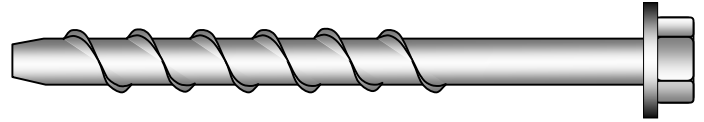


Self-tapping (Concrete) screw.



1 INTRODUCTION

CFA Sample Method Statements are the first stage of a programme of assistance provided by the CFA for supervisors and installers to make sure anchors are installed correctly*. This is a guide only. The manufacturer's installation instructions should always be followed.

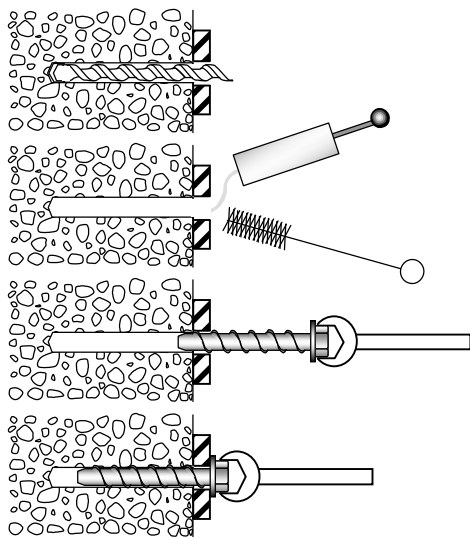
2 BASE MATERIAL SUITABILITY

Although called "Concrete screws" self-tapping screws also work well in hard masonry such as stone and solid brick. They may work in concrete blocks but due to low strength and the ease with which threads can strip in softer materials they should not be used in lightweight, thermal or hollow blockwork or soft brickwork.

3 INSTALLATION

A typical procedure is outlined below. Always follow the manufacturer's instructions.

Hex bolt type (A) Also relevant to types B, E & F

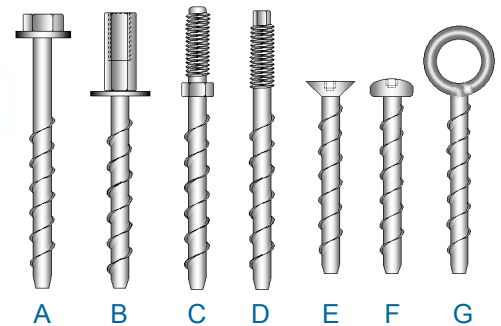


Drill hole through the fixture to correct diameter and depth

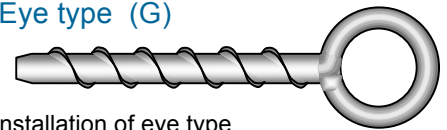
Clean hole thoroughly by blowing AND brushing

Insert the anchor through fixture & screw into hole until bolt head is firmly seated against the fixture.

Tighten* by no more than ¼ turn

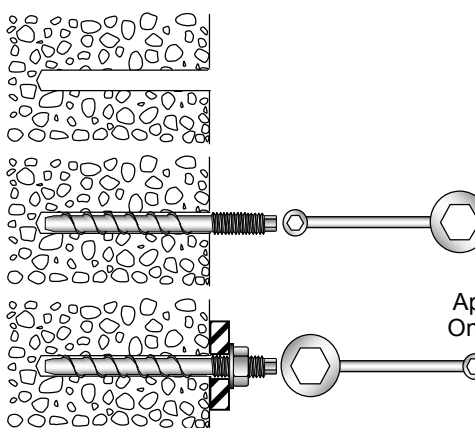


Eye type (G)



Installation of eye type self-tapping screws is simple. Drill hole to recommended diameter and depth. Clean hole. Screw in anchor to recommended depth.

Threaded stud projecting type (D)



Prepare the hole as above

- drill to the correct diameter & depth
- clean thoroughly

Insert the screw into the hole until the thread is level with the surface

Apply fixture, nut and washer. Once nut is firmly seat against fixture tighten by no more than ¼ turn

Projecting stud with nut (C)

This configuration is not suitable for clamping down a fixture.



Installation of this type of threaded stud anchor is also simple. Drill hole to recommended diameter and depth. Clean hole. Screw in anchor until nut is firmly seated against the substrate - tighten by no more than ¼ turn.

Other aspects

Anchor positioning

The manufacturer's recommendations regarding close edge distances and anchor spacing distances should always be followed.

Hole depths

Hole depths are often quoted for the maximum fixture thickness. If thinner fixtures are used the hole depth must be increased pro rata.

Clearance hole diameters in fixtures

Allow +1mm on drill diameter

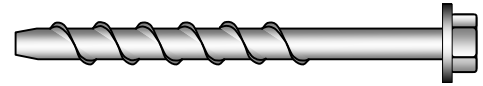
Drill hole diameter and screw designation

Most manufacturers refer to the drill hole dia in their designation but not all – check hole diameter before installing.

*Tightening torques

Some manufacturers quote tightening torques but these are for the purpose of setting impact wrenches for installing multiple fixings in concrete. It is a maximum torque which should not be exceeded and is not appropriate for other, weaker materials. Once the screw is firmly seated against the fixture, with no gap, tightening by only ¼ turn will clamp the fixture.

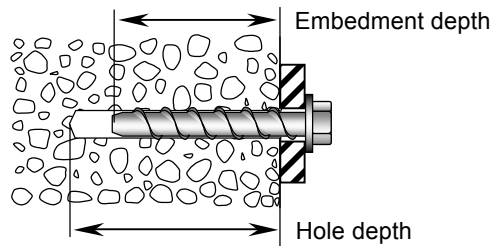
CFA Sample Method Statement: Self-Tapping (Concrete) Screws



Information you will need:

Anchor specification	Make
	Type
	Order code
	Finish
Diameter mm
Length mm
Fixture thickness mm
Drill hole diameter mm
Clearance hole in fixture mm
Embedment depth mm
Hole depth in substrate mm

Information highlighted in red is particularly important.



Equipment you will need:

Drilling machine SDS+	
Drill bit	Diametermm
	Working length mm
Blow out pump	
Cleaning brush	
Ring spanner or ratchet with deep reach socket	Width across flats mm

*This Sample Method Statement is one of a series available free of charge from the **Construction Fixings Association**.
 A more comprehensive **Guidance Note: Self-tapping Concrete Screws** is available from the CFA website at www.fixingscfa.co.uk.
 Training courses are also available for specialist contractors to a syllabus approved by the CFA leading to certification as competent installers of anchor systems.
 For more details logon to www.fixingscfa.co.uk and go to "Safer Installations" page.
Note: This guidance is given in good faith, however the **Construction Fixings Association** can accept no liability for adverse consequences arising from this guidance being followed.

