

Conformance of Victaulic IPS Grooved Couplings and Fittings to ASME B31.3 Process Piping Code (2020) Requirements

The American Society of Mechanical Engineers (ASME) established the B31 Pressure Piping Code Committees to promote safety in pressure piping design and construction through published engineering criteria. The basic consideration of the Codes is safety; however, the Codes are not designed to replace competent engineering design or judgement. Most importantly, the Codes do not “approve”, “rate”, or “endorse” any items of construction; proprietary devices, or activity. The Codes do not put a limit on conservatism and, conversely, the Codes also allow for designs that are capable of more rigorous engineering analysis which justifies less conservative designs. A final point of importance is that the Codes strive to keep abreast of all current technologies regarding improvements to materials, fabrication, and any other new developments in the piping industry.

Victaulic grooved couplings and fittings may be utilized on ASME B31.3 Process Piping Code applications within their published temperature and pressure parameters. ASME B31.3 designates the use of mechanical joints, specifically grooved joints that use gaskets as a method of leak resistance under Paragraph 300.2, Definitions, which defines a Mechanical Joint as:

“A joint for the purpose of mechanical strength or leak resistance, or both, in which the mechanical strength is developed by threaded, grooved, rolled, flared, or flanged pipe ends; or by bolts, pins, toggles, or rings; and the leak resistance is developed by threads and compounds, gaskets, rolled ends, caulking, or machined and mated surfaces.”

Also, grooving is designated as a means of pipe preparation within paragraph 300.2 in the definition of fabrication which is:

“The preparation of piping for assembly, including cutting, threading, grooving, forming, bending, and joining of components into subassemblies. Fabrication may be performed in the shop or in the field.”

Victaulic grooved couplings and fittings are "Listed Components" as defined in Paragraph 304.7.1 Listed Components. Paragraph 304.7.1 permits the use of materials *“manufactured in accordance with the standards listed in Table 326.1.”* The pertinent standards in Table 326.1 include:

- ASTM F1476, "Performance of Gasketed Mechanical Couplings for Use in Piping Applications"
- ASTM F1548, "Performance of Fittings for Use with Gasketed Mechanical Couplings Used in Piping Applications"
- ANSI/AWWA C606, "Grooved and Shouldered Joints"

A piping system designed and installed using Victaulic flexible and rigid couplings is ideal for accommodating both primary and secondary stresses. Flexible couplings allow both deflection and axial movement at each coupling joint, which can be designed to accommodate system thermal expansion, pipeline misalignment, pipeline differential settlement, and seismic movement. Rigid couplings maintain pipe alignment, as they are designed to minimize any differential movement between the two joining elements. Both flexible and rigid couplings can be modeled within commercially available pipe stress analysis programs. Victaulic will provide allowable stress limitations for couplings to ensure that system stress can be evaluated by the design engineer and maintained within safe levels in accordance with Part 5 of ASME B31.3. Also, Victaulic Piping System Design Engineers are available to perform system stress analysis, to assist system designers utilizing these tools, or to assist system designers with selection of pipe support types.

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

References

[26.01 Design Data](#)

Note: Both flexible and rigid coupling hangers spacing recommendations can be found in this document.

[26.02 Calculating and Accommodating Pipe Line Thermal Growth](#)

[26.03 The Victaulic Piping Method for Accommodating Pipe Offsets](#)

[26.04 Victaulic Coupling Vibration Attenuation Characteristics](#)

[26.06 Conformation of Victaulic IPS Grooved Couplings and Fittings to ASME B31.1 Power Piping Code Requirements](#)

[26.07 Conformance of Victaulic IPS Grooved Couplings and Fittings to ASME B31.9 Building Services Piping Code Requirements](#)

[26.09 Victaulic Grooved Piping System for Vacuum Services](#)

[26.12 Design Data for Seismic Applications of Victaulic Grooved Systems](#)

[26.13 Seismic Testing Program](#)

[26.15 Grooved Piping Systems in Buried Applications](#)

[WP-18 Modeling Victaulic Couplings in Piping System Stress Analysis Programs](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

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Refer to the Warranty section of the current Price List or contact Victaulic for details.

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