USER GUIDE

Mediterran CAD 2013 (ArchiCAD 15, 16, 17)

MEDITERRAN

Szinekkel tetőzi otthonát

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Section 1

1.1 Installing the Mediterran Roof Tiling add-on

Start the Mediterran 2013 installer and choose the ArchiCAD versions you want to use with the add-on.
Remember that only ArchiCAD 15, ArchiCAD 16 and ArchiCAD 17 are available with the new add-on. To get a former version contact the product developer.
Follow the steps in the installer to install the add-on.

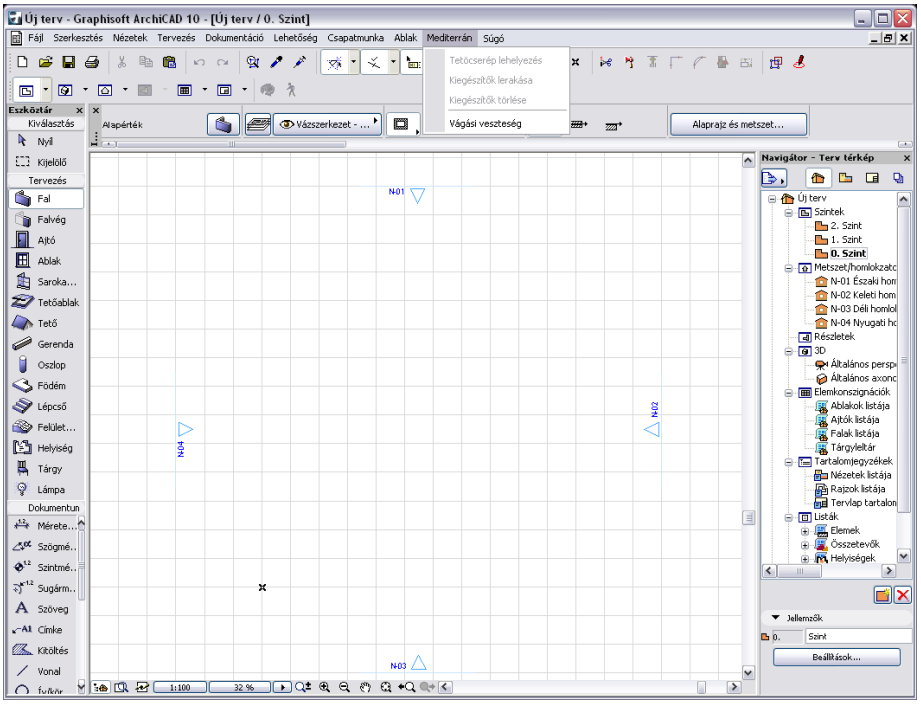
If you already used the former Mediterran version, there is no need to remove it before installing the latest version.

After installation, the Mediterran add-on will automatically load, when you open ArchiCAD.

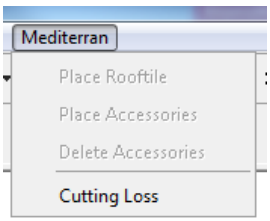
Notification: *the current version of the Mediterran add-on can only be used with ArchiCAD 15, 16 and 17!*

1.2 Starting the Mediterran program

After the start of ArchiCAD, a new menu „Mediterran" will appear in the menu.



Main functions of the add-on can be reached from this menu.



1.3 General functionality of the Mediterran add-on

The Mediterran CAD consists of two parts: an add-on running under ArchiCAD (Mediterran API) and a GDL library (MediterranTmp.lib). The program places polygons on the surfaces of ArchiCAD roofs. Roof accessories, such as snow guards, antenna outlets, dormer, etc. can be placed onto the polygons. Tiles are displayed as texture, accessories are displayed with a 3D model, on the floor plans and in 3D windows. Ridge tiles have got a simplified 3D display. The MediterranTmp.lib library contains the files that are necessary for the textures and lists.

The tiles and different edge elements are placed into the Add-Ons/ Mediterran / MediterranTmp.lib library. (This library will be automatically loaded, by the program) These are the elements that will be placed onto the plan, by the Mediterran API.

Section 2

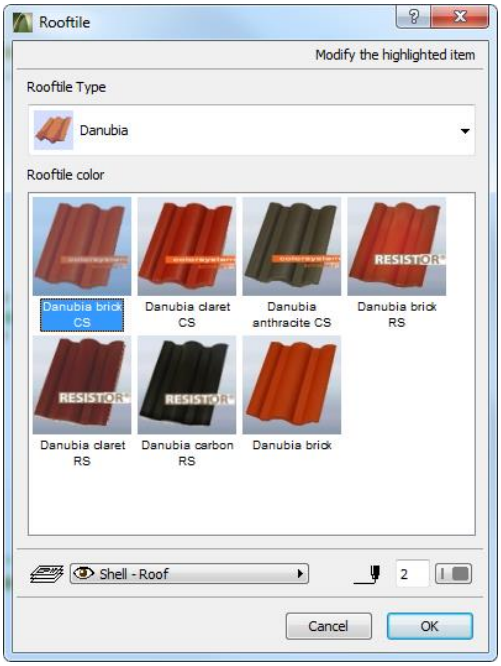
2.1 Basics

The add-on places the roof tile polygons onto the roofs on the same floor int he ArchiCAD plan. After the placing of the parametric roof tile objects, the original roof and the placed polygon will be grouped. This group can be suspended or ungrouped any time, with the right command in the Edit menu.
There are no automatic relations between the placed library objects and the roof. The polygon will not react to the modification of the angle, thickness, etc. of the roof, however it will follow the mirroring, turning or moving of the roof, if the grouping is not suspended. Deleting the roof will not delete the polygon.

