



## SJS-FP

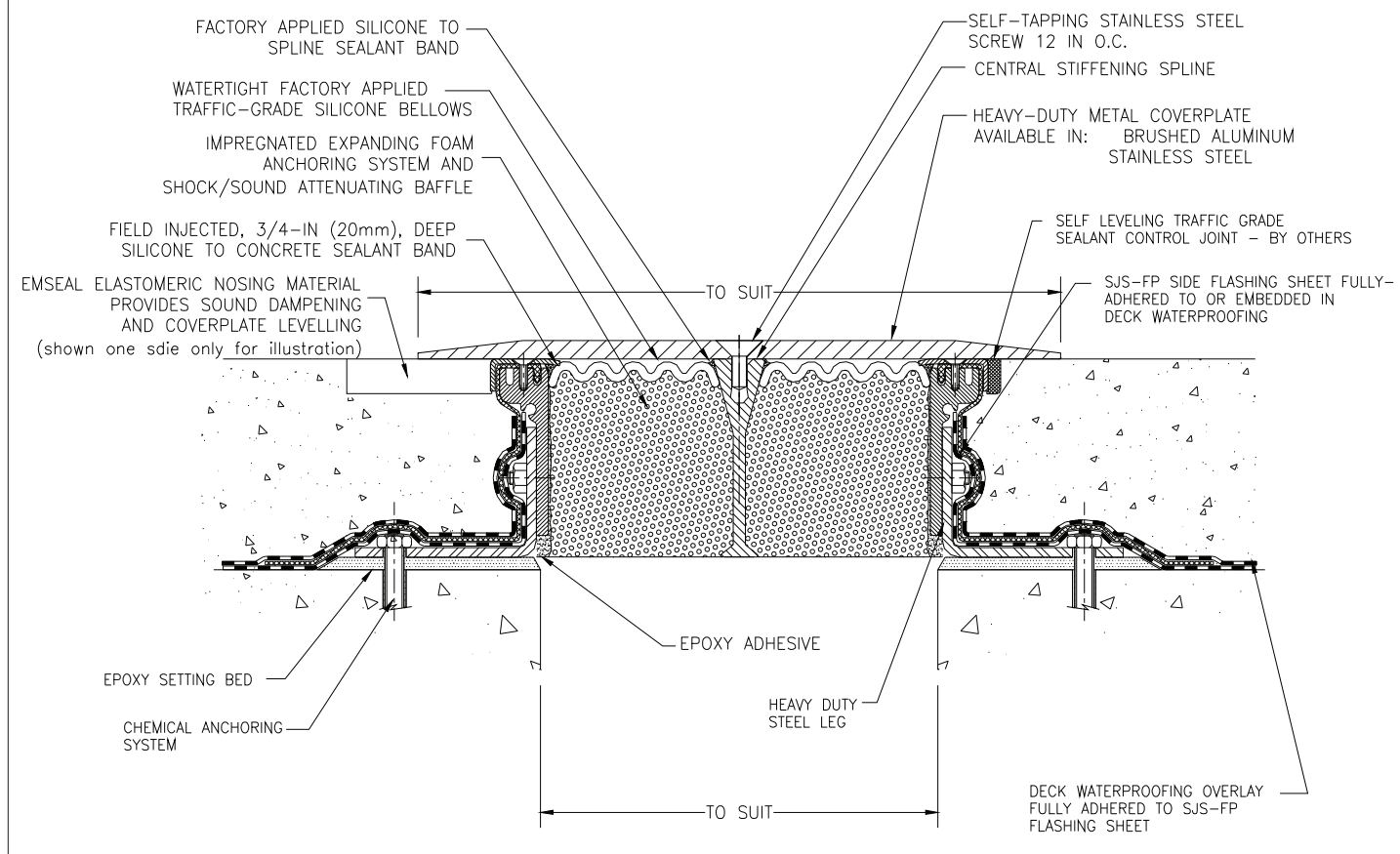
**Watertight, Seismic and Large-Gap Deck Expansion Joint System for Split-Slabs, Plazas, Stadium Concourses, etc.**

