

# Stair Rail Code Compliance

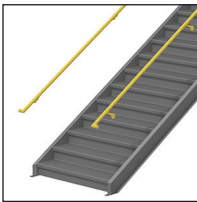
	OSHA	IBC	IRC
Type "A"	✓	✓	✓
Type "B"	✗ *	✗	✗
Type "C"	✓	✓ **	✓
Type "D"	✓	✓	✓
Type "E"	✓	✓	✓

Note: Code compliance per 2024 IBC and 2021 IRC. Not all states use these versions.

\* OSHA 1910.29(f) allows type "B" railings for stairs installed before January 17, 2017.

\*\* IBC 1015.4 allows type "C" railings for stairs that (a) are not open to the public and (b) are servicing one of the following occupancy groups: I-3 (jails, detention centers, etc.) F (factories), H (high-hazard areas), or S (storage).

## Stair Rail Types



### Type A

- 1 ¼" pipe (1.66" O.D.)
- Ships with mounting brackets and hardware to attach to rail. Customer must supply wall anchors.
- Must be installed at 34" - 36", measured vertically from the leading edge of each tread.



### Type B

- **Not recommended** - no longer OSHA compliant; may be allowed in some non-commercial use cases
- 1 ½" square tubing
- 36" tall stair rail serves dual purpose as handrail



### Type C

- 1 ½" square tubing stair rail and guardrail; 1 ¼" pipe handrail (1.66" O.D.)
- 42" tall stair rail and guardrail; 36" handrail
- Complies with OSHA 1910.29(f)(4) and exceptions of IBC 1015.4\*\*\* to ensure no openings exceed 19 inches in the smallest dimensions



### Type D

- 1 ½" square tubing stair rail and guardrail with vertical balusters; 1 ¼" pipe handrail (1.66" O.D.)
- 42" tall stair rail and guardrail; 36" handrail
- Complies with IBC 1015.4 to ensure a 4" sphere cannot pass through the rail at any point.



### Type E

- 1 ½" square tubing stair rail and guardrail with mesh infill; 1 ¼" pipe handrail (1.66" O.D.)
- 42" tall stair rail and guardrail; 36" handrail
- Complies with IBC 1015.4 to ensure a 4" sphere cannot pass through the rail at any point.

# Stair Tread Code Compliance

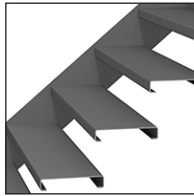
	OSHA	IBC	IBC A.M.E.*	IRC
Diamond Plate - Open Riser	✓	✗	✗	✗
Diamond Plate - Closed Riser	✓	✓	✓	✓
Diamond Plate - "Thick Profile" Open Riser	✓	✓**	✗	✓
Bar Grating - Open Riser	✓	✗	✗	✗
Bar Grating - Partially Closed Riser	✓	✓**	✗	✓
Poured Pan - Closed Riser	✓	✓	✓	✓

Note: Code compliance per 2024 IBC and 2021 IRC. Not all states use these versions.

\* Compliant with IBC "Accessible Means of Egress" per IBC 1009.

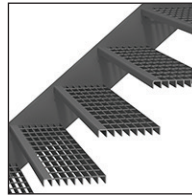
\*\* IBC 1015.4 allows treads with open or partially open risers for stairs that (a) are not an accessible means of egress, (b) are not open to the public, and (c) are servicing one of the following occupancy groups: I-3 (jails, detention centers, etc), F (factories), H (high-hazard areas), or S (storage).

## Stair Tread Types



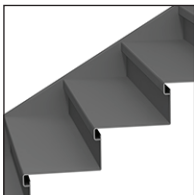
### Diamond Plate - Open Riser

- 7" - 9" rise
- 9 ½" run



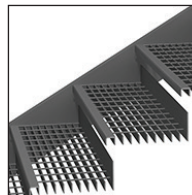
### Bar Grating - Open Riser

- 7" - 9" rise
- 9 ½" run
- Serrated surface



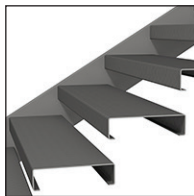
### Diamond Plate - Closed Riser

- 4" - 7" rise
- 11" run



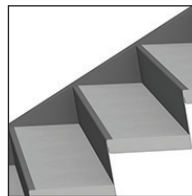
### Bar Grating - Partially Closed Riser

- 4" - 7" rise
- 11" run
- Serrated surface



### Diamond Plate - "Thick Profile" Open Riser

- 4" - 7" rise
- 11" run



### Poured Pan - Closed Riser

- 4" - 7" rise
- 11" run