Important! The Mediterran program should be used, when the roof has reached its final form, and all connecting structures (skylights, chimneys, connecting walls etc.) are placed.
The base roofs for Mediterran tiling shall be modelled with the help of ArchiCAD's Roof Tool. In this version of the add-on Single-plane and Multi-plane roofs can be used as well, but the single-lane roofs should be cropped to each other. The add-on work with the tolerance of a few centimeters, so smaller inaccuracies could be filtered. After the modelling of the roofs, you can use the Mediterran add-on to place the roof tiles and the roof accessories.
The program will try to define the different edge types of the roof by analyzing the roof geometry. Therefore it is necessary to highlight all connecting roofs and other items (walls and chimneys).as the add-on analyzes the relations between the selected roofs, walls and fills. Then the add-on places the ridge tiles, valleys, eaves and gables to the roof edges. The add-on will place chimney and wall flashings on the connecting edges of the walls, and fills.

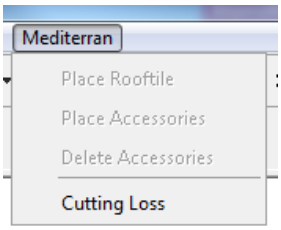
2.2 Rooftile placement

To place the roof tiles select the necessary roofs, walls, and fills, and give the **Mediterran / *"Place Rooftile"*** command. The properties of the tiles shall be set in the Roof tiles dialog.

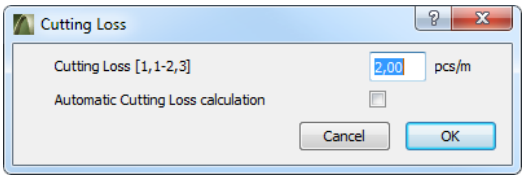


The choice of the roof tile type and color will automatically define the necessary parameters of the ridge tiles and the accessories.

The quantity of used roof tiles is calculated based on the maximal batten distance that can be applied for the roof of the same angle. Take this into consideration, if the structure is made with a smaller distance (inverse relationship). The number of necessary roof tiles may differ from the calculated quantity in the case of more complex roofs, as well. There will be an excess demand of basic roof tiles on the edges compared to the calculated quantity due to the cut edges.



This excess demand for the length of cut edges (valley, edge, hip, etc.) shows nearly a linear relationship, so the most accurate estimate of the roof tile surplus can be based on the length of the edges.
The cutting loss factor can be set in the **"Mediterran"** / "**Cutting loss**" menu.



The default setting of this factor is 2,0 pcs / m /side (we calculate both sides in the case of hips and valleys, therefore it is actually 4 pcs/m in those cases). The factor can be set to a different value from this default, within specified limits. (1.1 – 2.3).

The number of additional roof tiles (ridge tiles, ridge tiles for shed roofs, vent tiles, etc.) is calculated depending on the used tile type. The program does not calculate half tiles. The add-on places these additional tiles automatically, after the setting of tile types and roof edges.

You can set the tile types and other settings such as layer and pen of the elements in the "Rooftile" window. Select all of the necessary roofs and connecting structures (walls, and fills) and open this dialog by giving the **Mediterran / Place roof tiles** command. Set the necessary types and click OK to proceed.

Remember that the quantity of the base tiles is based on default values. It may be necessary to increase the calculated quantities in the listing in relation to the roof geometry.

Set roof edges

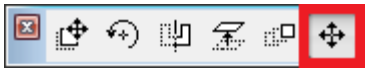
After the Rooftile dialog, the add-on tries to define the roof edge types automatically. However, it may occur that the algorithm makes mistakes, and miscalculates the edges. Therefore we implemented a new step into the working of the Mediterran Rooftiling add-on. This enables users to check and correct the roof edges, if necessary.

Important! The program places an edge-setting GDL object on the roof, after the setting of the tiles in the Roof tiles dialog. This object is only a terminal object; it will disappear at the end of the tiling process. Please, do not move it or place it on another layer, because that will hinder the operation of the add-on.

The edge-setting object has got an icon on each roof edge; this symbolizes the set roof-edge type.
If the set types are correct, or you do not want to reset them, click on the **"Finalize roof tiles"** button in the dialog.

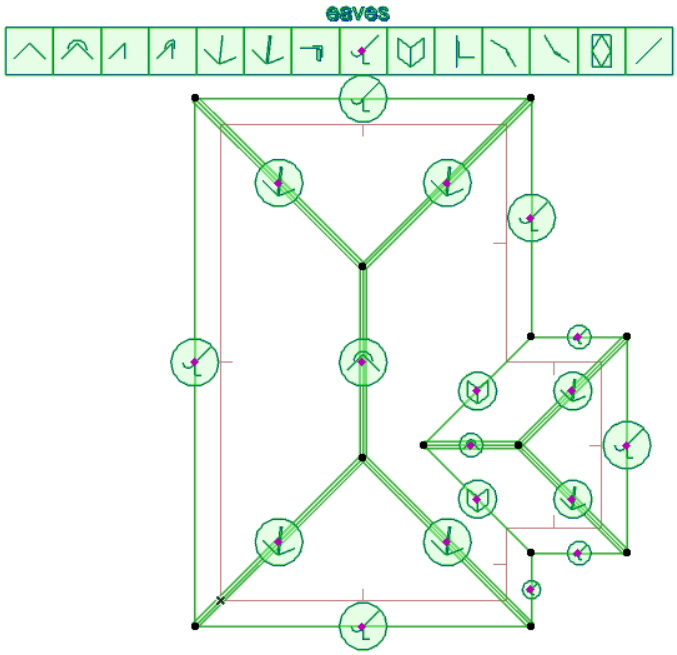
If you want to correct the edges, you have to use one of the following methods.

