### **Pipe Clamps**



Page 29

B3373C Plastic Coated Standard Riser Clamp Page 29

B3140 Standard Pipe Clamp Page 30

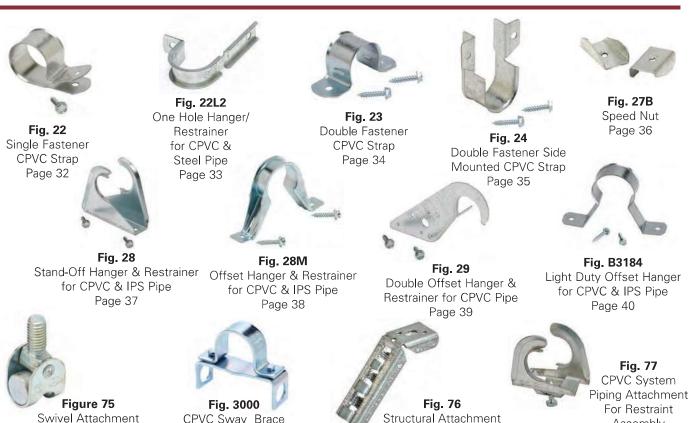
B3140C & B3140F Plastic Coated & Felt-Lined Standard Pipe Clamp Page 30

For Restraint Assembly

Pages 42 & 43

B2400 Standard Pipe Strap Page 31

### **CPVC Solutions**



# **Pipe Supports**

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CPVC Sway Brace

Attachment

Page 41

Assembly

See Pages

44 & 45

## **Seismic Bracing**



Fig. 828
Universal Sway
Brace Attachment
to Steel
Pages 52 & 53



Fig. 825 Sway Brace Attachment to Steel Pages 54 & 55



**Fig. 825A** Sway Brace Attachment to Steel Page 56



**Fig. 906** Sway Brace Multi-Fastener Adapter Page 56



**Fig. 800**Adjustable Sway
Brace Attachment
To Steel
Pages 58 & 59



Fig. 980 Universal Swivel Sway Brace Attachment Pages 60 & 61



Fig. 909 No-Thread Swivel Sway Brace Attachment Page 62



Fig. 910 Threaded Swivel Sway Brace Attachment Page 63



**Fig. 907** Multi-Angle Attachment Page 64



**Fig. 975**Straight Sway
Brace Fitting
Page 65



Fig. 1001 Sway Brace Attachment Pages 66 & 67



**Fig. 1000**Fast Clamp Sway
Brace Attachment
Pages 68 & 69



**Fig. 2002** Sway Brace Attachment Page 70



Fig. 75 Swivel Attachment See Page 40



Fig. 3000 CPVC Sway Brace Attachment See Page 41



Fig. 76
Structural
Attachment
For Restraint
Assembly
See Pages 42 & 43



Fig. 77
CPVC System
Piping Attachment
For Restraint Assembly
See Pages
44 & 45



**Fig. 98**Rod Stiffener
Page 72



Fig. 98B
Rod Stiffener
with Break Off
Bolt Head
Page 72



SC228 Rod Stiffener Page 72



**Fig. 4L** Sway Brace Attachment Pages 74 & 75



Fig. 4B
Pipe Clamp For
Sway Bracing
Page 78

# TOLCO Fig. 77 - System Piping Attachment for Restraint Assembly (UL Listed) For CPVC & Steel Pipe

Size Range: %" and ½" all threaded rod (ATR)

Material: Steel

Function: System attachment for restraint (sway brace) assembly

**Features:** The Fig. 77 is UL Listed to be used with both (IPS) steel and CPVC fire sprinkler pipe, in 1" through 2" diameters. It fits multiple rod diameters allowing for field adjustment if longer brace material is needed. Its sturdy break-off bolt will not strip and verifies proper installation. Its snap on design has many advantages. It can be installed with one-hand, can easily position the brace all thread rod over the top of the pipe being braced or underneath the pipe being braced to accommodate the desired brace angle. It can be fixed in place or moved to a new location by sliding along the pipe or snapping on or off and relocating. An entire prefabricated assembly (Fig. 74 & 77 joined with ATR) can be pre-assembled to save time and labor and later be field installed and adjusted to fit.

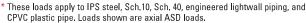
Installation Instructions: Install TOLCO™ Fig. 77 system attachment to sprinkler pipe branch line to be restrained. You can position with the rod engagement either above or below the sprinkler pipe. Rod must extend a min. of 1" (25.4) past the edge of the Fig. 77. The attachment can be slid along the pipe to position close to where the Fig. 74 structural attachment will be fastened to the structure. The snap on design allows maximum adjustability during this stage of the installation process. Engage ATR (previously attached to the Fig. 74 structural attachment to the rod engagement portion of the Fig. 77 system attachment. Tighten set bolt on Fig. 77 system attachment until head breaks off verifying proper installation torque. For more information visit our website for the most up to date instructions sheets.

