

Manual DTILE

DTILE is a unique system which allows a space to be completely tiled. This is possible because the DTILE collection consists of flat, construction and function tiles. With these an object can be totally covered with a blanket of tiles. The edges will be soft and round, making the space more friendly, easier to clean and safer for children.

Durable, frost resistant stoneware, ensures that the DTILE system can be used in almost any circumstance. The possibilities are only limited by one's imagination. This manual explains how to use the system, and will guide you through the various steps which need to be taken.

The following subjects are covered:

The design

The detailing

How to determine the sizes

Advise on which materials suits the system best.

The design.

Nowadays almost all designers and architects design with the aid of a computer. However, it might be that you either prefer sketching by hand or are not capable of designing by computer.

No need to worry, the principles remain the same.

The DTILE system is based on the well known and widely used 15x15 cm module size. However, DTILE added a third dimension in tiling, and therefore the system follows a 15x15x15cm grid. This grid will be the basis for the design. An existing object can be tiled with the DTILE system, but if the size does not fit the 15cm module it will be necessary to cut the tiles to fit the space. A good tile layer can do this. However, we have found that a lot of our clients prefer, especially if the space or object is built from scratch, to keep the 15x15x15 grid as complete as possible. In this case it is necessary to design in that 15x15x15 grid.

First we will explain how to design manually. You might miss the skills to design electronically or just prefer to sketch by hand, if the instructions are followed your efforts will lead to an accurate visualization of your object.

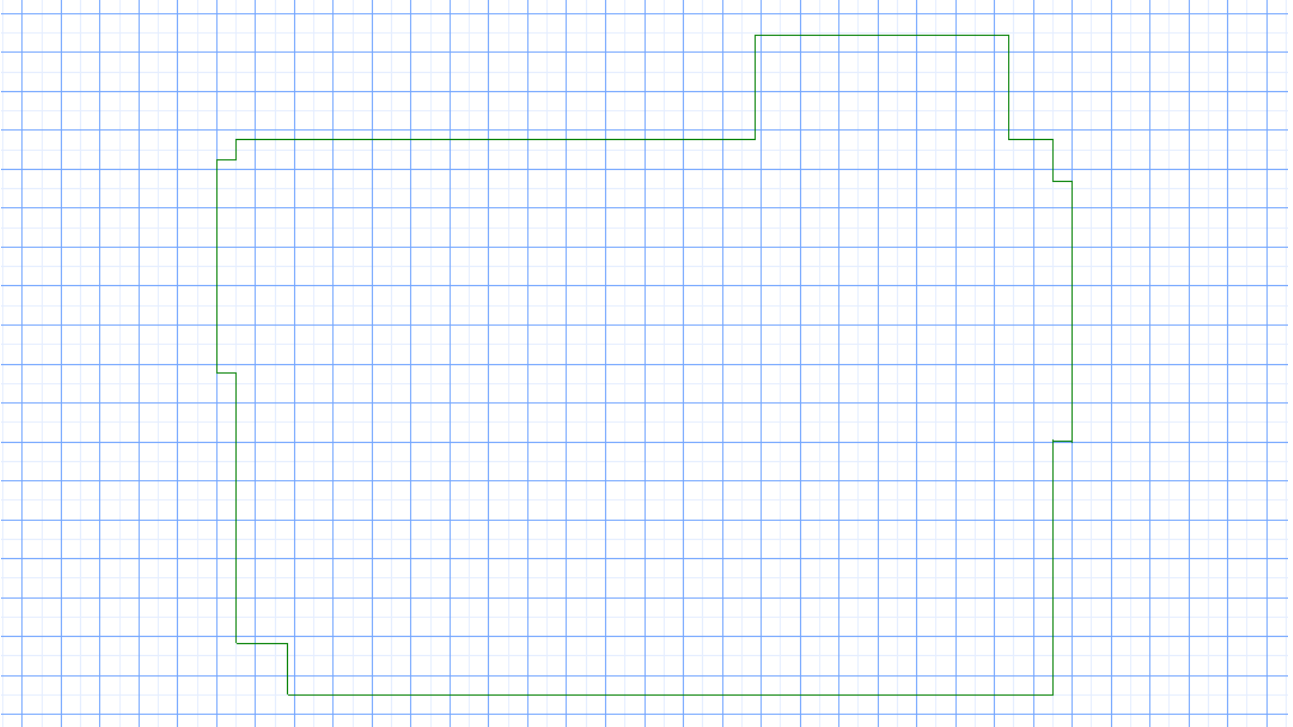
Even if you plan to design on a computer, please read these instructions as well, it will help.

As an example we will look at a real bathroom, fitted in an existing house. Of course every room or object is unique, but the principles are the same.

