

Defender™ step type ladders

Ergonomic Defender step type ladders maximise comfort, ease of movement and safety.

Carrying **StandardsMark™** product certification, Defender access and safety equipment is designed by engineers, tested in a **NATA™-accredited** facility and installed by Certified Defender Installers.

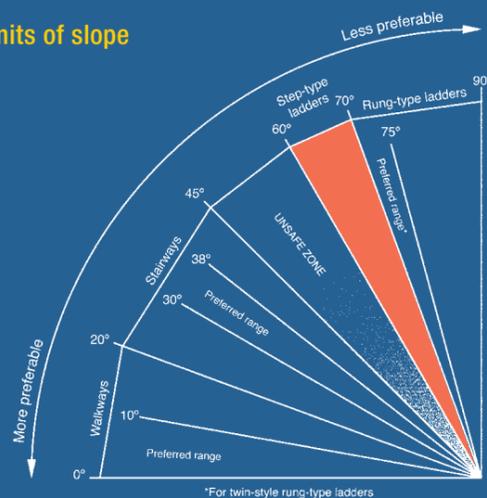
Defender step type ladders fully comply with the **National Construction Code, AS 1657, OHS legislation** and **state regulations**.

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

About the AS 1657 Standard

The AS 1657 Standard requires that the means of access shall be selected from the following limits of slope, and considered in the hierarchical order given:

Limits of slope



Defender's wide range of equipment includes all the means of access discussed in AS 1657, in addition to all components (stabilizing brackets, safety-lines, guardrails, hand-rails, cages, intermediate platforms/landings and platforms, lockable gates, access hatches, etc.), for a complete and safe height access system.

Quick delivery, minimal disruption

For rapid delivery, Defender step type ladders are stocked in our warehouse in kit form to suit all standard roof and platform profiles. Your Defender step type ladder can be installed with minimal disruption.

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

- | | |
|-------------------------|-------------------------------|
| Access Hatches | Rung Ladders |
| Cooling Tower Platforms | Staircases |
| Guardrails | Static Lines & Rail Systems |
| Landings & Platforms | Walkways |
| Roof Anchors | Internal & Suspended Walkways |



AS 1657 Approved

AS 1657 is the Australian Standard for the design, construction and installation of guardrails, fixed platforms, walkways, staircases 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).

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

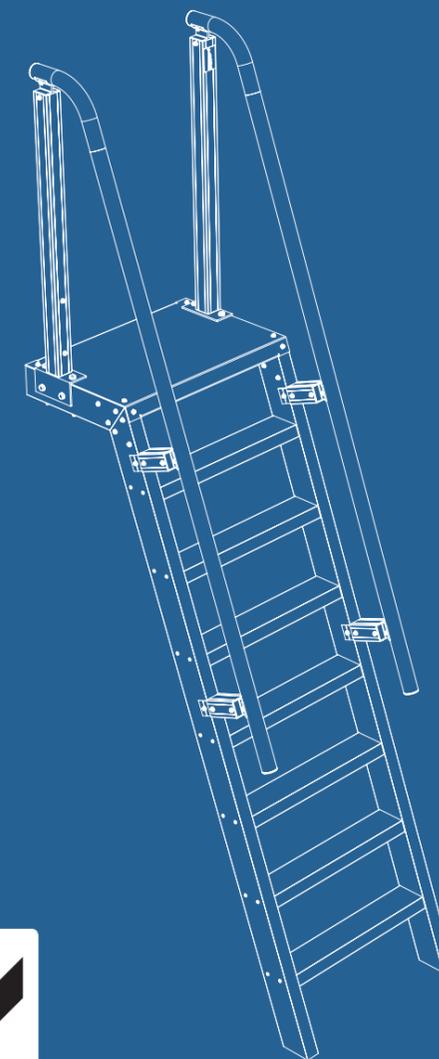
CALL US TODAY ON 1300 013 794 TO ARRANGE A VISIT FROM A CERTIFIED DEFENDER™ CONSULTANT

Step Type Ladders

SPECIFICATIONS GUIDE



Independently certified safety



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™ step type ladders

Ergonomic Defender step ladders maximise comfort, ease of movement and safety.

They are designed and independently certified to fully meet the requirements of Australia's **National Construction Code** (formerly the BCA) and **AS 1657**, ensuring compliance with **Australian Standards**, **OHS legislation** and **state regulations**.

Manufacture and installation specifications:

- Ladder, with the correct accessories to meet AS 1657, to be installed at a 60-70 degree (1 in 4) incline wherever possible.
- The stile to be made of an unbroken length of aluminium to avoid points of weakness. Splicing is unacceptable.
- Brackets to be installed at correct intervals to maintain 250kg load rating.
- Ensure a minimum 200mm clearance behind step ladders.
- Treads, including the distance from the bottom tread to the landing, are to be equally spaced. (See figures 2 & 3.)
- Dimensions and properties of step ladder to be fully compliant to AS 1657. (See Figures 4 & 5.)
- Treads to be shaped to maximize foothold as proved in ergonomic research*. (See Figure 6.)
- Positive fixings will be used: never rivets or Tek screws for primary structural fixings. All are to be galvanized and never zinc coated.
- Provide slip resistance tests results confirming treads are independently tested in a **NATA™-accredited** laboratory to meet outdoor slip rating of R10 on a wet oil ramp test.
- Rungs to be bolted, not welded, to the stiles, with additional mechanical fixings to provide redundancy, guaranteeing treads won't fail and dislodge from stiles.
- Labelled to ensure traceability, identify parties and to nominate the load rating of the system.

