



eTlipse
elements2



TL XPRESS

GUIDE (ENGLISH)

April 14, 2024

TL ELEMENTS: XPRESS - BUILDING TOOL \\ GUIDE

TL Elements XPRESS is a tool to perform the automatic building of Architecture models out of rooms, separation lines and user preferences; automatic application of wall finishes and insertion of frames; optional and automatic join of wall, floor and ceiling elements; optional and automatic creation of wall parts. Basically, it is a way to run a streamlined single execution of several commands of the TL Elements application. You can use the core functionalities of the TL Elements lists to handle rooms selection.

This is a guide to get you started on the basics of the command. Please, keep in mind that, in addition to this and any other support material, TL Elements/TL Elements Xpress also provides helpful tooltips with descriptions of features that you may invoke by hovering your mouse over the buttons of the application.

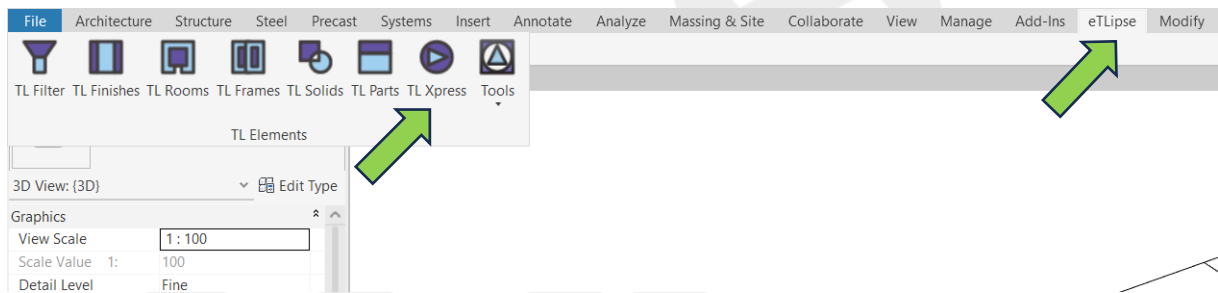


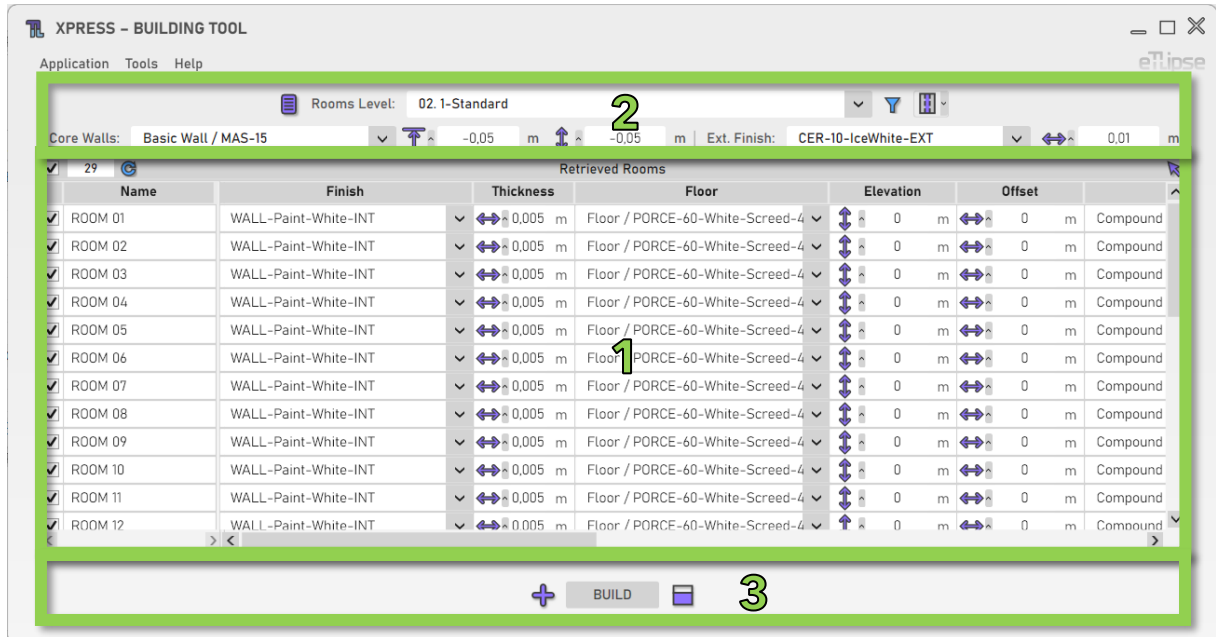
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TL XPRESS INTERFACE



As we can see in the image, the TL Xpress user interface provides:

1. A list of filtered rooms (Rooms List).
2. A set of tools for rooms filtering (to fill the Rooms List) and core walls parameters.
3. A set of tools for building of the rooms with the provided parameters.

To learn how to use the controls in lists, refer to the "TL List" guide.

All numeric text boxes in the interface will assume values in the units currently set for the type of the selected parameter in the active project.

Use of Revit Global Parameters

Before using any of the multiple features of TL Xpress, we should note that every field for numeric value in its user interface can be locked and receive values from Revit global parameters. We must keep in mind that the global parameter must always match the unit type of the numeric field (fields for length values require length global parameters, fields for integer values require integer global parameter, etc.).

Finish	Thickness	Floor	Elevation
LL-Paint-White-INT	0,005 m	Floor / PORCE-60-White-Screed-4	0 m
LL-Paint-White-INT	0,005 m	Floor / PORCE-60-White-Screed-4	0 m
LL-Paint-White-INT	0,005 m	Floor / PORCE-60-White-Screed-4	0 m
LL-Paint-White-INT	0,005 m	Floor / PORCE-60-White-Screed-4	0 m
LL-Paint-White-INT	0,005 m	Floor / PORCE-60-White-Screed-4	0 m
LL-Paint-White-INT	0,005 m	Floor / PORCE-60-White-Screed-4	0 m
LL-Paint-White-INT	0,005 m	Floor / PORCE-60-White-Screed-4	0 m
LL-Paint-White-INT	0,005 m	Floor / PORCE-60-White-Screed-4	0 m
LL-Paint-White-INT	0,005 m	Floor / PORCE-60-White-Screed-4	0 m

Every field is preceded by a button that opens the panel with the option to lock the values in the field to a Revit global parameter. In the image, we can see an example of this button next to a field that takes values for elevations of walls (in this case, values of length).

Global Parameters Panel:

- Ceiling Offset: -0,5
- Ceramic Thickness: 0,01
- Door Offset: 0,1
- Painting Thickness: 0,002
- Skirting Height: 0,15
- Structure Offset: -0,05
- Window Elevation: 1
- Window Elevation High: 1,5

After clicking the button, we can click the “globe” icon to lock the field to one of the available global parameters of the respective unit type found in the active Revit project.

If no global parameter for the unit type of the field is found, the button to open the panel will be disabled.

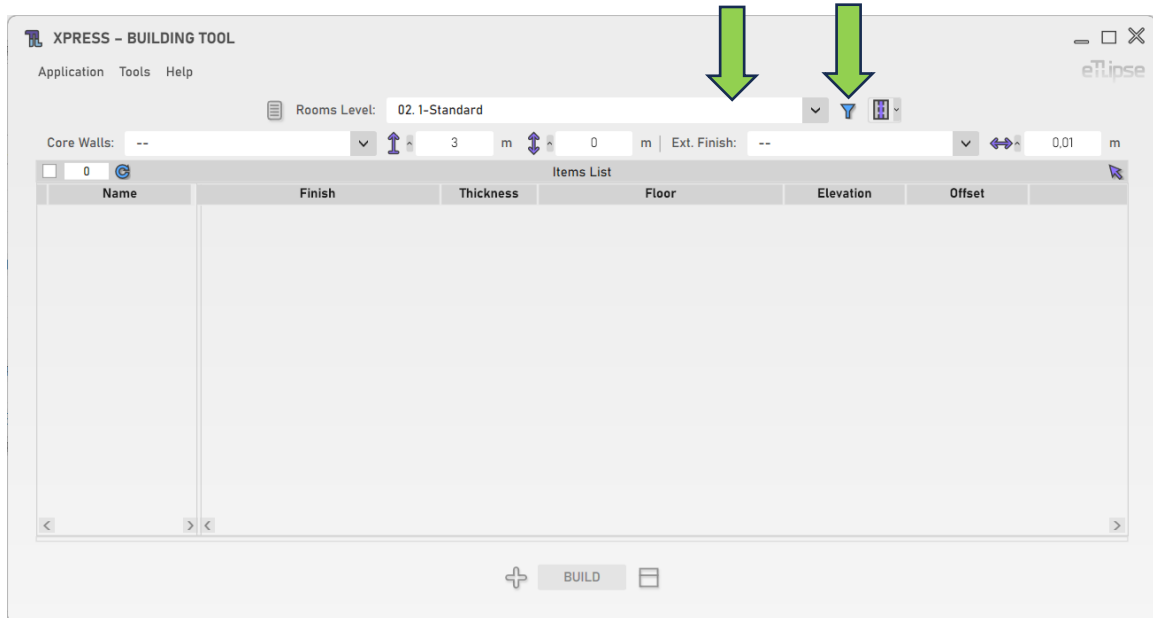
TL Xpress Requirement

The main requirement to use the TL Xpress command is having a Revit model with an integrated group of Rooms divided by Room Separation Lines. These rooms will be retrieved by level and will be analyzed as a group forming a single story of a building, sharing dividing walls and enclosed by external walls.



