



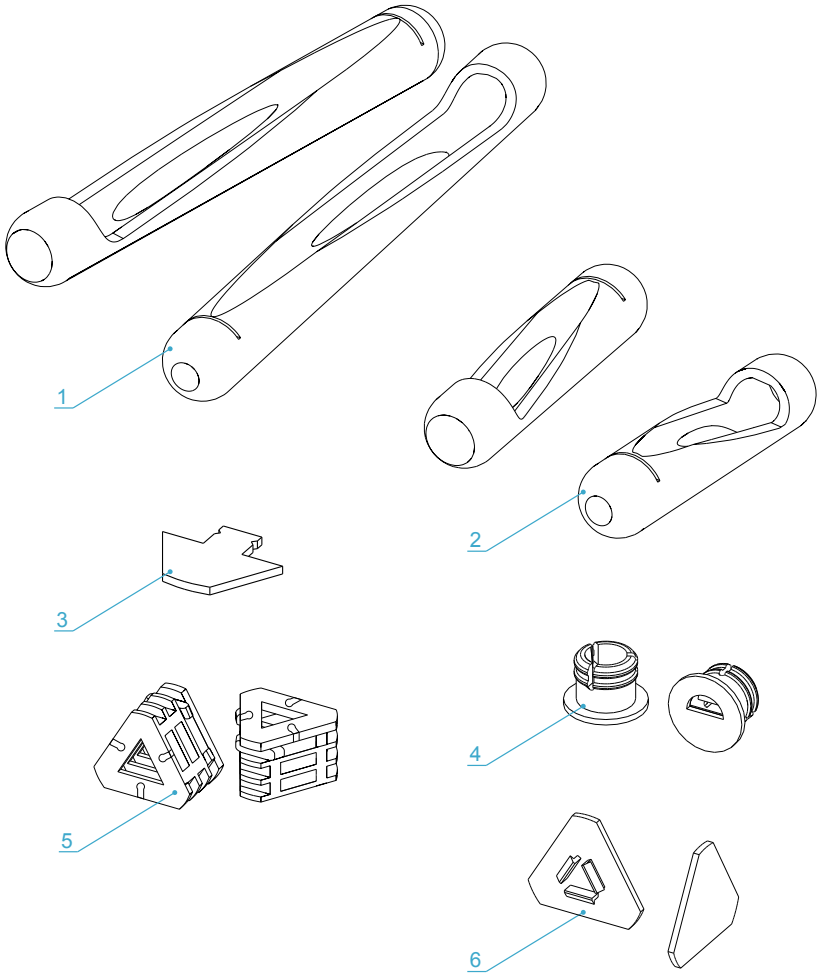
ZRT³ NOZZLE NUBS™
TECHNICAL SPECIFICATION



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ZRT³ NOZZLE NUBS & COMPONENTS



1. 150mm ZRT³ Nozzle Nub
3. Securing Clip
5. External wall cap

2. 75mm ZRT³ Nozzle Nub
4. Internal wall cap
6. Texture cap

STEPS FOR EXTERNAL INSTALLATION

STEP 1.

Drill a hole in the wall with a 22mm diameter drill bit, position each hole horizontally @ 200mm intervals.



STEP 2.

Extract dirt and debris from the hole using the cleaning tool contained within the handle of the applicator pistol.



STEP 3.

Place the applicator pistol, containing the ZRT³ Nozzle Nub magazine (setup for external walls), against the wall ensuring the Nub is aligned with the hole.



STEPS FOR EXTERNAL INSTALLATION

STEP 4.

Once aligned, push the handle forward until the handle and body baseplates are flush. This will insert the ZRT³ Nozzle Nub into the wall.



STEP 5.

Using the applicator pistol side handle, push an external cap into the hole until flush with the external facing.



STEP 6.

Clip a matching texture cap onto the secure external cap, completing the installation.



STEPS FOR INTERNAL INSTALLATION

STEP 1.

Remove the skirting board and drill XXmm diameter holes horizontally @ 200mm intervals.



