

2626 South Sheridan • PO Box 17249 • Wichita, Kansas 67217 Phone: (316) 945-9328 • Fax: (316) 945-0789

# INSTALLATION INSTRUCTIONS FOR 12" AND UP ELASTOMERIC FACE SEAL EXPANSION JOINT COVER SYSTEMS

## FOR BALCO, INC. 12" AND WIDER FACE SEAL 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. Upon receipt, this product should be stored in the horizontal position in a clean, dry location. This is a finished product. Store this product in a protected area.

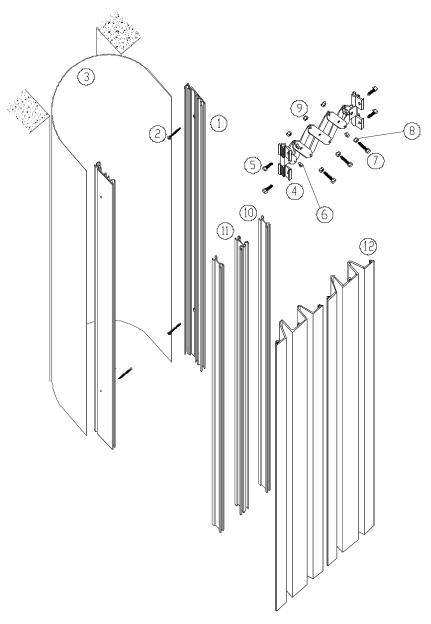


Figure 1

## PARTS:

- 1. Base Member
- 2. Base Member Fasteners
- 3. Water Barrier
- 4. Pantograph Bar
- 5. Pantograph Bar Bolts
- 6. Pantograph Bar Nuts
- 7. Subchannel Bolts
- 8. Subchannel Nuts
- 9. Subchannel Nuts
- 10. Subchannel (Face Seal Ends)
- 11. Subchannel (Intermediate Face Seal)
- 12. Face Seal (UV-Rated or Non-UV-Rated)\*
- \* UV-Rated Face Seals are differentiated by a continuous indentation mark on the back side of the seal.

## **Tools Required:**

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

- A. Drill Bits (for Metal)
- B. Drill Bits (for Concrete, Carbide, if needed)
- C. Electric Drill
- D. Phillips Screw Drivers
- E. 3/16" and 1/4" Sockets
- F. Tape Measure
- G. Markers
- H. Caulking Gun
- I. Weatherproofing Sealant
- J. Sikalex 1a
- K. Miter Box
- L. Hacksaw (for cutting Face Seal)
- M. Wallpaper Roller (1/2")
- N. Screen Roller1

## **INSTALLATION**

These installation instructions are for use in the installation of Wall and Ceiling Expansion Joint Cover Types FCWW-12 and wider, TCWW-12 and wider, FCVS-12 and wider, and TCVS-12 and wider. The system is illustrated in Figure 1. The joint cover system shall be installed as follows:

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

**STEP 2.** Select one base member extrusion, and mark the locations of the anchor holes on the base member. Locate the anchor holes in the base member extrusion's anchor channel (see Figure 2). The anchor holes are spaced a maximum of 20" o.c. with an anchor hole a nominal 3" from each end of the extrusion. Repeat this procedure for each base member section.

**STEP 3.** Drill the anchorholes into the base members at the locations marked in Step 2.

NOTE: BASE MEMBERS INSTALLED AT TRANSITIONS IN THE JOINT(S), 90° PERPENDICULAR AND SAME-PLANE, MUST BE MITERED APPROPRIATELY.

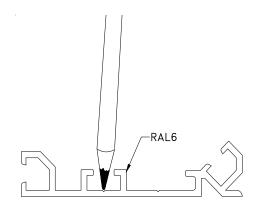


Figure 2

This item is only recommended if the back seal is EPDM Sheet with 44V.

- **STEP 4.** If fire barrier is provided with the system, install it at this time. Install the fire barrier in accordance with the installation instructions for the type of fire barrier provided.
- **STEP 5.** For installation of the EPDM sheet water barrier, proceed directly to the section of these installation instructions entitled "Water Barrier Installation".
- **STEP 6.** For concrete or masonry walls, select a base members and place it inside the joint in its properly installed position against the wall. Ensure that the front of the base member is 1/8" from the surface of the wall. This will allow the face seal to be nominally flush with the wall. Also ensure that the base member is level and properly aligned. Using the base member as a template, mark the locations for the anchor holes on the concrete or masonry (see Figure 3).
- **STEP 7.** Remove the base member from the joint, and drill the anchor holes into the substrate at the locations marked in Step 6.

