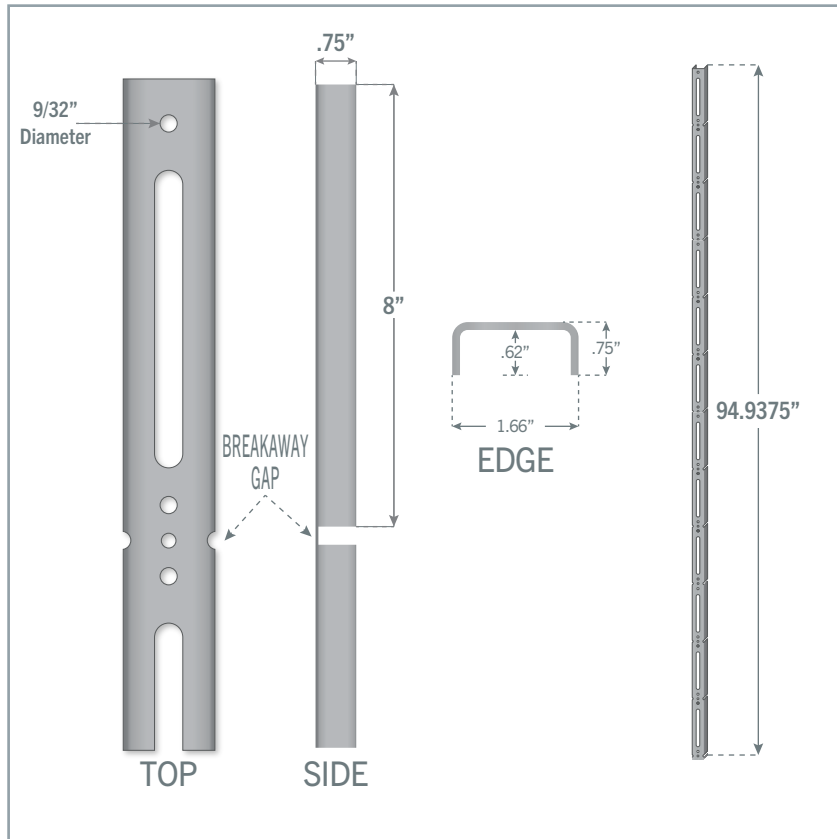


MASONRY ANCHORS

300-C SLOTTED CHANNEL



TECHNICAL CERTIFICATION MATERIAL

#300 Mill Galvanized, #300 Plain Finish
ASTM A1008 / ASTM A1008M

 Yield:
20,000 p.s.i. min. to 40,000 p.s.i. max.

#310-SS Stainless Steel Type 304 (ASTM A480 / ASTM A666)

 Yield: 30,000 p.s.i. min.  Tensile Strength:
75,000 p.s.i.

GALVANIZING

#310-MG Mill Galvanized: ASTM A653/A653M (0.6 oz/ft²)
#310-HDG Hot Dip Galvanized: ASTM A153 (1.5 oz/ft²)


MORE INFORMATION


DESCRIPTION

The #300-C Slotted Channel is used to anchor masonry to structural steel members. When welded, they provide 12 slots, each 5-7/16" long by 9/16" wide. The slot accepts Type A, B, and C standard inserts, though any custom designed insert can be made to order.

The Slotted Channel and Masonry Insert allow for secure connection, while still providing movement between the masonry and steel.


The 300-C has a gap between every section allowing the fabricator to reduce the length to fit the space available.


 9/32" diameter holes for connecting powder actuated fasteners (2 per pc.)


 Overall Dimensions:
Length 94.9375"
Width 1-9/16"

 Slot Dimensions:
Length 5-7/16"
Width 9/16"
(5" vertical travel)

Material Options:

 - Carbon Steel, Plain Finish
- Carbon Steel, Hot Dip Galvanized (Made to Order)
- Stainless Steel

 100 pieces per piece

 Compatible Inserts:
- Type A, Type B, and Type C



300-C Continuous Slotted Channel

Pull Testing

Tensile and yield strength test results are shown on the previous page. Beyond this pull tests were performed to determine an estimate of the load that would produce failure. This test simulates some of the working conditions of the Slotted Channel Masonry Anchor.

#300-C Continuous Slotted Channel works in conjunction with an insert to secure masonry to a steel structure. Insert types can be found on our website;

<https://www.thesteelsupplyco.com/slotted-channel>

The standard Slotted Channel should be connected to the I-Beam with 6 welds as shown in Fig. 1.

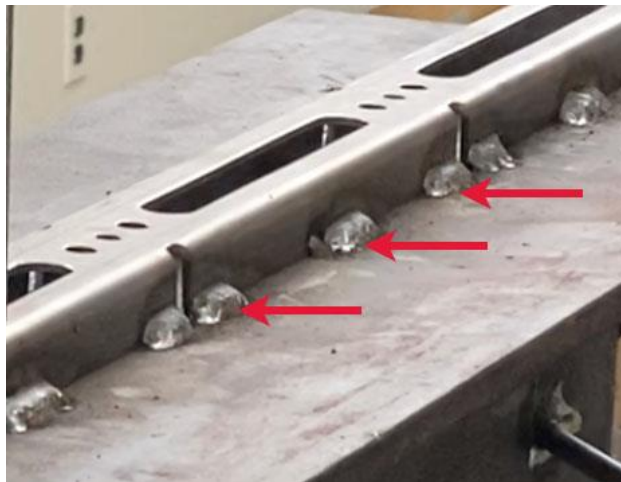


Fig. 1

Six welds per section, three per side, provide a secure connection and eliminate deflection under load.

