



# ALTAIR

Altair<sup>®</sup> FluxMotor<sup>®</sup> 2022.2

Part Library

General user information

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# 1 PART LIBRARY OVERVIEW

## 1.1 Main areas of Part Library

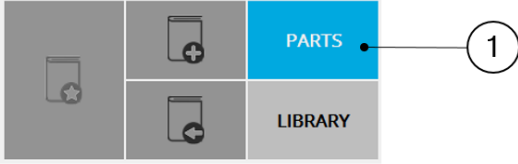
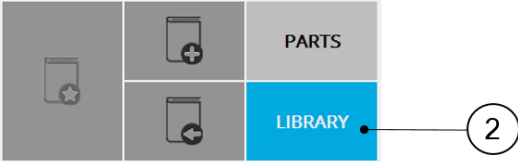
### 1.1.1 Overview

Part Library is a dedicated application to allow an effective machine part management. Libraries are provided with standard parts. Many slots and magnets are available. All the topologies are parameterized.

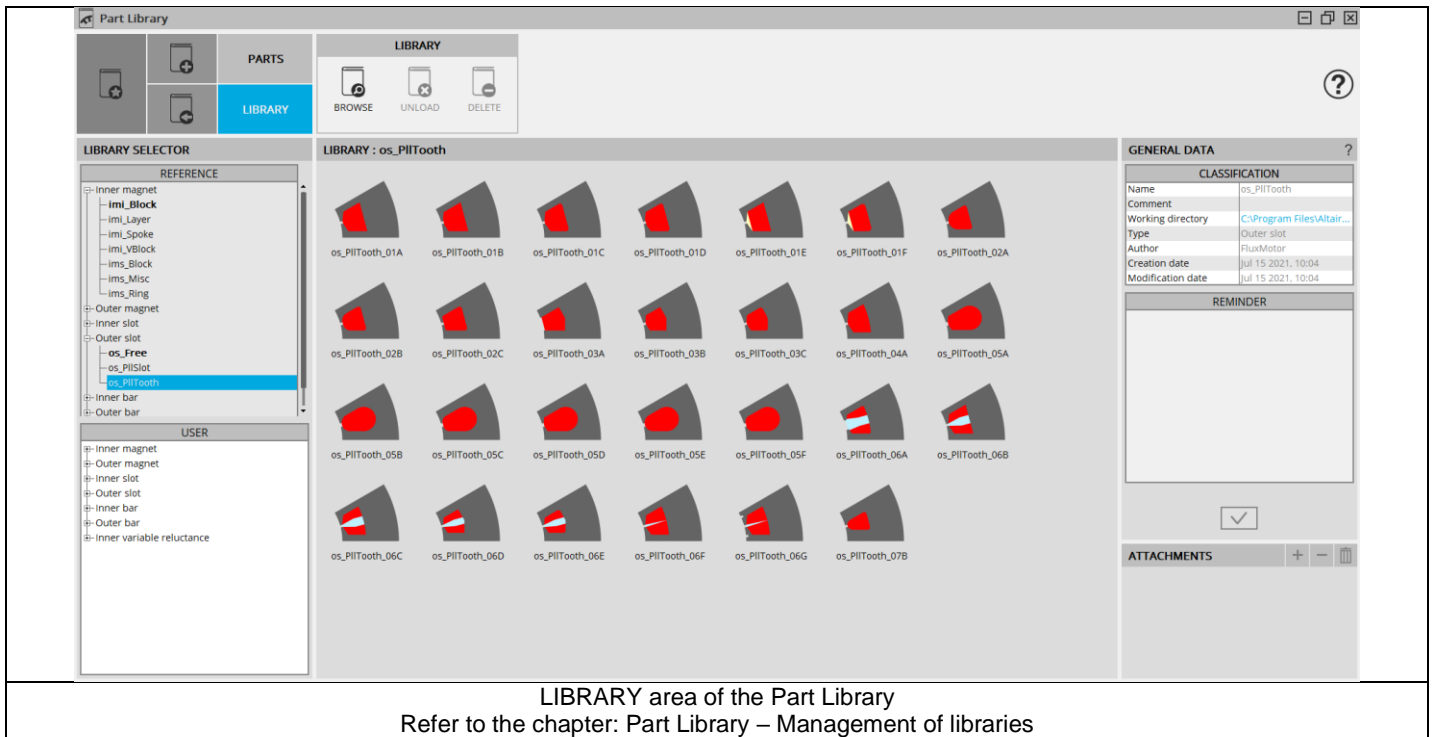
Part Library consists of two main areas:

- The LIBRARY area to manage the libraries
- The PARTS area to visualize and manage all the parts stored in the selected libraries

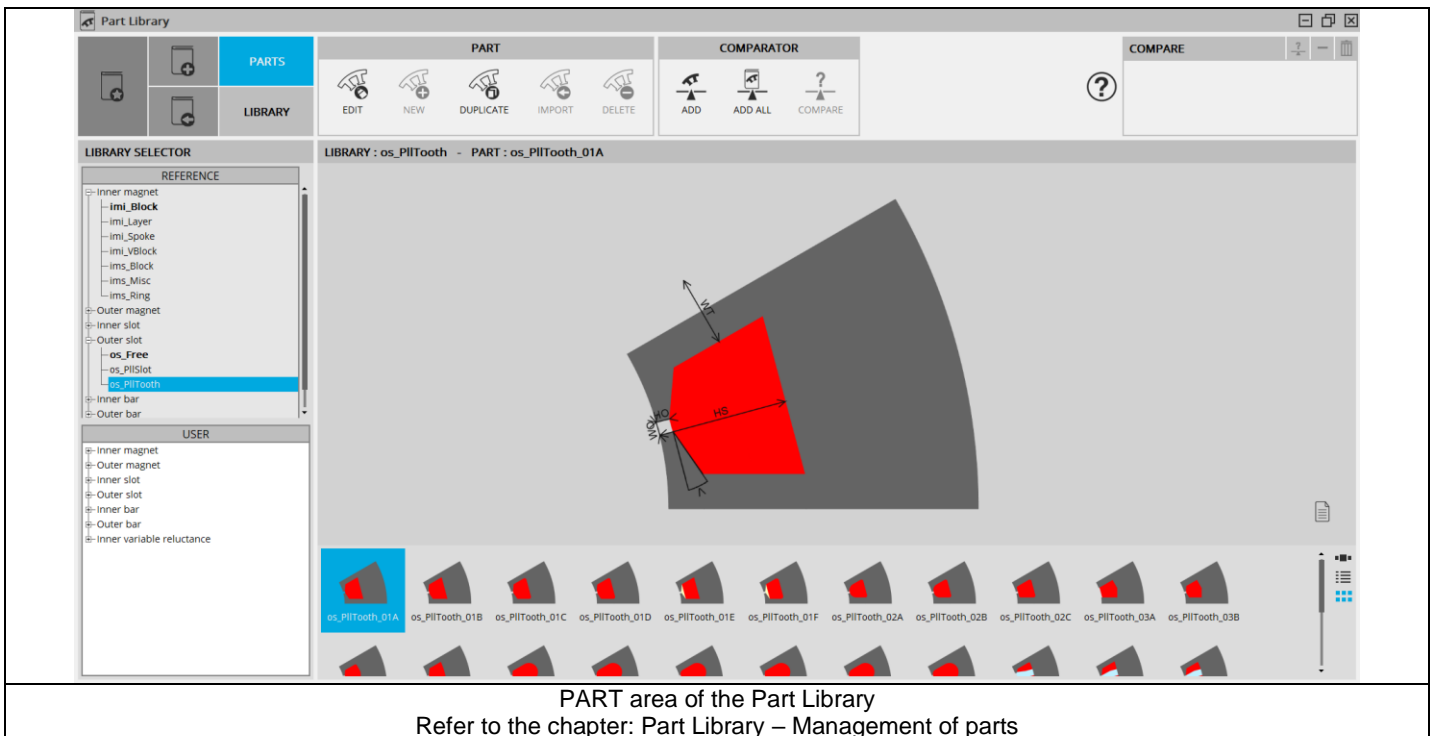
To reach one of these areas, just click on the corresponding button.

|   |   |                            |
|---|---|----------------------------|
|  | 1 | Get into the PARTS area.   |
|  | 2 | Get into the LIBRARY area. |

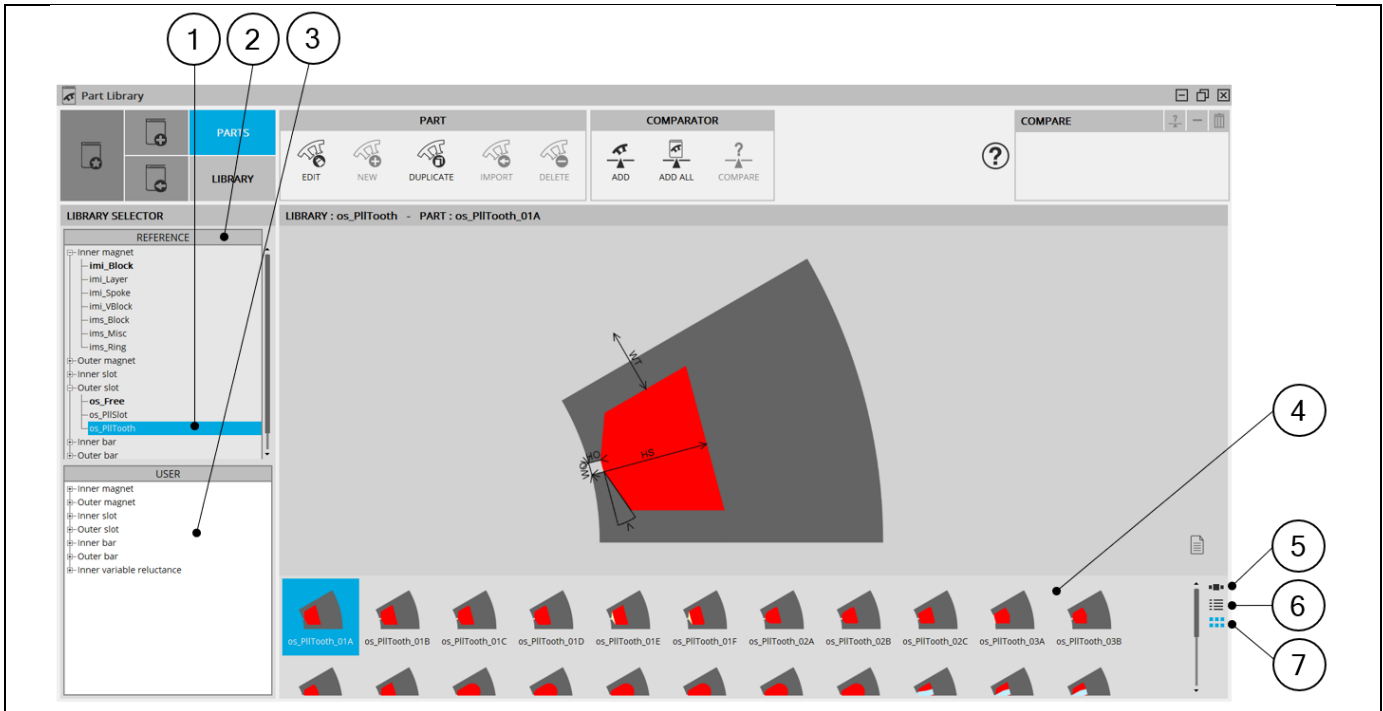
### 1.1.2 LIBRARY area of the Part Library application



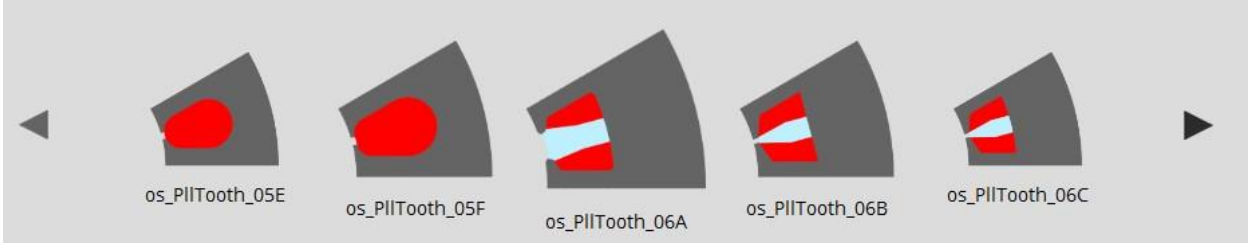
### 1.1.3 PARTS area of the Part Library application



Note: Three different ways are proposed to display and visualize the parts. They are all illustrated below:



How to choose another magnet topology?

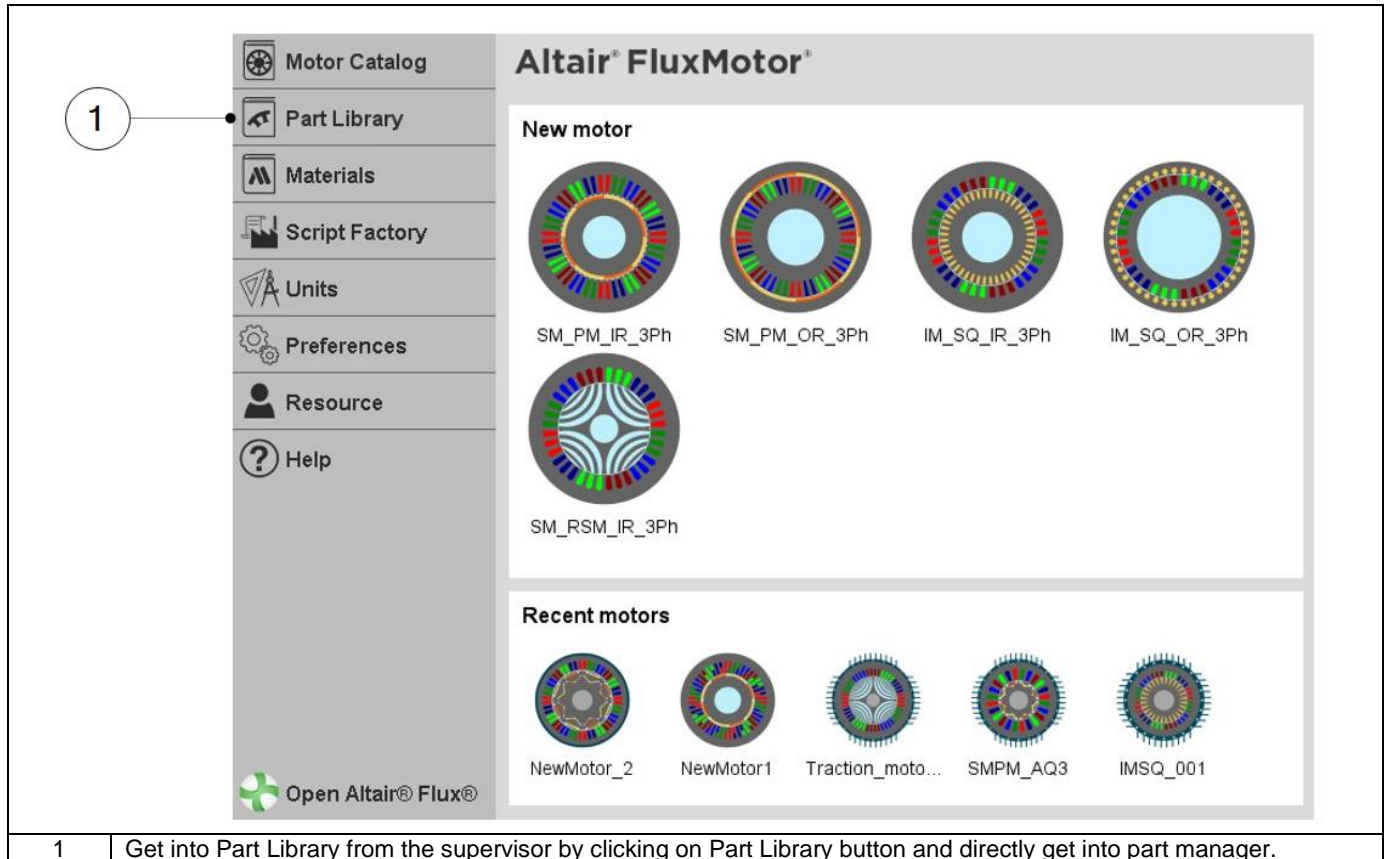
|                 |   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1               | Selection of the library parts which must be displayed.   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| 2               | Reference libraries available with Altair® FluxMotor®.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| 3               | User's libraries.   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| 4               | All the parts of the selected library are displayed in this area.<br>Three ways are proposed to display and visualize the parts.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| 5               | Button to display thumbnails as a slide show:<br>   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| 6               | Button to display thumbnails as a list:<br><table border="1" data-bbox="240 1285 1481 1423"> <tr> <td>os_PIItooth_01A</td> <td>os_PIItooth_01B</td> <td>os_PIItooth_01C</td> <td>os_PIItooth_01D</td> </tr> <tr> <td>os_PIItooth_02A</td> <td>os_PIItooth_02B</td> <td>os_PIItooth_02C</td> <td>os_PIItooth_03A</td> </tr> <tr> <td>os_PIItooth_04A</td> <td>os_PIItooth_05A</td> <td>os_PIItooth_05B</td> <td>os_PIItooth_05C</td> </tr> <tr> <td>os_PIItooth_05F</td> <td>os_PIItooth_06A</td> <td>os_PIItooth_06B</td> <td>os_PIItooth_06C</td> </tr> </table> | os_PIItooth_01A | os_PIItooth_01B | os_PIItooth_01C | os_PIItooth_01D | os_PIItooth_02A | os_PIItooth_02B | os_PIItooth_02C | os_PIItooth_03A | os_PIItooth_04A | os_PIItooth_05A | os_PIItooth_05B | os_PIItooth_05C | os_PIItooth_05F | os_PIItooth_06A | os_PIItooth_06B | os_PIItooth_06C |
| os_PIItooth_01A | os_PIItooth_01B   | os_PIItooth_01C | os_PIItooth_01D |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| os_PIItooth_02A | os_PIItooth_02B   | os_PIItooth_02C | os_PIItooth_03A |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| os_PIItooth_04A | os_PIItooth_05A   | os_PIItooth_05B | os_PIItooth_05C |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| os_PIItooth_05F | os_PIItooth_06A   | os_PIItooth_06B | os_PIItooth_06C |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| 7               | Button to display thumbnails as a matrix view of pictures as illustrated in our example.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |

