



Formwork
Solutions



FORMWORK SOLUTIONS

Geoplast formwork solutions

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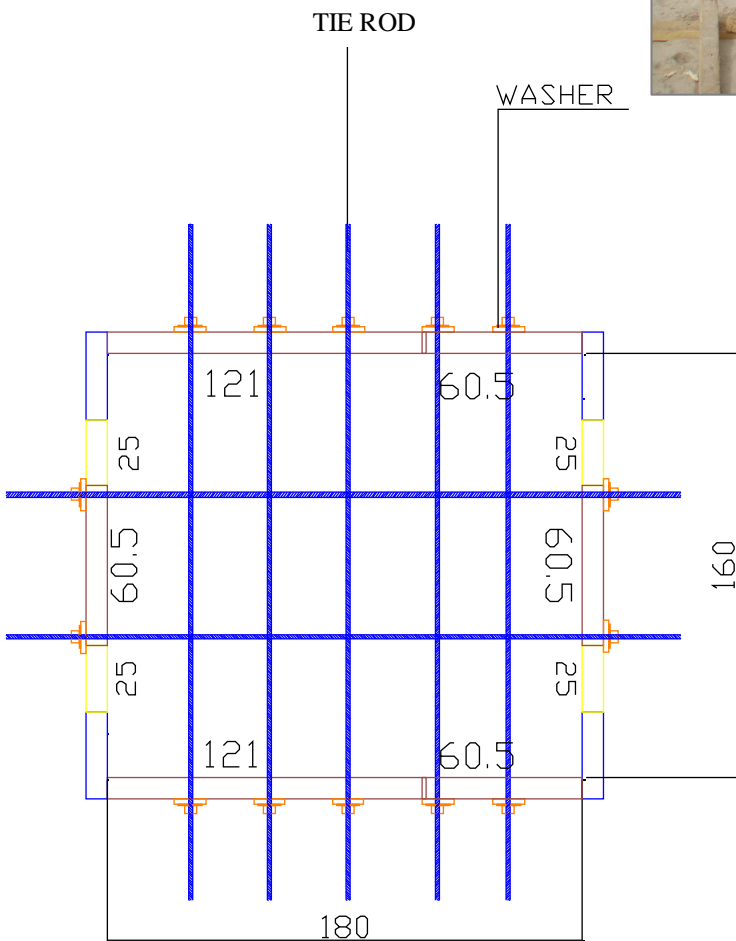
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Pile caps: tie rods - Geopanel

Geopanel is used for pile caps with tie-rods of adequate length. It is very important that the base is aligned and firmly fixed to the ground with timber. No bracing is required for pours of height up to 60 cm.

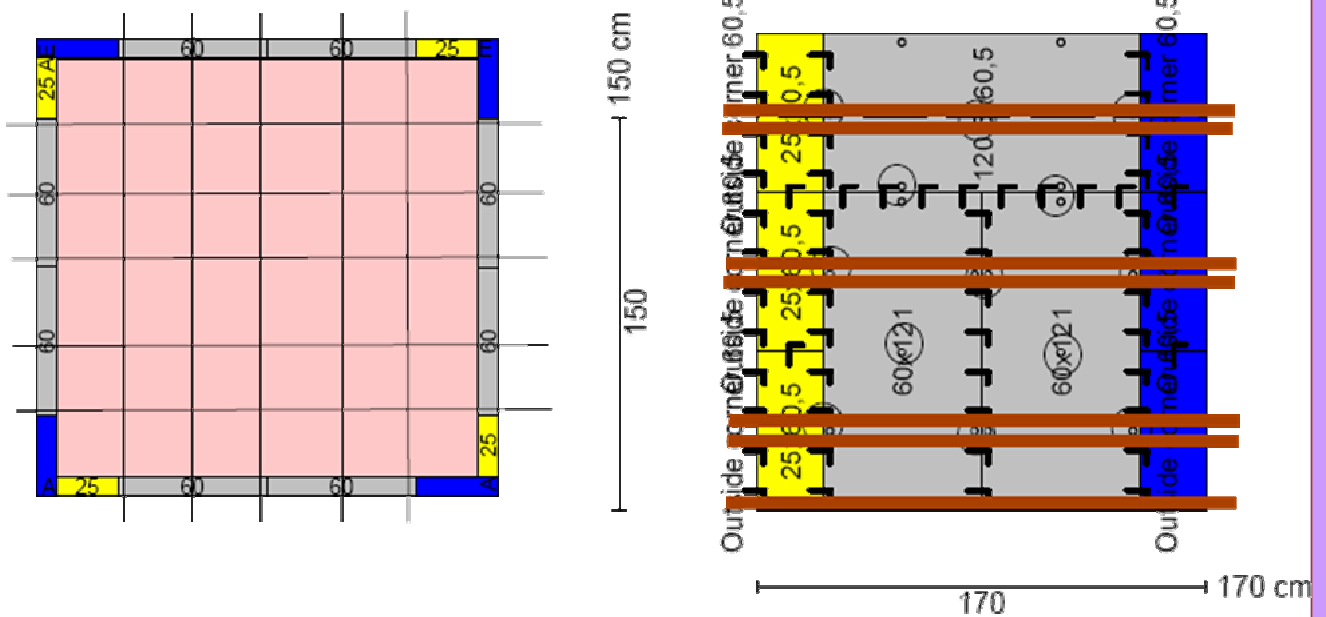


Example of pile cap with tie-rods and base-fixing



Pile caps: bracing - Geopanel

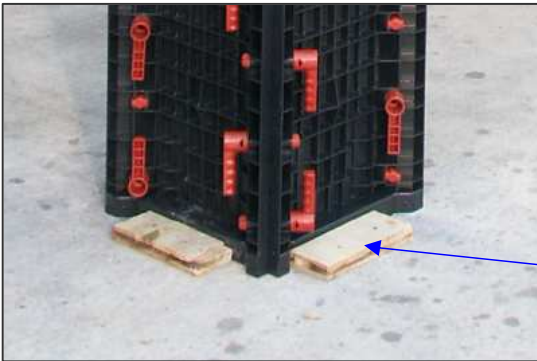
When tie-rods cannot be used, or for pours higher than 60 cm, bracing of the pile caps is required. These must be calculated to be strong enough to withstand the pressure generated by the concrete pour, but spacing is max. 60 cm between each brace, the lowest brace at 30 cm from the ground.



