

MSS SP-79-2018

Socket-Welding Reducer Inserts

Standard Practice
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The SI (metric) units and U.S. customary units in this Standard Practice are regarded separately as the standard; 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.

This document has been substantively revised from the previous 2011 edition. It is suggested that if the user is interested in knowing what changes have been made, 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

The original 1974 edition established a Standard Practice for Socket-Welding Reducer Inserts that were produced by various manufacturers to varying dimensions, although basically similar in design principle.

The 2011 edition included the addition of Table 3M for SI (metric) dimensioned fittings. Other SI (metric) dimensions and the 2010 Errata Sheet were also incorporated into the 2011 edition.

This 2018 edition includes various formatting and editorial updates, general clarifications to body text, updating of fitting material requirements, expansion of fittings covered by this Standard Practice (Table 1), inclusion of NPS 1/8 (DN 6) values that may be used to determine the nominal wall thickness of the Schedule 160 pipe for rating purposes (Table 2), and revisions to Table 3 and Table 3M, including the addition of all remaining insert reducing sizes down through NPS 1/8 (DN 6).

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Manufacturers Standardization Society of the Valve and Fittings Industry

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SOCKET-WELDING REDUCER INSERTS

PURPOSE

To provide a Standard Practice establishing requirements for insert type fittings, which effectively, after welded installation, creates a socket-welded reduced end fitting, such as a Tee, 90-degree Elbow (Ell), Cross, 45-degree Elbow (Ell), Coupling, etc.

1. SCOPE

1.1 **General** This Standard Practice covers ratings, dimensions, tolerances, finish, marking and material requirements for socket-welding reducer inserts for use with ASME B16.11, Class 3000 and 6000 socket-welding fittings. U.S. customary unit dimensions for these reducer inserts are shown in Table 3 and SI (metric) dimensions are shown in Table 3M.

1.1.1 **Fitting Sizes/Pipe Correlation** Fittings covered by this Standard Practice are shown in Table 1, by class, size range and correlation to the schedule number or wall designation of pipe for calculation of ratings.

TABLE 1
Fitting Sizes/Pipe Correlation

Class Designation	Sizes		Pipe Used For Rating Purposes	Wall Designation
	NPS	DN		
3000	1/8 – 4	6 – 100	Schedule 80	XS
6000	1/8 – 3	6 – 80	Schedule 160	—

GENERAL NOTE: This table is not included to restrict the use of pipe of thinner walls with the Reducer Inserts.

1.1.2 **Partial Compliance Fittings** Fittings with special dimensions and fittings made from non-standard materials may be designed and manufactured by agreement between the manufacturer and the purchaser, provided they are marked in accordance with the requirements for partial compliance fittings of Section 5.1.1(e).

1.1.3 **Welding** Installation welding requirements are not within the scope of this Standard Practice, except for:

- (1) The CAUTIONARY NOTE REGARDING INSTALLATION OF SOCKET-WELDED JOINTS (see Section 12)
- (2) The WELDING GAP AND MINIMUM SOCKET WALL THICKNESS (see Figure 1)
- (3) The GAP RECOMMENDATIONS (see Figure 2). Installation welding shall be done in accordance with the applicable piping system into which the fittings are to be installed.

2. GENERAL

2.1 **Referenced Standards** The standards and specifications referenced in this Standard Practice are shown in Annex A, which is a normative part of this Standard Practice. It is not considered practical to identify the specific edition of each standard and specification in the individual references. Instead, the specific edition reference is identified in Annex A. A fitting made in conformance and conforming to this Standard Practice in all other respects will be considered to be in conformance with this Standard Practice, even though the edition reference may have changed in a subsequent addendum to or revision of the standard.