# J-Series & JP-Series

## INSTALLATION INSTRUCTIONS

Two Part Epoxy Systems

### Recommended Tools

- Electric grinder– 4” size wheel
- Soft wire wheel– 4” or 6” diameter
- Hand wire brushes
- Clean cloth rags
- Duct tape & paper or plastic
- 8” sharp knife– hack saw
- Miter box
- 2 x 5 margin trowel, paint brushes (disposable)
- Vacuum pump
- Nylon brush
- Gallon of denatured alcohol
- Cardboard for mixing epoxy on approx. 24” x 24”
- Paper cups for partial batch mixes

### Pre-Installation Inspection

1. Prior to installation of the expansion joint profile, the installer will visit the site and notify the proper authority in writing of any conditions (listed under other sections) that might be detrimental to the installation or performance of the expansion joint. Coordinate the installation with related work. Detrimental conditions are determined to be:

a) Irregularities in joint opening width exceeding 1/4”
b) Unsound concrete, joint opening side walls, and/or substrate
c) The top edge of the joint should be chamfered or have a radius of 1/4”
d) Moisture, oil, or other contaminates
e) Migrating cracks to the edge of the joint opening
f) Construction joints intersecting perpendicular to the joint opening.
g) Temperature range during the installation must remain between 40º F and 90° F. Temperatures above 90° F will cause the epoxy to set up too quickly or installing at substrate temperatures below 40º F will cause the cure to retard or not cure at all.
h) Proper sizing of seal depends on accurate field information such as providing the exact joint opening at a given temperature. Communication among the engineer, contractor and the manufacturer is necessary to determine proper seal sizing for the specific joint location.

### Material Preparation

***Preparation of Surfaces of Joint Stem Opening:***

1. All surfaces to receive the seal profile should be dry, clean and sound concrete free of loose, cracked, delaminated, and spalled sections. Repair any sections that do not meet these criteria. The surfaces to receive the profile shall be sandblasted to exposed aggregate. Sandblasting will increase the surface area and enhance the bond capacity of the adhesive. The sandblast process will also remove all laitance and other bond- inhibiting contaminants. When sandblasting is not possible, disc grinding may be employed, after which an inspection of the surface shall be made to ensue it has a roughened surface.



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# Material Preparation

***Preparation of Joint Interfaces:***

1. Form or saw cut the groove/joint opening into the concrete to the recommended depth. Assure that the interfaces, whether concrete or steel, run parallel to each other for the length of the run. Walls should be plumb to the top surface of the concrete and should be spaced at a consistent width across the joint to within 1/4". Unsound concrete must be removed and repaired.

2. Clean dirt, stones, and standing water from the joint opening. Use a stiff bristled brush and compressed air to remove all dust. Sandblast the vertical walls of the groove to remove laitance and contaminants and increase bond area for the adhesive.

3. For steel angle or embedded plate surfaces, sandblast the surface to a "white metal" finish SSP-10. All rust and oxides must be removed from the surface to be bonded. Clean off sand blasting dust with compressed air and a clean white rag soaked in alcohol. Contact EMS for application to galvanized metal surface preparation.

# Material Installation

1. Immediately prior to installation, the interface walls should be blown out again.

2. Uncoil the seal and allow it to relax.

3. Apply the conditioning agent to a short section of the sidewall of the seal (5' or less). Wire brush the sidewalls to abrade the surfaces to receive the adhesive. When done properly, the shine of the surfaces will be removed and a roughened, dull, tacky finish will be obtained.

4. After the surface preparation of the seal is complete apply alcohol to the sidewalls of the seal and scrub vigorously into the ribs using a stiff nylon brush to clean out any residue which may impede the bond. The last step of the preparation process is a rinse of the prepared sides of the profile. Wipe prepared sidewalls with alcohol soaked rags. This will remove the last remnants of the cleaning process.



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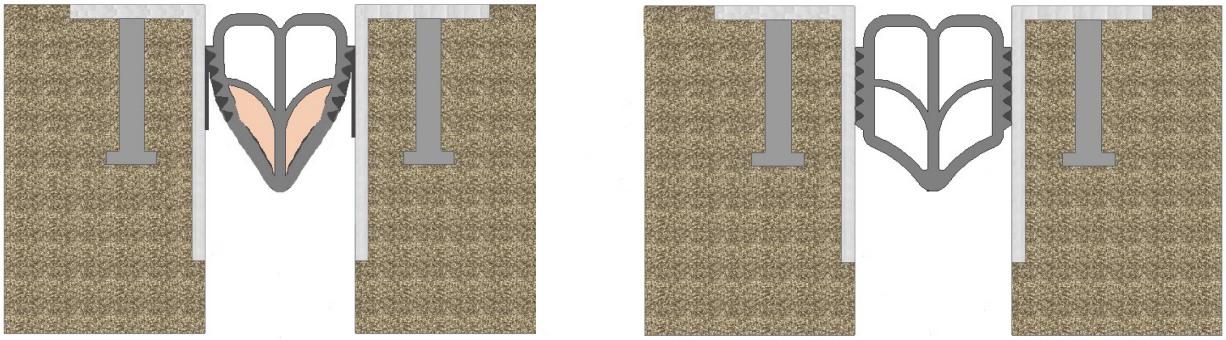
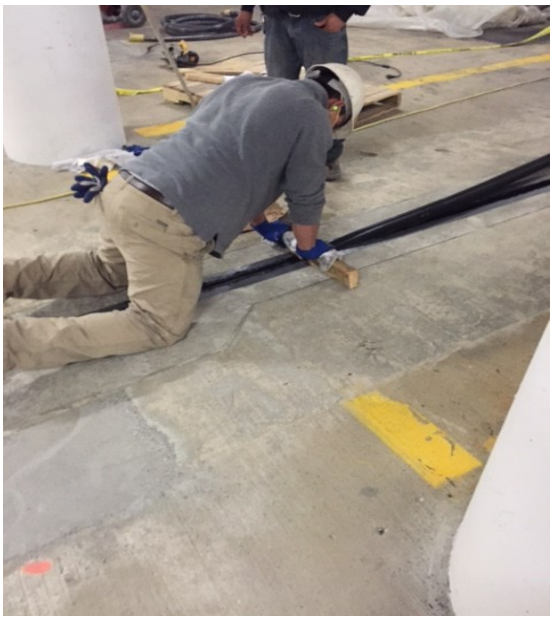
## Material Installation

