

arachnipod

Total Edge Management System



USERS' MANUAL

Version 6.1

CE CE Certified in 3 & 4 leg configurations to CEN/TS 16415:2013 for maximum 2 persons
and EN 795:2012 for single person use

 **FERNO**[®]
Australia

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CE Compliance Information

CE Certifying Organisation

SAI Global NB2056
PO Box 5420, Sydney NSW 2001 Australia
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CE CEC40142A1 Certified in 3 & 4 leg configurations to CEN/TS 16415:2013 for maximum 2 persons and EN 795:2012 for single person use

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Glossary

Throughout this manual the following abbreviations are used:

Abbreviation	Description	Abbreviation	Description
NB2056	No. of Notified body for PPE	m	Metre
CEN/TS 16415:2013 EN795:2012	Standard for anchor systems	"	Inch
TEMS	Total Edge Management System	PPE	Personal Protective Equipment
SA	Sideways A-frame	Qty	Quantity
N/A	Not applicable	ea	Each
kN	Kilonewton	A 	Anchor
kg	Kilogram		Load
lb	Pound	WLL	Working Load Limit
mm	Millimetre	MBS	Minimum Breaking strength

Introduction

Congratulations on your purchase of the Arachnipod. The Arachnipod is a total edge management system that will empower the end user with a wide range of configuration options.

The complete Arachnipod total edge management system (TEMS) can be rigged as a:

- » Gin Pole (mono pole / monopod)
- » A-frame (bipod)
- » Sideways A-frame (SA-frame)
- » Tripod
- » Quadpod
- » Lazy Leg or Easel Leg Tripod
- » Handrail monopod (used to support to a handrail)
- » Bridge

Components can be added or removed as required so that the Arachnipod compliments existing structural or natural features making it the most versatile edge management solution on the planet.

Ferno knows that rigging is not always conducted on a flat surface or with a clean edge so the Arachnipod was designed with every conceivable task in mind. From the harshest vertical rescue conditions to a simple tripod for a confined space entry task, the Arachnipod will provide the flexibility that end users demand.

The versatility of the Arachnipod will appeal to a wide range of end users including rescuers, mines rescue, industrial rope access workers, construction, and film industries.

The end user can purchase as little or as much Arachnipod hardware to suit their scope of operations making the Arachnipod an edge management system that is both affordable and upgradeable to suit changes in operational needs.

With the appropriate training, the Arachnipod can be used in a variety of configurations and in any number of environments from wilderness applications to industrial rope access scenarios.

 **WARNINGS**

Activities conducted at height can be dangerous resulting in injury or death. Do not use this device unless you have:

1. Read and understood the User's Manual
 2. Received appropriate training
 3. Ensured a competent person has conducted a risk assessment for the specific task
 4. Carried out a preoperational check of the Arachnipod, associated hardware and rigging before each use
 5. Accepted total responsibility for your own safety, and
 6. Proof tested drilled-in anchorages in accordance with local standards.
- This manual is not intended as a substitute for appropriate training. Training, practice and experience in technical rigging are essential for safe use!
 - The Arachnipod and associated hardware must always be secured to prevent it from falling over an edge. The Arachnipod may become unstable if used without an assessment of the resultant force and direction. Additional rigging may be required to ensure complete stabilisation.
 - A primary rope or cable system with an independent safety back-up system must be used when loaded life lines are rigged through any edge management device.
 - The Arachnipod has been engineered and tested using the original equipment as supplied. Never replace any pins, bolts or other components with non-genuine parts.
 - Do not use your Arachnipod if any parts are missing.
 - Arachnipods should be decommissioned from service after a maximum of 12 years from the date of commissioning into service. However if the date of commissioning into service is NOT recorded, the unit should be decommissioned from service after 12 years from the date of manufacture.
 - **For service or repairs, please contact your local Ferno Distributor or Ferno Australia**

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Working Load Limits (WLL)

The typical weight of a single person load ranges from 80 kg to 120 kg (176 lb* to 265 lb) depending upon a number of factors. The WLL of the Arachnipod exceeds this load in all configurations.

The weight of a rescue load typically ranges from 200 kg to 280 kg (440 lb to 617 lb) depending upon a number of factors. The Arachnipod offers many configurations that match or exceed the 280 kg load with only a few exceptions. The table below outlines the working load limits of the Arachnipod in various configurations.

	Leg Setting	WLL External Anchor Point	MBS	WLL Load Anchored to Leg
Gin Pole at 2050mm extension	F-6	280kg/ 616lb	28kN	N/A
Gin Pole at 3050mm full extension	A-1	150kg/ 330lb	15kN	N/A
A-Frame <i>or</i> Offset A-Frame <i>or</i> A-Frame with Lazy Leg	A-1 B-2 C-3	280kg/ 616lb 340kg/ 784lb 400kg/ 880lb	28kN 34kN 40kN	220kg/ 485lb
Tripod and Quadpod	A-1	400kg/ 880lb	40kN	
Handrail Monopole	F-6	280kg/ 616lb	28kN	
Bridge Beam 2000mm span* (middle of beam)	A-1	280kg/ 616lb	28kN	
Bridge Beam 3000mm span* (middle of beam)	A-1	230kg/ 506lb	23kN	
Bridge Beam 4000mm span* (middle of beam)	A-1	175kg/ 385lb	28kN	
Any span** (end of beam)	A-1	280kg/ 616lb	19kN	



* If bridge beam has Strongbac fitted, WLL for bridge beam

becomes 280 kg / 616 lb at any length up to 6000 mm / 236"

* WLL for bridge trolley is 250 kg / 550 lb (ultimate strength 24.5kN)

* Throughout this manual 1 lb (pound) = 0.453 kg and 1 kg = 2.2 lb

**Bridge beam MBS differs depending on where the load is positioned along the beam. On a 2m bridge beam the safety factors reduces from 10:1 to <7:1 as the trolley moves from the centre to the end of the beam.

Dimensions and Weight

Item	Storage	Max Length	Weight
Standard leg	1420 mm / 56"	3050 mm / 120"	8.6 kg / 19 lb
Pulley leg	1550 mm / 61"	3150 mm / 124"	10 kg / 22 lb
Tripod	370 mm x 130 mm x 1420 mm 14.6" x 5.1" x 56"	3050mm / 120"	25.8 kg / 57 lb
Tripod with pulley head	370 mm x 130 mm x 1550 mm 14.6" x 5.1" x 61"	3150mm / 124"	27.2 kg / 60 lb
Tripod bag (empty)	380 mm x 150 mm x 1600 mm 15" x 6" x 64"	N/A	6.5 kg / 14.3 lb
Accessory kit (full)	400 mm x 20 mm x 660 mm 15.7" x 7.9" x 26"	N/A	19 kg / 41.8 lb
2 m Bridge	290 mm x 150 mm x 2070 mm 11.5" x 6" x 81.5"	N/A	21 kg / 46.2 lb
2 m Bridge kit	300 mm x 160 mm x 2150 mm 11.8" x 6.3" x 84.7"	N/A	40 kg / 88 lb

Tripod and Kit Contents

ARACHNIPOD PART NUMBER	ARACHNIPOD COMPONENT	ARACHNIPOD INDUSTRIAL	ARACHNIPOD INDUSTRIAL PLUS	ARACHNIPOD ADVANTAGE BASIC	ARACHNIPOD ADVANTAGE
	TRIPOD STYLES:	APOD-IND	APOD-IND+	APOD-ADV-B	APOD-ADV
90-0108	Standard Leg	3	2	2	1
90-0110	Pulley leg		1		1
90-0114	Lazy leg			1	1
APOD-LLA	Lazy Leg Adaptor Plug			1	1
42-1019	Feet Rope & Rope Grab	1	1	1	1
42-1011	Arachnipod bag			1	1
ARACHNIPOD PART NUMBER	ARACHNIPOD PART NAMES	ARACHNIPOD RESCUE	ARACHNIPOD ADVANTAGE PLUS BASIC	ARACHNIPOD ADVANTAGE PLUS	ARACHNIPOD RESCUE PLUS
	TRIPOD & ACCESSORIES KITS:	APOD-RESQ	APOD-ADV+B	APOD-ADV+	APOD-RESQ+
90-0108	Standard Leg	2	2	1	1
90-0110	Pulley leg	1		1	1
90-0114	Lazy leg		1	1	1
APOD-LLA	Lazy Leg Adaptor Plug		1	1	1
42-1019	Feet Rope & Rope Grab	1	1	1	1
42-1011	Arachnipod Bag	1	1	1	1
26-0007-0	Rigging Plate	1	1	1	
90-0120	Spike Feet	3			
APOD -AKIT	Arachnipod Full Accessory Kit				1
07-1027-0	Quad Plate		1	1	
90-0121	Reverse Head		1	1	
03-1037-0	Gin Head		1	1	
APOD-ADV-AB	Advantage Accessory Kit Bag		1	1	

