

Defender™ ... independently certified safety

The ideal addition to walkways and platforms, Defender guardrails provide support for workers, preventing falls and avoiding damage to the roof.

Accredited with **StandardsMark™ certification**, Defender access and safety equipment is designed by engineers, tested in our **NATA™ -accredited** facility and installed by factory-trained installers.

Defender guardrails fully comply with the **National Construction Code** (formerly the BCA), **AS 1657, OHS legislation** and **state regulations**.

Most importantly, every Defender system is individually configured to suit your site and the way your people work. The result is strong, reliable equipment that delivers fully compliant access and true safety.

Quick delivery, minimal disruption

For rapid delivery, Defender guardrails are stocked in our warehouse in kit form to suit all standard roof and platform profiles. No welding or grinding is needed on-site so your Defender guardrail can be installed with minimal disruption.

CONTACT US TODAY FOR MORE INFORMATION

Ensuring a safe work environment requires full compliance to **Australian Standards** and **OHS legislation**. **WHS laws** require that the control means are selected using a risk-based approach following the hierarchy of controls.

Risk Assessment Tool

Plot the likelihood and the severity on the matrix to yield a rating, applying the hierarchy of controls:

| Severity | Likelihood | | | |
|------------------|-----------------|-------------|--------------|-------------------|
| | A – Very likely | B – Likely | C – Unlikely | D – Very unlikely |
| 1 – Catastrophic | High (1A) | High (1B) | High (1C) | Medium (1D) |
| 2 – Major | High (2A) | High (2B) | Medium (2C) | Medium (2D) |
| 3 – Moderate | High (3A) | Medium (3B) | Medium (3C) | Low (3D) |
| 4 – Minor | Medium (4A) | Medium (4B) | Low (4C) | Low (4D) |

The hierarchy of control

Level 1: Eliminate the risk of fall (e.g. work on a platform with guardrailing)

Level 2: Use of passive fall prevention devices (e.g. install guardrailing)

Level 3: Use of work positioning systems (e.g. install anchors and/or static lines)

Level 4: Use of fall injury prevention systems (e.g. compliment level 3 with rescue procedures)

Level 5: Use of ladders or administrative controls (e.g. induction, training and procedures)

Other Specifications Guides in the **DEFENDER™** series:

Access Hatches

Cooling Tower Platforms

Landings & Platforms

Roof Anchors

Rung Ladders

Staircases

Static Lines & Rail Systems

Step Type Ladders

Walkways

Internal & Suspended Walkways



AS 1657 Approved

AS 1657 is the Australian Standard for the design, construction and installation of guardrails, fixed platforms, walkways, stairways and ladders. This standard underpins Defender's performance.

ISO 9001 Quality

ISO 9001 is the world's most established quality framework, currently being used by over 750,000 organisations in 161 countries. This standard assures Defender's quality.

NATA™ Accredited Testing

NATA is the authority that provides independent assurance of technical competence through a proven network of best practice industry experts. The criteria for determining a facility's competence are based on the relevant international standard (e.g. ISO/IEC 17025, ISO 15189, ISO/IEC 17020). NATA provides assessment, accreditation and training services to laboratories and technical facilities throughout Australia and internationally.

CodeMark™ – National Construction Code Approved

The CodeMark scheme recognises Defender's compliance with the National Construction Code (formerly the BCA).

Proudly Australian Made

Engineered and fabricated in its own ISO 9001 quality-assured factory, Defender guardrails are certified Australian-made.

Get it done right, first time, for less.
Defender equipment and installation is
extraordinarily cost-effective. Why?
Because smart design shouldn't cost extra.