## 1.2 How to get into Part Library?

Two ways are possible:

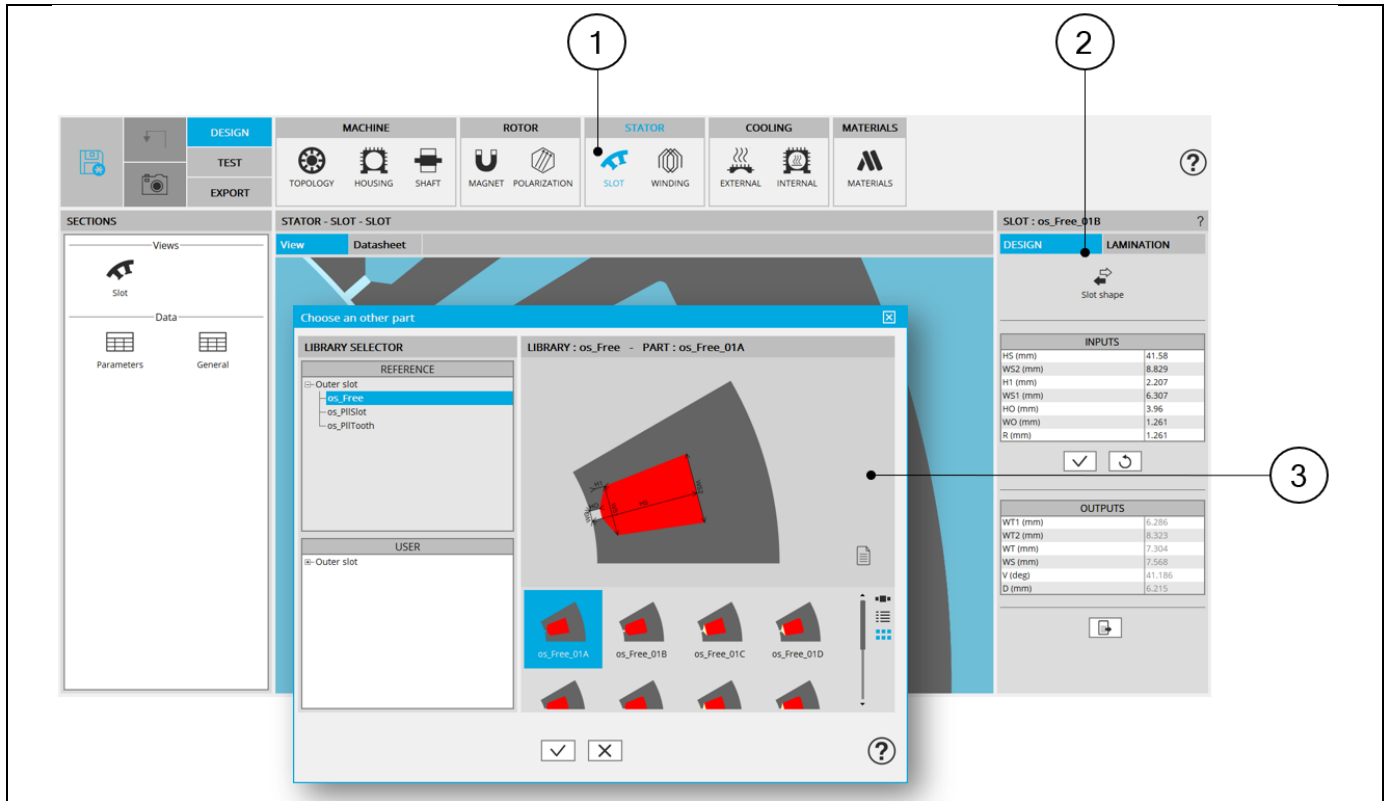
- 1) From the supervisor, click on the button “Part Library”
- 2) From Motor Factory, in the Slot area, bar area or the Magnet area of the DESIGN environment it is possible to get into Part Library using a Read Only mode to visualize, compare, choose, and import part topology to modify the current stator design or the rotor design.

### 1.2.1 Access to Part Library is possible from the supervisor.



## 1.2.2 Access to Part Library is possible from Motor Factory – Slot area

In the slot area, modifying the slot topology is possible by accessing the Part Library (Read only mode).



|   |   |
|---|---|
| 1 | Selection of the STATOR subset: SLOT, in the DESIGN area of Motor Factory.  |
| 2 | "Slot shape" button allows accessing the slot libraries (in Part Library application) to change the slot topology.  |
| 3 | Clicking on the "Slot shape" button opens a dialog box, allowing access the slot libraries. It allows to visualize, compare, choose and import another slot topology to modify the current stator design. |



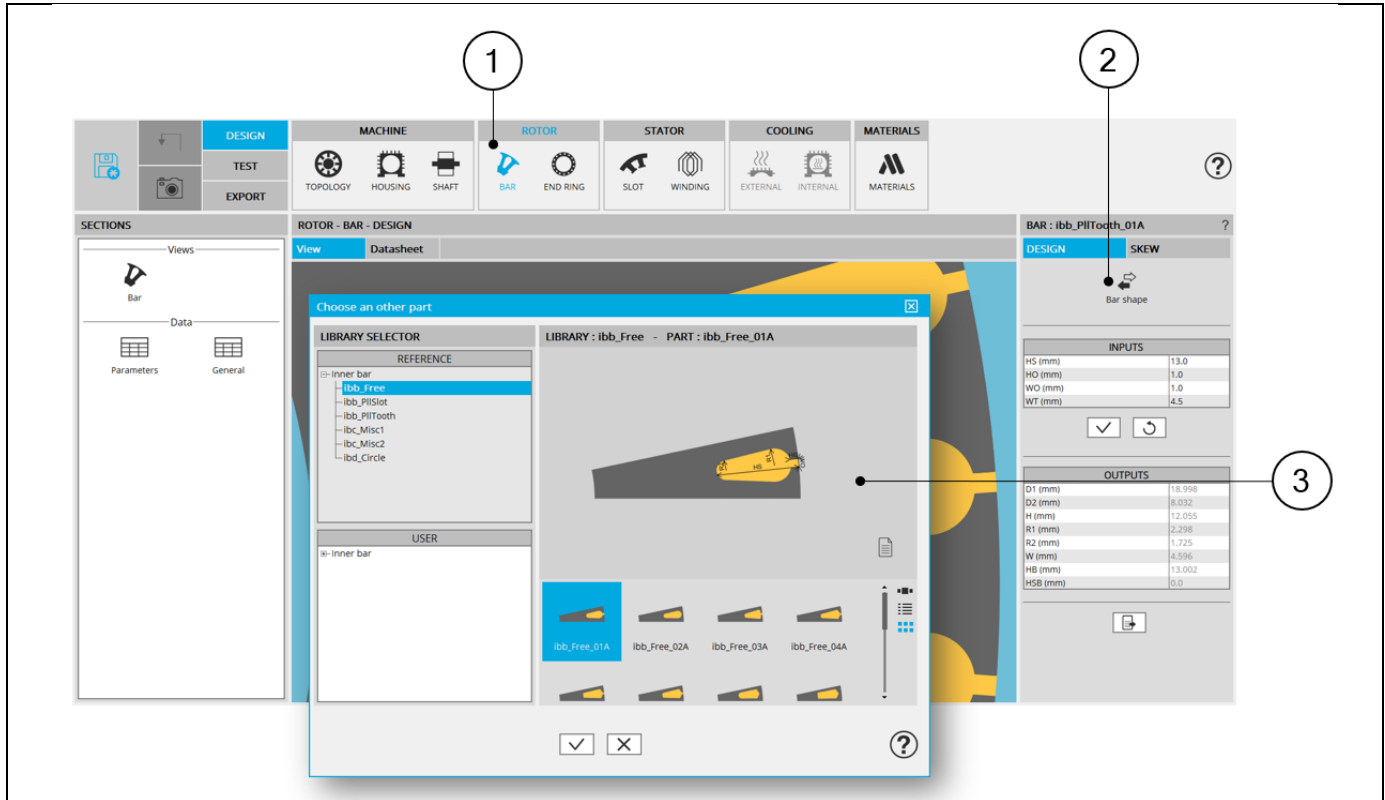
### 1.2.3 Access to Part Library is possible from Motor Factory – Magnet area

In the magnet area, modifying the magnet topology is possible by accessing the Part Library (Read only mode). It is available for synchronous machines with permanent magnets only.

|   |   |
|---|---|
| 1 | Selection of the ROTOR subset: MAGNET, in the DESIGN area of Motor Factory.   |
| 2 | "Magnet shape" button allows accessing the magnet libraries to change the magnet topology.  |
| 3 | Clicking on the "Magnet shape" button opens a dialog box, allowing access to the magnet libraries. It allows to visualize, compare, choose and import another magnet topology to modify the current rotor design. |

### 1.2.4 Access to Part Library is possible from Motor Factory – Bar area

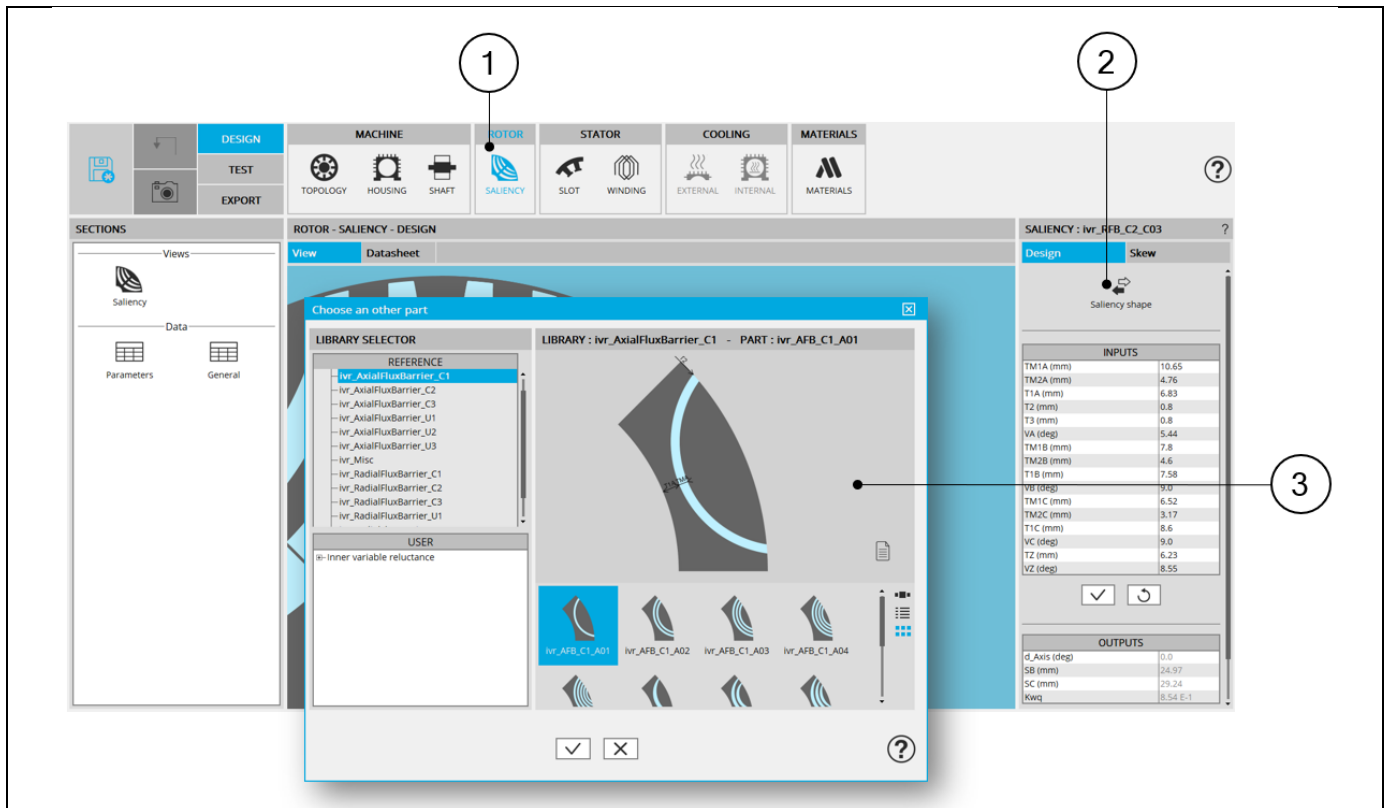
In the bar area, modifying the bar topology is possible by accessing the Part Library (Read only mode). It is available for induction machines with squirrel cage only.



|   |   |
|---|---|
| 1 | Selection of the ROTOR subset: BAR, in the DESIGN area of Motor Factory.  |
| 2 | "Bar shape" button allows accessing the bar libraries to change the bar topology.   |
| 3 | Clicking on the "Bar shape" button opens a dialog box, allowing access the libraries. It allows to visualize, compare, choose and import another bar topology to modify the current rotor design. |

## 1.2.5 Access to Part Library is possible from Motor Factory – Saliency area

In the saliency area, modifying the saliency topology is possible by accessing the Part Library (Read only mode). It is available for reluctance synchronous machines only.