ARACHNIPOD PART NUMBER	ARACHNIPOD PART NAMES	ARACHNIPOD TEMS 2 metre Bridge	ARACHNIPOD TEMS 3 metre Bridge	ARACHNIPOD TEMS 4 metre Bridge
		APOD-TEMS2	APOD-TEMS3	APOD-TEMS4
90-0108	Standard Leg	1	1	1
90-0110	Pulley leg	1	1	1
90-0114	Lazy leg	1	1	1
APOD-LLA	Lazy Leg Adaptor Plug	1	1	1
42-1019	Feet Rope & Rope Grab	1	1	1
42-1011	Arachnipod Bag	1	1	1
26-0007-0	Rigging Plate			
90-0120	Spike Feet			
APOD -AKIT	Arachnipod Full Accessory Kit	1	1	1
APOD-BR2	2m Bridge Kit	1		
APOD-BR3	3m Bridge Kit		1	

APOD-BR4	4m Bridge Kit			1
INCLUDED IN BRIDGE KITS:				
	Bridge	2m Bridge	3m Bridge	4m Bridge
90-0108	Spare Standard Leg	1	1	1
42-1013	2m Bridge Bag	1		
42-1014	3m Bridge Bag		1	
42-1015	4m Bridge Bag			1
42-1019	Foot Tether Rope	1	1	1
BRIDGE KIT OPTIONAL UPGRADES/ ACCESSORIES				
APOD-BRSSU	Bridge Kit Stainless Steel Upgrade Kit			
APOD-BRS	Bridge Ratchet Strap Kit			
APOD-BRSB3	Strongback Bridge Reinforcement 3m			
APOD-BRSB4	Strongback Bridge Reinforcement 4m			

FULL ACCESSORY KIT CONTENTS

PART NUMBER	COMPONENT	QUANTITY	PART NUMBER	COMPONENT	QUANTITY
42-1012	Accessory Bag	1	68-0036	Spare Detent Pins	2
90-0120	Spike Feet	4	68-0054	Spare Leg Pin c/w Detent Pin	1
03-1037-0	Gin Head	1	07-1026-0	Steps	2
34-0032	Soft Ground Shoes	4	90-0119	Equipment Bracket	1
16-1046-0	Hold-Down Stakes	4	26-0007-0	Rigging Plate	1
68-0041	M12 Tru-bolts	8	07-1027-0	Quad Plate	1
68-0042	M12 Masonry Drill Bit	2	90-0121	Reverse Head	1
22-1002	Spare Qik-Link Head Pins	2			
LAZY LEG KIT CONTENTS (APOD-LLK)			WINCH & FALL ARRESTOR KITS		
90-0114	Lazy Leg	1	APOD-W10	10m Winch & Mount - 6mm cable	1
90-0121	Reverse Head	1	APOD-W20	20m Winch & Mount - 6mm cable	1
42-1020	Lazy leg Bag	1	APOD-FA	15m Type 3 Fall Arrestor & Mount	1
APOD LLA	Lazy Leg Adapter Plug	1			

ACCESSORIES

APOD-EKLL	Extension Kit for Lazy Leg
68-0054	Leg Pin
68-0047	Leg Pin Cable
APOD-LLA	Lazy Leg Adaptor Plug

ADVANTAGE ACCESSORY KIT

07-1027-0	Quad Plate	1
90-0121	Reverse Head	1
03-1037-0	Gin Head	1
26-0007-0	Rigging Plate	1
APOD-ADV-AB	Advantage Accessory Kit Bag	1

OPTIONAL EXTRAS

90-0120	Spike Feet	4
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General

The Arachnipod is used for securing persons that work in confined spaces where a fall from height may occur, specifically in areas such as tanks, shafts, trenches, mountain cliffs and voids or confined spaces that need entering.

The use is limited to persons who are physically fit and have been instructed in the proper safe use of the product as well as obtaining the correct necessary knowledge in the use of the of the product. In order to rescue a person that has been involved in a fall or incident / accident a full emergency rescue plan must be implemented to consider all possible implications and situations that may occur during the rescue

Intended Purpose

The use of the tripod, quadpod or bridge system is limited to combinations of approved and registered components only which are:

- Retractable type fall arrestor with rescue winch according to EN360
- Rescue, lifting and descending devices according to EN361, EN341, EN1496, EN67, EN1891, EN1497 and any other relevant EN standard pertaining to the task that has been completed
- Approved and tested componentry by manufacturer of the product

Other combinations and components are not allowed as the safe operation of the system is not assured if relevant standards are not followed. Additionally the tripod, quadpod or bridge system can be equipped with an approved load winch that is available through the supplier of the unit. Instructions for the load winch must be followed and the total working load of the desired configuration must not be exceeded.

The tripod, quadpod or bridge system is to be used for its intended purpose at the time of purchase and may not be used for any other application. Any changes, repairs or additions are to be made by the manufacturer or its accredited agents only.

The Arachnipod is to be used for personal fall protection only. It is not to be used for lifting equipment. Any changes, repairs or additions are to be made by the manufacturer or its accredited agents only.

When the Arachnipod is used as part of a fall arrest system, the user shall be equipped with a means of limiting the maximum dynamic forces exerted on the user during the arrest of a fall to a maximum of 6kN.

Care, Maintenance & Storage

- Wash the unit with warm water and soft detergent soap.
- Rinse with clean water.
- Leave unpacked unit in a warm, dry, well-shaded and ventilated place to dry.
- Do not use additional heat sources or blowers to dry the unit.
- Avoid contact with chemicals, oils, solvents and other aggressive corrosive materials or agents.
- Once cleaning is complete, store unit in bags or boxes and store at room temperature away from direct sunlight.
- If unit requires any further maintenance, contact your supplier for further details.

Transportation

To avoid damage, the unit should be carefully packed into bags or boxes. The item's weight should be marked on the packaging and a note of caution for a person to take care when lifting heavy objects.

Safety Information

It is essential for safety that the Arachnipod be withdrawn from service immediately should any doubt arise about its condition for safe use, or if it has been used to arrest a fall. It must not be used again until confirmed in writing by a suitably accredited qualified person or the supplier of the system. Please be aware that extreme temperature, chemicals and rough handling of the system may cause damage.

Life Cycle

The Arachnipod's life span is dependent on the individual operational conditions each unit is subjected to. Many factors affect equipment lifespan including frequency of use, actual conditions of use, care and maintenance of the unit, weather and environmental conditions. If deemed necessary, the unit may be permanently withdrawn from service before or after a specific use, or after inspection during the unit's mandatory annual review.

The maximum life span of the Arachnipod is twelve (12) years from first being put into service provided it has not sustained damage, is maintained, serviced and inspected according to manufacturer's instructions. Arachnipod components are labelled with the Date of Manufacture. When the unit is retired from service, destroy the unit so it cannot be re-entered into service by mistake.

Non-metallic Components

The following table lists materials used to produce any non-metallic components on the Arachnipod.

PART	MATERIAL
Standard foot tread	Polyurethane
Leg stoppers	
Foot socket	
Soft Ground Shoe	
Lazy Leg Adapter plug	
Lazy Leg extender mouldings	
Bridge Pulley mouldings	
Pulley Head pulley spacers	Acetal
Step spacers	
Bridge Pulley spacer	
Lower Leg stopper	
Leg bumper	Rubber

Inspection of the Arachnipod

Equipment should be inspected regularly, before and after each use by a qualified person. Record the date of the inspection and the results in the equipment log. It is also recommended to write the date of the next inspection on the device. Each user should be trained in equipment inspection and should carry out a pre-inspection of the equipment to ensure that it is in a serviceable condition and operates correctly before each use.

Inspect the Arachnipod for cracks, dents, or elongation of the karabiner and pin holes. The legs should fit together smoothly and should not appear bent or deformed. Pins should have the retaining hardware present and must function freely.

Inspect plastic parts for wear or chemical damage.

Repairs

Any repair work must be done by the manufacturer or accredited agent. Any other repair work or modifications will void the warranty.



WARNING

The Arachnipod has been engineered and tested using the original equipment as supplied. Never replace any pins, bolts or other components with non-genuine parts.

