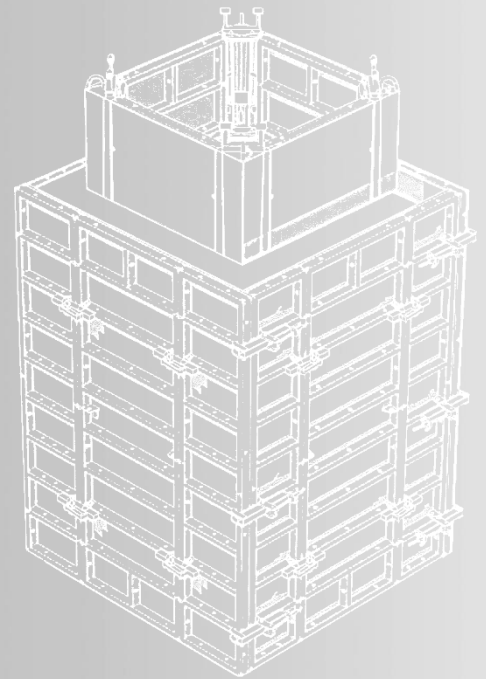
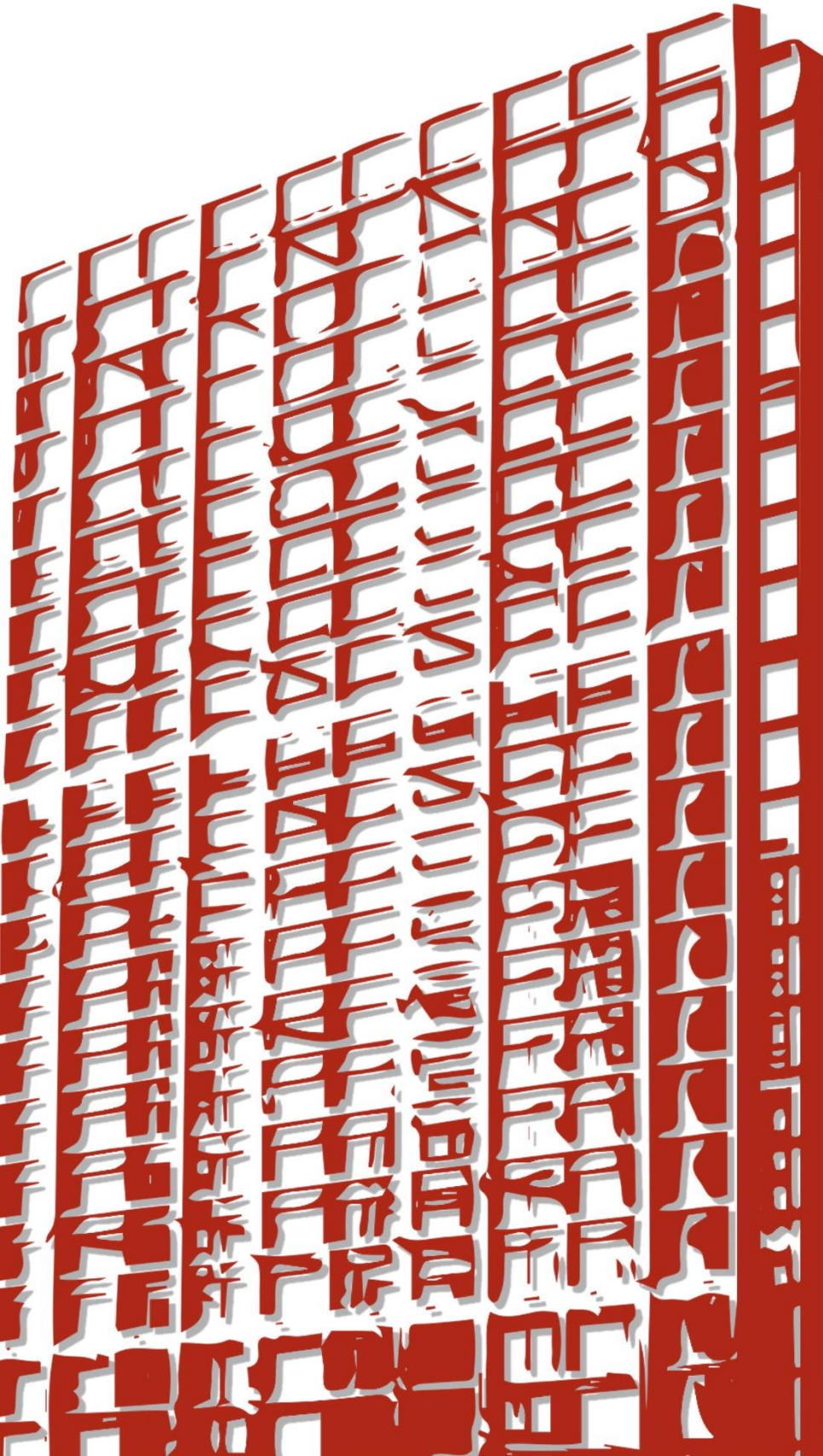


INSTRUCTIONS FOR ASSEMBLY AND USE

LIFT SHALF- S100

ID NO: 01.03



PLEASE READ THIS MANUAL CAREFULLY BEFORE USING THE PRODUCTS PROVIDED.

TO THE EXTENT PERMITTED BY THE LAW, FARESIN FORMWORK S.P.A. UNIPERSONALE SHALL REMAIN THE SOLE OWNER OF THIS MANUAL, WITH PROHIBITION TO PROPOSE, COPY OR DISCLOSE IT TO ANY THIRD PARTIES WITHOUT EXPRESS WRITTEN AUTHORIZATION TO DO SO.

V.07.18

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GENERAL

FARESIN FORMWORK S.p.A. UNIPERSONALE (hereinafter referred to as “**FARESIN FORMWORK**”) makes a constant effort to guarantee its products are the very best quality, providing its customers with an attentive backup service. Continuous product improvement is one of our company policies, an objective achieved through direct collaboration with the customer. For any specific information not contained in this manual or if you require any backup support, please contact our technical service who are able to respond to the most diverse requirements.

FARESIN FORMWORK S.p.A. UNIPERSONALE

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FARESIN FORMWORK guarantees its products only if used correctly pursuant to the information provided in this manual. If the products do not conform to the indications in this manual, please inform our Technical Service immediately providing all the requested information.

 The manual only outlines the risks caused by using the LIFT SHAFT in standard conditions. The manual does not cover specific site conditions and/or interference with other work being carried out at the same time and/or the equipment used to create and employ the system. Therefore, interference with other work processes and work conditions which may imply exposure to specific risks or reduce the performance of the formwork, must be the subject of careful analysis within the scope of each specific construction site.

FARESIN FORMWORK is able to supply on request an assembly, inspection and sizing service for formwork for specific applications.

It is forbidden to reproduce, transmit, transcribe or store this manual in an information system, even in part or even if translated into another language, in whatever form, without prior written authorisation by FARESIN FORMWORK


This user's manual is subject to continuous updating and review by the manufacturer; when the LIFT SHAFT formwork is used, the user must ensure he or she has the most updated version of the manual.

DEFINITION

- **Use cycle:** a cycle consisting in an assembly stage, concrete pouring, disassembly and subsequent handling.
- **Standard conditions of use:** conditions whereby the formwork is correctly assembled by prepared personnel, adequately secured for accidental horizontal action, standing on a flat concrete surface without any sagging points. These are the conditions of use of the formwork considered in this manual.
- **PPE:** personal protection equipment
- **Use:** application stage that starts with correct assembly.
- **Installation:** formwork installation stage, in compliance with linearity, horizontality and verticality.
- **Assembly:** every procedure required to form off-site sectors or walls, including accessories and whatever else is necessary for the erection procedure.
- **Erection:** this phase specifically concerns installation of the sectors or walls prepared previously and their joining systems, including the tie rods and the washer plates; it also includes the accessories used to secure the formwork vertically and the structures used to create the concrete walls.
- **Dismantling:** the reverse of the assembly procedure
- **Disassembly:** when all the components are taken apart and stored on pallets. This procedure is usually carried out when the work to construct the concrete walls has finished.

In this manual, some information has been highlighted as indicated below:

Italic bold type indicates fundamental requirements which must be complied with to ensure the products are used properly and to avoid potentially dangerous situations.

 This symbol indicates that these instructions REQUIRE PARTICULAR CAUTION to ensure the products are employed properly.

PRODUCT PRESENTATION

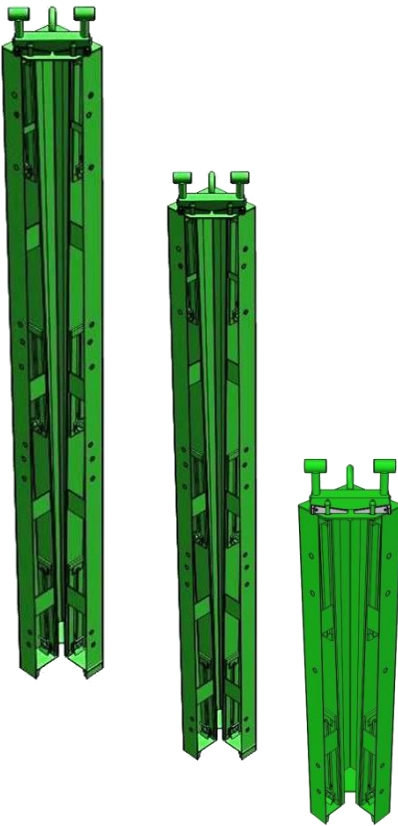
The lift shaft is made up of the Module formwork of both the 100/120 profiles and four biconical blocks placed in the inside corners.


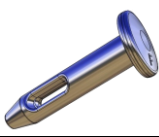
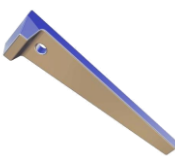

The exterior features formwork is joined together using traditional methods: clamps or pins and wedges, and universal clamps are used on corners.


The biconical block mechanism is a technological innovation which allows the biconical blocks to slide, thus reducing the width of the formwork by 2.5 cm each and making the formwork extremely fast to dismantle with just a pull of the crane.


In the internal block made up of 4 biconical blocks, each side shrinks by a total of 5 cm compared to the reinforcement position and is therefore easily detached and removed from the concrete shaft.

The subsequent above pouring will require the use of formwork support brackets positioned in the bar sleeve holes in the section of wall built previously.

| PRODUCT | BICONICAL BLOCKS DIMENSIONS | CODE | SUP. mq | WEIGHT Kg. |
|---|------------------------------------|---------|---------|------------|
|  | 4500X250X250 H4500 S.100 | 7160494 | 2,25 | 158,00 |
| | 4500X250X250 H4500 S.120 | 7160498 | 2,25 | 162,00 |
| | 3000X250X250 H3000 S.100 | 8168110 | 1,50 | 105,00 |
| | 3000X250X250 H3000 S.120 | 8168285 | 1,50 | 125,00 |
| | 2700X250X250 H2700 S.100 | 8168352 | 1,35 | 96,00 |
| | 2700X250X250 H2700 S.120 | 8168169 | 1,35 | 96,00 |
| | 1500X250X250 H1500 S.100 | 8169008 | 0,75 | 60,00 |
| | 1500X250X250 H1500 S.120 | 8168744 | 0,75 | 65,00 |

| PRODUCT | DESCRIPTION | CODE | WEIGHT Kg. |
|--|---------------------------------|----------------|-------------------|
|  | FORMWORK BEARING BRACKET | 8168978 | 12,00 |
|  | SHORT PIN | 8168021 | 0,28 |
|  | WEDGE FOR PIN | 8168024 | 0,16 |
|  | ADJUSTABLE PIN | 8168184 | 0,78 |

| PRODUCT | DESCRIPTION | CODE | SUP. mq | WEIGHT Kg. |
|---|---|----------------|----------------|-------------------|
|  | PROFILE FOR INCLINED WALL L=3000 100X100 | 8168026 | 0,30 | 24,00 |
| | PROFILE FOR INCLINED WALL L=2700 100X100 | 8168346 | 0,27 | 21,50 |
| | PROFILE FOR INCLINED WALL L=1500 100X100 | 8168032 | 0,15 | 12,10 |
| | PROFILE FOR INCLINED WALL L=3000 100X120 | 8168284 | 0,30 | 27,00 |
| | PROFILE FOR INCLINED WALL L=2700 100X120 | 8168275 | 0,27 | 24,30 |
| | PROFILE FOR INCLINED WALL L=1500 100X120 | 8168280 | 0,15 | 13,90 |

| PRODUCT | DESCRIPTION | CODE | SUP. mq | WEIGHT kg |
|---|---|----------------|--------------------|----------------------|
|  | DRILLED PIPE FOR PINS/BARS 3000X50X100 | 8168228 | 0,15 | 14,30 |
| | DRILLED PIPE FOR PINS/BARS 1500X50X100 | 8168071 | 0,075 | 7,50 |
| | DRILLED PIPE FOR PINS/BARS 2700X50X100 | 8168348 | 0,135 | 12,90 |
| | DRILLED PIPE FOR PINS/BARS 3000X50X120 | 8168283 | 0,15 | 16,20 |
| | DRILLED PIPE FOR PINS/BARS 1500X50X120 | 8168279 | 0,075 | 8,40 |
| | DRILLED PIPE FOR PINS/BARS 2700X50X120 | 8168232 | 0,135 | 14,60 |

IMPORTANT: The mechanical strength of a lift shaft system is limited by the strength of the panels in relation to the pressure of the concrete.

- The allowable strength of horizontal panels is 60 kN/m².
- The allowable strength of vertical panels S100 is 80 KN/m² and of vertical panels S120 is 70 KN/m²

Do not assemble the system in adverse weather conditions. Before leaving the construction site, ensure the configuration is complete, stable and windproof.

INSTALLATION AND USE

Notwithstanding the relative legislation in effect when the LIFT SHAFT system is used, the following regulations must be observed.


All procedures regarding the installation and use of the system must be carried out by suitably educated and trained staff. In particular, every procedure must be carried out in compliance with the following general standards:

1. every procedure must be workmanlike and carried out in safe conditions, in compliance with all the general instructions contained within the standards in effect and integrated by this manual, as well as with all the special indications provided concerning specific onsite uses;
2. all lifting and handling equipment and the relative load pick-up units must be suitable for handling and positioning the components and their assemblies; all lifting equipment must feature the CE mark;
3. all the components and equipment used must be inspected before use so that any unreliable components or equipment can be eliminated for whatever reason;
4. people installing and using the components must be equipped with suitable tools and use appropriate personal protection devices (P.P.I.) according to the risks to which they are exposed;
5. if the assembly is so complex that it requires an assembly drawing, the drawing must be drawn or requested for the specific case required; the drawing must be complied with scrupulously, ensuring that the structures are positioned exactly in conformity with the measurements in the drawing.
6. the panels must be dismantled after the concrete has reached a compression strength that allows it to statically support its own weight as well as the (even temporary) weight applied by the reinforcement structures.
7. The concrete pouring speed and method must comply with standard UNI EN 18202.

Handling and assembly procedures must comply with the work sequence described in this manual.

Handling components and using the LIFT SHAFT system can expose workers to the risk of injuries and/or contusions due to incorrect manoeuvres, falls from heights or tipping over.

The risks caused by using the system are added to the risks of the construction site where the products are employed.

 Risks caused by particular and specific conditions on the site where the LIFT SHAFT system is employed are not evaluated because pursuant to the Italian Law in effect, said risks must be analysed in the General and Operative Safety Plans regarding each individual construction job.

HANDLING AND STORING THE COMPONENTS

When handling the formwork, the following recommendations must be taken into account:

- Use suitable means of transportation and handling equipment which comply with the legal requisites.
- Secure the parts to the means of transportation using suitable fasteners.
- Accessories must be stored in their containers until they are assembled on the panels and must be returned to their containers when the formwork is disassembled.
- Wood damaged by contact with the soil will reduce the quality of the wall construction.
- Dents in the framework caused by falls or strong impacts can make assembly impossible and interfere with proper composition of the desired wall.



Any components that are not fastened securely may fall during haulage.

Handle components with cranes/winches suitable for this type of use. Do not handle the LIFT SHAFT system once it has been installed on site.

Store all the components onsite in a specifically assigned area. Post signs to mark the storage area and prevent interference with other work procedures. Cordon off the storage area with fencing to prevent accidental access; the elements must be clearly visible. Post signs marking the storage area.

We recommend storing the parts in the containers provided by FARESIN FORMWORK for greater safety and security.