NOTE: DRILL ANCHOR HOLES IN THE CONCRETE OR MASONRY 1/4" DEEPER THAN THE ANCHOR LENGTH.
OBSERVE NORMAL SAFETY PRECAUTIONS WHEN DRILLING INTO CONCRETE OR MASONRY TO AVOID ALL UTILITIES AND RE-BAR. CLEAN AWAY ALL REFUSE FROM THE INSTALLATION AREA.

- **STEP 8.** Select a base member and the Pantograph Bar bolts, and insert the bolts into the selected base member's raceway at the locations at which the pantograph bars will be installed (see Figure 4). The pantograph bars are located at 12" from the top and bottom of the assembled joint cover and at 4' o.c. along its length. Two bolts per side per each pantograph bar are required.
- **STEP 9.** If additional watertightness is required, place a nominal 1/8" bead of silicone sealant (by others) onto the back side of the base member (see Figure 5).
- **STEP 10.** Place the base member into its installed position. For concrete or masonry installations, align the anchor holes in the base member with the anchor holes in the substrate. For all installations, ensure that the base member is level and properly aligned. Ensure that the front of the base member is 1/8" from the



Figure 3

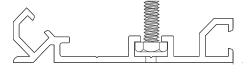


Figure 4

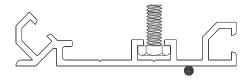


Figure 5

surface of the wall. Using the fasteners provided by the factory, attach the base member to the wall (see Figure 6).

**STEP 11.** Repeat Step 8 through Step 10 for the opposite base member and for each subsequent base member.

## Alternative Base Member Installation Method

NOTE: IN LIEU OF MECHANICAL FASTENERS, AN APPROPRIATE SEALANT/ADHESIVE MAY BE USED TO CONTINUOUSLY THOROUGHLY COAT THE BACK OF THE BASE MEMBERS AND TO AFFIX THE BASE MEMBERS TO THE ASSEMBLY SUBSTRATE (SEE FIGURE 7). ENSURE THAT THE BASE MEMBERS ARE STRAIGHT AND LEVEL. AN EPOXY ADHESIVE OR A SEALANT, SUCH AS SIKAFLEX 1A, IS ACCEPTABLE, PROVIDED THE SELECTED ADHESIVE/SEALANT IS APPROPRIATE FOR USE WITH THE SUBSTRATE TO WHICH THE BASE MEMBERS WILL BE ADHERED.

## **Water Barrier Installation**

This section of these installation instructions is only applicable to FCWW Series and FCVS Series Expansion Joint Cover Systems. If a TCWW Series or a TCVS Series Expansion Joint Cover system is being installed (systems having no back seal), or if the back seal installation has already been completed, proceed directly to the section of these instructions entitled "Pantograph Bar Installation".

**STEP 12.** Ensure that the substrate is clean and clear of dirt, debris, etc. Clean away any loose material, sand, dirt, grease, debris, etc. from the substrate.

STEP 13. Spread non-curing mastic on the substrate along both sides of the joint (see Figure 9). Refer to the project details and the shop drawings to determine the placement and the width of the mastic. For Floor-to-Wall installations refer to the project details and the shop drawings to determine the height to which the mastic must be spread on the wall.

**STEP 14.** Select the water barrier, and place it into its installed position, pressing it firmly into the mastic on



Figure 6

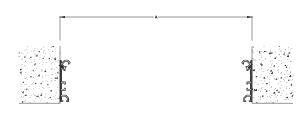


Figure 7

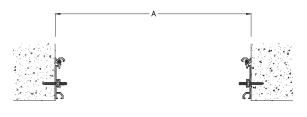


Figure 8

both sides of the joint and allowing it to drape into the joint to form a trough (see Figure 1). Ensure that the water barrier is properly aligned and positioned. Make the appropriate allowances for water expulsion at this time.

**STEP 15.** After allowing sufficient time for the water barrier to adhere to the mastic, spread non-curing mastic on top of the sections of the water barrier that are resting on the substrate along both edges of the joint.