Do not use your Arachnipod if any parts are missing.

The Arachnipod must not be used outside its limitations, or for any purpose other than that for which it is intended.

For service or repairs, please contact your local Ferno Distributor or Ferno Australia

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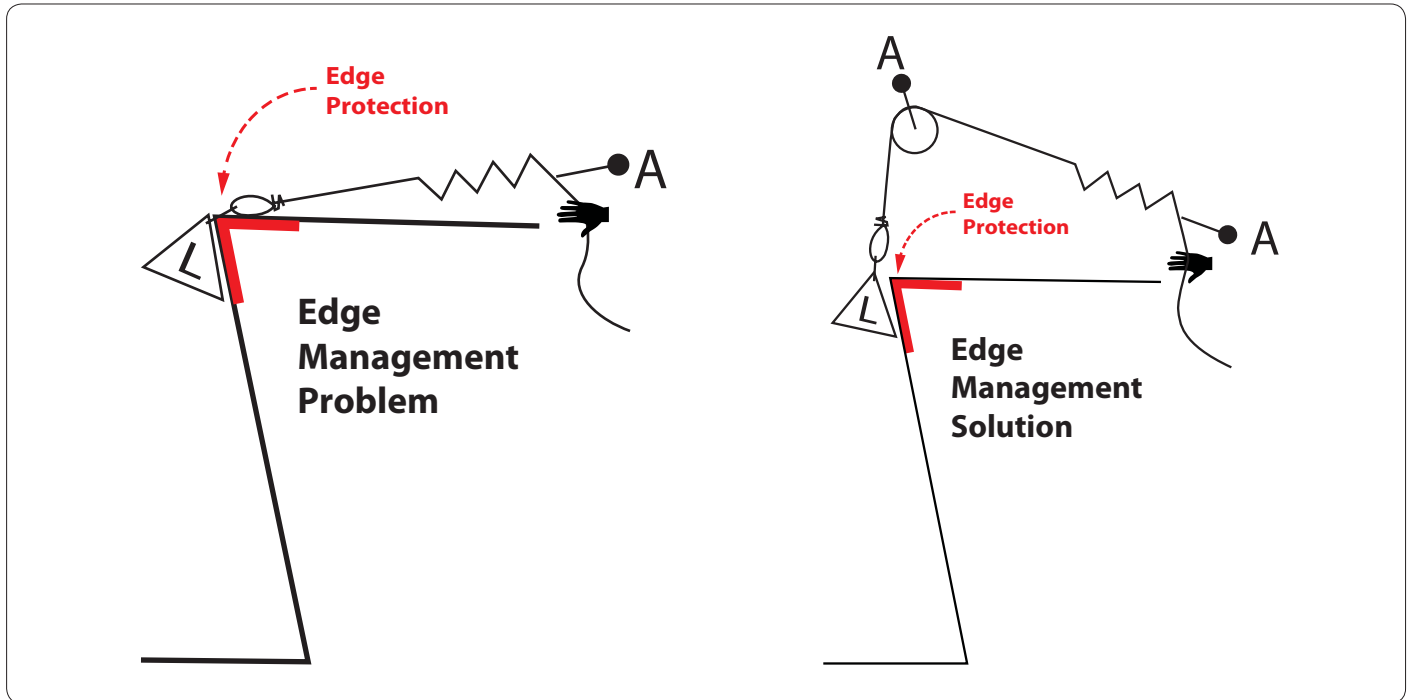
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Safe Working Practices

1. Always wear relevant PPE including gloves.
2. Do not exceed the working load limit for the given application.
3. Always maintain a safety line independent of the main line.
4. All Arachnipod feet must be secured to prevent unwanted movement.
5. It is a good practice to ensure that all rigging is capable of holding the entire weight of the main load.
6. Always provide height safety and fall prevention for personnel working close to the height risk.
7. Ensure a Rescue Plan is in place to deal with any emergencies which may arise.

Principles of Edge Management

Edge management is the assessment of the rigging task to ensure that the load can be manoeuvred over the edge. Rigging to provide a high change of direction is the key to successfully managing an edge. The Arachnipod is a tool that can be used to achieve a high change of direction.

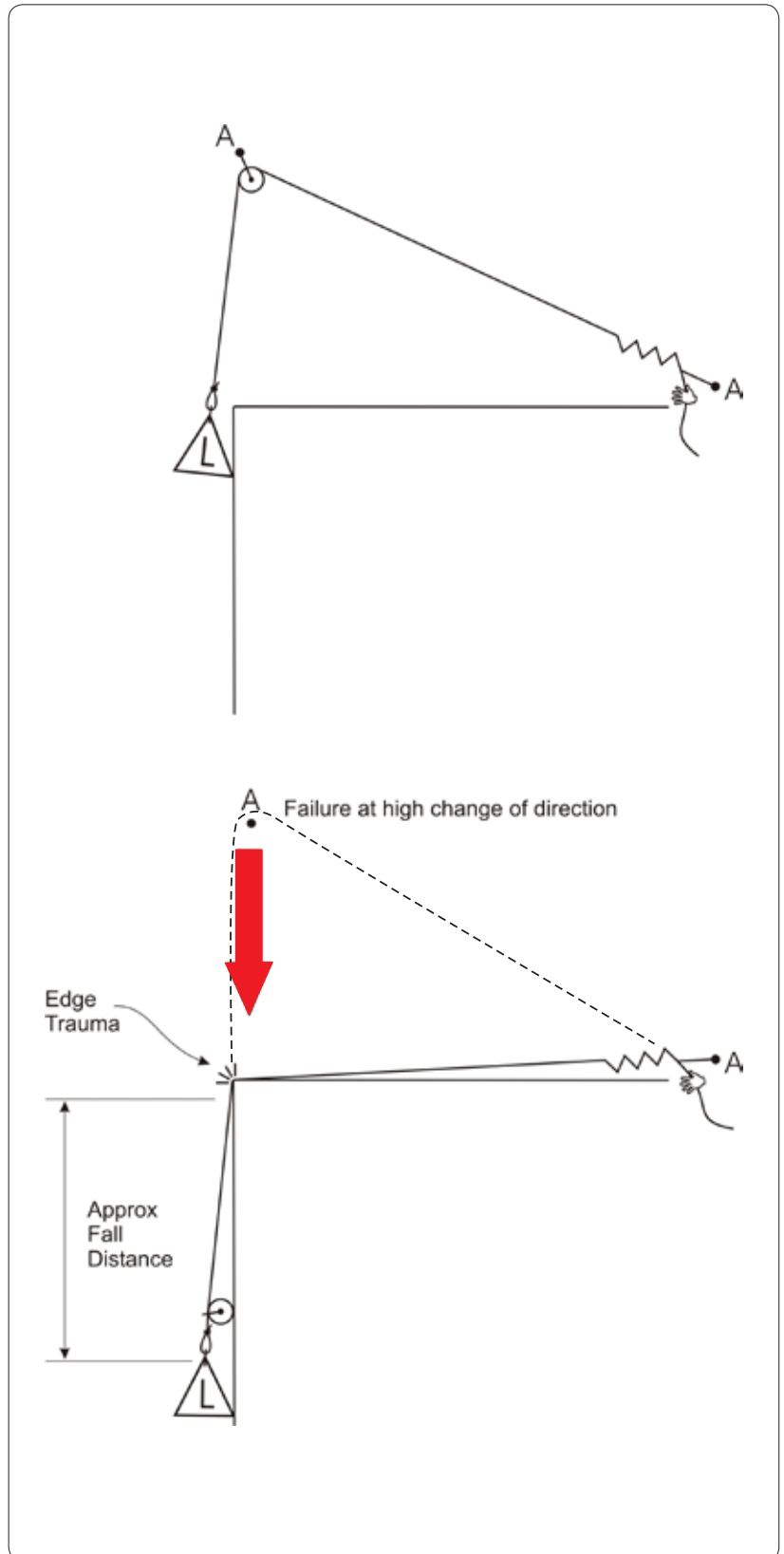


**Critical Point Analysis
(High change of direction)**

A critical point analysis is the assessment of all rigging regardless of the equipment brand or type. The purpose of a critical point analysis is to determine if the rigging relies on any single point to provide operator safety.

