Safety Barrier System Acceptance Conditions

QUADGUARD CZ Steel Rail Crash Cushion - Temporary

Issue Date: 16 December 2021 | **Supplier:** Ingal Civil Products

These conditions take precedence over any instructions in the Product Manual.

These acceptance conditions should be read in conjunction with the Product Manual and Transport for NSW Specification R132 – Safety Barrier Systems and Austroads Guide to Road Design Part 6:Roadside Design, Safety and Barriers.

Transport for NSW may withdraw or modify this acceptance at any time without notice. Users should refer to the Transport for NSW website to ensure they have the latest version of the conditions related to this product.

Acceptance of this product does not place any obligation on Transport for NSW, or its contractors, to purchase or use the product.

Status	**Legacy - Not permitted on Transport for NSW contracts signed from 1 January 2022.**
Product accepted	QUADGUARD CZ Steel Rail Crash Cushion with tension strut or concrete backup <u>Variants</u> QUADGUARD CZ (pinned steel plate) Steel Rail Crash Cushion with tension strut or concrete backup QUADGUARD CZ DPA (driveable pile anchors) Steel Rail Crash Cushion with tension strut or concrete backup. Variants that are NOT listed above are NOT recommended for acceptance.
Accepted speed	100 km/h

Tested Outcomes

Containment Level	Point of Redirection		Tested Article Length (m)	Anchor/Post Spacing (m)	Dynamic Deflection (m)	Working Width (m)	Notes
	Leading (m)	Trailing (m)					
NCHRP 350 TL3	Fully redirective		6.74	Refer to drawings	n/a	n/a	

Approved Connections

Crash Cushions or Terminals must be fitted to both ends of a barrier	
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	
Proprietary Products	
	Refer to safety barrier Conditions for Use for accepted proprietary connections.

Design Guidance

This product must be installed and maintained in accordance with the Product Manual and Transport for NSW specifications	
System length	6.74m
System width (m)	Varying widths up to 2.285
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 Speed (km/h)**	**Post/Pin Spacing (m)**	**Post/Pin Type**	**Pavement Construction**
Concrete	Permitted	100	Refer to drawings		
Deep lift asphaltic concrete					
Asphaltic concrete over granular pavement					
Flush seal over granular pavement					
Unsealed compacted formation					

Note: Installation in pavement conditions not listed above have not been justified to the Transport for NSW's satisfaction.