



ALTAIR

Altair[®] FluxMotor[®] 2024.1

Motor Catalog

General user information

[Altairhyperworks.com](https://www.altairhyperworks.com)

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1 MOTOR CATALOG OVERVIEW

1.1 Main areas of Motor Catalog

1.1.1 Overview

Motor Catalog is a dedicated application to allow an effective management of machines.

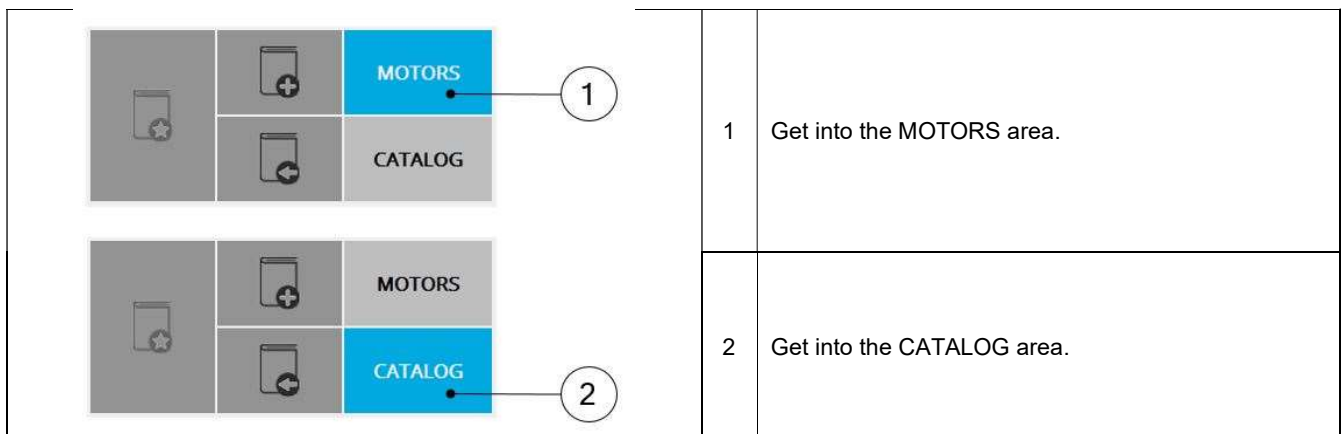
Reference catalogs are available:

- For instance, catalogs in which a few motors for automotive applications are stored. All these motors are characterized by general data and performance.
- There are also catalog like “Gallery” of motors characterized by their general data.

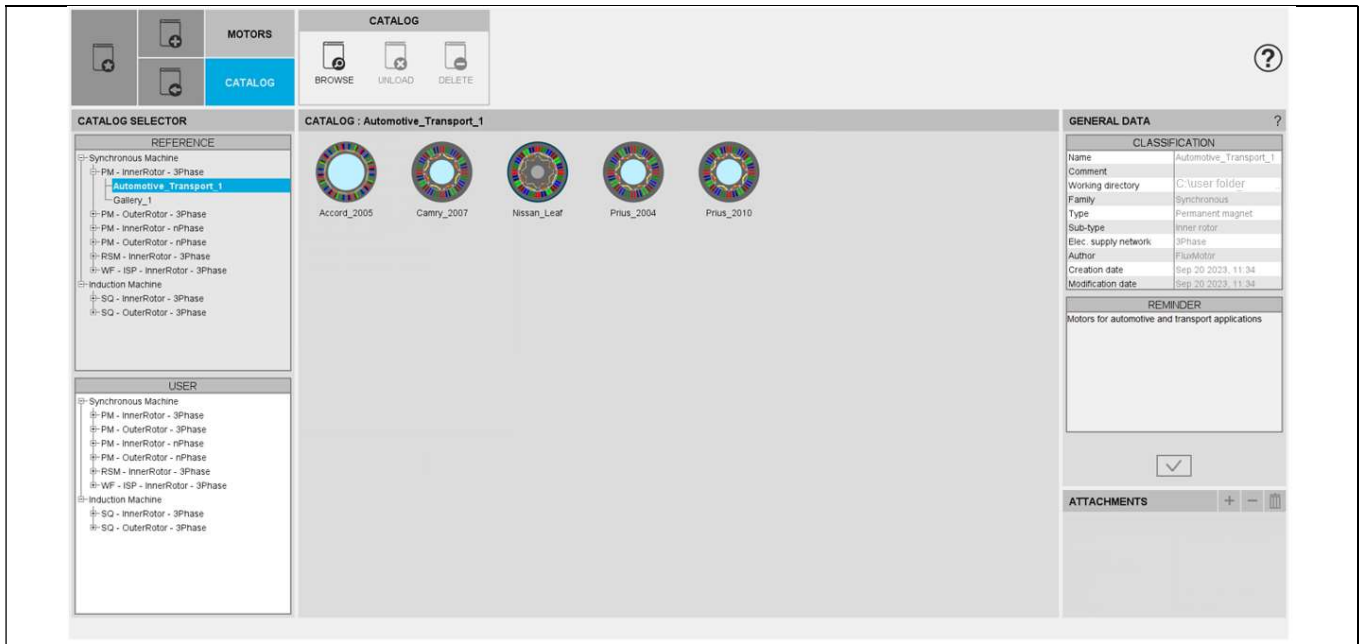
Motor Catalog consists of two main areas:

- The CATALOG area to manage the catalogs
- The MOTORS area to visualize and manage all the motors stored in the selected catalogs

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

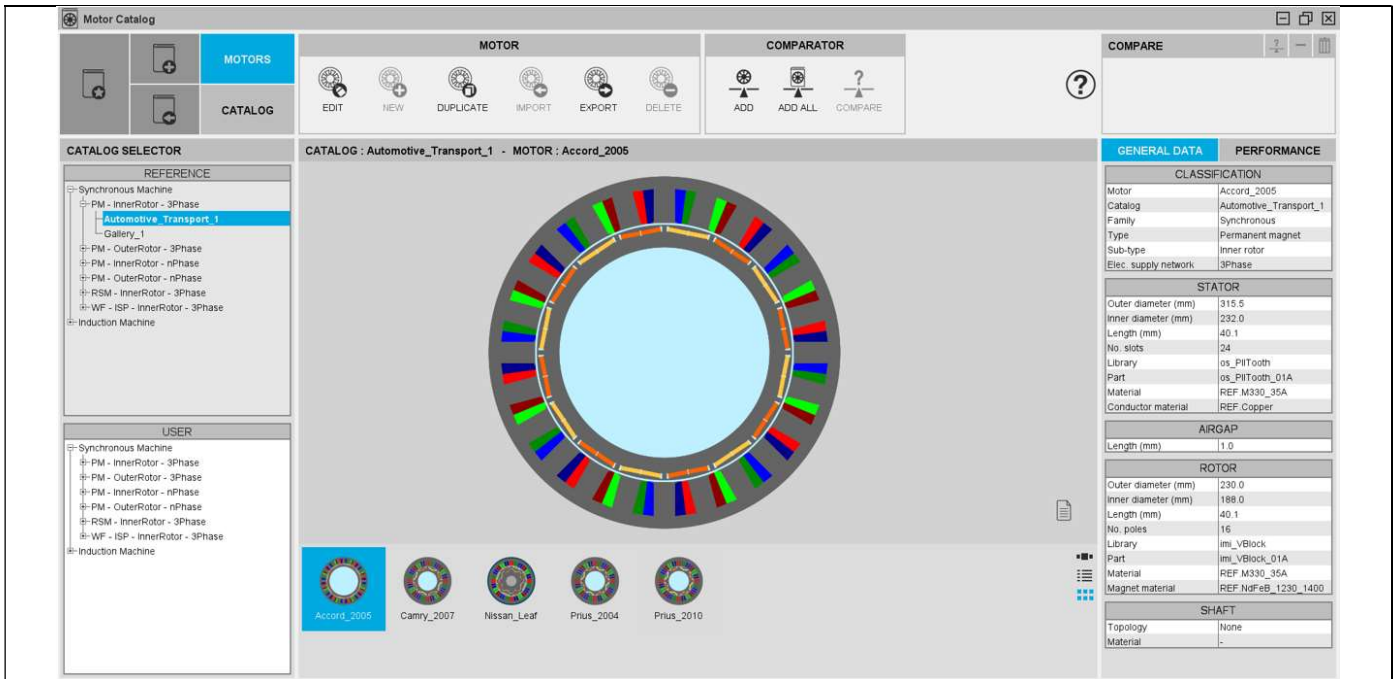


1.1.2 CATALOG area of the Motor Catalog application



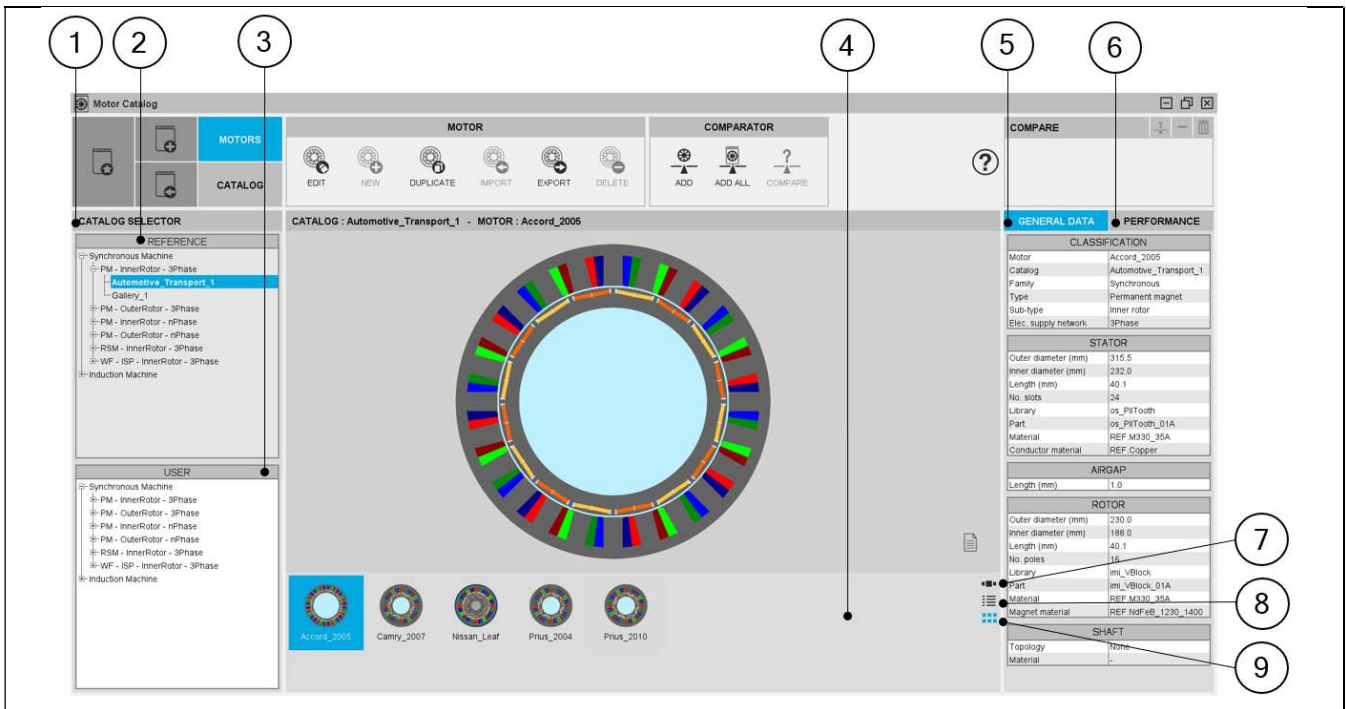
CATALOG area of the Motor Catalog
Refer to the chapter: Motor Catalog – Management of catalogs

1.1.3 MOTORS area of the Motor Catalog application

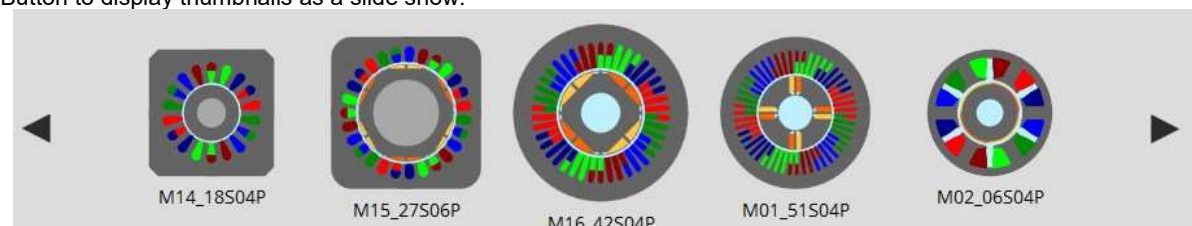


MOTORS area of the Motor Catalog
Refer to the chapter: Motor Catalog – Management of Motors

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

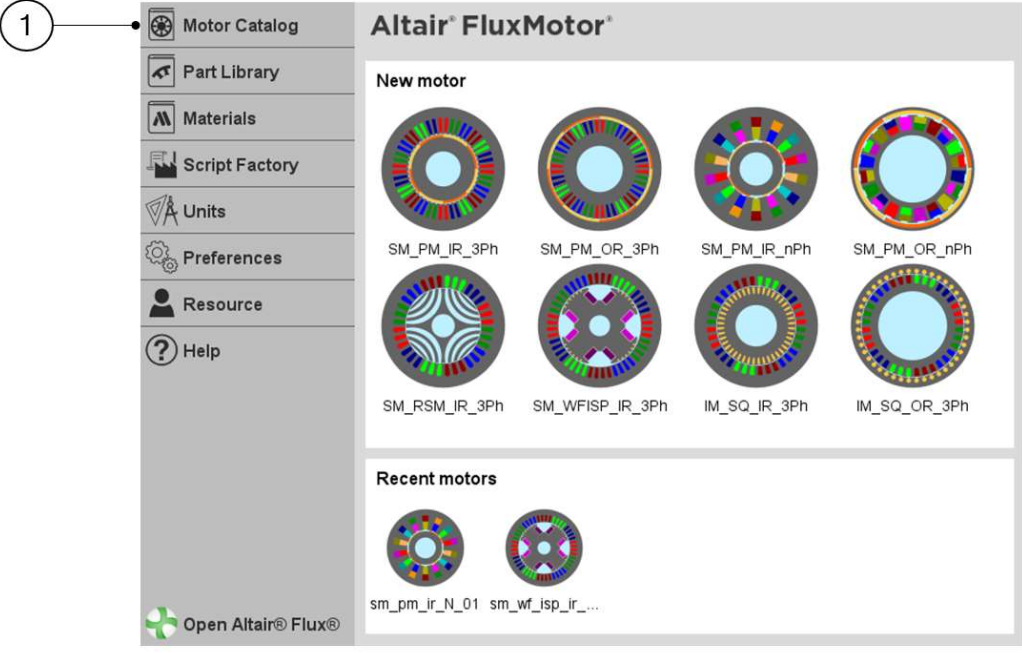


How to visualize motors?

| | | | | | | | | | | | | | | | | | |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | Selections of catalog for motors are displayed. | | | | | | | | | | | | | | | | |
| 2 | Reference catalogs available with FluxMotor®. | | | | | | | | | | | | | | | | |
| 3 | User's catalogs. | | | | | | | | | | | | | | | | |
| 4 | All the motors of the selected catalog are displayed in this area. Three ways are proposed to display and visualize the motors. | | | | | | | | | | | | | | | | |
| 5 | General data of the selected motor is displayed. | | | | | | | | | | | | | | | | |
| 6 | Performance of the selected motor is displayed. Note: Performance are displayed only if the datasheet test has been performed. See information on the Motor Factory user guide (TEST environment). | | | | | | | | | | | | | | | | |
| 7 | Button to display thumbnails as a slide show:  | | | | | | | | | | | | | | | | |
| 8 | Button to display thumbnails as a list: <table border="1" data-bbox="239 1500 1436 1657"> <tr> <td>M01_51S04P</td> <td>M02_06S04P</td> <td>M03_12S10P</td> <td>M04_18S06P</td> </tr> <tr> <td>M05_60S08P</td> <td>M06_18S12P</td> <td>M07_42S14P</td> <td>M08_27S18P</td> </tr> <tr> <td>M09_60S20P</td> <td>M10_60S10P</td> <td>M11_42S28P</td> <td>M12_51S34P</td> </tr> <tr> <td>M13_60S40P</td> <td>M14_18S04P</td> <td>M15_27S06P</td> <td>M16_42S04P</td> </tr> </table> | M01_51S04P | M02_06S04P | M03_12S10P | M04_18S06P | M05_60S08P | M06_18S12P | M07_42S14P | M08_27S18P | M09_60S20P | M10_60S10P | M11_42S28P | M12_51S34P | M13_60S40P | M14_18S04P | M15_27S06P | M16_42S04P |
| M01_51S04P | M02_06S04P | M03_12S10P | M04_18S06P | | | | | | | | | | | | | | |
| M05_60S08P | M06_18S12P | M07_42S14P | M08_27S18P | | | | | | | | | | | | | | |
| M09_60S20P | M10_60S10P | M11_42S28P | M12_51S34P | | | | | | | | | | | | | | |
| M13_60S40P | M14_18S04P | M15_27S06P | M16_42S04P | | | | | | | | | | | | | | |
| 9 | Button to display thumbnails as a matrix view of pictures is illustrated in our example. | | | | | | | | | | | | | | | | |

1.2 How to get into Motor Catalog?

Access to Motor Catalog is possible from the supervisor.
From the supervisor, click on the button “Motor Catalog”.



