



***BALCO INC***

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***INSTALLATION INSTRUCTIONS  
FOR BALCO, INC.  
NBR SERIES  
EXPANSION JOINT COVER SYSTEMS***



# INSTALLATION INSTRUCTIONS FOR BALCO, INC. NBR SERIES FLOOR EXPANSION JOINT COVERS

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 covers are shipped unassembled. Store this product in the horizontal position in a clean, dry location. This is a finished product. Store this product in a protected area.

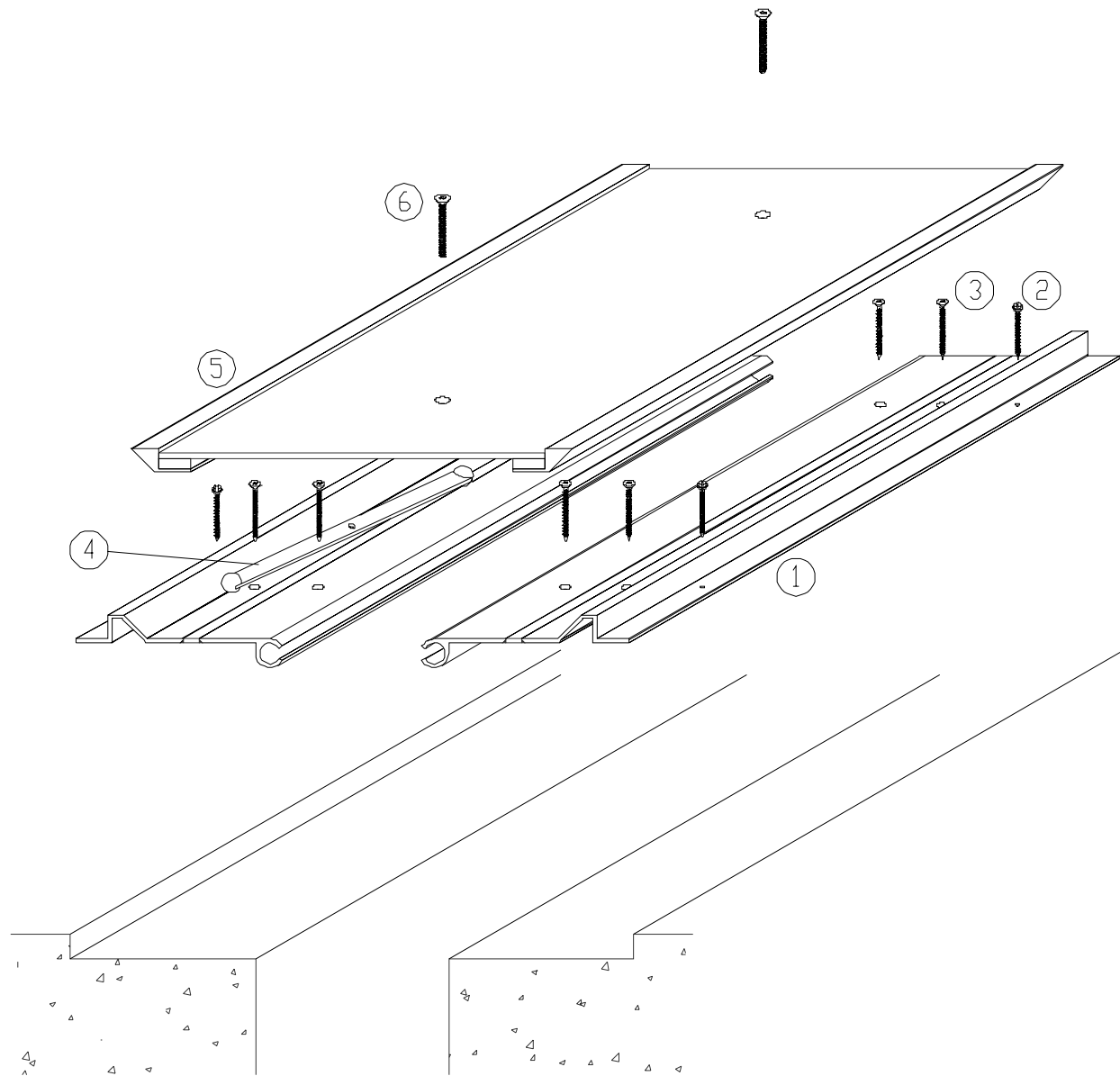


Figure 1

## PARTS:

1. Base Member
2. Base Member Hex Head Fastener
3. Base Member Flat Head Fastener
4. Center Bar
5. Cover Plate
6. Centering Bar Bolt