ASSEMBLY

Before erecting the LIFT SHAFT system, ensure the conditions below apply:

1. **LEVEL SURFACE FLATNESS:** the surface on which the formwork is installed must be level and must not show any irregularities such as depressions and the like.
2. **CAPACITY OF THE SURFACE TO WITHSTAND THE LOADS INSTALLED:** in particular, the loads transmitted by the plumb line brackets and relative fastening, and the formwork itself.
3. **alignment of the formwork:** during installation, alignment must be checked using points fastened to the floor which must resist the lateral thrust of the panels when they are placed side by side.
4. after assembly, **every formwork section** must be positioned vertically; therefore check beforehand the capacity of the available lifting equipment and adjust the weight of the sections to be raised accordingly.
5. **for all panel arrangements** and under any conditions of use, always use the **accessories** designed specifically by FARESIN FORMWORK

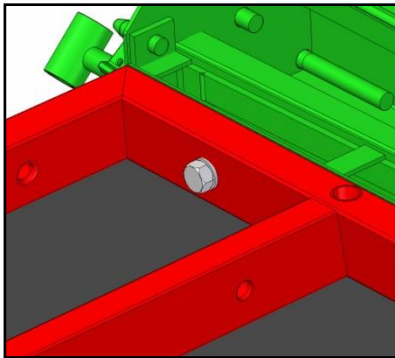


Faresin Formwork accepts no liability for damage to personnel or property caused by the use of accessories different from the recommended ones.

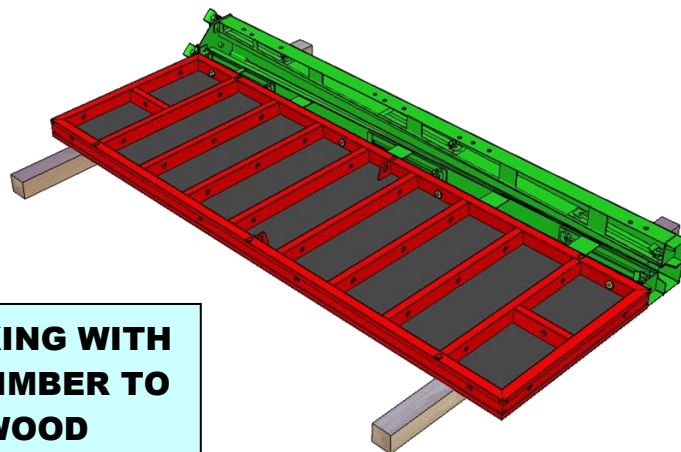
ERECTION

To build a lift shaft, proceed as follows:

1. Assemble the first wall.
2. Assemble the first biconical block on the wall you have just built.
3. Secure to the wall using short pins-wedges and an M18 x 70 bolt.
4. Repeat the last two steps for the second biconical block (see photos below).

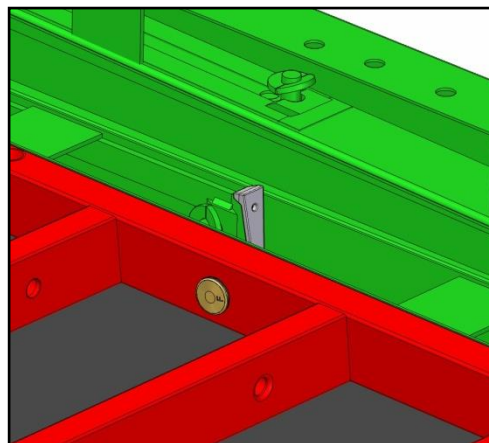


**ON FIRST HOLES ON TOP
SECURE WITH A M18X70mm
SCREW**

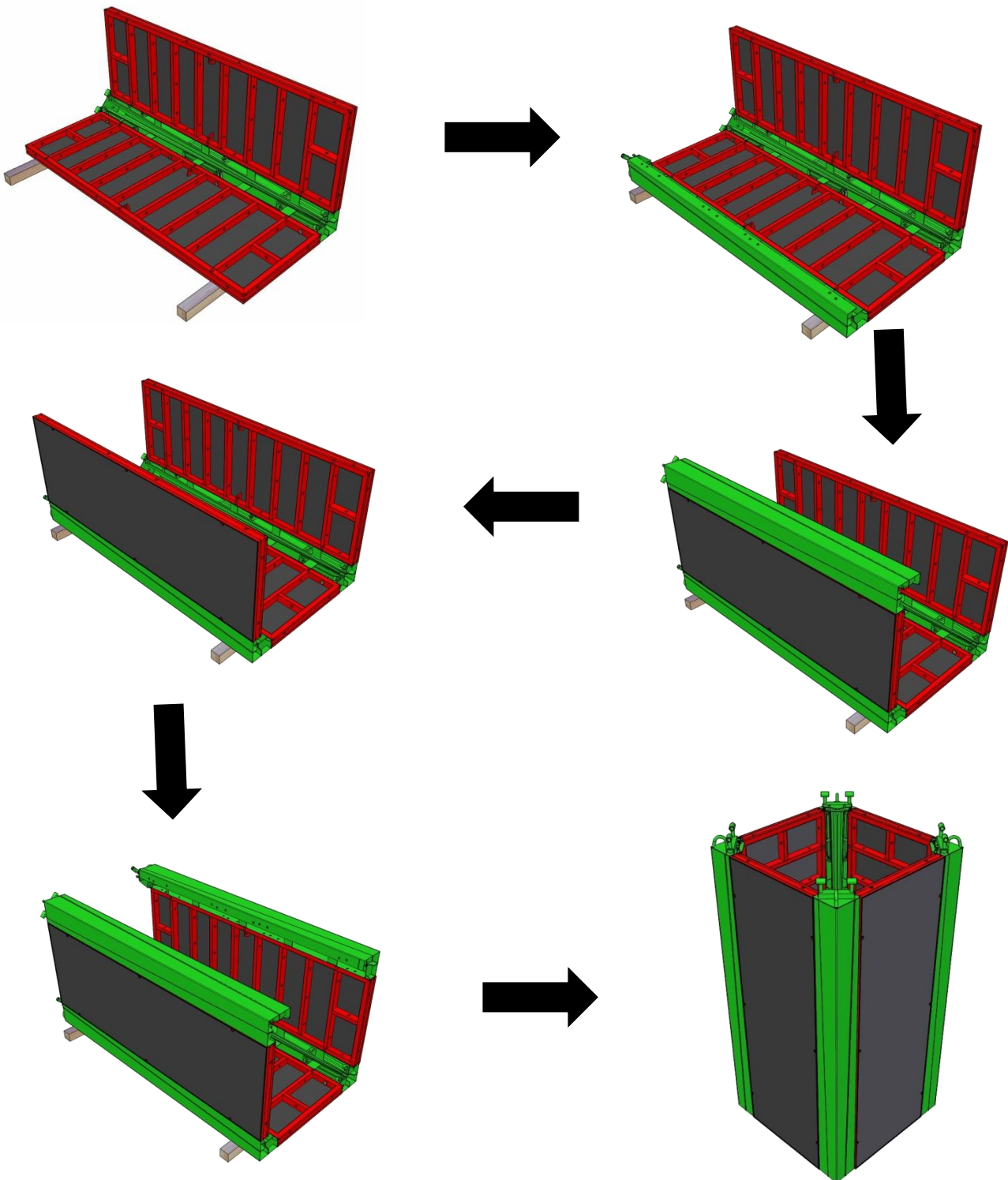


**PREPARE PLANKING WITH
TWO ROWS OF TIMBER TO
AVOID PLYWOOD
DAMAGES**

**SECURE ALL THE REMAINING
HOLES BY A SHORT PIN AND
WEDGE**

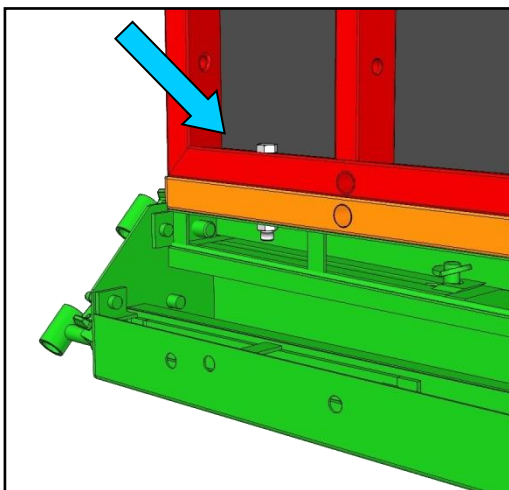
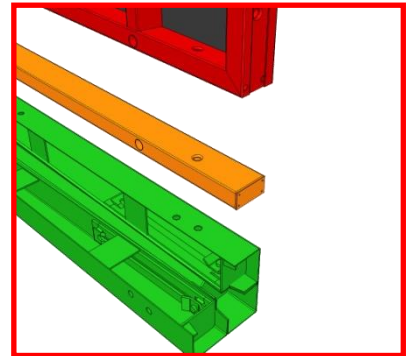
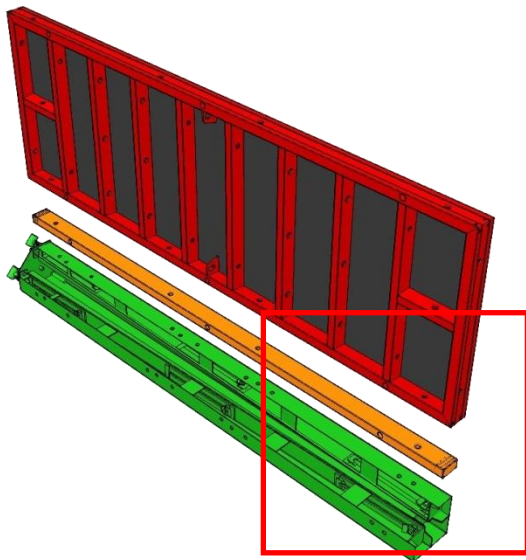


5. Using a suitably sized panel from the storage area, create the second side.
6. Place against the biconical block and secure using the pins and wedges.
7. Repeat these two steps for the third wall.
8. Using the lifting hooks, position the assembly so it is vertical.
9. Construct the last side of the lift shaft and join to the structure.
10. Insert stabilising struts if the walls are long enough to require them (see the pictures below).

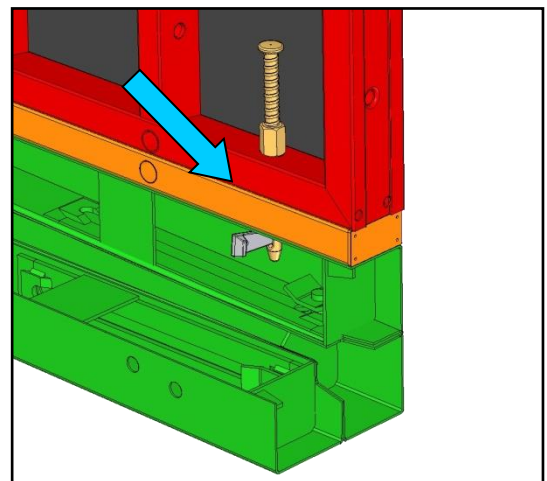


ASSEMBLING BICONICAL BLOCKS WITH COMPENSATIONS

In the case of 5 cm compensation rods, use adjustable pins and M18 x 140 mm screws as described below.

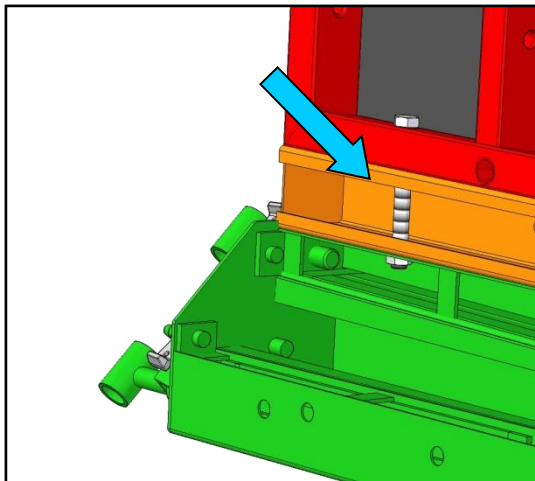
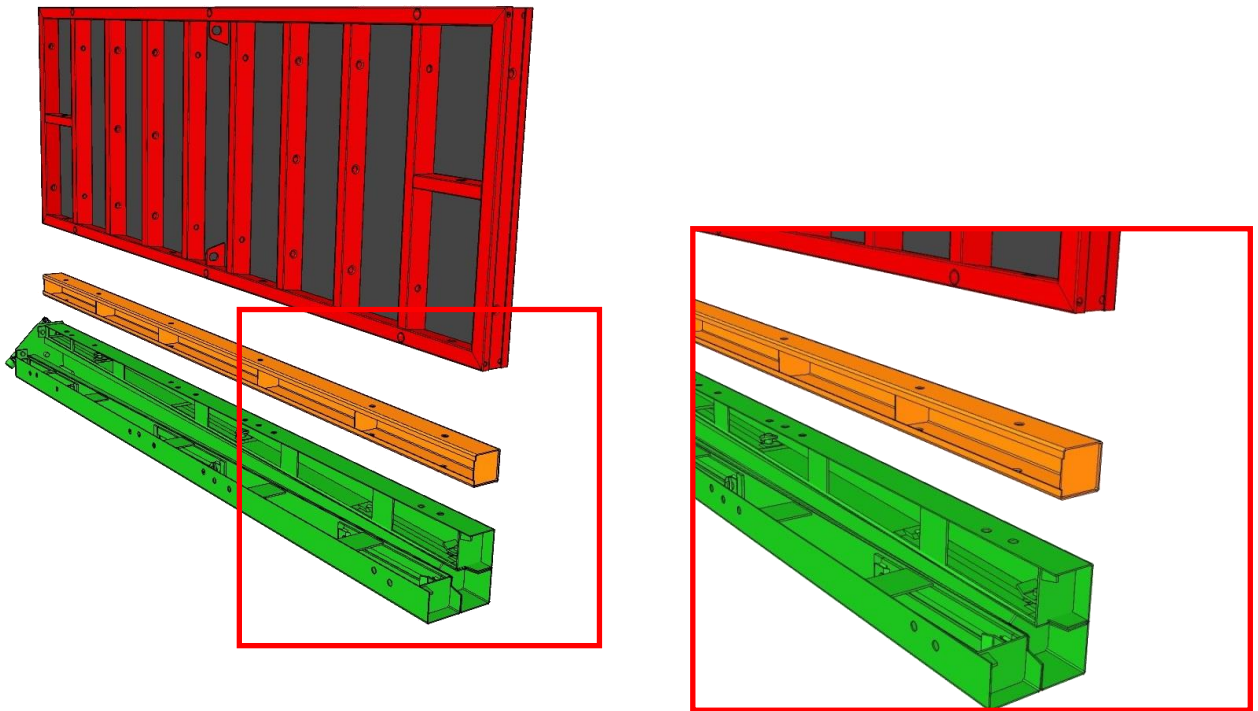


**ON FIRST HOLES ON TOP
SECURE WITH A
M18X130mm SCREW**

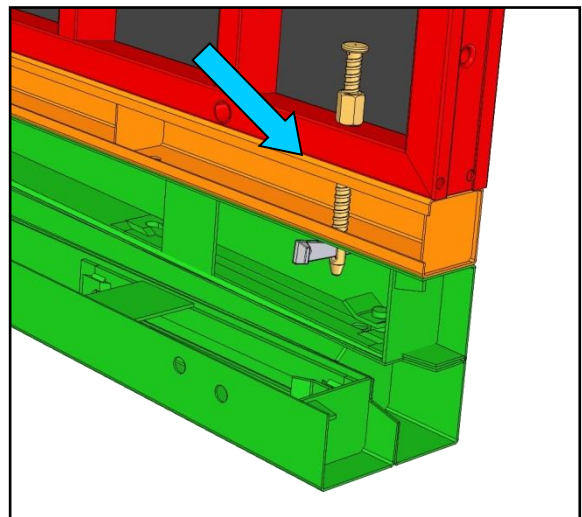


**SECURE ALL THE
REMAINING HOLES BY A
ADJUSTABLE PIN AND
WEDGE**

In the case of 10 cm compensation rods, use adjustable pins and M18 x 170 mm screws as described below.

