



# RB Passively Safe Cabinet

## National Highways Approved

### TECHNICAL DATA SHEET

**The Ritherdon Passively Safe Cabinet** is a crash-friendly, breakaway roadside cabinet, designed to minimize the dangers associated with a high-speed vehicle collision. Upon impact, the cabinet shears off its base travelling clear of the car, minimizing damage and injury to the occupants. This also negates the need for expensive and potentially hazardous roadside barriers. The unit sits on a 100mm tall interface unit (cassette), which in turn is fixed onto a 350mm plinth, which is buried in a concrete foundation 50mm above ground for maximum stability.

The RB PSC range is tested in accordance with MCE 2650, TR 1100, TR 2130 and TR 2180 for National Highways Product Acceptance (PAC/0036/1/2022/05/10).



Figure 1 - RB800 Passively Safe Cabinet (PSC)

Table 1 - Dimensions of Product Range

Model	External Dimensions			Working Depth mm	Cable Opening		Backboard Size		Weight kg
	Height mm	Width mm	Depth mm		Width mm	Depth mm	Height mm	Width mm	
RB600PSC	1115	600	380	239	500	279	920	550	47
RB800PSC	1115	800	380	308	700	279	920	750	65

304 Grade Stainless Steel. Standard colours include Black, Dark Grey, Light Grey and Dark Green.

## Accessories

### Electrical Insulation System (EIS)

The EIS is an optional device that can be mounted to the interface unit below the cabinet. The EIS uses an impact sensor to cut all power to the cabinet in the event of a collision, providing an additional layer of risk reduction to the Passively Safe Cabinet.



Figure 2 - EIS Device

### PolePlug



Figure 3 - Ritherdon PolePlug

The PolePlug is a cable coupling system made by Ritherdon designed to break away safely in the event of a collision, safely cutting the power supply to traffic poles without leaving exposed wires. These can be used for the power supply to the Passively Safe Cabinet, allowing the cables to safely break away along with the cabinet, further mitigating the risks associated with a collision.



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## Testing

The Ritherdon Passively Safe Cabinet has been crash tested according to BS EN 12767: 2007 and was initially designated as passively safe with an Occupant Safety Level classification of 100NE3 (EN12767: 2007). This has since been reclassified to a Performance Class of **100-NE-B-R-SE-SD-0** in accordance with the most up to date standard (EN12767: 2019).

## High Speed (TRL089) & Low Speed (TRL085B) Impact Tests

These tests were performed by TRL and are designed to assess the damage caused by a collision with the cabinet.

- The cabinet (42kg) was loaded to a total weight of 80kg to simulate the presence of internal electrical equipment.
- The cabinet was struck by a 1999 Nissan Micra weighing 940kg at 100 km/h and 35 km/h for the high-speed and low-speed tests respectively.
- There was no penetration of occupant compartment, and the windscreen was not fractured or penetrated in either test.
- Vehicle remained upright for duration of tests within the parameters specified by the standard.
- Attributed with a safety level of 100NE3 (EN12767: 2007).
- Later reclassified to a Performance Class of **100-NE-B-R-SE-SD-0** (EN12767: 2019).

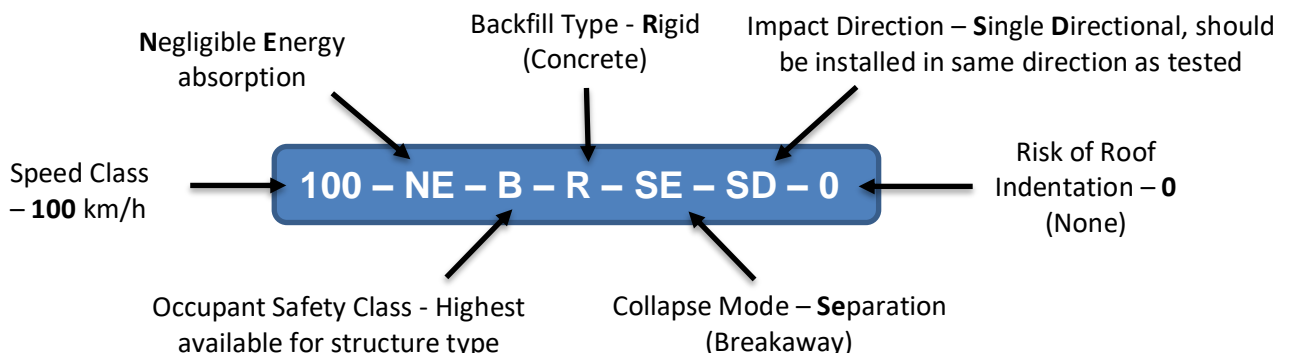


Figure 4 - Passively Safe Cabinet Crash Test



Figure 5 - Cabinet base (cassette) after breakaway

## Breakdown of Performance Classification



*Please contact our technical team if you require a more detailed report of the testing or you would like to see videos and pictures of the tests, or if you have any other questions and would like to discuss any aspect of this data sheet.*