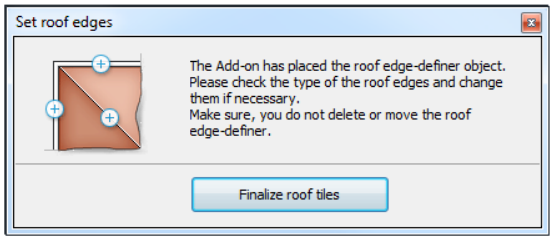
1) Set edge-types on the floor plan:
Grab the purple hotspot in the middle of the icon, and move it slightly upwards. A palette shall appear with the available edge-type settings. Find your necessary type and move the purple hotspot onto it.



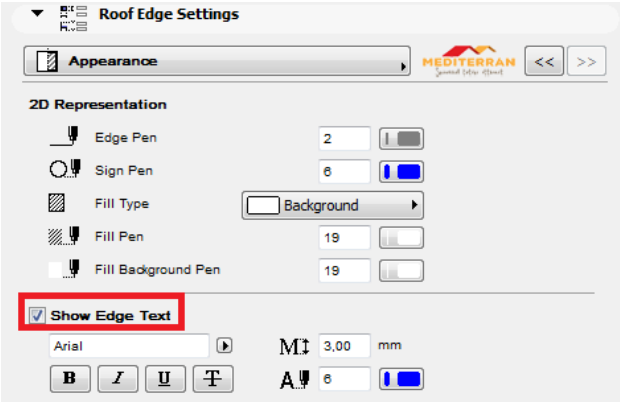
Always use the "Move node" function on the moving palette, this will allow you to move only the hotspot and not the whole object.

The original edge-choice of the add-on is always positioned above the circular icon. This will help you, if you want to reset the original edge-type.

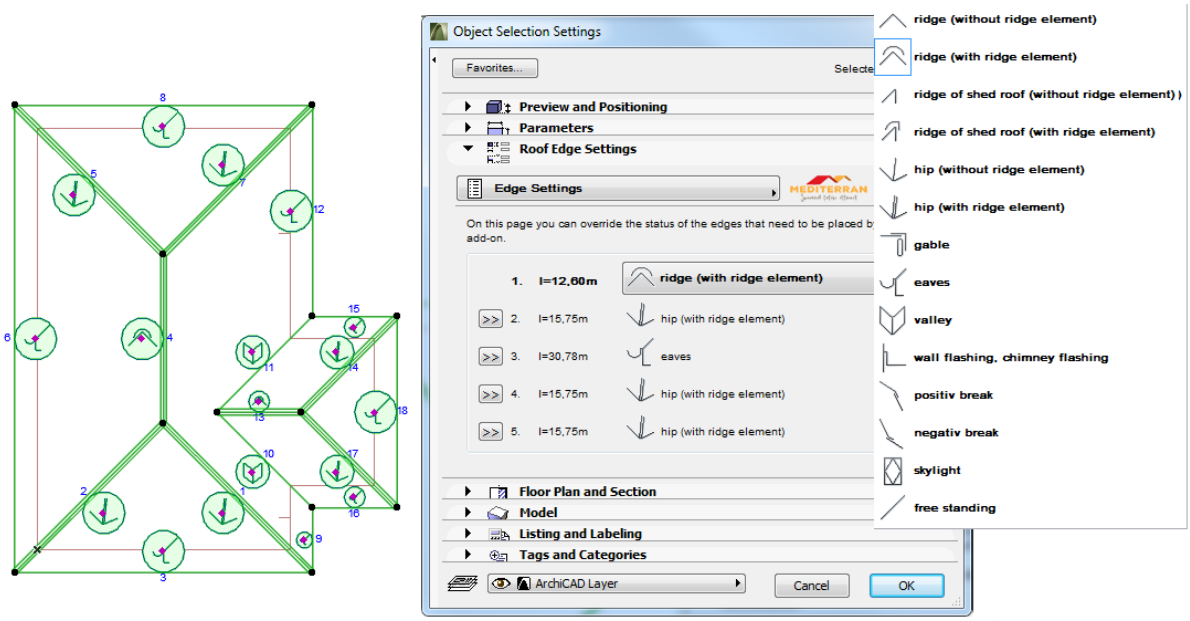




2) Setting the edge type in the Object Settings dialog:



Open the „**Object Settings**" window on the **Info Box** or with **Ctrl+T** and choose the page "**Appearance**" under the **Roof Edge Settings**. Click the "**Show edge text**" checkbox to make the numbering of the edges on the floor plan.
Then you can return to the "**Edge Settings**" page and define the edge type for each numbered roof edge.



Roof edges can have the following types:

ridge (without ridge element)

ridge (with ridge element)

ridge of shed roof(without ridge element)

ridge of shed roof(with ridge element)

hip (without ridge element)

hip (with ridge element)

gable

eaves

valley

wall flashing, chimney flashing

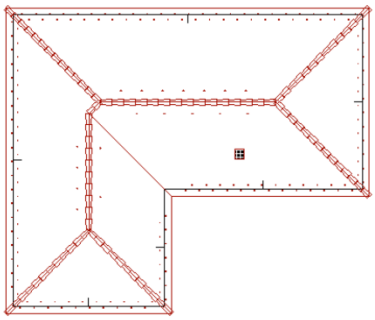
positive break

negative break

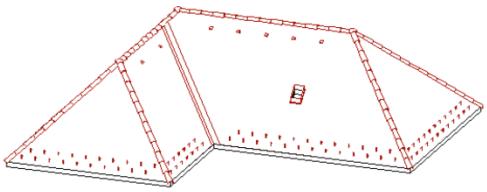
skylight

free standing

You can use either of the two methods above. If you are done with the edge settings click "**Finalize the roof tiles**" and the add-on will place roof tiles.