Example of pile cap with bracing

Column formwork alignment - Geotub

For alignment two straight pieces of timber to the floor or ground before the formwork is erected.



Anchoring

To anchor the formwork to the ground just overlap a piece of timber with the lower flange of the form.

In the case of larger forms it is possible to fix the lower flange to the ground with washer and a threaded bar.

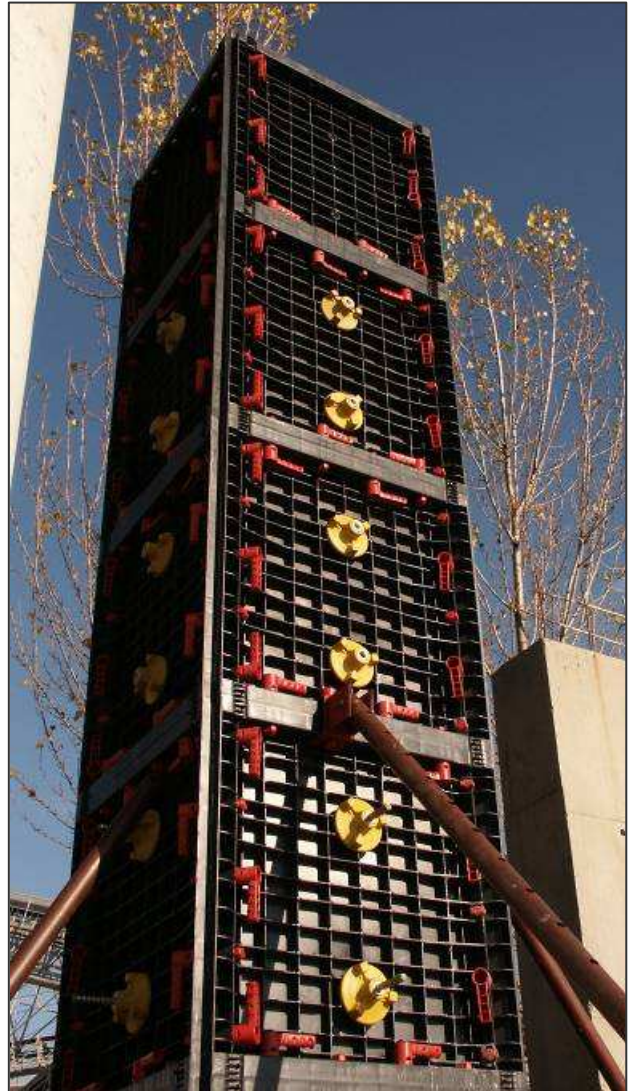


Column propping - Geotub

The Geotub column formwork accepts virtually any kind of propping and does not require any specific type of prop.

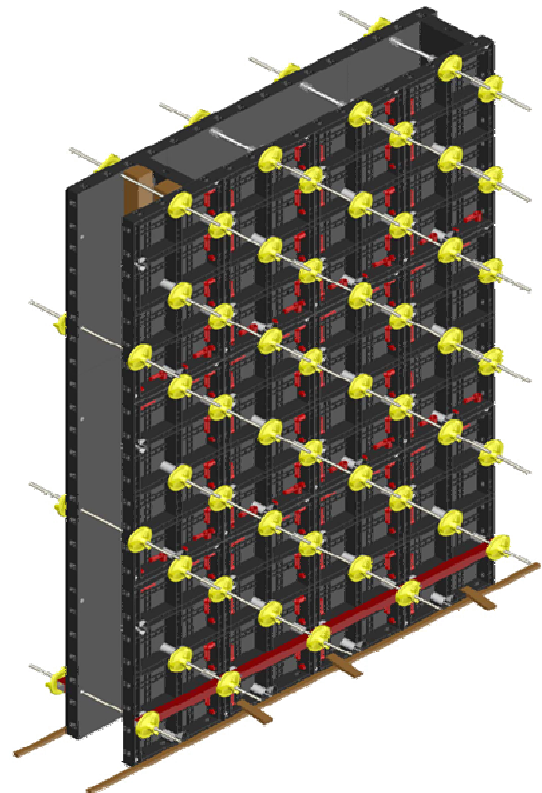
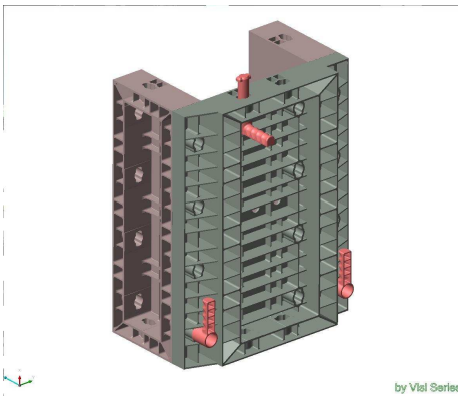
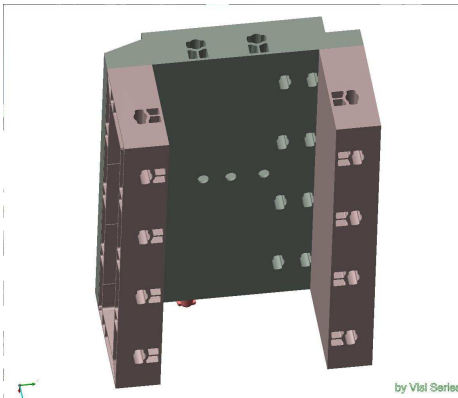
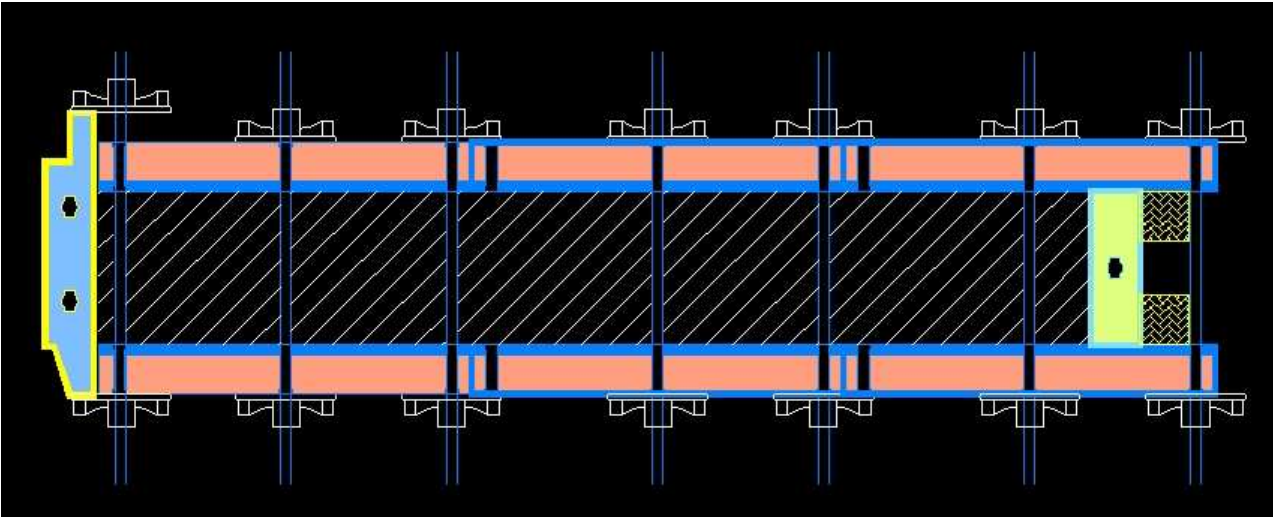
In case push-pull propping is required a specific steel joint is available.