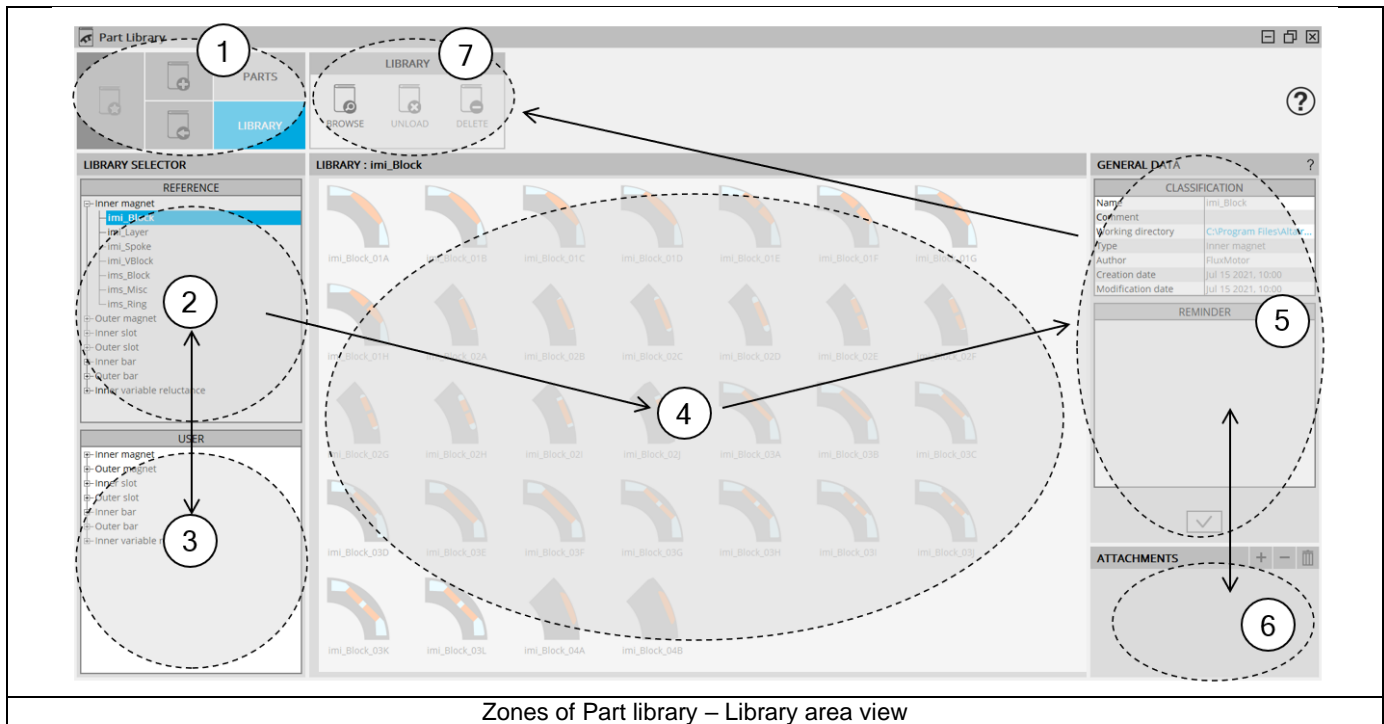
- |   |   |
|---|---|
| 1 | Selection of the ROTOR subset: SALIENCY, in the DESIGN area of Motor Factory.   |
| 2 | "Saliency shape" button allows accessing the bar libraries to change the saliency topology.   |
| 3 | Clicking on the "Saliency shape" button opens a dialog box, allowing access the libraries. It allows to visualize, compare, choose and import another saliency topology to modify the current rotor design. |

## 2 MANAGEMENT OF LIBRARIES

### 2.1 Overview

#### 2.1.1 Main areas

Here are the main zones that compose “LIBRARY” environment of the Part Library:

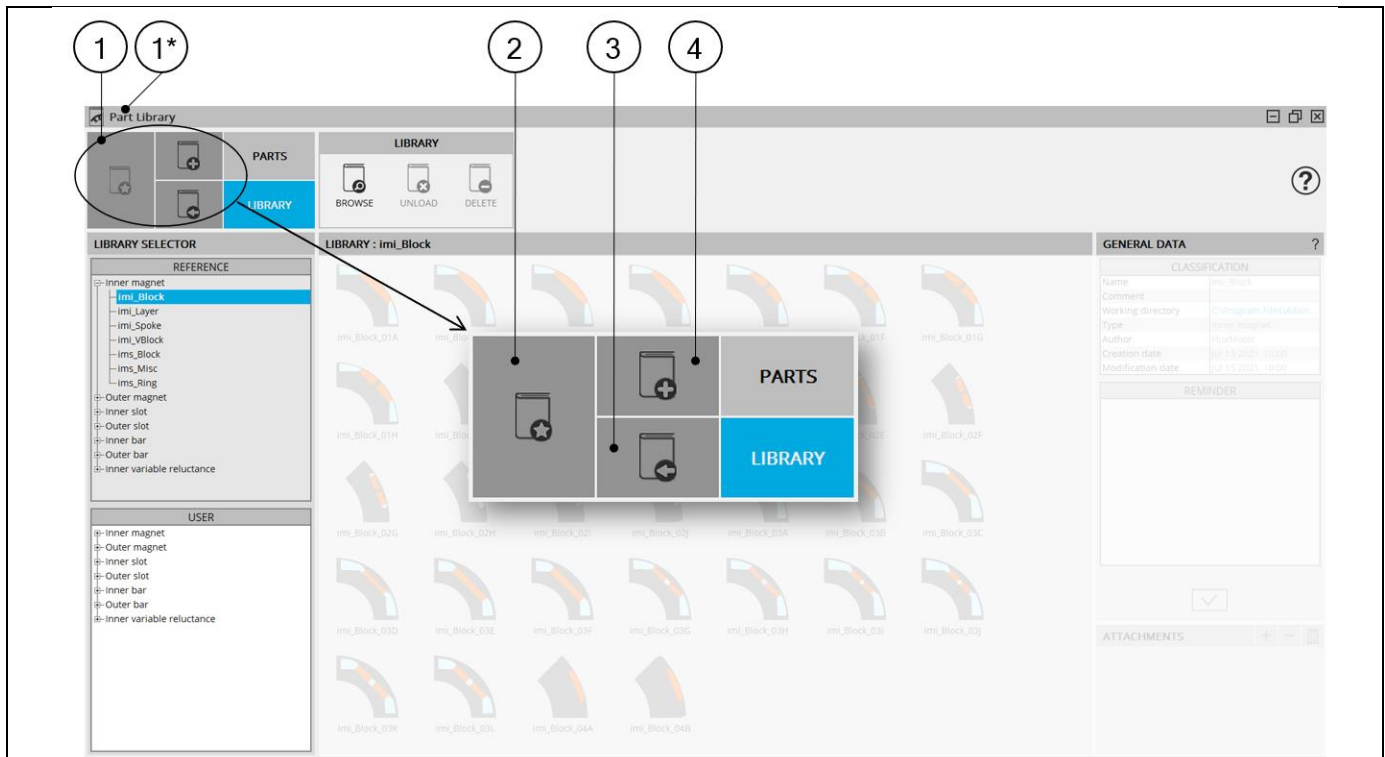


|        |  |
|--------|--|
| Zone 1 | Part Library has two main environments: LIBRARY and PARTS.<br>When LIBRARY is selected = Blue color Library environment of Part library is displayed.<br>Three main functions are available from the top of this panel: <ul style="list-style-type: none"> <li>• Create a new library,</li> <li>• Load a library</li> <li>• Set library as favorite</li> </ul> |
| Zone 2 | Reference libraries are available. <b>Selections of libraries must be done in this field.</b> Slots or Magnets of these libraries are read only. However, they can be copied and moved in user’s libraries.  |
| Zone 3 | User’s libraries. <b>Selections of libraries must be done in this field.</b><br>The users can create new libraries. See the process in the chapter “Reference commands”.   |
| Zone 4 | Visualization of all the parts (thumbnails) stored in the selected library.  |
| Zone 5 | Information relative to the selected library.<br>“Reminder” is an area in which a memo can be written if needed.<br>Note: The working folder is accessible for all the libraries.  |
| Zone 6 | It is possible to attach documents to the selected library (pictures, pdf files, etc.)   |
| Zone 7 | Libraries can be managed from this area:<br>UNLOAD library means to cut the link between the library files and the LIBRARY environment.<br>DELETE library means destroy the links and all the associated files and folders<br>BROWSE allows to reach directly to the folder in which are stored data of the corresponding library.                             |

## 2.1.2 Direct access to main functions

All the functions listed below are described in the section dedicated to reference commands.

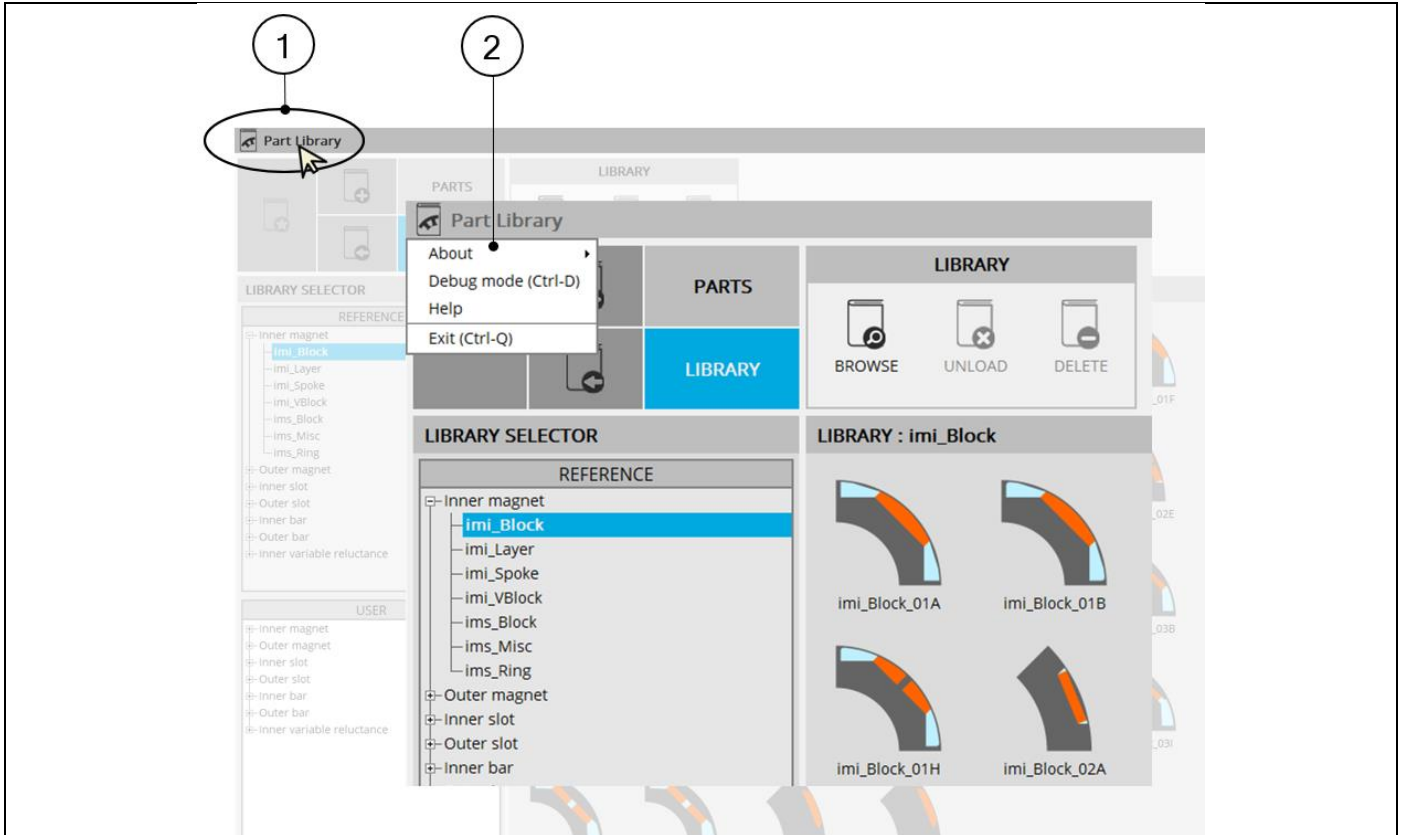
Note: These commands are available in LIBRARY environment as well as in PARTS environment.



|    |   |
|----|---|
| 1  | <p>Click on one of the three main buttons to use some main system functions.</p> <ul style="list-style-type: none"> <li>• Book with a star = Set library as favorite</li> <li>• Book with sign + = Create a new library</li> <li>• Book with arrow = Load a library</li> </ul> <p>Note: These three functions are available in the LIBRARY and PARTS areas.</p> |
| 1* | Clicking on this zone allows accessing to the main menu.  |
| 2  | <p>Set library as favorite among "Inner Magnet" libraries and "Outer Slot" libraries. The selected libraries (bold characters) are opened first from the Motor Factory. See the process in the chapter "Reference commands".</p>  |
| 3  | Load a library from a folder. See the process in the chapter "Reference commands".  |
| 4  | Create a new library. See the process in the chapter "Reference commands".  |

### 2.1.3 Expanding the menu in Part Library

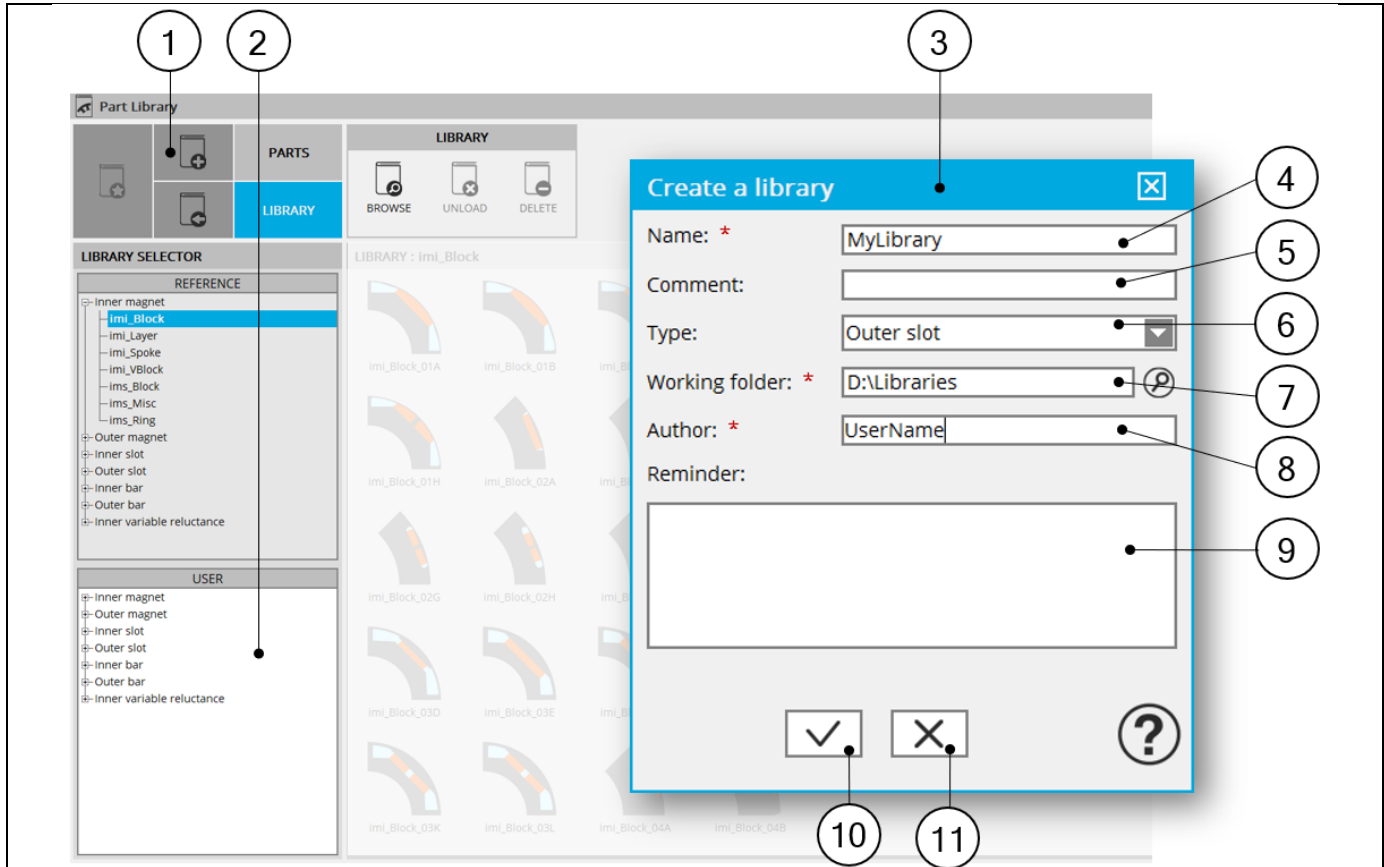
This menu gives access to system functions like help and exit.



|                                     |  |
|-------------------------------------|--|
| 1                                   | Expand the menu in the left top part of Part Library in both areas: LIBRARY or PARTS.  |
| 2                                   | <p>List of actions available:</p> <ul style="list-style-type: none"> <li>• About</li> <li>• Debug mode</li> <li>• Help to open the online help documentation directly on the chapter dealing with Part Library</li> <li>• Exit for closing “Part Library” from the top menu of Part Library</li> </ul> |
| <input checked="" type="checkbox"/> | Closing the Part Library is also possible by using this icon on the right top part of the Part Library panel.  |
| *                                   | Closing the Part Library is also possible by using the shortcut CTRL-Q defined in the user preferences. For more information, refer to the chapter “user’s preferences”.   |

## 2.2 Reference commands

### 2.2.1 Create a new library



#### How to create a new library?

|    |  |
|----|--|
| 1  | Click on the button "create a new library" (Shortcut Ctrl - L).  |
| 2  | The new library is stored as a user's library (either a magnet library, a slot library or a bar library).                                    |
| 3  | Clicking on the button "Create a new library" opens a dedicated dialog box.  |
| 4  | A library is defined by a name (MyLibrary in our example).   |
| 5  | A comment can be added (it will be the tooltip of the created library).  |
| 6  | With the current version of FluxMotor®, different kinds of libraries can be created like "Inner Magnet", "Outer slot", "Inner bar" libraries |
| 7  | Select the folder in which you want to store the new library (D:\Library_Slot in our example).   |
| 8  | Set the author of this new library.  |
| 9  | A reminder allows you to keep important notes to know what was considered for the new library.   |
| 10 | Button to apply inputs, create the new library and close the dialog box.   |
| 11 | Button to close the dialog box and to cancel the creation of the library.  |

Note 1: Once created, the library "MyLibrary" corresponds to a folder where the name is "MyLibrary" in which are stored the parts. The library folder "MyLibrary" is stored in a parent folder, Library\_Slot for example. Here is the corresponding path: D:\Library\_Slot\MyLibrary.

