# Pipe Hangers and Supports

## Materials, Design, Manufacture, Selection, Application, and Installation

**Standard Practice**
**Developed and Approved by the**
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This MSS Standard Practice was developed under the consensus of the MSS Technical Committee 403, *Pipe Hangers and Supports*, and the MSS Coordinating Committee. In addition, this Standard Practice was approved by an ANSI/MSS Consensus Committee and by ANSI as a revised American National Standard. The content of this Standard Practice is the resulting efforts of competent and experienced volunteers to provide an effective, clear, and non-exclusive standard that will benefit the industry as a whole. This MSS Standard Practice describes minimal requirements and is intended as a basis for common practice by the manufacturer, the user, and the general public. The existence of an MSS Standard Practice does not in itself preclude the manufacture, sale, or use of products not conforming to the Standard Practice. Mandatory conformance to this Standard Practice is established only by reference in other documents such as a code, specification, sales contract, or public law, as applicable. MSS has no power, nor does it undertake, to enforce or certify compliance with this document. Any certification or other statement of compliance with the requirements of this Standard Practice shall not be attributable to MSS and is solely the responsibility of the certifier or maker of the statement.

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The U.S. customary units and SI (metric) units in this Standard Practice are regarded separately and each should be used independently of the other. Combining or converting values between the two systems may result in non-conformance with this Standard Practice. U.S. customary units in this Standard Practice are the originating standard, in cases of conflict or incongruity.

> **This Standard Practice has been revised from the previous 2009 edition. It is suggested that if the user is interested in knowing what changes have been made, that a direct page by page comparison should be made of this document and that of the previous edition.**

Non-toleranced dimensions in this Standard Practice are nominal unless otherwise specified.



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## FOREWORD

This Standard Practice was developed by a cooperative effort of representatives of pipe hanger manufacturers. It is based on "best practice" current at this time and on the collective experience of the industry. There is a companion Standard Practice, MSS SP-127, which relates to the design, selection, and application of bracing for piping systems subject to seismic, wind, and dynamic loading.

The 2009 edition of SP-58 was originally ANSI-approved and published in 2011 as an American National Standard. Since 2009, the SP-58 Standard Practice has integrated the content of the original SP-58, along with the final editions of SP-69, SP-77, SP-89, and SP-90 to create a comprehensive single-source document that enables the user to specify a minimum level of acceptance for pipe hanger and support design and performance, in addition to defining the types of hangers and supports.

This 2018 revision of ANSI/MSS-SP-58 contains several editorial and formatting changes, new inclusions, and updates based on the prior ANSI canvas committee comments and subsequent proposals brought forward to the committee. New materials and allowable stresses have been added. Allowable stress has been updated for metal framing channel to maintain consistency with the general safety factor stated within the Standard Practice. Post-weld heat treatments have been updated to remain in compliance with ASME B31.1. Revisions have been made to the insulated piping and protection shield sections. For the first time, rooftop supports are addressed in the document. The type chart has been updated to current standard products and enlarged for readability. The information within Table 4 has also been expanded, and the references in Annex C have been updated.

**Notice:**

This revised ANSI/MSS SP-58-2018 comprehensive edition continues to integrate the content of five MSS Standard Practices, including ANSI/MSS SP-69-2003, into a single source document that enables the user to specify a minimum level of acceptance for pipe hanger and support design and performance, in addition to defining the types of hangers and supports. The aforementioned ANSI/MSS SP-69 was withdrawn in 2014, and SP-77, SP-89, and SP-90 were withdrawn in 2010. The standard ANSI/MSS SP-58-2009, and subsequently revised editions, shall be officially utilized and referenced in place of ANSI/MSS SP-69.

Note that all previous Standard Practices mentioned will remain available from MSS as historical documents.

*In Memory of:*
Harold Erikson
1923 – 2016
*Fifty-eight years of dedicated service as a member of MSS Committee 403.*
*He served as a mentor and inspiration to all within the industry.*

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# PIPE HANGERS AND SUPPORTS – MATERIALS, DESIGN, MANUFACTURE, SELECTION, APPLICATION, AND INSTALLATION

## 1. SCOPE

1.1 This Standard Practice establishes an industry accepted basis for Manufacturers, Engineers, Erectors, Purchasers, Inspectors, Draftsmen, and others involved in the Materials, Design, Manufacture, Selection, Application, Inspection, and Installation of pipe hangers and supports and their components for piping systems of all service temperatures.

1.2 This Standard Practice establishes the minimum requirements for materials, allowable stresses, product design, testing, and load ratings for pipe hanger and support assemblies for standard and unique pipe hangers and supports.

1.3 This Standard Practice establishes the inspection criteria for the manufacture and installation of pipe hangers and supports.

1.4 This Standard Practice establishes the required procedures for packing, marking, shipping, receiving, and storage of pipe hangers and supports.

1.5 This Standard Practice establishes the minimum requirements for pipe hanger and support assembly drawings.

1.6 This Standard Practice establishes the field practices for installation, adjustment, testing, and inspection of pipe hangers and supports.

1.7 This Standard Practice establishes the terminology and identification of pipe hangers and supports, along with recommended contractual relationship structures.

## 2. OBJECTIVE

2.1 To serve as a guide for pipe hanger and support design, manufacture, selection, and installation.

2.2 To enable the user to specify a minimum level of acceptance for pipe hanger and support design and performance.

2.3 To define types of hangers and supports that are illustrated in the Type Chart, Figure A1. Hangers and Supports shown on the Type Chart indicate general types only and manufacturers' other standard products shall be acceptable under this Standard Practice if they meet dimensional and load rating limitations set forth in this Standard Practice.

2.4 To serve as a pipe hanger and support specification for selection and application, by being referenced in whole or in part.

2.5 To serve as a guide to proven industry practice during engineering design and writing of job specifications covering the hanging, supporting and controlling movement of piping systems.

2.6 To provide the erector with information on types of hangers and support components to be used for specific applications and installations, where such information is not otherwise provided.

2.7 To serve as a companion document to MSS SP-127 which provides recommendations for the design, selection, and application of bracing for piping systems subject to seismic, wind, and dynamic loading.