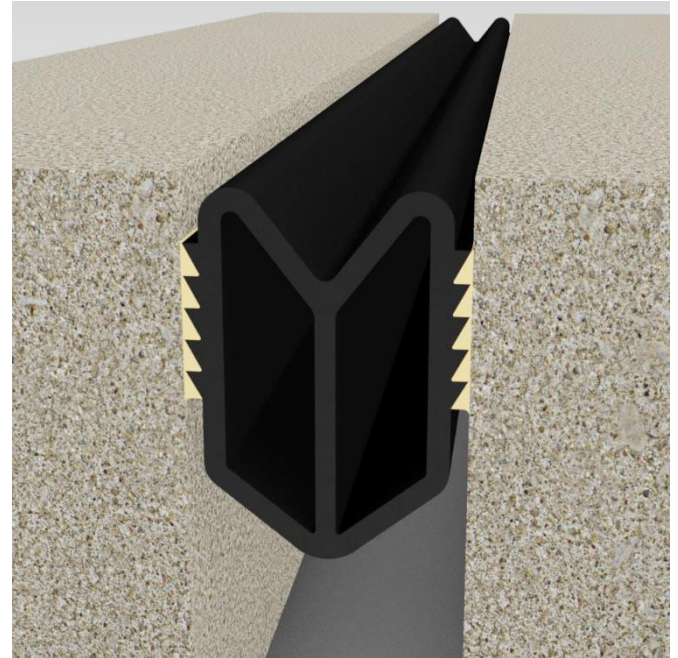
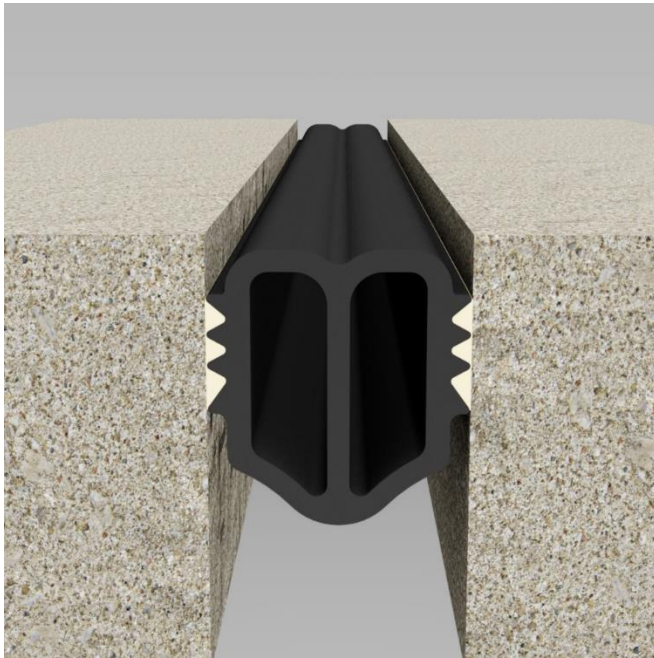


# Installation Procedure

Last Updated: March 1<sup>st</sup>, 2018



## Jeene®

### Multi-Directional Structural Sealing Joint System

The following installation procedure is very important and must be fully understood prior to beginning any work. To ensure proper installation and performance of expansion joint system the following actions must be completed by the installing contractor. Failure to do so will affect product warranty.

- 1) Carefully read and understand installation procedure. Contact WBA's Technical Service Department at (800) 677-4922 for product assistance.
- 2) Inspect all shipments and materials for missing or damaged components and hardware. Contact Customer Service at (800) 677-4922 with WBA's order number and invoice for prompt assistance.
- 3) Inspect substrate or adjacent construction for acceptance before beginning work. Report unacceptable construction to the project manager for scheduled repair work.
- 4) Review WBA shop drawings for project specific detailed information if Engineering services were purchased at time of order.

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## Health & Safety

During the installation of any Watson Bowman Acme product, appropriate personal protective items should be worn at all times, including but not limited to the following:

- Proper work clothing
- Safety glasses
- Safety boots
- Gloves
- Hard hat



Local rules and regulations regarding safe work environments and health should be followed.

## Product Components

The following components are required for the installation of this product:



Aron Alpha 241 Adhesive  
P/n: 2803J



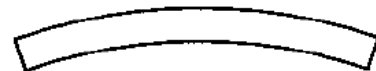
Profile Conditioning Agent  
P/n: 2802J



Concrete Cleaner  
P/n: 2731J



End Cap Material  
P/n: 2803J



Air Valve Material  
P/n: 2804J

**Installer's note:** We offer adhesives for Cold Weather and Warm Weather. Choose your adhesive based on the installation conditions. Consult your shipping documents for proper listings and requirements.