DOPPIO SNODO STABILIZZATORE / DOUBLE STABILISER JOINT
Geoplast code: EGASNOD0000



Blade columns - Geopanel

Geopanel wall panels are used for shear walls of height up to 3 meters. The ends are stopped either with Geopanel 60x20(/25/30/40) cm or with Geopanel CL 20-30 / CL 35-45).

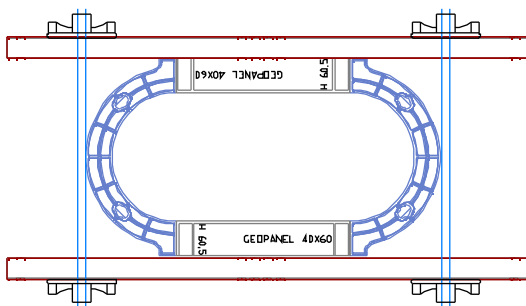
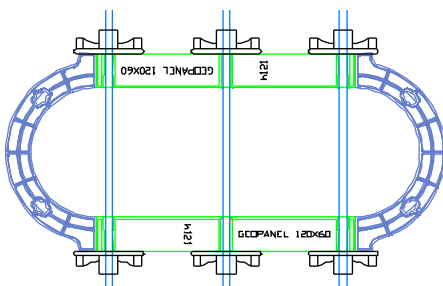
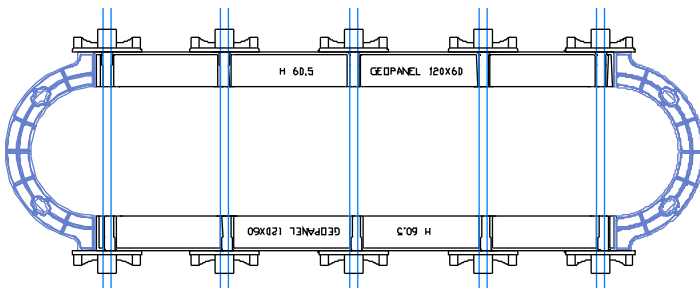


Oval columns – Geotub + Geopanel

It is possible to create oval columns combining Geotub round column forms and Geopanel. Not all Geotub round forms are compatible with Geopanel: the possible combinations are:

Geotub Ø 25	ok *
Geotub Ø 35	ok *
Geotub Ø 40	ok *
Geotub Ø 45	ok
Geotub Ø 50	ok
Geotub Ø 60	ok

* creates a small step between the straight and the curved surfaces, easily removed with some retouching right after stripping the forms.



Wall formwork alignment - Geopanel

To align Geopanel wall formwork it is best to fix the alignment timber to the slab before erecting the formwork.



Wall formwork propping - Geopanel

The Geopanel wall formwork accepts virtually any kind of propping and does not require any specific type of prop.

For push-pull props a specific steel part is available.

