

PRODUCT SPECIFICATION

12 & 14 GAUGE SQUARE POST

MATERIAL: Posts shall be manufactured by S-Square Tube Products, Inc. Steel posts furnished shall conform to the Standard Specification for Hot Rolled Carbon Sheet Steel, structural quality, ASTM A1011 (previously A570). Posts shall conform to the Standard Specification for Electric-Resistance Welded Metallic-Coated Carbon Steel Mechanical Tubing, ASTM A787.

FINISH: The square sign post tubing shall be hot-dipped galvanized conforming to ASTM specification A653 designation G90. The weld is Zinc-Coated after scarfing operation.

SHAPE: The cross section of the post shall be square tubing formed of 12 or 14 gauge steel, carefully formed into size, and induction welded in such a manner that neither weld nor flash shall interfere with telescoping properties.

HOLES: Holes shall be 7/16" ± 1/64" in diameter on 1" centers for the entire length of the post. Holes shall be on the center line of each side in true alignment and opposite to each other.

YIELD STRENGTH PROPERTIES:
60,000 PSI minimum

THICKNESS:
12 gauge 0.094 min., 0.105 nominal
14 gauge 0.074 min., 0.083 nominal

Corner Radii:
Standard outside corner radii shall be:
5/32" ± 1/32"

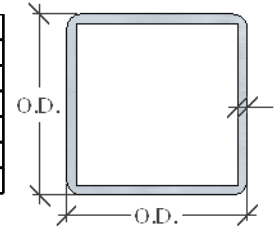
Length: The length of each post shall be as specified and have a permissible length tolerance of ± 1/4"

Straightness: 1/16" in 3 feet

TELESCOPING PROPERTIES: The finished post shall be straight and have a smooth uniform finish. It shall be possible to telescope the post with each consecutive larger or smaller size of square tube, freely and for not less than ten feet of their length without the necessity of matching any particular face to any other face. All holes and ends shall be free from burrs.

Post Dimensions and Properties

O.D. (in)	t (in)	Z (in ³)	M _A (lb-in)
1.75" x 1.75"	0.083	0.311	11173
1.75" x 1.75"	0.105	0.377	13544
2" x 2"	0.083	0.417	14982
2" x 2"	0.105	0.509	18287
2.25" x 2.25"	0.105	0.661	23748
2.5" x 2.5"	0.105	0.833	29928



Weight Per Foot, Pounds

Size	Gauge	Perforated	Not Perforated
1.75" x 1.75"	14	1.71	1.89
1.75" x 1.75"	12	2.06	2.27
2" x 2"	14	1.99	2.17
2" x 2"	12	2.42	2.64
2.25" x 2.25"	12	2.78	2.99
2.5" x 2.5"	12	3.14	3.36

Squareness of Sides and Twists:

Nominal Outside Dimensions	Squareness Tolerance	Twist Permissible in 3' Length
1.75" x 1.75"	± 0.010"	0.062"
2" x 2"	± 0.012"	0.062"
2.25" x 2.25"	± 0.014"	0.062"
2.5" x 2.5"	± 0.016"	0.062"

Note: A sample shall be considered to fail if its sides are not 90 degrees to each other within the squareness tolerance listed above.

Tolerances:

Nominal Outside Dimensions	Outside tolerance on All Sides at Corners
1.75" x 1.75"	± 0.010"
2" x 2"	± 0.010"
2.25" x 2.25"	± 0.010"
2.5" x 2.5"	± 0.010"

Note: Measurements from outside dimension shall be made at least 2" from end of tube.

