

**Architectural Art Mfg.**  
A division of Pittcon Architectural Metals, LLC

Installation Instructions

# Installation Instruction

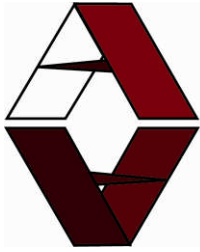
## Preparation

### Expansion Joint/Trench and Access Cover Systems

**A guide to preparation and installation of Architectural Art products**

1. Prior to installing:
  - a. Inventory all materials and fasteners required for this installation.
  - b. Make sure you have all tools required for the job.
  - c. Make sure concrete is cured and other building components receiving the expansion joint cover or fire barrier are suitable for the installation.
2. Check materials for damage:
  - a. Determine if damaged materials are field correctable. If you can correct the damage without compromising the function of the system or the aesthetics then proceed at your own discretion.
  - b. If damage is not field correctable then contact Architectural Art:
    - i. At the phone number at the bottom of the page
    - ii. At the Fax number at the bottom of the page
    - iii. At the address at the bottom of the page
    - iv. Or email [support@archart.com](mailto:support@archart.com)
3. During and after installation:
  - a. All materials must be protected from damage due to construction conditions.
  - b. If replacement materials are required Contact Architectural Art by any of the means listed above.

6409 Rhode Island Avenue, Riverdale, Maryland 20737-1098  
Phone (800) 835-0028 Fax (678) 735-0085



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## **Installation Instructions**

4. Variations due to specific conditions or modifications to the standard product may not be addressed in this set of installation instructions. Reference project specific instructions or details for those conditions.
5. Review all submittal packages prior to proceeding with installation.
6. Read through complete instructions prior to beginning installation.
7. Field cutting may be required for site specific lengths and conditions.
  - a. Begin cutting longest lengths first.
  - b. Save your drop cuts for later use on shorter lengths.
8. If **Fire Barrier** is required as a part of this overall expansion joint cover system then refer to the fire barrier installation instructions before installing the expansion joint cover system.
  - a. Fire Barrier flanges may change the overall depth of blockouts or wall recess required for this installation. Adjust as required.
  - b. Determine fire barrier attachment requirements prior to installing cover.
  - c. Life Safety or Fire Marshall Inspections may be required by the authority having jurisdiction over fire barriers prior to installing the joint cover system.
  - d. Consult with field supervision for direction.
9. If a water-stop, moisture barrier or weatherproof design is required in conjunction with the fire barrier system then:
  - a. Install the fire barrier first.
  - b. Make sure the water protection is between the fire barrier and exposure to water.
10. Some materials may require match drilling of the frame to the construction substrate. Plan accordingly.
11. Clean up after installation.
  - a. Dispose of trash.
  - b. Clean the material with soap and water or as specifically recommended by product data.
12. *Inspect and admire your work. Chances are if you are proud of your work, we will be too.*

Thank you for working with Architectural Art.

**Refer to additional specific instructions for your product application.**

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# **JointCrete™ JT-1 Primer**

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## **DESCRIPTION:**

JointCrete™ JT-1, formed in the field, permits edge treatment of expansion joints for the placement of expansion joint covers either made of metal or elastomeric products. JointCrete™ JT-1, is pre-proportioned granular rubber base filler used with a 100% solids epoxy binder black in color to produce a mixture of uniform shore hardness that flexes under impact or loading.

## **PRIMING:**

Prime all areas to receive JointCrete™ JT-1 with JointCrete™ JT-1 Primer just prior to placement of mixed system at the rate of 150 square feet per gallon.

## **MIXING:**

Combine one part by volume of Component A with one part by volume of Component B, mix for 3 +/- minutes. Mixing may be done using slow speed drill, and mixing paddle. Scrape sides and bottom, mix until uniform.

## **APPLICATION:**

Apply immediately after mixing. Apply at approximately 150 square feet per gallon. Surfaces to receive JointCrete™ JT-1 should be clean, dry, and free of laitance, oil, and dirt. Pour the Pre-mixed JT-1 onto primed area, screed to desired elevation and hand tamp to complete the application.

## **TEMPERATURE:**

JointCrete™ JT-1 should not be installed in temperatures below 40° F.

## **CAUTION:**

**Component A - For Industrial Use Only! WARNING! Contains Epoxy Resins.** May cause skin sensitization or other allergic responses. Avoid inhalation of vapor. Use good ventilation, particularly if material is heated or sprayed. Prevent contact with skin and eyes. If skin or eyes are contacted, wash immediately with soap and water. If eyes are contacted, flush immediately with soap and water and consult a physician.

**Component B - Contains Alkaline Amines.** In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician. Wash clothing before reuse.

**WEAR PROTECTIVE CLOTHING, GOGGLES AND/OR BARRIER CREAMS.  
FOR INDUSTRIAL USE ONLY / KEEP AWAY FROM CHILDREN**



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# JointCrete™ JT-1

## **DESCRIPTION:**

JointCrete™ JT-1, formed in the field, permits edge treatment of expansion joints for the placement of expansion joint covers either made of metal or elastomeric products. JointCrete™ JT-1, is pre-proportioned granular rubber base filler used with a 100% solids epoxy binder black in color to produce a mixture of uniform shore hardness that flexes under impact or loading.

## **PACKAGING:**

One unit will consist of 2 1/2 gallons of Component A, 2 1/2 gallons of Component B and 50 lbs. of JointCrete™ JT-1 Elastomer Filler (Component C). This unit will yield 1.408 cubic feet. The weight of JointCrete™ JT-1 is 70 lbs. per cubic foot.

## **PRIMING:**

Prime all areas to receive JointCrete™ JT-1 with JointCrete™ JT-1 Primer just prior to placement of mixed system at the rate of 150 square feet per gallon.

## **MIXING:**

Combine one part by volume of Component A with one part by volume of Component B, mix for 3 +/- minutes. Blend rubber at a rate of 50 lbs. per 5 gallons of mixed epoxy resin. Continue mixing for 3 - 5 minutes. Mixing may be done using slow speed drill, or a mortar mixer (blade type) may be used for large applications.

## **APPLICATION:**

Surfaces to receive JointCrete™ JT-1 should be clean, dry, and free of laitance, oil, and dirt. Pour mixed JointCrete™ JT-1 onto primed area, screed to desire elevation and hand tamp to complete the application. If the application is greater than 4" in depth, the JointCrete™ JT-1 should be placed in layers not greater than 4" per layer.

## **TEMPERATURE:**

JointCrete™ JT-1 should not be installed in temperatures below 40° F.

