INSTALLATION HANDBOOK TUFF-POST STEEL LIFELINE

- Round Post -

Safety*Link* 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
- WALKWAY & GUARDRAIL
- X-RAIL HORIZONTAL RAIL





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



Asia-Pacific/The Americas info@safetylink.com Europe/Africa/Middle East europe.sales@safetylink.com Northern Europe uk.sales@safetylink.com

www.safetylink.com

INSTALLATION OF SAFETYLINK TUFF-POST TO STEEL

WARNINGS
MAINTENANCE – PERIODIC INSPECTIONS
WARRANTIES
TUFF-POST 150MM (ROUND) – STEEL MOUNTED COMPONENTS
TUFF-POST 300MM (ROUND) – STEEL MOUNTED COMPONENTS
TUFF-POST 600MM (ROUND) – STEEL MOUNTED COMPONENTS
TUFF-POST 900MM (ROUND) – STEEL MOUNTED COMPONENTS 10
TUFF-POST OVERHEAD END (ROUND) – STEEL MOUNTED COMPONENTS
TUFF-POST OVERHEAD INTERMEDIATE (ROUND) – STEEL MOUNTED COMPONENTS
TUFF-POST (ROUND) – STEEL INSTALLATION
POSITIONING OF TUFF-POST
DRILLING THE HOLES
PREPARING THE HOLES
INSTALLING BOLTS (MINIMUM A4-70 GRADE)11
FITTING THE HEIGHT SAFETY SYSTEM TO THE TUFF-POST12
LIFELINE SYSTEM INFORMATION
INSTALLATION: CABLE, TENSIONERS & TERMINATION FITTINGS
Home Assemble & TORQUE SETTINGS FOR SWAGELESS TERMINALS
APPENDIX A – SWAGELESS/SWAGED FITTINGS INSTALLATION
APPENDIX B – CRIMPED FITTINGS INSTALLATION
SAFETYLINK FROGLINE SHUTTLE
CONNECTING TO THE LIFELINE SYSTEM
PROGRESSING ALONG THE LIFELINE SYSTEM
DISCONNECTING FROM THE LIFELINE SYSTEM18
SAFETYLINK OVERHEAD SHUTTLE 19
CONNECTING TO THE LIFELINE SYSTEM19
PROGRESSING ALONG THE LIFELINE SYSTEM19
DISCONNECTING FROM THE LIFELINE SYSTEM19
EXAMPLE: HORIZONTAL LIFELINE ON PITCHES BELOW 25 DEGREES
EXPERT FALL PROTECTION PLANNING
IN CASE OF ACCIDENT 22



FROGLINE VIDEO





CATALOGUE

WEBSITE

READ CAREFULLY SOMEONE'S LIFE DEPENDS ON IT

- 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 structure is adequate.
- SafetyLink Height Safety Systems must only be installed as per our installation guides, to structures as specified in the installation manual for each product.
- All safety procedures must be complied with in accordance with the current safety code(s) of practice(s) for working at heights. Ensure safety at all times by being attached to suitable anchor points and approved safety equipment or approved scaffolding.
- Installation is to be carried out by, or under the supervision of a competent height safety installer.
- To prevent galling of non-permanent or adjustable stainless steel components use nickel anti-seize or similar boundary layer lubricant.
- Recommended waterproofing for roof tiles: *Sika Flex Co-Polymer Sealant*.
- Recommended waterproofing for metal roof: Silicone Sealant Neutral Cure.
- Recommended chemical is Fischer FIS-V.
- 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.
- Install SafetyLink horizontal lifeline systems on roof pitches no greater than 15 degrees and across roof pitches no greater than 25 degrees.
- **MAXIMUM NUMBER OF USERS PER SYSTEM IS FOUR (4).**
- ▲ MAXIMUM NUMBER OF USERS PER SPAN IS TWO (2).
- ▲ REFER TO SYSTEM INFORMATION FOR SITE SPECIFIC USE.



R	0		1
P	٦		
5	afety	uni	<u>د</u>

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 (refer to AS/NZS 1891.4:2009 if clarification required or contact SafetyLink).

SafetyLink Anchorages (In accordance with AS/NZS 1891.4:2009)

ALL ANCHORAGES MUST BE INSPECTED EVERY 12 MONTHS.

