Fire barrier expansion control system

Fire rated protection
Multi-directional movement
Durable, aesthetic finishes

Wabo® FireShield FSV & FSH

wbacorp.com
Wabo®FireShield (FSV & FSH)
Fire Barrier Expansion Joint System

Multi-Functional **Fire Rated** system that accommodates a broad range of structural movement. The complete package.

Wabo®FireShield is a second generation unified fire rated, sound attenuating, UV stable, thermal sealant system. The system features silicone faces on each side of a fire-retardant impregnated foam sealant. The silicone finish enhances the water resistant nature of the product and provides an aesthetic finish. Wabo®FireShield also has the ability to handle variations in joint size through incremental sizing. There is no drilling or modifying of the substrate required for installation.

**Wabo®FireShield FSV & FSH**
Recommended applications.
- All Interior and Exterior vertical expansion joint applications
- For use in various construction projects including healthcare, transportation, recreation, retail, commercial, educational, parking structures, stadiums, and water treatment facilities
**For Best Results**

**Tips to do it right.**

- Surfaces to be sealed must be free from dirt and debris.
- Do not install if the joint’s anticipated movement will exceed the seal’s movement range.
- Complete installation information is supplied with material and is also available from Watson Bowman Acme.
- Periodically inspect the applied material and repair localized areas as needed. Consult a Watson Bowman Acme representative for additional information.
- Make certain the most current version of the product data sheet is being used. Please consult the website (www.wbacorp.com) or contact a customer service representative.
- Proper application is the responsibility of the user. Field visits by Watson Bowman Acme personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.
- Store Wabo®FireShield FSV at a minimum of 68°F (20°C) for a minimum of 24 hrs prior to installation, regardless of temperature at location of installation.
- Store materials in a dry, enclosed area off the ground and out of direct sunlight.
- Do not install when substrate or ambient temperatures are below -14°F (-25°C) or above 95°F (35°C).
- **Warranty** - Includes a one year material warranty. Project specific warranties are available from the manufacturer upon request.

### Model No. Joint Opening Nominal Install J.O. (Size when ordering at mean temperature) Total Movement System Depth

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**FSV - vertical applications**

**FSH - horizontal applications**

*Other sizes available, contact WBA for details. Contact your WBA representative with your special design needs.

For more information, please visit www.wbacorp.com or call 1-800-677-4922.
**Wabo® FireShield FSV & FSH Fire Barrier Expansion Joint System**

**PRODUCT DATA SHEET**

**DESCRIPTION:**

Wabo® FireShield is a second generation unified fire rated, sound attenuating, UV stable, thermal and water resistant sealant system. It features water resistant silicone faces on each side of a fire-retardant impregnated foam sealant without the need for additional set of intumescent bellows. This fire-retardant impregnated pre-compressed foam does not rely on the silicone face or an intumescent coating to provide its fire rating.

Although designed to be used alone, it can also be installed behind in vertical FSV applications, and installed below in horizontal FSH applications. This is for for any metallic or elastomeric expansion joint system. With both sides coated, it may be placed with either side exposed to view adding to the versatility and increasing the aesthetic fireproof sealing options. The silicone finish enhances the water resistant nature of the product and provides an aesthetic finish. Wabo® FireShield also has the ability to handle variations in joint size through incremental sizing. There is no drilling or modifying of the substrate required for installation.

**RECOMMENDED FOR:**

- All interior and exterior expansion joint applications. FSV is for vertical applications and FSH is for horizontal
- For use in various construction projects including healthcare, transportation, recreation, retail, commercial, educational, parking structures, stadiums, and water treatment facilities

**PACKAGING/COVERAGE:**

- Shipped in nominal standard lengths of 6.5 LF (2 meters)
- Epoxy adhesive supplied as part of the system
- Silicone sealant and intumescent sealant for unions only
- For Wabo® FireShield FSV - silicone faces: multiple colors and custom colors available
- For Wabo® FireShield FSH - available in traffic grade off-white/gray color. Pick resistant option also available

**FEATURES**

<table>
<thead>
<tr>
<th><strong>FEATURES</strong></th>
<th><strong>BENEFITS</strong></th>
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<tr>
<td>Fire Rated</td>
<td>2 or 3 hr fire rating in accordance with UL-2079</td>
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<tr>
<td>Sound Attenuation</td>
<td>Minimizes sound transfer</td>
</tr>
<tr>
<td>Ease of Installation</td>
<td>No mechanical anchors needed to install system. Time and labor savings</td>
</tr>
<tr>
<td>Generous Movement Capability</td>
<td>Can accommodate structural movement up to +/-50%. Excellent for thin wall/slab applications</td>
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**TECHNICAL DATA**

**DESIGN INFORMATION:**

Wabo® FireShield is permanently resilient and will expand and contract with the movement of the joint under any weather condition.

