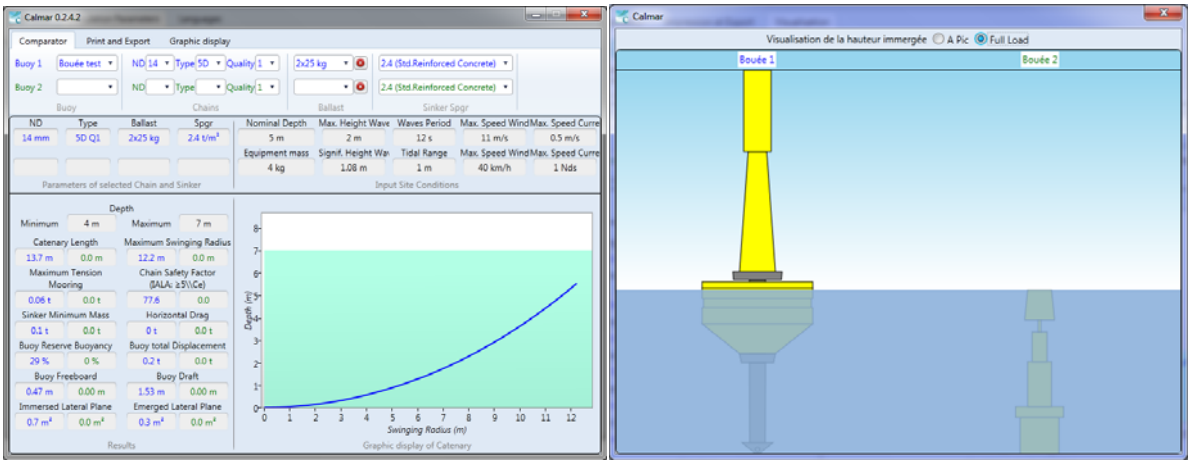
SOFWARE MANUAL



CALMAR ENGLISH VERSION

15/02/13	2	KA	MOZ	MF's Comments Added
08/10/12	1	JFB	DH	Comments Added
05/10/12	0	JFB	DH	First Issue For Comment
Date	***Rev***	***By***	***Validated***	***Comments***

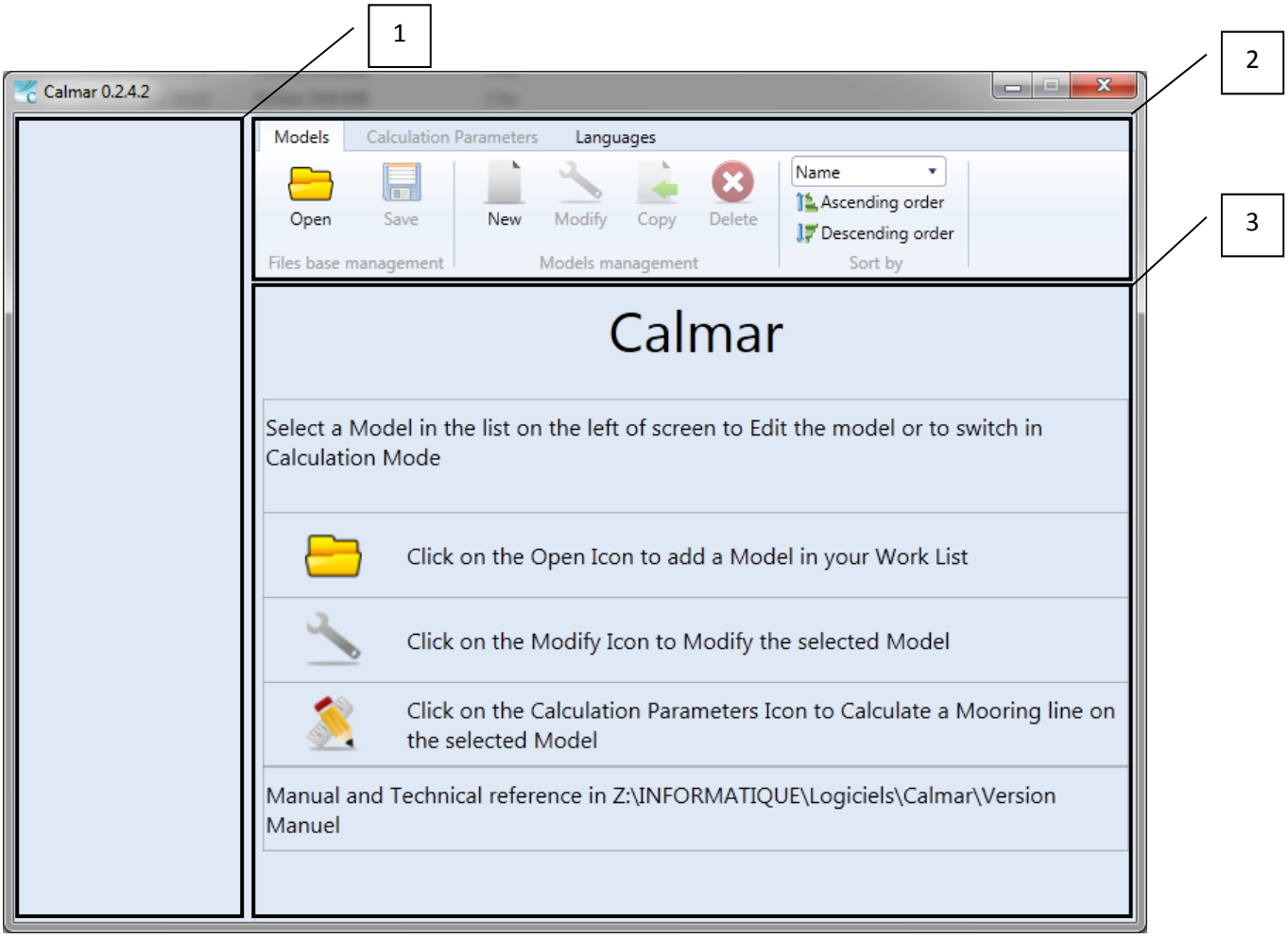
Table of contents

1 Introduction

This present manual guides you to use our CALMAR software.

1.1 Definition of main screen

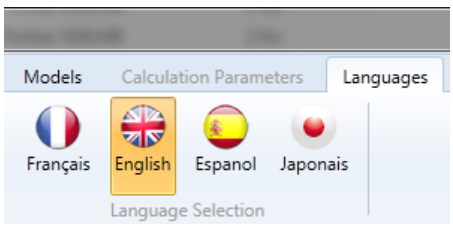
The below is the first page of software



1. Buoy list recorded in the software
2. Function menu of software
3. Frame aids

1.2 Selection of language

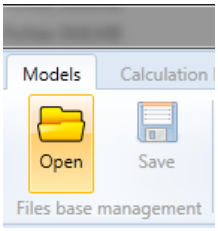
On the menu, select the page « Language » then choose your language.



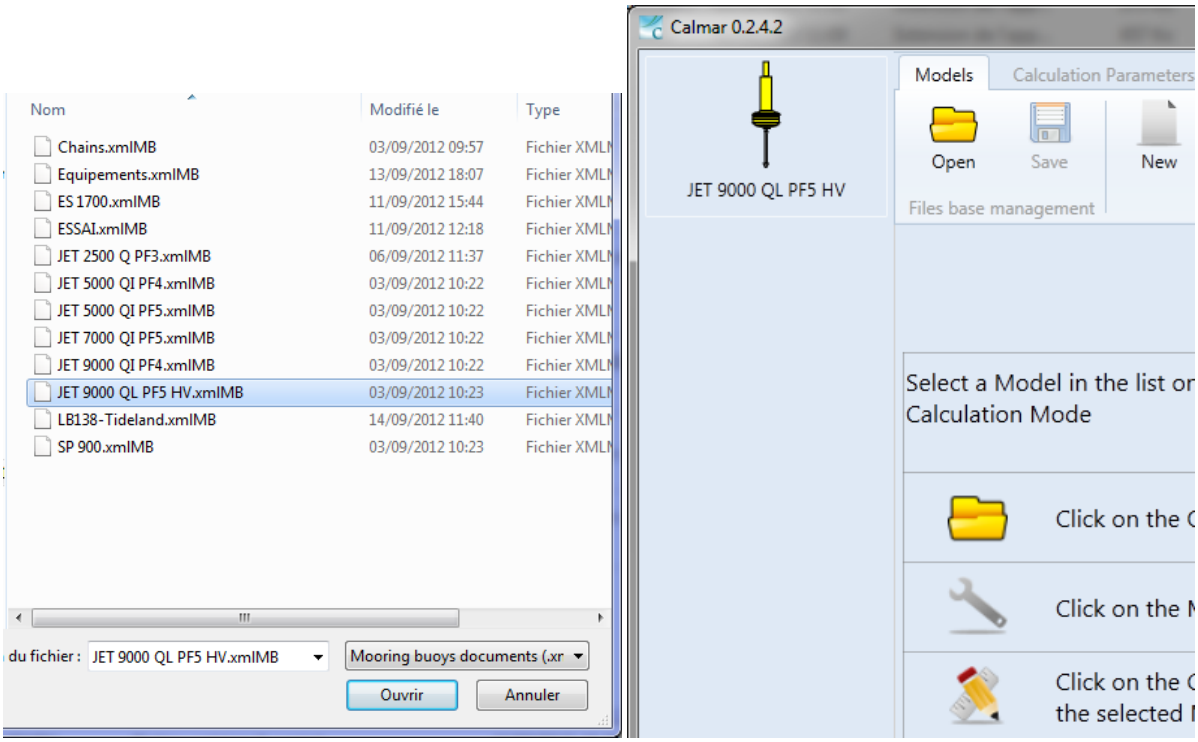
2 How to use Models

2.1 Download a model of existing buoy

On the menu, click icon « Open »

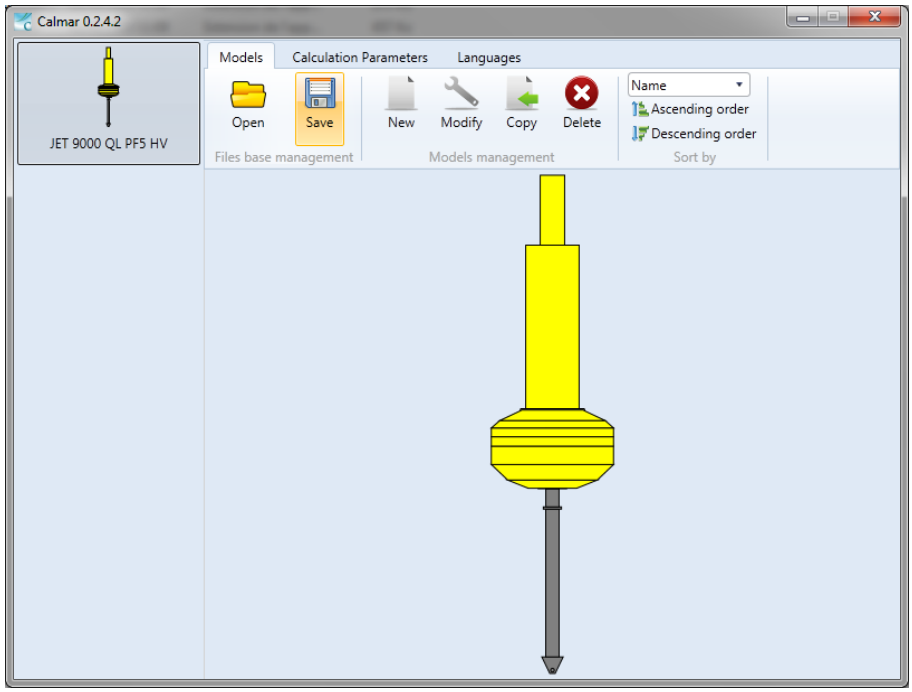


Select the file of buoy model, click « Open » and the buoy appears on the list of main page (Attention the software does not authorize the addition of a buoy with the same name).

