

SPECIFICATION  
Sections 07 90 00 / 07 95 00

MIGUTAN FP by EMSEAL

Watertight Split Slab/Plaza-Deck Expansion Joint System

*\*\*\*NOTE to Specifier:*

- 1.) It is critical in ensuring the success of the project that this expansion joint be specified in the same section as the deck waterproofing system and is installed by the contractor responsible for installing the deck waterproofing system.*
- 2.) MIGUTAN is available as models FP110 or FP155 (different size of sealing glands), a range of leg heights, aluminum or steel legs, and short or long flashing sheets. Please consult MIGUTAN tech data sheet or contact EMSEAL tech assistance at 800-526-8365 to determine best configuration for the project. \*\*\**

PART 1 – GENERAL

1.01 Work Included

- A. The work shall consist of furnishing and installing waterproof expansion joints in accordance with the details shown on the plans and the requirements of the specifications. Expansion joints shall be heavy-duty extruded aluminum retainer rails, synthetic rubber side flashing sheets, a thermo-plastic rubber sealing insert, and stainless-steel retainer caps assembly with optional coverplate.
- B. Related Work
  - Division 3 - Cast-in-Place Concrete
  - Division 7 - Thermal & Moisture Protection
  - Division 7 - Sealants, Caulking and Waterproofing

1.02 Submittals

- A. General – Submit the following according to Division 1 Specification Section.
- B. Standard Submittal Package – Submit typical expansion joint drawing(s) indicating pertinent dimensions, general construction, expansion joint opening dimensions and product information.
- C. Alloys where used:
  - 1) Plates: Aluminum 6061-T6 alloy meeting ASTM B221-95a
  - 2) Plates: Stainless Steel Grade 304 meeting ASTM A240 and A666
  - 3) Capping Strip: Stainless Steel Grade 304 meeting ASTM A240 and A666
  - 4) Legs: Commercial Grade Galvanized Steel meeting ASTM A653
- D. Manufacturer must submit proof of 10 projects with leak-free installations under similar conditions to this project and that have been installed for a minimum of 5 years. Proof of installation shall include addresses of installed systems and contact names for owners of each location.
- E. Sample of material to be used in work is required at time of submittal.

1.03 Product Delivery, Storage and Handling

- A. Deliver products to site in Manufacturer's original, intact, labeled containers. Handle and protect as necessary to prevent damage or deterioration during shipment, handling and storage. Store in accordance with manufacturer's installation instructions.

#### 1.04 Basis of Design

- A. All joints shall be designed to meet the specified performance criteria of the project as manufactured by: (USA & International) EMSEAL JOINT SYSTEMS, LTD 25 Bridle Lane, Westborough, MA 01581-2603, Toll Free: 800-526-8365. (Canada) EMSEAL, LLC 120 Carrier Drive, Toronto, Ontario, Canada M9W 5R1 Toll Free: 800-526-8365. www.emseal.com
- B. Alternate manufacturers must demonstrate that their products meet or exceed the design criteria. Submittal of alternates must be made three weeks prior to bid opening to allow proper evaluation time.

#### 1.05 Quality Assurance

- A. The General Contractor will conduct a pre-construction meeting with all parties and trades involved in the treatment of work at and around expansion joints including, but not limited to, concrete, mechanical, electrical, HVAC, landscaping, masonry, curtain wall, waterproofing, fire-stopping, caulking, flooring and other finish trade subcontractors. All superintendents and foremen with responsibility for oversight and setting of the joint gap must attend this meeting. The General Contractor is responsible to coordinate and schedule all trades and ensure that all subcontractors understand their responsibilities in relation to expansion joints and that their work cannot impede anticipated structural movement at the expansion joints, or compromise the achievement of watertightness or life safety at expansion joints in any way.
- B. Warranty – Manufacturer’s standard warranty shall apply.