STEP 2.

Drill a hole in the wall with a 22mm diameter drill bit, position each hole horizontally @ 200mm intervals ensuring alignment with skirting board holes.



STEP 3.

Extract dirt and debris from the hole using the cleaning tool contained within the handle of the applicator pistol.



STEPS FOR INTERNAL INSTALLATION CONTINUED

STEP 4.

Place the applicator pistol, containing the ZRT³ Nozzle Nub magazine (setup for internal walls), against the wall ensuring the Nub is aligned with the hole.



STEP 5.

Once aligned, push the handle forward until the handle and body baseplates are flush. This will insert the ZRT³ Nozzle Nub into the hole.



STEP 6.

Reposition the predrilled skirting board (step 1) and push the internal end cap into each hole, completing the installation.



Regulations

1. The Building Regulations 2000 (as amended) England and Wales.

Spirare's ZRT³ Nozzle Nub is in compliance with Building Regulations. Therefore using the ZRT³ NN in existing buildings is not a subject of these Regulations, but action to satisfy Requirements C4 and 7 but necessary for a 'material change of use' as defined in regulation 5 (a)

2. The Building Standards (Scotland) Regulations 1990 (as amended).

The Spirare's ZRT³ NN if used in accordance with this technical information / guidance will satisfy or contribute to satisfying the various Regulations and related Technical Standards listed below

Regulation 10	Fitness of materials and workmanship
Standard B2.1	Selection and use of material, fitting, and components and workmanship
Comment	The product is acceptable see section 9 of this Certificate

3. The Building Regulations (Northern Ireland) 2000

The use of Spirare's ZRT³ NN devices in an existing building is not controlled by these Regulations but action to satisfy Regulations 32 and C4 maybe necessary for a 'material change of use' under Regulation 9

Regulation B2	fitness of materials and workmanship
Comment	The product is acceptable. The product is odourless and does not give off harmful vapor See section 9 of this certificate

4. Construction (Design and Management) Regulations 1994 (as amended).

Construction (Design and Management) Regulations 1995. Information in this technical document may assist the installer, planner, designer, and constructor to address their obligations under these Regulations.

See Sections 6 Delivery and site handling (6.3), 12 installations

Technical Specification

5. Description

- 5.1. Spirare's ZRT³ NN is a ceramic component and is manufactured by a controlled batch – blending process, regular quality control checks, are carried out on the final product.
- 5.2. The ceramic component ZRT³ NN is packed in cardboard magazines for insertion into an applicator gun
- 5.3. The process involves delivering a set amount of ZRT³ NN into a depth of the holes in a horizontal line on the wall and into a series of holes in the brick, block, stone or mortar at the base of any existing wall.

6. Delivery and site handling

- 6.1 ZRT³ NN are supplied in a cardboard magazine. Each magazine holds 6 ZRT³ NN.
- 6.2 The product should be stored in a dry place
- 6.3 The product is not classed as an irritant under chemical (hazard information and packaging for supply) Regulations 2002 (CHIP 3)

Design Data

7. General

- 7.1 ZRT³ NN is satisfactory for use in accordance with BS 6576 : 1985, in existing:
 - (a) solid walls of brickwork, block, or masonry up to 500mm thick
 - (b) walls of conventional cavity construction, or
 - (c) walls of rubble-filled construction

to provide a pathway to remove unwanted moisture from existing walls and act against rising damp where there is no damp-proof course or where the existing damp-proof course has failed.

- 7.2 Re-plastering may be necessary to retain salts in the body of the wall to prevent damage to subsequent redecoration. Re-plastering specification is to use a renovation plaster mixture only that is suitable and satisfactory for this purpose of allowing the wall to breath.

8. Drying time

- 8.1 After treatment a 230mm solid brick wall previously affected by rising damp should normally dry out in 6 – 12 months, provided normal heating is used during the winter months. A thicker wall may take longer. Where hygroscopic salts are present the wall may not dry out completely therefore it might be recommended that re-plastering will prevent damage to internal decorations.

