

BALCO INC

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***INSTALLATION INSTRUCTIONS
FOR HDNE & HDNEL SERIES
EXPANSION JOINT COVER
SYSTEMS***

INSTALLATION INSTRUCTIONS FOR BALCO, INC. HEAVY DUTY TYPES HDNE & HDNEL 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.

HDNE- PARTS LISTS

	<u>HDNE-2</u>	<u>HDNE-3</u>	<u>HDNE-4</u>
A. Base Member Assembly:			
1. Base Member ¹	X	X	X
2. Angle (CSA2x2x316) ²	X	X	X
3. H141 w/HN14 & SW14 ³	X	X	X
4. Anchors (TH14214 w/SW14)	X	X	X
B. Base Member (GA100)	X	X	X
C. Anchors (TH316134) ⁴	X	X	X
D. Cover Plate	X	X	X
E. Centering Bar	X	X	X
F. Centering Bar Screw (F516112S)	X	X	X

HDNEL- PARTS LISTS

	<u>HDNEL-2</u>	<u>HDNEL-3</u>	<u>HDNEL-4</u>
A. Base Member Assembly:			
1. Base Member ¹	X	X	X
2. Angle (CSA112x112x316) ²	X	X	X
3. H1458 w/HN14S & SW14 ³	X	X	X
B. Cover Plate ⁶	X	X	X
C. Anchors (TH316134) ⁵	X	X	X
D. Anchors (TF316114) ⁵	X	X	X

¹ All HDNE Series Joint Covers use base member GA100.

² Part number typically provided, but other angle may be provided as required by the construction.

³ Bolt, Nut and Washer

⁴ Anchors provided by the factory may differ from that listed here, depending upon the construction and the installation conditions.

TOOLS REQUIRED

- A. Drill Bits for Base Members (Metal) and Anchors (Concrete).
- B. Electric Drill
- C. Sockets for Anchors
- D. Phillips Head Bits