The screenshot displays the Altair FluxMotor software interface. On the left is a vertical navigation menu with icons and labels: Motor Catalog (circled with a '1'), Part Library, Materials, Script Factory, Units, Preferences, Resource, and Help. Below the menu is a green 'Open Altair® Flux®' button. The main window is titled 'Altair® FluxMotor®' and contains two sections: 'New motor' and 'Recent motors'. The 'New motor' section features eight circular motor icons arranged in a 2x4 grid, each with a unique color pattern and a label below it: SM_PM_IR_3Ph, SM_PM_OR_3Ph, SM_PM_IR_nPh, SM_PM_OR_nPh, SM_RSM_IR_3Ph, SM_WFISP_IR_3Ph, IM_SQ_IR_3Ph, and IM_SQ_OR_3Ph. The 'Recent motors' section shows two smaller motor icons with labels 'sm_pm_ir_N_01' and 'sm_wf_isp_ir_...'.

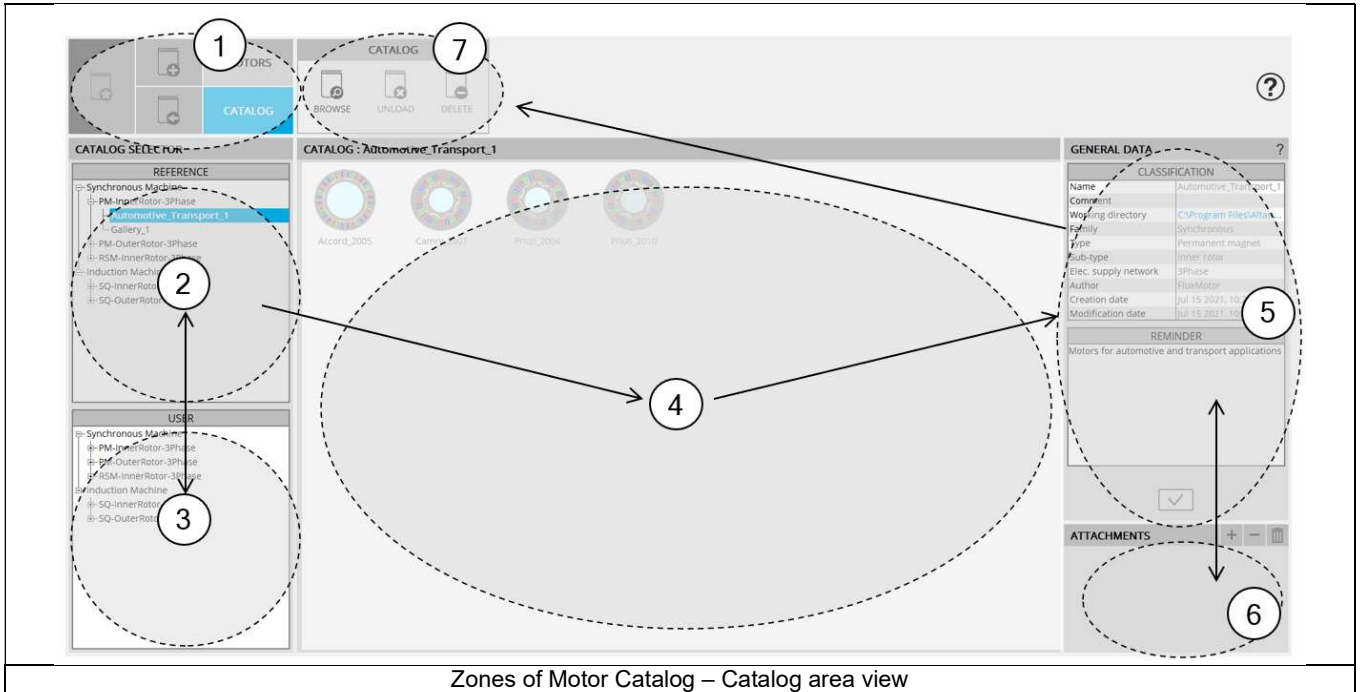
| | |
|---|-------------------------------------------------------------------------------------------------------------------------|
| 1 | Get into Motor Catalog from the supervisor by clicking on Motor Catalog button and directly get into the motor manager. |
|---|-------------------------------------------------------------------------------------------------------------------------|

2 MANAGEMENT OF CATALOGS

2.1 Overview

2.1.1 Main areas

Here are the main zones that compose “CATALOG” environment of the Motor Catalog.



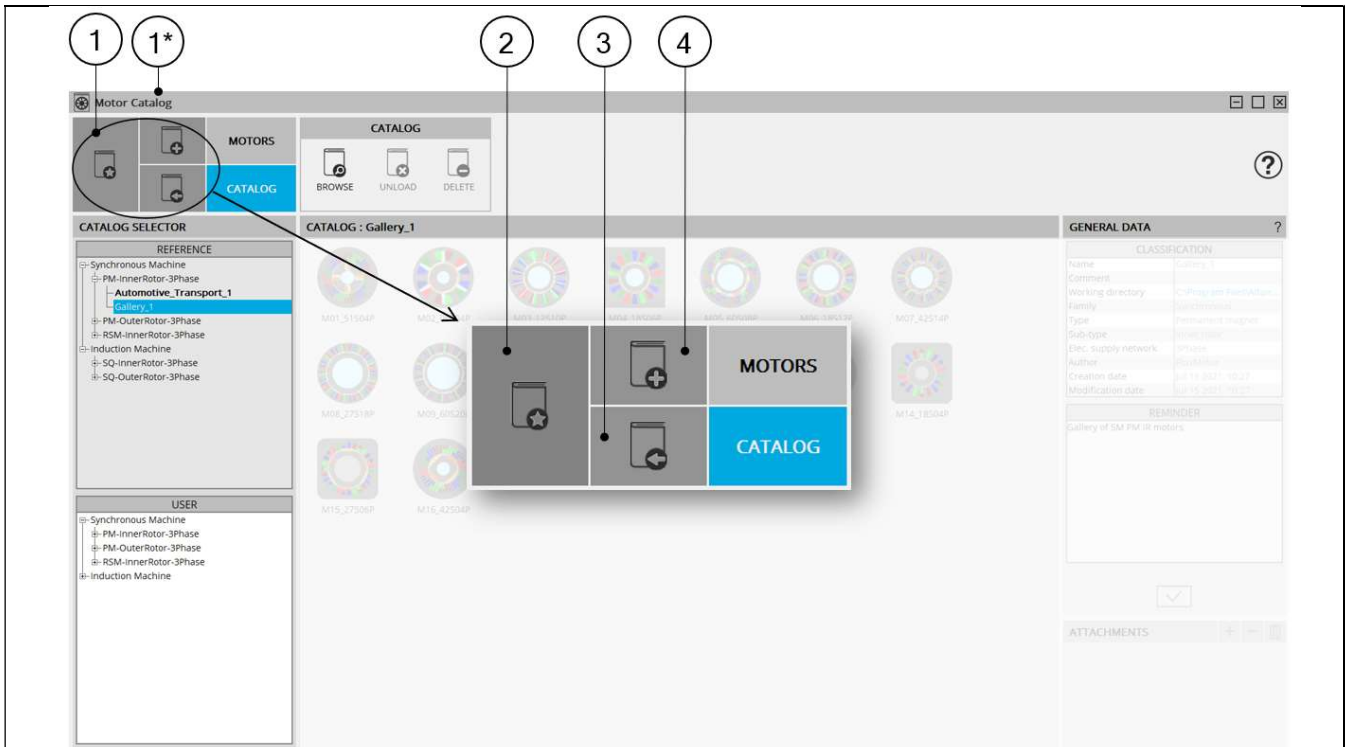
Zones of Motor Catalog – Catalog area view

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

2.1.2 Direct access to main functions

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

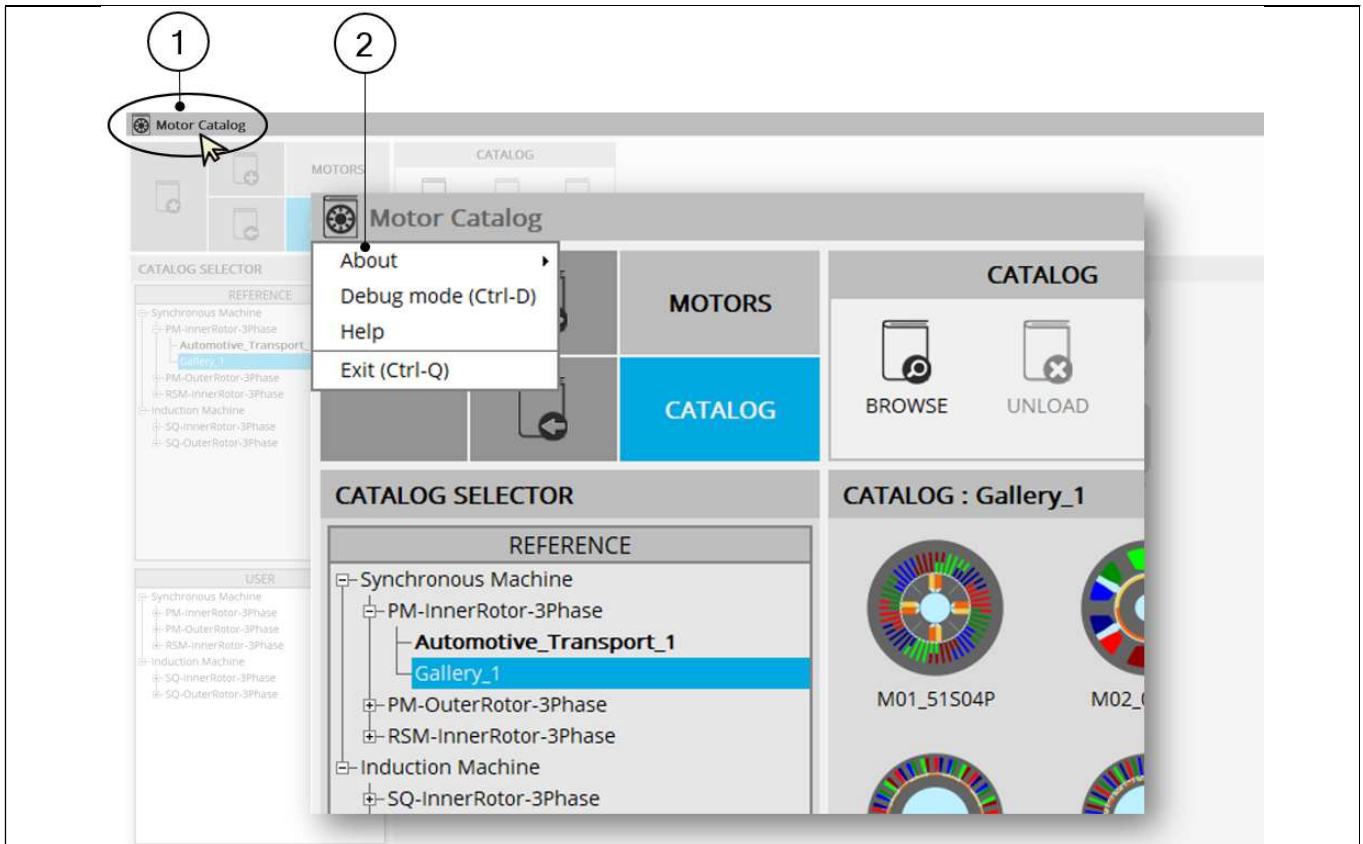
Note: These commands are available in CATALOG environment as well as in MOTORS environment.




| | |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <p>Click on one of the three main buttons to use some main system functions.</p> <ul style="list-style-type: none"> Book with a star = Set catalog as favorite Book with sign + = Create a new catalog Book with arrow = Load a catalog <p>Note: These three functions are available in the CATALOG and MOTORS areas.</p> |
| 1* | Clicking on this zone allows access to the main menu. |
| 2 | Set catalog as favorite. The selected catalog (bold characters) is opened. See the process in the chapter "Reference commands". |
| 3 | Load a catalog from a folder. See the process in the chapter "Reference commands". |
| 4 | Create a new catalog. See the process in the chapter "Reference commands". |

2.1.3 Expanding the menu in Motor Catalog

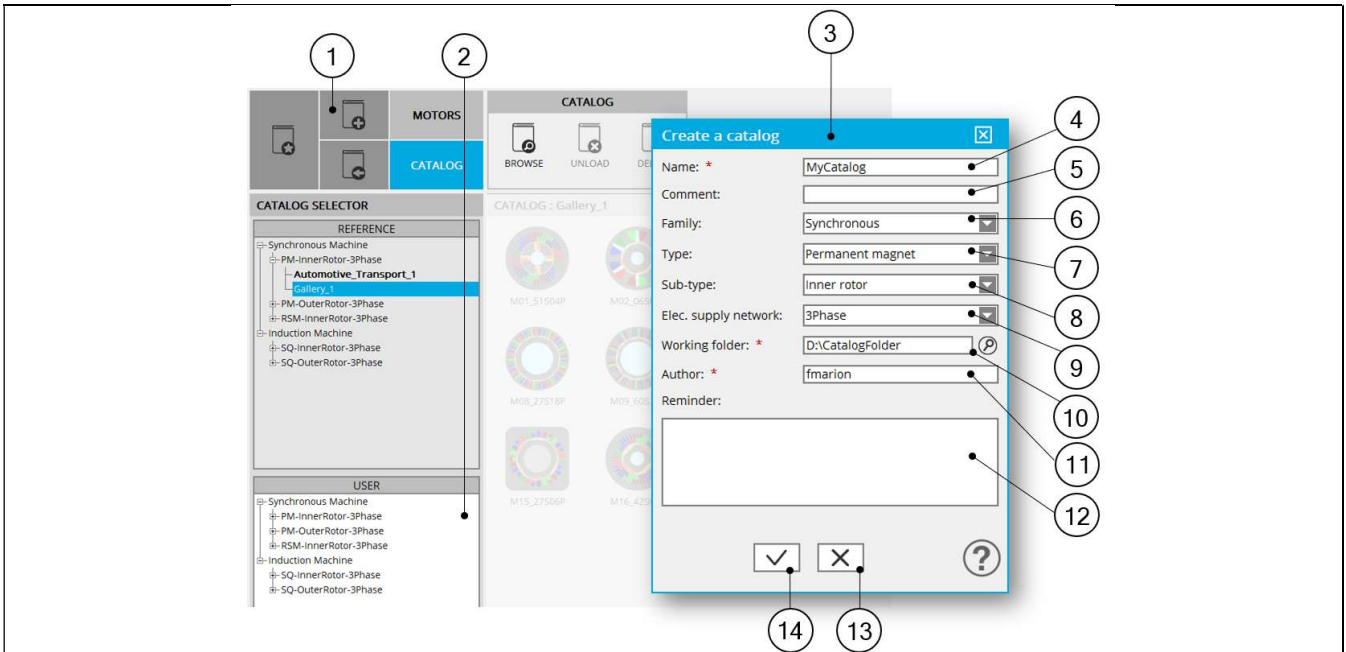
This menu gives access to system functions related to help and exit.



| | |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Expand the menu on the left top part of Motor Catalog in both areas: CATALOG or MOTORS. |
| 2 | List of actions available: <ul style="list-style-type: none"> • About • Debug mode • Help to open the online help documentation directly on the chapter dealing with Motor Catalog • Exit for closing Motor Catalog from the top menu of Motor Catalog |
|  | Close Motor Catalog is also possible by using this icon on the right top part of the Motor Catalog panel. |
| * | Close Motor Catalog 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 catalog



How to create a new catalog?

| | |
|----|---------------------------------------------------------------------------------------------------|
| 1 | Click on the button “create a new catalog” (Shortcut Ctrl - C). |
| 2 | The new catalog will be stored in user’s catalog. |
| 3 | Clicking on the button “Create a new catalog” opens a dedicated dialog box. |
| 4 | A catalog is defined by a name. |
| 5 | A comment can be added if needed (it will be the tooltip of the created catalog). |
| 6 | Select the family of machines to be considered (Synchronous / Induction) |
| 7 | Select the type of machine to be considered |
| 8 | Select the sub-type of machine to be considered |
| 9 | Select the electrical supply network number of phases to be considered |
| 10 | Select the folder in which you want to store the new Catalog |
| 11 | Set the author of this new catalog. |
| 12 | A reminder allows you for keeping important notes to know what was considered in the new catalog. |
| 13 | Button to apply inputs, create the new catalog and close the dialog box. |
| 14 | Button to close the dialog box and to cancel the creation of the catalog. |

Note 1: Once created, the catalog corresponds to a folder (“MyCatalog” in our example) in which data are stored about the motors. The catalog folder is stored in a parent folder (“CatalogFolder” in our example).

Note 2: The “Motors” are stored in the catalog folder (folder “Motors”).

