TOLCO™ Fig. 98 - Rod Stiffener TOLCO™ Fig. 98B - Rod Stiffener with Break-Off Bolt Head

Size Range: Secures 3/8"-16 thru 7/8"-9 hanger rod

Material: Steel

Function: Secures channel to hanger rod for vertical seismic bracing. Slight distortion of the channel (strut) may occur upon installation of rod stiffeners.

Approvals: Included in our Seismic Restraints Catalog approved by the State of California Office of Statewide Health Planning and Development **(OSHPD)**. For additional load, spacing and placement information relating to OSHPD projects, please refer to the TOLCO Seismic Restraint Systems Guidelines

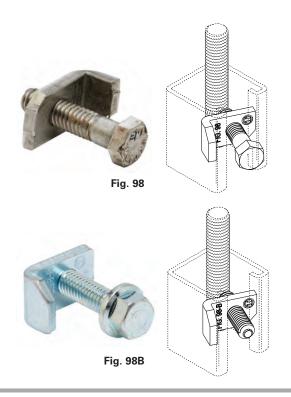
Finish: Electro Galvanized. Contact customer service for alternative

finishes and materials.

Weight: Approx. Wt./100: Fig. 98 - 11.8 Lbs. (5.3kg)

Fig. 98B - 12.7 Lbs. (5.7kg)

Order By: Part number



SC228 - Hanger Rod Stiffener

Size Range: Secures 3/8"-16 thru 5/8"-11 hanger rod

Material: Steel

Function: Secures channel to hanger rod for vertical seismic bracing. Slight distortion of the channel (strut) may occur upon installation of rod stiffeners.

Finish: Electro Galvanized. Contact customer service for

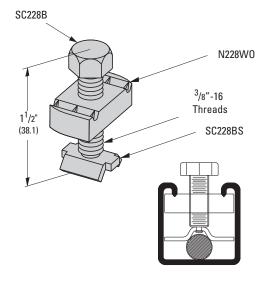
alternative finishes and materials.

Weight: Approx. Wt./100: 21.0 Lbs. (9.5kg)

Order By: Part number

Note: Order channel separately





Rod Stiffener Requirements

Rod Size	Maximum Rod Length Without Rod Stiffener	Maximum Spacing Between Rod Stiffeners
3/8"	19" (482mm)	13" (330mm)
1/2"	25" (635mm)	18" (457mm)
5/8"	31" (787mm)	23" (584mm)
3/4"	37" (940mm)	28" (711mm)
7/8"	43" (1092mm)	33" (838mm)
1″	50" (1270mm)	38" (965mm)
1 ¹ /4"	60" (1524mm)	43" (1092mm)

Notes:

- 1.) Rod stiffeners are required only on hanger and trapeze assemblies that have seismic bracing attached at or within 4" (101.6mm) of the rod. A minimum of two rod stiffeners (Figure 98, 98B, or SC228) must be installed.
- 2.) Recommended torque on Figure 98 and SC228 is 8 ft-lbs. (10.8Nm) or finger tight and one full turn with a wrench.
 Figure 98B has the break off bolt head.

1" (25.4mm) Max.

TOLCO™ B3214 - Tie Bolt

Material: Steel

Function: Recommended for securing the connection of steel pipe to ductile pipe first attach tie bolts to pipe flanges then connect tie rods. May

be used in vertical or horizontal applications.

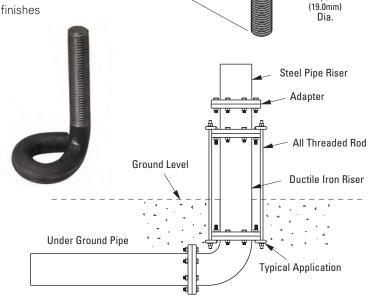
Approvals: Conforms to NFPA Pamphlet 24, Installation of Private Fire Service Maintenance 4" (100mm) - 12" (300mm) pipe size.

Finish: Plain. Contact customer service for alternative finishes

and materials.

Order By: Part number, size and finish. Custom lengths for thicker flange available.

Part No.	Length in. (mm)	Approx. Wt./100 Lbs. (kg)			
B3214-4	4" (101.6)	107.5 (48.5)			
B3214-4 ¹ /2	4 ¹ /2" (114.3)	113.7 (51.6)			



Size Specify 4" (101.4mm) or

4¹/2" (114.3mm)

B3213 - Coach Screw Rod

Size Range: 3/8"-16 rod thru 1/2"-13 rod

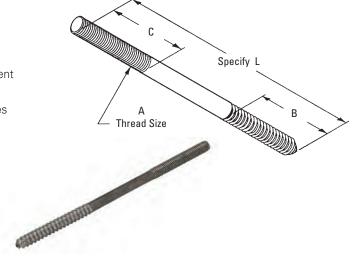
Material: Steel

Function: Typically used to suspend pipe from wood joists. Machine threaded on one end and lag threaded on the other end. It is recommended that pilot holes be pre-drilled to prevent beam from splitting and to aid in starting lag threads.

Finish: Plain. Contact customer service for alternative finishes

and materials.

Order By: Part number, rod size, length and finish



	Thread Size	Standard Rod Lengths	Coach Screw Thread Length B		Rod Thread Length C			Design Load	
Part No.	Α	in. (mm)	in.	(mm)	in.	(mm)	Lbs.	(kg)	
B3213- ³ /8 x 'L'	3/8"-16	*31/2", 8" (88.9, 203.2)	2"	(50.8)	2"	(50.8)	390	(1.73)	
B3213- ¹ / ₂ x 'L'	1/2"-13	*31/2", 8" (88.9, 203.2)	2 ¹ /2"	(63.5)	21/2"	(63.5)	640	(2.84)	

 $^{*3/}_{6} \times 3^{1}/_{2}$ and $^{1}/_{2} \times 3^{1}/_{2}$ will have a coach screw thread length of 2" (50.8) and a rod thread length of 1" (25.4). Design Load is based on proper installation and solid wood.