

MSS SP-9-2018

Spot Facing for Bronze, Iron, and Steel Flanges

Standard Practice
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U.S. customary units in this Standard Practice are the standard; the SI (metric) units are based on common equivalencies and are for reference only. Combining or converting values between the two systems may result in non-conformance with this Standard Practice.

Substantive changes in this 2018 edition are “flagged” by parallel bars as shown on the margins of this paragraph. The specific detail of the change may be determined by comparing the material flagged with that in the previous 2013 edition.

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

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SPOT FACING FOR BRONZE, IRON, AND STEEL FLANGES

1. SCOPE

1.1 This MSS Standard Practice applies to the spot facing for U.S. customary (inch-series) bolting of pipe flanges in bronze, gray iron, ductile iron, or steel when cast integral with valves and fittings, as well as the companion flanges, when so required by the standard for the product.

1.2 This Standard Practice also applies to the spot facing for SI (metric) bolting used in bolted joints not covered by the referenced flange standards herein.

2. DESIGN

2.1 *U.S. Customary (Inch-Series) Bolting*

2.1.1 The dimensions for spot facing apply to the use of hexagon head bolts or hexagon nuts in accordance with ASME B18.2.1 and ASME B18.2.2 (heavy series). For bolt sizes 1/2 and 5/8, the minimum diameter of spot facing is sufficient for regular square head bolts, in accordance with ASME B18.2.1.

2.1.2 The minimum spot facing diameters illustrated in Figure 1, are listed in Table 1 for bolt sizes 1/2 inch through 4 inches.

2.1.3 The bolt sizes, for which spot facing is provided, include all the inch-series bolt sizes required in the various flange standards indicated below:

Bronze

- ASME B16.24, Cast Copper Alloy Pipe Flanges and Flanged Fittings: Class 150, 300, 600, 900, 1500, and 2500
- MSS SP-106, Cast Copper Alloy Flanges and Flanged Fittings: Class 125, 150, and 300

Gray Iron

- ASME B16.1, Gray Iron Pipe Flanges and Flanged Fittings: Class 25, 125, and 250

Ductile Iron

- ASME B16.42, Ductile Iron Pipe Flanges and Flanged Fittings: Class 150 and 300

Steel

- ASME B16.5, Pipe Flanges and Flanged Fittings: NPS 1/2 through 24 Metric/Inch Standard
- ASME B16.47 Large Diameter Steel Flanges: NPS 26 through NPS 60 Metric/Inch Standard
- MSS SP-44 Steel Pipeline Flanges