

INSTALLATION HANDBOOK

TUFF-POST ANCHORS

SafetyLink is an innovative anchor company achieving success and keeping you safe whilst working at heights.

-  ROOF ANCHORS
-  HORIZONTAL LIFELINES
-  PERMANENT LADDERS
-  LADDER STABILISERS
-  TEMPORARY ANCHOR



Read entire handbook before installing SafetyLink products. All products must be installed in accordance with SafetyLink's installation handbook, using only products supplied by SafetyLink Pty Ltd. Failure to follow all warnings and instructions may result in serious injury or death.



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Safety Centre Training



Catalogue



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Terms/Conditions/Warranties

WARNINGS



READ CAREFULLY SOMEONE'S LIFE DEPENDS ON IT

INSTALLATION MUST BE CARRIED OUT BY, OR UNDER THE SUPERVISION OF A COMPETENT HEIGHT SAFETY INSTALLER.

The building or structure for the anchorages should be assessed by an engineer, unless it is clear to a competent height safety installer that the anchorages system is structurally adequate.

- STANDARD EYEBOLTS MUST ONLY BE USED AS A FALL ARREST ANCHOR.**
- ABSEILING EYEBOLTS ARE TO BE USED FOR ROPE ACCESS (ABSEILING).**
- SURFACE MOUNTED ANCHORS MUST NOT BE USED FOR ROPE ACCESS (ABSEILING).**
- RETRO EYEBOLTS USED FOR ROPE ACCESS (ABSEILING) EXCEPT ON HIGH PROFILE SECTION.**

When installing anchor points all safety procedures must comply in accordance with the current safety code/s of practice/s for working at heights.

- Recommended waterproofing for roof tiles: *Sika Flex Co-Polymer Sealant*.
- Recommended waterproofing for metal roof: *Silicone Sealant*.
- All threads must be coated with Loctite prior to assembly (**IMPORTANT NOTE: Before applying Loctite 243 use Loctite 7471 primer to activate the surface according to manufacturer's instructions**).
- A personal energy absorber or a fall-arrest device with a personal energy absorber must be used to connect to all SafetyLink Anchorages and (or) Strops.

MAXIMUM USER PER EYEBOLT IS ONE (1)

WARNING

Locking Hex Nut must be fully screwed up the thread of the eyebolt to expose 30mm of thread.

This thread must be fully screwed into the bracket, coat threads with Loctite (**IMPORTANT NOTE: Before applying Loctite 243 use Loctite 7471 primer to activate the surface according to manufacturer's instructions**).

Locking Hex Nut must be firmly tightened onto the bracket to stop the eyebolt from unscrewing and to gain maximum strength.



EYEBOLTS - Threads need to have a minimum of **SIX FULL 360° TURNS** into the ultimate thread.

RETRO EYEBOLTS - Threads need to have a minimum of **EIGHT FULL 360° TURNS** into the ultimate thread.



CORRECT

Always use a spanner when tightening and un-tightening the locking hex nut.



WRONG

DO NOT place an object into the eye of the eyebolt to tighten or un-tighten the locking hex nut, as this may damage the eyebolt.



MAINTENANCE – PERIODIC INSPECTIONS

All items of height safety equipment which are in regular use shall be subjected to periodic inspection and servicing. These regular scheduled inspections and servicing must be carried out by a competent height safety installer.

FIXED LADDERLINK: LADDER SUPPORT BRACKET

ALL LADDERLINKS MUST BE INSPECTED EVERY 12 MONTHS, INSPECTIONS NEED TO BE CARRIED OUT BY A COMPETENT HEIGHT SAFETY INSTALLER.

Procedures to be followed at inspection time:

- Visually inspect ladder support brackets for any signs of deterioration or the protective coating being removed. *(Note: LadderLink is made from marine grade aluminium and therefore should not corrode).*
- Ensure LadderLink is firmly secured to the structure as per SafetyLink Installation Handbook. *(refer to Installing LadderLink).*

SAFETYLINK ANCHORAGES

ALL ANCHORAGES MUST BE INSPECTED EVERY TWELVE MONTHS, INSPECTIONS NEED TO BE CARRIED OUT BY A COMPETENT HEIGHT SAFETY INSTALLER.

