

BALCO INC

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***INSTALLATION INSTRUCTIONS
FOR BALCO, INC. DURAFLEX™***

***"BCS" SERIES - BALCO COMPRESSION SEAL
TYPE BCSW-SERIES WALL SYSTEMS***

INSTALLATION INSTRUCTIONS FOR BALCO, INC. DURAFLEX™ BCSW SERIES - COMPRESSION SEAL SYSTEMS

The following installation instructions are very important. Read them carefully, and be sure you understand them completely before you begin any work.

STORAGE & HANDLING

The expansion joint systems are provided with self-adhesive tape applied and are shipped pre-compressed in five foot (5') lengths. Upon receipt, these products should be stored in the horizontal position in a clean, dry location. Store these products in a protected area. Do not allow these products to freeze. Store these products at a temperature range of 60-80°F. The work area shall be well ventilated. All users should familiarize themselves with the Sealant 35 MSDS information prior to the work.

BCSW SERIES BALCO COMPRESSION SEAL SYSTEMS PARTS LISTS¹

	<u>BCSW-100</u>	<u>BCSW-200</u>	<u>BCSW-300</u>	<u>BCSW-400</u>
A. Foam Seal	BCSW100	BCSW200	BCSW300	BCSW400
B. Sealant	Sealant 35	Sealant 35	Sealant 35	Sealant 35

¹ Not all systems are included in this list. Intervening sizes are available (1/4" increments), as well as small sizes down to 1/2".

TOOLS REQUIRED

This is a list of tools and materials recommended for use in the installation of these joint systems. Tools and materials in this list are not provided by Balco, Inc. Tools and materials marked with an asterisk (*) must be pre-approved by Balco, Inc. and the Project Structural Engineer.

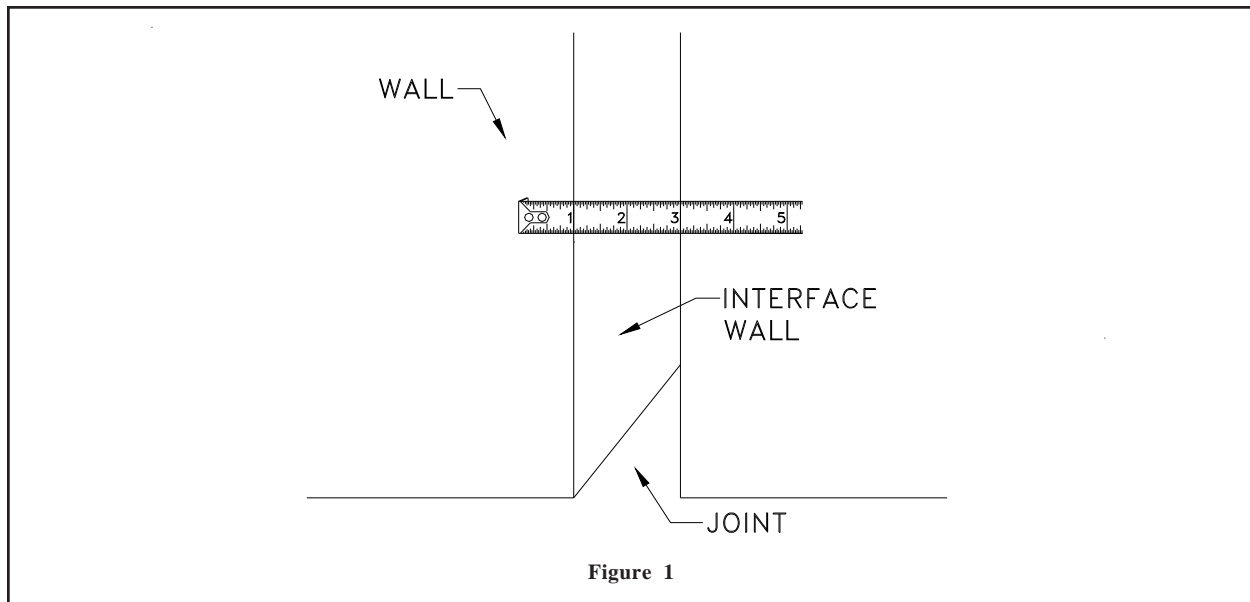
- | | |
|---|--|
| A. Tape Measure | J. Markers for marking Concrete and Seal |
| B. Level | K. Utility Knife |
| C. Concrete Saw | L. Clean White Rags |
| D. Disc Grinder | M. Clean Plastic Sheet |
| E. Diamond Grinding Disc | N. Miter Box |
| F. Disc Grinder | O. Water/Alcohol mixture and/or Alcohol |
| G. Concrete Patching Material* | P. Toluene |
| H. Air Compressor (fitted with an oil trap) | Q. Caulking Gun |
| I. Air gun | R. Trowel and/or Putty Knife |