**CALL US TODAY ON 1300 013 794
TO ARRANGE A VISIT FROM A
CERTIFIED DEFENDER™ CONSULTANT**

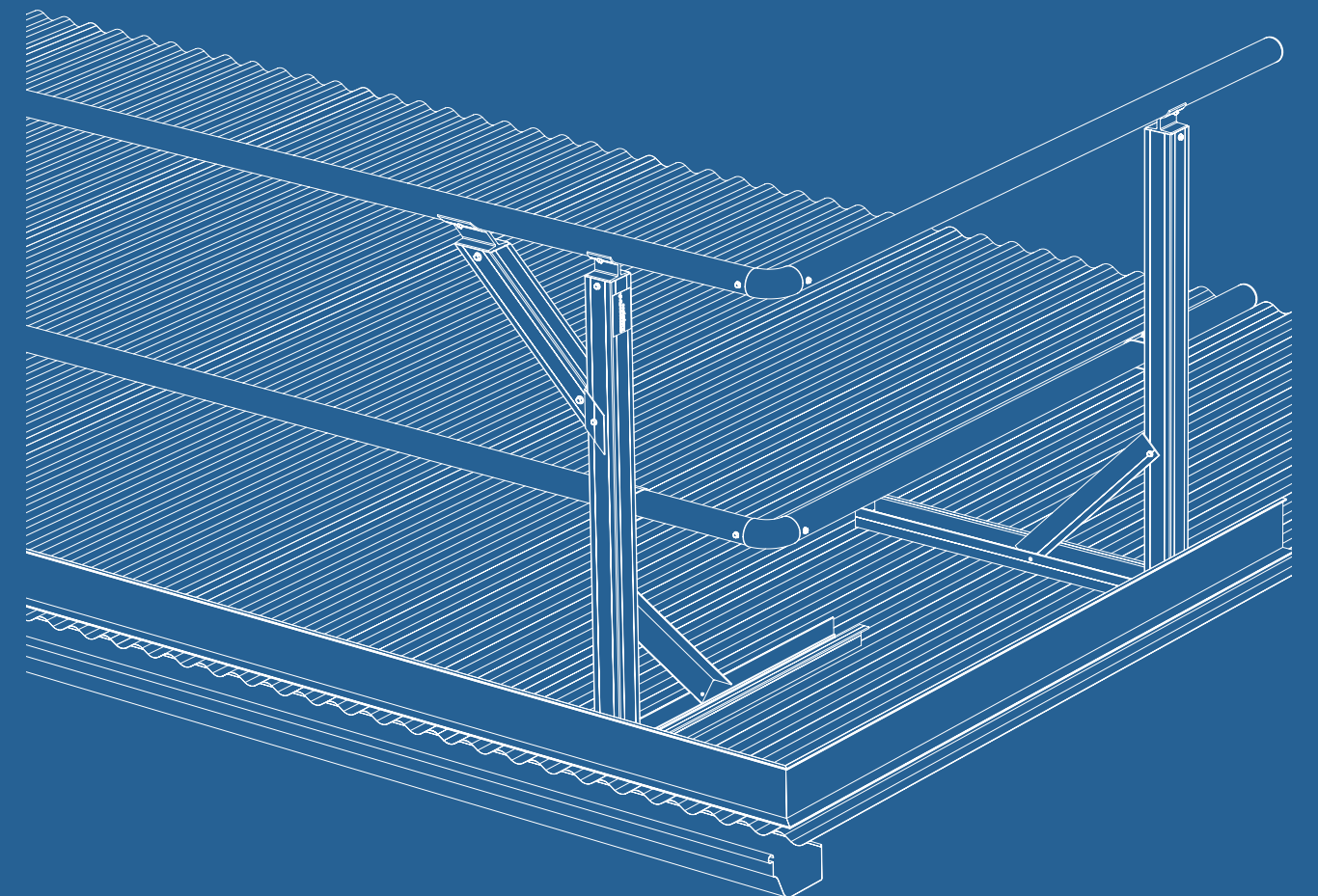


Guardrails

SPECIFICATIONS GUIDE



Independently certified safety



To order, receive a quote, or for more information contact us today at:

enquiries@workplacedefender.com.au

or call 1300 013 794

www.workplacedefender.com.au

Certified Defender™ Installer:

**workplace
access&safety®**

the fall prevention specialists

Telephone 1300 552 984

www.workplaceaccess.com.au



www.workplacedefender.com.au

Defender™ guardrails

This specification details the construction of guardrail for permanent perimeter protection to meet Australian Standards and regulatory requirements.