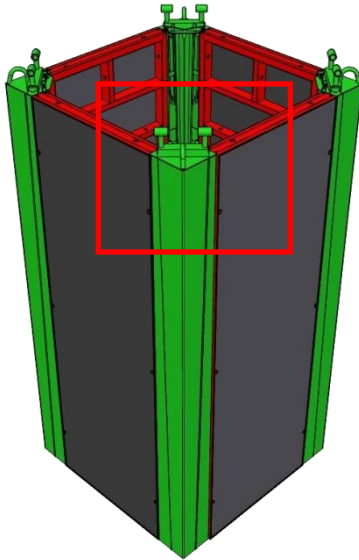


**ON FIRST HOLES ON TOP
SECURE WITH A
M18X170mm SCREW**

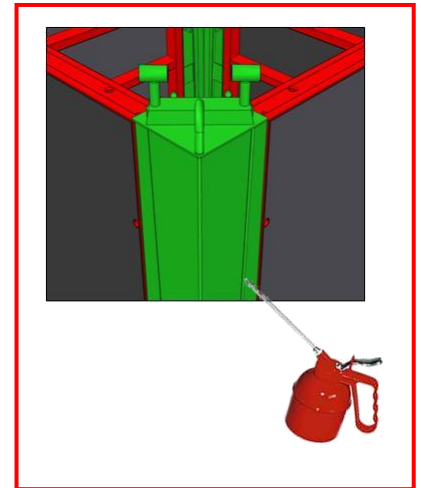


**SECURE ALL THE
REMAINING HOLES BY A
ADJUSTABLE PIN AND
WEDGE**

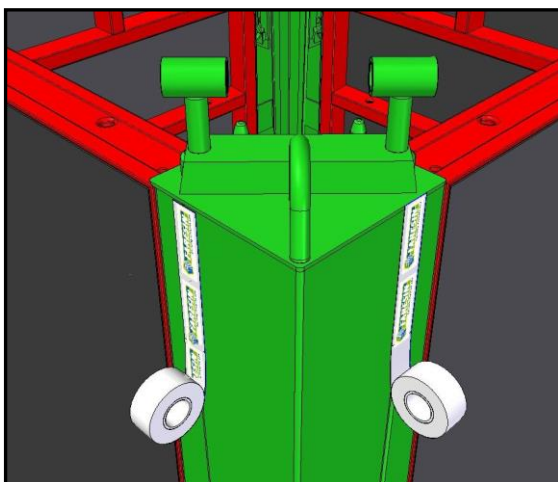
Using the lifting hooks, position the assembly so it is vertical checking the presence of the biconical blocks wedges.



**GREASE THE
SLIPPING SURFACES
OF BICONICAL
BLOCKS.**

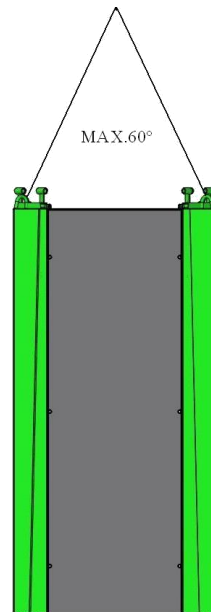


To ease dismantling, use adhesive tape to close the sliding slits on the biconical blocks or clad the internal shaft with transparent film (see the pictures below).

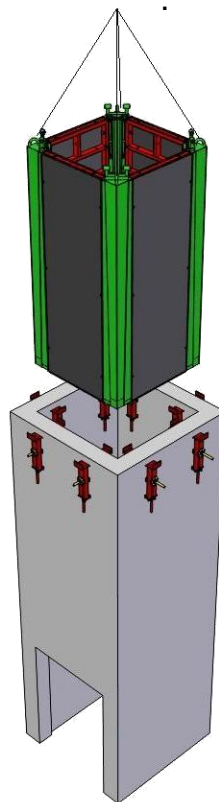


TRANSPORT

1. Connect the lifting hooks on the biconical blocks to the lifting system; ensure a maximum 60° angle is formed with the hoisting cables.



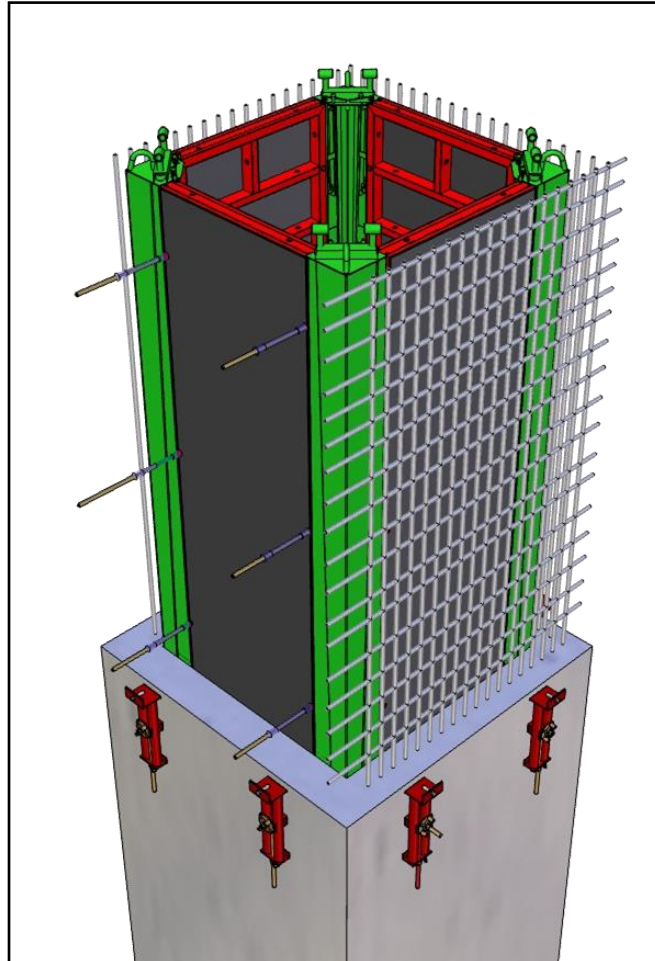
2. Move the assembly into the desired position.



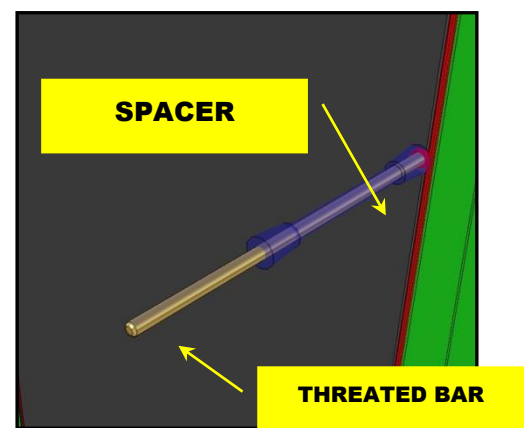
3. Treat the surface in contact with the concrete with stripping oil

EXTERNAL SIDE ERECTION

1. Create the wall reinforcement.
2. Prepare and insert the threaded bars and spacers.

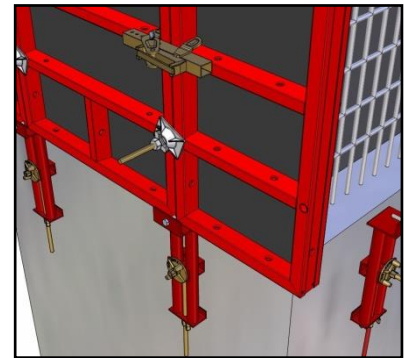
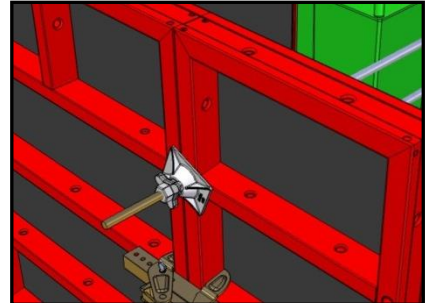
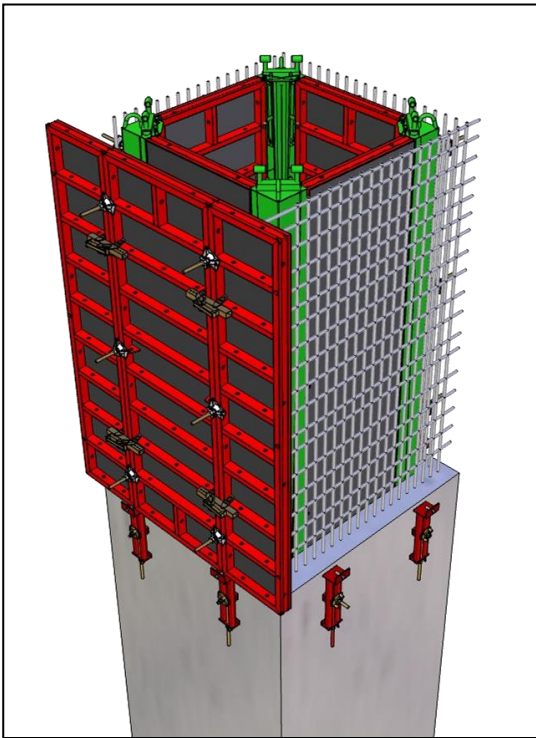


**INSERT IN EACH HOLE THE
THREADED BAR AND SPACER**

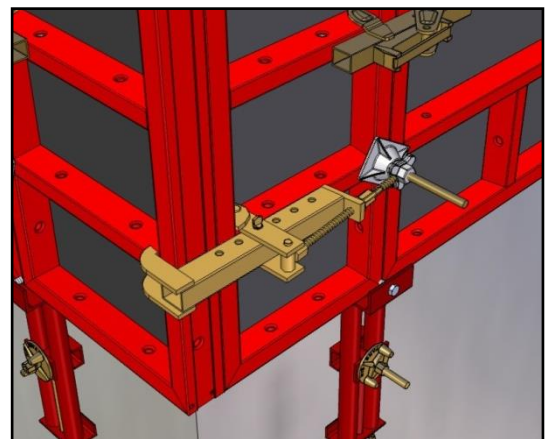
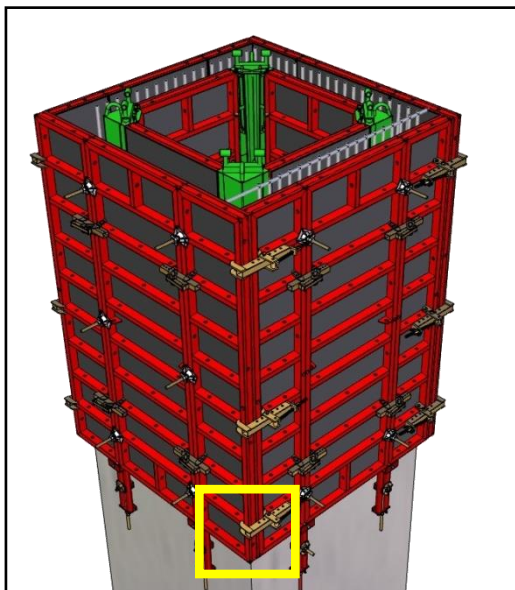


3. Assemble the exterior walls as described in the chapter on linear walls (MODUL S100).

4. Treat with release agent, move the external walls in position and join to the lift shaft using NUTS.
5. Use universal clamps to close the tops of the corners.

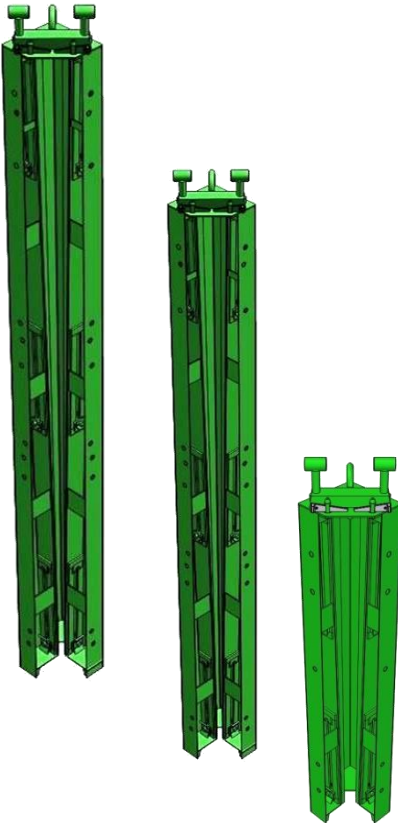


In the same way repeat the same operations shown above to complete the external wall.



LOCK EACH CORNER WITH AT LEAST 3 UNIVERSAL CLAMPS

BICONICAL BLOCK LOAD BEARING CAPACITY

| PRODUCT | BICONICAL BLOCKS DIMENSIONS | CODE | SUP. mq | WEIGHT Kg. |
|--|---|---------|---------|------------|
|  | 4500X250X250 H4500 S.100 | 7160494 | 2,25 | 158,00 |
| | 4500X250X250 H4500 S.120 | 7160498 | 2,25 | 162,00 |
| | 3000X250X250 H3000 S.100 | 8168110 | 1,50 | 105,00 |
| | 3000X250X250 H3000 S.120 | 8168285 | 1,50 | 125,00 |
| | 2700X250X250 H2700 S.100 | 8168352 | 1,35 | 96,00 |
| | 2700X250X250 H2700 S.120 | 8168169 | 1,35 | 96,00 |
| | 1500X250X250 H1500 S.100 | 8169008 | 0,75 | 60,00 |
| | 1500X250X250 H1500 S.120 | 8168744 | 0,75 | 65,00 |

The load bearing capacity of every single biconical block is:

- Permitted load acting on each biconical block: **20.0 kN**

(Load considered in S.L.S. it means combination of unitary factors of the acting loads)

FORMWORK BEARING BRACKET



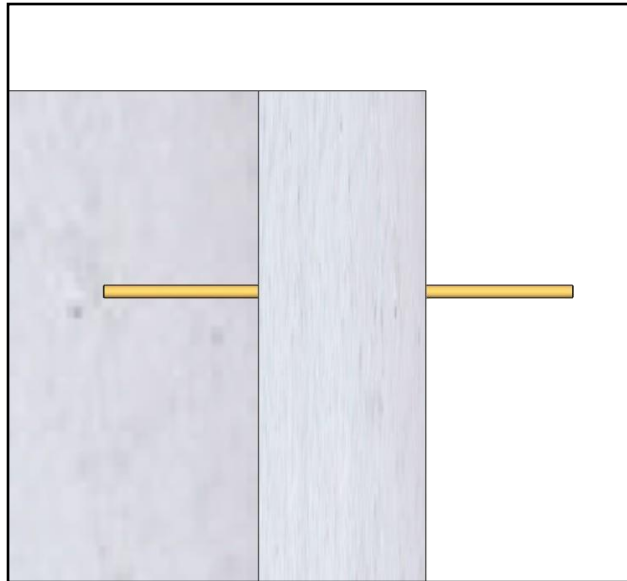
LOAD BEARING CAPACITIES

The formwork bearing brackets are calculated to support the following:

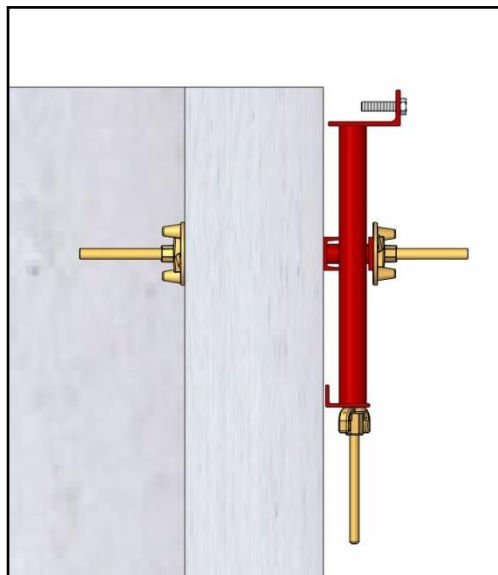
- Wall consisting of formworks and accessories having height max 6.0 m and width max 1,00 m.
- Wall consisting of formworks and accessories having height 3.0 m and width max 3,00 m.
- Wind thrust up to 90 Km/h.
- Permissible weight on each bracket of 6.0 kN.

For safe use in elevation of the lift shaft, the wall on which you apply the formwork bearing bracket must have obtained a degree of maturity adequate to support the weight of the formwork.

