



# EE10 – SINGLE FIX WALL TIE

**DESCRIPTION AND USE** The stainless steel double expansion remedial wall ties are manufactured from Neoprene and Austenetic 304 Grade Stainless Steel. The tie has been designed with neoprene expanders being more sympathetic to the material we are fixing to. It uses a newly designed torque nut to set both the inner and outer expanders independently. The inner fix is affected by a ribbed neoprene, which gives the best possible grip on the inner leaf. This design is an improvement over other ties where the expanders have to be continually taken out, pre-expanded and re-inserted to effect a fix.

**APPLICATION** An 11mm diameter hole is drilled through the outer leaf brick and into the inner leaf brick to a minimum, depth of 55mm. The hole should be drilled at a slightly inclined angle to avoid ingress of dampness (as recommended in BRE Digest 329) and if necessary, blow out to remove any loose dust and drillings. Care must be taken in selecting the correct length wall tie for the appropriate cavity width.

The EE10 is then inserted into the hole and located into the hole in the inner leaf. The EE10 should be left approximately 10mm inside the face of the outer brickwork. Once in place the setting tool, held in a suitable cordless drill, should be applied to the torque nut to expand the inner body. At a pre-set strength the torque nut will then run down the thread. If a pull test is required for the inner leaf only, it should now be carried out using the appropriate adapter and testing machine.

The outer leaf is loaded by continuing to set the nut with the drill and tool. If testing is required on the completed installation it is performed as described previously.

Typical loads achieved are in excess of 2.3kn.

Below are listed typical tensile failure loads under testing in accordance with BSI DD140 Part 1 and provide indicative values of the tie performance in various base materials. The couplet test produces results of a conservative nature compared to actual wall tests.

Base Material	Compressive Strength (N/mm <sup>2</sup> )	Tie Anchorage (Kn)
Common facing brick	19-25.5	7.01
Deep frogged brick	18-25.0	6.52
Dense Concrete block	7-19.3	3.12
Lightweight concrete block	2.3-3.2	1.78

**NOTE:** The above results are mean failure loads and are either the ultimate pull out load or the load at a deformation of 5mm, whichever occurred first.

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