



Victaulic AWWA Grooved Piping System

1.01 General:

A. Section Includes:

1. General.
2. Materials:
 - a. Pipe.
 - b. Victaulic Couplings.
 - c. Victaulic Fittings.
 - d. Victaulic Valves.
3. Execution.

B. Submittals

1. AWWA grooved piping products shall be shown on drawings and product submittals and shall be specifically identified with the applicable Victaulic series or style designation.

C. References:

1. American Society for Testing Materials (ASTM)
 - a. ASTM A-126 – Gray Iron Castings for Valves, Flanges, and Pipe Fittings
 - b. ASTM A-183 – Carbon Steel Track Bolts and Nuts
 - c. ASTM A-449 – Quenched and Tempered Steel Bolts and Studs
 - d. ASTM A-536 – Ductile Iron Castings
 - e. ASTM B-633 – Electrodeposited Coatings of Zinc on Iron and Steel
 - f. ASTM D2000 – Standard Classification System for Rubber Products in Automotive Applications
2. American National Standards Institute (ANSI):
 - a. ANSI A21.10 - Ductile and Gray Iron Fittings
3. American Water Works Association
 - a. AWWA C-110 – Ductile and Gray Iron Fittings
 - b. AWWA C-153 – Ductile Iron Compact Fittings 3 In. Through 24 In. and 54 In. Through 65 In., for Water Service.
 - c. AWWA C-606 – Grooved and Shouldered Joints.

D. Quality Assurance:

1. All grooved joint couplings, fittings, valves, and specialties shall be the products of a single manufacturer.



2.01 Materials:

- A. Pipe:** AWWA ductile iron pipe, minimum Class 53, grooved in accordance with AWWA C606. Rigid radius groove dimensions shall be utilized where flexibility is neither required nor desired. Pipe ends shall be factory grooved. .
- B. Mechanical Couplings:**
- 1. Victaulic Couplings:** Manufactured in two or more segments of cast ductile iron, conforming to A-536, Grade 65-45-12. Gaskets shall be pressure-responsive synthetic rubber, FlushSeal® type. Mechanical coupling bolts shall be zinc plated (ASTM B-633) heat treated carbon steel track head conforming to physical properties of ASTM A-183, minimum tensile strength 110,000 psi (758450 kPa) as provided standard Victaulic. Victaulic Style 31.
 - 2. Transition Couplings:** For transition between IPS steel and AWWA ductile iron sized pipe. Housings cast with offsetting, angle-pattern, bolt pads. Victaulic Style 307.
 - 3. Coupling Gaskets:** Synthetic rubber, FlushSeal® configuration, conforming to AWWA pipe outside diameter and coupling housing, manufactured of elastomers as designated in ASTM D-2000.
 - a.** Reference shall always be made to the latest published Selection Guide for Victaulic Gaskets for proper gasket selection for the intended service.
 - 4. Flange Adapters:** For use with AWWA grooved end pipe and fittings, for mating to ANSI Class 125 flanged components. Victaulic Style 341.
- C. Victaulic Grooved End Fittings for AWWA Ductile Iron Pipe:** Fittings shall be cast of ductile iron conforming to A-536, Grade 65-45-12. Fittings conform to ANSI A21.10/AWWA C-110 for center-to-end dimensions and wall thickness, and AWWA C-153 for wall thickness. Grooved ends shall conform to AWWA C606.
- D. Victaulic Grooved End Valves for AWWA Ductile Iron Pipe:**
- 1. Plug Valves:** 175 psi (2”(DN50) through 12”(DN300)) and 150 psi (14”(DN350) through 18”(DN450)) bubble-tight, bi-directional sealing. Ductile iron body conforming to ASTM A-536, Grade 65-45-12, synthetic rubber encapsulated ductile iron plug, grade to suit the intended service, with welded-in nickel seat. Victaulic Series 365.
 - 2. AWWA Check Valves:** 175 psi working pressure, cast iron body conforming to ASTM A-126, Class B, Bronze disc conforming to ASTM B-584 or ductile iron conforming to ASTM A-536, Grade 65-45-12, ductile iron hinge, stainless steel shaft, bronze seat. Spring and lever, weight and lever, or lever with air cushion actuator. Victaulic Series 317.



3.01 Execution:

A. Installation:

1. Install in accordance with manufacturer's latest recommendations. Follow the instructions listed in the latest Victaulic I-300 assembly manual.
2. Pipe ends shall be clean and free from indentations and projections in the area from pipe end to groove.
3. The gasket style and elastomeric material (grade) shall be verified as suitable for the intended service as specified.

B. Training:

1. Victaulic's factory trained representative shall provide on site training for contractor's field personnel in the proper use of grooving tools, application of groove, and product installation.

C. Application:

1. Victaulic grooved products may be used in lieu of flanged couplings and fittings in applicable piping systems 3"(DN75) through 36"(DN900).
2. Gaskets used on potable water systems shall be UL classified in accordance with ANSI/NSF-61.
3. Victaulic's factory trained representative shall periodically visit the job site and review installation. Contractor shall remove and replace any improperly installed products.