Manufacture and installation specifications:

- > Guardrail shall comply with the appendices of Australian Standard AS 1657 for testing of guardrailing (posts and railing).
- > Install a 100mm kick board (or toe-board) if the area below is trafficable.
- > The top rail has a vertical height not less than 900mm above the working surface. The maximum distance between the top and centre rails is 450mm and a maximum of 560mm from the lowest rail to the standing level.
- > Posts shall be installed at correct intervals to sustain loads. The maximum distance between vertical posts shall be 2.8m.
- > Rails shall be spaced correctly to prevent people falling between them.
- > Brace posts frequently to maintain rigidity and longevity of the system – no less than one brace for every fourth post (as shown in figure 3).
- > All penetrations shall be sealed with silicone above and below the base supports for watertight installation (as indicated in figure 2).
- > Fixings shall be installed to ensure structural integrity with provision for redundancy. All steel fixing must be galvanized rather than zinc-coated. The guardrail will be fixed to the roof with self-sealing bulb-type fixing rivets or self-drilling screws.

Independent certification

- > Independently certified to Australian Standard AS 1657 by *SAI Global™* and/or equivalent JAS-ANZ accredited certification body.



- > Manufactured by an independently audited ISO 9001 accredited facility delivering consistent product with full traceability.



- > Certified Australian-made



- > Installed equipment independently certified to the National Construction Code (formerly the BCA) for *CodeMark™* compliance or equivalent standard by *SAI Global™* or an equivalent JAS-ANZ accredited certification body.



Independently accredited testing

- > Product tested in our *NATA™*-accredited laboratory to meet AS 1657 requirements.



Documentation and labelling

- > Provide an installation certificate stating designer, fabricator, installer and certifier with each installation.
- > Comprehensive handover documentation allows the system to be properly managed by the workplace controller.
- > Provides all of the user information, layouts and compliance labelling to meet AS 1657 safety requirements.
- > Guardrailing labelled to ensure traceability and identification of the system (as shown below).



Installation

- > Height safety installers demonstrate competency through training delivered by a registered training organisation.
- > Independently accredited installation contractor to install the guardrails.



Safe installation and fabrication

- > System design controls fall hazards at all locations to satisfy WHS laws.
- > Installation performed by organisation independently certified to AS/NZS 4801 Standard for Health and Safety Management Systems.
- > Licensed to the requirements of state building regulations.



Environmental accreditation

- > Manufacture and construction to be conducted by an organisation independently certified to satisfy the ISO 14001 Environmental Management System standard, recognising the management of primary environmental issues.



Traceability

- > All guardrails marked to provide full traceability to material batches.

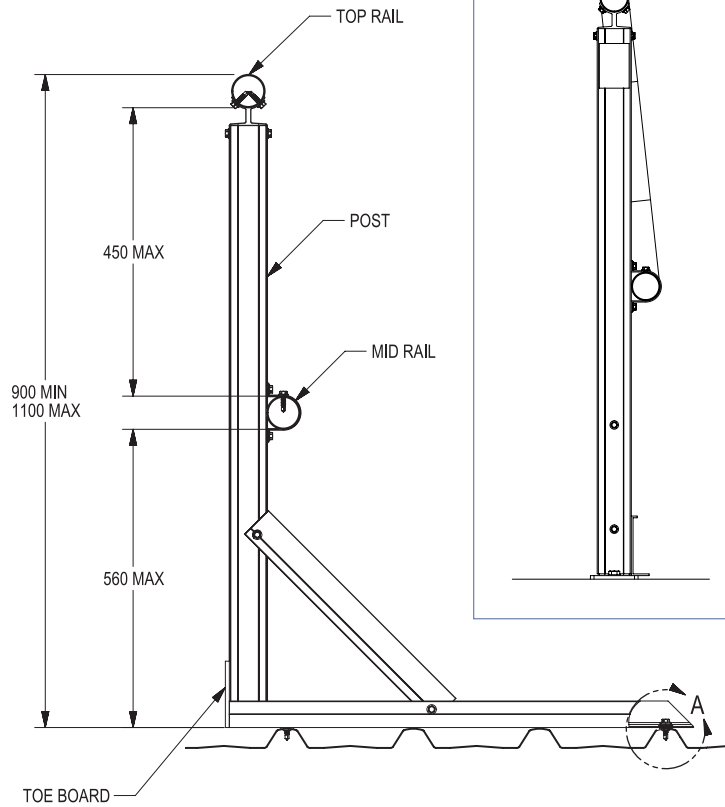
Design

- > System layout and design to be completed by an RTO-trained designer.

Design Certification

- > Design certificate issued, guaranteeing the system meets the requirements of the Code of Practice Safe Design of Structures 2012.

Figure 1. Roof-top applications.



Platforms/
concrete applications.

