

## *Steel-ply walls*



ISO 9001

**BUREAU VERITAS**  
Certification

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# STEEL-PLY WALLS FORMWORK SYSTEM



## characteristics of the system

### ► Manual



Steel-ply Walls is a considerably lightweight system, weighing only 24 kg / m<sup>2</sup>. As such it is ideally suited to formwork projects where no crane is available. It can however, thanks to its extensive range of accessories, also be applied in large panel formwork projects that use a crane.

### ► Speed



The panels are joined using wedge bolts that interlock and are fixed in place with the tap of a hammer. Once one of the faces of the wall has been erected, the other face is automatically aligned using the ties that hold the two sides of the formwork together. The system comes with a lifting bracket to move panels that are already set up, by crane.

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## A Manual Solution For Any Perimeter

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A reusable, concrete wall formwork system, not requiring a crane (weight 24 kg / m<sup>2</sup>). Steel-ply Walls consists of galvanised steel frame, with a phenolic resin laminated plywood face, 12 mm in thickness. Steel-ply's variety of sizes and accessories, its phenolic resin laminated face, its lightness, and its system of wedge bolts for assembly, combine to produce a formwork system that is flexible, quick to assemble, and that gives a high quality concrete finish.

Steel-ply Walls assembly accessories include:

Workstation Bracket

Alsina Form Release Agent

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### ► Versatility



Its great range of sizes and variety of forming components, mean that its 5/15/20/25/.../55 and 60 cm panels can be applied to the completion of most wall formwork structures. The Steel-ply system's standard panels and its range of accessories, facilitate the construction of polygonal wall formwork structures

### ► Finish



The Steel-ply Walls formwork system, is made from a steel frame laminated at high temperature, coated in red polyester based paint. The formwork surface consists of a phenolic resin laminated plywood surface, 12 mm in thickness, that provides a high quality concrete finish, with a pressure tolerance of up to 48,80 kN/m<sup>2</sup>.

# Characteristics of the Steel-ply Walls

## workstation bracket

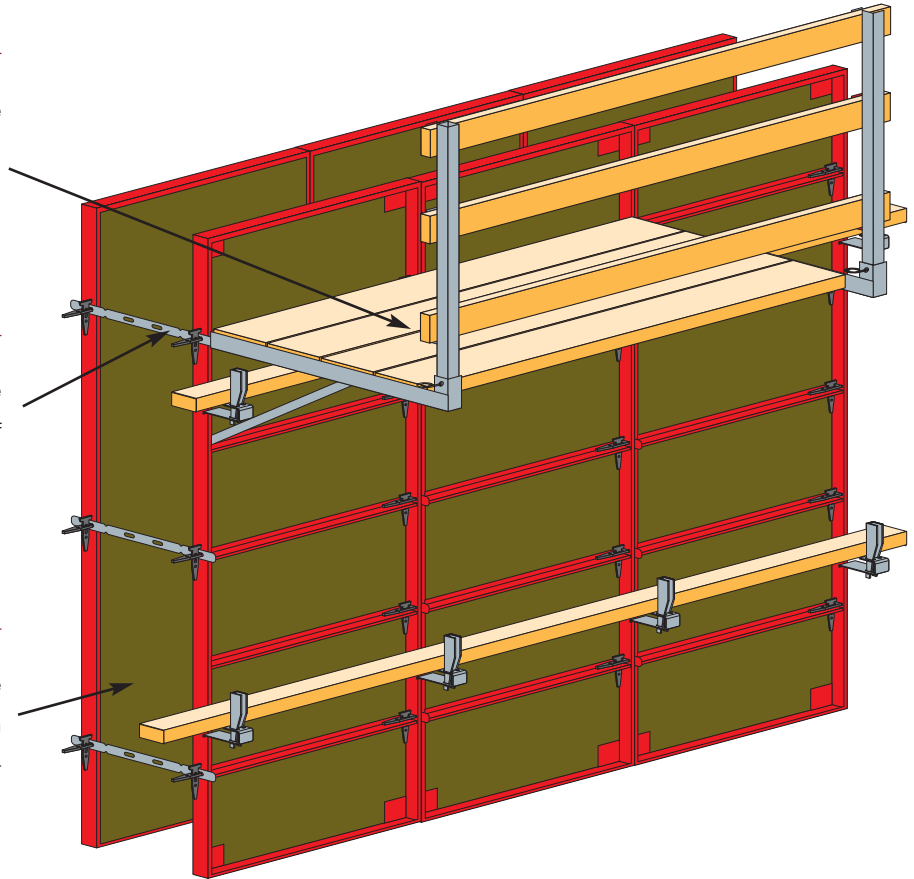
An essential accessory for the safety of the operator during concreting of the wall.