## **CAUTION:**

**WARNING! COMPONENT A - CONTAINS EPOXY RESINS. COMPONENT B - CONTAINS ALKALINE AMINES.** May cause skin sensitization or other allergic responses. Avoid inhalation of vapor. Use good ventilation, particularly if material is heated or sprayed. Prevent contact with skin and eyes. If skin or eyes are contacted, wash immediately with soap and water. If eyes are contacted, flush immediately with soap and water and consult a physician.

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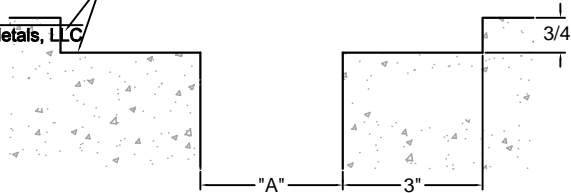


## MANUFACTURING

### STEP 1.

Division of Pittcon Architectural Metals, LLC

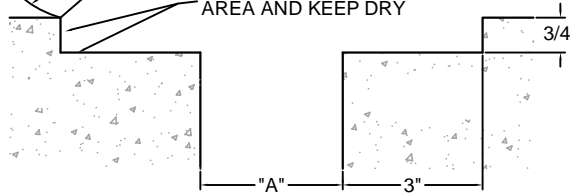
SAND BLAST  
BLOCK-OUT



### STEP 2.

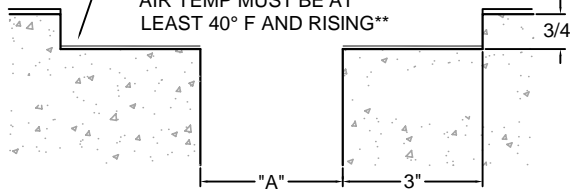
APPLY TAPE AND BUTCHER PAPER  
AT LEAST 12" BEYOND  
BLOCKOUT EDGE

CLEAN DEBRIS FROM  
AREA AND KEEP DRY



### STEP 3.

APPLY JOINTCRETE™  
PRIMER TO BASE AS DIRECTED  
Min. 10 Mil thickness  
USING ROLLER OR BRUSH  
\*\*AIR TEMP MUST BE AT  
LEAST 40° F AND RISING\*\*

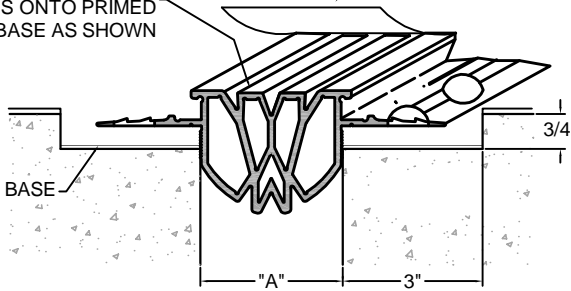


### STEP 4.

INSERT W11 SERIES SEAL  
BY PLACING PERFORATED  
FLANGES ONTO PRIMED  
BLOCKOUT BASE AS SHOWN

APPLY TAPE TO  
SURFACE OF SEAL

PRIMED BLOCKOUT BASE

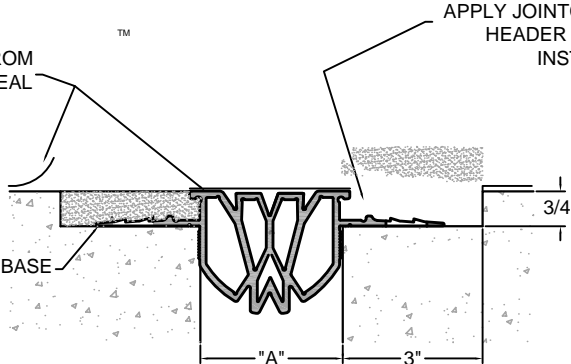


### STEP 5.

REMOVE TAPE FROM  
CONCRETE AND SEAL

APPLY JOINTCRETE™ ELASTOMERIC  
HEADER IN ACCORDANCE WITH  
INSTRUCTIONS PROVIDED

PRIMED BLOCKOUT BASE

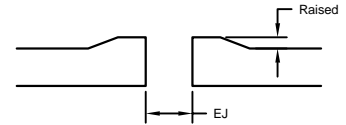


# W11 Series Wing Seal Installation Instructions

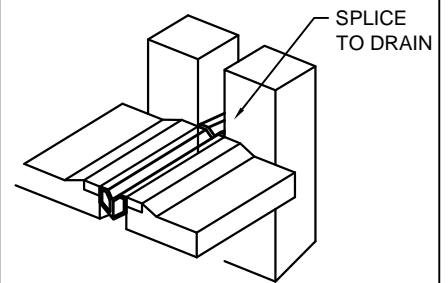
8-15-08

## General Tips for Improved Waterproofing of Expansion Joints

1. Raise the area parallel to the expansion joint to reduce water ponding



2. Locate Splices at columns or other areas that can be easily drained



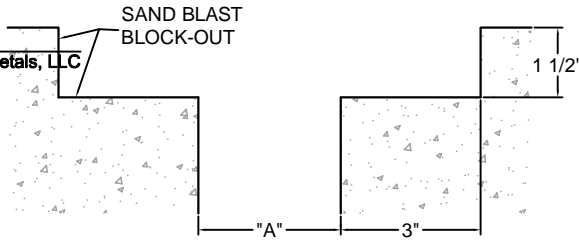


# Architectural Art

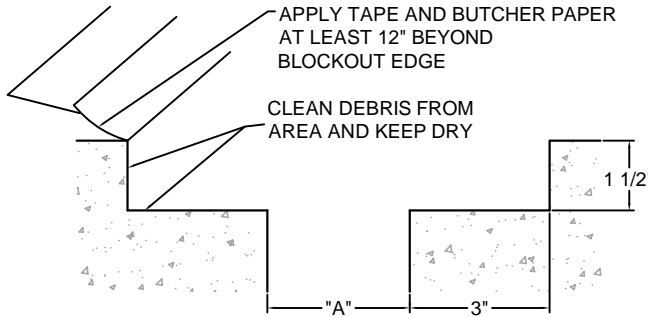
## MANUFACTURING

STEP 1.

