

# TORSION SPRING CEILINGS – SERIES 3000

## SECTION 09 54 50

### **PART 1 – GENERAL**

#### **1.01 SECTION INCLUDES:**

- A. The Torsion Spring Ceilings - Series 3000 is fully accessible. It can be provided as a flat or segmented or undulating or convex or concave vault. For curved Ceiling Systems, the radii should not be less than 48". The System consists of a Suspension System made of extruded aluminum members to form a continuous surface.
- B. Panels engage into maximum 5' wide module with Torsion Springs. All fasteners are concealed.

#### **1.02 RELATED DOCUMENTS/SECTIONS:**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions.
- B. Division 1 Specification sections apply to work of this Section.
- C. Finish Schedule or Finish Legend apply to work of this Section.

#### **1.03 REFERENCES:**

- A. GENERAL
  - 1. Comply with applicable requirements of the following, except where more stringent requirements are indicated by building codes.
- B. ASTM (American Society for Testing and Materials)
  - 1. ASTM C635, Standard Specifications for Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
  - 2. ASTM C636, Recommended Practice for Installation of Metal Suspension System for Acoustical Tile and Lay-In Panels.
- C. CISCA Ceiling Systems Installation Handbook.

#### **1.04 DESIGN/PERFORMANCE REQUIREMENTS:**

- A. All components of the Torsion Spring Ceilings – Series 3000 shall be provided by one (1) Manufacturer to ensure single source responsibility and quality control.

#### **1.05 SUBMITTALS:**

- A. Submission must be made within ten (10) working days of the General Contract Award to avoid project delay.
- B. Product Data: Submit Manufacturer's:
  - 1. Product Specifications
  - 2. Detail Drawings
  - 3. Installation Instructions

- C. Shop Drawings: Submit Shop Drawings for fabrication and installation of Torsion Spring Ceilings - Series 3000 including the following:
  - 1. Location of Torsion Spring Ceilings - Series 3000
  - 2. Specified radii (if applicable)
  - 3. Panel thickness
  - 4. Perforation pattern
  - 5. Finish
  - 6. Tolerances
  - 7. Panel size
  - 8. Acoustical media
- D. Samples:
  - 1. Submit three (3) samples consisting of Suspension Tees with Panels and Torsion Springs attached.
- E. LEED Requirements if applicable (LEED is a registered trademark of USGBC)
  - 1. Materials and Resources
    - a. MR Credit 4 – Recycled Content
    - b. MR Credit 5 – Regional Materials
  - 2. Indoor Environmental Quality
    - a. IEQ Credit 4.2 – Low Emitting Materials, Finishes
- F. Closeout Submittals
  - 1. Provide Manufacturer’s Cleaning and Maintenance Instructions
  - 2. Warranty Documents

**1.06 QUALITY ASSURANCE:**

- A. Manufacturers’ Qualifications: Furnish components from one (1) Manufacturer with a minimum of ten (10) years of experience in the fabrication of extruded aluminum ceiling specialties.
- B. Installer’s Qualifications: 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.

**1.07 PRODUCT DELIVERY, STORAGE AND HANDLING:**

- A. Deliver Panels and all system hardware to the job site in Manufacturer’s original packaging, unopened and undamaged, just prior to installation.
- B. Avoid warpage and damage by storing Panels and all system hardware above floor, flat and in a dry, humidity and temperature controlled interior location.
- C. Follow Manufacturer’s instructions and exercise care during off loading, handling and installation to avoid damage and marring of finishes.

**1.08 SEQUENCING:**

- A. Substitute Products: Alternate proposals for substitute products will not be accepted unless approval is issued in addenda.
- B. Contract Execution: Submittals shall be completed and approved prior to award of subcontract for system components.
- C. Manufacturer’s Production Schedule: Sub-contract for the work of this section shall be planned to allow sufficient time for Manufacturer’s production and delivery scheduling.

## **1.09 WARRANTY:**

- A. Furnish Manufacturer's:
  - 1. Warranty that materials furnished will perform as specified for a period of not less than one (1) year from date of material shipment when installed in accordance with Manufacturer's recommendations.

