



PHD Manufacturing, Inc.

FIRE PROTECTION & SEISMIC

www.phd-mfg.com



PRODUCT CATALOG



PHD Manufacturing, Inc.

FIRE PROTECTION & SEISMIC PRODUCTS

PHD is large enough to meet your needs and small enough to know your name.

Welcome

Since 1972, PHD Manufacturing, Inc. has established itself as a leading domestic manufacturer in the commercial and industrial plumbing, mechanical, electrical, and fire protection industries. The company has built its reputation by providing problem solving solutions and maintaining large strategic inventories to ensure on-time deliveries at competitive pricing.

PHD offers a complete line of Made in the USA Pipe Hangers, Beam Supports, Strut Products & Accessories, and Fire Protection & Seismic Products featuring CPVC straps and sway brace fittings. Our products are available in a variety of materials and finishes to meet all your needs and deadlines.

You can depend on PHD for quality products and exceptional customer service. The entire PHD family knows these are the reasons customers keep coming back year after year. Customers are considered part of "The PHD Family." Find out more by calling us today.

FINISH & MATERIAL LEGEND

FINISH	CODE
Copper Color Epoxy	CCEF
Copper Plated	CP
Electro-Galvanized	EG
Hot-Dip Galvanized	HDG
Plain	PL
Powder Coated	PTD
Pre-Galvanized	PG
PVC Coated	PVC
OPTIONAL MATERIAL	CODE
Stainless Steel 304	SS
Stainless Steel 316	SX



PHD Manufacturing, Inc.

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PIPE HANGERS



NFWA Swivel Ring Hanger

Steel
Finishes in PG or PG with Felt

Fig #	Pipe Size
141	1/2
141	3/4
141	1
141	1-1/4
141	1-1/2
141	2
141	2-1/2
141	3
141	3-1/2
141	4
141	5
141	6
141	8

Federal Specification A-A-1192A (Type 10) and MSS ANSI/SP-69 and SP-58 (Type 10) compliant.

Underwriters's Laboratories Listed in the US (UL) and Canada (CUL) for use with standard steel pipe sizes 3/4" to 8" and CCEFVC pipe sizes 3/4" to 4".
Factory Mutual Approved for sizes 3/4" to 8".



Swivel Ring Hanger

Steel
Finishes in PG or PG with Felt

Fig #	Pipe Size
151	2-1/2
151	3
151	3-1/2
151	4
151	5
151	6
151	8

Federal Specification A-A-1192A (Type 10) and MSS ANSI/SP-69 and SP-58 (Type 10) compliant.

Underwriter's Laboratories Listed in the US (UL) and Factory Mutual Approved for all sizes.



Copper Tubing Swivel Ring Hanger

Steel
Finishes in CCEF or CCEF with PVC

Fig #	Tube Size
152	1/2
152	3/4
152	1
152	1-1/4
152	1-1/2
152	2
152	2-1/2
152	3
152	3-1/2
152	4
152	5
152	6

Federal Specification A-A-1192A (Type 10) and MSS ANSI/SP-69 and SP-58 (Type 10) compliant.



Surge Restraint

Spring Steel
Finishes in Powder Coated-Black

Fig #	Pipe Size
055	3/4 - 2

Underwriter's Laboratories Listed in the US (UL) and Canada (CUL).



Standard Clevis Hanger

Steel
Finishes in PL, PL with Felt, EG, EG with Felt, PL with PVC, or HDG with EG Hdwe

450	Plain
451	EG
Fig #	Pipe Size
450 - 451	1/2
450 - 451	3/4
450 - 451	1
450 - 451	1-1/4
450 - 451	1-1/2
450 - 451	2
450 - 451	2-1/2
450 - 451	3
450 - 451	3-1/2
450 - 451	4
450 - 451	5
450 - 451	6
450 - 451	8
450 - 451	10
450 - 451	12

Federal Specification A-A-1192A (Type 1) and MSS ANSI/SP-69 and SP-58 (Type 1) compliant.

Underwriter's Laboratories Listed in the US (UL) and Factory Mutual Approved for 2-1/2" to 8" only.



Band Hanger

Steel, * available in SS & SX
Finishes in PL, PL with Felt, EG, or PL with PVC

180 *	Plain
181	EG
Fig #	Pipe Size
180 - 181	1/2
180 - 181	3/4
180 - 181	1
180 - 181	1-1/4
180 - 181	1-1/2
180 - 181	2
180 - 181	2-1/2
180 - 181	3
180 - 181	3-1/2
180 - 181	4
180 - 181	5
180 - 181	6
180 - 181	8

Federal Specification A-A-1192A (Type 7) and MSS ANSI/SP-69 and SP-58 (Type 7) compliant.



Light Duty Clevis Hanger

Steel
Finishes PL, PL with Felt or EG

440	Plain
441	EG
Fig #	Pipe Size
440 - 441	1/2
440 - 441	3/4
440 - 441	1
440 - 441	1-1/4
440 - 441	1-1/2
440 - 441	2
440 - 441	2-1/2
440 - 441	3
440 - 441	3-1/2
440 - 441	4

Federal Specification A-A-1192A (Type 1) and MSS ANSI/SP-69 and SP-58 (Type 1) compliant.

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PIPE HANGERS



Hinged Extension Split Clamp

Malleable Iron
Finishes in PL or EG

Fig #	Pipe Size
508R	3/8
508R	1/2
508R	3/4
508R	1
508R	1-1/4
508R	1-1/2
508R	2
508R	2-1/2
508R	3
508R	4

Federal Specification A-A-1192A
(Type 12) and MSS ANSI/SP-69 and
SP-58 (Type 12) compliant.



Extension Split Clamp

Malleable Iron, avail. in SS & SX
Finishes in PL or EG

Fig #	Size
510R	3/8
510R	1/2
510R	3/4
510R	1
510R	1-1/4
510R	1-1/2
510R	2
510R	2-1/2
510R	3
510R	4

Federal Specification A-A-1192A
(Type 12) and MSS ANSI/SP-69 and
SP-58 (Type 12) compliant.



Standard Pipe Clamp

Steel, * available in SS & SX

520 *	Plain
521	EG
Fig #	Pipe Size
520 or 521	1/2
520 or 521	3/4
520 or 521	1
520 or 521	1-1/4
520 or 521	1-1/2
520 or 521	2
520 or 521	2-1/2
520 or 521	3
520 or 521	3-1/2
520 or 521	4
520 or 521	5
520 or 521	6
520 or 521	8
520 or 521	10
520 or 521	12
520 or 521	14
520 or 521	16
520 or 521	18
520 or 521	20
520 or 521	24
520 or 521	30

Federal Specification A-A-1192A
(Type 4) and MSS ANSI/SP-69 and SP
58 (Type 4) compliant.