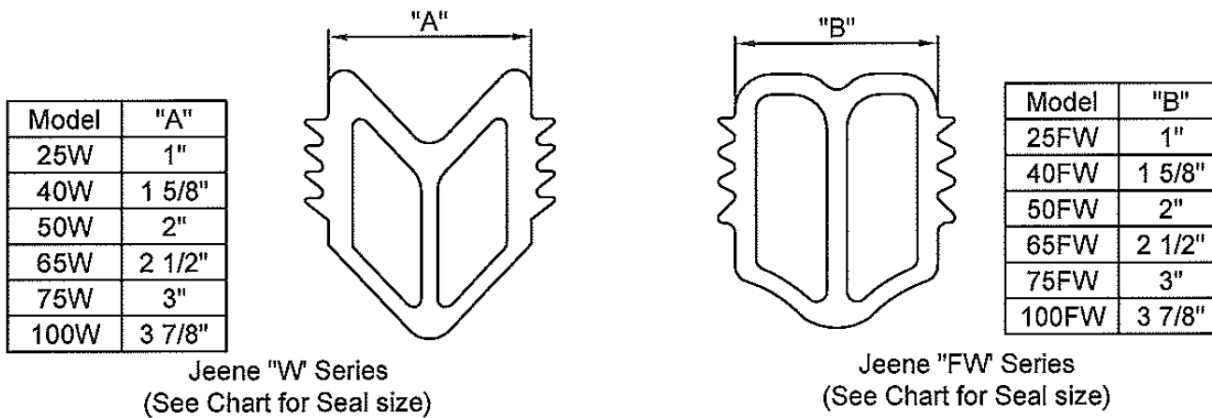


Warm Weather Adhesive  
P/n: 2840J



Cold Weather Adhesive  
P/n: 2841J

The following components vary in size depending on model of system:



## Recommended Equipment

WBA recommends the following equipment for an easy and successful installation:

- Sandblasting Equipment
- 1 - 3/8" Hand Drill (For Mixing Epoxy)
- 1 - Small Jiffy mixing paddle
- 1 - Wire wheel for 1/2" Drill (Or wire brush)
- Several 2" Margin Trowels and putty knives
- 1 - Box of Clean white non-colored cotton rags
- 4 - Clean 1 gal. plastic buckets
- 2 - Nylon bristle scrub brushes
- 1 - 4 1/2" Angle grinder (With Blade for Masonry)
- Dremel Tool with accessories and 1/8" drill bit
- Solvent for tool clean up (Xylene)
- 1 - 9" grinder (With Diamond & Abrasive blade)
- Compressor/Vacuum Pump (Grainger Model: 4Z024)
- 1 - Roll of Clear plastic sheeting
- Several pairs of rubber gloves, knee pads, dust masks
- 1 - Bulk caulking gun + Cone plastic tips
- 1 - Knife sharpener
- 2" wide duct tape (Joint length x 2 Qty/roll)
- 1 - Spray bottle for soapy water (Large profile leak check)
- Miter Box - Large enough to splice seal
- 18" Back Saw - Remove teeth leaving a razor sharp edge

## Pre-Installation Notes

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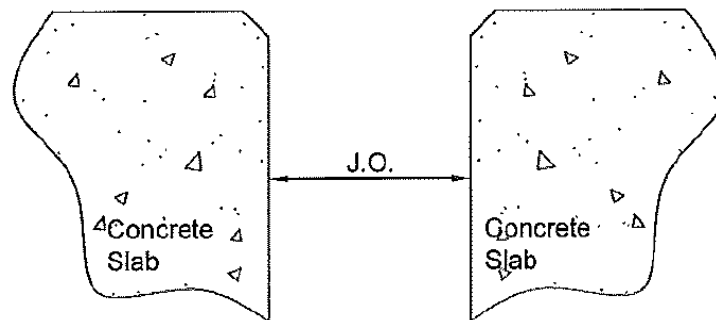
Installation must be performed only in joint openings with sound, clean and dry substrates. Joint openings must have parallel and dimensionally consistent side walls. Careful attention should be given to any concrete cracks at and around the joint opening. Care should also be taken to ensure that the area of joint opening in contact with the seal is prepared to the proper depth, depending on seal size.

## Installation

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**1A**

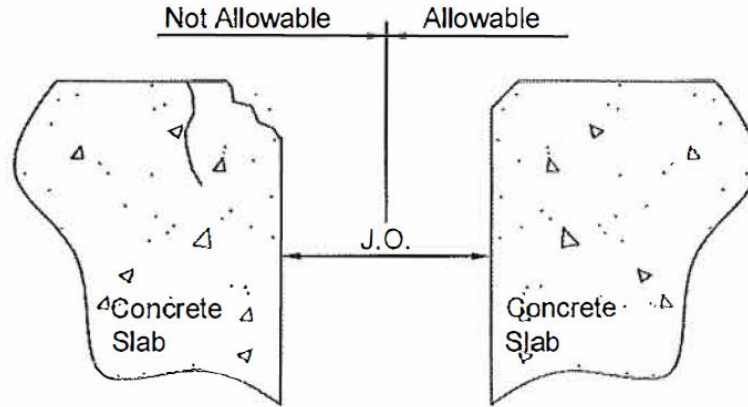
**Preparation (New Construction):** Forming materials shall be carefully removed to avoid edge spalling. Repairs are to be made to ensure parallel and dimensionally consistent side walls. Joint opening should be chamfered to help prevent future fracturing and spalling. The concrete side walls must be free of all contaminants such as form release agents, grease, oil and all other dirt and debris. Sandblasting is the recommended preparation procedure, but where sandblasting is not possible, disc grinding may be employed. However, careful inspection must be made to ensure roughened and completely clean concrete. Clean joint opening with compressed air. Immediately prior to installing the Jeene® profile, concrete side walls shall be wiped down with Concrete Cleaner.