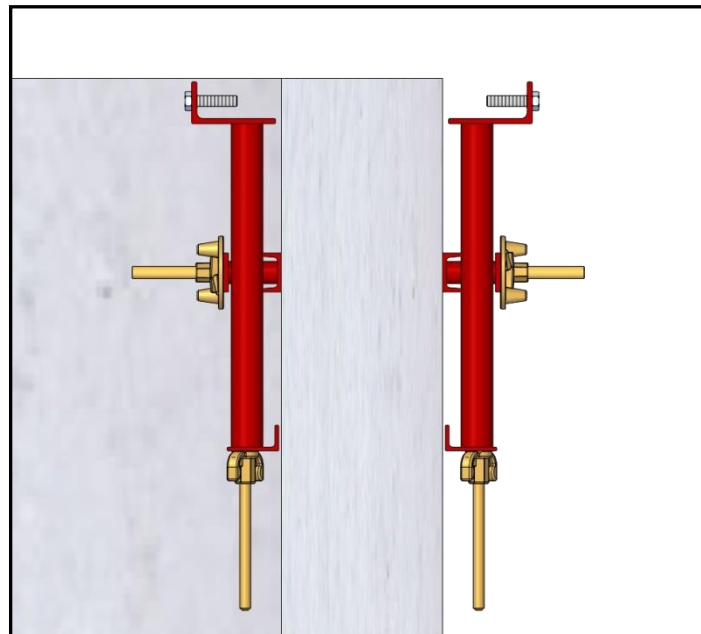
For installation of the formwork bearing bracket it proceeds as follows.
Put a Screw bar into a previous pour holes



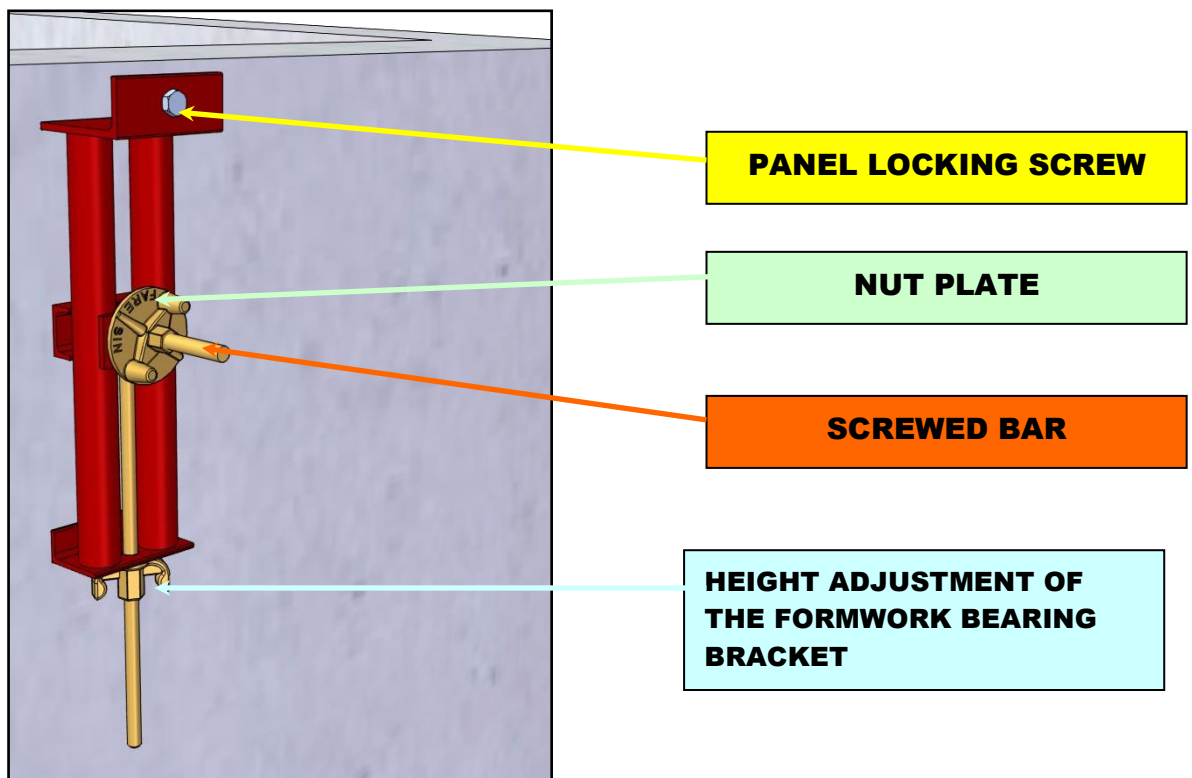
Insert a formwork bearing bracket and fix it with two nuts.



If necessary, insert a formwork bearing bracket at the inner side of lift shaft and fix together with two nuts.

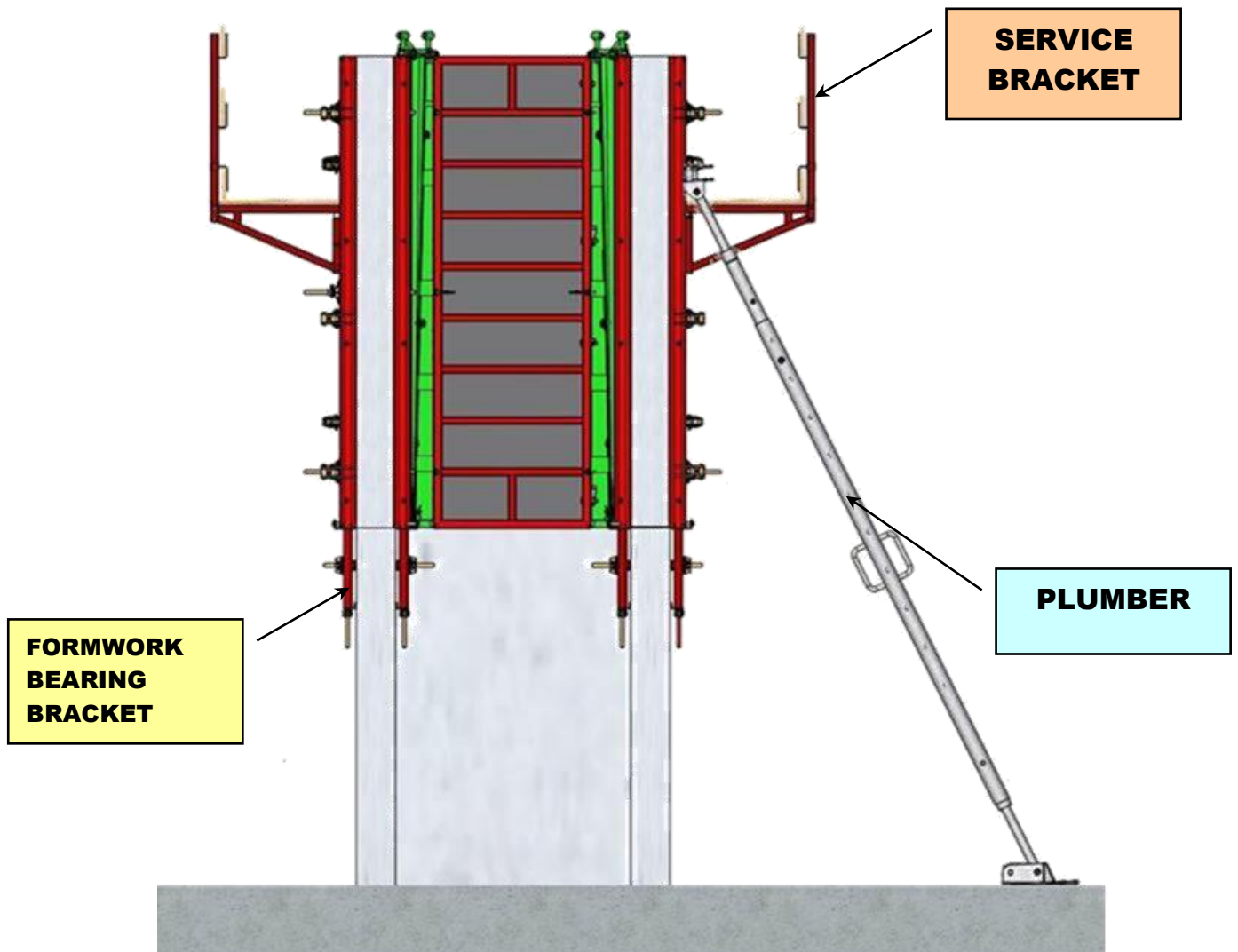


Adjust the height of the panels



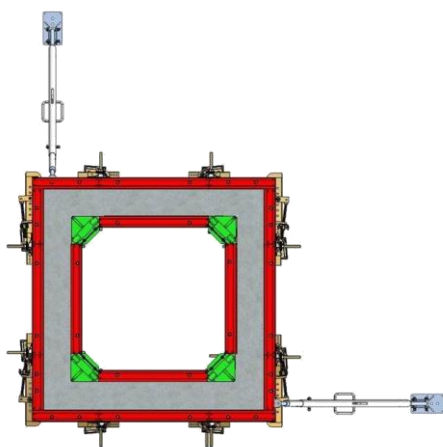
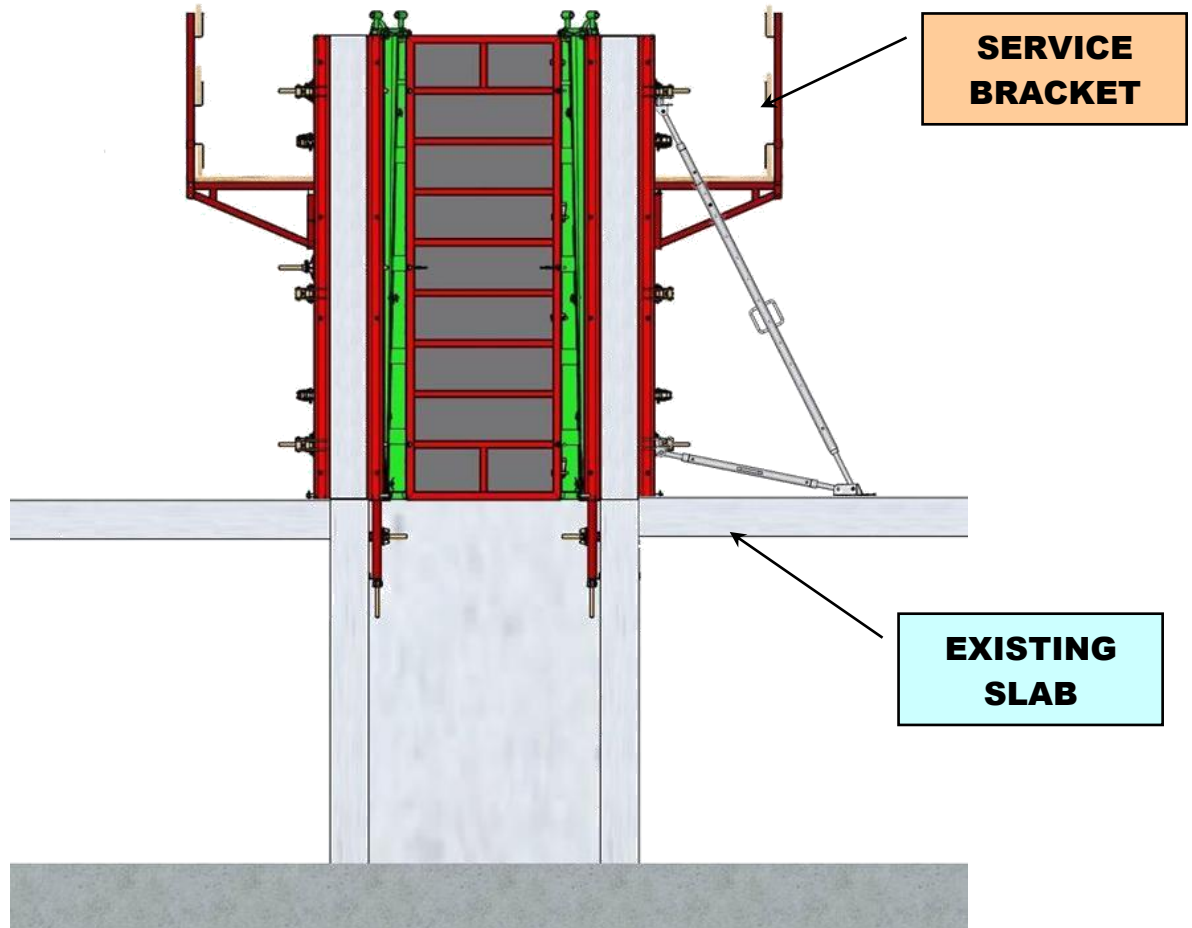
EXAMPLES OF LIFT SHAFT APPLICATION

LIFT SHAFT CONSTRUCTED BEFORE SLAB



LIFT SHAFT CONSTRUCTED AFTER SLAB

The main difference between lift shafts constructed after and before the floor slab, lies in the fact that the external formwork wall stands on the floor slab and the plumb line must always be carried out as described for assembly on the ground.

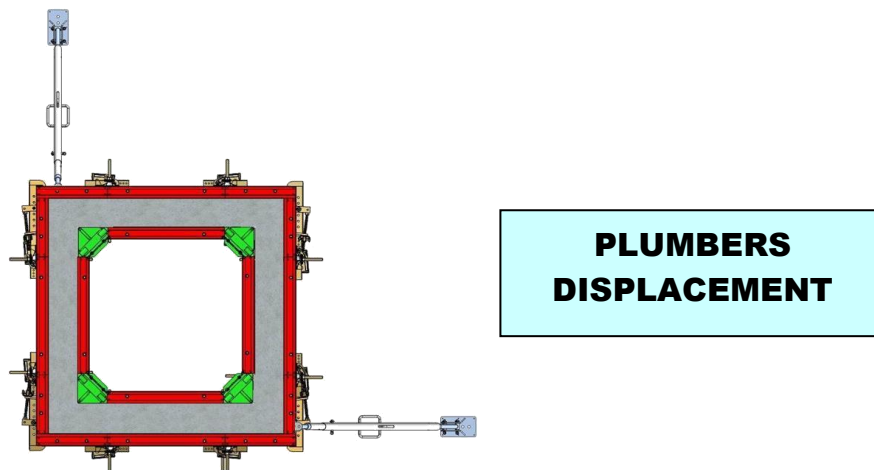
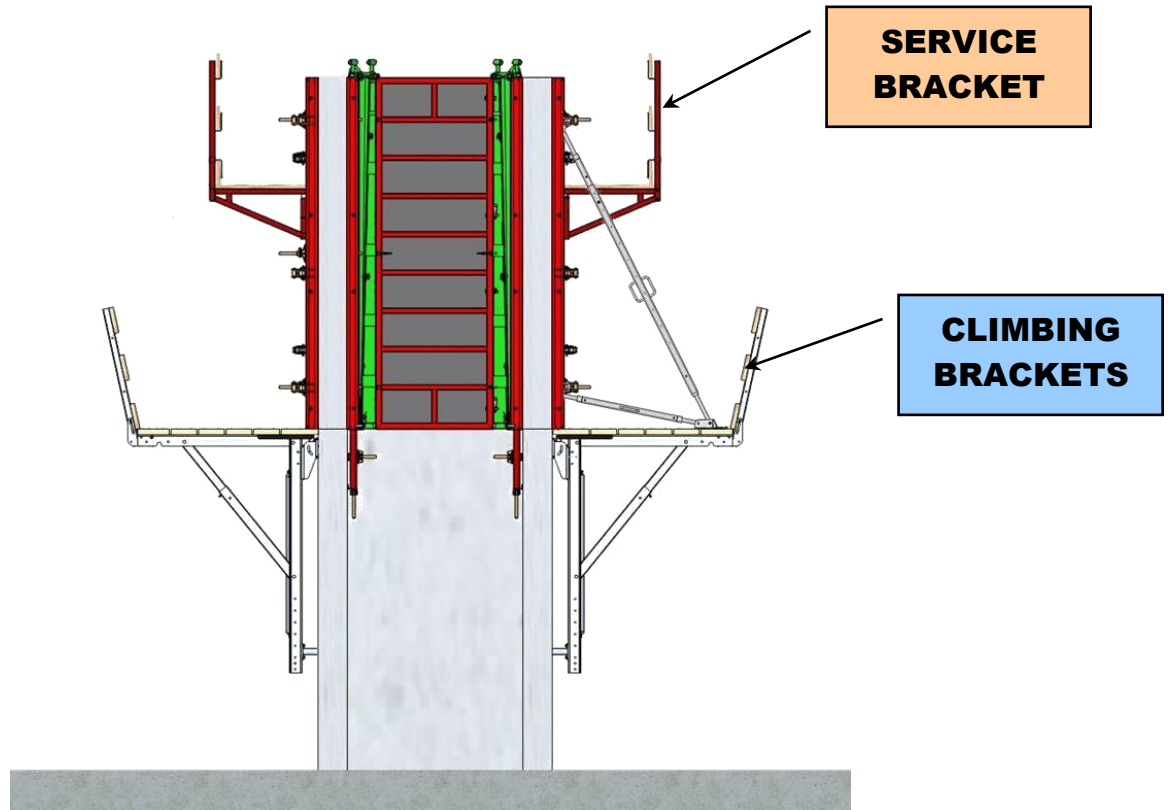


**PLUMBERS
DISPLACEMENT**

LIFT SHAFT COMBINED WITH CLIMBING BRACKETS

This is a special installation situation, where the floor slab is already present.

The external part of the formwork stands on the floor of the climbing scaffold and therefore the plumb line and the panels must be secured in the same way as for lift shafts assembled on the ground.