Note 2: The "Parts" are stored in the library folder (folder "Parts").

All the data corresponding to a part, like the associated Excel file (see Part Factory section), are stored in a specific folder. There are also the "Attachments" (folder "Attachments") joined to the part by the user.

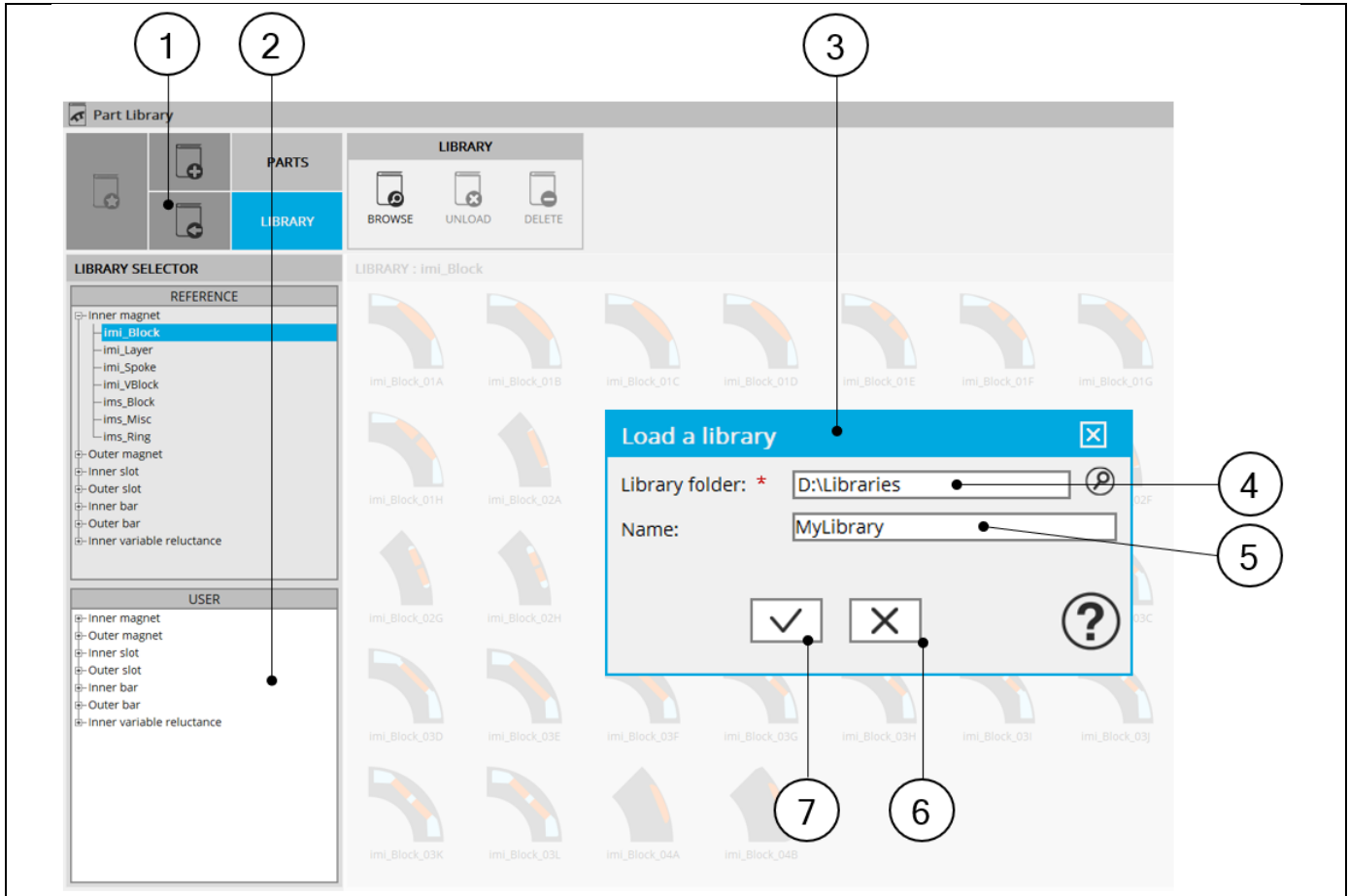
## 2.2.2 Load a Library

### 2.2.2.1 Introduction

As explained in the previous chapter “Create a new library”, a library corresponds to a folder in which all the data relative to parts are stored.

Load a library means to create a link between the folder corresponding to the library and Part Library application.

### 2.2.2.2 How to load a library?



How to load a library?

|   |   |
|---|---|
| 1 | Click on the button “Load a library”.   |
| 2 | The library is loaded in user’s library (either a magnet library or a slot library according to the type of part is contained in it). |
| 3 | Clicking on the button “Load a library” opens a dedicated dialog box.   |
| 4 | The folder in which the targeted library is stored must be selected.  |
| 5 | A library is defined by a name (“MyLibrary” in our example).  |
| 6 | Button to close the dialog box and to cancel the loading of the library.  |
| 7 | Button to apply inputs, load the new library and close the dialog box.  |



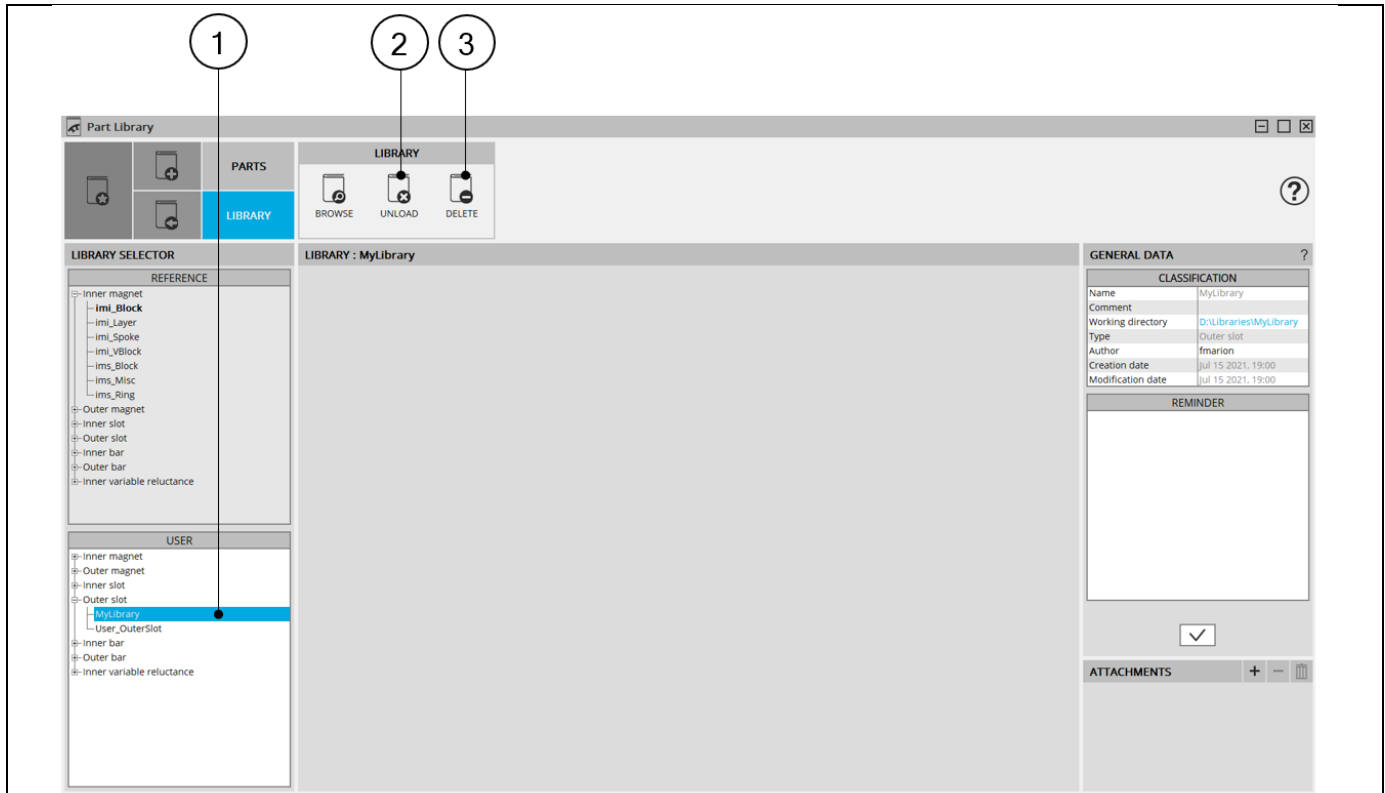
## 2.2.3 Unload or Delete a library

### 2.2.3.1 Introduction

Unload a library means to cut the link between the folder corresponding to the library and Part Library application. However, the folder is not removed. It still exists after having been unloaded and it can be reloaded if needed.

Delete a Library means to remove the folder corresponding to the library. In this case all its content will be deleted and can't be reloaded.

### 2.2.3.2 How to Unload or Delete a library?



How to Unload or Delete a library?

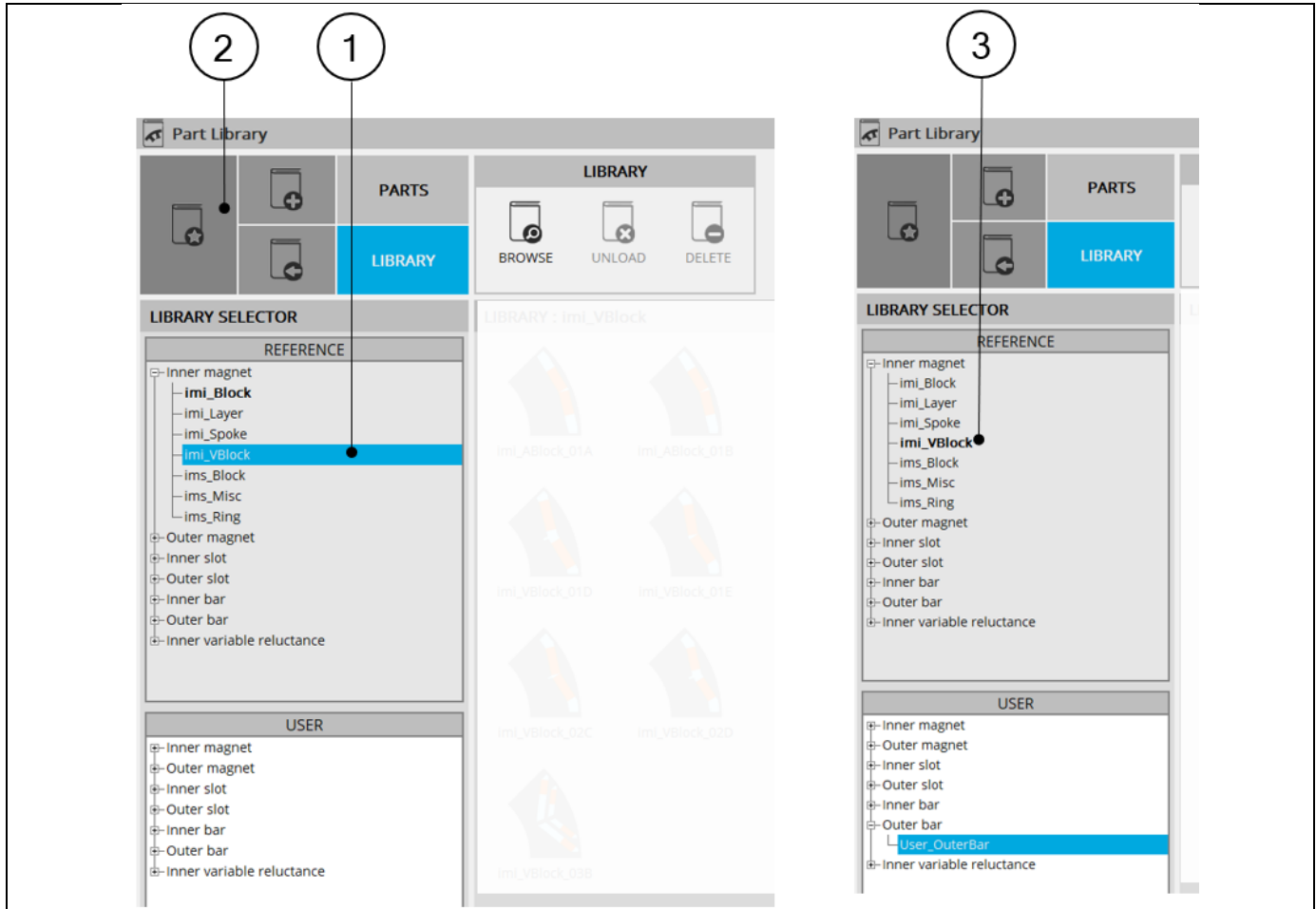
|   |  |
|---|--|
| 1 | Selection of the library to Unload or to Delete. |
| 2 | Button to Unload the selected library.           |
| 3 | Button to Delete the selected library.           |

## 2.2.4 Set library as favorite

### 2.2.4.1 Introduction

Setting a library as favorite allows opening this library as first, from the DESIGN area of Motor Factory when changing the topology of part (Slot, magnet, or bar)

### 2.2.4.2 How to set a library as favorite?



How to set library as favorite?

|   |   |
|---|---|
| 1 | Selection of the library to set as favorite.  |
| 2 | Click on the button to set the selected library as favorite.  |
| 3 | The name of the favorite library is written in bold text.<br>Note: There is one favorite library for each type of part. |

## 2.3 General Data information

General Data information allows giving some reference data for libraries. They are described below.

### Library information

|   |   |
|---|---|
| 1 | <p>General information:</p> <ul style="list-style-type: none"> <li>• Name of the library</li> <li>• Working folder in which are stored all the data dealing with the library (Part files, etc.)<br/>Note: Clicking on this link allows directly reaching the corresponding folder.</li> <li>• Author: modifiable only for User's libraries</li> <li>• Creation and Modification date</li> </ul> |
| 2 | <p>Area in which it is possible to write a memo.<br/>Note: Only available for User's libraries.</p>   |
| 3 | <p>Button to save the changes in the REMINDER and/or Author fields.</p>   |

## 2.4 Attachments

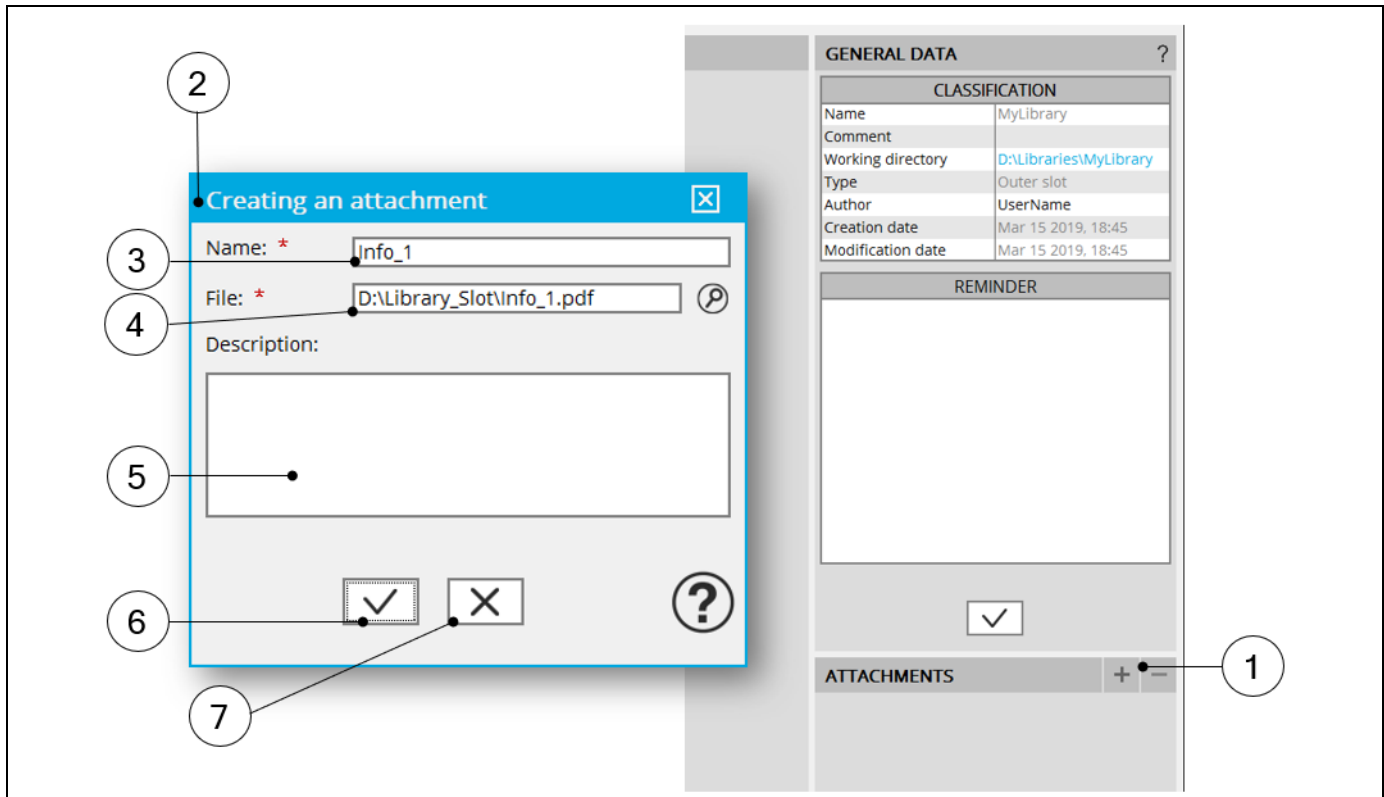
### 2.4.1 Introduction

Documents can be attached to User's libraries. That allows quickly reaching the additional information to describe these libraries.