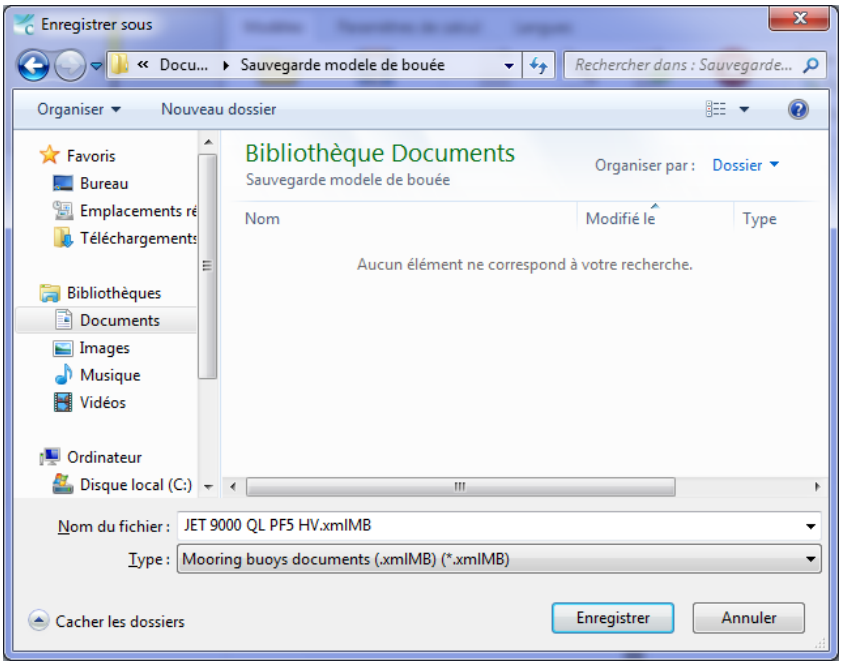


2.2 To save a model of buoy

Select the buoy that you want to save and then click « Save ».

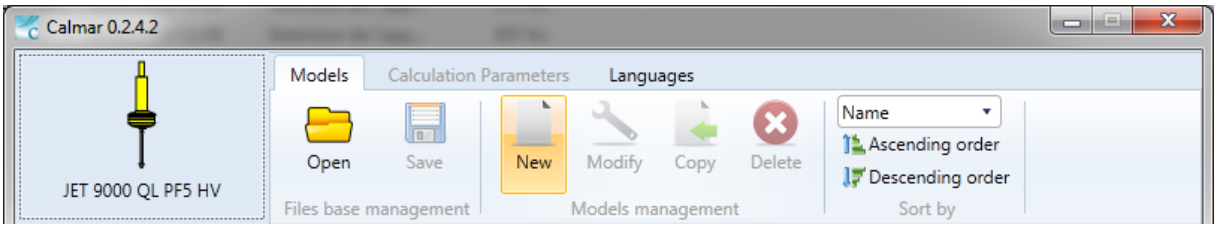


Select the file and the name of file then click « Save »

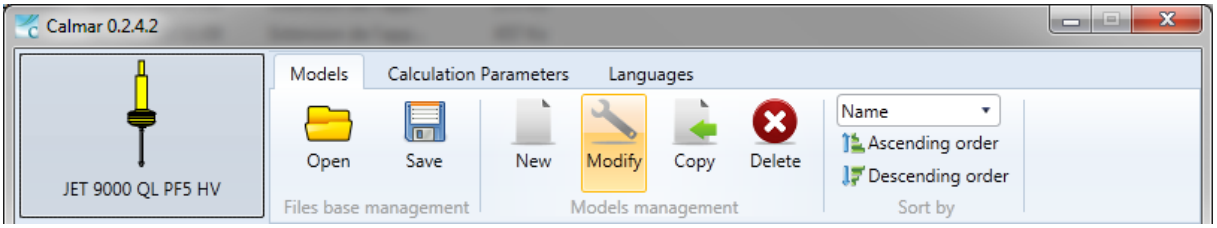


2.3 To create or modify a model

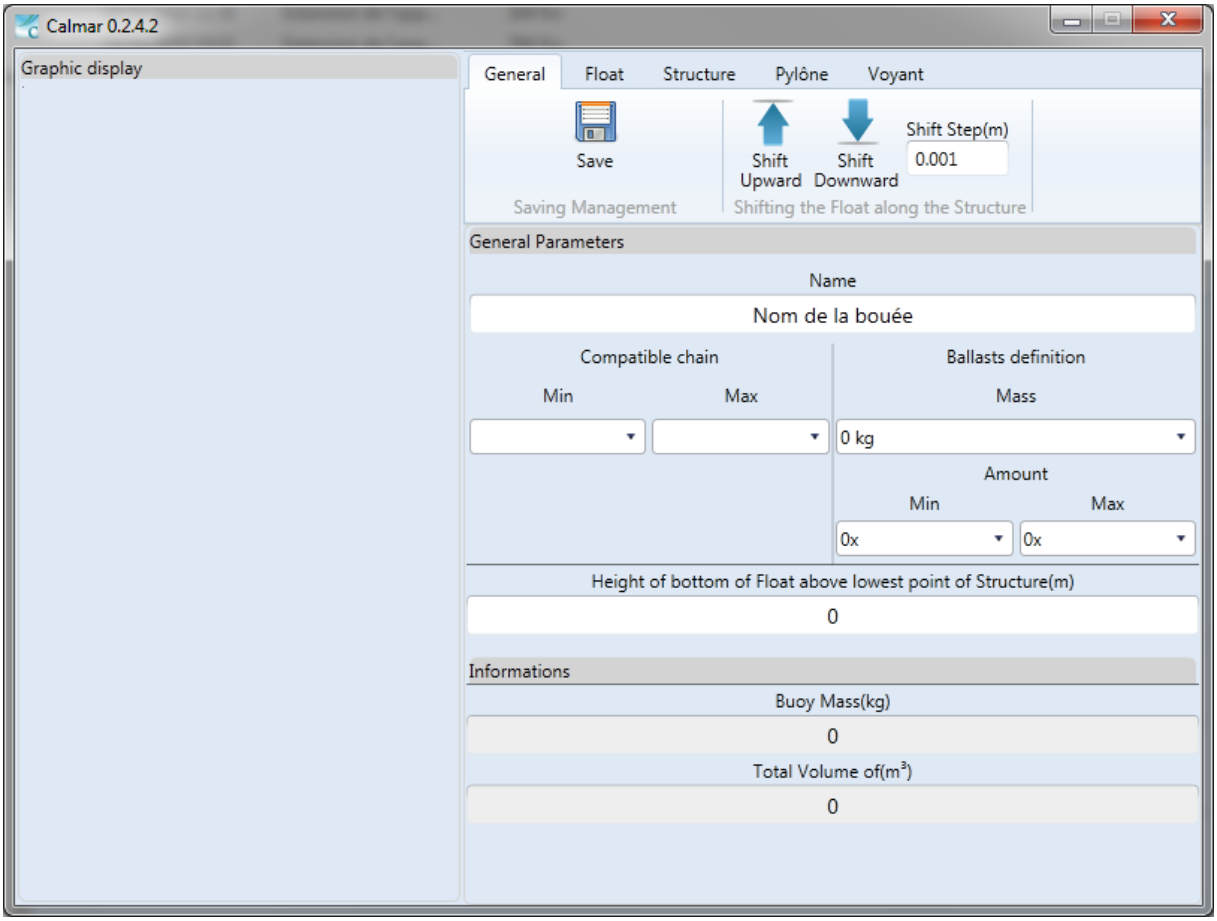
To create a buoy on the main screen, click the icon « New »



To modify a buoy on the main screen, click the icon « Modify ».



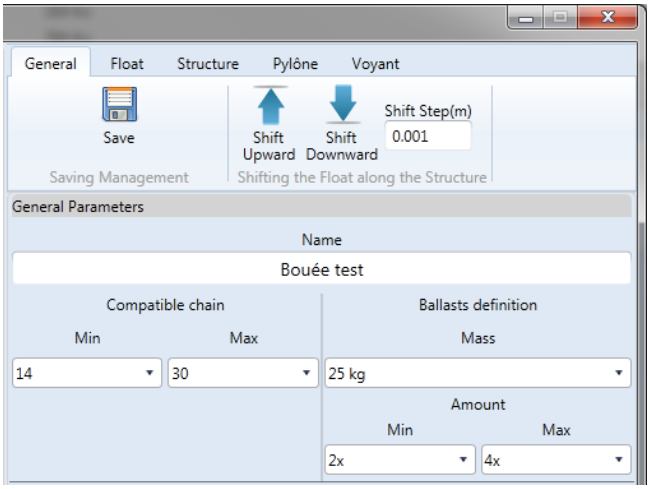
A new page appears and allows you to enter the necessary information to create a buoy.



Here are the steps to follow to create or modify a model.

2.3.1 Information of general parameter of buoy

On the first screen, enter the following information:



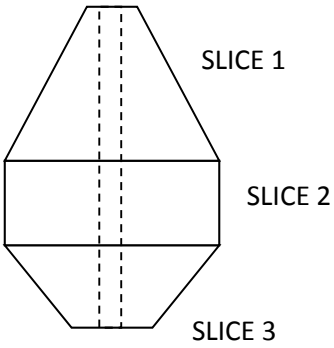
1. The name of buoy

2. The size of chain (minimum & maximum)

3. The definition of ballasts (unit mass of a ballast and number minimum & maximum)

2.3.2 To create a float

Here is the drawing of our float before recording to software.