WIND LOAD MOMENTS (70 mph plus gusts)** Square Sign Supports SINGLE POST INSTALLATION

SIGN SIZE (W X H)"	MOUNTING HEIGHT*					
	5 Ft.	6 Ft.	7 Ft.	8 Ft.	9 Ft.	10 Ft.
12 X 18	2,740	3,410	4,130	4,910	5,750	6,650
12 X 36	5,440	6,490	7,590	8,740	9,960	11,230
18 X 24	4,900	5,910	6,980	8,100	9,290	10,530
24 x 24	6,190	7,420	8,700	10,040	11,450	12,910
24 x 30	7,970	9,450	10,980	12,570	14,220	15,930
24 x 36	9,930	11,660	13,450	15,290	17,200	19,170
24 x 48	14,280	16,540	18,850	21,210	23,640	26,130
30 x 30	9,620	11,370	13,160	15,020	16,930	18,900
36 x 36	14,050	16,420	18,840	21,320	23,860	28,170
48 x 24	10,490	12,440	14,440	16,490	18,610	20,790
48 x 30	13,440	15,800	18,200	20,670	23,190	25,230
48 x 36	16,590	19,360	22,170	25,040	27,970	30,970
48 x 48	26,240	30,210	34,220	38,300	42,440	46,630
48 x 60	35,210	40,130	45,090	50,120	---	---

Example: 48" x 24" sign, 10ft mounting height; moment equals 23,670 in.-lbs. Use two 1-3/4" 14ga posts.

ALLOWABLE LOAD		
1-3/4"	(14ga) square	13,800
1-3/4"	(12ga) square	15,900
2"	(14ga) square	17,760
2"	(12ga) square	22,320
2-1/4"	(12ga) square	30,060
2-1/2"	(12ga) square	38,520

*Bottom of sign
**For 60 MPH, multiply moment by 0.735
For 80 MPH, multiply moment by 1.306
(gust allowance for all wind speeds is 30%)

Procedure:
Determine moment from table for sign size and mounting height. Select post having an allowable load equal to or greater than required moment.

WIND LOAD MOMENTS (70 mph plus gusts)** Square Sign Supports TWO-POST INSTALLATION

SIGN SIZE (W X H)"	MOUNTING HEIGHT*					
	5 Ft.	6 Ft.	7 Ft.	8 Ft.	9 Ft.	10 Ft.
48 X 24	11,210	13,470	15,850	18,340	20,950	23,670
48 X 30	14,160	16,830	19,610	22,520	25,530	28,660
48 X 36	17,310	20,390	23,580	26,890	30,310	33,850
48 x 48	26,960	31,240	35,630	40,150	44,780	49,510
48 x 60	35,930	41,160	46,500	51,970	57,546	63,240
60 x 30	17,340	20,510	23,810	27,220	30,750	34,380
60 x 36	21,280	24,970	28,770	32,690	36,716	40,870
72 x 36	25,250	29,550	33,960	38,490	43,140	47,890
72 x 48	35,630	41,150	46,780	52,530	58,400	64,370
84 x 42	35,100	40,710	46,450	52,310	58,270	64,350
84 x 48	41,330	47,660	54,112	60,680	67,350	74,140

Example: 48" x 24" sign, 10ft mounting height; moment equals 23,670 in.-lbs. Use two 1-3/4" 14ga posts.

ALLOWABLE LOAD		
1-3/4"	(14ga) square	27,600
1-3/4"	(12ga) square	31,800
2"	(14ga) square	35,520
2"	(12ga) square	44,640
2-1/4"	(12ga) square	60,120
2-1/2"	(12ga) square	77,040

*Bottom of sign
**For 60 MPH, multiply moment by 0.735
For 80 MPH, multiply moment by 1.306
For 90 MPH, multiply moment by 1.653
For 100 MPH, multiply moment by 2.041
(gust allowance for all wind speeds is 30%)