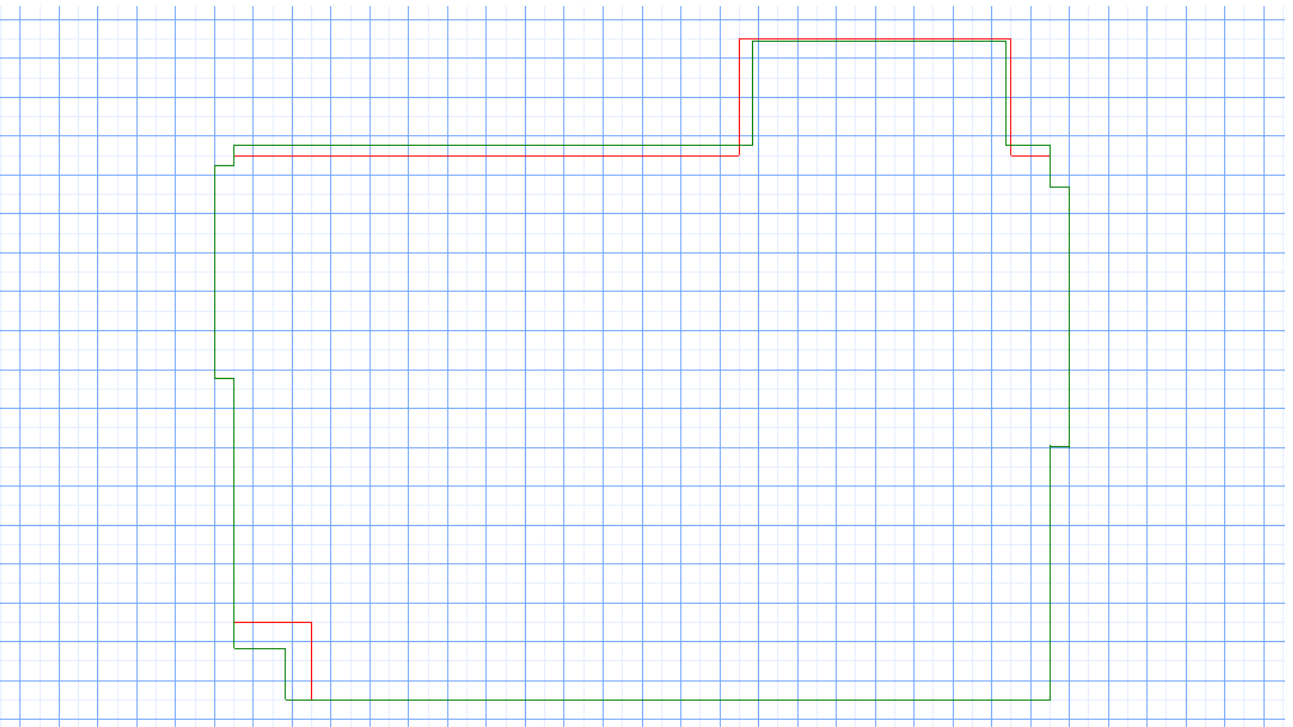


You could use the DTILE graph paper. This will simplify the designing and measuring process. There are two different grids. The thick lines for the flat tiles and the thinner ones for the construction tiles.

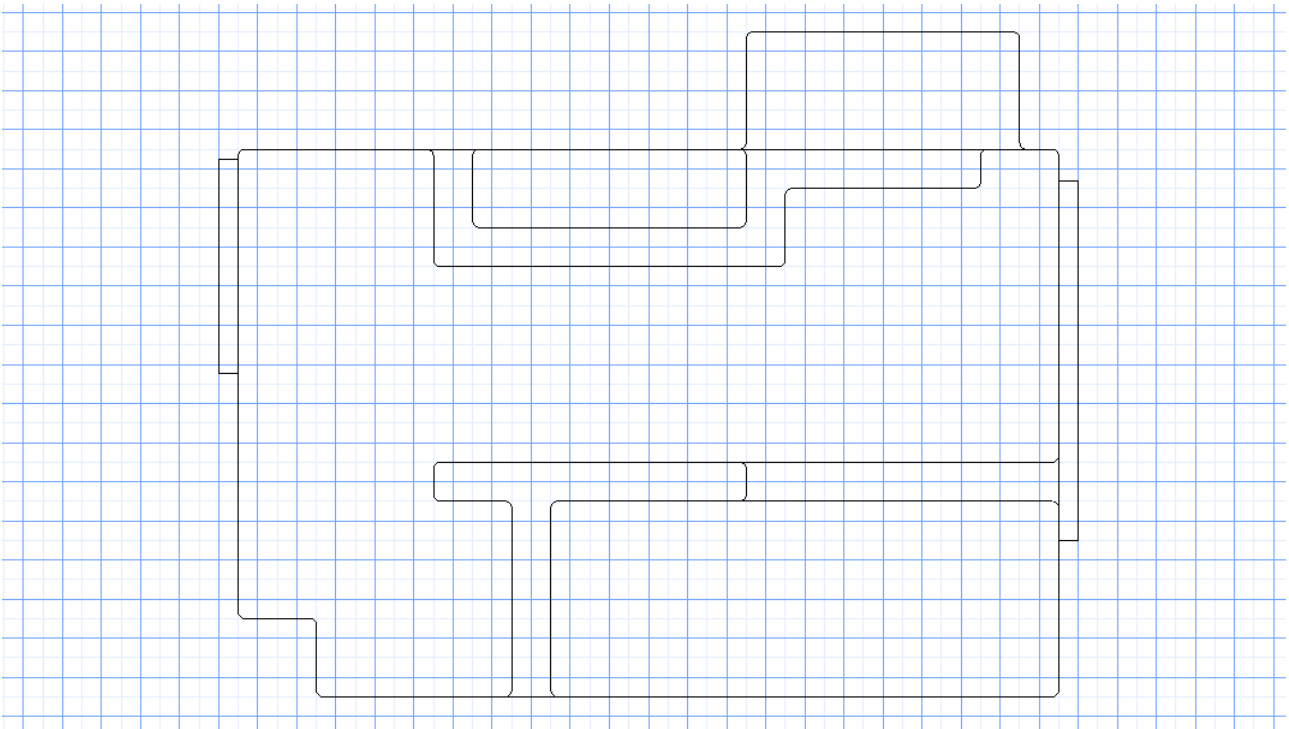
First, take the measurements of your space and put them on the graph paper. More often than not, these sizes will not correspond with the 15x15x15 module size, as it will show.