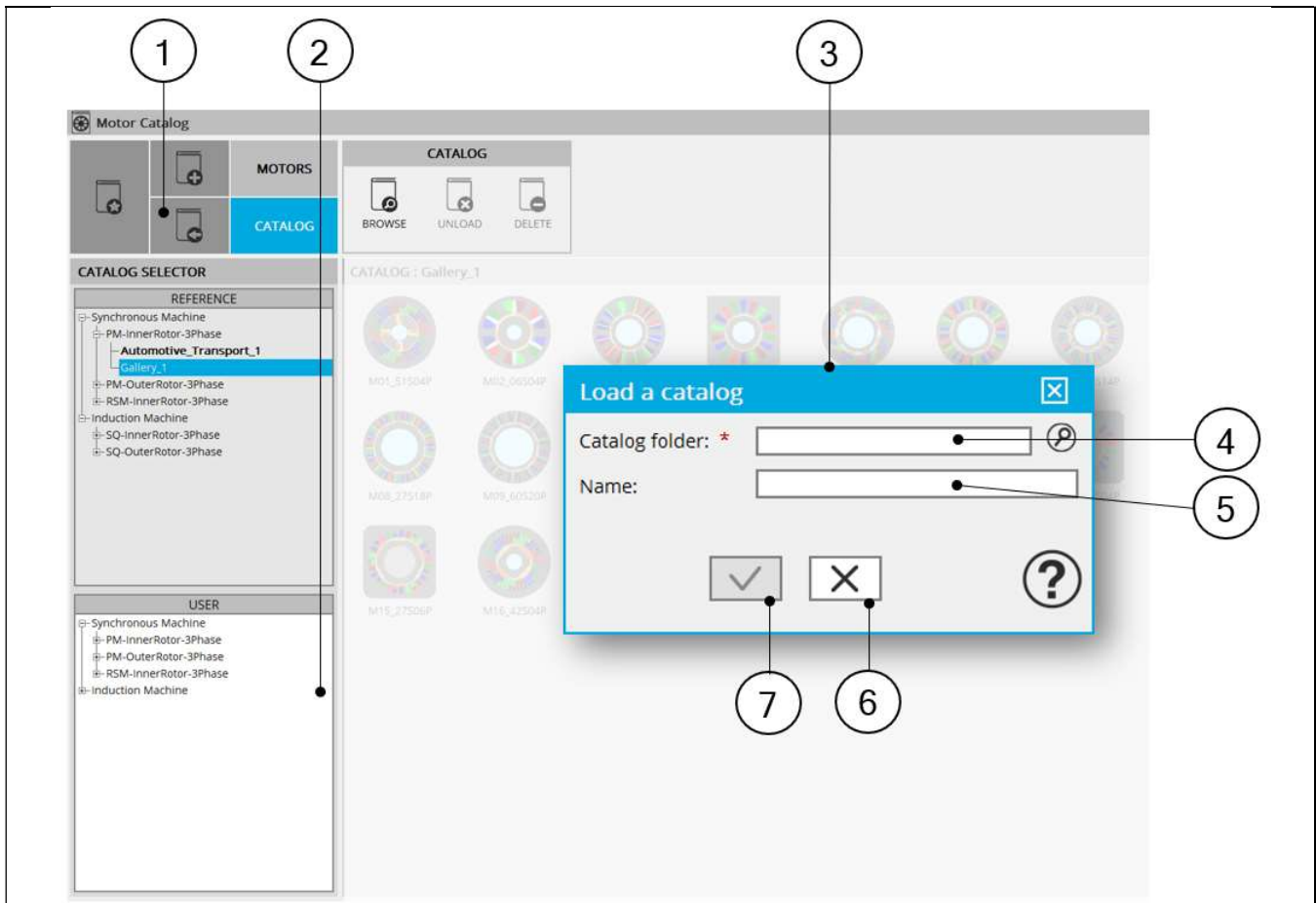
All the data corresponding to a motor, like the associated materials, parts, are stored in a specific folder. There are also the “Attachments” (folder “Attachments”) joined to the motor by the user.

2.2.2 Load a catalog

2.2.2.1 Introduction

As explained in the previous chapter, a catalog corresponds to a folder in which data are stored about the motors. Load a catalog allows to create a link between the folder corresponding to the catalog and the Motor Catalog application.

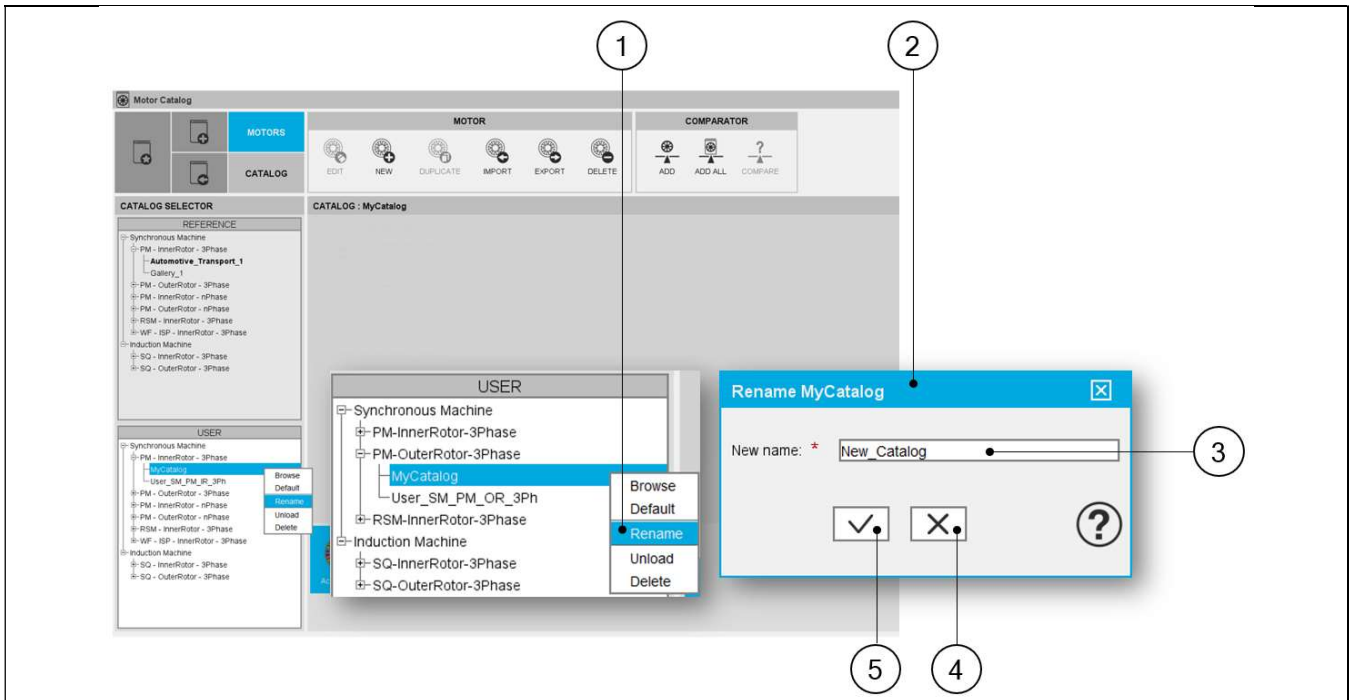
2.2.2.2 How to load a catalog?



How to load a catalog?

| | |
|---|--------------------------------------------------------------------------|
| 1 | Click on the button "Load a catalog". |
| 2 | The catalog is loaded in user's catalog. |
| 3 | Clicking on the button "Load a catalog" opens a dedicated dialog box. |
| 4 | The folder in which the targeted catalog is stored must be selected. |
| 5 | The name which will be assigned to the loaded catalog. |
| 6 | Button to close the dialog box and to cancel the loading of the catalog. |
| 7 | Button to apply inputs, load the new catalog and close the dialog box. |

2.2.3 Rename a catalog



How to rename a catalog?

| | |
|---|----------------------------------------------------------------------------------------------|
| 1 | Right Click on the catalog to be renamed. |
| 2 | The dialog box is opened to allow renaming of the selected catalog |
| 3 | Give a new name to the selected catalog (a name which is not already used in Motor Catalog). |
| 4 | Button to close the dialog box and to cancel the renaming of the catalog. |
| 5 | Button to apply inputs, rename the catalog and close the dialog box. |

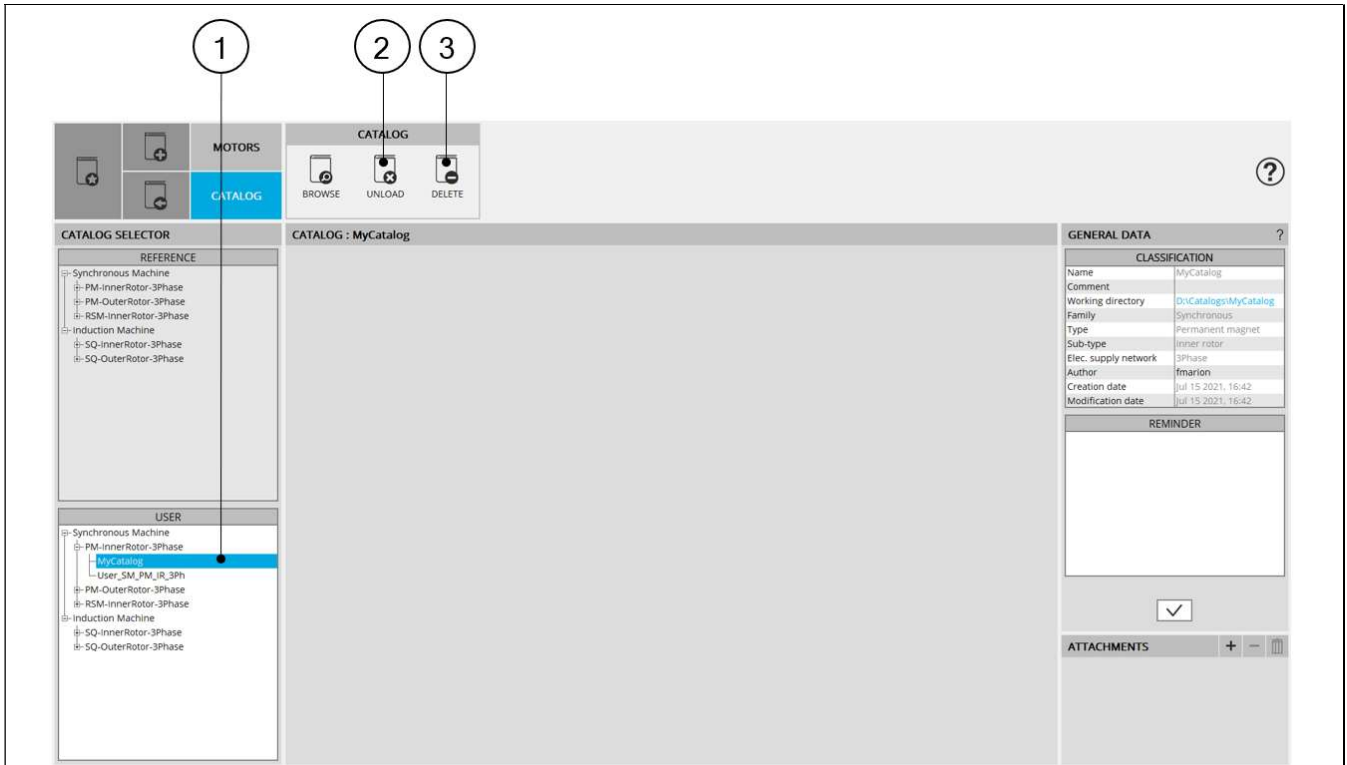
2.2.4 Unload or Delete a catalog.

2.2.4.1 Introduction

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

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

2.2.4.2 How to Unload or Delete a catalog?



How to Unload or Delete a catalog?

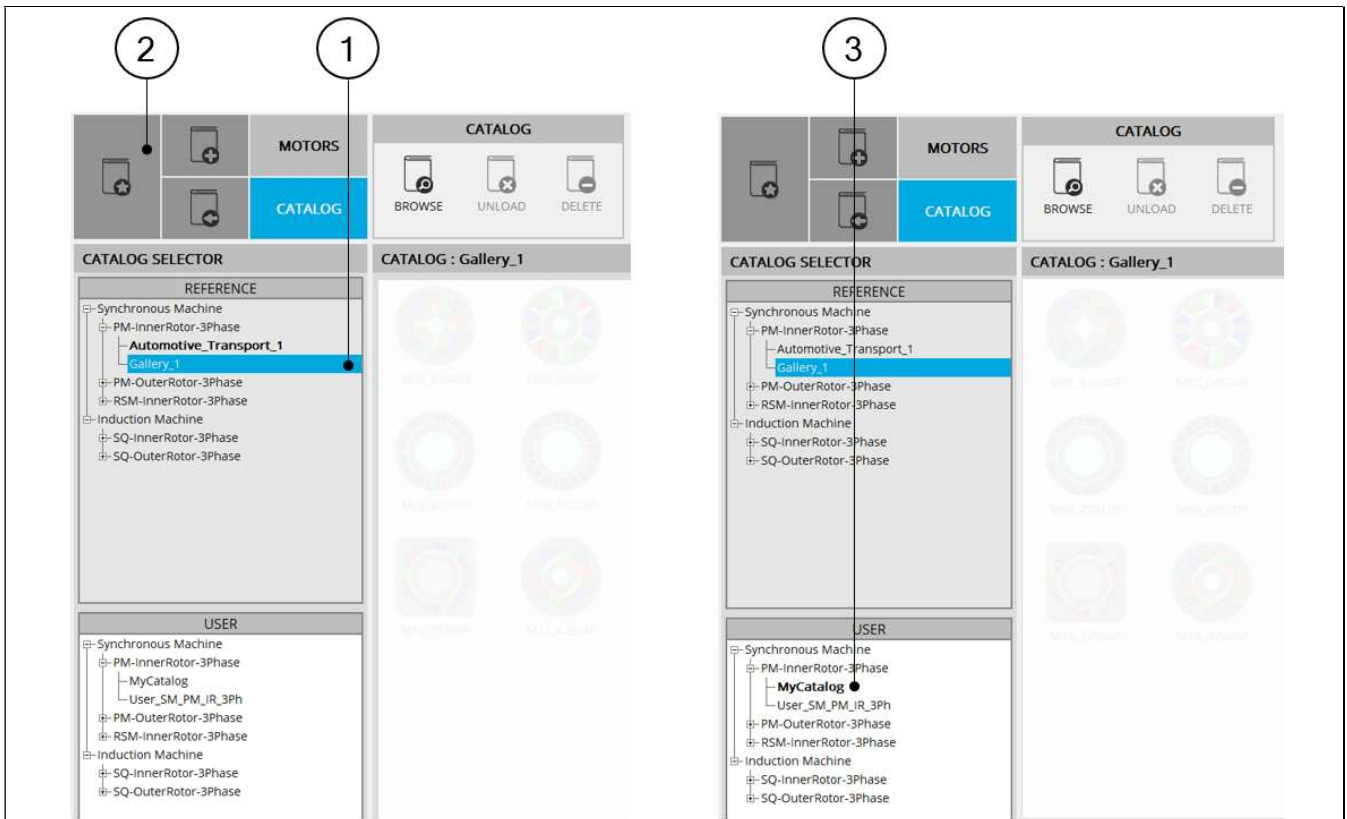
| | |
|---|--------------------------------------------------|
| 1 | Selection of the catalog to Unload or to Delete. |
| 2 | Button to Unload the selected catalog. |
| 3 | Button to Delete the selected catalog. |

2.2.5 Set catalog as favorite

2.2.5.1 Introduction

Setting a catalog as favorite allows opening this catalog in first, when opening Motor Catalog.

2.2.5.2 How to set a catalog as favorite?



How to set catalog as favorite?

| | |
|---|---------------------------------------------------------------------------------------------------|
| 1 | Selection of the catalog to set as favorite. |
| 2 | Click on the button to set the selected catalog as favorite. |
| 3 | The name of the favorite catalog is written in bold text. Note: There is one favorite catalog. |

2.3 General Data information

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

| GENERAL DATA ? | |
|--------------------------------------|--------------------------------------------|
| CLASSIFICATION | |
| Name | Gallery_1 |
| Comment | |
| Working directory | C:\Program Files\Altair... |
| Family | Synchronous |
| Type | Permanent magnet |
| Sub-type | Inner rotor |
| Elec. supply network | 3Phase |
| Author | FluxMotor |
| Creation date | Mar 12 2019, 20:03 |
| Modification date | Mar 12 2019, 20:03 |
| REMINDER | |
| Gallery of inner rotor motor samples | |
| <input checked="" type="checkbox"/> | |

Catalog information

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

2.4 Attachments

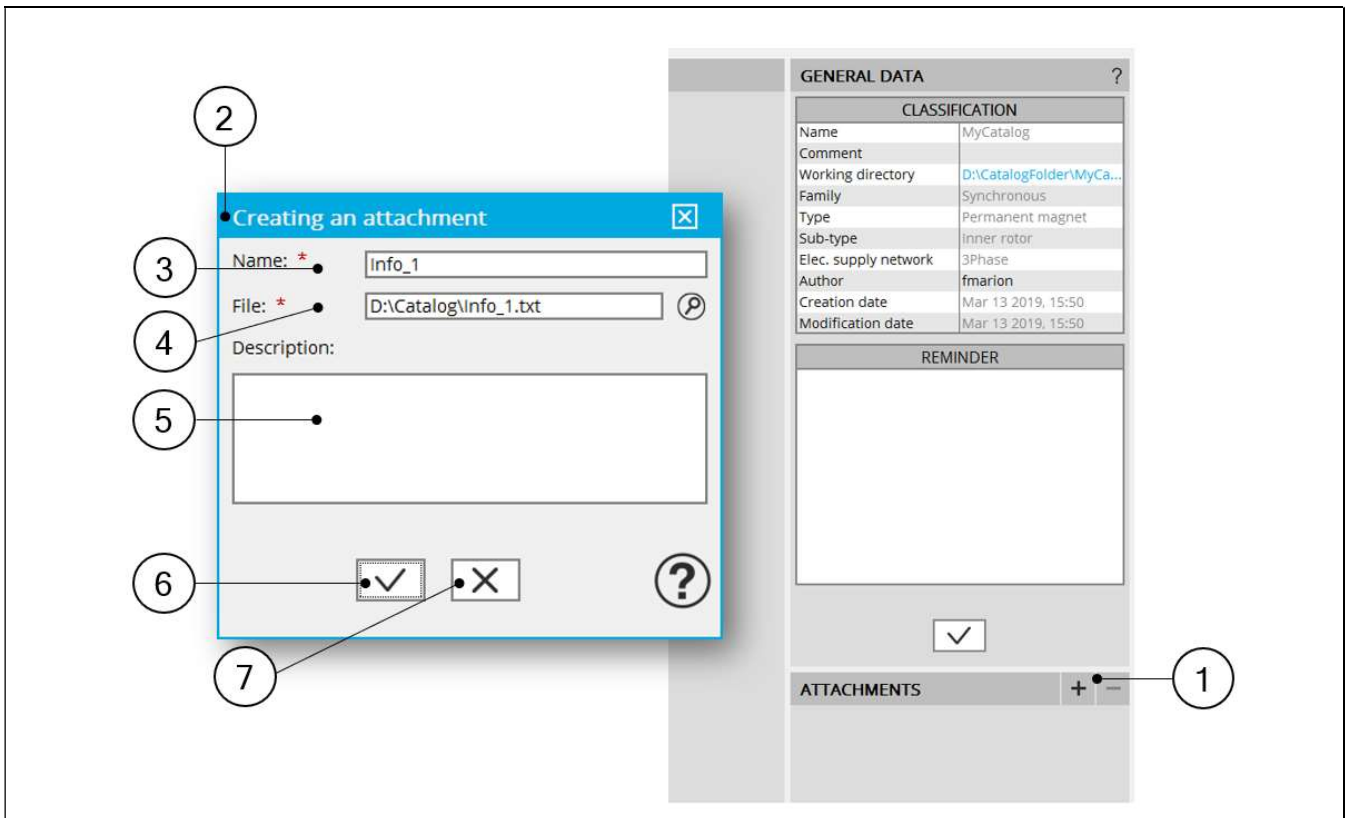
2.4.1 Introduction

Documents can be attached to User's catalogs. This allows quickly reaching for additional information to describe these catalogs.