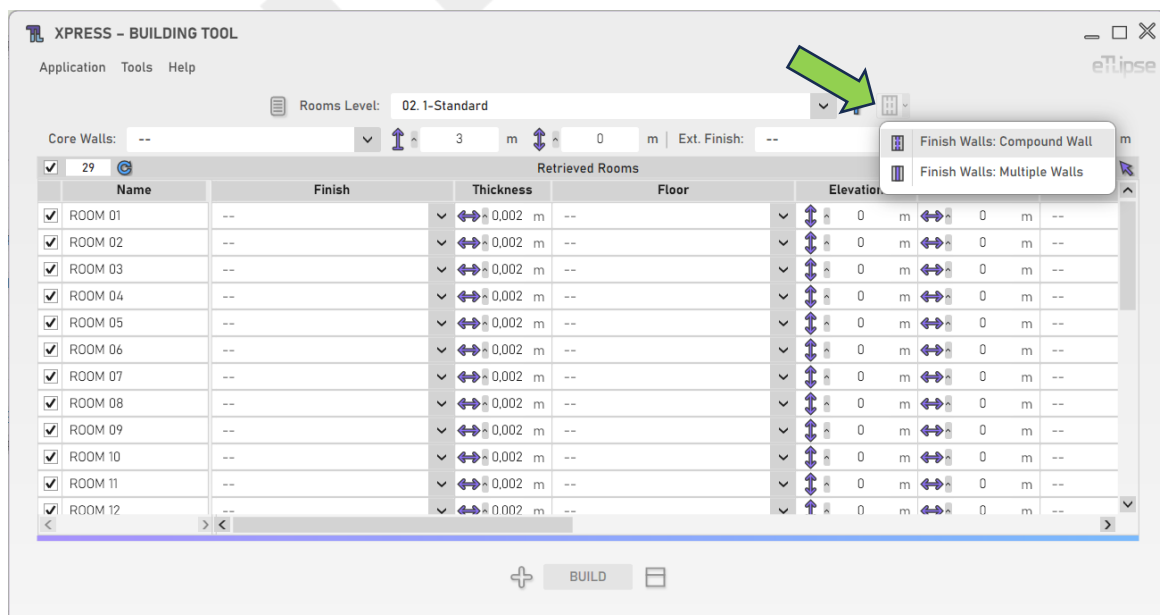
Retrieving Rooms by Level

In order to retrieve rooms for the list, you need to select a level in the "Room Levels" dropdown box and click the "Retrieve Rooms" button.



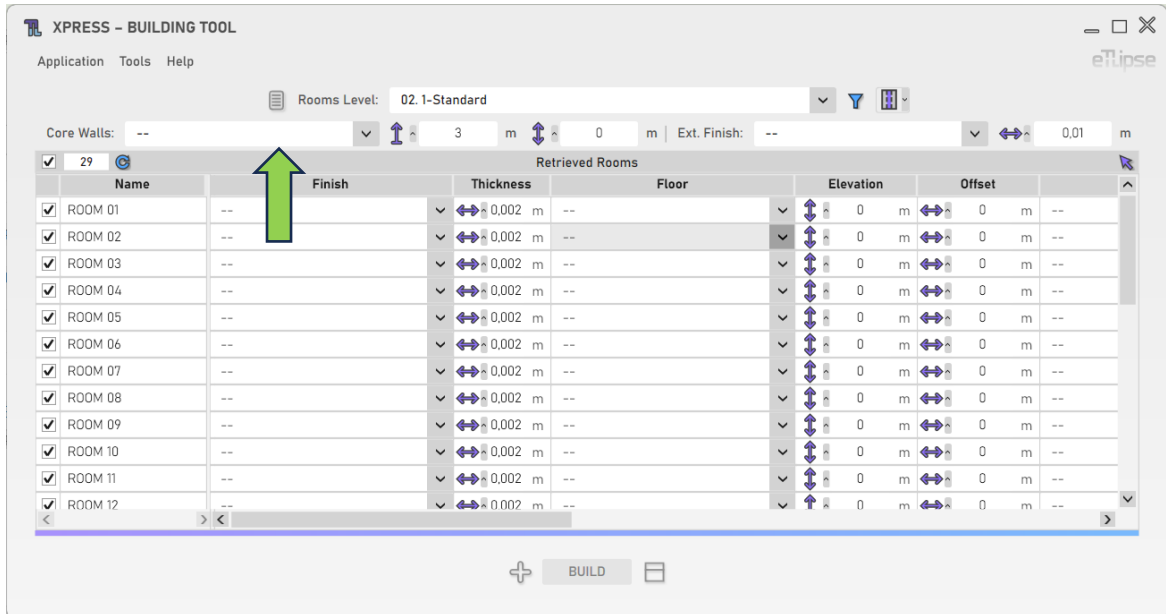
Setting the Wall Assembly Mode

You can determine if the finishes of your walls will be applied as new layers to the core walls ("Compound Wall" mode) or as new walls placed at the faces of the core walls ("Multiple Walls" mode). In order to set this behavior, you need to select the respective option in the "Toggle Wall Assembly Mode" dropdown box.



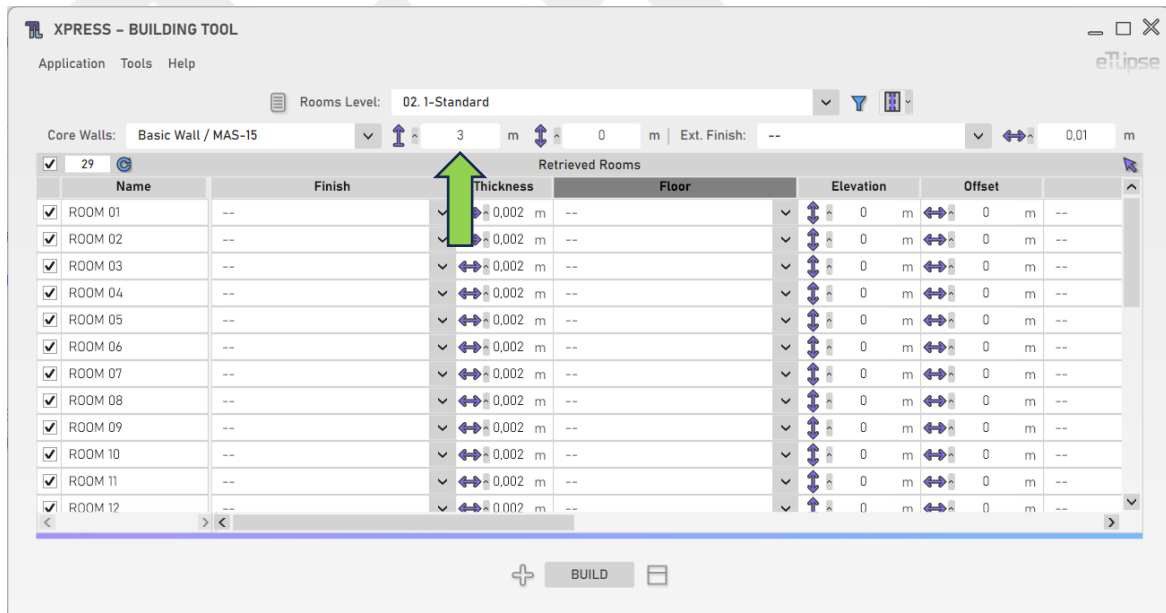
Setting the Core Walls Type

In order to set the type of the core walls of the building, you need to select a wall type in the “Core Wall Type” dropdown box.



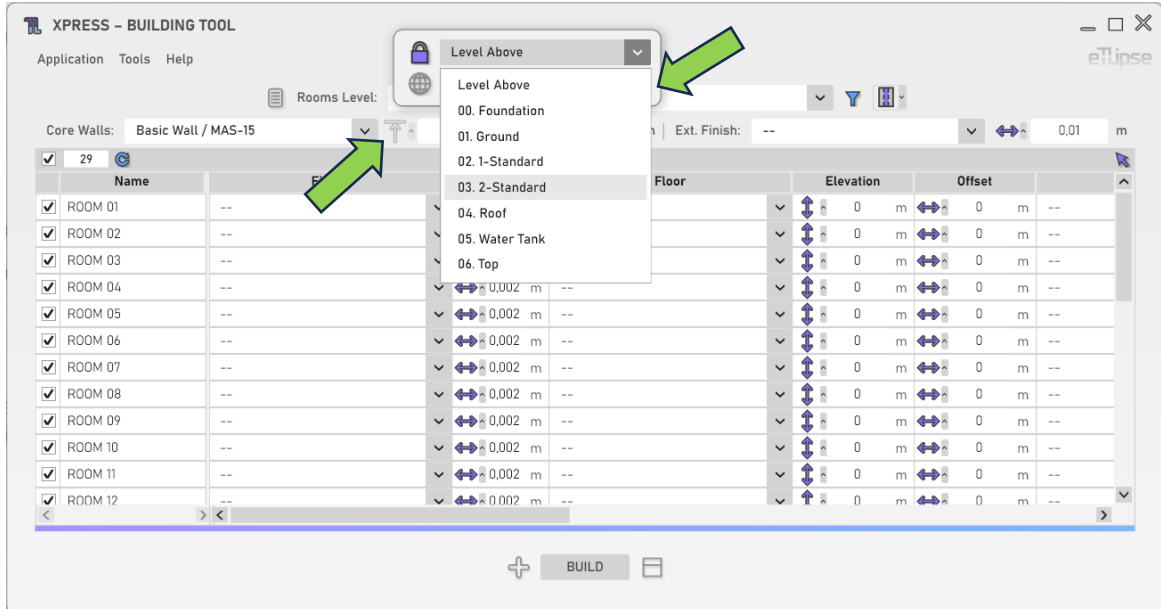
Core Wall Height

To set the height of the walls to be created, provide a length value in the indicated text box.