**1B**

**Preparation (Existing Construction):** Joint openings are to be inspected for cracks, loose concrete and spalling. Repairs are to be made to ensure parallel and dimensionally consistent side walls which is required. If extensive repairs are necessary, it is recommended that a blackout be cut on either side of the joint and WaboCrete II Elastomeric Concrete Header shall be placed.

- Joint opening edges shall be chamfered to help prevent future fracturing and spalling. The concrete side walls must be free of all contaminants such as form release agents, grease, oil and all other dirt and debris. Sandblasting is the recommended preparation procedure, but where sandblasting is not possible, disc grinding may be employed. However, careful inspection must be made to ensure roughened and completely clean concrete. Clean joint opening with compressed air. Immediately prior to installing the Jeene® profile, concrete side walls shall be wiped down with Concrete Cleaner.

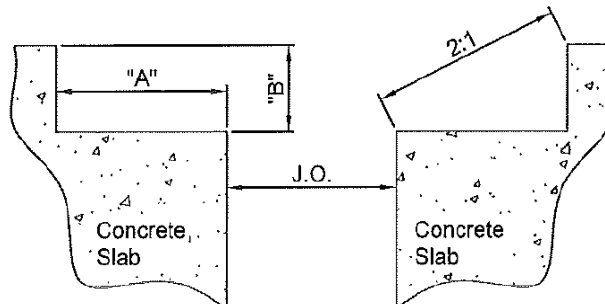


**1C**

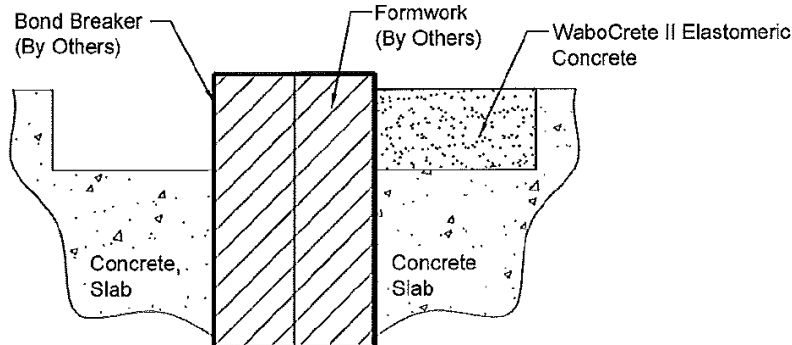
**Preparation (Blockout with Wabo®Crete II):**

- Fill joint opening with Formwork (By Others) and place bondbreaker on formwork where it will be in contact with WaboCrete II Elastomeric Concrete.
- Mix and place WaboCrete II according to manufacturer's recommendation. Joint edges shall be chamfered to help prevent future fracturing and spalling. Concrete blackouts must be free of all contaminants such as form release agents, Grease, Oil and all other dirt & debris. Sandblasting is preferred to roughen and clean WaboCrete II, but where sandblasting is not possible disc grinding may be employed.
- Clean joint opening with compressed air. Immediately prior to installation of Jeene®, utilizing Concrete cleaner, wipe down concrete surface (Except WaboCrete II and steel)

Location	"A" Min.	"B" Min.
Bridges	4"	2"
Parking Decks/Misc	1 1/2"	3/4"



**Blockout Dimensions**

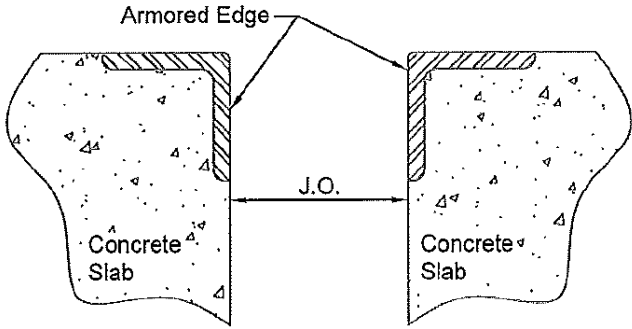


**Formwork Layout**

**1D**

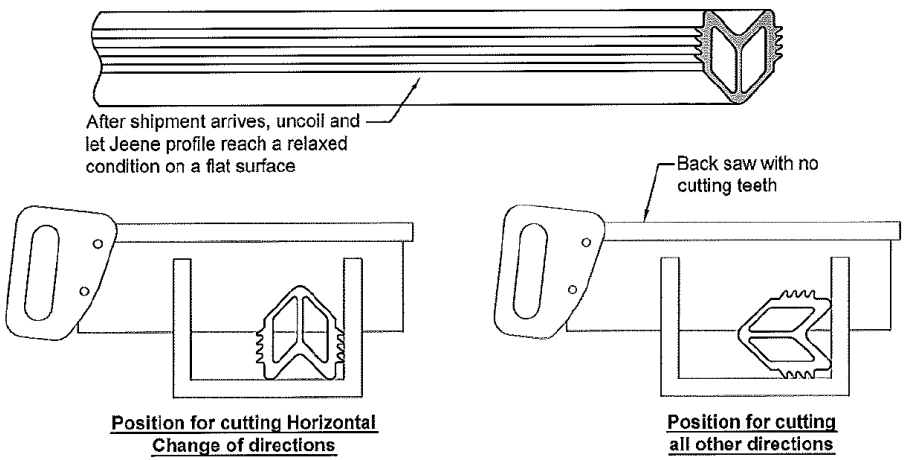
**Preparation (Armored Edge – New or Existing):**

