

**SAMPLE SPECIFICATION**

**Tilting Disc Check Valves**

GA-TDCV-SPEC

1.0 GENERAL

1.1 Manufacturer shall have a minimum of ten (10) years’ experience in the manufacture of tilting disc check valves.

1.2 When requested, manufacturer shall provide detailed product data and descriptive literature including dimensions, weight, head loss vs. flow, pressure rating, materials of construction and cross-sectional drawings clearly illustrating the individual components.

2.0 PRODUCT

2.1 The tilting disc check valve shall be iron body with full port, metal-to-metal seating and meet the testing and leakage requirements of AWWA C508.

2.2 The check valve shall have the same size flanged inlet and outlet connections faced, drilled and of the thickness required by ANSI/ASME B16.1 Class 125 or Class 250, as shown on plans or in the valve schedule.

2.3 The valve body shall consist of two sections bolted together. The inlet section shall contain a bottom port for inspection or the installation of a bottom buffer. The outlet section shall have two trunnions to accept pivot pins and a top port for inspection or the installation of a top mounted dashpot.

2.4 The valve disc shall pivot on pins that are offset so that approximately 1/3 of the disc area is above and 2/3 below the pins and eccentrically located so that the disc pivots into and out of the seat without contact. The disc shall present an airfoil shape to the flow for stability and low head loss and pivot freely without the need for lubrication.

3.0 MATERIALS

3.1 The body sections of Class 125 flanged valves shall be made ASTM A126 Class B cast iron. The body sections of Class 250 flanged valves shall be made from ASTM A536 Grade 65-45-12 ductile iron.

3.2 A lead free bronze seat ring shall be clamped between the two body sections and sealed with Buna-N O-rings.

3.3 The disc in sizes 14-inch and smaller shall be made from solid lead-free bronze. Larger sizes shall have an ASTM A536 Grade 65-45-12 ductile iron disc with a replaceable lead-free bronze disc seat ring and pivot pin bushings.

3.4 Pivot pins shall be made from Type 303 stainless steel.

3.5 Cover bolts, nuts and studs shall be zinc plated carbon steel.

4.0 OPTIONS

4.1 Specify when required: The valve shall be equipped with a hydraulic bottom buffer to dampen the final 10% of the valve’s closure to minimize hammer associated with rapid flow reversal. The buffer assembly shall consist of a high-pressure hydraulic cylinder, stainless steel pressurized oil reservoir, pressure gauge, charging valve, flow control valve and relief valve. The buffer assembly shall be valve mounted with an air gap to prevent hydraulic fluid from entering the valve.

4.2 Specify when required: The valve shall be equipped with a top mounted hydraulic dashpot mechanically attached to the valve disc providing independent opening and two-stage closing speed to minimize hammer and reduce pressure surge by allowing some reverse flow at pump shutdown. The dashpot assembly shall consist of a high-pressure hydraulic cylinder with rod cushion, stainless steel non-pressurized reservoir, stainless steel pressurized reservoir, two flow control valves, two relief valves, charging valve and pressure gauge. The dashpot asembly shall be valve mounted with an air gap to prevent hydraulic fluid from entering the valve.

4.3 Specify when required: The valve shall be supplied with a visual position indicator

4.4 Specify when required: The valve shall be supplied with a visual position indicator and a DPDT NEMA 1, 2, 4, 6, 12 & 13 limit switch to remotely indicate when the valve is closed.

4.5 Specify when required: The valve shall be supplied with a visual position indicator and dual DPDT NEMA 1, 2, 4, 6, 12 & 13 limit switches to remotely indicate when the valve is closed and fully open.

5.0 MANUFACTURER

 5.1 Tilting disc check valves shall be VAG/GA Industries Series 7125 as manufactured by VAG USA, LLC Cranberry Township, PA USA.