

QUICKCHANGE REACTIVE TENSION BARRIER

REVISION REGISTER

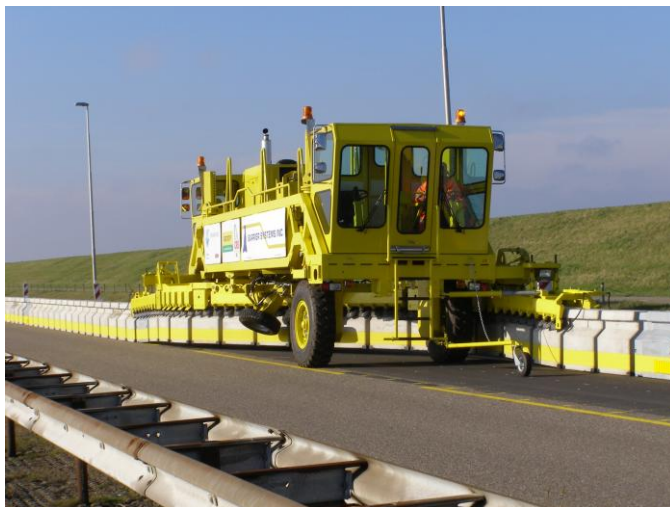
Revision	Description	Date
1	Issued for use.	09/04/2020
1 A	MASH crash tests added. Point of redirection updated.	13/10/2022
1 B	Terminal updated.	19/12/2024
1 C	Accepted to MASH TL4. Minimum length amended. Product Manuals updated.	26/06/2026

Quickchange Reactive Tension Barrier (i.e Quickchange Barrier) is a moveable reinforced concrete barrier system designed to be shifted laterally using a Barrier Transfer Machine. The barrier system is approved for temporary and permanent use by Main Roads WA under the following conditions.

Image:



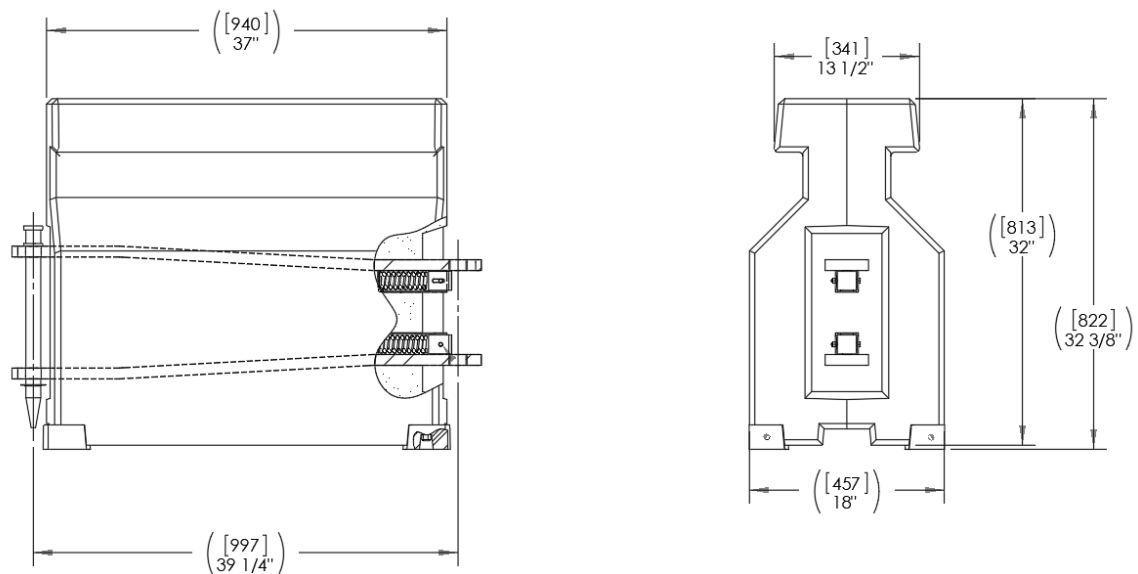
Photograph of the Quickchange Reactive Tension Barrier Module



Photographs of typical Barrier Transfer Machines shifting barriers. Typical Permanent applications (left) and Typical Temporary or Construction applications

QUICKCHANGE REACTIVE TENSION BARRIER

Drawings:



Cross section of Quickchange Reactive Tension Barrier Module

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Test Level: Approved to MASH TL-3

Test Level	Test Description	Deflection	Working Width
MASH - TL3	2270 kg at 100 km/h and 25°	1.05 m	1.52 m
MASH TL4	10000 kg at 90 km/h and 15°	1.38	3.33

Accepted Design Speed:

For Temporary Installation

- Up to 70 km/hr

For Permanent Installation

- Up to 100 km/hr

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Configuration:

- The Quickchange Barrier consists of concrete barrier modules tensioned via the spring-loaded hinges at each end of the module. The modules are connected using steel pins.
- The Quickchange Barrier must only be relocated (shifted) using the approved Barrier Transfer Machine.

Design:

- Design to be in accordance with Lindsay Transportation Solutions' "Quickchange Concrete Reactive Tension Barrier QMB-CRTS Deployment and Maintenance Manual", (P/N 1620195 Rev A (ECN 37617)).
- The barrier must not be installed on grades greater than 16.7%.
- It is recommended that the barrier should be offset from the edge of traffic lane by:
 - traffic speed 40 km/h or less – 0.2 m
 - traffic speed 41 to 60 km/h – 0.3 m
 - traffic speed 61 to 80 km/h – 0.5 m
 - traffic speed greater than 80 km/h – 1.0m.

Minimum Length:

- 170 m excluding terminals.

Terminal Permitted:

For Temporary Installation

- Absorb-RZ Plastic Terminal – refer Absorb-RZ Installation Manual P/N 1824559_Rev A

For Permanent Installation

- The exposed ends must be shielded by approved permanent barriers and overlapped by minimum of 85 metres.

Points of Redirection:

- 85m from the interface between the terminal and barrier (applies to both leading and trailing points of redirection).

Limitations:

- May only be used at locations that are approved by Main Roads WA Road and Traffic Engineering Branch
- Screens and other attachments are incompatible with the Barrier Transfer Machine.
- May only be used on pavement surfaces that are smooth and free of snag points, kerbs or obstructions that may interfere with the operation of the system.

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Installation and Maintenance:

- In accordance with the Lindsay Transportation Solutions' "Quickchange Concrete Reactive Tension Barrier QMB-CRTS Deployment and Maintenance Manual", (P/N 1620195 Rev A (ECN 37617)).

Parts to be Replaced after Impact:

- All damaged or deformed components must be replaced. Repaired components must not be used.

Parts Typically Re-Useable after Impact:

- Undamaged units

Reference:

- Main Roads WA file 16/3057