

SECTION 07730

ROOF ACCESSORY ATTACHMENT SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Roof accessory attachment system for standing seam metal roofs and walls.
- B. Related Sections:
 - 1. Division 1: Administrative, procedural, and temporary work requirements.
 - 2. Section [07410 - Metal Roof Panels:] [07610 - Sheet Metal Roofing:] [_____ - _____:] Metal roof system.
 - 3. Section [07721.01] [07721.02] - Snow Guards: Snow guards for metal roof system.
 - 4. Section [_____ - _____]: Roof-mounted [equipment.] [walkways.] [parapet bracing.] [solar panels.] [accessories.] [_____.]
 - 5. Section [_____ - _____]: Roof-mounted piping.
 - 6. Section [_____ - _____]: Roof-mounted conduit.

1.2 REFERENCES

- A. Aluminum Association (AA) - Aluminum Standards and Data, 2003 Edition.
- B. ASTM International (ASTM):
 - 1. B85-03 - Standard Specification for Aluminum-Alloy Die Castings.
 - 2. B221-04a - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - 3. E527-83(2003) - Standard Practice for Numbering Metals and Alloys.

1.3 SYSTEM DESCRIPTION

- A. Roof accessory attachment system to provide attachment to standing seam metal roofs:
 - 1. With only minor dimpling of panel seams.
 - 2. With only round point set screws.
 - 3. Without penetrations through roof seams or panels.
 - 4. Without use of sealers or adhesives.
 - 5. Without voiding roof warranty.

1.4 SUBMITTALS

- A. Submittals for Review:
 - 1. Shop Drawings: Show locations of clamps on roof, clamp spacing, and type of component being attached.
 - 2. Product Data: Include product description and installation instructions.
 - 3. Samples: Samples of typical clamp.
- B. Quality Control Submittals:
 - 1. Test results: Results of product load testing performed on panel seams.
- C. Sustainable Design Submittals:
 - 1. Regionally manufactured products: Certify location of material manufacturer and distance from manufacturer to project site.
- D. Closeout Submittals:
 - 1. Certification: Installer's certification that roof attachment system was installed in accordance with manufacturer's instructions and approved Shop Drawings.

1.5 QUALITY ASSURANCE

- A. Load Testing:
 - 1. Provide product tensile load testing performed by a recognized independent testing laboratory.
 - 2. Test loading to failure on mockup of specific panel seams proposed for this Project, performed in direction parallel to seams.
- B. Mockup:
 - 1. Size: [Minimum of [two] [____] panel seams.] [____.]
 - 2. Show: Panel seams, clamps, and roof accessory being attached.
 - 3. Locate [where directed.] [____.]
 - 4. Approved mockup may remain as part of the Work.

1.6 WARRANTIES

- A. Provide manufacturer's 1 year warranty providing coverage against defects in materials and workmanship.

1.7 MAINTENANCE

- A. Extra Materials: Provide [30] [____] extra clamps with set screws and attachment bolts.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on products by Metal Roof Innovations, Ltd.
- B. Substitutions: [Under provisions of Division 1.] [Not permitted.]

2.2 COMPONENTS

- A. Standard Clamps:
 - 1. Manufactured from 6061-T6 aluminum extrusions conforming to ASTM B221 or aluminum castings conforming to ASTM B85 and to AA Aluminum Standards and Data.
 - 2. Clamp model: No. [S-5-U.] [S-5-E.] [S-5-T.] [S-5-K.] [S-5-Z.] [S-5-R.] [S-5-T2.]
 - 3. Set screws: 300 Series stainless steel, 18-8 alloy, 3/8 inch diameter, with round nose point, two per clamp. Cup-point setscrews are not permitted.
 - 4. Attachment bolts: 300 Series stainless steel, 18-8 alloy, 10 mm diameter, with flat washers.

**** OR ****

- B. Mini Clamps:
 - 1. Manufactured from 6061-T6 aluminum extrusions conforming to ASTM B221 or aluminum castings conforming to ASTM B85 and to AA Aluminum Standards and Data.
 - 2. Clamp model: No. [S-5-U Mini.] [S-5-E Mini.] [S-5-T Mini.] [S-5-Z Mini.]
 - 3. Set screw: 300 Series stainless steel, 18-8 alloy, 3/8 inch diameter, with round nose point, one per clamp. Cup-point setscrews are not permitted.
 - 4. Attachment bolts: 300 Series stainless steel, 18-8 alloy, 8 mm diameter, with flat washers.

**** OR ****

- C. Clamps:
 - 1. Manufactured from red brass, Copper UNS Alloy No. C23000.
 - 2. Clamp model: No. S-5-B.
 - 3. Set screws: 300 Series stainless steel, 18-8 alloy, 3/8 inch diameter, with round nose point. Cup-point setscrews are not permitted.
 - 4. Attachment bolts: 300 Series stainless steel, 18-8 alloy, 10 mm diameter, with flat washers.

**** OR ****

- D. Mini Clamps:
1. Manufactured from red brass, Copper UNS Alloy No. C23000.
 2. Clamp model: No. S-5-B Mini.
 3. Set screw: 300 Series stainless steel, 18-8 alloy, 3/8 inch diameter, with round nose point, one per clamp. Cup-point setscrews are not permitted.
 4. Attachment bolts: 300 Series stainless steel, 18-8 alloy, 8 mm diameter, with flat washers.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to beginning installation, verify that:
1. Panel seaming is complete.
 2. Panel attachment is sufficient to withstand loads transferred from clamps.
 3. Installation will not impeded roof drainage.

3.2 PREPARATION

- A. Clean seam areas to receive clamps; remove loose and foreign matter that could interfere with installation or performance.

3.3 INSTALLATION

- A. Install clamps in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Place clamps in neat, straight rows, evenly spaced.
- C. Place both set screws on same side of clamp.
- D. Tighten set screws to manufacturer's recommended torque.
- E. Randomly test set screw torque using calibrated torque wrench.

END OF SECTION