**STEP 16.** Select the joint cover system subchannels, and place them into their installed position over the water barrier. Firmly press the subchannels into the mastic spread on top of the water barrier and install the subchannels (see Figure 10). Complete the installation of the expansion joint cover system in accordance with the installation instructions for the system.

**STEP 17.** Repeat Step 12 through Step 16, as appropriate, for each subsequent section of the back seal (water barrier) installation.

## Pantograph Bar/Subchannel Installation

**STEP 18.** Determine the number of pantograph bars required for the section of the joint cover system. The pantograph bars are spaced 4' O.C. starting at 12" from the bottom, and the top, of the base member sections.

STEP 19. Select one of those pantograph bars, the subchannels and the fasteners. If the subchannel supports a transition in the face seal, miter the subchannel as necessary for the transition (see Figure 11). Set the subchannels on a smooth, flat, and level surface. Using the fasteners provided by the factory, insert the head of one bolt into each subchannel raceway (RAL7 and RAL8), and slide the bolts into the proper position along the raceway. Select two jamb nuts per bolt, and attach them to each bolt, (see Figure 12). Tighten the bolts by hand so that they are snug. Attach the selected pantograph bar by inserting each subchannel bolt into the corresponding bolt hole in the selected pantograph bar (see Figure 13). Ensure that the subchannels are straight, level and properly aligned. Select a nut for each bolt and loosely attach it onto the end of each subchannel bolt, attaching the pantograph bar to the subchannels. Repeat this procedure for each of the pantograph bars for the section of the joint cover system being installed.



Figure 9

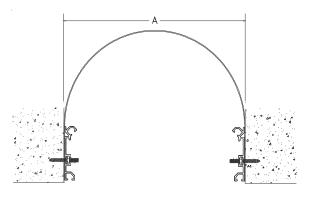


Figure 10

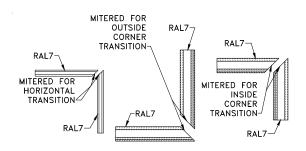


Figure 11

STEP 20. After the pantograph bars have been installed in a section of the subchannels, place the subchannels, with attached pantograph bars into their installed position, and using thje fasteners provided by the factory, attach the pantograph bars to the base members (see Figure 14). Tighten the nuts between the subchannels and pantograph bars, as well as the nuts holding the pantograph bars to the subchannels, as needed so that the face seal raceways of the subchannels are properly aligned with the raceways of the base members. DO NOT OVERTIGHTEN THE NUTS.

STEP 21. If the subchannels (RAL7 or RAL8) must be spliced, use the splice bars and anchors provided by the factory. Slide two splice anchors into each mating subchannel's raceway. Leave a 1/4" gap between the abutting sections of subchannel (RAL7 or RAL8) and attach the splice bar to the mating sections of the subchannel as shown in Figure 15. Tighten the top two splice bar bolts, leaving the other splice bar bolts loose. Referto Figure 16 through Figure 18 for other subchannel transition configurations.



It may be necessary to cut or miter the face seal. Balco, Inc. recommends using a hacksaw to cut or miter the face seal.

**STEP 22.** Determine the length of face seal required for the installation. Mark the face seal at the location at which it needs to be cut to attain the required length.

**STEP 23.** Place the face seal into the miter box at the mark made in Step 22.

**STEP 24.** Flooding the area with water to lubricate the saw blade, cut the face seal by applying constant downward force on the hacksaw frame. Making the cut with one stroke will minimize ragged edges on the face seal.

STEP 25. Put the face seal into its installed position, and beginning 1/4" from the bottom of the joint, insert the face seal's arrows into the corresponding track in the base members and subchannel (see Figure 19 and Figure 20). Use a wallpaper roller (by others, 1/2" width) to roll the arrows into the tracks continuously along the length of the face seal. Lubricating the face seal's arrows with soapy water or liquid soap can make installation of the face seal easier. Do not use oils or oil based lubricants on the face seal arrows.

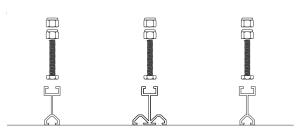


Figure 12

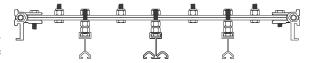


Figure 13

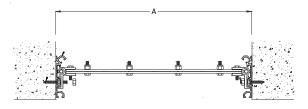


Figure 14

NOTE: THE 1/4" GAP AT THE BOTTOM OF THE FACE SEAL ALLOWS WATER TO DRAIN FROM THE SYSTEM.