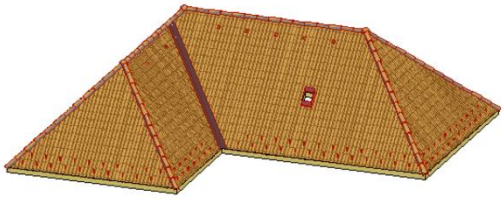


floor plan



hidden line 3D view

shaded 3D view



rendered picture

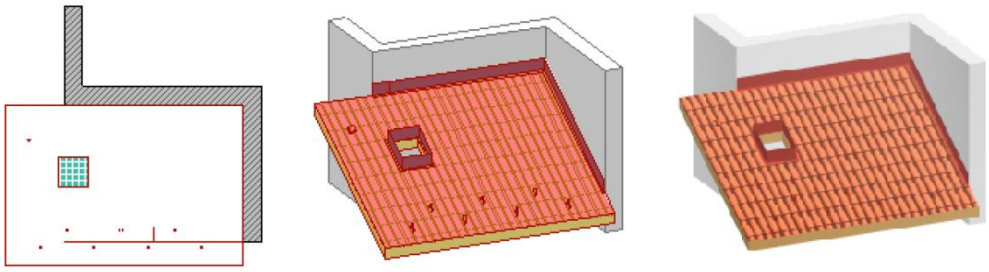
2.3 Features of the Mediterran 2013 Rooftiling add-on

1. Valleys:

Valleys appear in a color that harmonizes with the texture of the roof tiles. The quantity of tiles will be decreased by the valley's area.

2. Wall and chimney flashings:

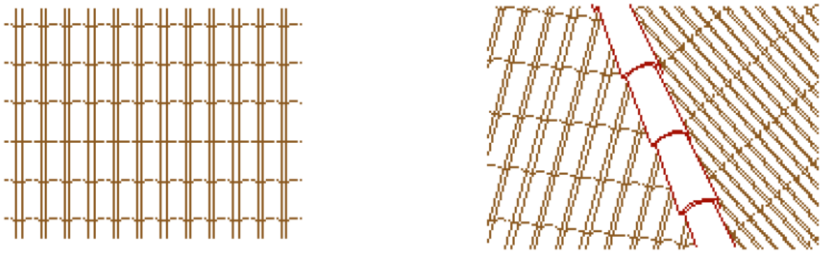
The program can make chimney and wall flashings for those items that were selected with the roofs and that have connecting edges. It is not enough to draw the walls and fills, but it is also necessary to make holes into the roof for these.



Important! The add-on only checks the relation of walls and roofs on the floor plan and only deals with the selected items.

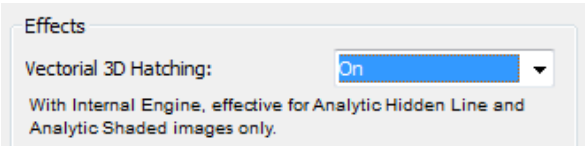
3. 3D hatchings:

The program will display the following pattern in hidden line and shaded 2D views:



The color of the lines will be similar to the used Tile color.

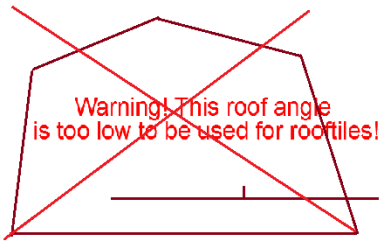
Turn on the "**Vectorial 3D Hatching"** in the "**View/3D View Options /3D Window Settings"** dialog to display the 3D fills.



You can display the 3D hatching in the Section/Elevation windows as well. Go to the Section/Elevation Settings dialog and mark the "**Vectorial 3D Hatching"** checkbox on the Model Display page.

4. Monitoring roof angles:

The add-on sends the following warning message in case you want to place tiles on a roof that has a lower angle than 10°, to increase the roof angle (however the tiles will appear in 3D and in the listing.):



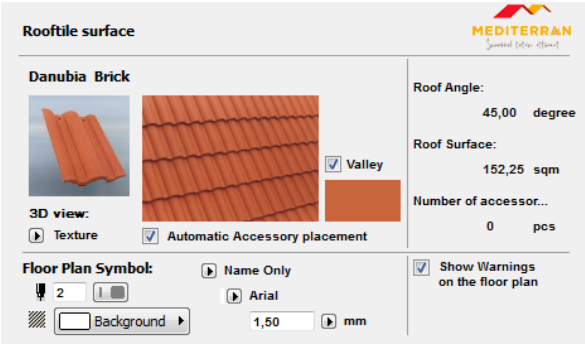
On the floor plan

Depending on the roof angle and other factors, there may be need for the use of underlay foil or insulation in the roof. Detailed specifications for the use of underlay foil and insulation can be found in the valid Mediterran ® Application Guide. If the angle of the roof is more than 6° lower than the required angle, the add-on displays a different message on the floor plan (red text without cross out lines) to notify you that an underlay should be used.

