

## INSTALLATION MANUAL

**COBRA Flexible tracks**

**and**

**CONCAV&CONVEX / CONCAVEX Flexible studs**

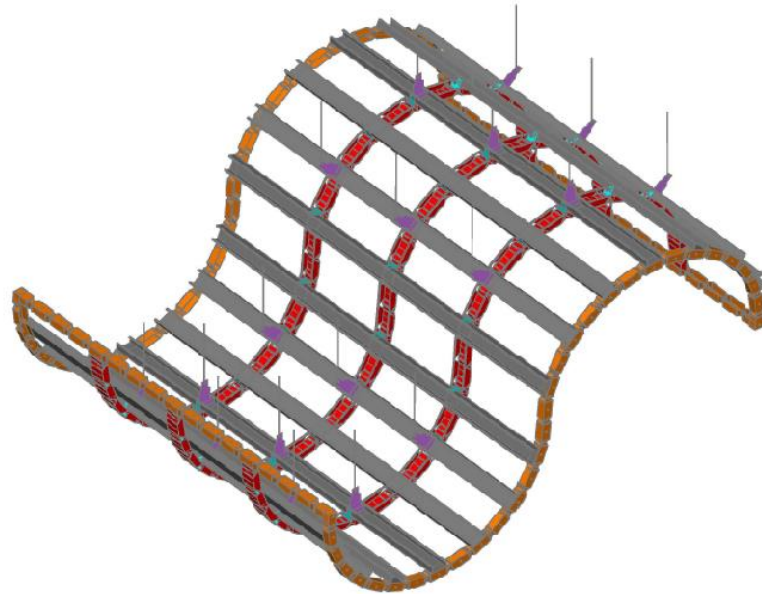


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## WAVY CEILING

For the realisation of a wavy ceiling, with dimensions of 3x3,50m, proceed as follows:



- trace the perimeter of the counter ceiling along the existing perimetral walls following the required curvature
- fix the COBRA Curving Profiles COBRA 30mm along the traced perimeter, every 24cm
- bend the sides of the COBRA 30mm (previously fixed to the walls, where the waves are going to start) by hand, to get the perfect starting point of the curvature (in this way the plasterboard will find a safe support between the wall and profile)

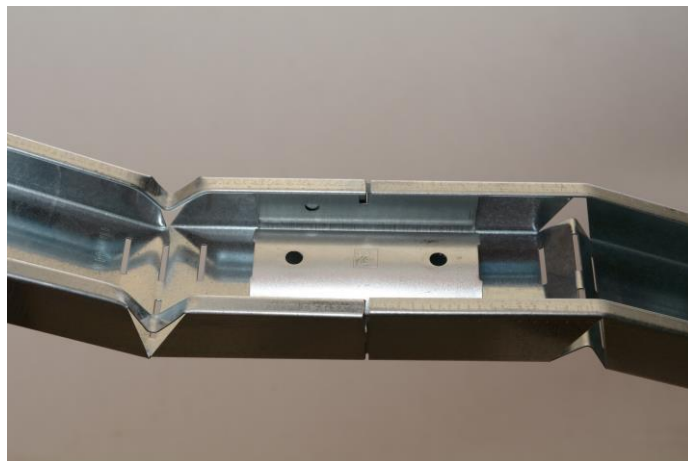


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- mark the positions of the hangers in the direction of the primary structure, with an interaxle spacing of 100cm (length) x 80cm (width). Please check the hanger's distribution following the curvature and the interaxle spacing of the primary structure
- install the primary standard metal structure C49x27 (or C60x27) with an interaxle spacing of 40cm (or 50cm, as for a flat ceiling)
- bend the CONCAV&CONVEX / CONCAVEX Curving Studs, following the outline of the COBRA 30mm already placed on the existing perimeter

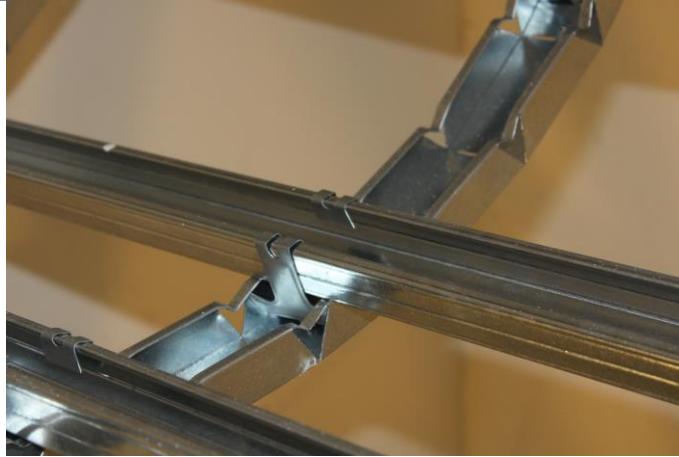


- connect the Studs with a channel connector 60x27 to obtain the curvature with the desired radius (if you are using the single CONCAVEX stud, no joint is necessary to change the direction of curvature, but only for the continuation beyond 3 metres)