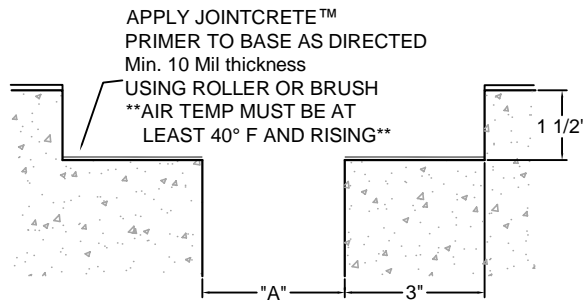
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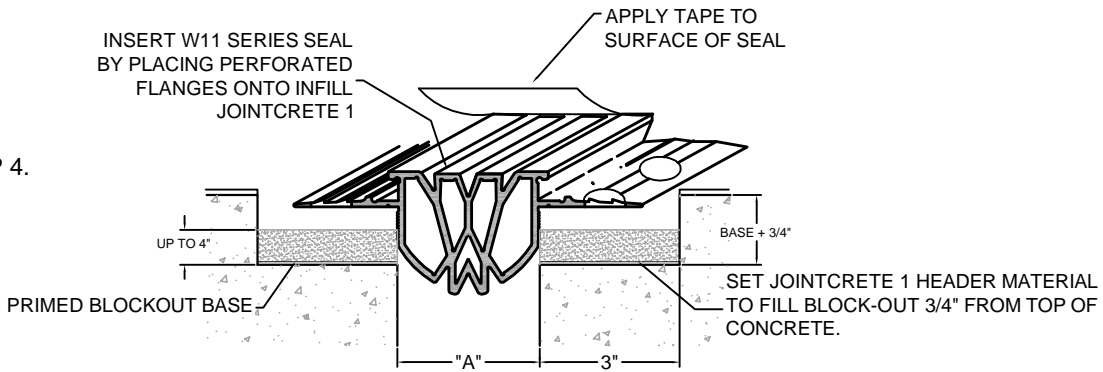
STEP 2.



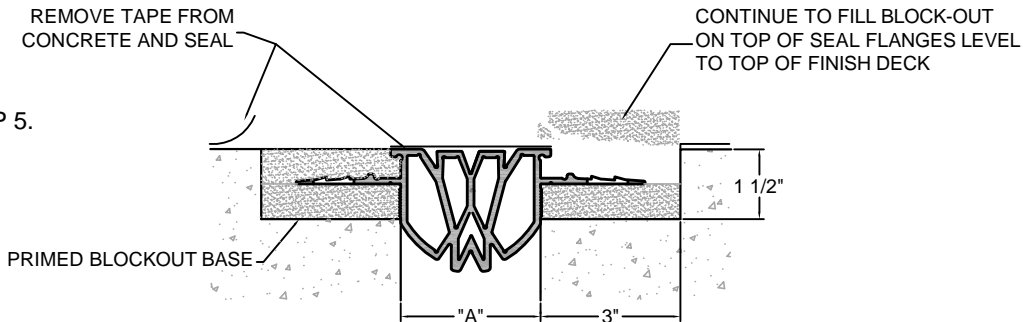
STEP 3.



STEP 4.



STEP 5.

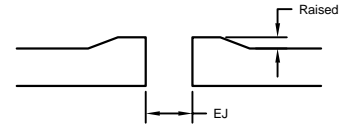


# W11 Series Wing Seal Installation Instructions DEEP BLOCK-OUT

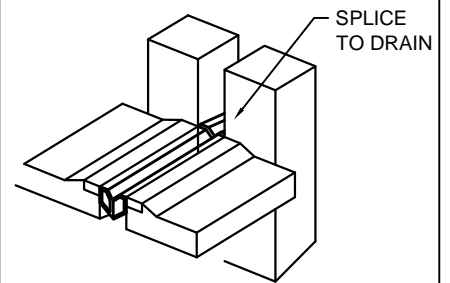
8-15-08

## General Tips for Improved Waterproofing of Expansion Joints

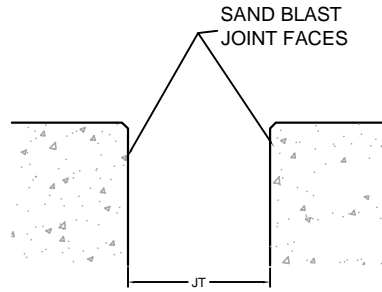
1. Raise the area parallel to the expansion joint to reduce water ponding



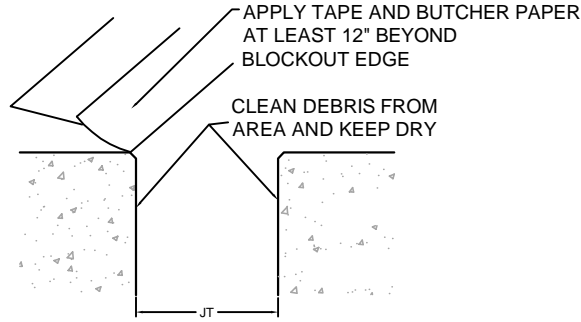
2. Locate Splices at columns or other areas that can be easily drained



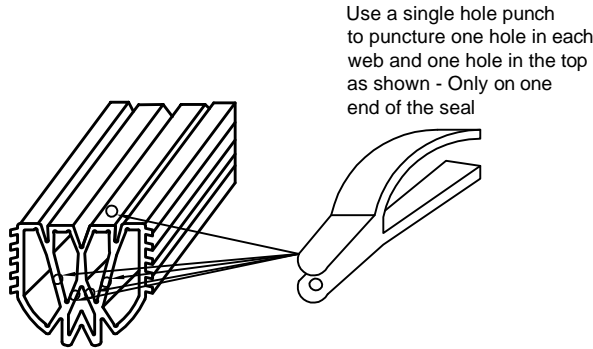
STEP 1.



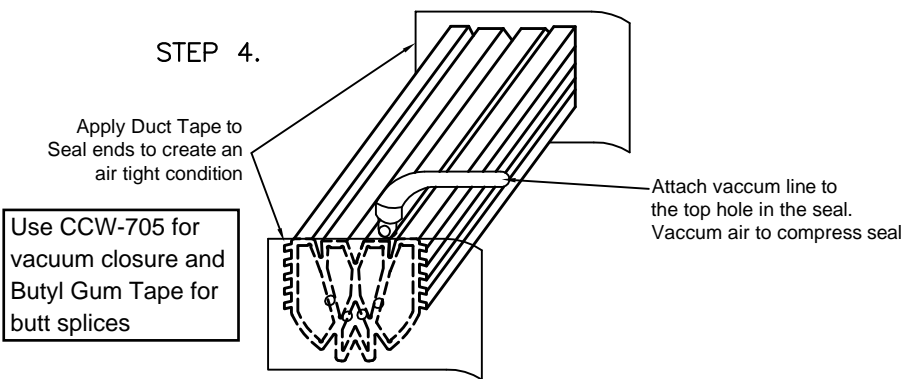
STEP 2.



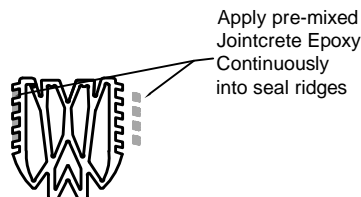
STEP 3.



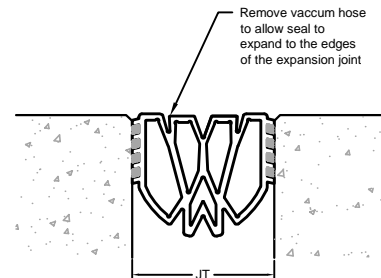
STEP 4.



