

## *CL-40 shoring system*



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# CL-40 SHORING SYSTEM



## ▶ Light and resistant



The Alsina CL-40 Shoring System is a light and practical system with a useful load capacity of 4 TN/leg.

The head can house any Alsina standard profile: HT-20 metal or wood girders, components that contribute a double function: support the formwork surface and brace the supporting structure.

The Alsina CL-40 Shoring system allows shuttering with phenolic resin-coated plywood (of 15 to 18 mm), Alisan Panels and Three-layer Panels.

## ▶ Quick



The multidirectional joint technique saves valuable time during assembly, as well as providing exceptional stability and the possibility of different forms.

One hit with a hammer drives the wedges and allows vertical or horizontal alignment or diagonal alignment to the angle required.

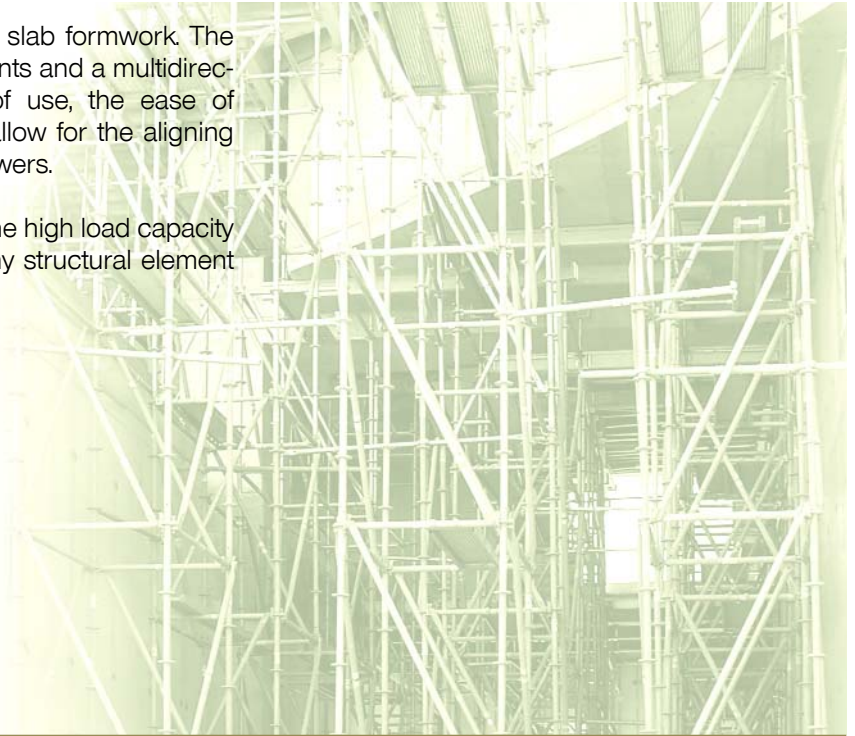
The shoring towers may be assembled lying on the ground or vertically in their final position.

Likewise, because of their high rigidity, they can be transported from one structure to another without needing to be dismantled.

## → light and resistant shoring with numerous possibilities

Support structure for horizontal or sloping slab formwork. The system is made up of vertical support elements and a multidirectional connection system. The versatility of use, the ease of assembly and the number of accessories allow for the aligning of both braced shoring and independent towers.

Alsina's CL-40 Shoring system, because of the high load capacity of the joint (4 TN/leg), allows propping of any structural element for slabs in building or civil engineering.



### Versatile

### Certified and accredited



The design of the Alsina Multidirectional system allows different applications to be carried out with a set of common elements:

**CL-40 SHORING:** allows assembling of shoring (equally spaced legs) or independent towers.

**MOBILE WORK PLATFORMS:** for vibrating the concrete in columns and walls.

**SITE STAIR TOWERS:** stair that complies with current standards, allows any height to be reached with total safety.

**REINFORCED SCAFFOLD:** provides a stable structure for steel reinforcing.

Alsina's Multidirectional System is a certified and accredited product that uses components of proven quality and offers a guarantee certified by current standards.