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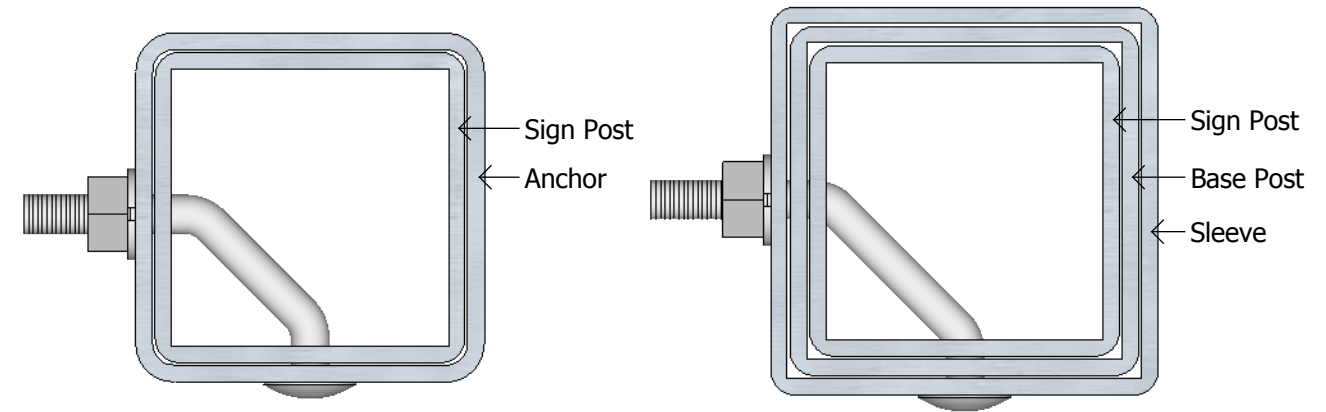


Notes:

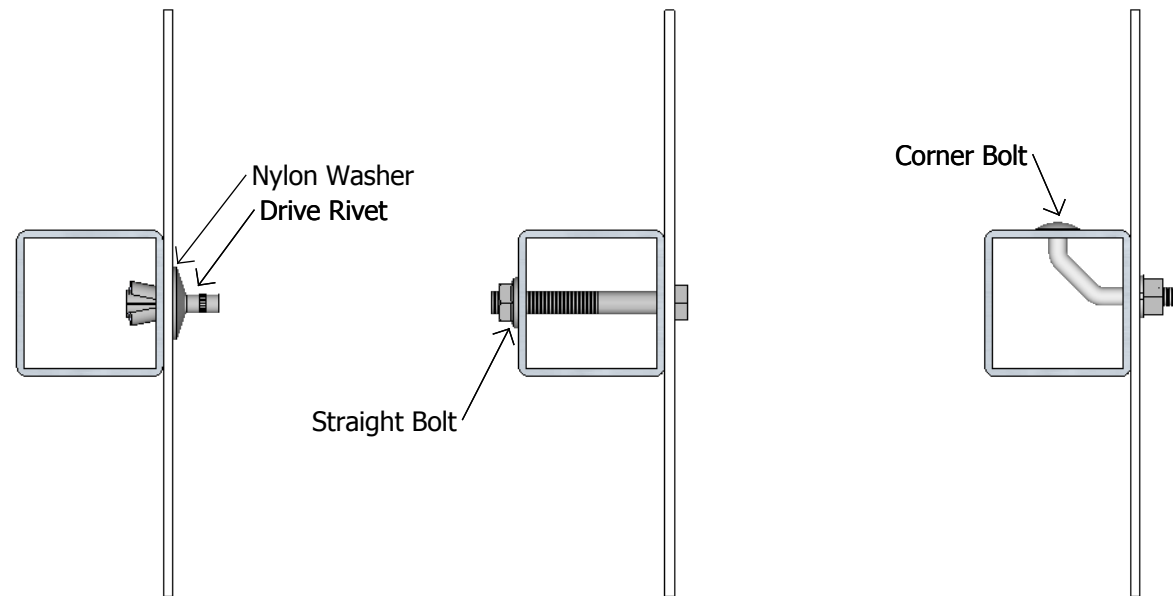
Project: S-Square Square Post
Description: Installation Information

