



“ building  
the future ”

prefabricated foundation





## The Foundation

In construction, foundations are that part of the building structure (prefabricated or in situ) that performs the task of transmitting the loads of the elevated structures to the ground. They therefore have the function of receiving loads from the superstructure and transmitting them to the ground.

The type of foundation used depends on the stresses (loads, moments and shear) acting on it and the type of soil on which the loads are transmitted.

There are two families of foundations: superficial (direct) and deep (indirect).

After studies and research, Clesi has developed two types of foundations suitable for solving the most diverse cases. We respond to these problems with Themèlio and Themèlio EVO, the former of the direct type, the latter of the indirect type.



## THEMÈLIO®

It is the direct foundation suitable for the construction of buildings on soils with no particular resistance problems

## THEMÈLIO® EVO

Themèlio EVO, on the other hand, is used when the terrain does not have sufficient bearing capacity to support the load of the building to be constructed or, in any case, when the expected subsidence with the direct foundation is excessive. In this case, piles will be driven in at the depth at which the solid soil layer is reached or piles of a length sufficient to resist the loads transmitted by the foundations through the lateral friction created with the soil.

Themèlio and Themèlio EVO and the Synde connection system are our answer to prefabricated foundations. The prefabricated Themèlio and Themèlio EVO plinths

are produced in our Supino - Frosinone (FR) factory in pyramid-shaped metal moulds.

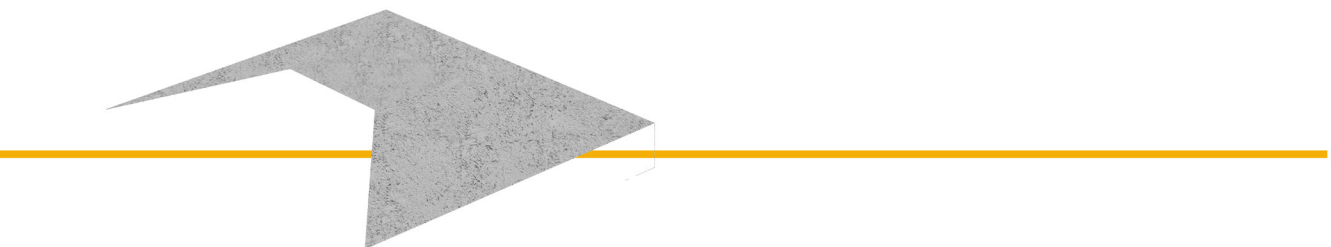
Themèlio plinths are connected by means of RC (reinforced concrete) and PRC (prestressed reinforced concrete) beams to form a frame scheme.

In the case of prefabricated panel buildings, the connection beams also serve as panel holders.

The prefabricated structure and therefore also prefabricated foundations offer certain advantages over cast-on-site structures, including speed of construction and better quality control, both of the materials used and of the production process of the elements.

