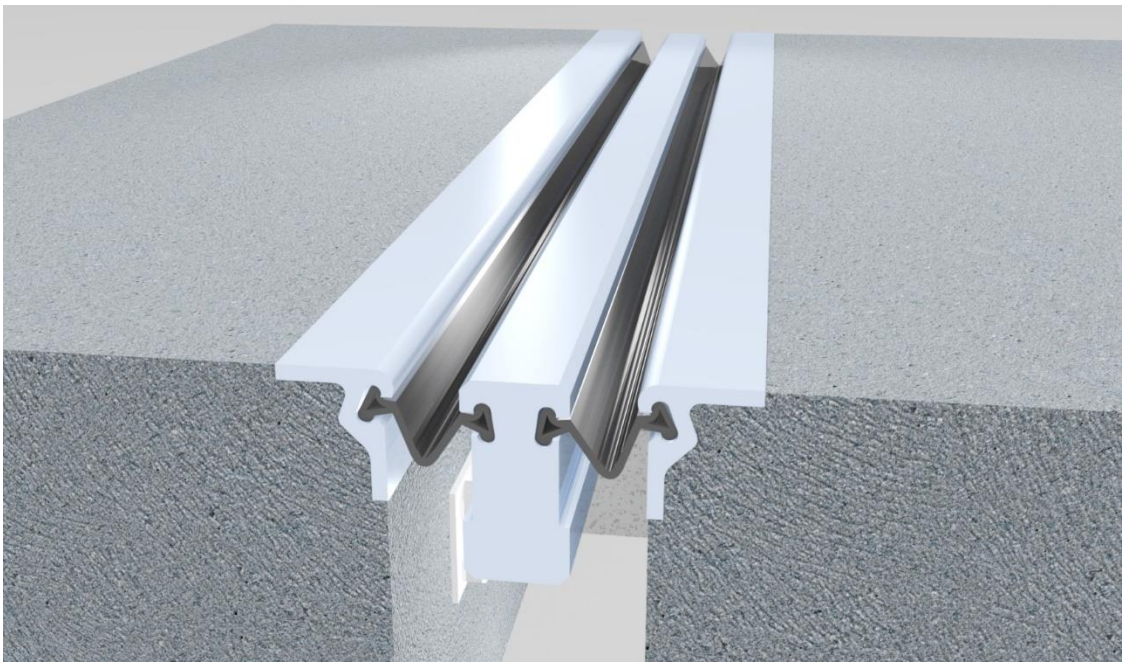
Installation Procedure

Last Updated: February 2019



Wabo®Modular STM Series

Large Movement Multiple Support Bar Joint System

The following installation procedure is very important and must be fully understood prior to beginning any work. To ensure proper installation and performance of expansion joint system the following actions must be completed by the installing contractor. Failure to do so will affect product warranty.

1) Carefully read and understand installation procedure. Contact WBA's Technical Service Department at (800) 677-4922 for product assistance.
2) Inspect all shipments and materials for missing or damaged components and hardware. Contact Customer Service at (800) 677-4922 with WBA's order number and invoice for prompt assistance.
3) Inspect substrate or adjacent construction for acceptance before beginning work. Report unacceptable construction to the project manager for scheduled repair work.
4) Review WBA shop drawings for project specific detailed information if Engineering services were purchased at time of order.

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Health & Safety

During the installation of any Watson Bowman Acme product, appropriate personal protective items should be worn at all times, including but not limited to the following:

- Proper work clothing
- Safety glasses
- Safety boots
- Gloves
- Hard hat

Local rules and regulations regarding safe work environments and health should be followed.

Pre-Installation Notes

The work shall consist of furnishing and installing a Wabo®Modular STM series joint system in accordance with the details shown on the plans and the requirements of the specifications. The Wabo®Modular STM series joint system is prefabricated.

Stage Construction

- Depending on the time frame for the stage construction sequence, the neoprene seals may or may not be put into the steel rails in the shop.

- If the field work schedule calls for a minimal time delay between respective installations of the two joint halves, the seals can be left out of the assemblies when they leave the shop. In this situation, the seals would then be field installed in continuous lengths spanning the entire roadway width.

- Should this method prove unacceptable, as in the case of significant delays between installation of the two halves, the first joint half can be shipped with temporary seals in place (at additional cost). Once the two joint sections have been coupled in the field, the temporary seals must be removed and the permanent full-length rubber shall be installed.