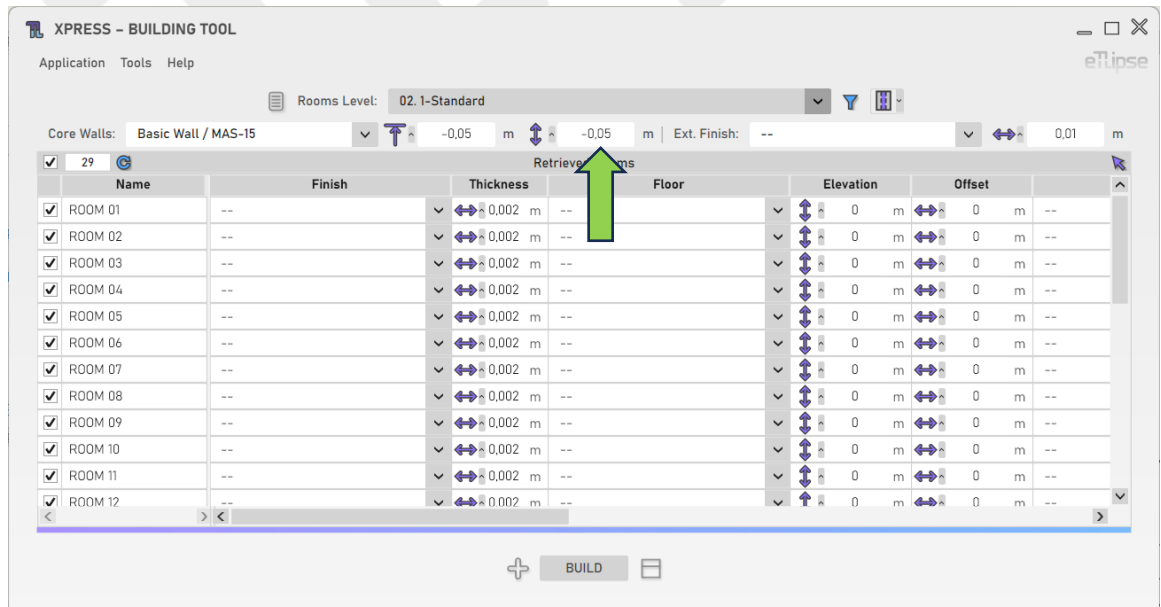
Core Wall Top Offset Lock

Alternatively, you can lock the top face of the walls to be created to a given project level and set an offset value based on this level. To achieve this, click the respective icon, then, enable the lock button and choose a level in the popup panel that appears.



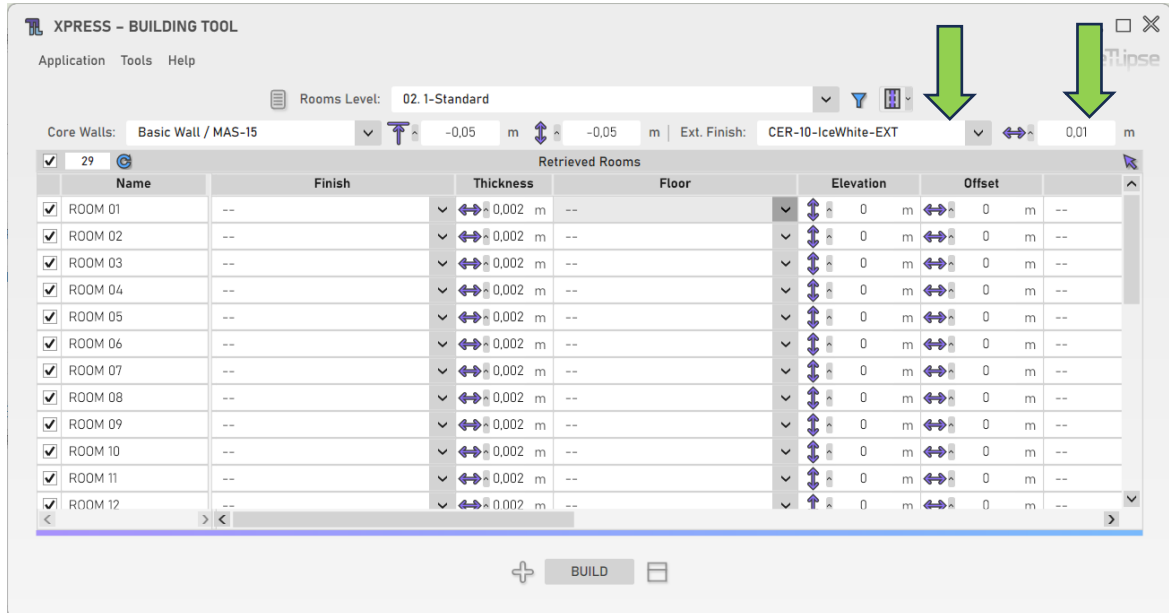
Core Wall Elevation

To set the elevation of the walls to be created, provide a length value in the indicated text box.



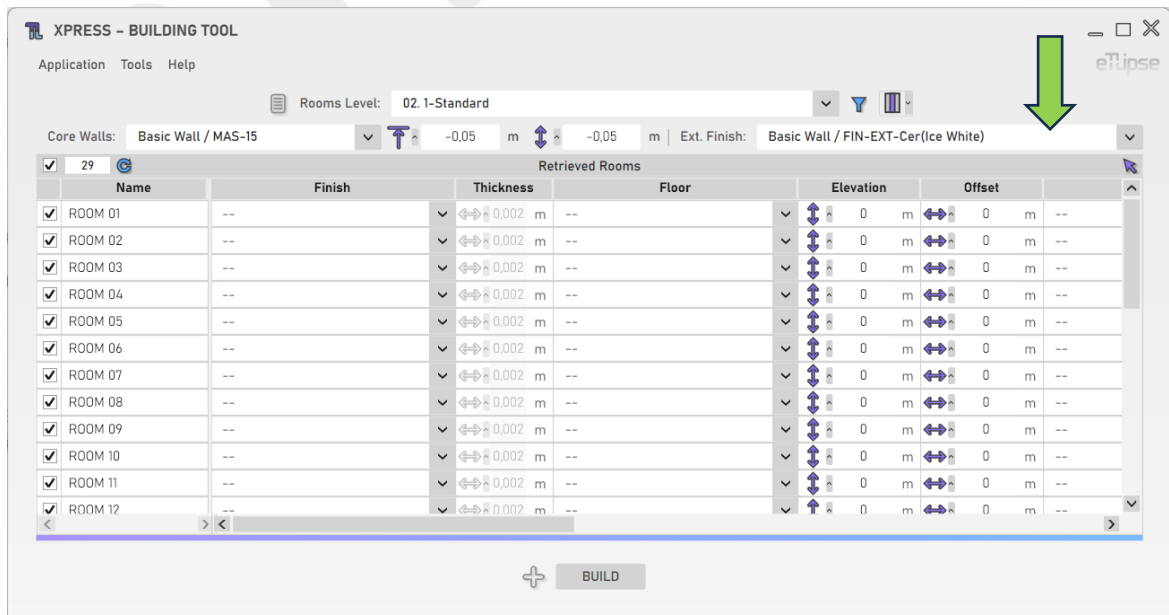
Setting the External Walls Finish (Compound Wall Mode)

In "Compound Wall" mode, in order to set the material for the finish layer to be applied to the external side of the core walls, you need to select a material in the "External Finish Material" dropdown box. You have to provide a thickness value to the layer as well in the "Finish Thickness" field.



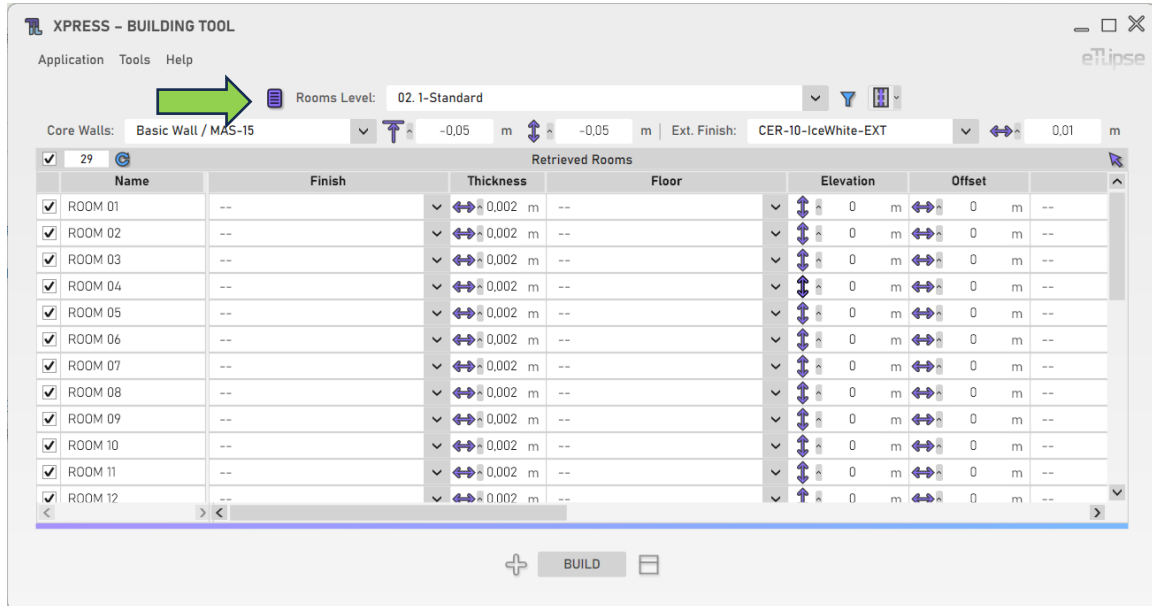
Setting the External Walls Finish (Multiple Walls Mode)

In "Multiple Walls" mode, in order to set the type for the wall to be placed as finish to the external side of the core walls, you need to select a type in the "External Finish Wall Type" dropdown box.



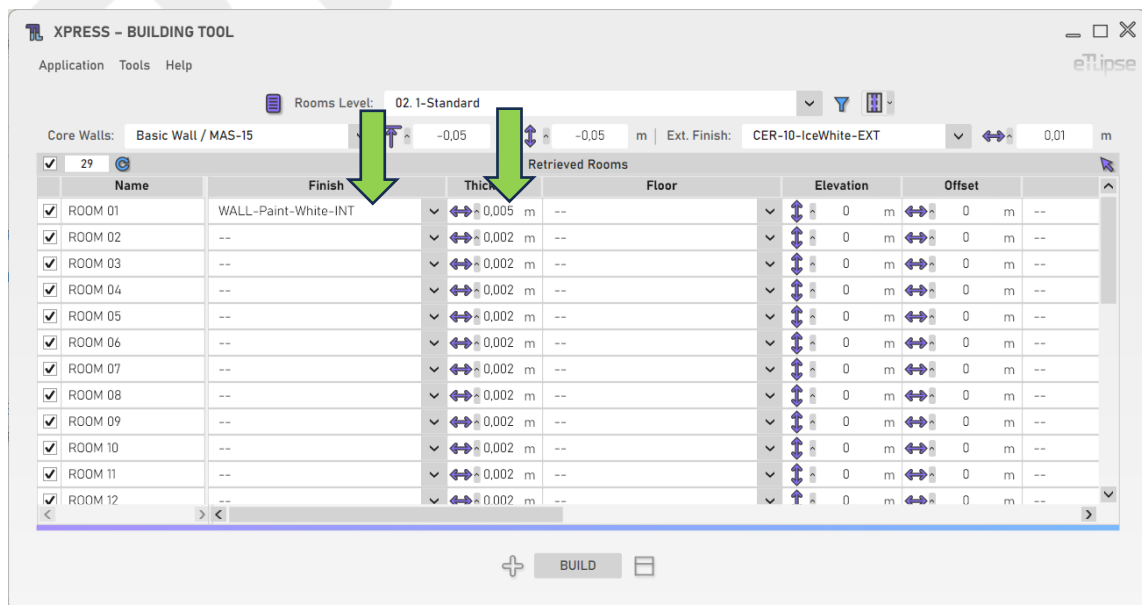
Setting of Multiple Parameter Values at Once

In the list of retrieved rooms, it is possible to set the same value of a specific parameter for multiple selected rooms at once. To do this, remember to always activate the "Toggle Setting of Multiple Parameter Values" button before assigning a parameter value that you wish copied to the same parameter of other selected rooms.