On the float screen, input the following information:

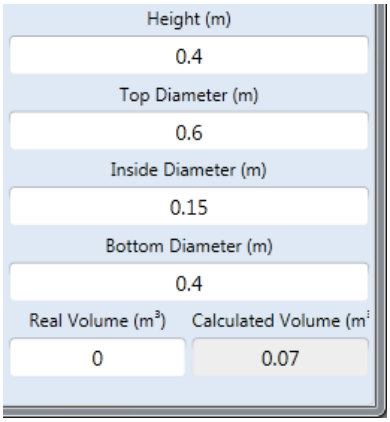
1. Name of float
2. Mass of float
3. Definition of slice

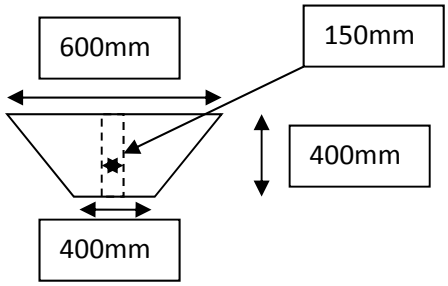
2.3.2.1 *Definition of slices for a float*

To save time, start by creating the bottom slice to the top slice.

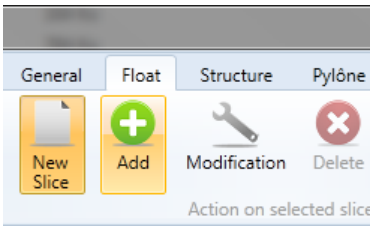
- Slice 3

Here is the description of the slice to enter.

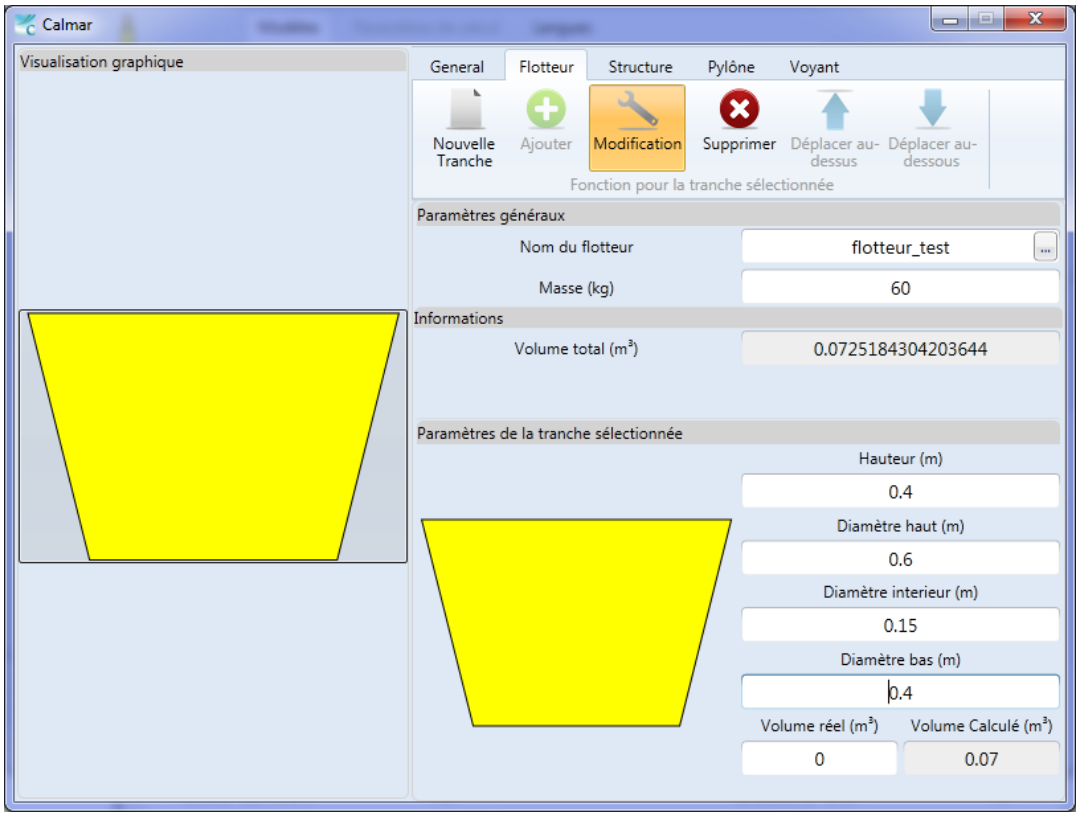




Once information is input, click « add »

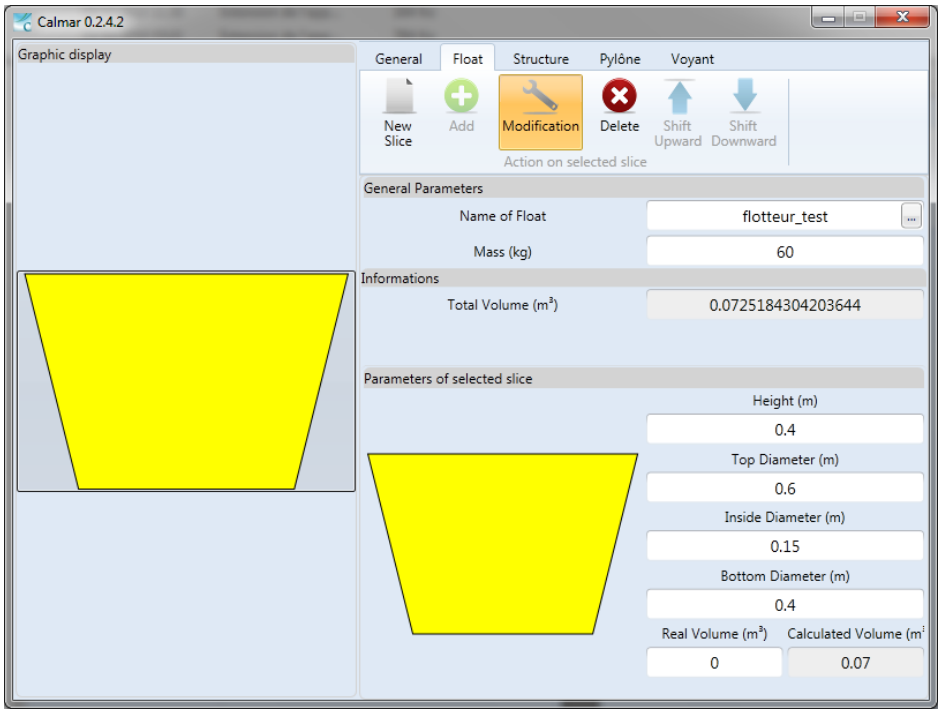


Here is the result

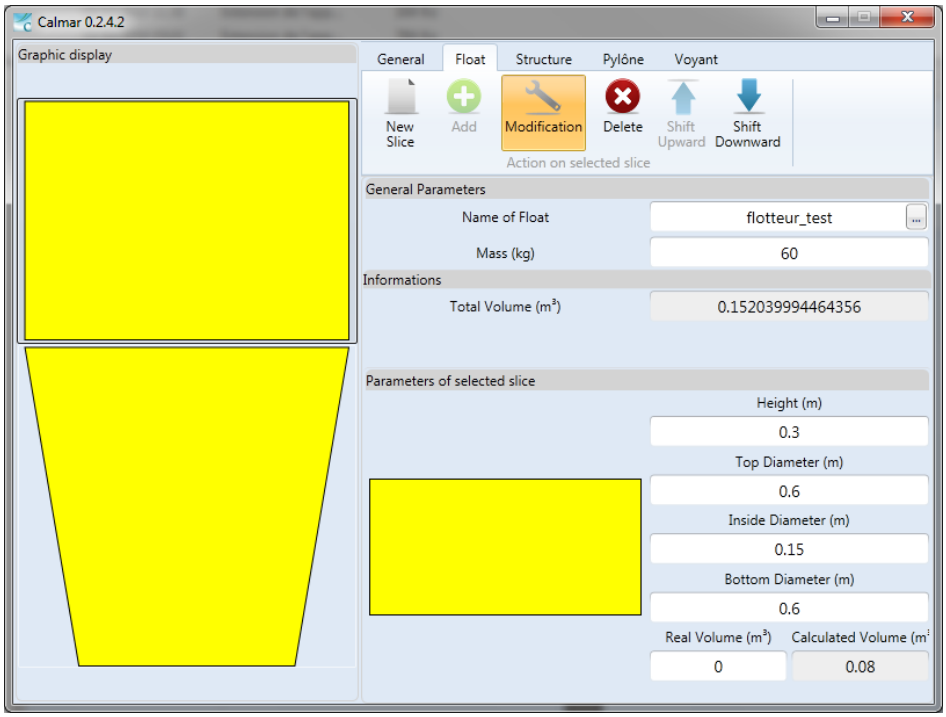


- Slice 2

To create a new slice, click « New slice »:

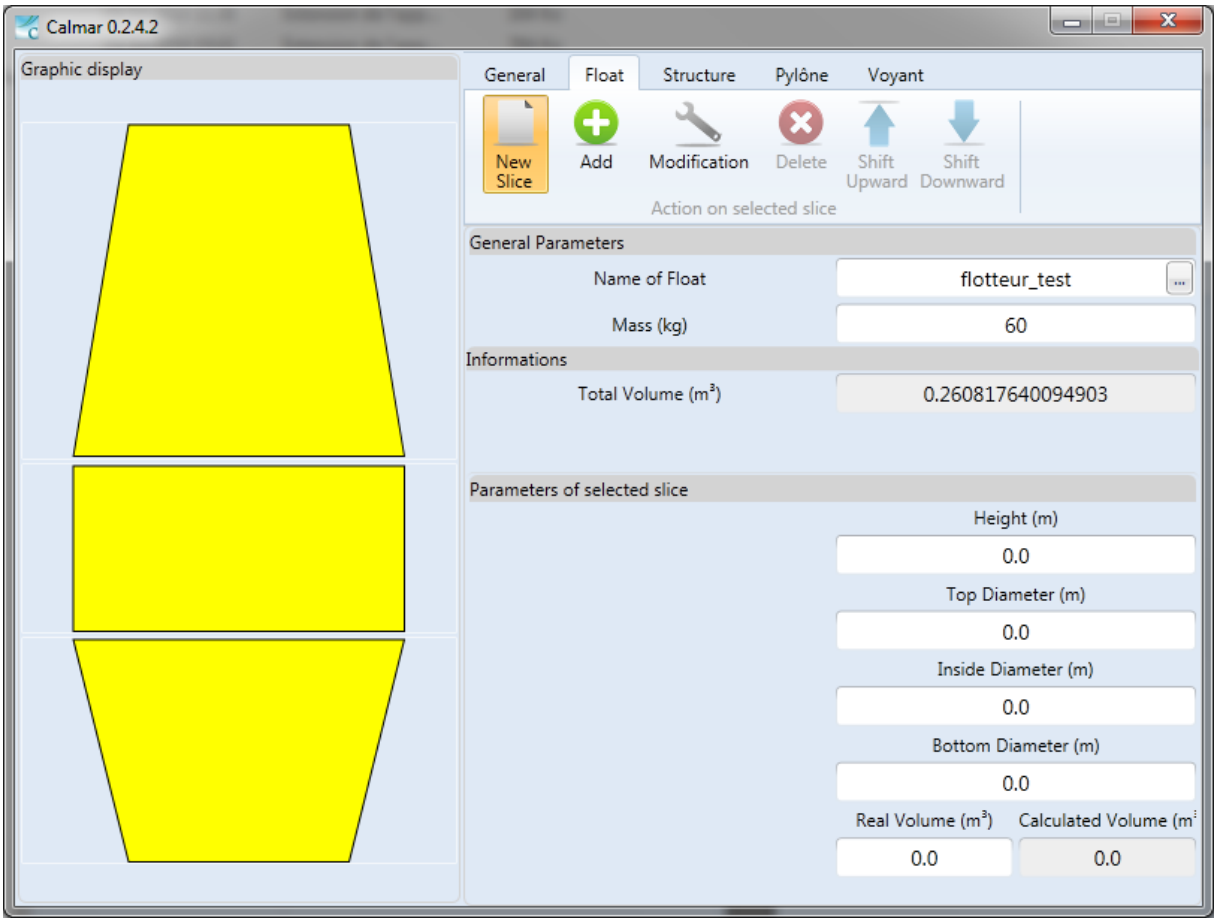


The selection of slice (on left side) under edition disappears and the button « Add » appears. Operate the new input then click « Add ».