PRELIMINARY REQUIREMENTS

1. Scope of Preliminary Requirements

The expansion joint stem opening must be formed to a uniform width for the entire length of the joint. To select the proper seal size, the following should be considered:

- A. The size of the joint opening measured at a 70°F temperature should be verified and recorded by the Engineer of record (see Figure 1). Please note that the joint size provided in Figure 1 is representative, and the actual required joint size may vary from that indicated in Figure 1. Joints must be sized every 5-7 feet to ensure the joint width is uniform and that the joint depth is sufficient for the system provided.

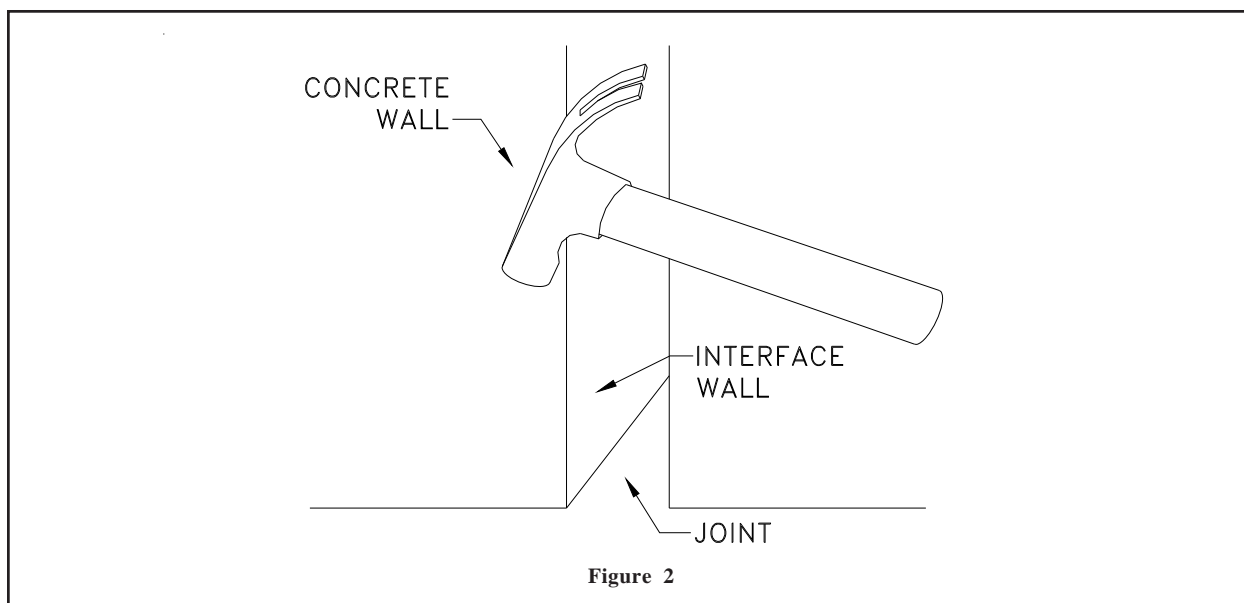


- B. The Project Structural Engineer shall determine the movement required at the joint location. Ensure that other movement requirements, such as longitudinal rack, deflection, etc. are considered and accounted for.