## ties

Metallic component that is embedded in the concrete. Its function is to keep both sides of the wall parallel and aligned.

## panel

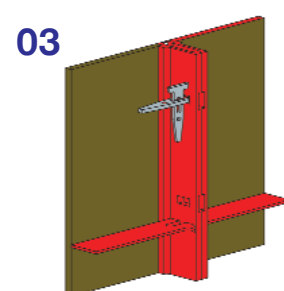
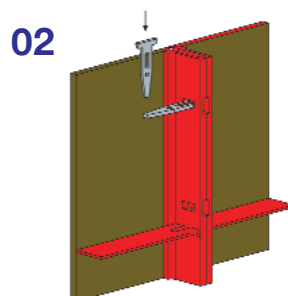
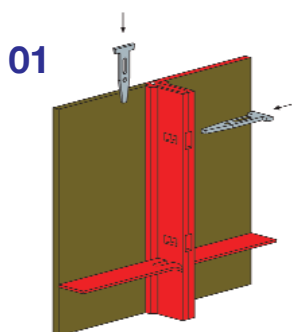
Consisting of a laminated at high temperature steel frame, and a 12 mm thick, phenolic resin laminated plywood surface. Maximum tolerable pressure 48,80 kN/m<sup>2</sup>



## joining wedge bolts

The panels are aligned and joined in the following way:

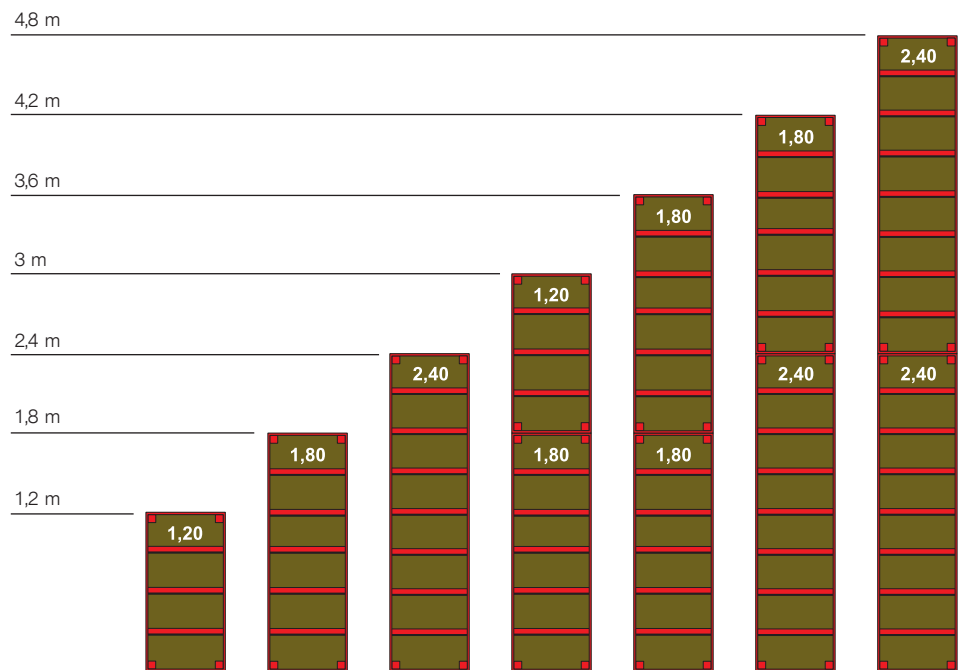
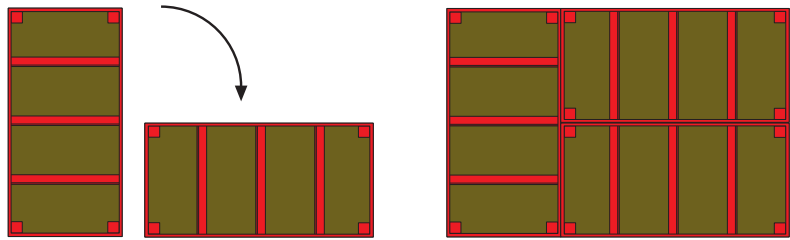
- Vertically position the panels ensuring the bolt slots (dado slots) are aligned.
- Insert the horizontal wedge bolt through one of the slots. This can be done from left to right or vice-versa (1)
- Insert the vertical wedge bolt through the slot created by the horizontal wedge bolt. A simple tap of a hammer will fix it in place (2)
- In the event that the slot coincides with the positioning of a tie, pass the tie through the panel and fix it in place with the wedge bolts