Note 1: Documents can be attached only to user's libraries.

Note 2: Documents can be linked to libraries as well as to parts. See chapter Management of parts.

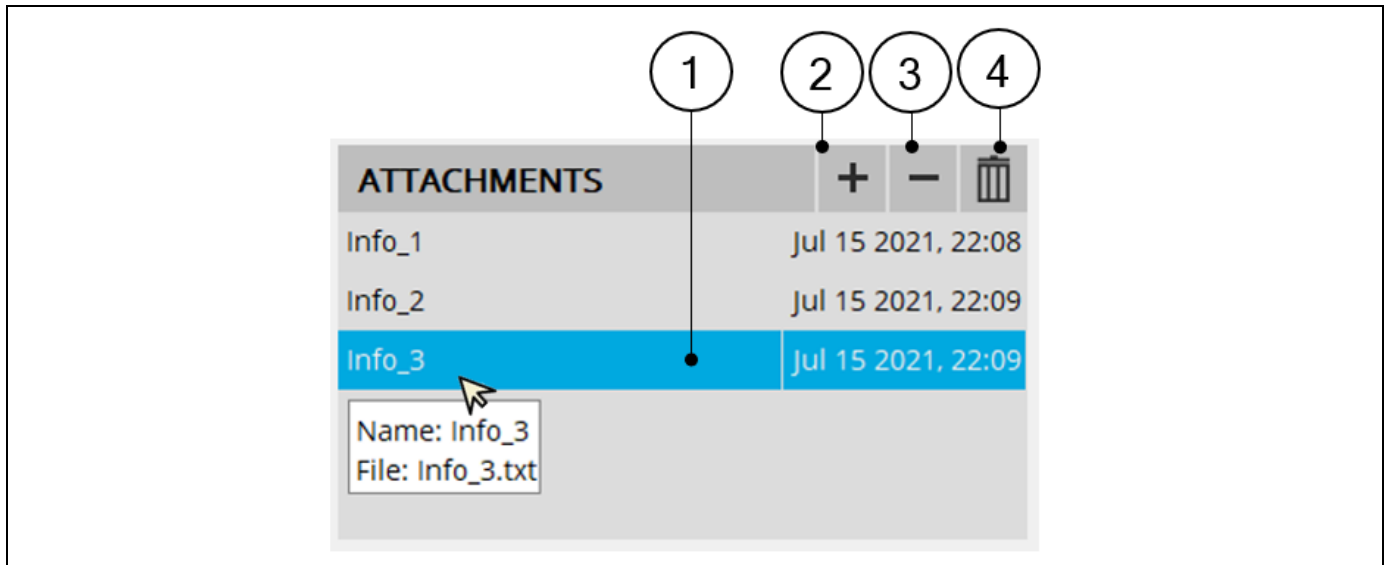
### 2.4.2 How to create an attachment?



Creation of an attachment

|   |   |
|---|---|
| 1 | Button (+) to add an attached document.   |
| 2 | A dedicated dialog box allows adding a new attached document.<br>All kind of documents can be attached (like word, excel, pdf or text files, pictures, etc.). |
| 3 | Give a name to the attached document.   |
| 4 | Select the folder in which the document to be attached is going to be stored.   |
| 5 | It is possible to write a reminder dealing with the attached document.  |
| 6 | Button to apply inputs, create the new attachment and close the dialog box.   |
| 7 | Button to cancel the creation of the attachment.  |

## 2.4.3 Management of attachments



Management of attachments

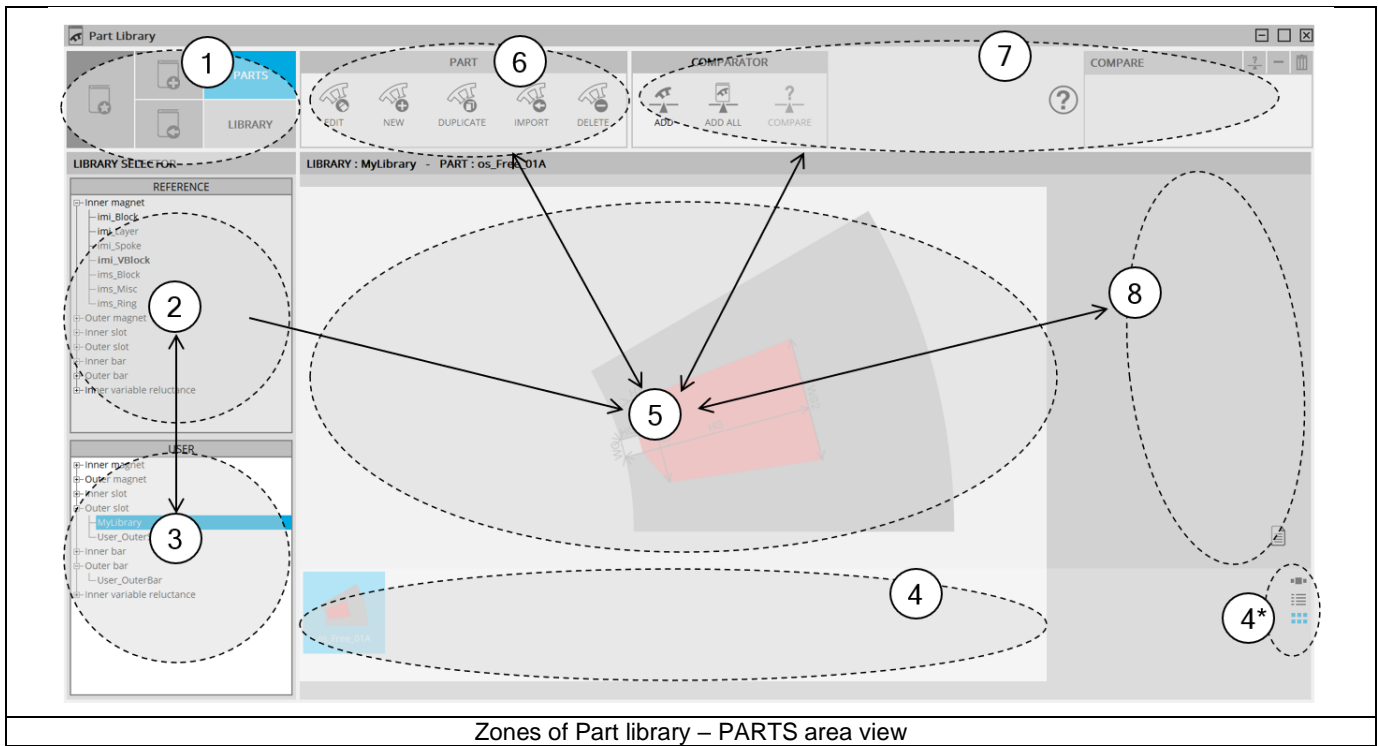
|   |  |
|---|--|
| 1 | Selection of an attached document. Once selected, a tooltip reminds the name and the description of the selected document. |
| 2 | Button (+) to add an attachment (see the previous section).  |
| 3 | Button (-) to remove one or several attachments.   |
| 4 | Button for removing the selected attached file.  |

## 3 MANAGEMENT OF PARTS

### 3.1 Overview

#### 3.1.1 Main areas

Here are the main zones that compose “PARTS” environment of the Part library.



|         |   |
|---------|---|
| Zone 1  | <p>Part Library has two main environments: LIBRARY and PARTS<br/>When PARTS is selected = Blue color PARTS environment of Part Library is displayed.<br/>Three main functions are available from the top of this panel:</p> <ul style="list-style-type: none"> <li>• Create a new library,</li> <li>• Load a library</li> <li>• Set library as favorite</li> </ul> <p>See the section “management of libraries” for more information.</p> |
| Zone 2  | <p>Reference libraries are available. <b>Selections of libraries must be done in this field.</b> Slots, Magnets or Bars of these libraries are read only.<br/>However, they can be copied and moved in user’s libraries.</p>  |
| Zone 3  | <p>User’s libraries. <b>Selections of libraries must be done in this field.</b><br/>The users can create new libraries. See the process in the chapter “Reference commands”</p>   |
| Zone 4  | <p>Visualization of all the parts (thumbnails) stored in the selected library.<br/>Clicking on one thumbnail allows displaying the corresponding part on the central area (5).</p>  |
| Zone 4* | <p>The parts can be displayed as a slide show, as a list or as a matrix view of pictures.</p>   |
| Zone 5  | <p>Visualization of the selected part.</p>  |
| Zone 6  | <p>Tools to manage the parts: Edit, New, Duplicate, Import or Delete part.</p>  |
| Zone 7  | <p>Tools to manage the comparison between parts – Access to the comparator.</p>   |
| Zone 8  | <p>It is possible to attach documents to the selected library (pictures, pdf files, etc.).</p>  |

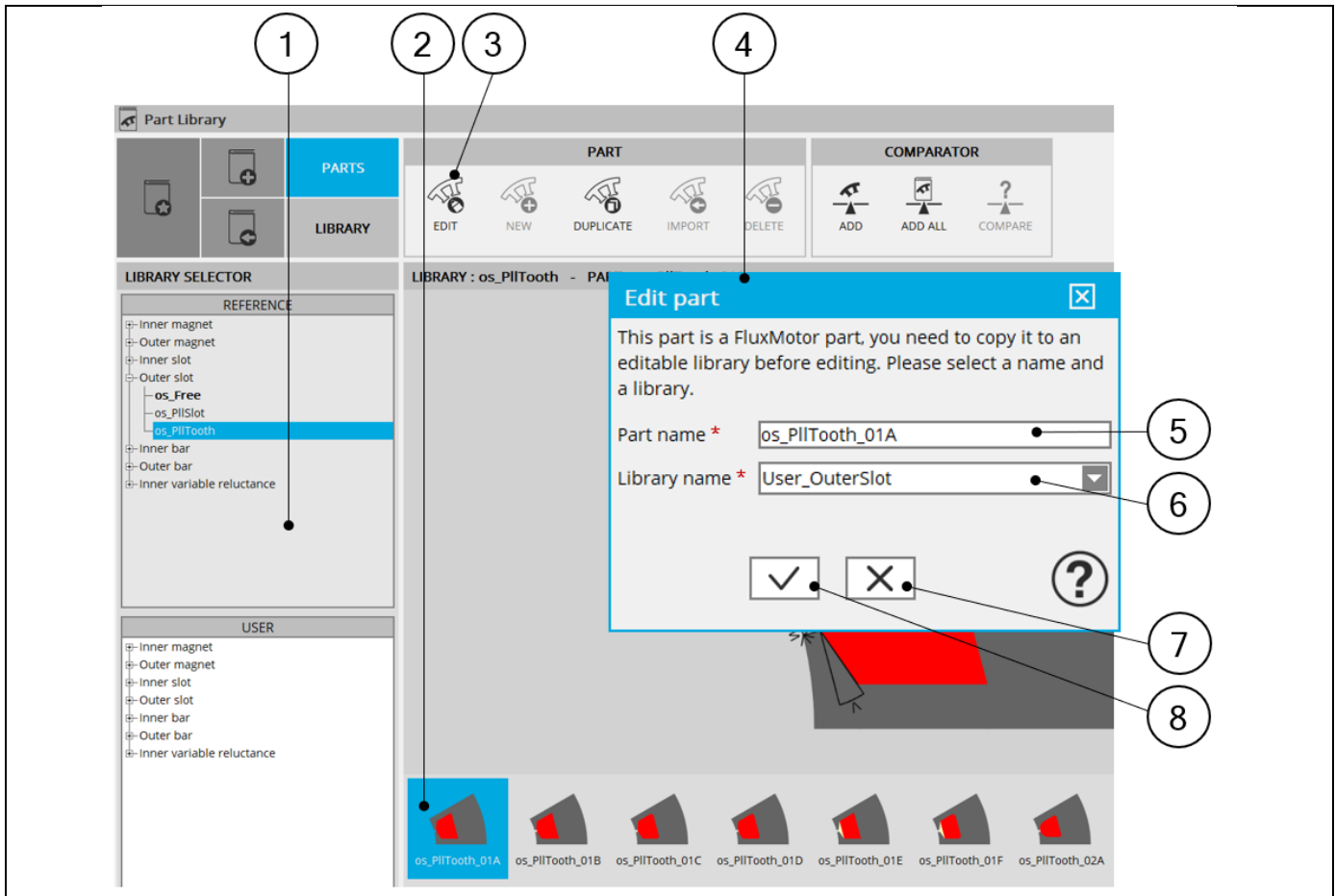
## 3.2 Reference commands

### 3.2.1 Edit a part

#### 3.2.1.1 Part from the reference libraries

Edit part allows modifying the part geometrical properties by using the functions of Part Factory.

As all the parts from reference libraries are in Read only mode, before editing a part the user must copy it in a User's library. A dedicated dialog box allows doing that quickly as it is shown below.



Edit a part from reference libraries

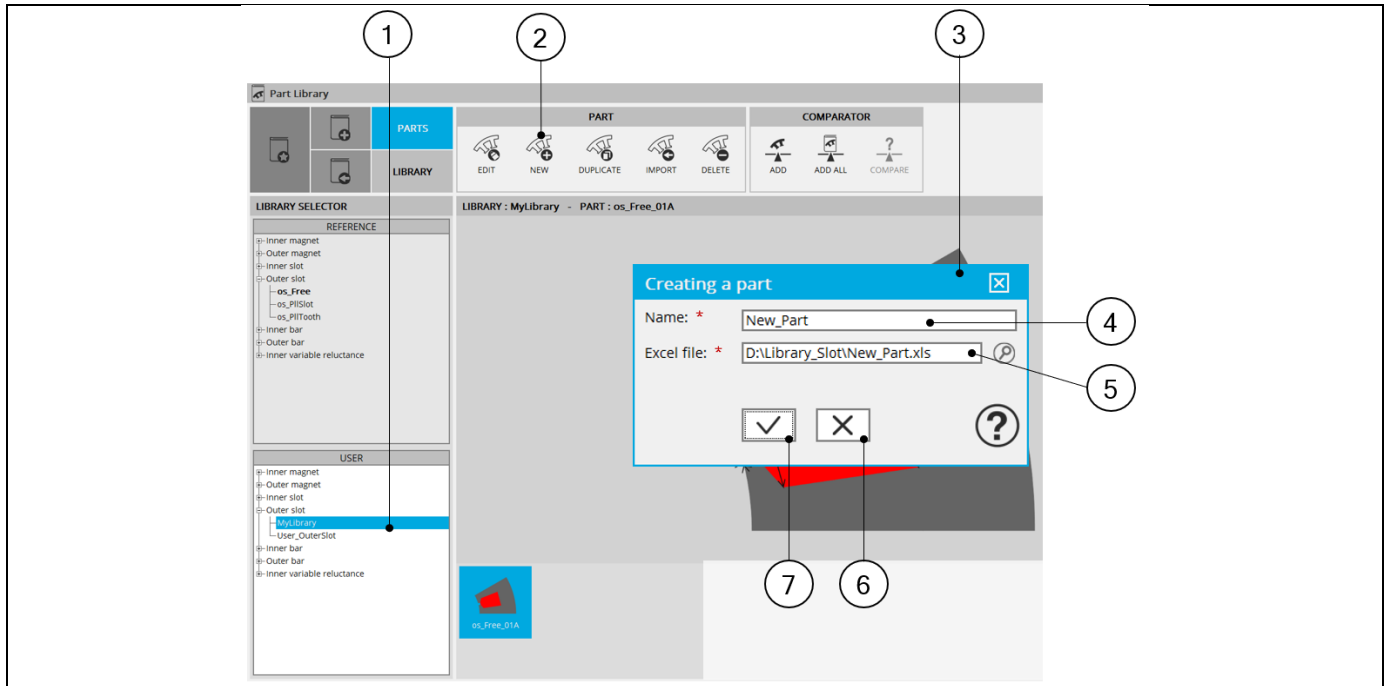
|   |  |
|---|--|
| 1 | Selection of a reference library.  |
| 2 | Selection of one part in the selected library. This part is displayed in the central area.   |
| 3 | Click on the button "EDIT".  |
| 4 | As a part from reference library is considered, a dialog box opens which allows copying the selected part in a user's library.   |
| 5 | Give a name to the part.   |
| 6 | Choose a user's library in which the copied part will be stored.   |
| 7 | Button to cancel the edited data of the part.  |
| 8 | Button to apply inputs and edit the selected part.<br>Then, Part Factory is launched allowing the reading and/or the modification of the geometrical properties of the part. |

#### 3.2.1.2 Part from User's libraries

In this case, as the part is not in a Read only mode, its editing allows opening the part directly with Part Factory application through which read or/and modifying its geometrical characteristics is done.