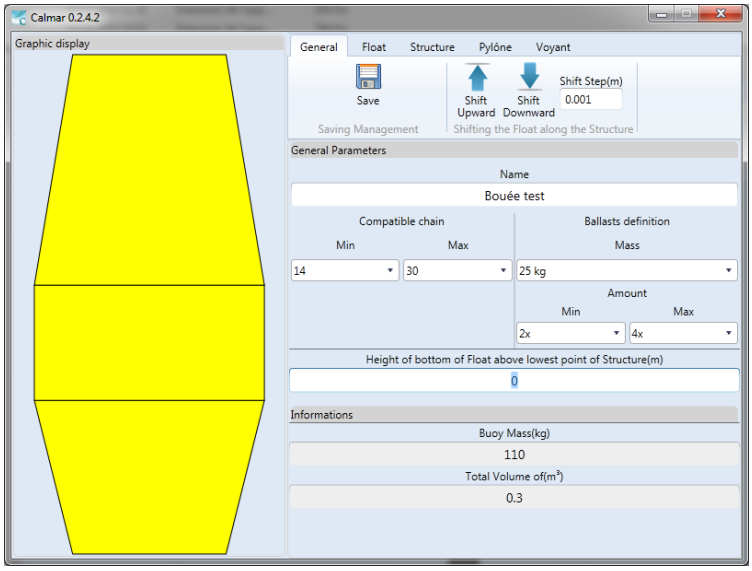


- Slice 1

The same principle to use as previously. Here is the result.



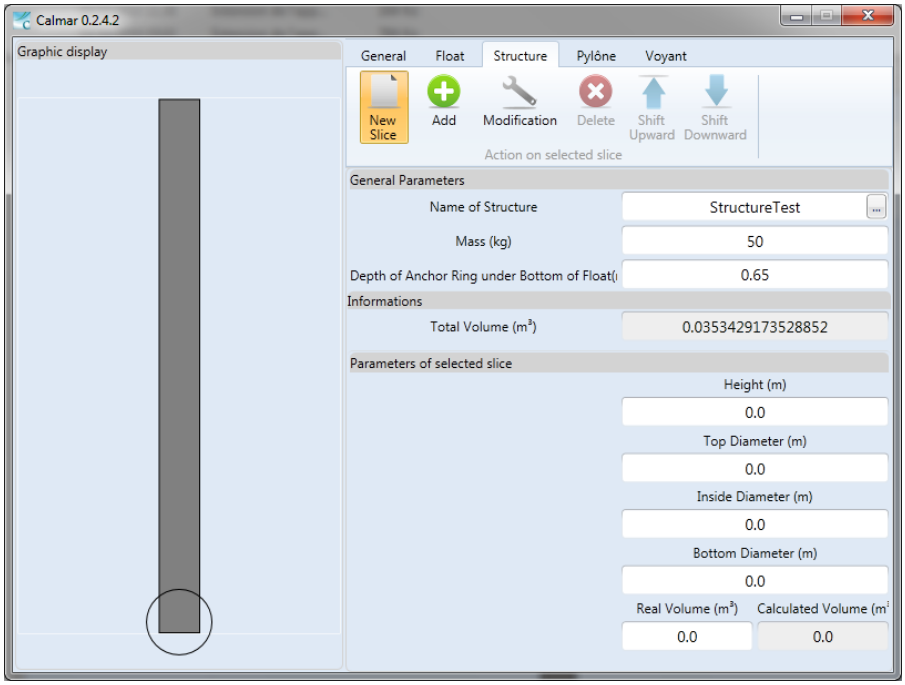
Coming back on the page « General », we can see the complete buoy.



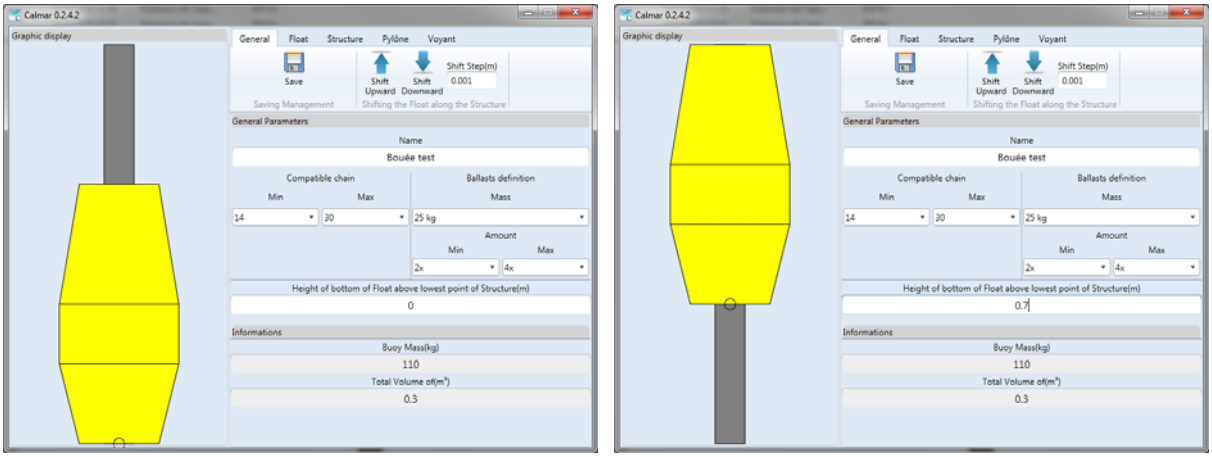
2.3.3 To create a structure

The same principle described as for float ; however, we need to precise the distance between the float bottom and the mooring ring.

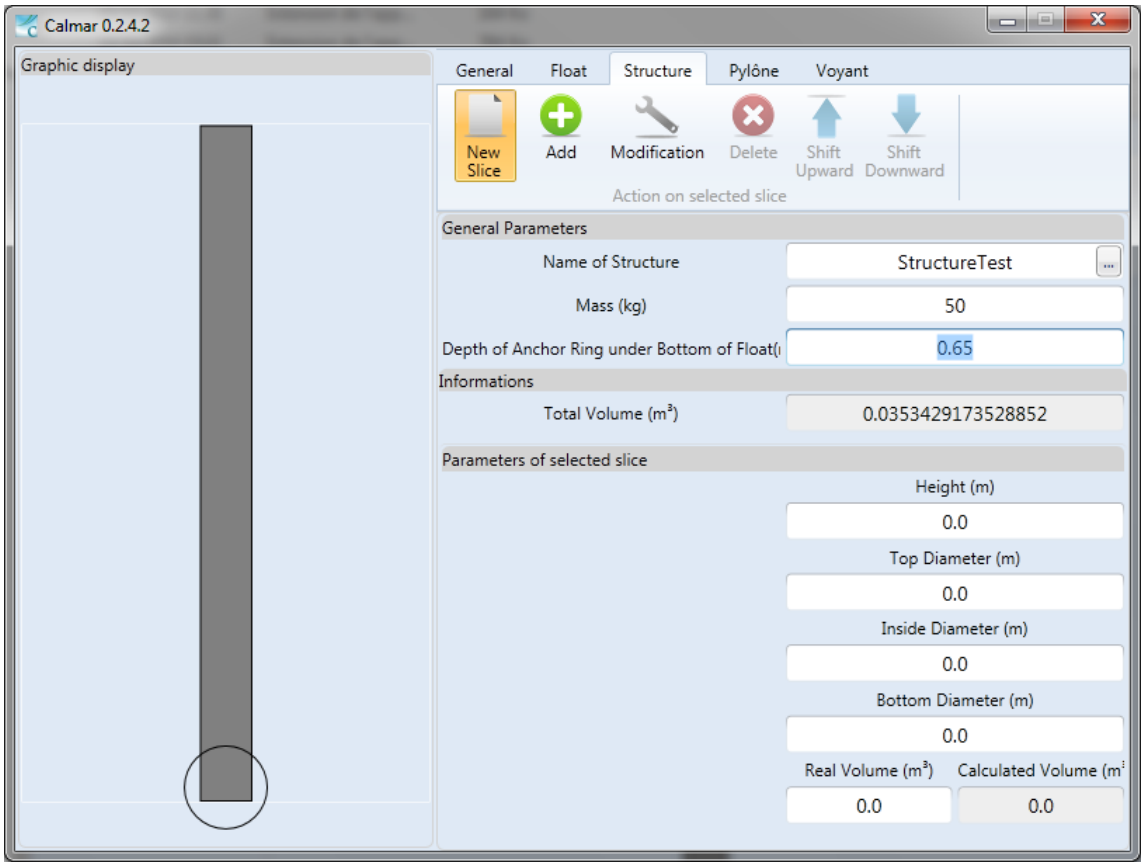
For example, take a look at a structure of 2m long and a mooring ring.



