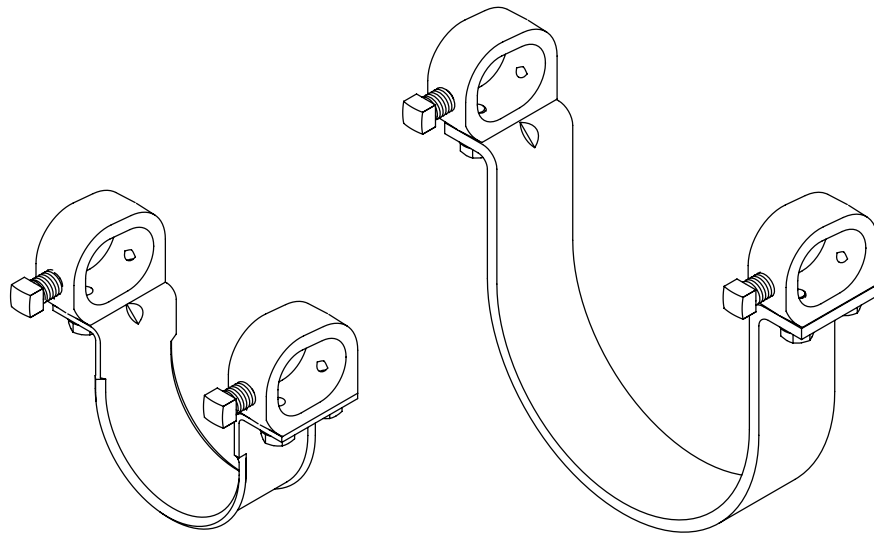
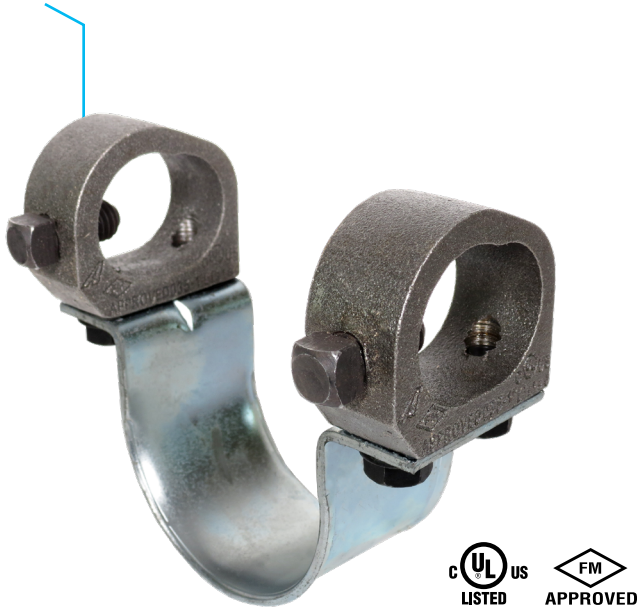


**Model K Lateral Sway Brace
Fig. AF035**



1" (DN25) to 3" (DN80) Service Pipe

4" (DN100) to 12" Service Pipe

Material Specifications

Size Range:

Service Pipe Size: 1" - 12"
Brace Member: 1" - 2"

Material

Ductile Iron Casting with Carbon Steel Strap and Hardware

Finish

Plain
Electro-Galvanized

Service

A seismic lateral brace designed to connect a brace member to the service pipe. The AF035 rigidly braces steel and CPVC piping systems subjected to horizontal and vertical seismic loads.

Approvals

cULus Listed (ANSI/UL 203a) and FM Approved (FM 1950-13). Complies with NFPA 13, ASCE 7, IBC, & MSS SP-127 bracing requirements.

Features

- The set screw provides a visual indication that proper installation has been achieved
- Rounded edge design eliminates potential for abrasion of CPVC pipe

Patents

No. 7,516,922, No. 7,523,895

Ordering

Specify figure number, service pipe size, brace size, finish, and description.



PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
Address:	Approved as noted
Contractor:	Not approved
Engineer:	Remarks:
Submittal Date:	
Notes 1:	
Notes 2:	

**Model K Lateral Sway Brace
Fig. AF035**

FIG. AF035: Weight Per Size

Service Pipe Size	Brace Member Size			
	1" (DN25)	1¼"(DN32)	1½" (DN40)	2" (DN50)
1 (DN25)	1.60 lbs	1.80 lbs	2.00 lbs	2.28 lbs
1¼" (DN32)	1.68 lbs	1.88 lbs	2.08 lbs	2.36 lbs
1½" (DN40)	1.64 lbs	1.84 lbs	2.04 lbs	2.32 lbs
2" (DN50)	1.88 lbs	2.08 lbs	2.28 lbs	2.56 lbs
2½"	1.90 lbs	2.10 lbs	2.30 lbs	2.58 lbs
DN65	2.00 lbs	2.20 lbs	2.40 lbs	2.68 lbs
3" (DN80)	2.10 lbs	2.30 lbs	2.50 lbs	2.78 lbs
4" (DN100)	2.18 lbs	3.38 lbs	3.58 lbs	3.76 lbs
5" (DN125)	3.40 lbs	3.60 lbs	3.80 lbs	4.08 lbs
DN150	3.80 lbs	4.00 lbs	4.20 lbs	4.48 lbs
6"	3.90 lbs	4.10 lbs	4.30 lbs	4.58 lbs
DN200	4.70 lbs	4.90 lbs	5.10 lbs	5.38 lbs
8"	4.80 lbs	5.00 lbs	5.20 lbs	5.48 lbs
10"	5.60 lbs	5.80 lbs	6.00 lbs	6.28 lbs
12"	6.16 lbs	6.36 lbs	6.56 lbs	6.84 lbs



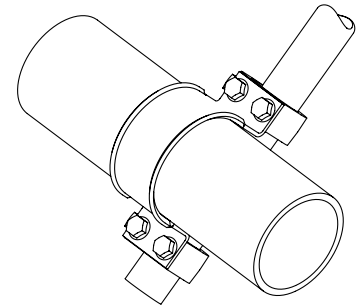
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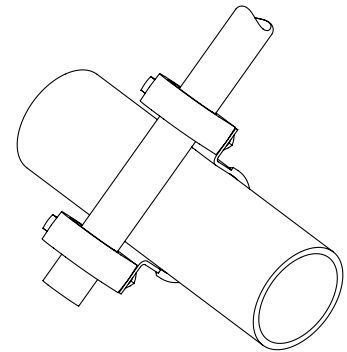
Model K Lateral Sway Brace Fig. AF035

FIG. AF035 cULus Listing per ANSI/UL 203a (ASD)

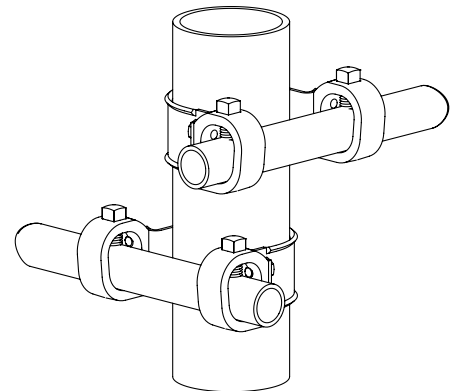
Service Pipe Size	Standard Service Pipe	Specialty Service Pipe	Horizontal Load Rating at Brace Angle			
			30°-44° lbf/kN	45°-59° lbf/kN	60°-90° lbf/kN	Listed lbf/kN
1" (DN25)	Sch. 10 Sch. 40 CPVC Metric Pipe	Mega-Thread MLT / GL Eddy Thread EZ-Thread				
1¼" (DN32)	Sch. 10 Sch. 40 CPVC Metric Pipe	Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread				
1½" (DN40)	Sch. 10 Sch. 40 CPVC Metric Pipe	Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread Fire-Flo	625 2.78	884 3.93	1082 4.81	1250 5.56
2" (DN50)	Sch. 10 Sch. 40 CPVC Metric Pipe	Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread Fire-Flo				
2½"	Sch. 10 Sch. 40 CPVC	Mega-Flow Eddy Flow Fire-Flo				
DN65	Metric Pipe	-				
3" (DN80)	Sch. 10 Sch. 40 CPVC Metric Pipe	Mega-Flow Eddy Flow Fire-Flo				
4" (DN100)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow Eddy Flow Fire-Flo				
5" (DN125)	Sch. 10 Sch. 40 Metric Pipe	-				
DN150	Metric Pipe	-	942 4.19	1333 5.93	1632 7.26	1885 8.38
6"	Sch. 10 Sch. 40	Mega-Flow				
DN200	Metric Pipe	-				
8"	0.188" wall Sch. 40	-				
10"	0.188" wall Sch. 40	-				
12"	0.188" wall Sch. 40	-	1125 5.00	1591 7.08	1948 8.67	2250 10.01



