

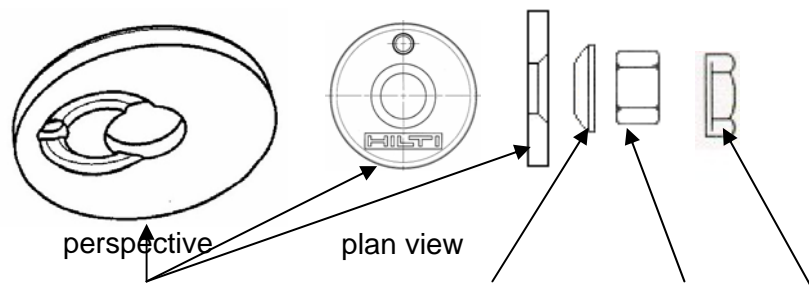
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Hilti Dynamic Set

If a multiple-anchor fastening is loaded towards the edge of a concrete member (shear load), the size of the clearance hole in the anchoring plate is very important. The clearance hole is always larger than the anchor diameter to ensure easy installation, so it is unlikely that the anchors will be uniformly loaded. Design methods take this fact into account by assuming that only the row of anchors nearest to the member edge takes up all the loads.

The second row of anchors can be activated only if there is considerable deformation of the anchoring plate, which often leads to an edge failure of the concrete member. The problem of the clearance hole increases if the loads are reversed (dynamic).

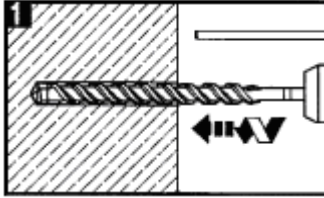
To make anchors suitable for reversing shear loads, Hilti developed the Dynamic Set. This consists of a special washer, which permits HIT injection adhesive to be dispensed into the clearance hole, a spherical washer, a nut and a locknut.



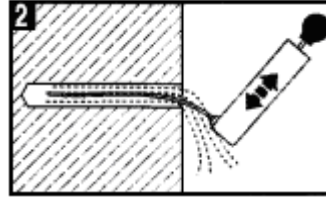
By using the dynamic set for static fastenings, the shear resistance is improved significantly. The unfavourable situation of only one row of anchors taking up all loads no longer exists and the loads are distributed uniformly among all anchors.

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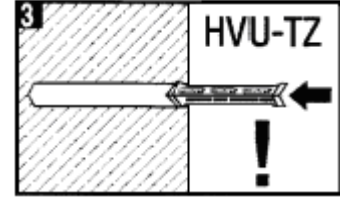
Setting instructions for the HVZ adhesive anchor.



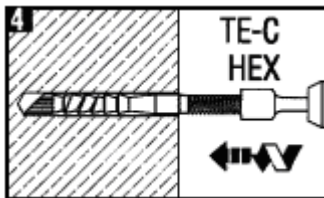
1 Drill hole to the correct depth and diameter.



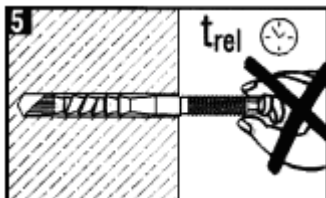
2 Clean the hole.



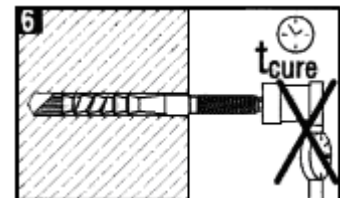
3 Insert the HVU-TZ capsule.



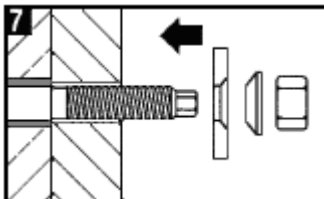
4 Drive in the HAS-TZ rod using the correct drive connection.



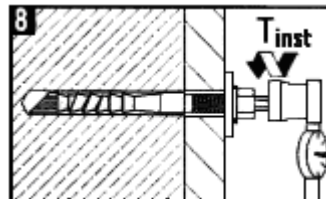
5 Wait before removing the adapter.



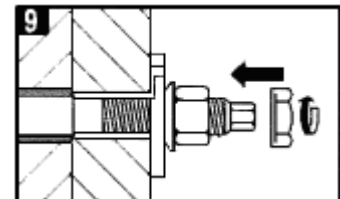
6 Wait until the full curing time.



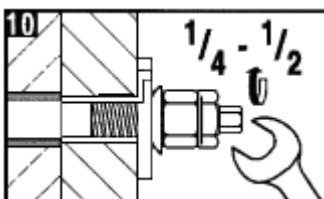
7 Fit the injection washer, the spherical washer and the nut.



8 Apply the correct tightening torque to the nut.



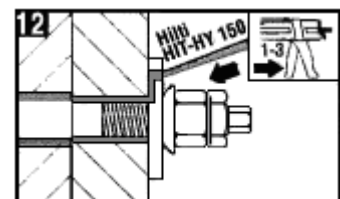
9 Fit the locknut.



10 Tighten the locknut by 1/4 to 1/2 turn.



11 Open the HIT-HY 150 resin and "waste" the first 2 trigger pulls.

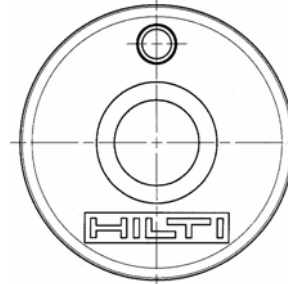


12 Inject the HIT resin through the hole in the top of the injection washer.

The above applies to other adhesive (resin) anchors and also to mechanical anchors from step 7 onwards. Steps 1 to 6 should be replaced with the standard installation instructions for the relevant anchor.

Washer Dimensions

Anchor size	Outside Diameter [mm]	Inside Diameter [mm]	Thickness [mm]
M10	42	13	5
M12	44	15	5
M16	52	20	6
M20	60	24.5	6



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IMPORTANT NOTES

1. The information and recommendations given herein are believed to be correct at the time of writing. The data has been obtained from tests done under laboratory, or other controlled, conditions and it is the users' responsibility to use the data given in the light of conditions on site and taking account of the intended use of the products concerned. Whilst Hilti (Gt. Britain) Limited can give general guidance and advice, the nature of Hilti products means that the ultimate responsibility for selecting the correct product for a particular application must lie with the customer.
2. All products must be used, handled and applied in accordance with current instructions for use published by Hilti (Gt. Britain) Limited.
3. All products are supplied, and advice given, subject to Hilti (Gt. Britain) Limited terms of business.
4. Hilti's policy is one of continuous development. We therefore reserve the right to alter specifications etc. without notice.
5. Construction materials and conditions vary on different sites. If it is suspected that the base material has insufficient strength to achieve a suitable fixing, contact the Hilti Technical Advisory Service.



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