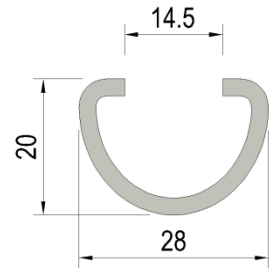


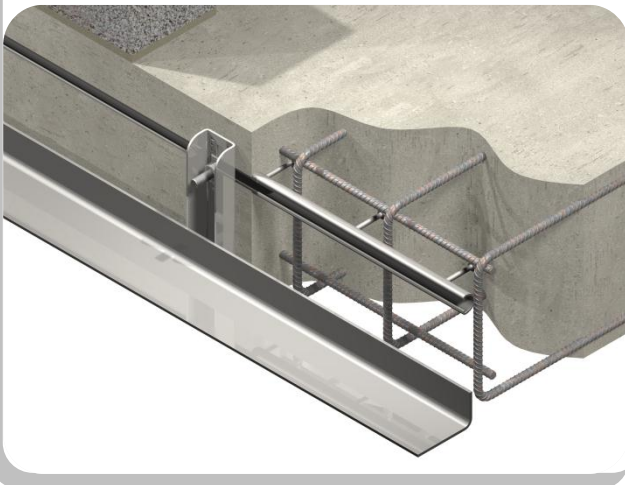
# ACS 31/21 Curve

Worldwide Patent Pending & Registered Design 001792227-0001/2



## Background

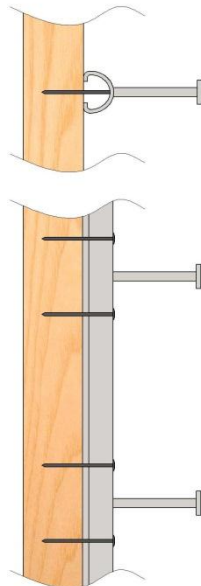
The ACS Curve, Cast in Channel and T Head Bolt Assembly is a unique patented system, designed to provide support and/or restraint to secondary products that are fixed back to a concrete structure without the need for drilling and post-fixing. The channel provides continuous adjustment along its length via the Curve T Head Bolt allowing for normal site tolerance and disassembly as appropriate. The system has been designed specifically to suit Masonry Support and Windpost applications but is a multipurpose, medium duty channel that can readily be used in various static loading applications across a range of industries. The Curve system is typically supplied in standard three-metre lengths but can be supplied in short lengths or special welded corner, angle or radiused fabrication details to suit specific site requirements.



## Installation

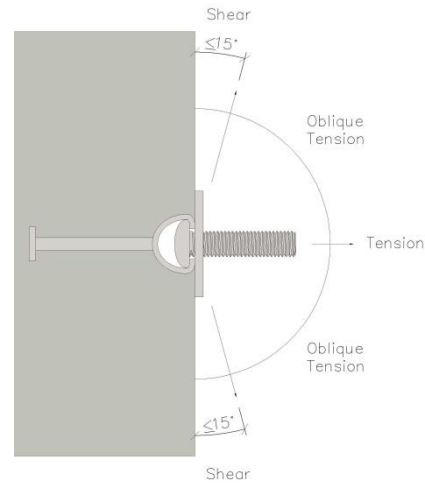
ACS 31/21 Curve is typically supplied in 3m lengths complete with channel anchors, nail holes and an expanded polymer foam infill, which is intended to prevent the ingress of concrete during construction. To reduce the potential for this ingress, the channel must be fixed to the formwork using all nail holes provided.

The load capacity of the channel is subject to its edge distance and spacing. The minimum and nominal spacing's and edge distances and the systems associated load capacities can be seen in the following tables.

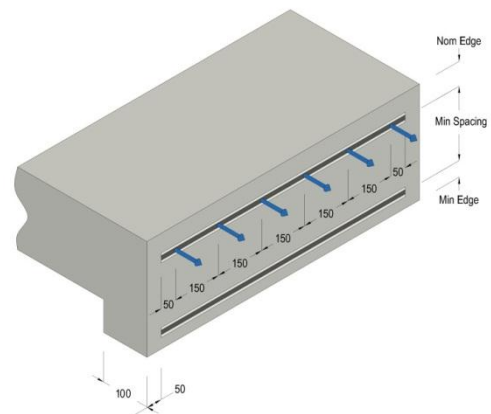


## Allowable Loads Table

The allowable loads table provides the capacity for both direct tension and shear. Combined loads must not exceed either of these capacities and must be subject to a combined load check during calculation.

