



**AASHTO
EN1317 N2 & H1
KS Standard**

High Strength Steel Guardrails

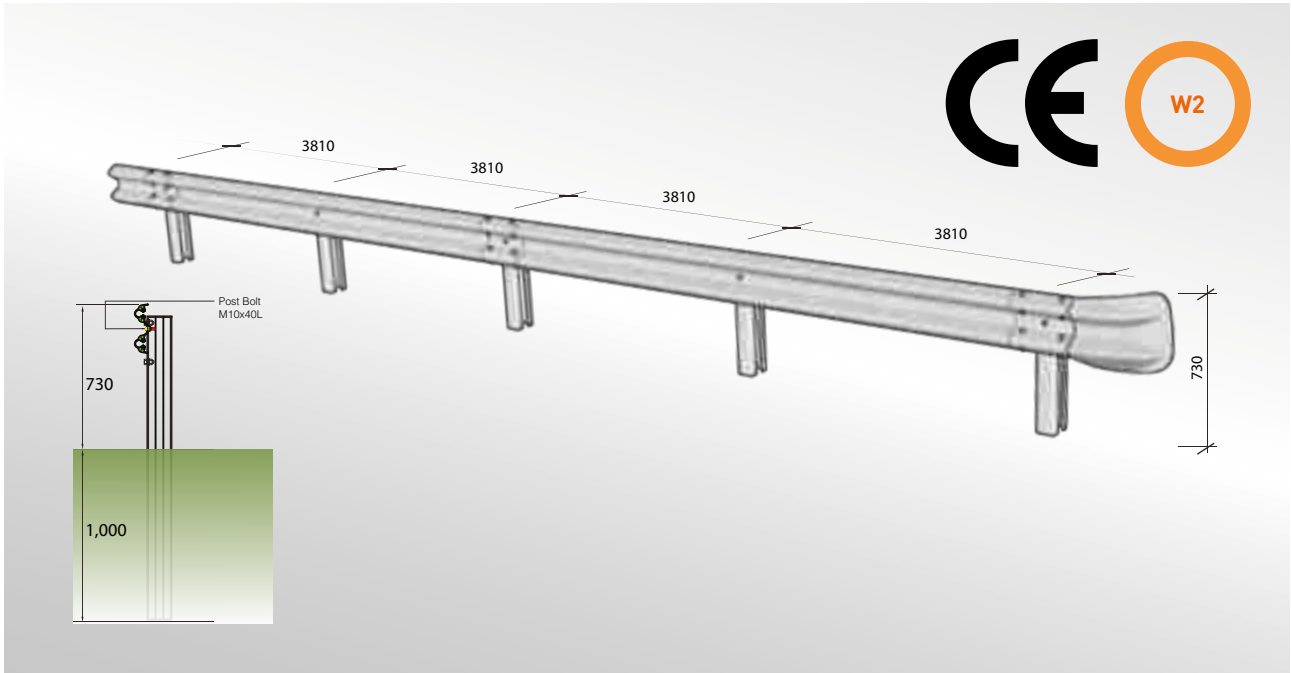
Dependable Quality & Durability



Steel roadside restraint systems designed and tested to safely redirect errant vehicles back to the road upon collision

- Made in Korea Steel: Quality and physical durability ASTM A36 Equivalent: SS400, SS490
- Hot dip galvanizing as per ASTM A123 after fabrication
- Wide range of barriers suitable for medians, roadsides and shoulders of bridges and highways
- Customizable specifications based on client request and governmental standards (Steel grades, coating(Hot dip galvanizing/powder coating) custom dimensions and punching)
- Tested performance by Korea Expressway Corporation & Transportation Research Institute

Class N2 EN1317 Roadside Barrier W2



Characteristics

- Height above ground: 730mm
- Depth of penetration: 1000mm
- Post spacing: C/C 3810mm

Components

- Bolt with nut and washer
Beam: M16*35L Post: M10*40L
- W beam rail 2.67T
- U post: 3.2T

