## IRONMAN HYBRID Steel Safety Barrier

<table>
<thead>
<tr>
<th>Distributor</th>
<th>Saeroads Pty Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued</td>
<td>May 2015</td>
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</tbody>
</table>

### Status

**Accepted** – May be used on the classified road network.

These acceptance conditions should be read in conjunction with the Product Manual and Roads and Maritime Specification R132 – Safety Barrier Systems. These acceptance conditions take precedence over any instructions in the Product Manual.

Roads and Maritime Services may withdraw or modify this acceptance at any time without notice. Users should refer to the Roads and Maritime Services website to ensure they have the latest version of the conditions related to this product.

### Product accepted

**Accepted for temporary installations only**

- 4 metre steel freestanding Ironman Barrier with the addition of 4 precast concrete blocks placed inside at the base of the barrier. The concrete blocks are attached using steel straps and can be retrofitted to standard Ironman to produce the IRONMAN HYBRID Steel Safety Barrier.

### Variants NOT accepted

- 12 metre retrofitted units.
- Variants that are not on the list above are not accepted.
- Variants accepted in other jurisdictions, but not accepted in the local jurisdiction, are **NOT** permitted.

### Speed limit (km/h)

80 km/h (70 km/h if used with ABSORB 350 Plastic Terminal)

### Tested containment

- NCHRP 350 Test Level 2 (2,000 kg at 70 km/h and 25°)
- NCHRP 350 Test Level 3 (2,000 kg at 100 km/h and 25°)

### Accepted dynamic deflection

<table>
<thead>
<tr>
<th>Speed limit</th>
<th>Deflection</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;70 km/h</td>
<td>1.6 metres</td>
</tr>
<tr>
<td>≤70 km/h</td>
<td>1.3 metres</td>
</tr>
</tbody>
</table>

Note: the accepted deflections are those measured in crash tests performed under controlled conditions. Crash tests represent an approximation of what is likely to be seen in the field. The use of interpolated/extrapolated deflection values is not accepted.

### Accepted working width

<table>
<thead>
<tr>
<th>Speed</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Not specified. Refer to Austroads Guide to Road Design Part 6: Section 6.3.16 for guidance</td>
</tr>
</tbody>
</table>

Working width is the distance between the traffic face of the road safety barrier system before the impact and the maximum lateral position of any major part of the system or vehicle during and after the impact.

Note: the accepted working widths are those measured in crash tests performed under controlled conditions. Crash tests represent an approximation of what is likely to be seen in the field. The use of interpolated/extrapolated values is not accepted.
### Point of need
- At leading end of the terminal (QUADGUARD CZ).
- At trailing end of the terminal (ABSORB 350 Plastic Terminal – Temporary).

### Minimum length of barrier between terminals
- 28 metres (QUADGUARD CZ)
- 116 metres (ABSORB 350 Plastic Terminal)

### System conditions
1. Flaring across the clear zone without a terminal listed below is NOT permitted.
2. 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.
3. Installation in front of kerb is not permitted.

### Approved terminals and connections

<table>
<thead>
<tr>
<th>Terminals</th>
<th>W-Beam guardrail</th>
<th>Thrie-Beam guardrail</th>
<th>Type F Concrete Safety Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not permitted</td>
<td>Not permitted</td>
<td>Not permitted</td>
<td></td>
</tr>
</tbody>
</table>

#### Terminals
1. **QUADGUARD CZ**
   - Permitted for use with IRONMAN HYBRID Steel Safety Barrier.
   - See QUADGUARD CZ acceptance document for conditions of use.
   - The QUADGUARD CZ TO IRONMAN HYBRID TRANSITION must be used to connect the terminal to the barrier.
   - Permitted as a terminal on a flare.

2. **ABSORB 350 PLASTIC TERMINAL - TEMPORARY**
   - Permitted for use with IRONMAN HYBRID Steel Safety Barrier.
   - The installation is restricted to a Speed Limit of 70 km/h or less.
   - See ABSORB 350 Plastic Terminal acceptance document for conditions of use.
   - The ABSORB 350 TO IRONMAN HYBRID TRANSITION must be used to connect the terminal to the barrier.
   - Not permitted as a terminal on a flare.

### Gore area use
Permitted – consider speed and deflection limitations

### Pedestrian area use
Permitted – consider potential for snagging and deflection

### Cycleway use
Permitted – consider potential for snagging and deflection

### Median use
Permitted

### Slope limit
Side slope limit: 20 Horizontal to 1 Vertical (5%)

### Foundation pavement conditions
- **Concrete** Permitted
- **Deep lift Asphaltic Concrete** Permitted
- **Asphaltic concrete over granular pavement** Permitted
- **Flush seal over granular pavement** Permitted
- **Unsealed compacted formation** Not Permitted
- **Natural surface** Not Permitted

Foundation pavement conditions must be smooth and free of snag points, kerbs or obstructions that may interfere with the operation of the product.

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**IRONMAN HYBRID Steel Safety Barrier**  
2
<table>
<thead>
<tr>
<th>Attachments and screens</th>
<th>In accordance with the requirements of Australian/New Zealand Standard AS/NZS 3845, road furniture such as headlight screens, signs, lighting posts and fences for pedestrians, visual screens, debris screens, platforms for workers and other non-product hardware <strong>must not be attached</strong> to the product. Screens may be placed adjacent to the side of the product not exposed to traffic. The distance between the screen and the product shall be determined by a site specific risk assessment that considers the deflection distance. Screens must not have horizontal members that present a risk of impaling errant vehicles that impact the product.</th>
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<tr>
<td></td>
<td>Acceptance of this product does not place any obligation on Roads and Maritime Services, or its contractors, to purchase or use the product.</td>
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