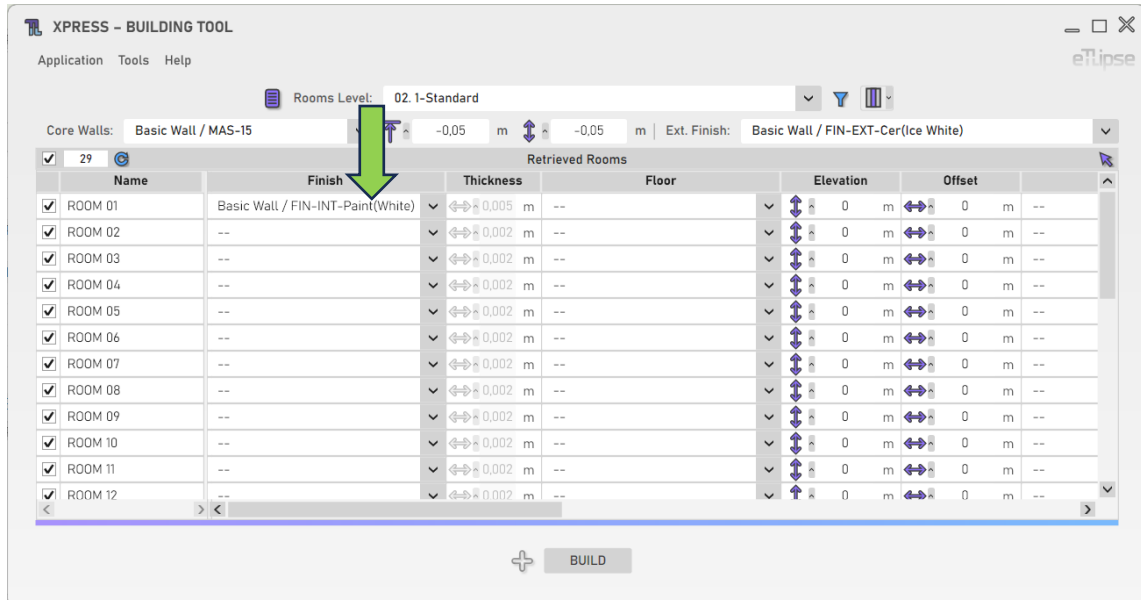
Setting Finishes for Rooms (Compound Wall Mode)

In "Compound Wall" mode, in order to set the material for the finish layer to be applied to the internal side of each listed room, you need to select a material in the "Internal Finish Material" dropdown box. You have to provide a thickness value to the layer as well in the "Finish Thickness" field.



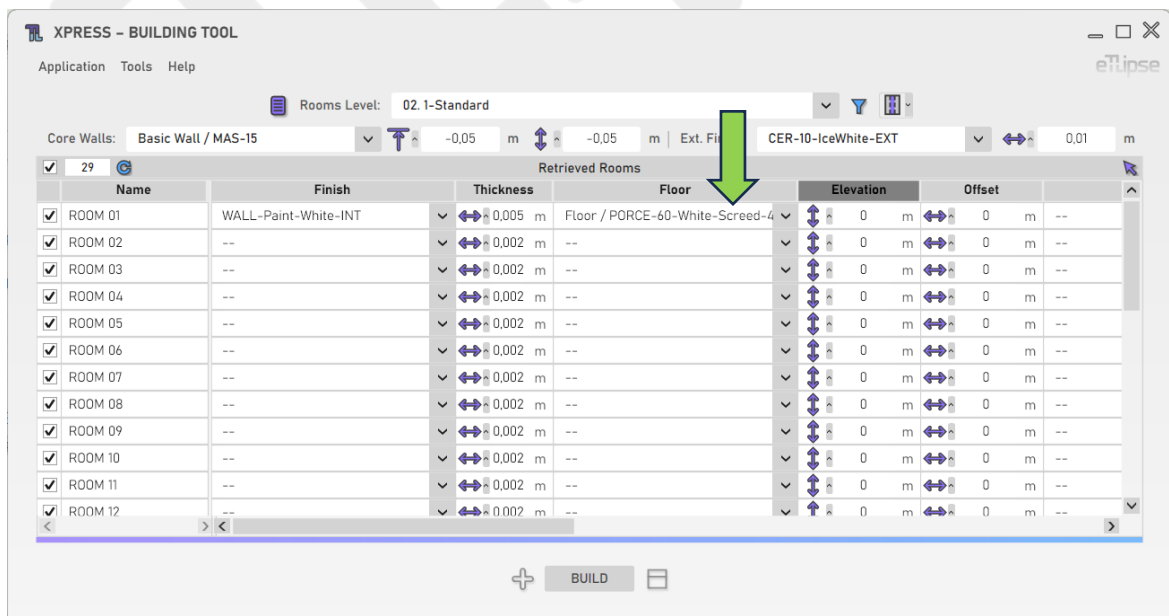
Setting Finishes for Rooms (Multiple Walls Mode)

In "Multiple Walls" mode, in order to set the type for the wall to be placed as finish to the internal side of the listed rooms, you need to select a type in the "Internal Finish Wall Type" dropdown box.



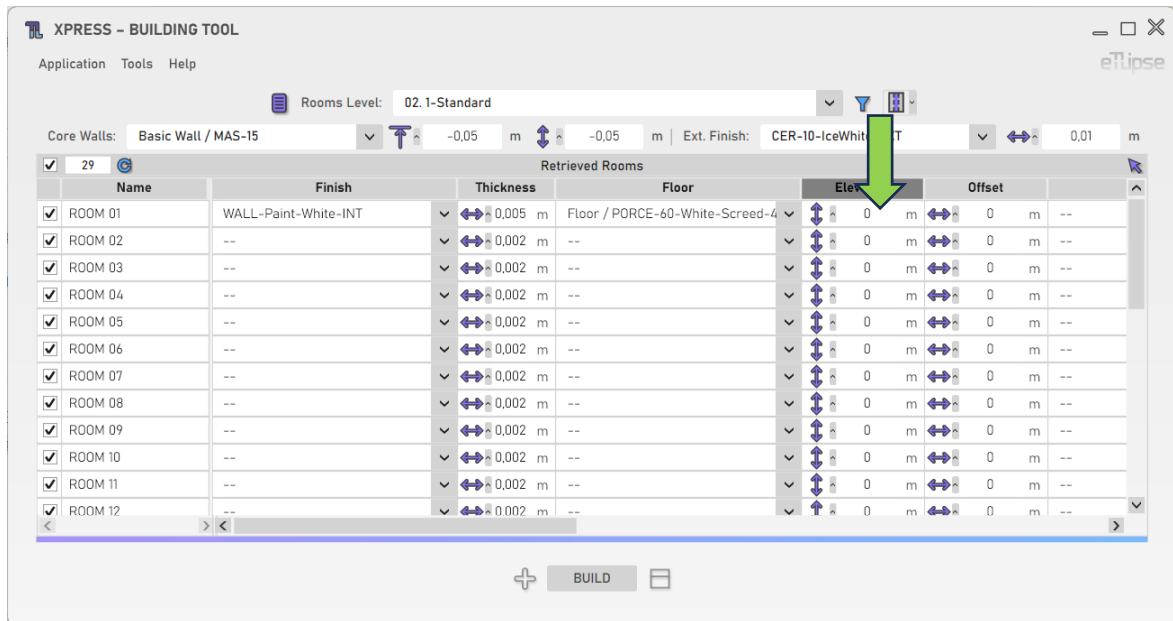
Floor Type

In order to set the type of the floor to be created for each room, you need to select a floor type in the "Floor Type" dropdown box.



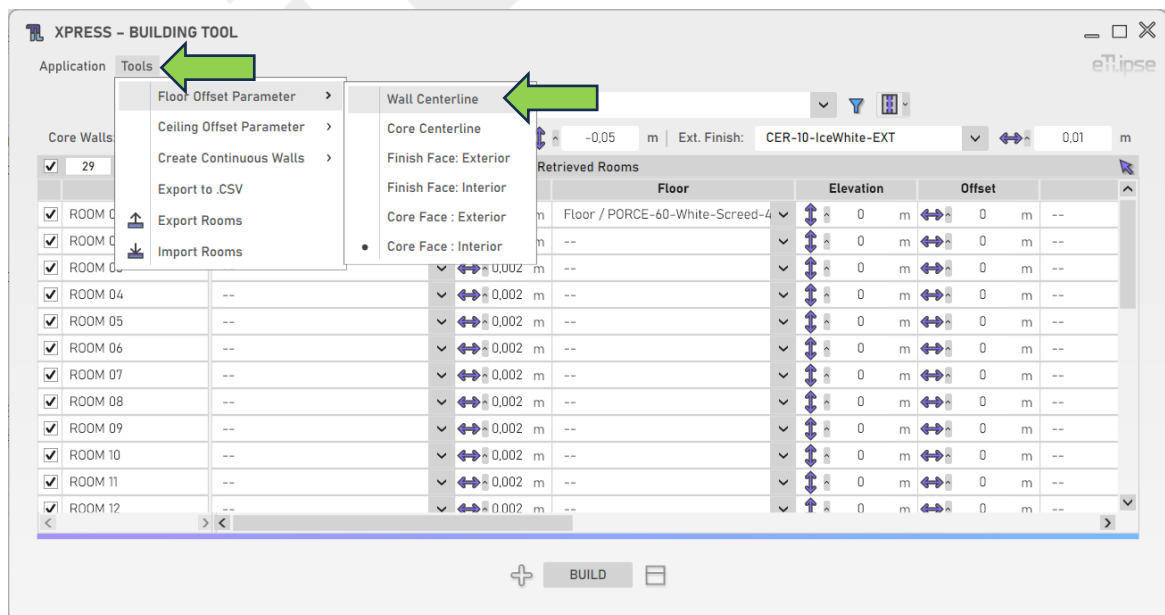
Floor Elevation

To set the elevation of the floors to be created, provide a length value in the indicated text box.



