Installation Guide

KSN Anchors

KSN Anchors for wall to slab connection

KSN Anchors are used to provide reinforcement continuity at joints between concrete cast at different times, in particular for wall to slab connections. Reinforcement continuity systems contribute to the stability of a structure and therefore it is essential that the correct installation procedures are followed.

Prior to Installation

! The handling precautions shown below should be taken in addition to normal handling precautions to avoid physical injury. Ancon Ltd cannot be held responsible for any injury as a result of using our products, unless such an injury is a result of our negligence.

Handling: KSN anchors for wall to slab connections are delivered to site pre-assembled with a tapered timber strip. The anchors are held in position by countersunk socket head cap screws. Tape is provided on the front part of the strip to protect the socket head from concrete ingress.

The product should be handled with gloves by the timber strip.

Corresponding BARTEC PLUS threaded continuation bars should be handled with the same handling precaution as standard reinforcement bars, with additional care taken not to damage the threaded end.

Due to the weight of some of the products, they may require two men handling depending on installation position.

Storage: The timber strip is treated with a sealer to protect it from water; however the product should be protected from frost while stored and from water when possible.

! Ancon KSN anchors must be installed in accordance with this guidance. If in doubt, ask.

Before installation, any loose anchors should be tightened to the timber carrier to ensure that the anchors will not move during concreting. The above handling precautions in addition to normal handling precautions to avoid physical injury apply and personal protection equipment should be worn.

The tape on the face of the timber strip should not be removed as it will prevent concrete ingress in the hex socket.

A formwork release agent should be applied to the timber strip and any spillage must be removed from the anchors.

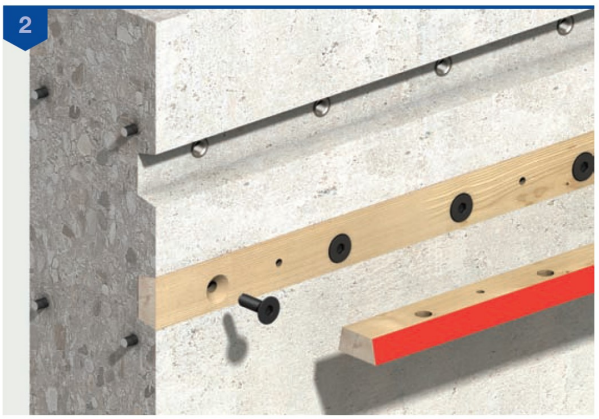
The omission of the release agent will prevent the easy removal of the timber strip at a later stage and if the timber strip cannot be completely removed, the capacity of the joint may be compromised.

Tools required for installation:	M10 Stud/bolt to push timber away from concrete
KSN 12 - 10MM a/f Allen Key / Hex Head Wrench	Hand Wrench to suit continuation bar diameter
KSN 16 - 12MM a/f Allen Key / Hex Head Wrench	**Other requirement:**
KSN 20 - 14MM a/f Allen Key / Hex Head Wrench	Formwork release agent

The timber carrier supporting the anchors is positioned against the formwork at the required location of the adjoining slab, orientated to the instructions on the label which indicates that the coloured side should face up. The timber is fixed to the formwork with nails.

! It is important that the strip is set to the correct position, the right way up and fixed to prevent any movement during concreting to ensure adequate cover to the continuation bar and to comply with the design.

Other wall reinforcement should be installed to the Engineer's details, based on Ancon's recommendations. The concrete is then cast and once it has reached sufficient strength, the formwork is removed to reveal the face of the timber strip with the protective tape.



When installation of the continuation bars is required, the tape is removed to reveal the socket head cap screws which can be unscrewed using the corresponding Allen key (supplied with each order). We recommend keeping the screws in place until installation of the continuations bars. Three M10 tee nuts have been inserted in each timber strip in order to allow for the use of M10 studs/bolts to help push the

! The KSN anchors are to be used only with Bartec Plus continuation bars provided by Ancon.

The Bartec Plus continuation bar thread should be checked to be free of any dirt and be positioned at the anchor location and rotated to fit into the anchor thread. The connection should then be tightened by using a hand wrench. No torqueing is required.