### PART 2 – PRODUCT

#### 2.01 General

- A. Provide traffic durable, watertight, expansion joint by EMSEAL Joint Systems for expansion joints and isolation joints in plaza (podium) decks and split slabs. Typical locations include, but are not limited to the following: applications for joints over occupied space, below-grade, stadium concourses, parking deck joints, between split-slab and solid slab construction and anywhere waterproofed split slab construction is specified. System shall perform waterproofing, traffic bearing and movement-accommodation functions as the result of a single installation and without the addition of gutters, vapor barriers, bladders, or other devices suspended beneath or within the system in any way.
- B. Provide MIGUTAN FP as manufactured by EMSEAL JOINT SYSTEMS LTD and as indicated on drawings for horizontal expansion joint locations.
- C. System shall be comprised of two sub-assemblies: a) the structural-slab mounted supporting legs with integral waterproofing side sheets; and b) the joint sealing assembly. The two subassemblies shall be comprised of all the following components: 1) Extruded, heat-weldable, thermoplastic-rubber sealing insert (gland), 2.) structural-slab mounted interlocking aluminum or steel retainer legs available in leg heights from 1” (25mm) to 12” (400mm), 3.) integral heat weldable NBR modified PVC waterproofing side sheets, 4.) stainless steel capping strips. 5.) carbon Steel Grade II zinc dichromate yellow finish, UNC 16, anchors and nuts and, 6.) hi-mod anchor epoxy.
- D. Epoxy-mortar setting/leveling bed to act as dielectric separator as well as to ensure that the system is fully supported and at the appropriate elevation throughout its length.

- E. Underside of flanges of sealing gland shall have sealing darts that mate with the top of the supporting aluminum rail extrusion. Gland shall have flanges which extend beyond location of sealing darts and which overlap the PVC sealing darts also installed into the reglet in top of supporting aluminum rail extrusion. Gland to be secured in compression to supporting aluminum rail extrusion with pre-drilled, striated stainless steel protective cappings with stainless steel machine screws and nylon counter-sink seals.
- F. Side flashing sheets are locked into the reglet in top surface of retainer leg on each side of joint. The deck waterproofing membrane (by others) is installed on the deck and brought up to the MIGUTAN-FP system. With the side flashing sheets pulled out of the way, the membrane is installed over the top of, and up the mounting legs. The side flashing sheets are lowered into the liquid membrane (or into the non-sag mastic component of a sheet waterproofing system by others) and sandwiched with another layer of waterproofing. Concrete, paver, asphalt or other topping slab or wearing course material is installed up to the stainless steel retaining caps on the mounting rails.
- G. The side flashing sheets shall be 12" (300 mm) wide and .012" 3mm thick.
- H. Stainless-steel cover plate to extend across the sealing gland and rest on the top of the opposite retainer cap to be available upon request. Stainless steel coverplate to be fabricated from minimum 11 guage, .012" (3mm) thick, type 304 stainless steel.
- I. Select the system model appropriate to the movement and design requirements at each joint location that meet the project specification or as defined by the structural engineer of record.
- J. Manufacturer's Checklist must be completed by expansion joint subcontractor and returned to manufacturer at time of ordering material.

## 2.02 Fabrication

- A. Include details and manufacturing drawings indicating profiles of each type of expansion joint cover assembly, splice joints between sections, joinery with other types, special end conditions, fasteners, and relationship to adjoining work and finishes with specific reference to tie-in with deck waterproofing system through integration with expansion joint system side flashing sheets.
- B. Directional changes and terminations into vertical plane surfaces (walls, parapets, ends of decks, etc) as well as to transition the material through curbs, treads and risers or other in-slab plane changes, cross-connections and tee-joints must be provided by factory-manufactured single units which includes factory fabricated and welded insert glands and all aluminum components of joint assembly.
- C. Expansion joint supporting aluminum rail extrusions to be factory set at mid-point of movement range and held at this dimension by spacers to be removed after attachment of the rails to the deck.

## PART 3 – EXECUTION

### 3.01 Installation

- A. Preparation of the Work Area
  - 1. The contractor shall provide properly formed and prepared expansion joint openings constructed to the exact dimensions and elevations shown on manufacturer's standard system drawings or as shown on the contract drawings.

Deviations from these dimensions will not be allowed without the written consent of the engineer of record.

2. The contractor shall clean the joint opening of all contaminants immediately prior to installation of expansion joint system. Repair spalled, irregular or unsound joint surfaces using accepted industry practices for repair of the substrates in question. Remove protruding roughness to ensure joint sides are smooth. Refer to Manufacturers Installation Guide for detailed step-by-step instructions.
3. System to be installed by qualified sub-contractors only according to detailed published installation procedures and/or in accordance with job-specific installation instructions of manufacturer's field technician. The applicator must be the same contractor as will be installing the deck waterproofing system. Bids must include for presence of paid-for manufacturer's field technician to be present during initial preparation, inspection, and material installation.

### 3.02 Clean and Protect

- A. Protect the system and its components during construction. Subsequent damage to the expansion joint system will be repaired at the general contractor's expense. After work is complete, clean exposed surfaces with a suitable cleaner that will not harm or attack the finish.

END OF SECTION