Procedures to be followed at inspection time:

- Visually inspect anchors for signs of deterioration.
- The FrogLine End, Intermediate and Corner anchor points have energy absorbing regions and stabilising joins. If these energy absorbing regions are expanded this will indicate the anchor point has arrested a fall and should be replaced. Similarly, if the stabilising joins have been broken this would also indicate the anchor point has arrested a fall and should be replaced. (*The design features of the FrogLine's curved profile provides the initial shock absorbing capabilities in the event of a fall. Further extension is provided in the serpentine shapes which progressively dissipate and absorb energy whilst retaining their strength. This lessens the force on the person falling and the structure the anchor is attached to).*
- 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 16mm bolt securing the FrogLine Base to the Tuff-Post for rigidity and tightness. If the Bolt can turn in the anticlockwise direction it will require attention.
- 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.
- Check the full length of the stainless steel cable for any evidence of wear, cuts, looseness, extension, interstrand wear, corrosion, stiffness, brittleness or fraying.
- Check the integrity of cable terminations and that lifeline tensioners are correctly adjusted (80kg/0.8kN/800N) and lock nuts are tensioned correctly.
- Check for the presence of contaminants or exposure to corrosive or extreme environment signs may include discoloration, crystalling or oxidation. These could significantly reduce the safe working load of the Lifeline.
- Run the FrogLine Shuttle along the full length of the life line to verify its correct function.
- 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.

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

Ŵ

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



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 supplies 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.

٩
 SafetyLink'

TUFF-POST 150mm (Round) – Steel Mounted Components

PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
ROGLINE END	FrogLine Base End	316 SS	1
OLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
NASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
UFF-POST150R	TUFF-POST 150mm (Round)	316 SS	1
OLT-M12x50mm-SS	Bolt: M12 x 50mm Set Screw	316 SS	2
VASHER M12 Spring_316	Spring Washer: M12	316 SS	2
VASHER M12_316	Washer: M12	316 SS	2
UT M12_316	Nut: M12	316 SS	2

TUFF POST INTERMEDIATE ANCHOR – PRODUCT CODE: STAT.FROGTUFF001S-150R

PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE INT	FrogLine Base Intermediate	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST150R	TUFF-POST 150mm (Round)	316 SS	1
BOLT-M12x50mm-SS	Bolt: M12 x 50mm Set Screw	316 SS	2
WASHER M12 Spring_316	Spring Washer: M12	316 SS	2
WASHER M12_316	Washer: M12	316 SS	2
NUT M12_316	Nut: M12	316 SS	2



TUFF POST INTERMEDIATE EXTENDED ANCHOR – PRODUCT CODE: STAT.FROGTUFF008S-150R

PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE INT_EXT	FrogLine Base Intermediate Extended	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16 Innovativ	👝 316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST150R	TUFF-POST 150mm (Round)	0/316 SS	1
BOLT-M12x50mm-SS	Bolt: M12 x 50mm Set Screw	316 SS	2
WASHER M12 Spring_316	Spring Washer: M12	316 SS	2
WASHER M12_316	Washer: M12	316 SS	2
NUT M12_316	Nut: M12	316 SS	2



PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE CNR	FrogLine Base Corner	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST150R	TUFF-POST 150mm CC	316 SS	1
BOLT-M12x50mm-SS	Bolt: M12 x 50mm Set Screw	316 SS	2
WASHER M12 Spring_316	Spring Washer: M12	316 SS	2
WASHER M12_316	Washer: M12	316 SS	2
NUT M12 316	Nut: M12	316 SS	2





TUFF-POST 300mm (Round) – Steel Mounted Components

PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY	
FROGLINE END	FrogLine Base End	316 SS	1	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1	
WASHER M16_316	Washer: M16	316 SS	1	
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1	
TUFF-POST300R	TUFF-POST 300mm (Round)	316 SS	1	
BOLT-M16x50mm-SS	Bolt: M16 x 50mm Set Screw	316 SS	4	
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4	
WASHER M16_316	Washer: M16	316 SS	4	
NUT M16_316	Nut: M16	316 SS	4	





PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE INT_EXT	FrogLine Base Intermediate Extended	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16 Innovativ	👝 316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST300R	TUFF-POST 300mm (Round)	0/316 SS	1
BOLT-M16x50mm-SS	Bolt: M16 x 50mm Set Screw	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16 316	Nut: M16	316 SS	4



PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE CNR	FrogLine Base Corner	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST300R	TUFF-POST 300mm (Round)	316 SS	1
BOLT-M16x50mm-SS	Bolt: M16 x 50mm Set Screw	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16 316	Nut: M16	316 SS	4





TUFF-POST 600mm (Round) – Steel Mounted Components

PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY	E
FROGLINE END	FrogLine Base End	316 SS	1	
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1	
WASHER M16_316	Washer: M16	316 SS	1	
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1	
TUFF-POST600R	TUFF-POST 600mm (Round)	316 SS	1	
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	4	
WASHER M16_SPRING	Spring Washer: M16	316 SS	4	
WASHER M16_316	Washer: M16	316 SS	4	
NUT M16 316	Nut: M16	316 SS	4	

PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE INT	FrogLine Base Intermediate	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST600R	TUFF-POST 600mm (Round)	316 SS	1
BOLT-M16x50mm-SS	Bolt: M16x50mm	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16_316	Nut: M16	316 SS	4

PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE INT_EXT	FrogLine Base Intermediate Extended	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16 Innovativ	e 316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST600R	TUFF-POST 600mm (Round)	07 ₃₁₆ SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16 316	Nut: M16	316 SS	4



PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE CNR	FrogLine Base Corner	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST600R	TUFF-POST 600mm (Round)	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16_316	Nut: M16	316 SS	4





TUFF-POST 900mm (Round) – Steel Mounted Components

RODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY	
ROGLINE END	FrogLine Base End	316 SS	1	
OLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1	
VASHER M16_316	Washer: M16	316 SS	1	
VASHER M16_SPRING_316	Spring Washer: M16	316 SS	1	
UFF-POST900R	TUFF-POST 900mm (Round)	316 SS	1	
OLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	4	
VASHER M16_SPRING_316	Spring Washer: M16	316 SS	4	
VASHER M16_316	Washer: M16	316 SS	4	
IUT M16_316	Nut: M16	316 SS	4	

PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE INT	FrogLine Base Intermediate	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST900R	TUFF-POST 900mm (Round)	316 SS	1
BOLT-M16x50mm-SS	Bolt: M16x50mm	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16 316	Nut: M16	316 SS	4



PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE INT_EXT	FrogLine Base Intermediate Extended	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16 Innovativ	👝 316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST900R	TUFF-POST 900mm (Round)	0/316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16 316	Nut: M16	316 SS	4



PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE CNR	FrogLine Base Corner	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST900R	TUFF-POST 900mm (Round)	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16_316	Nut: M16	316 SS	4





TUFF-POST OVERHEAD END (Round) – Steel Mounted Components

TUFF POST OVERHEAD END ANCHOR – PRODUCT CODE: STAT.FROGTUFF009S-150R			
PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
ROGLINE END_OH	FrogLine Base End Overhead	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST150R	TUFF-POST 150mm (Round)	316 SS	1
3OLT-M12x50mm-SS	Bolt: M12 x 50mm Set Screw	316 SS	2
WASHER M12 Spring_316	Spring Washer: M12	316 SS	2
WASHER M12_316	Washer: M12	316 SS	2
NUT M12_316	Nut: M12	316 SS	2

TUFF POST OVERHEAD END ANCHOR – PRODUCT CODE: STAT.FROGTUFF009S-300R			
PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE END_OH	FrogLine Base End Overhead	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST300R	TUFF-POST 300mm (Round)	316 SS	1
BOLT-M16x50mm-SS	Bolt: M16 x 50mm Set Screw	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16_316	Nut: M16	316 SS	4

TUFF POST OVERHEAD END	ANCHOR – PRODUCT CODE: STAT.FROGT	JFF009S-600R	
PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
ROGLINE END_OH	FrogLine Base End Overhead	316 SS	1
OLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
ASHER M16_316	Washer: M16	316 SS	1
ASHER M16_SPRING_316	Spring Washer: M16 10 Valiv	e 316 SS	1
JFF-POST600R	TUFF-POST 600mm (Round)	316 SS	1
DLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	4
ASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
/ASHER M16_316	Washer: M16	316 SS	4
UT M16_316	Nut: M16	316 SS	4

FROGLINE END_OH BOLT-M16x50mm-SS WASHER M16 316	FrogLine Base End Overhead Bolt: 16mm x 50mm Set Screw Washer: M16	316 SS 316 SS 316 SS	1
			1
WASHER M16 316	Washer: M16	316 55	4
—		310 33	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST900R	TUFF-POST 900mm (Round)	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16_316	Nut: M16	316 SS	4





TUFF-POST OVERHEAD INTERMEDIATE (Round) – Steel Mounted Components

PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY	
FROGLINE INT_OH	FrogLine Base Intermediate Overhead	316 SS	1	
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1	
WASHER M16_316	Washer: M16	316 SS	1	
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1	
TUFF-POST150R	TUFF-POST 150mm (Round)	316 SS	1	
BOLT-M12x50mm-SS	Bolt: M12 x 50mm Set Screw	316 SS	2	
WASHER M12 Spring_316	Spring Washer: M12	316 SS	2	
WASHER M12_316	Washer: M12	316 SS	2	
NUT M12 316	Nut: M12	316 SS	2	



PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
ROGLINE INT_OH	FrogLine Base Intermediate Overhead	316 SS	1
OLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
VASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST300R	TUFF-POST 300mm (Round)	316 SS	1
BOLT-M16x50mm-SS	Bolt: M16 x 50mm Set Screw	316 SS	4
VASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16_316	Nut: M16	316 SS	4

TUFF POST OVERHEAD INTERMEDIATE ANCHOR – PRODUCT CODE: STAT.FROGTUFF004S-600R			
PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE INT_OH	FrogLine Base Intermediate Overhead	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST600R	TUFF-POST 600mm (Round)	316 SS	1
BOLT-M16x50mm-SS	Bolt: M16x50mm	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16_316	Nut: M16	316 SS	4



PRODUCT COMPONENTS	DESCRIPTION	MATERIALS	QTY
FROGLINE INT_OH	FrogLine Base Intermediate Overhead	316 SS	1
BOLT-M16x50mm-SS	Bolt: 16mm x 50mm Set Screw	316 SS	1
WASHER M16_316	Washer: M16	316 SS	1
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	1
TUFF-POST900R	TUFF-POST 900mm (Round)	316 SS	1
BOLT-M16x50mm-SS	Bolt: M16x50mm	316 SS	4
WASHER M16_SPRING_316	Spring Washer: M16	316 SS	4
WASHER M16_316	Washer: M16	316 SS	4
NUT M16_316	Nut: M16	316 SS	4





TUFF-POST (Round) – 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.

The building or structure for the anchorages must be assessed by an engineer, unless it is clear to a competent height safety installer that the structure is adequate. Refer to system information for site specific use.

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 eyebolt system.

POSITIONING OF TUFF-POST

- The pendulum effect applies.
- 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 **50mm**.
- ▲ 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.
- Δ During installation you must be safe at all times.

DRILLING THE HOLES

TUFF-POST 150R - Drill 2 x M12 holes in suitable locations with a power drill and 12mm drill bit. TUFF-POST 300R - Drill 4 x M16 holes in suitable locations with a power drill and 16mm drill bit. TUFF-POST 600R - Drill 4 x M16 holes in suitable locations with a power drill and 16mm drill bit. TUFF-POST 900R - Drill 4 x M16 holes in suitable locations with a power drill and 16mm drill bit.

PREPARING THE HOLES

The holes must be clear and free from burrs.

INSTALLING BOLTS (minimum A4-70 grade)

TUFF-POST 150R - must be held down with a minimum of 2 x M12 bolts. TUFF-POST 300R - must be held down with a minimum of 4 x M16 bolts. TUFF-POST 600R - must be held down with a minimum of 4 x M16 bolts. TUFF-POST 900R - must be held down with a minimum of 4 x M16 bolts.

- Bolts must be a minimum of A4-70 Grade, length will be a minimum of 50mm and ultimately determined by the thickness of steel the post is anchored to.
- When holes drilled in required location and clear from burrs.
- Place TUFF-POST on steel structure and secure with bolts, washer, spring washer and nut, *see drawing below.*

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



Steel Mounted Sectional Drawing

	Return to Table of Contents			
	Ref: FROGLINE_Tuff_Post_Steel_Round_Handbook		Page 12 of 21	
ink'			Doc ID: MKT-641 Version: 7.0	

LIFELINE CABLE

Following cables can be used for SafetyLink lifeline systems,

- Cable (STAT.CABLE001): 8mm dia, 7x7 wire rope
- Cable (STAT.CABLE_8MM_7X19_SS): 8mm dia, 7x19 wire rope. It provides high flexibility and suited for lifelines with short intermediate intervals and multiple corners.
- Cable (STAT.CABLE_8MM_1X19_SS): 8mm dia, 1x19 wire rope. It provides limited flexibility for overhead lifeline and suited for easy transitions over intermediates with SRL's. DO NOT USE WITH SWAGELESS FITTINGS. Note: It is always recommended to install at least one intermediate in overhead lifeline system when SRL's are used.

FITTING THE HEIGHT SAFETY SYSTEM TO THE TUFF-POST

- Once the TUFF-POST is correctly installed to the structure, the Lifeline System can be installed.
- The system components are only to be installed to the TUFF-POST with a minimum grade A4-70 Stainless Steel 316 bolt.

FOLLOW BELOW STEPS FOR END, INTERMEDIATE AND CORNER UNITS

STEP 1

Place the FrogLine Base on top of the TUFF-POST.