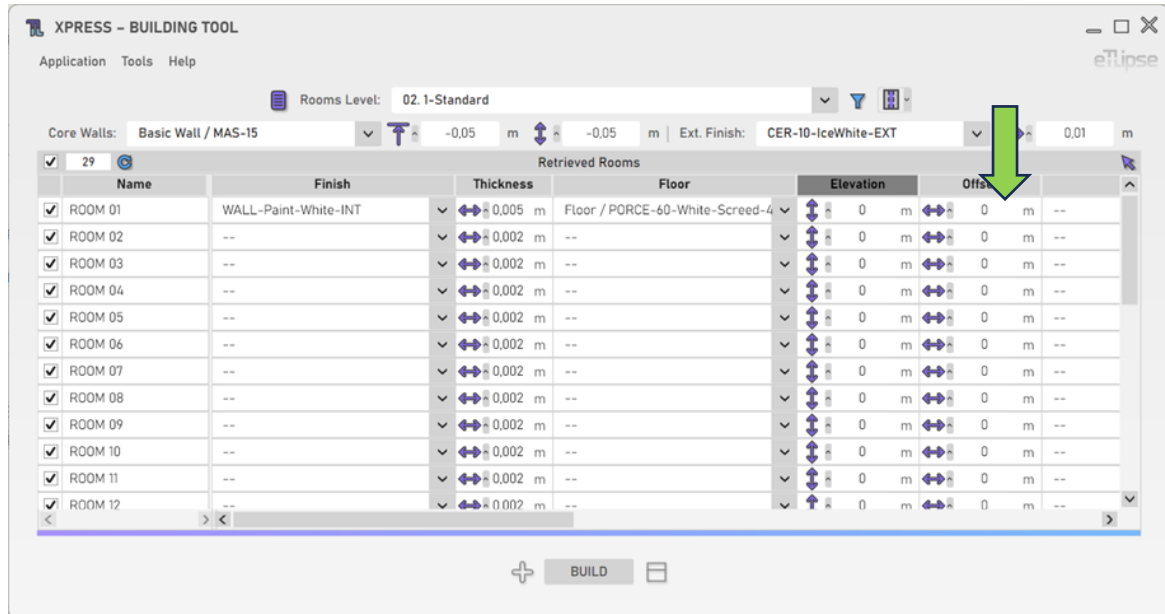
Floor Offset Parameter

You can limit the horizontal offset of the floors to the centerline, centerline of the core, external finish face, internal finish face, external core face or interior core face of the walls that enclose the rooms where the floors are going to be created. To access these options, go to the "Tools>Floor Offset Parameter" menu.



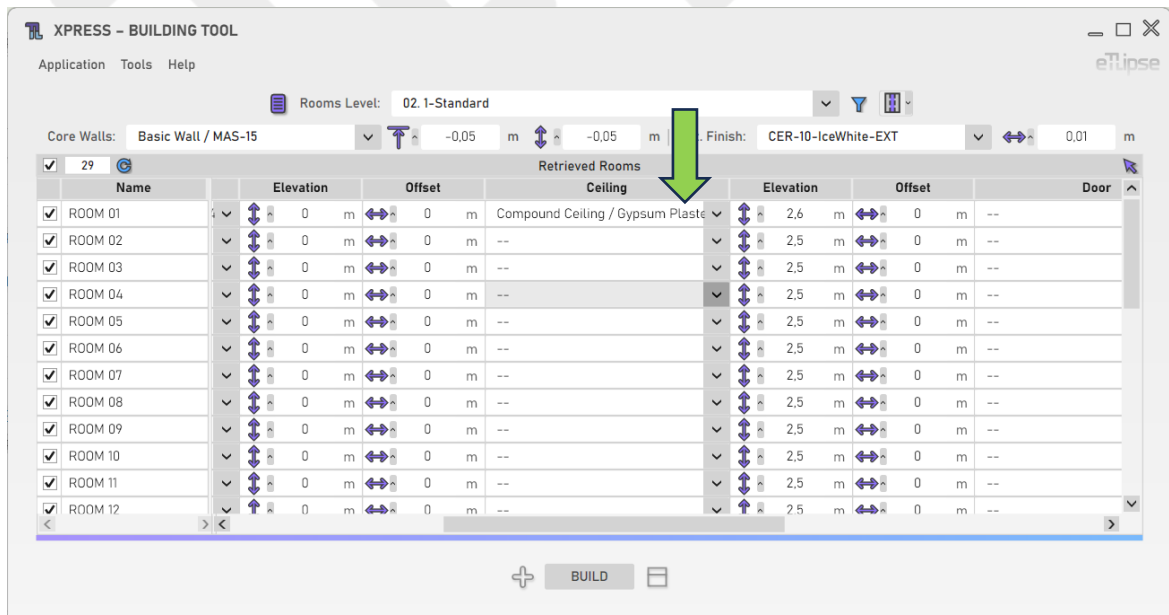
Floor Horizontal Offset

To add a horizontal offset value to the chosen Floor Offset Parameter reference, provide a length value in the indicated text box. Positive values will expand the offset. Negative values will contract it.



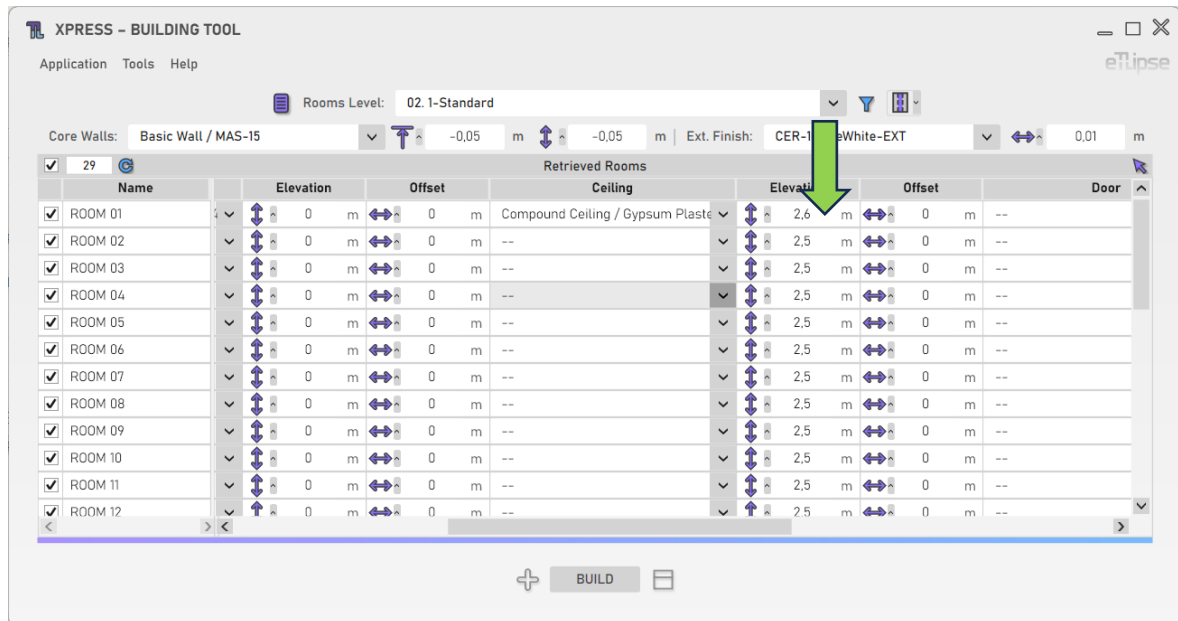
Ceiling Type

In order to set the type of the ceilings to be created for each room, you need to select a ceiling type in the "Ceiling Type" dropdown box.



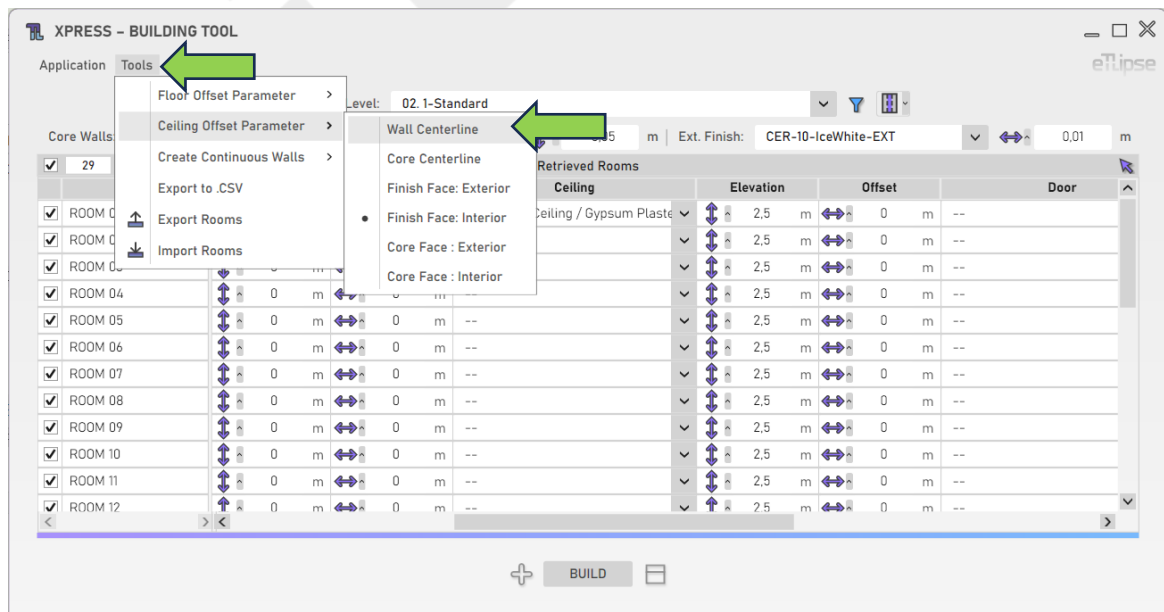
Ceiling Elevation

To set the elevation of the ceilings to be created, provide a length value in the indicated text box.



