

MSS SP-89-2003

Pipe Hangers and Supports - Fabrication and Installation Practices

Standard Practice

**Developed and Approved by the
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Unless otherwise specifically noted in this MSS SP, any standard referred to herein is identified by the date of issue that was applicable to the referenced standard(s) at the date of issue of this MSS SP. (See Annex A.)

In this Standard Practice all notes, annexes, tables, and figures are construed to be essential to the understanding of the message of the standard, and are considered part of the text unless noted as "supplemental". "Supplemental" information does not include mandatory requirements.

U.S. customary units in this SP are the standard; the metric (SI) units are only for reference.

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FOREWORD

This standard practice was developed by a cooperative effort of representatives of the pipe hanger manufacturers. It is based on the best current practice and on the collective experience of the industry. There are three companion standards - MSS SP-58 and MSS SP-69 relate to hanger materials, design, manufacture, selection and application; MSS SP-127 relates to the design, selection, and application of bracing for piping systems subject to seismic - wind - dynamic loading. In addition, the MSS Technical Committee 403 has developed guidelines for pipe supports contractual relationships and on hanger terminology as covered in MSS SP-77 and MSS SP-90 respectively.

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PIPE HANGERS AND SUPPORTS - FABRICATION AND INSTALLATION PRACTICES

1. SCOPE

1.1 This Standard Practice establishes recommended procedures for detailing, fabrication, and installation of pipe hangers and supports. These procedures supplement, but do not replace, those of the manufacturer.

2. OBJECTIVE

2.1 To serve as a guide to the fabricator and erector of pipe supports, so they may understand their mutual responsibilities.

2.2 To furnish the erector, who may not be familiar with engineered pipe supports, a guide for the proper installation of these supports.

2.3 To serve as a companion document to MSS SP-58 which provides recommendations for materials, design and manufacture of pipe hangers and supports.

2.4 To serve as a companion document to MSS SP-69 which provides recommendations for the selection and application of pipe hangers and supports.

2.5 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 - dynamic loading.

3. PIPE HANGER ASSEMBLY DRAWINGS

3.1 *Description*

3.1.1 This section contains recommendations for minimum data which should appear on hanger drawings to enable the fabricator to furnish, and the erector to install the hanger assembly, as intended by the job specification or purchase order conditions.

3.2 *General*

3.2.1 The conventional 8 1/2 x 11 inch hanger drawing shall contain the information necessary for shop fabrication and field installation of the hanger assembly. In the case of complex assemblies, supplementary or larger, 11 x 17 inch sheets may be used.

3.2.2 The data shown on the hanger drawing should consist of:

- a) Drawing of the assembly (Section 3.3)
- b) Bill of material (Section 3.4)
- c) Load and movement data (Section 3.5)
- d) Supplementary steel (Section 3.6)
- e) Field and shop welds (Section 3.7)
- f) Protective coatings (Section 3.8)
- g) Location plan (Section 3.9)
- h) Identification (Section 3.10)
- i) Reference drawings (Section 3.11)

3.3 *Drawing of the Assembly*

3.3.1 Drawing shall be a pictorial representation of the assembly showing each component part identified to a bill of material item.

3.3.2 Dimensioning of the hanger assembly depends upon the complexity of the design. As a minimum, the following data should be shown:

- a) The overall dimension from the supporting structure to the centerline or bottom of the pipe.
- b) The orientation, elevation, size and type of supporting structure.
- c) Pipe size (nominal pipe size unless otherwise noted) and insulation thickness as applicable.
- d) Pipe elevation.
- e) Other dimensions necessary for the fabrication and installation of the complete hanger assembly.
- f) Unless otherwise required, all dimensions shall be to the nearest one-eighth inch (3 mm).

3.4 *Bill of Material*

3.4.1 An itemized bill of material shall be provided listing all components of the hanger assembly. Identification of standard catalog components shall be made by manufacturer's figure number, type and size. Appropriate material specification shall be shown for special components.