

Steel Grating Selection Guide (Imperial Units)

Comprehensive Guide for Bar Grating Specification

1. Available Series Overview

Series	Bar Depth	Available Bar Sizes	Bar Spacing	Typical Applications
1"	1" (25mm)	1"×1/8", 1"×3/16"	1-3/16" (30mm)	Light platforms, catwalks, trenches
1-1/4"	1-1/4" (30/32mm)	1-1/4"×1/8", 1-1/4"×3/16"	1-3/16" (30mm)	Walkways, mezzanine floors, platforms
1-1/2"	1-1/2" (38mm)	1-1/2"×1/8", 1-1/2"×3/16"	1-3/16" (30mm)	Industrial floors, truck docks
1-9/16"	1-9/16" (40mm)	1-9/16"×1/8", 1-9/16"×3/16"	1-9/16" (40mm)	Heavy industrial, bridge walkways
2"	2" (50mm)	2"×1/8", 2"×3/16"	1-9/16" (40mm)	Airport runways, heavy equipment areas

2. Grating Type Comparison

Type	Manufacturing	Features	Best For
Welded	Resistance welding	Highest strength, most economical	Industrial, general purpose
Serrated	Serrated bar + welding	Anti-slip surface, 15% load reduction	Wet/oily conditions, outdoors
Press-Locked	Interlocking, pressed	Smooth appearance, moderate loads	Architectural, decorative

3. Selection Procedure

- Step 1: Determine the required clear span (distance between supports) in feet.
- Step 2: Calculate the expected uniform load in lbs/ft² (dead load + live load).
- Step 3: Select the appropriate grating series based on bar depth needed.
- Step 4: Find the intersection of your span and load in the load table.
- Step 5: Verify deflection criteria: L/200 for pedestrian, L/360 for sensitive areas.
- Step 6: Consider serrated bars for wet/slippy environments (note 15% load reduction).
- Step 7: Confirm material specification: Q235 / A36 carbon steel, hot-dip galvanized per ASTM A123.

4. Load Classification Reference

Classification	Load Range (lbs/ft ²)	Typical Use	Color Code
Light Duty	≤ 50	Pedestrian walkways, light platforms	■ Green
Medium Duty	51 - 150	Industrial platforms, truck docks	■ Yellow
Heavy Duty	151 - 300	Forklift traffic, heavy equipment	■ Orange
Special	> 300	Airport, highway - consult engineer	■ Red

5. Ordering Specification Template

When ordering, please specify the following:

- Grating type (Welded / Serrated / Press-Locked)
- Bearing bar size: Depth × Thickness (e.g., 1-1/2" × 3/16")
- Bearing bar spacing (e.g., 1-3/16" C.C.)
- Cross bar spacing (default: 4" C.C.)
- Panel dimensions: Length × Width
- Material: Q235 / A36 carbon steel
- Finish: Hot-dip galvanized per ASTM A123 (standard), or specify other
- Quantity