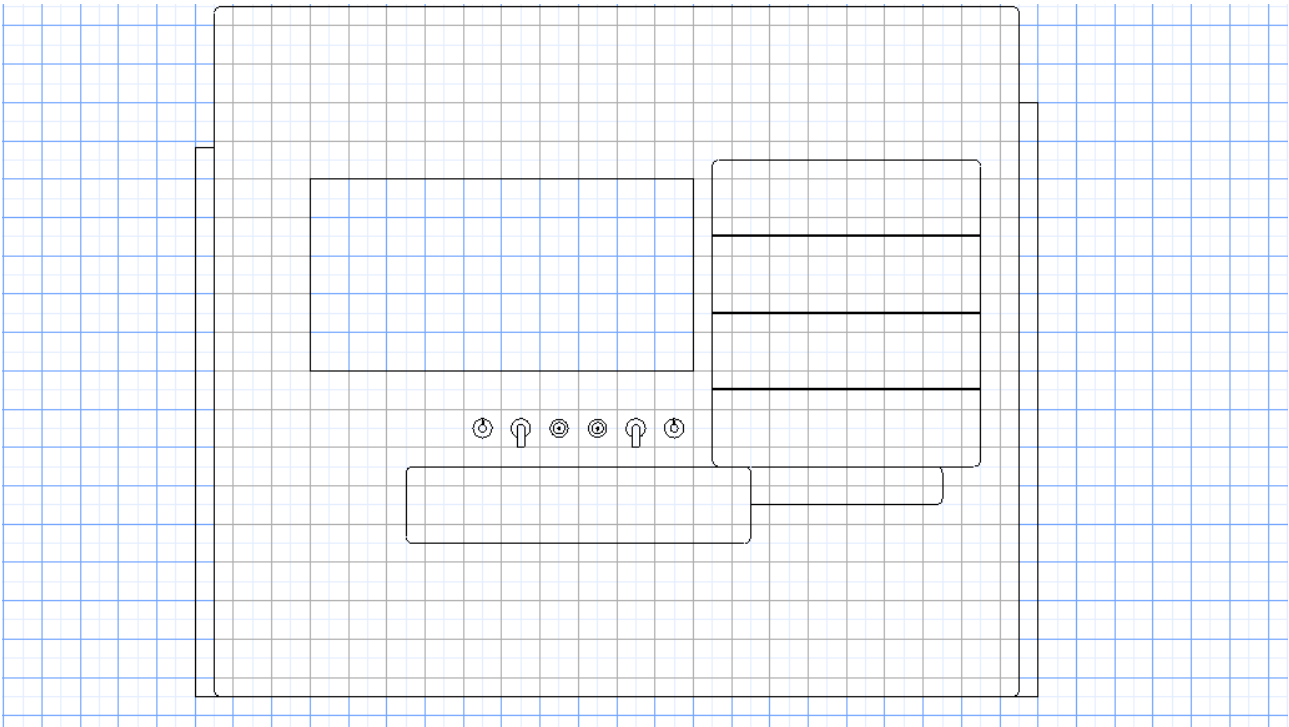
Now correct the sizes. You can see that the red line, the module size, corrects the green line, the existing situation. Sometimes the space is too large, which is not a problem since it can be made to fit, sometimes it is too small. In a lot of cases, extra room can be created, by removing old tile work, or by means of moving walls. Please ask your contractor.



