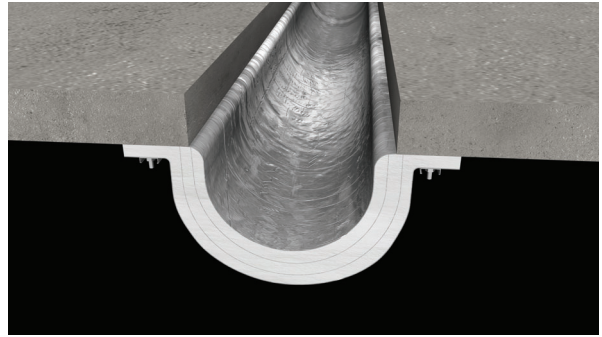




A CSW Industrials Company

## INSTALLATION INSTRUCTIONS

### MetaFlex® Pro Undermount Floor Expansion Joint Fire Barrier



#### IMPORTANT

The following instructions are very important.

Read them carefully, and be sure you understand them completely before you begin any work.

Store this product in the horizontal position in a clean, dry location. This is a finished product.

Store this product in a protected area. Do not stack anything on top of this product.

Review approved Balco shop drawings for types and locations prior to beginning work.

#### RECOMMENDED TOOLS

TAPE MEASURE / UTILITY KNIFE / METAL-CUTTING SAW OR CUTOFF WHEEL AND GRINDER / FILE  
DRILL / DRILL BITS FOR METAL AND CONCRETE / DEEP SOCKET / RATCHET / CAULKING GUN

#### IMPORTANT

MetaFlex® Pro Fire Barrier has sharp edges.

Balco recommends that installers wear work gloves, safety glasses, long sleeve work shirts and long work pants when working with or installing MetaFlex® Pro Fire Barrier.

# METAFLEX® PRO UNDERMOUNT EXPANSION JOINT FIRE BARRIER

## JOINT PREPARATION

### CONCRETE:

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.

Measure the joint width every 5' to 7' (1.5m - 2.1m) to verify the joint is correctly sized. This should be performed prior to receiving product.

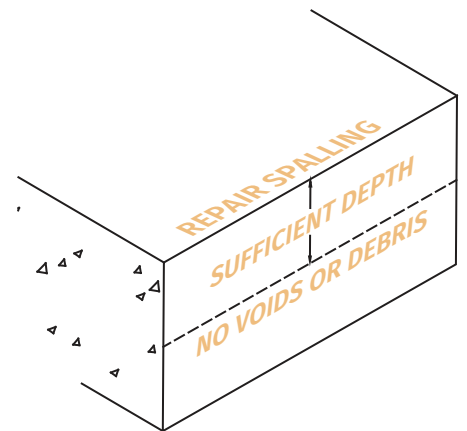
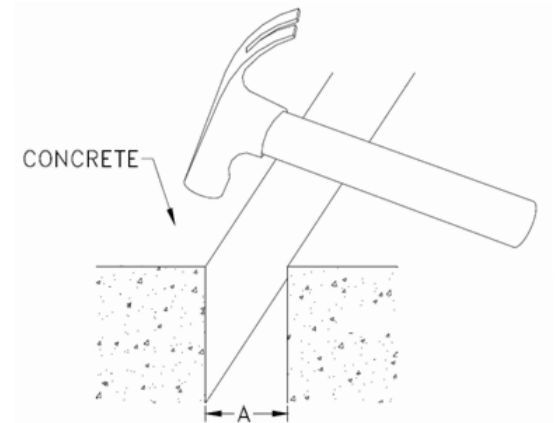
Verify the joint is clean, uniform, and of sufficient depth for the fire barrier.

### IMPORTANT:

Concrete adjacent to the expansion joint system must be sound. This should be confirmed by tapping these areas with a hammer.

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.

Confirm repaired areas are sound by the same method described above.

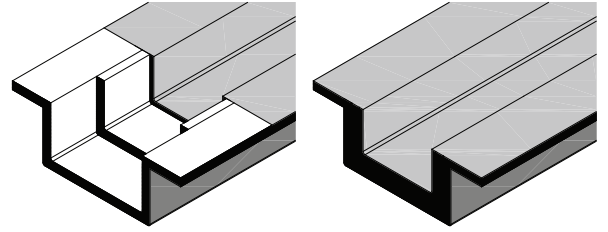


# METAFLEX® PRO UNDERMOUNT EXPANSION JOINT FIRE BARRIER

## STEP ONE

Select the first section of fire barrier to be installed. Work from one end of the joint line to the other.