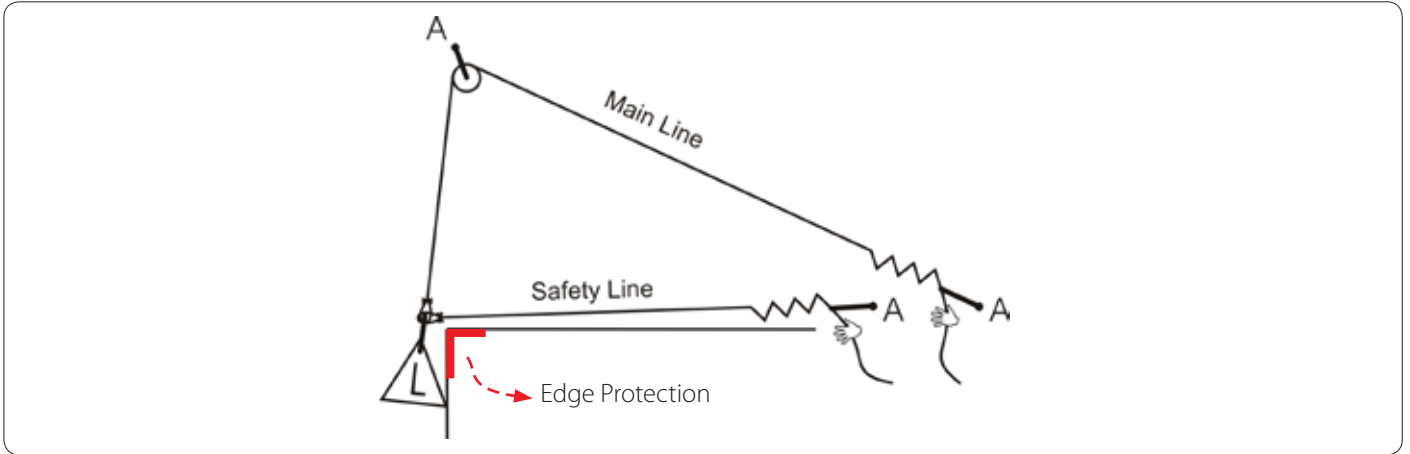
The Arachnipod if used correctly will provide an efficient and safe edge management system but not all aspects of the rigging and equipment use can be guaranteed by the manufacturer. Many factors such as edge instability, anchor insecurity, misuse, persons who are not fully competent, user error, abuse and the use of other equipment could result in a system failure.

The diagram (right) shows how failure of a high change of direction (edge management) of a single rope system would subject the load to a fall. The seriousness of the fall will depend upon many factors including the height of the change of direction and the length of rope that is between the load and the anchor.

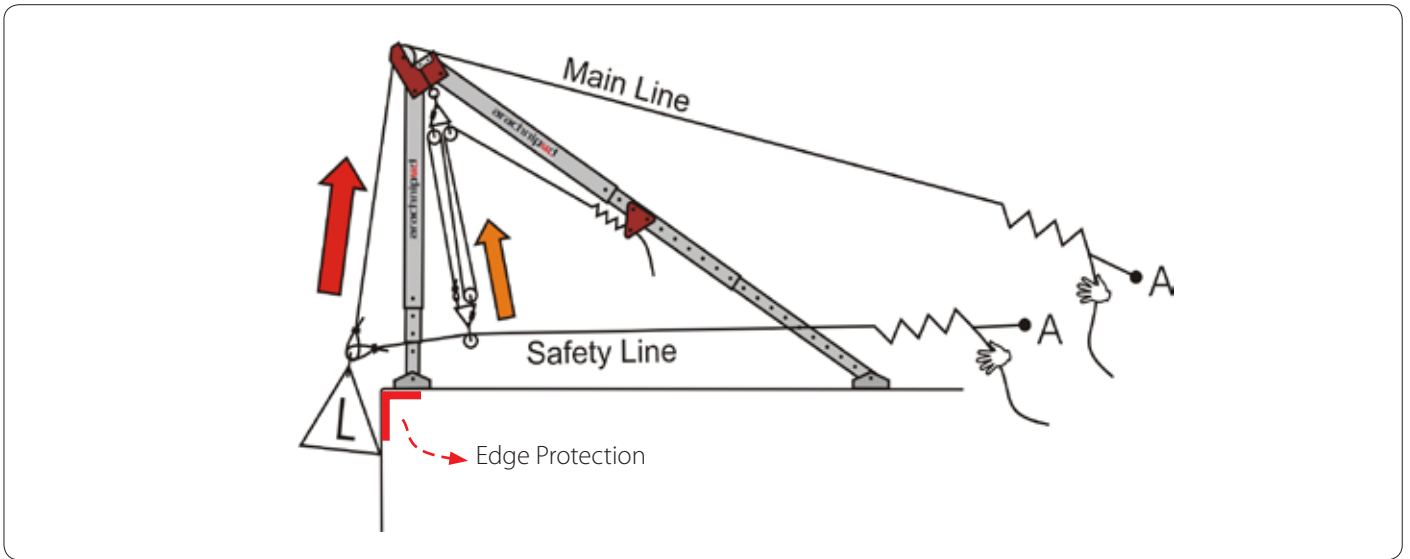


The Two Rope System

A two rope system provides additional safety by backing up the main line and any edge management systems. The second line or safety line is rigged to take the shortest path from the anchor to the load.



When the load is located below the edge the safety line provides protection for both main line and edge management failures. When the load is located above the edge the safety line provides limited protection for main line failures.



The Arachnipod can be rigged with the main line passing over the pulley head and a rated hauling system can be used to progressively pick the safety line up as the load is raised. This process provides additional protection against a main line failure. Ferno can supply properly rated and pre-rigged hauling systems that are suitable for this task.



WARNING

Edge protection should also be provided to protect both lines against edge trauma. Ferno can supply a range of edge protection solutions

Understanding the forces at a change of direction pulley

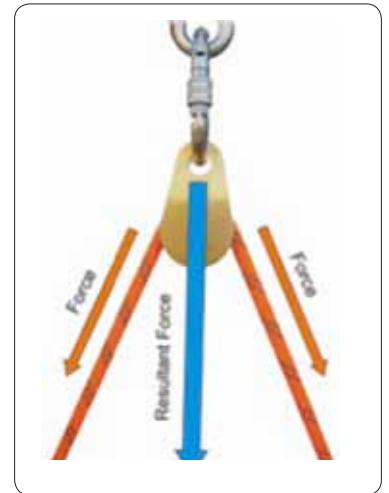
Most edge management tasks require the use of a pulley or pulleys to change the direction of the load line. Correct assessment of the loads being applied to these pulleys and the ability to determine the resultant direction is essential when selecting the most appropriate edge management system and rigging.

An applied force has magnitude and direction. A change of direction pulley is subjected to two forces:

1. The weight of the load, and
2. The force required to manage that load.

The force that is required to manage the load will vary because of friction.

The resultant force bisects the two applied forces. A good indicator of resultant direction is to look at the direction of the pulley and attachment hardware.

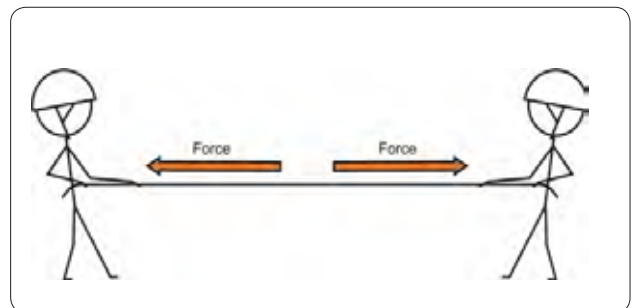


Understanding the forces being applied to the Arachnipod

The Arachnipod or any other edge management device is subjected to resultant forces and directions. To keep edge management devices or rigging in place the resultant forces and directions being applied must be assessed and sometimes additional rigging will be required to provide stabilisation. In simple terms, if all of the forces are balanced then the Arachnipod will remain stable.

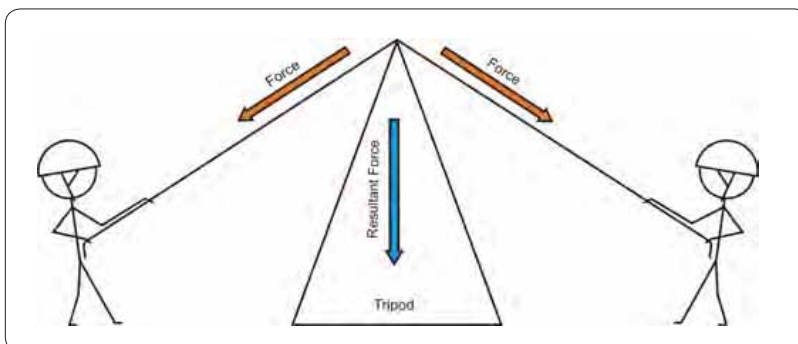
We can use various Arachnipod components and rigging to balance the forces as follows:

1. The legs of the Arachnipod system are generally used to balance compression forces,
2. Additional rigging is used to balance tension forces, and
3. Some rigging may be used to preload the tension rigging to minimise movement created rope stretch and cyclic loading.



by

The game known as "tug of war" is a good example of balanced forces. If two people applied exactly the same horizontal force then the rope would remain stationary. The load forces are balanced and no movement would occur.