**STEP 26.** For vertical face seal runs greater than 20 feet (typically exterior), place a bead of Sikaflex-1a (or equivalent sealant) into the top 12" of the base members (RAL1, RAL5, or RAL6) and subchannels (RAL7 or RAL8) tracks (face seal arrow channels).

**STEP 27.** If it is necessary to provide a sealed splice or transition for the face seal, refer to the appropriate separate set of instructions for splicing face seals (Santoprene or Silicone).

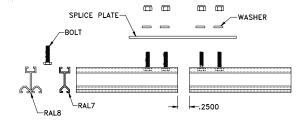


Figure 15

## Special Silicone Face Seal Splicing

The instructions below do not apply to Santoprene face seals. They are only applicable to Silicone face seals. **STEP 28.** When typical splicing methods are not possible for Silicone Face Seals, Optional Splice Pins (CS2/SS2) are provided to align mating sections of the Silicone Face Seal, see Figure 21. Splice Pins are never provded in conjunction with Santoprene Face Seals. Select a splice pin.

**STEP 29.** Insert one-half of the splice pin into one of the slots on the back of the silicone face seal.

**STEP 30.** Preat Step 28 and Step 29 for the other splice pin.

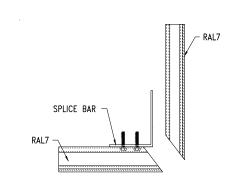


Figure 16

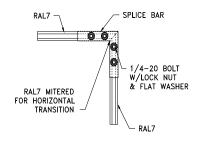


Figure 17

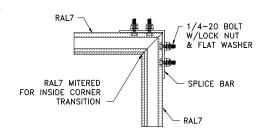


Figure 18

- **STEP 31.** Insert the other holf of each splice pin into the corresponding slot of the mating silicone face seal section.
- **STEP 32.** Press the mating sections of silicone face seal firmly together.
- **STEP 33.** Seal the splice in the silicone face seal with sealant (by others) as needed.into the tracks continuously along the length of the face seal.

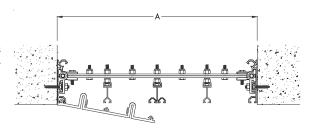


Figure 19

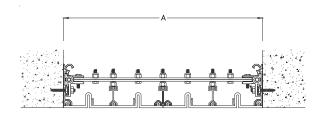


Figure 20

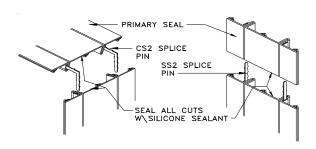


Figure 21

## 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<sup>TM</sup>) 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



2626 South Sheridan • PO Box 17249 • Wichita, Kansas 67217 Phone: (316) 945-9328 • Fax: (316) 945-0789

# SPLICING INSTRUCTIONS FOR SANTOPRENE FACE SEALS

## BALCO, INC. SANTOPRENE FACE SEALS

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

## STORAGE & HANDLING

Store this product in a clean, dry location. This is a finished product. Store this product in a protected area.

## **TOOLS REQUIRED**

This is a list of tools recommended for use in the splicing of Santoprene Face Seals. Tools are not provided by Balco, Inc.

A. Hack Saw

B. Miter Box¹ (by others)

C. Utility Knife

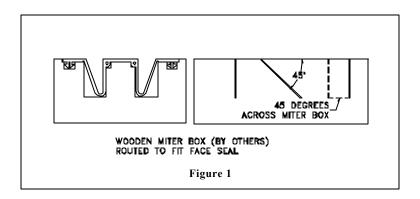
E. Heat Knife³ (optional)

F. Soldering Iron (optional)

G. Wire Brush

D. Splicing Iron<sup>2</sup>

- <sup>1</sup> The Miter Box must be wide enough to easily accommodate the face seal width. Balco, Inc. recommends that the Miter Box be fabricated in the field and that it conform to the general configuration illustrated in Figure 1 below.
- <sup>2</sup> Balco, Inc. recommends use of a Splicing Iron such as those commercially available from J P Specialties, Inc., 551 Birch Street, Lake Elsinore, CA 92530; phone: (951) 674-6869; toll-free: (800) 821-3859. The dimensions of the Splicing Iron required are dependent on the width of the face seal.
- <sup>3</sup> Balco, Inc. recommends use of a Thermocutter (Heat Knife) such as those commercially available from Abbeon Cal, Inc., 123 Gray Avenue, Santa Barbara, CA 93101; phone: (805) 966-0810; toll-free: (800) 922-0977.