2. Jobsite Conditions and Survey and Joint Preparation

The conditions of the joint opening must be surveyed prior to beginning installation work. The following points should be considered and action implemented where required:

- A. The joint interface walls must be constructed equidistant from one another, straight, parallel to one another and plumb. Concrete saws and diamond grinding disks should be used to correct any deviations.
- B. Access to the bonding surface of the interface walls must be free and clear. Any obstructions must be accounted for in the installation process.
- C. Edge spalling, sharp projections and concrete voids (bug holes) shall also be repaired prior to proceeding with the joint installation. Consult the Project Structural Engineer for a list of acceptable patching products. Repair mortars recommended by Balco, Inc. include; Thoroc 1060, Emaco T-415 and Sika 123. Contact Balco, Inc. for recommendations on other compatible repair mortars. All repair materials used should have reached full cure conditions as specified by the repair material manufacturer before installation of the joint system begins. All obstructions such as form work and refuse shall be removed from the joint opening.
- D. Concrete adjacent to the expansion joint system must be sound. This should be confirmed by tapping these areas with a hammer (see Figure 2). If a hollow sound is heard or the concrete cracks, crumbles or loosens, the unsound concrete must be removed and repaired with a structural repair mortar.
- E. Repaired areas must also be sound. Confirm that they are by tapping these areas with a hammer. If a hollow sound is heard or the repaired area cracks, crumbles or loosens, the unsound repair must be completely removed and repaired again with a structural repair mortar. Access to the bonding surface of the interface walls must be free and clear. Any obstructions must be accounted for in the installation process.



- F. Measure the stem opening and correlate with the wall temperature. Verify that the opening width is synchronized with the values in the Temperature-Adjustment Table supplied by the Project Structural Engineer.
- G. Review all directional change locations; advise Balco, Inc. of the details.
- H. Confirm that the joint is clean, sound and provides an appropriate installation surface. Use compressed air to clean away any dust and loose debris from the joint, see Figure 3. Using water, a 50/50 mixture of alcohol and water, or alcohol to applied to clean cloths, wipe the joint interface walls clean to the depth of the seal plus 1".

INSTALLATION

These installation instructions are for use in the installation of the DuraFlex™ BCSW Series - Balco Compression Seal Wall Systems. The system shall be installed as follows:

- STEP 1.** Review Balco, Inc. approved shop drawings for types and locations.
- STEP 2.** Ensure that the joint and concrete, if applicable, have been properly prepared for the seal installation in accordance with the section of these instructions entitled "Concrete Joint Opening Preparation".
- STEP 3.** Select the seal and lay it out next to the joint. Balco, Inc. recommends placing the seal on a clean plastic sheet to ensure that it does not become soiled.
- STEP 4.** When working with stick-packaged material, remove the binding holding the stick(s) compressed (see Figure 3). Cut the binding along the hardboard edges. Do not cut along the face of the seal. Remove the release paper from the sides of the seal, exposing the pressure sensitive adhesive in preparation for installation (see Figure 4).

NOTE: WORK QUICKLY. THE SEAL WILL BEGIN TO EXPAND AS SOON AS THE BINDING IS REMOVED. IF THE MATERIAL EXPANDS BEFORE YOU ARE READY FOR INSTALLATION, IT IS POSSIBLE TO RE-COMPRESS IT BY HAND PRIOR TO

