


Safety Barrier Technical Conditions for Use

QUADGUARD M10 CZ Crash Cushion - Temporary

	Issue Date : 6 September 2021	Supplier: 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	Recommended for Acceptance
Product accepted	<p>QUADGUARD M10 CZ Crash Cushion</p> <p><u>Variants</u></p> <p>Variants that are NOT listed above are NOT recommended for acceptance.</p>
Accepted Speed	<p>70 km/h (TL2)</p> <p>100 km/h (TL3)</p>
Product Manual reviewed	Revision B, September 2021
Product Manual	https://www.ingalcivil.com.au/products/road-safety-barriers/crash-cushions/quadguard-cz

Design Requirements

Containment Level	Point of Redirection (m)		Tested Article Length (m)	Anchor/Post Spacing (m)	Notes
	Leading	Trailing			
MASH TL2	Fully redirective		4.0	Refer to drawings	
MASH TL3	Fully redirective		6.71	Refer to drawings	

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 – reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bidirectional traffic) a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
Thrie-Beam Guardrail	
Concrete	Permitted

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Proprietary Products	
	Refer to Safety Barrier Technical Conditions for Use for approved connections.

Design Guidance

System length (m)	4.0 (TL2) 6.71 (TL3)
System width (m)	0.61
Slope limit	8%
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	Refer to drawings	M20 x 180mm threaded rod with epoxy	Installation on concrete pavement or pad is permitted in accordance with the manufacturer's drawings
Deep lift asphaltic concrete				M20 x 460mm threaded rod with epoxy	
Asphaltic concrete over granular pavement					Steel plate on 150mm AC over 150mm compacted sub-base
Flush seal over granular pavement	Not permitted				
Unsealed compacted formation					

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