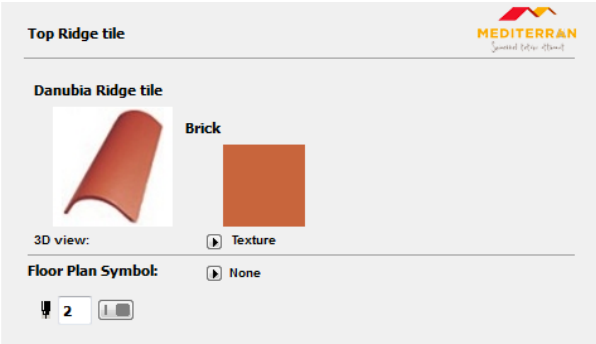
5. Listing:

Not only can the program list components in the list, but it can also display product process. The prices may not be up-to-date so always check the actual prices with the manufacturer. More information about listing can be found in Section 3.

6. User Interface of the tiles and ridge tiles:



Tile object

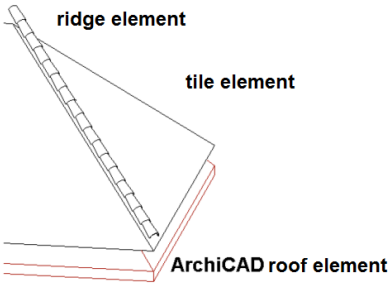


Ridge tile object

Certain parts of the data, shown in the user interface are indicative. Tile type and textures cannot be set after the tiling process in the Object Dialog. The tile types and colors should be defined during the Tiling process, in the Mediterran /Place roof tiles menu.

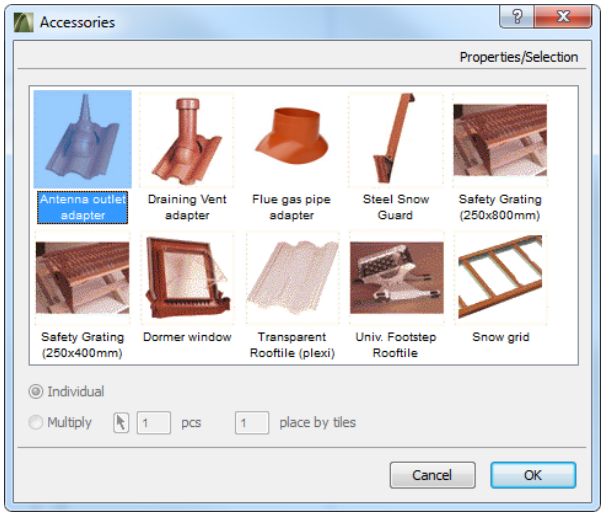
2.4 Placing accessories

There are some accessories, like vent tiles or snow guards that the add-on places automatically. The quantity of these elements depends on the type of the roof tile.



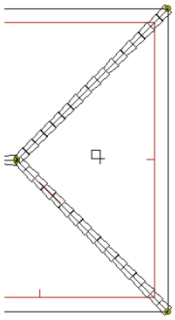
Other accessories such as antenna outlets, steel snow guards, dormer windows and draining vent outlets, etc. should be defined one by one, according to the needs of the designer.

To place these accessories, select one of the roof tile surfaces. (If you select more surfaces or none of them the accessories will not be placed and you will get an error message)

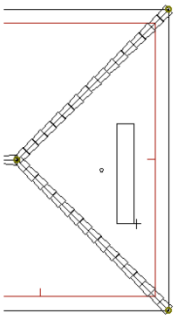


After selection go to the "Mediterran"/Place Accessories menu and choose the accessory in the dialog and define the properties of the placement (only available for certain accessories.)

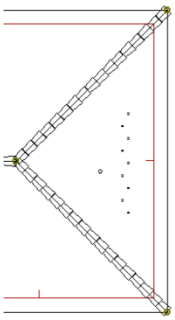
After making the settings, click OK and return to the floor plan to place the accessory by clicking on the selected tile surface.
If you want to use the multiply option you can give the exact number of accessories, if the arrow icon is turned off. The number of placed items by tiles can be given as well.



individual placement
(I.e. antenna outlet)



multiply
(I.e. steel snow guard)

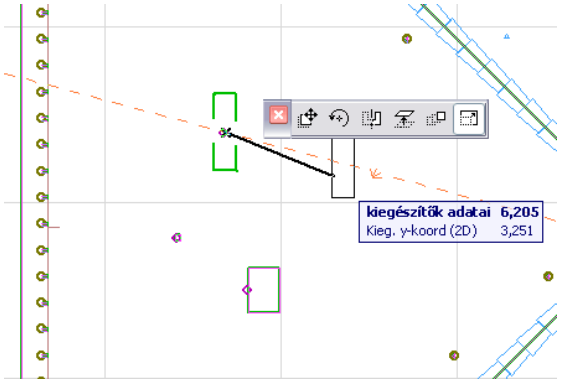


placed accessories

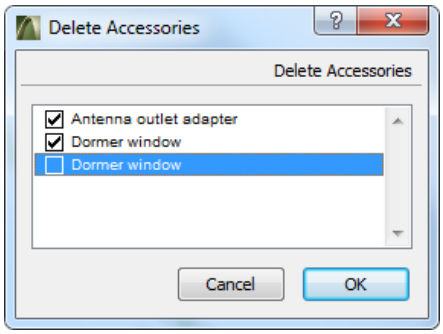
Use this method to place the accessories to the other tile surfaces, as well.
All placed accessories will appear in the 3D views, on the floor plan and in the component lists.

2.5 Modify and delete accessories

Placed accessories can be moved around on the roof surface. Chose the tile surface with the accessory, and purple hotspots will appear. Grab the accessories hotspot and use the Move node function on the flying palette to drag or change the length of the accessory.