Riser Clamp

Steel, * available in SS & SX
Finishes in PL, EG or PL with PVC

550 *	Plain
551	EG
Fig #	Pipe Size
550 - 551	1/2
550 - 551	3/4
550 - 551	1
550 - 551	1-1/4
550 - 551	1-1/2
550 - 551	2
550 - 551	2-1/2
550 - 551	3
550 - 551	3-1/2
550 - 551	4
550 - 551	5
550 - 551	6
550 - 551	8
550 - 551	10
550 - 551	12

Federal Specification A-A-1192A
(Type 8) and MSS ANSI/SP-69 and SP
58 (Type 8) compliant.

Underwriter's Laboratories Listed in
the US (UL) and Factory Mutual
Approved for sizes 3/4" - 8" only.



Copper Tubing Riser Clamp

Steel

Finishes in CCEF or
CCEF with PVC

Fig #	Tube Size
552	1/2
552	3/4
552	1
552	1-1/4
552	1-1/2
552	2
552	2-1/2
552	3
552	3-1/2
552	4
552	5
552	6

Federal Specification A-A-1192A
(Type 8) and MSS ANSI/SP-69 and SP
58 (Type 8) compliant.



Adjustable In-Rack Flue Hanger *

Steel

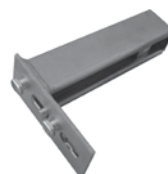
Finishes in EG

Fig #	Size
990 **	Adj. 8"-12"

* Threaded Rod and Pipe Hanger
sold separately

** Patent Pending

Underwriter's Laboratories Listed in
the US (UL) and
Canada (CUL).



Single In-Rack Flue Hanger

Steel

Finishes in EG

Fig #	Size
995	6"

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BEAM PIPE CLAMPS



Purlin Clamp

Malleable Iron with hardened steel cup point set screw and locknut

Finishes in PL or EG

Fig #	Rod Size
290	3/8

Federal Specification A-A-1192A (Type 23) and MSS ANSI/SP-69 and SP-58 (Type 23) compliant.

Underwriter's Laboratories Listed in the US (UL) and Factory Mutual Approved.



"SureLok" Top Beam Clamp

Steel with hardened steel cup point set screw and locknut

Finishes in PG

Fig #	Rod Size
345	3/8

Federal Specification A-A-1192A (Type 19) and MSS ANSI/SP-69 and SP-58 (Type 19) compliant.

Underwriter's Laboratories Listed in the US (UL) and Canada (CUL). Factory Mutual Approved.



Malleable Iron C-Clamp (Imported)

Malleable Iron with hardened steel cup point set screw and locknut.

* Size 1/2 available in SS & SX

Finishes in PL or EG

Fig #	Rod Size
350	1/2 *
350	5/8
350	3/4
350	7/8

Federal Specification A-A-1192A (Type 19) and MSS ANSI/SP-69 and SP-58 (Type 19) compliant.

Underwriter's Laboratories Listed in the US (UL) and Canada (CUL) for all sizes. Factory Mutual Approved for 1/2" rod size only.



Malleable Iron C-Clamp (Made in USA)

Malleable Iron with hardened steel cup point set screw and locknut.

* Size 3/8 and 1/2 available in SS & SX

Finishes in PL or EG

Fig #	Rod Size
353	3/8 *
354	1/2 *
355	5/8
356	3/4
357	7/8

Federal Specification A-A-1192A (Type 19) and MSS ANSI/SP-69 and SP-58 (Type 19) compliant. Fig. 353 sized for 3/8" rod can be used in an inverted position (bottom of beam).

Used in this manner Fig. 353 also complies with Federal Specification A-A-1192A (Type 23) and MSS ANSI/SP-69 and SP-58 (Type 23).

Underwriter's Laboratories Listed in the US (UL) and Canada (CUL) for 3/8" - 7/8" sizes. Factory Mutual Approved for rod sizes 3/8" and 1/2" only.



Retaining Strap For Fig. 345, 350 & 360

Steel, available in SS & SX

Finishes in EG

Fig #	Rod Size
359	3/8 & 1/2
359	5/8
359	3/4
359	7/8

Underwriter's Laboratories Listed in the US (UL) and Canada (CUL) for 3/8" and 1/2" rod sizes only. Meets NFPA13 requirements for hangers and fasteners subject to earthquakes.



Wide Mouth Beam Clamp (Imported)

Malleable Iron with hardened steel cup point set screw and locknut

Finishes in PL or EG

Fig #	Rod Size
360	3/8
360	1/2
360	5/8
360	3/4

Federal Specification A-A-1192A (Type 19) and MSS ANSI/SP-69 and SP-58 (Type 19) compliant.

Underwriter's Laboratories Listed in the US (UL) and Canada (CUL) for rod sizes 3/8" and 1/2" only. Factory Mutual Approved for rod sizes 3/8" and 1/2" only. Approvals are only for Fig. 360 with Locknut.



Wide Mouth Beam Clamp (Made in USA)

Malleable Iron with hardened steel cup point set screw and locknut

Finishes in PL or EG

Fig #	Rod Size
363	3/8
364	1/2

Federal Specification A-A-1192A (Type 19) and MSS ANSI/SP-69 and SP-58 (Type 19) compliant.

Underwriter's Laboratories Listed in the US (UL) and Canada (CUL). Factory Mutual Approved for rod sizes 3/8" and 1/2" only. Approvals are only for Fig. 363 & 364 with Locknut.



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SEISMIC BRACE FITTINGS

FIRE PROTECTION
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Pipe Attachment**Steel
Finishes in EG

Fig #	Pipe/Brace Size
010	1 / 1
010	1-1/4 / 1
010	1-1/2 / 1
010	2 / 1
010	2-1/2 / 1
010	3 / 1
010	4 / 1
010	1 / 1-1/4
010	1-1/4 / 1-1/4
010	1-1/2 / 1-1/4
010	2 / 1-1/4
010	2-1/2 / 1-1/4
010	3 / 1-1/4
010	4 / 1-1/4
010	6 / 1-1/4

Underwriter's Laboratories Listed for US (UL) and Canada (CUL). Factory Mutual Approved. Listed for use with NFPA and PHD Sway Brace components only.

**Large Sway Brace
Pipe Attachment**Steel
Finishes in EG

Fig #	Pipe/Brace Size
015	2-1/2 / 1
015	2-1/2 / 1-1/4
015	3 / 1
015	3 / 1-1/4
015	4 / 1
015	4 / 1-1/4
015	6 / 1
015	6 / 1-1/4
015	8 / 1
015	8 / 1-1/4

Underwriter's Laboratories Listed for US (UL) and Canada (CUL) for 2-1/2" - 6" sizes only. Factory Mutual Approved for all sizes. Listed for use with NFPA and PHD Sway Brace components only.

**Multi-Fastener Adapter**Steel
Finishes in EG

Fig #	Pipe Size
025	1/2
025	3/4

Underwriter's Laboratories Listed for US (UL) and Canada (CUL). Listed for use with NFPA fastener tables and PHD Sway Brace components only. Factory Mutual regards this device as part of the building structure.

**C-Clamp Structural
Attachment**Ductile Iron and Steel
Finishes in EG

Fig #	Pipe Size
030	Up to 8

Underwriter's Laboratories Listed for US (UL) and Canada (CUL). Factory Mutual Approved. Listed for use with NFPA fastener tables and PHD Sway Brace components only.



