

Curved Radius Guardrail

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Curved radius guardrail is a specialized barrier section designed to provide a smooth transition in road curves, with radii ranging from 1.5 meters to 50 meters. It is formed into convex or concave profiles using an automated bending machine to achieve precise curvature. The system is developed from a proven design for both new installations and upgrades to existing road safety infrastructure. It ensures consistent impact performance and alignment continuity at turning points where straight barrier sections would create abrupt transitions.

Specifications

Radius Range	1.5 m to 50 m
Forming Method	Automated bending machine
Surface Treatment	Hot dip galvanized
Application	Road curves, roundabouts, interchanges, retrofit installations

TBC: the published specification does not state Steel Grade, Zinc Coating for this product. Confirm before relying on it.

Key Benefits

- Provides a smooth, continuous transition in road curves without sharp angles or discontinuities
- Formed with an automated bending machine to maintain precise radius accuracy across the section
- Reduces the risk of vehicle snagging at curve entry and exit points
- Compatible with standard W-beam and thrie-beam systems for seamless integration
- Designed to maintain impact energy absorption and redirection in curved alignments

- Can be installed with standard posts and spacers to support the curved run

Technical Features

- Curved profile formed to radii between 1.5 m and 50 m, convex or concave
- Automated bending machine ensures consistent curvature and dimensional accuracy
- Compatible with standard W-beam and thrie-beam profiles for system integration
- Formed from Q235B or Q345 steel, supplied by Tang Steel, for consistent mechanical properties

Materials

- Q235B or Q345 hot rolled steel, supplied by Tang Steel, ensuring consistent grade and thickness
- Steel coil processed through automated bending to maintain structural integrity
- No secondary welding or field modification required for curvature

Application Scenarios

- Road curves with radii between 1.5 m and 50 m where straight barrier sections would create abrupt transitions
- Approaches to roundabouts and interchanges requiring a continuous barrier path
- Upgrade projects on existing highways where curve geometry must be matched without regrading
- Sharp bends on mountain roads or urban intersections where vehicle trajectory must be guided
- Site-specific installations where the natural alignment requires a custom radius

Installation Notes

- Measure the curve radius at the site and confirm the required radius for the guardrail section
- Install standard posts at the specified spacing along the curve, ensuring proper embedment depth
- Position the curved guardrail section so the radius matches the road alignment
- Connect adjacent sections using standard splice bolts, ensuring the lap direction follows traffic flow
- Fit terminal ends at both ends of the curved run and at any break points
- Inspect galvanized surfaces at cut or drilled points and treat any exposed steel before handover