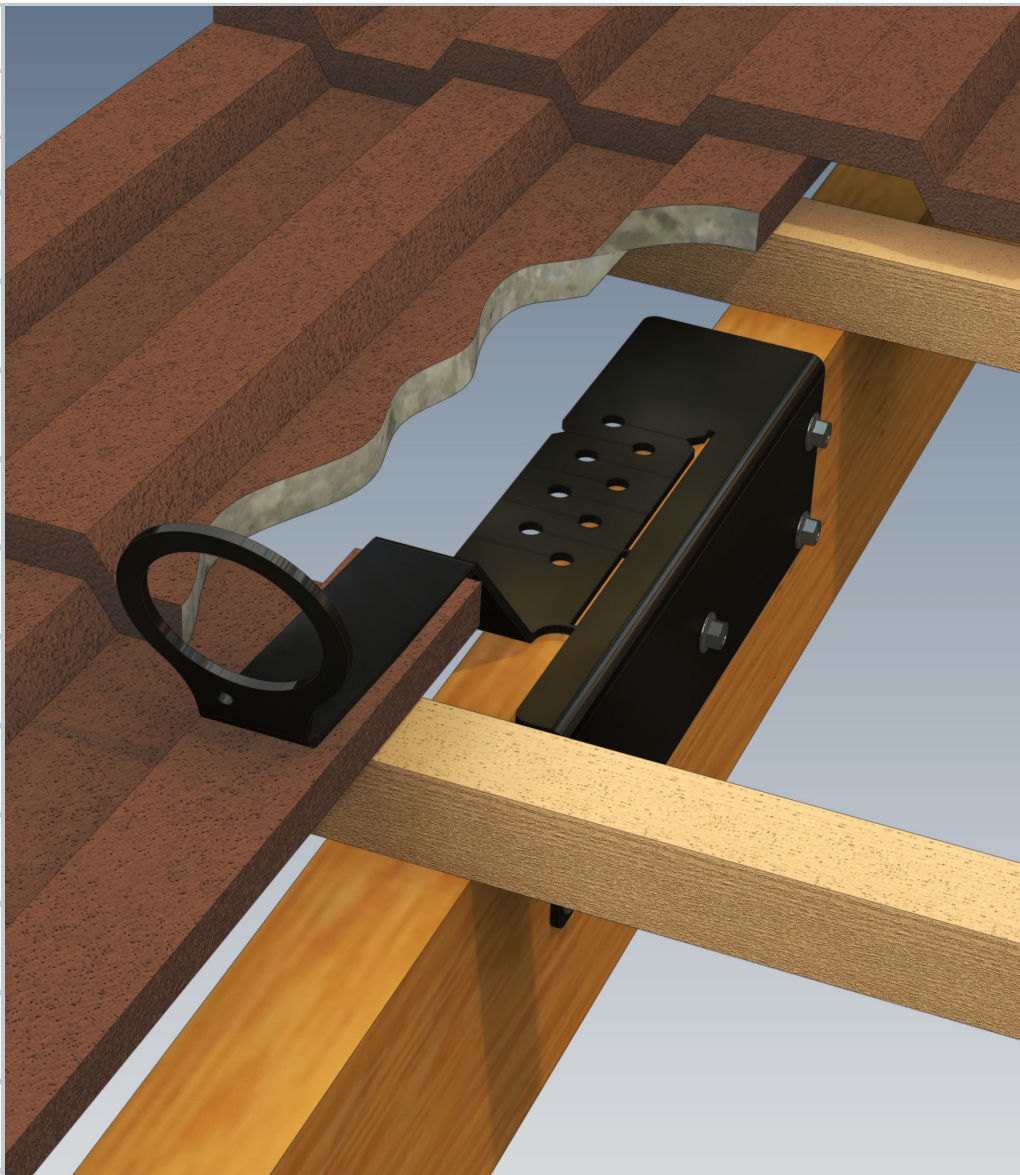
Kattsafe Height access and fall protection

INSTALLATION MANUAL

TIMBER MOUNT ANCHOR

AP121



Timber mount anchor designed to fasten to timber trusses between tiles.