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**Clamping Pipe Attachment**Ductile Iron and Steel
Finishes in EG

Fig #	Pipe Size
031	2
031	2-1/2
031	3
031	3-1/2
031	4
031	5
031	6
031	8

Underwriter's Laboratories Listed for US (UL) and Canada (CUL). Factory Mutual Approved. Listed for use with NFPA fastener tables and PHD Sway Brace components only.

**Sway Brace Bar Joist
Adapter**Ductile Iron
Finishes in EG

Fig #	Pipe Size
035	Up to 8

Underwriter's Laboratories Listed for US (UL) and Canada (CUL). Factory Mutual Approved. Listed for use with NFPA fastener tables and PHD Sway Brace components only.

**Supporting Pipe
Attachment ***Steel
Finishes in EG

Fig #	Pipe Size
040	2
040	2-1/2
040	3
040	3-1/2
040	4
040	5
040	6
040	8

Underwriter's Laboratories Listed for US (UL) and Canada (CUL) as a hanger or as a sway brace. Factory Mutual Approved as a sway brace only. Listed for use with NFPA fastener tables and PHD Sway Brace components only.



* Fig. 030 C-Clamp Structural Attachment sold separately

**Sway Brace Structural
Adapter**Ductile Iron
Finishes in EG

Fig #	Pipe Size
045	Up to 8

Underwriter's Laboratories Listed for US (UL) and Canada (CUL). Factory Mutual Approved. Listed for use with NFPA fastener tables and PHD Sway Brace components only.



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CPVC STRAPS & ATTACHMENTS

CPVC Two-Hole Pipe Strap		CPVC One-Hole Wrap Around		CPVC Two-Hole Stand Off Strap		CPVC Two-Hole Side Mount Strap	
Steel Finishes in PG		Steel Finishes in PG		Steel Finishes in PG		Steel Finishes in PG	
Fig #	Pipe Size	Fig #	Pipe Size	Fig #	Pipe Size	Fig #	Pipe Size
070	3/4	075	3/4	076	3/4	077	3/4
070	1	075	1	076	1	077	1
070	1-1/4	075	1-1/4	076	1-1/4	077	1-1/4
070	1-1/2	075	1-1/2	076	1-1/2	077	1-1/2
070	2	075	2	076	2	077	2
Underwriter's Laboratories Listed in the US (UL) and Canada (CUL).		Underwriter's Laboratories Listed in the US (UL) and Canada (CUL).		Underwriter's Laboratories Listed in the US (UL) and Canada (CUL).		Underwriter's Laboratories Listed in the US (UL) and Canada (CUL).	

PHD ATTACHMENTS

							
Steel Eye Socket		Steel Eye Socket		Pipe Saddle Support with Stud		Steel Side Beam Connector	
Steel Finishes in EG		Steel Finishes in EG		Steel, available in SS & SX Finishes in PL or EG		Steel Finishes in PL or EG	
Fig #	Rod Size	Fig #	Rod Size	Fig #	Pipe Size	Fig #	Rod Size
36	3/8	37	3/8	874	2	906	3/8
		37	1/2	874	2-1/2	Federal Specification A-A-1192A (Type 34) and MSS ANSI/SP-69 and SP-58 (Type 34) compliant.	
Underwriter's Laboratories Listed in the US (UL) and Factory Mutual Approved.		Underwriters' Laboratories Listed in the US (UL) and Canada (CUL) for 3/8" and 1/2" rod sizes. Factory Mutual Approved for 3/8" rod size only.		874	3	Underwriter's Laboratories Listed in the US (UL) and Canada (CUL), and Factory Mutual Approved.	
				874	3-1/2		
				874	4		
				874	5		
				874	6		
				874	8		
				874	10		
				874	12		
				Federal Specification A-A-1192A (Type 38) and MSS ANSI/SP-69 and SP-58 (Type 38) compliant.			

				Can't find what you're looking for? Call us for more information.			
Reversible Angle Bracket		Reversible Side Beam Angle Bracket				Steel Ceiling Plate	
Steel, available in SS & SX Finishes in PL or EG		Steel Finishes in PL or EG				Steel	
Fig #	Size #	Fig #	Rod Size			945	PG
910	1	925	3/8 or 1/2	946	CP		
910	2	Federal Specification A-A-1192A (Type 34) and MSS ANSI/SP-69 and SP-58 (Type 34) compliant.		Fig #	Rod Size		
910	3			945 or 946	3/8		
910	4			Underwriter's Laboratories Listed in the US (UL) and Canada (CUL) for supporting up to 2" pipe max. (Fig. 945 only)			
							

THREADED ACCESSORIES

FIRE PROTECTION
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Rod Swivel Attachment

Steel
Finishes in EG

Fig #	Rod Size
020	3/8

Underwriters Laboratories Listed in the U.S. (UL) and Canada (CUL).



Threaded Studs

Steel, available in SS & SX
Finishes in PL or EG

Fig #	Rod Size *
10	3/8
10	1/2
10	5/8
10	3/4
10	7/8

* Specify length



Coach Screw Rod

Steel
Finishes in PL or EG

Fig #	Rod Size
40	3/8
40	1/2

* Specify 4", 6", 8", 10" or 12" length



Lag Screw

Steel
Finishes in PL or EG

Fig #	Length
45	1-1/2
45	2
45	2-1/2
45	3
45	4



Concrete Anchors

Steel
Finishes in EG

Fig #	Rod Size
47S Drop In	3/8
47S Drop In	1/2
47S Drop In	5/8



Wood Drive Screw

Steel
Finishes in PL or EG

Fig #	Size
48	12 - 1-1/2"
48	12 - 2"
48	14 - 1-1/2"
48	14 - 2"
48	16 - 2"



Eye Rod

Steel, available in SS & SX
Finishes in PL or EG

Fig #	Rod Size *
50	RH Threads
50L	LH Threads
50 or 50L	3/8
50 or 50L	1/2
50 or 50L	5/8
50 or 50L	3/4
50 or 50L	7/8
50 or 50L	1

* Specify length



Standard Rod Coupling

Steel, available in SS & SX
Finishes in PL or EG

Fig #	Rod Size
100	1/4
100	3/8
100	1/2
100	5/8
100	3/4
100	7/8
100	1



Short Pattern Rod Coupling

Steel
Finishes in PL or EG

Fig #	Rod Size
104	3/8
104	1/2



Hex Nut

Steel, available in SS & SX
Finishes in PL or EG

Fig #	Rod Size
110	Standard
110H	Heavy
110 or 110H	1/4
110 or 110H	5/16
110 or 110H	3/8
110 or 110H	1/2
110 or 110H	5/8
110 or 110H	3/4
110 or 110H	7/8
110 or 110H	1
110 or 110H	1-1/8
110 or 110H	1-1/4
110 or 110H	1-1/2

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Flat Washer

Steel, available in SS & SX
Finishes in PL or EG

Fig #	Rod Size
130	1/4
130	3/8
130	1/2
130	5/8
130	3/4
130	7/8
130	1
130	1-1/8
130	1-1/4
130	1-1/2