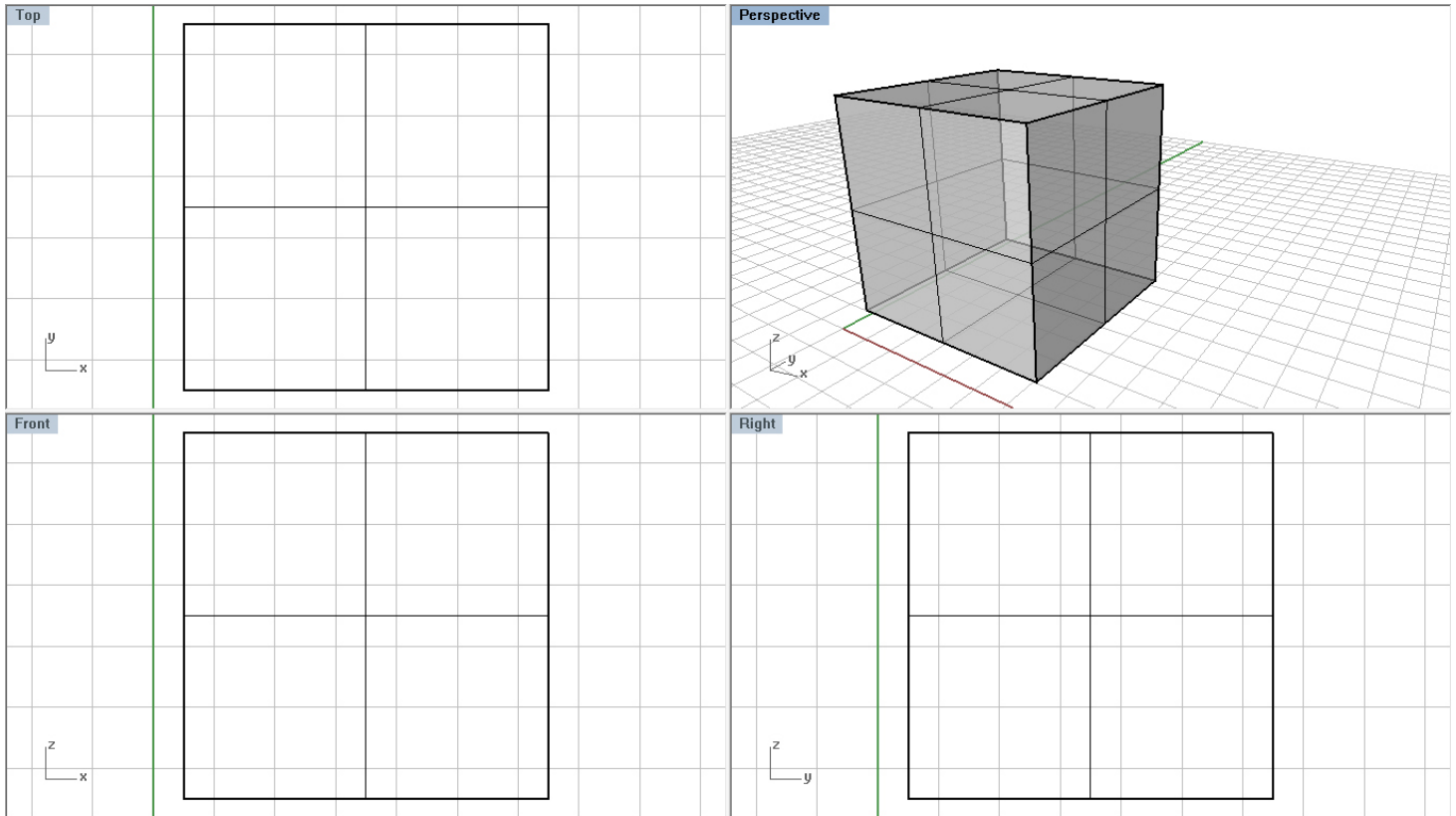
Now you can design your space from the different perspectives. Consider the flat and construction tiles. You can see below how this would look like when viewed from above.



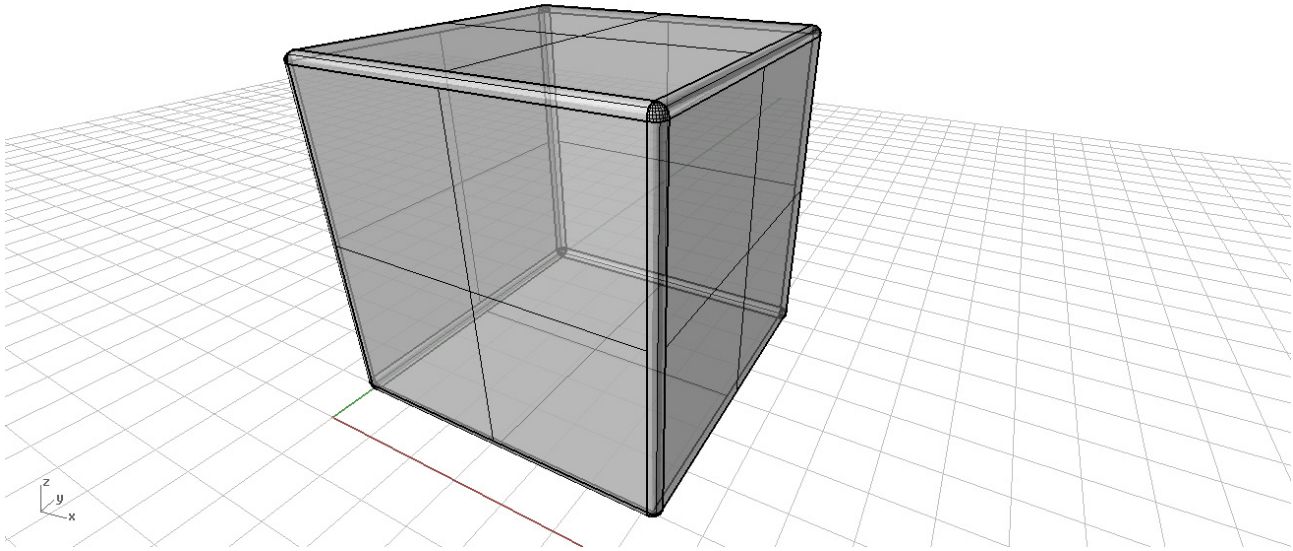
The other views can be designed in the same way. As soon as the design becomes more definitive it might help to draw the grout. This will give you a good impression of how your object is going to look.