Product brochure
Timber mount anchor

Installation manual
Timber mount anchor

Find all related products and resources on our website kattsafe.com.au

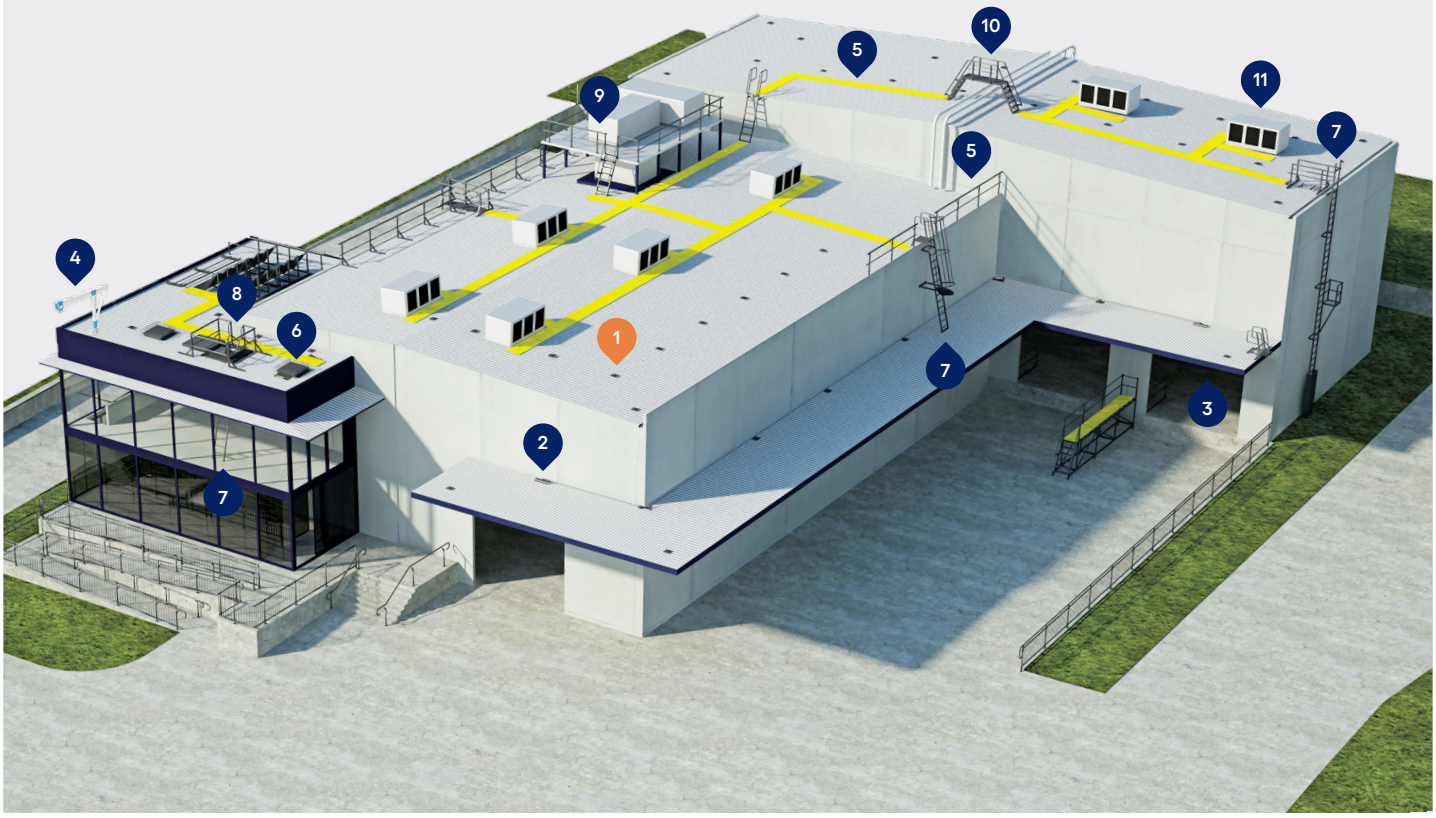
Commercial building height access and fall protection requirements

Kattsafe leads the industry in the design, installation and management of access and fall protection safety systems.

The in-action model demonstrates access and fall protection requirements for a commercial building design. Kattsafe recommendations fulfill current workplace requirements for the safety of building maintenance subcontractors, employees and the general public.

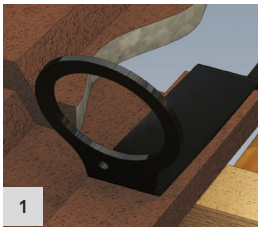
For more information please contact Kattsafe.
kattsafe.com.au

1 Anchor points
2 Static lines
3 Rigid rail
4 Davits and needles
5 Guardrail and walkway
6 Skylight protectors
7 Rung ladders
8 Access hatches
9 Platforms and stairs
10 Step ladders
11 HVAC platforms



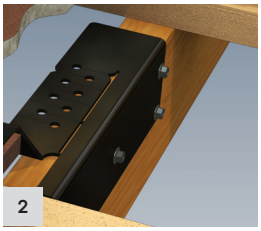
TIMBER MOUNT ANCHOR

Timber mount anchor designed to fasten to timber trusses between tiles. Fall arrest use, simple installation and low-profile design.



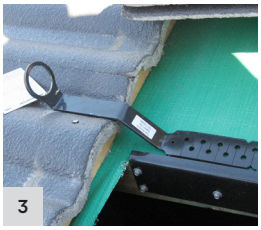
Large attachment ring

Designed for easy snap hook attachment for users.



Simple installation

Simple installation that doesn't require any penetration or interference with roof tiles.