Procedures to be followed at inspection time:

- Visually inspect anchors for signs of deterioration.
- The FrogLink/TileLink anchor point has two energy absorbing regions and two stabilising joins which hold the eyelet in place during use. If these energy absorbing regions are expanded this will indicate the anchor point has arrested a fall. Similarly, if the two stabilising joins have been broken this would also indicate the FrogLink/TileLink has arrested a fall and should be replaced.
- The eyebolt should remain straight, a bent eyebolt will indicate that the anchor point has arrested a fall *(The design features of the eyebolt includes the ability to bend like a fishing pole starting from the top and working its way to the bottom, enabling it to use up energy as the eyebolt bends whilst lessening the force on the person falling and the attachment point).*
- Visually inspect the components of the anchor for corrosion, superficial surface marking is permitted while deeper corrosion or pitting would require attention.
- Manually (by hand) check the eyebolt for rigidity and tightness, if the eyebolt can turn in the anticlockwise direction it will require attention.
- Visually inspect the rubber hat washer and waterproofing components to ensure it has remained sealed.
- Visually inspect the attachment component of the anchorage where practically possible.
- Visually inspect the parent structure for modifications or deterioration which might lead to loss of anchorage strength.
- For Concrete Installation Only: To comply with Australian Standards, each ConcreteLink must be tested after installation and at every recertification inspection. Ensure you wait the recommended curing time as specified by the chemical anchor instructions. The pull test can be done using a 16mm threaded eyebolt. Test consists of ultimate pull out force proof loading to 50% of design purpose of anchorage.
- A personal energy absorber or a fall-arrest device with a personal energy absorber must be used in conjunction with all SafetyLink Anchorages and Lifeline systems.

IN ADDITION TO SAFETYLINK PTY LTD EQUIPMENT, ALL ANCILLARY EQUIPMENT MUST BE INSPECTED IN ACCORDANCE WITH APPLICABLE REGULATORY REQUIREMENTS AND THE MANUFACTURER'S INSTRUCTIONS.



**FOR MAINTENANCE ADVICE AND SERVICES PLEASE CONTACT SAFETYLINK
ON +61 249 641068 OR 1300 789545 FOR YOUR NEAREST SAFETYLINK INSPECTION SERVICE
CENTRE OR EMAIL: info@safetylink.com**



WARRANTIES

EXTRACT: SafetyLink Pty Ltd STANDARD TERMS AND CONDITIONS

- 11.1 To the extent permitted by law all implied conditions, warranties and undertakings are expressly excluded.
- 11.2 Except as provided in this clause the Company shall not be liable for any loss or damage, whether direct or indirect (including consequential losses or damage) arising out of any breach of contract by the Company or any negligence of the Company, its employees or agents.
- 11.3 Should the Company be liable for a breach of a guarantee, condition or warranty implied by the Australian Consumer Law (not being a guarantee, condition or warranty implied by sections 51, 52 and 53 of that Law) then its liability for a breach of any such condition or warranty express or implied shall be limited, at its option, to any one or more of the following.
- A) in case of Goods
- (I) the replacement of the Goods or the supply of equivalent Goods.
 - (II) the repair of the goods,
 - (III) the payment of the cost of replacing the Goods or acquiring equivalent Goods.
 - (IV) The payment of the cost of having the Goods repaired.
- Provided that any such Goods are returned to the Company by the Purchaser at the Purchaser's expense.
- B) in the case of services
- (i) the supply of the services again,
 - (ii) the payment of the cost of having the services supplied again.
- 11.4 The Company will not liable for the costs of recovery of the Goods from the field, loss of use of the Goods, loss of time, inconvenience, incidental or consequential loss or damage, nor for any other loss or damage other than as stated above, whether ordinary or exemplary, caused either directly or indirectly by use of the Goods.
- 11.5 The Company warrants that at the time of shipment, Products manufactured by it will be free from defects in material and workmanship. In the absence of a modified written warranty, the Company agrees to making good any such defects by repairing the same or at the Company's option by replacement, for a period of (1) one year from the date of shipment. This limited warranty applies provided that:
- (a) defects have arising solely from faulty materials or workmanship;
 - (b) the Products have not received maltreatment, inattention or interference;
 - (c) **the Products have been installed in accordance with the Company's Installation Handbooks using only products supplied by the Company;**
 - (d) accessories used with the Products are manufactured by or approved by the Company;
 - (e) the Products are maintained in accordance with Australian Standard 1891.4 (section 9).
 - (f) you notify any claim under this warranty to SafetyLink in writing to the address below no later than 14 days after the event or occurrence concerning the produce giving rise to the claim and you pay all costs related to your claim.