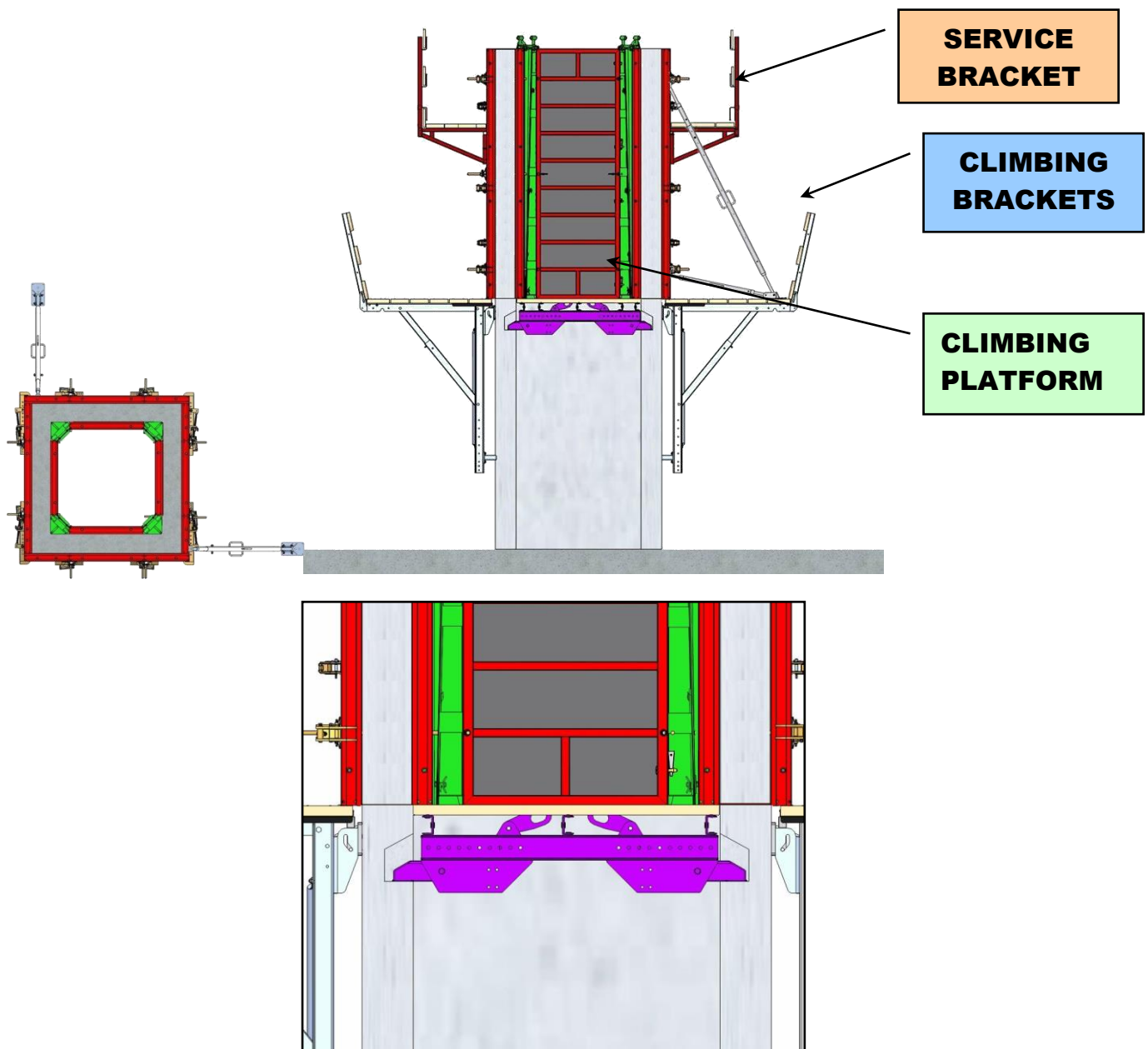


N.B. As concerns how to assemble, use and maintain the climbing scaffolds as well as how to secure the panels and their plumb line, carefully read and strictly observe the instructions and regulations contained in the climbing brackets use and maintenance manual.

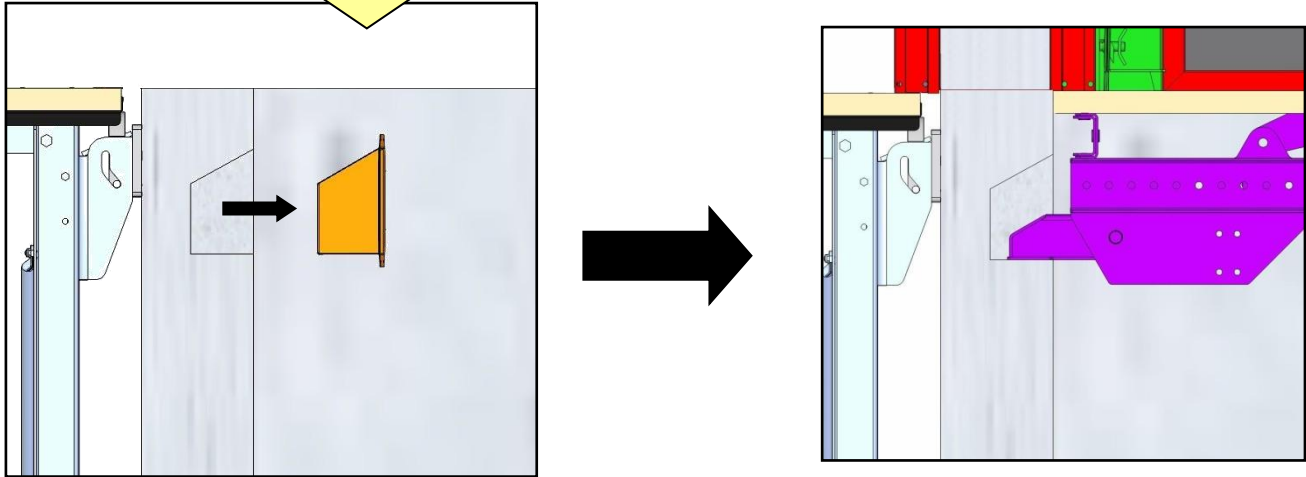
LIFT SHAFT COMBINED WITH CLIMBING BRACKETS AND CLIMBING PLATFORM

In this situation, the external part of the formwork stands on the floor of the climbing scaffold and therefore the plumb line and the panels must be secured in the same way as for lift shafts assembled on the ground.

The internal shaft of the formwork stands on the climbing platform and therefore the panels are secured in the same way as for lift shafts assembled on the ground.



**BOX FOR
WEDGE
SUPPORT
NICHERS**



Wedge support previously realized using BOX FOR WEDGE SUPPORT NICHERS

N.B. As concerns how to assemble, use and maintain the climbing scaffold and platforms as well as how to secure the panels and their plumb line, carefully read and strictly observe the instructions and regulations contained in the relative use and maintenance manuals.

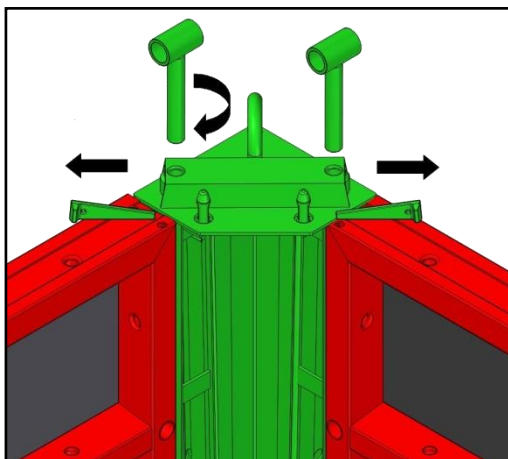
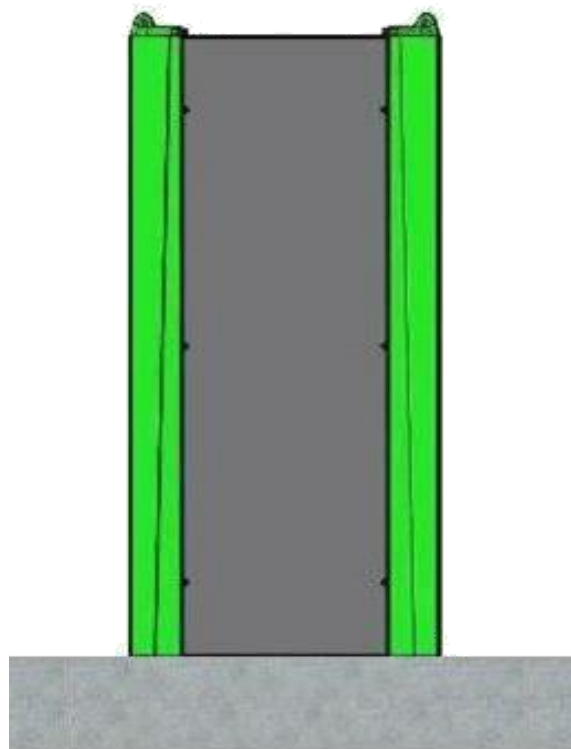
Before pouring the concrete, check the structure; ensure that all the assembly accessories (tie rods, clamps, pins, plugs, etc.) are present and that their tightening torque is correct.

LIFT SHAFT FORMWORKS EXCEEDING 3.00 METERS

Thanks to the new biconical blocks, it is possible to install two or more sections of formwork placed vertically on top of each other.

The special shape of the two headers on the biconical block allows them to be stacked on top of each other, on condition that reinforcement and dismantling is carried out on each horizontal section.

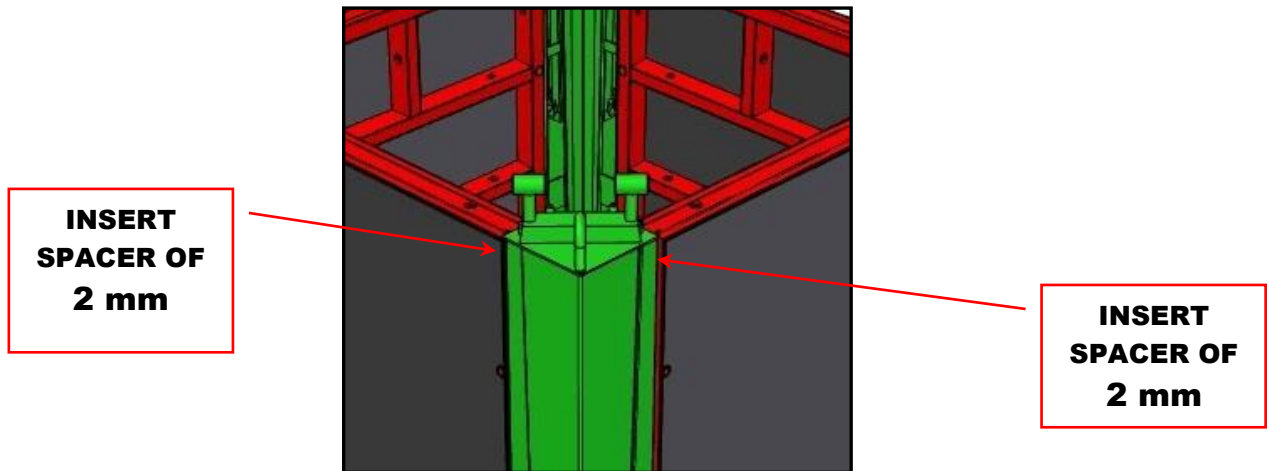
Prepare the lower 3.00 m high formwork and place in the pouring position, remove the large screws and the wedges.



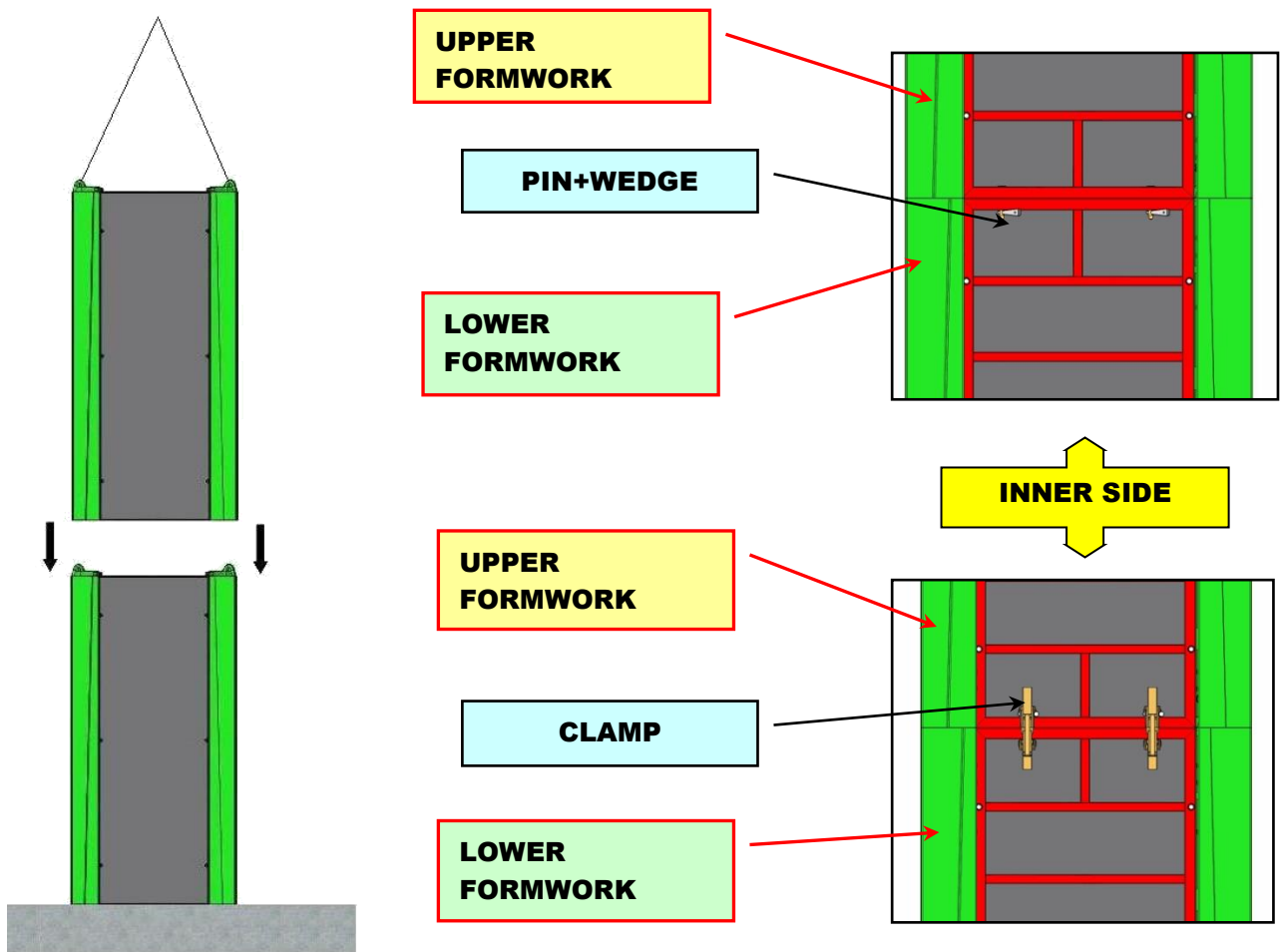
**N.B REMOVE THE
SCREW PIPES AND
WEDGES**

IMPORTANT

Prepare the upper formwork, ensuring that the maximum dimensions exceed 2-3 mm compared to the lower formwork. To achieve this, insert shims between the panels (ref. 3) illustrated in Fig. B.



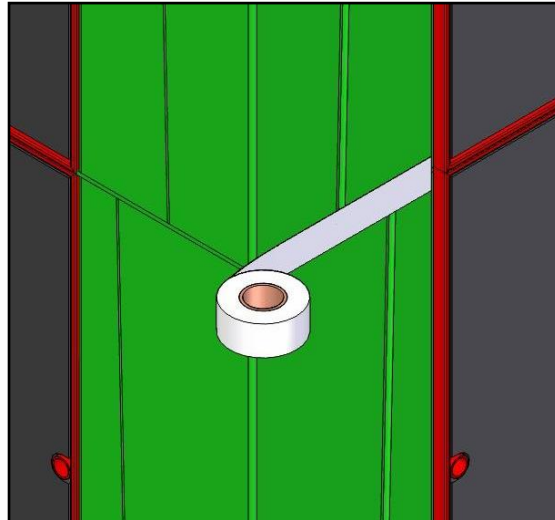
Put the upper formwork above the lower formwork and centre as exactly as possible. Lock using pins and wedges or alignment clamps in the panels.