If a tripod is placed under the tug of war rope then the same rules would apply.

Because there is now a change of direction a resultant force now exists.

Assessing the stability of your Arachnipod rigging

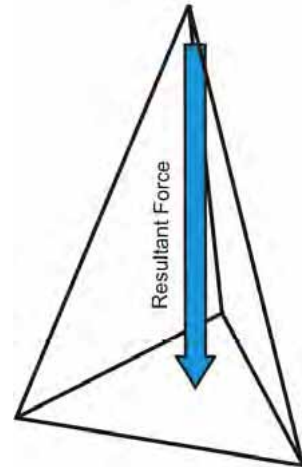
The following stabilisation examples will look at the resultant directions and suggest how the stability of the edge management scenario may be managed.

Remember: an applied force has magnitude and direction. This manual will refer to resultant forces and resultant directions.

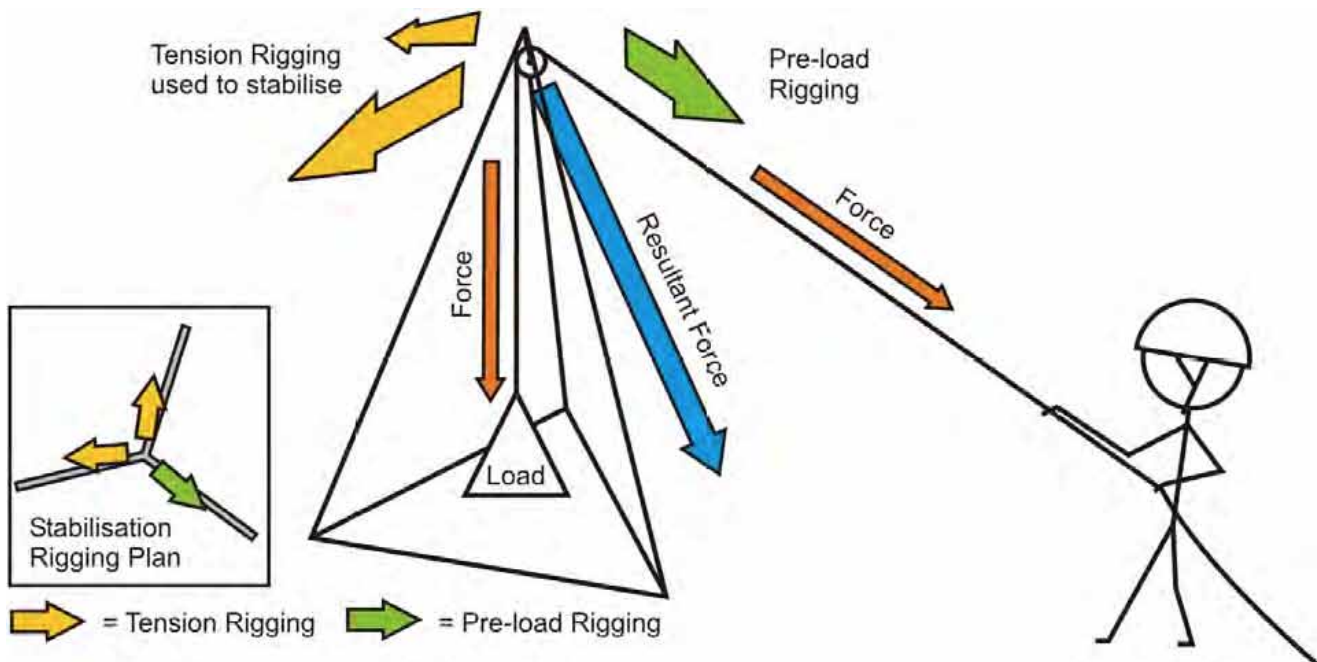
Tripod Stabilisation

Tripods make use of three legs all of which are in compression. Some tripod applications may require additional rigging to provide sufficient stabilisation and security.

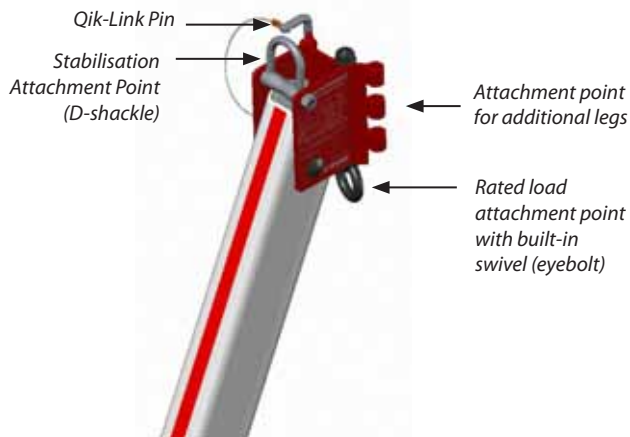
If a tripod is rigged in such a way that the resultant force and direction are being applied downwards and if it remains within the triangular base (the triangle formed by the leg securing rope) then the tripod will remain stable. If the load shifts closer to any given leg then the load being applied to that leg increases but the tripod will remain stable.



If the resultant force and direction is being applied outside of the triangular base then the tripod will become unstable. Additional rigging will be required to maintain tripod security. Some of the rigging will remain under tension and other rigging may be used to preload the edge management system.



Arachnipod Parts

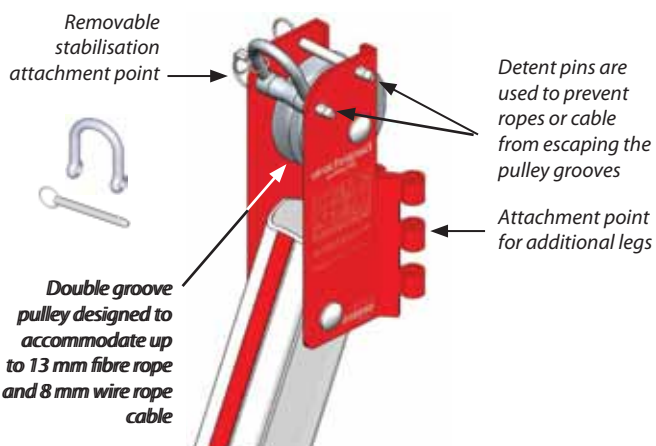


Standard Leg

Legs can be connected using Qik-link pins. The connected joint looks much like a hinge.

A basic tripod is made up of three standard legs joined with Qik-link pins. The removal of one Qik-link pin allows the tripod to be stored flat for easy transportation.

Rated load attachment points (eyebolts) are provided along with an additional attachment point for stabilisation rigging. The load attachment point can swivel 360°.

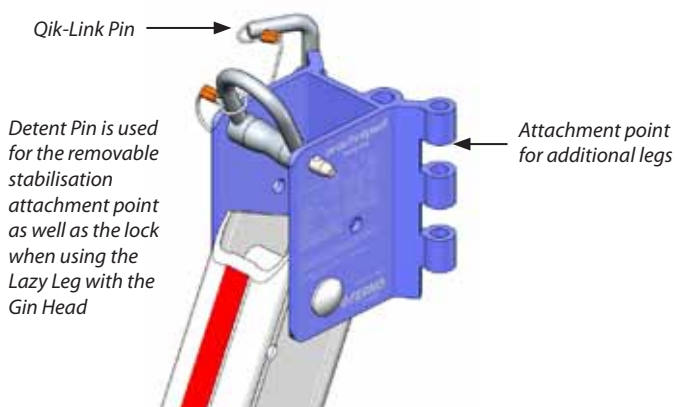


Pulley Leg

A pulley leg can be used in place of a standard leg to add a pulley to a tripod or A-frame configuration. Other configurations such as a handrail technique are also possible. (see handrail technique in this manual)

The pulley has been designed to accommodate up to 13 mm fibre rope as well as up to 8 mm (steel/ stainless steel) wire rope cable.

The stabilisation attachment point is removable.