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

Note 2: Documents can be linked to catalogs as well as to motors. See chapter Management of motors.

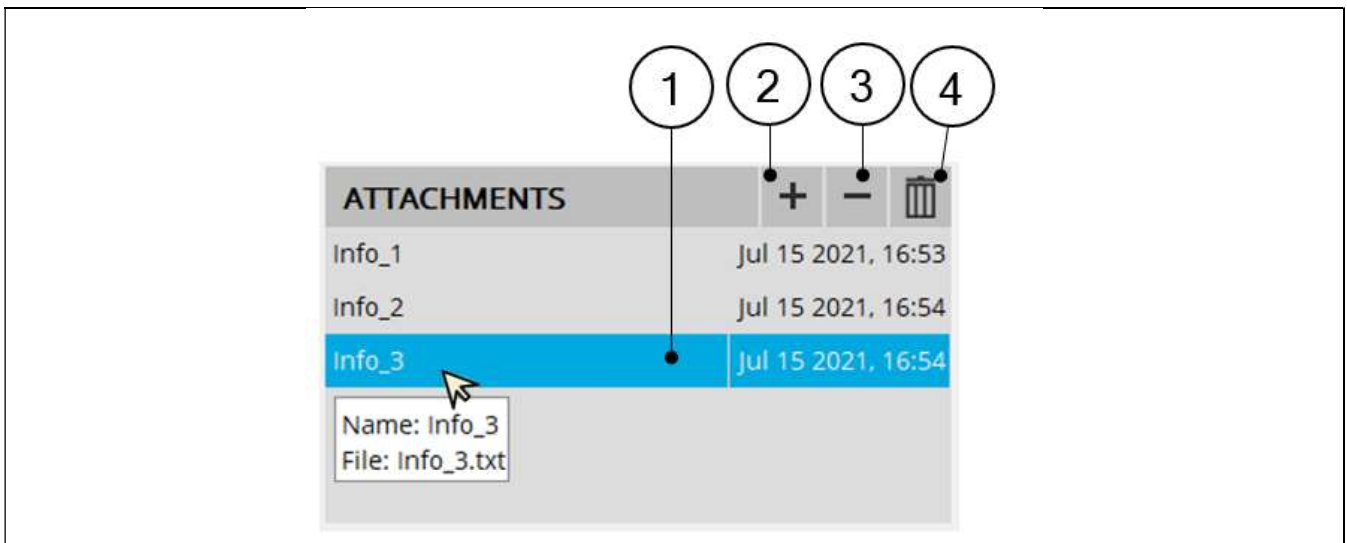
2.4.2 How to create an attachment?



Creation of an attachment

| | |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Button (+) to add an attached document. |
| 2 | A dedicated dialog box allows adding a new attached document. 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 is stored the document to be attached. |
| 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

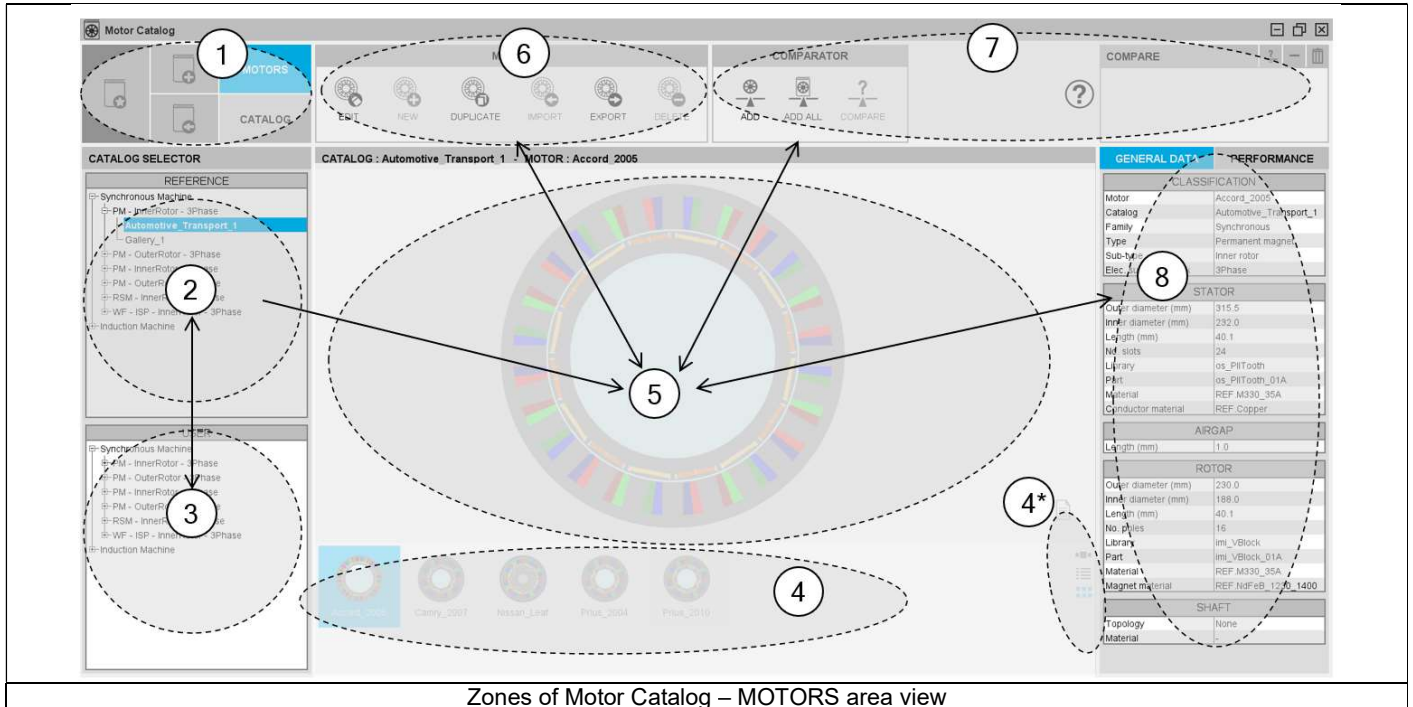
| | |
|---|----------------------------------------------------------------------------------------------------------------------------|
| 1 | Selection of an attached document. Once selected, a tooltip reminds the name and the description of the selected document. |
| 2 | Button (+) to add an attachment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

3 MANAGEMENT OF MOTORS

3.1 Overview

3.1.1 Main areas

Here are the main zones that compose “MOTORS” environment of the Motor Catalog.



Zones of Motor Catalog – MOTORS area view

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

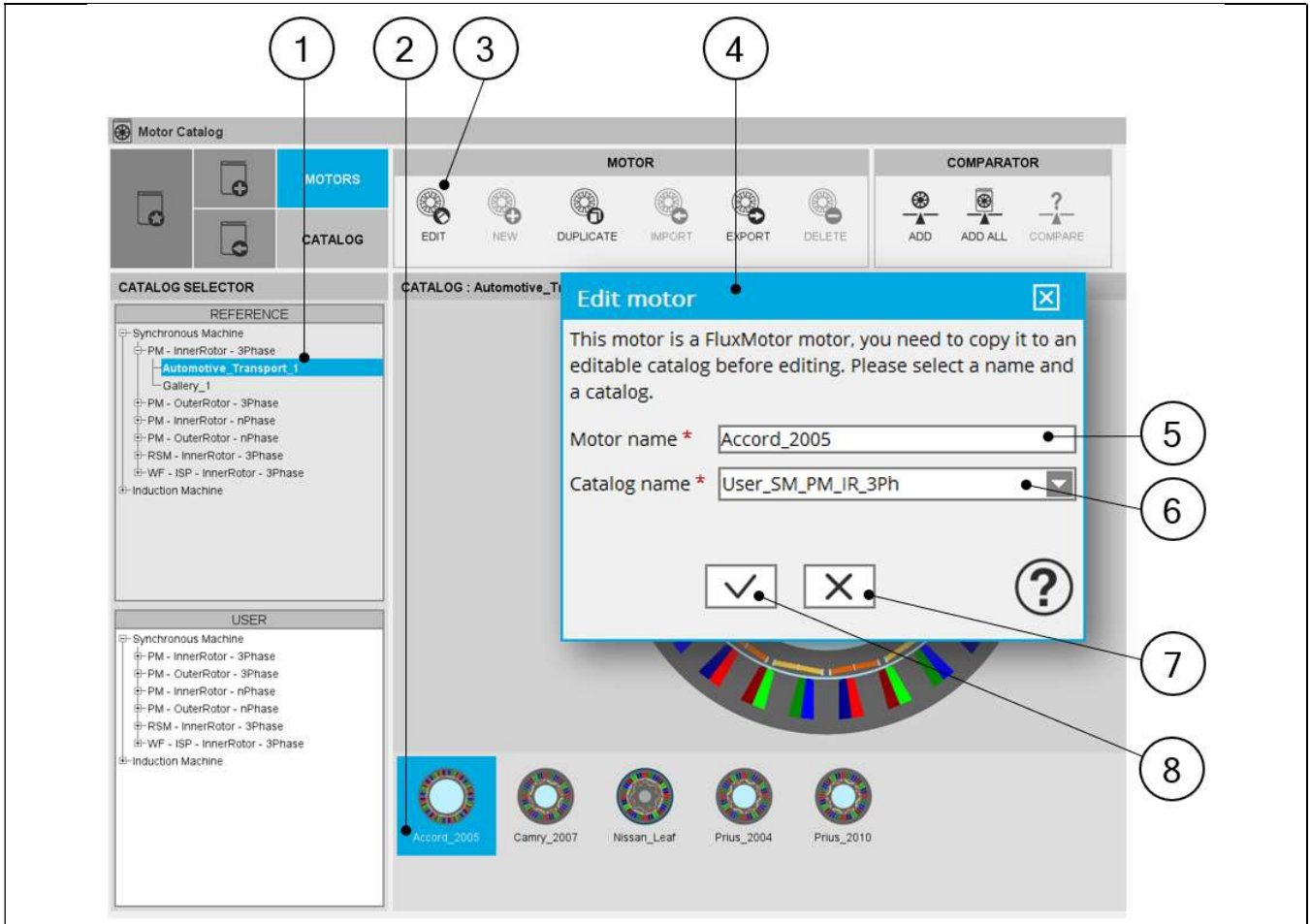
3.2 Reference commands

3.2.1 Edit a motor

3.2.1.1 Motor from the reference catalogs

Edit a motor allows modifying its general data and properties by using Motor Factory.

As all the motors from reference catalogs are in read only mode, before editing such motor user must copy it in a user's catalog. A dedicated dialog box allows doing that quickly as it is shown below.



Edit a motor from reference catalogs

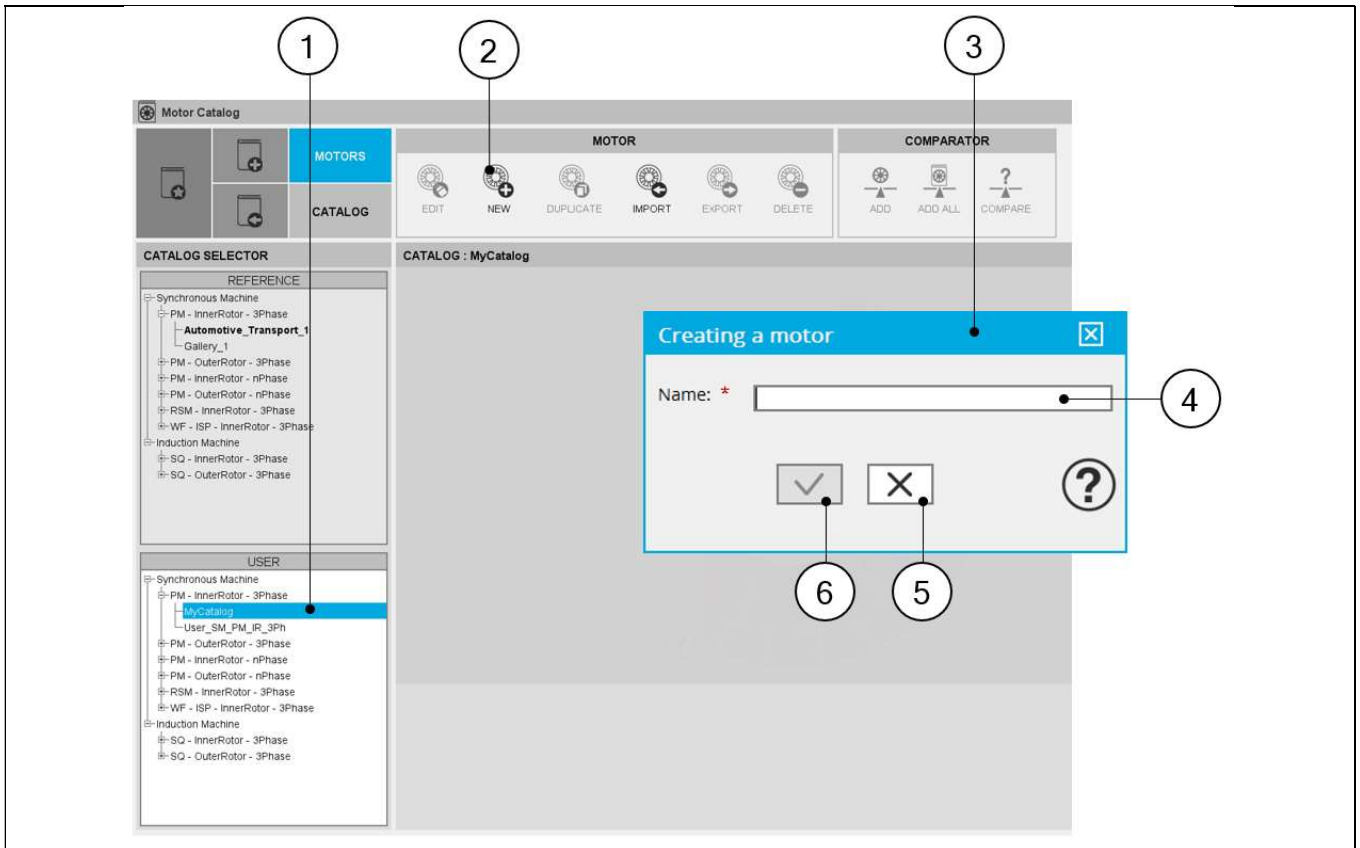
| | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Selection of a reference catalog. |
| 2 | Selection of one motor in the selected catalog. This motor is displayed in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

3.2.1.2 Motor from User's catalogs

In this case, as the motor is not in a Read only mode, it allows opening the motor directly with Motor Factory application which can be used to read or/and modify its characteristics.

