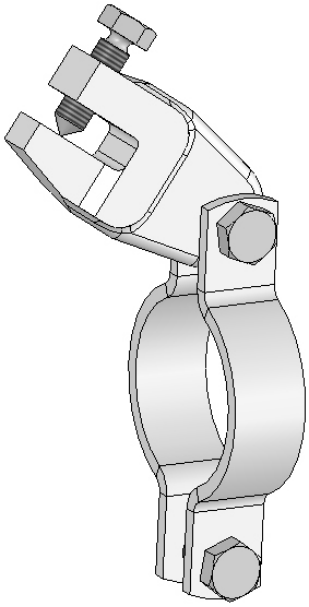
SEISMIC SWAY BRACING
CLAMPING PIPE ATTACHMENT
Model 031

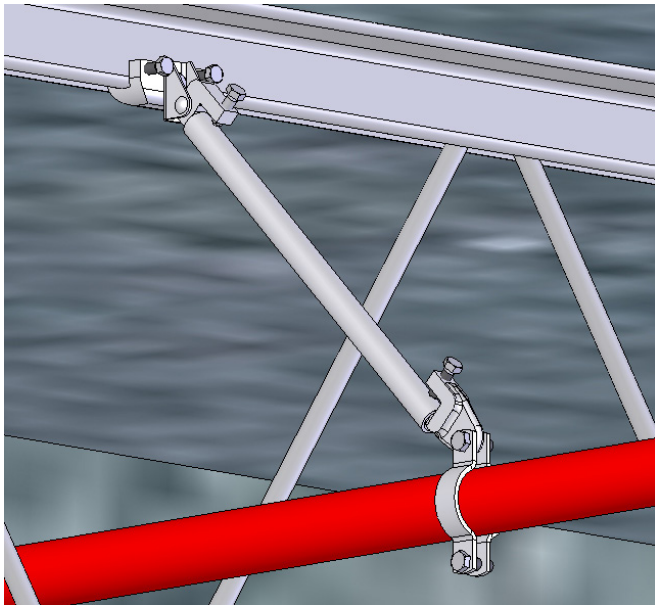


FUNCTION:
Designed for bracing pipe against sway and seismic disturbance. Universal swivel design allows for attachment at any angle and the ability to be used in a lateral or longitudinal bracing configuration.
The pipe attachment component of a sway brace system used in conjunction with a PHD Manufacturing structural attachment fitting and joined together with a bracing pipe 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.

SIZE:
Pipe size 2-1/2" thru 8" Schedule 10 thru 40 IP.
Pipe size used for bracing 1" and 1-1/4" Schedule 40 IP.

FINISH: Electro-galvanized

MATERIAL: Low Carbon Steel



INSTALLATION:
Place attachment around pipe to be braced, positioning as needed, then tighten clamping bolts and nuts. Insert bracing pipe into fitting against the pivot bolt and tighten each fitting set screw finger tight.
Then tighten each set screw evenly until hex head breaks off.

APPROVALS:
Underwriters Laboratories listed for US and Canada
Factory Mutual Approved
Listed for use with NFPA and PHD sway brace components only.

Model 031 (Clamp Included)			
Item Number	Pipe Size	Brace Size	Weight Each (lbs)
2550643	2"	1" - 2" sch 40	2.60
2550644	2-1/2"	1" - 2" sch 40	2.77
2550645	3"	1" - 2" sch 40	3.00
2550647	4"	1" - 2" sch 40	3.30
2550648	5"	1" - 2" sch 40	4.57
2550649	6"	1" - 2" sch 40	5.42
2550650	8"	1" - 2" sch 40	8.52

CROSS REF:
Erico: CSBSTU
Tolco: 4L

See page two for UL and FM Maximum Design Loads

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

SEISMIC SWAY BRACING
CLAMPING PIPE ATTACHMENT
Model 031

UL Maximum Design Loads All Pipe Sizes, SCH 10 & 40 (3 1/2 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	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°	1270	(5.64)
			45°-59°	1800	(9.07)
			60°-74°	2200	(10.89)
			75°-90°	2460	(12.18)
1/4" Thru 3/8" Thick Structural Steel		Lateral & Longitudinal	30°-44°	900	(4.00)
			45°-59°	1280	(5.69)
			60°-74°	1570	(6.98)
			75°-90°	1750	(7.78)
PHD 12 Gauge Strut Channel 1001 & 1201		Lateral & Longitudinal	30°-44°	1070	(4.75)
			45°-59°	1440	(6.40)
			60°-74°	1740	(7.73)
			75°-90°	1940	(8.62)

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°	1370	(6.09)	2.60	(1.18)
		45°-59°	1930	(8.58)		
		60°-74°	2370	(10.54)		
		75°-90°	2810	(12.49)		
2 1/2	(65)	30°-44°	1500	(6.67)	2.77	(1.26)
		45°-59°	2120	(9.43)		
		60°-74°	2600	(11.56)		
		75°-90°	2900	(12.89)		
3	(80)	30°-44°	1370	(6.09)	3.00	(1.36)
		45°-59°	1930	(8.58)		
		60°-74°	2370	(10.54)		
		75°-90°	2810	(12.49)		
3 1/2	(90)	30°-44°	1370	(6.09)	3.13	(1.42)
		45°-59°	1930	(8.58)		
		60°-74°	2370	(10.54)		
		75°-90°	2810	(12.49)		
4	(100)	30°-44°	1370	(6.09)	3.30	(1.50)
		45°-59°	1930	(8.58)		
		60°-74°	2370	(10.54)		
		75°-90°	2810	(12.49)		
5	(125)	30°-44°	1370	(6.09)	4.57	(2.07)
		45°-59°	1930	(8.58)		
		60°-74°	2370	(10.54)		
		75°-90°	2810	(12.49)		
6	(150)	30°-44°	1410	(6.27)	5.42	(2.46)
		45°-59°	2000	(8.89)		
		60°-74°	2450	(10.89)		
		75°-90°	2730	(12.14)		
8	(200)	30°-44°	1320	(5.87)	8.52	(3.86)
		45°-59°	1870	(8.31)		
		60°-74°	2290	(10.18)		
		75°-90°	2550	(11.34)		

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.

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	