Using a utility knife and a sharp blade, carefully cut the ceramic blanket and foil from the 'Female' end of the fire barrier off to create a flat end.



## STEP TWO

Using a metal cutting saw or a cutoff wheel in a grinder, cut 6" (152mm) off of one pair of the provided metal channels.

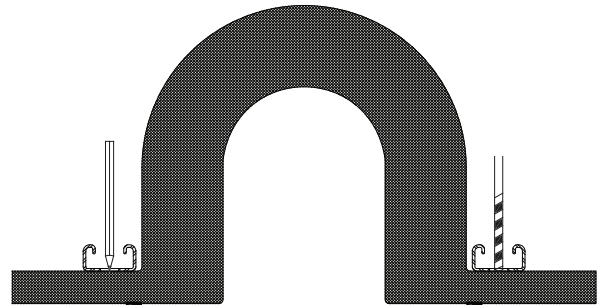
Use a file to remove any sharp edges or burrs from the cut edges of the metal channels.

## STEP THREE

Using the metal channels as a guide, mark and drill 3/8" (10mm) anchor holes through the 'ears' of the fire barrier.

Anchor holes should be 3" (76mm) from the outer edge of the barrier, spaced 2" (51mm) from each end and 10" (254mm) on-center, maximum.

Mark the positions of the anchor holes on the metal channels.



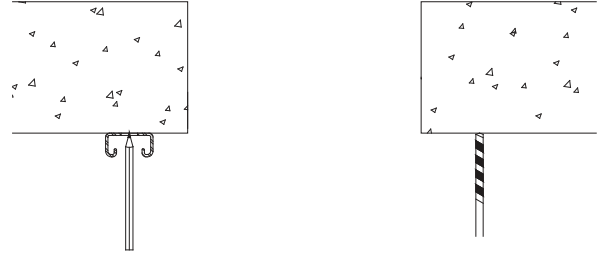
# METAFLEX® PRO UNDERMOUNT EXPANSION JOINT FIRE BARRIER

## STEP FOUR

Using the marked metal channels as a template, mark and drill 1/4" (6mm) anchor holes in the concrete slab.

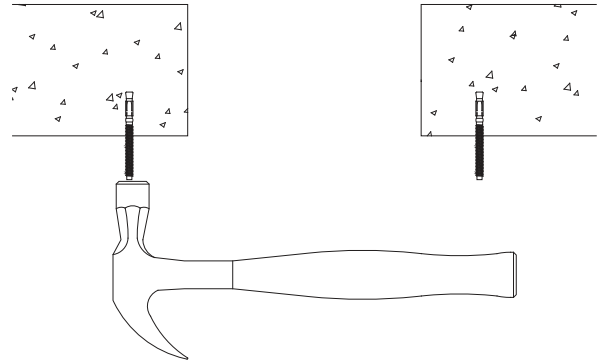
Anchor holes should be 2" (51mm) from the inside edge of the joint, 1 1/2" (38mm) deep, and spaced to match the holes drilled in the fire barrier in **STEP THREE**.

Remove all dust and debris from the anchor holes and blockouts.



## STEP FIVE

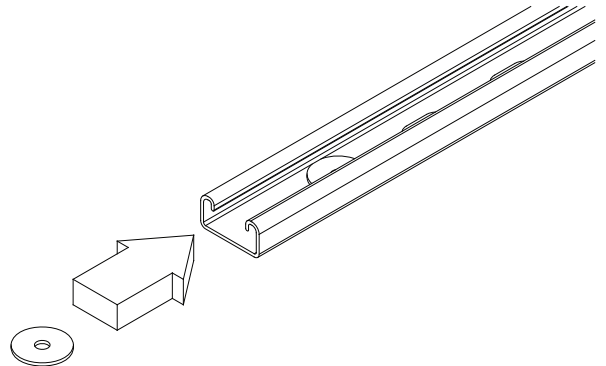
Place a concrete anchor in each anchor hole and use a hammer to drive the anchor in until it bottoms out within the hole, with an embedment of 1 1/2" (38mm).



## STEP SIX

Select the metal channels and fender washers.

Insert a fender washer the end of each metal channel, aligning it with the first marked anchor hole.



