SPECIFICATION
Section 07900/079500
Previous 05800

Wabo®WeatherSeam
Model "WSW, WSE, WSC" Wall, Soffit and Ceiling
Seismic Expansion Control System

PART 1 - GENERAL

1.01 Work Included

A. The work shall consist of furnishing and installing expansion joints in accordance with the details shown on the plans and the requirements of the specifications. The joints are proprietary designs utilizing extruded elastomeric seals and aluminum profiles.

B. Related Work
- Miscellaneous and ornamental metals
- Flashing and sheet metal
- Sealants and caulking

1.02 Submittals

A. Template Drawings - Submit typical seismic joint cross-section(s) indicating pertinent dimensioning, general construction, component connections, and anchorage methods.

1.03 Product Delivery, Storage and Handling

A. Deliver products in each manufacturer's original, intact, labeled containers and store under cover in a dry location until installed. Store off the ground, protect from weather and construction activities.

1.04 Acceptable Manufacturer

A. All joints shall be as designed and manufactured by Watson Bowman Acme Corp., a BASF affiliate, 95 Pineview Drive, Amherst, New York 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 submittals will not be considered. This submission shall be in accordance with MATERIALS AND SUBSTITUTIONS.

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

1. A working 6" sample of the proposed system with a letter describing how system is considered superior to the specified system.

2. A project proposal drawing that illustrates the recommended alternate system installed in the wall or ceiling construction that is specific to the project. Typical catalog cut sections will not be considered.

3. Verifiable list of prior installations showing prior and successful experience with the proposed systems.

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, RC-14001:2008 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, RC-14001:2008 certified prior to project bid date. Manufacturers in the process of obtaining certification will not be considered.

B. Warranty: The Vertical Seismic Wall Series expansion control system's performance shall be warranted when installed by 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 specified design movements and loading conditions.

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

D. Application: The specified expansion control systems shall be installed by a factory trained installer certified in the proper installation of the expansion control and fire barrier systems.

PART 2 - PRODUCT

2.01 General

A. Provide seismic joint system that shows no exposed aluminum surfaces incorporating specially engineered elastomeric seals to facilitate movement. The system shall be capable of accommodating multi-directional seismic movement without stress to its components by incorporating seismic-centering bars that have been designed with circular sphered ends that lock, slide and rotate inside a corresponding extrusion cavity. In openings greater than 6 inches manufacturer is to provide a system incorporating multiple seals demonstrating movement without sag or distortion to the seal element. Single seal systems in openings greater than 6 inches that are simply supported by a preformed spring clip will not be allowed.

For walls, soffits and ceilings furnish Wabo®WeatherSeam, Model "WSW, WSE or WSE" Expansion Control System as manufactured by Watson Bowman Acme Corp. and as indicated on drawings.

2.02 Components and Materials

A. Aluminum Extrusions - Material shall conform to properties of ASTM B221, alloy 6063-T5.

B. Visual Seal - Extruded Elastomeric profile shall be designed with side lugs that mechanically lock into a corresponding aluminum profile. Incorporate features that allow a mechanical connection at all splices between sectional lengths of seal. Material shall be Santoprene or manufacturers alternate material exhibiting a shore A hardness of 70 +/-5.

Standard colors are: black, beige, gray and white.

C. Secondary Functional Seal - Extruded Elastomeric profile shall be designed utilizing a serpentine configuration allowing maximum movement and flexibility. Its side lugs shall mechanically lock into a corresponding aluminum profile. Utilization of a common flat sheet good material will not be acceptable. Material shall be a quality flame retardant vinyl with a minimum material thickness of .063".

D. Seismic-Centering Bar - (multiple seal systems only - WSW)
Shall exhibit circular sphered ends that lock and slide inside the corresponding aluminum extrusion cavity to allow freedom of movement and flexure in all directions including vertical displacement. Bar shall be molded or manufactured

incorporating corrosion resistant nylon components with sphered ends and 1" wide standard cross member for standard applications. Spacing shall be per manufacturer's recommendation and standard details. Utilize for 8 thru 12 inch openings and in combination with the pantograph control mechanism on 16, 20 and 24 inch openings

Bar shall exhibit the following physical properties to demonstrate ability to resist corrosion and fatigue.