## **INSTRUCTIONS:**

These instructions are for use in splicing Balco, Inc. Face Seals types SANW200 through SANW900 and VS200S through VS900S used in FCWW Series, TCWW Series, FCVS Series and TCVS Series Expansion Joint Cover Systems. Splices of the Face Seals can be accomplished using one of the following two methods. Splices can be easily completed in the field by using a heat fusing process as described in METHOD I below. Splices can also be easily completed in the field using an optional adhesive splice kit and the procedures described under METHOD II below.

## METHOD I - HEAT FUSING STRAIGHT-LINE SPLICES

Whenever straight-line splices occur, always splice the base members and the face seal at different locations along the joint run. The minimum required spacing between the splice locations is 1'-0".

- **STEP 1.** Review Balco, Inc. approved shop drawings for types and locations.
- STEP 2. Install the joint cover system's base members and back seal (if provided),
- **STEP 3.** Select the mating sections of face seal.
- **STEP 4.** Select the splicing iron.
- **STEP 5.** Allow the splicing iron to heat in accordance with the manufacturer's recommendations.
- STEP 6. Place the end of each mating section of face seal against the heated splicing iron. Allow the splicing iron to heat the end of each of the face seal sections to be spliced. Continue heating the end of each section of face seal until the Santoprene is molten. Do not allow the Santoprene to heat until the material begins to bubble.
- **STEP 7.** Before the face seal ends have time to cool, remove the splicing iron and press the heated ends of the face seal sections tightly together. Ensure that the sections of face seal are properly aligned and level with one another.

NOTE: A HEAT KNIFE (THERMOCUTTER) MAY BE USED IN PLACE OF A SPLICING IRON. AFTER EACH SPLICE OPERATION, CLEAN THE SURFACE OF THE SPLICING IRON OR HEAT KNIFE BLADE USING A WIRE BRUSH.

- **STEP 8.** Allow the splice to cool for two (2) minutes. Ensure that the splice seal is adequate.
- **STEP 9.** If the surface appearance of the face seal splice is unsatisfactory, use a heated soldering iron to burnish (smooth) the front surface of the splice.
- **STEP 10.** Complete the installation of the face seal in accordance with the installation instructions appropriate for the system provided.

## 90° CORNER SPLICES

The following procedures are for use in the fabrication of 90° face seal splices, both horizontal-to-vertical and vertical-to-horizontal.

- **STEP 1.** Review Balco, Inc. approved shop drawings for types and locations.
- **STEP 2.** Miter one end of the base members of the first section of the joint cover system to be installed at the corner. Miter the base members at a 45° angle.
- **STEP 3.** Install the mitered base members in accordance with the installation instructions appropriate for the system provided. Ensure that the mitered ends are installed at the corner.
- **STEP 4.** Select the mating base member sections for the corner.
- STEP 5. Miter one end of the each of the base members selected in Step 4. These base members will mate with the installed corner base members mitered in Step 2. Miter these base members so that they will fit with the mitered base members already installed at the corner.

