Hinged Compression Gasket Flood Gate (WK Model# FG-C) 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-C as manufactured by Walz & Krenzer, Inc.

2.02 Materials:

A. Panel: 5051-H32 aluminum plate with 6061-T6 aluminum stiffeners.
B. Frame: ASTM A-36 steel (options include aluminum and 304 or 316 stainless steel).

C. Gasket: ASTM D2000 GR DE neoprene gasket, 25 duro with fully molded corners.
D. Dogs/Drop bolts: stainless steel/bronze dogs or drop bolts. Utilize drop bolts for reduced maintenance and lower cost where operation is from outside only.
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.
G. Hinges: to include bronze oil-impregnated thrust bearing and stainless steel hinge pins.
H. Removable ramp (available as an option): aluminum or stainless steel.

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 angles for mounting on the exterior face of the wall surface
C. Bottom frame is a flatbar with raised machined knife-edge. Standard bottom sill is raised 1-1/2" from floor surface.
D. Roller assembly is provided on gates wider than 6'.
E. Frame(s) shall have mounting holes for expansion anchors (options include masonry subframe with welded anchors for embedment in concrete).
F. Dual panel hinged flood gates available for wider openings.
G. Frame knife-edge shall be rounded and smooth to maximize sealing.
H. Removable ramp (optional) is placed over the raised bottom sill for vehicular traffic or to prevent tripping hazard.
I. Gate size and design pressure direction shall determine the quantity and type of dog. Dogs are designed to adjust gasket compression in the field.
J. 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. 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.
D. Hydrostatic Test (optional for critical applications): Provide hydrostatic test data certifying that the closure furnished, or a closure

of similar design, has been satisfactorily tested to verify that it will withstand the designed hydrostatic pressure with no visible leakage.

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.