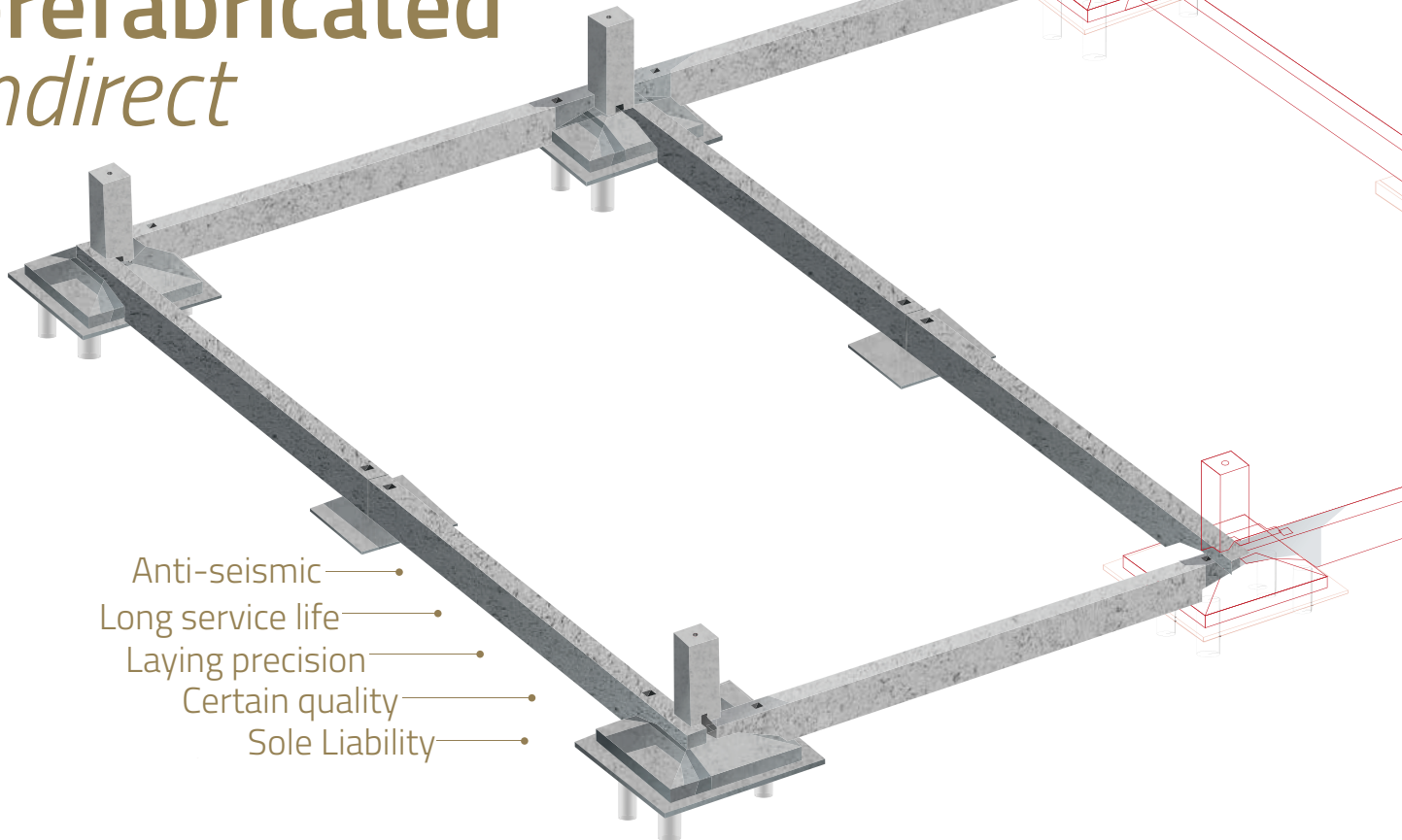
Our Synde connection system allows for the connection between the Themèlio or Themèlio EVO foundation plinth and the building column to be realised.







# The *first* foundation prefabricated indirect



- Anti-seismic
- Long service life
- Laying precision
- Certain quality
- Sole Liability

## Connecting beams

The connection between the plinths is made by means of appropriately dimensioned prefabricated beams of varying dimensions. The connection beams have both the function of connecting and supporting the prefabricated panels where provided. The connection between the plinth and the beam is made by means of dowels, which are also suitably designed and dimensioned.

Our design department takes care of all the planning, which becomes a guarantee of excellence thanks to the strong experience gained over the years and the strong knowhow provided by research and investment.



# SYNDE®



## Advantages

- connection tightening with commissioning of the earthquake-resistant connection
- ease of implementation
- ease of calculation
- absence of bracing and/or shoring
- immediate use of the plinth-pillar or column-pillar system

## Junction system

Synde is the high-capacity, seismic-resistant junction system we designed and represents the practical application of the ductility and strength criteria that international seismic standards have long defined.

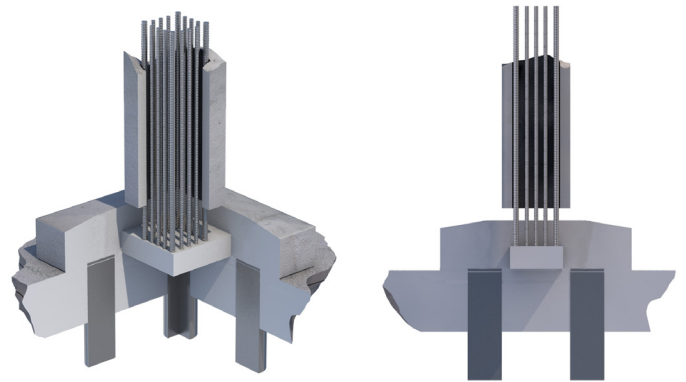
Synde ensures a perfect and continuous connection between the pillar and the foundation work in the case of both prefabricated Themelio foundations and foundations built using traditional criteria.

## Connection

Synde consists of two elements, a steel collar with a circling function placed at the base of the pillar and suitable anchor bolts.

## Implementation

The positioning of the pillar on the plinth, is made level and plumb by adjusting the nuts and locknuts with a structural function, at a later stage a fibre-reinforced mortar is poured to ensure continuity and protection of the elements forming the node.







Discover the features of Clesi products

For the Clesi works, only the executive attachments of the contract are authentic. All images in this brochure are used purely for illustrative purposes



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