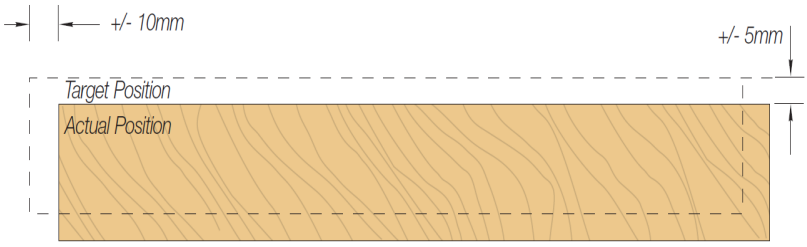
After tightening there should be no more than 2-4mm of thread exposed for sizes KSN12 and KSN20 and no more than 10mm for size KSN16.

Slab reinforcement should be installed to the Engineers details.

The slab is cast to complete the application.

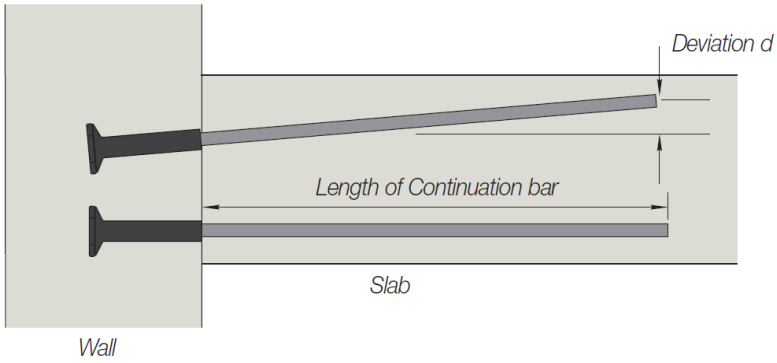
Installation Tolerances

Timber Anchor Carrier Setting Out Deviation Allowances



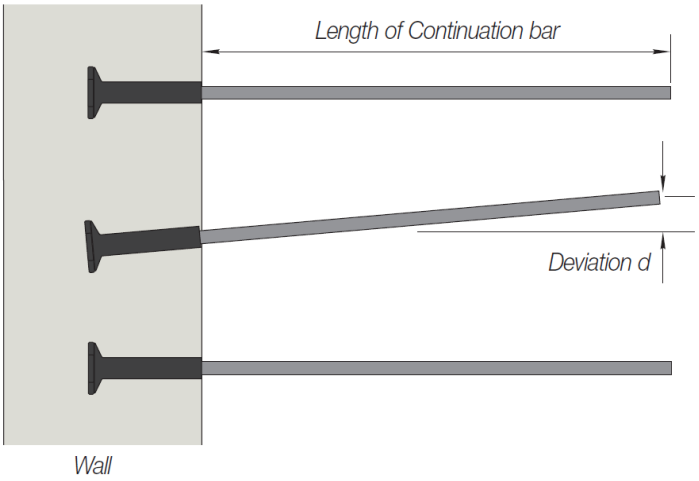
Vertical Transverse Section Alignment of Anchor Side View

Length of Continuation Bar (mm)	Deviation d
700	+/- 2mm
1000	+/- 3mm
1500	+/- 5mm



Horizontal Transverse Section Alignment of Anchor Plan View

Length of Continuation Bar (mm)	Deviation d
700	+/- 10mm
1000	+/- 12mm
1500	+/- 20mm



Summary

KSN anchors for wall to slab connections:

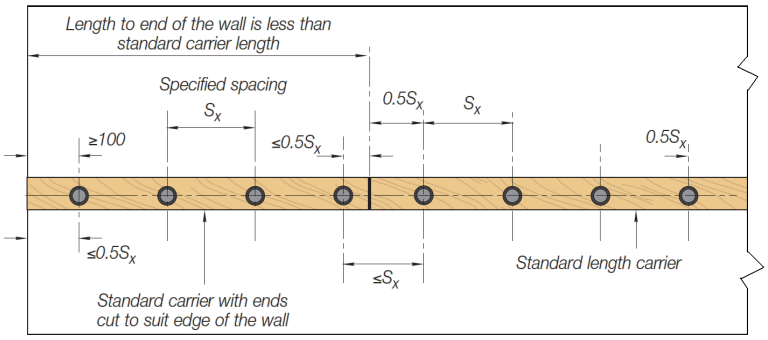
1. Apply release agent to the timber strip.
2. Position the timber strip supporting the anchors the right way up (coloured face up) as indicated on the label against the formwork according to Ancon installation tolerances to provide adequate cover to the continuation bar.
3. Fix timber strip to the formwork with nails or tie it to the reinforcement.
4. Fix the rest of the wall reinforcement to the Engineer's detail based on Ancon's recommendations.
5. Cast the concrete wall.
6. Remove formwork when concrete has reached sufficient strength.
7. Remove tape to reveal head cap screws.
8. Remove socket head cap screws using hex key.
9. Remove timber strip.

Guidance for cutting standard length anchor carrier

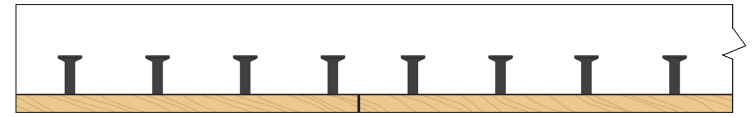
In some instances, at the end of a run of anchors for example, a non-standard carrier length may be required. In order to achieve this, the standard timber carrier may be cut to suit, under the following conditions:

- Anchor carriers are to be installed end to end without any gaps between them at all locations
- The specified spacing between anchors must never be exceeded
- The actual anchor spacing can be reduced to below the specified spacing but with a minimum of 150mm
- Minimum edge distance should be 100mm

Cut at the end of a run



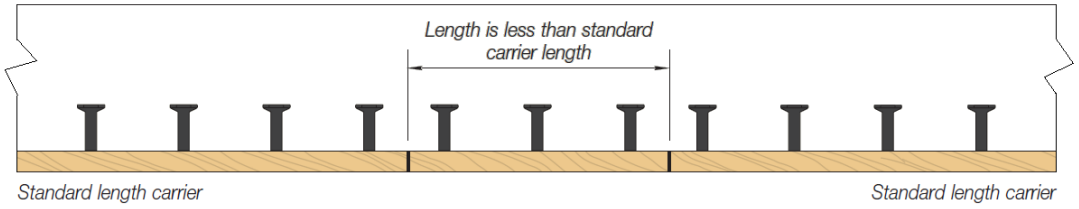
Standard Length Carrier



Standard carrier with ends cut to suit edge of the wall

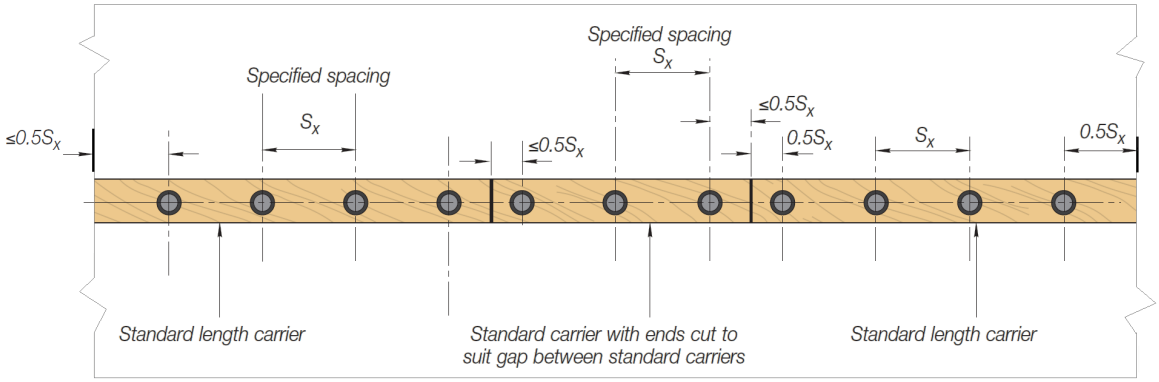
Plan View

Cut at the middle of a run



Standard carrier with ends cut to suit gap between standard carriers

Plan View



Wall Elevation