Designing on a computer uses the same principle, but it is easier to make a 3 dimensional picture. It is advised to adjust the settings first. Adjust the overall grid to 15cm. This will make it easier to assess whether your design fits the 15 cm grid. Adjust the snap spacing to 7.5 cm. This makes it easy to move and create your object within the 15 cm grid. First design your basic shape, in this case a simple cube. Take a look at the grid and how it acts as a digital graph paper.

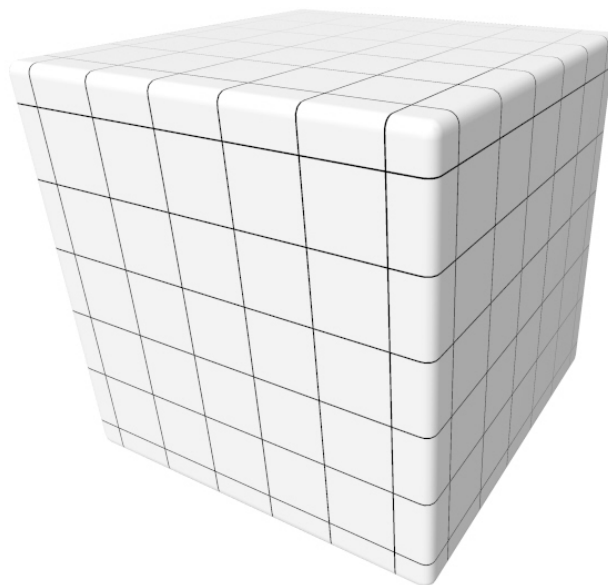


Now you can round off the corners. Every program has such a function (usually called fillet edge). Set the radius to 2,5 cm.



Now you can assign material to the object. We cannot advise on this part of the process. All programs have different ways of doing so. Please see the manual for your specific program.

Just make sure the material fits the objects. The module size of the material should be 15x15x15, but the grout is 3mm thick which leaves 14,7cm x 14,7cm for the tile.



The detailing

Now that you have defined the shape of your object you can now add the details. As mentioned before, DTILE provides several practical applications, which are compatible with the tile grid. These are called Function tiles. The number of different function tiles is limited to those mentioned on the price list and are available as CAD files. The DTILE collection will be permanently renewed and expanded. If there is a function you might need, please let us know, and we will investigate whether your idea should be incorporated in the DTILE collection.

Some functions are necessary, but are not part of the DTILE collection yet.

One could have the need for, for example, faucets. A lot of our clients want to respect the tile pattern, and feel it is aesthetically pleasing if the faucets are placed in the center of a tile.

This will not always work, for example because the faucets are mounted on an bracket which doesn't fit the size 15x15cm. Please choose your faucets well. There are those whose bracket fits the 15cm grid, those with flexible fixing possibilities and those where the individual parts have their own individual brackets. Ask your supplier.

In the past, some of the DTILE costumers have had success with the faucets of VOLA, (www.vola.com), But there are other suitable suppliers.

There have been projects where electrical outlets and switches were needed. In several of those projects, series 1930 by the Berker company was chosen.

(<http://www.berker.com/en/international/catalogue/productline/101/>)

This series contains products made from china, which could be an excellent addition to your DTILE object.

How to determine the sizes

How to determine the sizes

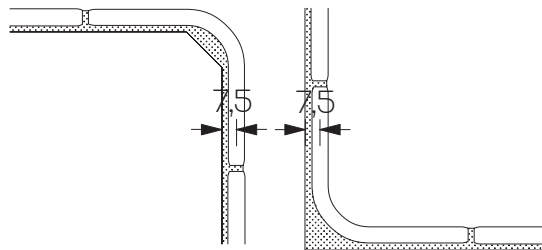
Now that the object is designed and detailed, it is time to start the preparation for the work. For this, you first need to determine the measurements of the basis, on which to tile.