STEP 5.

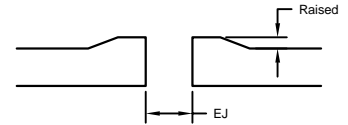


STEP 6.

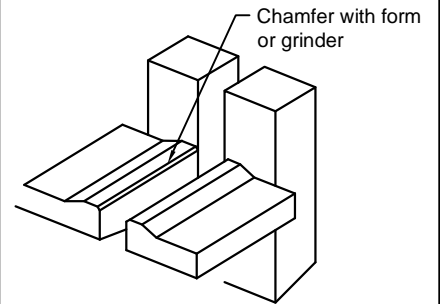


## General Tips for Improved Waterproofing of Expansion Joints

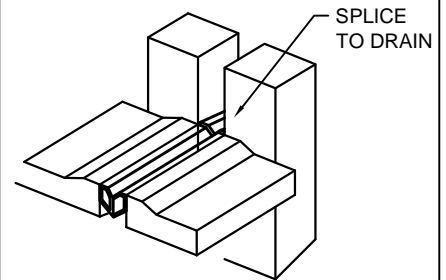
1. Raise the area parallel to the expansion joint to reduce water ponding



2. Chamfer edges to prevent chipping and spalling of concrete



3. Locate Splices at columns or other areas that can be easily drained





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# JointCrete1™ Epoxy

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## DESCRIPTION:

**JointCrete Epoxy** is a two component, 100% solids, mixed at a 1:1 ratio adhesive that is formulated to give a permanent bond to ceramic, metal, concrete and elastomeric surfaces. **JointCrete Epoxy** is thixotropic, non-sag, and is easily applied by trowel.

## MIXING:

Combine one part by volume of Component “A” with one part by volume of Component “B”. Mix for not less than (3) three minutes using a slow speed drill (300 to 600 rpm) and **Mixing Paddle**

## APPLICATION:

Surface must be clean. Remove grease, rust, or other foreign materials by best means available. For best results surfaces should be dry during application.

## ADVANTAGES:

- Excellent bond to most substrates.
- Permanent flexibility, molecularly fixed, will not migrate.
- 100% solids, non-combustible.
- Thixotropic - Light Gel - Dependable gap filling adhesive for permanent adhesion of structural components.
- Convenient one to one by volume mix ratio.
- Excellent chemical resistance.
- Excellent recovery from deformation by compression or elongation.
- Stays flexible at temperatures as low as – 20° F (-29° C).
- Retains properties at temperatures as high as 300° F (149° C) in intermittent exposure.
- Used by “Certified Applicators” to stop leaks between ceramic insulators and transformer housing. Training video of leak repair is available upon request.

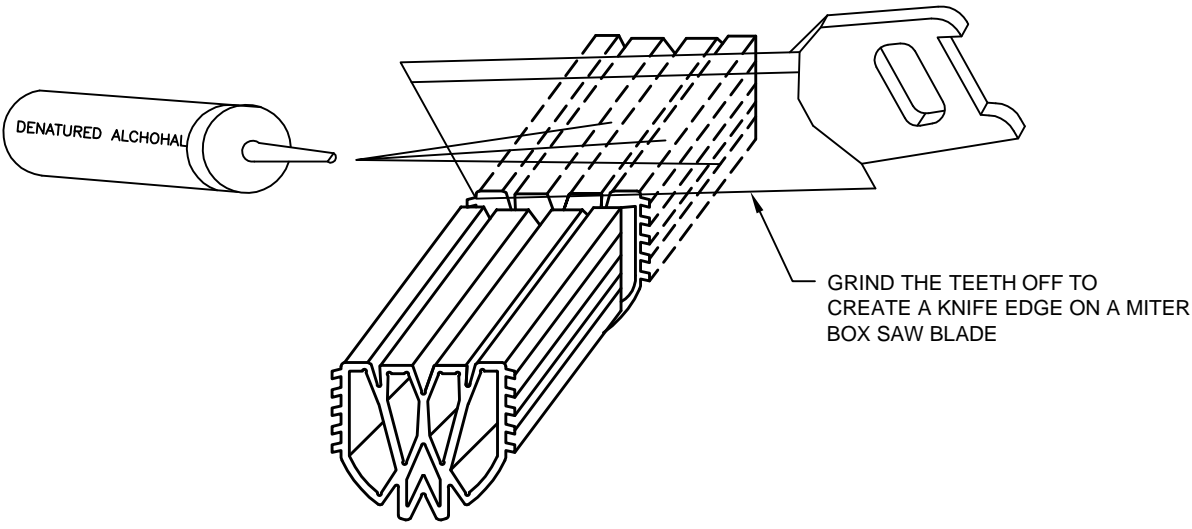
## CAUTION:

**FIRST AID:** In case of skin contact, immediately wash with soap and water. In case of eye contact, flush with copious amounts of water for at least (15) fifteen minutes. Remove contaminated clothing. If irritation persists, seek medical attention. Wash clothing before reuse.

**WEAR PROTECTIVE CLOTHING, GOGGLES AND/OR BARRIER CREAMS.  
FOR INDUSTRIAL USE ONLY / KEEP AWAY FROM CHILDREN**



# W 15 SERIES CUTTING INSTRUCTIONS



## W15 SERIES CUTTING INSTRUCTIONS

<b>CUSTOMER:</b>		
<b>PROJECT:</b>		
<b>LOCATION:</b>		
<b>ARCHITECT:</b>		
<b>CONTRACTOR:</b>		
<b>NOTE:</b>		
<b>JOB NO.:</b>	<b>DATE:</b> 10/15/07	<b>SCALE:</b> (NTS)

LENGTH:	QTY:	COLOR/FINISH:



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# Installation Instructions

## W40-SM-AL and Larger Systems: 10-18-12

1. Read and understand all instructions prior to starting the installation.
2. Protect materials at all times from damage during the installation process and due to construction conditions.
3. Install in accordance with the approved shop drawings, details, and these instructions.
4. Carefully note the design function requirements in the Preparation section, item 9.
5. For exterior applications allow a 1/4" (6 mm) gap every 20 feet (6 meters) for the cover plate only for every  $\Delta T$  of 75°F (42°C) of temperature change expected from the coldest to the hottest day of the calendar year.