- Available hot dip galvanized coating or anti corrosion steel

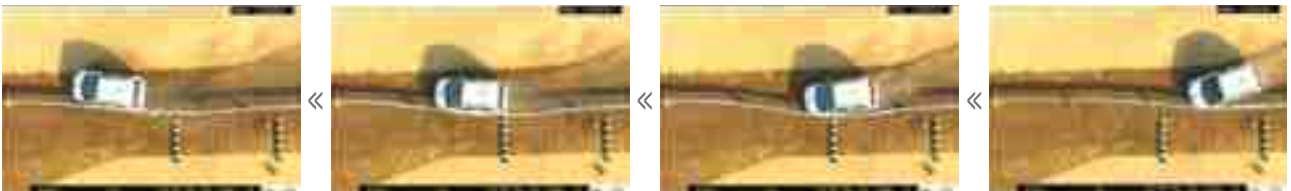
Crash Test Report

In accordance with EN1317-2

Impact Severity: Level A

TEST	Type (Angle)	Mass (Kg)	Speed (Km/h)	ASI (G's)	THIV (Km/h)	Width (m)	Deflection (M)
TB11	20°	900	100	0.47=A	22.49	0.37=W1	0.37
TB32	20°	1,500	110	0.85=A	18.51	0.70=W2	0.85

