

**Flush Sill Compression Gasket Watertight Door**  
**(WK Model# WT-FD-FS) Specifications**

**Part 1 – General**

- 1.01 Description:** Provide flush sill watertight door(s) factory assembled with frame and all operating components in accordance with contract specifications and approved drawings. Quick-acting handwheel or lever provided for frequent access.
- 1.02 Acceptable Manufacturers:** Watertight door 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 D1.1, D1.2, D1.3, D1.6.
  - D. ASME Structural Welding Code Section IX.
  - E. FEMA Bulletin 3-93, #102 & #114.
  - F. ASTM A36, D2000.
  - G. American Iron and Steel Institute (AISI) CL 304, 316, 316L.
- 1.04 Submittals:**
- A. Manufacturers Data: Submit installation and maintenance manuals for watertight door.
  - B. Shop Drawings: Submit shop drawings approved by licensed Professional Engineer for watertight door 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 watertight door’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 years successful experience in the design and manufacture of similar closures.

**Part 2 – Products**

- 2.01 Product Description:** Watertight door shall be Model WT-FD-FS as manufactured by Walz & Krenzer, Inc.
- 2.02 Materials:**
- A. Panel: A-36 steel (aluminum and stainless steel available).

- B. Frame: A-36 steel (aluminum and stainless steel available).
- C. Gasket: silicone with fully molded corners.
- D. Operating Mechanism: bronze or stainless-steel pins and toggles, stainless steel link bars, stainless steel gears.
- E. Bushings and bearings for pins: bronze oil impregnated thrust bearings.
- F. Finish: Aluminum panel painted with INSL-X CheckRust acrylic paint. Frame blast clean per SSPC-SP7 and primed with inorganic zinc primer. Other finishes, including powder coating, polished stainless steel and anodizing 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 door closed) or unseating direction (pushing door open).
- B. Side frames are angles or flatbars for mounting on the exterior face of the wall surface.
- C. Bottom frame is a flatbar embedded into the floor to provide a fully flush surface. As an alternate, the bottom frame can be mounted on top of the floor to provide a very low sill height of ½”.
- D. Roller assembly can be 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. Frame knife-edge shall be rounded and smooth to maximize sealing.
- G. Options include power operation, viewing windows and locks, remote indication/control/monitoring.
- H. Door size and design pressure direction shall determine the quantity and type of dog. Pins are designed to adjust gasket compression in the field.

### **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 application): 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” with a maximum deviation of 1/16” in any 6’ length.
- C. All butt welds in frame to be full penetration welds.

### **3.02 Installation:**

- A. Install watertight door 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:** Watertight door 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