# Components of the CL-40 Shoring System

## main and secondary beams

The slab will be supported on the HT-20 Beam or Metal Girder, depending on: the edge of the slab, the distance between legs and the forming surface used.

## HT beam head

Support for placing the beams that hold up the slab and helps adjust the height of the assembly.

## diagonal bracing

Bracing element of the assembly, tubular shape made of high resistance steel.

## ledgers

Galvanized element made of steel ST 37-2, supplied with head with permanent wedge for its perfect assembly with the rosette couplings for the standards distanced 50 cm apart. Available lengths: 0.73, 1.09, 1.57, 2.07 and 2.57 m.

## standards

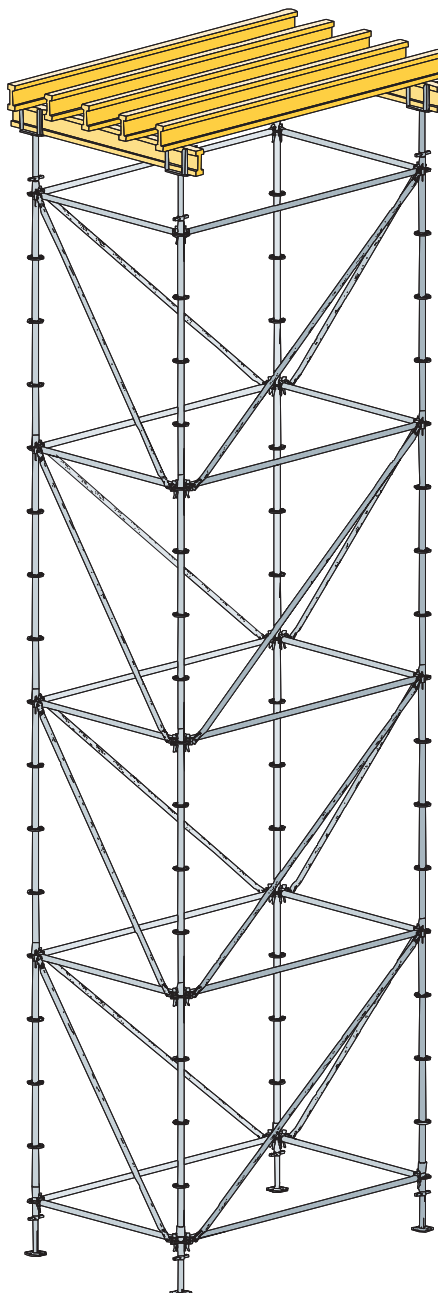
Galvanized part made of ST 37-2 steel with a bearing capacity of 4 Tn/leg.

## base collar

Starting element in the assembly of scaffolding.

## base jack

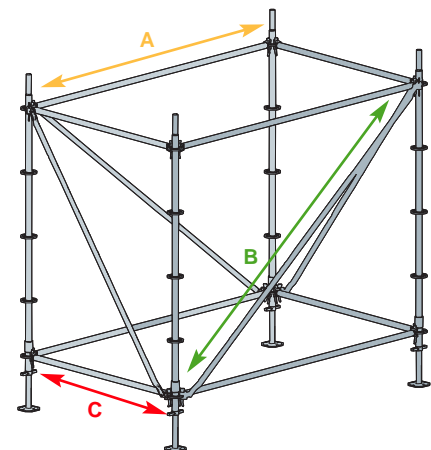
Element that transfers the load to the ground and adjusts the height necessary for the shoring



