



**TPE-03 PERMANENT GROUND ANCHORS**  
(Available in **TPE 03A** and **TPE 03B** versions)



**TPE-03 permanent anchors** are produced in compliance with the **Ministerial Decree as of 14.01.2008**, Decree **no. 12391 22.12.2011**, and with the European and Italian Standards.

The **TPE-03** ground anchor is usually used in the construction of bulkheads and diaphragms, where the type of ground needs permanent anchors to be installed.

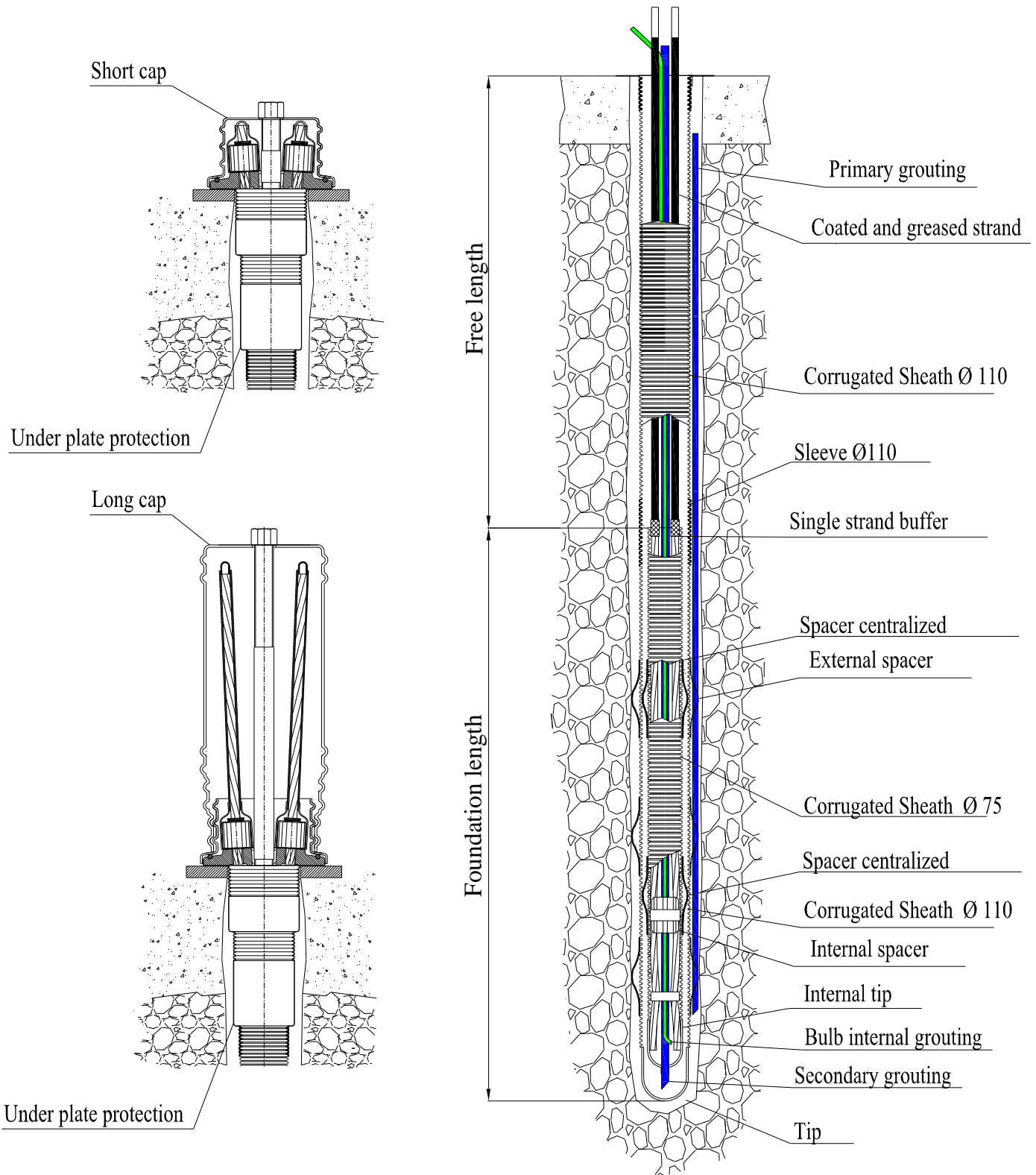
The **TPE-03** ground anchors are defined permanent as their expected design life is over two years.



