SEISMIC BRACING



CLAMPING PIPE ATTACHMENT

FIG. 031

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, Grade 5 clamping bolts

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.

Specify figure number and sprinkler pipe size. **Ordering:**

UL Maximum Design Loads									
All Pipe Sizes, SCH 10 & 40 (31/2 SCH 40 only) Lateral & Longitudinal Assemblies									
Brace Member Member Thickness Member Length Ibs. kN									
1" Thru 2" Pipe	SCH 40	Refer to NFPA13	2015	(8.96)					
Structural Steel	1/4" & 3/8" 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)					

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°	1270 1800 2200 2460	(5.64) (9.07) (10.89) (12.18)						
	u ³ /8" Thick ural Steel	Lateral & Longitudinal	30°-44° 45°-59° 60°-74° 75°-90°	900 1280 1570 1750	(4.00) (5.69) (6.98) (7.78)						
Strut	2 Gauge Channel & 1201	Lateral & Longitudinal	30°-44° 45°-59° 60°-74° 75°-90°	1070 1440 1740 1940	(4.75) (6.40) (7.73) (8.62)						

	FM Maximum Design Load											
	Brace: 1" Thru 2" SCH40 Pipe (GB/T3091, EN10255H, or JISG3454)											
Pipe	Size	Brace Angle		tudinal	Wt. I	Each						
SCH 10, 40 & Flow Pipe		From Vertical	lbs. kN		lbs.	kg						
& FIU	w Pipe	(Degrees) 30°-44°	1370	(6.09)		9						
2	(50)	45°-59° 60°-74° 75°-90°	1930 2370 2810	(8.58) (10.54) (12.49)	2.60	(1.18)						
21/2	(65) 30°-44° 45°-59° 60°-74° 75°-90°		1500 2120 2600 2900	(6.67) (9.43) (11.56) (12.89)	2.77	(1.26)						
3	(80)	30°-44° 45°-59° 60°-74° 75°-90°	1370 1930 2370 2810	(6.09) (8.58) (10.54) (12.49)	3.00	(1.36)						
31/2	(90)	30°-44° 45°-59° 60°-74° 75°-90°	1370 1930 2370 2810	(6.09) (8.58) (10.54) (12.49)	3.13	(1.42)						
4	(100)	30°-44° 45°-59° 60°-74° 75°-90°	1370 1930 2370 2810	(6.09) (8.58) (10.54) (12.49)	3.30	(1.50)						
5	(125)	30°-44° 45°-59° 60°-74° 75°-90°	1370 1930 2370 2810	(6.09) (8.58) (10.54) (12.49)	4.57	(2.07)						
6	30°-44° 45°-59° 60°-74° 75°-90° 30°-44°		1410 2000 2450 2730	(6.27) (8.89) (10.89) (12.14)	5.42	(2.46)						
8			1320 1870 2290 2550	(5.87) (8.31) (10.18) (11.34)	8.52	(3.86)						

Ctrust					PHD Stru	t Channe	el Maximur	n Horiz	ontal Load	90° Froi	m Vertic	al			
Fig. #	Strut			r		00	200			300					
i ig. #	ı		1/1 =		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)





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FIG. 031 CLAMPING PIPE ATTACHMENT

Pipe Braced: 2", 2 1/2", 3", 3 1/2", 4", 5", 6", 8"

Bracing: 1" thru 2" SCH 40 pipe, structural steel, and PHD 12 gauge strut channel (1001 & 1201)

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 forming a complete sway brace assembly. Sway brace assemblies are intended to be installed in accordance with

NFPA 13 and the manufacturer's installation instructions.

Underwriters Laboratories listed for US and Canada

Factory Mutual approved

Listed for use with PHD sway brace components only

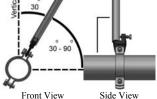
Material: Ductile Iron and Low Carbon Steel, Grade 5 clamping bolts

Installation: 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:



Longitudinal

W Sid Lateral

Lateral										
UL Maximum Design Loads										
Pipe Sizes 2" thru 8" SCH 10 & 40 (3 1/2 SCH 40 only)										
	Lateral & Longitudinal Assemblies									
Brace Member Member Thickness Member Length Max. Design Lo										
1" Thru 2" Pipe	SCH 40	Refer to NFPA13	2015							
Structural Steel	1/4" to 3/8" thick	Refer to NFPA13	2015							
1001 Series Strut	12 Ga.	See Chart Below	2015							
1201 Series Strut	12 Ga.	See Chart Below	2015							

FM Maximum Design Loads										
				able Hori nstallatio						
		Pipe	Brac	e Angle	From Vei	tical	Brace			
Orientation	Pipe Size	Schedule	30°-44°	45°-59°	60°-74°	75°-90°	Member			
Lateral	2, 2 1/2, 3, 3 1/2, 4, 5, 6, 8	LW, 10, 40	1270	1800	2200	2460	1" to 2" Schedule 40 Pipe			
Longitudinal	2	LW, 10, 40	1370	1930	2370	2810	1" to 2" Schedule 40 Pipe			
Longitudinal	2 1/2	LW, 10, 40	1500	2120	2600	2900	1" to 2" Schedule 40 Pipe			
Longitudinal	3, 3 1/2, 4	LW, 10, 40	1370	1930	2370	2810	1" to 2" Schedule 40 Pipe			
Longitudinal	5, 6	LW, 10, 40	1410	2000	2450	2730	1" to 2" Schedule 40 Pipe			
Longitudinal	8	LW, 10, 40	1320	1870	2290	2550	1" to 2" Schedule 40 Pipe			
Lateral or Longitudinal	2, 2 1/2, 3, 3 1/2, 4, 5, 6, 8	LW, 10, 40	900	1280	1570	1750	1/4" to 3/8" Thick Structural Steel			
Lateral or Longitudinal	2, 2 1/2, 3, 3 1/2, 4, 5, 6, 8	LW, 10, 40	1070	1440	1740	1940	1001 & 1201 Strut			

NOTE: LW above refers to FM Approved Lightwall pipe, commonly referred to as Schedule 7. These ratings may also be applied to EN10220 and GB/T 8163 pipe. Schedule 10 above may be applied to GB/T 3091, GB/T 3092, EN 10255 M and H, JIS G3452. Schedule 40 above may be applied to GB/T3091, EN10255H or JISG3454 brace pipe.

ľ	Strut	Max	x. Hori	zontal Load (lbs.) 90° From Vertical								
L	Fig. #	r	l/r =	100		200		300				
ſ	1001	0.580		58"	4670	116"	1165	174"	518			
ſ	1201	0.297		29"	3260	59"	785	89"	345			

NOTE: Use NFPA13 table "Allowable Horizontal Load on Brace Assemblies Based on the Weakest Component of the Brace Assembly" reduction factors for maximum loads at varying angles.

Refer to www.phd-mfg.com regarding further strut channel details

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