

MSS SP-135-2006

High Pressure Steel Knife Gate Valves

Standard Practice
Developed and Approved by the
Manufacturers Standardization Society of the
Valve and Fittings Industry, Inc.
127 Park Street, NE
Vienna, Virginia 22180
Phone: (703) 281-6613
Fax: (703) 281-6671
e-mail: info@mss.hq.org



www.mss-hq.org

This MSS Standard Practice was developed under the consensus of the MSS Technical Committee 114 and the MSS Coordinating Committee. The content of this Standard Practice is the result of the efforts of competent and concerned volunteers to provide an effective, clear, and non-exclusive specification that will benefit the industry as a whole. This MSS Standard Practice 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 is established only by reference in a code, specification, sales contract, or public law, as applicable.

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". All appendices appearing in this document are construed as "supplemental". Supplemental information does not include mandatory requirements.

Any part of this standard may be quoted. Credit lines should read 'extracted from MSS SP-135, 2006 with permission of the publisher, the Manufacturers Standardization Society.' Reproduction prohibited under copyright convention unless written permission is granted by the Manufacturers Standardization Society of the Valve and Fittings Industry Inc.

Originally Approved September, 2005

Copyright ©, 2006 by
Manufacturers Standardization Society
of the
Valve and Fittings Industry, Inc.
Printed in U.S.A.

TABLE OF CONTENTS

<u>SECTION</u>		<u>PAGE</u>
	1 SCOPE.....	1
	2 STANDARDS UNITS.....	1
	3 PRESSURE-TEMPERATURE RATINGS.....	1
	4 SIZE.....	1
	5 MARKING.....	1
	6 MATERIALS.....	1
	7 DESIGN.....	1
	8 WELDING.....	2
	9 TOLERANCES.....	2
	10 PRODUCTION TEST.....	2
	11 SHIPPING INFORMATION.....	2
TABLE	1 Class 150 Valve Dimensions, Inches.....	3
	1A Class 150 Valve Dimensions, Millimeters.....	4
	2 Class 300 Valve Dimensions, Inches.....	5
	2A Class 300 Valve Dimensions, Millimeters.....	6
ANNEX	A Referenced Standards and Applicable Dates.....	7

High Pressure Steel Knife Gate Valves

1. SCOPE

1.1 This Standard Practice covers the construction requirements for carbon steel and stainless steel knife gate valves that meet the applicable requirements of ASME B16.34.

1.2 This Standard Practice covers flanged body designs compatible with ASME B16.5 flanges for sizes NPS 2 (DN 50) through NPS 24 (DN 600) and ASME B16.47 Series A flanges for sizes NPS 26 (DN 650) through NPS 36 (DN 900).

2. STANDARD UNITS

The values stated in either U.S. customary units or metric units are to be regarded separately as the standard. Within the text, the metric units are shown in parenthesis. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. Combining values from the two systems may result in nonconformance with this standard.

3. PRESSURE-TEMPERATURE RATINGS

This Standard Practice is limited to valves with Class 150 and 300 pressure-temperature ratings, as described in ASME B16.34 and shall meet all requirements of Section 2, ASME B16.34.

4. SIZE

The valve sizes in Tables 1, 1A, 2 and 2A are the nominal sizes of the end connections.

5. MARKING

Valves shall be marked in accordance with ASME B16.34, MSS SP-25, and in accordance with the following requirements and modifications:

- a) Manufacturer's name or trademark/logo.
- b) The body material of construction or code, when more than one material or grade of material is used, shall each be identified. When lining in contact with the fluid is used, it shall be listed and identified as "lining". It is not required to repeat the material designation on fabricated bodies.

c) Since these valves are normally manufactured for closure in one direction only, the valve shall be marked showing the "seat side" (downstream side) of the valve in such a manner that the markings can be seen with the valve installed in the pipeline. The user shall be responsible for correct directional installation.

d) A tag is to be attached to the valves for installation purposes indicating:

- 1) Care to be taken in valve installation with respect to direction of closure.
- 2) Care to be taken when installing studs or bolts in the tapped holes of the flange in the area of the chest to prevent chest damage. The chest is the body area between the packing chamber and the flanges.
- 3) Packing nuts may require adjustment to obtain a tight seal.

e) The stem material need not be listed.

6. MATERIALS

Valves shall be carbon steel or stainless steel. All materials shall be in accordance with the requirements of Section 5, ASME B16.34.

7. DESIGN

7.1 The design of all valves shall prevent permanent distortion of the body or seats when tested as specified in Section 10. Some permanent distortion of parts is acceptable during the shell test of Section 10.1 provided it can be demonstrated that there will be no further deformation upon subsequent pressure loadings.

7.2 Threaded holes used for flange bolting shall provide for full thread engagement to a depth of not less than the nominal bolt diameter. Unless otherwise specified by the customer, threaded holes for flange bolting shall be tapped in accordance with ASME B1.1 Coarse Thread Series Class 2B for bolts 1 inch and smaller and shall be tapped to the 8-Thread Series Class 2B for bolts 1-1/8 inches or larger.