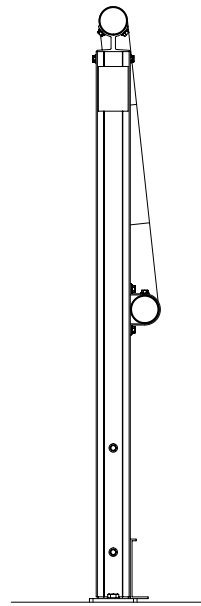


Figure 2.

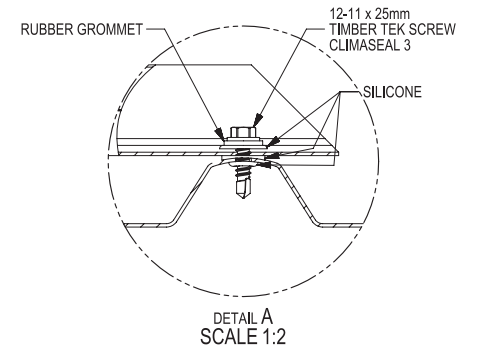
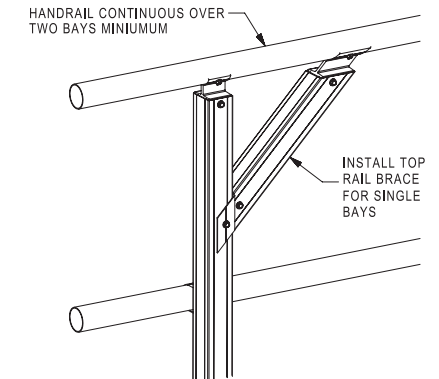


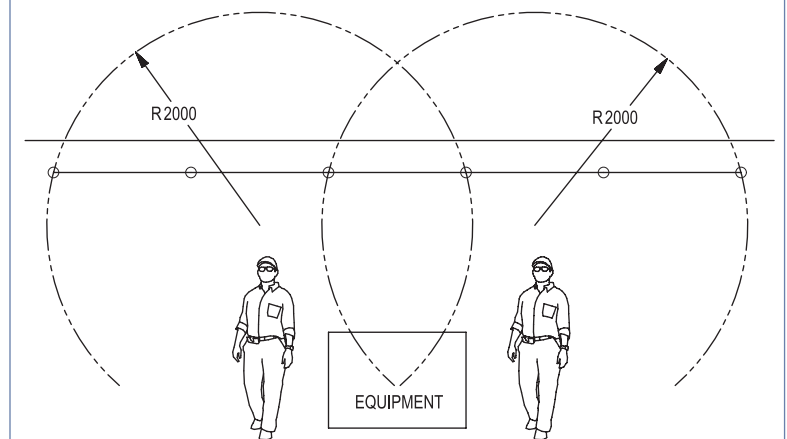
Figure 3.



Positioning of guardrailing

- Guardrailing is to be installed wherever a person stands within 2m of a fall hazard to gain access to areas requiring routine maintenance every 12 months or less. This includes but is not limited to evaporative and split type air conditioning, refrigeration equipment, extraction for cooking areas, satellite dishes, telecommunications equipment, fans, fire extraction and gutters.
- On inclines of 0-6 degrees, guardrail is to be installed where the equipment is located within 2 metres of a fall hazard (see figure 1), and is to protect a person within a 2m radius (see figure 4).
- A fall hazard is regarded as any fall over a height of 300mm.
- Where the incline exceeds 6 degrees, guardrailing is to be provided irrespective of the distance to the edge.

Figure 4.



Recommended designer, manufacturer, installer and certifier:

workplace access&safety®

Telephone 1300 552 984
www.workplaceaccess.com.au



| TOLERANCES U.N.O. | | |
|----------------------|-------------|----------|
| DRAWN: | MGB | 10/08/13 |
| CHECKED: | CS | 10/08/13 |
| APPROVED: | CS | 10/08/13 |
| DO NOT SCALE | | |
| FABRICATION | ±1000 ±10 | |
| MACHINING | ±100 ±20 | |
| MACHINE SURFACES | ±0.2 | |
| POLE POSITION | ±10 ±20 ±30 | |
| ALL DIMENSIONS IN mm | | |

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TITLE: **DEFENDER™ GUARDRAILS**

DWG. No. **146-003**

SHEET 1 OF 1

SCALE: NONE

SIZE
A3