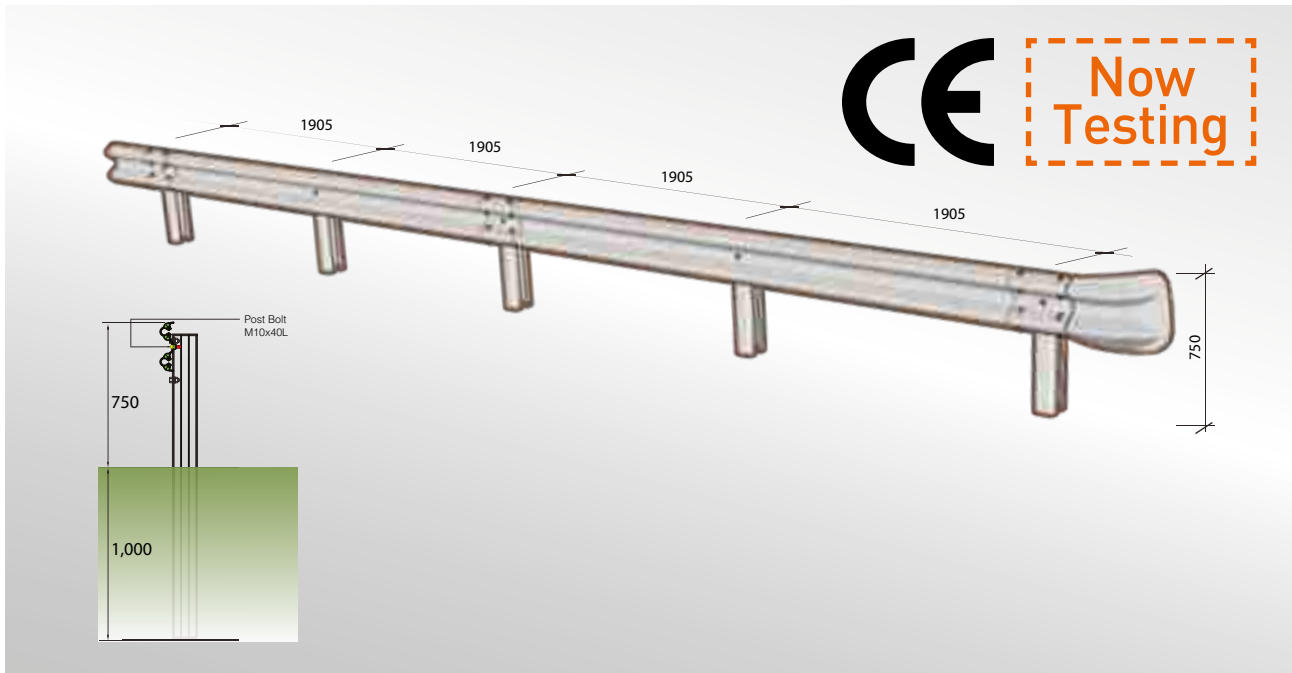
TB11



TB32



Class H1 EN1317 Roadside Barrier



Characteristics

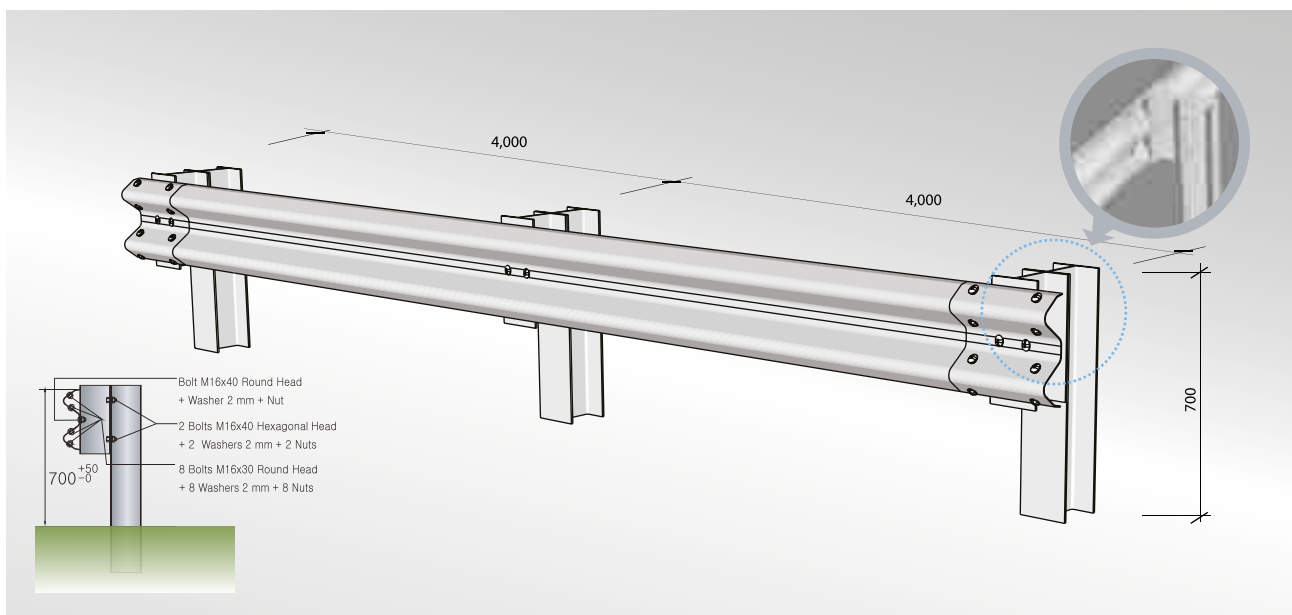
- Height above ground: 750mm
- Depth of penetration: 1000mm
- Post spacing: C/C 1905mm

Components

- Bolt with nut and washer
Beam: M16*35L Post: M10*40L
- W beam rail 3.2T
- U post: 4.0T

- Available hot dip galvanized coating or anti corrosion steel

AASHTO W / Thrie Beam

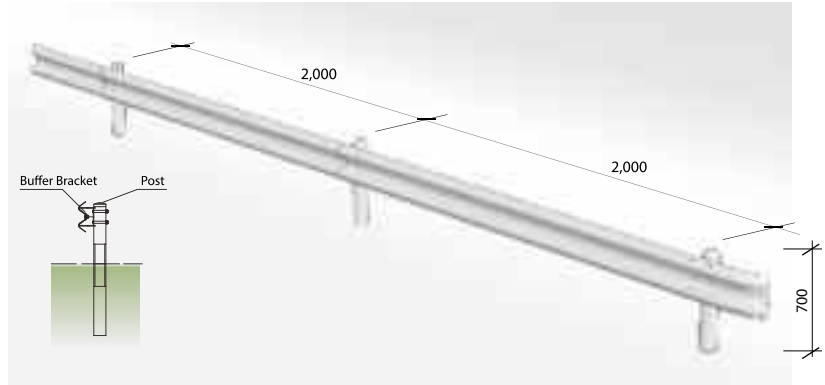
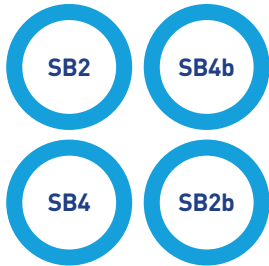


South Korea's first and only fabricator of AASHTO guardrails. Corrugated steel W beam and Thrie beam guardrails are formed and finished according to the specifications by the American Association of State Highway and Transportation Officials. All variants available: Type 1-4 and classes A and B.