- Armored edge surfaces must be abrasive blasted immediately prior to installation of Jeene®. This is a **REQUIREMENT** for new and existing construction. All oxidation must be removed and a "White Steel" (SP10) surface revealed. Sandblasting is recommended preparation procedure, but where sandblasting is not possible, aggressive disc grinding may be employed to roughen and abrade the surface to achieve the "White Steel" condition. No solvents or cleaners are to be used on steel surfaces prior to applying epoxy adhesive.
- Stainless steel and aluminum surfaces require sandblasting to remove the glassy surface to be made for acceptable for installation.
- On Galvanized coated surfaces, galvanizing material must be removed to look like "White Steel". If using a disc grinder or sandblasting must achieve a SP10 finish (White Steel and less than 5% pitting)
- Installation of Jeene® profile should immediately follow surface prep to avoid re-oxidation of steel surface. Any prepped surfaces left exposed for any length of time that results in oxidation of the surface must be prepped again immediately prior to Jeene® installation.

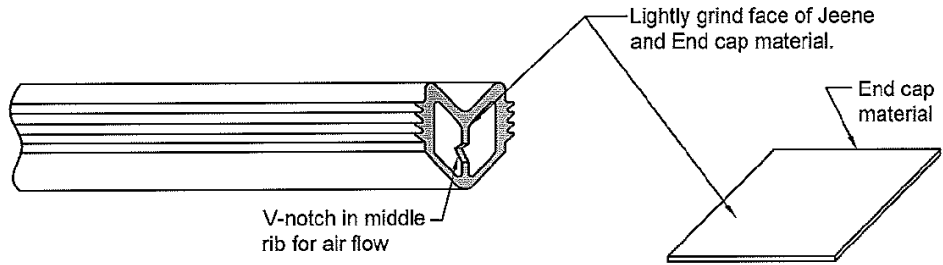


**2**

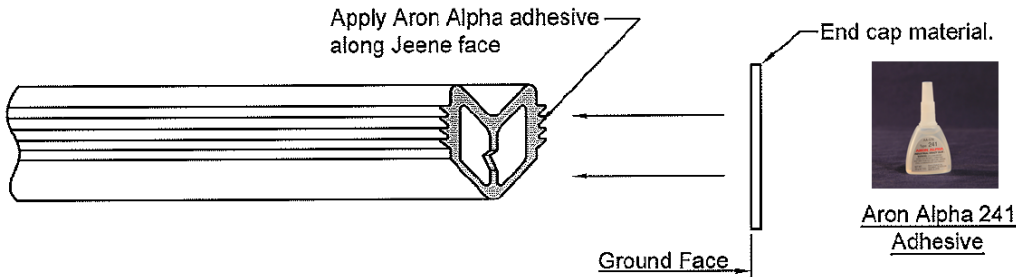
Allow seal to be uncoiled and relaxed before cutting seal into desired lengths. The seal has elastic capabilities and will stretch if pulled upon. While cutting it is recommended that the seal not be under any tension to ensure that the seal will be cut to desired lengths. **Note:** Manufacturer recommends to grind off all teeth of the back saw and squirt some denatured alcohol at cutting location to ensure the cleanest and straightest cut.



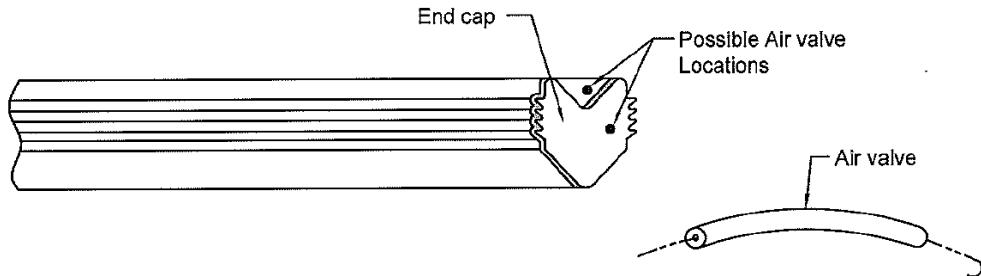
**3** Cut a V-notch groove in middle rib to ensure air flow through each chamber when inflating system as per Step 6. Before adhering the end cap material to Jeene® profile, each profile must be lightly ground so that the contact surface face reveals virgin material. Also surfaces must be smooth and powder free. **Note:** Grinding can be accomplished with a 4 1/2" grinder or a rotary tool.



