

## 8. PARTITION WALL / LARGE FORMAT CLADDING

### EI-120 / EI 180

Non-bearing partitions performing separation functions between fire compartments, must have a fire resistance as indicated on the **UNE EN 1364-1** standard.

When conducting a fire resistance test of non-bearing elements, part 1: walls, an edge is left free, the standard allows to increase the width dimensions.

Regarding height extension, the standard is clear and concise. When the construction is tested with a minimum of 3 meters, it is possible to increase it up to 4 meters.

On numerous occasions we find partition walls higher than 4 meters. **mercor tecresa**<sup>®</sup> is pioneer on the development of large dimension partition walls and offers the most efficient and comfortable solution for this type of works. Consult our commercial department.

On the other hand, every time a compartment is broken, for example the services crossing, it is necessary to seal the gaps produced by them. Consult the **Tecsel**<sup>®</sup> **Sealing System** catalogue to find the most appropriate solution.

TECWOOL<sup>®</sup> F MORTAR

# CONSTRUCTIVE SOLUTIONS

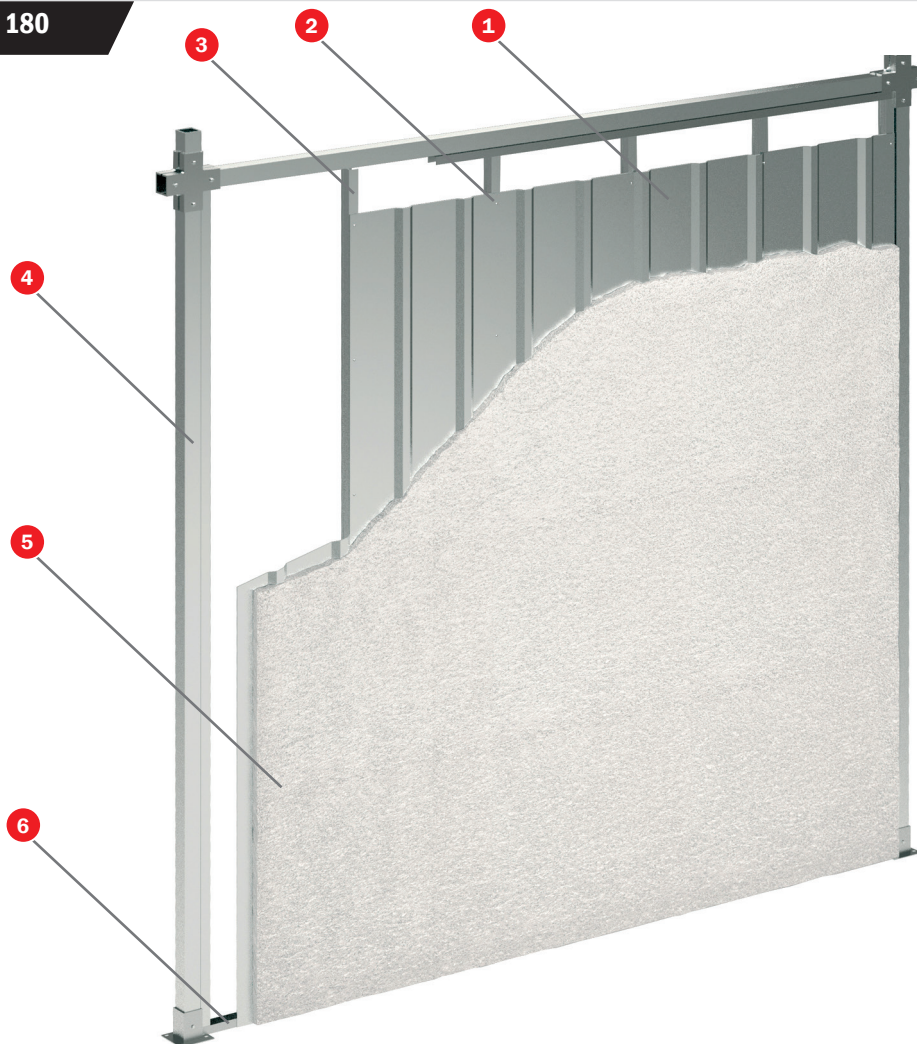


# TECWOOL® MORTAR

PARTITION WALL / LARGE FORMAT CLADDING

## TECWOOL® F MORTAR

EI 120 - EI 180



### TEST

**Standard:** UNE EN 1364-1

**Laboratory:** CIDEMCO

**Test No:** 27916

### SOLUTION

- 1 0,6 mm corrugated sheet
- 2 3,5x25 mm self drilling screw
- 3 46x36x0,6 mm stud
- 4 60x60x1,5 mm metal structure
- 5 Tecwool® F (49 mm thickness)
- 6 48x30x0,5 mm metal runner

### APPLICATION

Fix the 60x60x1,5 mm metal structure (consult our commercial department for dimensions and fixations).

Fix the 48x30x0,5 mm metal runners over the modulation of the metal structure and over them, the 46x36x0,6 mm metal runners every 600 mm by 3,5x25 mm self-drilling screws.

