

DIY MANUAL

Thermo-Block Magyarország Kft.

Storage

Thermo-Block building blocks are transported to the building site equipped with corner-protecting without pallets. The blocks are worth accumulating sorted in kinds. It is advisable to accumulate the blocks fenced from the wind if necessary tied. It is especially important to protect the joining points from damages. Since the remnants might be used during the process of the work, it is practical to collect them.



Storage in bales



Tying, corner protecting

Bearing walls

Checking the building site:

To draw profit from the advantage of accuracy of Thermo-Block, attention should be made on geometrical designing of the area.

The most important things are to check and adjust summit levels.

Thermo-Block does not require special footings it can be constructed on any conventional structure.



concrete placing



gravel bedding of receptor



receptor



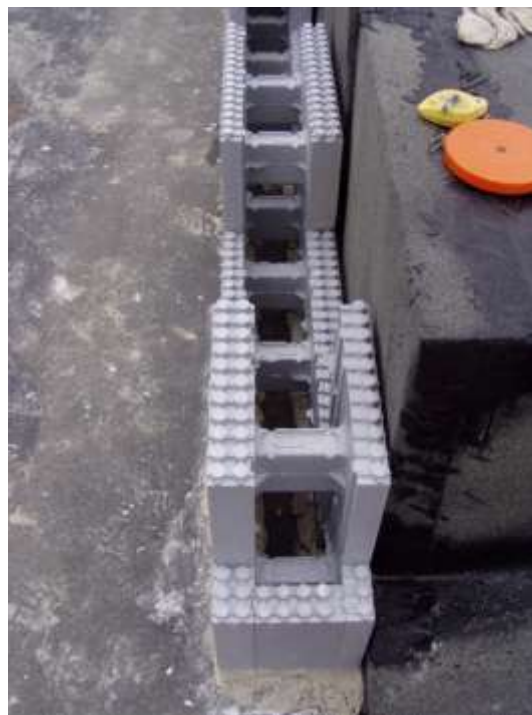
disposing of drainage

Insulation against ground water and steam:

Under the first layer of the elements we should put bitumen felt in proper width.



*insulation under
the wall*



Insulation of the side wall

Setting out :

After installing insulating paper the interior wall line must be set out with a line. To set out the first layer precisely can be both with laser and traditionally as well. At the same time it is very important that the blocks are accurate horizontally and vertically as well. It is practical to start to put down the blocks from the corners. We are more precise if we put elements pro tempore on the would-be place of doors and windows but remember that they must not be filled with concrete.



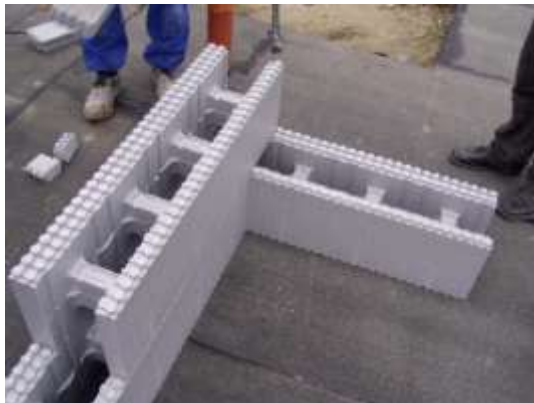
setting out

Block-laying:

After fixing the first layer, we fill the blocks halfway up and then set the height. The concrete is always put on the connector rib to avoid dislocation. Reinforcement of the wall should be placed according to the static instructions. In the blocks there are special iron bars for reinforcement. After filling the first layer with concrete, three more layers can be put together and fill them halfway up. While filling the concrete into the hole the cock of the blocks must be protected from damage and concrete. While filling the concrete we should proceed helix so that the wall can dry before starting the following layer. Filling the hole C12-24 KK quality concrete ought to be used. The performance of the corners and wall ends are to be used wall and lock elements. At the corners by cutting out the elements we enable to flow the concrete everywhere.



first layers



wall corner



mortar bed



layer-ironing



Lintelings:

Lintel elements are placed one by one on the propping put down in advance. Consider should be made that at the joints all the elements must be propped. The shoulder of the lintel elements are at least 25 cms on both ends. The bottom plate of the lintels must be cut out at the shoulder so that the concrete can be uninterrupted with the wall element lying underneath. Bar spacing must be checked for the technical manager in charge before concrete laying. The propping can be removed just after becoming solid.



propping



lintel elements

Ring beam blocks:

Ring beam blocks are connected with positioning cocks to the last wall block layer. The blocks must be cut, and while concrete placing they must be fixed. The ring beams are practical to support with planks from the outside.



corners



support of the ring beam blocks

Slab:

Thermo-Block slab is a concealed grid system that consists of cast-in-place concrete where EPS assists to insulate the slab. Thermo-Block slab consists of an EPS hearth and metal beams. The measurement and manufacturing of each slab is piece production. After completing backing, the following thing is to place solid floor and metal beams.