**Approvals:** Underwriters Laboratories Listed in the USA **(UL)** and Canada **(cUL)**. For FM Approved information refer to FM Approved page 45.

Finish: Pre-Galvanized.

Order By: Figure number and pipe size.

Part No.	Pipe	e Size (mm)		Design Lo Rod (kN)	ads (UL Listed) ¹/₂" Rod Ibs. (kN)		
77-1	1	(25)					
77-1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	(32)	300	(1.33)	300	(1.33)	
<b>77-1</b> <sup>1</sup> / <sub>2</sub>	11/2	(40)					
77-2	2	(50)					



<sup>§</sup> All other trademarks are property of their respective owners.

#### **All Thread Rod Maximum Restraint Lengths**

Rod Size	Root Least Radius Dia. of Gyration		Maximum Unbraced Length L - (in.)				Max. Horizontal Load @ 45° (lbs.)**			
:	: /\	r /\	I/r=100	I/r=200	I/r=300	I/r=400†	I/r=100	/r=200	I/r=300	I/r=400†
in.	in, (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	lbs. (kN)	lbs. (kN)	lbs. (kN)	lbs. (kN)
3/8-16	0.300 (7.6)	0.075 (1.9)	7 (177.8)	14 (355.6)	22 (558.8)	30 (763.0)	300 (1.33)	186 (0.82)	82 (0.36)	44 (0.19)
1/2-13	0.404 (10.2)	0.101 (2.5)	10 (254.0)	20 (508.0)	30 (762.0)	40 (1016.0)	300‡ (1.33)‡	300‡(1.33)‡	152 (0.67)	85 (0.38)

<sup>†</sup> 1/r = 400 NFPA 13 2010, Sec 9.3.6.1 (5) † 1/r = 400 NFPA 13 2013 & 2016, Sec 9.3.6.1 (5) & NFPA (2016) TABLE 9.3.11.8(a)(b)(c)(d)(e)(f)

Eaton's B-Line series seismic bracing components are designed to be compatible only with other B-Line series bracing components, resulting in a listed seismic bracing assembly. Eaton B-Line Division warranty for seismic bracing components will be the warranty provided in Eaton B-Line Division standard terms and conditions of sale made available by Eaton, except that, in addition to the other exclusions from Eaton B-Line Division warranty, Eaton makes no warranty relating to B-Line series seismic bracing components that are combined with products not provided by Eaton.

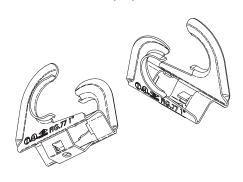
All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Updated 5-24-21





Pipe Attachment for Branch Line Restraint US Patent No. 9,797,527





<sup>\*\*</sup>Per NFPA 13 (2013) Table 9.3.5.11.8 (a)(b)(c), consult for maximum allowable load information on ATR.

<sup>‡</sup>Max load governed by Fig. 74/77 Max horizontal load.

#### TOLCO Fig. 77 - System Piping Attachment for Sway Brace Assembly (FM Approved) For CPVC & Steel Pipe

Size Range: %" and ½" all threaded rod (ATR)

Material: Steel

Function: System attachment for restraint

Features: The Fig. 77 is to be used with both (IPS) steel and CPVC fire sprinkler pipe, in 1" through 2" diameters. It fits multiple rod diameters allowing for field adjustment if longer brace material is needed. Its sturdy break-off bolt will not strip and verifies proper installation. Its snap on design has many advantages. It can be installed with one-hand, can easily position the brace all thread rod over the top of the pipe being braced or underneath the pipe being braced to accommodate the desired brace angle. It can be fixed in place or moved to a new location by sliding along the pipe or snapping on or off and relocating. An entire prefabricated assembly (Fig. 74 & 77 joined with ATR) can be pre-assembled to save time and labor and later be field installed and adjusted to fit.

Installation Instructions: Install TOLCO™ Fig. 77 system attachment to sprinkler pipe branch line to be restrained. It can be positioned with the rod engagement either above or below the sprinkler pipe. Rod must extend a min. of 1" past the edge of the Fig. 77. The attachment can be slid along the pipe to position close to where the Fig. 74 structural attachment will be fastened to the structure. The snap on design allows maximum adjustability during this stage of the installation process. Engage ATR (previously attached to the Fig. 74 structural attachment to the rod engagement portion of the Fig. 77 system attachment. Tighten set bolt on Fig. 77 system attachment until head breaks off verifying proper installation torque. For more information visit our website for the most up to date instructions sheets.



For UL Listed information refer to UL Listed page 44.

Finish: Pre-Galvanized.

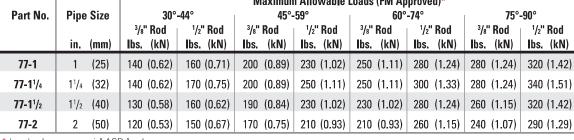
Order By: Figure number and pipe size.