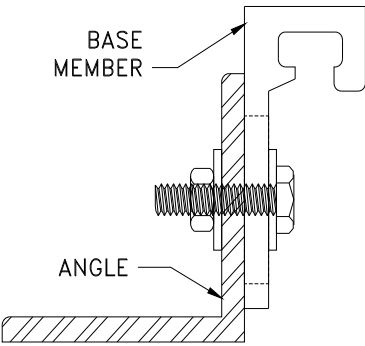


Figure 1

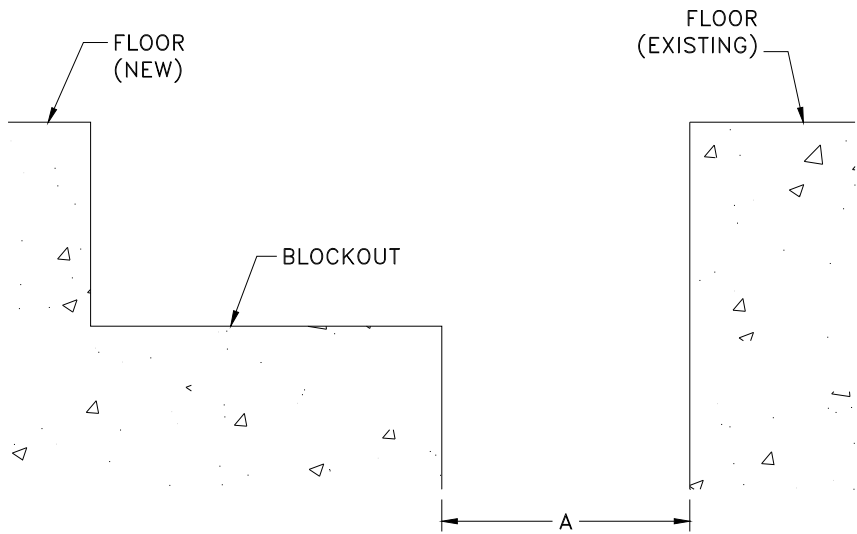


Figure 2

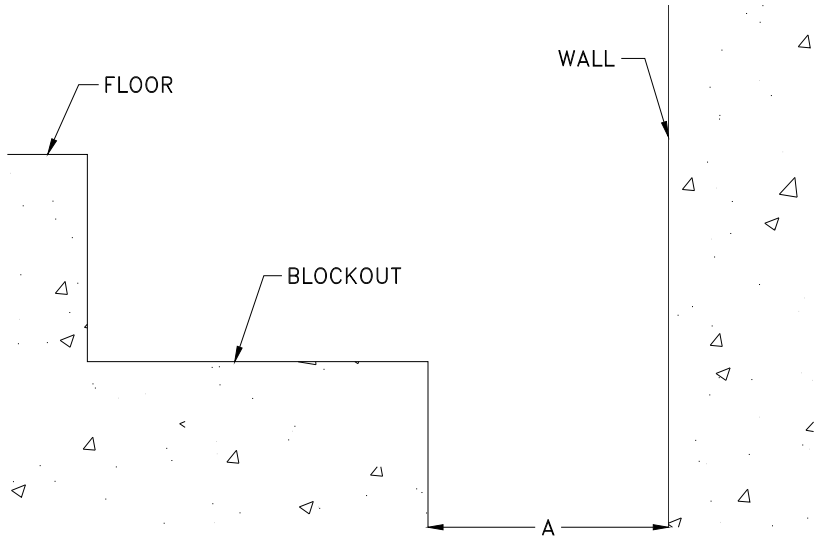


Figure 3



Figure 4

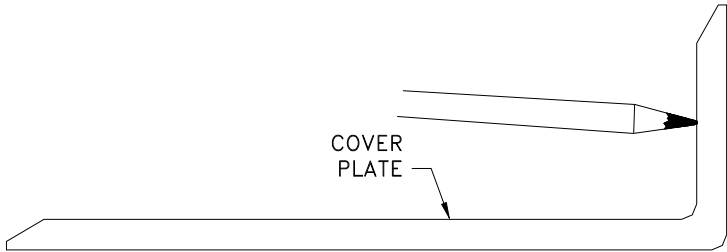


Figure 5

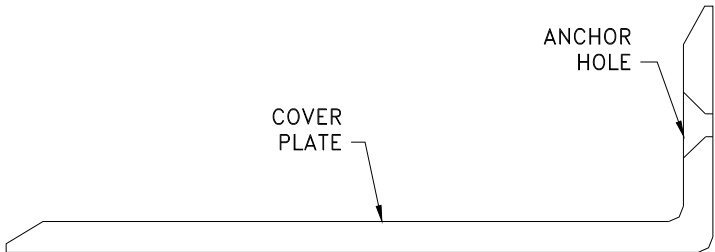


Figure 6

INSTALLATION

These installation instructions are for use in the installation of heavy-duty, new-to-existing expansion joint cover types HDNE-2, HDNE-3, HDNE-4, HDNEL-2, HDNEL-3, and HDNEL-4. The joint cover system shall be installed as follows:

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

NOTE: THE BASE MEMBER EXTRUSIONS ARE ATTACHED TO CONTINUOUS STEEL ANGLES AT THE FACTORY. ANGLES ARE CARBON STEEL UNLESS STAINLESS STEEL ANGLES ARE SPECIFIED. THE BASE MEMBERS AND THE CONTINUOUS STEEL ANGLES MAKE UP THE BASE MEMBER ASSEMBLY (SEE FIGURE 1).

STEP 2. Prepare the slab for installation of the Balco, Inc. expansion joint covers (see Figure 2 and Figure 3). Ensure that the slab is flat, level, and clear of all debris. The blockout 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 blockout to ensure that it is flat, level, and clear of all debris. Prepare and clean the blockout as needed.

STEP 3. If the installation is a floor-to-wall condition, select a floor-to-wall cover plate (see Figure 4). For floor-to-floor installations, proceed directly to Step 7.