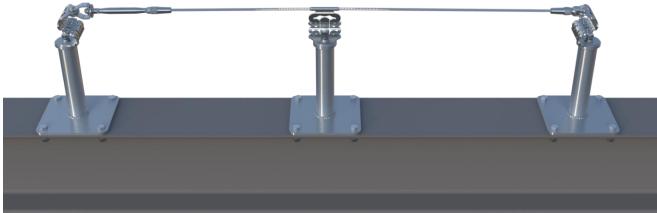
STEP 2

Place M16 Spring Washer and M16 Washer on FrogLine Base, then screw M16 x 50mm Bolt through washers and FrogLine Base.

STEP 3

Tighten the Bolt making certain the FrogLine Base Unit lines up with the intended direction of the lifeline.

Innovative Fall Protection





		<u>Return to Tabl</u>	le of Contents
	Ref: FROGLINE_Tuff_Post_Steel_Round_Handbook		Page 13 of 21
k'		Doc ID: MKT-641	Version: 7.0

LIFELINE SYSTEM INFORMATION

INSTALLATION: CABLE, TENSIONERS & TERMINATION FITTINGS

- 1. Install Swaged/Swageless Termination to the cable in accordance with product guidelines. See Appendix A or B.
- 2. Determine which end is most suitable to have the cable *Tensioner with Tension Indicator*. (Some lifelines may require a Tensioner with Tension Indicator on both ends). Connect the cable with Termination end to the FrogLine End Anchor top connection point. This will be at the opposite end to where the Tensioner end will be. (Ensure securing pin has been installed correctly).
- 3. Install the cable through Intermediates and Corners to the opposite end of the Lifeline system (Intermediates must be installed as per installation manual, maximum distance between End, Intermediate and Corner Anchors is 10 metres).
- 4. Connect Swaged/Swageless Tensioner with Tension Indicator to FrogLine End Anchor top connection point. (Do not attach *Tensioner* to cable at this stage).
- 5. Adjust the *Tensioner* out to the maximum safe length.
- 6. Match the cable along the side of the Tensioner and mark where to cut cable so that it will reach safely into the Tensioner unit in accordance with product guidelines. Appendix A or B.
- 7. Cut cable to length.
- 8. Install Swaged/Swageless Tensioner fitting to cable as per Appendix A or B. Connect Tensioner to FrogLine End Anchor top connection point (Ensure securing pin has been installed correctly).
- 9. Tension cable until the disc on the Tension Indicator can spin and indicates 80kg/0.8kN/800N.

TIGHTENING ASSEMBLY & TORQUE SETTINGS FOR SWAGELESS TERMINALS

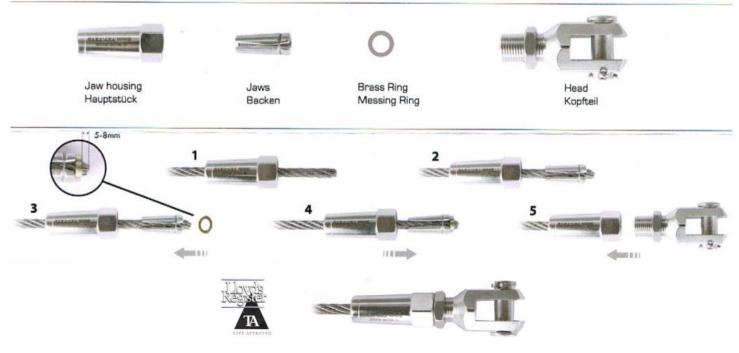
Wire size:		Nm	Lbf ft
Ø 3	-	11	8.25
-	1/8"	11	8.25
Ø 4	5/32"		12.75
-	3/16"	22	16.5
Ø 5	-	- 22	16.5
-	7/32	1111 ₃₈ Vali	Ve _{28.5}
Ø 6	- E	all P ³⁸ otec	28.5
-	1/4"	38	28.5
Ø 7	9/32"	48	35.5
Ø 8	5/16"	58	43.0
-	3/8"	75	55.5
Ø 10	-	75	55.5
Ø 12	-		
-	1/2"		
Ø 14	-		
Ø 16	-		



Ref: FROGLINE_Tuff_Post_Steel_Round_Handbook

APPENDIX A – SWAGELESS/SWAGED FITTINGS INSTALLATION





Make sure that the cable matches the terminal. The SS terminal use only for 8mm 7x7 and 7 x 19 Stainless Wire. Do not reuse jaws or house.