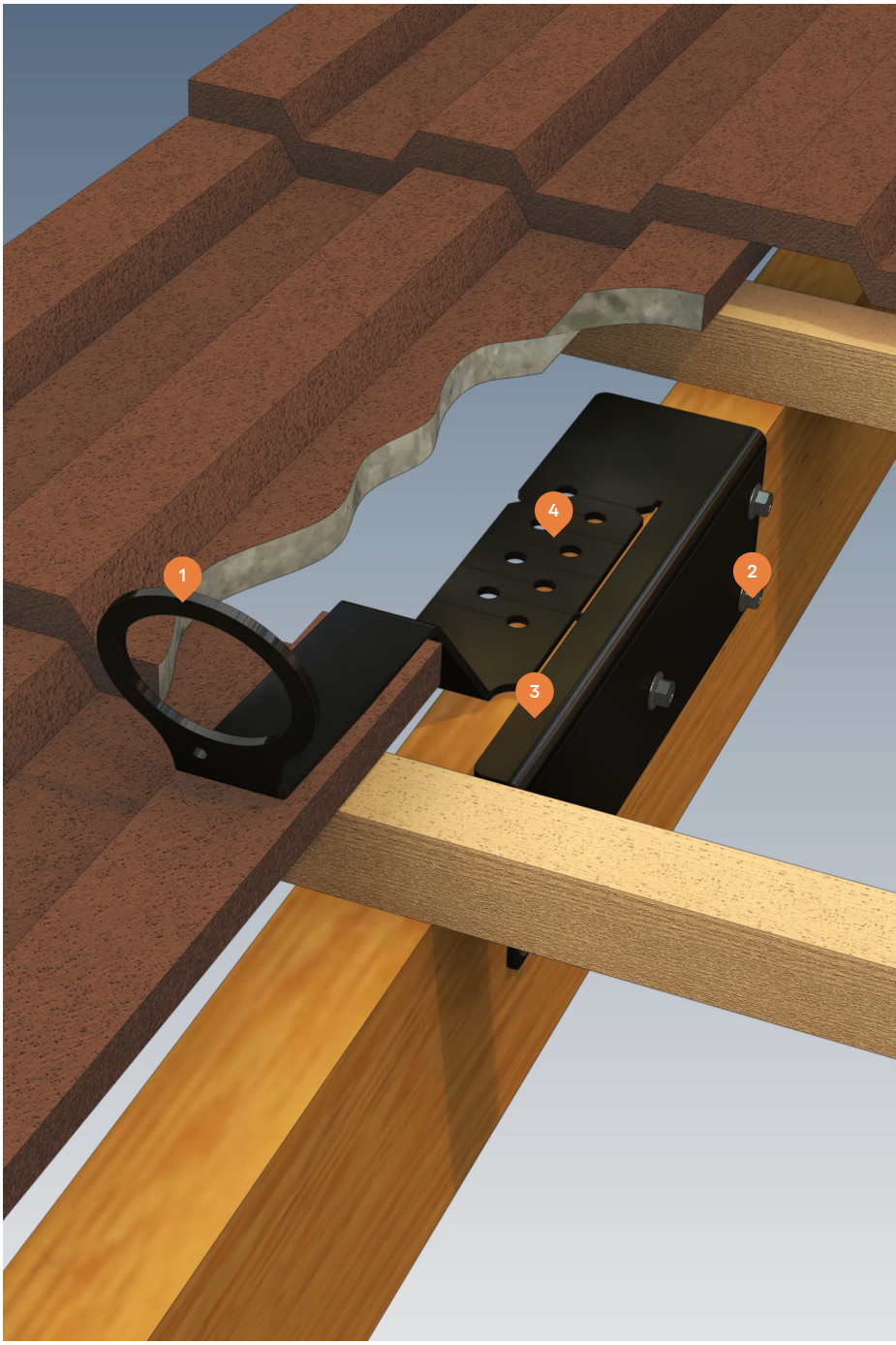


Low profile design

Allowing minimal architectural impact, and can be powder coated.

Load absorbing capability

Designed to extend and flex in a fall situation, high loads from a fall are dissipated through the anchor.



TOOLS AND EQUIPMENT

Cordless drill

5/16 nut setter

Angle grinder

Tape measure

INSTALLATION REQUIREMENTS

Must be read prior to installation

1. This system must only be installed by competent persons trained in the selection, use and maintenance of fall arrest systems and hold a current Kattsafe approved installer certificate.
2. Persons installing this system are required to have a comprehensive knowledge of the Australian Standards, codes of practice and industry guidelines that relate to the selection, use and maintenance of fall arrest systems and equipment.
3. Integrity and suitability of the structure to which this system is attached must be approved by a structural engineer unless it is clear to a competent person as to the suitability of connection to structure.
4. Read installation and operating instructions carefully before commencing any work. Consent to deviate from the installation guide must be obtained in writing from the manufacturer.
5. Conduct an initial work/risk assessment, and take all reasonable precautions to eliminate or control potential hazards and risks during the installation of this product.
6. Complete all necessary WHS documentation, including a Job Safety Analysis and Work Method Statement and obtain consent from responsible person in workplace prior to commencement of work.
7. Installers must be authorised and approved by Kattsafe and possess valid industry licenses, be appropriately trained, and comply with all relevant WHS legislation prior to installation of this product.
8. Do not modify or remove any element of the support structure without prior authorisation by a qualified engineer.
9. Any re-routing of electrical and/or other services must be carried out by qualified or authorised personnel.
10. Appropriate temporary access and safety equipment must be used during installation, such as platform ladders or scaffolding and fall protection anchorage points.
11. In case of emergency access and fall arrest systems must be installed by a minimum of two persons.
12. Do not tamper with, modify or remove any part this system unless authorised by the manufacturer.
13. Appropriate labels or markings must be attached to each system and include the following:
    - System for personnel use only
    - Service entry date
    - Next examination/service due date
    - Harness gear requirements and system compatibility
    - Maximum designed load ratings
    - Installer/Certifier contact details
    - Decorative coatings and coverings must be removed to ensure correct evaluation of structure prior to attachment of system
14. Documentation confirming correct use and maintenance of the system and equipment must be provided to the workplace manager on completion of installation. (See operation manual).
15. Inspect the timber for any knots, splits, cracks or rotting do not install anchor in these areas.
16. Do not install anchor near a nail/joining plate
17. Ensure the screw does not cause timber to crack during installation (pilot drill to prevent cracking)
18. Observe strengthening requirements, If there is any doubt as to the strength of the timber, consult with an Engineer.
19. Anchor must only be fastened to a structural roof truss member, nogins or small 'nailed-in' hip trusses may not be suitable.

Kattsafe instructions and recommendations, drawings and diagrams, and all other documentation are copyright, errors and omissions excepted, and must be carefully read and implemented. Any assistance or guidance given is without prejudice, and Kattsafe cannot be held responsible for any inaccuracy or misinterpretation whatever. Failure to follow site installation requirements and warnings, may result in serious injury or death.

Kattsafe accepts no direct or indirect responsibility and/or consequential liability whatever, for any products and systems incorrectly installed or certified. Kattsafe cannot warrant the integrity or suitability of the structure to which the products may be attached. Prior assessment must be made by a qualified structural engineer, unless the structure is authorised or approved by a competent person.