Korean Standard 2 Way / 3 Way

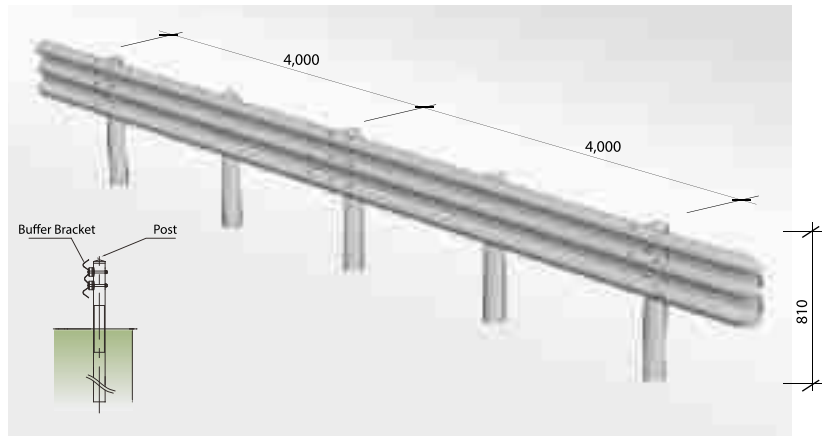
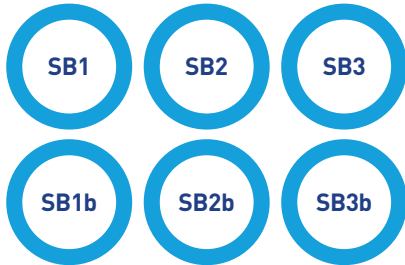
2 Way

Containment level



3 Way

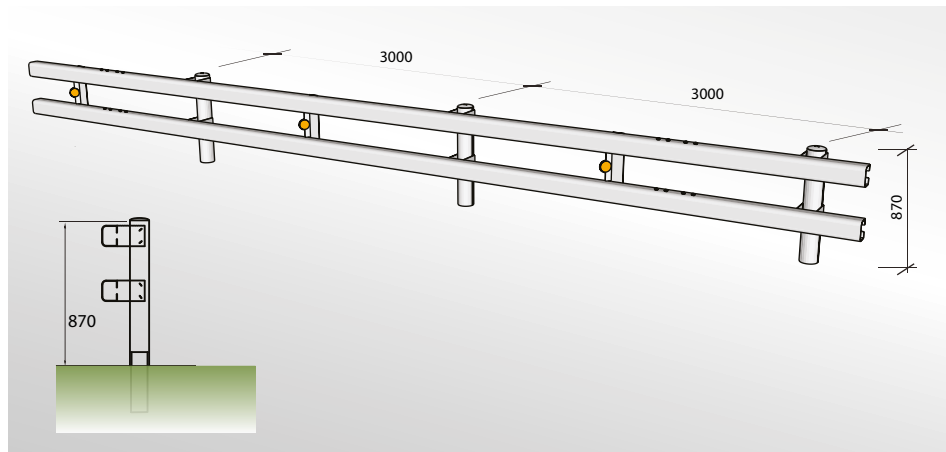
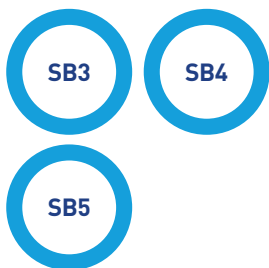
Containment level



Shinsung Control's Corrugated steel 2 and 3 way beams are available in containment levels SB1-SB5 of the Korean standard for steel guard rail safety barriers. The 2 way and 3 way systems are available for road shoulder and medians. Hybrid 2 Way & 3 Way designs available at containment level SB5. Circular steel supports are utilized, at intervals 2-4 meters.