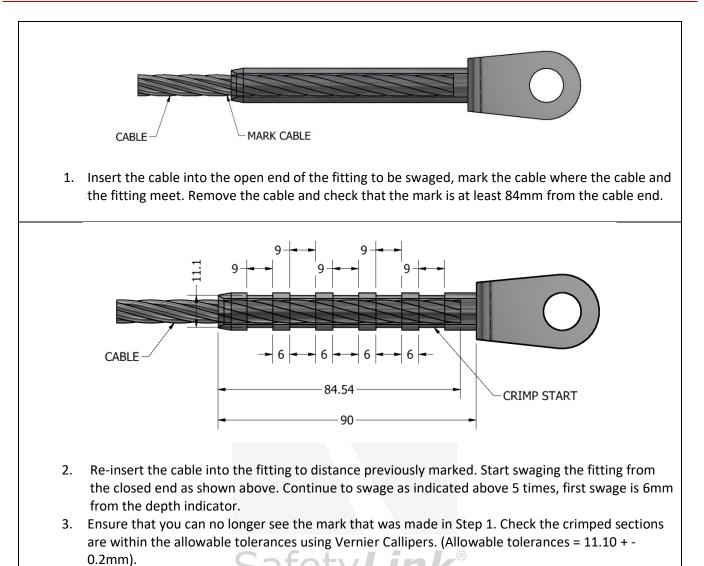
- **1** Slide the jaw housing in place on the cable.
- 2 Slide the jaws onto the cable, ensuring there is equal space between the jaws.
- **3** Place the brass pressure ring on the end of the cable. Make sure that the distance from the pressure ring to the end of the cable is 5-8mm.
- 4 Slide the jaw housing over the jaws.
- 5 The terminal can now be assembled. Screw the head on the jaw housing with a torque wrench min. 58 Nm (43Lbf ft), Tighten the lock nut with min. 50 Nm (36 Lbf ft).

Note: after the first dynamic load the terminal **MUST** be tightened again. When assembling Swageless Terminals the breaking strength of the cable will be reduced by 0-15%.

The user is responsible for choosing the proper cable, and for correct assembly.

	0	
	Safety Link	
١.		

APPENDIX B – CRIMPED FITTINGS INSTALLATION





- ▲ Ensure marked cable as indicated in step one is a minimum of 84mm.
- ▲ Ensure all crimped sections (flat) are with 11.10mm, with a tolerance level of + or 0.2mm. This distance should be the case of all 8mm 7 x 19 and 7 x 7 cable. The measurement should be taken with Vernier Callipers to ensure accuracy. If your measurements are outside the acceptable tolerance range this can be a sign of either a loss of pressure in your swaging tool or an indication that your dies are worn or incompatible. Any swaging that occurs outside the acceptable tolerances will need to be restarted using the appropriately amended tools.
- ▲ When swaging terminations, the mark made in step 1 will disappear during the final swage due to the lengthening of the material during the swaging operation.
- ▲ The swaged end has a mark indicating the end of the solid section (depth indicator) of the unit and the start of the hollow section. Start swaging 6mm from the mark indicating the solid section.
- ▲ When completed the swaged section should be a minimum of 80mm long. The dies are made with a 9mm wide section to crimp. These 9mm crimping sections need to completed 5 times, leaving five flat sections along the swaged end. In between each crimped section you need to maintain a distance of between 5mm and 6mm.
- ▲ **DO NOT** swage the solid section indicated by the mark on the unit this will damage the swaging tool and the dies.



SAFETYLINK FROGLINE SHUTTLE

CONNECTING TO THE LIFELINE SYSTEM

- 1. Remove the Karabiner from the FrogLine Shuttle. The supplied Karabiner is a SafetyLink steel trilock and needs three distinct movements to be removed from the shuttle (Slide gate up, twist gate, depress gate).
- 2. Slide the inner component of the FrogLine shuttle to the right or left of the shuttle body. This will put the two shuttle karabiner connecting holes adjacent to each other and widen the mouth of the shuttle. The shuttle is now in the open position and can be placed face down onto the lifeline cable.
- 3. To lock the shuttle onto the cable, push the inner component from its position to the right or left back across the shuttle body. This will re-align the karabiner connection holes and narrow the mouth of the shuttle.
- 4. Insert the SafetyLink Karabiner through both connecting holes. This locks the shuttle body and inner component of the shuttle together and ensures the shuttle remains in the closed position. Check that the Karabiner has locked correctly. The Shuttle is now secured to the life line system.
- It is a requirement when connecting a lanyard between the users harness and FrogLine shuttle/lifeline system that a personal tear web energy absorber be used. This tear web energy absorber needs to be at the harness end of the lanyard to ensure maximum energy absorption.
- ▲ MAKE SURE YOU ARE SAFE AT ALL TIMES WHILST ATTACHING OR DETACHING FROM THE FROGLINE LIFELINE SYSTEM.
- ${\rm I}$ A FALL RESCUE PLAN SHOULD BE DEVELOPED PRIOR TO USING SAFETYLINK EQUIPMENT.
- ▲ ENSURE YOU USE THE SAFETYLINK KARABINER SUPPLIED ONLY.

