

**SECTION 08 71 30**  
**THRESHOLDS, WEATHERSTRIPPING AND SEALS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Requirements for thresholds, saddles, weatherstripping, seals and astragals as shown on Drawings and as specified herein.

**1.02 REFERENCE STANDARDS**

- A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.
  - 1. American National Standards Institute (ANSI).
  - 2. American Society for Testing and Materials (ASTM).
  - 3. National Fire Protection Association (NFPA).
  - 4. Builders Hardware Manufacturers Association (BHMA).
  - 5. Underwriters Laboratories, Inc., (UL).
  - 6. American Architectural Manufacturers Association (AAMA).

**1.03 SUBMITTALS**

- A. Product Data
  - 1. Catalog sheets, specifications, installation and maintenance instructions for each item and type.
- B. Samples
  - 1. Color Samples:
    - a. Color anodized Aluminum: Manufacturer's standard colors, as selected by the Architect.
    - b. Bronze: Manufacturer's standard finish, as selected by the Architect.

**1.04 QUALITY ASSURANCE**

- A. Fire Rated Products
  - 1. Comply with Underwriter's Laboratories, Inc. (UL); Warnock Hersey International, Inc., (WHI); or Factory Mutual System (FM) Standards, and time ratings in hours listed in each directory list.
- B. Use resilient or flexible stripping and seals that are easily replaceable and available during anticipated life of building.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver, store, and handle products of this Section as recommended by manufacturer to protect from damage.
- B. Inventory products immediately upon delivery.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Zero International, Inc., Bronx, NY.
- B. Accurate Metal Weatherstripping Co., Mt. Vernon, NY.
- C. Pemco, Ventura, CA
- D. Reese Enterprises, Inc., Huntington Beach, CA.
- E. Safe-T-Metal Co., Inc., Garden City Park, NY.
- F. National Guard Products, Memphis, TN.

## 2.02 MATERIALS

- A. Metals
  - 1. Extruded Aluminum: Alloy 6063, hardness T5 or T6.
  - 2. Extruded Architectural Bronze: Brass Alloy 385.
  - 3. Stainless Steel: Rolled, non-magnetic, Type 300.
- B. Neoprene
  - 1. Minimum chlorine content 12 percent.
  - 2. Solid Neoprene: Mil R-6855E, Class II, Grade 40.
  - 3. Closed Cell Neoprene: ASTM D6576, Type II, Grade A, B, C.
- C. Polypropylene
  - 1. American Architectural Manufacturer's Association (AAMA), 701.1 Standards.
- D. Fasteners
  - 1. Builders Hardware Manufacturers Association (BHMA), Standard 1001, unless otherwise specified.

## 2.03 EXTRUDED THRESHOLDS

- A. Types
  - 1. Type 1: Single piece saddle.
  - 2. Type 2: Adjustable width saddle.
    - a. Adjustable Construction: 3 piece interlocking. Width: Minimum 5" and less than 7".
    - b. Adjustable Construction: 5 pieces interlocking. Width: Minimum 7" or greater.
  - 3. Provide adjustable width saddles generally at building entrance doors.
    - a. Type 3: Rabbeted with stop strip.
      - 1) Thermal Barrier: Hollow neoprene bulb.
      - 2) Thermal Barrier: Closed cell sponge neoprene.
      - 3) Thermal Barrier: Pile insert.
- B. Metal
  - 1. Extruded bronze
- C. Surface Pattern
  - 1. Abrasive tread for single piece saddle.
  - 2. Grooved tread for adjustable width saddle.
- D. Fasteners
  - 1. Bronze Thresholds: Solid brass Phillips flathead wood screws, or flathead machine screws as anchors, appropriate for substrate.

## 2.04 SPECIAL ACCESSORIES

- A. Disabled Ramps
  - 1. Metal and finish to match threshold type.
- B. Cover Plates for Door closers
  - 1. Construction and finish to match threshold type. Openings and cutouts for hardware unit spindles. Coordinate fabrication with final approved hardware schedule and necessary templates.

## 2.05 CAST METAL THRESHOLDS

- A. Provide at roof bulkhead door and other locations as indicated on drawings.
- B. Metals
  - 1. Cast bronze (Provide white bronze at aluminum doors).
- C. Surface Pattern
  - 1. Grooved tread.
- D. Finish

1. Minimum two (2) ounces per square foot of abrasive granules embedded a minimum of 1/16" deep in top metal surface.
- E. Fasteners
1. Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.

## **2.06 THRESHOLD FABRICATION**

- A. Fabricate thresholds of length required for tight fit against doorframes. Cope to provide fitting around obstructions. Leave edges free from burrs.
- B. Factory miter corners and fit with end returns to close exposed ends of thresholds not covered by the doorframe.
- C. Drill holes 3" from each end of threshold and intermediate holes 12" maximum on center for required fasteners. Prepare holes for countersunk fasteners.