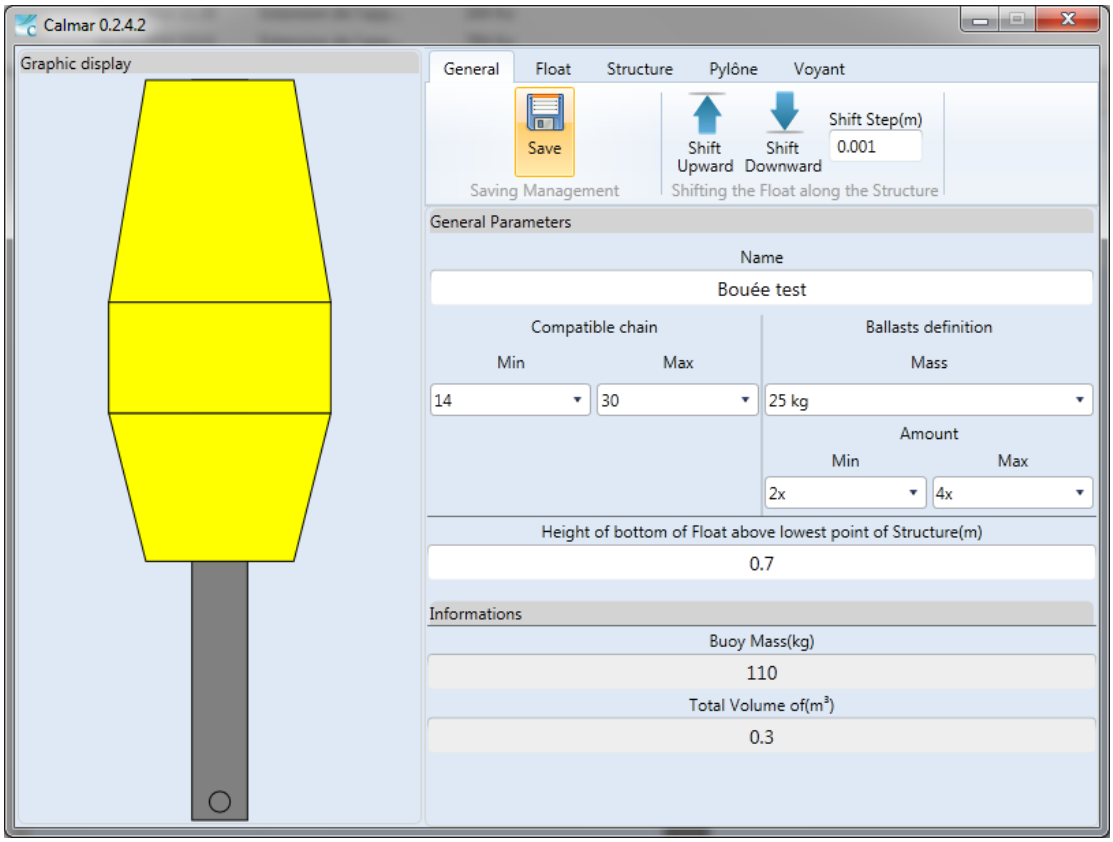
Coming back on the page « General », we need to define the position of the float on the structure with the buttons « Move upward » and « Move downward » .



To end, input the height between the bottom of float and the mooring ring on the page « Structure ».



Verify the page « General » the result:

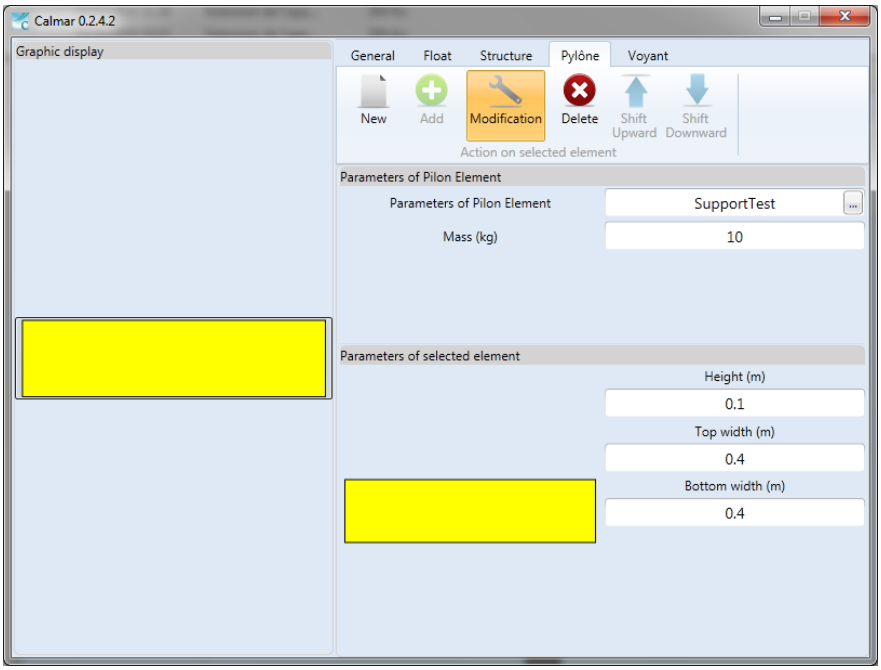


2.3.4 To create a mast or a topmark

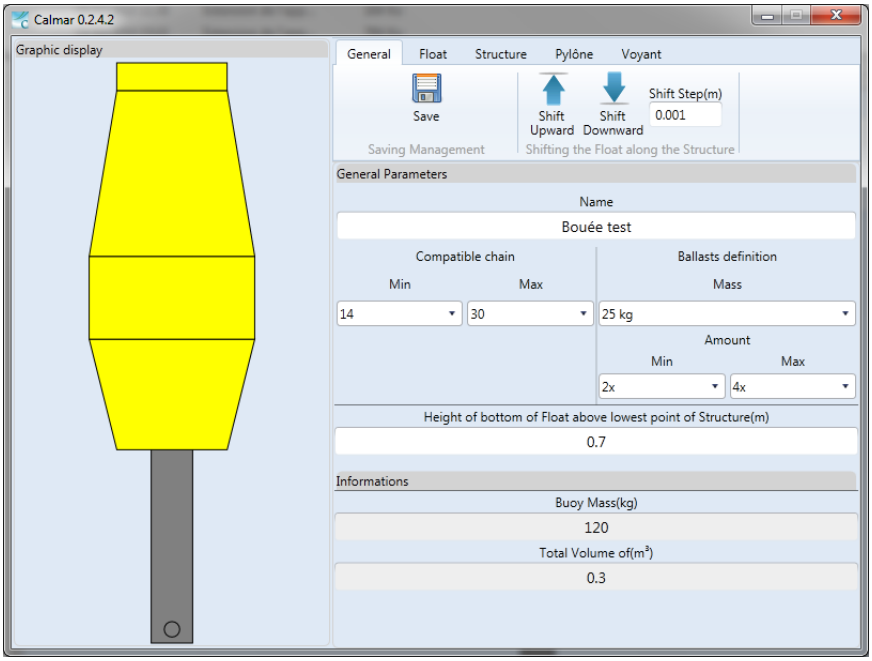
On the screen of mast or topmark, input the following information:

1. Name of mast or topmark
2. Mass of mast or topmark
3. Definition of dimension of mast or topmark

Once the parameters are input, we click « Add » :

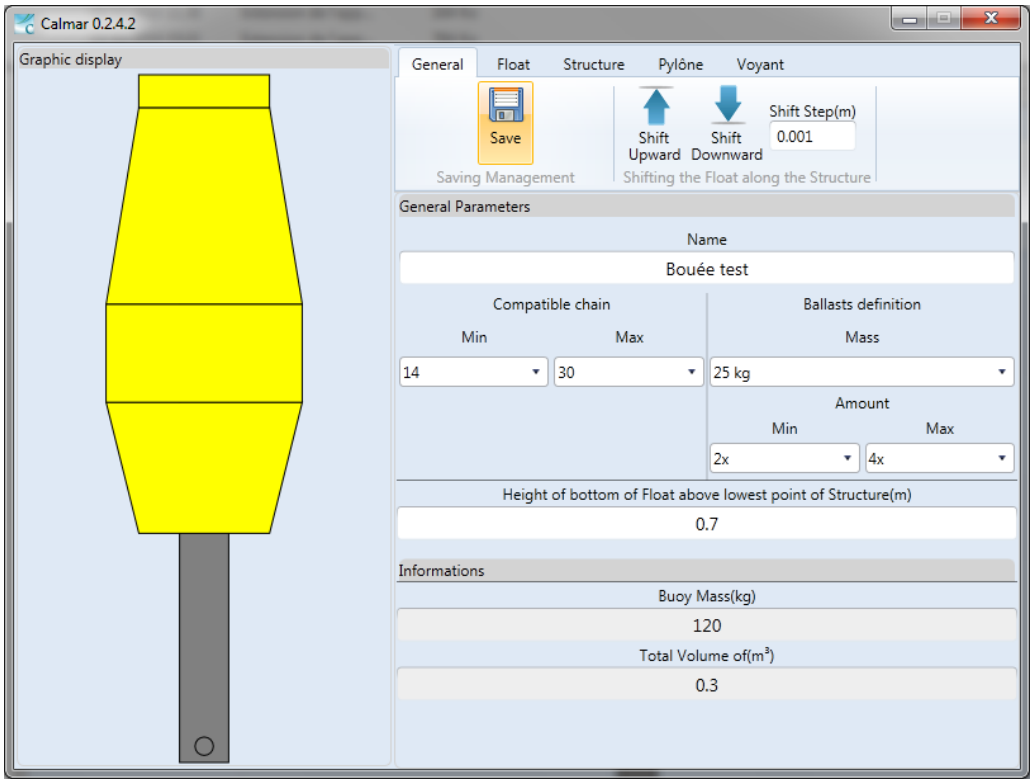


And the page « General », the result is:

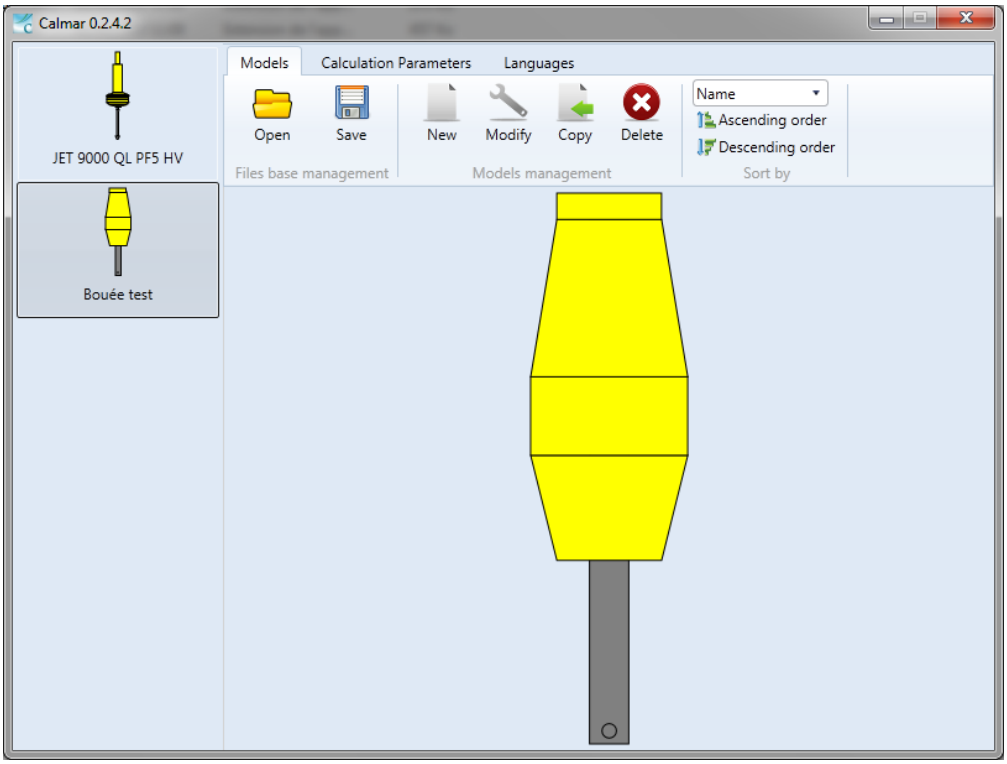


2.4 To record the model under edition

To save the modified model, click « Save » on the page « General »



