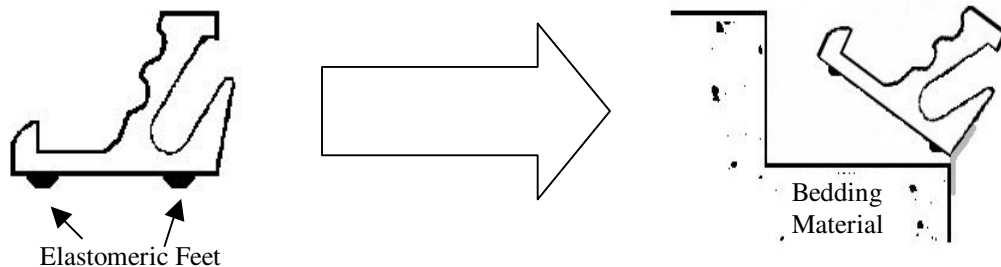


INSTALLATION INSTRUCTIONS FOR THE TS-SYSTEM

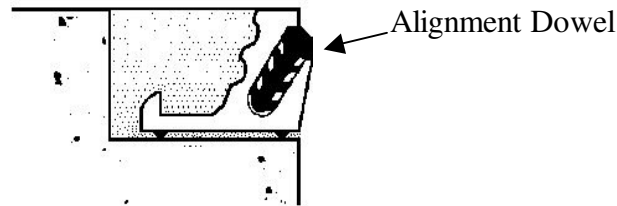
Installation

- 1) Inspection: Manufacturer's technician should be on site at commencement of installation for inspection of substrate preparation and demonstration of installation procedures. Bids must include a specific line item for manufacturer's technical service and will be considered incomplete and subject to disqualification if excluded. Technical service is defined as the paid, contracted service of a manufacturer's representative or factory technician.
- 2) The following is a general summary of installation requirements. In all cases the manufacturer's standard written instructions or specific instructions of the manufacturer's technician are to be followed.
 - a) Prepare the block-out recess. The concrete must be clean, dry, and level. Unsound concrete must be removed and the area repaired. Sandblast the recess to remove laitance and contaminants. Tape off the edges of the recess.
 - b) Sandblast those portions of the aluminum rails that will come in contact with the Polycrete.
 - c) Apply a 1/8" – 1/4" thick layer of the Polycrete 2020 bedding mix to the recess base, directly underneath where the metal flanges will sit. Place rubber leveling "feet" on the bottom of the flanges of the aluminum rails at approximately two to three foot intervals. Using the appropriate tools and equipment, position the aluminum rails in the recess. Space the rails across the joint at the proper dimension and elevation. Press the rails into the resins so that Polycrete 2020 bedding oozes up through the holes in the flanges. The aluminum rails must be placed and aligned to the correct grade.



NOTE: The elastomeric "feet" are used to set a space under the aluminum rails' assuring proper depth bedding is applied to the concrete. These elastomeric feet rest on top of the recess surface nested into the bedding material.

- d) At the time of installation, the engineer of record must be consulted for the temperature adjustment table. This will determine the joint opening “setting” at that given deck temperature. Preset the distance between the aluminum rail extrusions prior to anchoring the rails into place with the use of spacers. Keep in mind that the opening may be wider or narrower the next day. Adjustments must be made to keep in sync with the deck temperature.
- e) Butter the ends of the rails with an appropriate sealant. Alignment of the rails is accomplished by using the extruded rubber alignment dowels.



Note: Alignment dowels: Cut short three-inch long sections of seal wing from the seal. Insert them into the edge rails to assure proper alignment at butt end connections.

- f) Tape the top of the aluminum rails. This will provide a neat, finished appearance and protect them during the Polycrete finishing.
- g) Mix the Polycrete 1600 resins with the pre-measured aggregate to form the mortar mix. (Note that the Polycrete 1600 mortar and Polycrete 2020 bedding products have different mixing directions. See the appropriate data sheet and installation manual.) Place the mortar mix around the rails and fill the recess area. Compact the material so that no honeycombing can occur.
- h) Level off the Polycrete and trowel the finish smooth. Strip the protective tape and paper from the concrete and tops of rails.
- i) Allow the Polycrete to cure over-night. It will take an initial set in an hour and has a “drive over” of overnight at 70°F.
- h.) Apply a lubricant/adhesive, as supplied by the manufacturer, to the lug areas of the aluminum rails. Install the sealing element for the full length of the joint.
- j) Clean up your work area.

Materials

- 1) The seal is made of an extruded thermoplastic material. The gland may be cut in the field and heat-welded to match directional changes such as curbs, stairs, around columns, and dogleg conditions.
- 2) EMS’s Polycrete 1600 or other epoxy mortars are used to level the setting bed prior to the installation of the edge rails. It is imperative that the edge rails be set flat and level to the deck surface elevation.
- 3) Aluminum edge rails are made to meet ASTM 6061-T6 alloy. The edge rails are extruded to assure uniformity of shape.

TS Sealing Element

- 1) The heart of the system is the TS-400 sealing element. The seal is made from thermoplastic material (trade name Santoprene), which enables the process of heat welding of various configurations at directional changes and transitions as mentioned above. These changes in plane or irregularities around columns, wall-to-floor, or up and over conditions such as stairs or curbs are a common occurrence. Thermoplastic material lends itself very well to solve these difficult to seal conditions.
- 2) Factory-made directional changes and transitions may be made at EMS's fabrication plant according to drawings and dimensions provided by the field contractor. However, with minimal training field crewmen can learn to adapt quickly with successful splices

Factory Fabrication of Transitions

- 1) In addition to factory heat-welded splices EMS's fabrication plant we will also fabricate the aluminum edge rails to match the field conditions.

Surface Condition

- 1) Joint surfaces to receive the system shall be sound, smooth, straight, parallel, and level from side to side.

Size-Up

- 1) Allow adequate free movement for thermal expansion and contraction of metal to avoid buckling. Securely attach in place with all required accessories.
- 2) Maintain continuity of expansion joint cover assemblies with end joints held to a minimum and metal members aligned with cut off portions of securing lugs.

Seal Placement

- 1) Install seals in continuous lengths to eliminate leakage opportunities. All transitions and terminations should be factory-welded wherever possible according to field-measurements and drawings on centerline provided by the contractor. Site welding, when needed, can be carried out after suitable instruction by the expansion joint manufacturer and/or their representative.

Site Cleanup

- 1) Dispose of all waste materials from the site. Seal must be cleaned of all foreign matter as recommended by the seal manufacturer