Lateral Application



Lateral Application



Riser Application

- 1) Brace Angles are determined from Vertical.
- 2) Sch. 10 & 0.188" Wall Load Ratings may be used for any thicker wall pipe of the same diameter.
- 3) Listed load ratings reduced for angle ranges in accordance with NFPA 13-2019 Table 18.5.2.3.
- 4) See table below for UL listed specialty pipes & UL Listed metric service pipes.
- 5) Load Ratings reflect 1" (DN25) - 2" (DN50) brace members. See table below for listed brace members.
- 6) Minimum safety factor of 2.2 in accordance with NFPA 13-2019 Section A.18.5.2.3.



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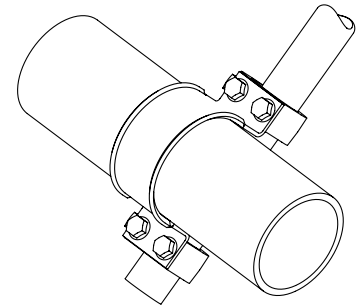
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Model K Lateral Sway Brace Fig. AF035

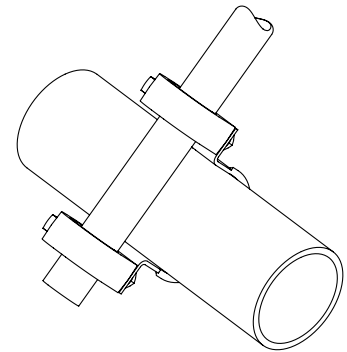
FIG. AF035 cULus Listing Per UL 203a (ASD) For NFPA 13-2016 Editions Or Earlier

UL's current Listings 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 factor of 1.5 for the load rating as compared to 2.2 for the current edition. The load ratings noted in this table 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).

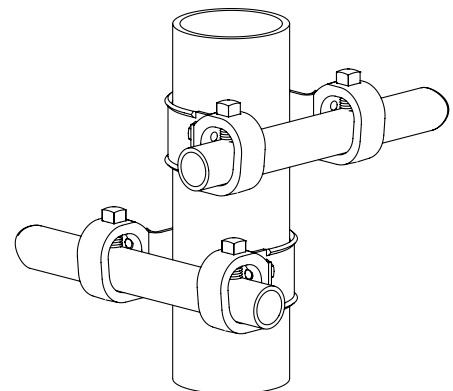
Service Pipe Size	Standard Service Pipe	Specialty Service Pipe	Horizontal Load Rating at Brace Angle			
			30°-44° lbf/kN	45°-59° lbf/kN	60°-74° lbf/kN	75°-90° lbf/kN
1" (DN25)	Sch. 10 Sch. 40 Metric Pipe	Mega-Thread MLT / GL Eddy Thread EZ-Thread				
1¼" (DN32)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread				
1½" (DN40)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread Fire-Flo				
2" (DN50)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread Fire-Flo				
2½"	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow Eddy Flow Fire-Flo	1382 6.15	1955 8.70	2393 10.65	2765 15.52
DN65	Metric Pipe	-				
3" (DN80)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow Eddy Flow Fire-Flo				
4" (DN100)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow Eddy Flow Fire-Flo				
5" (DN125)	Sch. 10 Sch. 40 Metric Pipe	-				
DN150	Metric Pipe	-				
6" (DN200)	Sch. 10 Sch. 40	Mega-Flow				
8"	0.188" Wall Sch. 40	-				
10"	0.188" Wall Sch. 40	-				
12"	0.188" Wall Sch. 40	-	1870 8.32	2644 11.77	3238 14.40	3740 16.64