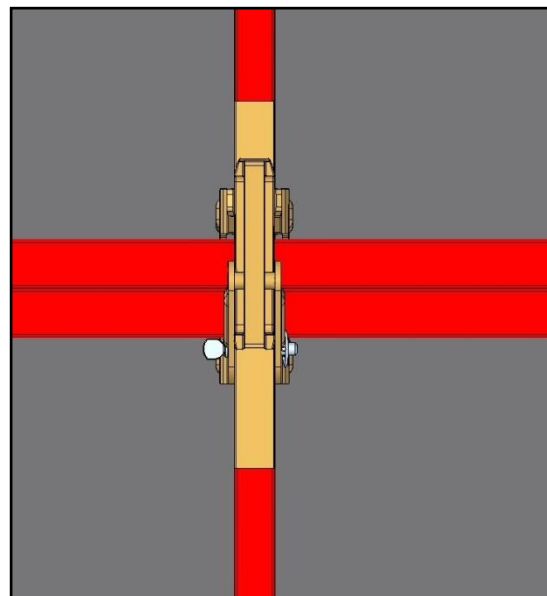
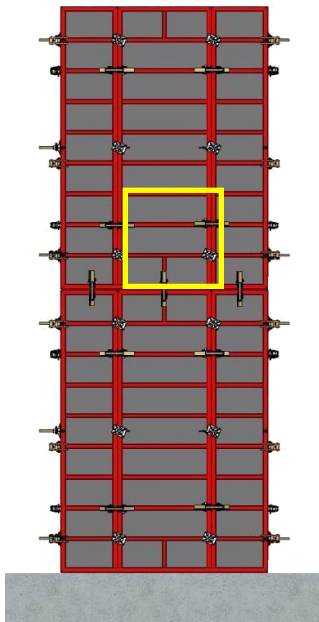


The biconical blocks stacked one on top of the other must never be joined together to avoid deformations

Cover the joint between the two biconical blocks (lower and upper) using an approx. 5 cm high adhesive band (ref. 4) Fig. C to prevent the concrete from leaking.



Create the wall reinforcement and the external side



Fix the external sides by clamps.

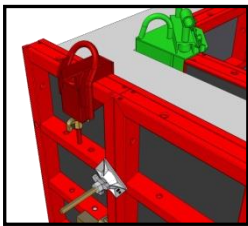
STRIPPING

The formwork may only be dismantled after the concrete has reached sufficient compression strength to support its own weight and that of any temporary structures secured to it, or anyway pursuant to the project documents (NTC 23/09/2005 art. 5.1.7 – UNI EN 13670-1 – D.M.09.01.2006 art. 6.1.5).

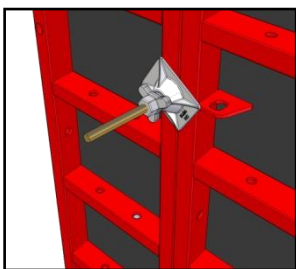
UPPER FORMWORK STRIPPING

- Remove the wedges to release the biconical block.
- Move the four biconical blocks by completely tightening the large screws so it is possible to detach the panels from the wall.
- At the same time, if present, shorten the stabilising struts.
- Hook the four biconical blocks to a lifting device. The cables must form a 60° maximum angle. Slowly extract them to their limit stop thus shrinking the formwork by approx. 20 cm. See Fig. D.
- Then slowly remove the formwork and place it in the maintenance area.

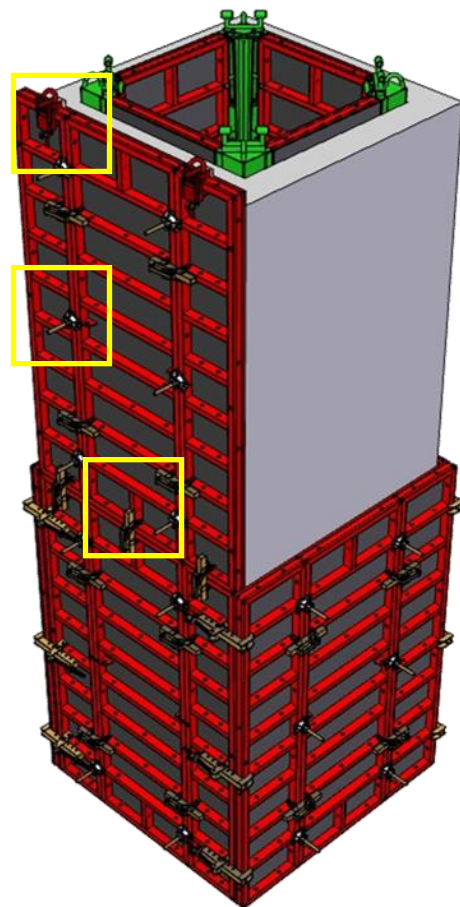
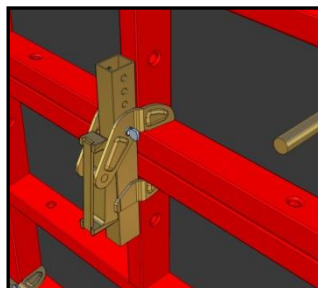
LIFTING



REMOVE SREWED BARS

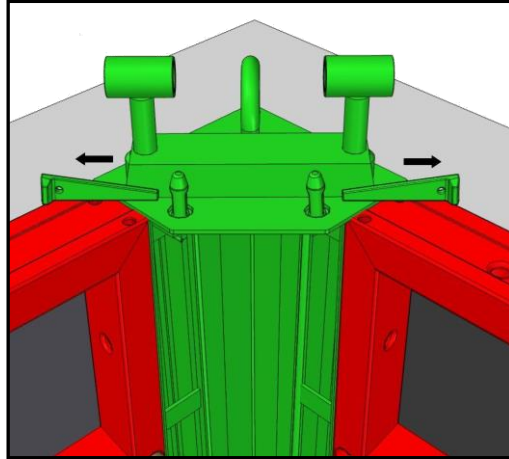


REMOVE CLAMPS CONNECTION BETWEEN TWO PARTS

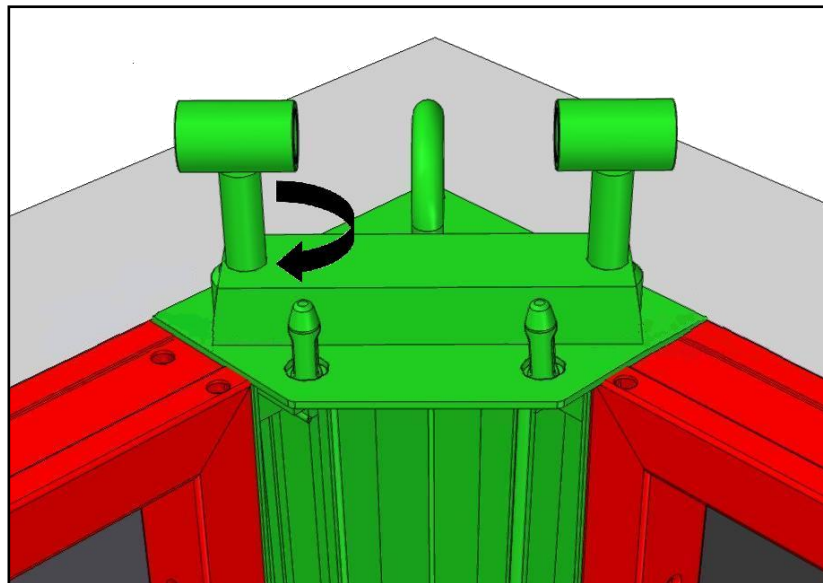


INNER SHAFT STRIPPING

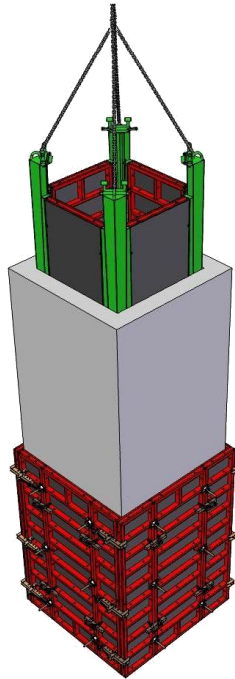
Remove the wedges to release the biconical block.



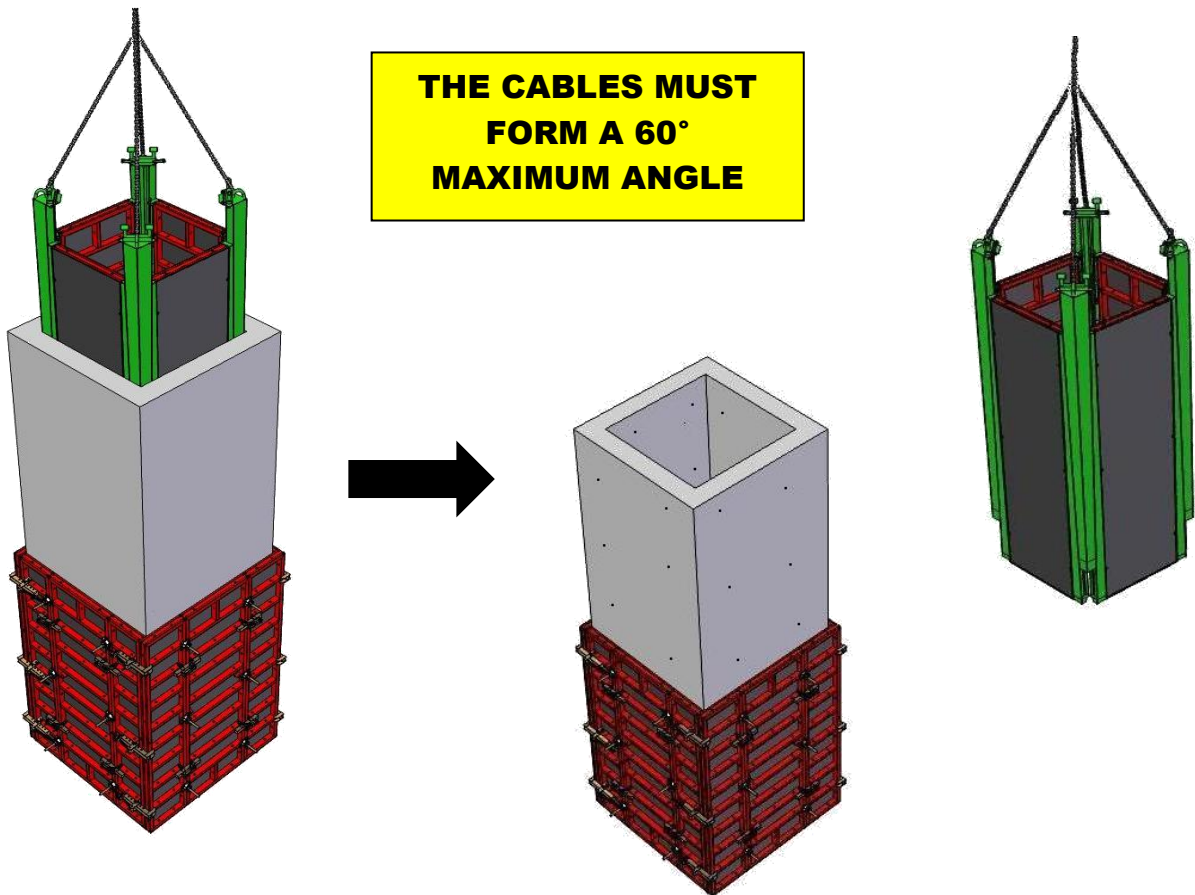
Move the four biconical blocks by completely tightening the large screws so it is possible to detach the panels from the walls.



- Hook the four biconical blocks to a lifting device. The cables must form a 60° maximum angle. Slowly extract them to their limit stop thus shrinking the formwork by approx. 20 cm.

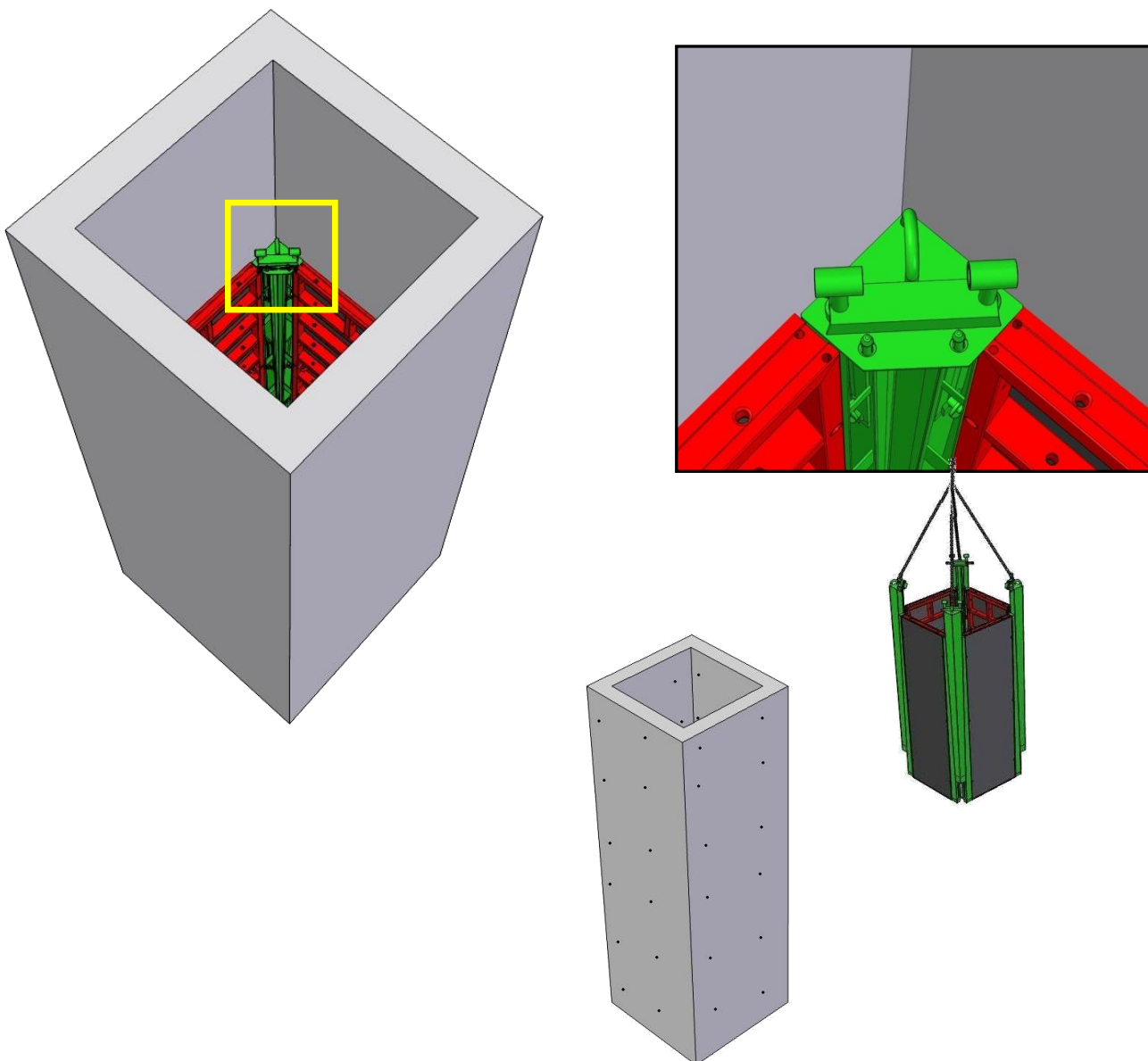


- Then slowly remove the formwork and place in the maintenance area.



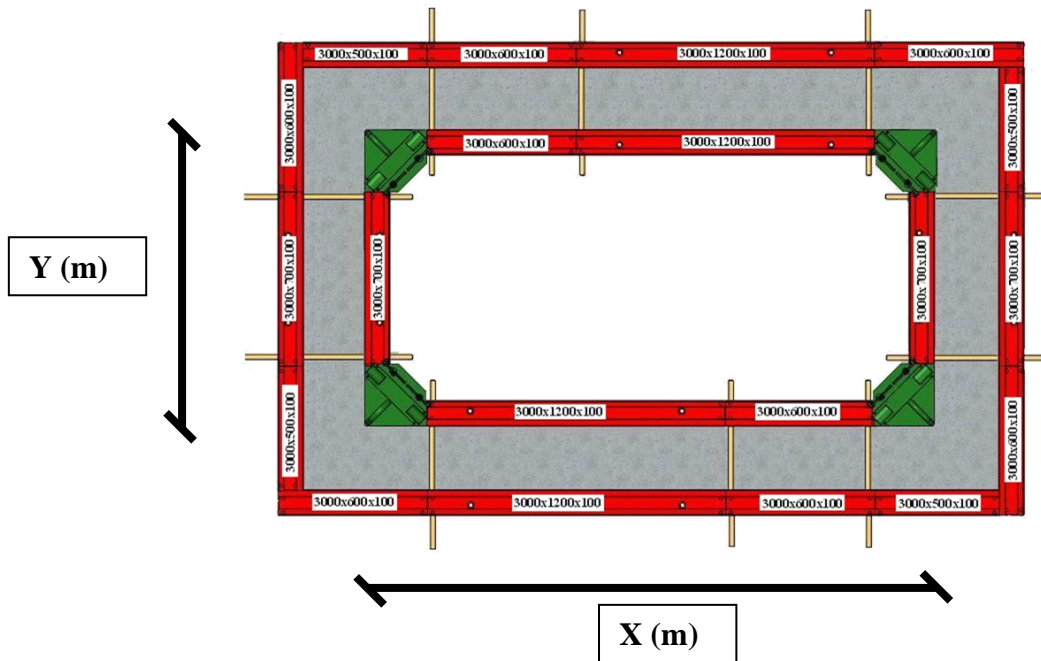
LOWER FORMWORK STRIPPING

- Assemble the large screws (ref. 1) in Fig. A on the biconical blocks.
- Tighten the screws to move the biconical blocks (ref. 1). Starting with the biconical blocks free to slide vertically, hook them to the lifting device and extract completely. This will shrink the formwork and allow the other two biconical blocks to slide freely. Act on the large screws to move the biconical blocks (ref. 1) in Fig. A.
- Hook the four biconical blocks to the lifting device and slowly extract the biconical blocks to their limit stop thus shrinking the formwork by approx. 20 mm.
- Then slowly remove the formwork and place it in the maintenance area.