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CHANNEL/STRUT



**1-5/8" X 1-5/8" X
12 Gauge**

*Steel, available SS & SX
Finishes in PL, PG, PTD*



**1-5/8" X 3-1/4" X
12 Gauge**

*Steel, available SS & SX
Finishes in PL, PG, PTD*

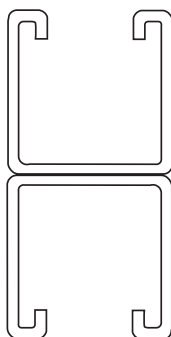


**1-5/8" X 2-7/16" X
12 Gauge**

*Steel, available SS & SX
Finishes in PL, PG, PTD*

Profiles	10 Ft-Fig #	20 Ft-Fig #	10 Ft-Fig #	20 Ft-Fig #	10 Ft-Fig #	20 Ft-Fig #
Solid	1001	1002	1501	1502	1601	1602
Welded Back to Back *	1001A	1002A	1501A	1502A	1601A	1602A
1-1/8" X 9/16" Slots on 2" Centers	1011	1012	1511	1512	1611	1612
Welded Back to Back *	1011A	1012A	1511A	1512A	1611A	1612A
9/16" Dia. Holes on 1-7/8" Centers	1021	1022	1521	1522	1621	1622
Welded Back to Back *	1021A	1022A	1521A	1522A	1621A	1622A
3" Slots	1031	1032	1531	1532	1631	1632
7/8" Knockouts on 6" Centers	1041	1042	1541	1542	1641	1642

* Welded Back to Back Strut



**GRC & STD
Pipe Clamp**

*Steel, available SS & SX
Finishes in EG*

Fig #	Pipe Size
2001	3/8
2002	1/2
2003	3/4
2004	1
2005	1-1/4
2006	1-1/2
2007	2
2008 *	2-1/2
2009 *	3
2010 *	3-1/2
2011 *	4
2012	5
2013	6
2014	8
2015	10
2016	12

* Universal for EMT



Strut Nut without Spring

*Steel, * available in SS & SX
Finishes in EG*

Fig #	Size
3001	#8-32
3002	#10-24
3003	#10-32
3004 *	1/4
3005	5/16
3006 *	3/8
3007	7/16
3008 *	1/2
3009	5/8
3010	3/4
3011	7/8



Strut Nut with Spring

*Steel, * available in SS & SX
Finishes in EG*

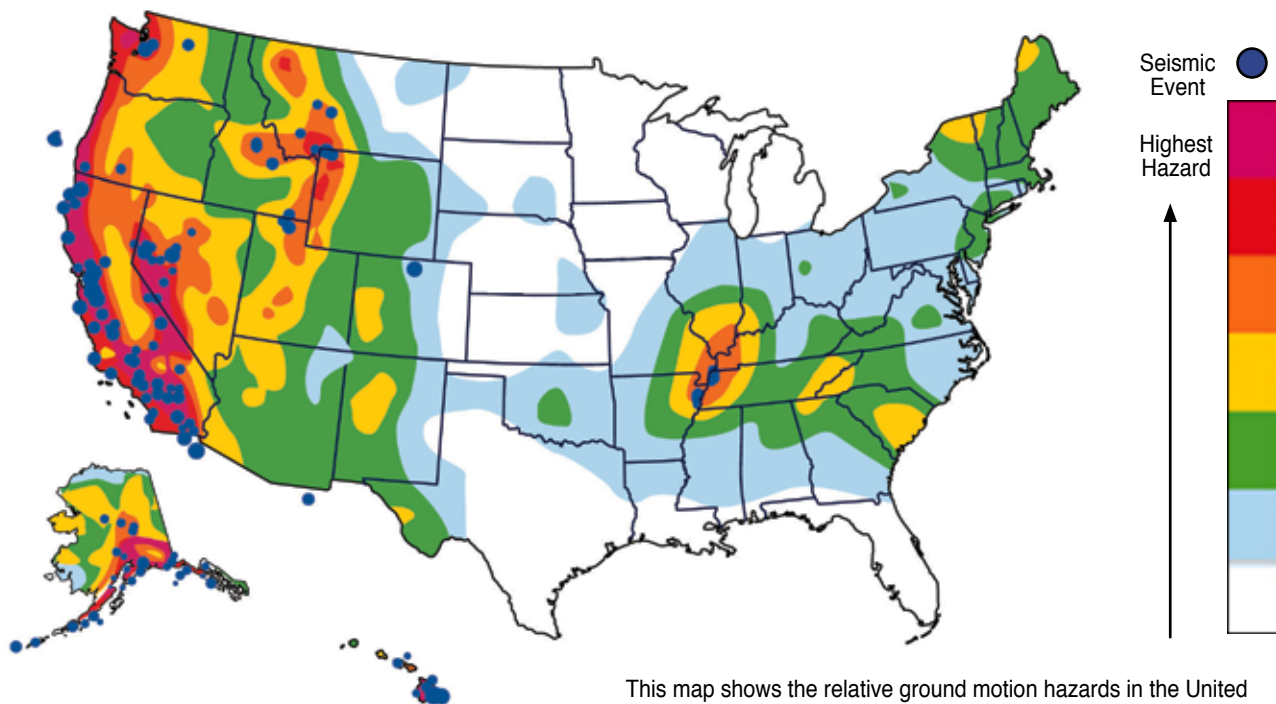
Fig #	Size
3101	#8-32
3102	#10-24
3103	#10-32
3104 *	1/4
3105	5/16
3106 *	3/8
3107	7/16
3108 *	1/2
3109	5/8
3110	3/4
3111	7/8

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Seismic Activity Zone Map



This map shows the relative ground motion hazards in the United States during a 50-year time period. Map not to scale. Source: USGS.

Architects can count on PHD's seismic parts to comply with the building code regulations governed by the IBC (International Building Code), which considers the following parameters:

- Ground motion maps
- Seismic design categories (SDC)
- Building importance factors
- MEPP utility importance factor based on end use (IP)
- Ratio of building height vs. elevation of the utility being braced.





SWAY BRACE FITTINGS

FIRE PROTECTION
& SEISMIC CATALOG

FUNCTION: Designed for bracing pipe against sway and seismic disturbance. 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 forms 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 1" thru 6". Pipe size used for bracing 1" or 1 1/4" Schedule 40 IP.

FINISH: Electro-galvanized

MATERIAL: Low Carbon Steel

INSTALL: Place over the pipe to be braced, adjust brace angle, and insert bracing pipe through opening leaving a minimum of 1" extending from attachment. Brace pipe can be installed on top or bottom of pipe to be braced but must be a minimum of 6" away from a pipe joint. Tighten nuts down evenly until hex heads break off.