# METAFLEX® PRO UNDERMOUNT EXPANSION JOINT FIRE BARRIER

## STEP SEVEN

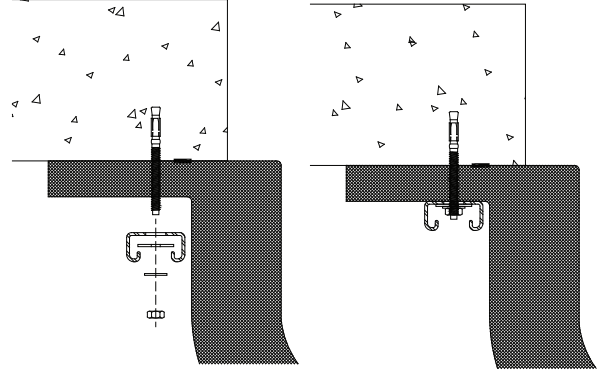
Select the section of fire barrier and metal channels to be installed.

Place the fire barrier in its installed position, aligning the anchor holes drilled in **STEP THREE** with the anchors installed in **STEP FIVE**.

Place the metal channels over the anchors, through the installed fender washers.

Install the small washer, then the nut provided with each anchor to hold the fire barrier assembly in place. Do not fully tighten the nuts at this time.

Once all four nuts are installed, the barrier will hang unsupported.

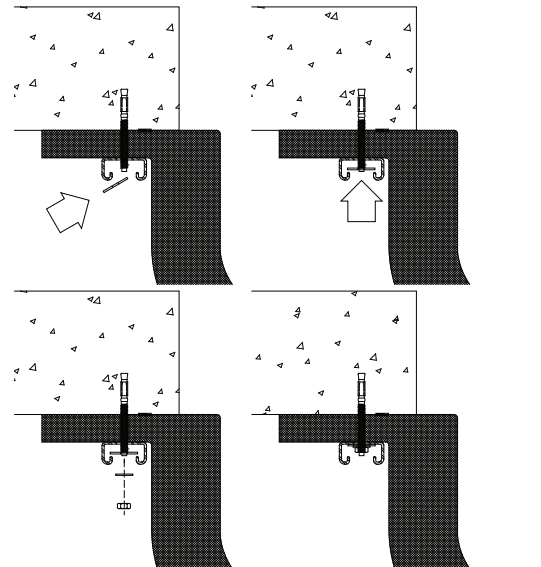


## STEP EIGHT

Select the remaining fender washers, small washers, and nuts required to install the section of fire barrier.

Insert a fender washer over each anchor, followed by a small washer and nut as shown.

Do not fully tighten the nuts at this time.



## STEP NINE

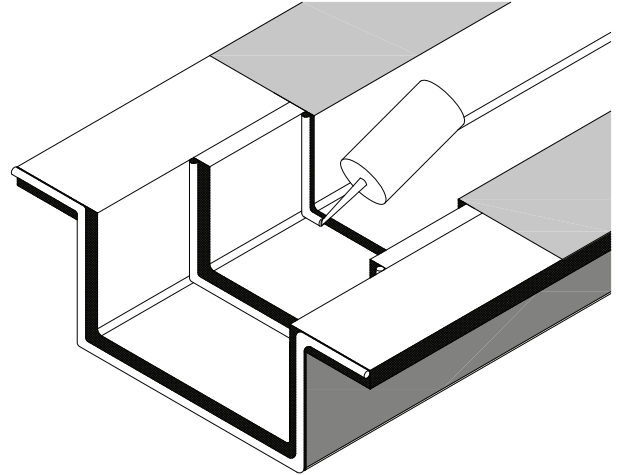
Select the next section of fire barrier and accompanying metal channels to be installed, and repeat **STEPS TWO THROUGH SIX** to prepare for installation.

# METAFLEX® PRO UNDERMOUNT EXPANSION JOINT FIRE BARRIER

## STEP TEN

Move to the 'Female' end of the section of fire barrier to be installed.

Select the factory provided sealant and apply a 3/8" (10mm) bead at the interface of each blanket layer.



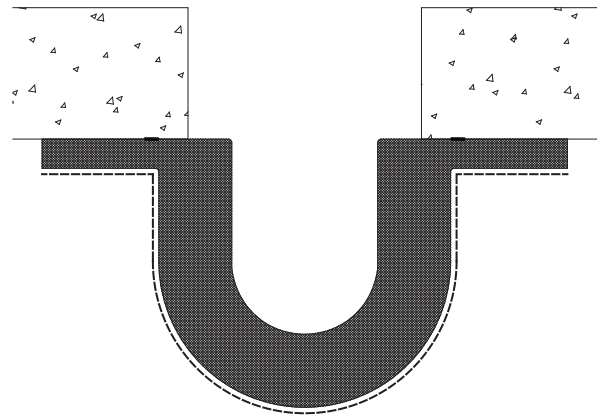
## STEP ELEVEN

Place the fire barrier in its installed position, aligning the anchor holes drilled in **STEP THREE** with the anchors installed in **STEP FIVE** and tightly butting the female end of the barrier with the male end of the installed barrier.

