CTCEM connector

Plate 60x50 mm - screw Ø 14 mm

The high performance connector.

The connector consists of a toothed plate and a 10.9 steel stud threaded at the lower part and with a hexagonal head. The base plate contrasts the tendency of the stud to rotate, therefore giving a high level of resistance to any movement. The plate also prevents any crushing of the concrete and brings a large area of concrete into contact with the connector so as to give a greater shear resistance. The fixing is completely mechanical. There is no need for resins or chemical additives. The connection is quick and easy, economic and clean. The head of the connector protrudes for a height of 40mm.

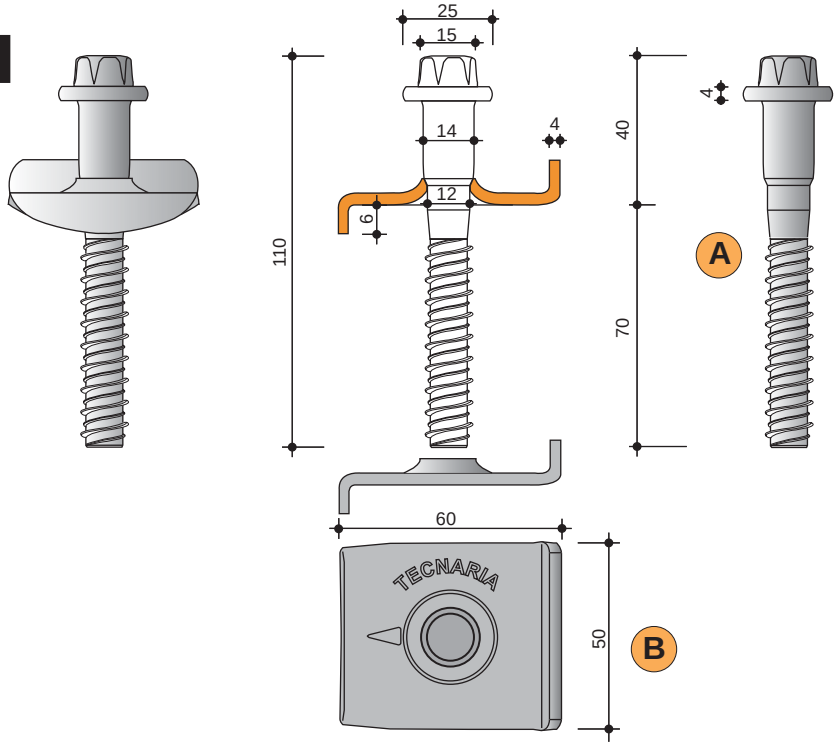
Data Sheet

The **TECNARIA** stud connector with screw and toothed plate for integrating concrete casting consists of:

A) A Ø 14 mm shank of 10.9 hardened steel, with 15 mm hexagonal head and fake washer, and Ø 12 mm threaded body.
B) A 60x50 mm, 4 mm thick toothed steel plate with rectangular base. The stud connector and the base plate, thanks to their particular conformation, come together during the embedding process.

Specifications: Stud connector with screw and toothed plate for concrete casting integration. Element composed of a Ø14 mm shank of 10.9 hardened steel, with washer and 15 mm hexagonal head. The Ø12 mm threaded body has a truncated conical section at the lower end allowing it to be inserted into the central hole of the 60x50x4 mm stabilizing plate folded on two sides.

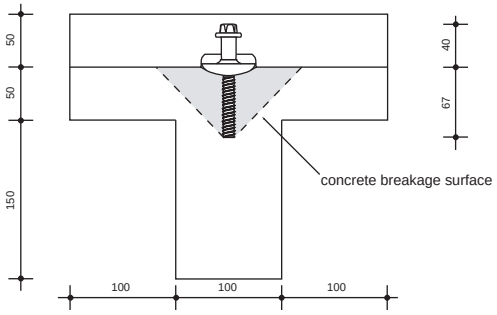
Code	Height connector
CT CEM 14/040	40 mm



Strength of the CTCEM connector

Mean breaking load medio P_{um}	Characteristic breaking resistance P_{Rk}	Design load (S.L.U.) P_d	Allowable load (T.A.) P_{adm}
35.7 kN	26.7 kN	21.4 kN	14.2 kN

The table shows the reference values relating to the tests carried out at the Laboratory of Building Science of the University Institute of Architecture in Venice (Italy). These tests were carried out according to the procedures indicated in Eurocode 4 ENV 1994-1-1.
The results shown are for connectors connecting a C25/30 concrete structure with a C25/30 concrete slab. The geometries of the two connected parts are such that the breakage surface of the concrete is not reduced due to thin sections.



Geometry of the tested specimen

Strength of the CTCEM connector

- When the floor has a concrete topping, locate the position of the beams.
- Mark the positions where the connectors are to be fixed.
- Make incisions in the concrete with an angle grinder to the following dimensions: width 4 mm, depth 5 mm, direction transverse to the direction of the beam (fig. 1).
- Place the base plate into the notch with the folded part facing downwards. The arrow on the top must be parallel to the beam, towards the central point (fig. 2).
- Drill a hole with an 11 mm drill bit to a depth of 75 mm (fig. 3).
- Remove the cement dust (fig. 4).
- Insert the screw in the hole and tighten it for its whole length with an impact wrench (or with a screwdriver with clutch). Take care not to keep screwing after contact between the plate and the screw has been made (fig. 5).





