

ADA Compliance Guide for Steel Grating

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The Americans with Disabilities Act (ADA) is a U.S. federal anti-discrimination law that sets accessibility requirements for public building walkways, platforms, stairs and ramps. Steel grating, commonly used for walkways, platforms and stair treads, must meet ADA specifications for opening size and slip resistance to ensure safe passage for wheelchairs, canes and high-heeled footwear.

1. Core ADA Requirements Summary

Item	ADA Requirement	Notes
Maximum Opening Size	3/4" × 3/4" [19mm × 19mm] max	Neither dimension may exceed 3/4" [19mm]; prevents cane tips and high heels from catching
Opening Orientation	Long axis perpendicular to traffic direction	Elongated openings must run across the walkway to avoid catching wheelchair casters
Slip Resistance	Slip-resistant surface required	Serrated bearing bars recommended for higher coefficient of friction
Maximum Height Change	1/4" [6.4mm] max	Change in level between grating and adjacent floor must not exceed 1/4"; bevel transition if more
Minimum Walkway Width	36" [915mm] minimum	Minimum clear width for accessible walkways; allows wheelchair passage
Maximum Ramp Slope	1:12 (approx. 4.76°)	Maximum slope for accessible ramps
Load Requirement	100 psf [4.9 kN/m²] min	Minimum uniform live load for public walkway platforms

2. ADA-Compliant Recommended Sizes

The sizes below are estimates based on standard module calculations. Actual clear opening sizes should be verified against specific bearing bar width and cross bar diameter.

Model	Bearing Bar	Bar Spacing	Cross Bar Spacing	Clear Opening	ADA Compliant
19W4 (1-3/16" spacing)	1"×3/16" [25×5mm]	1-3/16" [30mm]	4" [100mm]	~1-1/16" × 3-3/4"	✗ Opening too large
19W4 Heavy Duty	1-1/4"×3/16" [32×5mm]	1-3/16" [30mm]	4" [100mm]	~15/16" × 3-3/4"	✗ Opening too large
15W4 (1-1/16" spacing)	1"×3/16" [25×5mm]	1-1/16" [27mm]	4" [100mm]	~13/16" × 3-3/4"	■ Width OK, length too long
19W2 (2" cross bar)	1"×3/16" [25×5mm]	1-3/16" [30mm]	2" [50mm]	~1-1/16" × 1-3/4"	✗ Opening too large
7/8" spacing, serrated	1-1/4"×3/16" serrated [32×5mm]	7/8" [22mm]	2" [50mm]	~5/8" × 1-3/4"	✓ Compliant (recommended)

Model	Bearing Bar	Bar Spacing	Cross Bar Spacing	Clear Opening	ADA Compliant
3/4" spacing, serrated	1-1/4"×3/16" serrated [32×5mm]	3/4" [19mm]	2" [50mm]	~9/16" × 1-3/4"	✓✓ Fully compliant + anti-slip (best)
Inserted 3/4"×3/4"	1"×1/8" flat [25×3mm]	3/4" [19mm]	3/4" [19mm]	~11/16" × 11/16"	✓✓ Fully compliant (inserted type)

3. Selection & Application Recommendations

3.1 Prioritize Small Openings for Pedestrian Walkways

For main entrance walkways, plaza paving, hospital and school corridors, and other high-foot-traffic areas in public buildings, select grating with bearing bar spacing $\leq 3/4"$ [19mm] to ensure clear openings stay within the ADA limit. Serrated bearing bars are recommended for improved slip resistance.

3.2 Special Attention for Stair Treads

ADA has specific requirements for stair tread nosing and slip resistance. Serrated grating treads are recommended, with an anti-slip nosepiece at the front edge. Tread openings must meet the same 3/4" [19mm] limit as platform grating.

3.3 Trench Cover Opening Limits

Trench and drain covers located in pedestrian areas are subject to the same ADA 3/4" [19mm] opening requirement. For long-slot grates, the slot width must be $\leq 3/4"$ [19mm] and slots should run perpendicular to the direction of travel.

3.4 Industrial Facilities May Use Standard Sizes

For factory-only industrial platforms not accessible to the general public, standard spacings (1-3/16" / 1-1/2" [30/40mm]) may be used per industrial safety standards and are not required to meet ADA. However, any public visitor walkways must still be ADA-compliant.

4. Disclaimer

This guide is provided as technical reference information and does not constitute formal compliance certification. Project design and acceptance should follow the latest edition of the ADA Standards, ANSI A117.1, and applicable local building codes. If your project has specific ADA compliance requirements, please contact our technical department before ordering and we will provide a compliant solution matched to your project specifications.