

GUIDE SPECIFICATIONS
EXTERIOR SUN CONTROL SPECIALTIES - FIXED AEROFOIL LOUVER BRISE SOLEIL SYSTEM

Division 10 - Specialties
Section 10.000 □ Fixed aerofoil louver brise soleil system

1.0 GENERAL

1.1 RELATED SECTIONS:

- | | | | |
|-------|---------|-------|------------------------------|
| 1.1.1 | Section | 0□ .. | Structural steel |
| 1.1.2 | Section | 08920 | Glazed aluminum curtain wall |
| 1.1.3 | Section | 0□ .. | Aluminum cladding |

Products supplied by this section and installed by other trades:

Specifier co-ordinate this work with designated trades in other sections of these project specifications.

- 1.1.4 Fixed aluminum aerofoil louver brise soleil system installed to the window wall as indicated on the architectural drawings.
- 1.1.5 Steel or aluminum attachment brackets for fixed aerofoil louver brise soleil system

1.2 SUMMARY:

- 1.2.1 Provide exterior fixed aluminum aerofoil louver brise soleil system with related specified hardware to complete the installation to the following locations:
Specifier provide the scope of the work
- 1.2.2 Brise soleil system shall be mounted to brackets protruding from the window wall / facade as indicated on the architectural drawings
- 1.2.3 Aluminum cladding supplied and installed by other trades shall be coordinated with this trade to ensure smooth integration of the specified system

1.3 QUALITY ASSURANCE:

- 1.3.1 All bidders submitting bids on the work of this section shall meet or exceed the quality of materials, components and assemblies herein. Bidders who do not comply with these specifications shall refrain from submitting a bid
- 1.3.2 Alternate bids, alternate products shall be submitted to the Design Consultant ten (10) days prior to tender closing. Alternate bids can only be submitted as an alternate to the specified base bid product
- 1.3.3 Manufacturer shall have a minimum of fifteen (15) years experience in the manufacture of the specified shading system. All work specified under this section shall be supplied by one subcontractor
- 1.3.4 Conform to applicable Building Codes, relevant local codes and all other standards noted
Specifier provide details of any specific codes to be met
- 1.3.5 Install one complete sample with accessories on site. Review the installation before proceeding with the remainder of the work. Adjust sample installation, as required, to gain acceptance. Accepted work may form part of the final installation

1.4 SUBMITTALS AND TEST REPORTS:

- 1.4.1 Submit fully detailed drawings prepared in AutoCAD 2000 version format showing all components, finishes and other construction conditions, installation, controls and all applicable dimensions according to Section 01300 □ Submittals
- 1.4.2 Submit structural calculations for local approval, taking account of maximum potential wind and snow loads
- 1.4.3 Submit duplicate samples of the key components of the specified fixed horizontal louver system with the specified finish. Minimum size 40□ (1000mm) for review
- 1.4.4 Submit duplicate samples of the specified brackets and attachment methods

- 1.4.5 Submit duplicate copies of maintenance instructions including the name, address and other contact details of local service company

1.5 INSPECTION / PREPARATION

- 1.5.1 Verify that the structure necessary to carry the brise soleil system is a proper installation and secure
- 1.5.2 Notify general contractor in writing of any deficiencies in the work of other trades that would affect the fixed horizontal louver system
- 1.5.3 Make accurate measurements at the site before fabrication. Check layout of glazing framing sections, spans and loading capabilities

1.6 DELIVERY, STORAGE AND HANDLING:

- 1.6.1 Do not deliver to site until areas to receive the brise soleil system are completely finished
- 1.6.2 Deliver materials in original protective wrappers or containers, with manufacturer's labels and sealed intact
- 1.6.3 Handle and store materials in accordance with the manufacturer's recommendations, protecting materials and finishes from damage or soiling

1.7 WARRANTY:

- 1.7.1 Provide a limited manufacturer's warranty from date of Substantial Completion covering the following periods:
 - Aluminum components and steel hardware Two (2) years
 - Aluminum and steel finishes Ten (10) years
- 1.7.2 Provide a limited installation warranty from date of Substantial Completion of one (1) year