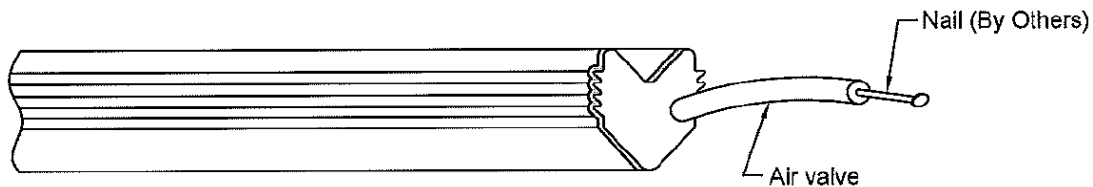
**4** The end cap is to be adhered to Jeene® Profile utilizing Aron Alpha 241 adhesive. When applying Aron Alpha 241 a thin layer is to be applied to the Jeene® profile end only. After adhesive has been applied, firmly press end cap against the Jeene® profile end for at least 60 seconds. Repeat same step for other end of profile. Best results occur when adhering half of the Jeene® profile at a time, especially on larger profiles. **Note:** If Aron Alpha 241 adhesive fluid has a yellowish tint to it do not use. Fluid should be clear in order for best results. Installer Note: After end cap has been adhered to Jeene® Profile, trim excess end cap material from seal. Exercise care not to damage the seal between the end cap material and Jeene® Profile.



**5** After finding the location of the air valve, that area must be lightly ground. Utilizing a 1/8" drill bit drill a hole where the air valve will be adhered. Using wire as a guide for air stem location, install air valve in the same steps as adhering the end cap to Jeene® Profile.



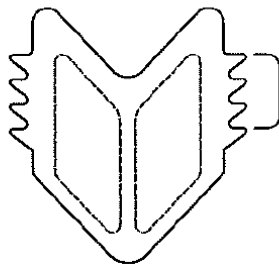
**6** After End caps and air valve have been installed, now seal is ready for air inflation. Utilizing an air pump, inflate the seal to 15 to 20 PSI. Utilizing a nail, plug air valve to hold air. Each end cap and air valve locations shall be checked for air leaks. Testing for air leaks consists of submerging seal in water or using a spray bottle with soapy water to reveal any bubbles that indicates escaping air. If leaking occurs the connections must be repaired. the locations must be dried thoroughly and scraped of old adhesive. Using a knife point to open air leak area and scrap old adhesive away. Now that the leaking area is cleaned, apply additional adhesive into the opened area and press firmly together for another 60 seconds. Repeat testing again until there is no leaking. The seal shall remain inflated during the seal cleaning process and deflated right before installation process.



**7** Lay plastic sheeting approximately 2' wide along side of the joint opening. Place the Jeene® profile on top of the plastic sheeting and perform seal preparation. The inflated and air tested profile should be vigorously wire brushed or sandblasted along the entire ribbed area that serves as the bonding surface on both sides. Profile sizes from 2" (50mm) to 4" (100mm) may be sandblasted. The surface will appear dull and abraded when properly prepared. Following wire brush abrasion, the ribbed area should be aggressively scrubbed with Conditioning agent using a stiff nylon brush 2 times each side. Once surface dries it should appear even duller.



Profile Conditioning Agent



Rib cleaning area Steps:

1. Wire Brush
2. Nylon brush with Condition Agent
3. Clean white rags with Conditioning agent.

**8** Jeene® epoxy is a very powerful bonding agent. The approximate pot life for Warm Weather Epoxy is 90 mins. at 90°F. The approximate pot life for Cold Weather Epoxy is 30 mins. at 70°F and 60 mins. at 40° to 50°F. It is not recommended to use Cold Weather Epoxy above 60°F or below 40°F.

- The epoxy must be mixed in proportions as specified and supplied by the manufacturer. One container of accelerator to one container of resin. Based on container contents, this produces a ratio of 1 :2 for Warm Weather and 1 :1 for Cold Weather. The epoxy must be mixed only after all preparations of gap and profile have been totally completed, checked and confirmed.



- Epoxy should be mixed in clean 1 to 2 gallon pails with a hand drill and small mixing paddle (paint mixing paddle with round bottom). Color consistency should exhibit! no streaking. **Note:** Premix Cold Weather Part B for 45 seconds. Mix no more than 2 units at a time.
- Areas adjacent to the joint opening should be cleaned of dust and debris that could contaminate the joint gap or the profile. The prepared inflated profile should be placed adjacent to the opening while the remaining procedures are performed.

