

## **SUGGESTED SPECIFICATIONS FOR MODEL FP-M REMOVABLE MULTI-PANEL LIP SEAL FLOOD BARRIER**

### **Part 1 – General**

- 1.01 **Description:** Provide flood barrier(s) factory assembled with frame(s) and all operating components in accordance with contract specifications and approved drawings.
- 1.02 **Acceptable Manufacturers:** Flood barrier shall be as manufactured by Walz & Krenzer, Inc. 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
  - D. ASME Structural Welding Code Section IX
  - E. FEMA Bulletin 3-93, #102 & #114
- 1.04 **Submittals:**
- A. Manufactures Data: Submit installation and maintenance manuals for flood barriers.
  - B. Shop Drawings: Submit shop drawings approved by licensed Professional Engineer for flood barriers 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 flood barriers ability to withstand the design pressure loading.
  - D. QA Submittals: Submit test reports showing compliance with specified performance characteristics.
- 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:** Removable multi-panel flood barrier shall be Model FP-M as manufactured by Walz & Krenzer, Inc.

**2.02 Materials:**

- A. Panel – 5052-H32 aluminum plate with 6061-T6 aluminum stiffeners (mild steel and stainless steel available).
- B. Frame – A-36 steel (aluminum and stainless steel available).
- C. Latches – stainless steel sliding latch bolts

- D. Gasket – Walz & Krenzer neoprene lip seal gasket, 60 duro with fully molded corners.
- E. Finish – aluminum panel painted with INSL-X CheckRust acrylic paint. Frame blast clean per SSPC-SP7, primed with inorganic zinc primer. Other finishes, including powder coating and anodizing available.
- F. Grab Handle and Panel Stops – 6061-T6 aluminum
- G. Storage brackets – A-36 steel
- H. Removable support brace – for side-by-side panels, diagonal brace(s) are mounted to the front of the panels, with one brace located at every seam between panels. The diagonal brace attaches to a flush sub plate, which is embedded in the ground in front of the flood barrier. Other bracing options are available.

### **2.03 Design**

- A. Flood barriers over 10' in width and 6' in height may require multiple panels, available in both side by side, and/or stacked configurations. Side by side multiple panel flood barriers are provided with removable braces (and without mullions). Stacked flood barriers (stacked on top of each other) do not require bracing.
- B. Square gasket corners are used at the junction of the panels. Very slight leakage may occur at the square gasket corner, however this leakage rate is typically well under the allowable FEMA leakage rate for the protected area.
- C. Side frames are available as angles for mounting on the exterior face of the wall surface, or as flatbars for mounting inside doorjamb.
- D. Bottom frame is a ½" flatbar, which can be recessed ½" into floor surface to achieve a flush bottom sill.
- E. Corners of flood barriers have small (2") radius.
- F. Frame(s) shall have mounting holes for expansion anchors (options include masonry subframe with welded anchors for embedment in concrete).
- G. Two (2) storage brackets per panel included.
- H. Removable braces are typically diagonal braces mounted from a flush-embedded sub plate in the ground surface in front of the flood barrier to the seam between the panels. If this arrangement is unworkable due to space considerations, other bracing options are available.

### **2.04 Quality Assurance**

- A. Perform shop operational test
- B. Perform shop hose 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

## **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.

**3.02 Installation:** Install flood barrier in accordance with manufactures instructions and approved shop drawings.

**3.03 Warranty:** Flood barrier 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.