# TECHDATA

### Product Description

- SJS-FP is designed to provide a watertight, trafficable joint system in large (4-inch (100mm) and larger joint openings, in decks of split-slab design.
- The system consists of two sub-assemblies:
  - 1) The structural-slab mounted supporting legs with integral waterproofing side sheets; and
  - 2) the joint sealing and coverplate assembly.
- The mounting leg assembly is delivered with opposing legs factory-set to the nominal joint size. It is installed into a wet-setting bed of epoxy mortar and bolted to the deck.
- The joint sealing and bridging assembly consists of a central stiffening spline flanked by two watertight silicone bellows supported by precompressed, impregnated foam shock absorbers, and covered by a heavy duty coverplate.
- The factory-assembled spline, bellows, foam, are shipped with factory-attached, installation hanger bars. Epoxy gel adhesive is applied to the faces of the previously installed mounting leg assembly.
- The sealing assembly is lowered into the joint gap where it self-expands into wet epoxy adhesive.
- Consecutive lengths are joined through the field-application of manufacturer-supplied, low-modulus, high-movement silicone to the spline and intersecting bellows surfaces. Friction fit alignment pins prevent the joints from moving during silicone cure.
- A field-applied silicone sealant band is injected at the bellows to joint substrate interface to complete the waterproofing.
- The deck waterproofing membrane is installed on the deck and brought up to the SJS-FP system. With the SJS-FP side flashing sheets pulled out of the way, the membrane is installed over the top of, and up the SJS-FP mounting legs. The side flashing sheets are lowered into the liquid membrane (or into the non-sag mastic component of a sheet-waterproofing system) and sandwiched with another layer of waterproofing.
- Concrete, pavers, asphalt, or other topping slab or wearing course material is installed up to the stainless steel retaining caps on the SJS-FP mounting rails.
- The SJS-FP joint-sealing assembly installation hanger bars are removed sequentially as coverplates are lowered over the joint and screwed to the center spline, completing the installation.

**Figure 1: System Components**



**Uses, Applications**

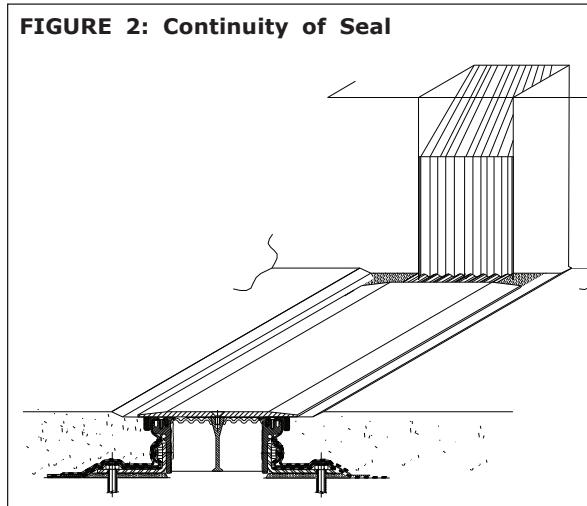
- For new construction and retrofit of old or failed joint systems.
  - For restoring watertightness to chronic leaking over occupied spaces.
  - Uniquely suited to joint openings designed for seismic separation of structural building elements.
- split-slab decks
  - parking decks
  - plaza decks
  - podium decks
  - airport roadways
  - mall bridge connectors
  - stadium concourses, etc.