# Modulation of the Steel-ply Walls

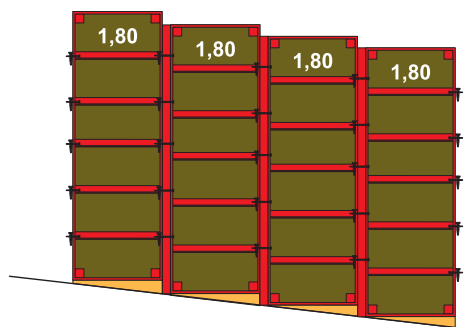
## the Steel-ply panel

The Steel-ply system comes in three standard panel heights: 120 cm, 180 cm and 240 cm, with a distance of 30 cm between the cross-bars. The design of the panels means that they can be placed horizontally or, by turning them 90 degrees, vertically, adapting themselves to the majority of dimensions that could arise onsite.



## stepped walls

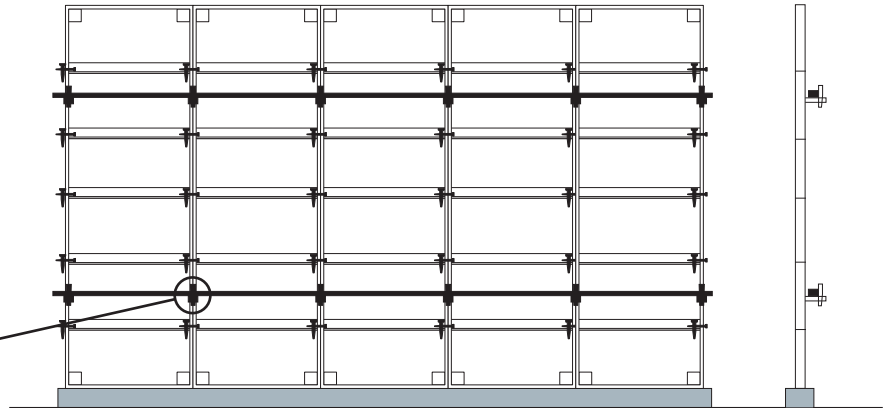
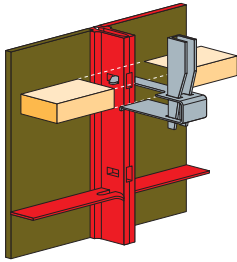
The Steel-ply system can also be used for stepped wall formwork, by using the steel extension panel, that has a greater number of holes, and so enables the joining of panels positioned on different levels.



## Assembly of the Steel-ply Walls

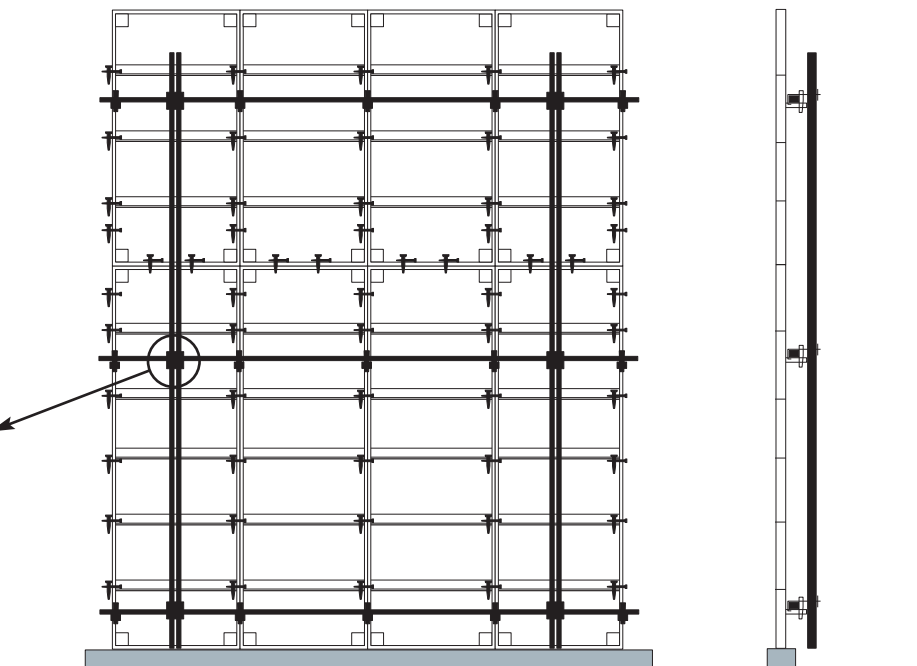
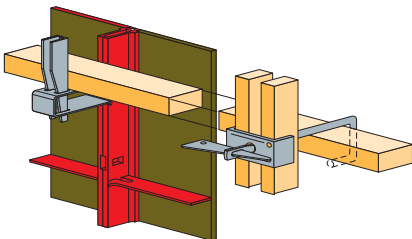
### horizontal alignment of the panel

