



## SOLUTIONS FOR PENETRATIONS: ZEMENTOL WS spacer



### Description:

- The ZEMENTOL WS waterproof spacer has been developed to waterproof tie bolt holes efficiently.
- Due to its robust construction it performs two functions: spacer and tie point. The ZEMENTOL WS is immune to damage. The use of an auto-waterproofing, prefabricated part generates major time and cost savings. There is no need for any filling or gluing.
- ZEMENTOL WS is closed by inserting the plastic plugs, which have an additional rubber waterproofing ring.
- Large cones fixed at the extremities of the ZEMENTOL WS ensure lasting waterproofing of the tie points by extending the water flow path.
- The spacers are manufactured using high-performance plastic and are resistant to thermal loads, as well as to water or soil attacks on concrete.

### Material and components:

- The tube, two end pieces and two plugs per component are made out of HDPE.
- The sealing rings are made out of rubber.

### Size:

product type	length (in mm)
ZEMENTOL WS 250	250
ZEMENTOL WS 300	300
ZEMENTOL WS 350	350
ZEMENTOL WS 400	400

The length is equivalent to the diameter of the walls.  
Special-diameter tubes for on-site adaptation can be delivered.

### DELIVERY UNIT:

- Bag with 25 spacers.

### Installation:

- For all projects that use the ZEMENTOL<sup>®</sup> System, ZEMENTOL staff will close the spacers.
- Put a spacer tube on the tie rod while the shutter is opened.
- Close the shutters with installed reinforcements and tighten the shutters with tie rods.
- Remove the shutters and tie rods.
- Remove concrete residuals and dirt from inside the tube with a textile cloth. Do not use any sharp or hard objects for cleaning, since the sealing surfaces could be damaged.
- Insert plastic plugs into the tube.
- Knock in the plastic plugs using a wood or plastic cover until the plugs are flush with the adjacent area. Never knock the plugs in without a cover or they may be damaged.