The fabricator can elect to employ 4 welds, like the 8" Slotted Channel shown in fig.2. The Slotted Channel will remain secure to the I-Beam however under enough pressure the center could begin to flex and contribute to failure of the insert. Fig. 3.

Note: In all cases instructions for welding shown on the shop drawings should be followed.

Fig. 2



Fig. 3



Note the 8' Slotted Channel has breaks in the sides between every 8" section. This allows the fabricator to remove any unnecessary length manually. Fig.4. The channel is bent back and forth as shown 4 to 5 times and the process takes approximately 10 seconds.

Fig. 4 Break Away Sections



The inserts used in this test were actual stock, Type B. They were clamped from above and located in the center of the slot, where the Slotted Channel would be the most vulnerable. Fig. 5.

Shown in figure 5 is insert Type B # 351-10. It is 12 gauge steel x 1-1/4" wide. The insert is pulled up so it is in full contact with the underside of the slotted channel, but with minimal pressure. More significant than the overall width is the tab width. Per the illustration in Fig. 5a, sample tab width ranged from 0.460" to 0.500" wide.

Pressure was applied gradually at a 90° angle as shown and increased until failure occurred.

Fig. 5



Fig. 5a

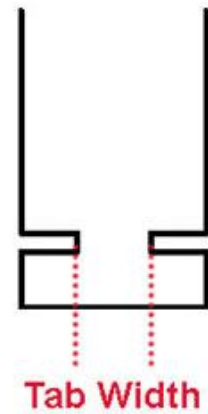


Fig. 6. As the test progressed and pressure gradually increased the area of the insert at the tab began to elongate. In actual service there should not be a situation where enough force is exerted on the insert to cause permanent elongation. At this point there is no compromise in the Slotted Channel.

Fig. 6



What cannot be seen in figure 6 is that the tab below the slot begins to deform and become wedge shaped.

Fig. 7. As the Insert elongates and the tabs narrow they focus pressure at the edge of the slot, rotate and distort further, and begin to pull through.

Fig. 7



Figure 8 shows the collapsed tabs of the inserts.

Fig. 8



The Peak Load reached in the test of #300-C Continuous Slotted Channel was 1,733 lbf.

Test results are shown below. Fig. 9.

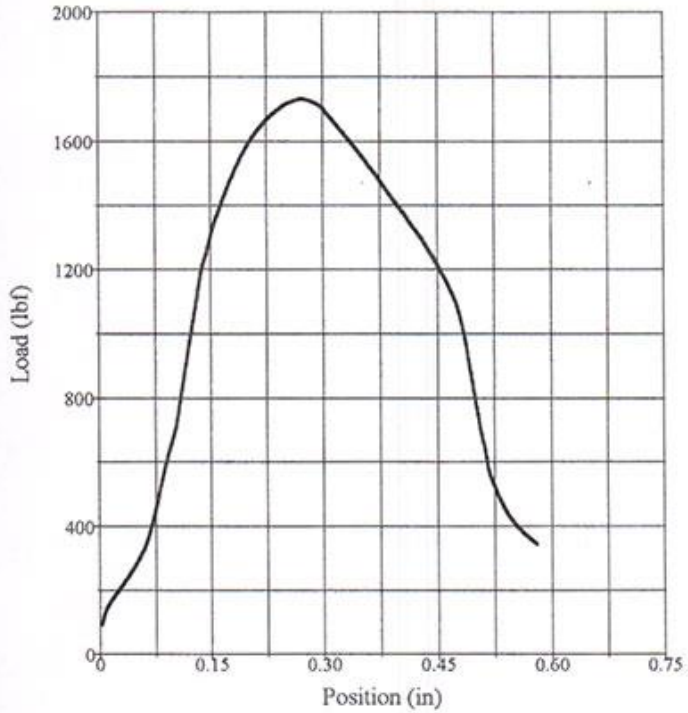
Note the load was applied directly at 90° and this remained consistent with no other movement taking place. In true field conditions there would most likely be force exerted vertically or horizontally that would also affect these results.

Additional information and Video Clips of these tests can be found on our website;

<https://www.thesteelsupplyco.com/slotted-channel>

This is presented for information purposes only. The Fabricator should follow all shop drawing and engineering instructions.

Fig. 9



Test Results

Width:	0.5000 in
Thickness:	0.1000 in
Area:	0.0500 in ²
Tensile Strength:	34660 psi
Peak Load:	1733 lbf
Total Elongation:	0.0000 %
Pretest Punch Length:	2 in
Posttest Punch Length:	2 in

Test Summary

Counter:	60553
Elapsed Time:	00:02:19
Job Number:	A50471
Specimen Identification:	#300C Continuous Slotted Channel 6 We
Procedure Name:	Tensile Strength Only_Flat
Start Date:	03/17/2020
Start Time:	10:59:16 AM
End Date:	03/17/2020
End Time:	11:01:35 AM
Workstation:	Long Island
Tested By:	NICHOLAS