the market.

1.2.4 - Cache

Cache size: The size of the disk cache; for a better experience, it is advised to set an amount of disk space of at least 1Go

Cache folder: The folder used for cacheing models on the HDD

1.2.5 - Folder

Log file: The path to the log file; the log file contains information on the various events that occur during the execution of the program

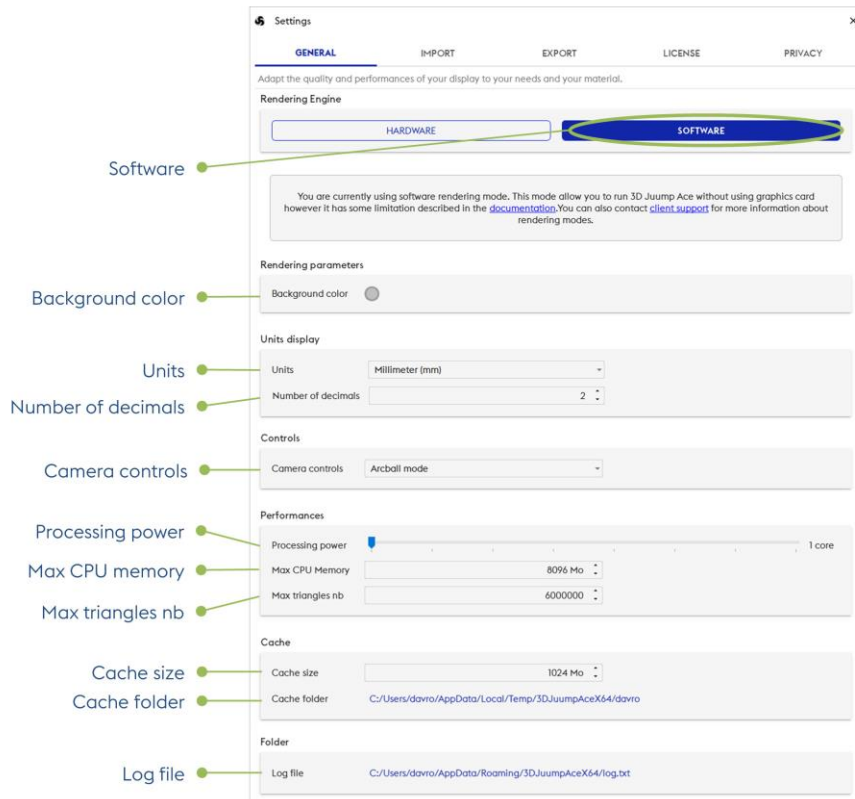
1.2.6 - Save and cancel settings

Reset: Restore default settings

Apply: Perform settings modifications operated since last application

Cancel: Cancel settings modifications operated since last application

1.3 - Software renderer



General settings / Software renderer

1.3.1 - Rendering parameters

Background color: The color of the background; it is possible to set a transparent color for screenshots (only supported in the PNG file format)

1.3.2 - Units display

Units: Select the unit to use between millimeter, centimeter, meter or inch

Number of decimals: Select the number of decimal to display

1.3.3 - Controls

Camera controls: Select the navigation controller you want to use in order to navigate in 3D. Arcball mode is common to 3D Juump software products. Examine is similar to some CAD software of the market.

1.3.4 - Performances

Processing power (Software renderer only): the number of threads used for display; set to the number of cores of the host CPU for the best performance

Max CPU memory: The maximum amount of memory than can be used by the software to store geometric data; higher value leads to better performance on large scenes with many objects

Max triangles nb: The maximum amount of triangles that can be displayed on a single frame

1.3.5 - Cache

Cache size: The size of the disk cache; for a better experience, it is advised to set an amount of disk space of at least 1Go

Cache folder: The folder used for caching models on the the hard disk drive of the computer, used by 3D Juump Ace for an efficient processing of large models