The two lower irons of metal beams should be placed over the lower iron of metal ring beams, minimum 15 cms from the inner place. After putting down the spreader iron net the following step is concrete placing, which should be made in one phase. The static expert calculates the thickness of the walls and coffered slab. The placing of the concrete must be checked with the boffin in charge. The quality any consistency of the concrete is defined by the static architect. If a concrete pump is used the abutments must not be burdened, so the concrete has to be spread out. The fresh concrete should be protected from extreme weather conditions, so the post-treatment must be carried out.



netbeam



floor blocks



spreading abutment



load allocating net



abutment

Removal of abutment:

Removal of the abutment can be done just after the concrete of the slab has been hardened, this process must be checked by the boffin in charge.

Quality insurance:

A random sample from the fresh concrete must be taken and the results must be registered in the site diary.

Roof blocks:

There is no need roof batten, counter batten, roof wrap foil, and board insulation between the rafters. The blocks fit together tongued and grooved providing good insulation of the roof. The rafter spacing is 90 cm. The roof blocks are fixed with spacer bolts to the rafter. The roof tiles are directly placed on the built tiling batten. Considering the available roof tiles, the batten gauge is between 28 – 32 cms, and the angle of inclination is between 22 – 45. The roof blocks should be placed on the storm side from the eaves towards the ridge.



roof framing

**The Valley:**

We cut off the roof blocks along the roof batten parallel with the valley rafter 20 – 20 cms both sides from the axis. Next we make the valley with 3 cm thick EPS layers.

Division walls:

Both conventional and blocked division walls can be built with Thermo-Block system. The interior EPS layer are pulled down to the concrete. As a result we get a groove that provides horizontal bearing of the division walls. The division walls are built according to the instructions of the manufacturer.



division wall opening



division wall access, lintels



division wall first layer



fixing of the division wall



Trade-jobs, finishing

Doors and windows:

Fixing doors and windows should be at least 7 cms into the concrete with plugs into the concrete bolted through the frames. After doors and windows the expansion joints are filled with foam and we put on the architraves.

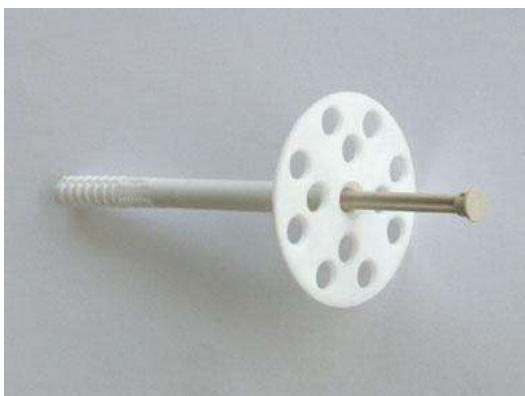


Fixing doors and windows

Fixing technology:

- Small objects are fixed with either EPS plugs or dry wall screw. The latter is used for dry wall.

- Big objects are fixed as followings: from the interior EPS insulation we cut out a small piece, in its place we plug a grooved profile to the concrete. Heavy objects are practical to fasten to this profile with self-drilling screw.



plug



ESP plug

Finishing:

External rendering can be:

- Dryvit system thin-coat plaster
- traditional dry hydrate plaster on steel mesh
- brick and stone ornament glued on the surface



stone



thin coat plaster

External rendering:

- machine-made rendering
- glued or bolted on skeleton dry wall
- traditional lime rendering
- cold coating



tile work



dry-walling



Tools, and aids:

- cement mixer
- level gauge
- spirit level and plumb rule
- builder's tape
- bearer
- handsaw
- knife



Health and accident prevention regulations:

During the implementation health and accident prevention regulations must be kept.

While working upstairs such as putting up slab, placing concrete etc. beware of staying downstairs.

Installing solid floor is just allowed from plank

Bolsters are dismantled from the centre.

On the slab any activity can be done just after fixing bolsters.

Personal protective clothing is compulsory.