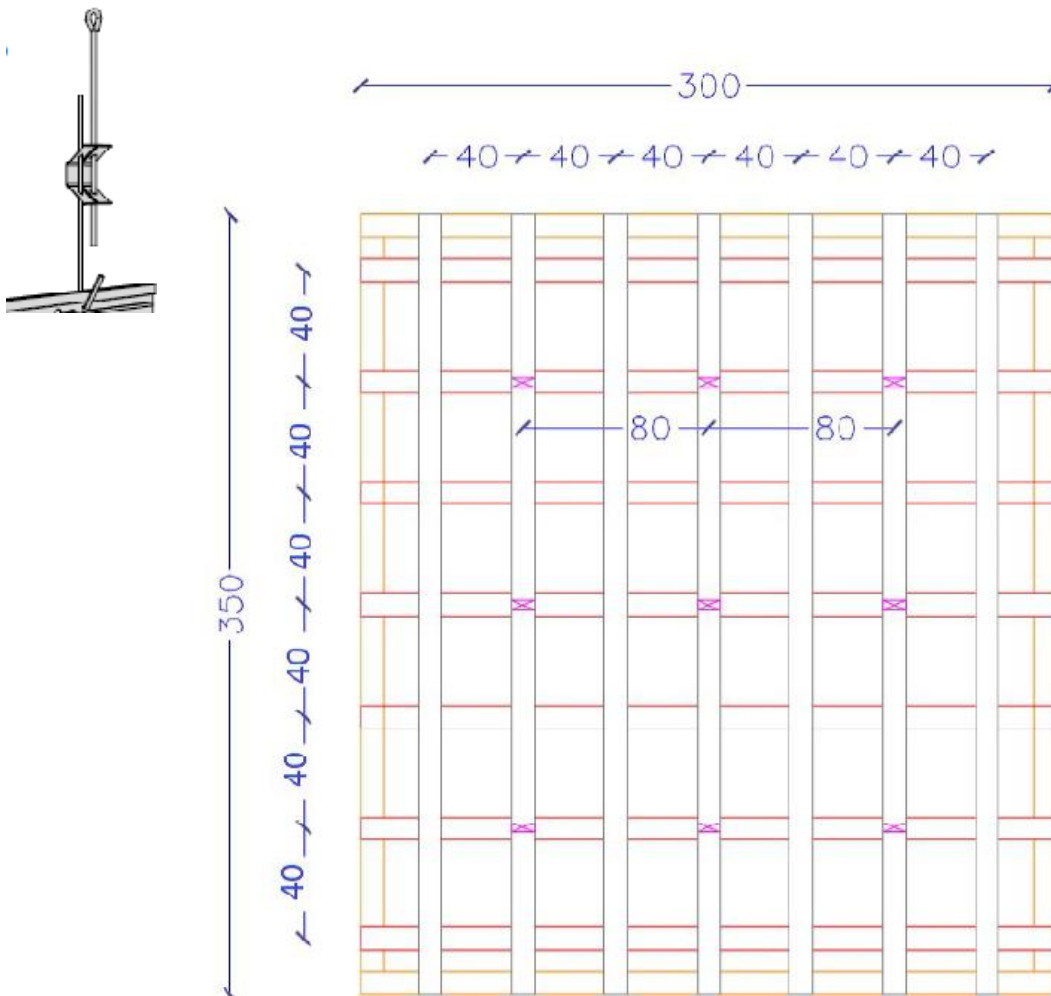
- connect the CONCAV&CONVEX / CONCAVEX Curving Studs to the primary metal framework with channel hangers, with an interaxle spacing of 30cm (or 40cm, depending on the radius of the curvature)

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- the number of hangers and their positioning on the ceiling will be done accordingly to the size of the room and the additional loads

*Wavy Ceiling installation diagram: distance between the main profiles and hanging directions*



- the result will be the following:



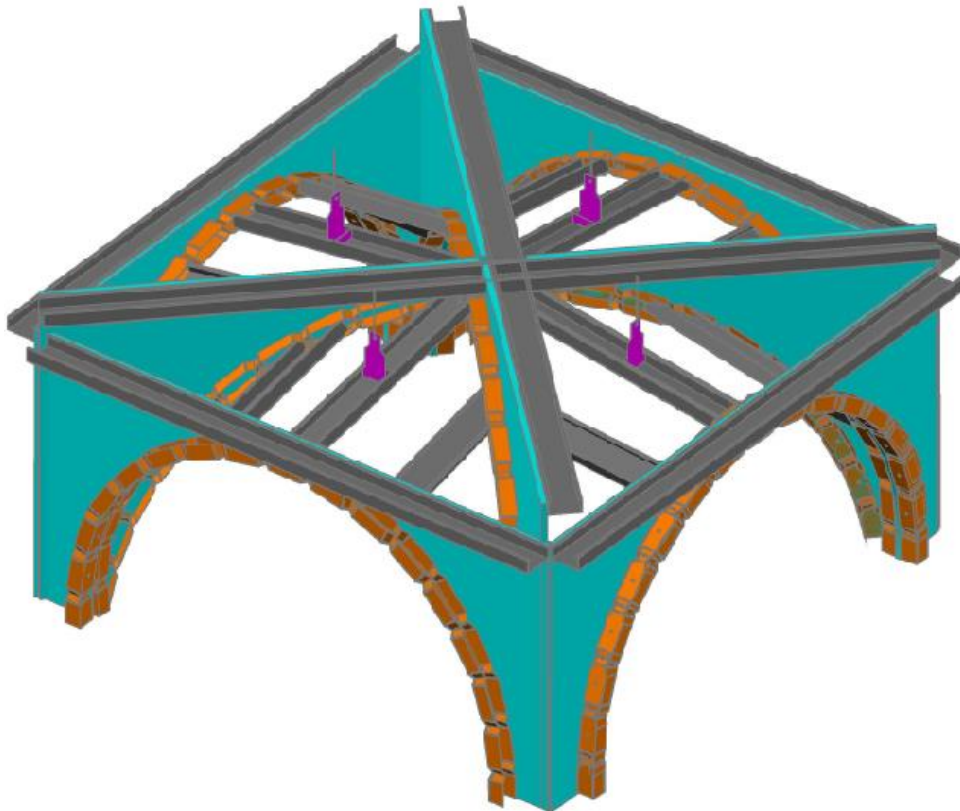
- proceed with the plasterboard laying (thickness 6mm/10mm), that will find a continuous surface for optimum shaping



## CROSS VAULT

For the realisation of a cross vault with dimensions of 3x3,50m proceed as follows:

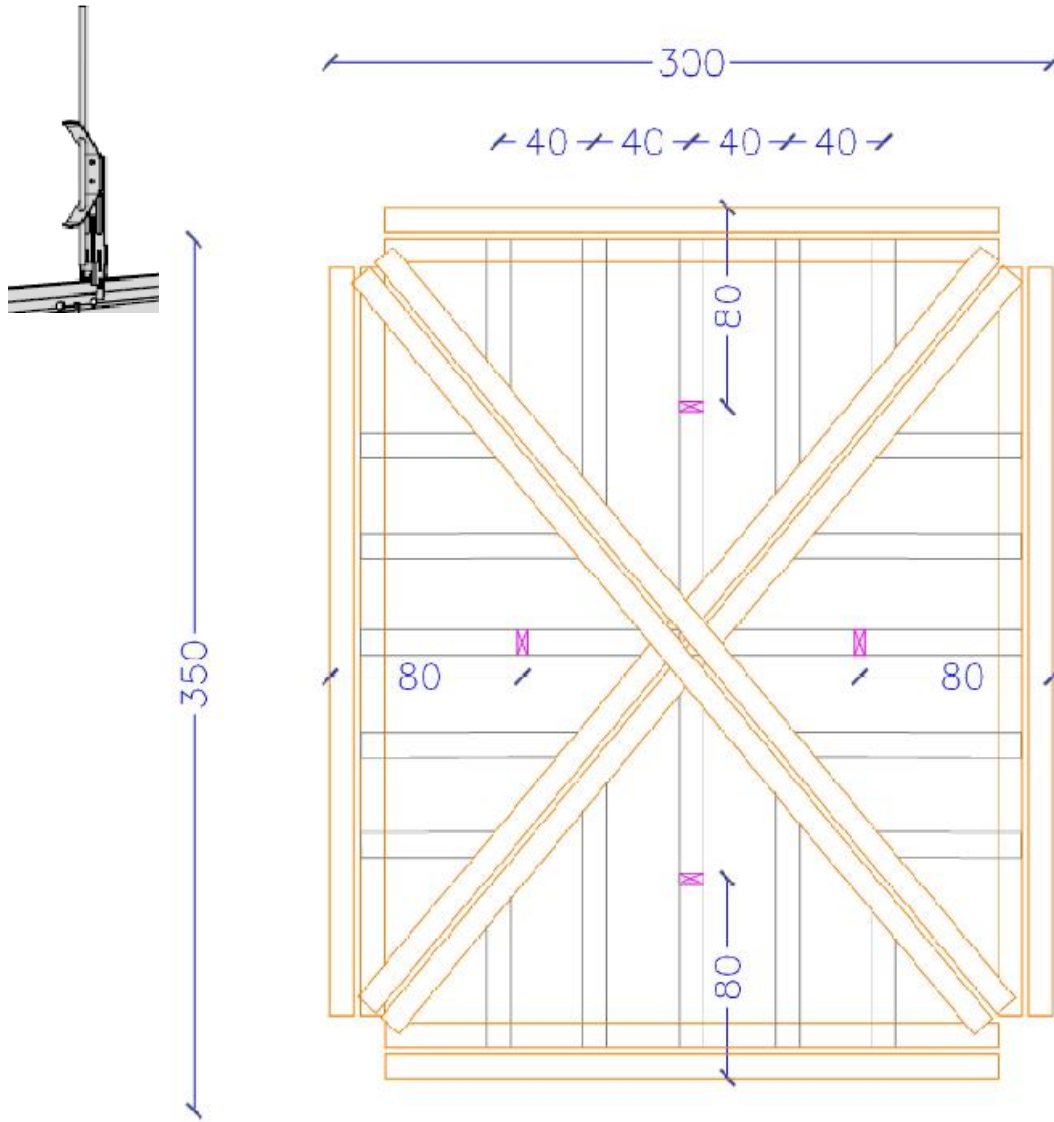
- trace the perimeter of the desired vault along the existing perimetral walls (as for the barrel vault)
- fix the plasterboard sheets, starting from each corner, to obtain the centre and the height of the arches
- trace the desired arch onto the plasterboard sheets and cut away any excess of the sheets
- fix the COBRA 30mm on both the sides of each sheet
- insert standard studs C49x27 (or C60x27) in the COBRA 30mm, with variable distances according to the curving radius