1.3.6 - Folder

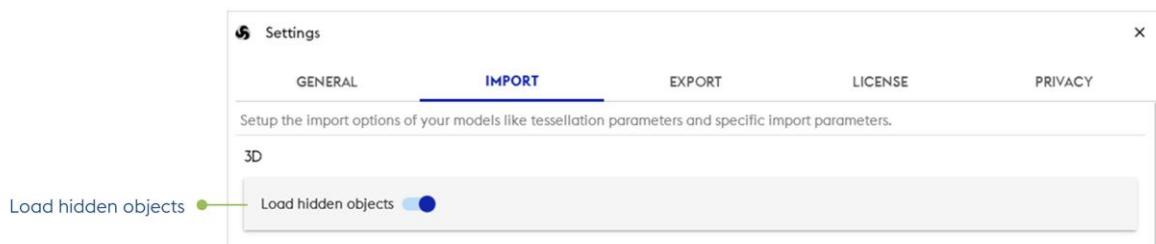
Log file: The path to the log file; the log file contains information on the various events that occur during the execution of the program

2 - Import settings

The **Import settings** panel gives the user control on how the data of CAD files is imported in 3D Juump Ace.

2.1 - Import 3D settings - 3D

3D section is relative to general parameters when importing 3D data.



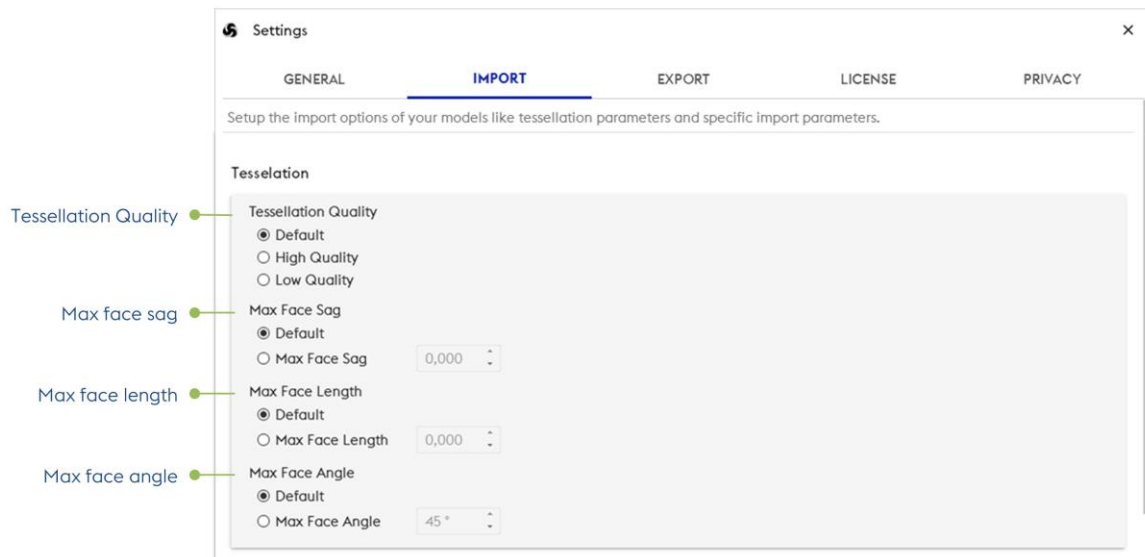
Import settings / Load hidden objects

Load hidden objects: Allowed to import hidden objects.

💡 In the case of a ProEngineer file import, external references load existing latest version.

2.2 - Import 3D settings - Tessellation

Some CAD files contain native (parametric) surfaces definitions. These surfaces must be converted to polygons for 3D Juump Ace to display them. The 3D category of the Import settings panel allows the user to modify the parameters used for surface tessellation. For most users, the default tessellation settings should work for all CAD files. They are configured to generate well-balanced meshes providing satisfying visuals for a moderate number of triangles. Only users with advanced knowledge of what these parameters do should try and fix them, as they can decrease either the visual quality or the rendering performances of the surfaces.



Import settings / Tessellation

Tessellation quality: Selection of heuristic tessellation. *Default* is the recommended parameter. *High quality* will increase the number of triangle thus the quality and the size of the data. *Low quality* will reduce the number of triangle thus the quality and the size of the data.