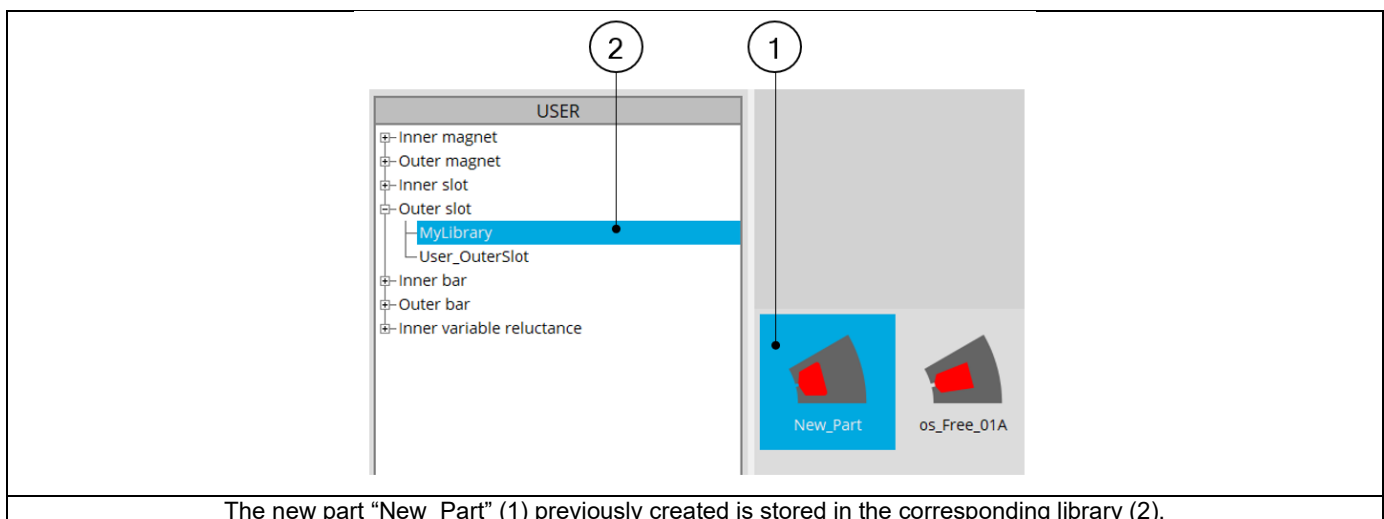
### 3.2.2 Create a New part

The creation of a new part is possible only in a user's library. If you select a Reference library, the icon "New" is disabled.



How to create a new part from Part Library?

|   |   |
|---|---|
| 1 | <p>Selection of a user's library in which the new part will be stored.<br/>The selected library must correspond to the type of the part to create, like for instance:</p> <ul style="list-style-type: none"> <li>• Outer slot library for creating a slot</li> <li>• Inner magnet library for creating a magnet</li> </ul>  |
| 2 | Click on the button "New".  |
| 3 | A dialog box is automatically opened to allow the process of creation.  |
| 4 | Give a name to the new part.  |
| 5 | Select the Excel file in which all the parameters of the part to create are defined. See section Part Factory.  |
| 6 | Button to cancel the edition of the part.   |
| 7 | <p>Button to apply inputs and create the new part.<br/>Then, Part Factory is launched allowing the reading and/or the modification of the geometrical properties of the part embedded in the excel file selected in the previous step.<br/>Note: The new part "New_Part" previously created will be stored in the corresponding library. See next illustration.</p> |



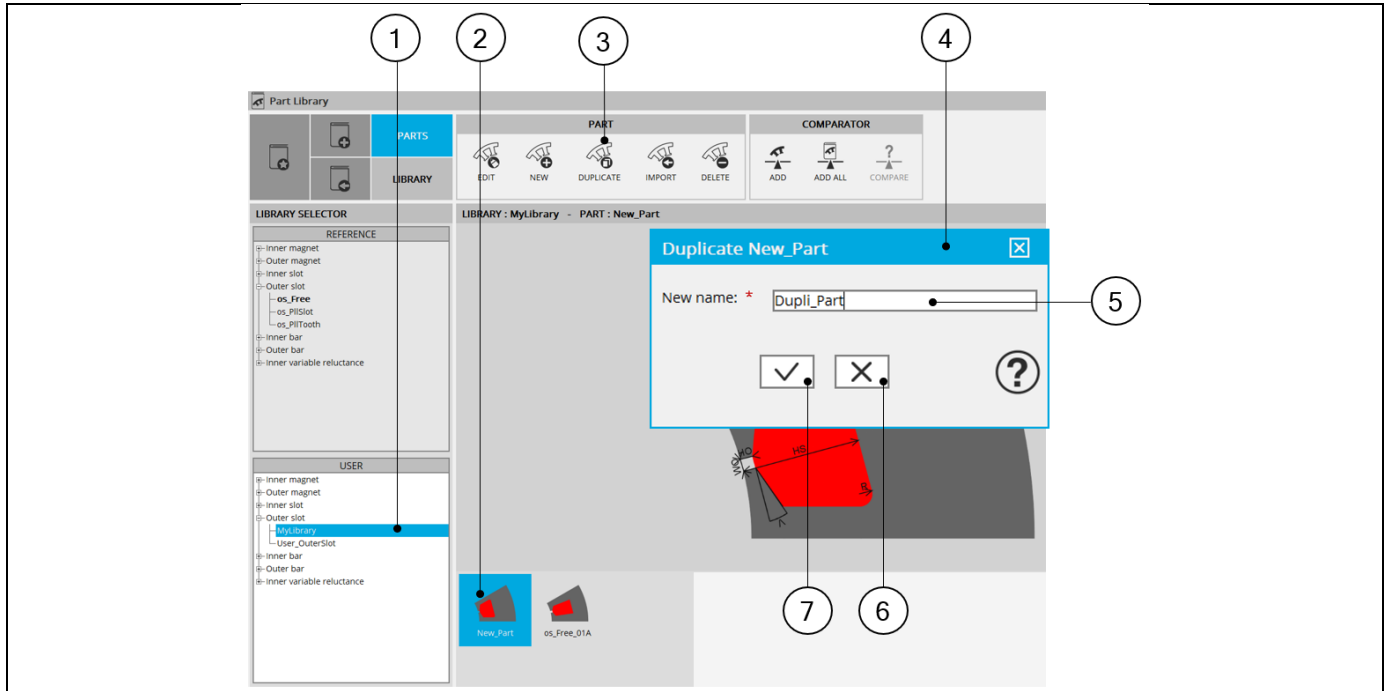
The new part "New\_Part" (1) previously created is stored in the corresponding library (2).



### 3.2.3 Duplicate

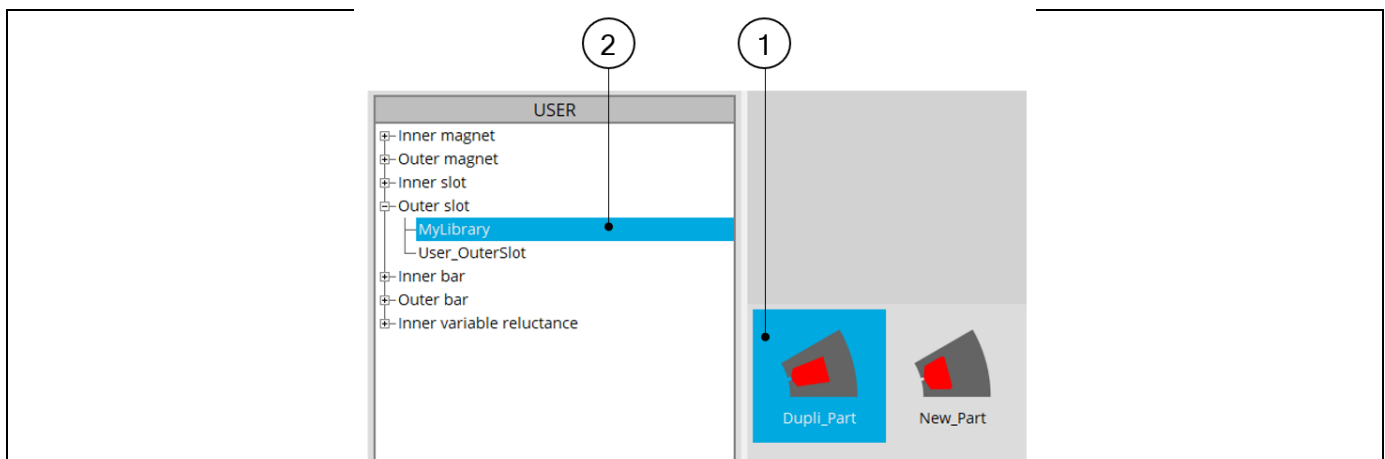
The duplication of a part is possible only in a user's library. If you select a Reference library, the icon "DUPLICATE" is disabled.

Note: If the selected library is empty, the icon "DUPLICATE" is disabled.



How to duplicate part?

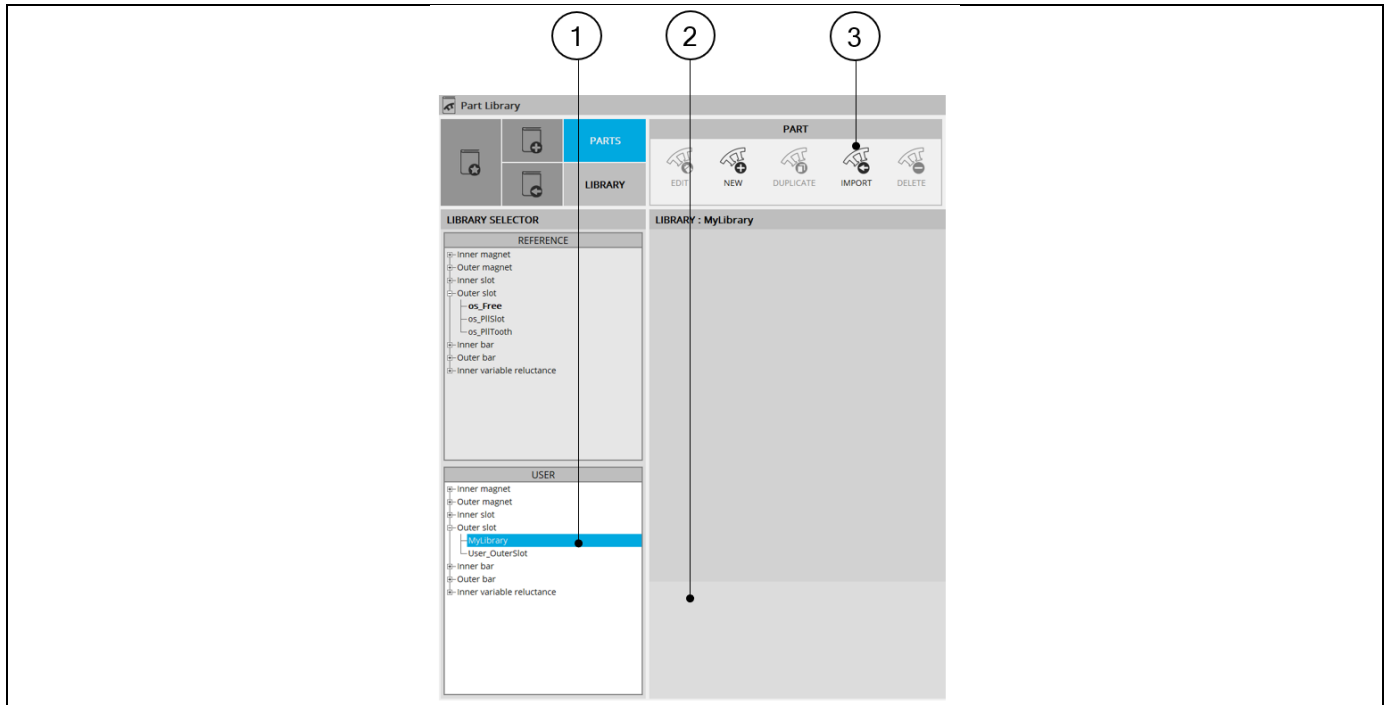
|   |  |
|---|--|
| 1 | Selection of a user's library in which the part to duplicate is stored.  |
| 2 | Selection of the part to duplicate.  |
| 3 | Click on the button "DUPLICATE".   |
| 4 | A dialog box is automatically opened to allow the process of duplication.  |
| 5 | Give a name to the new part.   |
| 6 | Button to cancel the edition of the part.  |
| 7 | Button to apply inputs and create the new part.<br>Then, Part Factory is launched allowing the reading and/or the modification of the geometrical properties of the part embedded in the Excel file selected in the previous step.<br>Note: The new part "Dupli Part" previously created will be stored in the corresponding library. See next illustration. |



The new part "Dupli Part" (1) previously created is stored in the corresponding library (2).

### 3.2.4 Import a part from another library

Importation of parts is possible only in a user's library. If you select a Reference library, the icon "Duplicate" is disabled.



How to import a part from another library ?

|   |  |
|---|--|
| 1 | Selection of a user's library in which the parts to import will be stored.       |
| 2 | In this example, the library in which parts will be imported is currently empty. |
| 3 | Click on the button "IMPORT".  |

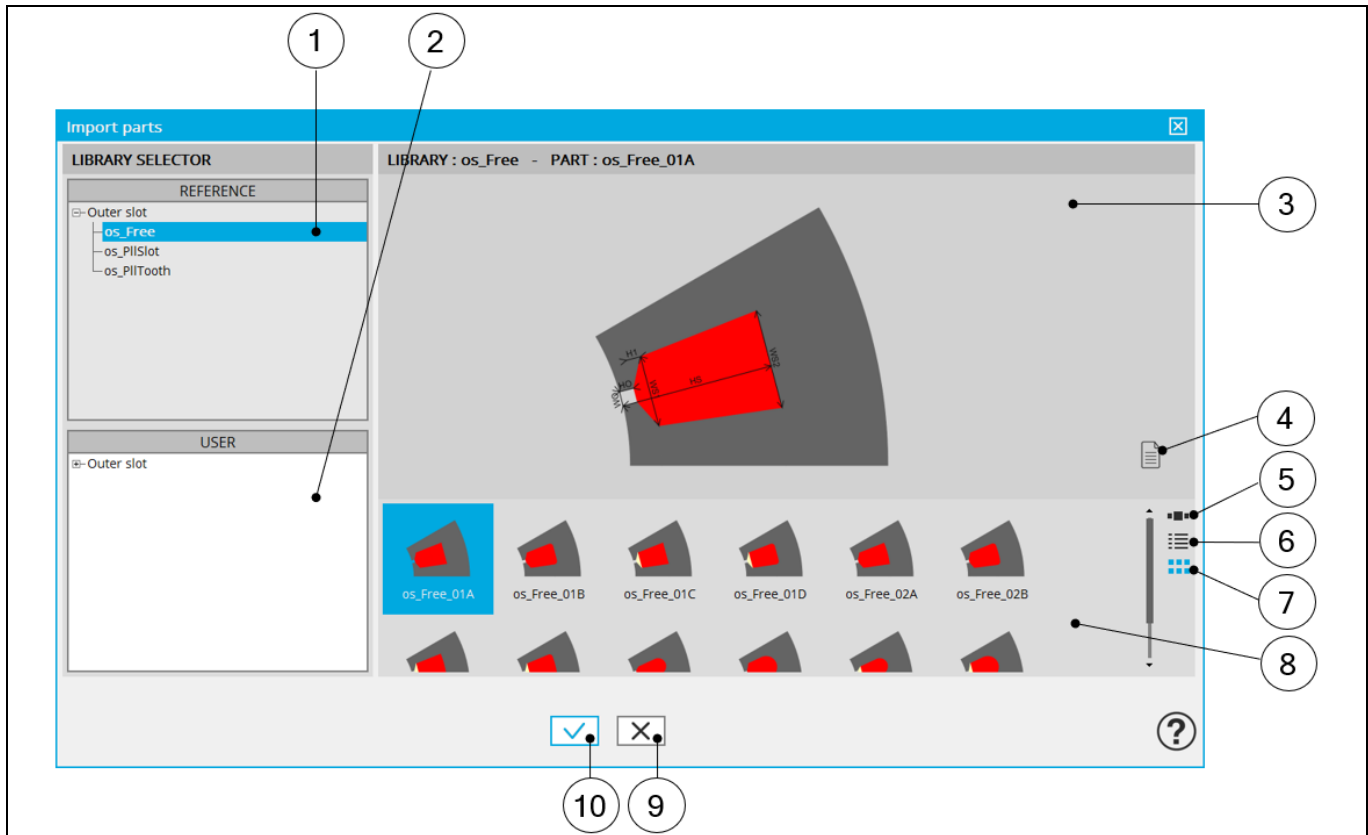
Clicking on the icon "IMPORT" opens a dialog box, allowing access to the part libraries.