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

ORDERING: Specify figure number, brace pipe size, and sprinkler pipe size

**Fig. 010
SWAY BRACE
PIPE ATTACHMENT**

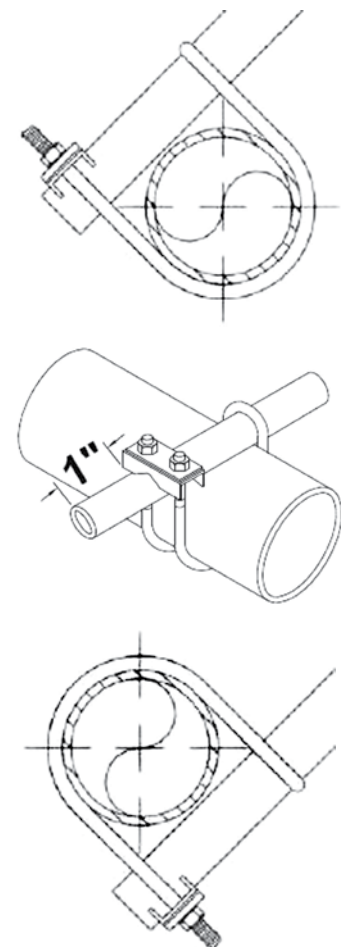


UL Maximum Design Load							
Pipe Size SCH 40		lbs.	kN	Weight Ea.			
				1" (25mm) Brace Pipe		1 1/4" (32mm) Brace Pipe	
				lbs.	kg	lbs.	kg
*1	(25)	1000	(4.45)	0.71	(0.32)	0.75	(0.34)
1 1/4	(32)	1000	(4.45)	0.76	(0.34)	0.79	(0.36)
1 1/2	(40)	1000	(4.45)	0.79	(0.36)	0.82	(0.37)
2	(50)	1000	(4.45)	0.84	(0.38)	0.88	(0.40)
2 1/2	(65)	1000	(4.45)	0.90	(0.41)	0.94	(0.43)
3	(80)	1000	(4.45)	0.98	(0.44)	1.02	(0.46)
4	(100)	1000	(4.45)	1.10	(0.50)	1.14	(0.52)
6	(150)	1600	(7.12)	N/A	N/A	1.40	(0.63)

* Restraint only

FM Maximum Design Load					
Brace Pipes 1" or 1 1/4" (GB/T3091, EN10255H, or JISG3454)					
Pipe Size SCH 10, 40 & Flow Pipe		Brace Angle From Vertical (Degrees)		lbs.	kN
1	(25)	30°-44°		340	(1.51)
		45°-59°		480	(2.13)
		60°-74°		590	(2.62)
		75°-90°		660	(2.93)
1 1/4	(32)	30°-44°		350	(1.55)
		45°-59°		500	(2.22)
		60°-74°		610	(2.71)
		75°-90°		680	(3.02)
1 1/2	(40)	30°-44°		290	(1.28)
		45°-59°		420	(1.86)
		60°-74°		510	(2.26)
		75°-90°		570	(2.53)
2	(50)	30°-44°		390	(1.73)
		45°-59°		550	(2.44)
		60°-74°		670	(2.98)
		75°-90°		750	(3.33)
2 1/2	(65)	30°-44°		440	(1.95)
		45°-59°		620	(2.75)
		60°-74°		760	(3.38)
		75°-90°		850	(3.78)
3	(80)	30°-44°		470	(2.09)
		45°-59°		660	(2.93)
		60°-74°		810	(3.33)
		75°-90°		910	(4.04)
4	(100)	30°-44°		430	(1.91)
		45°-59°		610	(2.71)
		60°-74°		750	(3.33)
		75°-90°		840	(3.73)
*6	(150)	30°-44°		250	(1.11)
		45°-59°		350	(1.55)
		60°-74°		430	(1.91)
		75°-90°		480	(2.13)

* 1 1/4" brace size only



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

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SWAY BRACE FITTINGS



FUNCTION: Designed for bracing pipe against sway and seismic disturbance. 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 forms 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".

Pipe size used for bracing 1" or 1-1/4" Schedule 40 IP.

FINISH: Electro-galvanized

MATERIAL: Low Carbon Steel

INSTALL: Place over the pipe to be braced, adjust brace angle, and insert bracing pipe through opening leaving a minimum of 1" extending from attachment. Brace pipe can be installed on top or bottom of pipe to be braced but must be a minimum of 6" away from a pipe joint. Tighten two hex head cone point set bolts until heads bottom out on attachment, ensuring proper torque has been applied.

APPROVALS: Underwriters Laboratories listed for US and Canada (2-1/2" thru 6" only). Factory Mutual approved.

Listed for use with NFPA and PHD sway brace components only

ORDERING: Specify figure number, brace pipe size, and sprinkler pipe size

**Fig. 015
LARGE SWAY BRACE
PIPE ATTACHMENT**



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)	lbs.	kN	Weight Ea.			
				1" (25mm) Brace Pipe		1 1/4" (32mm) Brace Pipe	
				lbs.	kg	lbs.	kg
2 1/2 (65)	30°-44°	1020	(4.53)	1.31	(0.59)	1.49	(0.68)
	45°-59°	1440	(6.40)				
	60°-74°	1770	(7.87)				
	75°-90°	1970	(8.76)				
3 (80)	30°-44°	1080	(4.80)	1.40	(0.64)	1.57	(0.71)
	45°-59°	1530	(6.80)				
	60°-74°	1870	(8.31)				
	75°-90°	2090	(9.29)				
4 (100)	30°-44°	1020	(4.53)	1.53	(0.69)	1.70	(0.77)
	45°-59°	1450	(6.44)				
	60°-74°	1770	(7.87)				
	75°-90°	1980	(8.80)				
6 (150)	30°-44°	640	(2.84)	1.81	(0.82)	1.98	(0.90)
	45°-59°	900	(4.00)				
	60°-74°	1110	(4.93)				
	75°-90°	1240	(5.51)				
8 (200)	30°-44°	570	(2.53)	2.07	(0.94)	2.24	(1.02)
	45°-59°	810	(3.60)				
	60°-74°	990	(4.40)				
	75°-90°	1100	(4.89)				

UL Maximum Design Load			
Pipe Size SCH 10 & 40	lbs.	kN	
2 1/2 (65)	1000	(4.45)	
3 (80)	1000	(4.45)	
4 (100)	1000	(4.45)	
6 (150)	1600	(7.12)	

Note: This product is not compatible with metric pipe. For metric piping see Fig. 010, Fig. 031, or Fig. 040.

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SWAY BRACE FITTINGS

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.

FINISH: Electro-galvanized

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

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. Factory Mutual approved. Listed for use with PHD sway brace components only

ORDERING: Specify figure number and sprinkler pipe size

**Fig. 031
CLAMPING
PIPE ATTACHMENT**



See application illustrations on page 19.



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	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 lbs.	kN	Weight Ea. 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)

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SWAY BRACE FITTINGS

FIRE PROTECTION
& SEISMIC CATALOG



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 two PHD Manufacturing structural attachment fittings 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". Refer to PHD Structural attachment fitting literature regarding appropriate brace members, sizes, and further loading limitations.

