SECTION 079500

EJC MODEL: PFH

Expansion Joint Covers

07 95 00 (079513)

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Division-1 General Requirements, apply to the work of this Section.

1.02 SUMMARY

A. This section includes the following:
   1. Interior Floor expansion joint covers.
   2. Interior Wall expansion joint covers.
   3. Interior Ceiling expansion joint covers.
   4. Exterior Floor expansion joint covers.
   5. Exterior Wall expansion joint covers.
   6. Roof expansion joint covers.
   7. Fire Rated Assemblies.

1.03 RELATED SECTIONS

A. Related work specified elsewhere includes:
   1. Cast-in-place concrete
   2. Precast concrete
   3. Unit masonry
   4. Sealants and caulking
   5. Cement plaster
   6. Gypsum wallboard systems
   7. Acoustical ceilings
   8. Fire stopping

1.04 REFERENCES

A. Publications listed herein are part of this specification to the extent referenced. The criteria established in the specifications shall take precedence over the standards referenced herein. (An example of a reference standard is provided below.)
   1. American Society for Testing and Materials (ASTM):
      a. ASTM B221, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes and Tubes.

1.05 DEFINITIONS

A. Maximum Joint Opening: Widest linear gap a joint system tolerates and in which it performs its designed function without damaging its functional capabilities.
B. Minimum Joint Opening: Narrowest linear gap a joint system tolerates and in which it performs its designed function without damaging its functional capabilities.
C. Movement Capability: Value obtained from the difference between widest and narrowest widths of a joint.
D. Nominal Joint Opening: The width of the linear opening specified in practice and in which the joint system is installed.

1.06 SYSTEM DESCRIPTION

A. Joint covers shall permit unrestrained movement of joint without disengagement of cover.
   1. Specify Vertical joint movement. (Specify for each building level: floor, wall, ceiling, roof).
   2. Specify horizontal joint movement. (Specify for each building level: floor, wall, ceiling, roof).
B. Allowable load on floor joint cover plate shall be uniform load of 550 pounds concentrated for standard and 2,200 pounds concentrated load for heavy-duty systems
C. Centering Bars shall be fully engage with the base members' tracks.
D. Fire rated joint covers shall have been tested by an independent, nationally recognized testing and listing entity in accordance with ASTM E1966 or UL 2079, where applicable at the full rated period. Covers shall be listed with an independent, nationally recognized testing and listing entity. Fire rating shall be [2 hours] not less than the fire rating of adjacent construction.

1.07 QUALITY ASSURANCE

A. Manufacturer: Obtain joint cover assemblies through one source from a single manufacturer.
B. Installer: Firm with not less than three (3) years of successful experience in the installation of systems similar to those required by this project and acceptable to the manufacturer of the system.

1.08 SUBMITTALS

A. Submit manufacturer's specifications and technical data, including Material Safety
   1. Product Data Sheets, installation instructions, and, as required, catalog cuts and templates to explain construction and to provide for incorporation of the product into the project. Data to clearly indicate movement capability of the cover assemblies and suitability of the material used in exterior for UV exposure.
   2. Submit certificates, copies of independent test reports, or research reports showing compliance with fire resistance rating and other specified performance requirements.
B. Submit shop drawings showing complete fabrication details for all joint covers, including required anchorage to surrounding construction, recesses, blocking, backing and connections between similar and dissimilar joint cover assemblies.
      1. Submit samples of each type of joint system indicated.
         a. Include manufacturers color charts showing the standard range of colors and finishes available for each exposed metal and elastomeric seal material.

1.09 DELIVERY, STORAGE AND HANDLING

A. Provide temporary protective cover on [anodized aluminum] [stainless steel] finished surfaces.
B. Deliver joint covers in new, clean, unopened crates of sufficient size and strength to protect materials during transit.
C. Store components in original containers in a clean, dry location.

1.10 SEQUENCING

A. Submittals shall be completed and approved prior to award of subcontract for system components.
B. Subcontract for the work of this section shall be planned to allow sufficient time for manufacturer's production and delivery scheduling.