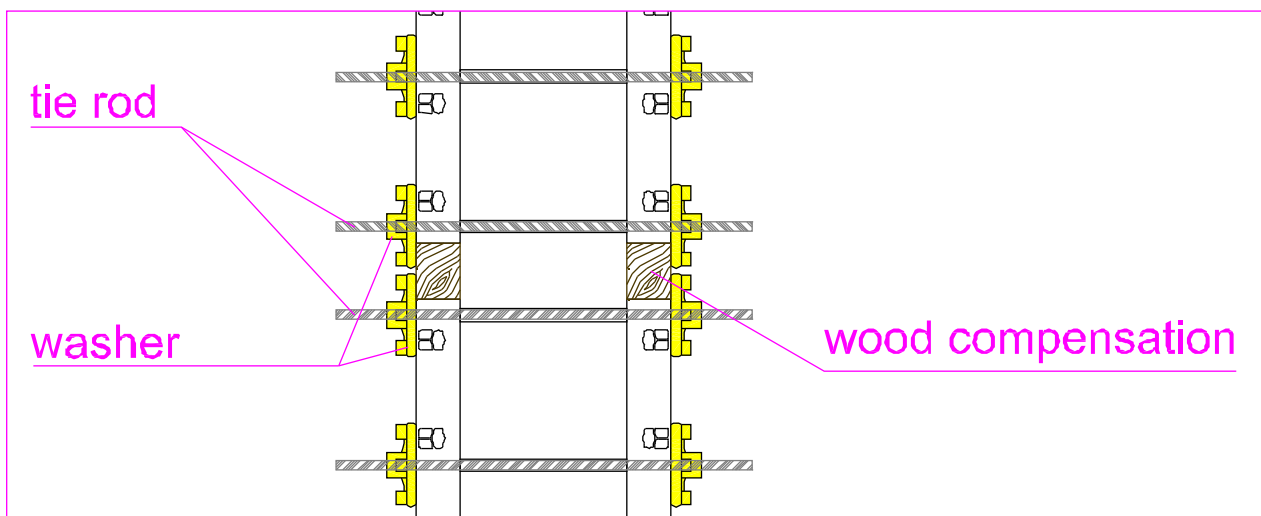
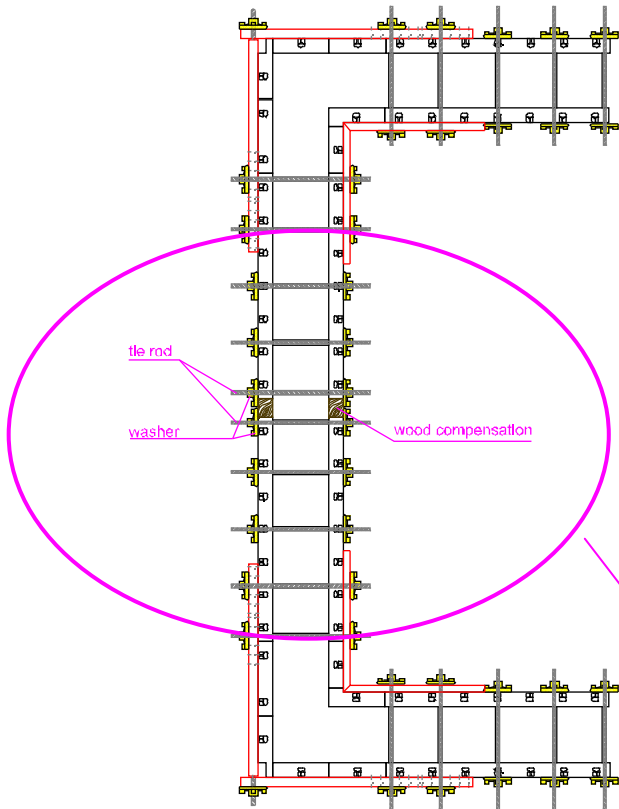
DOPPIO SNODO STABILIZZATORE / DOUBLE STABILISER JOINT
Geoplast code: EGASNOD0000



Wall compensations - Geopanel

In situations where of compensations smaller than 20 cm (the smallest size of Geopanel) timber will be used as gap filler.

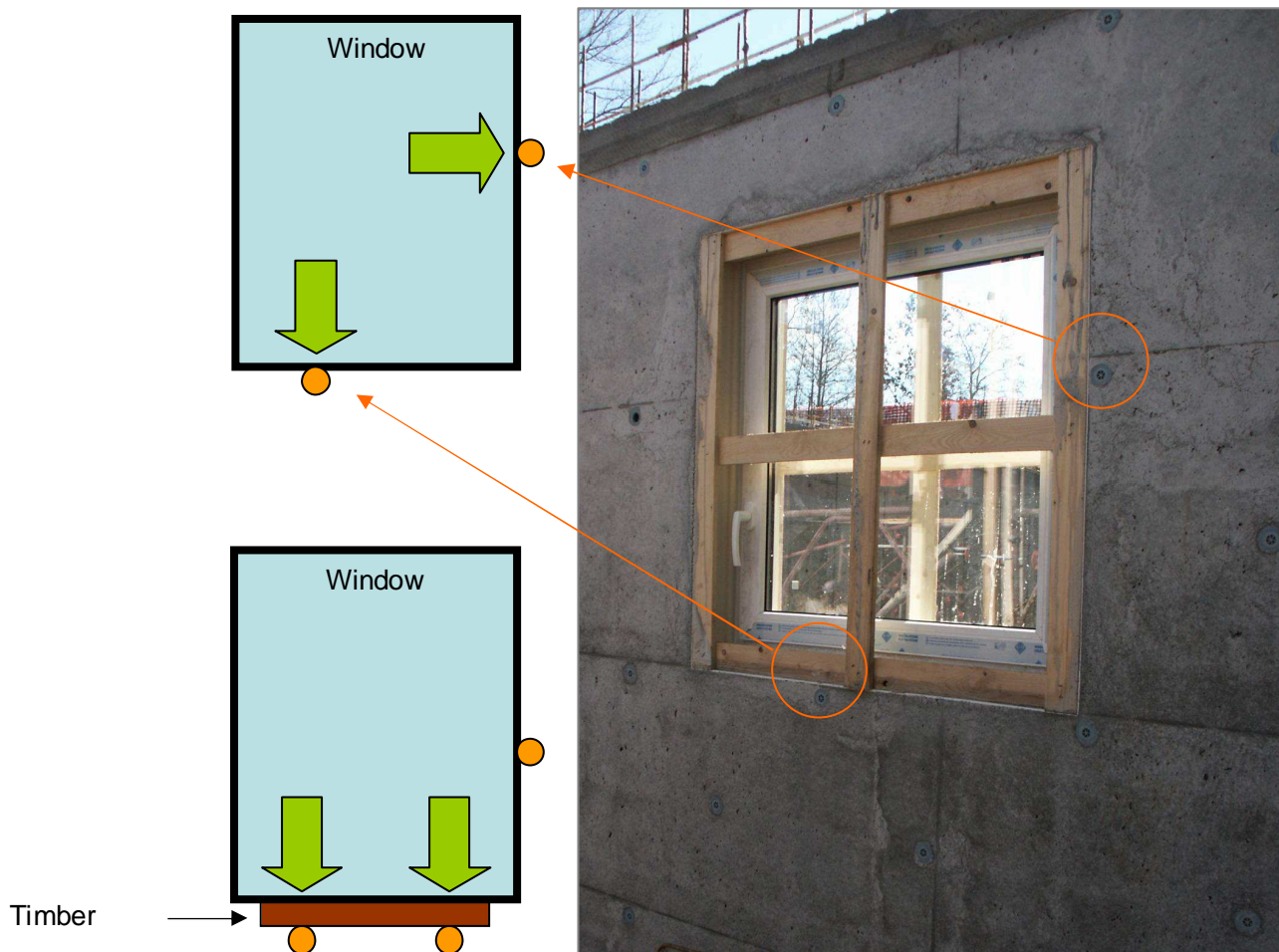
The timber is held in place from the outside of the forms by the washers fixed on the 120x60 cm Geopanel on both sides; The pressure of the concrete will hold the timber in place within the pour.