## **2.07 DOOR BOTTOM PROTECTION**

- A. Automatic Door Bottoms
1. Mounting: Surface; stop face. (Hinge face for swing-in exterior doors).
    - a. Carpet Application: When unit drops on to pile-type carpeted floor finish, use pointed edge (45 degrees bevel from both sides) on bottom of seal contact strip.
  2. Housing: Extruded aluminum, main walls and flanges, minimum 0.062" thick.
  3. Finish:
    - a. Aluminum: Clear anodized.
  4. Seal: Closed cell sponge neoprene.
  5. Fasteners: Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.
- B. Sweep Type
1. Mounting: Surface.
  2. Housing: Extruded aluminum, main walls and flanges, minimum 0.062" thick.
  3. Finish: Clear anodized (or color anodized to match door finish, if door finish is color anodized).
  4. Seal: Solid neoprene.
  5. Fasteners: Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.
- C. Brush Type
1. Mounting: Surface.
  2. Housing: Extruded aluminum: main walls and flanges, minimum 0.062" thick.
  3. Finish: Clear anodized (or color anodized to match door finish, if door finish is color anodized).
  4. Seal: Solid neoprene.
  5. Fasteners: Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.
- D. Spring-Metal Type Contact Stripping
1. Mounting: Surface
  2. Metal: Spring bronze, minimum 0.008" thick.
  3. Fasteners: Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.

## **2.08 DRIP CAPS**

- A. Provide drip caps for exterior doors not protected from precipitation.
- B. Types
1. Sill Protection.
  2. Top Protection: Extended rain drip cap.
- C. Metal

1. Extruded aluminum.
- D. Finish
  1. Anodized to match door finish.
- E. Fasteners
  1. Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.

## **2.09 HEAD AND JAMB WEATHERSTRIPPING AND SEALS**

- A. Resilient Insert Type
  1. Mounting: Surface.
  2. Housing:
    - a. Extruded aluminum: Main walls and flanges, minimum 0.06" thick.
      - 1) Security Housing: Minimum 0.080" thick.
    - b. Extruded bronze (brass): Main walls and flanges, minimum 0.05" thick.
  3. Finish:
    - a. Aluminum: Clear anodized, or Bronze color anodized. Color as selected by Project Architect.
    - b. Bronze: Mill.
  4. Seals: Solid neoprene.
  5. Fasteners: Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.
- B. Interlocking Metal Type
  1. Mounting: Surface.
  2. Metal: Extruded aluminum, minimum 0.052" thick.
  3. Finish:
    - a. Mill, or
    - b. Bronze color anodized, color selected by Project Architect.
  4. Fasteners: Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.
- C. Spring Metal Type
  1. Mounting: Surface.
  2. Metal:
    - a. Spring bronze, minimum 0.006" thick.
    - b. Spring stainless steel, minimum 0.005" thick.
  3. Finish: Mill.
  4. Fasteners: Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.
- D. Special Purpose Ratings for Jambs and Head. Meet requirements of Paragraph A., and the following
  1. Special Purpose Rating for Door(s) Indicated:
    - a. Fire Rated/Labeled.
    - b. Smoke/Air.
    - c. Sound Tested.
    - d. Light Proof.
  2. Mounting: Three sides of frame.
    - a. Light Proof Rating: Continuous extruded elliptical solid neoprene seal, with no light leaks.
    - b. Sound Tested: Adjustable bumper-type stripping with resilient insert, retained in adjustable metal strip by captive adjustment screws, forming a combination door stop and seal.
- E. Sliding Door Protection
  1. Mounting: Surface.

2. Housing: Extruded aluminum; main walls and flanges, minimum 0.062" thick.
3. Finish: Color anodized to match door finish.
4. Seal: Neoprene loop, 3/16" thick. Extreme temperature, military specifications R-6855E, Class II, Grade 40.
5. Fasteners: Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.

## **2.10 MEETING STILE PROTECTION - ASTRAGALS**

- A. Meeting Stiles Seals
  1. Types: Weather.
  2. Mounting: Surface.
  3. Housing: Extruded aluminum, main walls and flanges, minimum 0.062" thick.
    - a. Finish: Color anodized to match door finish.
  4. Seal: Solid neoprene.
  5. Fasteners: Manufacturer's standard or recommended fasteners in compatible material and matching finish, unless otherwise specified.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. Install Work in accordance with manufacturer's printed instructions, except as shown or specified otherwise.
  1. NOTE: Refer to Section 07900: "Joint Sealers" for sealant types.
- B. Level and align thresholds with frames and doors. Where required, use non-corrosive shims.
  1. Exterior Doors: Set threshold in a solid bed of "Type 3" sealant.
  2. Secure thresholds to substrate with countersunk fasteners.
- C. Install surface mounted automatic door bottom between stops with activating rod on hinge side of door.
- D. Mount sweep type door bottom protection/drip caps on exterior side of doors.
  1. Before mounting apply "Type 2" sealant on the backside of bearing surface. Secure to door with required fasteners.
- E. Weatherstripping and Seals
  1. Starting at head, install continuous stripping at each opening without unnecessary interruptions at door corners and hardware.
  2. Secure fasteners for stripping and seals so they will not work loose during door operation. Exposed heads of fasteners shall be free of sharp edges.
  3. Coordinate meeting seals with hardware before installation.
  4. Install units plumb and level at optimum location to maintain a permanent effective seal.

### **3.02 ADJUSTING**

- A. Adjust stripping and seals, if necessary, to achieve an effective seal for proper operation of doors and hardware.

### **3.03 CLEANING**

- A. Clean exposed surfaces by methods recommended by manufacturer.

**END OF SECTION**