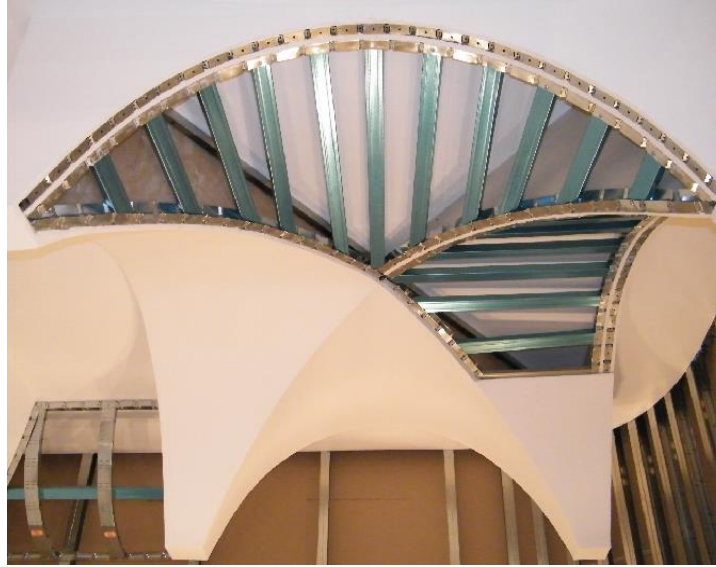
- fix the hangers to the centre of the upper arches 80cm from the perimetral walls, depending on the room's dimensions

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*Cross vault installation diagram: distance between the main profiles and hanging directions*





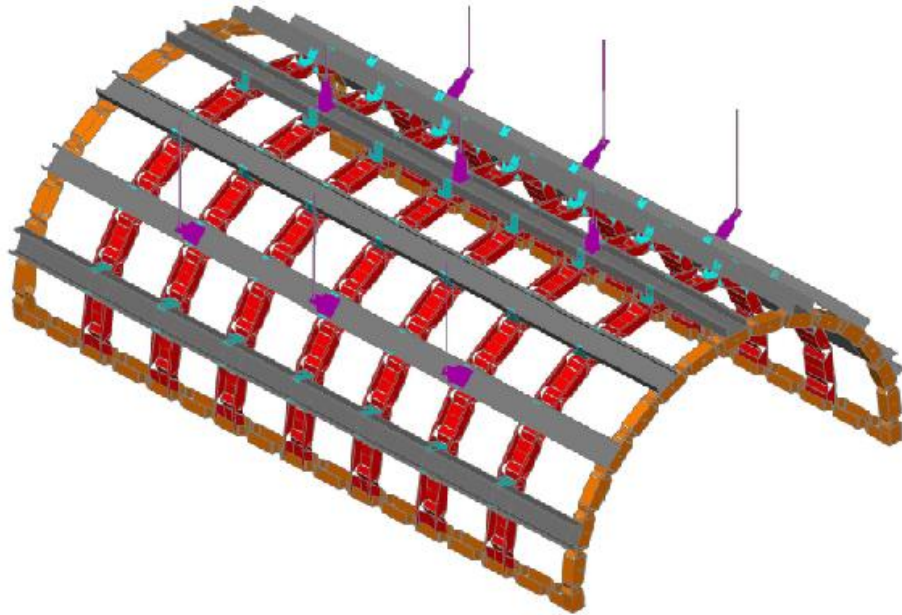


- proceed with the plasterboard laying (thickness 6mm/10mm), that will find a continuous surface for optimum shaping.

