SUGGESTED SPECIFICATIONS FOR MODEL WT-FD-I
INDIVIDUALLY DOGGED COMPRESSION GASKET WATERTIGHT DOOR

Part 1 – General

1.01 **Description:** Provide individually dogged 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, 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-FD-I 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 – ASTM D2000 GR DE neoprene gasket, 25 duro with fully molded corners. Note – 40-duro gasket used for doors designed to seal against a pressure exceeding 20'. Optional gasket material for unusual environmental conditions includes viton, silicon, hypalon, and others.
C. Securing dogs– stainless steel dog assemblies with bronze wedges. Door size and design pressure shall determine the quantity and type of dog. Dogs are provided with a means for adjusting the gasket compression in the field.
D. Hinges – hinges to include bronze oil-impregnated thrust bearing and stainless steel hinge pins.
E. Bushings and bearings for hinges and dogs 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. Options include power operation, remote indication/control/monitoring, viewing windows, and locks.

2.03 Design

A. Double panel doors can be provided for any size opening. Center mullion is not required, allowing for full access.
B. Frame – standard frame has 2" sill. Removable bottom frame with flush sill available for lower design pressures. Frames provided for bolt-on or weld-on installation for existing openings, or with masonry subframes for embedding in new pour concrete.

2.04 Quality Assurance

A. Perform shop operational test.
B. Perform shop chalk test for ensure 100% watertight/airtight seal.
C. All welding shall be performed in accordance with the requirements of the applicable AWS or ASME standards.
D. 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
E. 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. Edge of panel and knife-edge of frame to be flat with 1/8" with a maximum deviation of 1/16" in a 6' length.
B. Knife-edge on frame to be ground to a 3/32" radius with surface roughness not to exceed 125 micro inches.

C. 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.
D. 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.