### Preparation:

1. Inspect all materials and confirm that the correct product has been received and is not damaged.
2. Review all details and component parts related to this system assembly.
3. Refer to approved shop drawings and details for the nominal joint size, system component placement, and anchoring dimensions.
4. Layout all components required in the order in which they are to be installed.
5. During installation stagger the ends of the W005 Frames relative to the ends of the WP Cover Plate. If installation is started at one end of a joint run, pre-cut the first frame to be installed in half. Each half will later be installed on each side of the joint.
6. Inspect the substrate and joint opening to confirm it is prepared correctly to receive the product per the approved shop drawings and details.
7. The substrate for mounting must be structurally sound for a secure, trouble free installation. Repair all cracks, voids, spalls, and other deficiencies in the joint face and the adjacent deck mounting surface.
8. The joint faces must be flat, smooth, and parallel and provide the proper joint width.
9. The joint opening must be within  $\pm 1/4"$  [6mm] or less of the approved drawings and details for proper installation and function.
10. The horizontal mounting surface must be flat and level across the joint for a minimum of 8" [203 mm] each side of the joint opening for the length of the joint.
11. The mounting surfaces must be clean and free of loose dirt, dust, debris, and other contaminants that would affect the installation for proper application, placement, mounting, and attachment of all materials and components.



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# Installation Instructions

12. Mounting surfaces should be kept clean and dry during installation.
13. If fire barriers are required, coordinate their installation for proper placement, mounting, and attachment of these components in accordance with the drawings and details.
14. If an Epoxy Bedding/Adhesive Compound is required proceed to the Epoxy Bedding/Adhesive Installation Instructions below.

## Epoxy Bedding/Adhesive and Frame Installation Instructions: Critical Caution Notes 1 through 6 for Epoxy Bedding/Adhesive Compound:

1. Epoxy Bedding/Adhesive Compound: Installer shall provide a trowel grade, long pot life, epoxy, bedding/adhesive that can be feathered. The properties of the compound must be equal to or exceed Epoxy Systems #703, 100% solids, semi-flexible epoxy resin, adhesive for the specific application. The Bedding/Adhesive Compound must have excellent resistance to aggressive water.
2. Read and understand the technical data and MSDS sheets for the Epoxy Bedding/Adhesive before application, including surface preparation, mixing, application, and clean up requirements, as well as first aid and protective gear recommended by the manufacturer.
3. Surface preparation is the single most important step in the application of every resinous compound to concrete and metal. Carefully follow the surface preparation instructions of the manufacturer for concrete and aluminum in order to establish a strong bond.
4. Carefully follow the surface preparation instructions of the Bedding/Adhesive manufacturer for concrete and aluminum in order to establish a strong bond.
5. Carefully adhere to all the "Dos" and "Don'ts" regarding "quality" practices when mixing and installing or applying epoxies. Refer to the manufacturer's instructions.
6. If the Epoxy Systems #703 Epoxy Adhesive is utilized, the materials should be maintained at 72°F (22°C) or less in order to have the full pot life available for working the material. However, once the half pot life time is reached the materials begin to thicken and become more difficult to work. Therefore only small batches should be mixed at one time. Maintaining a lower pot temperature can lengthen the pot life, but the tradeoff is thicker material mixing. This may be experimented with in order to strike a good balance.

## Guideline Notes 7 through 12 for Installing the W005 Base Frames, the WBAR Heavy Duty Centering Mechanisms, and the BS Continuous Gutter System:

6409 Rhode Island Avenue, Riverdale, Maryland 20737-1098  
Phone (800) 835-0028 Fax (678-735-0085)



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# Installation Instructions

7. Stage the W005 Frames and anchors on each side of the joint so they may be easily retrieved for efficient installation.
8. Typically the installation should proceed down one side of the joint run at a time taking caution to establish and maintain the correct sight lines with the other side of the joint. The frames on the opposite side of the joint may be temporarily anchored for accurate placement of the system.
9. Please note that these guidelines may be altered if 2 crews are used or if a more efficient sequence can be developed. Sightline and part alignment must be maintained and all cautionary requirements must be followed.

## Cautionary Notes 10 and 11:

10. Because the WBAR Heavy Duty Centering Mechanisms typically cannot be installed once the Base Frames are installed in the Epoxy Bedding/Adhesive the correct number of WBAR Mechanisms must be inserted into their respective receivers before the final installation of the Base Frames. In order to apply and work the Epoxy Bedding/Adhesive and anchor the Frames, the WBARs can be pushed together out of the way and be taped, or otherwise held together, so they do not move.
11. Orient all the Centering Mechanisms in the same direction. The orientation should be such that clockwise movement forces the vertical legs of the WBAR pins against the W005 extrusion not the open side of the WBAR receiver in the Base Frame.
12. When abutting the Base Frame ends together apply a premium grade sealant like Sikaflex 1a to the frame ends so as to seal the butt joint.

## Continue with the Installation as Follows:

13. Using the W005 Frame as a template, properly position and temporarily hold the frame in place. Verify the sight lines and mark the concrete with the complete anchor hole pattern for predrilling the holes for the Base Frame. This step will be repeated for each Frame. As noted above the alignment of the Frames to verify sightlines is essential for proper fit and function.
14. Drill out all the anchor holes in accordance with the anchor manufacturer's instructions.
15. Remove and set aside the W005 Frame.
16. Thoroughly remove all dust, dirt, and other contaminants from the holes and the exposed concrete.
17. Confirm that all surfaces are properly cleaned and prepared in accordance with the instructions of the manufacturer of the Epoxy Bedding/Adhesive.



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18. Again utilizing the W005 Frame as a template, layout the extents of the Bedding/Adhesive requirements. You may want to use a wide removable tape to mark the outside edge of the location of the Bedding/Adhesive. The tape can be left in place and later used to protect the finished concrete from excess Bedding/Adhesive and assist in cleanup.
19. Remove the W005 Frame. Stage and prepare the W005 frames for immediate installation after the application of the Epoxy Bedding/Adhesive to the concrete. Clean and/or prime the underside of the W005 Frames in accordance with the Epoxy Bedding/Adhesive manufacturer's requirements. A primer may not be required. Carefully follow the manufacturer's instructions.

## Caution Note 20:

20. Before application of the Epoxy Bedding/Adhesive again review the installation sections above regarding the WBAR Heavy Duty Centering Mechanisms as once the Base Frames are permanently installed these mechanisms may not be able to be installed.
21. Following the manufacturer's instructions mix and apply the Epoxy Bedding to the extents of the previously marked layout. Trowel and screed as necessary to produce a flat and level installation. Then properly locate and set the W005 Frames and permanently anchor them into place.
22. Immediately remove the tape (if used) as you work your way along the joint run and clean up as you go. Follow the Bedding/Adhesive manufacturer's clean up instructions.
23. Allow the Bedding/Adhesive to initially cure before proceeding. This will vary depending on the Epoxy Bedding/Adhesive manufacturer.
24. Once the Bedding/Adhesive Compound has adequately cured in accordance with the manufacturer's recommendations proceed to the Final Installation.