FINISH: Electro-galvanized

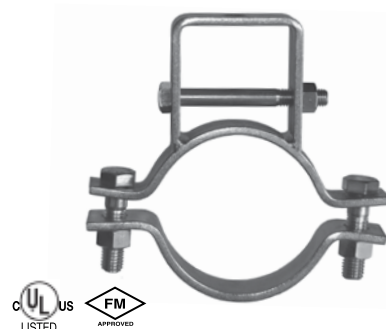
MATERIAL: Low Carbon Steel, Grade 5 clamping bolts

INSTALL: Attach PHD Manufacturing structural attachment fitting, Fig. 030 (sold separately), to Fig. 040 using supplied fastener. Place the assembly around the pipe to be braced, positioning welded clevis on top of the pipe, then tighten clamping bolts and nuts finger tight. Follow PHD Manufacturing structural attachment fitting's instructions for attaching to brace element. Adjust the brace element to the desired angle then tighten the supplied fastener to lock the PHD Manufacturing structural attachment fitting, Fig. 030, securely in position with the Fig. 040. Then evenly torque clamping bolts until hex portion of clamping nuts break off.

APPROVALS: Underwriters Laboratories listed for US and Canada as a hanger or as a sway brace. Factory Mutual approved as a sway brace only. Listed for use with PHD sway brace components only

ORDERING: Specify figure number and sprinkler pipe size

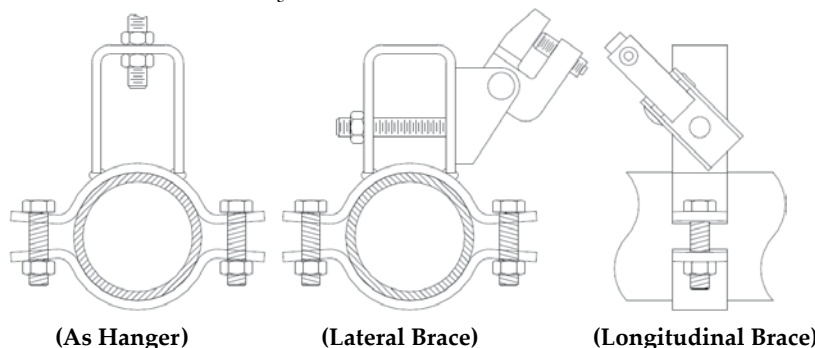
**Fig. 040
SUPPORTING
PIPE ATTACHMENT**



Note: Figure 030 sold separately.

UL Maximum Design Load							
Pipe Size SCH 10 & 40	Hanger Rod Size	Rec. Max. Hanger Load		Max. Design Sway Brace Load		Weight Ea.	
		lbs.	kN	lbs.	kN	lbs.	kg
2 (50)	3/8 (10)	730	(3.25)	1000	(4.45)	2.40	(1.09)
2 1/2 (65)	1/2 (12)	850	(3.78)	1000	(4.45)	2.58	(1.17)
3 (80)	1/2 (12)	1000	(4.45)	1000	(4.45)	2.80	(1.27)
*3 1/2 (90)	1/2 (12)	1000	(4.45)	1000	(4.45)	2.94	(1.33)
4 (100)	5/8 (16)	1000	(4.45)	1000	(4.45)	3.28	(1.49)
5 (125)	5/8 (16)	1600	(7.12)	1600	(7.12)	4.95	(2.25)
6 (150)	3/4 (20)	1600	(7.12)	1600	(7.12)	6.93	(3.14)
8 (200)	3/4 (20)	2015	(8.96)	2015	(8.96)	9.97	(4.52)

*SCH 40 only



Refer to Approvals Section

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FM Maximum Design Load					
Pipe Size SCH 10, 40 & Flow Pipe	Brace Angle From Vertical (Degrees)	Lateral		Longitudinal	
		lbs.	kN	lbs.	kN
2 (50)	30°-44°	1070	(4.75)	1260	(5.60)
	45°-59°	1520	(6.76)	1440	(6.40)
	60°-74°	1860	(8.27)	1740	(7.73)
	75°-90°	2080	(9.25)	1940	(8.62)
2 1/2 (65)	30°-44°	960	(4.27)	1000	(4.44)
	45°-59°	1360	(6.04)	1420	(6.31)
	60°-74°	1670	(7.42)	1740	(7.73)
	75°-90°	1860	(8.27)	1940	(8.62)
3 (80)	30°-44°	960	(4.27)	1000	(4.44)
	45°-59°	1360	(6.04)	1420	(6.31)
	60°-74°	1670	(7.42)	1740	(7.73)
	75°-90°	1860	(8.27)	1940	(8.62)
3 1/2 (90)	30°-44°	960	(4.27)	1000	(4.44)
	45°-59°	1360	(6.04)	1420	(6.31)
	60°-74°	1670	(7.42)	1740	(7.73)
	75°-90°	1860	(8.27)	1940	(8.62)
4 (100)	30°-44°	960	(4.27)	1110	(4.93)
	45°-59°	1360	(6.04)	1490	(6.62)
	60°-74°	1670	(7.42)	1800	(8.00)
	75°-90°	1860	(8.27)	1920	(8.54)
5 (125)	30°-44°	960	(4.27)	1110	(4.93)
	45°-59°	1360	(6.04)	1490	(6.62)
	60°-74°	1670	(7.42)	1800	(8.00)
	75°-90°	1860	(8.27)	1920	(8.54)
6 (150)	30°-44°	1000	(4.44)	1280	(5.69)
	45°-59°	1420	(6.31)	1810	(8.05)
	60°-74°	1740	(7.73)	2210	(9.83)
	75°-90°	1940	(8.62)	2470	(10.98)
8 (200)	30°-44°	1350	(6.00)	1160	(5.15)
	45°-59°	1900	(8.45)	1650	(7.33)
	60°-74°	2330	(10.36)	2020	(8.98)
	75°-90°	2600	11.56)	2250	(10.00)



STRUCTURAL ATTACHMENT FITTINGS

FUNCTION: Designed for bracing pipe against sway and seismic disturbances. Universal swivel design allows for attachment at any surface angle combined with concentric loading. Structure attachment fitting designed to use 1" thru 2" SCH 40 pipe, structural steel, and PHD 12 gauge strut channel (1001 & 1201) as sway bracing elements. No bracing member thicker than 3/8" can be used in conjunction with this product. Utilize the Fig. 030 with a PHD Manufacturing pipe attachment fitting and a bracing element to 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: 1/2" mounting hole. Braces up to 8" Pipe MAX

FINISH: Electro-galvanized

MATERIAL: Ductile Iron and Low Carbon Steel

INSTALL: Mount device to structure then insert brace element into fitting against back of jaw. Tighten set screw finger tight, then tighten until hex head breaks off. Adjust attachment to proper brace angle.