## Tools Required:

The following tools are recommended for use in the installation of the joint cover system. However, Balco, Inc. does not provide these tools:

- A. Drill Bits (for Concrete; Carbide, 3/8").
- B. Electric Drill
- C. Phillips, Slotted and Hex Screw Drivers
- D. Tape Measure
- E. Markers

## INSTALLATION

These installation instructions are for use in the installation of expansion joint cover types NBR-3x18 through NBR-12x38. The Joint Cover System is illustrated in Figure 1. Install the joint cover system as follows:

**STEP 1.** Review Balco, Inc. approved shop drawings for types and locations.

**STEP 2.** Provide blockouts for Balco, Inc. expansion joint covers in accordance with the approved shop drawings. Blockouts may be formed at the time of the initial concrete pour or at a later time by removing material from the slab. To ensure a good installation, use level and true blockout materials. Inspect the blockouts to see that they are the proper dimensions, flat, level, and clear of all debris. Prepare and clean the blockouts as needed.

**STEP 3.** Select a section of the base member. If the anchor holes have not been predrilled in the base members at the factory, mark the locations for the anchor holes on the selected base member (see Figure 2). Standard anchor spacing is 20" O.C. with an anchor at a nominal 3" from each end of the base member. Drill the anchor holes for the hex head anchors and for the flat head anchors into the base members at the marked locations (see Figure 3). The anchor holes for the flat head anchors must be countersunk.

**STEP 4.** If fire barrier is to be installed in conjunction with the joint cover system, install the fire barrier in accordance with the instructions for the fire barrier provided.

NOTE: THE OPTIONAL WATER BARRIER MAY BE EITHER EPDM OR HYPALON. THE BASIC INSTALLATION OF THE WATER BARRIER IS THE SAME REGARDLESS OF WHICH OF THESE

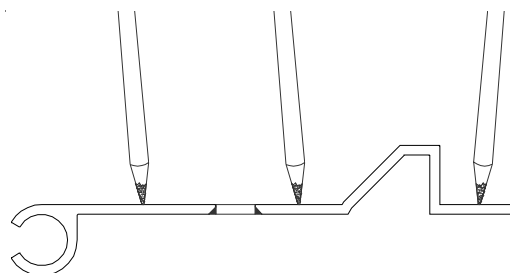


Figure 2

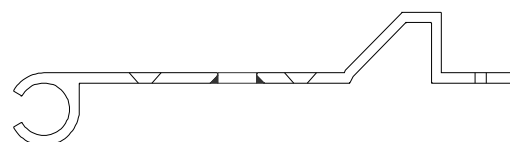


Figure 3

MATERIALS IS PROVIDED BY THE FACTORY. RECOMMENDED SPLICING METHODS VARY DEPENDING UPON WHICH MATERIAL IS PROVIDED.

**STEP 5.** If water barrier is to be installed in conjunction with the joint cover system, install the water barrier at this time. Refer to the installation instructions entitled, "INSTALLATION INSTRUCTIONS FOR BALCO, INC. .045 EPDM WATER BARRIER SYSTEMS" for the recommended procedures for the installation of the water barrier.

**STEP 6.** Select a base member, and place it into the blockout in its installed position. Ensure that the base member is level, flush with the finished floor, and plumb with the edge of the joint. Using the base member as a template, mark the locations for the anchors on the concrete (see Figure 4). Repeat this procedure for the opposite base member and properly aligned.

**STEP 7.** Remove the base members from their installed positions, and drill the anchor holes for the base member anchors into the concrete at the locations marked in Step 6. Drill the anchor holes 1/4" deeper than the length of the anchors. Clean away all dust and debris from the blockout.

