

# Pressure Testing of Knife Gate Valves

**Standard Practice**  
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This MSS Standard Practice was developed under the consensus of the MSS Technical Committee 409, *Knife Gate Valves*, and the MSS Coordinating Committee. The content of this Standard Practice is the resulting efforts of knowledgeable and experienced industry 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 industry at large. It is the responsibility of the user of this Standard Practice to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use. 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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Substantive changes in this 2021 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 2016 edition.

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

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## FOREWORD

This first edition of Standard Practice for Pressure Testing of Knife Gate Valves was approved and published in 2016. It was developed for the purpose of providing a uniform means of testing knife gate valves commonly used in the "full open" and "full closed" type of service for isolation. This Standard Practice is not intended for use with control valves. **Refer to ISA 75.19.01 and FCI 70-2 for Control Valves.**

There are five distinct types of knife gate valves; all derived from the original patent in the 1950s. Each type offers a different performance and ability. There are two main groups: A) Cold Working Pressure (CWP) rated valves that do not adhere to ASME B16.34, and B) ASME B16.34 Class 150, 300 and 600. In addition, there are two main Categories: C) Resilient Seated and D) Metal Seated.

Modern advances in knife gate design have and will present additional types in the future; including designs which are ready for use now, such as Double Block and Bleed. It is the owner's or specifier's responsibility to be aware of the differences.

The 2021 edition of MSS SP-151, in addition to various editorial and formatting updates, included: (1) Clarification to the pressure class in Table 2 involving the alternate gas test; (2) Clarification to text in Section 5.2 involving valves for double seating type; (3) Updating of the organizations and references in Annex A.

**CAUTION: Safety precautions must be taken when gas is used.**