*Caple, D, 2012 report

Testing

- Tested in a **NATA™-accredited** laboratory to meet the seven mandatory AS 1657 tests for stile, rung, fixing, extended stile strength and durability.

Manufacture

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

Documentation and labelling

- 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.

Installation

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

Safe installation and fabrication

- Installation performed by organization 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

- Mark all step ladders to provide full traceability to material batches.

Design

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

Step Type Ladders

- Provide certification by a body independently accredited by **SAI Global™** or equivalent to AS 1657.

Design Certification

- Issue a design certificate guaranteeing the system meets the requirements of the Code of Practice (Safe Design of Structures 2012).

Labelling

- Each step ladder individually marked with a unique ID number specifying the manufacturer, installer, certifier and next inspection due date on a label that is capable of withstanding at least 12 months of weather exposure. (See Figure 1.)

Figure 1.



Figure 2.

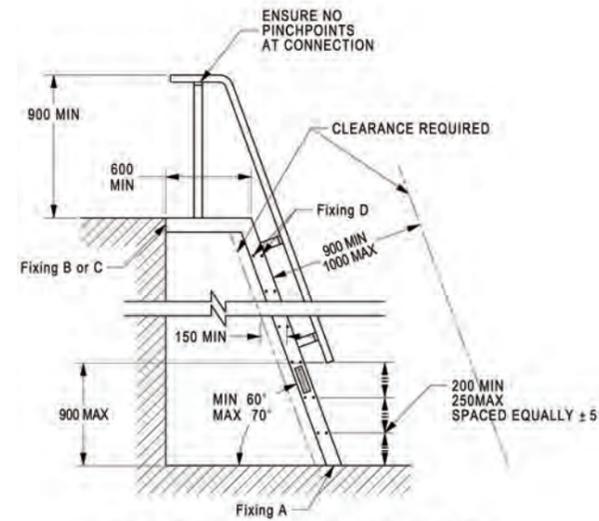


Figure 2. STEP TYPE LADDER FOR TRAVELLING FROM ONE LEVEL TO ANOTHER

Figure 3.

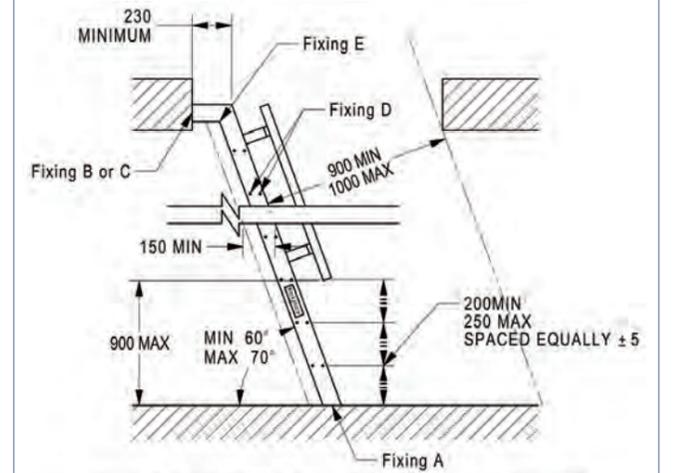


Figure 3. STEP LADDER FOR ACCESSING A HATCH OPENING

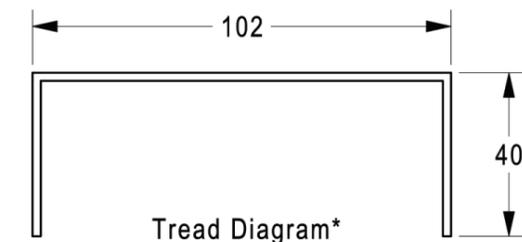
Figure 4.



Figure 5. Minimum dimensions and properties for components of access ladders - Step Type

COMPONENT	SHAPE	MATERIAL	SIZE (Minimum)	NOTE
Stile	Rectangular Hollow Section	Aluminum 6063-T6	100mm wide x 50mm deep x 2.5mm thick	
Tread	C-Section with slip resistant surface	Aluminum 6063-T6	102mm deep x 40mm wide x 2mm thick	Slip Resistant Surface (see Diagram*)

Figure 6.



Recommended designer, manufacturer, installer and certifier:



Telephone 1300 552 984
www.workplaceaccess.com.au

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DRAWN: MGB 30/03/12		TOLERANCES U.N.O.		TITLE: DEFENDER™ – STEP TYPE LADDER	
CHECKED: MGB 30/03/12		FABRICATION 0-1000: 1.0		DWG. No. SM-005	
APPROVED: - 30/03/12		MACHINING ± 0.2		SIZE A3	
HOLE POSITION		MACHINE SURFACES		SHEET 1 OF 1	
DO NOT SCALE		SCALE: 1:25			