N.B. If the structure is bigger, install a CONCAV / CONCAVEX Stud behind each portion, to support the weight of the vault. The stud needs to follow the shape of the outer arch and should be placed in the centre of each portion (parallel to the COBRA 30mm) before inserting the standard studs. The additional CONCAV / CONCAVEX studs will then be hooked to the ceilings with special "suspension clip", in order to support all the weights of the structure.

## BARREL VAULT

For the realisation of a barrel vault with dimensions of 3x3,50m, proceed as follows:



- trace the perimeter of the desired vault along the existing perimetral walls
- fix the Curving Profiles COBRA 30mm along the traced perimeter, every 24cm
- by hand, bend the sides of the profile to the desired inclination on the two linear sides of the vault

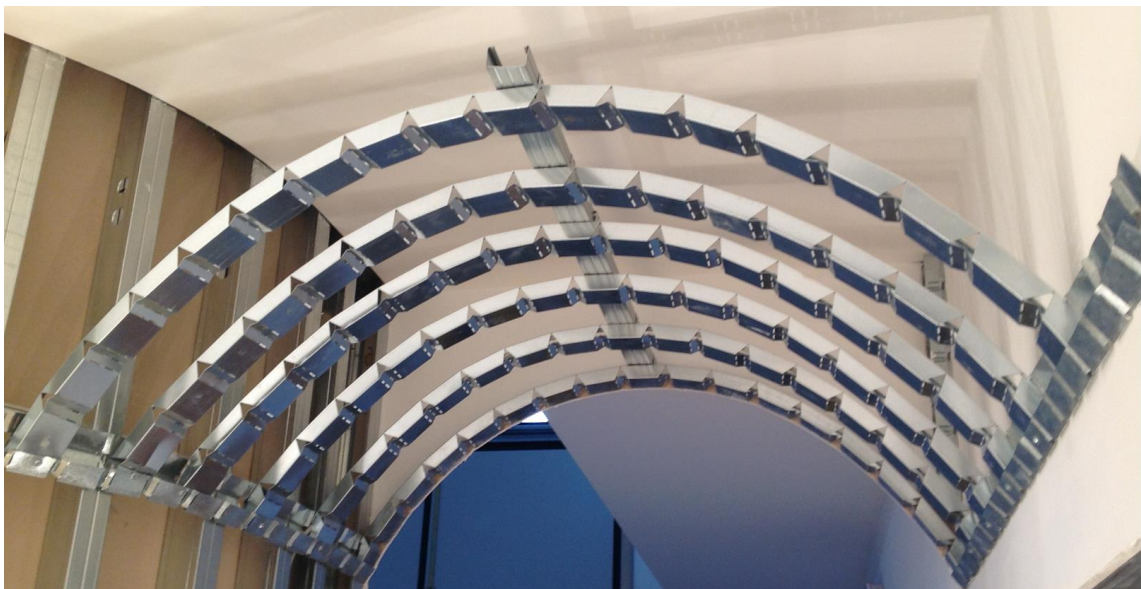


- build the vault with a double metal framework: for the primary structure use C49x27 (or C60x27), for the secondary structure use the CONCAV / CONCAVEX Curving Stud and channel hangers (as for a flat ceiling)

