

Hinged Inflatable Gasket Flood Gate (WK Model# FG-I) Specifications

Part 1 – General

- 1.01 Description:** Provide flood gate(s) factory assembled with frame(s) and all operating components in accordance with contract specifications and approved drawings.
- 1.02 Acceptable Manufacturers:** Flood gate shall be as manufactured by Walz & Krenzer, Inc (203-267-5712; sales@wkdoors.com).
- 1.03 Standards:** Comply with the provisions of the following (as applicable):
- A. AISC “Specifications for Design, Fabrication, and Erection of Structural Steel for Buildings”.
 - B. The Aluminum Assoc. “Aluminum Design Manual”.
 - C. AWS Structural Welding Code D1, D1.2, D1.3, D1.6.
 - D. ASME Structural Welding Code Section IX.
 - E. FEMA Bulletin 3-93, #102 & #114.
- 1.04 Submittals:**
- A. Manufacturers Data: Submit installation and maintenance manuals for flood gate.
 - B. Shop Drawings: Submit shop drawings approved by licensed Professional Engineer for flood gate including dimensional plans, elevations, sections, details for all mountings/connections, and parts list.
 - C. Calculations (optional for critical applications): Submit calculations approved by licensed Professional Engineer verifying the flood gate’s ability to withstand the design pressure loading.
 - D. QA Submittals: Submit test reports showing compliance with specified performance characteristics.
- 1.05 Qualifications:** Manufacturer shall present evidence attesting to at least five years successful experience in the design and manufacture of similar closures.

Part 2 – Products

- 2.01 Product Description:** Side hinged flood gate shall be Model FG-I as manufactured by Walz & Krenzer, Inc.
- 2.02 Materials:**
- A. Panel: 5051-H32 aluminum plate with 6061-T6 aluminum stiffeners (mild steel and stainless steel options are available).
 - B. Frame: ASTM A-36 steel (options include aluminum and 304 or 316 stainless steel).
 - C. Latches: stainless steel sliding latch bolts.

- D. Gasket: Dual EPDM inflatable gasket supplied with standard automotive style valve stem and 0-60 psi pressure gauge. Fabric reinforced inflatable gasket used for his pressure applications or large size gates.
- E. Finish: aluminum panel painted with INSL-X CheckRust acrylic paint. Mild steel frame to be blast to near white metal per SSPC-SP-7 and primed with one coat of inorganic zinc primer. Finish coat with epoxy paint is available.
- F. Grab Handle and Panel Stops: 6061-T6 aluminum (mild steel and stainless options are available).
- G. Hinges: to include bronze oil-impregnated thrust bearing and stainless steel hinge pins.

2.03 Design:

- A. Design Pressure: # (in feet of water). Specify seating (pushing gate closed) or unseating direction (pushing gate open).
- B. Side frames are available as angles for mounting on the exterior face of the wall surface, or as flatbars for mounting inside door jambs.
- C. Bottom frame is a ½” flatbar, which can be recessed ½” into floor surface to achieve a flush bottom sill.
- D. Corners of flood gate to have a minimum 7” radius at frame.
- E. Roller assembly is provided on gates wider than 6’.
- F. Optional air sources: compressed air tank, hand and foot pump.
- G. Frame(s) shall have mounting holes for expansion anchors (options include masonry subframe with welded anchors for embedment in concrete).
- H. Dual panel hinged flood gates available with a center mullion.
- I. Sealing surfaces shall be finished to 63 micro inches to maximize sealing, uninterrupted by steps greater than 0.015”, free of cracks, with finish lay parallel to seal.
- J. Gate size and design pressure direction shall determine the quantity and type of latches.
- K. Additional requirements such as hydrodynamic loads, impact loads and breaking wave loads shall be added as required by the specific application.

2.04 Quality Assurance:

- A. Perform shop operational test.
- B. Perform shop chalk test.
- C. Air leakage test: inflate gasket(s) and confirm no loss of pressure over ½ hour time period.
- D. Liquid Penetrant Test (for critical applications): Welds in the “potential” leak path shall be liquid penetrant inspected in accordance with Appendix VIII of Section VIII of ASME Code Div. 1.

Part 3 – Execution

3.01 Fabrication:

- A. The finished product shall be rigid, neat in appearance, and free from all defects, warps, and buckles. All exposed joints and corners shall be well rounded.
- B. The panel and frame shall be flat within 1/8” in any 6’ length.
- C. All butt welds in frame to be full penetration welds.

3.02 Installation:

- A. Install flood gate in accordance with manufacturer’s instructions and approved shop drawings.
- B. After installation, perform field operational and chalk test per manufacturer’s instructions to verify seal.
- C. Finish paint (if applicable) after installation.

3.03 Warranty: Flood gate shall operate satisfactorily and be free of defects in material and workmanship for a period of not less than one year from the date of delivery.