Lateral Application



Lateral Application



Riser Application

- 1) Brace Angles are determined from Vertical.
- 2) Sch. 10 & 0.188" Wall Load Ratings may be used for any thicker wall pipe of the same diameter.
- 3) Listed load ratings reduced for angle ranges in accordance with NFPA 13-2016 Section A.9.3.5.2.3.
- 4) See table below for UL listed specialty pipes & UL Listed metric service pipes.
- 5) Load Ratings reflect 1" (DN25) - 2" (DN50) brace members. See table below for listed brace members.
- 6) Minimum safety factor of 2.2 in accordance with NFPA 13-2016 Section A.9.3.5.2.3.



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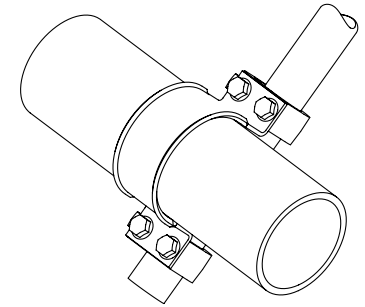
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Model K Lateral Sway Brace Fig. AF035

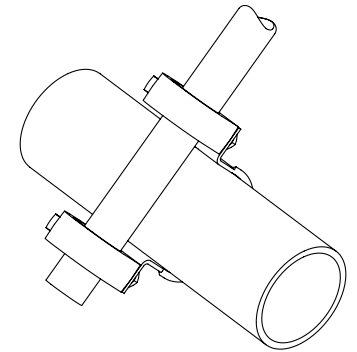
FIG. AF035 FM Approved (Listing) per FM 1950-13 (ASD)

Service Pipe Size	Standard Service Pipe	Specialty Service Pipe	Horizontal Load Rating at Brace Angle			
			30°-44°	45°-59°	60°-74°	75°-90°
			lbf/kN	lbf/kN	lbf/kN	lbf/kN
1" (DN25)	Sch. 10 Sch. 40 Metric Pipe	Mega-Thread MLT / GL Eddy Thread EZ-Thread				
1 1/4" (DN32)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread	1660 7.38	2350 10.45	2880 12.81	3210 14.28
1 1/2" (DN40)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread Fire-Flo	1540 6.85	2170 9.65	2660 11.83	2970 13.21
2" (DN50)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread Fire-Flo				
2 1/2"	Sch. 10 Sch. 40	Mega-Flow Eddy Flow Fire-Flo				
DN65	Metric Pipe	-	1270 5.65	1790 7.96	2200 9.79	2450 10.90
3" (DN80)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow Eddy Flow Fire-Flo				
4" (DN100)	Sch. 10 Sch. 40 Metric Pipe	Mega-Flow Eddy Flow Fire-Flo	1020 4.54	1450 6.45	1770 7.87	1980 8.81
5" (DN125)	Sch. 10 Sch. 40 Metric Pipe	-				
DN150	Metric Pipe	-	860 3.83	1220 5.43	1490 6.63	1660 7.38
6"	Sch. 10 Sch. 40	Mega-Flow				
DN200	Metric Pipe	-	540	770	950	1060
8"	0.188" Wall Sch. 40	-	2.40	3.43	4.23	4.72