Max face sag: Maximum allowed distance between the planar approximation polygon and the surface. This parameter ensures that mesh is similar enough to the original analytical surface (or the polyline is similar to the original curve). *Default* is the recommended parameter.

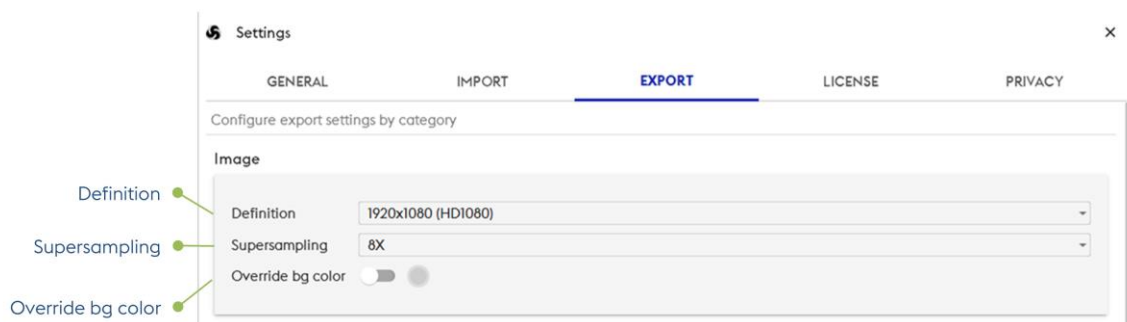
Max face length: Maximum allowed size of the approximation polygon (for triangulations it can be maximum allowed length of triangle sides). This parameter ensures enough detail for further analysis. *Default* is the recommended parameter.

Max face angle: Maximum allowed angle between two adjacent approximation polygons (on the same face). This parameter ensures that even very small humps or hollows that can have significant effect to analysis will not disappear in mesh. *Default* is the recommended parameter.

3 - Export settings

The **Export settings** panel gives access to the default parameters use by [export tools](#).

3.1.1 - Export Image settings



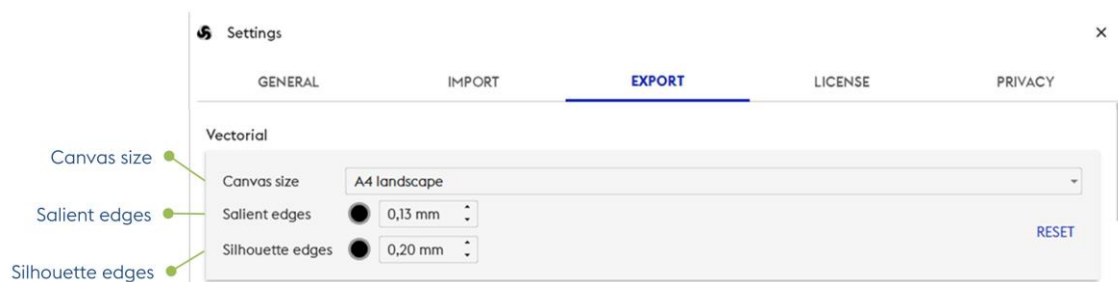
Export Image settings

Definition: Default output size of the raster image

Supersampling: Default number of samples per pixel (larger value = better quality)

Override background color: Default background color when activated; edit the background color for the export only

