



UL 203A

STANDARD FOR SAFETY

Sway Brace Devices for Sprinkler System Piping

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UL Standard for Safety for Sway Brace Devices for Sprinkler System Piping, UL 203A

First Edition, Dated December 18, 2015

Summary of Topics

This revision to ANSI/UL 203A is being issued as an editorial update, which includes a correction to the table referenced in ASTM A1023/A1023M, and a correction in the column labeled "Pipe Size", Table 9.2.

The corrected requirements are substantially in accordance with Proposal(s) on this subject dated April 10, 2015 and September 25, 2015.

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DECEMBER 18, 2015
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UL 203A

Standard for Sway Brace Devices for Sprinkler System Piping

Prior to the first edition, the requirements for the products covered by this standard were included in the Outline of Investigation for Sway Brace Devices for Sprinkler System Piping, UL 203A.

First Edition

December 18, 2015

This ANSI/UL Standard for Safety consists of the First Edition including revisions through June 27, 2016.

The most recent designation of ANSI/UL 203A as an American National Standard (ANSI) occurred on December 18, 2015. ANSI approval for a standard does not include the Cover Page, Transmittal Pages and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <http://csds.ul.com>.

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INTRODUCTION

1 Scope

1.1 These requirements cover sway brace devices intended to protect fire protection system piping in locations subject to earthquakes. These devices are intended for installation in accordance with the Standard for the Installation of Sprinkler Systems, NFPA 13.

1.2 These requirements cover restraint devices intended to restrict movement of fire protection piping.

2 Components

2.1 Except as indicated in 2.2, a component of a product covered by this Standard shall comply with the requirements for that component.

2.2 A component is not required to comply with a specific requirement that:

- a) Involves a feature or characteristic not required in the application of the component in the product covered by this standard, or
- b) Is superseded by a requirement in this standard.

2.3 A component shall be used in accordance with its rating established for the intended conditions of use.

2.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

3 Units of Measurement

3.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

4 Undated References

4.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

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5 Glossary

5.1 For the purposes of this Standard, the following definitions apply.

5.2 BRACE MEMBER – Structural component of a sway brace.

5.3 BRACE MEMBER NON-RIGID – Standard Specification for Stranded Carbon Steel Wire Ropes for General Purposes, ASTM A1023/A1023M, Table 7, Galvanized Steel Cable, as referenced by Standard Guidelines for the Structural Applications of Steel Cables for Buildings, ASCE-19.

5.4 FASTENER ADAPTER – Device to facilitate the use of additional fasteners for mounting a sway brace (See Figure A.4).

5.5 LOAD RATING, NONRIGID ASSEMBLY – The published load rating is less than or equal to the manufacturer's specified minimum breaking strength of the cable divided by 1.5.

5.6 LOAD RATING, RIGID SWAY BRACE FITTINGS – The published maximum force to be applied to a component of a rigid sway brace.

5.7 NPS (NOMINAL PIPE SIZE) – A dimensionless designator for pipe sizes defined in standards including:

- a) Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless, ASTM A53/A53M;
- b) Standard Specification for Electric-Resistance-Welded Steel Pipe, ASTM A135/A135M; and
- c) Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use, ASTM A795/A795M

used to replace terms such as "Nominal Diameter" and "Nominal Size."

5.8 PERMANENT DEFORMATION – The distortion of a system pipe or brace member in excess of the requirements in Table 13.1.

5.9 RESTRAINT DEVICE – A mechanism that is a part of a hanger assembly or a separate device and is intended to limit interaction of the pipe with other portions of the structure and to limit stresses in the pipes to permissible limits.

5.10 RIGID SWAY BRACE – An assembly intended to attach the system piping to the building structure to resist earthquake loads in two directions commonly consisting of:

- a) A sway brace fitting;
- b) A brace member; and
- c) A structure attachment fitting.

Examples of sway brace devices are shown in Appendix A.

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5.11 STRUCTURE ADAPTER – A device to facilitate the attachment of a sway brace to a specific building structural member.

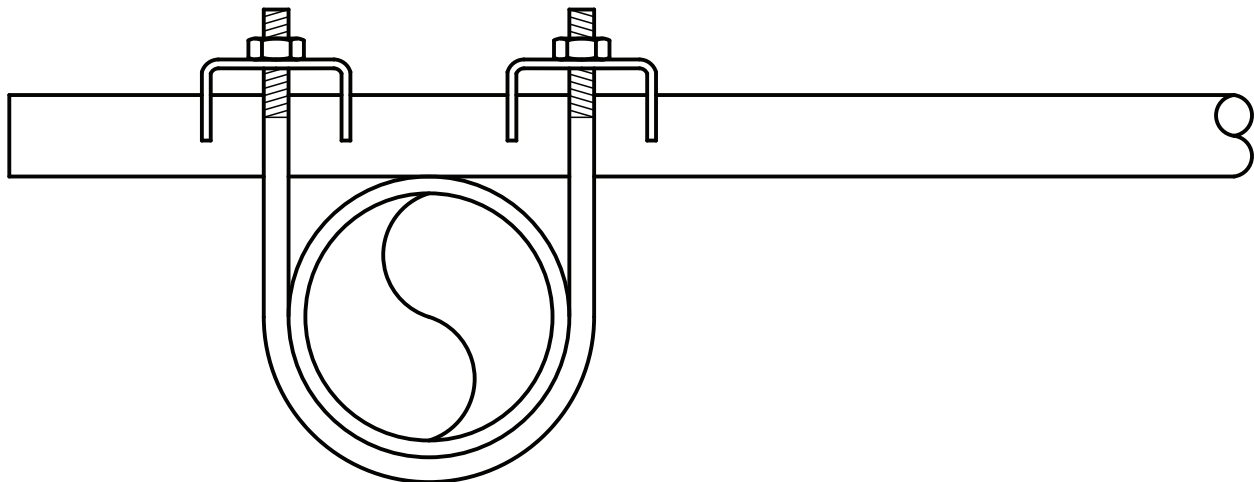
5.12 STRUCTURE ATTACHMENT FITTING – A device used to attach a sway brace directly to the building structure.

5.13 SWAY BRACE FITTING – A device used to attach the brace member of the sway brace to the system piping.

5.14 SWAY BRACE FITTING ADAPTER – A device to transition the attachment of the sway brace fitting to the sway brace member.

5.15 SWAY BRACE, LATERAL – A sway brace intended to resist differential movement perpendicular to the axis of the system piping. See Figure 5.1 as an example.

Figure 5.1
Lateral sway brace (End view)



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5.16 SWAY BRACE, LONGITUDINAL – A sway brace intended to resist differential movement parallel to the axis of the system piping. See Figure 5.2 as an example.