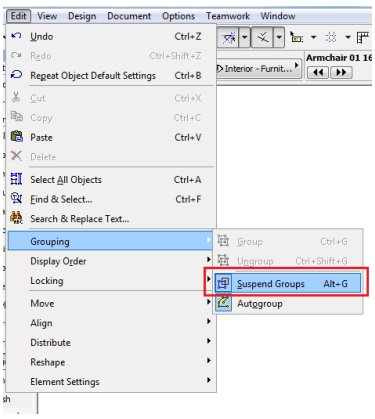
To delete an accessory from the roof select the tiled surface, and give the **"Mediterran" / Delete Accessory** command.



The Delete Accessory dialog will appear. Unmark the checkbox of the items you want to delete and click OK to remove the item from the roof.

2.6 Modify and delete tiled surfaces

The add-on groups the tile surfaces and ArchiCAD roofs, in order to help later modifications. Grouping ensures that the tile surfaces will move with the roof, if the roof is being elevated, moved, mirrored or rotated. However grouping can cause problems, when you want to change or delete the tiled surfaces, without deleting the roof underneath.



Delete Roof tile surfaces:

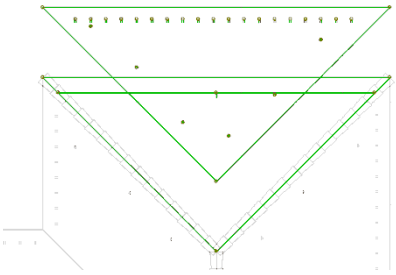
In order to delete the tiles, but keep the roof, grouping of tiles and roofs has to be suspended or the items have to be ungrouped.
Select the roof and use the **Edit / Grouping / Ungroup** command to ungroup the objects.
Use the **Edit / Grouping / Suspend Groups** command to suspend the groups.

Then select the tile surface and delete it with the Delete button or the **Edit / Delete** command.
Remove ridge tiles by selecting and deleting them.

Remark:
Deleting the base tiles will affect the content of the list: the accessories belonging to that tile surface will be deleted too. Items that are deleted from the list: roof foil, half length of the valley, snow guards, eaves' vent elements, vapor dispensing plates, vent tape.

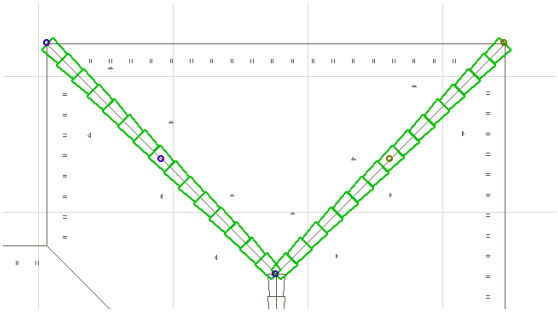
Modify base tiles:

To modify one tiled surface grouping has to be suspended or removed (see above). However if you want to change all tile surfaces the grouping can be turned on.
After selecting the necessary elements click the "**Mediterran / Place Rooftiles**" command. Choose the new tile type and color and click OK. The edge-setting object will not appear this time; all edges will have the same type as before. The old roof tiles will be deleted and new roof tiles will be placed.



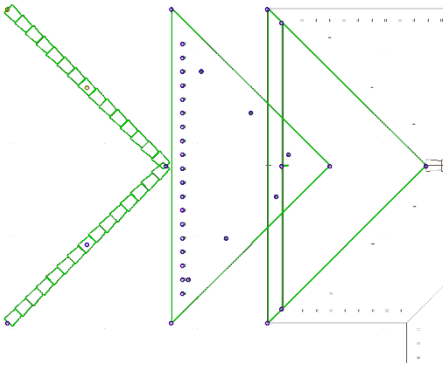
Attention!
If you only select the ArchiCAD roof before giving the **Place Rooftiles** command. The program will add a new tiled surface but will not remove the old one. The result will be a disturbance in the texture in 3D and double the amount of tiles in the listing.
Make sure you also select the tiled surface and the roof, too before you modify the texture.

Modify ridge tiles:



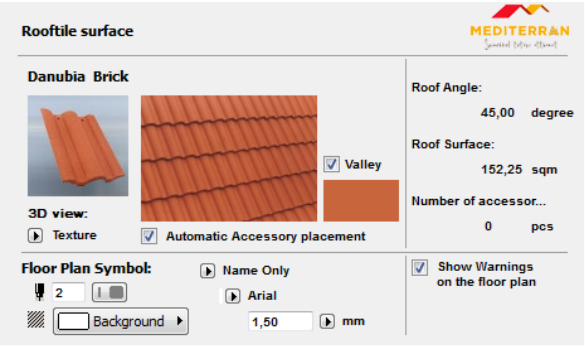
Turn the grouping off, select the ridge tiles you want to modify and give the "Mediterran / Place Rooftiles" command. Choose a new type and color, and click OK to replace the old ridge tiles with the new ones.

If you want to change the texture of the whole roof tiling, select all ridge tiles, tiles and roofs at the same time. (There is no need to suspend groups)
Then follow the steps described above.