## **PART 2 - PRODUCTS**

### **2.01 MANUFACTURERS:**

- A. Acceptable System: Torsion Spring Ceilings - Series 3000 shall be manufactured by Gordon, Inc. For all inquiries contact, Gordon, Inc., 5023 Hazel Jones Road, Bossier City, LA 71111, (800) 747-8954.
- B. The listed Manufacturer shall not be construed as closing specifications to other prospective Manufacturers, but rather as establishing a level of quality in a metal system. Other systems may be submitted for approval, as provided for in the specifications at least ten (10) working days prior to submission of bids. Companies desiring to submit a proposal shall submit all descriptive information of the system proposed including photographs and Shop Drawings of at least three (3) projects similar in detail and scope.

### **2.02 PRODUCT CONSTRUCTION:**

- A. Torsion Spring Ceilings - Series 3000 shall be manufactured of aluminum components. Suspension Components shall be extruded aluminum of standard 6063 T-5 / T-6 aluminum alloy.
  - 1. Optional roll formed steel suspension tees are available for flat torsion spring ceiling systems. Contact Factory for available sizes.
- B. Materials: Panels shall be aluminum 3003-H14 in a maximum 5' wide module, and fastened to the Suspension Members with concealed Torsion Springs. Panels are 0.040" minimum thickness. When perforated, the Panels will have a non-perforated border, size of which to be determined. Panels have up-turned edges.
- C. Optional Accessories:
  - 1. Extruded aluminum Perimeter Trim to conform to the profile of the Torsion Spring Ceilings - Series 3000 and provides a finished edge detail or Wall Angle or Custom Perimeter Trims are also available. Contact factory for more details.
  - 2. Black sound absorbing non-woven fabric backer – NRC 0.70-0.85 or PVC wrapped acoustical pad (1" thick x 1.5 lb density) is also available as specified. Contact factory for suitability with specified Panel.

### **2.03 FINISHES:**

- A. All Panels shall receive 5-stage pretreatment with dried-in-place conversion coating prior to receiving an electrostatically applied AAMA 2604 or AAMA 2605 compliant powder coating finish, depending on final application.

1. Color to be selected from Gordon, Inc.'s list of Standard Colors (Custom Colors also available).
  - a. Antimicrobial finishes available
- B. Stainless Steel finishes are brush #4, #8, custom mechanical, or custom options available.
- C. Panels may have a factory-applied wood-look finish:
  1. Laminated Wood-Look Films – Series 1
  2. Laminated Wood-Look Films – Series 2
  3. Wood-Look Paints

#### **2.04 FABRICATION:**

- A. Provide Suspension Tees to specified ceiling layout.
- B. Panels are provided to specified module sizes. When Wall Angle is used at perimeters, Panels will be field cut at perimeter.

### **PART 3 - EXECUTION**

#### **3.01 EXAMINATION:**

- A. Examination of Surfaces: Installer must examine conditions under which work is to be performed and must notify Contractor in writing of unsatisfactory conditions.
- B. Verify that field measurements and block-out dimensions are as shown on Shop Drawings.

#### **3.02 PREPARATION:**

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the Manufacturer to achieving the best result for the project conditions.

#### **3.03 INSTALLATION:**

- A. General: Comply with Manufacturer's printed instructions, governing regulations for Seismic Codes, and the Ceiling & Interior Systems Construction Association Standards applicable to work.
- B. Space Enclosure: Do not install any work until space is enclosed and weatherproofed, wet-work in space is completed and nominally dry, work above ceilings is complete, and temperature and humidity shall be continuously maintained at values near those of final occupancy.

#### **3.04 CLEANING:**

- A. Follow Manufacturer's cleaning instructions for specified finish.

#### **3.05 PROTECTION:**

- A. Procedures: Care should be taken during the remainder of construction to protect the Torsion Spring Ceiling - Series 3000 from damage.

- B. Damage to Finished Work: Finished units shall be without damage. Damage shall be repaired by the Contractor at the expense of the party damaging the material, as in accordance with the contract requirements.

**END OF SECTION**