This warranty does not apply to any defects or other malfunctions caused to the Goods by accident, neglect, vandalism, misuse, alteration, modification or unusual physical, environment or electrical stress.

Please note that the benefits to the purchaser (as a consumer) given by this warranty are in addition to your other rights and remedies under the Australian Consumer Law. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

- 11.6 If any goods are not manufactured by the Company, the guarantee of the manufacturer thereof shall be accepted by the Purchaser as the only express warranty given in respect of the goods.
- 11.7 Except as provided in this clause 11, all express and implied warranties, guarantees and conditions under statute or general law as the merchantability, description, quality, suitability or fitness of the Products for any purpose or as to design, assembly, installation, materials or workmanship or otherwise are hereby expressly excluded (to the extent to which they may be excluded by law).

PLEASE SEE SAFETYLINK PTY LTD FULL STANDARD TERMS OF CONDITIONS OF SALE FOR FURTHER REFERENCE.



TUFF-POST – Concrete Mounted Components

CONCRETE MOUNTED ANCHORS

PRODUCT CODE	DESCRIPTION	QTY
TUFF-POST300C	TUFF-POST Concrete Anchor - Raised 300mm:	
EYEBOLT-RETRO	Retro Eyebolt: 316 Stainless Steel	1
WASHER M20	Washer: 20mm 316 Stainless Steel	1
O-RING	O-Ring Washer	1
RETRO-WASHER	Retro Stainless Steel Washer with Foam	1
TUFF-POST300	TUFF-POST 300mm	1
CON-M12x160	4 x Anchor Rod M12X160, 4 x M12 Nut, M12 Spring Washer & M12 Washer	4

PRODUCT CODE	DESCRIPTION	QTY
TUFF-POST600C	TUFF-POST Concrete Anchor - Raised 600mm:	
EYEBOLT-RETRO	Retro Eyebolt: 316 Stainless Steel	1
WASHER M20	Washer: 20mm 316 Stainless Steel	1
O-RING	O-Ring Washer	1
RETRO-WASHER	Retro Stainless Steel Washer with Foam	1
TUFF-POST600	TUFF-POST 600mm	1
CON-M16x160	4 x Anchor Rod M16X160, 4 x M16 Nut, M16 Spring Washer & M16 Washer	4



TUFF-POST – Concrete Installation

All safety procedures must comply in accordance with the current safety code(s) of practice(s) for working at heights. Ensure safety at all times during and after installation by using an appropriate height safety system.

TUFF-POST is designed to raise the ground height of a height safety system therefore TUFF-POST **must only** be used in conjunction with a SafetyLink lifeline or energy absorbing eyebolt system.

POSITIONING OF TUFF-POST

- The pendulum effect applies (refer to Appendix Diagram 2)
- TUFF-POST must be in a position easily and safely reached from a safe access point.
- TUFF-POST must **not** be installed close to concrete edges, minimum distance to any concrete edge is **150mm**.
- **Minimum concrete thickness 150mm.**
- **Minimum concrete grade MPA32.**
- **Minimum anchor rod embedment 115mm.**
- **Recommended chemical anchor: Hilti HIT-HY200r or equivalent.**

- ⚠ If any doubt exists with the strength of the structure an engineer should make the assessment.
- ⚠ Installation must be carried out by, or under the supervision of a competent height safety installer.
- ⚠ During installation you must be safe at all times.

LOCATING THE STEEL REINFORCING IN THE CONCRETE

Use of a digital metal detector (example: Bosch DMO 10) to locate the steel reinforcing in the concrete is recommended when determining the anchor hole locations for the TUFF-POST. This ensures steel is avoided when drilling.

DRILLING THE 4 x 14mm HOLES

Drill a 14mm hole to a minimum depth of 115mm with a hammer drill and masonry drill bit, *refer to Drawing 2*.