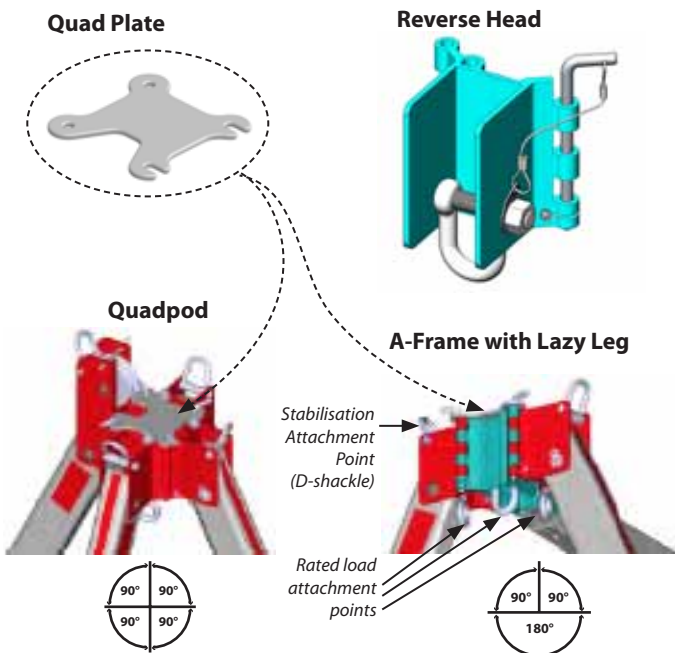


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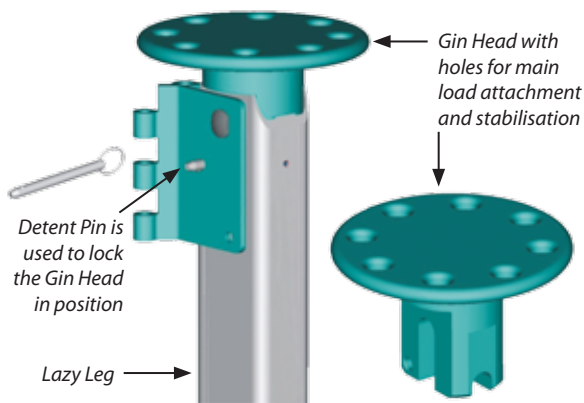


Reverse Head, Quad Plate and Quad Pod

A quad plate is used whenever four legs or heads are used together, such as a quadpod or lazy leg configuration.

A reverse head is used to change the angle between legs, and is used when a lazy leg configuration is required

When using a reverse head and whenever possible, loads should be attached to the large D-shackle to centralise the load between the two opposing legs.



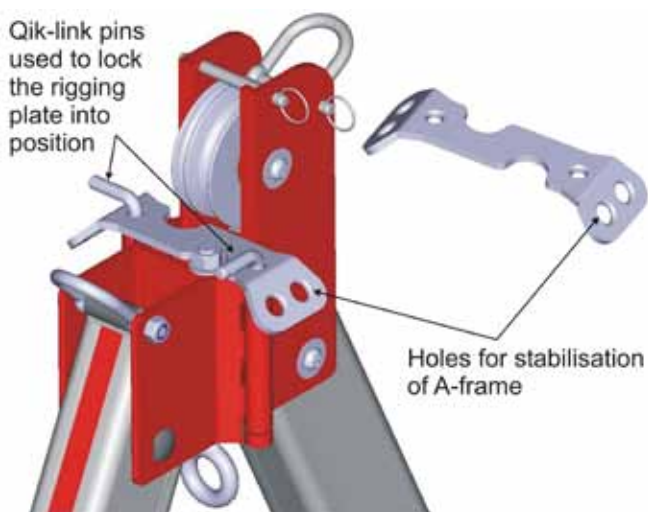
Gin Head

The gin head is used with a lazy leg to form a gin pole. Both parts are coloured blue making the leg selection an easy task.

Before connecting the gin head the head on the lazy leg must be rotated 180°.

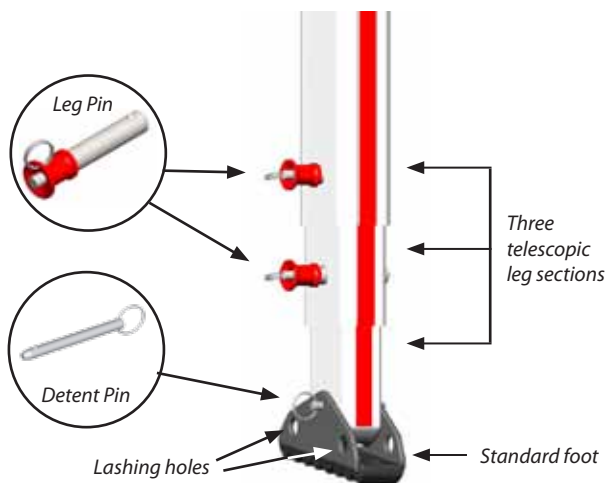
The gin head is then inserted into the lazy leg tube and locked into position with a detent pin.

The Gin Head can also be used as a large rigging plate when not used in a gin pole configuration.



Rigging Plate

A rigging plate is used when two legs are connected as an A-frame. It is used to provide additional stabilisation attachment points and is not for live loads.

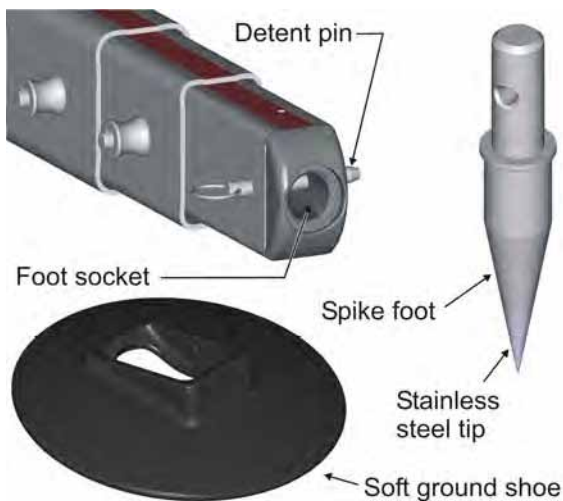


Leg with a Standard Foot

All legs have three telescopic sections that are locked with two leg pins. The foot options are held to the base of the lower leg with a detent pin.

A standard foot is ideal for flat surface applications. Lashing holes in the standard foot are provided for the leg restraint rope or other lashing technique.

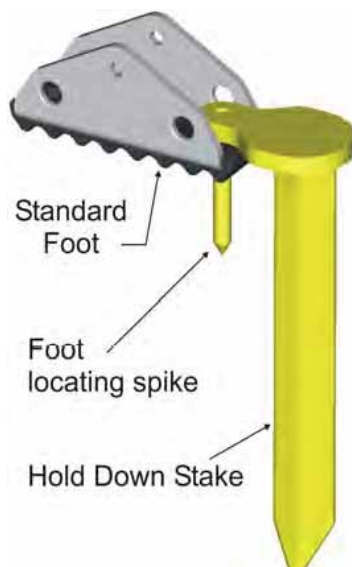
Unused lower leg holes can also be used with the leg restraint rope or for other lashing techniques.



Spike Foot & Soft Ground Shoe

A spike foot can be used for point loading and ground penetration applications. A stainless steel tip has been added to extend the service life of the spike foot. The spike foot inserts into the foot socket and is held in place with a detent pin.

The soft ground shoe fits over the spike foot and clips to the foot socket. It is used to limit ground penetration in soft ground applications.



Hold Down Stake

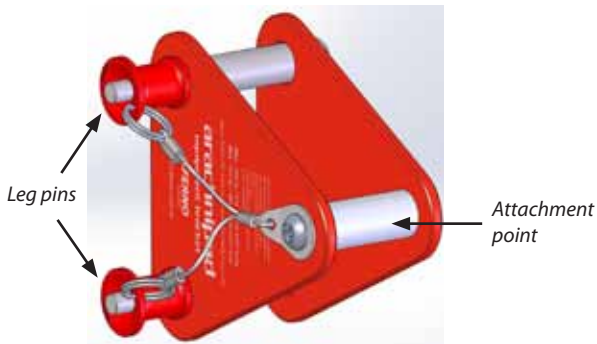
A hold down stake can be used to secure a standard foot to the ground. The foot locating spike lines up with one of the holes in a standard foot.