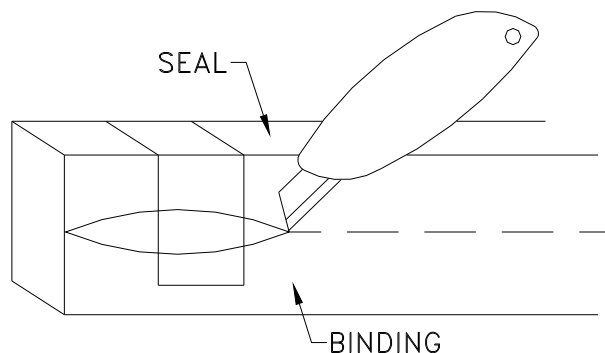


Figure 3

THE REMOVAL OF THE RELEASE PAPER. IF THE RELEASE PAPER HAS BEEN REMOVED, WET YOUR HANDS WITH WATER AND RE-COMPRESS THE SEAL BY HAND. WATER WILL NOT ADVERSELY AFFECT THE SEAL.

STEP 5. Beginning at the bottom of the joint, insert the seal into the joint gap, pressing it to one side of the joint using either a clean putty knife or by hand (see Figure 5).

NOTE: IN COOL WEATHER CONDITIONS, WEDGES MAY BE PLACED INTERMITTENTLY ALONG ONE SIDE OF THE SEAL TO HOLD THE STICK IN PLACE UNTIL THE SEAL HAS EXPANDED.

STEP 6. Cut and miter the seal to the lengths required for the application. To ensure proper fit, add 1/2" to the joint length and cut the seal. If splicing sections of the seal together is necessary, select the Sealant35. Using a putty knife, apply a thin film of Sealant35 onto the end of the installed section