It allows to visualize, compare, choose and import another part topology in the selected library.

Note: If the selected library corresponds to slots, then only slot libraries will be available.

On the contrary, if the selected library corresponds to magnets, then only magnet libraries will be available.

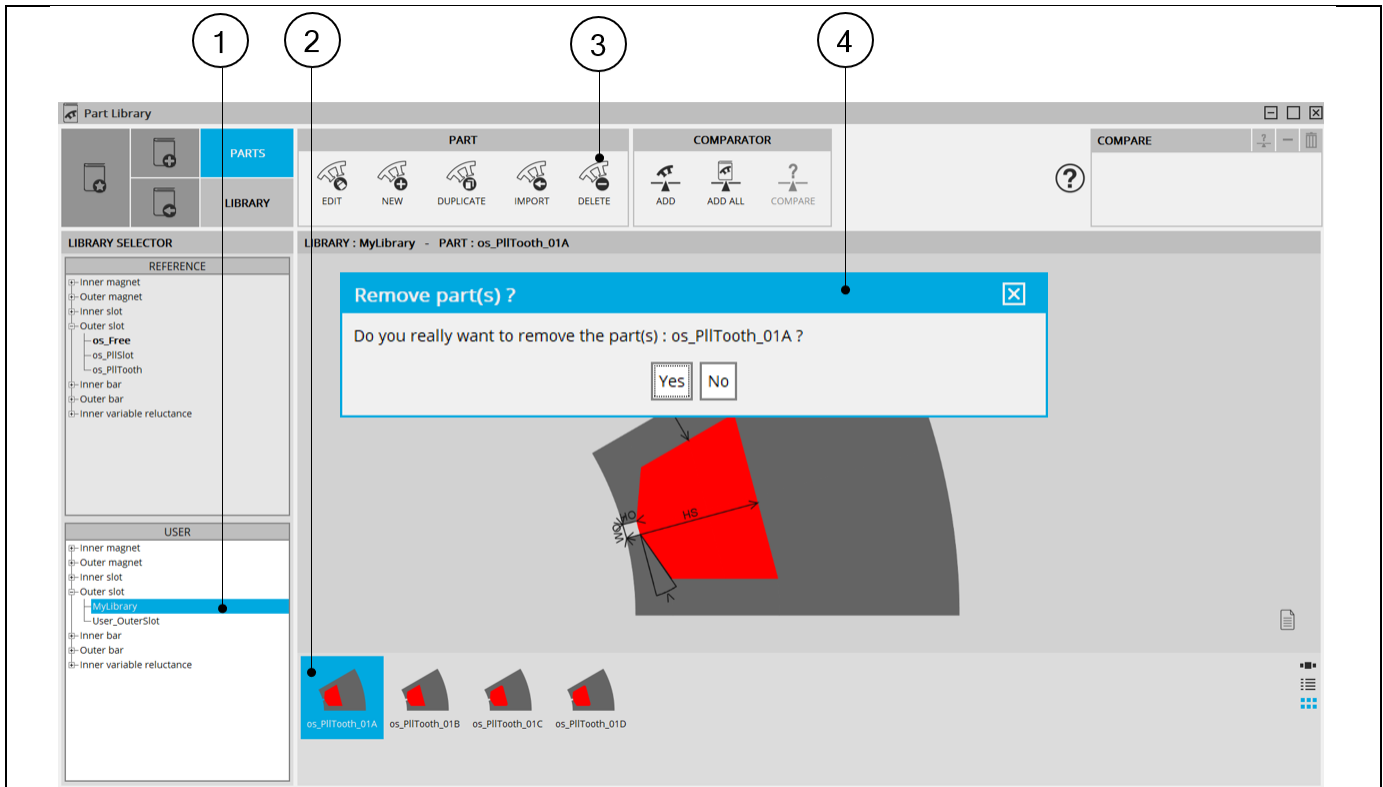
Note: the example below shows "slots" but the same principle is used for "magnets" or "Bars".



#### How to select parts to be imported?

|    |   |
|----|---|
| 1  | Visualization of reference libraries i.e. the libraries of slot topologies provided with FluxMotor®. Select them to view their content and choose slots among them. |
| 2  | Visualization of user libraries. The default user library is "UserOuterSlot".   |
| 3  | Area where the selected part is displayed (static picture) – Topology + dimension labels.   |
| 4  | Button to visualize the list of documents attached to the part. See additional information.   |
| 5  | Button to display thumbnails as a slide show.   |
| 6  | Button to display thumbnails as a list.   |
| 7  | Button to display thumbnails as a matrix view of pictures.  |
| 8  | Area to visualize all the topologies of slots from the selected library (ref. 1).   |
| 9  | Button to close the dialog box and cancel importation of slots.   |
| 10 | Button to choose and import the selected slots.   |

## 3.2.5 Delete parts from a library

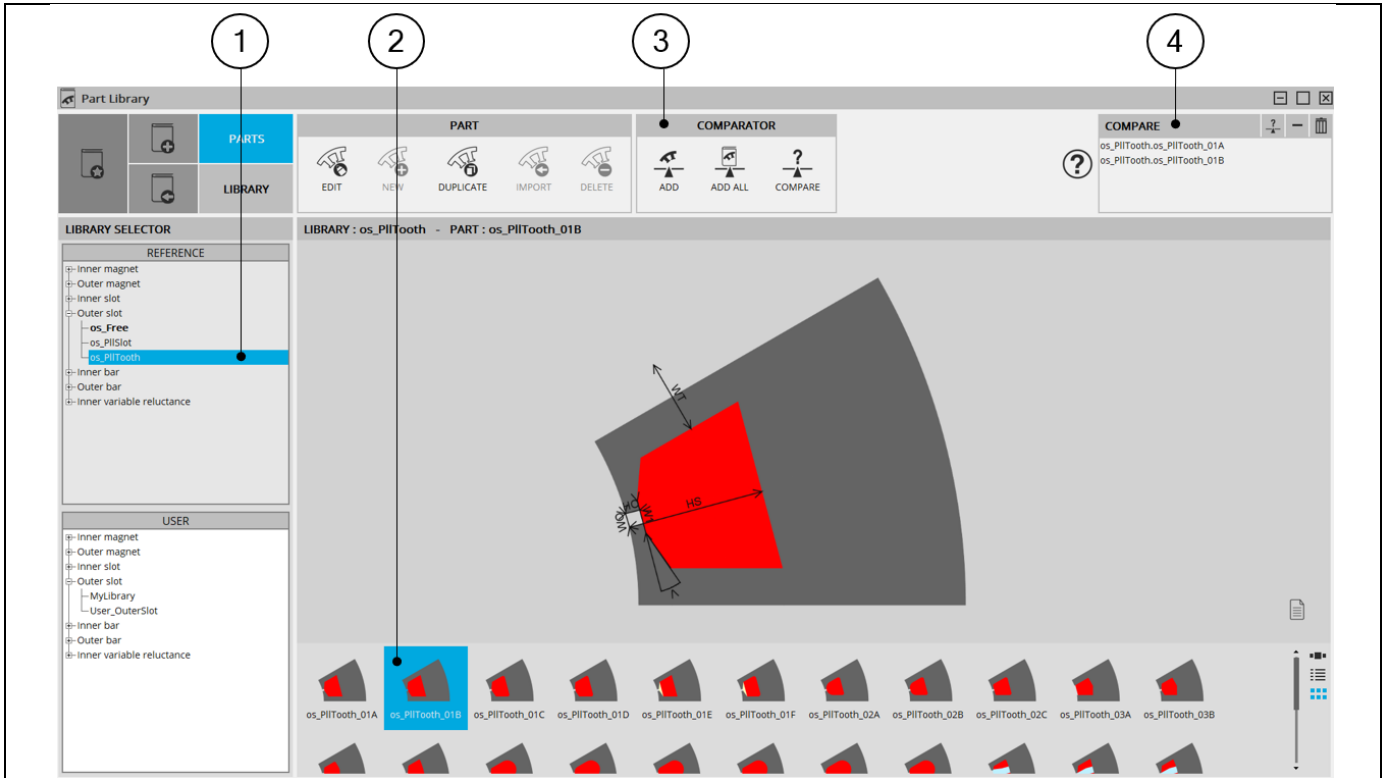


## How to delete parts from a library?

|   |  |
|---|--|
| 1 | Select the library where the parts to be deleted are stored.   |
| 2 | Select the part to delete (several parts can be selected to be deleted).   |
| 3 | Click on the button "DELETE".  |
| 4 | A dialog box is automatically opened to validate the removal of the parts selected.<br>Note: Delete a part means that all the data of the part is destroyed and not recoverable. |

### 3.3 Compare parts

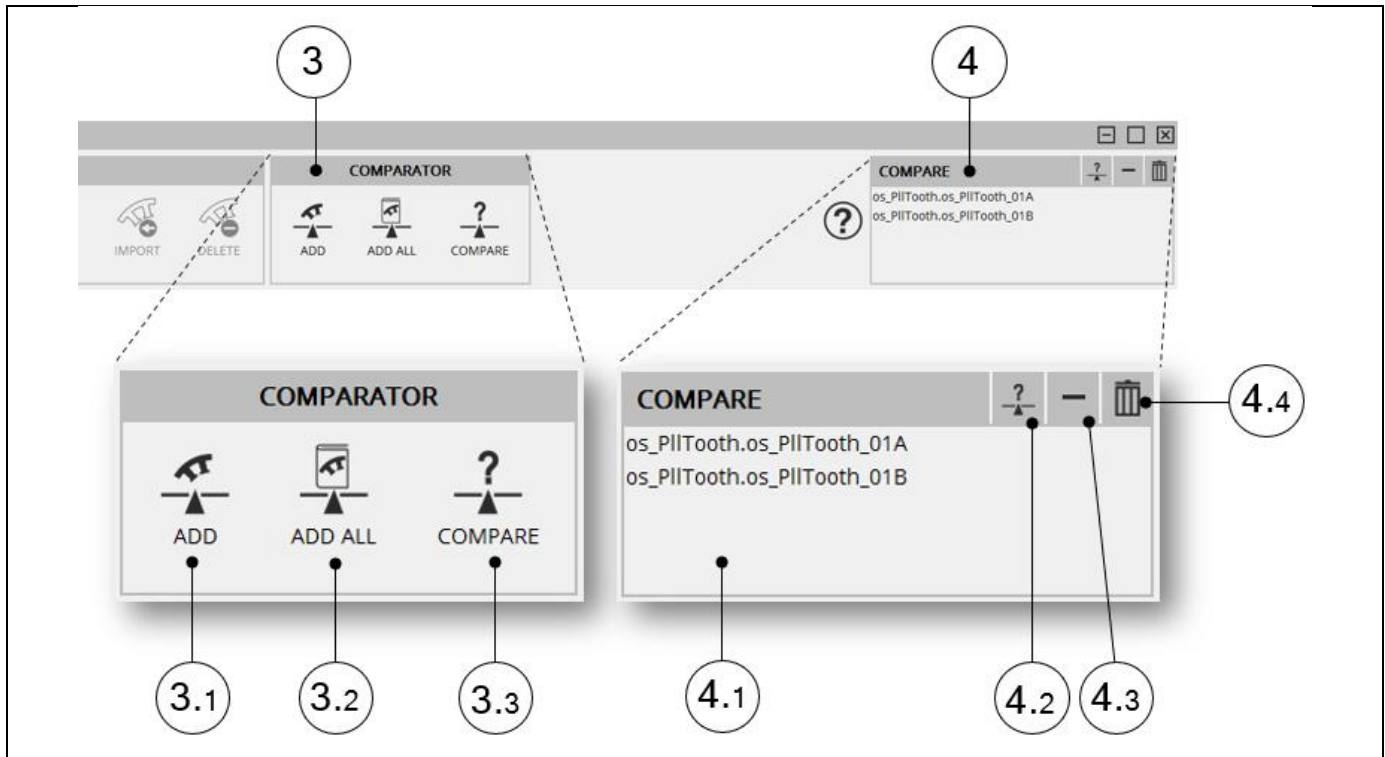
#### 3.3.1 Overview



Tools to select and compare the parts

|   |  |
|---|--|
| 1 | Selection of the library of the parts are displayed.                                   |
| 2 | Selection of one or several parts to compare.  |
| 3 | Box of tools to add the selected parts into the comparator. See more details below.    |
| 4 | Box of tools to manage the selected parts into the comparator. See more details below. |

## 3.3.2 Content management



Tools to select and compare the parts

|     |   |
|-----|---|
| 3   | Box of tools to add the selected parts into the comparator. See more details below.<br>Note: The parts selected altogether in the comparator must have the same type.<br>Outer slots cannot be compared with inner magnets for example. |
| 3.1 | Click on this icon to add the selected parts (one or several) into the comparator.  |
| 3.2 | Click on this icon to add all the parts of the selected library into the comparator.  |
| 3.3 | Click on this icon to get into the comparator application and compare the selected parts.   |
| 4   | Box of tools to manage the selected parts into the comparator. See more details below.  |
| 4.1 | Visualization of the selected part list.  |
| 4.2 | Click on this icon to get into the comparator application and compare the selected parts.   |
| 4.3 | Button to remove the selected parts (one or several) from the comparator.   |
| 4.4 | Button to remove all the parts from the comparator.   |

### 3.3.3 Compare

Here is the environment of the comparator of parts.



