



PROCESS
INDUSTRY
PRACTICES

TECHNICAL REVISION
February 2023

Vessel

**PIP VEEVJ001
Gasket Guideline**

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PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

This Practice has been prepared by harmonizing technical requirements from existing standards of major industrial operators, contractors, and standards development organizations. While this Practice is intended to incorporate the majority of requirements, individual applications may have requirements which take precedence over this Practice. Determinations concerning fitness for purpose or application of this Practice to specific project or engineering situations should not be made solely on information contained in this Practice. All Practices are intended to be consistent with applicable laws and regulations. Should this Practice conflict with applicable law or regulations, such laws or regulations must be followed. Consult an appropriate professional before applying or acting on any material contained in or suggested by this Practice.

Use of trade names should not be viewed as an expression of preference. Other brands having the same specifications are equally correct and may be substituted for those named.

This Practice is subject to revision at any time. For more information refer to PIP ADG001, *Specification for Developing Practices*.

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1. Scope

This Practice provides guidelines for specifying gaskets used with circular flanges for pressurized equipment and piping. It describes guidelines for use of gaskets with the following types of flanges:

- a. Standard flanges in accordance with *ASME B16.1*, *B16.5*, *B16.42*, or *B16.47*
- b. Custom flanges designed in accordance with *Code, Division 1* Appendix 2 or *Division 2*, Paragraph 4.16 or Part 5

This Practice applies to all of the following:

- a. Common gasket styles contained between flat (planar) flange surfaces
- b. Double jacketed, spiral wound, grooved metal with covering layer, corrugated metal, and sheet gaskets
- c. Design conditions not greater than the standard flange rating or the manufacturer's published gasket rating if more restrictive

This Practice does not address the following:

- a. Confined gaskets, i.e., gaskets contained in grooves (e.g., ring joint, tongue and groove, male-female, spiral wound without retaining rings, etc.)
- b. Self-actuated gaskets (e.g., "o"-rings)
- c. Proprietary gasket styles
- d. Other types of gaskets not specifically covered in this Practice
- e. Cyclic service as defined for vessels in accordance with *ASME Section VIII, Division 2*, Paragraph 5.5.2, Screening Criteria for Fatigue Analysis (cyclic service is defined as requiring a fatigue analysis) and for piping by *ASME B31.3* Paragraph 300.2, Severe Cyclic Service definition.

The guidelines in this Practice are intended to:

- a. Improve process containment;
- b. Reduce risk of personnel exposure;
- c. Enhance blowout prevention;
- d. Improve bonded joint reliability; and
- e. Provide for gasket standardization

Specific services, environments, or situations may require considerations that take precedence over the guidelines of this Practice.