- Wabo® FireShield has been tested and certified under UL 2079. It meets the requirements of ASTM E1966, ASTM E119 and ASTM E1399. UL 2079, like ASTM E1966, was developed to encompass the fire testing of ASTM E119 and movement cycling regime of ASTM E1399.
- It is also tested to ASTM E283, 330, 331 & 547 to confirm its sealing capabilities through its entire stated movement range. ASTM E90 testing has been completed to verify the sound attenuating properties of the system (test results available upon request).
- Movement Capability: +/-25% (50% total) or +/-50% (100% total) of the nominal material size, depending on the material selected.

**Available in sizes:**

- ½” (12 mm) to 4-1/2” (112 mm)
- Sizes 1” and greater supplied in ¼” increments
- Depth of seal for Wabo® FireShield is 4” (102 mm) deep

**AVAILABLE SIZES:**

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<tr>
<th>Model No. FSH</th>
<th>Model No. FSV</th>
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<th>“A” @ Mid. Nominal Install J.O. (gloss while ordering at mean temperature)</th>
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<tr>
<td>115FSH</td>
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<td>3.38</td>
<td>86</td>
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*For FSV: Other intermediate sizes available, up to 4.5” wide. Contact WBA for details.
**For FSH: Standard movement capability for this size is +/-25%, A +37%, -43% version also available upon request.
*Other sizes available, contact WBA for details. Contact your WBA representative with your special design needs.
**Application**:

Installation summary:

- Manufactured in 6.5 LF (2M) sticks which can be joined in the field to optional factory fabricated 90° factory transitions. These factory fabricated 90° units can be coated on both sides with the silicone coating allowing them to be installed as an upturn or downturn transition.
- Custom sizes are available to meet actual field conditions. Transitions end in an uncoated 90° miter to be adhered to another transition piece as used in walls-to-decks, treads and risers, parapets, curbs and other applications.
- 90° transitions can sometimes allow for much faster and secure installation by eliminating field cutting at angles. In vertical applications this system can be installed facing out from an exterior or interior wall and maintain its two hour fire rating.
- Wabo®FireShield is installed with an epoxy adhesive field applied to the sides of the Wabo®FireShield and on the face of the joint substrate.
- Product does not require an “injected bead” for its water resistant characteristics. The unions between each stick are made using a field applied silicone sealant and an intumescent sealant on the ends of the foam sealant.
- ASTM E90 Sound attenuation values for a 2” Wabo®FireShield System are a STC result of 54 and an OITC result of 48.

**For Best Results**:

- Surfaces to be sealed must be sound, dry, clean and free of oil, grease, laitance, rust and other foreign material.
- Remove dirt and other loose particles
- Do not install if the joint’s anticipated movement will exceed the seal’s movement range
- Complete installation information is supplied with material and is also available from Watson Bowman Acme
- Periodically inspect the applied material and repair localized areas as needed. Consult a Watson Bowman Acme representative for additional information
- Make certain the most current version of the product data sheet is being used. Please consult the website wbacorp.com or contact a customer service representative
- Proper application is the responsibility of the user. Field visits by Watson Bowman Acme personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite
- Store Wabo®FireShield at a minimum of 68°F (20°C) for a minimum of 24 hrs prior to installation, regardless of temperature at location of installation
- Store materials in a dry, enclosed area off the ground and out of direct sunlight
- Do not install when substrate or ambient temperatures are below 40°F (4°C) or above 95°F (35°C)
- Warranty - Includes a one year material warranty. Project specific warranties maybe available from the manufacturer upon request.