PHYSICAL PROPERTIES

Molded End Profile:

Material :	Nylon
Color:	Black
Tensile Strength @ break:	ASTM D638 25,500 psi

Cross-Member:

Material:	Pre-tempered spring steel

Damage Mitigation - Test Requirements:

Seismic-centering bar must exhibit ability to disengage (controlled release) from expansion joint edge member(s) when seismic movement exceeds the specified maximum allowable opening. Submit independent test report demonstrating required design of seismic-centering bar.

Requirements

a) Equipment:	- Instron Machine
b) Orientation:	- Specimen subjected to tensile load with cross member parallel to direction of load
c) Specimens:	- Test 4(min)– select at random
d) Disengagement range (lbs) :	- 800 (min.) – 1250 (max.)

E. Pantograph Control Mechanism - The mechanism shall be manufactured from corrosion resistant molded nylon components utilizing stainless steel threaded fasteners during factory assembly. The pantograph mechanism shall be shipped to the jobsite and installed with a maximum spacing of 30". Where applicable, modify spacing for project specific exterior wind load requirements. Utilize for 9 inch openings and those ranging from15 thru 24 inches.

F. Adhesive - Provide Wabo®PrimaLub adhesive to install both visual and secondary elastomeric seals at exterior or other areas exposed to moisture. The adhesive shall be a one part moisture curing polyurethane and aromatic hydrocarbon solvent mixture which complies with ASTM D-4070.

G. Bedding Sealant - Furnish manufacturer's recommended polyurethane sealant for bedding compound when securing aluminum extrusions to adjacent construction at exterior or other areas exposed to moisture. Color: Black.

H. Hardware - Provide manufacturers standard self-tapping screw including plastic masonry insert anchor. Diameter shall be 1/4" (min.) with a maximum spacing of 18" o.c.

I. Accessories - Provide necessary and related parts, butt splice clips and devices required for complete installation.

J. Fire Barrier Assembly - Designed to provide the required fire endurance rating, minimize passage of smoke and accommodate dynamic movement without stress or degradation to its components. Test system in maximum joint width incorporating a field splice. Supply Wabo®FlameGuard or Wabo®ThermoShield Fire Barrier System as governed by joint opening, test requirements and fire rating.

2.03 Fabrication

A. Aluminum extrusions shall be supplied in 10 ft. lengths. The contractor shall be responsible for field cutting the extrusion to obtain the proper joint profile. All cutting and mitering of the seal required at directional changes shall be performed by the contractor in a neat and workmanlike manner utilizing manufacturers standard splice clips and recommended adhesive.

B. All anchor holes shall be field drilled in accordance with manufacturer's drawings. Spacing shall be a maximum of 18" o.c.

C. Pantograph Control Mechanism (where applicable) - Provide factory assembled mechanisms ready for field installation.

D. Fire Barriers - Ship manufacturer's standard assembly including fire caulks, sealants (if applicable) and hardware for the required hourly rating. Assemblies shall be miter cut in the field to accommodate changes in direction.

2.04 Finishes

A. Aluminum extrusions shall be supplied in standard mill finish.

B. Elastomeric seals shall be supplied in standard colors - Black, beige, gray and white.

PART 3 - EXECUTION

3.01 Installation

A. Protect all expansion joint component parts from damage during installation and thereafter until completion of structure.

B. Expansion joint systems shall be installed in strict accordance with the manufacturer's typical details and instructions along with the advice of their qualified representative.

C. Contractor shall provide proper and adequate adjacent construction to receive and support the seismic expansion control joint system. The supporting framework shall be of design to secure all threaded hardware and provide rigidity for the proper installation and function of the joint system.

3.02 Clean and Protect

A. Protect system and its components during construction. After work is complete in adjacent areas clean exposed surfaces with a suitable cleaner that will not harm or attack the elastomeric material.