

DG404 Grating Grilles

Model Specification for type DG-Series Aluminum Pressure Lock Gratings as Manufactured by Ohio Gratings, Inc. 5299 Southway St. SW, Canton, Ohio 44706 or approved equal.

NOTE: The specifier will need to edit this specification to reflect the options in this document shown in **Red**. Some editing can be accomplished by deleting unnecessary requirements.

SECTION 05 53 00 Metal Fabrications – Metal Gratings

Part 1: General

1.1 Section Includes

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

1.2 References

- A. ASTM B 221 Aluminum Extruded Bars and Shapes
- B. ANSI/NAAMM- MBG-531-09 Metal Bar Grating Manual
- C. AAMA 2604 – High Performance Organic Coatings on Architectural Metal Extrusions
- D. AAMA 2605 – High Performance Organic Coatings on Architectural Metal Extrusions
- E. ASCE 7 – Minimum Design Loads for Buildings and Other Structures
- F. ASTM B209 – Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate
- G. ASTM B221 – Standard Specifications for Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Profiles and Tubes
- H. ASTM D4214 – Standard Test Method for Evaluating the Degree of Chalking of Exterior Paint Films
- J. ASTM D2244 – Standard Test Method for Calculation of Color Difference from Instrumentally Measured Color Coordinates

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. 12" x 12" samples of Grating 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 531-09 Metal Bar Grating Manual.

Part 2: Products

2.1 Source Requirements:

Design is based upon use of gratings as manufactured by Ohio Gratings, 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 to be used under this section and shall not, in any way, be construed as limiting competition.

2.2 Manufacturers:

Acceptable Manufacturers include Ohio Gratings, Inc. 5299 Southway St. SW, Canton, Ohio 44706, 800.321.9800 www.ohiogratings.com , or approved equal.

2.3 Manufactured Units:

A. **Description:** Aluminum DG404 Pressure Lock Decorative Grating. Extruded aluminum decorative profile bars are punched to receive 5/16" sq. cross rods and hydraulically pressed to permanently lock the bars in place.

1. Decorative Profile Bar Spacing: 4-11/16" on center.
2. Cross Bar Spacing: 4" on center.

B. **Fabrication:** Fabricate frames and mounting devices on grating sections as indicated in design details or per manufacturer recommendation. Band ends with bars as required.

C. **Design Criteria:**

1. **Loading:** DG404 Products shall be designed and manufactured to meet the live load conditions outlined in the structural documents and local building codes with maximum deflection of L/180 for the clear spans shown on the drawings.

D. **Materials:** Decorative profile bars and banding are Aluminum Type 6063-T6 and Aluminum Cross Bars are type 6063-T52. Framing and miscellaneous components alloys will vary.

E. **Fabrication Tolerances** shall be in accordance with ANSI/NAAMM MBG 531-09 Metal Bar Grating Manual.

- F. Finish:** Gratings shall be **Mill finish, Powder Coat (from mfg. standard color) or Anodized (clear, bronze, champagne, black).**

2.4 Accessories:

Provide appropriate fasteners for type, grade, and class required for the approved mounting 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 installation, contractor shall inspect supports for correct alignment and conditions for proper attachment and support of the gratings. Any inconsistencies between contract drawings and supporting structure deemed detrimental to grating placement shall be reported in writing to the 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-531-09 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.