9. Durability

- 9.1 ZRT³ NN is made from ceramic, ceramic material are set and can remain functional in-situ for 30 years.

The lifetime performance of the product will enable walls to dry continuously. Ceramic is not adversely affected, by frost, heat , oil or chemicals.

INSTALLATION

10 Installation

- 10.1 Action with respect to flooring timbers.
Where a suspected timber floor is independently supported on sleeper walls, with an effective damp-proof course and showing no signs of dampness, these need not be treated (see figure 1)

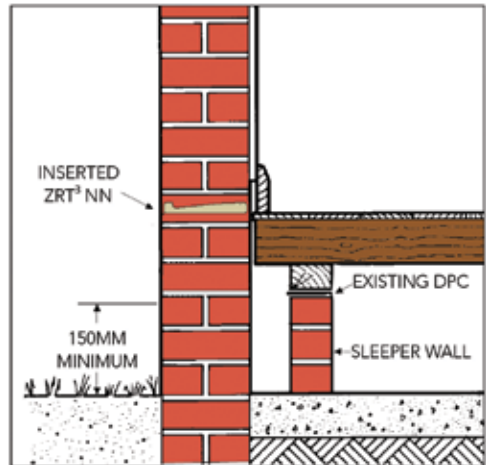


Figure 1. Suspended timber floor on sleeper wall

- 10.2 Where a suspended timber floor is supported on joists and /or a wallplate bearing on, or embedded in, the wall, there is a possibility of decay, particularly where concealed timbers are in contact with the damp wall. The condition of these timbers should be ascertained and remedial action taken if necessary. (see figure 2)

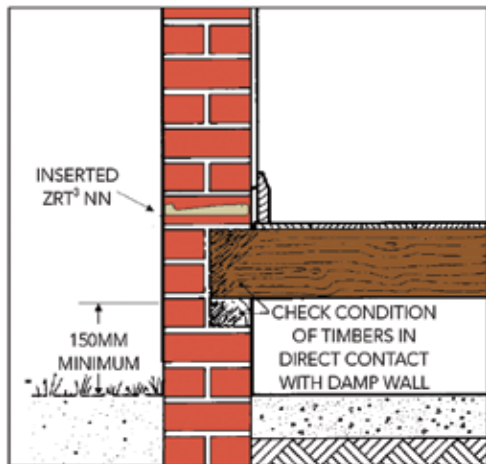


Figure 2. Check embedded timber for decay

INSTALLATION CONTINUED

- 10.3 If damage is limited to the joist ends, the floor may be reformed, using sleeper walls or joist hangers, to isolate the timber from the damp wall. (see figure 3)

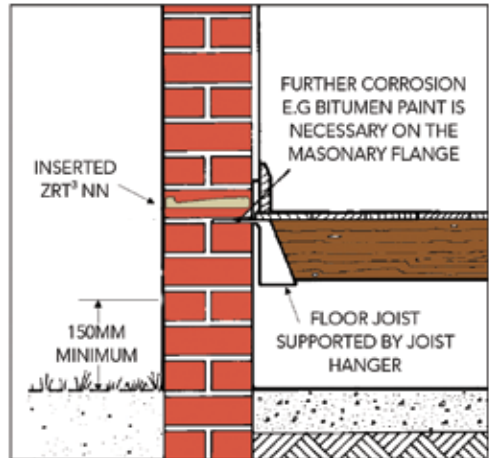


Figure 3. Isolation of timber joints from damp wall

- 10.4 If the timbers are sound, the existing floor maybe retained provided the damp-proof course is formed below the timber joists and /or wallplate. (see figure 4)