Afterwards, place the 0,6 mm corrugated sheet and affix it to the studs with 3,5x25 mm self drilling screws. Lastly, apply **Tecwool®F** mortar over the corrugated metal sheet.

The surface to be protected should be free from dust, oil, waste, poorly attached particles, paint leftover, etc.

It is recommended to use water with the application hose to wash dirt away from

the faces. This will also help achieve a thermal balance between the mortar and the applied surface.

**Tecwool® F** can provide different finishings: rugged, smooth, painted, etc., according to different aesthetic requirements. Once the spread is completed and in order to obtain a smooth finishing, a roller should be used and pressed slightly over the wet mortar until the desired finishing is obtained. It is possible to paint the mortar with elastic acrylic coatings to form a steam barrier. Before painting the mortar should be completely dry (28 days).

Once spread, mortar should be water sprayed superficially to ensure optimum settling of the cement.

**ASSEMBLY OF METALLIC STRUCTURE FOR LARGE DIMENSION PARTITION WALLS (> 4 m HEIGHT)**

When the dimension of the partition walls is higher than 4 meters, it is necessary to place an additional structure.

This structural solution is offered in 5 standard pieces easy to install, making the partition wall independent from the tensions produced by the expansions and temperature changes, and also the own work settlement.

The large format metallic structure, depending on the height, will be as follows:

Up to 8 meters height: 45x45x1,5 mm.

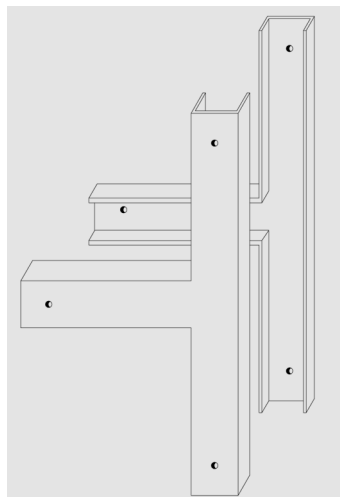
Partition walls higher than 8 meters: 60x60x1,5 mm.

**1. System break down**

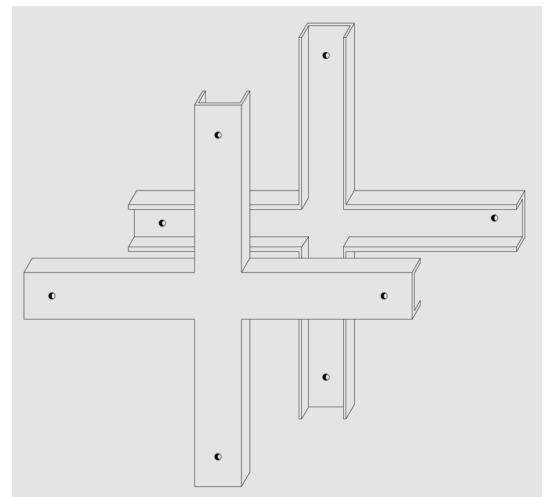
Structural solution consist of 7 standard pieces which are assembled as shown in the picture.