## Final Installation Instructions:

1. Starting at one end of the joint run place a small bead, approximately 1/8" [3mm], of premium grade sealant, like Sikaflex 1a, into the BS Gutter System arrow head receiver in the W005 Base Frame.
2. If there is a wall transition, drain, or other transition at the end of the horizontal joint allow sufficient Gutter System BS Seal to stick out the end for making the required transition.
3. Beginning at the Frame end, insert the arrow head of the BS Seal into the receiver opening and sealant in the Frame. Push the arrow head firmly into place for the full



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length of the joint run. Be careful not to stretch the seal as it is inserted and pressed into place. Do this for both sides of the joint.

4. Install the Gutter System Seal for the full length of the joint section.
5. Install the WG01 gaskets into the slots in the underside of the WP Cover Plates.
6. Using the predrilled holes in the Cover Plate for the Heavy Duty Centering Mechanisms as a template, mark one W005 with the string of holes required for properly locating and placing the Centering Mechanisms into position.
7. Using these markings, place and temporarily hold each Heavy Duty Centering Mechanism in position using a heavy duty tape. Verify the proper orientation of all the Centering Mechanisms in the same direction as noted previously.
8. Make sure all debris and contaminants are removed before the final installation of the WP Cover Plate.
9. Remove the female barrel section Flat Head Sex Bolt portion of the WBAR Assemblies in order to install the WP Cover Plates. The double flanged rubber grommet and metal backed washer will hold the other parts of the Spring Assembly in place. Some designs have an additional hex nut. **DO NOT REMOVE THE GROMMET, WASHER, OR NUT IF THERE IS ONE.**
10. Set the WP Cover Plate in place and verify that the predrilled holes align with all the bolts of the Centering Mechanisms. Reposition any Centering Mechanisms as needed.
11. Fish each centering bolt through the WP Cover Plate, screw the Sex Bolt female barrel into place and loosely hand tighten.
12. Remember to allow for gaps between the WP Cover Plates for thermal expansion depending on the changes in temperature expected. Adjust the location of the installed Cover Plates as required.
13. Once the WP Cover Plates and all the WBAR Heavy Duty Centering Mechanisms are properly installed hand tighten until you feel the full resistance of the spring and are snug. Hand tighten an additional 1/2 turn to complete the installation. Do not use any power tool to tighten. Do not compress the spring more than 1/8" [3mm].
14. This completes the installation.

## Protect the Final Installation:

1. Protect the installation from all traffic until the Epoxy Bedding/Adhesive has reached its final cure time.
2. Protect the fully cured final installation until final inspection. 10-18-12





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# Installation Instructions

**W30-SM-AL**

10-15-12

1. Read and understand all instructions prior to starting the installation.
2. Install in accordance with the approved shop drawings, details, and these instructions.
3. Only install this system when the expansion joint opening is a minimum of 3.00".
4. Carefully note the design function requirements in the Preparation section, item 6.
5. For exterior applications allow a 1/4" (6 mm) gap every 20 feet (6 meters) for the cover plate only for every  $\Delta T$  of 75°F (42°C) of temperature change expected from the coldest to the hottest day of the calendar year.

## Preparation:

1. Inspect all materials and confirm that the correct product has been received and is not damaged. Review all details and component parts related to this system assembly.
2. Refer to approved shop drawings and details for the nominal joint size, system component placement, and anchoring dimensions.
3. Layout all components required in the order in which they are to be installed.
4. During installation stagger the ends of the W105 Frames relative to the ends of the WP09 Cover. If installation is started at one end of a joint run, pre-cut the first frame to be installed in half. Each half will later be installed on each side of the joint.
5. Inspect the substrate and joint opening to confirm it is prepared correctly to receive the product per the approved shop drawings and details.
6. The substrate for mounting must be structurally sound for a secure, trouble free installation. Repair all cracks, voids, spalls, and other deficiencies in the joint face and the adjacent deck mounting surface.
7. For proper system design function the nominal joint opening must be within +/- 1/16" of the approved drawings and details when the ambient temperature is equal to the mean average temperature for the calendar year.
8. The mounting surfaces must be clean and free of loose dirt, dust, debris, and other contaminants that would affect the installation for proper application, placement, mounting, and attachment of all materials and components.
9. Mounting surfaces should be kept clean and dry during installation.
10. If fire barriers, vapor, and/or water barriers are required, coordinate their installation for proper placement, mounting, and attachment of these components in accordance with the drawings and details.

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# Installation Instructions

11. If an epoxy bedding adhesive and water barrier are required first go to the Water Barrier Installation Procedure and secondly to the Epoxy Bedding/Adhesive Installation Instructions below.

## Water Barrier Installation Procedure:

1. Microsealant tape: Installer shall provide a double sided, 30 mil x 2" wide, microsealant, waterproofing, putty tape (non butyl) equal to EternaBond DoubleStick MicroSealant Putty Tape. Follow all surface preparation and application requirements given in the manufacturer's technical data sheet and installation instructions.
2. Confirm that the mounting surfaces are clean and free of all contaminants as noted in the Preparation section above and in the applicable technical data sheets for all materials to be installed. All cleaners used must not leave any residues. Allow all cleaners to completely dry.
3. Layout the RE117FR-3 EPDM Water Barrier (12" wide, 305mm) supplied with the W30-SM-AL joint cover system.
4. Remove the release liner from one side of the double sided, microsealant tape and apply along the concrete top surface at the edge of the joint opening. Follow the applied pressure instructions for activating the bonding process. Do not remove the top side of the release liner until you are ready to install the EPDM Water Barrier.
5. Using a non-residue cleaner remove any dust, dirt, powder, or other foreign matter from the outside 3 inches of each edge of the EPDM Water Barrier that will contact the microsealant tape already installed.
6. Remove the second release liner from the previously installed microsealant tape.
7. Making sure the previously cleaned surface of the EPDM is applied to the microsealant tape, align the edge of the EPDM Water Barrier with the edge of the microsealant tape and seal it to the tape.
8. Apply pressure to the top surface of the EPDM Water Barrier in accordance with the microsealant tape manufacturer's instructions in order to activate the bond between the tape and the EPDM.
9. Confirm that the EPDM Water Barrier is secured to both sides of the joint edges with the excess barrier draped downward into the joint opening.





# Installation Instructions

10. Using a spreader tool or other type of blocking temporarily position and hold a 3/16" flat bar spacer at the top edge of the blockout against each joint face in order to fix the opening required later for the installation of the W105 frame and the insertion of the DBAR5 Centering Mechanism.
11. Once the flat bar spacers are positioned for proper location of the W105 frames, proceed to the Epoxy Bedding/Adhesive Installation Instructions.