- **STEP 6.** Install the mating base members mitered in Step 5 in accordance with the installation instructions appropriate for the system provided. Ensure that the mitered sections of the base members abut together as tightly as possible.
- **STEP 7.** Select the back seal (if specified and purchased).
- **STEP 8.** Install the back seal (if required) in accordance with the installation instructions appropriate for the system provided.
- **STEP 9.** Select the mating sections of face seal.
- **STEP 10.** Using a miter box and a hack saw, miter the end of one section of the face seal for the first corner section of the joint cover system. Miter the face seal at a 45° angle. Ensure that the face seal is of sufficient length so that entire miter will extend just above the corner of the substrate when the face seal section is installed.
- **STEP 11.** Miter the mating section of the face seal so that it will fit with the face seal mitered in Step 10. Ensure that the face seal is of sufficient length so that entire miter will extend just beyond the corner of the substrate when the face seal section is installed.
- **STEP 12.** Select the splicing iron.
- STEP 13. Allow the splicing iron to heat in accordance with the manufacturer's recommendations.
- **STEP 14.** Select the mating sections of face seal.
- STEP 15. Place the end of each mating section of face seal against the heated splicing iron. Allow the splicing iron to heat the end of each of the face seal sections to be spliced. Continue heating the end of each section of face seal until the Santoprene is molten. Do not allow the Santoprene to heat until it bubbles.
- **STEP 16.** Before the face seal ends have time to cool, remove the splicing iron and press the heated ends of the face seal sections tightly together. Ensure that the sections of face seal are properly aligned and level with one another.
  - NOTE: A HEAT KNIFE MAY BE USED IN PLACE OF A SPLICING IRON. AFTER EACH SPLICE OPERATION, CLEAN THE SURFACE OF THE SPLICING IRON OR HEAT KNIFE BLADE USING A WIRE BRUSH.
- STEP 17. Allow the splice to cool for two (2) minutes. Ensure that the splice seal is adequate.
- **STEP 18.** If the surface appearance of the face seal splice is unsatisfactory, use a heated soldering iron to burnish (smooth) the front surface of the splice.
- **STEP 19.** Engage the face seal splice with the installed base members and complete the installation of the face seal in accordance with the installation instructions appropriate for the system provided.

## METHOD II - ADHESIVE STRAIGHT-LINE SPLICES

Whenever straight-line splices occur, always splice the base members and the face seal at different locations along the joint run. The minimum required spacing between the splice locations is 1'-0".

- STEP 20. Review Balco, Inc. approved shop drawings for types and locations.
- STEP 21. Install the joint cover system's base members and back seal (if provided),
- STEP 22. Select the mating sections of face seal.
- STEP 23. Ensure that the mating ends of the seal sections to be spliced together have fresh, straight cuts.
- **STEP 24.** Select the Adhesive Splice Kit. Using Toluene and a clean rag, clean the mating seal surfaces.
- **STEP 25.** Select the Primer and one brush from the Splice Kit, and using the brush, apply the primer to the mating seal surfaces.
- **STEP 26.** Select the Adhesive and the other brush (clean) from the Splice Kit. Using the brush, apply the adhesive to one of the mating ends.
- STEP 27. Press the mating seal ends together and hold them together for at least one (1) minute.

### 90° CORNER SPLICES

The following procedures are for use in the fabrication of 90° face seal splices, both horizontal-to-vertical and vertical-to-horizontal.

- STEP 28. Review Balco, Inc. approved shop drawings for types and locations.
- **STEP 29.** Miter one end of the base members of the first section of the joint cover system to be installed at the corner. Miter the base members at a 45° angle.
- **STEP 30.** Install the mitered base members in accordance with the installation instructions appropriate for the system provided. Ensure that the mitered ends are installed at the corner.
- **STEP 31.** Select the mating base member sections for the corner.
- **STEP 32.** Miter one end of the each of the base members selected in Step 31. These base members will mate with the installed corner base members mitered in Step 29. Miter these base members so that they will fit with the mitered base members already installed at the corner.
- **STEP 33.** Install the mating base members mitered in Step 32 in accordance with the installation instructions appropriate for the system provided. Ensure that the mitered sections of the base members abut together as tightly as possible.
- STEP 34. Select the back seal (if specified and purchased).
- **STEP 35.** Install the back seal (if required) in accordance with the installation instructions appropriate for the system provided.
- STEP 36. Select the mating sections of face seal.
- **STEP 37.** Using a miter box and a hack saw, miter the end of one section of the face seal for the first corner section of the joint cover system. Miter the face seal at a 45° angle. Ensure that the face seal is of sufficient length so that entire miter will extend just above the corner of the substrate when the face seal section is installed.
- STEP 38. Select the Adhesive Splice Kit. Using Toluene and a clean rag, clean the mating seal surfaces.

- **STEP 39.** Select the Primer and one brush from the Splice Kit, and using the brush, apply the primer to the mating seal surfaces.
- **STEP 40.** Select the Adhesive and the other brush (clean) from the Splice Kit. Using the brush, apply the adhesive to one of the mating ends.
- **STEP 41.** Press the mating seal ends together and hold them together for at least one (1) minute.

## 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<sup>TM</sup>) 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