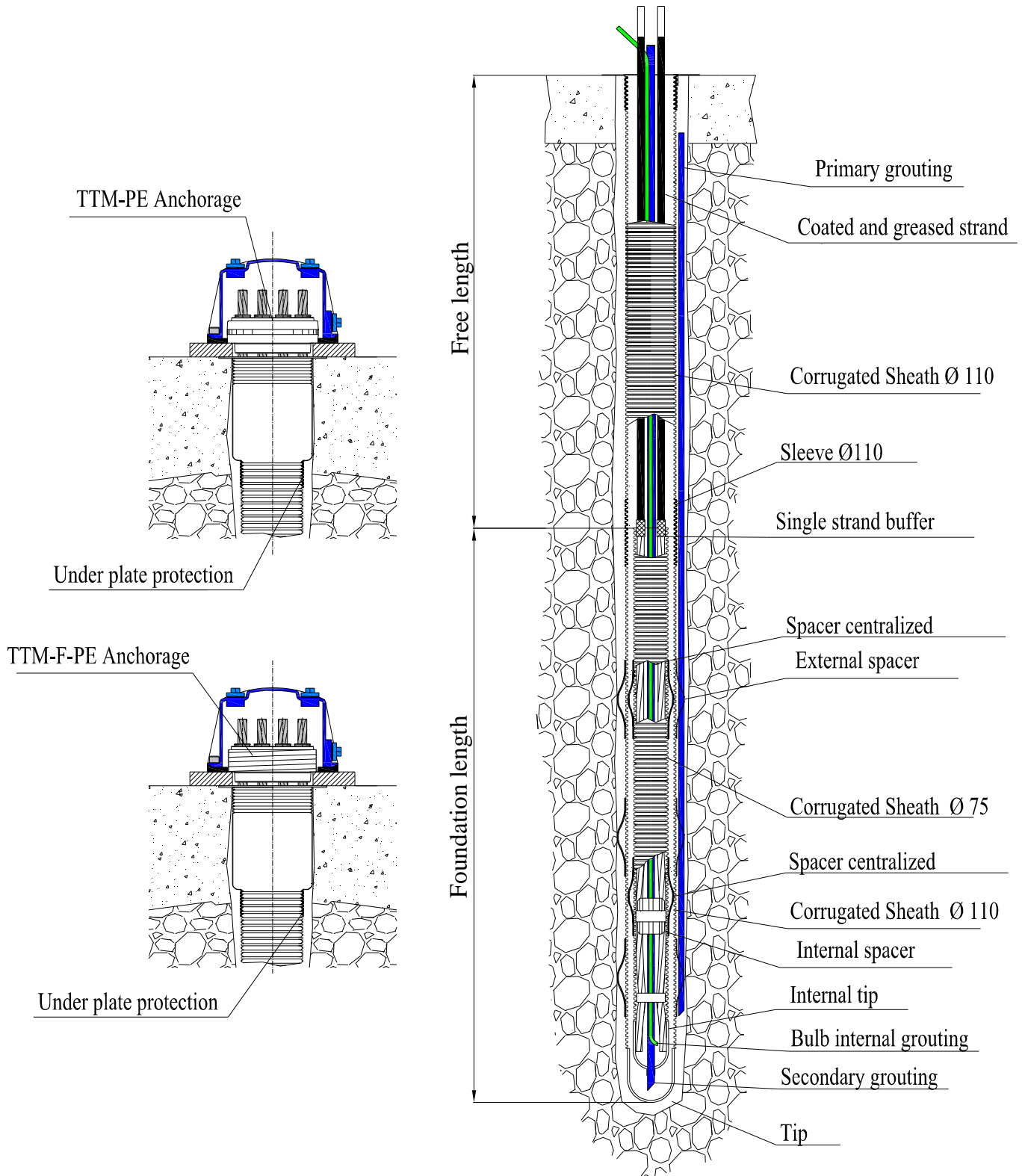
**The anchor is made as follows:**

- In the active part, the strands are separated by special spacers which guarantee the tendon to maintain a sinusoidal shape. By means of suitable strapping and/or taping, the sinusoidal shape of the tendon increases the adherence with the foundation cement mix. Grouting takes place via 16x20 mm polyethylene/polypropylene tubes that can guarantee a max. operating grouting pressure of 10 bar at 40°C and a burst pressure of 15 bar at 40°C.
- The free length is protected by inserting a H.D.P.E. corrugated sheath. Inside, strands are protected by greasing and sheathing by means of 16x19.5 mm tubes. The separation of the free length from the active part is achieved by way of a buffer of sealing material, which allows both parts to be perfectly hermetic and can be applied on each strand or globally on all strands.
- The end part of the anchor is provided with a polyethylene ogive to ease its insertion into the drilling hole and guarantee its total encapsulation.