APPROVALS: Underwriters Laboratories listed for US and Canada

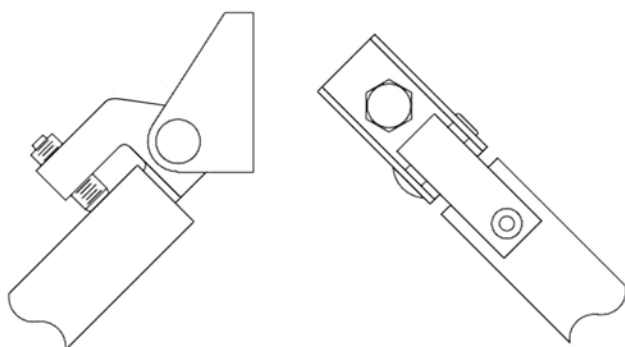
Factory Mutual approved. Listed for use with NFPA fastener tables and PHD sway brace components only

ORDERING: Specify figure number

**Fig. 030
C-CLAMP
STRUCTURAL
ATTACHMENT**



UL Maximum Design Loads (Up to 8" Pipe) Lateral & Longitudinal Assemblies					
Brace Member	Member Thickness	Member Length	lbs.	kN	Weight Ea. lbs. kg
1" Thru 2" Pipe	SCH 40	Refer to NFPA13	2015	(8.96)	1.46 (0.66)
Structural Steel	3/8" thick MAX	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 For Bracing SCH 10, 40 & Flow Pipe				
Brace Member		Brace Angle From Vertical (Degrees)	lbs.	kN
1" Thru 2" SCH 40 Pipe	(GB/T3091, EN10255H, or JISG3454)	30°-44°	1270	(5.64)
		45°-59°	2040	(9.07)
		60°-74°	2450	(10.89)
		75°-90°	2740	(12.18)
1/4" Thru 3/8" Thick Structural Steel		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		30°-44°	1070	(4.75)
		45°-59°	1440	(6.40)
		60°-74°	1740	(7.73)
		75°-90°	1940	(8.62)

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)
1201	0.297	(7.54)	29"	(736.6)	3260	(14.50)	59"	(1498.6)	785	(3.49)	89"	(2260.6)

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

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STRUCTURAL ATTACHMENT FITTINGS



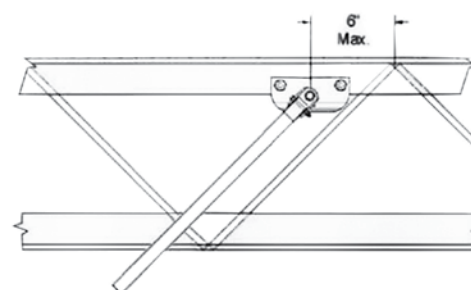
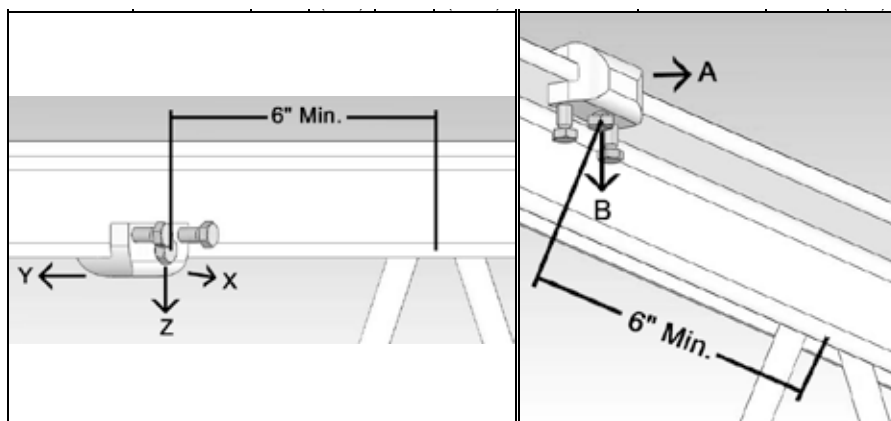
- FUNCTION:** Sway brace adapter used to attach a PHD Manufacturing sway brace assembly to a steel bar joist or structural member of 3/8" maximum thickness. To provide a point of connection when drilling or welding is not allowed or not practical. Sway brace assemblies are intended to be installed in accordance with NFPA 13 and the manufacturer's installation instructions.
- SIZE:** Braces up to 8" Pipe MAX. Attaches to 3/8" thick MAX structural members. When attaching to a structure thicker than 3/8", please see PHD Manufacturing Fig. 045.
- FINISH:** Electro-galvanized
- MATERIAL:** Ductile Iron
- INSTALL:** Steel bar joist manufacturer's warranty requires attachment within 6" of chord panel point. Place on structural member with the flange contacting the back of the jaw. Tighten set screws finger tight, then evenly tighten until hex heads break off. Attach PHD structural attachment to Fig. 035 with the supplied attachment bolt, ensuring that the attachment bolt head bottoms out securely. Please note that the maximum load will be limited by the PHD Manufacturing structural attachment utilized with this adapter.
- APPROVALS:** Underwriters Laboratories listed for US and Canada. Factory Mutual approved. Listed for use with NFPA fastener tables and PHD sway brace components only
- ORDERING:** Specify figure number

**Fig. 035
SWAY BRACE BAR
JOIST ADAPTER**



UL Maximum Design Load					
Pipe Size	lbs.	kN	Weight Ea.		
			lbs.	kg	
8" MAX	(200)	2015 (8.96)	2.38	(1.08)	

FM Maximum Design Load									
Beam Flange Thickness	Brace Angle From Vertical (Degrees)	X-Z		Y-Z		Beam Flange Thickness	Brace Angle From Vertical (Degrees)	A-B	
		lbs.	kN	lbs.	kN			lbs.	kN
3/8" Max	30°-44°	1040	(4.62)	970	(4.31)	3/8" Max	30°-44°	1150	(5.11)
	45°-59°	1490	(6.62)	1370	(6.09)		45°-59°	1660	(7.38)
	60°-74°	1800	(8.00)	2060	(9.16)		60°-74°	1990	(8.85)
	75°-90°	2010	(8.94)	2300	(10.23)		75°-90°	2220	(9.87)



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

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STRUCTURAL ATTACHMENT FITTINGS

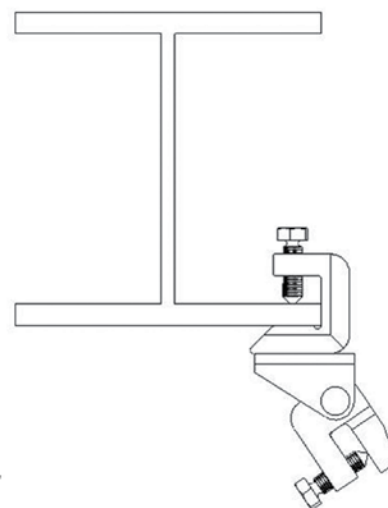
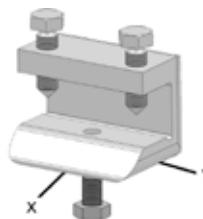
- FUNCTION:** Sway brace adapter used to attach a PHD Manufacturing sway brace assembly to a steel structural member of 3/8" minimum and 1 1/4" maximum thickness. To provide a point of connection when drilling or welding is not allowed or not practical. Sway brace assemblies are intended to be installed in accordance with NFPA 13 and the manufacturer's installation instructions.
- SIZE:** Braces up to 8" Pipe MAX
Attaches to 3/8" MINIMUM and 1 1/4" MAX thick structural members
When attaching to a structure less than 3/8" thick, please see PHD Manufacturing Fig. 035.
- FINISH:** Electro-galvanized
- MATERIAL:** Ductile Iron
- INSTALL:** Place on structural member with the flange contacting the back of the jaw. Tighten set screws finger tight, then evenly tighten until hex heads break off. Attach PHD structural attachment to Fig. 045 with the supplied attachment bolt, ensuring that the attachment bolt head bottoms out securely. Please note that the maximum load will be limited by the PHD Manufacturing structural attachment utilized with this adapter.
- APPROVALS:** Underwriters Laboratories listed for US and Canada. Factory Mutual approved. Listed for use with NFPA fastener tables and PHD sway brace components only
- ORDERING:** Specify figure number