Taking care not to impact against the Arachnipod foot or leg, hammer the hold down stake half way into the ground. Check the alignment of the foot locating spike then continue to hammer the stake into the ground. A soft faced or shot filled hammer is recommended for this task.



Maintain the alignment of the foot locating spike and the hole in the standard foot whilst hammering the hold down stake into position.

The hole in the standard foot can also be used to fix the foot using a 12 mm bolt.



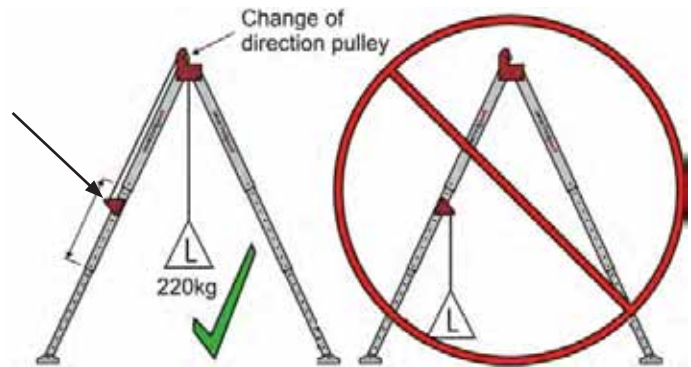
Equipment bracket, winch or fall block attachment (middle leg section only)

Equipment Bracket

The equipment bracket must only be used when attached to the middle telescopic leg section.

The WLL of the Arachnipod is reduced to 220 kg when a leg is used as an anchor.

This attachment point is only to be used if the main line passes through a change of direction pulley at the head of the tripod.



! WARNING

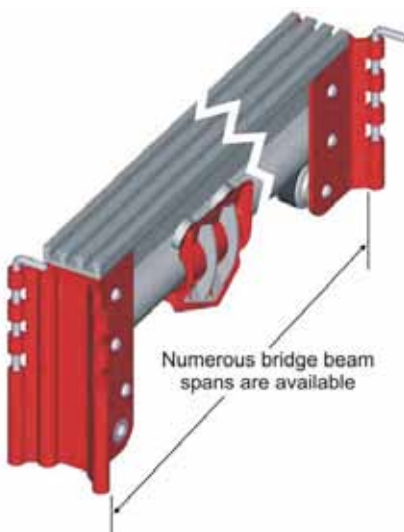
The rigging must include a change of direction at the head when an equipment bracket is being used as an anchor.



Steps

Steps can be attached to the middle and the lower leg sections. They are a useful aid when reaching high rigging. They are reversible and can be attached to the inside or the outside of a leg. A leg pin is used to secure a step into position.

Steps do not carry a rating for any load applications. Before using a step you must ensure that you are secured with suitable height safety rigging and personal protective equipment.



Bridge Beams and Trolley

Bridge beams are available in lengths up to 6 m (refer WLL table on page 6 for load rating). They add a panning capability that is well suited to trench rescue and confined space applications. A trolley is fitted to the bridge beam. The trolley is hauled back and forth along the beam using the trolley positioning line. This is a single person operation.

An "English Reeve" is recommended because it negates the need for any additional trolley stabilisation. A tie off point has been included to facilitate "English Reeve" rigging.

A mechanical advantage hauling system can be suspended directly from the trolley as long as it includes an integrated braking system to remove lateral forces at times other than when being raised or lowered. The Ferno CSR pulley kit (available separately) is a pre-rigged 4:1 mechanical advantage system incorporating a brake and a remote release for raising and lowering.

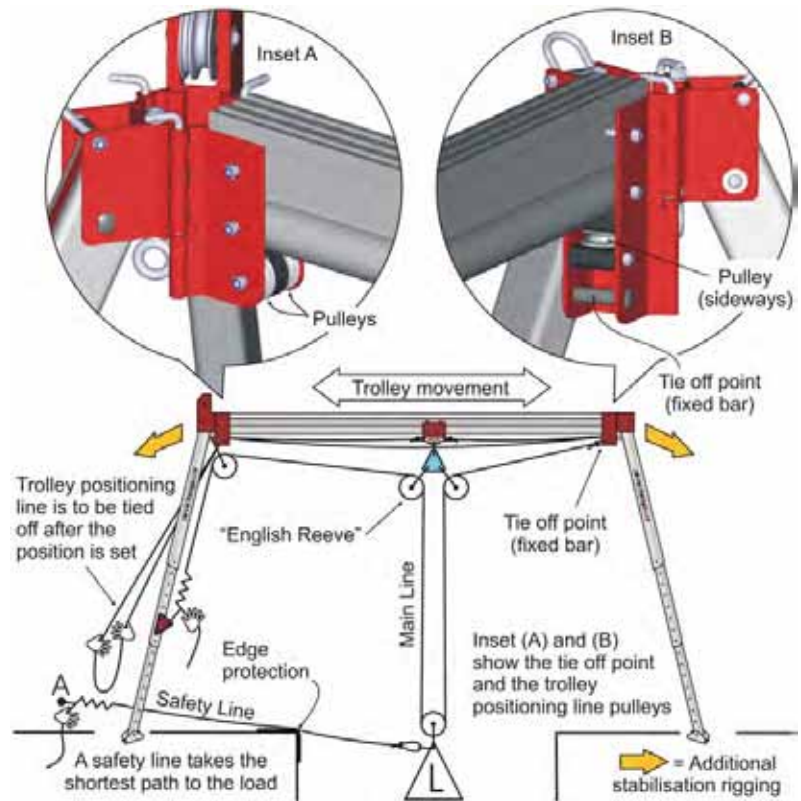
The trolley positioning line is used for positioning of the trolley.



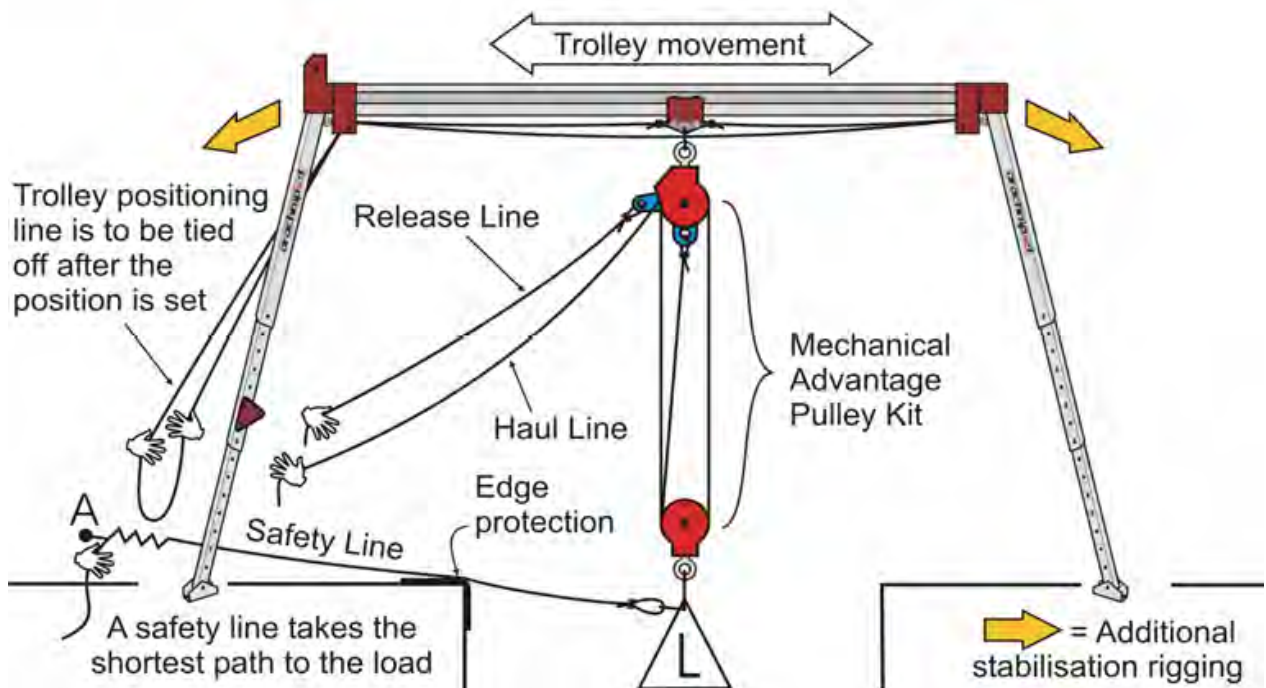
If any other rigging systems are used then the resultant forces must be considered and additional stabilisation of the trolley and the bridge is required.