SYSTEM LIMITATIONS

Must be read prior to installation

1. The timber mount anchor is not be used for abseil/twin rope work.
2. Rated for 15kN fall arrest (Not for rope access use.)
3. Minimum structural requirements for attachment of timber mount anchors:
   - Timber truss 90 x 35 F7 structural grade.
4. The timber mount anchor is suitable for single (1) person use (15kN).
5. Only to be used by competent persons with proof of training by a Registered Training Organisation (RTO) in the use of height safety and fall protection systems.
6. Harness gear is susceptible to deterioration when exposed to chemicals or hazardous environments and must be approved by the manufacturer for use in these applications.
7. This system, under normal use and environment, has a life expectancy of up to 10 years. A manufacturer's assessment and certification to confirm suitability for an additional 5 years use is recommended. This will depend on location, usage and scheduled maintenance as per manufacturer and legislative requirements.
8. Operators of this system must be connected via a lanyard with a personal energy absorber, in accordance to Australian and New Zealand Standard AS/NZS 1891.1.
9. Where slopes exceed 30°, the timber mount anchor must not be used as the load absorber may deform under constant load. A rope access anchor is recommended for this application using a work positioning system with a safety rope line.
10. Do not exceed maximum number of users/persons per system. See specific system data plate for user configuration.
11. Do not tamper with or make alterations to system components without manufacturer's consent.
12. This system is not to be used for tethering or lifting machinery or equipment.
13. The safety system must be recertified by a competent height safety inspector as recommended:
    - Non corrosive/mild environment – 12 monthly
    - Corrosive/harsh environment – 6 monthly (more frequent inspection may be required)

Kattsafe recommends that persons using fall arrest systems do not work alone in case of an emergency and help is required.

Should any part of the system/equipment have been subjected to abnormal loading, use must be discontinued until replaced/recertified by a competent height safety inspector.

AUSTRALIAN STANDARDS SUMMARY

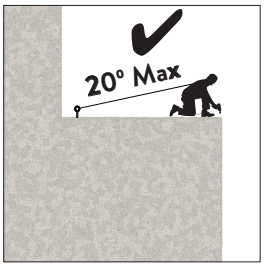


Figure 1

CORRECT Anchor loading in shear.

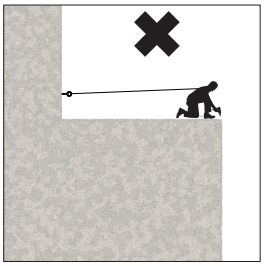


Figure 2

INCORRECT Anchor loading in tension.

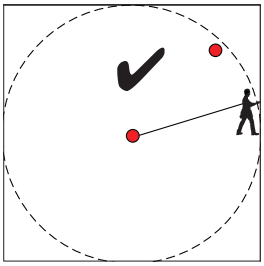


Figure 3

CORRECT Anchor positioning, NO risk of pendulum fall.

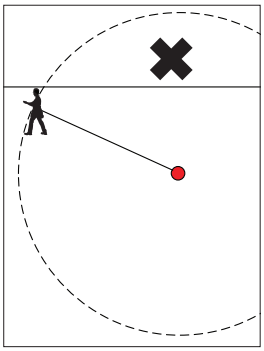


Figure 4

INCORRECT Anchor position, allows risk of pendulum fall.

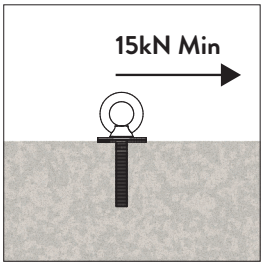


Figure 6

Load rating single person use

– 15kN design load - fall arrest/ single person

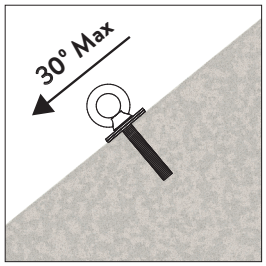


Figure 6

Angle of slope max 30° for fall arrest anchor.

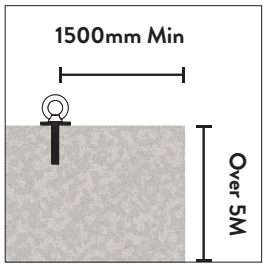


Figure 7

Anchor positioning for fall arrest minimum 1500mm from edge if vertical height is over 5000mm.

*See fall clearance page

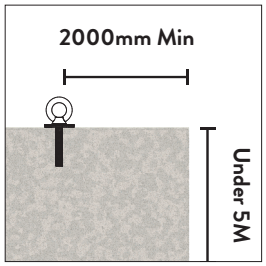


Figure 8

Anchor positioning fall arrest minimum 2000mm from edge if vertical height is under 5000mm.

*See fall clearance page

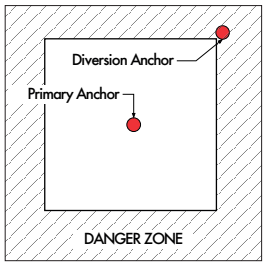


Figure 9

Primary anchor required in safe zone. Diversion anchor required in danger zone.

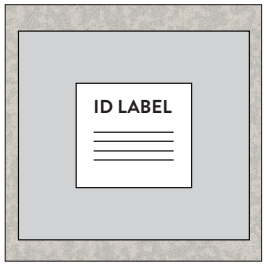


Figure 10

Anchor must include identification label confirming load rating and maintenance records, and installer/certifier details.

DESIGN & LAYOUT

Must be read prior to installation

1. The hierarchy of risk control must be followed at all times

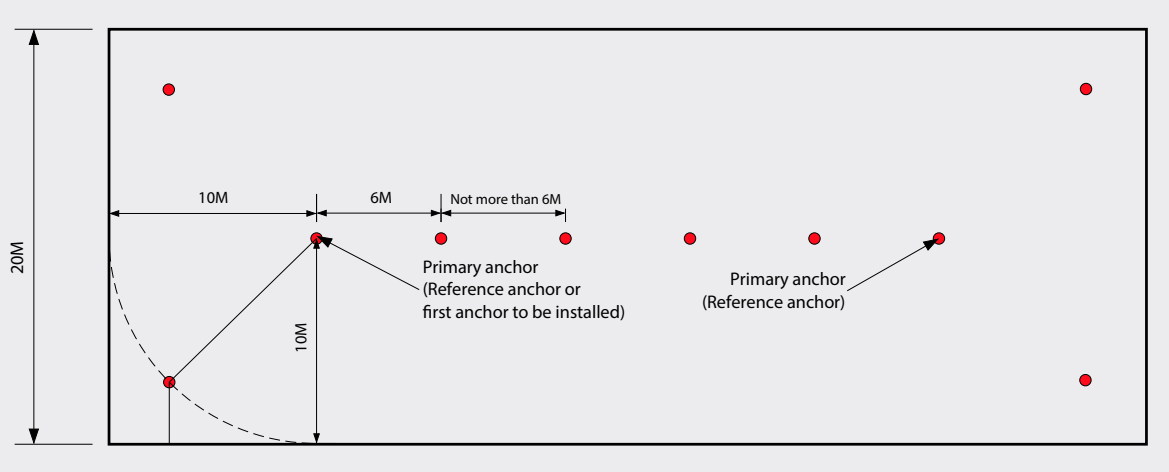
   It is important to note that the lower the hierarchy of control, the greater the skill of the operator required and therefore is least preferred compared with a higher hierarchy requiring minimal operator skill and less risk of operator injury as a result of incompetence.