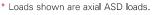


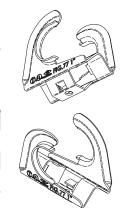
Pipe Attachment for Restraint (Sway Brace) US Patent No. 9,797,527



Part No.	Pipe Size		30°	-44°	Maximun 45°-		Loads (FM Ap	proved)* -74°	75°-90°	
			³/8" Rod Ibs. (kN)	1/2" Rod lbs. (kN)	³/8" Rod Ibs. (kN)	¹/2" Rod lbs. (kN)	³/8" Rod Ibs. (kN)	1/2" Rod lbs. (kN)	³/8" Rod lbs. (kN)	1/2" Rod Ibs. (kN)
77-1	1	(25)	140 (0.62)	160 (0.71)	200 (0.89)	230 (1.02)	250 (1.11)	280 (1.24)	280 (1.24)	320 (1.42)
77-1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	(32)	140 (0.62)	170 (0.75)	200 (0.89)	250 (1.11)	250 (1.11)	300 (1.33)	280 (1.24)	340 (1.51)
<b>77-1</b> <sup>1</sup> / <sub>2</sub>	11/2	(40)	130 (0.58)	160 (0.62)	190 (0.84)	230 (1.02)	230 (1.02)	280 (1.24)	260 (1.15)	320 (1.42)
77-2	2	(50)	120 (0.53)	150 (0.67)	170 (0.75)	210 (0.93)	210 (0.93)	260 (1.15)	240 (1.07)	290 (1.29)







#### **All Thread Rod Maximum Restraint Lengths**

Rod Size	Root Dia.	Least Radius of Gyration	Maximum Unbraced Length L - (in.)				Max. Horizontal Load @ 45° (lbs.)**			
:	in /mm)	r	I/r=100	I/r=200	I/r=300∆	I/r=400†∆	/r=100	I/r=200	I/r=300∆	I/r=400†∆
ın.	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	lbs. (kN)	lbs. (kN)	lbs. (kN)	lbs. (kN)
<sup>3</sup> /8-16	0.300 (7.6)	0.075 (1.9)	7 (177.8)	14 (355.6)	22 (558.8)	30 (763.0)	300 (1.33)	186 (0.82)	82 (0.36)	44 (0.19)
1/2-13	0.404 (10.2)	0.101 (2.5)	10 (254.0)	20 (508.0)	30 (762.0)	40 (1016.0)	300‡ (1,33)‡	300‡(1,33)‡	152 (0,67)	85 (0.38)

t | /r = 400 NFPA 13 2010, Sec 9.3.6.1 (5) t | /r = 400 NFPA 13 2013 & 2016, Sec 9.3.6.1 (5) & NFPA (2016) TABLE 9.3.11.8(a)(b)(c)(d)(e)(f)

\*\*Per NFPA 13 (2013) Table 9.3.5.11.8 (a)(b)(c), consult for maximum allowable load information on ATR.

 $\Lambda I/r = 300$  for bracing

 $\Delta I/r = 400$  for restraint

‡Max load governed by Fig. 74/77 Max horizontal load.

Eaton's B-Line series seismic bracing components are designed to be compatible only with other B-Line series bracing components, resulting in a listed seismic bracing assembly. Eaton B-Line Division warranty for seismic bracing components will be the warranty provided in Eaton B-Line Division standard terms and conditions of sale made available by Eaton, except that, in addition to the other exclusions from Eaton B-Line Division warranty, Eaton makes no warranty relating to B-Line series seismic bracing components that are combined with products not provided by Eaton.

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

#### **TOLCO Fig. 75 - swivel attachment**

Function: Three recommended applications for this product:

- May be used as a branch line restraint for structural attachment to anchor bolt, beam clamp, etc.
- May be used as an upper attachment with short hanger rod to omit seismic bracing.
- May be used in a pitched or sloped roof application, to meet requirements of NFPA 13 (2010) 9.1.2.6.

Refer to page 40 for more information and sizing.



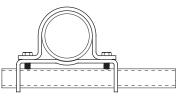




#### **TOLCO Fig. 3000 - CPVC sway brace attachment**

**Function:** For bracing CPVC and steel pipe against sway and seismic disturbance. The pipe attachment component of a sway brace system: Fig. 3000 is used in conjunction with a Fig. 900 Series fitting and joined together with bracing pipe per NFPA 13, forming a complete sway brace assembly.

Refer to page 41 for more information and sizing.







# Fig. 76 - TOLCO structural attachment for branch line restraint assembly (UL listed) structural attachment for sway brace assembly (FM)

Function: Structural attachment for branch line restraint or sway brace assembly

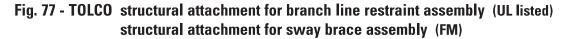
Refer to pages 42 for UL Listed information and sizing. Refer to pages 43 for FM information and sizing.











Function: System attachment for branch line restraint or sway brace assembly

Refer to pages 44 for UL Listed information and sizing. Refer to pages 45 for FM information and sizing.









All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.