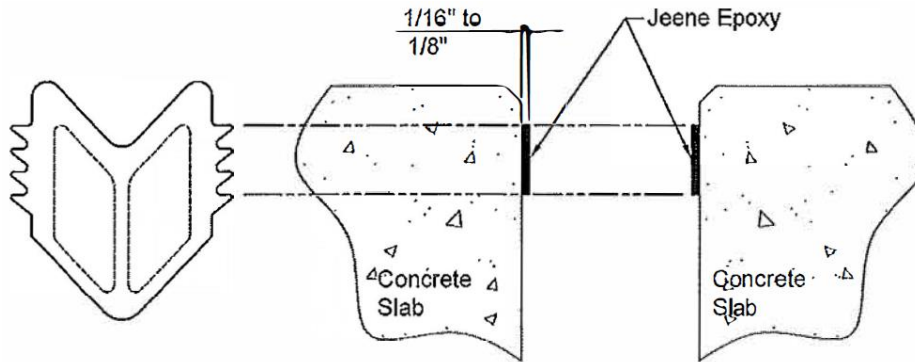


Warm Weather Adhesive

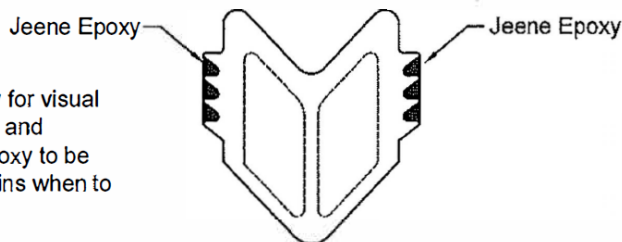


Cold Weather Adhesive

**9** Using a bulk gun, putty knives or margin trowels, apply epoxy to the joint opening side walls to the depth aligning approximately with ribs of the profile to be installed. The Epoxy should be applied and troweled firmly out to a thickness of 1/16" to 1/8".



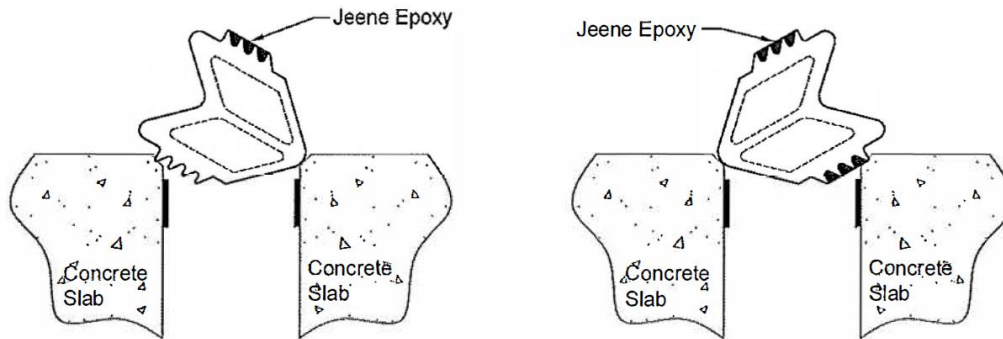
**10** Immediately before applying epoxy to the seal, wipe the seal with Profile Conditioning Agent using a white cotton rag. This will have to be done on both sides of the seal. Jeene® epoxy should be applied to the ribbed area of the profile with putty knives, trowels or bulk guns. The entire ribbed area must be covered. The epoxy should be limited to the ribbed area and have a depth/thickness comparable to the depth of the ribs. More is not better in this case.



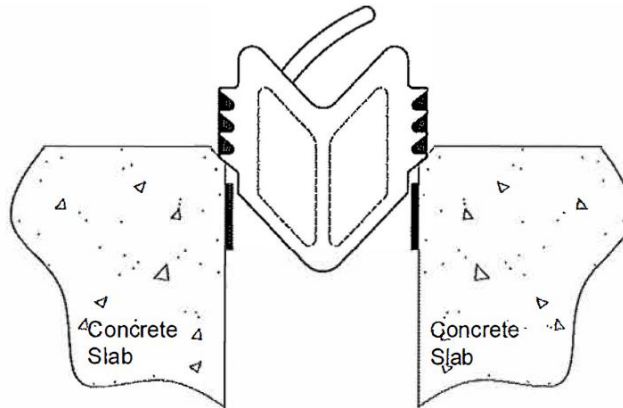
**Note:** Picture is only for visual of proper placement and amount of Jeene epoxy to be used. Step 11 explains when to place it on seal.

**11**

Place seal in joint opening with Jeene® Epoxy on both sides. Using long nose pliers, squeeze the air valve and let the air slowly escape from the seal until it starts to move down into the joint opening. In some cases the air has to be vacuumed from the seal by the use of a vacuum pump. When doing so exercise care not to over vacuum it. This could cause the seal to sink into the gap.



Place seal in joint opening as shown, make sure ribs sit in opening and not against either side wall. Apply Jeene® Epoxy as shown above, flip seal over and do the same to the other side.

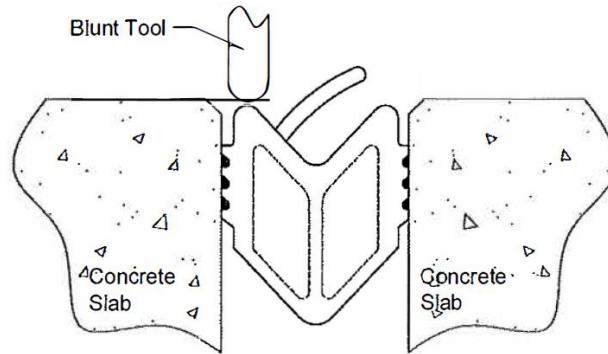


**12**

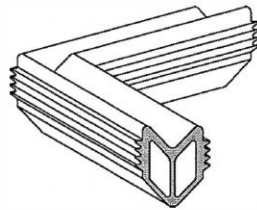
Once the profile is partially into the opening, a blunt tool should be used to set the seal 1/8" to 1/4" below the finished surface. Then insert a small amount of air into the Jeene® profile and inspect to ensure proper placement. After the profile is set into the correct position, inflate Jeene® profile into it's Final Stage (Approximately 15 to 20 PSI).