PROGRESSING ALONG THE LIFELINE SYSTEM

- 1. Always progress the system manually. Do not progress in any vehicle or motioning device.
- 2. When progressing towards a corner, to ensure the FrogLine Shuttle continues on a smooth path avoid cutting the corner sharply.
- 3. Do not place any tools or equipment onto the lifeline system.

DISCONNECTING FROM THE LIFELINE SYSTEM Vative

- 1. If you are attaching to an alternative fall arrest system ensure you are attached to that system before disconnecting from the FrogLine System.
- 2. Unlock Karabiner and detach it from the FrogLine Shuttle.
- 3. Slide the inner component of the FrogLine shuttle to the right or left of the shuttle body. This will put the two shuttle karabiner connecting holes adjacent to each other and widen the mouth of the shuttle. The shuttle is now in the open position and can be removed from the lifeline cable.
- 4. Slide inner component of Shuttle into original position and insert Karabiner through the two connecting holes to store.

REMEMBER YOU MUST BE SAFE AT ALL TIMES.

Where a risk of a fall exists on entering or exiting the lifeline system additional fall prevention measures must exist. Where additional fall prevention exists on entry and exit the user must ensure:

- 1. Attachment is correctly made to the lifeline system before detaching from the additional fall prevention system.
- 2. DO NOT detach from the lifeline system unless correct attachment is made to the additional fall prevention system.



Product Code: STAT.SHUTL003









SAFETYLINK OVERHEAD SHUTTLE

CONNECTING TO THE LIFELINE SYSTEM

- Remove the karabiner from the overhead shuttle. The supplied Karabiner is a SafetyLink steel trilock and needs three distinct movements to be removed from the shuttle (slide gate up, twist gate, depress gate).
- 2. Twist the shuttle gate to the right or left of the shuttle body. This will put the shuttle gate off to one side widening the mouth of the shuttle. The shuttle is now in the open position and can be placed onto the lifeline cable.
- 3. To lock the shuttle onto the cable, twist the shuttle gate back to the centre position on the shuttle body. This will re-align the karabiner connection holes and narrow the mouth of the shuttle. Insert the karabiner through both connecting holes. This will lock the shuttle body and shuttle gate together and ensures the shuttle remains in the closed position. Check that the karabiner has locked correctly. The shuttle is now secured to the lifeline system.
- 4. It is a requirement when connecting a lanyard between the users harness and shuttle/lifeline system that a personal tear web energy absorber be used. This tear web energy absorber needs to be at the harness end of the lanyard to ensure maximum energy absorption.
- \triangle MAKE SURE YOU ARE SAFE AT ALL TIMES WHILST ATTACHING OR DETACHING FROM THE FROGLINE SYSTEM.
- \triangle A FALL RESCUE PLAN SHOULD BE DEVELOPED PRIOR TO USING SAFETYLINK EQUIPMENT.
- ▲ ENSURE YOU USE THE SAFETYLINK KARABINER SUPPLIED ONLY.

PROGRESSING ALONG THE LIFELINE SYSTEM

- 1. Always progress the system manually. Do not progress in any vehicle or motioning device.
- 2. When progressing towards a corner, to ensure the Shuttle continues on a smooth path avoid cutting the corner sharply.
- 3. Do not place any tools or equipment onto the lifeline system.

DISCONNECTING FROM THE LIFELINE SYSTEM

- 1. If you are attaching to an alternative fall arrest system ensure you are attached to that system before disconnecting from the FrogLine System.
- 2. Unlock Karabiner and detach it from the FrogLine Shuttle.
- 3. Twist the shuttle gate to the left or right of the shuttle body. This will put the two shuttle karabiner connecting holes adjacent to each other and widen the mouth of the shuttle. The shuttle is now in the open position and can be removed from the lifeline cable.
- 4. Twist shuttle gate back to the centre of the shuttle into its original position and insert Karabiner through the two connecting holes to store.



${\rm \Delta}$ ~ REMEMBER YOU MUST BE SAFE AT ALL TIMES.

Where a risk of a fall exists on entering or exiting the lifeline system additional fall prevention measures must exist. Where additional fall prevention exists on entry and exit the user must ensure:

- 1. Attachment is correctly made to the lifeline system before detaching from the additional fall prevention system.
- 2. DO NOT detach from the lifeline system unless correct attachment is made to the additional fall prevention system.