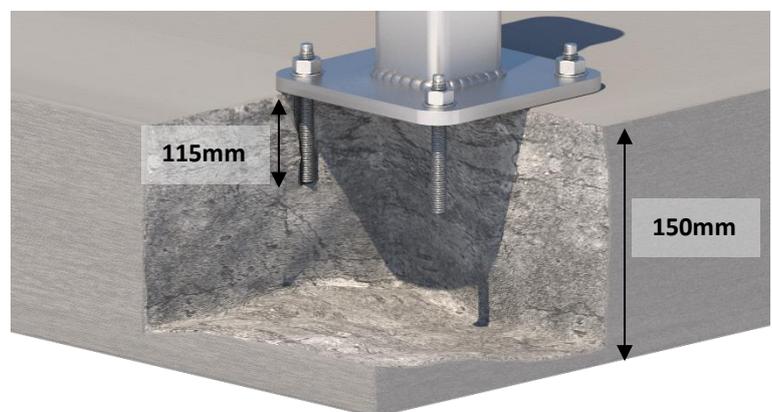
PREPARING THE 4 x 14mm HOLES

The holes must be moisture and dust free. Remove dust using compressed air, small brush and vacuum cleaner.

Drawing 1



Drawing 2



TUFF-POST – Concrete Installation

INSTALL 4 x ANCHOR ROD

The TUFF-POST 300mm must be held down with 4x anchor rods.

300mm Post use CON-M12x160

600mm Post use CON-M16x160

Anchor rod length must be a minimum of 160mm however will be determined based on water proofing membrane thickness under the TUFF-POST.

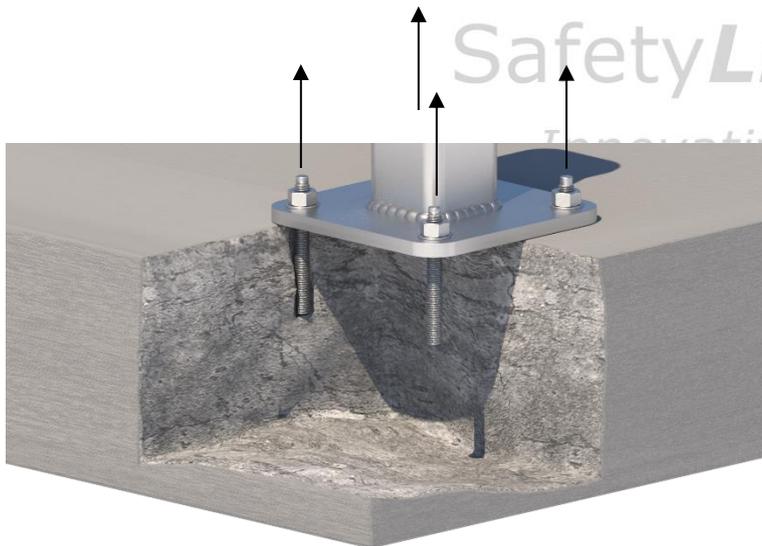
- Fill 14mm holes with chemical adhesive gel as specified with the Hilti product use data sheet.
- Fit anchor rods ensuring a minimum of 110mm for 300mm posts or 115mm for 600mm posts is embedded in the concrete and chemical adhesive gel.
- Remove any chemical adhesive gel that has been displaced from the anchor hole during installation.
- Allow chemical adhesive gel to cure to full strength as indicated in the Hilti product use manual.
- Once chemical adhesive gel has cured each Anchor Rod will need to be load tested with a calibrated pull testing machine to **7.5kN**, refer to Drawing 3.

Annual recertification will require the TUFF-POST to be load tested as a complete unit with a calibrated pull testing machine to **7.5kN**, refer to Drawing 4.

This is completed by connecting the pull test machine to the top of the TUFF-POST at the 16mm thread. If TUFF-POST is installed with a Lifeline system a load test eyebolt will be present for this test to be completed. If TUFF-POST is installed with an energy absorbing eyebolt, a test eyebolt will need to be installed and the energy absorbing eyebolt reinstalled once the test is completed. **NEVER COMPLETE LOAD TESTS ON ENERGY ABSORBING EYEBOLTS, LIFELINE END AND INTERMEDIATES.**