The basis of the calculations are 15x15x15cm, the DTILE grid. (The flat tiles measure 147x 147 mm and a joint of 3 mm makes that the system fits a module size of 15 cm.)

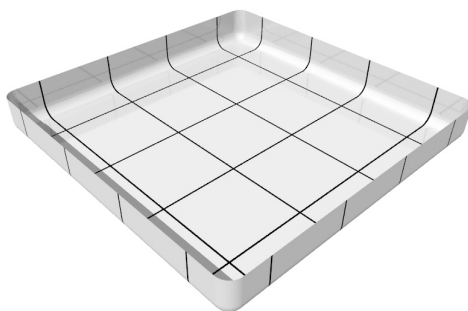
The construction tiles fit the system as well, but only on the axes. This means that the thickness of the material and the thickness of the adhesive both needs to be taken into account when determining the measurements.

The Tiles are 8,5 mm thick. Because the 15x15x15cm module follows the axis of the tile, half a material thickness needs to be added or subtracted, i.e. 4,25 mm. The thickness of the glue will be set to 3mm. this means that 7,25mm needs to be added or subtracted. This is too precise, and must be rounded off to 7.5mm.

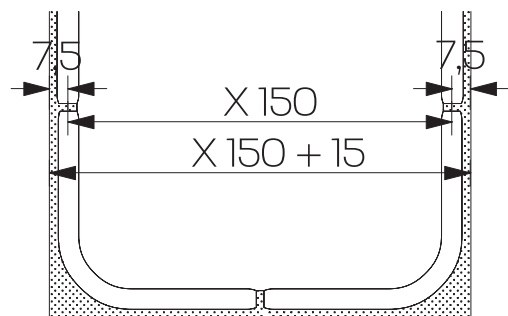
The distance from the axes to the object is 7,5 mm



Sometimes the base needs to be bigger than the module size. This is the case if negative shapes are needed. Think of hollow shapes such as niches, wash basins and often the space itself. Here, two inner corners face one another. The size of those shapes need to be bigger than the 15x15x15 module. The size of the base is calculated as following: Factor 15cm plus twice the for mentioned 7,5mm (15 mm)

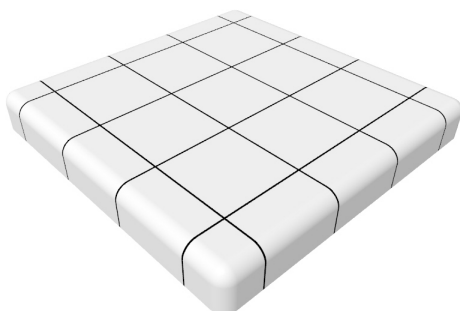


example of a negative shape

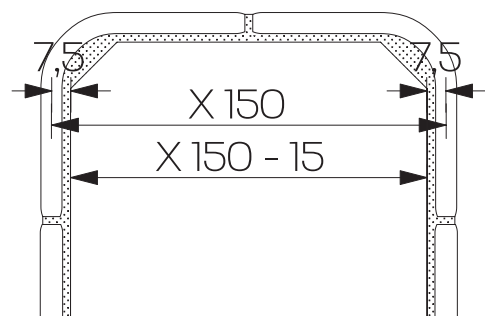


If one uses positive shapes, the base needs to be smaller than the 15x15x15cm module size. Think of the short side of a wall, or other cube-like shapes. In these instances, two outer corners face one another. The size of the base is calculated as follows:

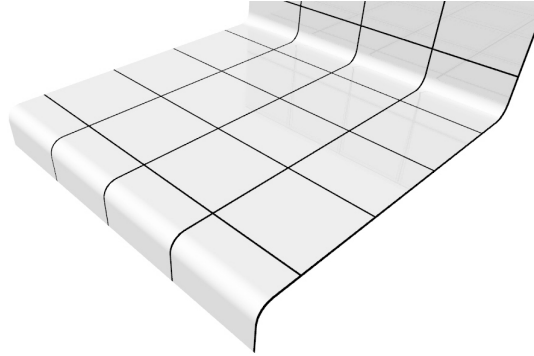
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example of a positive shape



In the situation where an inner corner, faces an outer one, the base does not need to be adapted. It is the module size. Think, for example, of a kitchen top. There is an inside corner to connect the top to the wall and an outer corner on the short side. In this case the result of adding and subtracting is neutral.