NOTE: OBSERVE NORMAL SAFETY PRECAUTIONS WHEN DRILLING TO AVOID ALL UTILITIES AND RE-BAR.

**STEP 8.** Place the base members into their installed position, aligning the anchor holes in the base members with the anchor holes in the fire barrier retainers, if applicable, and in the concrete. Ensure that the base members are level, plumb, properly aligned, and flush with the finished floor. Using the anchors provided by the factory, attach the base members to the concrete (see Figure 5).

**STEP 9.** Place grout (by others) continuously between the base members and the blockout (see Figure 6). Install the grout in accordance with the grout manufacturer's written instructions. Ensure that the grout is level with the surface of the concrete. Remove all excess grout from the exposed surfaces of the aluminum base members before the grout sets up.

**STEP 10.** After the grout has cured, select the centering bars for the section of the system being



Figure 4

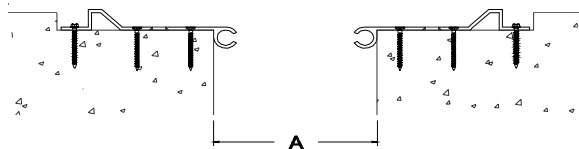


Figure 5

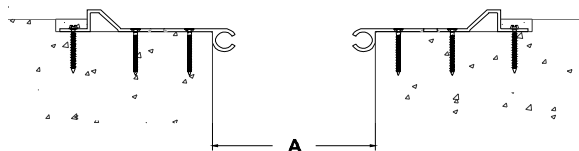


Figure 6

installed. The centering bars are spaced 20" O.C. Using the notch provided in the center of each section of the installed base member, insert one of the centering bar's spheres into the base member's track on one side of the joint. Insert the other centering bar sphere into the opposite base member's track (see Figure 7). Repeat this procedure for each centering bar.

**NOTE:** INSTALLATION OF CENTERING BARS MUST BE UNIFORM. WHEN CORRECTLY INSTALLED, CENTERING BARS WILL SPAN THE JOINT DIAGONALLY, AND ALL THE CENTERING BARS WILL BE PARALLEL WITH ONE ANOTHER.

**STEP 11** Select a cover plate and the centering bar bolts. Lay the selected cover plate beside the installed base members. Ensure that the cover plate is properly aligned with the base members. Slide the centering bars into position so that the anchor hole in the center of each centering bar is aligned with the respective anchor hole in the cover plate. Place the cover plate into its installed position. Ensure that the cover plate remains level, properly aligned, and at the proper elevation. Insert a Centering Bar Bolt through each of the bolt holes in the Cover Plate and into the Bolt hole in each corresponding Centering Bar. Hand tighten each centering bar bolt until the cover plate is held firmly in place (see Figure 8).

**STEP 12.** Install finish floor material at this time (see Figure 9). Install finish floor material in accordance with the instructions provided by the finish floor material manufacturer.

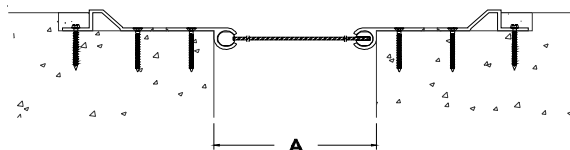


Figure 7

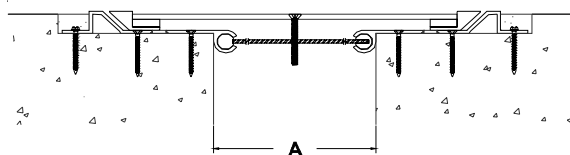


Figure 8

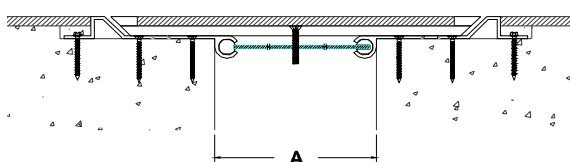


Figure 9

## **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"

### **BALCO, INC. PATENT NUMBERS:**

5,357,727; 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  
SAF-T-GLO patent pending