3.1.2 - Export Vectorial settings



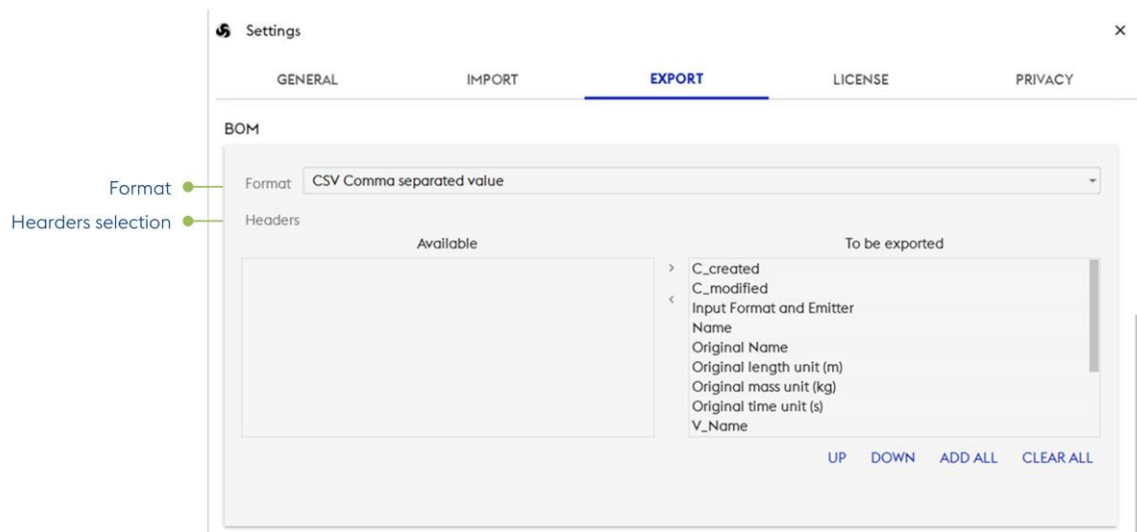
Export Vectorial settings

Canvas size: Default target image size and format

Salient edges: Default color and thickness of salient (crease) edges

Silhouette edges: Default color and thickness of silhouette edges

3.1.3 - BOM

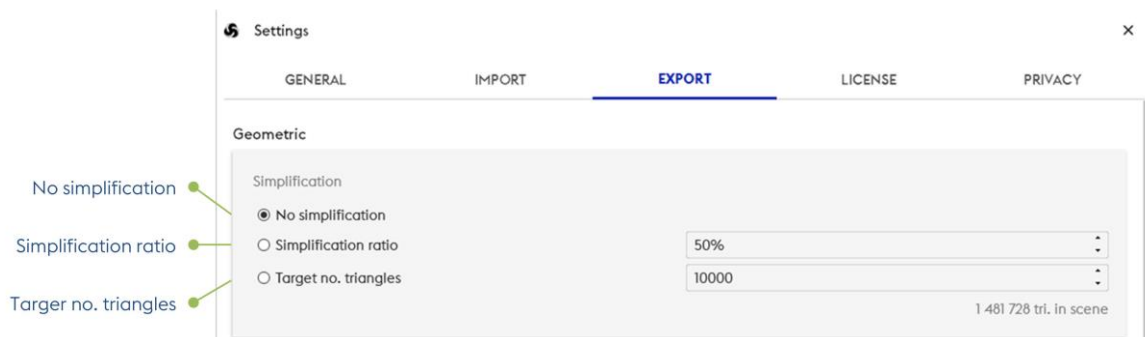


Export BOM settings

Format: Default CSV export format; 2 available formats: CSV (Comma Separated Value), CSV French version (semi-colon separated value)

Headers selection: Choose metadata to be exported in the list of all availables. By default, all are selected.