3.2.2 Create a New motor.

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



How to create a new motor from Motor Catalog?

| | |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Selection of a user's catalog in which the new motor will be stored. The selected catalog must correspond to the type of the motor to be created. |
| 2 | Click on the button "New". |
| 3 | A dialog box is automatically opened to allow the process of creation. |
| 4 | A name must be given to the new motor. It will be stored in the selected catalog. Then, Motor Factory environment is opened to design the new motor. Note: If the new motor is not saved in Motor Factory, its name doesn't appear in Motor Catalog. |
| 5 | Cancel the creation of a new motor from Motor Catalog. |
| 6 | Button to apply inputs and create the new motor. Then, Motor Factory is launched which allows to read and/or the modification of the characteristics of the motor. Note: The new motor "NewMotor1" previously created will be stored in the corresponding catalog. See next illustration. |

The screenshot displays the Altair FluxMotor software interface. On the left, there is a 'CATALOG SELECTOR' with 'REFERENCE' and 'USER' sections. The 'USER' section shows a tree view where 'MyCatalog' is selected. In the center, a 3D model of a motor is shown with a blue stator and a multi-colored rotor. On the right, a 'COMPARE' window is open, showing 'GENERAL DATA' and 'PERFORMANCE' tabs. The 'GENERAL DATA' tab displays a table of motor specifications.

| CLASSIFICATION | |
|----------------------|------------------|
| Motor | NewMotor_1 |
| Catalog | MyCatalog |
| Family | Synchronous |
| Type | Permanent magnet |
| Sub-type | Inner rotor |
| Elec. supply network | 3Phase |

| STATOR | |
|---------------------|-----------------|
| Outer diameter (mm) | 315.5 |
| Inner diameter (mm) | 232.0 |
| Length (mm) | 40.1 |
| No. slots | 24 |
| Library | os_P11Tooth |
| Part | os_P11Tooth_01A |
| Material | REF M330_35A |
| Conductor material | REF Copper |

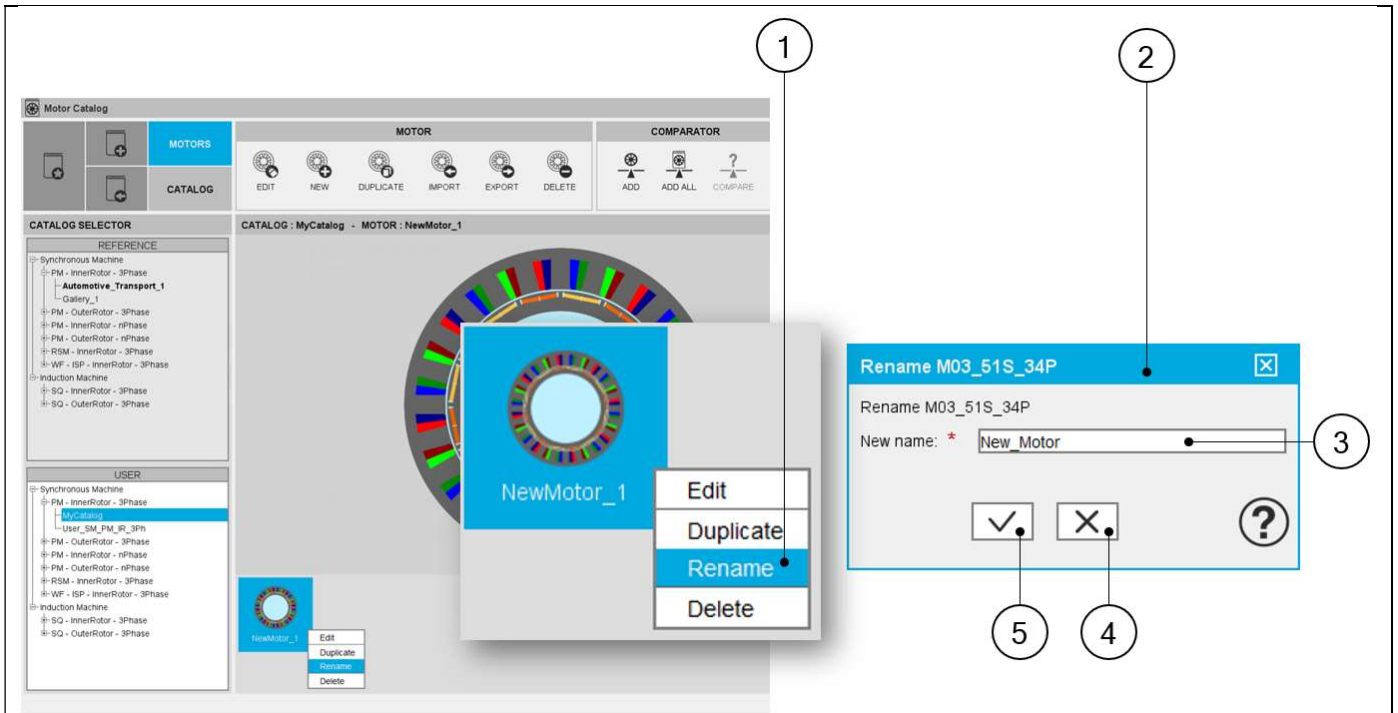
| ARGAP | |
|-------------|-----|
| Length (mm) | 1.0 |

| ROTOR | |
|---------------------|---------------------|
| Outer diameter (mm) | 230.0 |
| Inner diameter (mm) | 188.0 |
| Length (mm) | 40.1 |
| No. poles | 16 |
| Library | im_VBlock |
| Part | im_VBlock_01A |
| Material | REF M330_35A |
| Magnet material | REF NdFeB_1230_1400 |

| SHAFT | |
|----------|------|
| Topology | None |
| Material | - |

The new motor "NewMotor1" (1) previously created is stored in the corresponding catalog (2).
 Its general data are displayed in the corresponding tab (3).
 Performance will be added only when the datasheet test will be performed (3).

3.2.3 Rename a motor

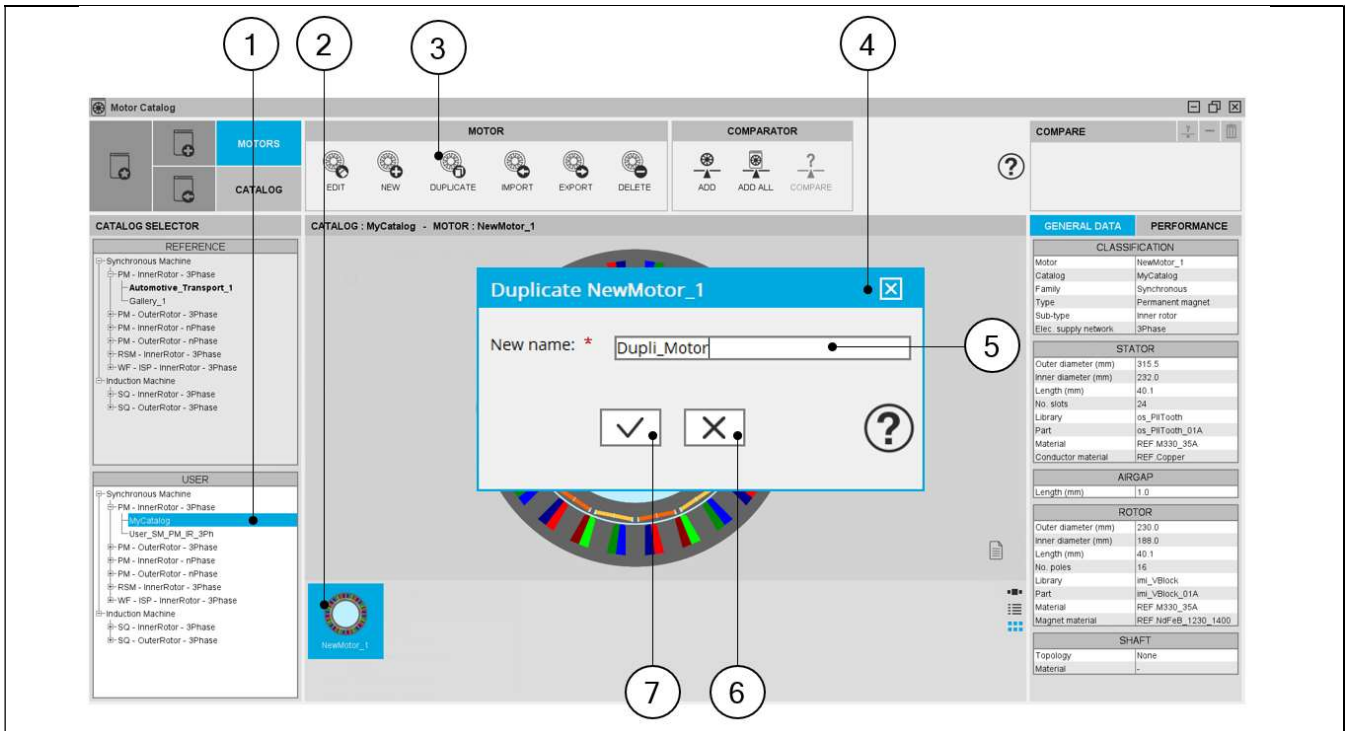


How to rename a motor?

| | |
|---|--------------------------------------------------------------------------------------------|
| 1 | Right Click on the motor to be renamed. |
| 2 | The dialog box is opened to allow renaming of the selected motor |
| 3 | Give a new name to the selected motor (a name which is not already used in Motor Catalog). |
| 4 | Button to close the dialog box and to cancel the renaming of the motor. |
| 5 | Button to apply inputs, rename the motor and close the dialog box. |

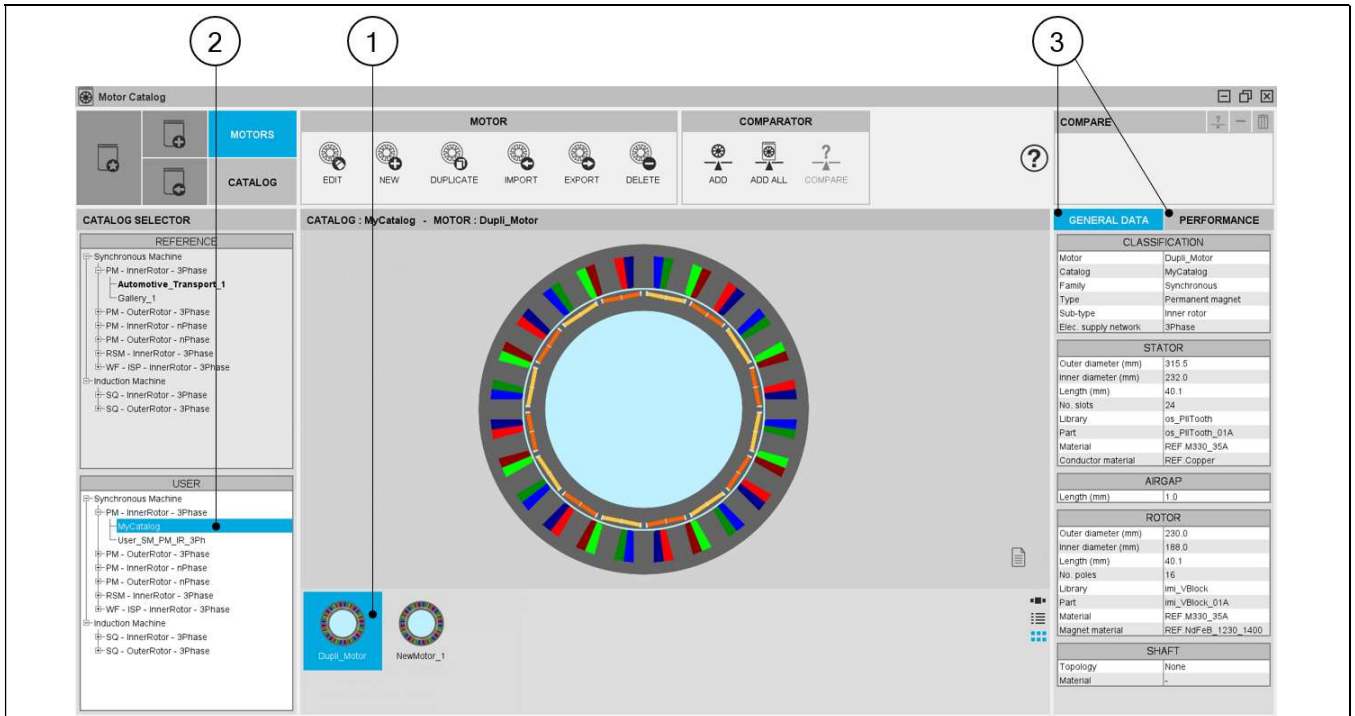
3.2.4 Duplicate

The duplication of a motor is possible only in a user's catalog. If you select a Reference catalog, the icon "DUPLICATE" is disabled.
 Note: If the selected catalog is empty, the icon "DUPLICATE" is disabled.



How to duplicate motor?

| | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Selection of a user's catalog in which the motor to be duplicated is stored. |
| 2 | Selection of the motor 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 motor. |
| 6 | Button to cancel the editing of the motor. |
| 7 | Button to apply inputs and create the new motor. Note: The new motor "Dupli_Motor" previously created will be stored in the corresponding catalog. See next illustration. |



The new motor "Dupli_Motor" (1) previously created is stored in the corresponding catalog (2).
 Its general data are displayed in the corresponding tab (3).
 Performance are available only if the datasheet test has been performed (3).

3.2.5 Import of motors

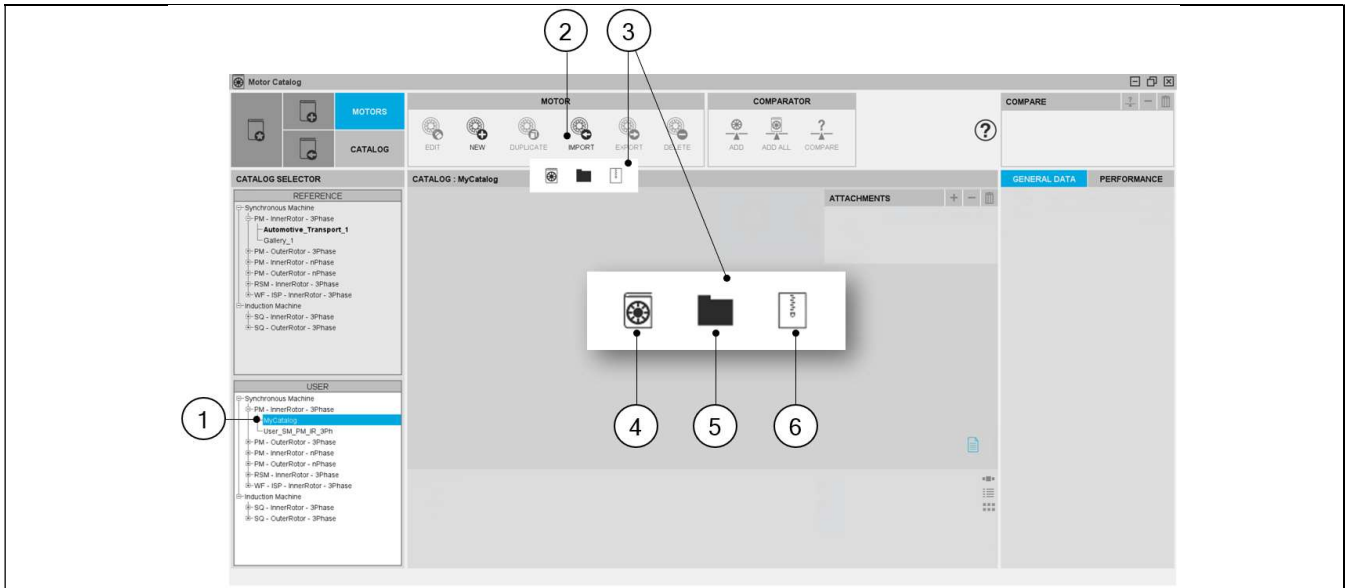
3.2.5.1 Introduction

Three ways are possible for importing a motor in a user's catalog:

- Import of motors from another catalog
- Import of motors from a folder
- Import of motors from a zip file

Note: Importing of motors is possible only in a user's catalog. Whatever is the selected import mode, if you select a Reference catalog, the icon "Import" is disabled.

Clicking on the icon "IMPORT" opens a dialog box, allowing select one way for importing the motors.

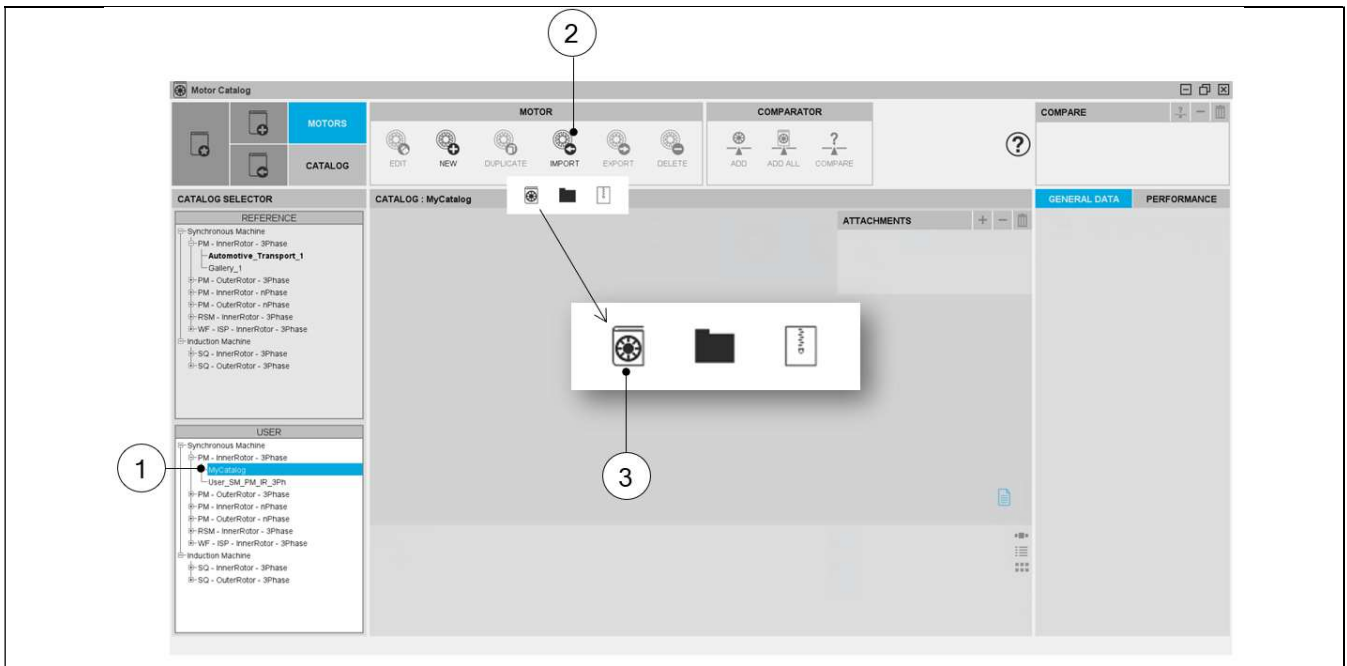


How to import a motor in a catalog (Motor Catalog) ?

| | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Selection of a user's catalog in which the motors to import will be stored. Note: In this example, the catalog in which motors will be imported is currently empty. |
| 2 | Click on the button "IMPORT". |
| 3 | Clicking on the icon "IMPORT" opens a dialog box, allowing three ways for importing motors. |
| 4 | 1 st solution: Import motors from another catalog. |
| 5 | 2 nd solution: Import a motor from a folder. |
| 6 | 3 rd solution: Import a motor from a zip file. |