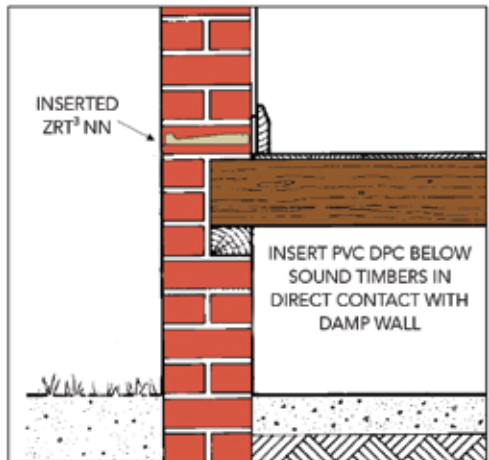


Figure 4. Insert pvc dpc below wallplate

11. Preparation

- 11.1 The course to be treated is chosen so that the position of the horizontal line for the installation of the ZRT³ NN is behind the skirting boards and as far, as practicable with the recommendations of BS 6576 : 1985 clause 4.3 and 4.4 (see section 10.4 of this document)
- 11.2 The internal walls on solid floors are treated as close to the floor as possible. The course chosen should therefore be behind the skirting board
- 11.3 Internal plastering affected by hygroscopic salts is removed from the area to be treated to a height of 300mm above the maximum level of the rising damp. Internal skirting and flooring is also removed and necessary, to expose the area for treatment.

12. Procedures

- 12.1 Holes 22mm diameter are drilled at the base line of the wall and at intervals of 200mm. The holes should be drilled straight through the depth of the wall: except on party walls which should only be drilled to a depth of 75 mm.
- 12.2 Solid walls of brick or stone should be drilled / treated from one side only, in a single operation. The selected mortar course is drilled at the prescribed centres to the appropriate depth (see table 1) Where it is not possible, advise should be sought from the certificate holder.

Table 1 Depth of hole required and ZRT³ NN combinations.

WALL THICKNESS	NUB COMBINATIONS
100 mm	75mm Nub + 15mm Cap
200 mm	150mm Nub + 15mm Cap
300 mm	150mm Nub + 75mm Nub + 15mm Cap
400 mm	2 x 150mm Nub + 75mm Nub + 15mm Cap
500 mm	3 x 150mm Nub + 15mm Cap

Note : Never drill all the way through on a single or double wall (cavity wall). Only drill to a depth of 75 mm.

PROCEDURES CONTINUED

- 12.3 For preference cavity walls should be treated from both sides but, if the thickness of the individual leaves permits, may be treated from one side, the drill must pass completely through the selected mortar course, then across the cavity and straight through the inner leaf. The cavity must be clear before treatment. Check that you can guarantee nub alignment across cavity. Insertion of ZRT³ NN can then be inserted from both sides of the wall.
- 12.4 Random stone or rubble infilled walls, the mortar course should be followed drillings may be made also into into porous stone.
- 12.5 The installation process consists of loading the magazine into the applicator gun, aligning nozzle opening with hole, and pushing handle forward to insert ZRT³ NN into the hole. As holes can vary in depth nubs are available in a variety of size. Nubs come in 75mm and 150mm and can be used in multiples to achieve various lengths eg 225mm = (75 + 150), 300mm = (150 + 150), 375mm = (150 +150 +75).

13. General :

Untreated walls

- 13.1 Any wall near a treated wall shall have all earth or rubble cleared away from treated wall. Also, external walls should be isolated by drilling 2 holes in the vertical position and inserting 2 ADNN one in each hole to form a ventilation moisture pathway to facilitate keeping the treated wall dry and protected.

Treated walls

- 13.2 Treated walls are left for a period of at least 14 days to allow initial drying out. Internal plastering is applied in accordance with the supporting instructions using renovating plaster only.

Bridging the damp-proofing course

- 13.3 Particular care is taken to avoid bridging the damp proof course, either internally or externally. Where external rendering has been removed, it is restored, ending in a bell casting above the injected damp proof course.

External wall finish

- 13.4 Holes in the external wall surface are finished with a caps. This cap allows ventilation to flow over the nub. An addition snap fit cover which is coloured and textured can then be applied to match the existing wall surface.
- 13.5 Other sources of dampness The original survey may have identified other possible causes of dampness, and measures to rectify these are taken as necessary.

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