STEP 4. If the anchor holes have not been predrilled in the floor-to-wall cover plate at the factory, mark the locations for the anchor holes on the cover plate (see Figure 5). Standard anchor spacing is 20" O.C. with an anchor at a nominal 3" from each end of the cover plate.

STEP 5. Repeat Step 3 and Step 4 for each section of the floor-to-wall cover plate.

STEP 6. If necessary, drill the anchor holes into the floor-to-wall cover plates at the locations marked in Step 4 and Step 5 (see Figure 6). Proceed directly to Step 15.

STEP 7. Select a section of the existing side base member (part no. GA100, see Figure 7).

STEP 8. If fire barrier is specified, install it at this time. Refer to the installation instructions appropriate for the type of fire barrier provided for the recommended procedures to use in the installation of the fire barrier.

STEP 9. If water barrier is specified, install it 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.

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

STEP 10. Place the selected section of the existing side base member into its installed position. Ensure that the base member is level, properly aligned, and flush with the top of the joint.

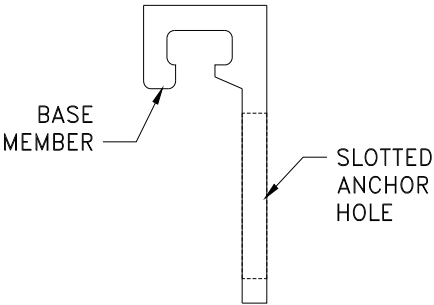


Figure 7

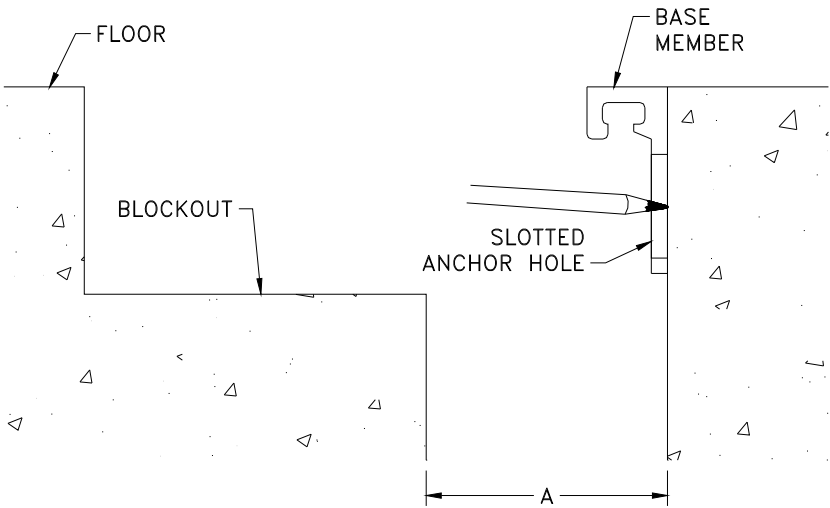


Figure 8

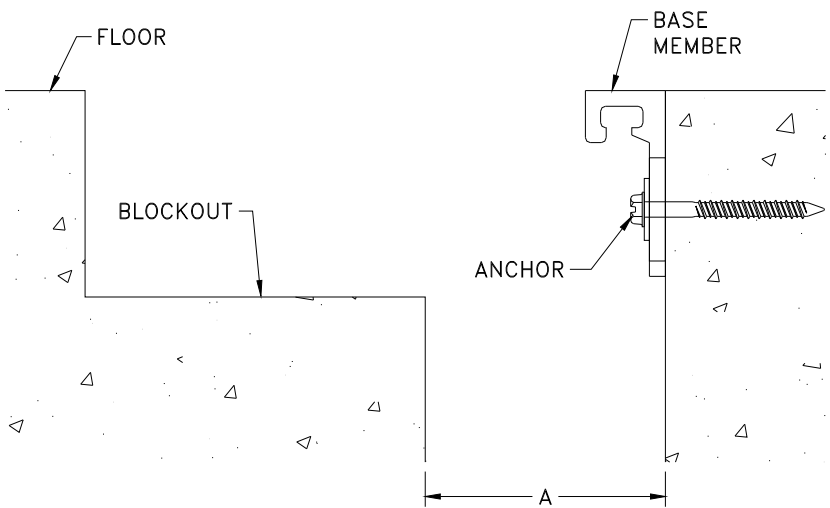


Figure 9

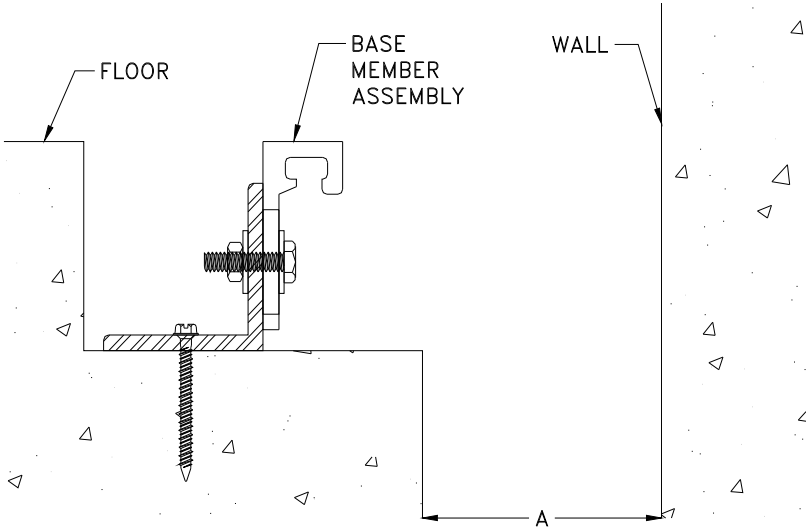


Figure 10

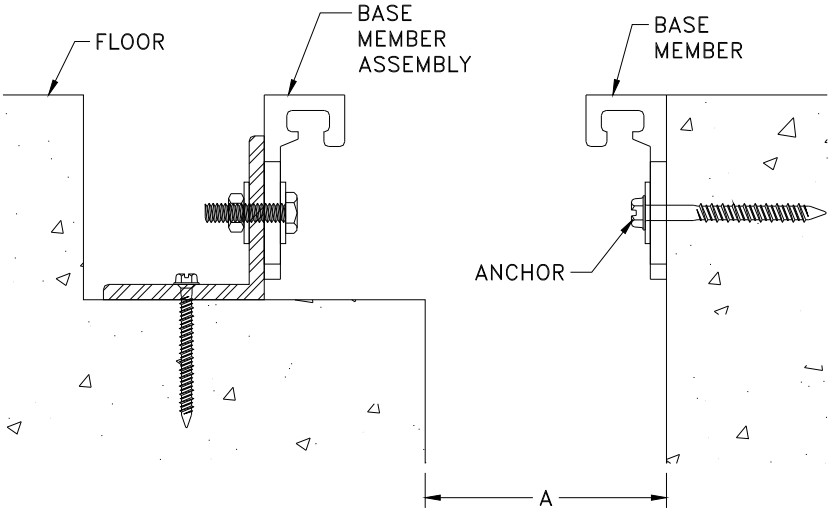


Figure 11

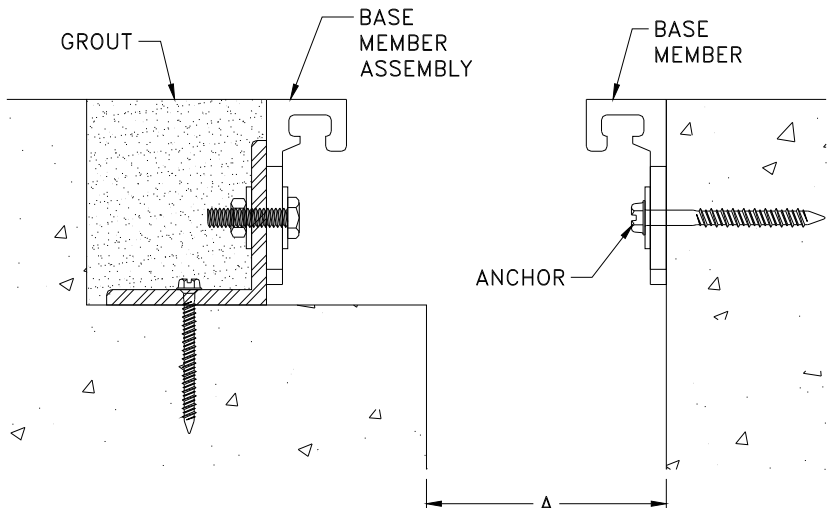


Figure 12

STEP 11. Using the base member as a template, mark the locations for the anchors on the concrete (see Figure 8).

STEP 12. Remove the base member from its position, and drill the anchor holes into the concrete at the locations marked in Step 11. 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 13. Place the base member back into its installed position, and attach it to the concrete. Ensure that the base member remains level, properly aligned, and flush with the top of the joint.

STEP 14. Repeat Step 17 through Step 20 above for each subsequent section of the base member assembly (see Figure 9).

STEP 15. Select a section of the base member assembly (part no. GA100 w\steel angle).

STEP 16. Place the selected section of the base member assembly into its installed position. Ensure that the base member assembly is level, properly aligned, and flush with the top of the joint. Adjust the height of the base member assembly as necessary.

STEP 17. Using the base member assembly as a template, mark the locations for the anchors on the concrete (see Figure 10).

STEP 18. Remove the base member assembly from its position, and drill the anchor holes into the concrete at the locations marked in Step 23. 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 19. Place the base member assembly back into its installed position, and attach it to the concrete. Ensure that the base member assembly remains level, properly aligned, and flush with the top of the joint.

STEP 20. Repeat Step 15 through Step 19 above for each subsequent section of the base member assembly (see Figure 11).

STEP 21. Place grout (by others) continuously between the base member assemblies and the blockout edge (see Figure 12). Install the grout in accordance with the grout manufacturer's written instructions.

STEP 22. Remove all excess grout from the exposed surfaces of the aluminum extrusions before the grout sets up. For floor-to-wall installations, go directly to Step 27.

STEP 23. Select a section of the cover plate (see Figure 13).

STEP 24. Select the centering bar bolts, and place a centering bar bolt into each of the cover plate's anchor holes.