Windows and doors in the pour - Geopanel

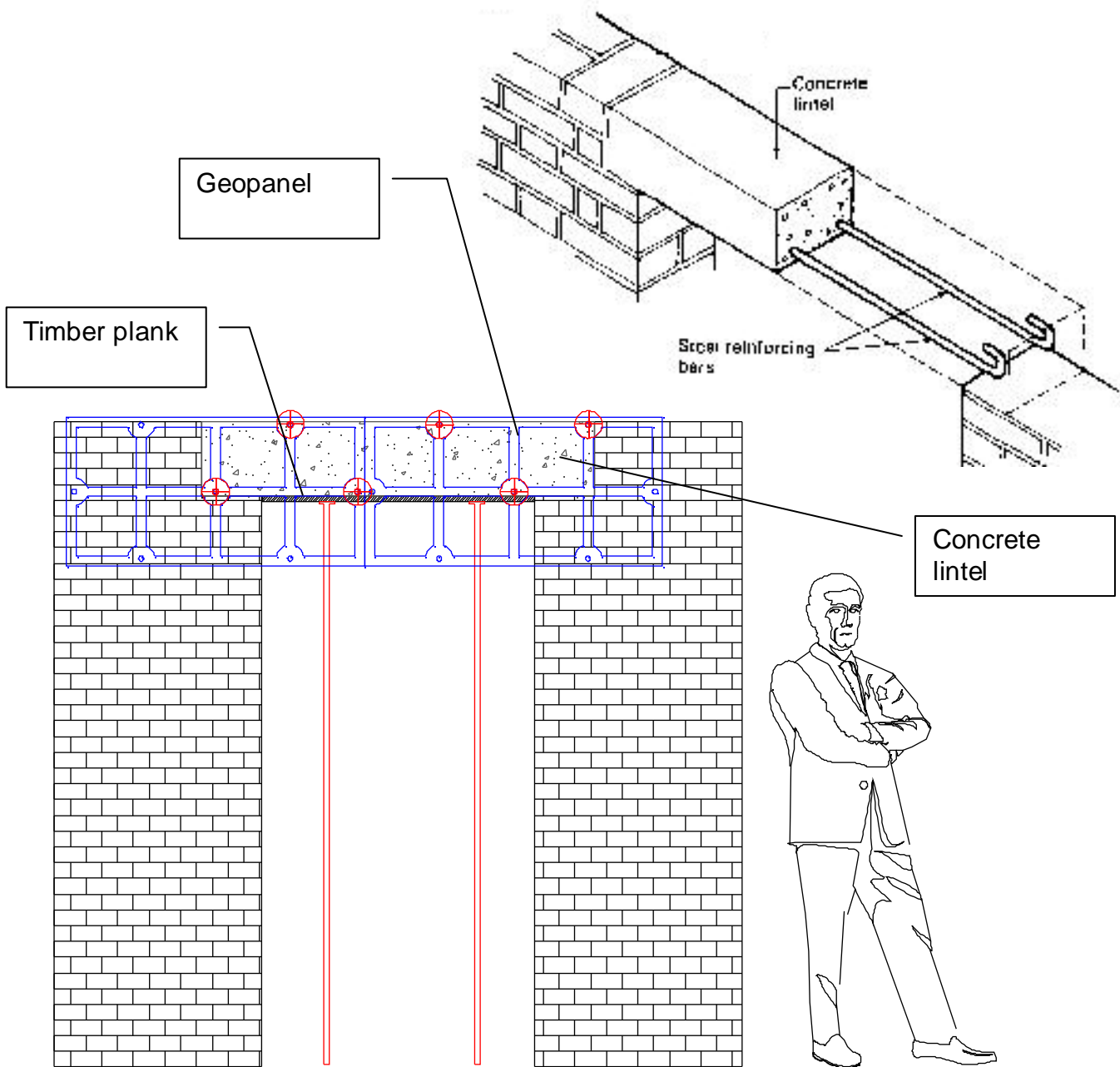
The window frame rests on two tie-rods: this way it is blocked in two directions.

If the tie-rod is not conveniently placed, it is possible to anchor timber spacers to the tie-rods, placing the window correctly. The steel armature (normally welded mesh) also helps to stabilise the frame.