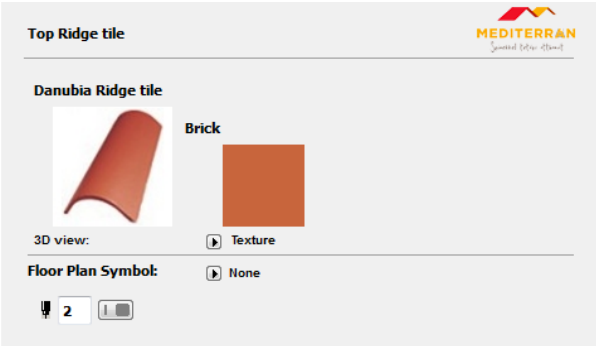


2.7 Additional features of tile and ridge tile objects

Tile and ridge tile objects have some useful additional features. You can check the information about the roof, and the used ridge and basic tiles on the user interface in the **Object Settings** dialog.

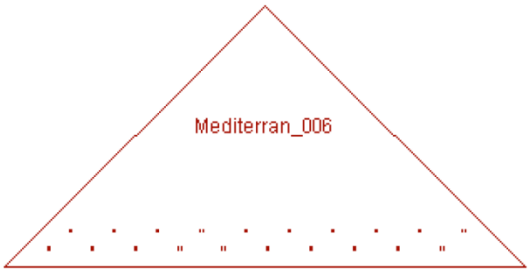


Parameters of the tile object

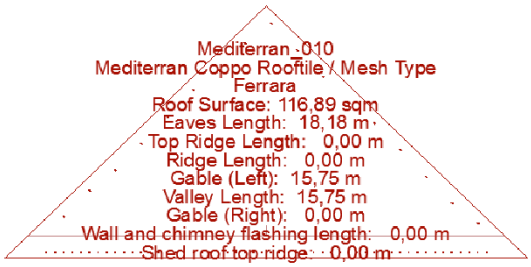


Parameters of the ridge tile

Certain information can also be displayed on the floor plan, if the Floor Plan Symbol is set to No. 1 or 2:



„1_Name Only"



„2_Detailed"

„1_Name Only"

„2_Detailed"

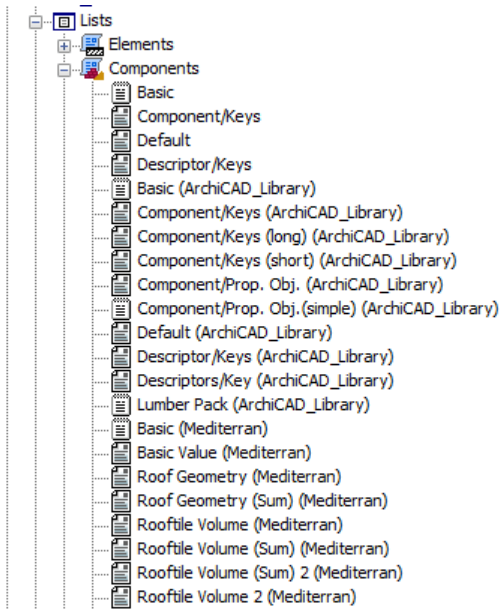
These informations will help you to identify the surfaces that are listed in the component lists. (See Section 3)
The text style of these informations can be set in the Object Setting dialog.
The position of the text can be changed on the floor plan with the purple hotspots (make sure you use the Move Node option on the flying palette).
Use this dialog too, if you want to change the pen and fill of the tile objects. (See Section 2.2)

Section 3

3.1 Listing Mediterran elements

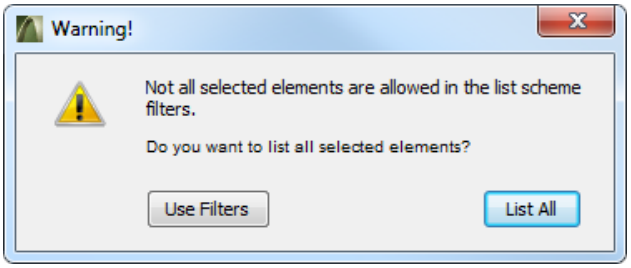
The program can generate automatic component lists for the placed tiles and accessories. The quantity of tiles will be calculated depending on the area and angle of the roof. All accessories and ridge tiles will be listed with the exact number of the placed elements.

We have two types of component lists in the MediterranTmp.lib library to choose from.



The Mediterran objects will be found in the component lists.

Important! Listing filters the components automatically. If you make a selection on the floor plan the add-on will automatically filter the items it can list. It can occur that there are items in our selection that cannot be listed in the component list. In this case the following message will appear:



We suggest that you use the **Use Filters** option.

3.2 Available component lists

Here you can find the description of the main properties of the available lists.

Rooftile Volume and Rooftile Volume 2*:
Choose this option to get the list of the used tiles and accessories for each individual roof surface. The surfaces are listed according to the ID given in the Object settings window. If you change the ID of a surface please make sure to regenerate the list, in order to identify the surfaces.

Mediterran Rooftile Calculation
(Price List date: 01. Feb 2013)

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Hotline: +36 69 569 950 - fax: +36 69 569 953 - http://www.mediterran.hu - e-mail: vevoszolg@mediterran.hu