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1.11 WARRANTY

A. Submit manufacturer's warranty that materials furnished will perform as specified for a period of not less than one (5) year when installed in accordance with manufacturer's recommendations.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Supplied by Ontario Specialty Architectural Products LLC,
PO Box 392567, Dubai, UAE; T: +97142776760 F: +97142776736
E-mail: sales@ontariosa.com Web: www.ontariosa.com
Under License of **McGill Architectural Products**,
1050 Squires Beach Road, Pickering, Ontario, CA L1W 3N8. Tel: (905) 420-0485
Toll free Tel: (888) 624-4557 Fax: (905) 420-4564, Toll free Fax: (888) 624-4558
Website: www.mcgillarchitectural.com E-mail: sales@mcgillarchitectural.com

2.02 MATERIALS

A. Metals

1. Aluminum:
   a. ASTM B221, alloy 6063-T6 for extrusions.
   b. ASTM B209, alloy 6063-T6 for plate.
   c. ASTM B209, alloy 5005-H34 for sheet.
2. Steel: ASTM A36 Plate
3. Stainless Steel: ASTM A666, type 304.
4. PVC Vinyl: Extruded flexible wall and ceiling joint cover.
5. Elastomeric seal: Preformed elastomeric membrane or extrusions to be installed in metal frames.
6. Compression Seals: ASTM D 2000 preformed rectangular elastomeric extrusions having internal baffle system and designed to function under compression.

B. Moisture Barrier: 1000micron reinforced polyethylene sheet.

C. Fire Barrier: Any material or material combination, when fire tested after cycling, designated to resist the passage of flame and hot gases through a movement joint and to meet performance criteria for required rating period.

D. Fasteners, accessories and other materials required for complete installation in accordance with the manufacturer's installation instructions.

2.03 FABRICATION

A. Fabricate joint cover assemblies as detailed. Provide centering bars, sealing washers, gaskets, splice covers, and closures as necessary for complete installation.
   1. Fabricate special transitions and corner fittings as required.
   2. Fabricate fire barrier as required for fire-resistant installations.
   3. Miter and weld joint systems as applicable.
   4. Provide necessary and related parts, devices, water barrier (if specified), anchors, form clips and other items required for water-resistant and fire-resistant installation.
   5. Provide corners, tees, transitions, curb risers, etc. assembled with connection [mitered] [interlocking] and secured to ensure proper fit and alignment as applicable.
   6. Special conditions shall be [shop] fabricated.

B. Shop assemble components and package with anchors and fittings. Provide components in single lengths where possible; minimize site splicing.

2.04 FINISHES (*Select all applicable items in this section)*

A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable.

2.05 ARCHITECTURAL JOINT SYSTEMS FOR BUILDING INTERIORS

A. Ontario Specialty Architectural Products shall manufacture expansion joint cover assemblies specified herein and indicated on the drawings. Other manufacturers may be accepted as substitutions only if the manufacturer can demonstrate product compliance with the requirements of the contract documents. Substitution requests must be reviewed prior to bid and must include the following information:
   1. Details
   2. ASTM- E1399 test reports for cyclic movement of architectural joint systems from an accredited lab
   3. Mock-ups
   4. Reference list of projects with similar products as those specified herein.
   5. Sample of written 5 year warranty

B. Floor-to-Floor Joint Systems: (delete if not required)

1. Basis-of-Design Product: Ontario Specialty Architectural Products. ***Model FG.***
2. Type: Aluminium system with elastomeric seal.
   a. Exposed Metal: Aluminum.
      1) Finish: Mill.
      2) Design: Recess aluminium frames
   b. Seal Material: OSA's Dual Durometer (TPR).
      1) Color: As selected by Architect from manufacturer's standard range.
      2) Gaskets to be dual durometer and have a flat profile that is free of ridges/reveals that collect dirt.
3. Movement Capability: +/- 25% of the gap size
4. Attachment Method: Mechanical anchors.
5. Load Capacity: 550lbs.
6. Fire-Resistance Rating: Provide joint system and fire-barrier assembly with a rating not less than that of adjacent construction. (Delete if not required)
7. Moisture Barrier: Manufacturer's standard. (Delete if not required)

