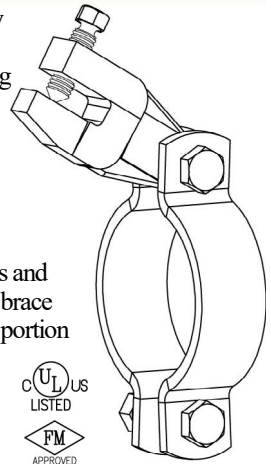
CLAMPING PIPE ATTACHMENT

FIG. 031



Function: Designed for bracing pipe against sway and seismic disturbance. Versatile design allows for attachment at any angle and the ability to be used in a lateral or longitudinal bracing configuration. The pipe attachment component of a sway brace system used in conjunction with a PHD Manufacturing structural attachment fitting and joined together with a bracing element form a complete sway brace assembly. Sway brace assemblies are intended to be installed in accordance with NFPA 13 and the manufacturer's installation instructions.

Size: Pipe sizes 2" thru 8". Can use 1" thru 2" SCH 40 pipe, structural steel, and PHD 12 gauge strut channel (1001 & 1201) as sway bracing elements.

Material: Ductile iron and carbon steel.

Finish: Electro-galvanized

Install: Place attachment around pipe to be braced, positioning brace attachment as needed, then tighten clamping bolts and nuts finger tight. Insert brace component into fitting against back of jaw. Tighten set screw finger tight, adjust brace angle as needed, then tighten set screw until hex head breaks off. Then evenly torque clamping bolts until hex portion of clamping nuts break off.

Approvals: Underwriters Laboratories listed for US and Canada and Factory Mutual approved. Listed for use with PHD sway brace components only.

Ordering: Specify figure number and sprinkler pipe size.

UL Maximum Design Loads All Pipe Sizes, SCH 10 & 40 (3½ SCH 40 only) Lateral & Longitudinal Assemblies				
Brace Member	Member Thickness	Member Length	lbs.	kN
1" Thru 2" Pipe	SCH 40	Refer to NFPA13	1370	(6.09)
Structural Steel	¼" & ⅜" thick	Refer to NFPA13	1370	(6.09)
1001 Series Strut	12 Ga.	See Chart Below	1370	(6.09)
1201 Series Strut	12 Ga.	See Chart Below	1370	(6.09)

UL's current Listings, shown above, are predicated on installation in accordance with the latest edition of NFPA 13. The 2016 and earlier editions of NFPA 13 referenced a minimum safety of 1.5 for the load rating as compared to 2.2 for the current edition.

The load ratings noted in table below, Previously Listed Loads, are consistent with the historical cULus Listings that were evaluated to the requirements of UL 203A, Outline of Investigation for Sway Brace Devices for Fire Sprinkler System Piping, based upon a minimum safety factor of 1.5 in accordance with the earlier editions of NFPA 13. The load ratings based upon the 2016 or earlier editions of NFPA 13 should only be used where approved by the Authority Having Jurisdiction (AHJ).

Previously Listed UL Loads All Pipe Sizes, SCH 10 & 40 (3½ SCH 40 only) Lateral & Longitudinal Assemblies				
Brace Member	Member Thickness	Member Length	lbs.	kN
1" Thru 2" Pipe	SCH 40	Refer to NFPA13	*2015	*(8.96)
Structural Steel	¼" & ⅜" thick	Refer to NFPA13	*2015	*(8.96)
1001 Series Strut	12 Ga.	See Chart Below	*2015	*(8.96)
1201 Series Strut	12 Ga.	See Chart Below	*2015	*(8.96)

*Load ratings are based on a minimum safety factor of 1.5 in accordance with NFPA 13-2016 Section A.9.3.5.2.3.

FM Maximum Design Load (All Sizes) For Bracing SCH 10, 40 & Flow Pipe					
Brace Member		Direction	Brace Angle (Degrees)	lbs.	kN
1" Thru 2" SCH 40 Pipe	(GB/T3091, EN10255H, or JISG3454)	Lateral	30°-44° 45°-59° 60°-74° 75°-90°	840 1320 1670 1860	(3.73) (5.87) (7.42) (8.27)
¼" Thru ⅜" Thick Structural Steel		Lateral & Longitudinal	30°-44° 45°-59° 60°-74° 75°-90°	890 1270 1550 1730	(3.95) (5.64) (6.89) (7.69)
PHD 12 Gauge Strut Channel 1001 & 1201		Lateral & Longitudinal	30°-44° 45°-59° 60°-74° 75°-90°	730 950 1140 1270	(3.24) (4.22) (5.07) (5.64)

FM Maximum Design Load **Brace: 1" Thru 2" SCH40 Pipe** (GB/T3091, EN10255H, or JISG3454)						
Pipe Size SCH 10, 40 & Flow Pipe		Brace Angle From Vertical (Degrees)	Longitudinal		Wt. Each	
			lbs.	kN	lbs.	kg
2	(50)	30°-44° 45°-59° 60°-74° 75°-90°	780 1110 1330 1470	(3.46) (4.93) (5.91) (6.53)	2.60	(1.18)
2½	(65)	30°-44° 45°-59° 60°-74° 75°-90°	900 1410 1790 2060	(4.00) (6.27) (7.96) (9.16)	2.77	(1.26)
3	(80)	30°-44° 45°-59° 60°-74° 75°-90°	840 1320 1610 1800	(3.73) (5.87) (7.16) (8.00)	3.00	(1.36)
3½	(90)	30°-44° 45°-59° 60°-74° 75°-90°	840 1320 1610 1800	(3.73) (5.87) (7.16) (8.00)	3.13	(1.42)
4	(100)	30°-44° 45°-59° 60°-74° 75°-90°	840 1320 1610 1800	(3.73) (5.87) (7.16) (8.00)	3.30	(1.50)
5	(125)	30°-44° 45°-59° 60°-74° 75°-90°	840 1320 1610 1800	(3.73) (5.87) (7.16) (8.00)	4.57	(2.07)
6	(150)	30°-44° 45°-59° 60°-74° 75°-90°	960 1360 1670 1860	(4.27) (6.04) (7.42) (8.27)	5.42	(2.46)
8	(200)	30°-44° 45°-59° 60°-74° 75°-90°	900 1270 1560 1740	(4.00) (5.64) (6.93) (7.73)	8.52	(3.86)

Strut Fig. #	PHD Strut Channel Maximum Horizontal Load 90° From Vertical															
	r		l/r =	100				200				300				
				Max		lbs.	kN	Max		lbs.	kN	Max		lbs.	kN	
1001	0.580	(14.73)		58"	(1473.2)	4670	(20.77)	116"	(2946.4)	1165	(5.18)	174"	(4419.6)	518	(2.30)	
1201	0.297	(7.54)		29"	(736.6)	3260	(14.50)	59"	(1498.6)	785	(3.49)	89"	(2260.6)	345	(1.53)	

Unless otherwise specified, all dimensions on drawings and in charts are in inches and dimensions shown in parentheses are in millimeters.