Pieces 3 and 7 present warped drill holes by which are fixed to the support work with dowels or metal anchors. Such warped drill holes allow movement iperpendicular to the direction of the partition wall in case of deformation. At the same time, piece 7 is articulated, so that in case of presenting inclinating angles it perfectly adapts to the support work to which is anchored.

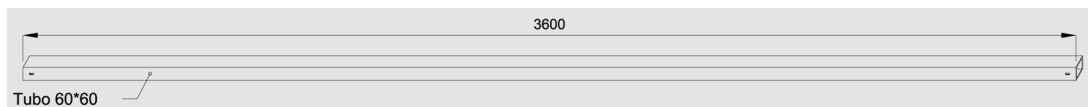
The rest of the pieces are assembled as shown in the drawing with their standard measures.



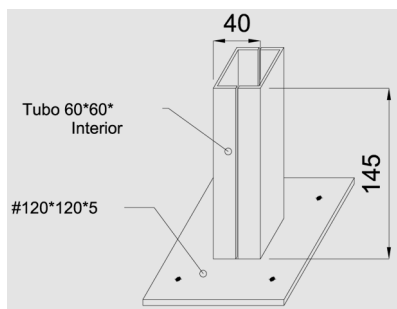
PIECE 1



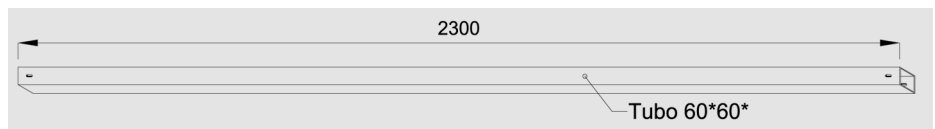
PIECE 2



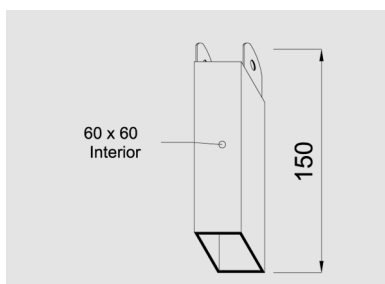
PIECE 4



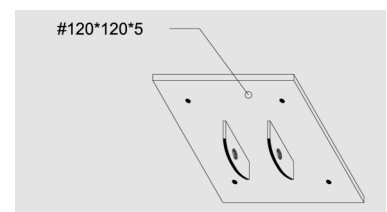
PIECE 3



PIECE 5



PIECE 6



PIECE 7

**TECWOOL® F MORTAR**

**EI 120 - EI 180**

**2. System assembly and details**

The structure forms a grid with dimensions shown in the drawing, in which independent areas of 8,28 m<sup>2</sup> will be formed.

Piece 4 represents the crossbeam and piece 5 the main stud.

Piece 2 is a connection at four points used to join pieces 4 and 5.

Piece 1 is a connection at three points used to join pieces 4 and 5 when it comes to the edge of finalisation or the beginning of the partition wall.

Once the metallic structure is placed, the profiling of the dry partition (metal runners and studs) shall be fixed onto such structure. Metal runners and studs are fixed to the structure with 19 mm nails within a distance of 250-300 mm.

Once the metallic structure is placed, the large format wall partition, the fireproof solution chosen according to the required solution, either **Tecbor®** boards or **Tecwool®** mortar will be installed.

An additional profile will be placed every three installed grids, providing the partition wall with perpendicular stability (consult with the Technical department).