- After proper inflation squeeze air valve with pliers and insert a nail into air valve to maintain pressure. Pressurization can be accomplished with a hand pump (Bicycle Type) or electric air pump. Air pressure should be applied slowly with close visual control maintaining the profile at the desired installation level. The Jeene® Profile should be firm, and a small amount of excess epoxy should be visible above the ribbed area of the joint. This is a indication of full contact between seal and joint opening walls.
- Excess epoxy should be scrapped from the top of the profile and the edges of the joint opening with putty knives or margin trowels. Using a clean rag dampened with Concrete Cleaner, exposed surface of the profile should be wiped down. Following these steps the site can be cleaned up and

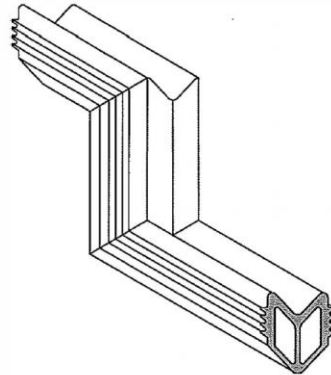
open to traffic. Maintain air pressure for a minimum of 24hrs at 70°F. The lower the temperature is the longer time.

**13****Splicing Procedure:**

- A miter box and saw is required.
- It is important that the saw be kept razor sharp.
- All splices must be cut in a miter box using a sharpened saw and concrete cleaner to lubricate the blade for sizes greater than 2" (WBA sells a large miter box - Part# 2754J).
- The cutting should be accomplished using a fast sliding motion to reduce distorting the seal during the cut. Applying excessive pressure to the seal will result in distortion and irregularities that will require grinding and cause difficult splice connections. The profile should be held against the far side of the miter box firmly without distortion, and the miter box should be secured.
- The cutting action should be on the forwardstroke only. The backstroke should be only to clear the opening and thus should be without pressure. The cut on the initial contact should be made with a downward stroke from high to low. Cutting strokes after this should be more level. The position of the profile to be cut in the miter box will vary based on directional change at the splice:
- Straight cuts for butt splices, the profile should be positioned with the top against the back wall of the miter box.
- 90° splices in a horizontal plane, the profile should be positioned with the top up.
- 90° splices in a horizontal to vertical transition, the profile should be positioned with the top against the back wall of the miter box.
- Cut the ends of the two seals at 45° angles in the miter box. Center webs shall be cut away to prevent them from becoming an obstruction to the mitering operation. Grind the cut surfaces to flat and smooth conditions, correcting any distortion and irregularities. Using Aron Alpha 241 adhesive, bond the prepared ends according to the job specifics. A thin layer of adhesive should be applied to one seal end, the two ends should be pressed firmly and evenly together for 60 seconds.
- It is helpful when adhering profile sections to adhere small sections of the splice at a time. In cooler temperatures, a heat gun will accelerate the cure of the Aron Alpha 241 adhesive.



