

ISO-FLEX DURA-BLOCK EXPANSION JOINT INSTALLATION PROCEDURES

1. Preparatory Work

The expansion joint blockout and stem openings shall be a consistent width and depth along the entire length. They shall be the required widths and depths for the specified system on this project. Refer to LymTal International Drawing No. 2056 for specific sizing/dimension information.

Edge spalling, sharp projections and concrete voids shall be repaired prior to proceeding with the joint installation. All repair materials used should have reached full cure conditions as specified by the manufacturer.

The Dura-Block joint "D" Series seal element shall be unrolled and allowed to lie in a relaxed position. Once relaxed, the seal should be cut to length and any splices can be made (See section "Splicing").

The vertical and horizontal faces of the expansion joint blockout should be cleaned to remove laitance, loosely bonded material, and any other contaminants that may inhibit bonding of the bedding and edge void sealants to the concrete.

The blockout should be clean and dry for system installation. Tape off the adjoining surfaces in order to maintain a neat appearance.

2. Installation

In the prepared blockout begin by locating the line of placement of the Iso-Flex Sure Plug bedding sealant on to the base of the blockout. This is a 1-part material packaged in 20 oz foil sausage packs.

Utilizing a chalk line, pull reference lines 1" and 2" away from the edge of the joint gap. Do this on both sides of the joint gap opening.

Run ¼" beads of the Sure Plug bedding sealant (2 lines each side of gap) along the chalk lines.

While still wet, install and press the "D" series seal into the bedding sealant. Two 20 oz. sausages are intended to seal 25 Ft of joint (both sides of gap).

With the "D" series seal now in place, start at one end of the joint location and begin to place the 6 Ft. anchor panels. Layout of the anchor panels is important for a good installation. Place the panels into the joint, laying them on top of the seal flange. Ensure that the tongue end aligns with the opposing groove end of each panel. The panel placement requires that the anchor hole be 2.5" away from the joint edge. **Be sure the panels are properly placed in the blockout. DO NOT ALLOW ANCHOR PANELS TO CANTILEVER INTO THE JOINT GAP OPENING.**

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With the panels loose laid in the blockout it is important to wedge the panels away from the concrete blockout edge in order to form the ¼" gap for the edge void sealant.

Beginning at one end of the joint length, begin to drill the anchor holes in the first set of opposing anchor panels.

This joint system utilizes anchor bolts produced by Powers Fasteners. The specific anchor is the Wedge Bolt Cat. No. 7262. This is a 5/8" hex head bolt with a 4" thread length. The anchors require that the pilot hole be drilled with the Power Wedge Bit Cat. No. 1324. This is a specific 5/8" drill bit required for proper performance of these wedge bolts. A limited supply of drill bits will be provided, however drill bits are the responsibility of the installing contractor. Any additional information for Powers Fasteners can be found at www.powers.com.

Utilizing the Wedge Bit, drill the anchor holes into the concrete deck (through the rubber flange) to a depth of 3.625" – 3.75". Vacuum out the loose concrete dust.

With all of the anchors holes properly located in the first opposing set of anchor panels, begin to install anchors. When using electric or pneumatic impact wrenches be sure to feather the trigger in order to avoid over tightening or stripping of the anchor. Utilize a hand torque wrench for final tightening.

Repeat this process down the length of the joint by drilling and anchoring each succeeding set of anchor panels. Force each ensuing panel firmly against the already installed panel so that the tongue and groove sections are tight. Having done so, tighten down the hardware on this panel. This process is to be repeated correspondingly for both sides of the joint gap working down the full length of the joint.

The wedge bolt anchors should be torqued to 75 Ft-LBS.

Anchor panels should be laid out in such a way to ensure that the final piece is a minimum of two feet in length so that it has at least two anchor locations holding it in place. Anchor panels can be field cut using a cutoff saw.

Once all of the panels are in place re-torque each bolt to ensure a snug fit.

With the system now in place, mix and install Iso-Flex 910 Tack Coat sealant for bolt hole and edge void sealants. This is a 2-part urethane requiring mixing. For the edge void areas, a backer rod should be installed so that the edge void sealant is held to a ½" depth.

Application of the Iso-Flex 910 Tack Coat urethane sealant is easily accomplished using a bulk-caulking gun.

3. Clean Up

Remove the tape from the concrete and dispose of properly.

Wipe the system with an organic solvent to remove any dirt or deposited sealant materials.

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4. Splicing

Butt splices of the Iso-Flex Dura-Block "D" series seal can be easily completed in the field by using a heat fusing process. The anchor panels are simply cut in the field and butted together. A cutoff saw is best for this as the anchor panel has a heavy steel reinforcement.

There is no means of fusing the anchor blocks together as they are an EPDM rubber material.

For the seal element, the first step is to make sure that the ends of the seal to be spliced have fresh, straight cuts. Utilizing an Iso-Flex Splicing Iron that is preheated to 400° F., hold it between each end of the prepared "D" series seal. When each surface shows about a 1/8" bead of melted material (approx. 2 Minutes) quickly remove the splicing iron, aligning the joint ends and forcing together until they bond (about 3-5 minutes). Allow the splice to cool for 15 minutes before proceeding. Do not move, bend, stretch or stress the splice for 2 hours.

Directional changes of the seal element can be pre-manufactured by LymTal. This then leaves only simple butt splicing for completion in the field.

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