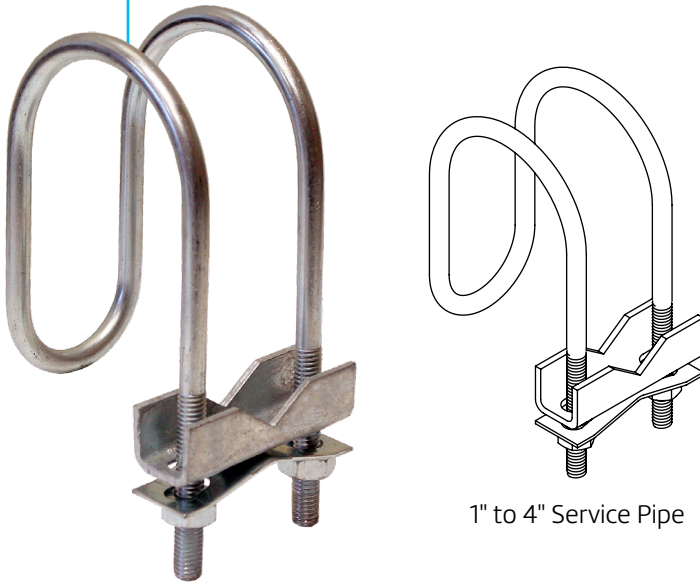


**Model Q Lateral Sway Brace  
Fig. AF001**



1" to 4" Service Pipe



**Material Specifications**

**Size Range:**

Service Pipe Size: 1" - 4", DN25 - DN100  
Brace Member: 1" - 1¼", DN25 - DN32

**Material**

Carbon Steel

**Finish**

- Plain
- Electro-Galvanized

**Service**

A seismic lateral brace designed to connect a brace member to the service pipe. The AF001 rigidly braces steel piping systems subjected to horizontal and vertical seismic loads.

**Approvals**

cULus Listed (ANSI/UL 203a), FM Approved (FM 1950-13), & OSHPD (OPM-0351-13). Complies with NFPA 13, ASCE 7, IBC, & MSS SP-127 bracing requirements.

**Features**

The indicator clip provides a visual indication that proper installation has been achieved..

**Ordering**

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

**FIG. AF001: Weight and Installation Torque**

Service Pipe Size	Brace Member Size		Installation Torque
	1" (DN25)	1" (DN25)	
1" (DN25)	0.82 lbs	0.87 lbs	14 ft-lbs
1¼" (DN32)	0.86 lbs	0.90 lbs	
1½" (DN40)	0.90 lbs	0.95 lbs	
2" (DN50)	0.96 lbs	1.00 lbs	16 ft-lbs
2½"	1.02 lbs	1.06 lbs	
DN65	1.05 lbs	1.09 lbs	
3" (DN80)	1.09 lbs	1.13 lbs	17 ft-lbs
4" (DN100)	1.23 lbs	1.26 lbs	

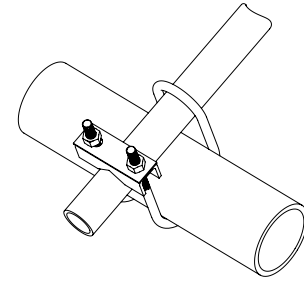


PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
Address:	Approved as noted
Contractor:	Not approved
Engineer:	Remarks:
Submittal Date:	
Notes 1:	
Notes 2:	

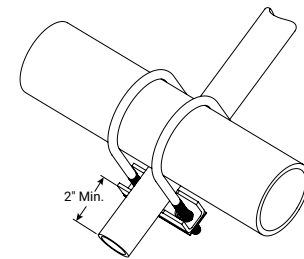
## Model Q Lateral Sway Brace Fig. AF001

FIG. AF001 cULus Listing per ANSI/UL 203a (ASD)

Service Pipe Size	Service Pipe	Horizontal Load Rating at Brace Angle			Listed
		30°-44°	45°-59°	60°-90°	
1" (DN25)	½" (M12)				
1¼" (DN32)	Sch. 10 Sch. 40 Metric Pipe				
1½" (DN40)					
2" (DN50)		340 lbf (1.51 kN)	480 lbf (2.14 kN)	588 lbf (2.62 kN)	680 lbf (3.02 kN)
2½"	Sch. 10 Sch. 40				
DN65	Metric Pipe				
3" (DN80)	Sch. 10 Sch. 40				
4" (DN100)	Metric Pipe				



Lateral Application



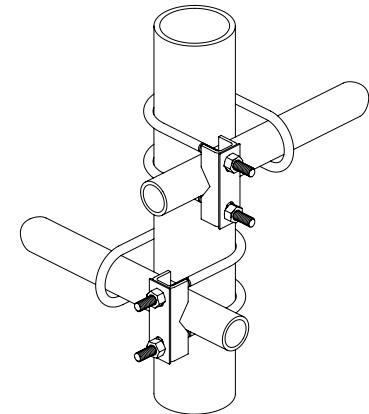
Lateral Application

- 1) Brace Angles are determined from Vertical.
- 2) Sch. 10 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) Load Ratings reflect 1" (DN25) – 1¼" (DN32) brace members. See table below for listed brace members.
- 5) Minimum safety factor of 2.2 in accordance with NFPA 13-2019 Section A.18.5.2.3.