3.1.4 - Geometric



Export Geometric settings

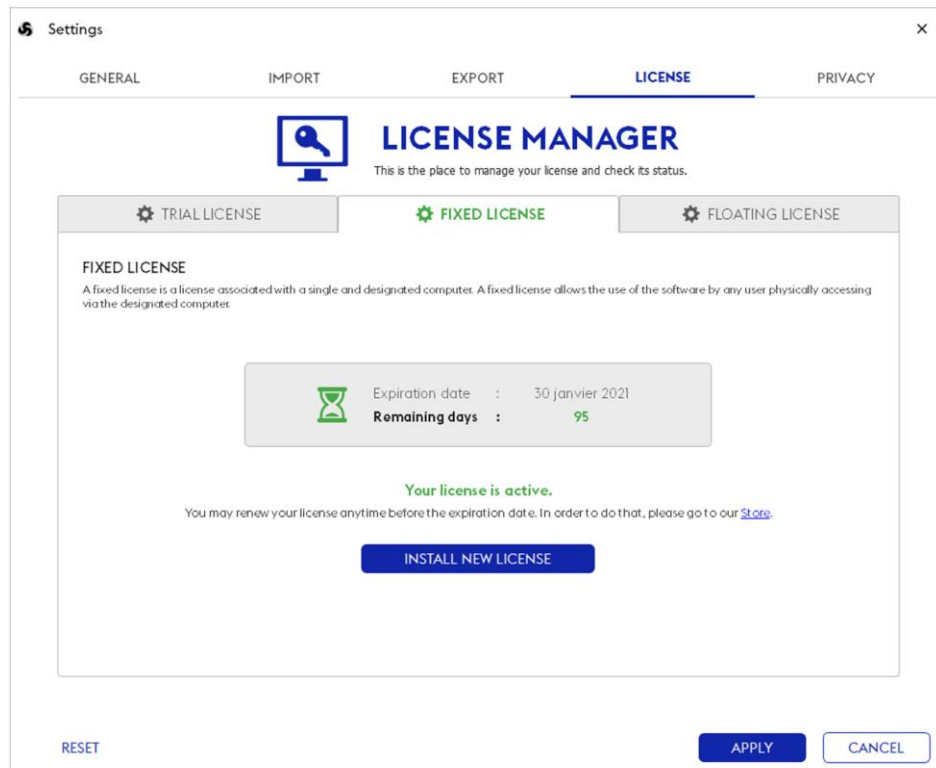
No simplification: The geometry will be exported without simplification (same amount of triangle than initially loaded at import)

Simplification ratio: The geometry will be simplified so that the final number of triangles will not exceed a the input fraction, in percentage, of the original number of triangles loaded at import

Target no. triangles: The geometry will be compressed so that the final number of triangles will not exceed the input amount of triangle

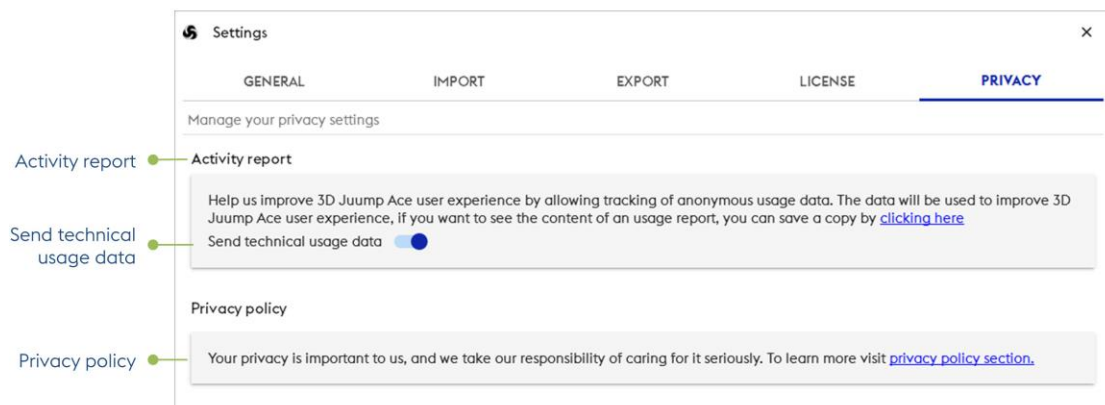
4 - License Manager

The **License Manager** panel gives access to the license request (including renewal) and to the current licensing information; please also refer to [License Manager](#).



License Manager

5 - Privacy settings



Privacy settings

Activity report: What concerns the activity report.

Send technical usage data: if you want to see the content of an usage report, you can save a copy by clicking here.

Privacy policy: Legal information and parameters about your personal data and privacy policy

Annexes

1 - Release notes

Please refer to: <https://www.realfusio.com/3d-juump-ace-release-notes/>

2 - Export control classification

3D Juump Ace is subject to the US Export Administrative Regulations (EAR) 15 C.F.R. part 730 et seq. for the country Group E:1 and E:2 which are, at the date of the License Terms and Conditions: Iran, North Korea, Sudan, Syria and Cuba. In particular, the user shall not use, export or re-export 3D Juump Ace in those countries and with end users or for end uses in breach of the US export control regulations.

For more information regarding this topic, please refer to the License Terms and Conditions.