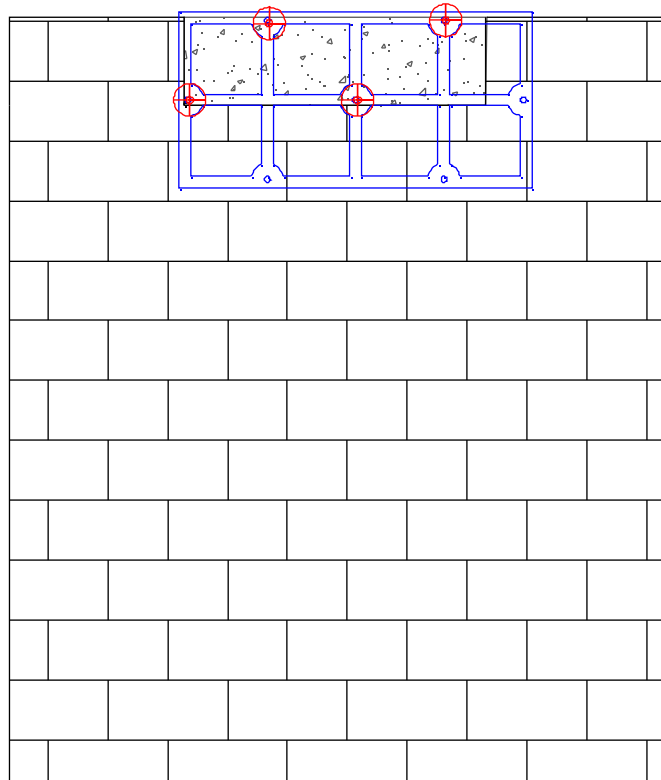
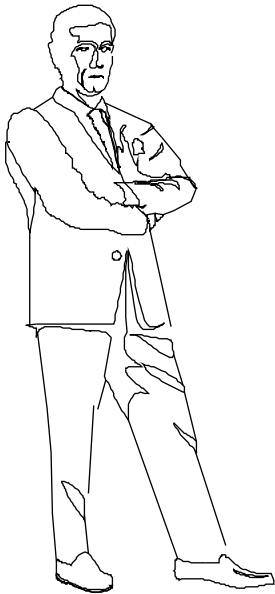
Lintels - Geopanel

Concrete lintels are very easily formed with Geopanel. Depending from the door or window span 2 or 4 pieces of Geopanel are assembled on the ground with the tie-rods and spacers, then rested onto a plank to form the lintel.



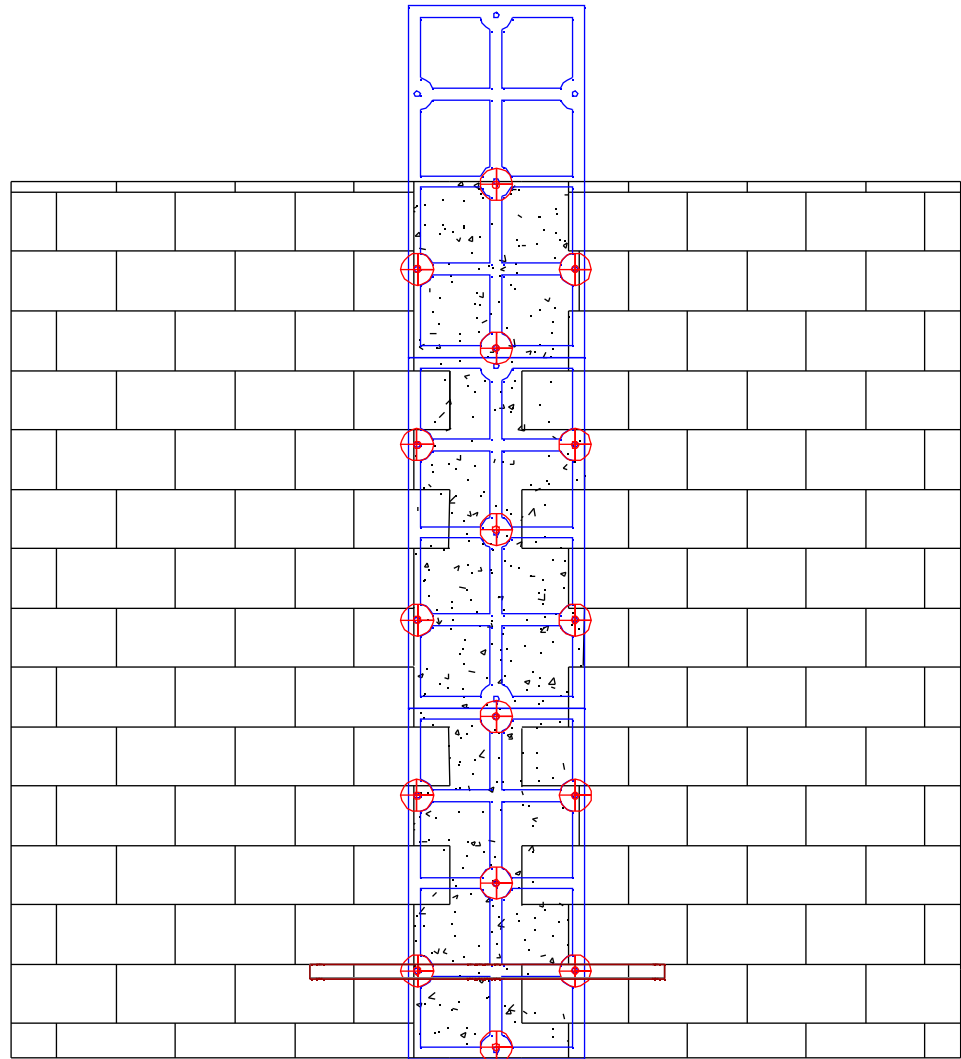
Beams integrated in brick walls - Geopanel

Concrete beams integrated in brick walls can be cast in-situ using 2 or 4 Geopanel assembled on the ground with the tie-rods and spacers and rested on the last layer of the brickwork.



Columns integrated in brick walls - Geopanel

Concrete columns integrated in brick walls can be cast in-situ using Geopanel oriented vertically to form two sides of the column with the two other sides formed by the existing brick structures.