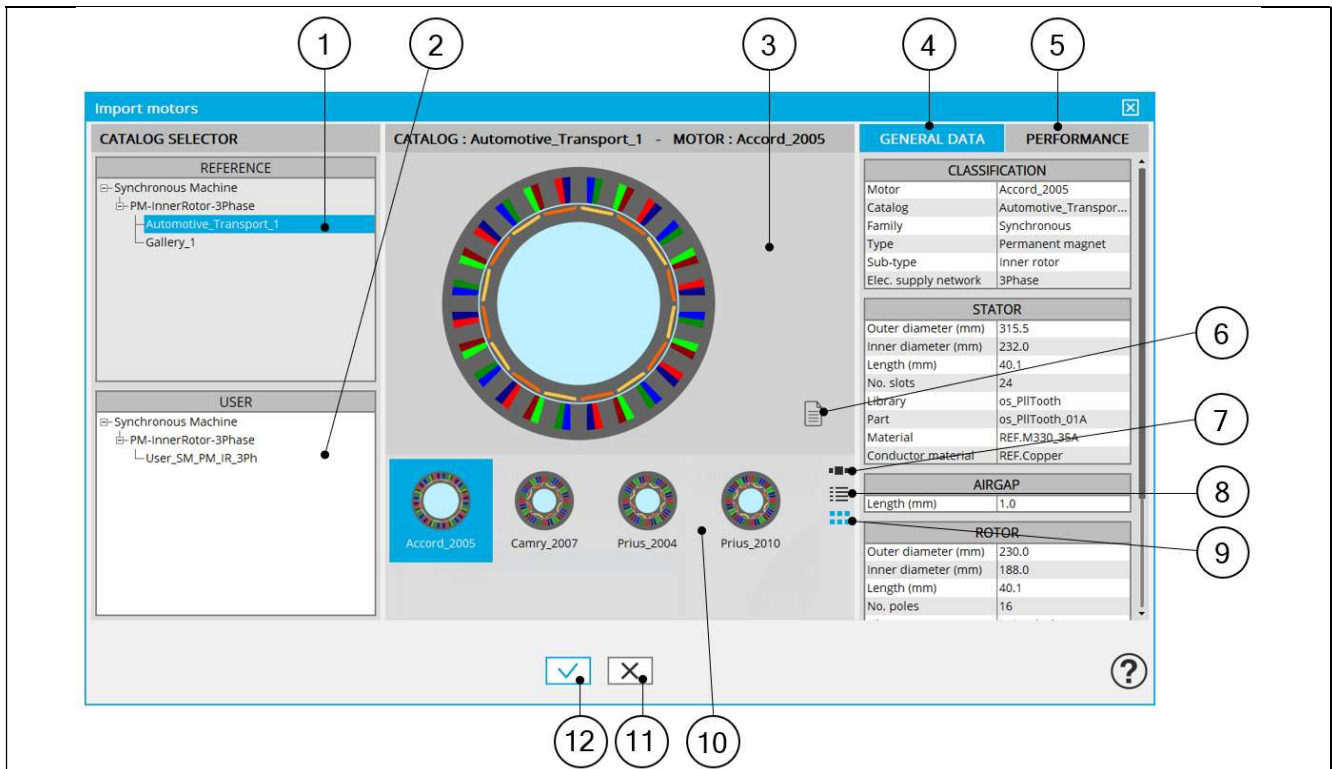
These three ways for importing motors in Motor Catalog are illustrated below.

3.2.5.2 Import of motors from a catalog



How to import a motor from another catalog ?

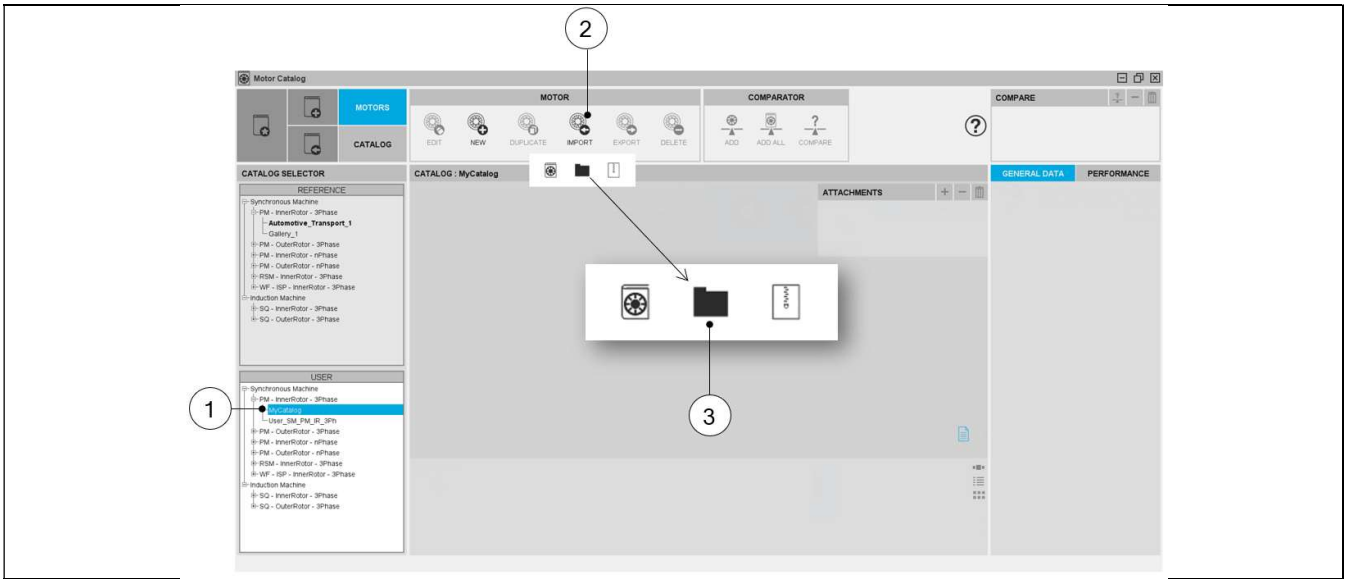
| | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Selection of a user's catalog in which the motors to import will be stored. Note: In this example, the catalog in which motors will be imported is currently empty. |
| 2 | Click on the button "IMPORT". |
| 3 | Clicking on the icon "IMPORT" opens a dialog box, allowing three ways for importing motors. Select the first one: "import from a catalog." Clicking on this icon allows access to the Motor Catalog. This allows to visualize, compare, choose, and import another motor topology in the selected catalog as illustrated in the next table. |



How to select motors to import?

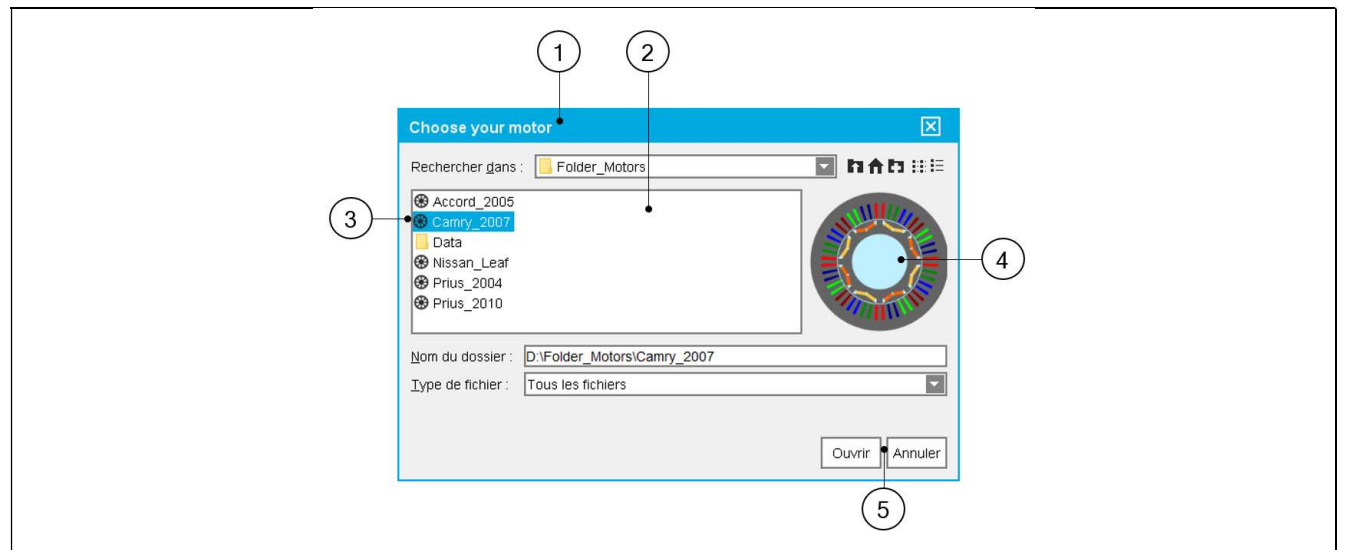
| | |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Visualization of reference catalog i.e. the catalogs of motor topologies provided with FluxMotor®. Select them to view their contents and choose motors among them. |
| 2 | Visualization of user catalogs. The default user catalog is "UserSynchronous". |
| 3 | Area where the selected motor is displayed (static picture). |
| 4 | General data of the selected motor. |
| 5 | Performance of the selected motor (available when the datasheet test has been performed. See Motor Factory user guide (TEST environment). |
| 6 | Button to visualize the list of documents attached to the motor. See additional information. |
| 7 | Button to display thumbnails as a slide show. |
| 8 | Button to display thumbnails as a list. |
| 9 | Button to display thumbnails as a matrix view of pictures. |
| 10 | Area to visualize all the topologies of motors from the selected catalog. |
| 11 | Button to close the dialog box and cancel import of motors. |
| 12 | Button to choose and import the selected motors. |

3.2.5.3 Import a motor from a folder



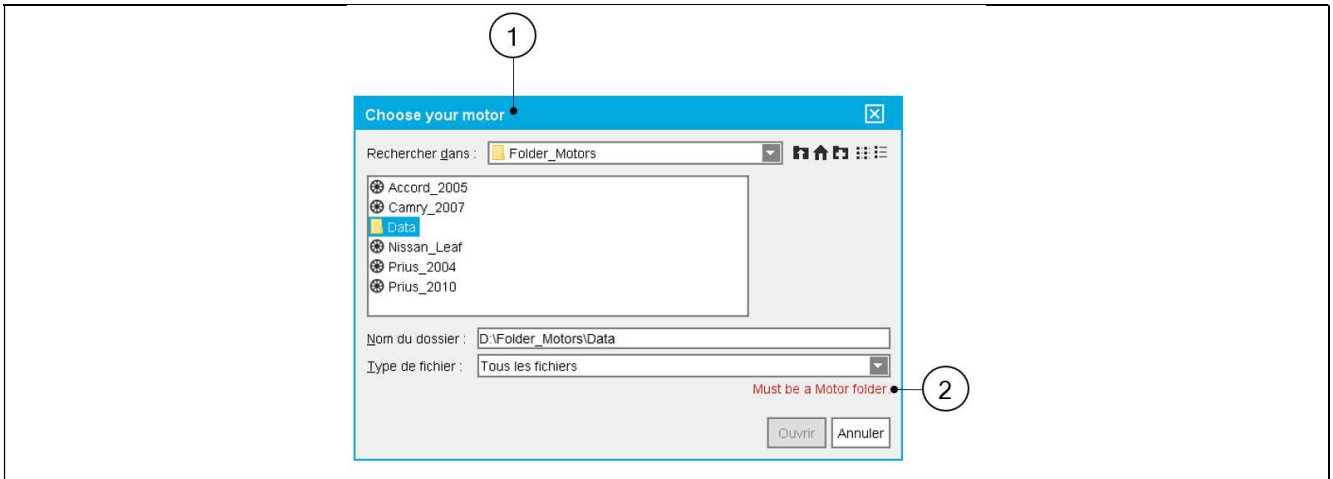
How to import a motor from a folder ?

| | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Selection of a user's catalog in which the motors to import will be stored. Note: In this example, the catalog in which motors will be imported is currently empty. |
| 2 | Click on the button "IMPORT". |
| 3 | Clicking on the icon "IMPORT" opens a dialog box, allowing three ways for importing motors. Select the second one: "import from folder." Clicking on this icon opens a dialog box to browse and find the folder to be considered. |



How to select motors to import?

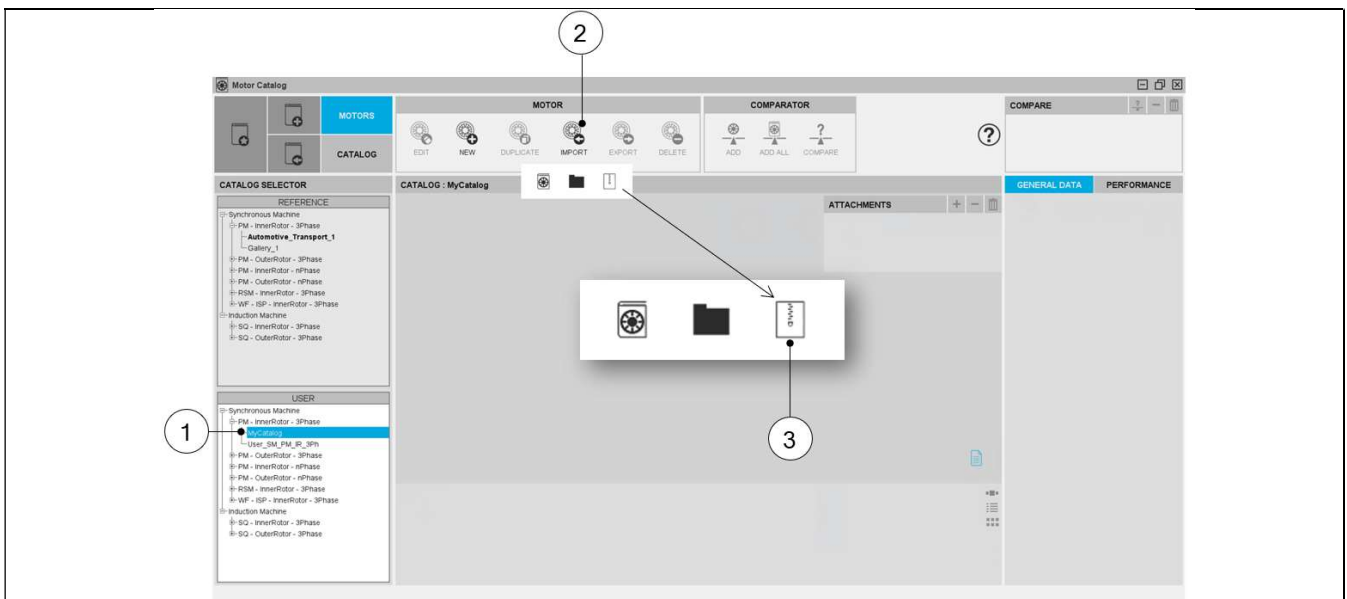
| | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Dialog box to browse and find the folder to be considered. |
| 2 | Visualization of the folder content. |
| 3 | Select the motor to be imported. When the selected folder corresponds to a motor, an icon representing a motor is displayed before the motor name. When the selected folder is not identified as a motor, a warning message is written in red (Must be a motor folder). Please see the following illustration |
| 4 | When a motor is selected, its picture is displayed on the right side of the dialog box to facilitate the selection of the right motor. |
| 5 | Two button allows confirm or cancel the selection. The "Open" button will be enabled only if a valid motor is selected. |



How to select the right motor to be imported?

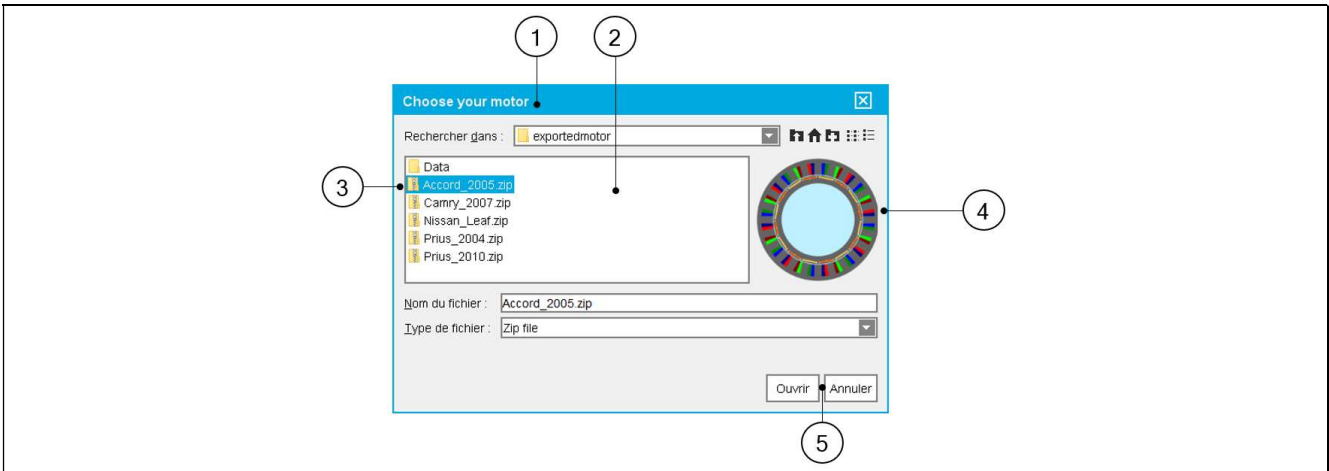
| | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Dialog box to browse and find the folder to be considered. |
| 2 | When the selected folder is not identified as a motor, a warning message is written in red (Must be a motor folder). The "Open" button will be disabled if the selected folder is not a motor. |

3.2.5.4 Import of a motor from a zip file



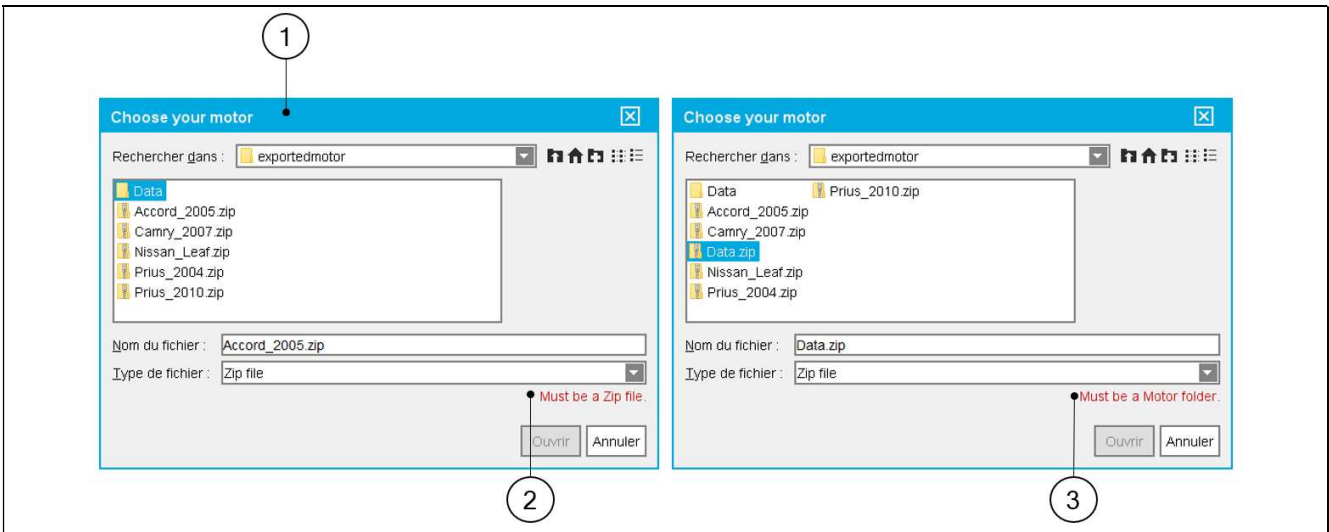
How to import a motor from a zip file ?

| | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Selection of a user's catalog in which the motors to import will be stored. Note: In this example, the catalog in which motors will be imported is currently empty. |
| 2 | Click on the button "IMPORT". |
| 3 | Clicking on the icon "IMPORT" opens a dialog box, allowing three ways for importing motors. Select the third one: "import from zip". Clicking on this icon opens a dialog box to browse and find the zip file to be considered. |



How to select motors to import?