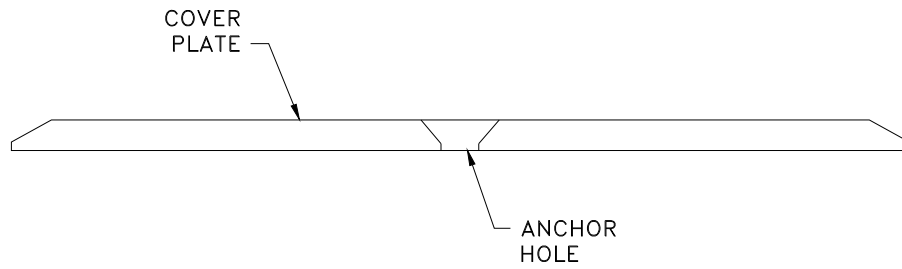


Figure 13

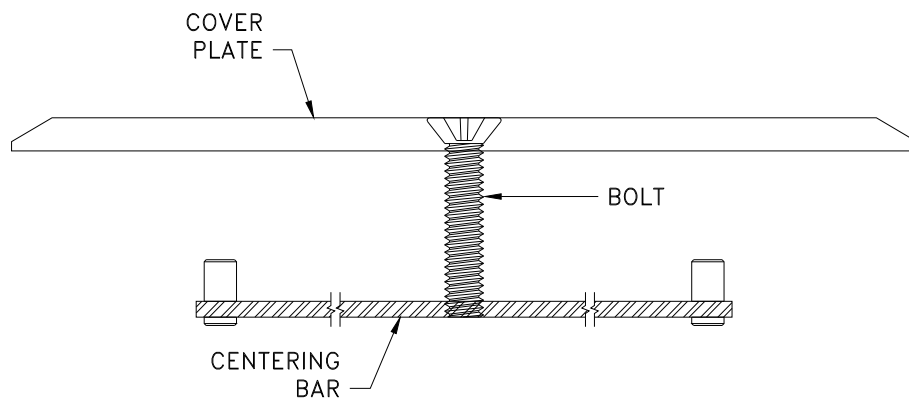


Figure 14

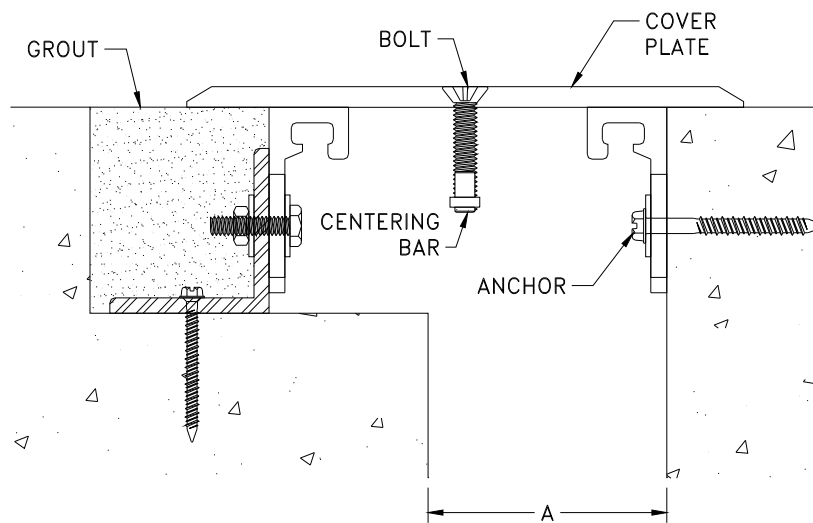


Figure 15

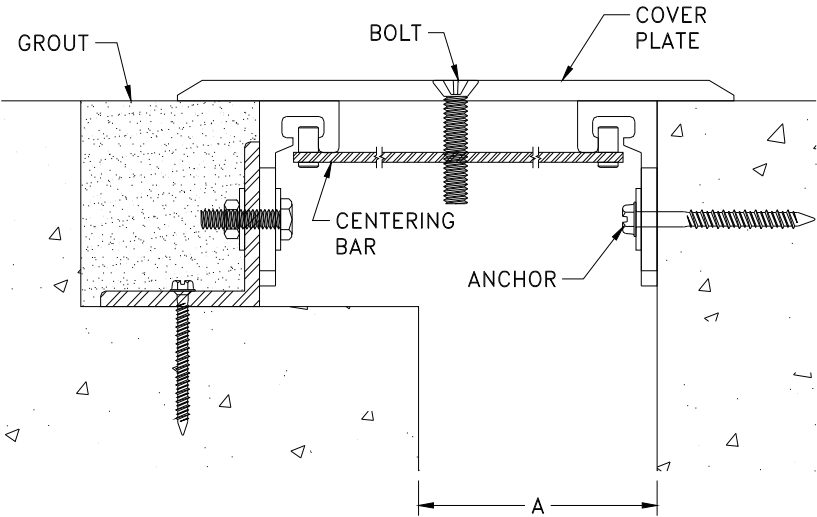


Figure 16

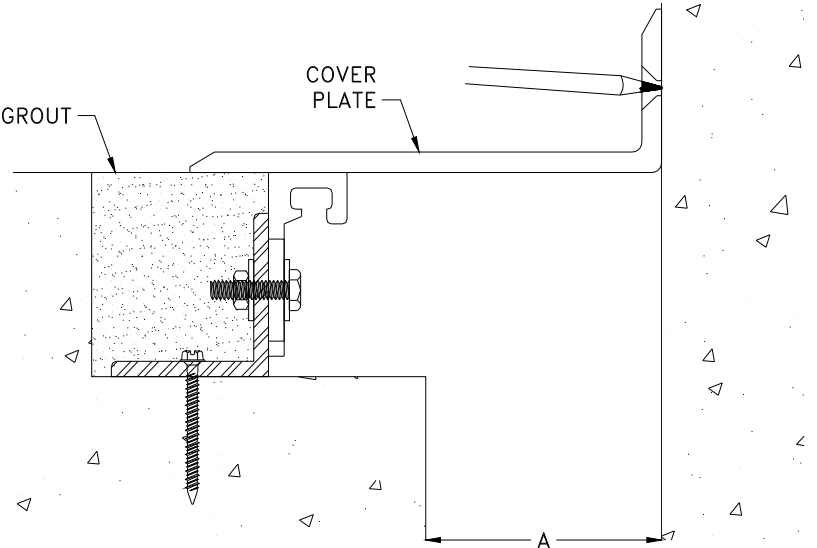


Figure 17

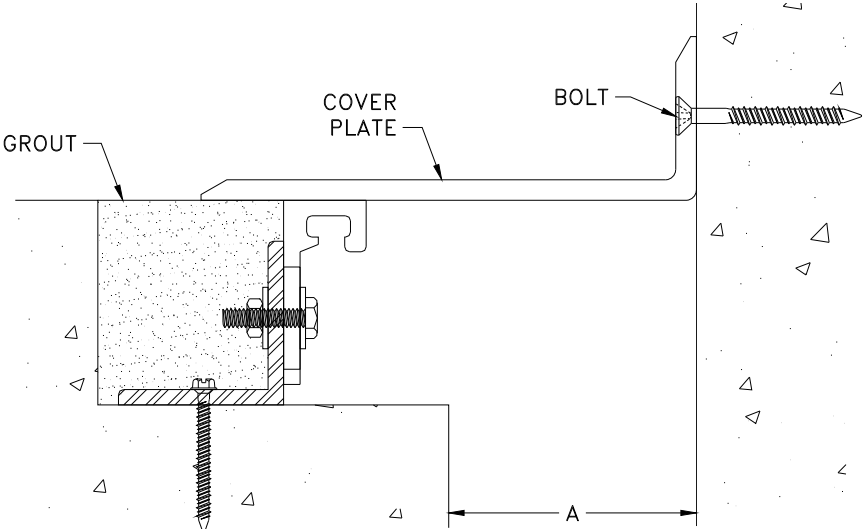


Figure 18

- STEP 25.** Attach a centering bar to the end of each centering bar bolt in the cover plate (see Figure 14). Position the centering bars so that they are parallel to the joint and cover plate and so that the centering bar pins will clear the base member channels when the cover plate is put into position for installation (see Figure 15).
- STEP 26.** Put the cover plate, with centering bars attached, into position over the joint. Tighten the centering bar bolts by hand until the centering bars are firmly held in place (see Figure 16). Do not overtighten the centering bar bolts. The installation of the floor-to-floor system is complete.
- STEP 27.** Select a section of the floor-to-wall cover plate.
- STEP 28.** Place the selected section of the floor-to-wall cover plate into its installed position against the wall. Ensure that the cover plate is level, properly aligned, and at the proper height.
- STEP 29.** Using the cover plate as a template, mark the locations for the anchors on the wall (see Figure 17).
- STEP 33.** Remove the cover plate from the wall, and drill the anchor holes into the wall at the locations marked in Step 36. Drill the anchor holes 1/4" deeper than the length of the anchors. Clean away all dust and debris from the installation area.

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

- STEP 34.** Place the cover plate back into position against the wall. Attach the cover plate to the wall using the fasteners provided by the factory. Ensure that it remains level, properly aligned, and at the proper height.
- STEP 35.** Repeat Step 27 through Step 34 for each subsequent section of the floor-to-wall cover plate (see Figure 18).

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