Fig. AF001 cULus Listing per ANSI/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	Service Pipe	Horizontal Load Rating at Brace Angle			Listed
		30°-44°	45°-59°	60°-90°	
1" (DN25)	½" (M12)				
1¼" (DN32)	Sch. 10 Sch. 40 Metric Pipe				
1½" (DN40)					
2" (DN50)		500 lbf (2.22 kN)	707 lbf (3.15 kN)	865 lbf (3.85 kN)	1000 lbf (4.45 kN)
2½"	Sch. 10 Sch. 40				
DN65	Metric Pipe				
3" (DN80)	Sch. 10 Sch. 40				
4" (DN100)	Metric Pipe				



Riser Application

- 1) Brace Angles are determined from Vertical.
- 2) Sch. 10 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 Table 9.3.5.2.3.
- 4) Load Ratings reflect 1" (DN25) – 1¼" (DN32) 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



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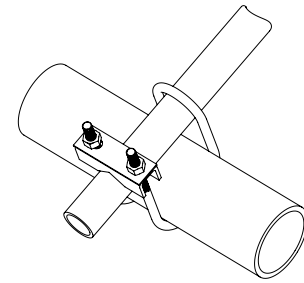
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## Model Q Lateral Sway Brace Fig. AF001

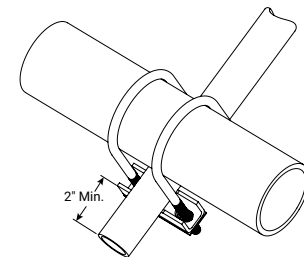
FIG. AF001FM Approved (Listing) per FM 1950-13 (ASD)

Service Pipe Size	Service Pipe	Horizontal Load Rating at Brace Angle			
		30°-44°	45°-59°	60°-74°	75°-90°
1" (DN25)	LW <sup>2</sup>	250 lbf (1.11 kN)	360 lbf (1.60 kN)	440 lbf (1.96 kN)	500 lbf (2.22 kN)
1¼" (DN32)					
1½" (DN40)					
2" (DN50)					
2½"					
3" (DN80)	LW <sup>2</sup>	410 lbf (1.82 kN)	590 lbf (2.62 kN)	720 lbf (3.2 kN)	800 lbf (2.56 kN)
4" (DN100)					
1" (DN25)					
1¼" (DN32)	Sch. 10 Sch. 40 Metric Pipe	500 lbf (2.22 kN)	810 lbf (3.6 kN)	1000 lbf (4.45 kN)	1100 lbf (4.89 kN)
1½" (DN40)					
2" (DN50)	Sch. 10 Sch. 40	760 lbf (3.38 kN)	1070 lbf (4.76 kN)	1320 lbf (5.87 kN)	1470 lbf (6.54 kN)
2½"					
DN65	Metric Pipe				
3" (DN80)	Sch. 10 Sch. 40 Metric Pipe				
4" (DN100)					

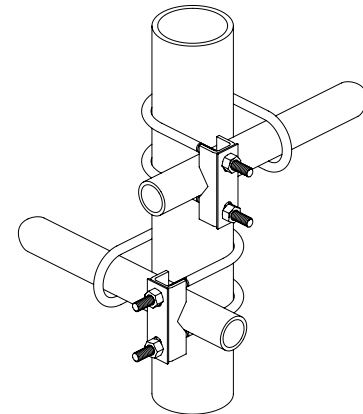
- 1) Brace Angles are determined from Vertical.
- 2) LW Refers to FM Approved Lightwall pipe, commonly referred to as Sch. 7 and Flow Pipe. See FM Approval Guide for approved Lightwall pipe.
- 3) Sch. 10 Load Ratings may be used for any thicker wall pipe of the same diameter.
- 4) See table below for FM listed specialty pipes & FM Listed metric service pipes.
- 5) Load Ratings reflect 1" (DN25) – 1¼" (DN32) brace members. See table below for listed brace members.
- 6) 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.
- 7) To convert to LRFD Load Ratings, ASD Load Ratings may be multiplied by a factor of 1.5.



Lateral Application



Lateral Application



Riser Application



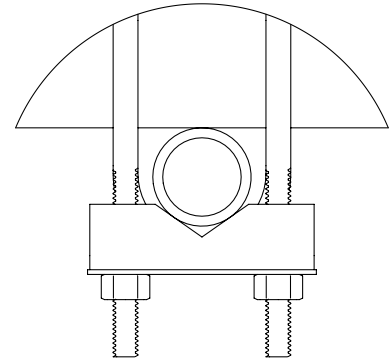
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## Model Q Lateral Sway Brace Fig. AF001

- 1 Place the AF001 over the service pipe to be braced.
- 2 Insert the brace member through the open loop and the bracket. The end of the brace pipe shall extend at least 2in (50.8mm) past the bracket.
- 3 Hand tighten the nuts equally until the bracket contacts the brace member. Continue to torque the nuts equally and alternately until indicator clip is flat and the installation torque has been achieved.
- 4 Ensure the brace angle is within the specified range.

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



**FIG. AF001 cULus Listed & FM Approved Brace Members**

Brace Member	Sizes	Standards (or Equivalent)	UL Listed	FM Approved
Sch. 40 NPS Pipe	1", 1¼"	ASTM A53, A106, A135, or A795	✓	✓
Sch. 40 Metric Pipe		KS D 3562	✓	✓
Metric Pipe	DN25	EN10255H		✓
	DN32	GB/T 3091		✓
		JIS G3454		✓

**FIG. AF001 cULus Listed & FM Approved Metric Service Pipes**

Brace Member	Service Pipe Sizes	UL Listed	FM Approved
KS D 3507 KS D 3537		✓	✓
KS D 3562 Sch. 40	DN25	✓	✓
GB/T 3091 GB/T 3092	DN32 DN40		✓
JIS G3452	DN50 DN 80 DN100		✓
EN 10255M			✓
EN 10255H			✓

**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](http://www.ul.com) and updated FM approval information may be viewed at [www.approvalguide.com](http://www.approvalguide.com).

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