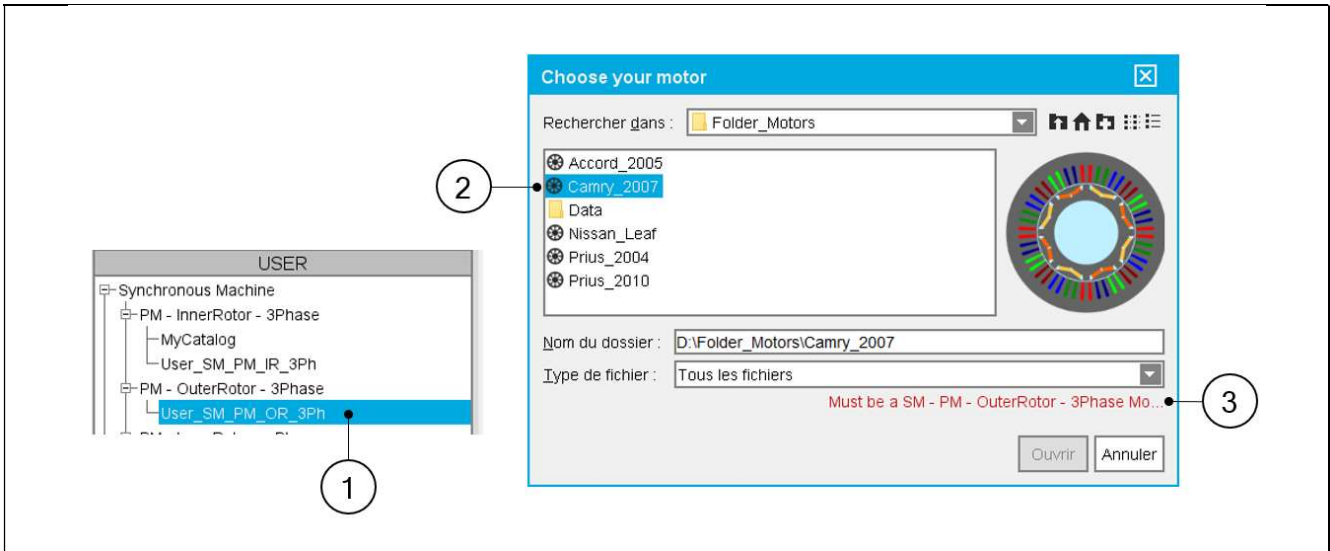
| | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Dialog box to browse and find the folder to be considered. |
| 2 | Visualization of the folder content. |
| 3 | Select the zip file (motor) to be imported. When the selected folder is not a zip file, a warning message is written in red (Must be a Zip file). Please see the following illustration. When the selected zip file is not identified as a zipped motor, a warning message is written in red (Must be a folder). Please see the following illustration. |
| 4 | When a zip file with a motor in it is selected, its picture is displayed on the right side of the dialog box to facilitate the selection of the right motor. |
| 5 | Two buttons allow confirm or cancel the selection. The "Open" button will be disabled if a selected folder is not a zip file containing a motor. |



How to select the right motor to be imported?

| | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Dialog box to browse and find the zip file to be considered. |
| 2 | When the selected folder is not a zip file, a warning message is written in red (Must be a Zip file). The "Open" button will be disabled if a selected folder is not a zipped motor |
| 3 | When the selected zip file is not identified as a zipped motor, a warning message is written in red (Must be a folder). The "Open" button will be disabled if a selected folder is not a zipped motor. |

Note: The selected user's catalog and the motor to be imported must be compatible.

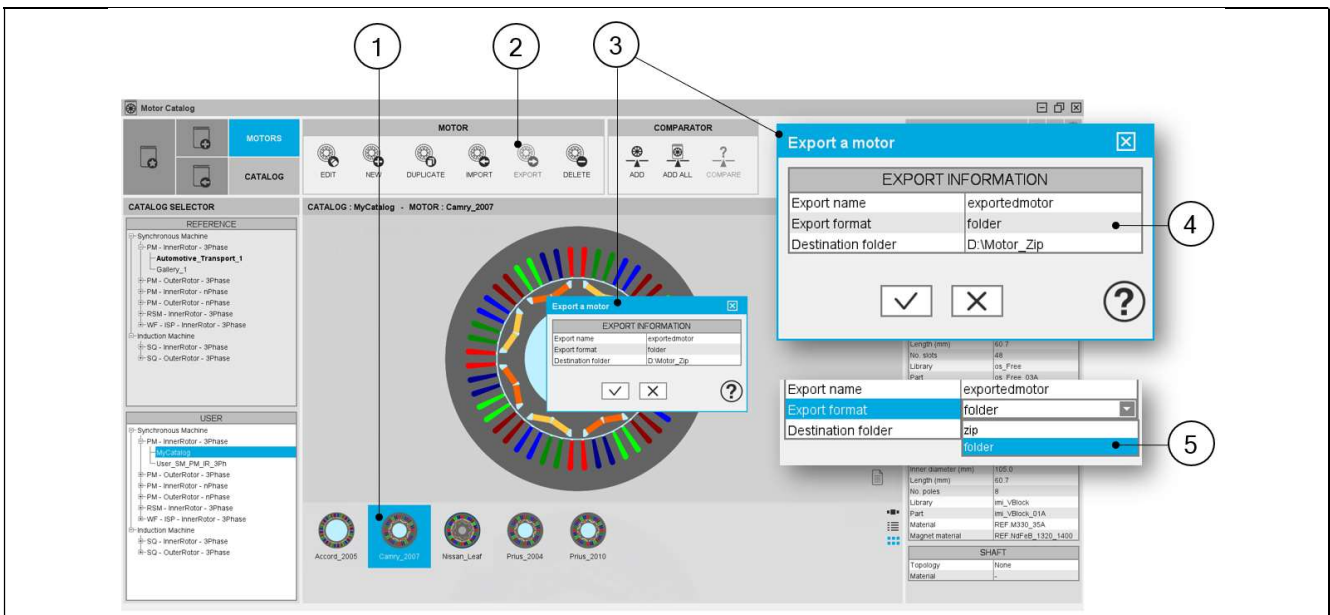


Compatibility between selected user's catalog and the motor to be imported?

| | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Selected user's catalog in which the motor must be imported: in that case outer rotor synchronous machine with permanent magnets |
| 2 | Selection of the motor to be imported: in that case inner rotor synchronous machine with permanent magnets. |
| 3 | As the two previous selections are not compatible an error message is written in red to explain why it is not possible to finalize the operation. |

3.2.6 Export of motors

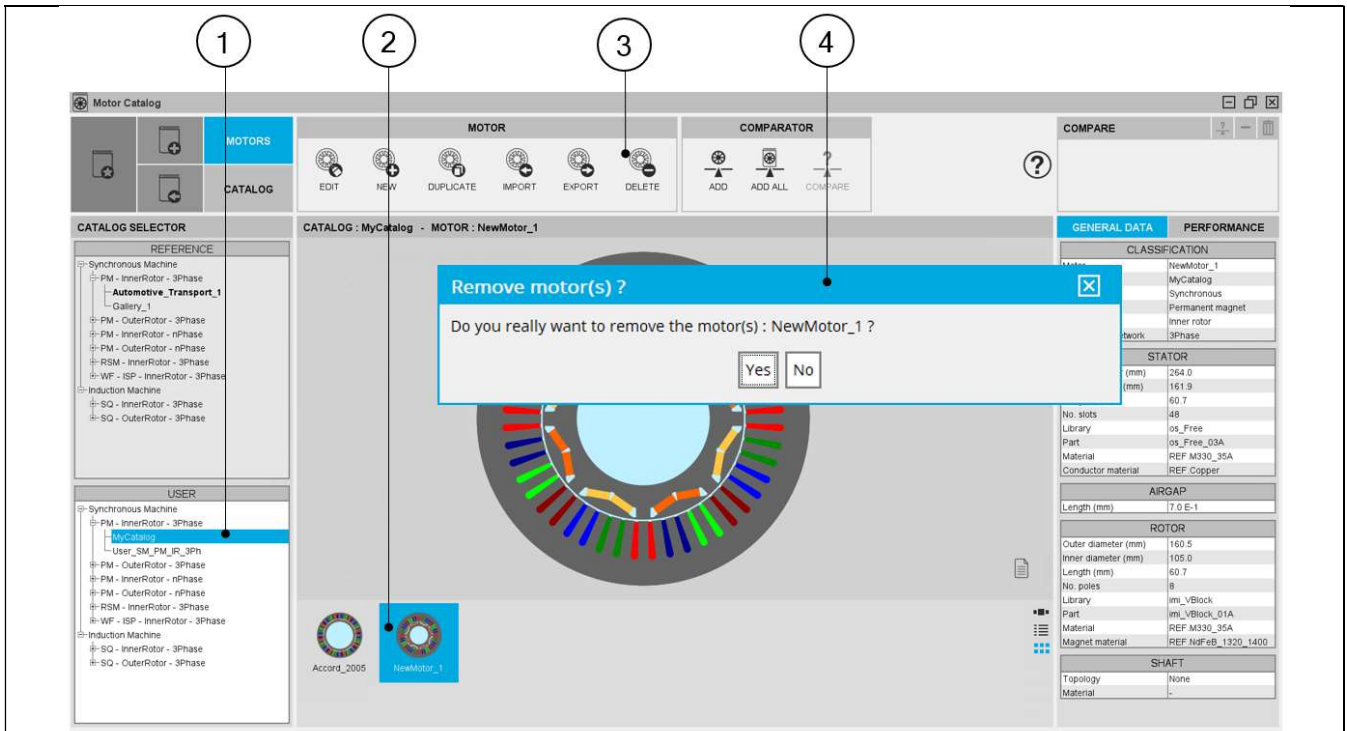
It is possible to export one or several motor from Motor Catalog in a folder or in a zip file.



How to export motors from Motor Catalog?

| | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select one or several motor(s) to be exported. |
| 2 | Clicking on the button "Export" opens a dialog box to export motors stored in a folder or in a zip file. |
| 3 | Dialog box to give "Export information" for exporting the motors. |
| 4 | Export information is: <ul style="list-style-type: none"> - Export name, - Export format: either folder or zip, - Destination folder. |
| 5 | The selected motor(s) can be stored either inside a folder or in a zip file before being exported. |

3.2.7 Delete motor from a catalog.

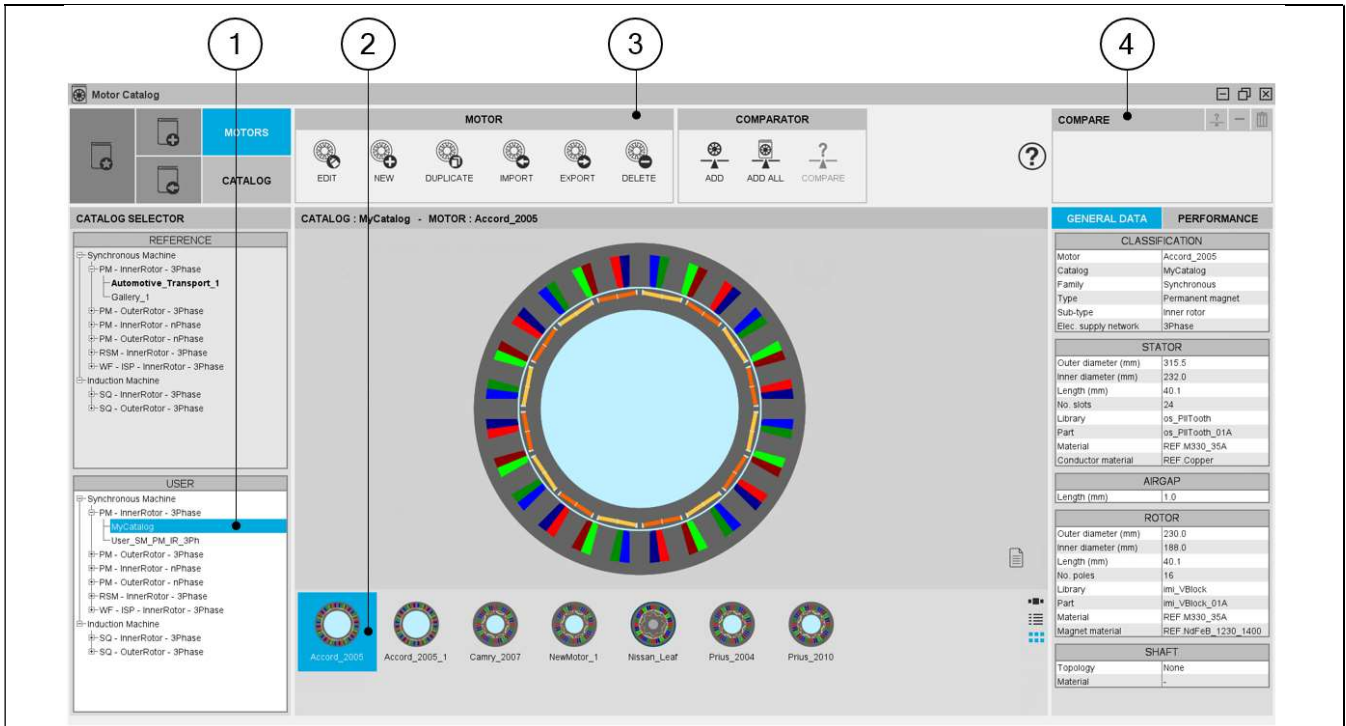


How to delete motors from a catalog?

| | |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select the catalog where the motors to delete are stored. |
| 2 | Select the motor to delete (several motors 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 selected motors. Note: Delete a motor means that all the data of the motor are destroyed and not recoverable. |