EXEMPLES OF USE

LIFT SHAFTS OR STAIRWELLS, TANKS AND SIMILAR.



In the following table the maximum advisable sizes of the assembly.

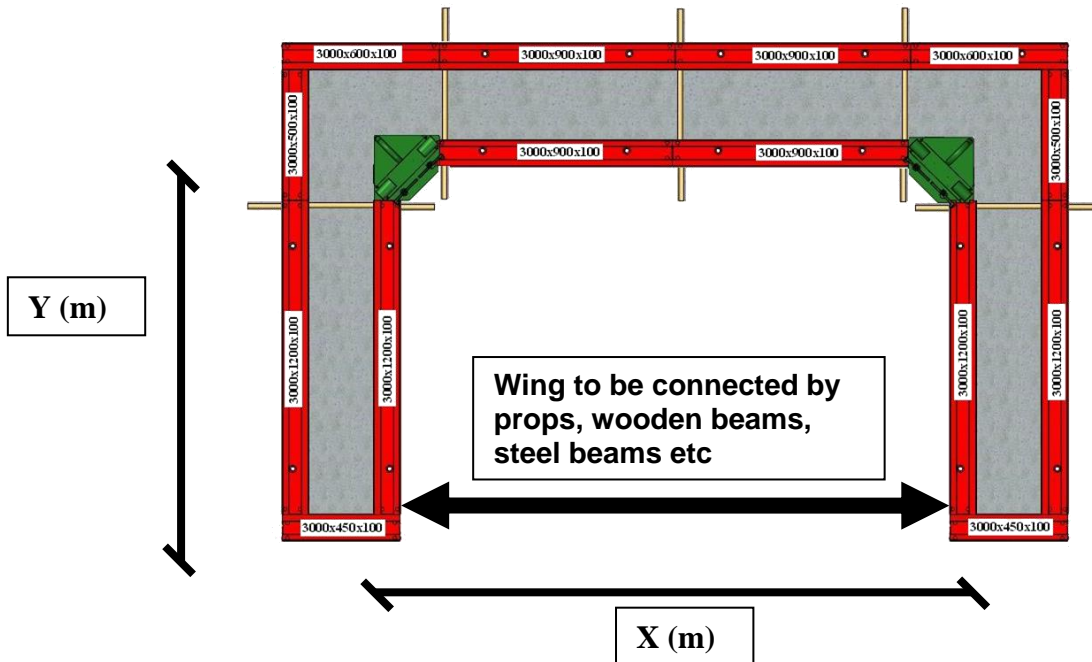
| Modul | X | Y | Biconical block height |
|-------|------|------|------------------------|
| | m | m | m |
| S100 | 6,00 | 8,00 | 3,00 |
| S120 | 5,00 | 7,00 | 3,00 |
| S100 | 5,00 | 7,00 | 4,50 |
| S120 | 4,00 | 6,00 | 4,50 |

The data in the previous table consider a standard application of accessories on formwork (service brackets, clamps, wood items etc). It is mandatory for the user, as for the above mentioned sizes and for greater sizes boxes, to provide a specific calculation about the total weight to lift and to relate it to permitted load bearing capacity of the biconical blocks (see page 19 of the present manual). In case, please contact the Technical Department of FARESIN FORMWORK.

U-SHAPED WALLS UP TO A WIDTH OF 3.00 M.



In case of U shaped wall lifting it is mandatory to connect the wings of the wall with props, wooden beams, steel beams etc in order to increase the stiffness of the system and to have a proper closed section.



In the following table the maximum advisable sizes of the assembly.

| Modul | X | Y | Biconical block height |
|-------|------|------|------------------------|
| | m | m | m |
| S100 | 6,00 | 3,00 | 3,00 |
| S120 | 5,00 | 3,00 | 3,00 |
| S100 | 5,00 | 3,00 | 4,50 |
| S120 | 4,00 | 3,00 | 4,50 |

The data in the previous table consider a standard application of accessories on formwork (service brackets, clamps, wood items etc). It is mandatory for the user, as for the above mentioned sizes and for greater sizes boxes, to provide a specific calculation about the total weight to lift and to relate it to permitted load bearing capacity of the biconical blocks (see page 19 of the present manual). In case, please contact the Technical Department of FARESIN FORMWORK.

LIFT SHAFT FORMWORKS EXCEEDING 2.5 METERS WIDTH

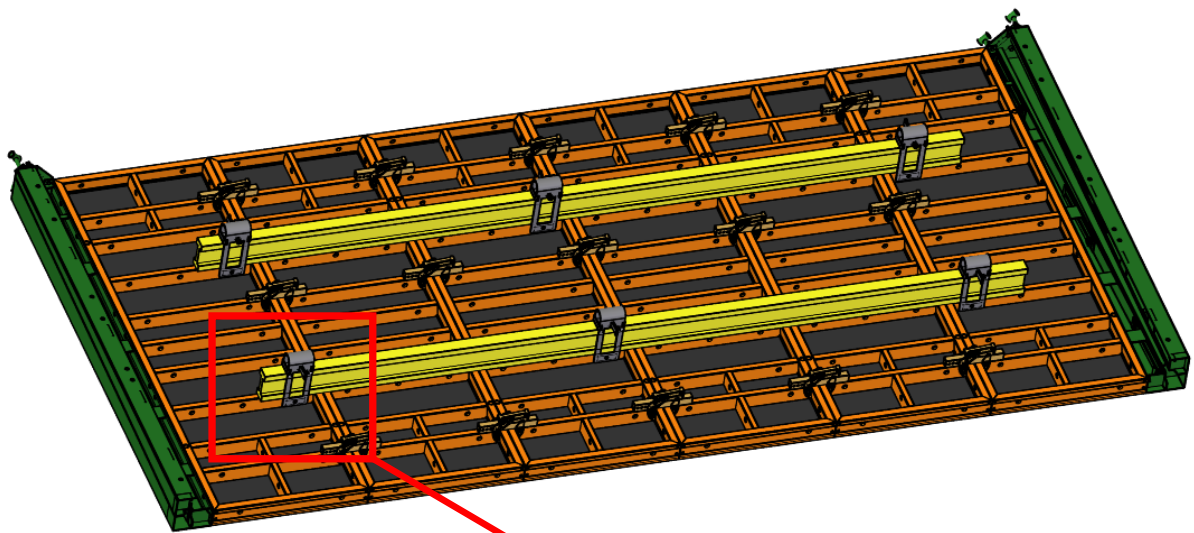
For a width of the wall superior to 2.50 meters it's indicated the use of the lifting truss. The lifting truss is in charge of the customer.



The customer must ensure that lifting truss has adequate load capacity

Repeat the same operations that they have been explained at the page 11 and 12 to assemble the lift shaft.

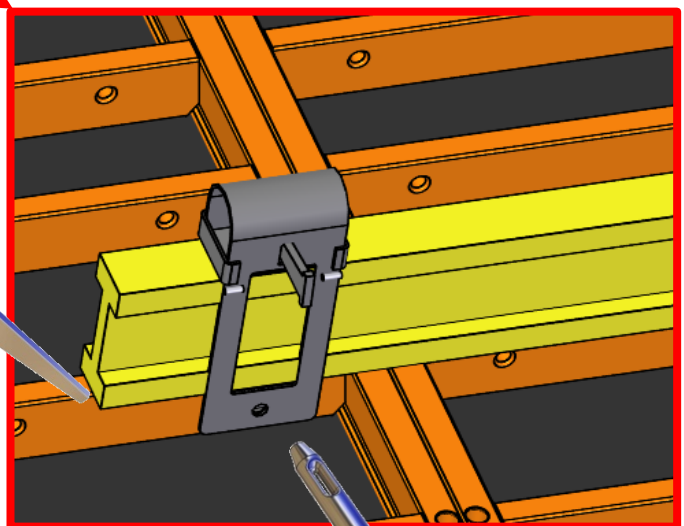
In this case it's important stiffen the vertical formworks with timber beam and the aligner stirrup for wooden beam H20.



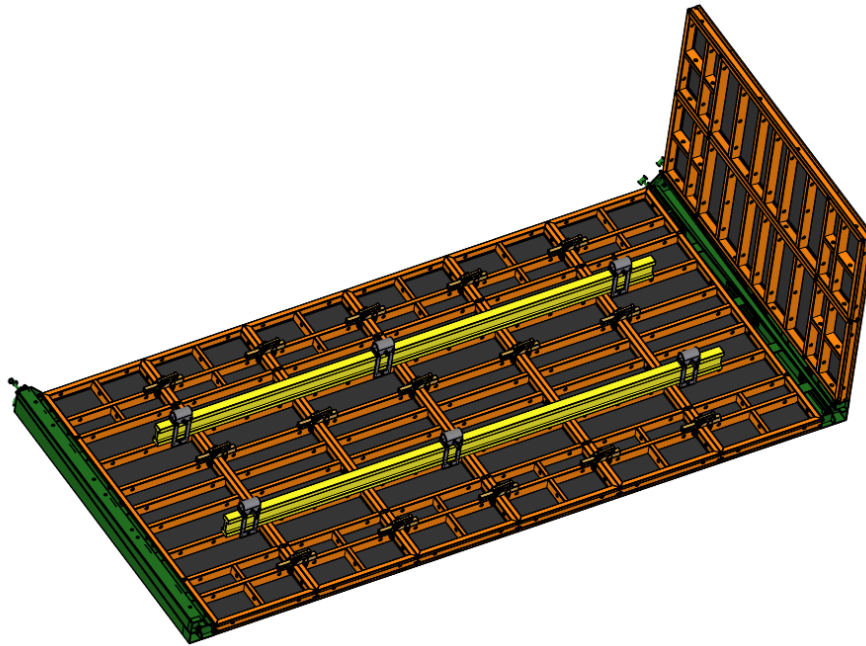
**INSERT THE ALIGNER STIRRUP FOR TIMBER BEAM H20
CODE 8168550**

**INSERT THE WEDGE FOR PINS
CODE 8168024**

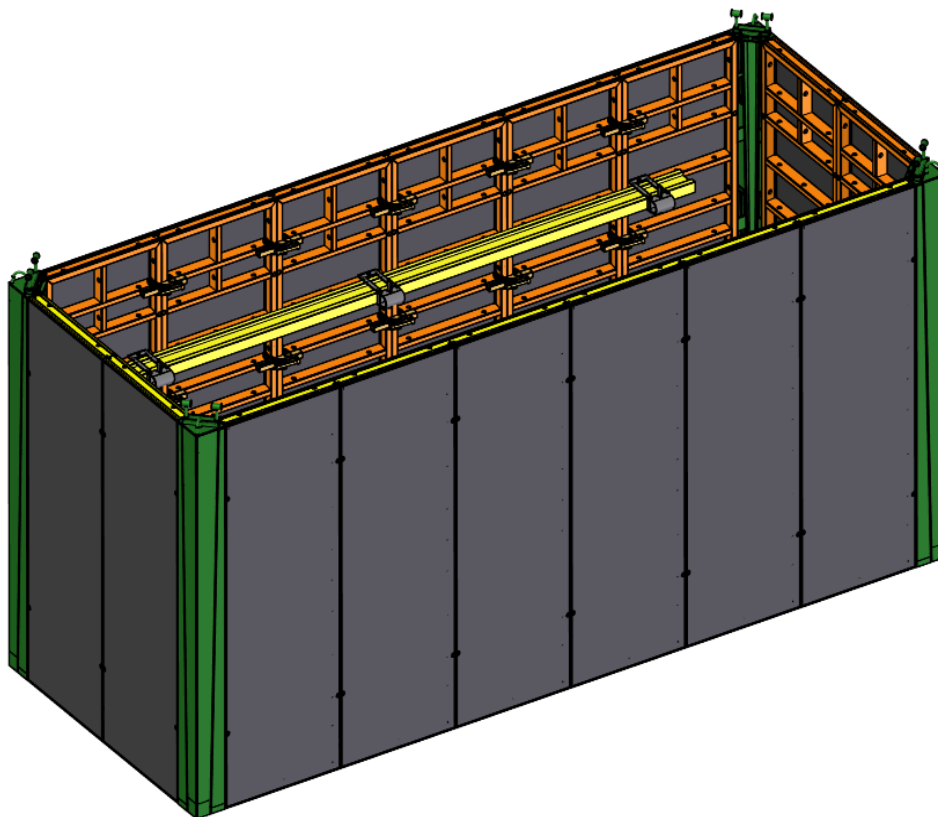
**INSERT THE SHORT PIN
CODE 8168021**



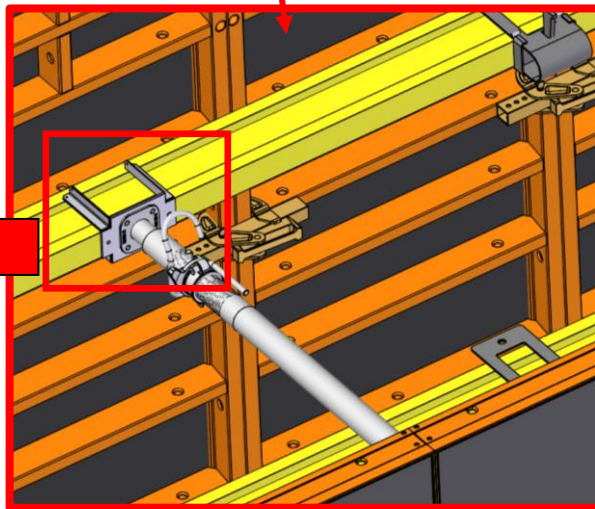
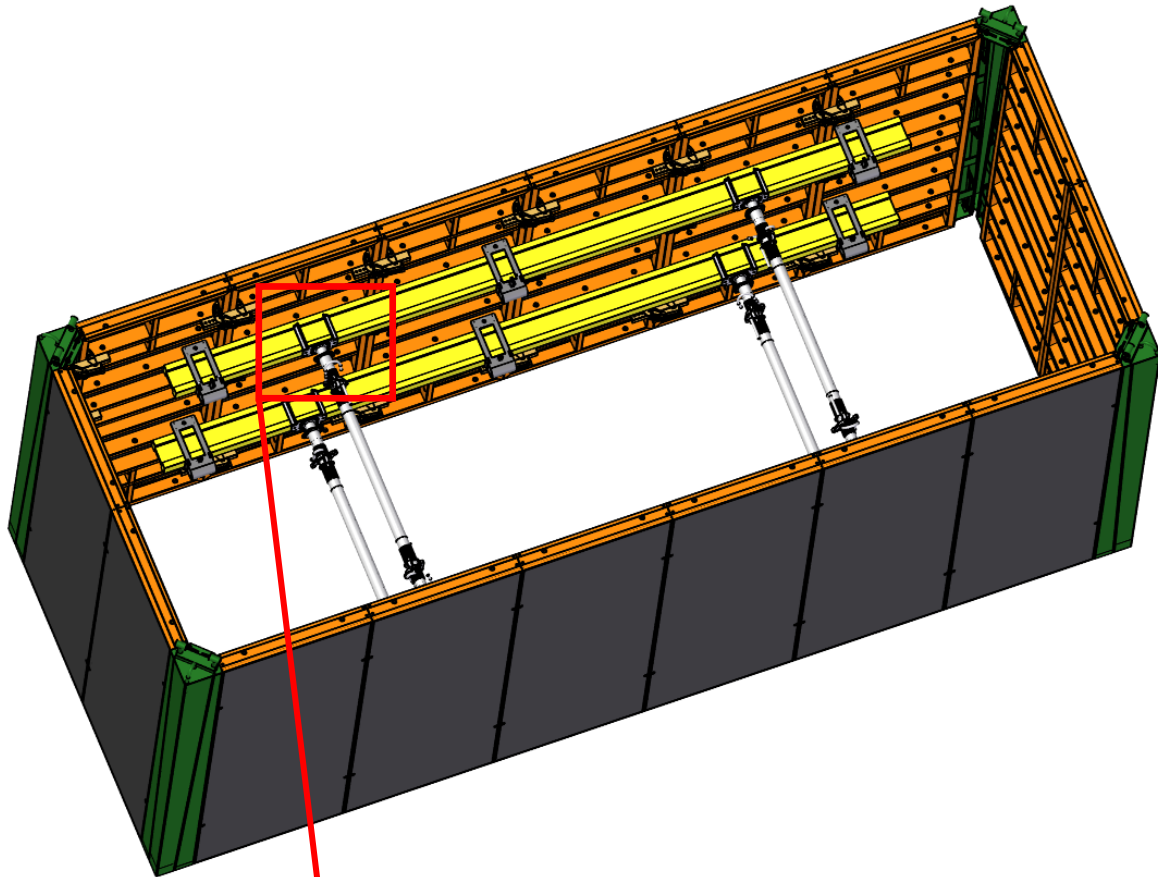
Insert the vertical formwork on the system previously assembled



