

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

Truss top chords at 48" (1219mm) O.C. maximum.

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

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

3/8" (10mm) diameter ASTM A307 threaded rod with washer and nut (see assembly detail)

Washer inside diameter = 7/16" (11mm)
Washer outside diameter = 13/16" (21mm)

TS tube web stiffener at applied load (see assembly detail)

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

(2) #10SDS each side at tube web stiffener. See assembly detail for spacing requirements.

Sprinkler pipe support attached to rod.

(2) #10SDS at each side of TSC trapeze, at each end of trapeze. (TYP)

(2) #10SDS at each side of truss chord, at each end of trapeze. (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.

TS tube web stiffener at applied load.
33W.75x.75 for TSC2.75 trapeze and 33W1.5x1.5 for TSC3.00 or TSC4.00 trapeze

Sprinkler pipe trapeze. See hanger parts table for size.

(2) #10 SDS at each side at web stiffener.

Hanger Rod Assembly Detail

Note: Multiply above units by 25.4 for millimeters.

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 1616 "North American Specification for the Design of Cold-Formed Steel Structural Members" (S100-16/S2-20).



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TSC Sprinkler Trapeze at Top 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:
TS049F

Date:
06/01/22

TrusSteel Detail Category:
Top Chord Sprinkler Hanger