5. Prior to installing the seal, try a dry run to see if you will need to draw a vacuum on the lower chambers of the seal to install it into the joint opening. Take a short section of seal about 3" long and squeeze and push it into the opening. You may find that the seal will insert into the joint snuggly without pushing away the glue on the sidewalls. If this is the case then it may not be necessary to draw a vacuum on the seal for the installation.

6. If necessary, draw a vacuum on the seal that matches the width of the joint stem opening. Neoprene sheet material and profile adhesive are provided to the contractor to make an end cap closure cover on one end of the seal. The opposite end is also capped with a neoprene sheet and an evacuation stem to draw the vacuum. *The vacuum is drawn from the bottom two chambers only; this forms a slight wedge shape and contains the glue during insertion.* Apply the adhesive to the sidewall ribs of the profile using a trowel or putty knife as the seal is installed. The ribs must be completely filled with adhesive.



Vacuum drawn from the bottom two chambers of the seal will create a "V" shape to the seal which will enhance the installation. These two illustrations show the JP-Seal being installed into the joint.





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## Material Installation

7. Mix the adhesive to the manufacturer's specifications (see Section VI). Apply the adhesive to the sidewalls of the joint opening. Apply the adhesive to the sidewall ribs of the seal using a trowel or putty knife as the seal is installed. The ribs must be completely filled with adhesive.

8. Insert the profile in the gap to the proper depth. Check the ribs for proper adhesive coverage. Fill any voids. Excess adhesive above the ribbed area should be removed with a trowel or putty knife. Clean any excess drips or puddles of adhesive from the top of the seal. Remove any excess adhesive using a clean cloth rag soaked with denatured alcohol.

9. Allow the adhesive to cure twenty-four hours (at temperature 70 F.). Maximum bond strength (at room temperature) is usually achieved within forty-eight hours.

## Field Quality Control

1. Work that does not conform to the specified requirements must be corrected and/or replaced as directed by the manufacturer and/or engineer.

2. Manufacturer/installer shall supply guaranty/warranty to the owner authority, as required.

## Adhesive Mixing Instructions

****There are two versions of our adhesive, the standard blend and a warm weather blend.****

**CEBREG BONDER (XE-140) [Standard Blend]**

1. Open the epoxies CEBREG BONDER (XE-140) - part "A" and CEBREG BONDER (XE-140) - part "B."

2. Depending on the amount of material desired, mix only to follow these rules; the mix ratio for the standard mix is 1:1 by volume for partial and full unit batches. For smaller batches use disposable paper cups of the same size to premeasured the glue components. After equal amounts are prepared place the contents onto a 4' square piece of cardboard or plywood.

3. Blend the two components with a margin trowel or wide putty knife. The black and gray colors should be thoroughly blended to make a dark gray color; there should be no streaks from partially mixed components.

4. AS WITH ANY EPOXY, DO NOT ALLOW THE MIXED EPOXY ADHESIVE TO SET IN A PILE OR CONFINED CONTAINER SUCH AS A PAIL. THIS WILL ACCELERATE THE CURE AND MATERIAL WILL PREMATURELY HARDEN DUE TO THE THERMAL REACTION OF THE TWO COMPONENTS.



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# Adhesive Mixing Instructions

****There are two versions of our adhesive, the standard blend and a warm weather blend.****

**CEBREG WW [Warm Weather Blend]**

1. Open the epoxies CEBREG BONDER (XE-140) - part "A" and CEBREG WW – part "B"

2. Depending on the amount of material desired, mix only to follow these rules; the mix ratio for the warm weather is 1.5:1 by volume for partial and full unit batches. For smaller batches use disposable paper cups of the same size to premeasured the glue components. After equal amounts are prepared place the contents onto a 4' square piece of cardboard or plywood. An example of a CEBREG WW partial mix, use the paper cups, fill 3 cups of "part A" and 2 cups of "part B" this will equal a 1.5:1 ration by volume.

3. Blend the two components with a margin trowel or wide putty knife. The black and gray colors should be thoroughly blended to make a dark gray color; there should be no streaks from partially mixed components.

4. AS WITH ANY EPOXY, DO NOT ALLOW THE MIXED EPOXY ADHESIVE TO SET IN A PILE OR CONFINED CONTAINER SUCH AS A PAIL. THIS WILL ACCELERATE THE CURE AND MATERIAL WILL PREMATURELY HARDEN DUE TO THE THERMAL REACTION OF THE TWO COMPONENTS.



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