For wall formwork one panel high, place a waler hook, on the lower section of the join, and one on the upper section of the join with the wedge bolt open. Then insert the waler rod and close the wedge bolt to leave the formwork aligned.



### vertical alignment of the panel

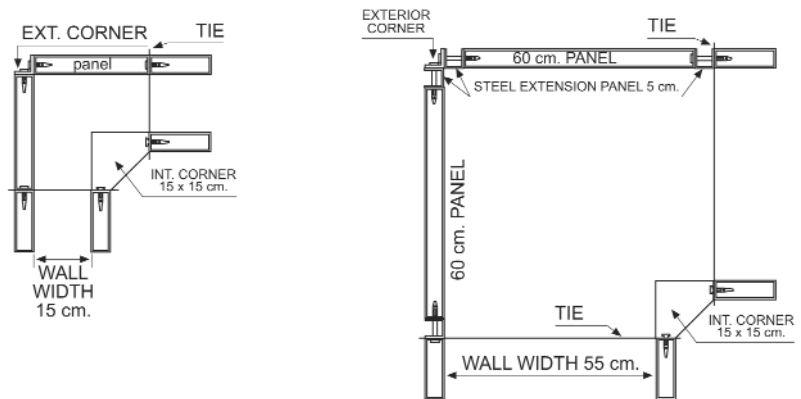
For wall formwork two or more panels high, attach two 90 x 40 strongback hooks on either side of the horizontal waler rod.



# Applications of the Steel-ply Walls

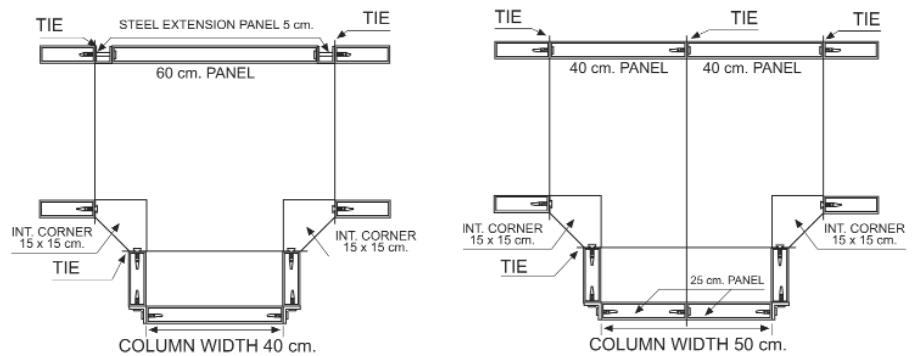
## wall corners

The Steel-ply system can be applied to wall corners with a minimum thickness of 15 cm and a maximum thickness of 55 cm.



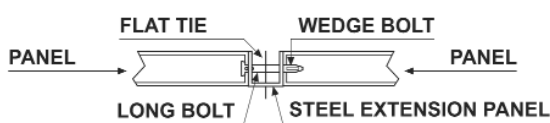
## pilastered walls (walls with adjoining columns)

The Steel-ply system can be used for pilaster wall formwork, the maximum column width permitted being 40 cm per single, tie-less front facing panel. For columns in excess of 40 cm wide, the panels must be attached to the column by passing a tie through the middle of the column.



## steel extension panel

The Steel Extension Panel is an accessory that enables the panel to be extended by 5 cm. It is most commonly used to simplify the following types of formwork: corners, intersections, stepped walls, circular walls, and closed walls in order to facilitate form release.



## custom angle panels

These accessories are instrumental in creating customised fillers. Two filler angles are placed on the sides of a phenolic resin coated plywood filler (with a maximum width of 30 cm), and then connected to the sides of the panels.