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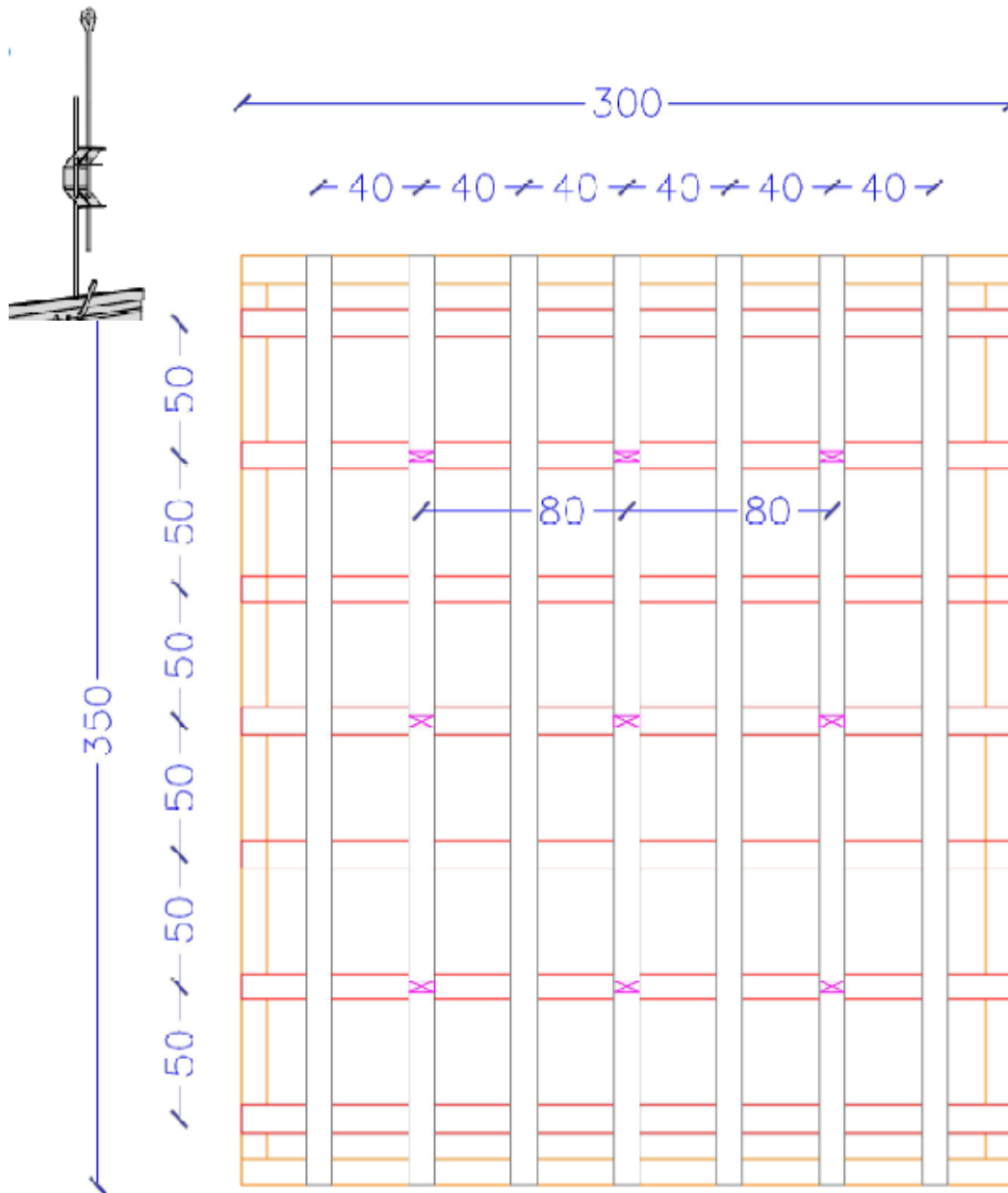


- the primary structure needs to have an interaxial spacing of 40cm (or 50cm), while the secondary of 30cm (or 40cm, depending on the radius of curvature)
- fix the structure with channel hangers, hangers with double suspensions clip. The interaxial spacing should be of 100x80cm to ensure the stability of the inclined primary studs.



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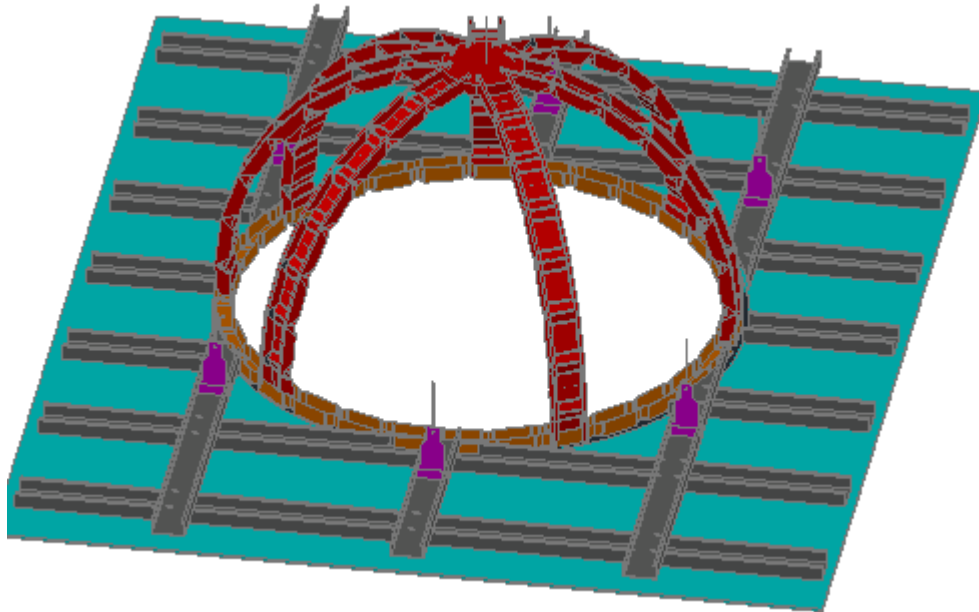
*Barrel vault installation diagram: distance between the main profiles and hanging directions*