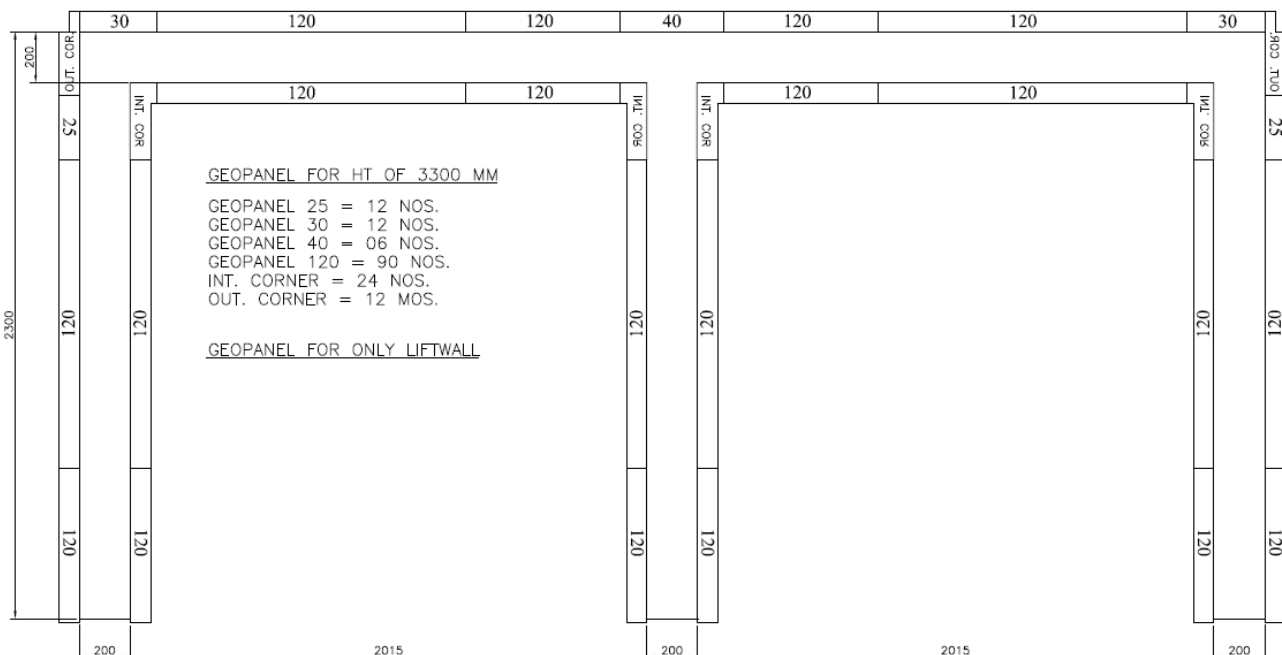
Walls over 3 meters height - Geopanel

Walls over 3 meters height are poured in phases of max 3 meters each. The tie-rod holes in the concrete are used to anchor the panels for the next pour.



Elevator shafts - Geopanel

Geopanel is particularly suitable for elevator shafts thanks to the modularity of the system that allows very fast erection / dismantling.



Box and bracket fixing - Geopanel

Boxes, brackets (for example for post-tensioned slabs) and other objects can be temporarily or permanently fixed to Geopanel.



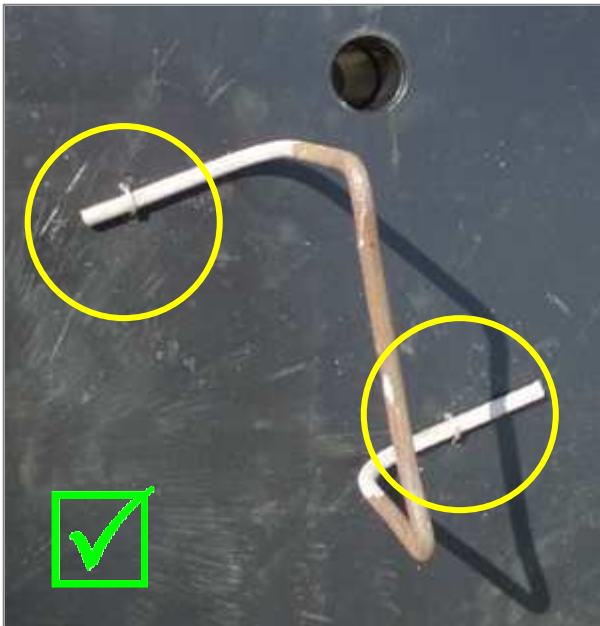
Never use nail and hammer on Geopanel and other plastic formwork!



It is fine to use screws on Geopanel and other plastic formwork.

Staple guns can be used.

The holes created by screws or staples will be stopped by the next pour and will not leave perceptible traces on the concrete finish.



Gangforms moved with cranes - Geopanel

Geopanel formworks can be moved as gangforms by crane. The light weight and the strenght of the plastic allow to move large-surface gangforms with ease and safety. The panels fixed held together by the handles are rigid and don't suffer being lifted with a crane.

Use the tie-rod holes in the panel to anchor a tie-rod and washers, and link to the crain hooks with slings.

Take care to lift both sides at the same time; lift slowly until the gangform is vertical to avoid excessive side pull on the handles.

The example shown below:

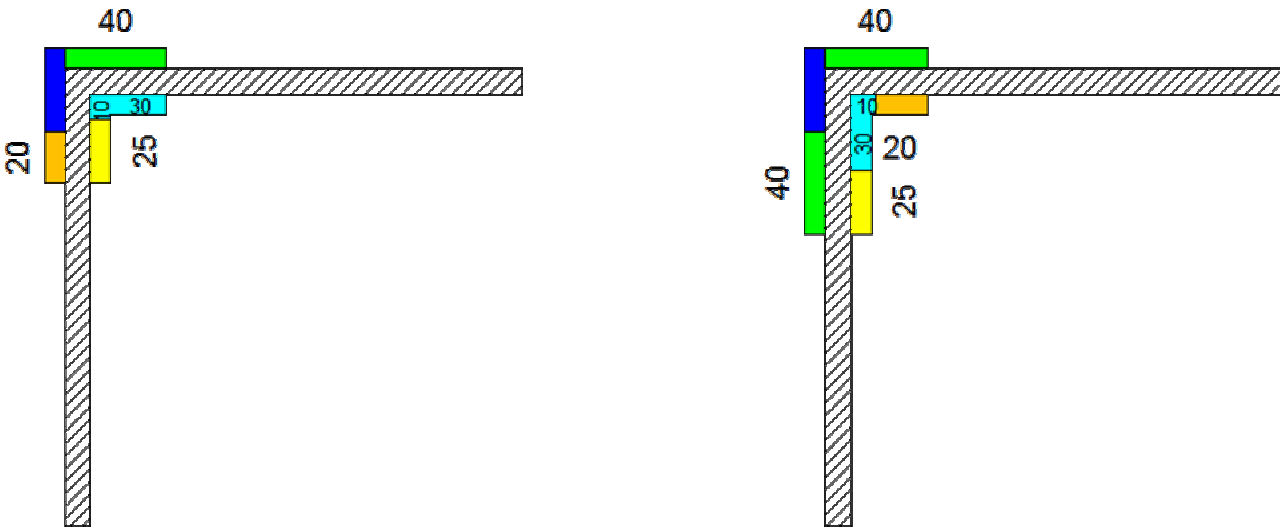
3m high, 12 m long = 50 pcs. weight approx. 650 kg