Complete with the assembly of the internal inner shaft



Insert four props with the relative fork to stiffen the system



FIX THE CONNECTION ITEM TO THE TIMBER BEAM AND THEN TO THE BRACING ITEM (PROP, STEEL BEAM ETC)

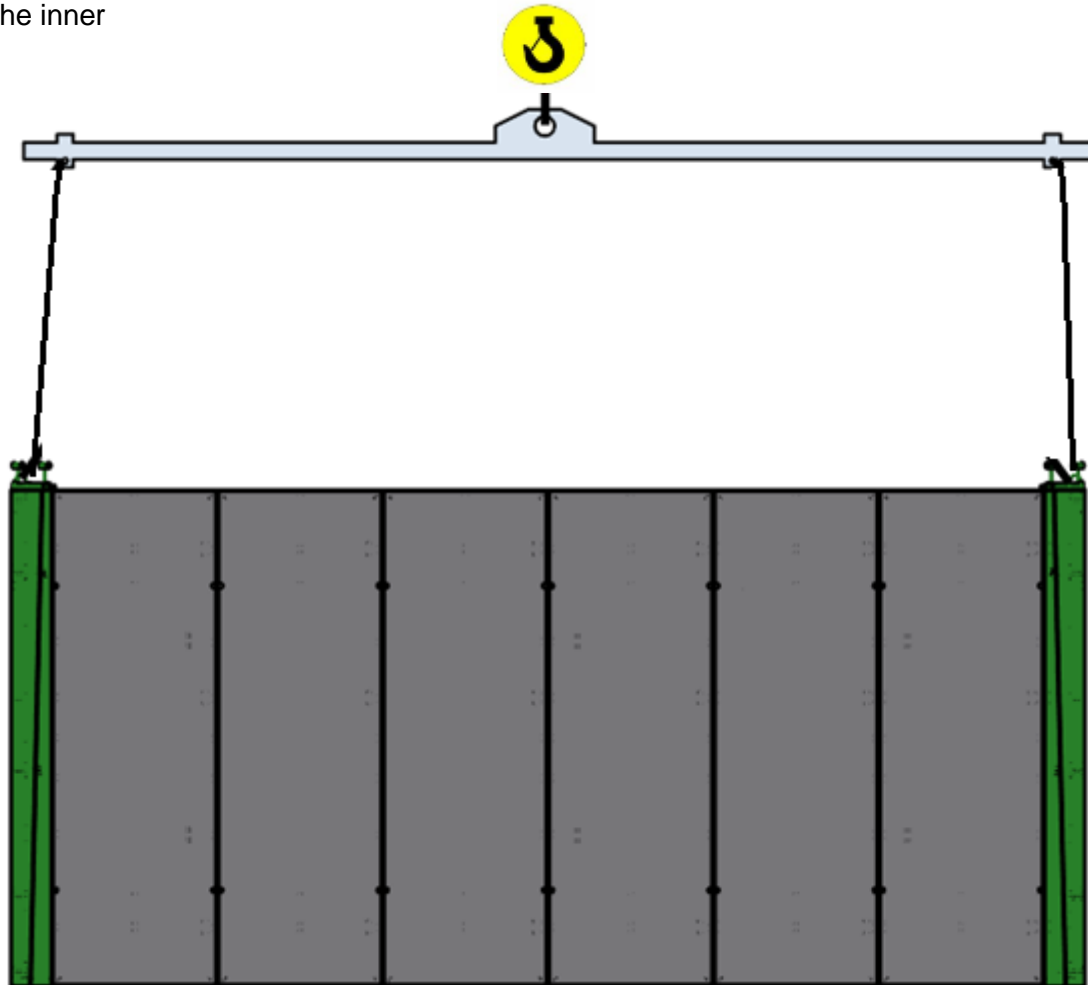
THE CONNECTION BETWEEN PROPS AND WOODEN BEAMS IS ONLY INDICATIVE TO HIGHLIGHT THE NEED TO BRACE THE LIFT SHAFT WHEN IT EXCEEDS THE 2.50 M WIDTH.

THIS PART OF THE PROJECT IS TOTALLY IN CHARGE OF THE CLIENT, IN RELATION TO:

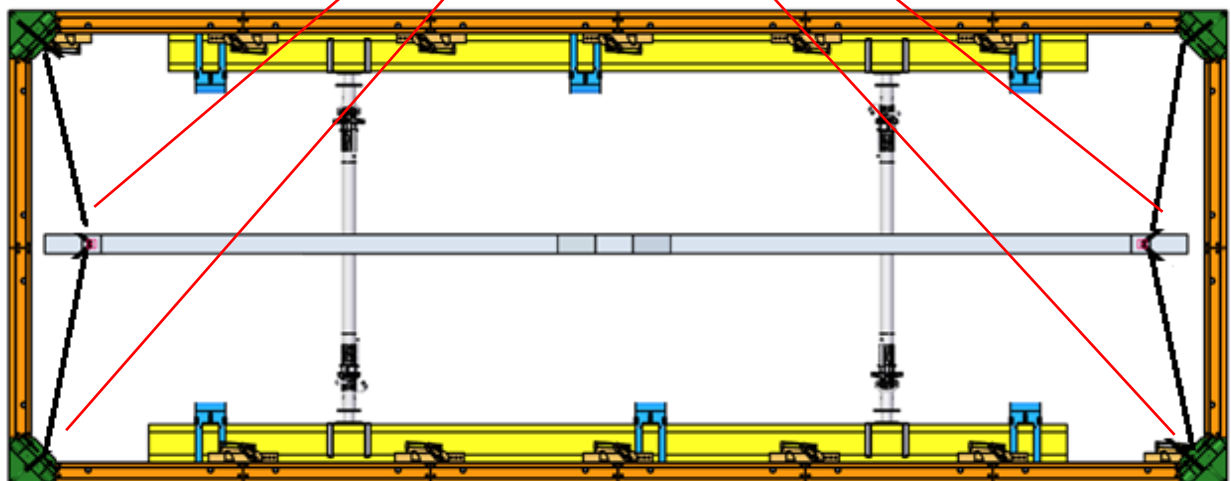
- **ITEMS USED AS BRACING (PROPS, STEEL BEAMS ETC)**
- **CONNECTION BETWEEN BRACING ITEM AND WOODEN BEAMS**
- **THE STRUCTURAL DESIGN OF THE PARTS INVOLVED**
- **ASSEMBLY AND WORKING OF THE DIFFERENT PARTS**
- **TECHNICAL VERIFIES OF THE BEARING CAPACITIES OF THE ITEMS USED**



Lift of the inner

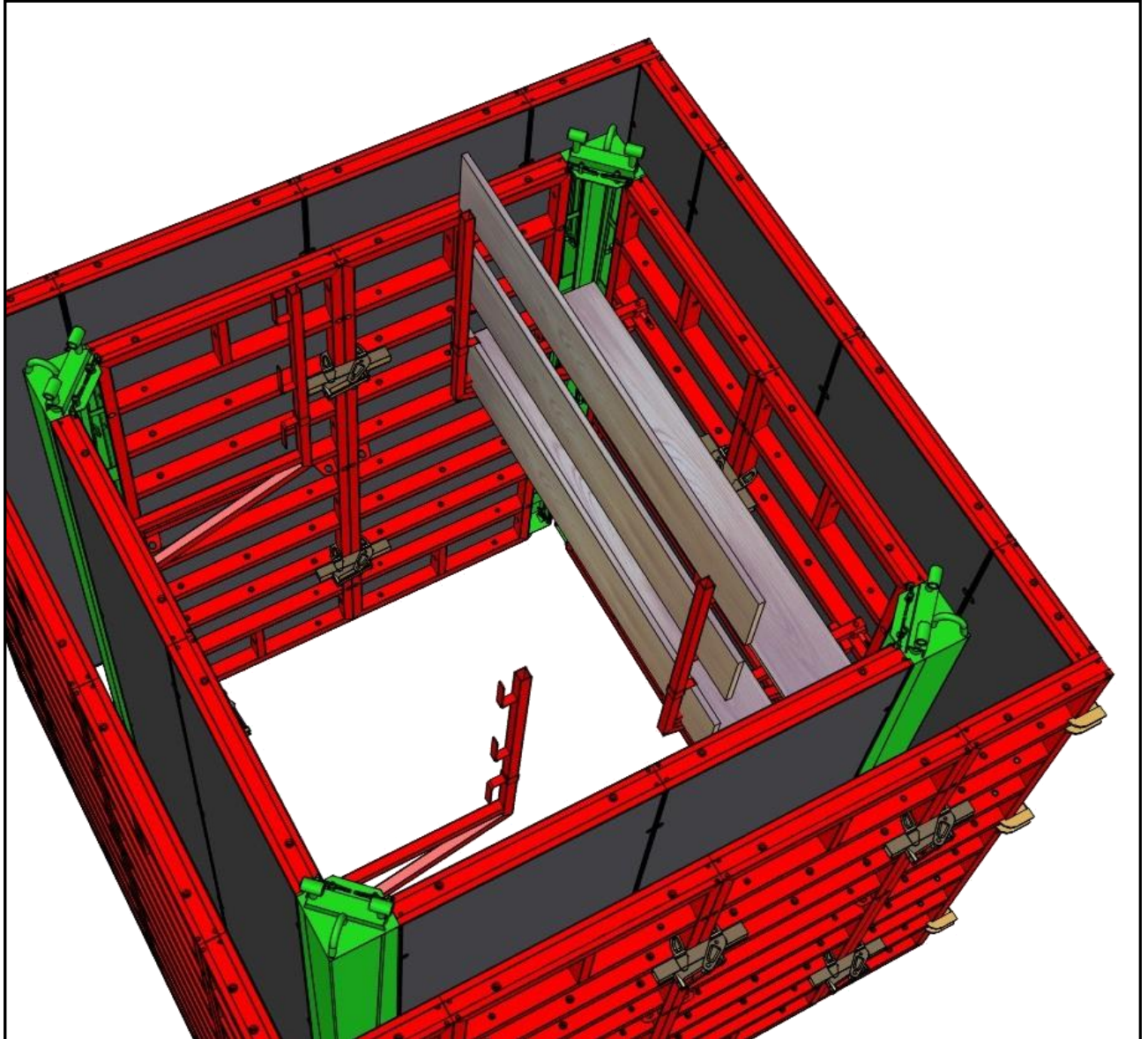


CRANE CHAIN



SERVICE BRACKET IN THE INNER SIDE OF THE LIFT SHAFT

For lift shaft formwork over two meters height you can see the use of service bracket below.



MAINTENANCE



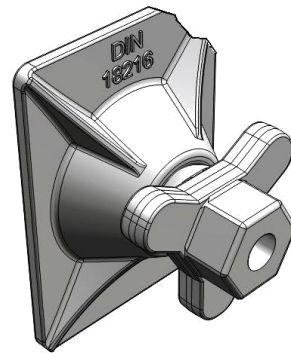
ONLY MATERIALS WITHOUT DEFECTS MAY BE USED ON THE WORK SITE.

All the elements of the LIFT SHAFT system and accessories must undergo regular inspections during the entire period of utilization. The two type of controls are: controls at each cycle of use and regular checks.

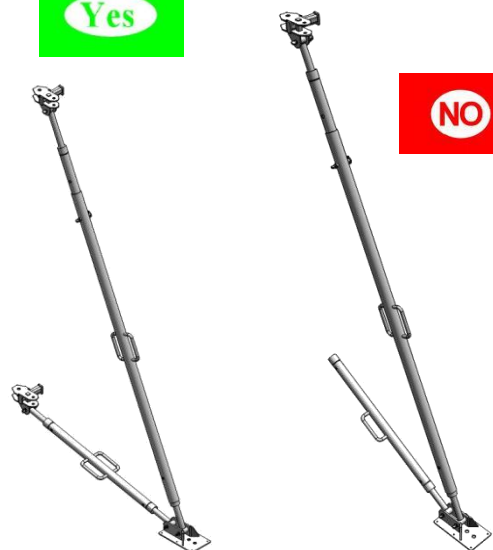
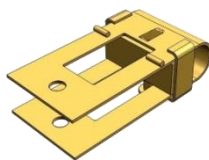
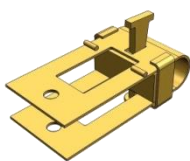
CONTROLS AT EACH CICLE OF USE:

Before each erection of the system check that:

- all the elements are intact, without signs of damage caused by impact, folding, abrasions, corrosion, etc...



the elements are complete with their accessories, etc..., in type and number suitable for correct erection and use of the system.



The controls at each cycle of use must be carried out by the SITE MANAGER, or by a person in charge having adequate competence, before each use of the elements.

The controls carried out at each cycle of use, together with the inspection of all the erected elements, must be recorded in the “site log book”, describing the positive outcome of the inspection.

Regular checks:

At least once a year controls must be carried out to ensure :

that the elements are not damaged or deformed due to impact, abrasion, corrosion, over-demanding work conditions, etc....

- the elements are complete with their accessories, etc., in type and number suitable for correct use of the system.
- the corrosion resistant protection is adequate to guarantee long life of the elements;
- the connections are effective and operational.

The controls for each use cycle must be made by the OWNER, or by his representative having adequate competence for the purpose.

IF ANY HIRED GOODS ARE FOUND TO BE FAULTY OR DAMAGED THEY MUST BE RETURNED IMMEDIATELY TO FARESIN FORMWORK.

USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear protective gloves, safety footwear, suitable work clothes, a safety hat and suitable safety devices to protect users against falling from a height during all the phases involving handling, assembly and use of the MODULE S100 system.



Impact and blows from heavy and blunt loads are inherent dangers when handling, assembling and dismantling the Module S100 system; these operations must be carried out by personnel wearing suitable personal protective equipment such as gloves, safety hat and footwear.

Ensure your safety against falling from heights by using suitable safety belts hooked to points that will guarantee adequate hold, in all work phases that are carried out at heights and particularly during the erection and stripping of the system at heights specified by current safety regulations.

During the concrete pour wear suitable equipment, safety footwear, eye and hand protection, and any other equipment included in the safety guidelines.

⚠ Adhere strictly to all the specific instructions contained in this manual to ensure correct use of all the elements comprising the Module S100 system.

Specific regulations concerning safety standards exist for all elements produced by FARESIN FORMWORK designed for use in construction sites.

NORMATIVE REFERENCES

For any information not directly recalled in this manual refer to the most recent safety standards in force in the specific country of use.

The main Italian regulations concerning safety on construction sites are:

D.LGS (Legislative Decree) 494/96 – 528/99

“TRANSPOSED EUROPEAN DIRECTIVE 92/57/EEC CONCERNING THE MINIMUM SAFETY AND HEALTH STANDARDS TO BE APPLIED IN TEMPORARY OR MOBILE WORK SITES”

D.Lgs. (Legislative Decree) 81/08

“CONSOLIDATION ACT ON HEALTH AND SAFETY”

AUSTRALIAN STANDARD

AS 4491 – 2004 – LIFTING DEVICES

AUSTRALIAN STANDARD

AS 3610 Formwork for concrete

The regulations provide general guidelines and requirements that must also be adhered to when using FARESIN FORMWORK products. This manual integrates the standard requirements that must be applied autonomously.

⚠ Note that, pursuant to DPR 164/56, falseworks for big works, that are not included in the current use outlines, must be executed according to a design prepared by an engineer, with all the stability calculations included. Before setting the falsework and the framework the ground resistance or the resistance of the structure on which they are to be placed must be checked in order to prevent possible yielding.

July 2018



TOGETHER WE BUILD THE WORLD

GET IN TOUCH

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