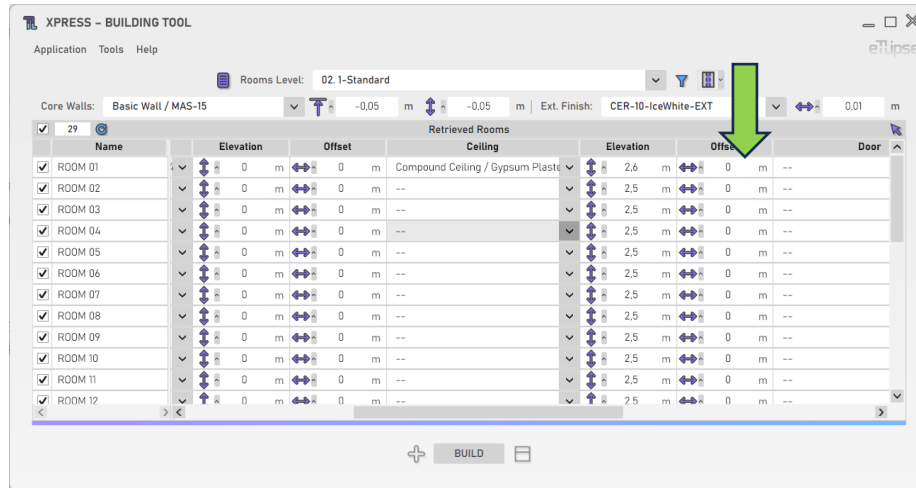
Ceiling Offset Parameter

You can limit the horizontal offset of the ceilings to the centerline, centerline of the core, external finish face, internal finish face, external core face or interior core face of the walls that enclose the rooms where the ceilings are going to be created. To access these options, go to the "Tools>Ceiling Offset Parameter" menu.



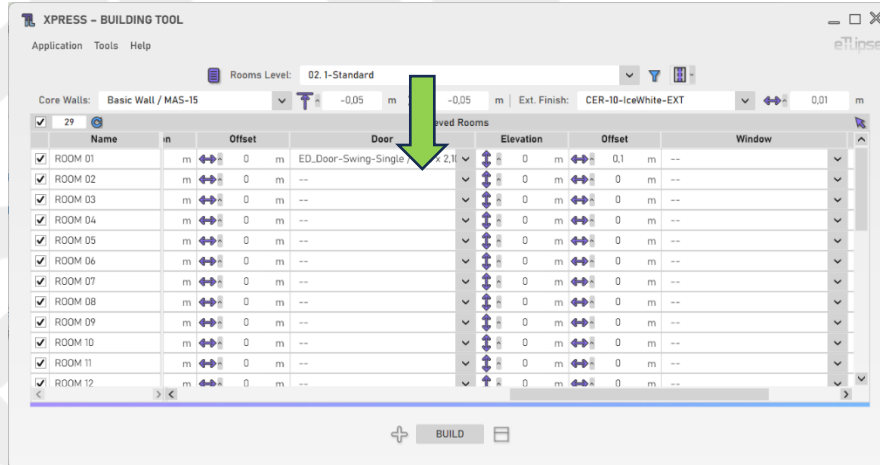
Ceiling Horizontal Offset

To add a horizontal offset value to the chosen Ceiling Offset Parameter reference, provide a length value in the indicated text box. Positive values will expand the offset. Negative values will contract it.



Door Type

In order to set the type of the doors to be inserted for each room, you need to select a door type in the "Door Type" dropdown box.

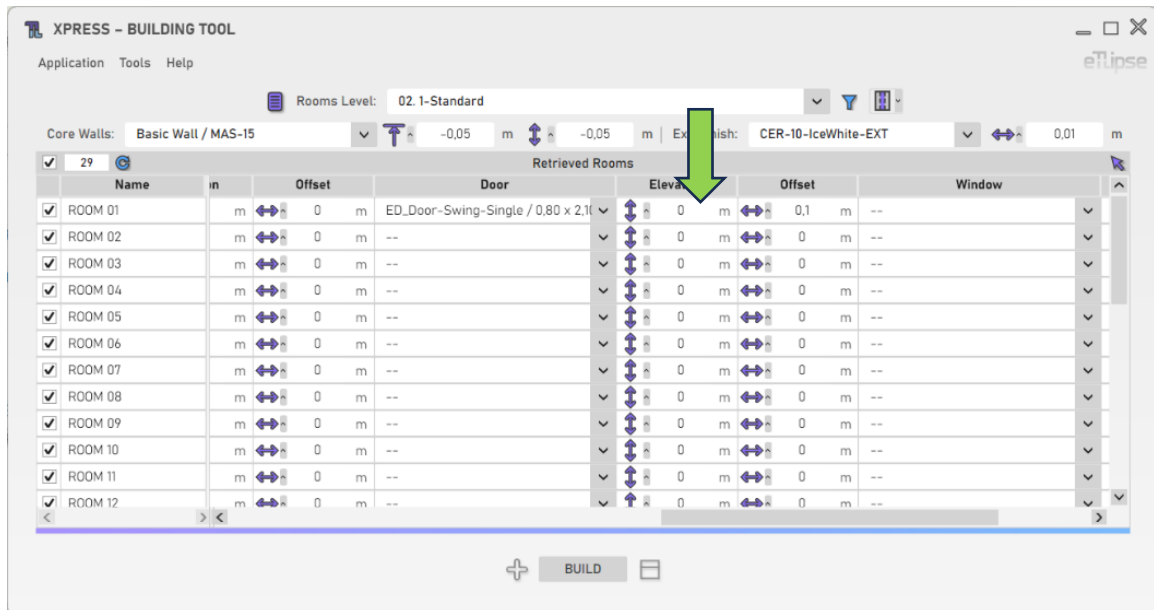


For rooms that normally should have multiple doors, as halls and circulations, we recommend the use of the **Any** option, as indicated in the second image. This option will allow the selected room to share as many doors as possible with other rooms that have a specific door type assigned to it.

As you may notice, it is not guaranteed that every door insertion expected by the user will be performed by the algorithm. In fact, it is not even possible to predict the opening side of door families, since they can be freely modelled by the user. The most expected scenario is that TL Xpress will create the walls and insert the doors automatically according to a basic logic, being the users the responsible for checking and changing their location and direction according to their project guidelines. So, be aware that this feature is a tool to facilitate the door insertion workflow, and not to completely replace it.

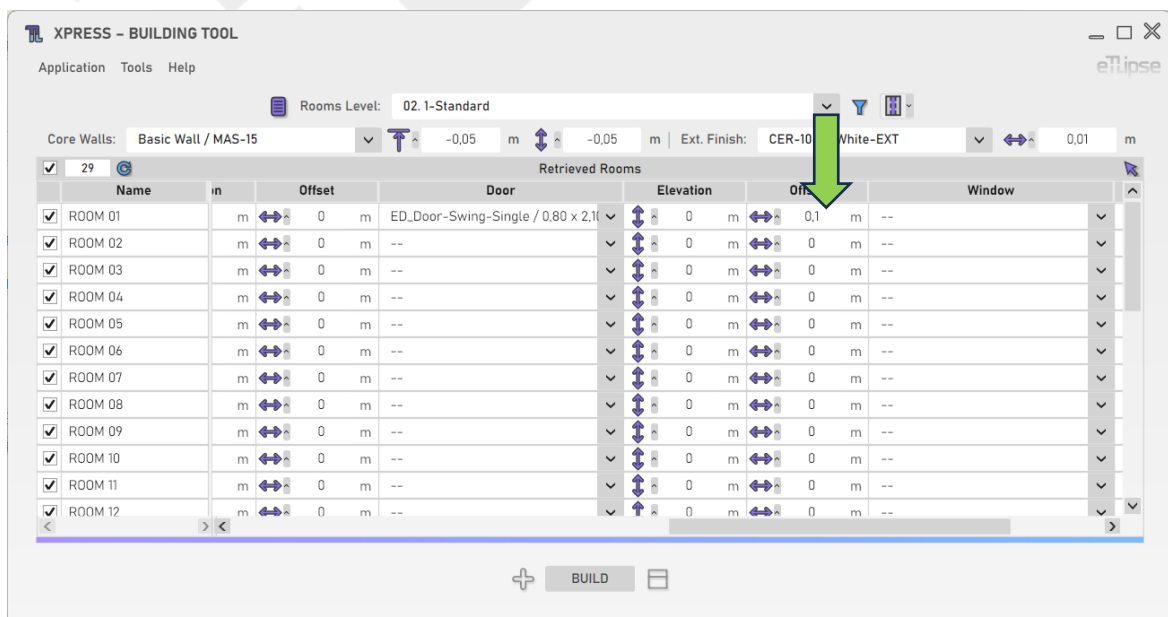
Door Elevation

To set the elevation of the doors to be created, provide a length value in the indicated text box.



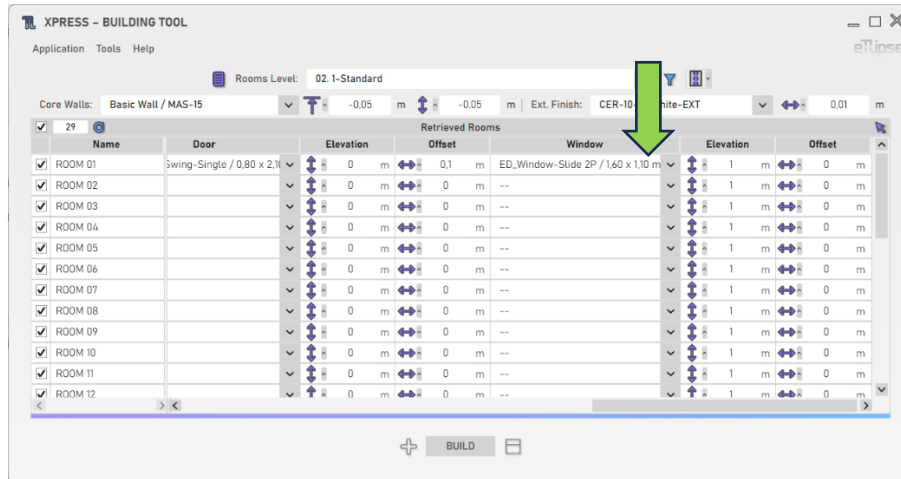
Door Horizontal Offset

To set the horizontal offset of the doors to be created, provide a length value in the indicated text box. The value "0" (zero) places the door at the center of the first valid wall. Positive values place it in an offset from the start of the first valid wall. Negative values, in an offset from the end of the first valid wall.