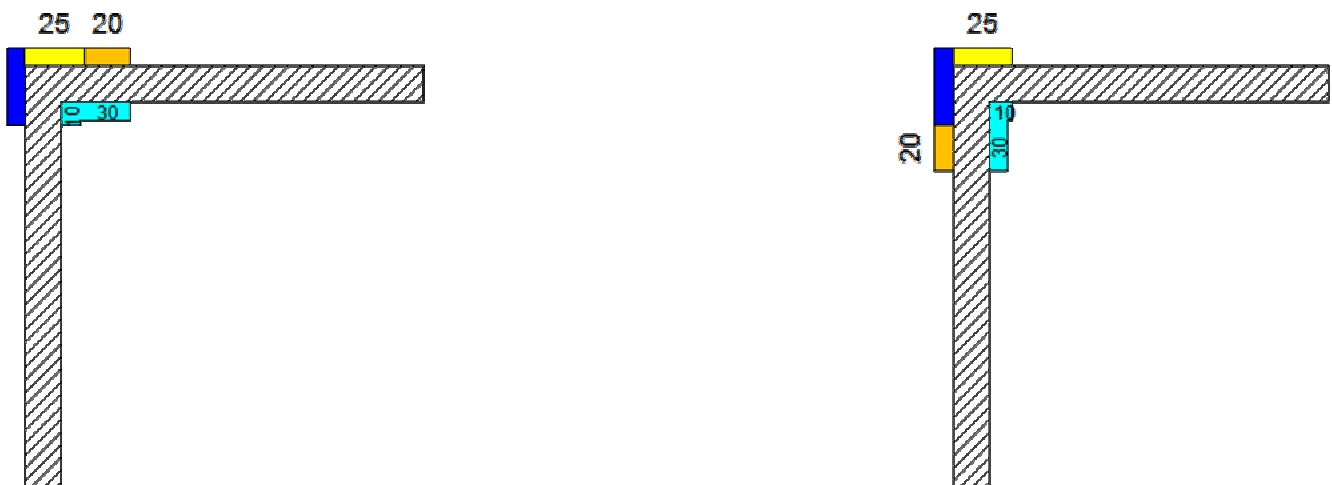
Corners with wall thickness 10 and 15 cm - Geopanel

The Geopanel system is also suitable for concrete walls less than 20 cm (200 mm) thick; the corners use .

Possible panel combinations for corner, **wall thickness 10 cm**



Possible combinations for corner, **wall thickness 15 cm**



Pour containment - Geosky

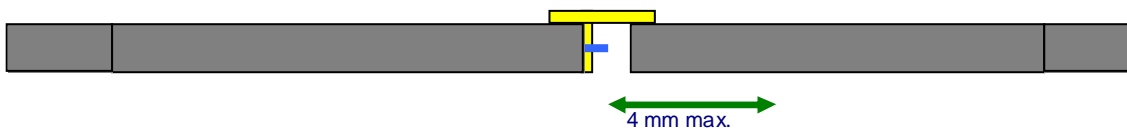
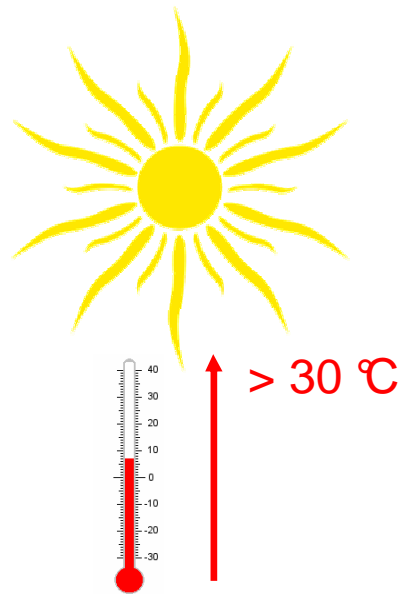
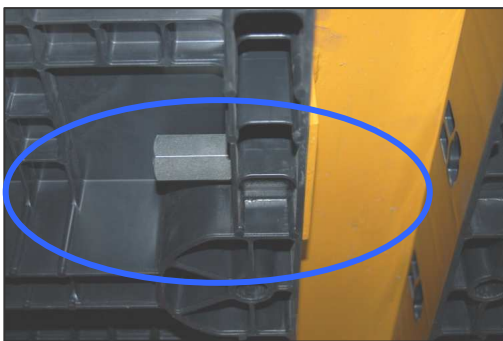
Where the slab needs side forming it is possible to anchor the woodwork to the Geosky system using the holes in the panels, rebar and washers.



Expansion control - Geosky

In case of high ambient temperatures a steel expansion joint is available for compensation of any thermal expansion of the formwork.

Expansion of max. 4 mm expansion every 1.2 meters may be expected.



Compensations - Geosky

During the forming of a full concrete slab compensations between Geosky (Geopanel) and walls is done with standard wood planks.

The ledge offered by the Geosky wedge system is used to support the compensation material.





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