2. Professional guidance on the design and set out of this system should be obtained prior to installation.
3. Certain environments produce acidic atmospheric conditions which are detrimental to steel structures and concrete surfaces. Any acidic environment must be assessed and structural components certified by a competent person prior to installation of this system.
4. Australian and New Zealand Standard AS/NZS 5532 does require each sub-structure type to which a fall arrest anchor system is attached to be individually tested and certified for safe use by the manufacturer.
5. When designing or positioning fall arrest and rope access systems it is important to check the following:
   - Roof pitch over 15° will require constant user attachment
   - Sub-structure type will determine best suited fixing method
   - Number of persons required to work in the same area will determine preferred type of fall protection system provided
   - Type of work to be done will determine best suited fixing type of fall protection system provided
   - How frequent the area will need to be accessed will determine preferred type of fall protection system provided
   - Safe access to the work zone will determine preferred type of fall protection system provided..
6. Where possible, anchorage systems should always be positioned above the operator to minimise unnecessary fall distance.
7. When connected to an anchorage system using a rope line lanyard, the anchorage must be placed a sufficient distance behind the operator to limit angle on lanyard to 20°. This is to avoid excessive tensile load on the anchor.
8. When positioning the anchor system it is important to ensure that there is no possibility of pendulum action should the operator accidentally fall as a result of incorrect anchor spacing between fall edge and spacing between anchorages.
9. Primary anchors must be positioned in the ‘safe zone’ a minimum of 2.5m from fall edge of the roof area ensuring operator safety whilst connecting to the system prior to moving into the danger zone area.
10. Anti pendulum or diversion anchors must be provided to allow rope line extension into extreme corners preventing pendulum action in the case of a fall.
11. Any angle of roof pitch above 30° will require rope access anchorages for use as a work positioning system (abseil) in place of a fall arrest system.
12. Sufficient fall clearance is essential in order to ensure correct operation of the system in a fall situation. Should fall distance be less than 5.0m, anchorage system must be positioned at least 2.0m or more from the fall edge to allow operator to work effectively in full restraint.

This document does not in any way replace the full Australian and New Zealand Standard document AS/NZS 1891 and AS/NZS 4488 which must be read and properly and understood prior to installation of this system.

Anchor layout for fall arrest use - Small roofs

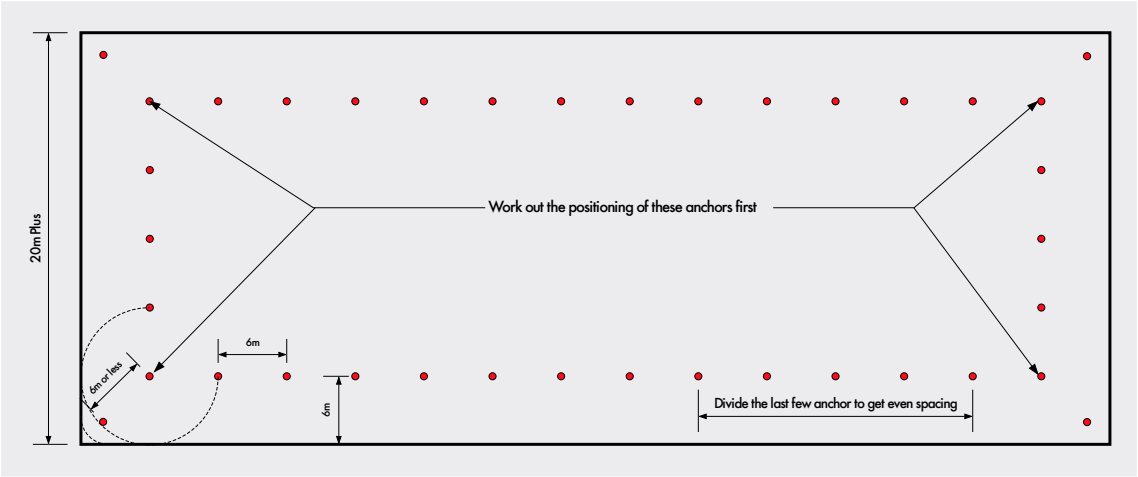
Roofs up to 20.0m in width



- Avoid positioning an anchor more than 10.0m from the roof edge. Further than this will require longer than standard rope line (15.0m) which is heavy and cumbersome to manage.
- Never allow more than 6.0m between anchors as this will create large 'dead zone' areas at the roof edge causing a pendulum fall possibility.
- The primary anchor (or reference anchor) must always be placed such that the distance away from the gutter edge of the roof is the same as from the gable end of the roof.

Anchor layout for fall arrest use - Large roofs

Roofs over 20.0m in width



- All points mentioned for smaller roofs also apply to larger roofs.
- Avoid positioning anchors in close proximity to roof lights as these are classified as fall hazards. Ensure roof lights or skylights are protected with fall protection covers should an anchorage be positioned in close proximity.