Once the buoy saved, the modifications appear on the buoys list :



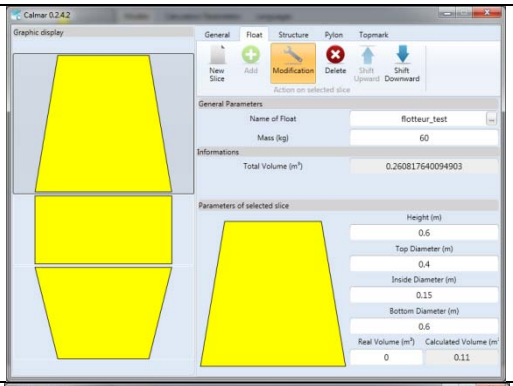
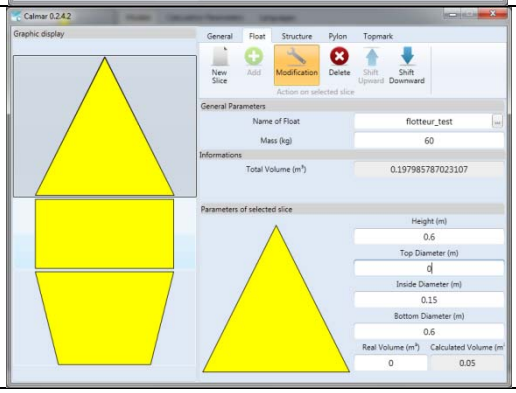
2.5 Common functions in the model editor

On the pages of « Float », « Structure », « Mast » and « Topmark », four buttons on the menu have the same functions.

2.5.1 Modification of element

On the pages of « Float », « Structure », « Mast » and « Topmark », all the information is automatically saved in the model under edition.

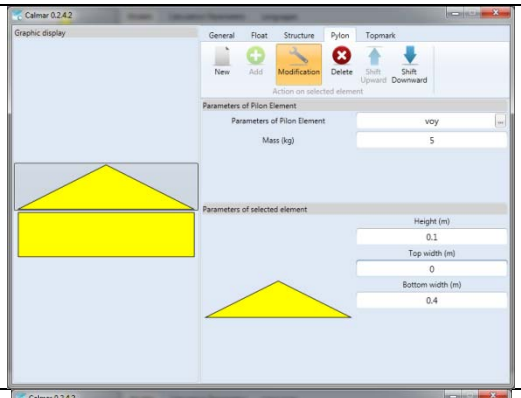
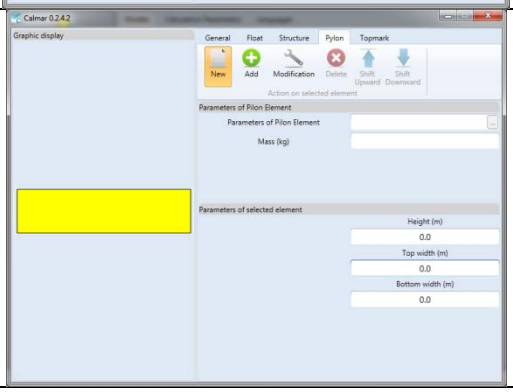
Example with a slice of float :

	Select a slice. When press the button, « Modification » will be high-lighted.
	Modification of diameter 0.4 to 0. The drawing changes automatically.

2.5.2 To delete an element

On the pages of « Floats », « Structure », « Mast » and « Topmark », all the information is automatically saved in the model under edition.

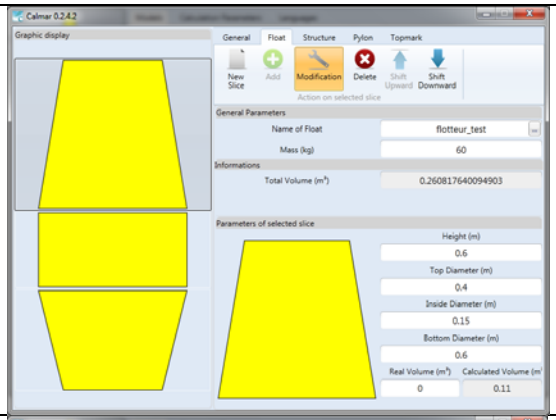
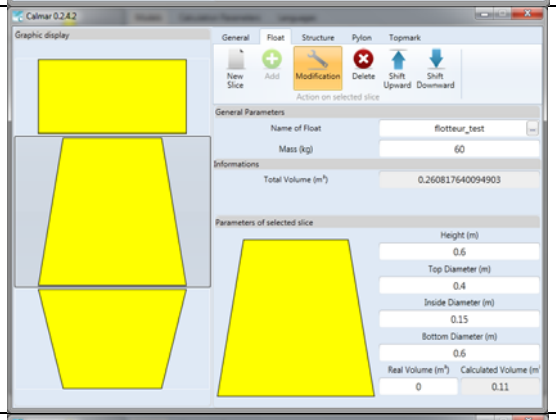
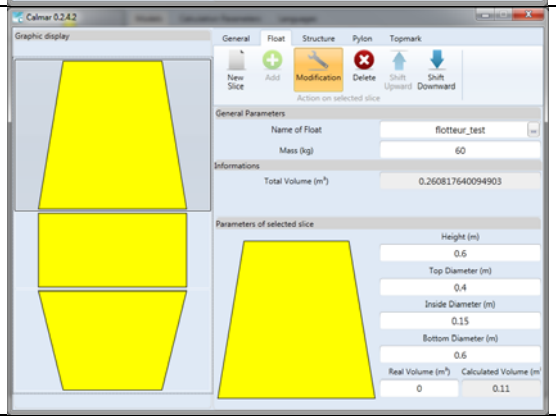
Example with topmark :

		Select a slice, then the button « Delete » becomes active.
		The mast has been just deleted. The drawing changes automatically.

2.5.3 To move a slice

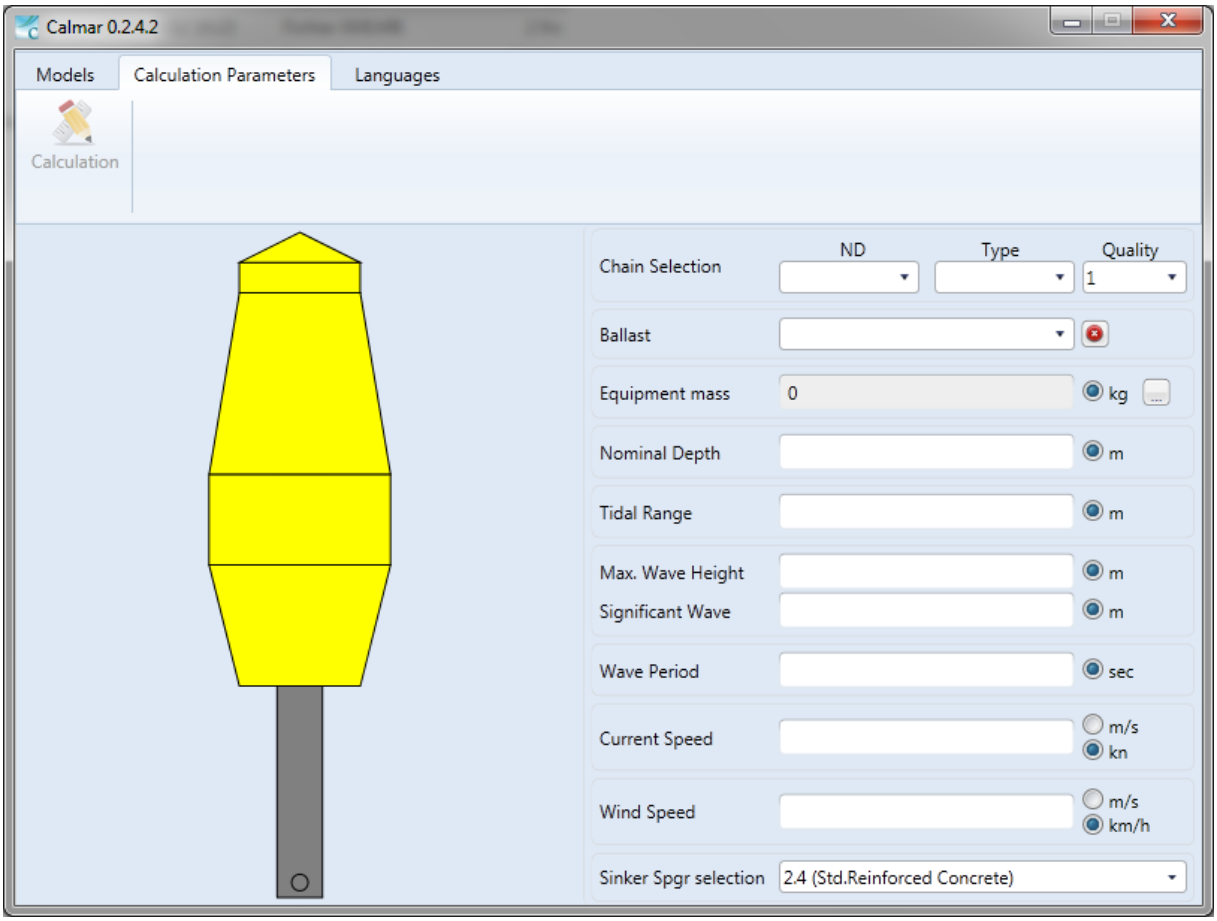
On the pages of « Floats » and « Structure », all the information is automatically saved in the model under edition.

Example with slices of float :

	Select the slice to move. You can only move it downward.
	The slice is moved down and now you have two possibilities to move. By clicking « Move downward », we can put back the slices to the original place.
	The slice being back to the original position.