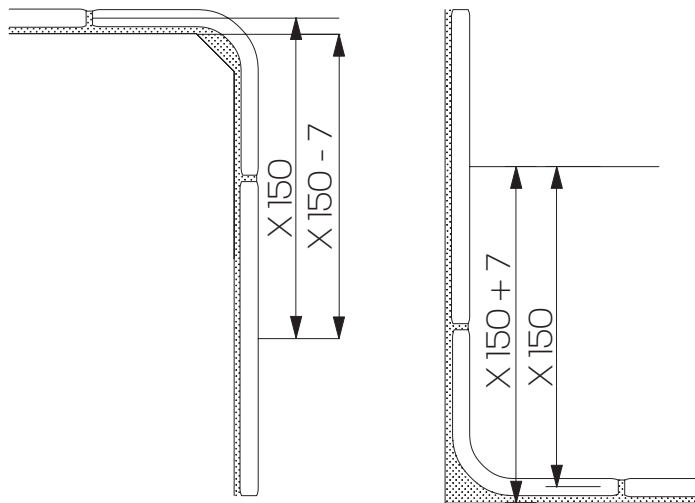
example of a neutral shape

Then there are situations where the middle of a tile needs to be calculated. Earlier, faucets and electrical outlets were mentioned. But there are other situations.

These positions are to be determined, in the same way as the measurements of the objects.

From an inner corner, a factor of 15cm, add 7mm.

From an outer corner, a factor of 15 cm, subtract 7mm.



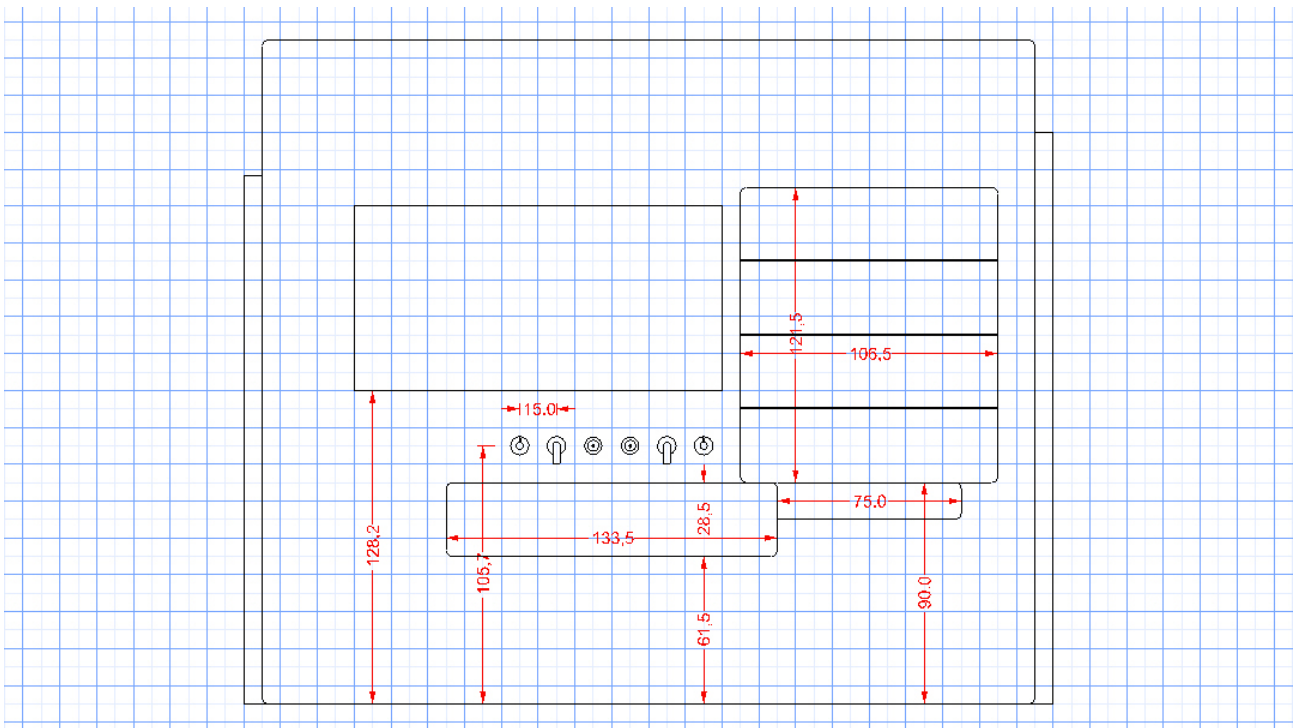
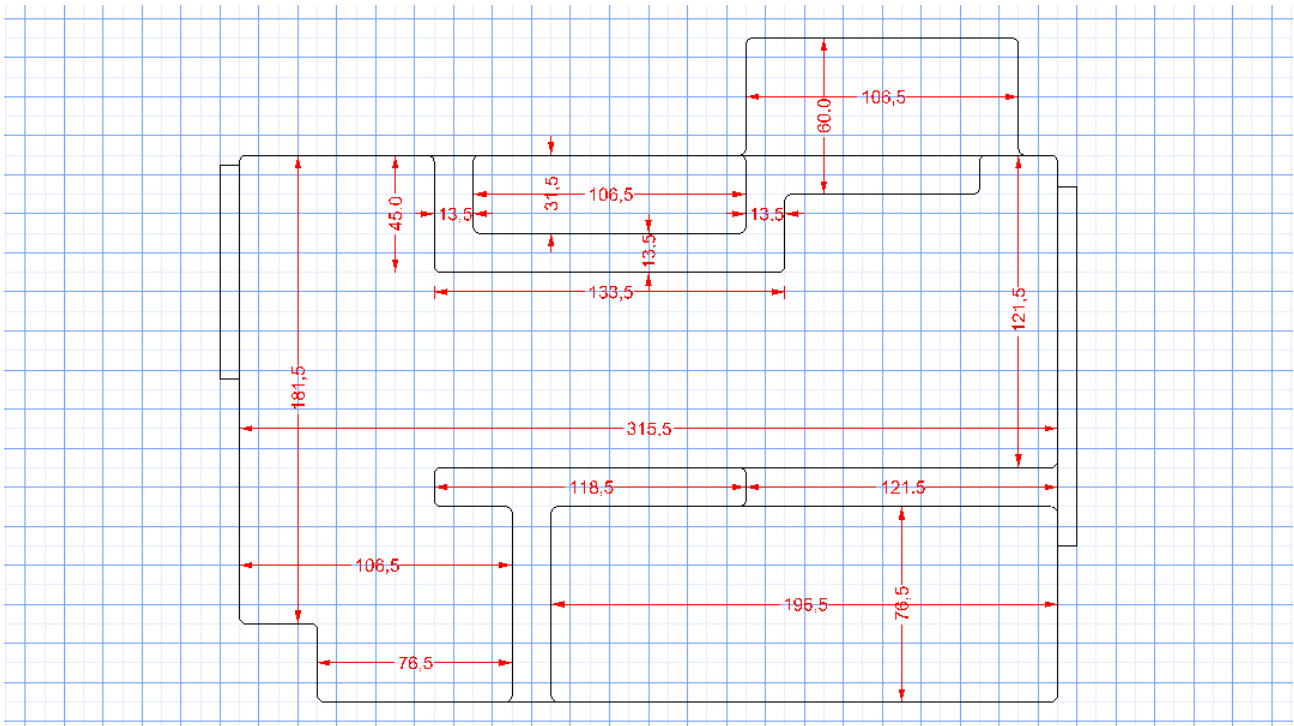
It is really not necessary to fully remember the comprehensive explanations. One could use the rule of thumb:

If inner corners face one another add 1,5cm. Measurements end to 1,5 or 6,5

If outer corners face one another subtract 1,5cm. Measurements end to 3,5 or 9,5

If an inner corner faces an outer corner use the module. Measurements end to 0 or 5

With the technique mentioned above the final measurements can be determined. In your drawing, simply measure the size and add or subtract. It is really not necessary to completely rework your drawing. Simply alter the sizes. The same goes if a computer is used. .



Materials.

Now that the measurements are determined, the object can be constructed.

Although the tiles are extremely strong, 8,5 mm stoneware, it is highly recommended that materials are used which have no or limited movement. If any movement is expected use materials which can absorb, to a certain extent, these movements. In the past, DTILE projects were fitted with reinforced styrene foam, with good results.

In situations where the influence of moisture can be expected, under no circumstance use materials which are susceptible to moisture. For example plasterboard, wood or compound wood (e.g. ply board, chipboard or mdf, even if these are named "waterproof") When absorbing moisture these materials will expand, with significant negative consequences.

The market offers several waterproof materials, especially suited for tiling.

Reinforced styrene boards:

<http://www.wedi.de>

<http://www.kerdi-board.com/>

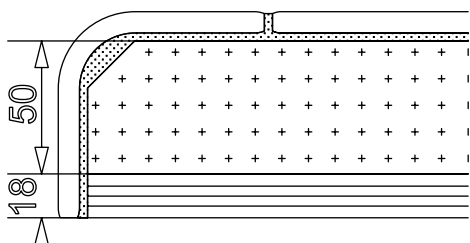
<http://www.luxelements.com>

Tip:

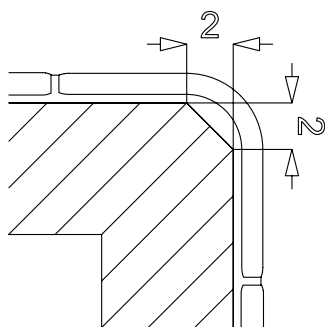
There are standard materials, which, when combined, have a perfect size.

A multiplex 18mm board, combined with a 50mm styrene board, will give a size of 68mm. This matches the size of 75mm minus 7mm, as explained earlier.

NB: never fix the tile directly to the multiplex. Make sure it is covered by a layer of reinforced styrene foam.



In order to make it possible to fit the outer corners it is necessary to facet the edges. Simply make a 45 degree facet, 2cm from the edge. Try to work as accurately as possible, but small deviations will not pose a problem. The specially developed DTILE adhesive applicator will ensure a good bed of glue on which to lay the tile.



Make sure that, before tiling, the object is completely watertight. Apply where necessary fiber tape and cover the surfaces, if necessary with a waterproof primer.

Whatever you do, please follow the advice of your supplier.