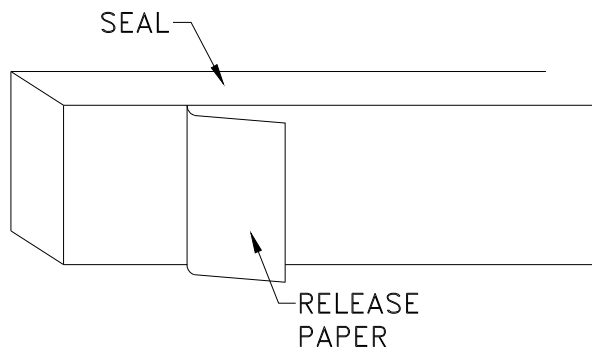


Figure 4

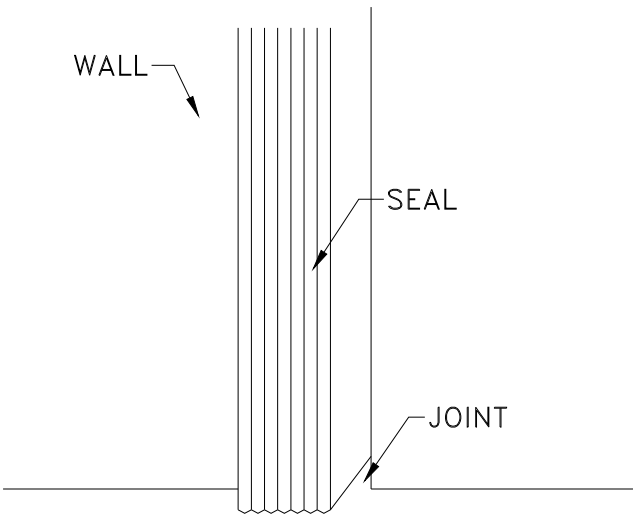


Figure 5

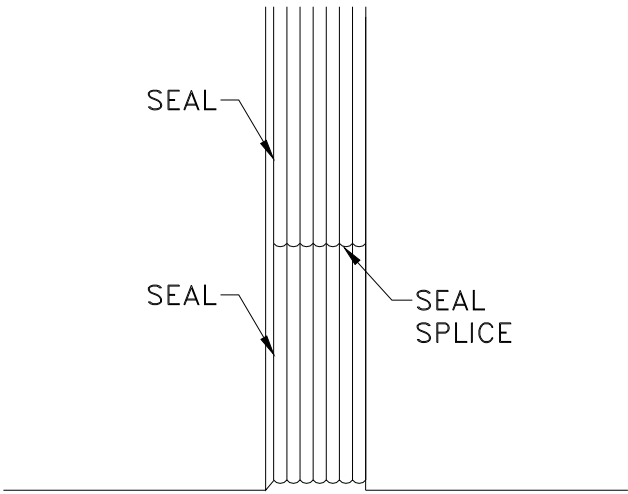


Figure 6

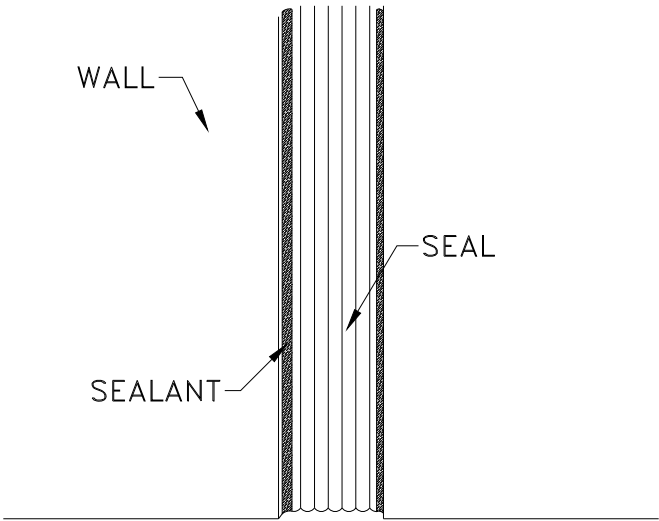


Figure 7

of the seal, and install the mating section of the seal as described above, pressing the mating section of the seal together with the installed section of the seal (see Figure 6). Ensure that the Sealant35 does not smear onto the seal's pressure sensitive adhesive. Repeat for each splice.

STEP 7. Allow the installed seal to completely expand.

STEP 8. Select the Sealant35, and place a continuous bead of Sealant35 along the front edges of the seal, where the seal interfaces with the joint wall, on both sides of the seal (see Figure 7).

STEP 9. Place a continuous bead of Sealant35 over all the splices in the seal. Ensure that the bead conforms in general to the seal's shape and that the splice is watertight.

STEP 10. Clean the installation area. Ensure that all trash and refuse are disposed of properly.

WARRANTY POLICY

Balco, Inc. warrants to its purchasers that all products sold by it will be free from manufacturing and material defects. Any defective product will be replaced or repaired free of any charge, provided a claim is brought to our attention, in writing, within the established warranty period following the date of shipment by us and provided our examination shows the product has failed under the terms of this warranty. The established warranty period for exterior joint cover systems (Duraflex™) is five (5) years provided the systems are installed by a Balco Certified Installer. The established warranty period for grids and mats is two (2) years. The established warranty period for all other Balco, Inc. products is one (1) year. Balco, Inc. will not be responsible for installation costs involved in such repair or replacement. Balco, Inc. shall have no obligation under this warranty if owner subjects materials to improper conditions (refer to Balco's installation instructions) This is in lieu of all other warranties, expressed or implied, and is the sole warranty extended by Balco, Inc. Our liability under this warranty is limited to repair or replacement and does not include any responsibility for consequential or other damage of any nature. It is further agreed and understood that the price stated for the seller's products is consideration for the limitation of seller's liability hereunder.

REGISTERED TRADEMARKS:

"VINYLINES" "SAF-T-GLO"
"METAFLEX" "SAF-TEN BEVEL"
"SENTRY" "DURAFLEX"
"ILLUMI-TREAD" "METABLOCK"
"MICHAEL RIZZA COMPANY"

BALCO, INC. PATENT NUMBERS:

5,782,044; 5,829,216; 5,832,678;
6,014,848; 6,115,980; 6,581,347;
6,942,419; 6,955,017; 6,962,026;
7,104,717; 7,856,781; 7,946,784;
8,079,190; 8,245,471; 8,464,485;
8,607,519; 8,601,760;

**Fire Resistant Joint Covers Patents
Pending**