Drawing 3

4 x Anchor Rod – 7.5kN Pull



Drawing 4

Tuff-Post End - 7.5kN Pull



TUFF-POST – Steel Mounted Components

STEEL MOUNTED ANCHORS

PRODUCT CODE	DESCRIPTION	QTY
TUFF-POST300S	TUFF-POST Steel Anchor - Raised 300mm:	
EYEBOLT-RETRO	Retro Eyebolt: 316 Stainless Steel	1
WASHER M20	Washer: 20mm 316 Stainless Steel	1
O-RING	O-Ring Washer	1
RETRO-WASHER	Retro Stainless Steel Washer with Foam	1
TUFF-POST300	TUFF-POST 300mm	1
BOLT-M12x50mm-SS	Bolt: M12x50mm 316 Stainless Steel Set Screw	4
WASHER M12	Washer: M12mm 316 Stainless Steel	4
NUT NYLOC M12_316	Nyloc Nut: M12 316 Stainless Steel	4

PRODUCT CODE	DESCRIPTION	QTY
TUFF-POST600S	TUFF-POST Steel Anchor - Raised 600mm:	
EYEBOLT-RETRO	Retro Eyebolt: 316 Stainless Steel	1
WASHER M20	Washer: 20mm 316 Stainless Steel	1
O-RING	O-Ring Washer	1
RETRO-WASHER	Retro Stainless Steel Washer with Foam	1
TUFF-POST600	TUFF-POST 600mm	1
BOLT-M12x50mm-SS	Bolt: M12x50mm 316 Stainless Steel Set Screw	4
WASHER M12	Washer: M12mm 316 Stainless Steel	4
NUT NYLOC M12_316	Nyloc Nut: M12 316 Stainless Steel	4

SafetyLink®

Innovative
Fall Protection



TUFF-POST – Steel Installation

All safety procedures must comply in accordance with the current safety code(s) of practice(s) for working at heights. Ensure safety at all times during and after installation by using an appropriate height safety system.

TUFF-POST is designed to raise the ground height of a height safety system therefore TUFF-POST **must only** be used in conjunction with a SafetyLink lifeline or energy absorbing eyebolt system.

POSITIONING OF TUFF-POST

- The pendulum effect applies (refer to Appendix Diagram 2)
- TUFF-POST must be in a position easily and safely reached from a safe access point.
- TUFF-POST must **not** be installed close to steel edges, minimum distance to any steel edge is **10mm**.
- **Minimum steel thickness 12mm.**

⚠️ If any doubt exists with the strength of the structure an engineer should make the assessment.

⚠️ Installation must be carried out by, or under the supervision of a competent height safety installer.

⚠️ During installation you must be safe at all times.

DRILLING THE 4 x 12mm HOLES

Drill 4 x 12mm holes in suitable locations with a power drill and 12mm drill bit.

PREPARING THE 4 x 12mm HOLES

The holes must be clear and free from burrs.

INSTALL 4 x M12 bolts minimum A4-70 grade

- The TUFF-POST must be held down with a minimum of 4 x M12 bolts.
- Bolts must be a minimum of M12 and A4-70 Grade, length will be a minimum of 35mm and ultimately determined by the thickness of steel the post is anchored to.
- A nyloc nut or thread locker must be applied to all bolts to prevent the bolts from coming loose.

No load testing is required when installing to steel structures, however inspection of the structure must be made an identified as capable of supporting the height safety system in the event of a fall.