## Epoxy Bedding/Adhesive and Frame Installation Instructions:

1. Epoxy bedding/adhesive compound: Installer shall provide a trowel grade, long pot life, epoxy, bedding/adhesive that can be feathered. The properties of the compound must be equal to or exceed Epoxy Systems #703, 100% solids, semi-flexible epoxy resin, adhesive for the specific application. The bedding/adhesive compound must have excellent resistance to aggressive water.
2. Read and understand the technical data and MSDS sheets for the epoxy bedding/adhesive before application, including surface preparation, mixing, application, and clean up requirements, as well as first aid and protective gear recommended by the manufacturer.

### Critical Caution Note 3:

3. Surface preparation is the single most important step in the application of every resinous compound to concrete and metal. Carefully follow the surface preparation instructions of the manufacturer for concrete and aluminum in order to establish a strong bond.
4. Using the W105 frames as a template, properly position and hold the frames in place. Verify the W30-SM-AL sight lines and mark the concrete with the complete anchor hole pattern for predrilling the holes for the frames.
5. Drill out all the anchor holes in accordance with the anchor manufacturer's instructions. Remove and set aside the W105 frames.
6. Thoroughly remove all dust, dirt, and other contaminants from the holes and the exposed concrete and water barrier.
7. Confirm that all surfaces are properly cleaned and prepared in accordance with the instructions of the manufacturer of the epoxy bedding/adhesive.



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# Installation Instructions

8. Utilizing the W105 frame as a template, layout the extents of the bedding/adhesive requirements. You may want to use a wide removable tape to mark the outside edge of the location of the bedding/adhesive. The tape can be left in place and later used to protect the finished concrete from excess bedding and assist in cleanup.
9. Remove the W105 frames. Layout and prepare the W105 frames for immediate installation after the application of the epoxy bedding/adhesive to the concrete. Clean and/or prime the underside of the W105 frames in accordance with the epoxy bedding/adhesive manufacturer's requirements. A primer may not be required. Carefully follow the manufacturer's instructions.

## Critical Caution Notes 10 through 12:

10. As previously stated surface preparation is the single most important step in the application of every resinous compound to concrete and metal. Carefully follow the surface preparation instructions of the manufacturer for concrete and aluminum in order to establish a strong bond.
11. Carefully adhere to all the "Dos" and "Do Nots" regarding "quality" practices when mixing and installing or applying epoxies. Refer to manufacturer's instructions.
12. If the Epoxy Systems #703 Epoxy Adhesive is utilized, the materials should be maintained at 72°F (22°C) or less in order to have the full pot life available for working the material. However, once the half pot life time is reached the materials begin to thicken and become more difficult to work. Therefore only small batches should be mixed at one time. Maintaining a lower pot temperature can lengthen the pot life, but the tradeoff is thicker material mixing. This may be experimented with in order to strike a good balance.
13. Following the manufacturer's instructions mix and apply the bedding to the extents of the layout. Trowel and screed as necessary to produce a flat and level installation. Then properly locate and set the W105 frames and permanently anchor them into place.
14. Immediately remove the tape (if used) as you work your way along the joint run and clean up as you go. Follow the manufacturer's clean up instructions.
15. Allow the bedding/adhesive to initially cure before proceeding. This will vary depending on the epoxy bedding/adhesive manufacturer.
16. Remove the temporary 3/16" flat bar spacers.
17. Once the bedding compound has adequately cured in accordance with the manufacturer's recommendations proceed to the Final Installation.

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# Installation Instructions

## Final Installation Instructions:

1. Install the WG01 gaskets into the slots in the underside of the WP09 cover plates.
2. Using the predrilled holes in the WP09 for the Centering Mechanisms as a template, mark one W105 with the string of holes required for properly locating and placing the Centering Mechanisms into position.
3. Using the markings from Step 2, place and temporarily hold each Centering Mechanism in position using a heavy duty tape. Orient all the Centering Mechanisms in the same direction. The orientation should be such that clockwise movement of the Centering Mechanisms forces the vertical legs against the W105 frame extrusion and not against the Water Barrier.
4. Make sure all debris and contaminants are removed before the final installation of the WP09 cover plate.
5. Set the WP09 cover plate in place and verify that the predrilled holes align with all the centers of the Centering Mechanisms. Reposition any Centering Mechanisms as needed.
6. Fish each centering bolt into its respective Centering Mechanism and loosely hand tighten.
7. Once all the centering bolts are installed hand tighten them until they are snug. Tighten an additional  $\frac{1}{2}$  turn to complete the installation. Do not use any power tool to tighten.
8. This completes the installation.

## Protect the Final Installation:

1. Protect the installation from all traffic until the epoxy bedding/adhesive has reached its final cure time.
2. Protect the fully cured final installation until final inspection.

10-15-12



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# Installation Instructions

## W20-SM-AL

10-15-12

1. Read and understand all instructions prior to starting the installation.
2. Install in accordance with the approved shop drawings, details, and these instructions.
3. Only install this system when the expansion joint opening is a minimum of 2.00".
4. Carefully note the design function requirements in the Preparation section, item 6.
5. For exterior applications allow a 1/4" (6 mm) gap every 20 feet (6 meters) for the cover plate only for every  $\Delta T$  of 75°F (42°C) of temperature change expected from the coldest to the hottest day of the calendar year.

### Preparation:

1. Inspect all materials and confirm that the correct product has been received and is not damaged. Review all details and component parts related to this system assembly.
1. Refer to approved shop drawings and details for the nominal joint size, system component placement, and anchoring dimensions.
2. Layout all components required in the order in which they are to be installed.
3. During installation stagger the ends of the W105 Frames relative to the ends of the WP09 Cover. If installation is started at one end of a joint run, pre-cut the first frame to be installed in half. Each half will later be installed on each side of the joint.
4. Inspect the substrate and joint opening to confirm it is prepared correctly to receive the product per the approved shop drawings and details.
5. The substrate for mounting must be structurally sound for a secure, trouble free installation. Repair all cracks, voids, spalls, and other deficiencies in the joint face and the adjacent deck mounting surface.
6. For proper system design function the nominal joint opening must be within +/- 1/16" of the approved drawings and details when the ambient temperature is equal to the mean average temperature for the calendar year.
7. The mounting surfaces must be clean and free of loose dirt, dust, debris, and other contaminants that would affect the installation. This is important for the proper application, placement, mounting, and attachment of all materials and components.
8. Mounting surfaces should be kept clean and dry during installation.



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# Installation Instructions

9. If fire barriers, vapor, and/or water barriers are required, coordinate their installation for proper placement, mounting, and attachment of these components in accordance with the drawings and details.
10. If an epoxy bedding adhesive and water barrier are required first go to the Water Barrier Installation Procedure and secondly to the Epoxy Bedding/Adhesive Installation Instructions below.