90° Miter  
Horizontal

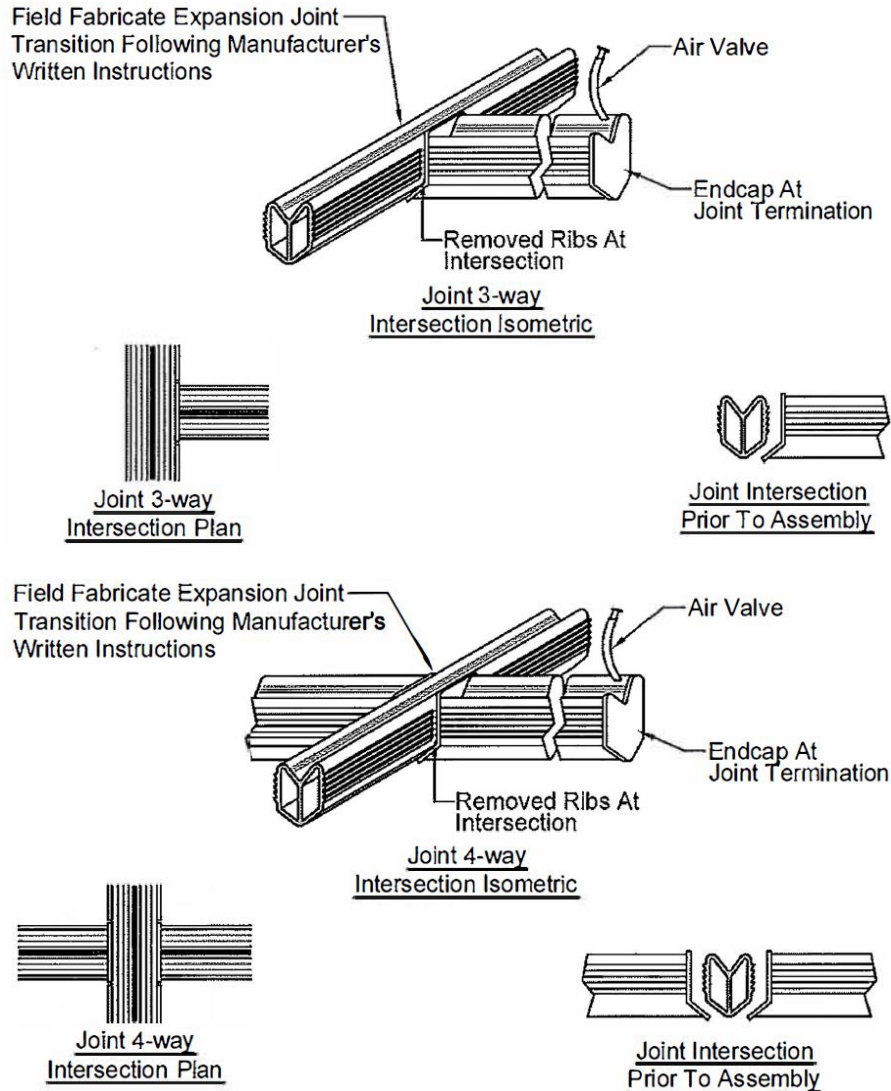


90° Miter  
Vertical

14

**Splicing Procedure – 3 & 4 Way Directional Change:** The preparation of Jeene® for 3 & 4 way connections require standard gap considerations and Jeene® profile cleaning procedures. Precise Field Measurements are required.

- To determine the contact point of the intersecting connection, locate the midpoint of the connection site, mark to identify and then measure the distance on either side of the mark to accommodate the connecting piece. For example: When connecting a 2" profile, 1" should be measured and marked on either side of the midpoint.
- Using a Disc grinder, completely remove the ribs from the profile that is to be the contact surface for the connection profile section. The surface should be smooth and powder free.
- The connecting profile section should be cut to the configuration of the profile side wall. the top portion of the cut will be straight and parallel and the bottom portion will be at an approximate 45° angle cut to fit the bottom "V" section of the profile.
- The edges of this freshly cut connecting piece should be carefully ground to a smooth powder free condition. The profile should be checked for proper configuration and fit against the contact profile section. Necessary adjustments should be made by cutting and grinding.
- The end cap and profile ends should be prepared according to the same procedures used in regular applications. Once adhered and secured over the end of the connecting profile section, the end cap should be trimmed to the exact contour of the profile.
- The entire exposed end cap surface of the connecting piece should be ground to a smooth powder free condition.
- Before connecting this profile to the contact profile section, air pressurization testing should be performed. As with all completed profile units, leaving the air in profile during the connection process.
- Aron Alpha 241 adhesive should be applied to entire surface of the end cap.
- Using firm and even pressure, butt the end cap against the prepared contact area and hold for 60 seconds. The connection is now complete.



**15**

**Splicing Procedure – Butt Splicing:** The first section of Jeene® Profile is installed according to regular installation procedures, leaving one or two feet of the profile and gap side walls without Jeene® Epoxy.

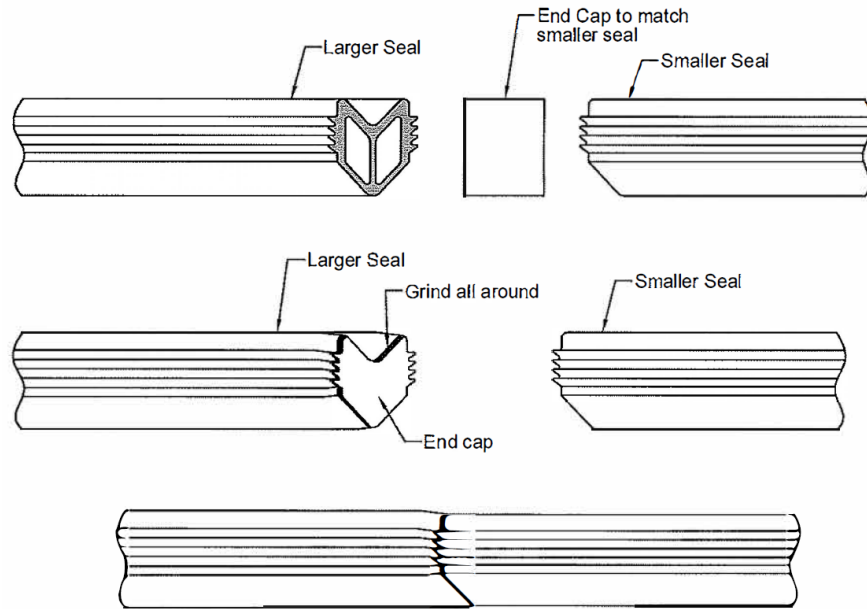
- When continuing the job, remove the end cap from the installed profile and carry out standard butt splicing and installation procedures. Be sure to measure the profile to the correct length, and check for air leaks prior to installing.

**16**

**Splicing Procedure: Different Sizes:**

- Measure the Joint gap width at the point where the Jeene® profile sizes will be different. Cut one piece of the end cap to match the size of the smaller profile.
- Prepare the larger profile to receive this end cap.

- Apply Aron Alpha 241 adhesive to the larger profile and squeeze it down to match the size of the end cap. Press the end cap firmly and evenly to the compressed profile and hold until a firm bond is achieved. Grind the end cap for a good smooth transition from larger seal to smaller seal.
- Prepare the smaller sized profile and the end cap that has just been applied to the larger profile.
- Apply Aron Alpha 241 adhesive to the smaller profile and press against the end cap of the larger profile holding until a firm bond is achieved.
- Install profiles as per standard installation procedures.



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