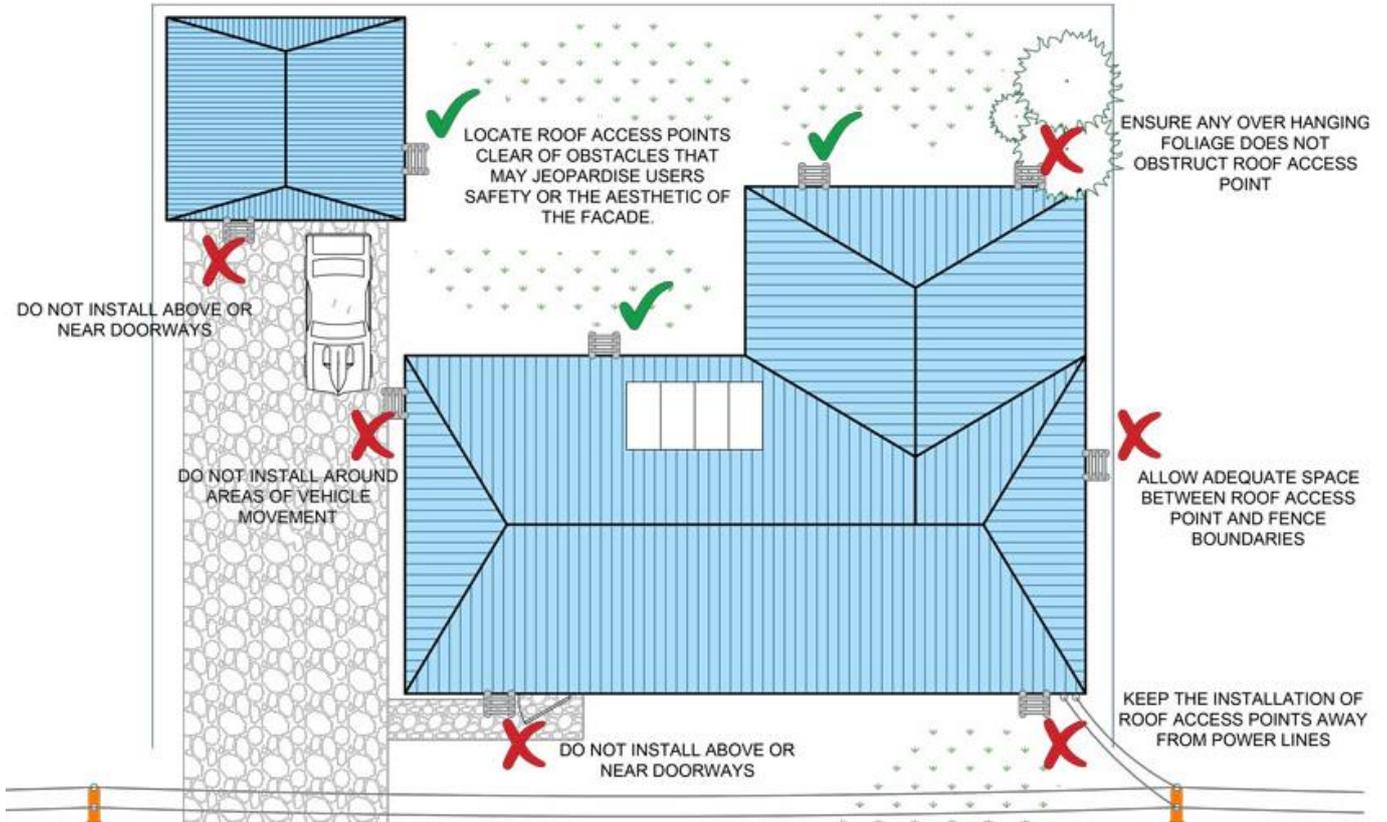
FITTING THE HEIGHT SAFETY SYSTEM TO THE TUFF-POST

- Once the TUFF-POST is correctly installed to the structure, the Lifeline System or Energy Absorbing Eyebolt system can be installed. Refer to FrogLine Manual.
- The system components are only to be installed to the TUFF-POST with a minimum grade A4-70 Stainless Steel M16 bolt.
- Thread locker must be applied to all threads before installing to the TUFF-POST. **Use Loctite on the thread to ensure that the unit cannot be tampered with (IMPORTANT NOTE: Before applying Loctite 243 use Loctite 7471 primer to activate the surface according to manufacturer's instructions).**