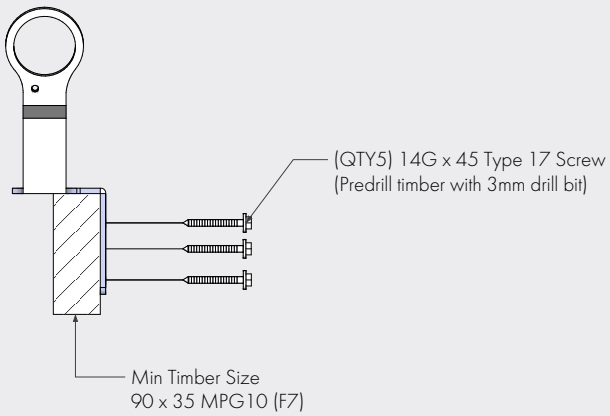
For roof pitches above 15° Kattsafe recommend that 100% attachment of the operator be maintained at all times. These diagrams are a guide only. All risks must be clearly identified and eliminated as far as reasonably practicable.

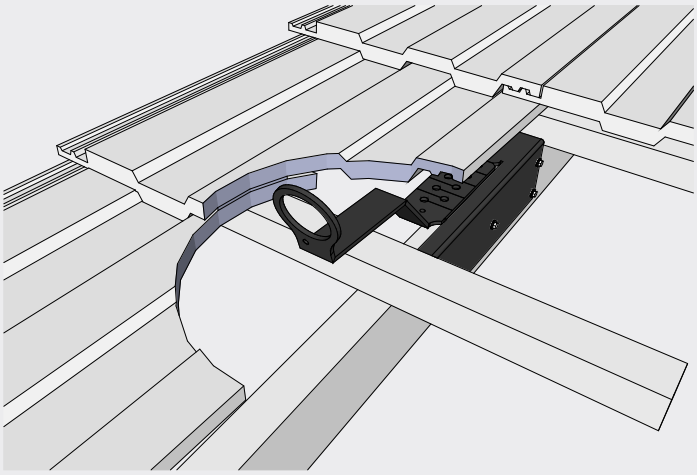
INSTALLATION PROCEDURE

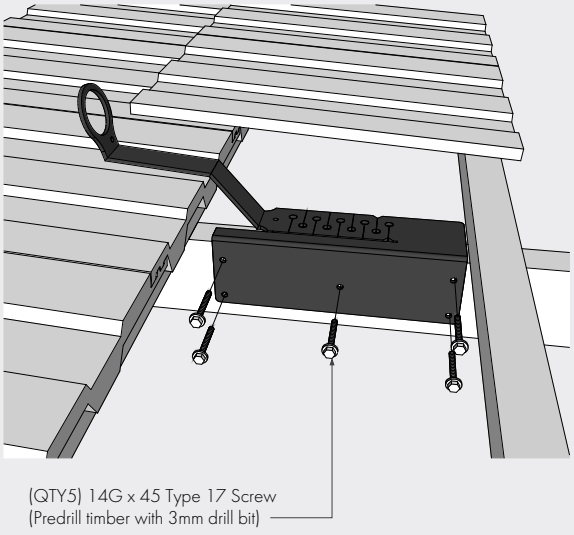
1. Locate position of area where anchor is to be installed.
2. Remove roof tiles to expose the timber truss/rafter.
3. Locate the anchor on the side of the truss/rafter ensuring the end of the anchor ring will protrude beyond the end of the roof tile once it is replaced.

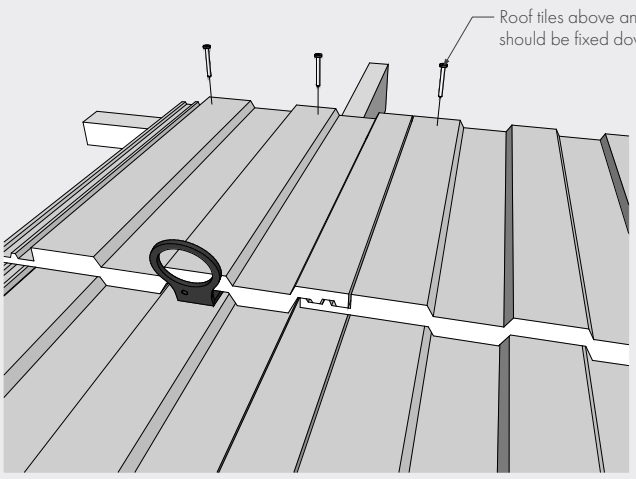
Note: The anchor can be placed either side of the truss to ensure that it lines up with the roof tile pattern.

4. Fix the anchor in place using five 40mm x12G Type17 screws.
5. Ensure the screws are not closer than 12mm from any edge of the timber (to prevent splitting)
6. Ensure the lower roof tile is nailed to the batten (to prevent any dislodgement should a fall occur).
7. Replace all other roof tiles and repeat above step for the roof tile located on timber of the anchor.