Window Type

In order to set the type of the windows to be inserted for each room, you need to select a window type in the "Window Type" dropdown box.

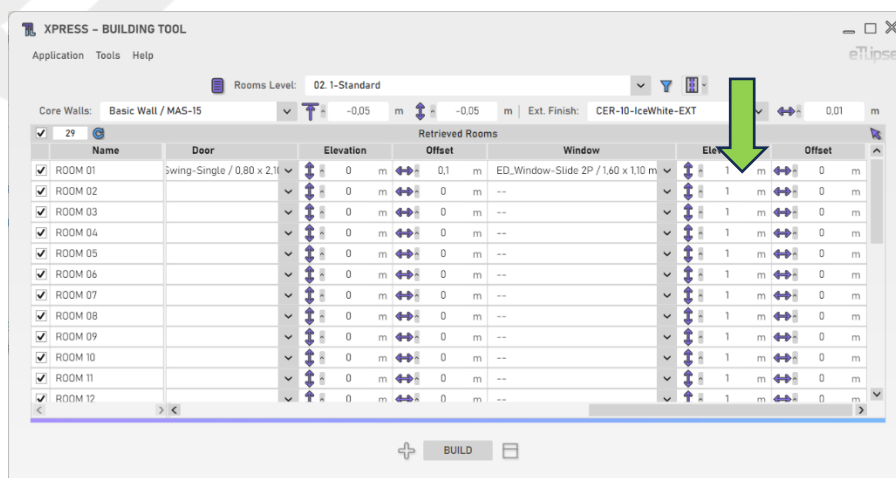


Be aware that the insertion of windows in TL Xpress is done by the analysis of the walls of the rooms. Only 1 of the external walls of each room can have a window insertion and the priority is directed to the ones in direct opposition to the internal wall with the door, when possible.

As you may notice, it is not guaranteed that every window insertion expected by the user will be performed by the algorithm. In fact, it is not even possible to predict the opening side of window families, since they can be freely modelled by the user. The most expected scenario is that TL Xpress will create the walls and insert the windows automatically according to a basic logic, being the users the responsible for checking and changing their location and direction according to their project guidelines. So, be aware that this feature is a tool to facilitate the window insertion workflow, and not to completely replace it.

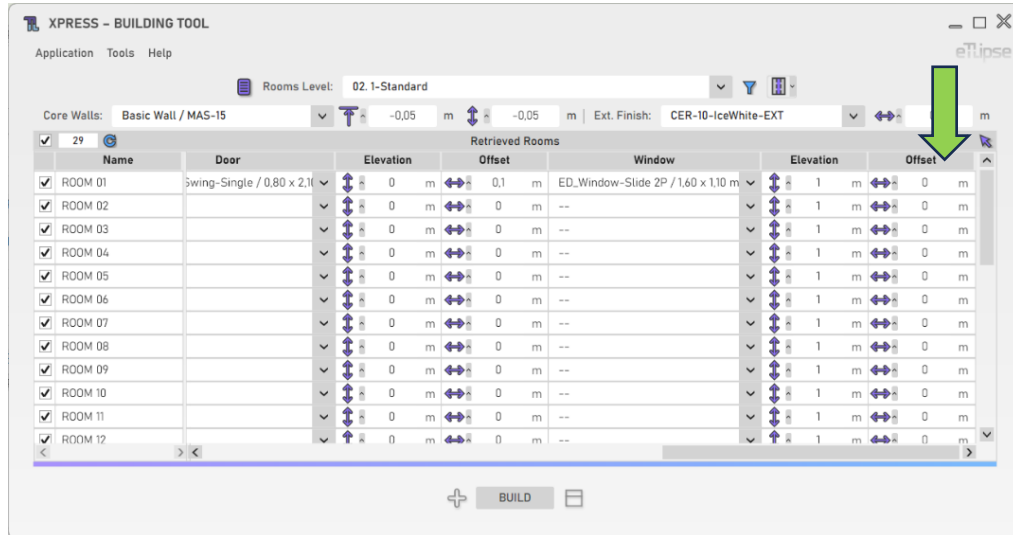
Window Elevation

To set the elevation of the windows to be created, provide a length value in the indicated text box.



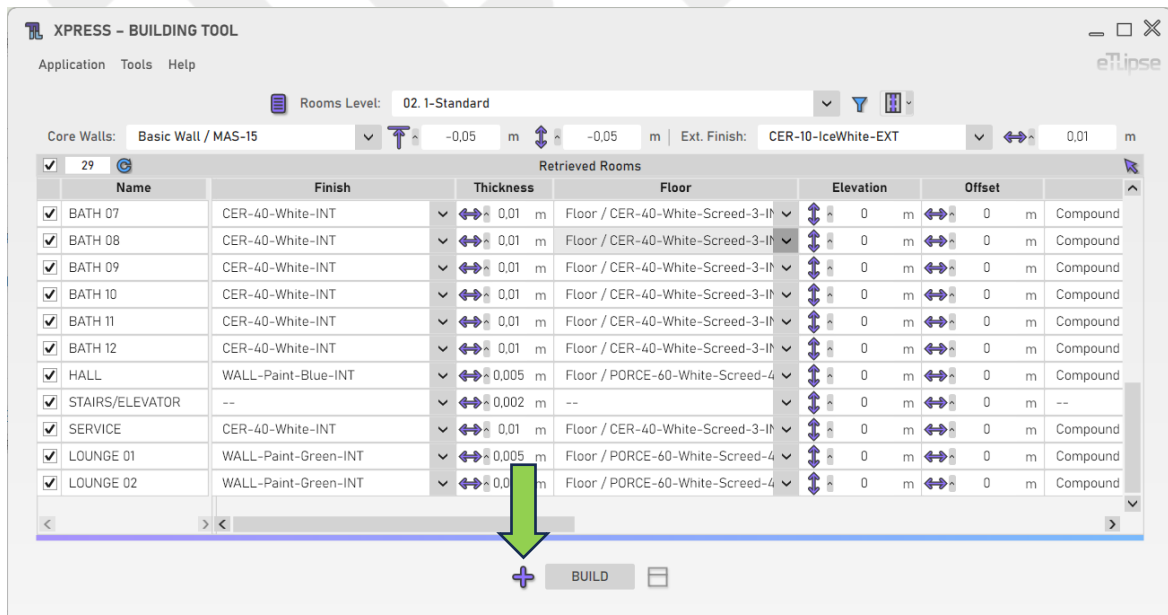
Window Horizontal Offset

To set the horizontal offset of the windows to be created, provide a length value in the indicated text box. The value "0" (zero) places the window at the center of the first valid wall. Positive values place it in an offset from the start of the first valid wall. Negative values, in an offset from the end of the first valid wall.



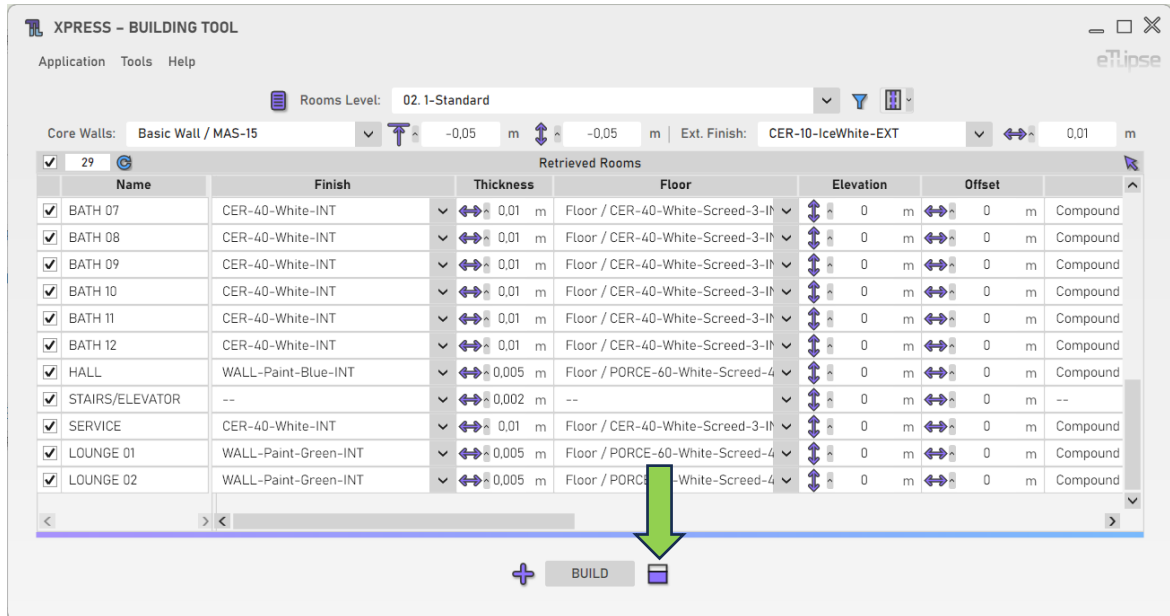
Join Geometry

To automatically join the geometry of the walls to be created with the geometry of the adjacent walls, you must enable the "Toggle Join Geometry" button.