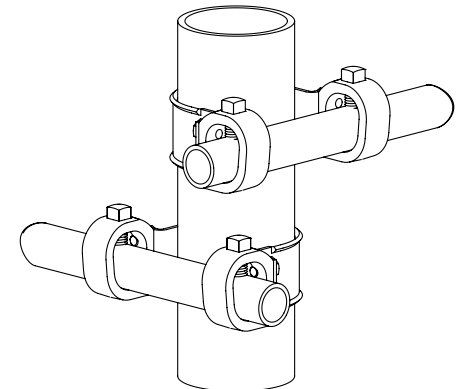
- 1) Brace Angles are determined from Vertical.
- 2) Sch. 10 & 0.188" Wall Load Ratings may be used for any thicker wall pipe of the same diameter.
- 3) See table below for FM listed specialty pipes & FM Listed metric service pipes.
- 4) Load Ratings reflect 1" (DN25) – 2" (DN50) brace members. See table below for listed brace members.
- 5) Minimum safety factor of 1.5 in accordance with NFPA 13-2016 Section A.9.3.5.2.3. To convert the load ratings above to a safety factor of 2.2 per NFPA 13-2019 Section A.18.5.2.3, multiply load ratings by a factor of 0.68.
- 5) To convert to LRFD Load Ratings, ASD Load Ratings may be multiplied by a factor of 1.5.



Lateral Application



Lateral Application



Riser Application



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Model K Lateral Sway Brace Fig. AF035

- 1 Place the AF035 over the service pipe to be braced.
- 2 Insert the brace member through the cast hoop ends.
The end of the brace pipe shall extend at least 1" (25.4 mm) past the cast hoop ends.
- 3 Hand tighten the set screws until they contact the brace member.
Continue to torque the set screws until the heads bottom out on the cast hoop ends.
- 4 Tighten per the fastener or structural attachment specifications.
- 5 Ensure the brace angle is within the specified range.

Notes: The brace member may be installed above or below the service pipe.

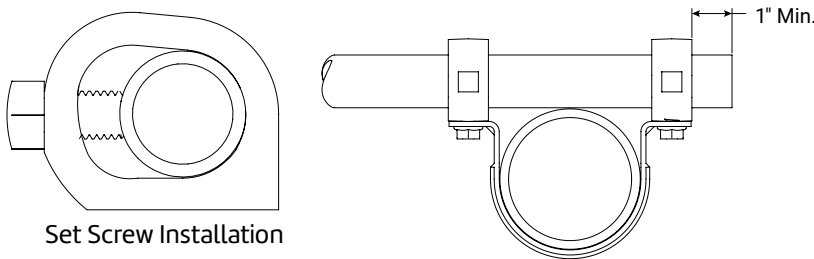


FIG. AF035 cULus Listed & FM Approved Brace Members

Brace Member	Brace Size	Standard (or Equivalent)	UL	FM
Sch. 40 NPS Pipe	1", 1¼", 1½", 2"	ASTM A53, A106, A135, or A795	✓	✓
Sch. 40 Metric Pipe	DN25 DN32 DN40	KS S 3562	✓	✓
		EN10255H		✓
		GB/T 3091		✓
Metric Pipe	DN50	JIS G3454		✓

FIG. AF035 cULus Listed & FM Approved Metric Service Pipes

Service Pipe Standard (or Equivalent)	Service Pipe Size	UL	FM
KS D 3507 KS D 3537	DN25	✓	✓
KS D 3562 Sch. 40	DN32	✓	✓
	DN40		
GB/T 3091 GB/T 3092	DN50		✓
	DN65		
JIS G3452	DN80		✓
	DN100		
EN 10255M	DN125		✓
	DN150		
EN 10255H	DN200		✓

Notes:
ASC Engineered Solutions™ brand bracing components are designed to be compatible ONLY with other ASC Engineered Solutions brand bracing components, resulting in a Listed seismic bracing assembly. Updated UL listing information may be viewed at www.ul.com and updated FM approval information may be viewed at www.approvalguide.com.

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