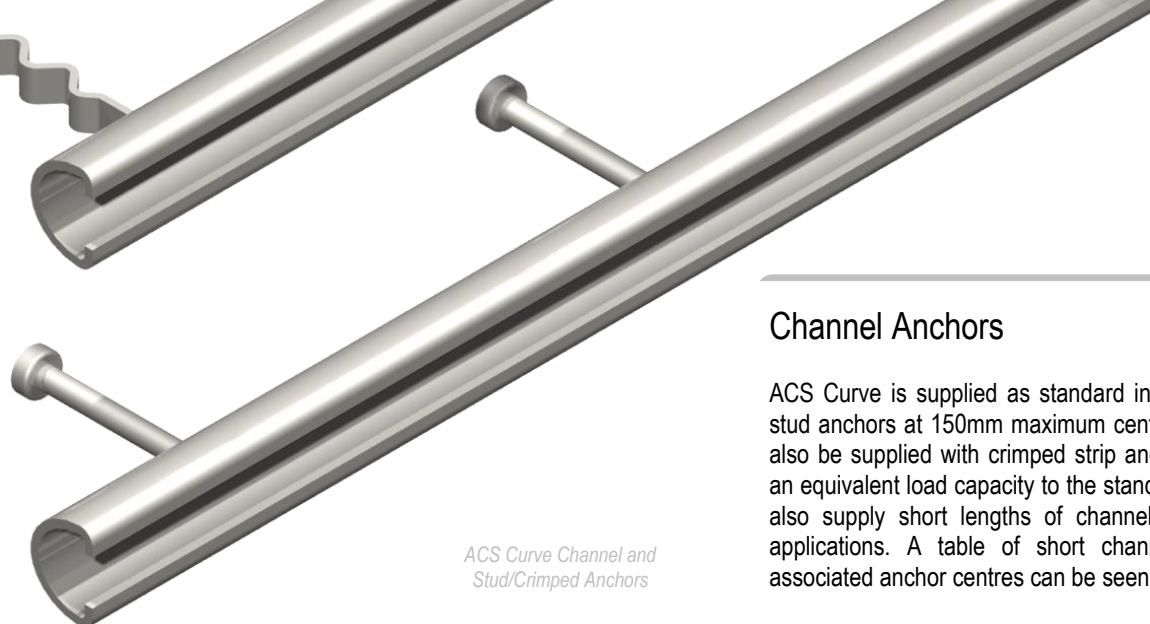


Channel Position	Edge Distance (mm)	Tension (kN)	Shear (kN)
Nominal Edge Distance	75	8.5	8.5
Minimum Edge Distance	60	6	6



## Minimum Channel Dimensions

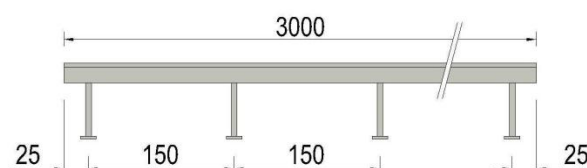
End Distance (mm)	Min Spacing (mm)	Concrete Depth (mm)
50	150	100



ACS Curve Channel and Stud/Crimped Anchors

## Channel Anchors

ACS Curve is supplied as standard in 3-metre lengths with stud anchors at 150mm maximum centres. The channel can also be supplied with crimped strip anchors, which provides an equivalent load capacity to the standard system. ACS can also supply short lengths of channel to suit specific site applications. A table of short channel lengths and the associated anchor centres can be seen below.



## T Head Bolt Installation

The Curve T Head Bolt is installed into the slot between the lips of the channel and rotated through 90°. During this operation, the bolt engages with the curved profile of the channel and is driven forward in the channel until the bolt locks into the front of the channel allowing ancillary components to be fixed. The bolt has a slot feature on the end of the shank to illustrate its orientation, which should be approximately vertical in its final fixed position.

## Short Channel Lengths

Short channel lengths can be supplied to suit site specific applications. Alternative lengths over 350mm can be supplied in increments of 150mm with anchors spaced at 150mm accordingly or standard 3m lengths cut on site to suit.



Channel Length (mm)	Number of Anchors per Length	Anchor Spacing (mm)
100	2	50
150	2	100
200	2	150
250	3	100
300	3	125
350	3	150

All Curve channels are supplied with an anchor fixed nominally 25mm from the end to ensure that the end cantilever is kept to a minimum. When cutting long lengths on site, the channel should be cut 25mm from the centre of the last anchor to prevent excessive deflection in the end cantilever.

## ACS Curve T Head Bolt

The ACS Curve T Head Bolt is designed, manufactured and tested in line with the guidance of BS EN ISO 3506-1:2009, Mechanical Properties of Stainless Steel Fasteners.

Bolt Size	Bolt Length (mm)	Tightening Torque (Nm)	Material	Property Class	SWL Tension (kN)	SWL Shear (kN)
M12	50	50	A2 (304)	70	30	26