

SUGGESTED SPECIFICATIONS FOR MODEL WT-ID HINGED INFLATABLE GASKET WATERTIGHT DOOR

Part 1 – General

- 1.01 **Description:** Provide inflatable gasket watertight (airtight) door(s) factory assembled with frame(s) and all operating components in accordance with contract specifications and approved drawings.
- 1.02 **Acceptable Manufacturers:** Watertight (airtight) door shall be as manufactured by Walz & Krenzer, Inc. (203-267-5712) or approved equal.
- 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. Manufactures Data: Submit installation and maintenance manuals for watertight (airtight) door(s).
 - B. Shop Drawings: Submit shop drawings approved by licensed Professional Engineer for door including dimensional plans and elevations, sections and details for all mountings and connections, and parts list.
 - C. Calculations (optional for critical applications): Submit calculations approved by licensed Professional Engineer verifying the watertight (airtight) door’s ability to withstand the design pressure loading.
 - D. QA Submittals: Submit test/inspection reports showing compliance with specified quality assurance requirements.
- 1.04 **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 (airtight) door shall be Model WT-ID as manufactured by Walz & Krenzer, Inc.

2.02 Materials:

- A. Panel & Frame– ASTM A-36 steel (options include aluminum and 304 or 316 stainless steel).

- B. Gasket – EPDM or neoprene inflatable gasket supplied with standard automotive style valve stem and 0-60 psi pressure gauge. Fabric reinforced inflatable gasket used for high-pressure applications or large size doors. Dual inflatable gaskets recommended for critical applications.
- C. Latches – stainless steel sliding latch bolts
- D. Hinges – hinges to include thrust bearing, sleeve bushing, and stainless steel hinge pins.
- E. Bushings and bearings for hinges to be oil-impregnated bronze.
- F. Finish – mild steel blasted to near white metal per SSPC-SP-10. Primed with one coat of inorganic zinc primer. Other finishes including epoxy finish paint, galvanizing, passivating, and powder coating available.
- G. Optional air sources (for when facility air source is not available) – compressed air tank, hand or foot pump, portable air tank, nitrogen or CO2 bottle.
- H. Options include push button power inflation/deflation, power open/close, remote indication/control/monitoring, viewing windows, and locks.

2.03 Design

- A. Corner of door to be radiused a minimum of 7” at the frame.
- B. Bottom frame is a ½” thick flatbar, which can be recessed ½” into floor surface to achieve a flush bottom sill.
- C. Side frames are available as angles for mounting to the exterior face of the wall surface, or as flatbars for mounting inside the doorjamb.
- D. Frame shall have mounting holes for expansion anchors (options include masonry subframe with welded anchors for embedment in concrete).
- E. Sealing surface shall be finished to 63 micro inches to maximize sealing, uninterrupted by steps greater than .015 inch, free of cracks, with finish lay parallel to seal.

2.04 Quality Assurance

- A. Perform shop operational test.
- B. Perform shop chalk test to verify gasket seal against frame.
- C. Air leakage test – inflate gaskets and confirm no loss of pressure over ½ hour time period.
- D. All welding shall be performed in accordance with the requirements of the applicable AWS or ASME standards.
- E. Liquid Penetrant Test (optional for critical applications only): Welds in the “potential” leak path shall be liquid penetrant inspected in accordance with Appendix VIII of Section VIII of ASME Code Div. 1
- F. Hydrostatic Test (optional for critical applications only): 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 panel and frame shall be flat within 1/8” in any 6’ length.
- B. 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.
- C. All butt welds in frame to be full penetration welds.

3.02 Installation:

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

3.03 Warranty: Watertight (airtight) 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.