- proceed with the plasterboard laying (thickness 6mm/10mm), which will find a continuous surface for optimum shaping

## DOME

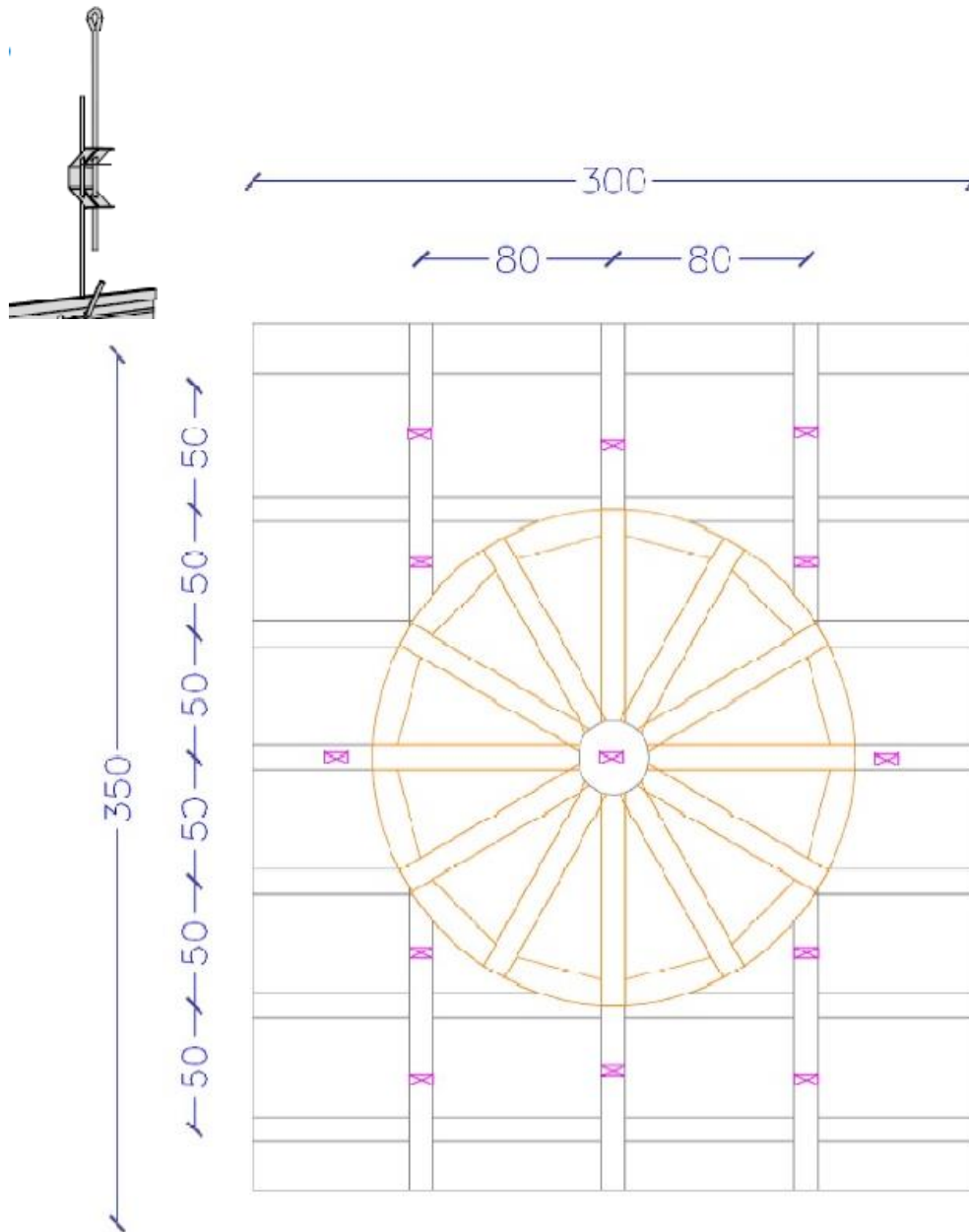
For the realisation of a dome with diameter of  $\varnothing$  200cm, on a ceiling of 3x3,50m proceed as follows:



- install a flat false ceiling at the desired height (this will work as compensation of the perimeter of the dome)
- the primary structure will have an interaxial spacing of 80cm, while the secondary structure will be at 50cm
- fix the structure with hangers, with interaxial spacing of 100cm (length) x 80cm (width)
- create the desired circumference from the existing false ceiling (hole at the base of the dome)
- fix the COBRA 30mm along the circumference of the dome
- determine the desired height that the dome will have in the upper centre
- obtain a circle (wood or plasterboard) with a lower diameter than the previous one (about 30cm or depending on the dimension of the total circumference) and fix it to the ceiling (with a suspension clip) at the desired height
- bend by hand the CONCAV / CONCAVEX Studs 60x27 following the curvature of the dome and its height
- fix one end of the CONCAV / CONCAVEX Studs inside the COBRA 30mm (at the base of the dome) and the other end on the little circle hung to the ceiling
- the distance between the CONCAV / CONCAVEX Studs will be determined by the radius of the dome (variable distance)
- proceed with the plasterboard laying (thickness 6mm/10mm), previously cut in slices, which will find a continuous surface for optimum shaping

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*Dome installation diagram: distance between the main profiles and hanging directions*



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N.B.: If the dome is very big, it is necessary to place some more CONCAV / CONCAVEX Studs to strengthen the structure behind. Place them across the CONCAV / CONCAVEX already in place (double metal framework) and fix them behind the first ones with channel hangers.

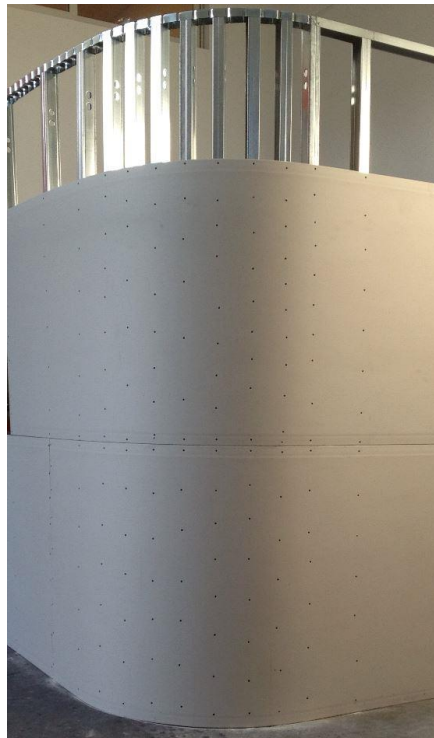


## CURVED WALL

For the realisation of a curved wall proceed as follows:



- Trace the curvature outline on the floor that the wall must follow
- Bend the COBRA 50/75/100mm flexible tracks according to the desired curvature
- Fix it to the floor and to the ceiling with screws, approximately every 30cm
- Insert and fix the standard vertical studs inside the COBRA tracks fixed to the floor and to the ceiling with recommended interaxial spacing of 30cm
- Cover and fix the plasterboard sheets horizontally





## CURVED DOWNSTAND

For the realisation of a curved downstand proceed as follows:



- Trace the curvature on the ceiling that the downstand must follow, also with the help of a wooden mould
- Fix the COBRA 30mm flexible track to the ceiling with the screws following the line
- Cut the plasterboard sheet according to the height chosen for the lowering of the downstand
- Fasten the plasterboard sheet to the COBRA 30mm, previously fixed to the ceiling
- Fasten with screws another flexible COBRA 30mm along the lower edge of the plasterboard just fixed



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- Fix to the ceiling some universal brackets to provide a point of support for the standard studs, placed at the same height as the COBRA 30mm, previously installed at the lower edge of the plasterboard



- Fix the standard studs on one side to the COBRA 30mm fixed to the lower side of the downstand, and on the other side to the universal brackets



- Fasten some sheets of plasterboard to the standard studs and to the COBRA 30mm, to the lower part of the structure to close it
- Once boards have been properly fixed, proceed to cut the excess of the sheets considering the curvature above with a cutter. If you want to add a LED bar, cut the board wider than the curved structure above
- Smooth any defects in the cut so that the surface is linear
- Fix an arch bead along the entire edge of the sheet and plaster properly

## VAULTED WALL

For the realisation of a vaulted wall proceed as follows:



- Screw the COBRA 50/75/100mm tracks to the floor
- Fasten the studs to the primary structure 50x27 (or 60x27 or wooden brackets) directly to the bearing wall
- Screw the CONCAV / CONCAVEX studs with an interaxial spacing of 40cm with channel hangers or rigid brackets to the primary structure
- Fasten the sheets of plasterboard directly to the CONCAV / CONCAVEX studs. The boards will find a continuous surface for optimum shaping



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