APPENDIX – Diagram 2 – Anchor Positioning Layout

THIS IS A GUIDE ONLY

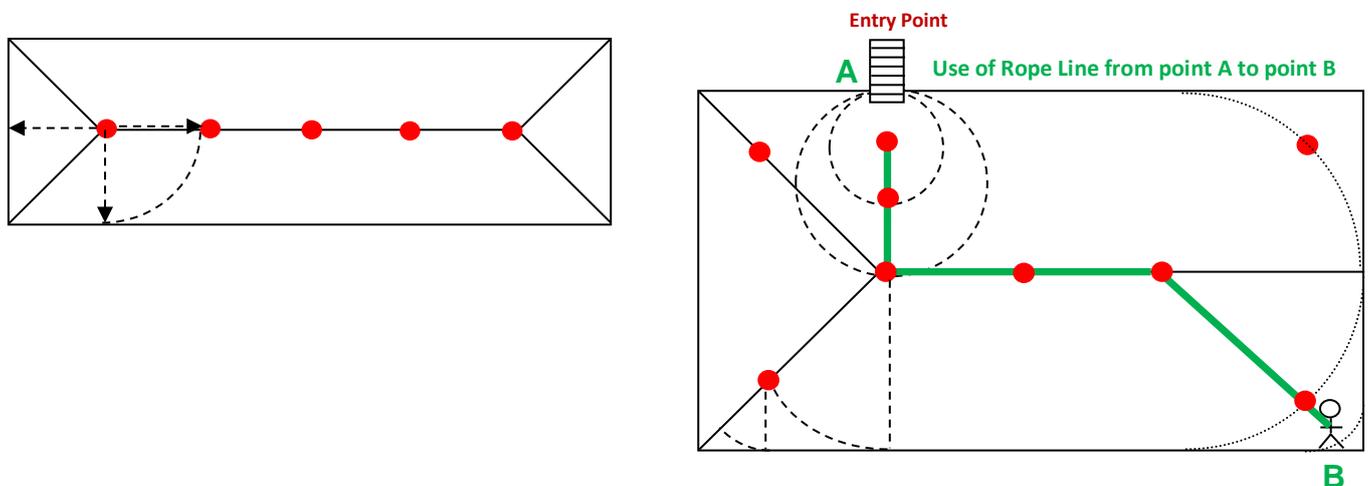
All working at heights safety procedures must be complied with when installing SafetyLink anchor points. For more information refer to your state or territories current legislation, regulations, policies and codes of practices.



- ⚠ IF ANY DOUBT EXISTS WITH THE STRENGTH OF THE STRUCTURE OR ROOF SHEETS AN ENGINEER SHOULD MAKE THE ASSESSMENT.**
- ⚠ DURING INSTALLATION YOU MUST BE SAFE AT ALL TIMES.**
- ⚠ INSTALLATION MUST BE CARRIED OUT BY, OR UNDER THE SUPERVISION OF A COMPETENT HEIGHT SAFETY INSTALLER.**

ACCESS, LAYOUT AND USE OF A SAFETYLINK ANCHOR SYSTEM

SafetyLink anchor points are positioned by calculating the pendulum effect, this limits the likelihood of a fall past the edge of the roof space. The pendulum effect still applies to a flat roof.



SPACING MUST BE NO GREATER THAN THE RAFTER LENGTH, PLEASE CONTACT YOUR DISTRIBUTOR IF YOU ARE UNSURE.

SAFETYLINK HEIGHT SAFETY SYSTEMS MUST ONLY BE INSTALLED AS PER OUR INSTALLATION GUIDES, TO STRUCTURES AS SPECIFIED IN THE INSTALLATION MANUAL FOR EACH PRODUCT. SHOULD ANY DOUBT EXIST IN REGARD TO THE STRUCTURES INTEGRITY AN ENGINEER SHOULD BE CONSULTED.



IN CASE OF ACCIDENT

⚠️ A FALL RESCUE PLAN AND SAFE WORK STATEMENT MUST BE DEVELOPED PRIOR TO USING SAFETYLINK SYSTEMS AND EQUIPMENT.

⚠️ PERSONS WORKING AT HEIGHTS SHOULD NOT WORK ALONE.

It is critical that before using any SafetyLink Systems a fall rescue plan is in place for any persons suspended mid-air following a fall. Serious injury or death can occur in a matter of minutes, particularly if a person's movement or breathing is restricted or loss of consciousness has occurred. In accordance with your fall rescue plan and appropriate first aid procedures it is essential to remove the person from the suspended position as quickly as possible.

In accordance with AS/NZS 1891.4:2009 clause 9.5

EQUIPMENT WHICH HAS ARRESTED A FALL OR SHOWS A DEFECT

Any piece of equipment including both personal and permanently installed items, which has been used to arrest a fall or which shows any defect during operator or periodic inspection shall be withdrawn from service immediately and a replacement obtained if necessary. A label indicating the condition or defect should be attached to the equipment, and it should be examined by a competent height safety installer who will decide whether the equipment is to be destroyed or repaired if necessary and returned to service. In the latter case, details of any repair shall be documented, and a copy given to the operator.



SafetyLink®
*Innovative
Fall Protection*



FS 707792

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