3 Calcul of a mooring line

Select the buoy which will be reference for the calculation then select the page « Parameters of calculation »



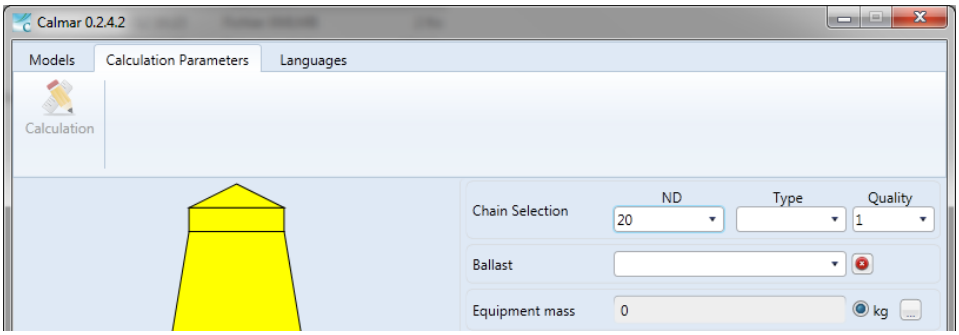
On the screen of calcul parameter, input the following information :

1. Select DN chain
2. Select the type of chain
3. Quality of the chain
4. Ballast of the buoy
5. The equipments
6. The nominal depth
7. The tide range
8. The period of swell
9. The speed of current (Max)
10. The speed of wind (Max)
11. Select the density of sinker

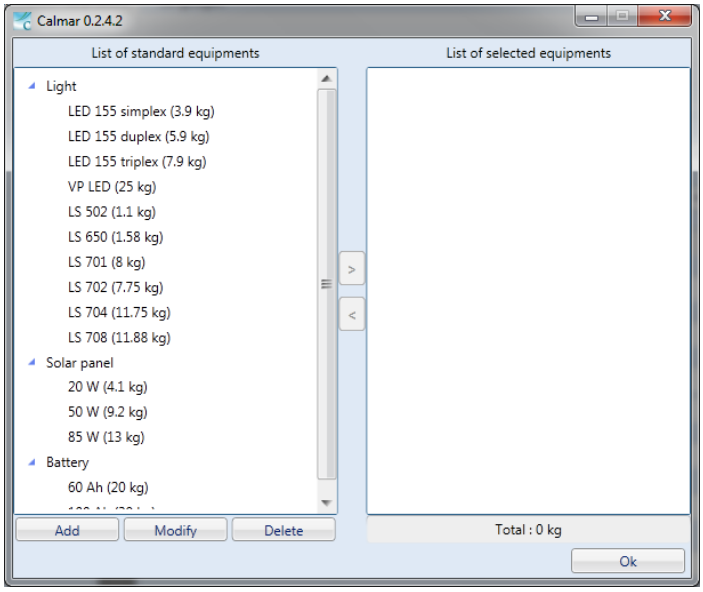
At the end of input, the button « Calcul » becomes active, click above to display the result page.

3.1 Window for equipment selection

On the page « Parameter of calcul », click the button on the right « Mass equipment »

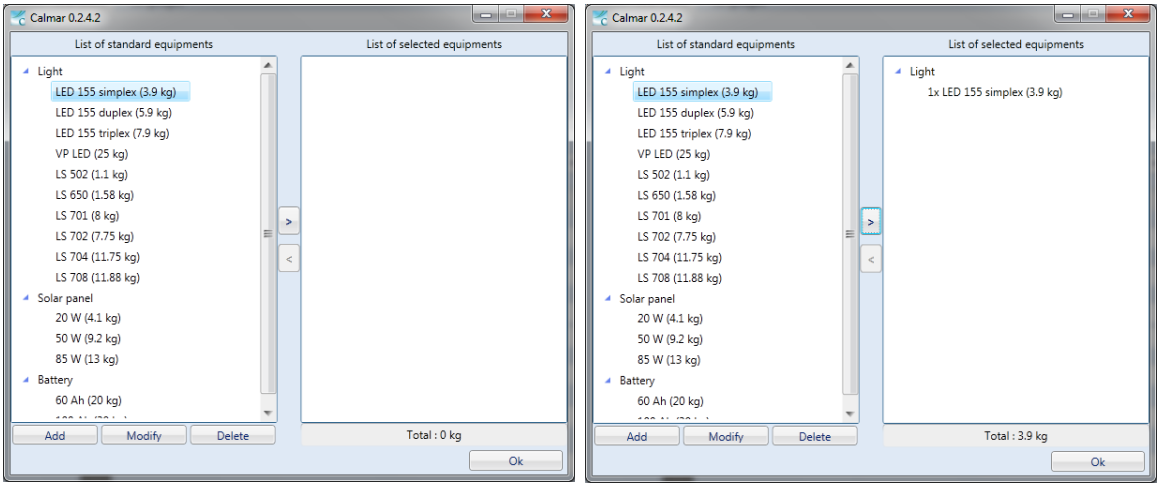


The equipment screen appears.



3.1.1 To select the equipment for calculation

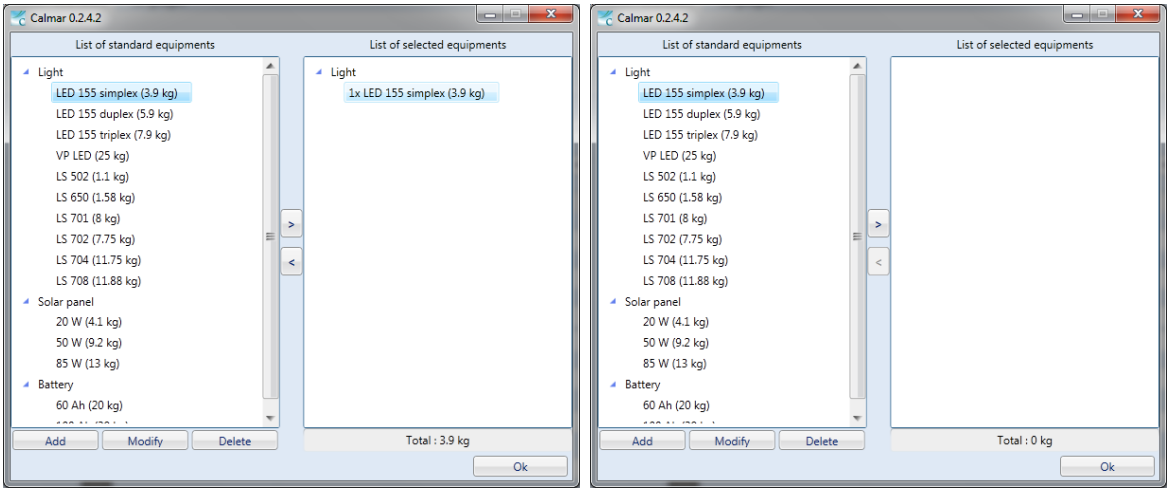
Select the equipment on right-side list then click on the right-arrow.



The equipment appears on the list on right-side with the quantity.

3.1.2 To delete selected equipment

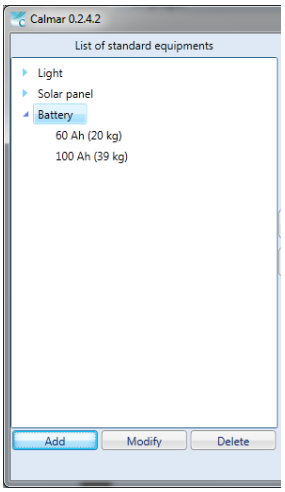
Select the elements to remove from the right-side list then click on the left-arrow.



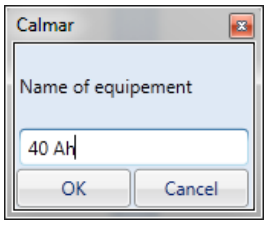
3.1.3 To add standard equipment

To add equipment to the standard list under the category,

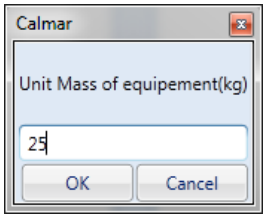
select the category then click « Add »



Input the name of equipment and the mass of equipment.

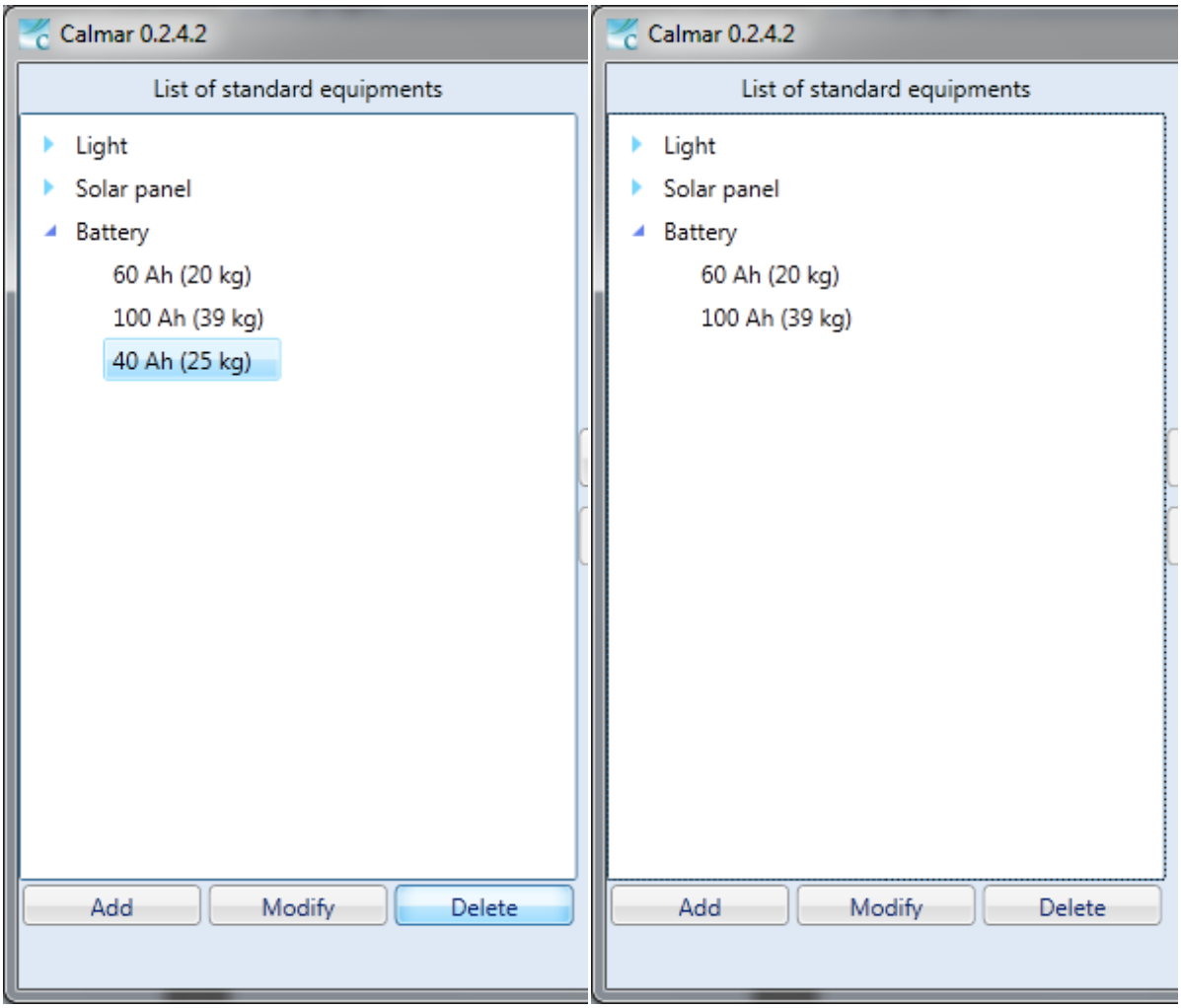


Then the new equipment appears on the list.