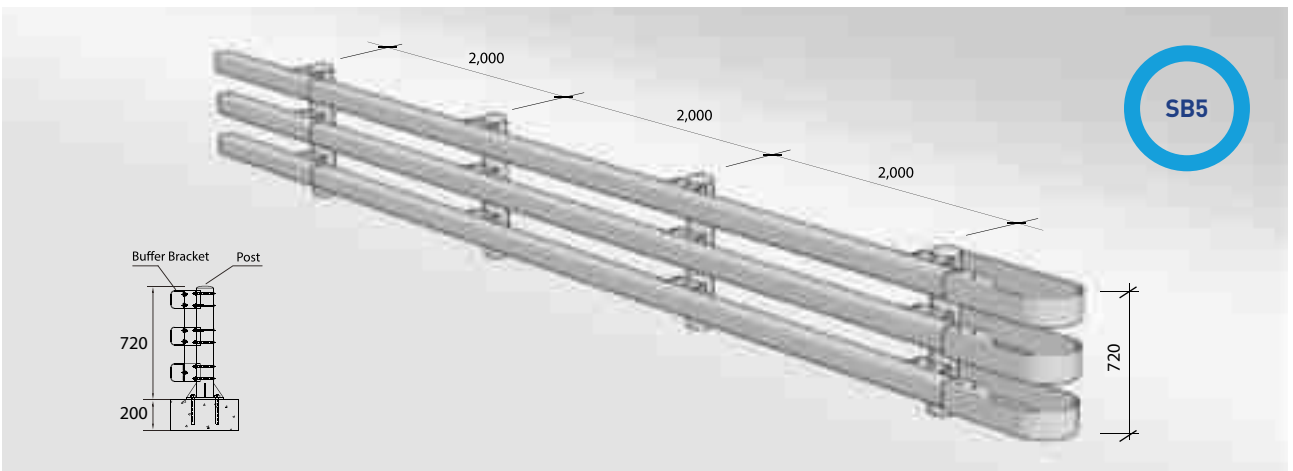
Open Box Type

Containment level



Shinsung Control's Open Box Type series are available in three containment levels: SB3, 2 Stage beam designed for road shoulders, SB4 2 Stage beam of median strips and the strongest variant, SB5 Three-Stage Steel barrier for structural steel bridges. Open Box type system utilize circular steel supports at intervals 2-3 meters.

SB5 Class: Bridgerail



Characteristics

- Height above concrete base: 920mm
- Depth of anchor penetration: 200mm
- Post spacing: C/C 2,000mm

Components

- Bolt with nut and washer
Beam: M16*180 Post: M19*220 Concrete anchor: M24*250
- Rail: middle 3.2T, top and bottom 3.9T
- Circular Post: 4.4T, diameter 165.2mm

TEST	Type (Angle)	Mass [Kg]	Speed [Km/h]	THIV [Km/h]	PHD [g's]
120521-S	20°	1,300	100		
120521-L	15°	14,000	80	32.6	13.6



Smoothly induces vehicles without rollover or sudden stop upon collision with the guard safe rail, no scatter!

SB1-SB7 Korean Standard Crash Testing Criteria

Grade		Strength Performance Assessment Collision Test				Passenger Protection Performance Assessment Collision Test			
		Impact Conditions			Impact Energy (KJ)	Impact Conditions			Impact Energy (KJ)
		Vehicle Weight	Nominal Speed (Km)	Impact Angle (°)		Vehicle Weight (Kg)	Nominal Speed (Km)	Impact Angle (°)	
Safety Barrier	SB1	8,000	55	15	60	13,000	60	20	21
	SB2		65		90		80		38
	SB3		80		130		100		59
	SB3-B		85		150		120		84
	SB4	14,000	65		160	80	38		
	SB5		80		230	100	59		
	SB5-B		85		270	120	84		
	SB6	25,000	80		420	100	59		
SB7	36,000	600		100	59				



SB4 Impact Test



Vehicle Weight : 14 ton



Impact Speed : 65Km/h



Impact Angel : 15°



SB2 Impact Test



Vehicle Weight : 1.3 ton



Impact Speed : 80Km/h



Impact Angel : 20°



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