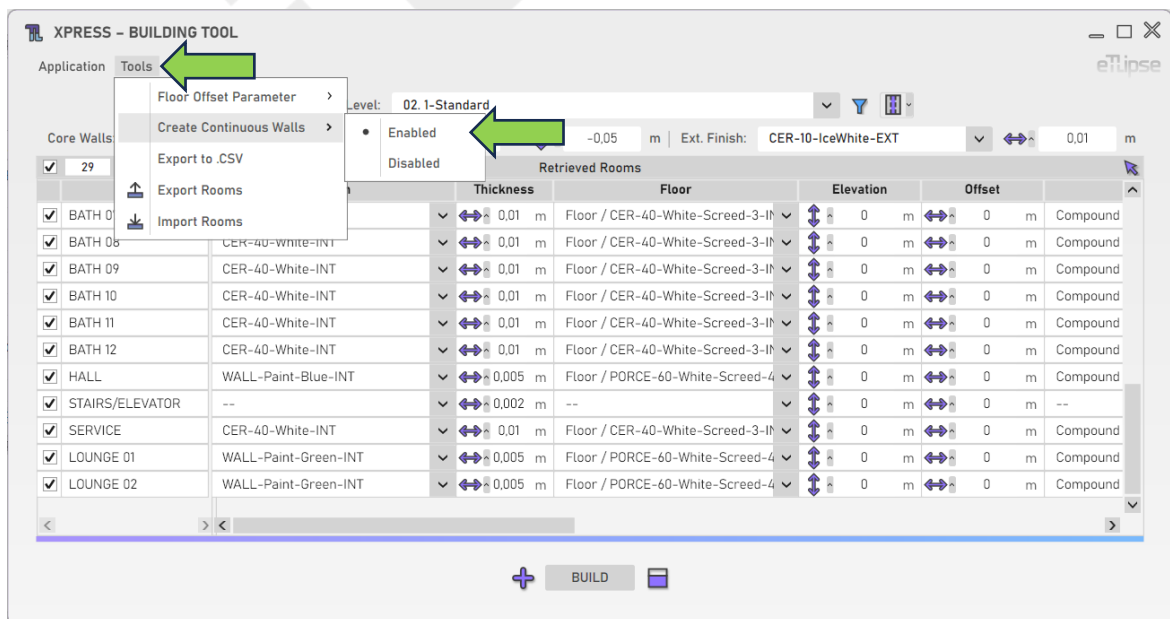
Parts Creation (Compound Wall Mode)

In "Compound Wall" mode, to automatically break the created walls into parts at end of the building process, you must enable the "Toggle Wall Parts Creation" button.



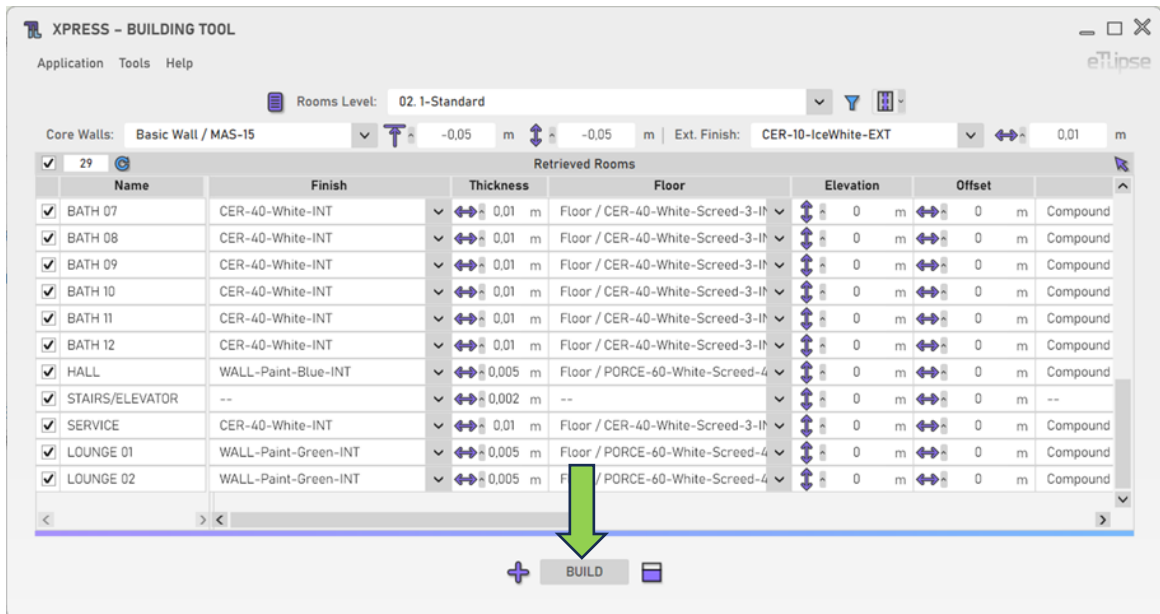
Continuous Walls (Multiple Walls Mode)

In "Multiple Walls" mode, to allow the automatic insertion of one continuous wall in segments with multiple walls in the same direction and continuity, you must enable the "Create Continuous Walls" option at the "Tools" menu.



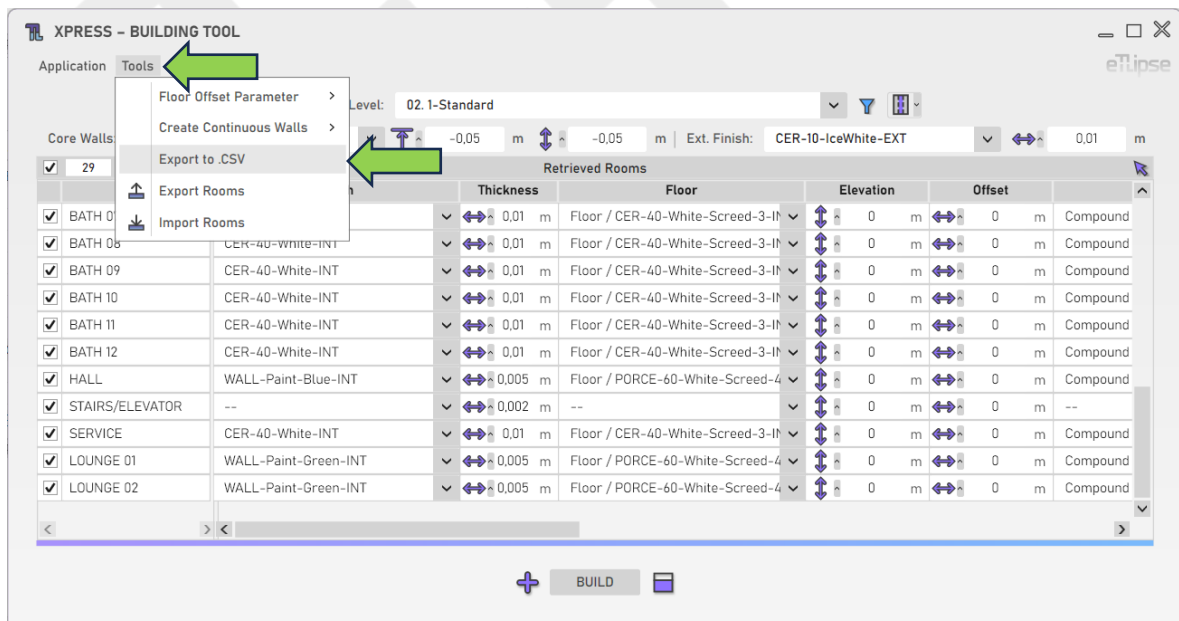
Building the Architecture

To build the rooms with all the provided settings, click the button "Build Architecture".



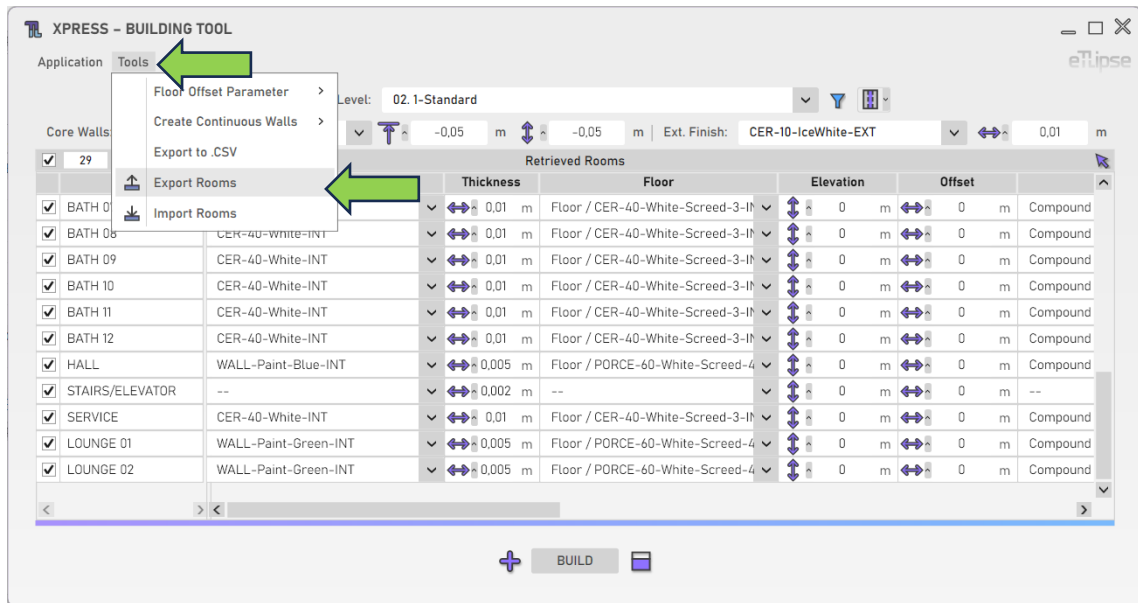
Export Content to a CSV file

You can export a table with the current list of rooms and their parameters to a .csv file. To do so, you just need to go to the menu "Tools>Export to .CSV".



Export Rooms to a File

At any time, you can export the current collection of rooms and their parameters to a *.tlsx* file. To do so, you need to go to the “Tools>Export Rooms” menu. The content of this file can be imported to the TL Xpress Rooms List in future Revit sessions. But be aware that this is only going to work in the same project with the same valid rooms.



Import Rooms from a File

As stated in the previous topic, you can import a saved collection of rooms and their parameters from a *.tlsx* file. To do so, you just need to go to the “Tools>Import Rooms” menu. The content of the chosen file can be imported to the TL Xpress Rooms List in the current Revit session. But be aware that this is only going to work in the same project with the same valid rooms.