3.1.4 To delete standard equipment

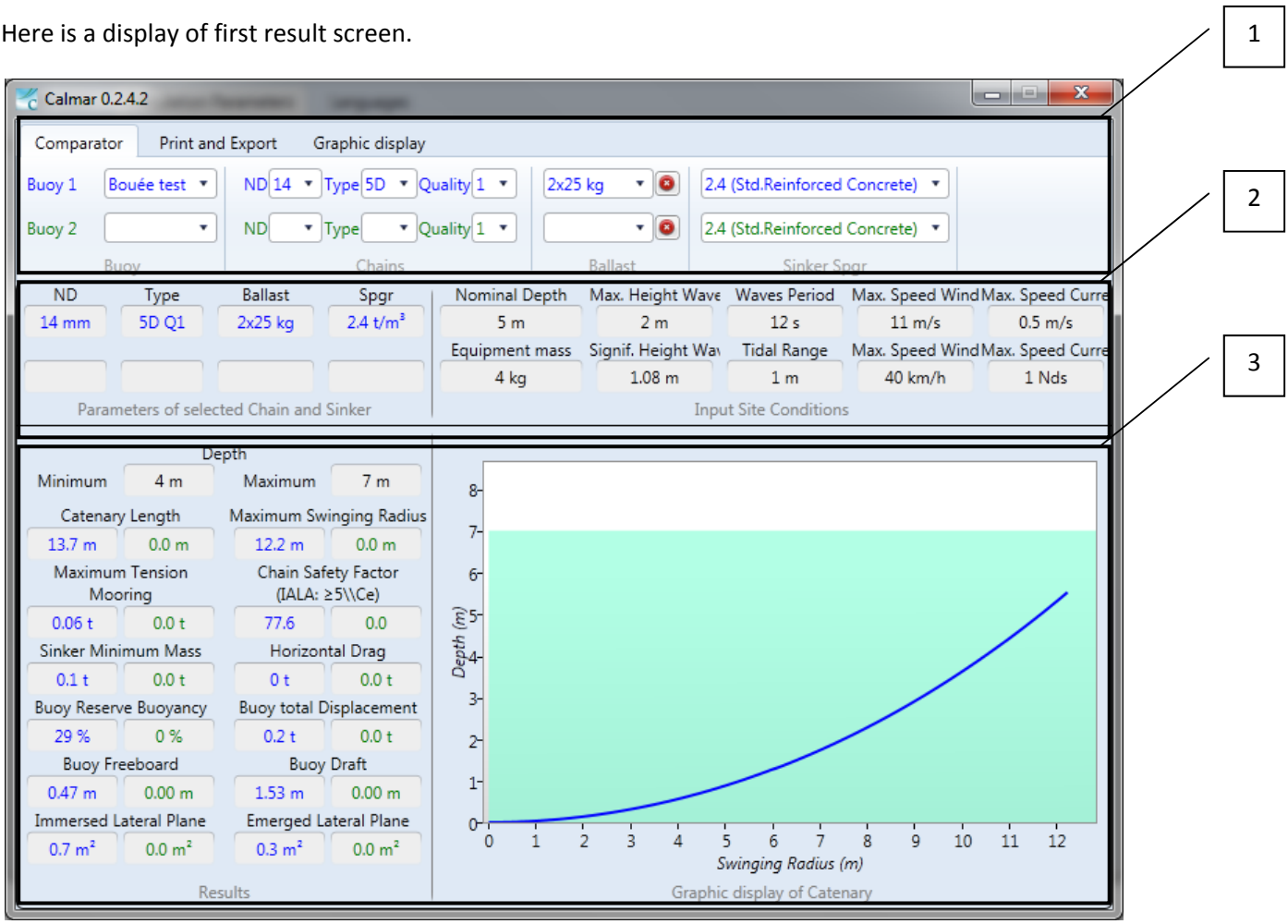
Select the equipment then click on « Delete »



4 Display of result

Once the parameters input on the page «Parameters of calcul », click « Calcul » to pass on the result screen.

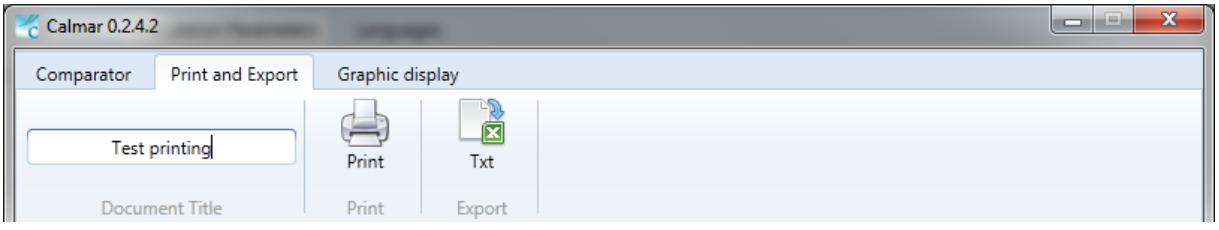
Here is a display of first result screen.



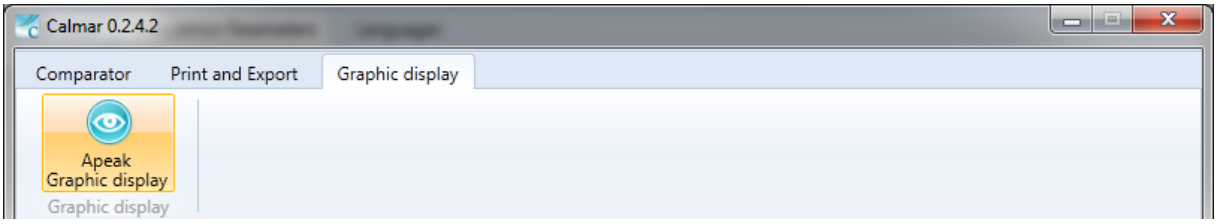
1. Menu with the functions of comparators, print and display
2. Display of input parameters (site conditions and bouy)
3. Display of result

4.1 To print and export

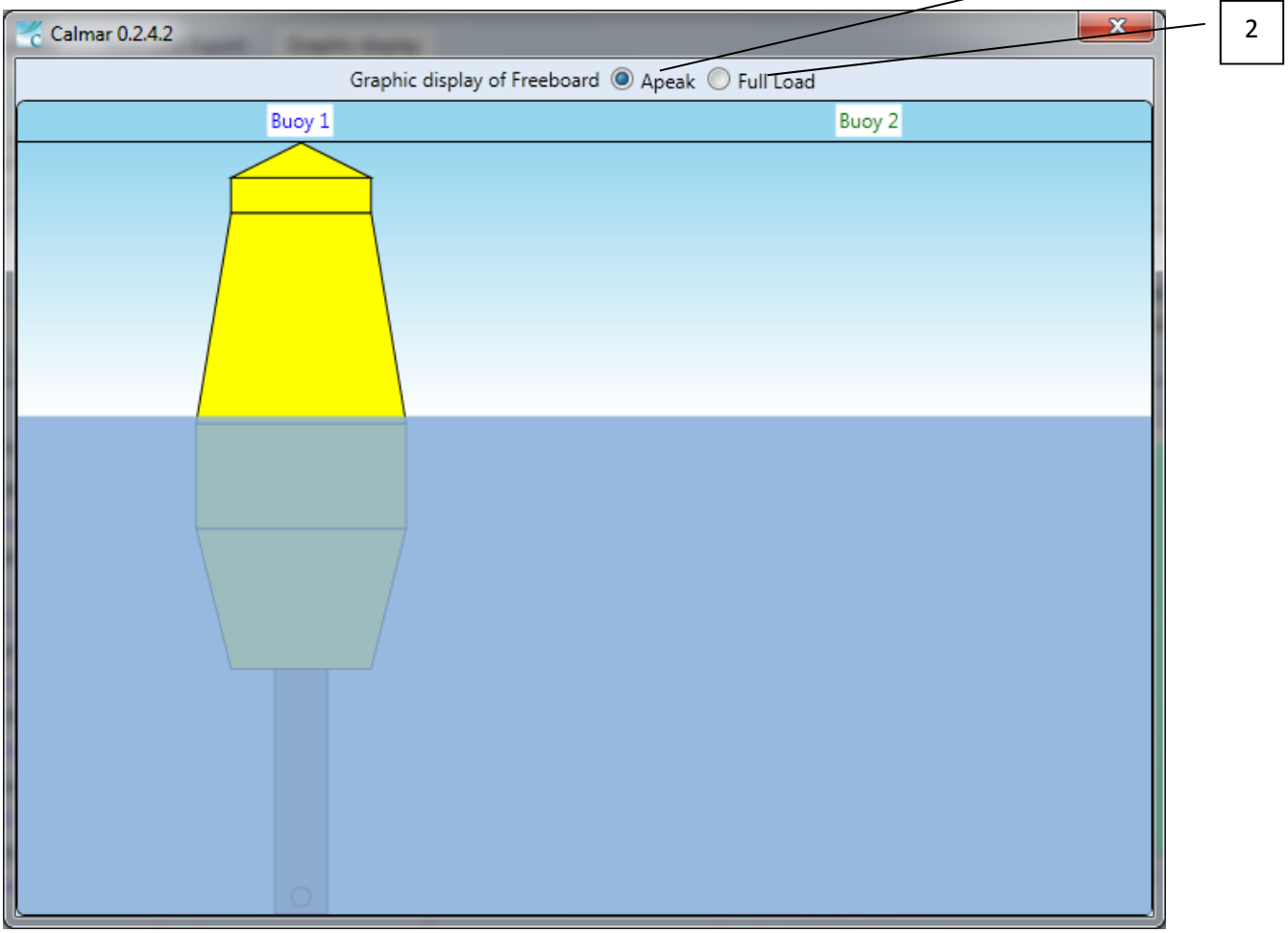
Select the page « Print and export» then input the file name (or project name) and click « Print » or « Txt » (the export allows three output formats to Txt format)



4.2 Display of buoy without equipment



To display the level of embedment of buoy (without equipment or with equipment), click the page « Display » then click the button « Display of buoy with or without equipment »



1. Display without equipment (By default)
2. Display with equipment