

TS tube vertical support posts. See hanger parts table for size.
Minimum length to match the depth of truss chord plus trapeze.

TSC trapeze member. See hanger parts table for size.
Each end shall extend 1/4" (6mm) minimum beyond
truss chord. See hanger loading table for spacing.
Trapeze must rest directly on bottom truss chord.

3/8" (10mm) diameter ASTM A307
threaded rod with washer and nut
positioned through center of flange.
Washer inside diameter = 7/16" (11mm)
Washer outside diameter = 13/16" (21mm)

7/16" (11mm) diameter
predrilled hole centered
on chord

Sprinkler pipe support
attached to rod.

(2) #10SDS each face (TYP)

TSC truss bottom chords at
48" (1219mm) O.C. maximum.

(2) #10SDS each face (TYP)

Note: Hanger rod shall be installed at a minimum of 4in. (102mm) from
inside edge of truss bottom chord for TSC2.75 chords and a minimum
of 6in. (152mm) for TSC3.00 or TSC4.00 chords.

Hanger Parts Table				
Truss Chord Size	Trusses at 24" (610mm) O.C.		Trusses at 48" (1219mm) O.C.	
	Trapeze Member	Support Post	Trapeze Member	Support Post
TSC2.75	28TSC2.75 min.	33W.75x.75	33TSC4.00 min.	33W.75x1.5
TSC3.00 or TSC4.00	28TSC3.00 or 28TSC4.00 min.	33W1.5x1.5	43TSC3.00 or 33TSC4.00 min.	33W1.5x1.5

Sprinkler Pipe Diameter & Hanger Load ^A		
Sprinkler Pipe Diameter in. (mm)	Maximum Hanger Load lbs. (kN)	Maximum Hanger Spacing ft (mm)
1 (25)	370 (1.65)	12 (3658)
1 1/4 (32)	430 (1.91)	12 (3658)
1 1/2 (38)	520 (2.31)	15 (4572)
2 (51)	630 (2.80)	15 (4572)

A. Values given are based on maximum hanger spacing.

General Notes:

1. SDS = self-drilling tapping screw. Screw spacing, end and edge distance is 9/16" (14mm) min.
2. The minimum yield strengths of materials are as follows (unless otherwise noted):
Tube steel support posts = 45ksi (310 MPa), TrusSteel Chords and Trapeze = 55ksi (379 MPa).
3. Values shown are for the sprinkler pipe hanger only. Truss must be properly loaded for
sprinkler pipe load. Refer to TrusSteel Technical Bulletin TB00.09.01, "Sprinkler Pipes - Truss
Loading & Connections".
4. It is the responsibility of the Building Designer to verify that the hanger design given in this
detail conforms with the overall sprinkler system support design.
5. Hanger loads were determined per NFPA 13 2022 "Standard For The Installation Of Sprinkler
Systems" and assume schedule 40 steel pipe.
6. Pipe hanger spacing shall not exceed 12 ft (3658mm) for pipes up to and including 1-1/4 in.
(32mm) diameter and 15 ft (4572mm) for pipes greater than 1-1/4 in. (32mm) diameter per
NFPA 13 2022 "Standard For The installation of Sprinkler Systems".
7. Nut shall be grade A, HEX conforming to ASTM A563 and Washer shall conform to ASTM F436.
8. Cold-Formed Steel calculations are per the 2020 supplement to AISI 2016 "North American
Specification for the Design of Cold-Formed Steel Structural Members" (S100-16/S2-20).

ALPINE TrusSteel™

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TSC Sprinkler Trapeze at Bottom Chord for 2" (51mm) Max. Diameter Pipe

Alpine, a division of ITW Building Components Group, Inc. shall not be responsible
for any performance failure in a connection due to a deviation from this detail.
Any variation from this detail shall be approved in advance by Alpine, a division of
ITW Building Components Group, Inc.

Standard Detail:

TS049D

Date:

06/01/22

TrusSteel Detail Category:

Bottom Chord Sprinkler Hanger