

1 General

1.1 **SECTION INCLUDES**

- .1 Design, labour, Products, equipment and services necessary for thermal spacers and support structure work in accordance with the Contract Documents.

1.2 **REFERENCES**

- .1 ANSI, H35.1M Alloy and Temper Designation Systems for Aluminum (Metric).
- .2 ASTM A480/A480M, Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet and Strip.
- .3 ASTM A653/A653M, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .4 CSA S136, Cold Formed Steel Structural Members.
- .5 CSA-S157-M, Strength Design in Aluminum.

1.3 **DESIGN REQUIREMENTS**

- .1 Coordinate with applicable cladding Sections as required for design of thermal spacer clips and girt support structure.
- .2 Design thermal clip system to incorporate shims where required to accommodate site conditions or an adjustable type of thermal clip with variable length to suit site conditions

1.4 **SUBMITTALS**

- .1 Product data:
- .1 Submit copies of manufacturer's Product data in accordance with Section 01 33 00 indicating:
- .1 Performance criteria, compliance with appropriate reference standard, characteristics, limitations.
- .2 Product transportation, storage, handling and installation requirements.
- .2 Shop drawings:
- .1 Submit shop drawings in accordance with Section 01 33 00 indicating:
- .1 Plans, elevations, details, profiles, dimensions, thickness of materials, methods of joining, special shapes, methods of anchoring, anchor and clip details, thermal isolation, and details of other pertinent components of the work, and compliance with design criteria and requirements of related work.
- .2 Interface of thermal spacer clip and girt support structure with adjacent construction.

- .3 Samples: Submit following samples in accordance with Section 01 33 00.
 - .1 Two samples of thermal spacer clip.
 - .2 Two 300 mm long samples of girt support structure.
 - .3 Two samples of each type fastener.
- .4 Extended warranty: Submit extended warranty signed and registered by the manufacturer providing the warranty in the name of the Owner for the timeframe and coverage specified in this Section.

1.5 **QUALITY ASSURANCE**

- .1 Installer's qualifications: Perform work of this Section by a company that has a minimum of five years proven experience in thermal spacer and support structure installations of a similar size and nature and that is approved by manufacturer.

1.6 **DELIVERY, STORAGE, AND HANDLING**

- .1 Store and handle to keep clean, dry, and protected from damage due to weather and construction activities.
- .2 Remove and replace all damaged and unsatisfactory materials which are deemed unsuitable for use at this Section's own expense.

2 Products

2.1 **ACCEPTABLE MANUFACTURERS**

- .1 Advanced Architectural Products.
- .2 Engineered Assemblies.
- .3 Interra Architectural Products.
- .4 Northern Facades Ltd.
- .5 Soprema.

2.2 **MATERIALS**

- .1 All materials under work of this Section, including but not limited to, paints and coatings are to have low VOC content limits.
- .2 Structural aluminum: ANSI, H35.1M and CSA-S157-M, alloy suitable for condition.
- .3 Galvanized sheet steel: ASTM A653/A653M Grade A, Z275 Commercial Quality zinc coating.
- .4 Stainless steel sheet and plate: ASTM A480/A480M, Type 304, Finish 2B.

- .5 Accessories, bracing, furring, bridging, plates, gussets, and clips: Formed sheet steel, thickness as necessary to meet structural requirements for special conditions encountered.
- .6 Isolation coating: Bituminous coating, acid and alkali resistant material.

2.3 THERMAL SPACER AND SUPPORT STRUCTURE

- .1 Thermal spacer clip system:
 - .1 Metal thermal spacer clip system with thermal break material, as designed by third party Professional Engineer retained under work of relevant cladding Section. Spacer clips to be complete with fasteners and in depth as indicated on Contract Drawings.
 - .2 Fasteners for spacers and attachment to back-up construction: Corrosion resistant, Type 316 stainless steel, in type as recommended by thermal spacer manufacturer.
 - .3 Sealant: Type as recommended by thermal spacer manufacturer.
- .2 Z-girts and hat channels:
 - .1 Z-girt or hat channel support system, as designed by third party Professional Engineer retained under work of relevant cladding Section.
 - .2 CAN/CSA S136-M; Minimum 1.2 mm thick, Z275 galvanized. Depth as indicated on Contract Drawings.
 - .3 Provide horizontal or vertical subgirts or hat channels with drilled holes for drainage where required.

3 Execution

3.1 EXAMINATION

- .1 Verify condition and dimensions of previously installed Work upon which this Section depends. Report defects to Consultant. Commencement of work of this Section means acceptance of existing conditions.
- 2. Verify that backup construction is aligned for proper installation of thermal spacers and support structure before commencing erection.
- .3 Protect metal surfaces in contact with concrete, masonry mortar, plaster or other cementitious surface with isolation coating.

3.2 INSTALLATION

- .1 Install thermal spacer clips and girt support structure, fasteners, and related items to lines and elevations indicated and in strict accordance with reviewed shop/erection drawings, manufacturer's written instructions and under direct supervision of the manufacturer. Carefully co-ordinate work with other Sections.
- .2 Install thermal spacer clip system, girts and hat channel support structure to the work of Sections 07 42 40, 07 42 41 and 07 46 19.

- .3 Apply isolation coating to supporting structural framing to prevent galvanic corrosion.
- .4 Confirm thermal clip accommodates orientation of vertical and horizontal sub-framing.
- .5 Clip thermal spacer to sub-framing and fasten clip and sub-framing to back-up structure, fastening through thermal spacer clip and into structure. Install sealant between clips and air, vapour and water resistive barrier to seal screw penetrations.
- .6 Completely install spacers, screws and sub-framing, prior to installing insulation.
- .7 Thermal insulation: Coordinate with Section 07 21 00 as required for installation of insulation.

3.3 **ADJUSTING**

- .1 Inspect and adjust after installation. Replace or repair defective work.
- .2 Adjust, and reconfigure as necessary to accommodate cladding systems incorporating thermal spacer clips and support structure. Do not reuse pre-drilled holes unless fastener size is increased.

END OF SECTION