## Water Barrier Installation Procedure:

1. Microsealant tape: Installer shall provide a double sided, 30 mil x 2" wide, microsealant, waterproofing, putty tape (non butyl) equal to EternaBond DoubleStick MicroSealant Putty Tape. Follow all surface preparation and application requirements given in the manufacturer's technical data sheet and installation instructions.
2. Confirm that the mounting surfaces are clean and free of all contaminants as noted in the Preparation section above and in the applicable technical data sheets for all materials to be installed. All cleaners used must not leave any residues. Allow all cleaners to completely dry.
3. Layout the RE117FR-2 EPDM Water Barrier (10" wide, 254mm) supplied with the W20-SM-AL joint cover system.
4. Remove the release liner from one side of the double sided, microsealant tape and apply along the concrete top surface at the edge of the joint opening. Follow the applied pressure instructions for activating the bonding process. Do not remove the top side of the release liner until you are ready to install the EPDM Water Barrier.
5. Using a non-residue cleaner remove any dust, dirt, powder, or other foreign matter from the outside 3 inches of each edge of the EPDM Water Barrier that will contact the microsealant tape already installed.
6. Remove the second release liner from the previously installed microsealant tape.
7. Making sure the previously cleaned surface of the EPDM is applied to the microsealant tape, align the edge of the EPDM Water Barrier with the edge of the microsealant tape and seal it to the tape.
8. Apply pressure to the top surface of the EPDM Water Barrier in accordance with the microsealant tape manufacturer's instructions in order to activate the bond between the tape and the EPDM.
9. Confirm that the EPDM Water Barrier is secured to both sides of the joint edges with the excess barrier draped downward into the joint opening.



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# Installation Instructions

10. Using a spreader tool or other type of blocking temporarily position and hold a 3/16" flat bar spacer at the top edge of the blockout against each joint face in order to fix the opening required later for the installation of the W105 frame and the insertion of the WTS020-1-1 Spring Assembly Centering Mechanism.
11. Once the flat bar spacers are positioned for proper location of the W105 frames, proceed to the Epoxy Bedding/Adhesive Installation Instructions.

## Epoxy Bedding/Adhesive and Frame Installation Instructions:

1. Epoxy bedding/adhesive compound: Installer shall provide a trowel grade, long pot life, epoxy, bedding/adhesive that can be feathered. The properties of the compound must be equal to or exceed Epoxy Systems #703, 100% solids, semi-flexible epoxy resin, adhesive for the specific application. The bedding/adhesive compound must have excellent resistance to aggressive water.
2. Read and understand the technical data and MSDS sheets for the epoxy bedding/adhesive before application, including surface preparation, mixing, application, and clean up requirements, as well as first aid and protective gear recommended by the manufacturer.

### Critical Caution Note 3:

3. Surface preparation is the single most important step in the application of every resinous compound to concrete and metal. Carefully follow the surface preparation instructions of the manufacturer for concrete and aluminum in order to establish a strong bond.
4. Using the W105 frames as a template, properly position and hold the frames in place. Verify the W20-SM-AL sight lines and mark the concrete with the complete anchor hole pattern for predrilling the holes for the frames.
5. Drill out all the anchor holes in accordance with the anchor manufacturer's instructions. Remove and set aside the W105 frames.
6. Thoroughly remove all dust, dirt, and other contaminants from the holes and the exposed concrete and water barrier.





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# Installation Instructions

7. Confirm that all surfaces are properly cleaned and prepared in accordance with the instructions of the manufacturer of the epoxy bedding/adhesive.
8. Utilizing the W105 frame as a template, layout the extents of the bedding/adhesive requirements. You may want to use a wide removable tape to mark the outside edge of the location of the bedding/adhesive. The tape can be left in place and later used to protect the finished concrete from excess bedding and assist in cleanup.
9. Remove the W105 frames. Layout and prepare the W105 frames for immediate installation after the application of the epoxy bedding/adhesive to the concrete. Clean and/or prime the underside of the W105 frames in accordance with the epoxy bedding/adhesive manufacturer's requirements. A primer may not be required. Carefully follow the manufacturer's instructions.

## Critical Caution Notes 10 through 12:

10. As previously stated surface preparation is the single most important step in the application of every resinous compound to concrete and metal. Carefully follow the surface preparation instructions of the manufacturer for concrete and aluminum in order to establish a strong bond.
11. Carefully adhere to all the "Dos" and "Do Nots" regarding "quality" practices when mixing and installing or applying epoxies. Refer to manufacturer's instructions.
12. If the Epoxy Systems #703 Epoxy Adhesive is utilized, the materials should be maintained at 72°F (22°C) or less in order to have the full pot life available for working the material. However, once the half pot life time is reached the materials begin to thicken and become more difficult to work. Therefore only small batches should be mixed at one time. Maintaining a lower pot temperature can lengthen the pot life, but the tradeoff is thicker material mixing. This may be experimented with in order to strike a good balance.
13. Following the manufacturer's instructions mix and apply the bedding to the extents of the layout. Trowel and screed as necessary to produce a flat and level installation. Then properly locate and set the W105 frames and permanently anchor them into place.
14. Immediately remove the tape (if used) as you work your way along the joint run and clean up as you go. Follow the manufacturer's clean up instructions.
15. Allow the bedding/adhesive to initially cure before proceeding. This will vary depending on the epoxy bedding/adhesive manufacturer.
16. Remove the temporary 3/16" flat bar spacers.

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# Installation Instructions

17. Once the bedding compound has adequately cured in accordance with the manufacturer's recommendations proceed to the Final Installation.

## Final Installation Instructions:

1. Install the WG01 gaskets into the slots in the underside of the WP09 cover plates.
2. Using the predrilled holes in the WP09 for the Centering Mechanisms as a template, mark one W105 with the string of holes required for properly locating and placing the Centering Mechanisms into position.
3. Using the markings from Step 2, place and temporarily hold each Centering Mechanism in position using a heavy duty tape. Orient all the Centering Mechanisms in the same direction. The orientation should be such that clockwise movement of the Centering Mechanisms forces the vertical legs against the W105 frame extrusion and not against the Water Barrier.
4. Make sure all debris and contaminants are removed before the final installation of the WP09 cover plate.
5. Set the WP09 cover plate in place and verify that the predrilled holes align with all the centers of the Centering Mechanisms. Reposition any Centering Mechanisms as needed.
6. Fish each centering bolt into its respective Centering Mechanism and loosely hand tighten.
7. Once all the centering bolts are installed hand tighten them until they are snug. Tighten an additional ½ turn to complete the installation. Do not use any power tool to tighten.
8. This completes the installation.

## Protect the Final Installation:

1. Protect the installation from all traffic until the epoxy bedding/adhesive has reached its final cure time.
2. Protect the fully cured final installation until final inspection.

10-15-12