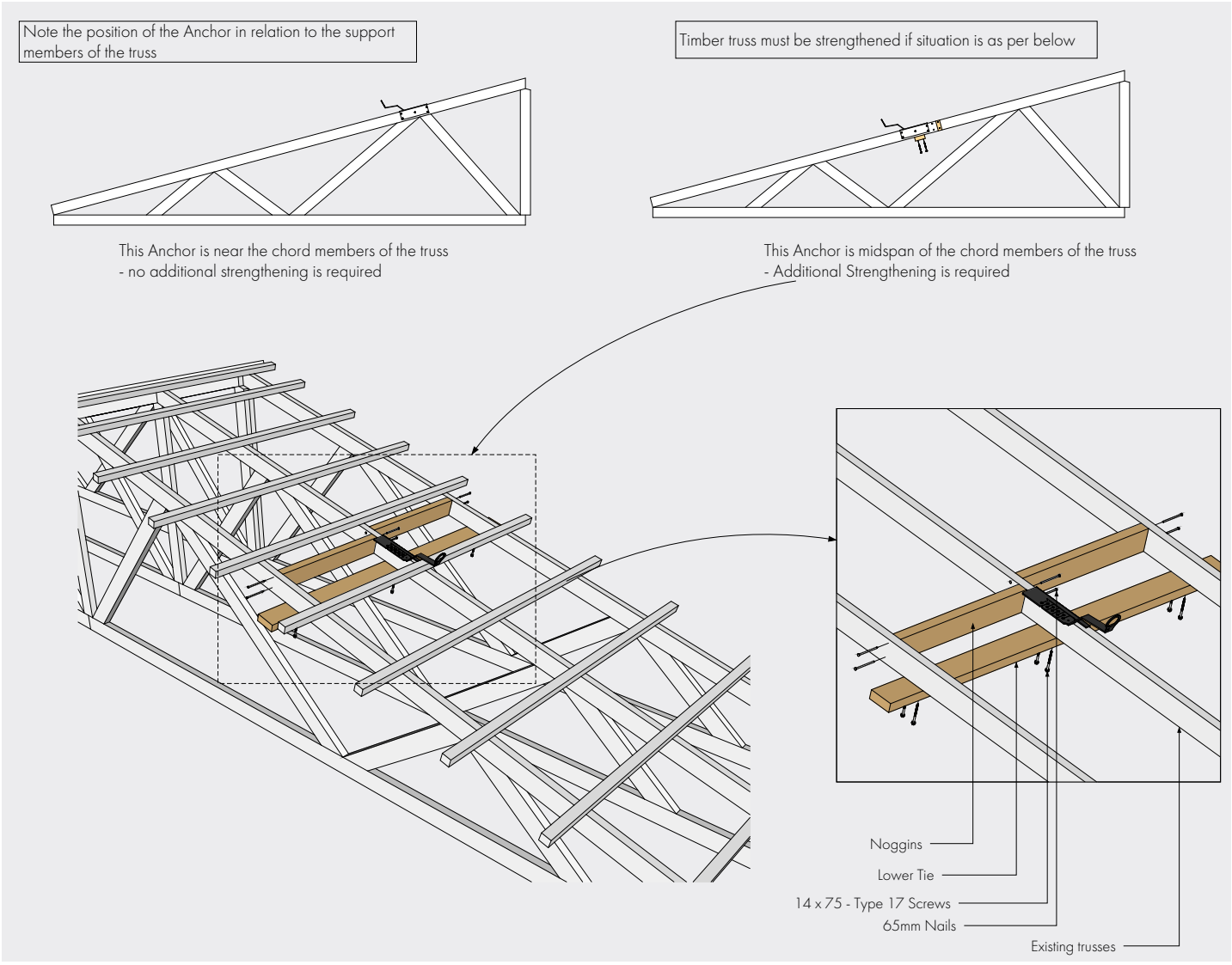




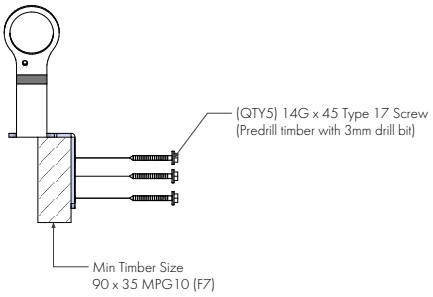
NOTES Timber must be structurally sound. Do not attach anchor to timber if cracked

ANCHOR POSITIONING

1. Install a 90x35 MGP10 tie to underside of timber chord directly under anchor point (or no more than 150mm away) extending 150mm past adjacent trusses. (If more, see strengthening requirements below.)
2. Fix tie to each crossing truss with two 14x75 type 17 screws.
3. Provide 90x35 MPG10 noggins in line with lateral tie between truss spacing fixed through truss timber chord with 2 gun nails.



INSTALLATION CRITERIA

Component	Installation criteria
Roof structure	Roof structure in good condition.
	Inspect the timber for any knots, splits, cracks or rotting do not install anchor in these areas.
	Ensure the strength of the timber can sustain the loads.
Installation 	Ensure the anchor is installed near a nail/joining plate.
	Ensure the anchor is fastened to a structural roof truss member.
	Min Timber Size 90 x 35 MPG10 (F7)
	Ensure only 14G x 45 Type 17 screws are used.
Data label 	Anchor data label attached at each anchor.
	All relevant data filled out including next maintenance date.

SYSTEM MAINTENANCE

Must be read prior to checklist

1. The timber mount anchor system needs to be checked and recertified by a competent height safety inspector every 12 months for non corrosive environments or 6 monthly for corrosive or harsh environments. (To be determined by competent person depending on severity of surrounding conditions.)
2. Never clean using acids or other chemicals that could damage the system components.
3. The energy absorber is subject to wear depending on frequency of usage. Any signs of excessive wear will require the anchor to be replaced.
4. The identification label must be completed confirming certification, maintenance and recertification of the system.
5. Harness gear and equipment must be maintained and stored in a dry, protected area, away from acids and ultra violet rays which cause material fibres to break down and reduce their safety and life expectancy.
6. Any deterioration or damage to the system or equipment must be reported to person in control of the workplace and relevant corrective action undertaken.
7. Maintenance inspections must be clearly documented. Any non-conformance must be clearly identified and tagged ‘Do Not Use’ until corrective action by a competent person has been completed.

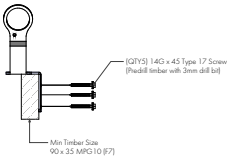
MAINTENANCE CHECKLIST

The checklist below outlines key checking criteria required to ensure the safe use of this system. Any item of concern not shown on the checklist must be noted on the maintenance report and brought to the attention of the workplace manager.

Items ticked PASS - YES means they conform with the required checking criteria and are suitable for normal use until the next recertification date. System data plates must be updated showing current check date and next check date.

Item ticked PASS - NO means they do not conform to the required checking criteria. These items must be clearly tagged ‘ Do Not Use’ and the required corrective actions put in place. The maintenance report must clearly document all non-conforming criteria.

This system must be maintained by a competent height safety inspector trained in the safe use and maintenance of this system.