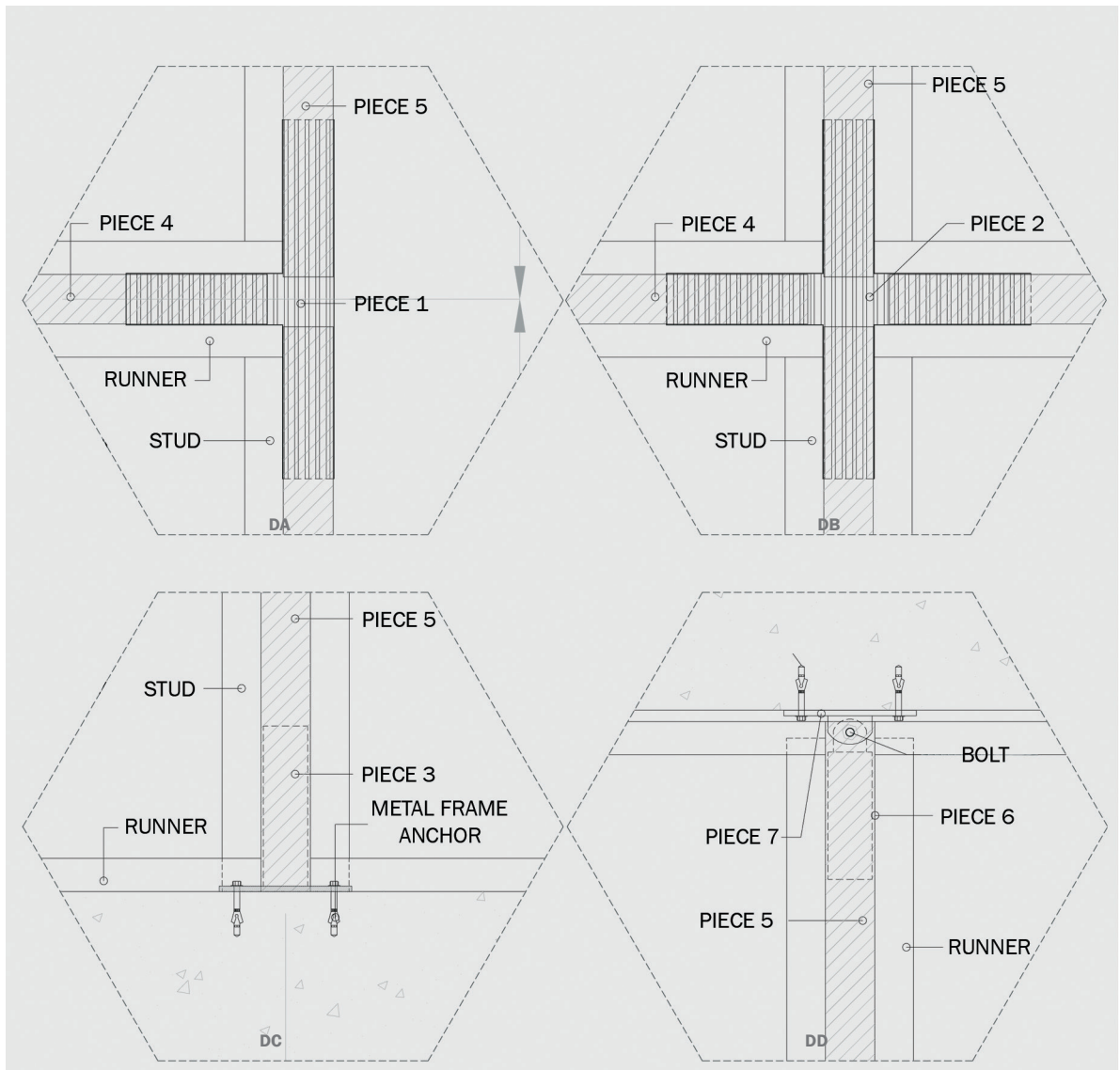
**3. Mortar Tecwool® application**

As **Tecwool®** is a rockwool mortar, it is flexible enough to absorb the deformation produced by the expansions of the structure.

A free edge of 50-70 mm (it will depend on the dimensions of the partition wall) will be left at the top of the partition wall, which will allow the uniform movement of the partition wall from the support work. This edge will be sealed, either with exterior baseboard (100 mm wide) or **Tecsel®** sealing.

Consult our Technical Department for further information.

*Note: **Mercor tecresa®** guarantees this solution, provided that all the components of the installation are from **mercor tecresa®** and the installation have been executed following the installation manual.*



Last updated 18/05/18