**Options**:

- Single Folded
- Double Sided
- Uncoated
- Pick Resistant Coating
- FSV Only: custom colors are available
- FSH Only: Traffic grade gray only
- Custom intermediate sizes are available

**For our most current information, please visit our website** @ wbacorp.com

Wabo®FireShield FSV & FSH System

rev. 10.2013

Wabo®FireShield FSV

vertical

Wabo®FireShield FSH

horizontal
SECTION 079000 /079500
Part 1 - General
1.01 Work Included
A. The work shall consist of furnishing and installing waterproof, fire rated expansion joints in accordance with the details shown on the plans and the requirements of the specifications. Preformed sealant shall be silicone pre-coated, preformed, pre-compressed, self-expanding, tensionless, 2 or 3 hour fire rated sealant system.

B. Related Work
- Division 3 – Cast in Place Concrete
- Division 7 - Thermal & Moisture Protection
- Division 7 - Sealants, Caulking and Waterproofing
- Division 7 - Joint Firestopping

1.02 Submittals
A. General – Submit the following according to Division 1 Specification Section.

B. Standard Submittal Package – Submit typical expansion joint drawing(s) indicating pertinent dimensions, general construction, expansion joint opening dimensions and product information.

C. Sample of material is required at time of submittal.

D. All products must be identified by a UL listing number and must be listed in the UL and ULC Online Certification Directories as proof that they have been tested according to UL 2079 and manufactured under UL’s “Follow Up” service.

E. Submit UL-issued Certificate of Compliance as proof product has been tested by UL and passed ANSI/UL 2079.

F. All products must be certified by manufacturer that they are not comprised of un-bonded vertical laminations and do not rely on a water based intumescent surface coating as part of the UL listed sealant system. Material exposed to the possibility of vandalism must have UL validation that the fire rated expansion joint will perform as listed with UL even if the surface bellows are vandalized or damaged. Exterior products must be certified by independent laboratory test report to exceed the requirements of curtain wall performance tests ASTM E330, E283-04, and E331. Product must meet or exceed hurricane-force wind loading with no deflection at both positive and negative pressures up to 4954 Pascals - equal to 200 mph winds (ASTM E330-02-procedure A).

G. All products must be certified by independent laboratory test report to ASTM E90-09 and to meet or exceed an STC 54 in STC 56 wall and OITC 48 rating in an OITC 47 wall.

H. All products shall be certified in writing to be: a) capable of being expanded from the mean joint size at 40°F to the stated maximum dimension without exerting any tension on the attached substrate; and b) capable of withstanding 150°F (65°C) for 3 hours while compressed down to the minimum of movement capability dimension of the basis of design product (-25% of nominal material size) then extended to the stated extension (+25%) without evidence of foam delamination or sealant face de-bonding from the material; and that the same material after the heat stability test and after first being cooled to room temperature will subsequently self-expand to the maximum of movement capability dimension of the basis-of-design product (+25% of nominal material size) within 24 hours at room temperature 68°F (20°C).
1.03 Product Delivery, Storage and Handling
A. Deliver products to site in Manufacturer's original, intact, labeled containers. All materials must have the WBA logo and the corresponding UL classification logo. Handle and protect as necessary to prevent damage or deterioration during shipment, handling and storage. Store in accordance with manufacturer's installation instructions.

1.04 Basis-of-Design
A. All joints shall be designed to meet the specified performance criteria of the project as manufactured by Watson Bowman Acme Corp, 95 Pineview Drive, Amherst, New York 14228.

B. Alternate manufacturers must demonstrate that their products meet or exceed the design criteria and must submit certified performance test reports performed by nationally recognized independent laboratories as called for in section 1.02 Submittals. Submittal of alternates must be made three weeks prior to bid opening to allow proper evaluation time.

1.05 Quality Assurance
A. The General Contractor will conduct a pre-construction meeting with all parties and trades involved in the treatment of work at and around expansion joints including, but not limited to, concrete, mechanical, electrical, HVAC, landscaping, masonry, curtain wall, waterproofing, fire-stopping, caulking, flooring and other finish trade subcontractors. All superintendents and foremen with responsibility for oversight and setting of the joint gap must attend this meeting. The General Contractor is responsible to coordinate and schedule all trades and ensure that all subcontractors understand their responsibilities in relation to expansion joints and that their work cannot impede anticipated structural movement at the expansion joints, or compromise the achievement of watertightness or life safety at expansion joints in any way.

B. 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 9001:2000 certified prior to project bid date. Manufacturers in the process of obtaining certification will not be considered.

