

Quick-Acting Compression Gasket Watertight Door
(WK Model# WT-FD-QA) Specifications

Part 1 – General

- 1.01 Description:** Provide quick-acting 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, 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-QA 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. In pressure exceeding 20' design pressure, 40 duro gasket is used. Optional gasket material for unusual environmental conditions including viton, silicone, hypalon and others.
- D. Operating Mechanism: bronze or stainless steel dogs and toggles, stainless steel link bars, stainless steel gears.
- E. Bushings and bearings for dogs: 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 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 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. Options include power operation, viewing windows and locks, remote indication/control/monitoring.
- I. 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” 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