

## Aluminum I-Bar SI Series – Product Specification Guide

### How to Specify:

The following information provides a model specification format for architectural and engineering specification sections that, when applied, will be consistent with the Three-Part Section Format of The Construction Specifications Institute (CSI) for specifications serving the construction industry. The CSI specification section for Grating is listed in Section 05 53 00, Metal Fabrications - Metal Gratings. These specifications are intended for use as a guide for architects and engineers and may need to be altered or modified to fit the specific conditions of the application in question.

### PART 1: GENERAL

#### 1.1 Scope

The contractor shall provide all labor, materials, equipment and incidentals as shown, specified and required to furnish and install grating, stair treads and frames.

#### 1.2 Quality Assurance

A. Comply with applicable provisions and recommendations of the following standards:

1. ANSI/NAAMM MBG 531-09 (Metal Bar Grating Manual) and MBG 533-09 (Welding Standards for Fabrication of Steel, Stainless Steel and Aluminum Bar Grating).
2. Aluminum: ASTM B221, Aluminum Alloy, Extruded Bars, Rods, Wire, Shapes and Tubing.

#### 1.3 Submittals

- A. The contractor shall submit for approval shop drawings for the fabrication and erection of all grating work. Include plans, elevations, and details of sections and connections. Show type and location of all fasteners.
- B. The contractor shall submit manufacturer's catalog pages, specifications, load tables, anchor details and standard installation details.
- C. Grating samples shall be submitted for approval as required.

### PART 2: PRODUCT

1. Grating: Aluminum Swage Locked I-Bar Grating (SI Series) by Pleasant Mount Welding, Inc., or approved equal.
2. Bearing Bars: I-Bar section with  $\frac{1}{4}$ " flange width on a maximum of  $1\frac{3}{16}$ " centers. (Note: Other spacings may be specified at the discretion of the architect/engineer.) See available grating profiles for SI-Series on this sheet.
3. Crossbars: Square bars oriented at 45° and locked perpendicular to bearing bars at a maximum of 4" on center. (Note: 2" crossbar centers may be specified at the discretion of the architect/engineer.)
4. Surface: Flanges have a striated surface and may also have a slip resistant coating applied if required.
5. Loading: Grating to carry pedestrian loading equal to a uniform load of 100 lbs. per square foot over the required clear span with deflection not to exceed  $\frac{1}{4}$ ". Note: alternate loading requirements may be specified at the discretion of the architect/engineer (base grating depth on loading and clear span requirements).
6. Bearing bars and banding shall be Aluminum Type 6063-T6 and Crossbars shall be 6063-T1.
7. Finish: Standard Mill Finish. Optional A-41 Clear Anodizing available.
8. Fabrication and Tolerances: In accordance with the ANSI/NAAMM MBG 531-09 Metal Bar Grating Manual.
9. Provide appropriate fasteners for type, grade, and class required for the approved anchoring system.

### PART 3: EXECUTION

#### 3.1 Installation

A. Prior to grating installation, contractor shall inspect supports for correct size, layout and alignment. Any discrepancies between contract drawings and supporting structure determined to be detrimental to grating placement shall be reported in writing to the architect or owner's agent prior to grating placement.

B. Install grating in accordance with shop drawings and standard installation clearances as recommended by the ANSI/NAAMM MBG 531-09 Metal Bar Grating Manual.

C. Cutting, Fitting and Placement.

1. Fabricate cutouts in grating sections for penetrations indicated. Arrange cutouts to permit grating removal without disturbing items penetrating gratings. Band ends and cuts in grating with bars of same size and material as bearing bars.
2. Utilize standard panel widths wherever possible.

D. Protection of Aluminum from Dissimilar Materials:

1. Where aluminum surfaces come into contact with dissimilar metals, surfaces shall be kept from direct contact by painting the dissimilar metal with one coat of bituminous paint or other approved insulating material.
2. Where aluminum surfaces come into contact with dissimilar materials such as concrete, masonry or lime mortar, exposed aluminum surfaces shall be painted with one coat of bituminous paint or other approved insulating material.

#### 3.2 Grating Attachment

Use approved attachment system and fasteners to secure grating to supporting members as shown on plans.