C. Manufacturer: Shall have a minimum ten (10) years' experience specializing in the design and manufacture of Architectural Expansion Control and Fire Barrier Systems.

D. Wabo®FireShield FSH Only: Products - Fire Barrier System shall be installed with manufacturer's blockout repair materials in horizontal applications.

E. Warranty – Manufacturer's standard warranty shall apply.

LEED Building Performance Requirements:
1. The VOC of the silicone must not exceed 40 grams/liter.

2. Products must be proved to be certified by independent test report to exceed the requirements of curtain wall performance tests ASTM E330, E283-04, and E331. Product must meet or exceed hurricane-force wind loading with no deflection at both positive and negative pressures up to 4954 Pascals - equal to 200 mph winds (ASTM E330-02-procedure A).

3. Products must be proved to have been tested in accordance with ASTM C518-04 and demonstrate an R-Value per 1-inch (25mm) of depth of not less than 1.03 at as-installed nominal joint size compression.

4. Products must be proved to have been certified by independent test report to ASTM E90-09 and to meet or exceed the STC and OITC rating for the project.

5. Product must be proved by independent test report to have air permeability not to exceed 0.02 L/(s.m2) at 75 Pascals as required by the Air Barrier Association of America (ABAA) and in accordance with ASTM E283-04.

Part 2 - Product
2.01 General
A. Provide watertight, energy-efficient, two (2) or three (3) hour fire rated joint sealant with a factory applied Traffic grade silicone membrane coating designed to provide protection against moisture and water intrusion on horizontal surfaces. System shall perform waterproofing, fire rating, movement joint functions as well as add to thermal insulation and sound attenuation as the result of a single installation and without the addition of ancillary fire-blankets, mineral wool, cover plates. Cover plates can be used where appropriate but should not be a required part of the fire rated system. Profile shall be installed without use of invasive anchor systems.

B. Provide 2 or 3 hour fire rated expansion joint Wabo®FireShield as manufactured or supplied by WBA and as indicated on drawings for horizontal expansion joint locations.

C. Sealant system shall be comprised of the following components: 1) fire retardant, impregnated foam not comprised of un-bonded vertical laminations and will fully extend without putting tension on the substrate, 2) pre-coated on both sides with silicone proven not to de-bond or separate if exposed to thermal shock cycling, 3) field-applied epoxy or UL listed adhesive, 4) system must not rely on a water based intumescent surface coating as part of the 2 or 3 hour fire rated sealant system. 5) Silicone fillet beads may be used where appropriate to prove a uniform seal with the substrate. Impregnated foam material must be proven not to take a compression set over time and the fire rated joint sealant must not rely on “injected sealant bands” along the substrate for its sealing properties.

D. Material shall be capable of movements of -25%, +25% (50% total) to -50% +50% (100% total) of nominal material size depending on the anticipated movement of the joint design.
SPECIFICATION

Standard sizes from 1/2” (25mm) to 4-1/2” (112mm). Depth of seal is 4” (100 mm).

E. Silicone external color facings to be low-modulus, waterproof silicone factory applied to the foam at a width greater than maximum joint extension such that the joint is never under tension within its rated movement range. When compressed to final supplied dimension, a bellow(s) to handle movement must be created in the silicone coating. Silicone coatings to be available in a range of not less than 26 standard colors for coordination with typical building materials, with the option for custom colors. Separate colors may be chosen for each coated surface.

F. Wabo®FireShield FSV and FSH are to be installed using manufacturer’s standard field-applied epoxy or UL approved adhesive. The Wabo®FireShield is to be installed slightly recessed from the surface, such that when the bead of silicone is installed between the substrates and the foam and silicone bellow(s), the system will be essentially flush or slightly inset from the joint face.

G. Select the sealant system model appropriate to the movement and design requirements at each joint location that meet the project specification or as defined by the structural engineer of record.

H. Manufacturer’s Checklist must be completed by expansion joint subcontractor and returned to manufacturer at time of ordering material.

2.02 Fabrication

A. Wabo®FireShield by Watson Bowman Acme Corp must be supplied pre-compressed to less than the mean joint size, packaged in shrink-wrapped lengths (sticks). If stick lengths are required in lengths other than 6.56LF (2M) add at least 10 working days to the lead time.