2.0 PRODUCTS

2.1 MANUFACTURER:

- 2.1.1 Arc Structures, Inc.
 - 1, 115 □ 28 Street SE
 - Calgary, Alberta,
 - Canada T2A 5K4
 - Tel: 403 204 8699
 - Fax: 403 204 8676
 - e-mail: sales@arcstructures.com
 - Web: www.arcstructures.com

2.2 SYSTEM:

- 2.2.1 System to comprise:
 - Specifier select appropriate option*
 - 1. Factory assembled panels, **or**
 - 2. Continuous system with aerofoil louvers fixed on site to projecting support arms

2.3 MATERIALS:

- 2.3.1 Aluminum and steel hardware and brackets:
 - Specifier: Dependent upon the system selected above, certain items in the section will need to be deleted*

Mounting brackets:
Mounting brackets to be supplied for the main system

Mounting brackets to be supplied for brace arms (optional)

Specifier select appropriate option

1. System to be attached to steel or aluminum plates projecting from the window wall, supplied by the window wall manufacturer, or
2. System to be attached to mounting brackets to be supplied by the manufacturer of the brise soleil system. Brackets to fix to:

Specifier select the appropriate option

- a. Projecting studs supplied by the window wall manufacturer
- b. Nosing of the window wall mullions
- c. Brick or block work, using resin anchors or similar
- d. Studs (provided by the structural steel contractor) projecting through the cladding
- e. Steel work behind the cladding using engineered steel or aluminum spacers to take up the distance between the steel structure and the cladding, or

Mounting brackets shall be manufactured from engineered wall thickness to support the full weight of the system and applied wind and snow loads including the safety ratio as determined by the local building and construction codes.

Mounting assembly will be equipped with attachment provision for cladding integration, as appropriate. Method of attaching to the structure to be coordinated with the structural steel contractor or the window wall contractor as appropriate.

Aerofoil louvers:

- a. The extruded aluminum aerofoil louver shall be x wide and x thick in the center. *Specifier to insert dimensions*. The aerofoil louver shall be elliptically shaped and shall be supplied as a single piece extrusion. Multiple extrusions mechanically attached together to form the complete elliptical profile shall not be acceptable
- b. The aerofoil fin shall be supplied with aluminum end plates to fit precisely over the extruded profile to prevent infiltration of weather elements and insects. The end caps shall be mechanically attached to the aluminum extrusion. **Optional**

Support arms

- a. Aluminum or steel support arms manufactured from engineered thickness to support full weight and applied wind and snow load of brise soleil
- b. General profile of the support arms to be in accordance with architect's drawing no. (*Specifier to insert drawing reference*)

Brace arms (optional):

- a. Brace arms designed to cope in both expansion and compression with the maximum calculated loads
- b. General design of the brace arms to be in accordance with architect's drawing no. (*Specifier to insert drawing reference*)

2.3.2 Material quality and coatings:

- a. All extruded aluminum components shall be extruded from 6063-T6 quality aluminum
- b. All aluminum components shall have the following finish: *Specifier select appropriate option*
 - Two (2) coat fluoropolymer finish to a standard non-metallic color, or
 - Three (3) coat fluoropolymer finish to a standard metallic color, or
 - Polyester powder coated finish to a standard color, or
 - Clear anodized finish according to AA-M12C22A31
- c. Steel components shall be manufactured from mild steel Fe230G while any stainless steel components shall be manufactured from Stainless 18-8
- d. Steel components shall be hot dip galvanized or zinc plated

3.0 EXECUTION

3.1 FABRICATION:

- 3.1.1 Brise soleil system components manufactured and assembled allowing for custom installation techniques to suit project requirements
- 3.1.2 Finished assemblies shall be square, true to size and free from twist or other defects that could affect their strength or appearance. Factory applied finish should be uniform, smooth and without blemishes

3.2 INSTALLATION:

- 3.2.1 Install work using skilled tradesman and install in strict accordance with manufacturer's recommendations.
- 3.2.2 All items installed, plumbed, squared and rigidly anchored maintaining uniform clearances and accurate alignment measurements
- 3.2.3 The brise soleil system shall be pre-measured and manufactured off-site

3.3 ADJUSTING AND CLEANING:

- 3.3.1 Adjust components as required to ensure trouble free performance
- 3.3.2 Prior to Substantial Completion clean down once the brise soleil system
- 3.3.3 Replace work which cannot be satisfactorily repaired, adjusted or cleaned.

END