**Features**

- 1) Watertight**—the tensionless silicone bellows are installed flush to the mounting height of system and just below the coverplate. This ensures that watertightness is achieved at the deck surface. The need for moisture barriers and secondary gutter systems is eliminated. Integration of the SJS-FP side flashing sheets into a sandwich with the deck waterproofing membrane ensures the deck-to-joint interface is watertight.
- 2) Non-Invasive Anchoring**—there are no hard metal-to-concrete connections in the coverplate system at all. This includes embedded pins, anchors, screws, bolts or tracks, trays or rails. The coverplate assembly is locked to the joint faces by means of the backpressure of the foam and the epoxy adhesive, and by the weight of the assembly.
- 3) Sound Attenuation**—the flanking impregnated foam and silicone hybrid acts not only as the anchoring system, but also as a highly effective sound and shock dampener. Optional sound attenuating polyurethane nosing material further dampens sound and provides a plate levelling mechanism. The result is a sound-attenuated, watertight coverplate system.
- 4) Self-Locating Coverplate Screws**—the center spline is a continuous receptor for the coverplate screws that are self-tapped into the anchor channel. This feature dramatically reduces installation-related problems of locating self-centering, sliding ball devices and pantographs. The probability of screws being left out is eliminated by the ease of

anchoring which also ensures proper plate alignment between sections.

- 5) Self-Locking, Vibration-Dampened Screws**—Vibration in alternative systems that rely on metal-to-metal connections and contact points is the primary cause of screw loosening. Vibration that might otherwise work to loosen screws in these technologies is, in the SJS-FP, first dampened by the massive and continuous springs of impregnated foam along the entire length of the joint. In addition, 30 pounds of force is required to loosen the screws which translates into excellent resistance to loosening without the need for thread-lock compounds.
- 6) Field-Adjustable Plate Support**—installation over a levelling-bed of EMSEAL-supplied elastomeric nosing material provides the opportunity to fine-tune the support of the coverplate sections to reduce rocking and noise caused by unlevel plates. Concrete in new and retrofit applications is inevitably uneven across and along the joint. Systems that attach or embed extruded rails to receive sliding ball and socket devices cannot be adjusted to eliminate unevenness across and down the length of the joint.
- 7) Continuity of Seal**—as in all EMSEAL expansion joint systems, continuity of seal through changes in plane and direction is an essential performance differentiator. Factory-fabricated transitions at curbs, sidewalks, parapets, tees, and crosses are available with the SJS SYSTEM. Details for watertight, field-fabricated transitions between the different EMSEAL product systems are available.

**FIGURE 2: Continuity of Seal****Performance & Selection:**

- **Joint Sizes:**  
For mean-temperature, structural-slab, joint sizes from:  
**1-inch (25mm) up to 18-inches (450mm).** For special conditions consult EMSEAL.
- **Movement Capability:**  
100% (+50% and -50%) of nominal material size.
- **Leg Heights:**  
3-inches (75mm) to 12-inches (300mm)
- **Coverplates:**
  - Standard coverplate is 3/8-inch (10mm) shot-blasted aluminum or stainless steel. Other custom metals are possible--consult EMSEAL.
  - Coverplate thicknesses can be customized to suit load and traffic expectations--Consult EMSEAL.
- **Fire Rating:**  
2-hour fire rating for joints or supporting structure openings from 2-inches (50mm) to 32 1/2-inches (815mm) are available with specification of the EMSEAL/Fireline520 Series fireblanket beneath the SJS-FP SYSTEM
- **Models:**  
Model selection is designated by product codes. The code segments relate to the product configuration: For example, *SJSFP-100-400-75* means:

Product	Movement	JointWidth	LegHeight
SJSFP	-100	-400	-75
	(100%)	(4" joint)	(75mm, 3")

Consult EMSEAL for model number suitable to your specific application.

**Warranty**

Standard or project-specific warranties are available from EMSEAL on request.

**CAD .dwg's & Guide Specs**

Guide specifications and CAD details are available at [www.emseal.com](http://www.emseal.com), or by email--contact EMSEAL.

**Availability & Price**

SJS-FP is available for shipment internationally. Prices are available from local representatives or direct from the manufacturer. The product range is continually being updated, and accordingly EMSEAL® reserves the right to modify or withdraw any product without prior notice.