B. Directional changes and terminations into horizontal plane surfaces can be provided by factory supplied 90-degree angles containing minimum 12-inch long leg and 6-inch long leg, or custom leg on each side of the direction change, or through field fabrication in strict accordance with published installation instructions. In most cases field conditions are such that the restrictive nature of the factory supplied corners do not conform to as built conditions and may outweigh the benefits. Consult manufacturer for proven field transition methods.

2.02 Finishes

A. Seals for Wabo®FireShield FSV Only – Standard color offering: Adobe Tan, Black, Blue Spruce, Bronze, Charcoal, Dusty Rose, Gray, Limestone, Natural Stone, Precast White, Rustic Brick, Sandstone.

B. Seals for Wabo®FireShield FSH Only – Standard color offering: Traffic Gray.

Part 3 - EXECUTION

3.01 Installation

A. Preparation of the Work Area

1. The contractor shall provide properly formed and prepared expansion joint openings constructed to the exact dimensions and elevations shown on manufacturer’s standard system drawings or as shown on the contract drawings. Deviations from these dimensions will not be allowed without the written consent of the engineer of record

2. The contractor shall clean the joint opening of all contaminants immediately prior to installation of expansion joint system. Repair cracked, spalled, irregular or unsound joint surfaces using accepted industry practices for repair of the substrates in question. Remove protruding roughness to ensure joint sides are smooth. Ensure that there is sufficient depth to receive the full depth (typically 4”) of the Wabo®FireShield system being installed. Refer to Manufacturer’s UL approved Installation Guide for detailed step-by-step instructions.

3. No drilling, or screwing, or fasteners of any type are permitted to anchor the sealant system into the substrate.

4. System to be installed by qualified sub-contractors only according to detailed published installation procedures and/or in accordance with job-specific installation instructions of manufacturer’s field technician.

3.01 - Clean and Protect

A. Protect the system and its components during construction. Subsequent damage to the expansion joint system will be repaired at the general contractor’s expense. After work is complete, clean exposed surfaces with a suitable cleaner that will not harm or attack the finish.
LIMITED WARRANTY:
Watson Bowman Acme Corp. warrants that this product conforms to its current applicable specifications. WATSON BOWMAN ACME CORP. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. The sole and exclusive remedy of Purchaser for any claim concerning this product, including, but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is the replacement of product or refund of the purchase price, at the sole option of Watson Bowman Acme Corp. Any claims concerning this product shall be submitted in writing within one year of the delivery date of this product to Purchaser and any claims not presented within that period are waived by Purchaser. IN NO EVENT SHALL WATSON BOWMAN ACME CORP. BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDES LOSS OF PROFITS) OR PUNITIVE DAMAGES. Other warranties may be available when the product is installed by a factory trained installer. Contact your local Watson Bowman Acme representative for details. The data expressed herein is true and accurate to the best of our knowledge at the time published; it is, however, subject to change without notice.

©2013 Watson Bowman Acme Corporation.
INSTALLATION PROCEDURE

PRODUCT INFORMATION

Manufacturer:
Watson Bowman Acme Corp
95 Pineview Drive
Amherst, NY 14228
(p) 800-677-4922
(f) 716-691-9239
wbacorp.com

Product Name:
Wabo® FireShield FSV System

Before Installation
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.

RECOMMENDED EQUIPMENT
Recommended tools include: tape measure, sharp knife, miter saw, painters tape, mineral spirits, clean cloth, isopropyl alcohol, duct tape, jiffy mixer, margin trowel, empty clean containers, caulking tool, and wood wedges.

Store material at minimum of 68°F (20°C) for a minimum of 24 hours prior to installation. Also make sure it is in a dry enclosed area making sure materials are off the ground and out of direct sunlight. Shaded areas recommended.

Components shown will vary in size depending on system model.
**INSTALLATION PROCEDURE**

6. Install next legnth and repeat until finished.

7. Remove any excess epoxy from the face of material using a clean, dry rag. Install a bead of silicone along the edge of the joint and tool firmly to bond with the substrates to ensure a proper bond and seamless appearance.

8. Coat exposed foam ends with intumescent caulk. Remove any excess epoxy or silicone left on the surface of the material substrate.

**LIMITED WARRANTY**

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Wabo®FireShield FSV System
rev. 10.2013
INSTALLATION PROCEDURE

PRODUCT INFORMATION

Manufacturer:
Watson Bowman Acme Corp
95 Pineview Drive
Amherst, NY 14228
(p) 800-677-4922
(f) 716-691-9239
wbacorp.com

Product Name:
Wabo® FireShield FSH System

Before Installation
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.