Checked By: JW, JL
Drawn By: JB
Date: 2013

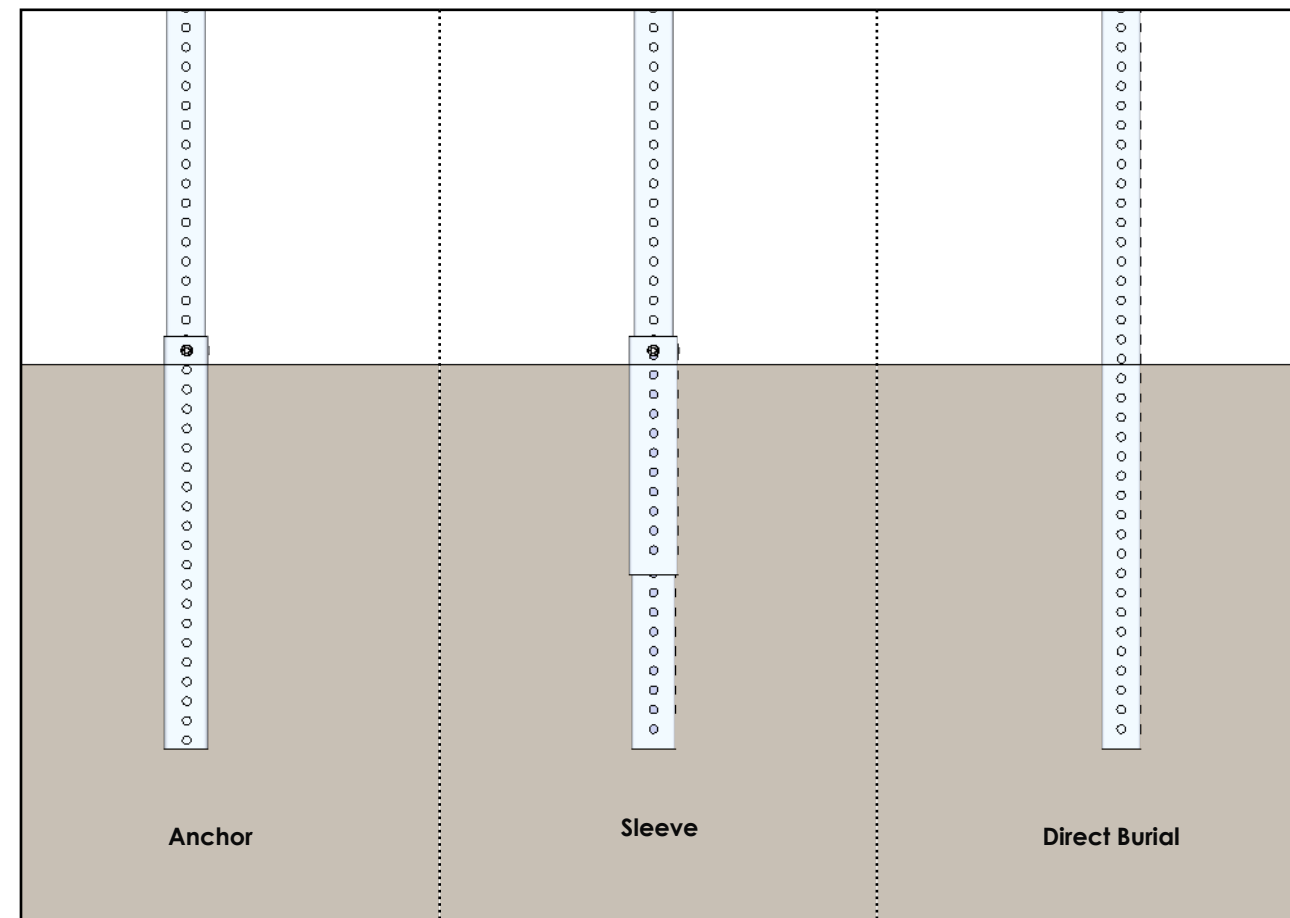
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Sign to Post Connections



5/16" - 18 Corner Bolts	Lengths	Fits	weight
SQVCB240-2	2.0"	≤ 2"	0.05 lbs
SQVCB240-3	2.5"	≤ 2.5"	0.05 lbs
SQVCB240-2.6	3.0"	≤ 3"	0.05 lbs



Install per Local Requirements

The anchor base may or may not have a strengthening sleeve at groundline. The anchor bases shall be sized to fit closely around the post. For 2.5" posts of both wall thicknesses and 2.25" 12ga posts the anchor bases shall be made of steel comparable to that of the posts and have wall thickness equal 7ga or greater. For 2.25" 14ga posts and all 2" and smaller posts the anchor bases shall be made of steel comparable to that of the posts and have wall thicknesses equal 12ga or greater.