3.3 Compare motors

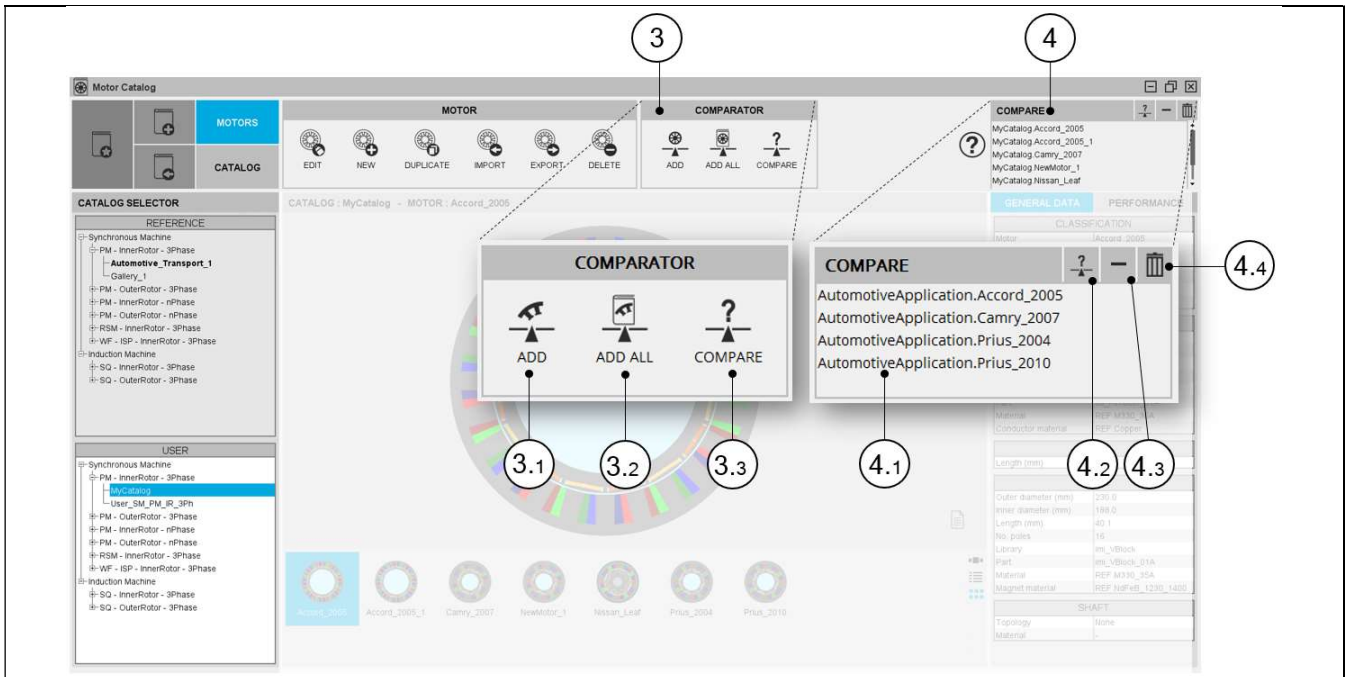
3.3.1 Overview



Tools to select and compare the motors

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

3.3.2 Content management

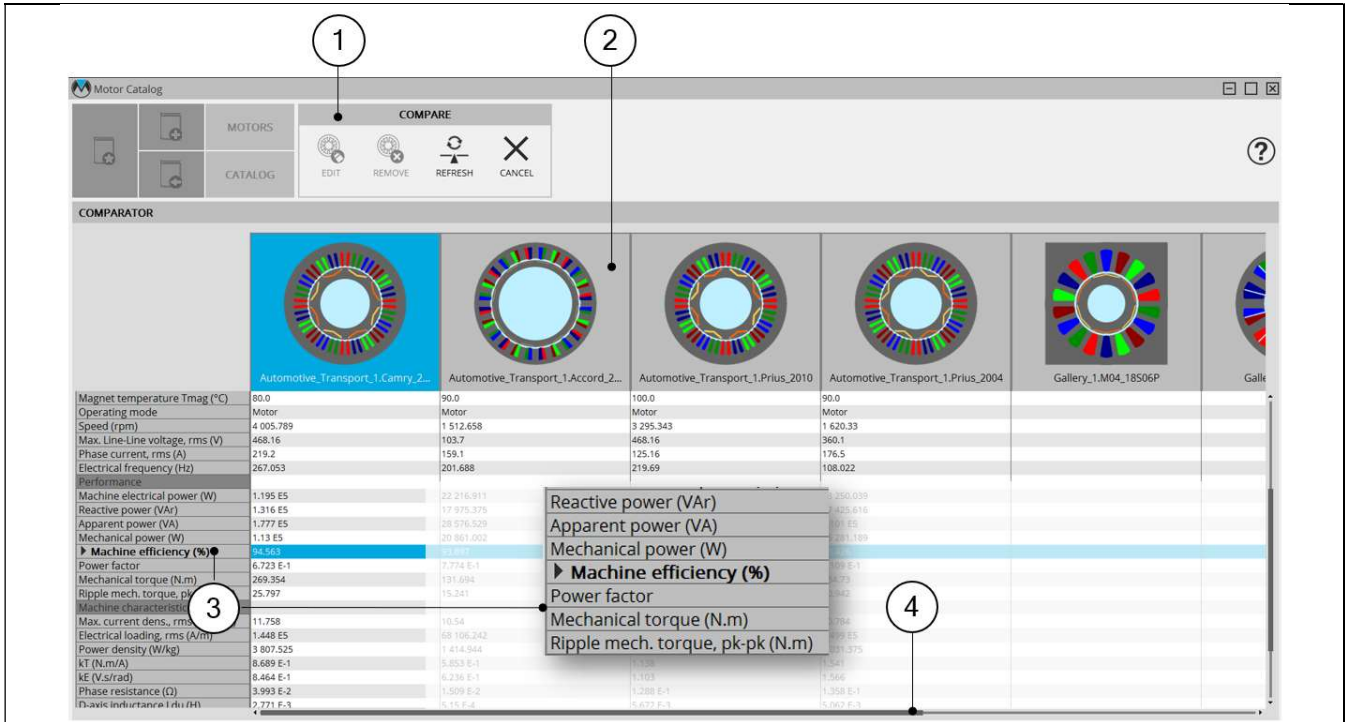


Tools to select and compare the motors

| | |
|-----|--------------------------------------------------------------------------------------------|
| 3 | Box of tools to add the selected motors into the comparator. See more details below. |
| 3.1 | Click on this icon to add the selected motors (one or several) into the comparator. |
| 3.2 | Click on this icon to add all the motors of the selected catalog into the comparator. |
| 3.3 | Click on this icon to get into the comparator application and compare the selected motors. |
| 4 | Box of tools to manage the selected motors into the comparator. See more details below. |
| 4.1 | Visualization of the selected motor list. |
| 4.2 | Click on this icon to get into the comparator application and compare the selected motors. |
| 4.3 | Button to remove the selected motors (one or several) from the comparator. |
| 4.4 | Button to remove all the motors from the comparator. |

3.3.3 Compare

Here is, the environment for the comparator of motors.



Tools to select and compare the motors

| | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <p>Box of tools to manage the selected motors into the comparator.</p> <ul style="list-style-type: none"> • EDIT: The selected motor (one motor) can be edited into Motor Factory. Edit a motor allows modifying its properties by using the functions of Motor Factory. See the chapter edit a motor for more details. • REMOVE: The selected motor is removed from the comparator. • REFRESH: For updating data by considering new results got in Motor Factory – Test environment. • CANCEL: To close the comparator and get back to Motor Catalog environment. |
| 2 | <p>All the selected motors are aligned to help the comparison. The general data and performance are displayed.</p> |
| 3 | <p>Clicking on one field allows arranging the motors by considering ascending or decreasing order of the selected data. The black arrow shows the order retained.</p> |
| 4 | <p>A scroll bar allows visualizing all the motors.</p> |

3.4 Attachments

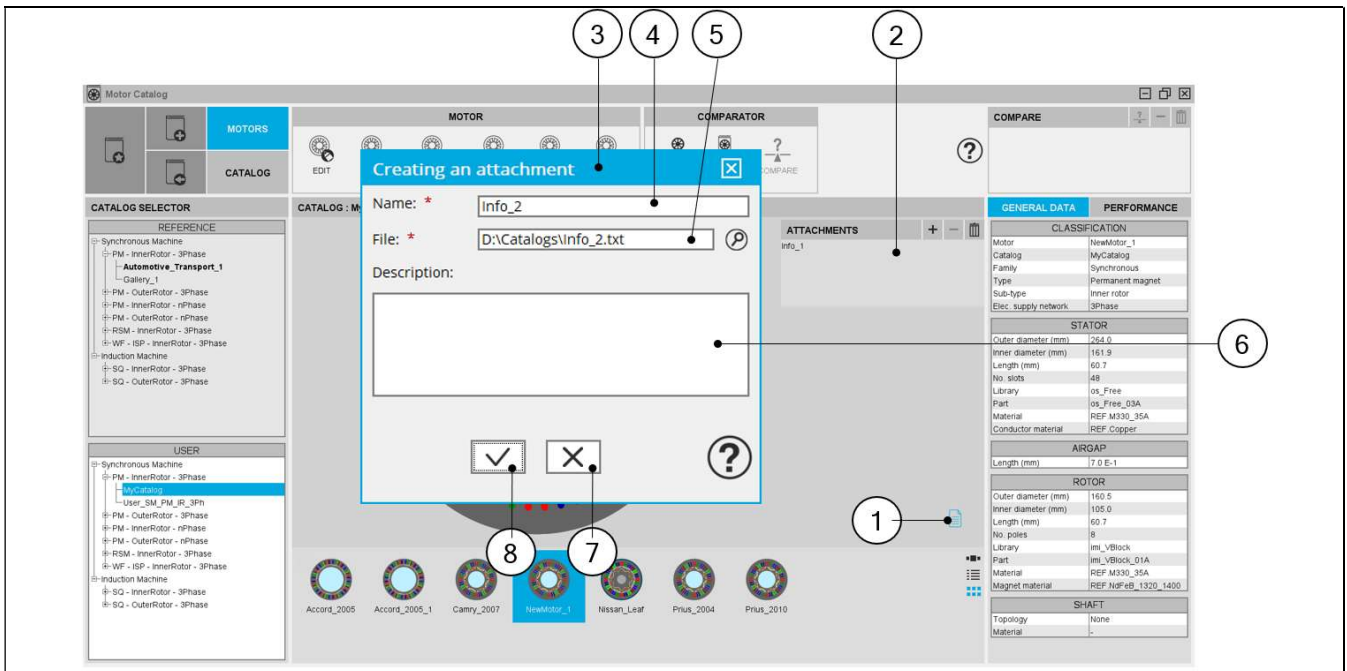
3.4.1 Introduction

Documents can be attached to user's motors. It allows quickly reaching to the available additional information for describing these motors.

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

Note 2: Documents can be linked to motors as well as to catalogs. See chapter Management of catalogs.

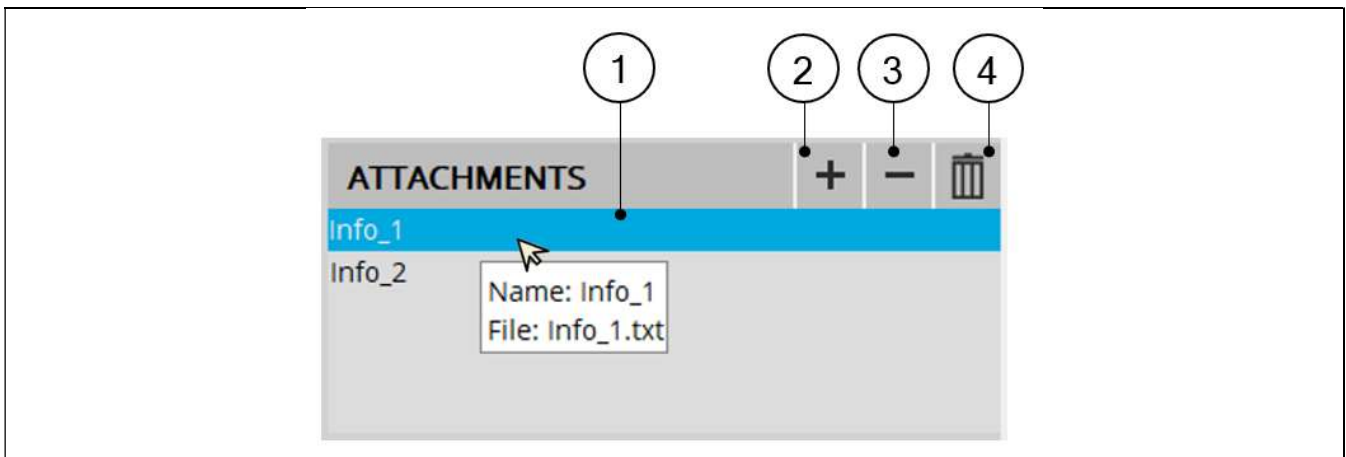
3.4.2 How to create an attachment?



Creation of an attachment for a motor

| | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Icon to display the attachment box just above (2). |
| 2 | Attachments box to manage the attached documents. Button (+) allows adding documents. Button (-) allows removing selected documents. Note: This box is disabled when motors from reference catalogs are considered. |
| 3 | A dedicated dialog box allows adding a new attached document. 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 selected attached file. |

4 EXTERNAL LINKS

4.1 Browse

4.1.1 Overview

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



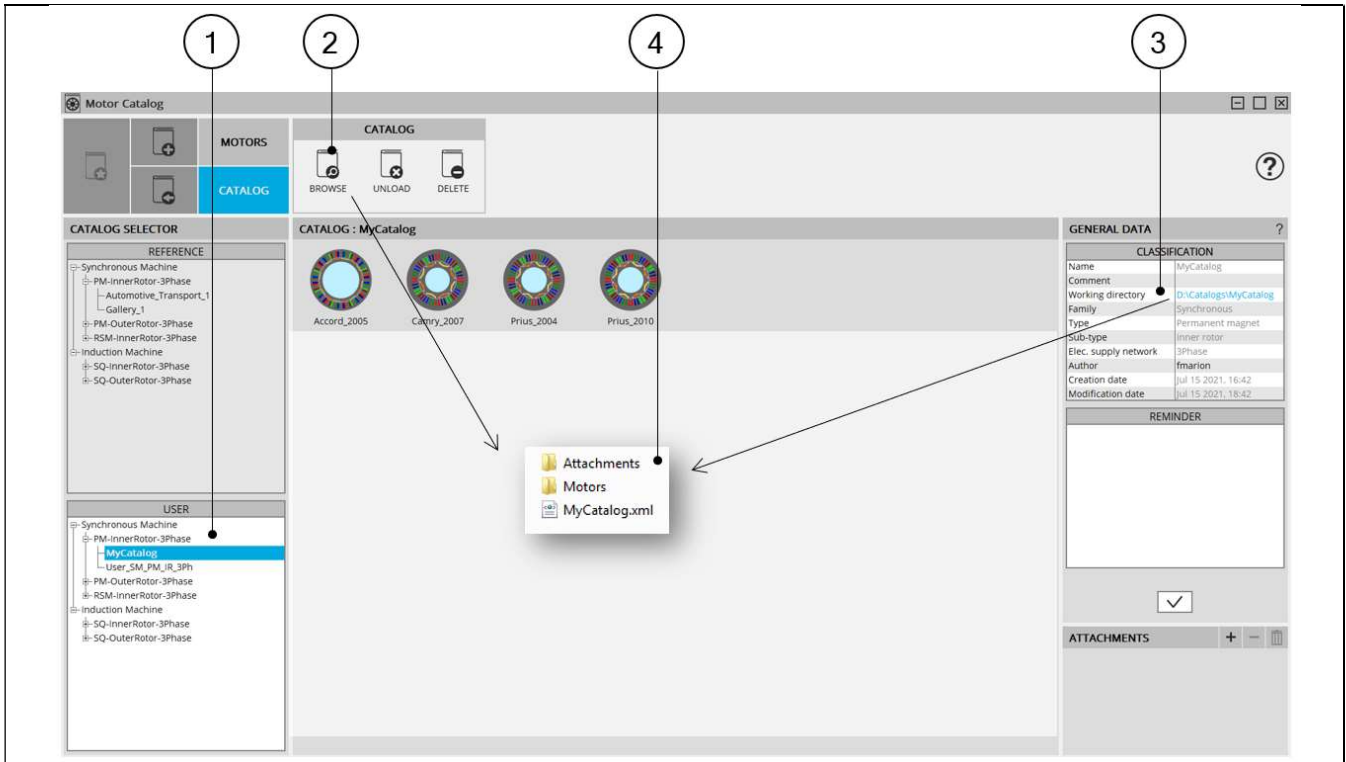
Browsing to access the catalog folder

| | |
|---|-----------------------------------------------------------------|
| 1 | Selection of a catalog. |
| 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 CATALOG interface are described below.

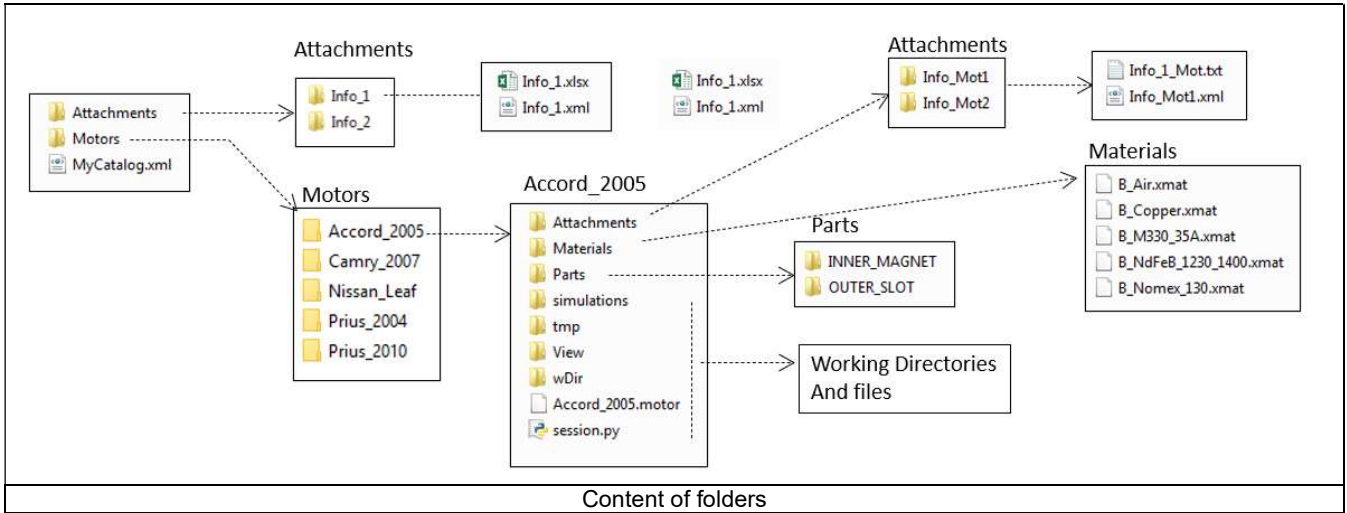


Browsing to access the catalog folder

| | |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Selection of a user's catalog. In our example the name of this catalog is "MyCatalog". |
| 2 | Click on the icon "BROWSE" to reach the folders dealing with the motor. |
| 3 | Click on the path in the "Working folder" field to reach the folders dealing with the motor. |
| 4 | Content of the folder "MyCatalog": Two folders "Attachments" and "Motors" + one xml file: MyCatalog.xml. 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 catalogs or motors.



Folder “Attachments”:
All the documents associated to the considered catalog (or Motor).

Folder “Motors”:
All the motors stored in the considered catalog.