RECOMMENDED EQUIPMENT
Recommended tools include; tape measure, sharp knife, miter saw, painters tape, mineral spirits, clean cloth, isopropyl alcohol, duct tape, jiffy mixer, margin trowel, empty clean containers, caulking tool, and wood wedges.

Store material at minimum of 68°F (20°C) for a minimum of 24 hours prior to installation. Also make sure it is in a dry enclosed area making sure materials are off the ground and out of direct sunlight. Shaded areas recommended.

Components shown will vary in size depending on system model.
LIMITED WARRANTY

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@ wbacorp.com

Wabo®FireShield FSH System
rev. 10.2013
Wabo® FireShield FSV Vertical Fire Barrier Expansion Joint System

SYSTEM DETAIL

Wabo® FireShield FSV
Wall-to-Wall
Wall-to-Corner
Not to Scale

Notes:

1.) Please refer to the installation guide for information on splices, terminations, transitions, and additional details concerning adjacent construction.

2.) Minimum and maximum values shown on dimension chart are the limits for proper system performance (after movement occurs). Unless otherwise noted, the dimension shown at "A" Mid is the recommended installation joint opening at mean temperature.

3.) The system is shipped in nominal standard lengths of 6.5 ft (2 meters). If required, please consult with a WBA representative for the types and quantities of any chemical components needed for proper installation.

4.) Double-side configuration shown for reference only. Product available in one-sided, uncoated or Pick Resistant options as well. Available in custom colors. Contact your WBA Sales Representative for more information regarding ordering or specifying proper sizing.

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Wabo®FireShield FSH Horizontal Fire Barrier Expansion Joint System

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SYSTEM DETAIL

Wabo®FireShield FSH
Slab-to-Slab
Not to Scale

Notes:

1.) Please refer to the installation guide for information on splices, terminations, transitions, and additional details concerning adjacent construction.

2.) Minimum and maximum values shown on dimension chart are the limits for proper system performance (after movement occurs). Unless otherwise noted, the dimension shown at "A" Mid is the recommended installation joint opening at mean temperature.

3.) The system is shipped in nominal standard lengths of 6.5ft (2 meters). If required, please consult with a WBA representative for the types and quantities of any chemical components needed for proper installation.

4.) Double-sided configuration shown for reference only. Product available in one-sided, uncoated or Pick Resistant options as well. Contact your WBA Sales Representative for more information regarding ordering or specifying proper sizing.

5.) Available in Traffic Grade Silicone gray color only.

<table>
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<tr>
<th>Model No.</th>
<th>Min. Joint Opening &quot;A&quot; (Size when ordering at mean temperature)</th>
<th>Max. Joint Opening &quot;A&quot; (Size when ordering at mean temperature)</th>
<th>Total Movement</th>
<th>&quot;B&quot; Nominal Install J.O.</th>
<th>System Depth &quot;B&quot;</th>
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</table>

*Other sizes available, contact WBA for details. Contact your WBA representative with your special design needs.

**Standard movement capability for this size is +25%, -43% version also available upon request.
Technical Expertise
More than 60 years of practical experience and knowledge in the Expansion Control industry allows WBA to develop solutions and make recommendations for the right product choice for your application.

Innovation
Offering the broadest range of products and services in the construction industry, we are the only company servicing the entire portfolio of Bridge and Highway, Architectural, Parking and Stadium markets. We support these markets with a fully qualified team of professional engineers and designers backed by strong relationships with national testing labs and universities.

Custom Solutions
WBA provides more than just technical expertise - we supply engineered solutions that make good sense. We offer a growing range of high performance Wabo® products and systems to provide long lasting solutions to difficult repair problems. We are fully resourced to deliver results and exceed the expectations of our customers.

Quality
WBA is dedicated in providing the highest quality products and services to our customers. Our professional operations team employs the principles of lean manufacturing, and enterprise resource planning tools, all supported by our formal ISO 9001:2008, RC 14001 and AISC quality management systems.

Interested in our Wabo®FireShield systems?
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Find your local sales representative
wbacorp.com/contact-us/local-rep
1-800-677-4WBA (4922)

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