ROSETTE BRACES AND JOINTS MULTIDIRECTIONAL ELEMENTS

## optimal adjustment

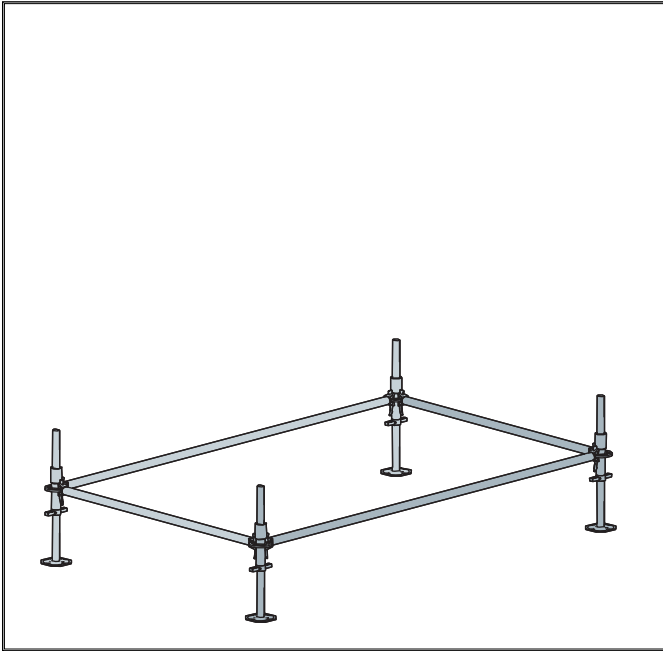
Alsina's CL-40 shoring system increases versatility due to its modular structure in length, width and height. Three main elements (A, B, C) offering optimal adjustment for different loads, slab thickness and geometry.



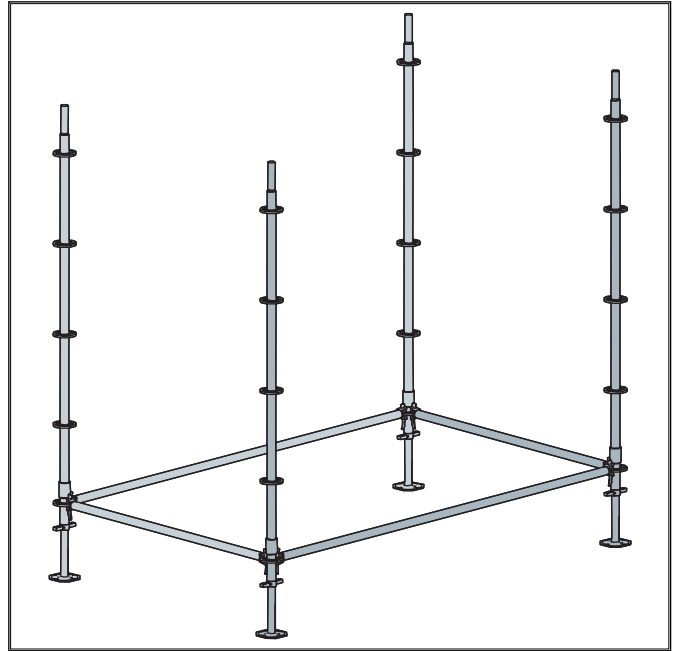
# Assembly of the CL-40 Shoring System

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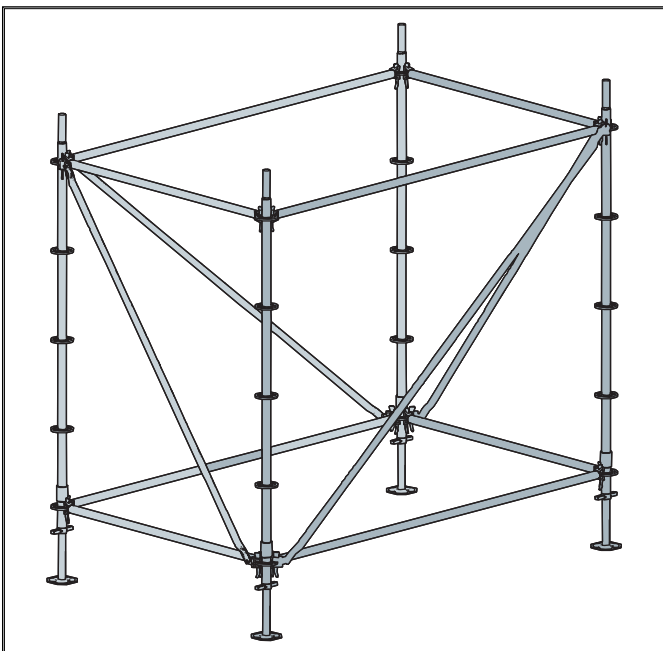
**01** Reposition with the Legs. Position the Base Collars and connect their rosette with the joists. Level.



