

Safety Barrier Technical Conditions for Use

EZY-GUARD 4 Steel Rail Safety Barrier - Permanent

	Issue Date: 3 April 2023	Proponent: Ingal Civil Products
	<p>These conditions take precedence over any instructions in the Product Manual.</p> <p>This document is a summary of the Austroads Safety Barrier Assessment Panel's assessment of the technical performance of the product against AS/NZS 3845 Parts 1 or 2 only. It does not consider procurement practices by individual Road Agencies.</p> <p>The Austroads Safety Assessment Panel may at any time, withdraw or modify this Technical Conditions for Use without notice.</p> <p>These acceptance conditions should be read in conjunction with the Product Manual and Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers.</p> <p>Acceptance of this product does not place any obligation on the Northern Territory Government or its contractors, to purchase or use the product.</p>	

Status	Accepted – may be used on the classified road network
Product accepted	EZY-GUARD 4 Steel Rail Barrier Variants: Back to back installation Base plate installation – may only be installed on concrete foundation pavements Ezy-Lift – only to be installed where the road surface has been overlaid Single 6 metre clear span – no closer than the system dynamic deflection from hinge point Variants that are NOT listed above are NOT recommended for acceptance.
Accepted speed	100 km/h
Product manual reviewed	Ezy-Guard Safety Barrier - Release 08/17 Ingal MPR – Release 11/22
Product manual	https://www.ingalcivil.com.au/products/road-safety-barriers/guardrail/ezy-guard-4-guardrail#ProductManual

Design Requirements

Containment Level	Point of Redirection		Tested Article Length (m)	Anchor/Post Spacing (m)	Dynamic Deflection (m)	Working Width (m)	Notes
	Leading (m)	Trailing (m)					
MASH TL3	Interface between barrier and end treatment		90.8	2.0	1.65	1.65	

Approved Connections

<i>An accepted end treatment must be provided at both ends of all barrier installations</i>	
Public Domain Products	
W-Beam Guardrail	Permitted
Thrie-Beam Guardrail	Permitted
Concrete	Permitted using SBTA 21-005 Transition from strong post W-Beam to rigid concrete barrier

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Proprietary Products	
QUADGUARD M10 Crash Cushion	<ul style="list-style-type: none"> Refer to QUADGUARD M10 Crash Cushion Technical Conditions for Use. The QUAD-BEAM transition to end terminal must be used to connect the crash cushion to the barrier. Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
ET-SS Terminal	<ul style="list-style-type: none"> Refer to ET-SS Terminal Technical Conditions for Use
Trend Median Terminal	<ul style="list-style-type: none"> Refer to Trend Median Terminal Technical Conditions for Use.
Ingal MPR Motorcyclist Protection	<ul style="list-style-type: none"> Motorcyclist Protection Device Tested to EN1317:8 – Class C60 with Severity Level 1 Not permitted on kerbed roads

Design Guidance

Minimum installation length	60 metres between crash cushions/terminals (tested article)
System width (m)	0.20 (standard) 0.30 (back to back)
Minimum distance to excavation (m)	1.65 – measured from the face of the barrier
Slope limit	10%
Systems conditions	Installation on top of a kerb is not recommended, however if installed on top of a kerb, all system components must be free to operate.
Gore area use	Permitted
Pedestrian area use	Permitted
Cycleway use	Permitted
Frequent impact likely	Permitted
Remote location	Permitted
Median use	Permitted

Foundation Pavement Conditions					
Pavement Type	Use	Max Accepted Impact Speed (km/h)	Post/Pin Spacing (m)	Post/Pin Type	Pavement Construction
Concrete	Permitted	100	2.0	Ezy-Guard 4 base plate post Or Ezy-Guard 4 driven post with coring holes	Refer to drawings
Deep lift asphaltic concrete	Permitted	100	2.0	Ezy-Guard 4 Post	Minimum AASHTO standard soil strength
Asphaltic concrete over granular pavement					
Flush seal over granular pavement					
Unsealed compacted formation					

Note: Installation in pavement conditions not permitted above have not been justified to the Panel's satisfaction.