

## Installation Guide Cast-In Channels

### Ancon Cast-In Channels

Ancon cast-in channels are normally supplied in 3000mm lengths with welded anchors, nail holes, and polystyrene infill. Cast-in channels provide a tolerance when fixing to concrete. Incorrect installation is likely to result in expensive remedial work which may result in bolted fixings.

All channels are supplied with nail holes to aid the fixing of the channel to the formwork. All such holes need to be utilised (except with Omega Channel), to prevent excessive ingress of concrete fines between the formwork during casting. Channels can also be fixed to the formwork using 'T' head bolts, nuts and washers.

30/20 Channel is supplied with plastic end caps. They should be removed where channels are butted together. End Caps should always be in place where channels are not butted.

### Minimum Edge Distance

Care should be taken to ensure that the dimension from the centre of the channel to the edge of the concrete is not less than the minimum edge distance shown below. The channel must be lined and levelled correctly. In every situation, care must be taken to ensure a good fit is obtained between the face of the channel and the formwork.

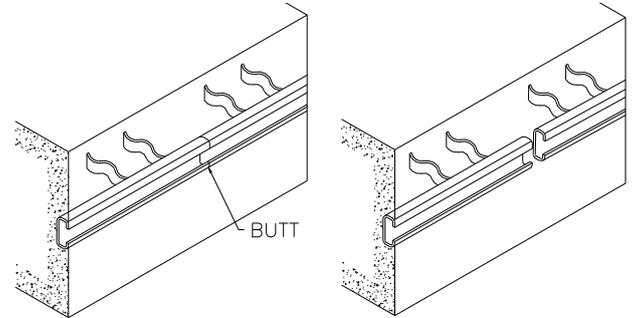
Channel	Min. Edge Distance 'e'
54/33	160mm
49/30	150mm
41/27	100mm
40/25	100mm
30/20	75mm
38/17	75mm
28/15	50mm
21/18 (Omega)	50mm

### Installation of 21/18 Omega Channel

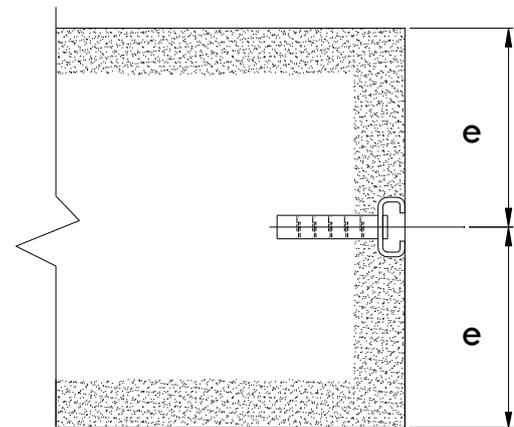
Ancon 21/18 is a shallow self-anchoring channel, and care must be taken during installation. The channel is filled with expanded polystyrene to help prevent the ingress of concrete. Nail holes to allow fixing to timber formwork are positioned at 150mm centres in 3000mm channel and 100mm lengths have two nail holes.

Nails 30mm long with a plain shank should be installed perpendicular to the channel to ensure the easy removal of the timber formwork and the retention of the channel in the concrete. 100mm long Omega is fixed with two nails. 3000mm long Omega is nailed at each end and then at 300mm centres.

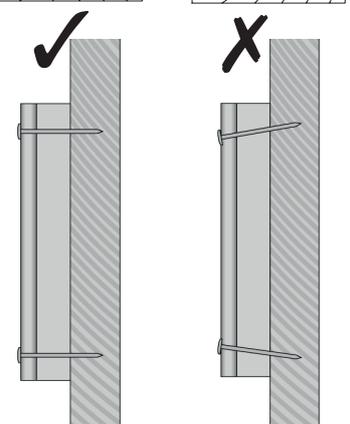
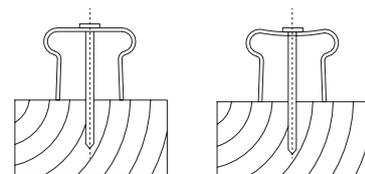
The concrete should be fully compacted around the channel to eliminate any voids. Sufficient time must be allowed for the concrete to attain enough strength to retain the channel before striking the formwork. In very cold weather it may be necessary to allow extra time.



✓ **Correct Installation**      ✗ **Incorrect Installation**



**Minimum Edge Distance**



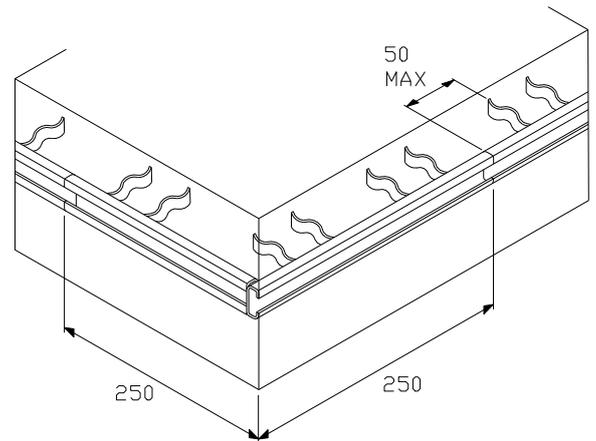
**Nailing Omega Channel**

## Welded Fabrications

Where channels with welded anchors are cut on site, it is important to ensure that there is an anchor within 50mm from the end of the channel. A distance greater than 50mm will reduce the load carrying capacity of the channel.

Where horizontal cast-in channel is used in conjunction with Brickwork Support Systems, all external corners must incorporate a Welded Corner Fabrication. Release oil must not be applied to either the channel or the channel anchors.

When the concrete is poured, care should be taken to ensure that the concrete is fully compacted around the back of the channel and especially adjacent to anchors. After the concrete has cured and the formwork removed, the formwork nails should either be cut off or bent away from any tie or T head bolt.

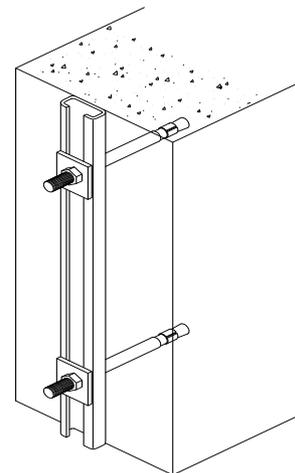


**Welded Corner Fabrication**

## Channels for Surface Fixing (Face Fixing)

The 38/17 and 28/15 channels are normally supplied plain backed for surface fixing to either concrete or steelwork. When bolting channel to concrete or steelwork it is important to utilise all fixing holes, incorporating the square washer provided and ensuring its correct orientation to achieve the allowable loads (see drawing opposite). Bolt and washer specifications are shown below.

Channel	Bolt Dia.	Washer
38 x 17	M10	30 x 30 x 3
28 x 15	M8	25 x 25 x 3



**Face Fixed Channel**

## Safety Precautions

Ancon stainless steel products are produced from sheared plate. As with all such industrial fabrications, these may present sharp edges. **Suitable personal protective equipment should be worn at all times during handling and installation.**

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The Construction applications and details provided in this guide are indicative only. In every case installation should be entrusted to appropriately qualified and experienced persons. Normal handling precautions should be taken to avoid physical injury. Leviat cannot be held responsible for any injury as a result of using our products, unless such injury arises as a result of our negligence.