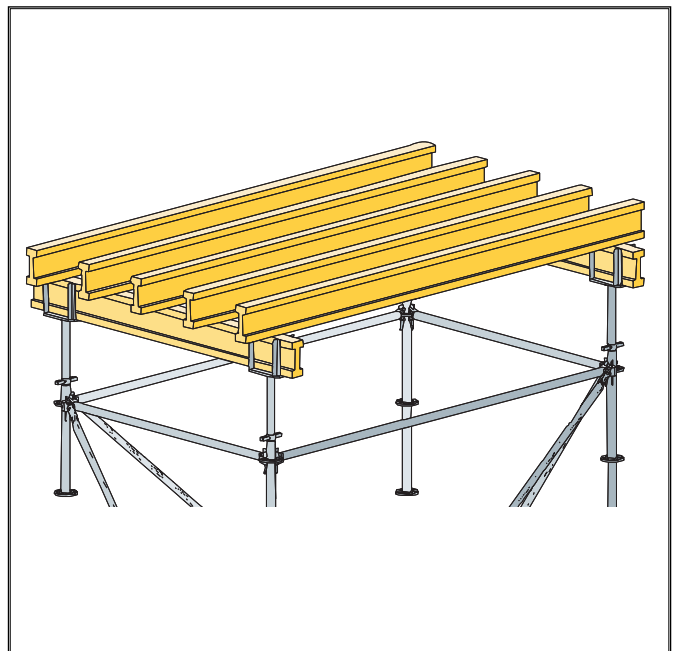
**02** Position the standards.



**03** Move diagonally and place the second line of ledgers. Position the second line of standards and repeat the rest of the process.



**04** Position and adjust the HT Beam Heads to the required height and then position the Beams.



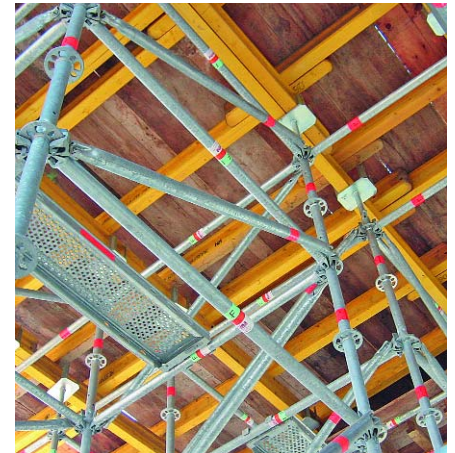
# Characteristics of the CL-40 Shoring system

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## forming surfaces

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The CL-40 Shoring system can use phenolic resin-coated plywood for fair-faced concrete or the Alisply Panel system for standard finishes.



## compatible with the Alsina Table formwork system

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The CL40 Shoring system is compatible with the preassembled system for slabs: the Alsina Table Formwork system.



## CL-160 shoring tower

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Heavy loads towers can be easily erected using a specific combination of CL-40 shoring elements. The assembly of four verticals offers a load capacity of 16 Tn (160 kN) per leg. As a result each shoring tower will carry out up to 64 Tn (640 kN) of load-bearing capacity.