	amount	unit price	summary
Mediterran_000			
Danubia			
Rooftile basic (Brick)	1 527 pcs	345 Ft	526 815 Ft
Rooftile Ventillation (Brick)	20 pcs	1 550 Ft	31 000 Ft
Necessary Accessories			
Birdstop comb	22 pcs	380 Ft	8 360 Ft
MediFol TEC permeable foil (W1)	176 sqm	253 Ft	44 528 Ft
Optional Accessories			
Vent Strip	22 m	264 Ft	5 808 Ft
Steel Snow Guard (Brick)	43 pcs	249 Ft	10 707 Ft
Eaves plate	11 pcs	1 675 Ft	18 425 Ft
Mediterran_000 summary:			**645 643 Ft**
Mediterran_001			
Danubia			
Rooftile basic (Brick)	1 527 pcs	345 Ft	526 815 Ft
Rooftile Ventillation (Brick)	20 pcs	1 550 Ft	31 000 Ft
Necessary Accessories			
Birdstop comb	22 pcs	380 Ft	8 360 Ft
MediFol TEC permeable foil (W1)	176 sqm	253 Ft	44 528 Ft
Optional Accessories			
Vent Strip	22 m	264 Ft	5 808 Ft
Steel Snow Guard (Brick)	43 pcs	249 Ft	10 707 Ft
Eaves plate	11 pcs	1 675 Ft	18 425 Ft
Selected Accessories			
Plastic rooftile (transfer) - Standard, Danubia (Brick)	1 pcs	4 100 Ft	4 100 Ft
Antenna outlet adapter (Brick)	1 pcs	5 600 Ft	5 600 Ft
Dormer window - 47,5x52 (Brick)	2 pcs	39 500 Ft	79 000 Ft
Mediterran_001 summary:			**734 343 Ft**
Mediterran_002			
Danubia			
Rooftile basic (Brick)	885 pcs	345 Ft	305 325 Ft
Rooftile Ventillation (Brick)	14 pcs	1 550 Ft	21 700 Ft
Necessary Accessories			
Birdstop comb	16 pcs	380 Ft	6 080 Ft

Rooftile Volume (Sum) and **Rooftile Volume (Sum) 2*:**

Mediterran Rooftile Calculation

(PriceList date: 01. Feb 2013)

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	amount	unit price	summary
Danubia			
Rooftile basic (Brick)	11 546 pcs	345 Ft	3 983 370 Ft
Rooftile Ventillation (Brick)	147 pcs	1 550 Ft	227 850 Ft
Danubia summary:			**4 211 220 Ft**
Ridgetiles			
Ridgetile starter (Brick)	6 pcs	1 730 Ft	10 380 Ft
Ridgetile transfer item for 3 (Brick)	4 pcs	1 730 Ft	6 920 Ft
Top Ridge tile (Brick)	280 pcs	1 280 Ft	358 400 Ft
Ridgetiles summary:			**375 700 Ft**
Necessary Accessories			
Ridge tile holder nail	113 pcs	248 Ft	28 024 Ft
MediRoll ridgetile pillow roll	107 m	9 250 Ft	989 750 Ft
Ridge tile fixing	280 pcs	76 Ft	21 280 Ft
Fixing nail	10 pcs	92 Ft	920 Ft
Birdstop comb	157 pcs	380 Ft	59 660 Ft
MediFol TEC permeable foil (W1)	1 329 sqm	253 Ft	336 237 Ft
Necessary Accessories summary:			**1 435 871 Ft**
Optional Accessories			
Vent Strip	157 m	264 Ft	41 448 Ft
Steel Snow Guard (Brick)	308 pcs	249 Ft	76 692 Ft
Eaves plate	80 pcs	1 675 Ft	134 000 Ft
Optional Accessories summary:			**252 140 Ft**
Selected Accessories			
Plastic rooftile (transfer) - Standard, Danubia (Brick)	1 pcs	4 100 Ft	4 100 Ft
Antenna outlet adapter (Brick)	1 pcs	5 600 Ft	5 600 Ft
Dormer window - 47,5x52 (Brick)	2 pcs	39 500 Ft	79 000 Ft
Selected Accessories summary:			**88 700 Ft**
ALLTOGETHER:			**6 363 631 Ft** *(5 090 905 Ft + VAT)*

This list contains the summed amount of the used tiles.

Remark:

*Lists marked with the * do not contain prices.These lists can be printed in order to fill the prices by hand.*

Actual prices may differ from the prices displayed in these pictures.

Roof Geometry:
This list contains the geometry data of each individual roof surface.

Roof Geometry Data

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Mediterran_000		
Angle:	45,00	degree
Roof Surface:	152,25	sqm
Eaves Length:	21,60	m
Top Ridge Length:	5,98	m
Ridge Length:	27,05	m
Mediterran_001		
Angle:	45,00	degree
Roof Surface:	152,25	sqm
Eaves Length:	21,60	m
Top Ridge Length:	5,98	m
Ridge Length:	27,05	m
Mediterran_002		
Angle:	45,00	degree
Roof Surface:	86,21	sqm
Eaves Length:	15,62	m
Ridge Length:	27,05	m
Mediterran_003		
Angle:	45,00	degree
Roof Surface:	86,21	sqm
Eaves Length:	15,62	m
Ridge Length:	27,05	m
Mediterran_004		
Angle:	45,00	degree
Roof Surface:	278,85	sqm
Eaves Length:	30,78	m
Top Ridge Length:	12,60	m
Ridge Length:	31,49	m
Mediterran_005		
Angle:	45,00	degree
Roof Surface:	278,85	sqm

Roof Geometry (Sum):
This list contains the summed geometry data of the entire roof.

Roof Geometry Data
- Summary -

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Roof Surface:	1 151,50	sqm
Eaves Length:	154,17	m
Top Ridge Length:	18,58	m
Ridge Length:	101,33	m

Section 4

4.1 Technical support

Mediterran roof tilling add-on is developed by ÉPTÁR Ltd.
Should you have any problems or suggestions on our add-on, please contact us on the following addresses:

ÉPTÁR Ltd.
Hungary
H-1145 Budapest, Szugló Street 61-63.
Tel: + 36 1 / 225 73 55
Fax: + 36 1 / 225 73 56
e-mail: info@eptar.hu

Budapest, 08th January 2014.