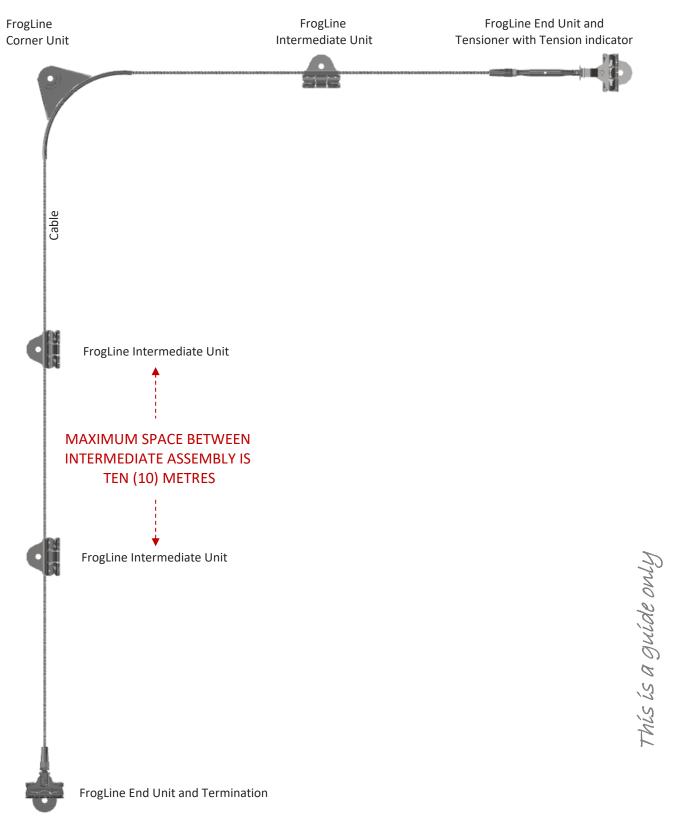






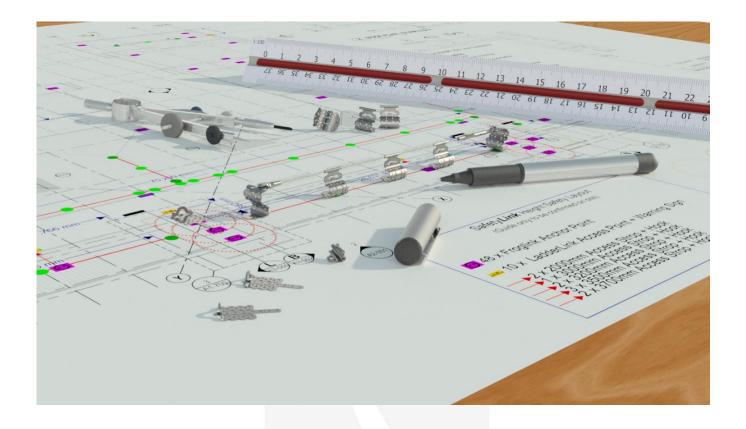
EXAMPLE: HORIZONTAL LIFELINE ON PITCHES BELOW 25 DEGREES

All working at heights safety procedures must be complied with when installing SafetyLink Height Safety Systems. For more information refer to your state or territories current legislation, regulations, policies and codes of practices. Horizontal height safety lifelines must only be installed and used by competent people with relevant current height safety qualifications.



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.

٩	1.00		1.1
٩	127		
		•	
		fetyLi	



SafetyLink's design and planning team are here to help work out the positioning of your fall protection system, ensuring all areas of your roof are accessed safely.

Things to consider when planning your roof layout:

- Are all areas of your roof protected, allowing complete access when working at heights?
- Are you protected from the ground up, allowing complete access to your roof?
- Detailed comprehensive documentation provided e.g. installation guides, testing results, product sheets should be provided.
- SafetyLink can also provide you with a qualified and reputable installer of SafetyLink products.

Contact our design team at <u>info@safetylink.com</u> and we can plan your fall arrest system for you.

© 2018, SafetyLink Pty Ltd, Australia.

Patents: SafetyLink Pty Ltd has a multitude of patents, patents pending, design applications, trademarks and copyrighted documents both lodged and issued. Should you wish to know the progress of our intellectual property on a specific product please email us on <u>ip@safetylink.com</u> and quote the product code.



Return t	o Table of Contents
Ref: FROGLINE_Tuff_Post_Steel_Round_Handbook	Page 20 of 21
Doc ID: MKT	-641 Version: 7.0

IN CASE OF ACCIDENT

▲ A FALL RESCUE PLAN SHOULD BE DEVELOPED PRIOR TO USING SAFETYLINK 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 Pty Ltd | ABN 83 081 777 371 | www.safetylink.com



Asia-Pacific/The Americas | +61 2 4964 1068 | info@safetylink.com Europe/Africa/Middle East | europe.sales@safetylink.com Northern Europe | uk.sales@safetylink.com