# CL-40 Shoring System in use

## Alsitec

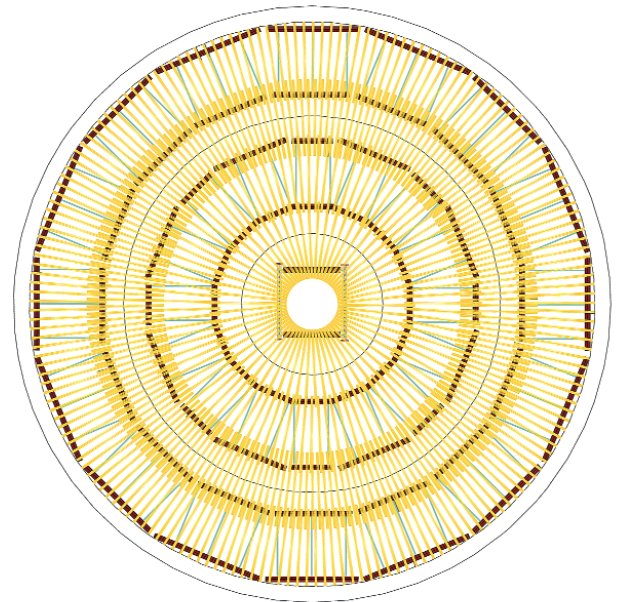
The design and application of shoring requires checking using static calculations of the structure.

Alsitec, Alsina's technical office, has the tools necessary for determining the type of shoring to use (strongbacks/ independent towers ) in each case.

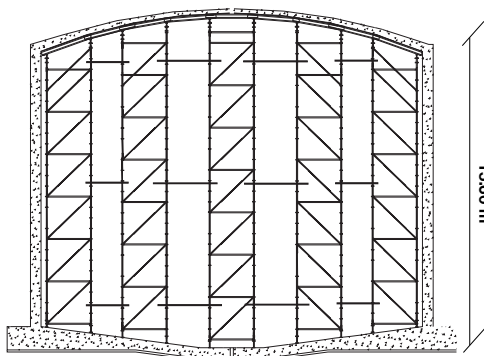
EDAR Santa María de Benquerencia (Toledo); project in which Alsitec redesigned the main cupola in the shape of a round block of 18 m inner diameter.

Vertical clearance of 15.80 meters consisting of independent towers in radial form to help fit the required circular shape of the floor.

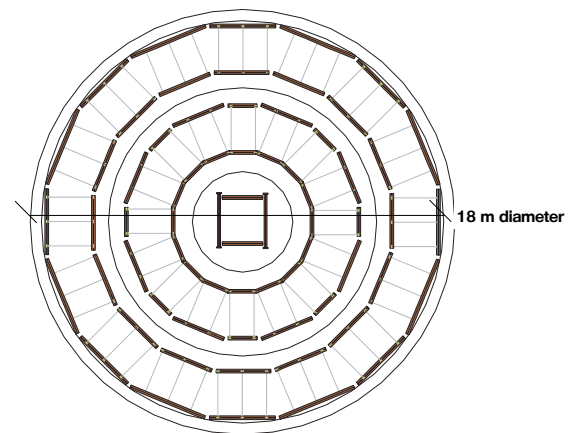
In the completion of the cupola, a first distribution of Beams were positioned that shape the planes of the faces of the polyhedron and it was covered with a distribution of Secondary Beams lined with Phenolic panels being able to give shape to the cupola.



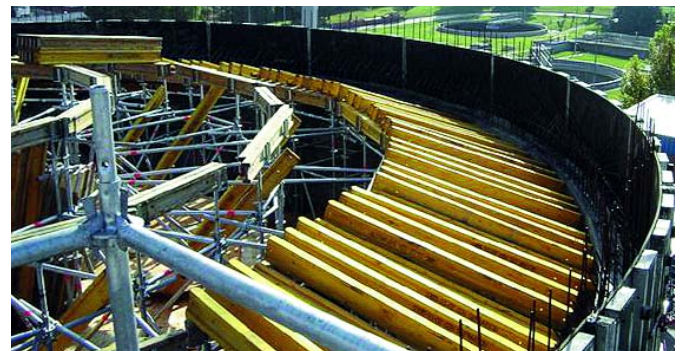
SECONDARY BEAMS FLOOR



CROSS SECTION



MAIN BEAMS FLOOR



Rearrangement of the Secondary Beams that support the phenolic plywood formwork surface.