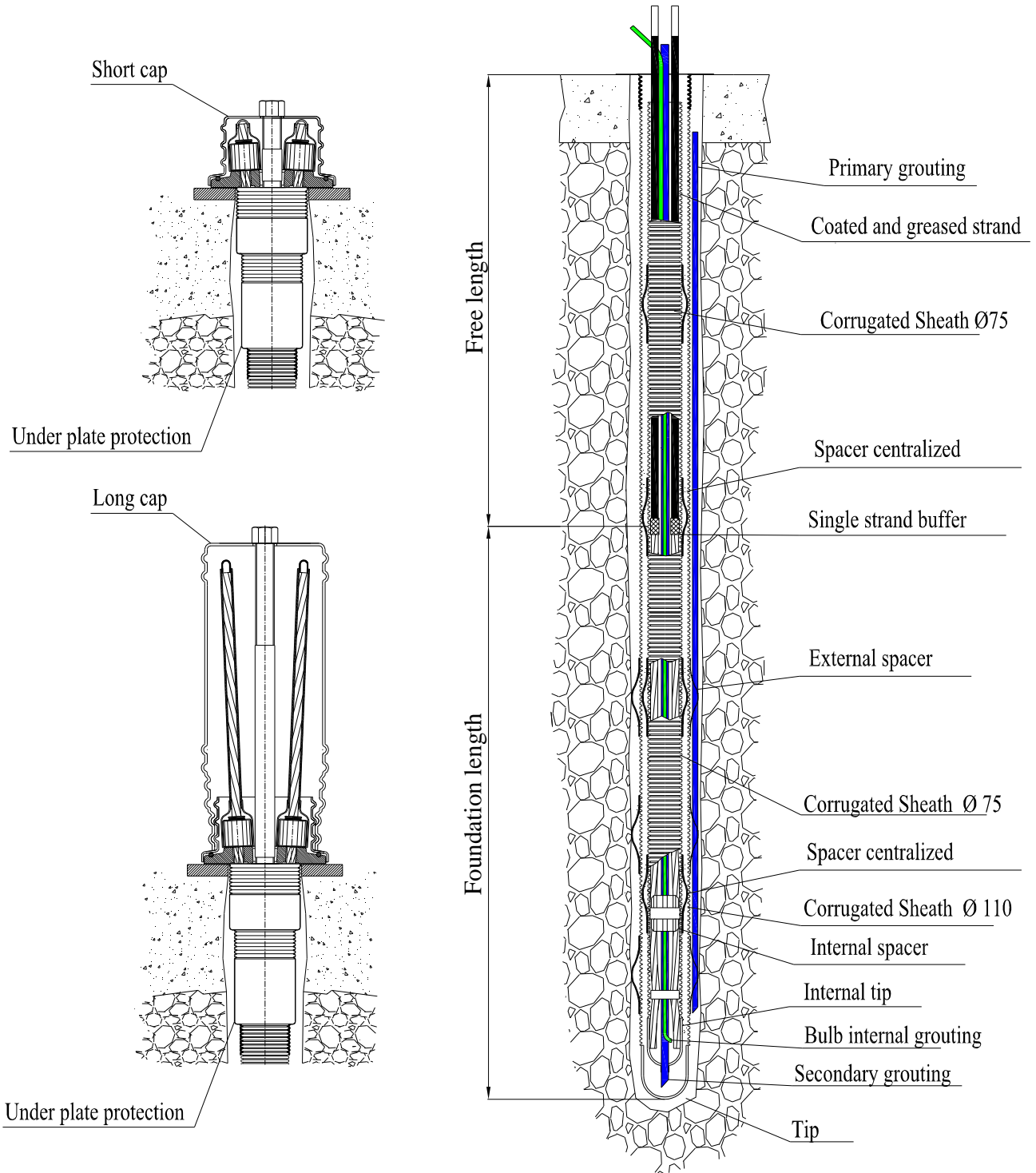
**TPE-03A GROUND ANCHOR DIAGRAM**  
(Installed with TTR-E type anchor)



**TPE-03A GROUND ANCHOR DIAGRAM**  
(Installed with TTM and TTM-F type anchor)



**TPE-03B GROUND ANCHOR DIAGRAM**  
(Installed with TTR-E type anchor)



**TPE-03B GROUND ANCHOR DIAGRAM**  
(Installed with TTM and TTM-F type anchor)