Repeat **STEPS SEVEN AND ELEVEN** to secure the barrier in place.

## STEP TWELVE

Measure the exposed length of fire barrier at the splice line as shown and record.



# METAFLEX® PRO UNDERMOUNT EXPANSION JOINT FIRE BARRIER

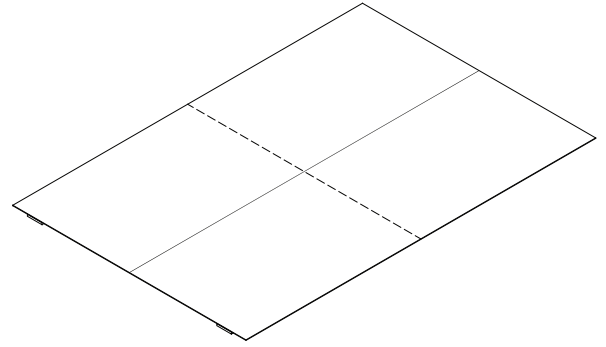
## STEP THIRTEEN

Select the rolled splice patch material and unroll a length equal to the measurement taken in **STEP TWELVE**.

Use a pair of snips to cut the splice patch material to length.

On the bare side of the splice patch, draw a center line across the length of the material.

Fold the splice patch in half along the width of the material and return to flat, creating a crease in the middle of the splice patch.

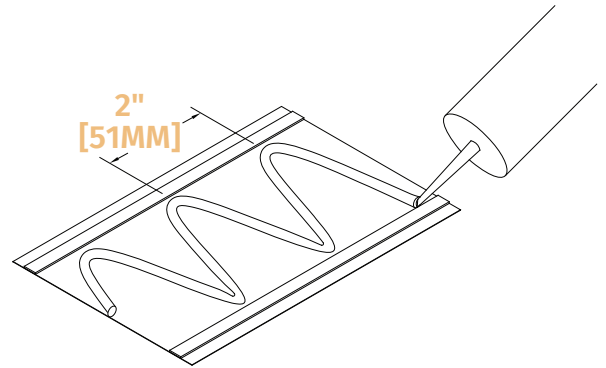


## STEP FOURTEEN

Select the factory provided sealant and the splice patch.

Apply a 3/8" bead of sealant to the underside of the splice patch.

Apply the sealant in a zig-zag pattern at a nominal 2" (51mm) from crest to crest, along the full length and width of the splice patch.

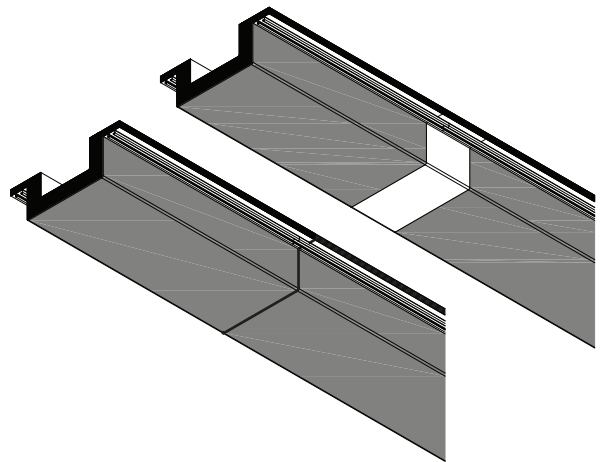


## STEP FIFTEEN

Peel the backing off of the adhesive tape of the splice patch.

Carefully center the splice patch on the splice line and place it onto the fire barrier, centering it in both directions with the fire barrier and the line of the splice, tucking it under the metal channels.

Smooth the splice patch down onto the barrier, applying firm pressure to the adhesive tape and spreading the sealant.



# METAFLX® PRO UNDERMOUNT EXPANSION JOINT FIRE BARRIER

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## STEP SIXTEEN

Tighten the nuts of the first section of fire barrier to be installed to a torque of 4 Ft-lb (5.5Nm) or until the material under the metal channels has been compressed to a fourth of its original thickness.

Fully tighten the nuts of each section of fire barrier once both splices (one at each end of the barrier) are complete per **STEPS TWELVE THROUGH FOURTEEN**.

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## STEP SEVENTEEN

Repeat **STEPS THREE THROUGH FIFTEEN** until all fire barrier sections are installed.

When installing MetaFlex® Pro Undermount fire barrier in multiple, non-adjacent joint lines, always start the next 'run' of fire barrier with the off-cut from the previous 'run' of fire barrier.

Complete fire barrier transitions per factory-provided details.