**Fig. 045
SWAY BRACE
STRUCTURAL
ADAPTER**



UL Maximum Design Load					
Pipe Size	lbs.	kN	Weight Ea.		
			lbs.	kg	
8" MAX	(200)	2015 (8.96)	3.49	(1.58)	

FM Maximum Design Load						
Beam Flange Thickness	Brace Angle From Vertical (Degrees)	X		Y		
		lbs.	kN	lbs.	kN	
3/8" Min. 1 1/4" Max.	30°-44°	1150	(5.11)	900	(4.00)	
	45°-59°	1800	(8.00)	1050	(4.67)	
	60°-74°	2230	(9.91)	1260	(5.60)	
	75°-90°	2460	(10.94)	1410	(6.27)	



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

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STRUCTURAL ATTACHMENT FITTINGS



FUNCTION: Designed for bracing pipe against sway and seismic disturbances. Sway brace adapter used to develop a greater structural connection by providing multiple fastener attachment points. Adapter allows for 2 or 3 NFPA 13 approved fasteners to be used when one fastener is too weak to anchor a sway brace assembly to a structure. Sway brace assemblies are intended to be installed in accordance with NFPA 13 and the manufacturer's installation instructions.

SIZE: 1/2" or 3/4" mounting holes

Braces up to 8" Pipe MAX

FINISH: Electro-galvanized

MATERIAL: Low Carbon Steel, 2 X 2 X 1/4 Angle

INSTALL: Attach to the structural surface as noted in NFPA13 fastener tables. Please note that the two outermost bolt holes must be used. The middle bolt hole should be used only in conjunction with both outermost bolt holes to ensure concentric loading. Attach a PHD Manufacturing structural attachment fitting to PHD Fig. 025 and follow the instructions provided with said fitting. The PHD structural attachment fitting can pivot around the mounting connection for adjustment to the desired brace angle. Please note that the maximum load will be limited by the PHD Manufacturing structural attachment utilized with this adapter.

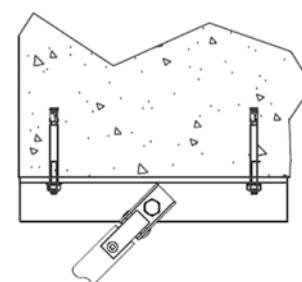
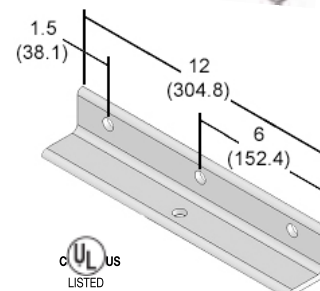
APPROVALS: Underwriters Laboratories listed for US and Canada. Listed for use with NFPA fastener tables and PHD sway brace components only. Factory Mutual regards this device as part of the building structure

ORDERING: Specify figure number and fastener size

UL Maximum Design Load (8" Pipe Max)					
Fastener Size		lbs.	kN	Weight Ea.	
				lbs.	kg
1/2	(12.7)	2015	(8.96)	3.19	(1.45)
3/4	(19.1)	2015	(8.96)	3.19	(1.45)

*NOTE: All connecting fasteners are sold separately.

**Fig. 025
MULTI-FASTENER
ADAPTER**



FUNCTION: Designed to restrict the upward movement of activated fire sprinkler systems. Grips ring hanger, NOT THE NUT, and allows for fine tuning adjustments.

SIZE: Pipe size 3/4" thru 2" IP.

FINISH: Powder Coating

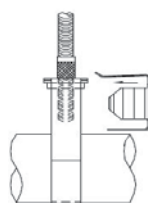
MATERIAL: Spring Steel

INSTALL: Installs easily before or after pipe installation and without tools. Simply clip Fig. 055 onto Fig. 141 ring hanger and run the hanger rod down to the bottom plate surface to ensure proper restraint.

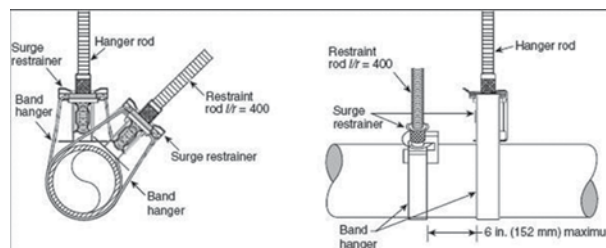
APPROVALS: Underwriters Laboratories listed for US and Canada. Listed for use with PHD Manufacturing, Inc. Figure 141 ring hangers only.

ORDERING: Specify figure number

**Fig. 055
SURGE
RESTRAINT**



**Fig. 055
(Pictured With Fig. 141)**
Note: For use up to 2" pipe, one size fits all.

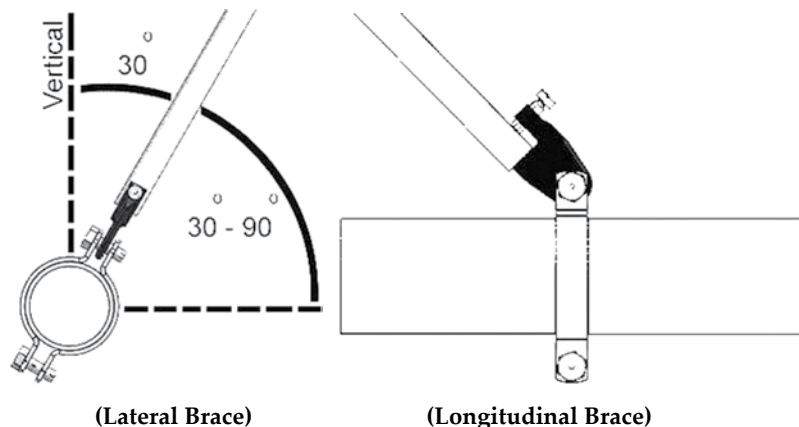


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SWAY BRACE FITTINGS



(Lateral Brace)

(Longitudinal Brace)

Fig. 031
CLAMPING
PIPE ATTACHMENT
Continued from page 13



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- 4th Enter Piping Specifications
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*Customer codes are assigned by your distributor

Customers like the easy to follow report that shows the calculations based on NFPA 13 2010 using UL approved product load limits.

- Brace Information
- Fastener Information
- Load Information
- Brace Components
- Assembly Detail



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You'll find product details including: Function, Material, Finish, Ordering, and Approvals



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