SPECIFICATION
07900/079500

Jeene®
Structural Sealing Joint System

PART 1 - GENERAL

1.01 Work Included

A. Work in this section includes the installation of expansion joint systems in areas indicated on drawings.

B. Related Work

- Elastomeric Concrete
- Polymer Concrete

1.02 Submittals

A. Samples - Submit one (1) sample at least 152mm (6”) long, of each profile type, for approval of the Engineer/Architect.

1.03 Product Delivery/Storage & Handling

A. Deliver materials in the original, intact manufacturer labeled containers.

B. Store materials between 4° - 32°C (40° - 90°F) in such a way as to prevent damage to containers or product.

1.04 Acceptable Manufacturers

A. All joints shall be as designed and manufactured by Watson Bowman Acme Corp., 95 Pineview Drive, Amherst, NY 14228

B. Alternate manufacturers and their products will be considered, provided they meet the design concept and are produced of materials that are equal to or superior to those called for in the base product specification.

C. Any proposed alternate systems must be submitted and receive approval 21 days prior to the bid. All post bid submissions will not be considered. This submission shall be in accordance with MATERIALS AND SUBSTITIONS.

- Any manufacture wishing to submit for prior approval must provide the following:

1. A working 6 inch sample of the proposed system with a letter describing how the system is considered superior to the specified system.
2. A project proposal drawing illustrating the recommended alternate system installed in the application, specific to the project.
3. Verifiable list of prior installations showing prior and successful experience with the proposed system.

4. Any substitution products not adhering to all specification requirements within, will not be considered.

1.05 Quality Assurance

A. Manufacturer: Shall be ISO-9001:2008, RC14001:2008 certified and shall provide written confirmation that a formal Quality Management System and Quality Processes have been adopted in the areas of, (but not limited to) engineering, manufacturing, quality control and customer service for all processes, products and their components. Alternate manufacturers will be considered provided they submit written proof that they are ISO 9001:2008, RC14001:2008 certified prior to the project bid date. Manufacturers in the process of obtaining certification will not be considered.

B. Warranty: The expansion control system shall be warranted when installed by the manufacturer's factory trained installer. Installation shall be in strict accordance with manufacturer's technical specifications, details, installation instructions and general procedures in effect for normal intended usage and suitable applications under specific design movements and loading conditions.

C. Manufacturer: Shall have a minimum ten (10) years experience specializing in the design and manufacture of expansion control systems.

D. Products: Expansion control systems shall be installed with manufacturer's blockout repair and infill materials.

E. Application: The specified expansion control system(s) shall be installed by the manufacturer's factory trained installer.

PART 2 - PRODUCT

2.01 General

A. The expansion joint system shall be a complete system designed by the manufacturer to withstand structural movement and harsh environmental conditions. The system consists of a preformed neoprene profile, installed using the same dimensions as the joint gap at mid-range temperature, bonded with a two-component epoxy adhesive, and pressurized during the adhesive cure time. It shall be installed by WBA Approved Installers. In addition, it shall be designed for application on the specified type of surface indicated on the project drawings.

2.02 Components and Materials

A. Profile - Polychloroprene (neoprene) elastomer, preformed by extrusion and vulcanized into its definitive shape, which is supplied in several configurations and dimensions, ranging from 1/4" to 5".

The profile shall have the following properties:

PROPERTY	ASTM METHOD	REQUIREMENT
Tensile Strength, min	D-412	2000 psi (13.8 MPa)
Elongation at Break, min	D-412	250%
Hardness, Shore A	D-2240	65 +/- 5
Oven Aging, 70hrs at 212ºF		

Tensile Strength, max loss Elongation at Break, max loss Change in Hardness	D-573	20% 20% 0 - 10 points
Oil Swell, 70hrs at 212ºF Weight Change, max	D-471	45%
Ozone Resistance, 70hrs at 104ºF	D-1149	No Cracks
Low Temperature Stiffing, 7 days at 14F Change in Hardness	D-2240	0 – 15 points