Field Preparation

- Proper field handling is of utmost importance to avoid damage to the fabricated joint system while it is lifted and lowered into its final position. The joint system shall be set to line and grade, ensuring that the system's uppermost plane matches the finished roadway profile. Care should be taken not to set the joint above finish grade.

- Before securing or casting in the joint system to the structure, the setting dimension shall be adjusted under the direction of the Field Engineer, to correspond to the proper ambient temperature dimension as shown on the shop drawings. The adjustment is accomplished by means of prestress devices, furnished by the manufacturer, which shall accompany the expansion joint system to the job site.

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- The structure temperature shall be measured by recording the surface temperature of the concrete and/or steel with a surface thermometer as described below.

- Record the temperature of the underside of the concrete slab at each end of the superstructure element adjacent to the expansion joint. Take the average of the readings to use with the temperature chart shown on the plans. In lieu of surface readings, internal slab readings may be taken by drilling a 1/4" diameter hole 3" into the concrete slab; filling the hole with water and inserting a probe thermometer.

Field Splicing

- If the system is to be installed in sections, the manufacturer will ship the joint with the appropriate ends beveled for field welding. Once the first joint section is installed and concrete has been cast, the adjacent length is field welded. Special care should be taken to the field weld details shown on the manufacturer's shop drawings.

Final Joint Placement

1 Complete all bolted and welded connections to the superstructure. Properly place formwork to maintain joint opening and prevent concrete from entering support boxes. Prior to placement of the concrete, all lifting devices shall be removed. Shipping devices on top of the joint need to remain and the bolts loosen upon placement of concrete.

2 When casting the joint system into the structure, care should be taken so that proper compaction of concrete around the system is achieved. After initial set of concrete, shipping devices must be loosened or removed to allow the joint to function.

Seal Installation

1 The neoprene seals shall be field installed in continuous lengths spanning the entire roadway width. To ensure proper fit of the seal and increase the ease of installation, dirt, spatter or standing water shall be removed from the steel cavity using a brush, scraper or compressed air.

2 Apply Wabo®PrimaLub by brush to the full perimeter on the walls of the steel shape machined cavity. (Refer to sketch below.)

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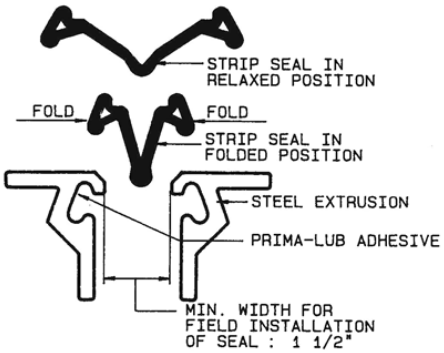

FIGURE 1

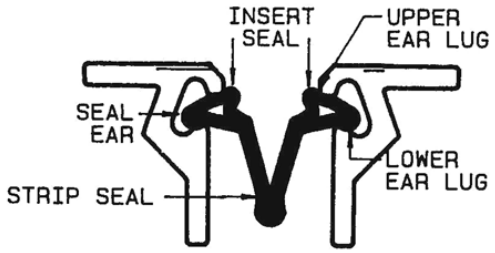

FIGURE 2

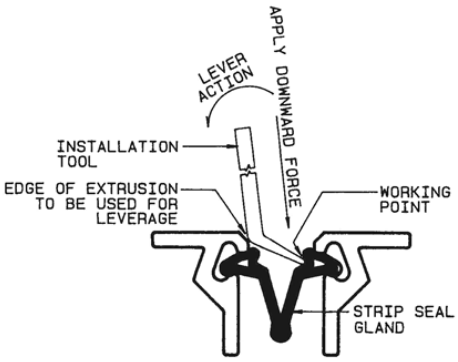

FIGURE 3

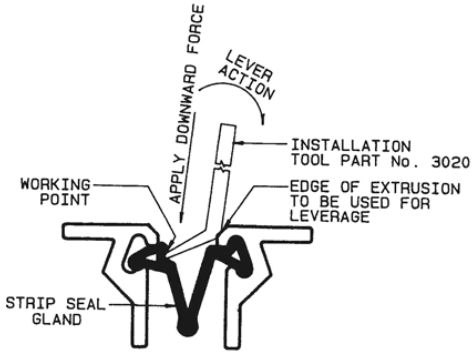

FIGURE 4

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