

**Model Specification:  
Aluminum Plank (PLK Series) – Rectangular Punched Gratings**

September 16, 2022

Specifier Notes: Architect or engineer should carefully review and edit this section to meet the requirements of the project and local building codes. Coordinate this section with other specification sections and the drawings and delete any unused "Specifier Notes" and options shown in "red" after editing.

This section covers Pleasant Mount Welding, Inc.'s "Aluminum Plank (PLK Series) – Rectangular Punched Grating." Consult PMWI ([www.pmwi.net](http://www.pmwi.net)) for assistance in editing this section for specific applications. Call 570.282.6164 or email [sales@pmwi.net](mailto:sales@pmwi.net) with any questions.

**SECTION 055300 - Metal Fabrications: Metal Gratings**

**Part 1: General**

**1.1 Section Includes**

- A. Prefabricated, custom-designed aluminum plank gratings.
- B. Miscellaneous installation hardware and accessories.

**1.2 Reference Standards**

- A. ANSI A326.3-2017: American National Standard Test Method for Measuring Dynamic Coefficient of Friction of Hard Surface Flooring Materials.
- B. ASTM B221: Aluminum Extruded Bars and Shapes.
- C. ANSI/NAAMM MBG 531-17: Metal Bar Grating Manual.

**1.3 Action Submittals**

- A. Product Data: The contractor shall submit the manufacturer's catalog pages including load tables, anchor details and standard installation details.
- B. Shop Drawings: The contractor shall submit for approval shop drawings for the fabrication and erection of all gratings, based on construction drawings of current issue. Include plans, elevations, and details of sections and connections as required. Show type and location of all fasteners.
- C. Samples of grating and anchorage system shall be submitted for approval.

**1.4 Quality Assurance**

- A. Manufacturer Qualification: A company specializing in the manufacture of metal bar gratings with not less than 10 years of documented experience.
- B. Fabrication tolerances shall be in accordance with applicable provisions and recommendations of ANSI/NAAMM MBG 531-17: Metal Bar Grating Manual.

## Part 2: Products

### 2.1 Source Requirements:

Design is based upon use of gratings as manufactured by Pleasant Mount Welding, Inc. and terminology used herein may include reference to the specific performance or product of this manufacturer. Such reference shall be construed only as establishing the quality of materials, operational features and workmanship used under this section and shall not, in any way, be construed as limiting competition.

### 2.2 Manufacturers:

Acceptable manufacturers include Pleasant Mount Welding, Inc. (45 Dundaff Street, Carbondale, PA 18407, 570-282-6164, [www.pmwi.net](http://www.pmwi.net)) or approved equal.

### 2.3 Manufactured Units:

A. **Description:** Aluminum Plank Grating (PLK Series) – **Rectangular Punched**. Six-inch wide extruded aluminum plank, with support bars spaced **1.2"** on center. Fabricated with banding into panels of standard width to fill area shown on drawings.

1. Plank Depth: based on loading requirements and clear span.
2. Top Surface of Plank: **Striated or SlipNOT® Slip Resistance Coating**.
3. Punch Pattern: Rectangular 19/32" x 2-3/4" holes staggered and spaced 4" on center along the span; spaced 1.2" on center between support bars. Punched holes shall have Plain Pattern.

B. **Fabrication:** Fabricate cutouts in grating sections for penetrations as indicated. Arrange cutouts to permit grating removal without disturbing items penetrating plank. Trim band ends (and cuts in the plank) with banding bars of 1/8" minimum thickness, that are the same nominal depth and material as the plank section. Weld banding flush with the top surface of grating. Include fabrication required for attachment system shown on drawing plans, or as recommended by manufacturer.

#### C. Design Criteria:

1. **Loading:** Grating products shall be designed and manufactured to meet live load conditions of **100 lbs / SQFT with a maximum deflection of 1/4"** for the clear spans shown on the drawings. Bearing bar depth shall be as shown on contract drawings, or as recommended by the manufacturer to meet loading requirements, clear span conditions and maximum deflections specified.
2. **Traction / Slip-Resistance:** When a traction surface is required, it is to be tested per ANSI A326.3-2017. Top surface shall provide a minimum Wet Dynamic Coefficient of Friction (Wet DCOF) of 0.45 to meet high traction classification.

D. **Materials:** Aluminum plank and banding are aluminum type 6063-T6.

E. **Fabrication Tolerances** shall be in accordance with ANSI/NAAMM MBG 531-17: Metal Bar Grating Manual.

F. **Top Surface:** When required, SlipNOT® Slip Resistance Coating will be included in order to meet or exceed Wet Dynamic COF requirements of paragraph 2.3 C.2 above.

G. **Finish:** Gratings shall be **Mill finish or A-41 Clear Anodized.**

#### **2.4 Accessories:**

Provide appropriate fasteners for type, grade, and class required for approved anchorage system.

### **Part 3: Execution**

#### **3.1 Field Verification:**

Take field measurements prior to preparation of final shop drawings (and fabrication where required) to ensure proper fitting of the work.

#### **3.2 Installation**

A. Prior to grating installation, contractor shall inspect supports for correct alignment and conditions for proper attachment and support of the gratings. Metal shall be used for all grating supports and provide the minimum bearing surface for the depth of grating per ANSI/NAAMM MBG 531-17: Metal Bar Grating Manual. Ends of all bearing bars at cutouts for penetrations are to be supported in like manner. Any inconsistencies between contract drawings and supporting structure deemed detrimental to grating placement shall be reported in writing to the engineer, architect or owner's agent prior to placement.

B. Install grating in accordance with shop drawings and standard installation clearances as recommended by ANSI/NAAMM MBG 531-17: Metal Bar Grating Manual.

C. 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, powder coat 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, powder coat paint, or other approved insulating material.

#### **3.3 Grating Attachment:**

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