#### Tools to select and compare the parts

|   |  |
|---|--|
| 1 | <p>Box of tools to manage the selected parts into the comparator.</p> <ul style="list-style-type: none"> <li>• EDIT: The selected part (one part) can be edited into Part Factory.</li> <li>• Edit a part allows modifying its geometrical properties by using the functions of Part Factory. See the chapter edit a part for more details.</li> <li>• REMOVE: The selected part is removed from the comparator.</li> <li>• CANCEL: To close the comparator and get back to Part Library environment.</li> </ul> |
| 2 | All the selected parts are presented to help with the comparison. The name and the type are displayed.   |
| 3 | Clicking on the name field allow arranging the parts alphabetically. The black arrow shows the order retained.   |
| 4 | A scroll bar allows visualizing all the parts.   |

## 3.4 Attachments

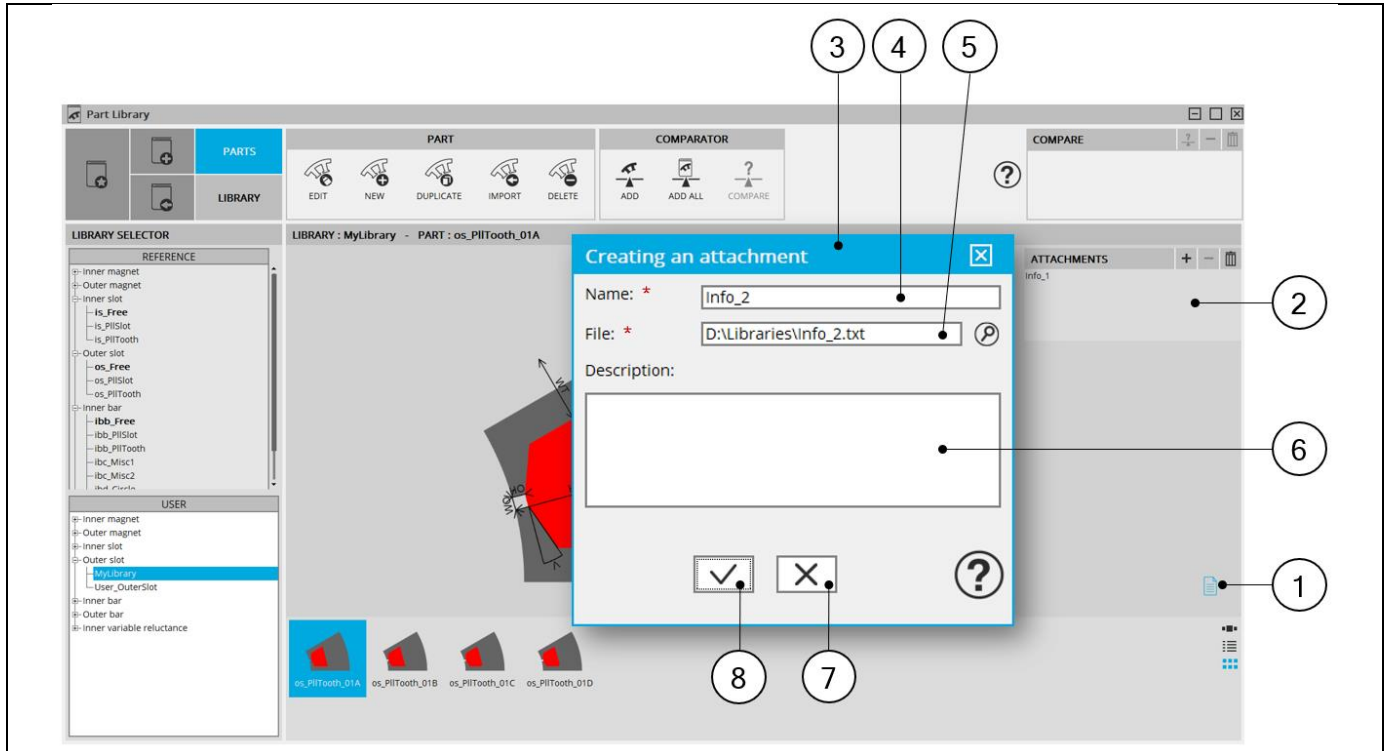
### 3.4.1 Introduction

Documents can be attached to User's parts. It allows quickly reaching to additional information which describe these parts.

Note 1: Documents can be attached only to user's parts.

Note 2: Documents can be linked to parts as well as to libraries. See chapter Management of libraries.

### 3.4.2 How to create an attachment?

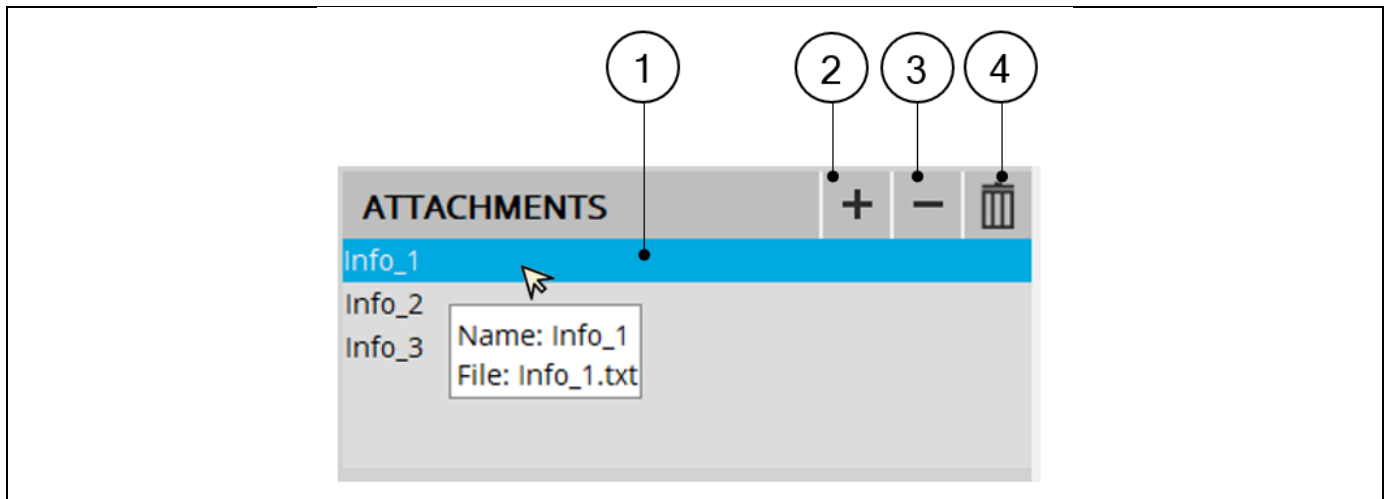


Creation of an attachment for a part

|   |   |
|---|---|
| 1 | Icon to display the attachment box just above (2).  |
| 2 | Attachments box to manage the attached documents.<br>Button (+) allows adding documents. Button (-) allows removing selected documents.<br>Note: this box is disabled when parts from reference libraries are considered. |
| 3 | A dedicated dialog box allows adding a new attached document.<br>All kind of documents can be attached (like word, excel, pdf or text files, pictures, etc.).   |
| 4 | Give a name to the attached document.   |
| 5 | Select the folder in which the document to be attached is stored.   |
| 6 | It is possible to write a reminder dealing with the attached document.  |
| 7 | Button to cancel the creation of the attachment.  |
| 8 | Button to apply inputs, create the new attachment and close the dialog box.   |



## 3.4.3 Management of attachments



Management of attachments

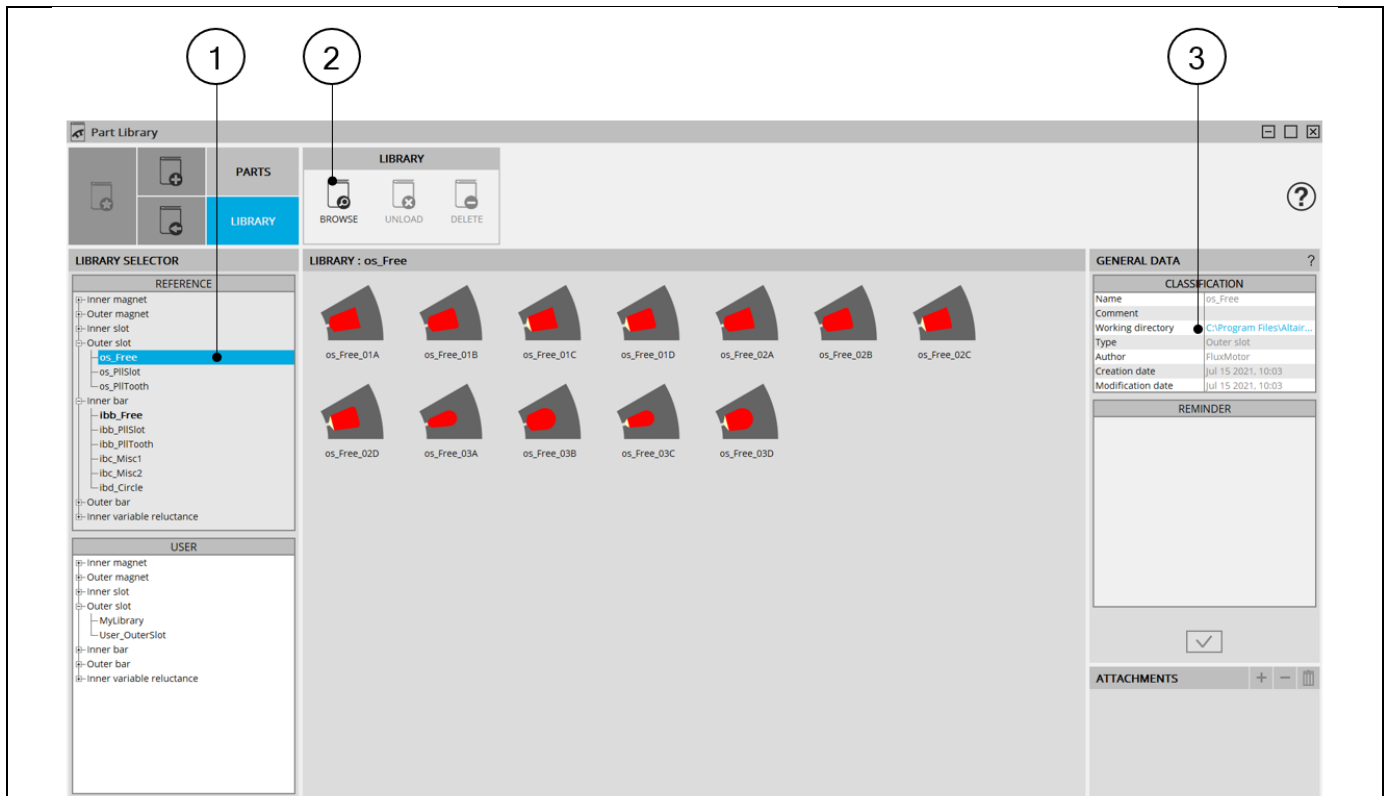
|   |  |
|---|--|
| 1 | Selection of an attached document. Once selected, a tooltip reminds the name and the description of the selected document. |
| 2 | Button (+) to add an attachment (see the previous section).  |
| 3 | Button (-) to remove one or several attachments.   |
| 4 | Button for removing the selected attached file   |

## 4 EXTERNAL LINKS

### 4.1 Browse

#### 4.1.1 Overview

From the library environment it is possible to directly access the folder in which the data dealing with the selected library are stored.



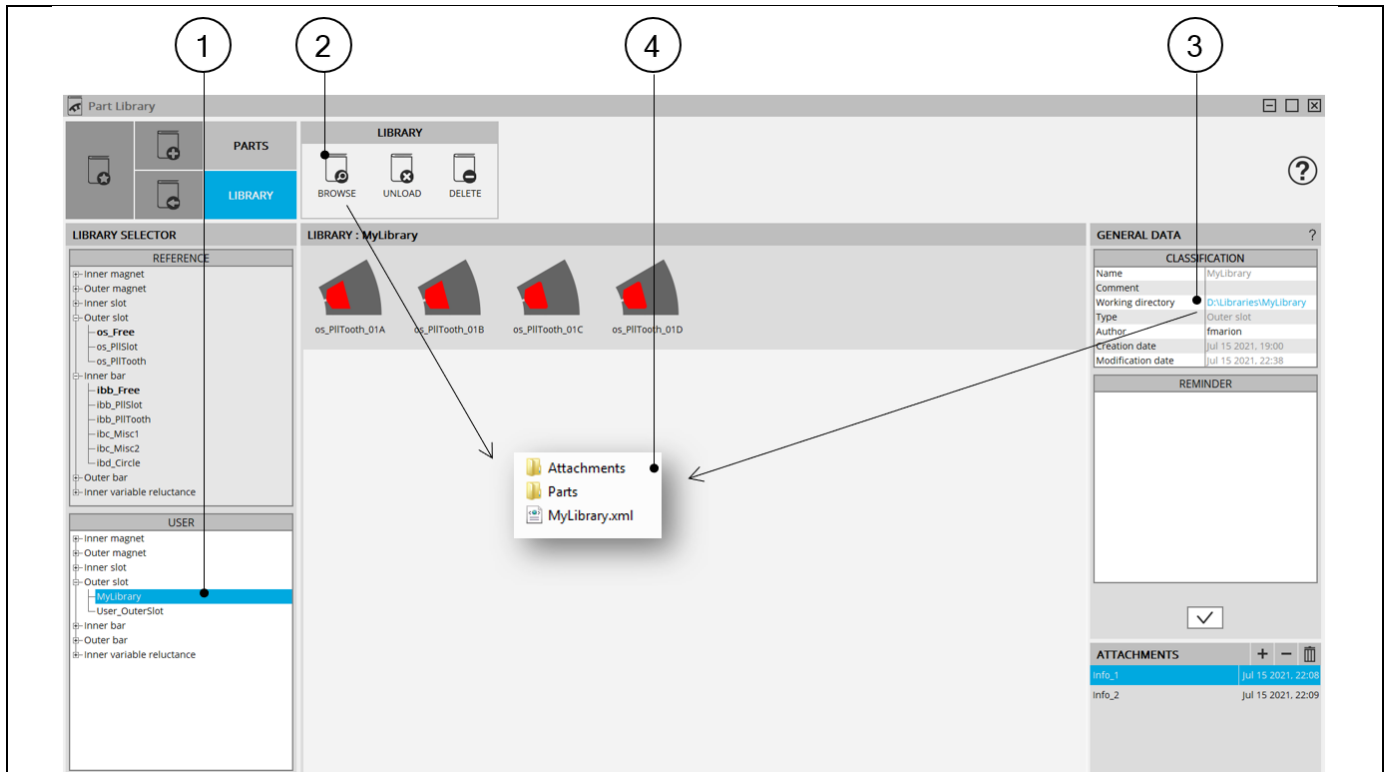
Browsing to access the library folder

|   |   |
|---|---|
| 1 | Selection of a library.   |
| 2 | Browse function available from the top part of the environment. |
| 3 | Browse function available from information table.               |

## 4.1.2 Contents of folders

### 4.1.2.1 Overview

The contents of folder directly reachable from the LIBRARY interface are described below.

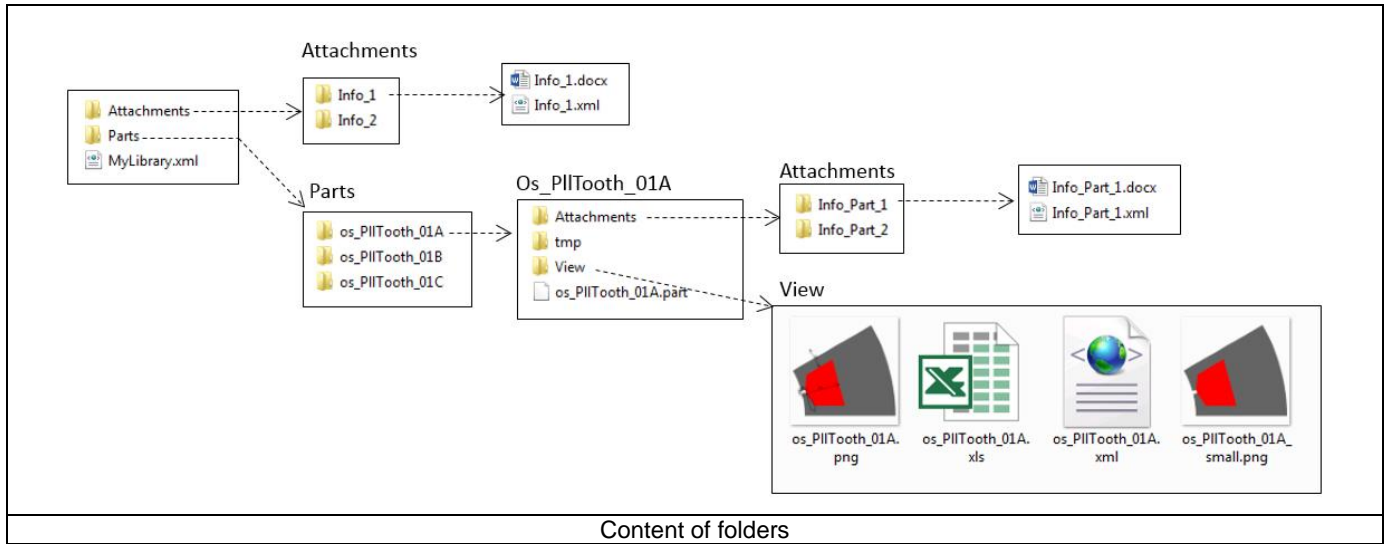


#### Browsing to access the library folder

|   |   |
|---|---|
| 1 | Selection of a user's library. In our example the name of this library is "MyLibrary".  |
| 2 | Click on the icon "BROWSE" to reach the folders dealing with the part.  |
| 3 | Click on the path in the "Working folder" field to reach the folders dealing with the part.   |
| 4 | Content of the folder "MyLibrary":<br>Two folders "Attachments" and "Parts" + one xml file: MyLibrary.xml.<br>See below the content of these folders. |

### 4.1.2.2 Folder organization

The graph below shows how to reach the main files dealing with libraries or parts.



Folder “Attachments”:

All the documents associated to the considered library (or Part).

Folder “Parts”:

All the parts stored in the considered library.

Note: In the folder associated to each part (like os\_PIItooth\_01A in the example above) the Excel file, contains all the part’s properties. It is stored in a folder with the name as “View”.