B. Adhesive - Two-component, thixotropic, epoxy-based adhesive, which is mixed at the job site. The adhesive shall have the following properties:

PROPERTY	**ASTM METHOD**	**REQUIREMENT**
Tensile Strength	D-638	4,000 psi (27 MPa)
Axial Compression	D 638	8,000 psi (55 MPa)
Pot Life at 68ºF (20ºC)	N/A	40 minutes
Flash Point	N/A	> 200ºF (93ºC)
Initial Cure at 68ºF (20ºC)	N/A	24 hours
Full Cure at 68ºF (20ºC)	N/A	7 days

Note: If the ambient air temperature is between 40ºF and 60ºF, an alternate cold weather epoxy shall be utilized

C. Pressurization is done through a valve with cap system. The profile is pressurized during installation and curing time of adhesive to assure complete bonding throughout gap/profile surfaces. Air pressure will bleed itself with time or air valve can be released at any time after 24 hours of installation.

PART 3 - EXECUTION

3.01 Project Conditions

A. Coordinate the installation of the joint system with related work. Protect installed units until completion of entire project.

B. Ambient temperature shall not be lower than 4°C (40°F) during installation. Note that gap size will change with cold and hot temperature extremes. Gap measurement should optimally be carried out at the mid-point of the average temperature range for the area of installation.

C. The environment should be free of dust, oil, grease, wax, moisture, and frost. The gap wall surfaces must be thoroughly cleaned.

D. No installation may be performed in rainy weather, or when rain is expected within one hour before installation. All surfaces must be completely dry prior to applying adhesive.

E. Personnel shall read the Material Safety Data Sheet for all components before beginning the installation.

F. Upon completion of this work, remove trash and debris on the site caused by work under this section.

3.02 Inspection

A. Verify that work done under other sections meets requirements. Notify Engineer/Architect in writing of any conditions requiring change order for additional treatment prior to application. A survey should be taken on the status of each gap, especially on rehabilitation work.

3.03 Preparation

A. All foreign materials must be totally removed from the gap. The heads must first be cleaned out by disc grinding or sandblasting and then vacuumed or blown with dry, oil free, compressed air before the two component epoxy adhesive is mixed and applied.

3.04 Installation

A. Expansion joint system is to be installed in strict accordance with the manufacturer's instructions by Watson Bowman Acme Approved Installers or under the supervision of Watson Bowman Acme Technicians.

B. Non durable and unsound concrete at the joint gap edge must be removed and the concrete must be totally repaired per the joint manufacturer. All cracks shall be repaired.

C. The profile shall be cut to the correct length of the appropriate gap for installation, without pulling or exerting excess tension.

D. Seal both ends of the profile (air tight) and install air valve. Inflate profile to assure there are no leaks in the profile. Deflate before installation.

E. Clean and abrade sides of profile per the manufacturer's instruction.

F. Mix adhesive according to manufacturer's directions only after all preparation of gap and profile are complete.

G. Apply adhesive to the inner gap walls in an even manner. In the same even fashion, apply adhesive to outer rigid sidewalls of profile.

H. Profile should be gradually inserted into the gap, without stress or compression. The installer should maintain the profile at the depth desired, by hand or by any convenient means. Clean away excess adhesive.

I. Pressurization should be done through the air valve with a heavy pump. Pressurization should be applied slowly so as not to cause the joint to squeeze adhesive out of the flanges on the sides of the joint.

J. Clean all excess adhesive around the edges and top of the joint with a trowel or scraping tool.

K. Allow epoxy adhesive to cure (usually 24 hours) and remove valve to bleed off air pressure.

3.05 Clean and Protect

A. Protect the Jeene® Structural Sealing Joint System during construction. Heavy construction vehicles will not be permitted to cross the joint without specific and

written permission by the Engineer. Subsequential damage to the system shall be repaired at the contractor’s expense.