

Watertight Door with Compression Gasket (WK Model# WT-FD-I) Specifications

Part 1 – General

- 1.01 Description:** Provide watertight door(s) factory assembled with frame and all operating components in accordance with contract specifications and approved drawings.
- 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, 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 five 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-I 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: 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. Frame blast clean per SSPC-SP7 and primed with inorganic zinc primer. Other finishes, including powder coating and anodizing available.
- F. Grab Handle and Panel Stops: 6061-T6 aluminum
- 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 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. Frame knife-edge shall be rounded and smooth to maximize sealing.
- G. Removable ramp (optional) is placed over the raised bottom sill for vehicular traffic or to prevent tripping hazard.
- H. Door size and design pressure direction shall determine the quantity and type of dog. Dogs 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” 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