Component	Inspection criteria	Pass Y/N	Corrective action	Completion date
Fixings 	Ensure the anchor is fastened to a structural roof truss member.			
	Ensure only 14G x 45 Type 17 screws are used.			
	Fixings to roof timber structure secure.			
	No evidence of penetration seal deterioration.			
Load absorber 	No evidence of eyelet damage or deformation.			
Data label 	Data label attached and clearly visible.			
	All relevant data filled out including last maintenance date.			
Roof structure 	Roof structure in good condition i.e. no knots, splits, cracks or rotting.			

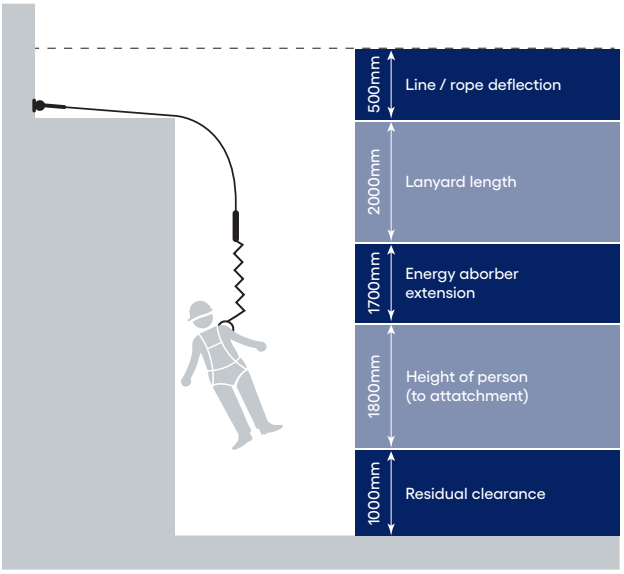
TECHNICAL INFORMATION

Fall clearance

There must be sufficient clearance below the user to arrest a fall before the user strikes the ground or another lower level hazard. The clearance required is dependent on the following factors:

- Elevation of anchorage
- Anchorage deflection
- Lanyard length
- Lanyard elongation on deceleration pull out (personal energy absorber)
- Operator height
- Fall distance residual clearance

See AS/NZS 1891.4:2009 Section 7 for a detailed explanation.



System requirements

The worker must wear a full body harness when connected to any fall arrest system including a personal energy absorber compliant with AS/NZS 1891.2:2001 and AS/NZS 1891.4:2009 limiting the force on the anchor and operator to a maximum of 6kN.

Harness connectors must support at least 15kN. Non-compatible connectors may unintentionally disengage (roll-out). Carabiners supplied with proprietary systems must not be removed or substituted with any other component.

Inspection and Maintenance

Inspection and recertification of fall arrest systems and equipment is required at least every 12 months by competent person in accordance with manufacturer's specifications and requirements of Australian Standard AS/NZS1891.4:2009 Section (9).

Important note

Failure to supply and/or install Kattsafe proprietary products in accordance with above standards and codes, specifications and instructions voids complete system certification and/or warranty.

TECHNICAL SPECIFICATION

Timber mount anchor

AP121

Timber mount anchor designed to fasten to timber trusses between tiles. System design, supply, layout, installation and certification by a Kattsafe approved installer, as per the manufacturer's installation instructions and current standards.

Materials

Profiled stainless steel - powder coated

Dimensions

- 384 (L) x 217mm (H)
- Eyelet diameter: 58mm

Weight

0.7kg

Fixings

Timber fixing: 12g 40mm type 17 tek screws

Substructure requirements

Minimum timber size: 90 x 35mm F7 grade

Rating

Fall arrest use: 15kN

Compliance

The AP121 timber mount anchor is designed and manufactured in accordance with requirements of Australian and New Zealand Standards AS/NZS 1891.4:2009 and AS 5532:2013.

Testing

Testing and performance based on requirements of Australian and New Zealand Standard AS/NZS5532.2013.

- Dynamic load tested: 15kN
- Resultant load on structure: 4.9kN
- Static load tested: 15kN in direction of timber truss
- Compliance with loads in other directions requires structure to be certified to withstand 15kN

Product warranty

10 years from date of purchase subject to correct installation. Use and maintenance to be in accordance with manufacturer's specifications and recommendations.

Inspection and maintenance

Inspection and certification every 12 months by a safety equipment inspector in accordance with manufacturer's specifications and requirements of Australian and New Zealand Standard AS/NZS 1891.4:2009 Section 9.

Important note

- The AP121 timber mount anchor must not be used for rope access.
- Failure to supply and/or install proprietary product in accordance with above standards and codes, specifications and installation/usage guidelines voids complete system certification and/or warranty.

WARRANTY INFORMATION

Warranty period on this system:
10 years from date of purchase

Should you have a warranty claim as a result of a defect the following procedure must be followed:

Identify the following information:

- The product/system name and code number.
- The date of purchase/installation.
- Installation company details.
- The installation identification number.
- The name of the company using this system.
- A description of the defect/warranty claim.
- The periodic system maintenance report.

Forward the above information to sales@kattsafe.com.au or contact technical helpline, 1300 301 755.

Terms and conditions

All warranty claims must be made in writing within 14 days of the appearance of the defect.

Incorrect installation or work done by a non accredited Kattsafe system installer will void all warranty rights.

Systems that have been installed using non proprietary equipment will void all warranties.

System roof/cladding and concrete penetration seals are not covered in this warranty.

Systems/components that have not been maintained in accordance with manufacturer's/legislative requirements will void warranty.

Systems used by incompetent persons or use with non compatible accessories ie. harness gear, lanyards, travellers, fall arrestors etc. will void warranty.

Systems/components used for purposes other than their intended use will void warranty.

General wear and tear is expected and will depend on the frequency of use and is not covered by warranty.

Product brochure
Timber mount anchor

Installation manual
Timber mount anchor

QMS Certification
ISO 9001:2015

Find all related products and resources on our website.
kattsafe.com.au

Kattsafe

Height access
and fall protection

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