C. Floor-to-Wall Joint Systems: (delete if not required)

1. Basis-of-Design Product: Ontario Specialty Architectural Products. ***Model FWG***
2. Type: Elastomeric seal.
   a. Exposed Metal: Aluminum.
      1) Finish: Mill.
      2) Design: Recess aluminium frames
   b. Seal Material: OSA's dual durometer (TPR).
      1) Color: As selected by Architect from manufacturer's standard range.
      2) Gaskets to be dual durometer and have a flat profile that is free of ridges/reveals that collect dirt.
3. Movement Capability: +/- 25% of the gap size
   Attachment Method: Mechanical anchors.
4. Load Capacity: 550Lbs.
5. Fire-Resistance Rating: Provide joint system and fire-barrier assembly with a rating not less than that of adjacent construction. (Delete if not required)
6. Moisture Barrier: Manufacturer's standard. (Delete if not required)

PART 3 – EXECUTION

3.01 EXAMINATION

A. Verify that field measurements [and blockout dimensions] are as shown on shop drawings prior to releasing materials for fabrication by the manufacturer.

B. Installer shall examine conditions under which work is to be performed and shall notify the contractor in writing of unsatisfactory conditions. Installer shall not proceed until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.02 PREPARATION

A. Prepare substrates according to architectural joint system manufacturer's written instructions.

B. Repair concrete slabs and blackouts using manufacturer's recommended repair grout of compressive strength adequate for anticipated structural loadings.

C. Coordinate and furnish anchorages, setting drawings, and instructions for installing joint systems. Provide fasteners of metal, type, and size to suit type of construction indicated and to provide for secure attachment of joint systems.

D. Cast-In Frames: Coordinate and furnish frames to be cast into concrete.

3.03 INSTALLATION

A. Comply with manufacturer's written instructions for storing, handling, and installing architectural joint assemblies and materials unless more stringent requirements are indicated.

B. Metal Frames: Perform cutting, drilling, and fitting required to install joint systems.

1. Install in true alignment and proper relationship to joints and adjoining finished surfaces measured from established lines and levels.
2. Adjust for differences between actual structural gap and nominal design gap due to ambient temperature at time of installation. Notify Architect where discrepancies occur that will affect proper joint installation and performance.
3. Cut and fit ends to accommodate thermal expansion and contraction of metal without buckling of frames.
4. Locate in continuous contact with adjacent surfaces.
5. Standard-Duty Systems: Shim to level where required. Support underside of frames continuously to prevent vertical deflection when in service.

6. Heavy-Duty Systems: Repair or grout blockout as required for continuous frame support and to bring frame to proper level. Shimming is not allowed.
7. Locate anchors at interval recommended by manufacturer, but not less than 3 inches from each end and not more than 24 inches

C. Seals in Metal Frames: Install elastomeric seals and membranes in frames to comply with manufacturer's written instructions. Install with minimum number of end joints. o.c.

1. Provide in continuous lengths for straight sections.
2. Seal transitions according to manufacturer's written instructions. Vulcanize or heat-weld field-spliced joints as recommended by manufacturer.
3. Installation: Mechanically lock seals into frames or adhere to frames with adhesive or pressure-sensitive tape as recommended by manufacturer.

D. Compression Seals: Apply adhesive or lubricant adhesive as recommended by manufacturer before installing compression seals.

E. Terminate exposed ends of joint assemblies with field- or factory-fabricated termination devices.

F. Fire-Resistance-Rated Assemblies: Coordinate installation of architectural joint assembly materials and associated work so complete assemblies comply with assembly performance requirements.

1. Fire Barriers: Install fire barriers to provide continuous, uninterrupted fire resistance throughout length of joint, including transitions and field splices.

G. Water Barrier: Provide water barrier at exterior joints and where called for on Drawings. Provide drainage fittings where indicated.

END OF SECTION