Bridge Systems

A bridge with 'English Reeve' rigging



A bridge with a mechanical advantage hauling / lowering system and an integrated brake



Arachnipod Assembly

The assembly and rigging process for the Arachnipod depends upon a number of factors including:

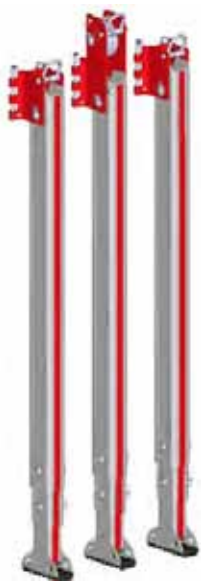
- The type of Arachnipod kits available
- The configuration to be used and
- The rigging experience of the user

It is recommended that two or more people work together to assemble the Arachnipod components as follows:

Step 1. Preparation

Select the most appropriate Arachnipod configuration for the task. Establish a staging area where the Arachnipod components can be laid out. A staging area is a location that is in a safe area (away from the fall hazard). A clean tarp is a useful tool for staging. Carry out a pre-operational check of all equipment and do not extend the legs until the heads are connected.

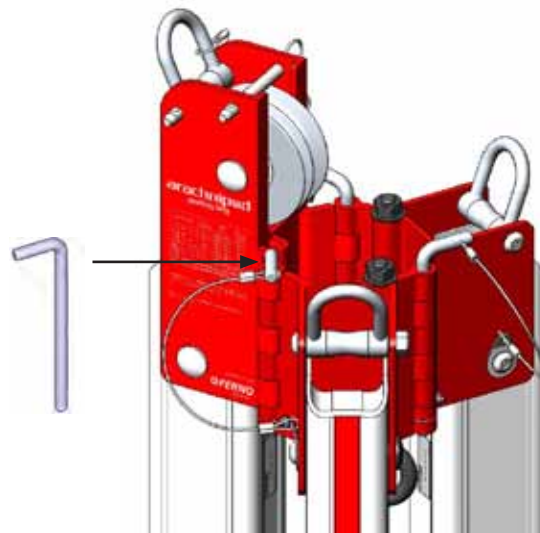
Step 2. Assemble legs



If more than one leg is required, stand the legs in an upright position next to each other, align the hinge cut-outs and insert the Qik-link pins.

If a rigging plate or quad plate is required it must be positioned prior to inserting Qik-link pins.

Repeat this process for any further legs that are required for your desired system.

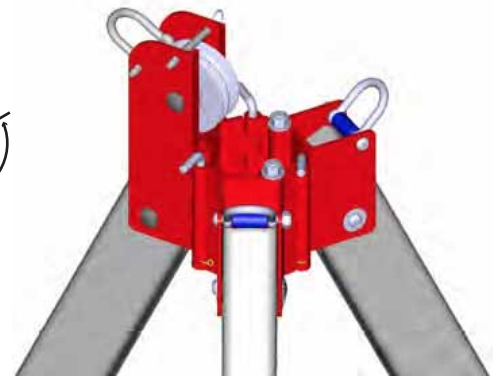
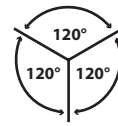


Bring the remaining head joints together and fit the last Qik-link pin.

Check all Qik-link pins to ensure that they are fully engaged into the head joints. Push down until they are retained by the spring clip.

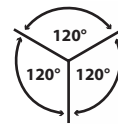
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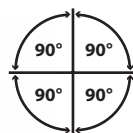


Tripod

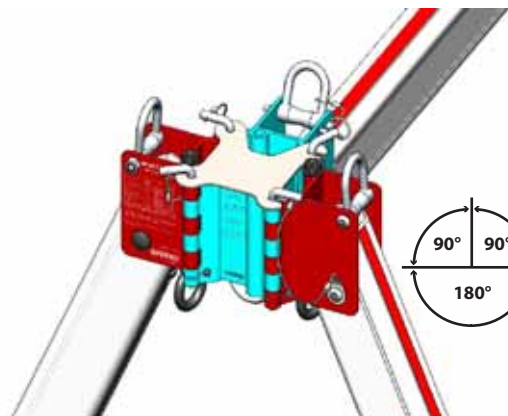
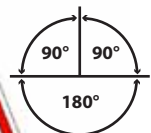
If a bridge is being used, it can be connected to two sets of A-Frames at this time.



Bridge



Quadpod



A-Frame with Lazy Leg

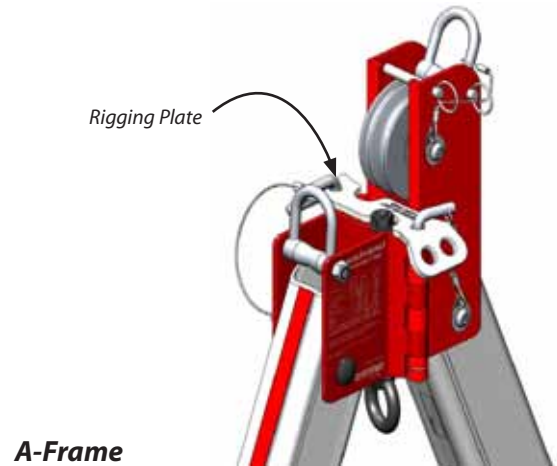
A fourth leg and quad plate can be added to create a quadpod. A reverse head and a quad plate can be added to change the angle between two legs to 180°.

A reverse head and a quad plate must always be used for an A-frame with lazy leg. A quad plate must always be used for a quadpod.

A rigging plate is recommended for use with an A-frame to provide additional stabilisation of the unit during use.

CAUTION

Double check ALL connections before proceeding to the next step.

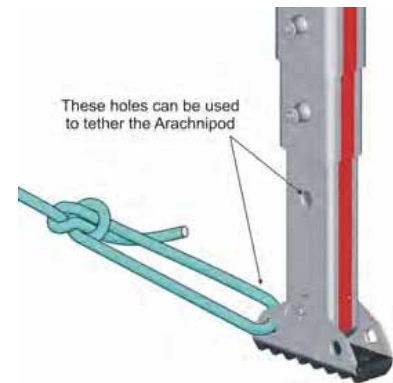


Step 3. Tether the Arachnipod and move it into position

Tethering is not to be confused with stabilisation. Tethering simply stops the equipment from being dropped over an edge whereas stabilisation stops unwanted movement whilst the equipment is being used.

Tether the Arachnipod with a rope to prevent it from being dropped over an edge.

Once the Arachnipod has been tethered it can be moved into position.



Step 4. Extend the legs

Extending the legs can be achieved by removing both leg pins from the legs and adjusting the legs to the desired height. This can be achieved by one person moving from leg to leg and making small adjustments or with multiple persons all adjusting their respective leg simultaneously.

It is easier to adjust the height of the legs whilst they are close together, before splaying them out.

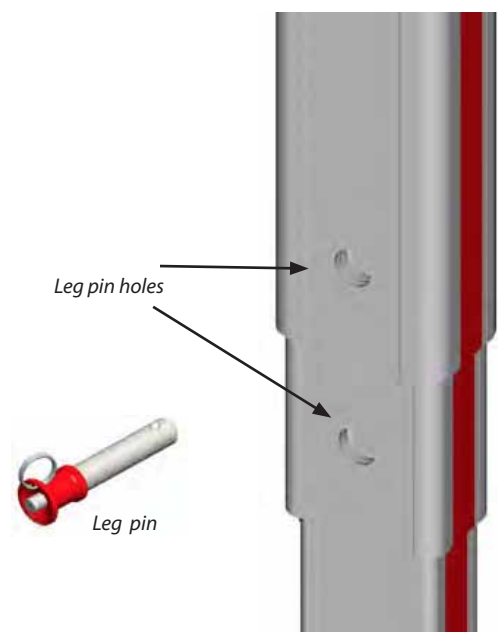
Once desired height is achieved, fit leg pins through leg pin holes. It may be necessary to adjust some or all legs at different heights to suit the terrain. Ferno does not place a limit on the amount of differential adjustment between each leg.

Ensure that the stability of the Arachnipod is maintained whilst the legs are being adjusted.

Check that all leg locking pins are fully engaged.



Do not place fingers into leg pin holes



WARNING

Take care with sliding parts. Do not place fingers into holes and watch for pinch points that may be created depending upon the application and the equipment used.

Step 5. Position the legs

Check that the legs are positioned in a secure location and ensure that the most appropriate foot option is being used.

Step 6. Secure the legs

Secure the legs to suit the application.

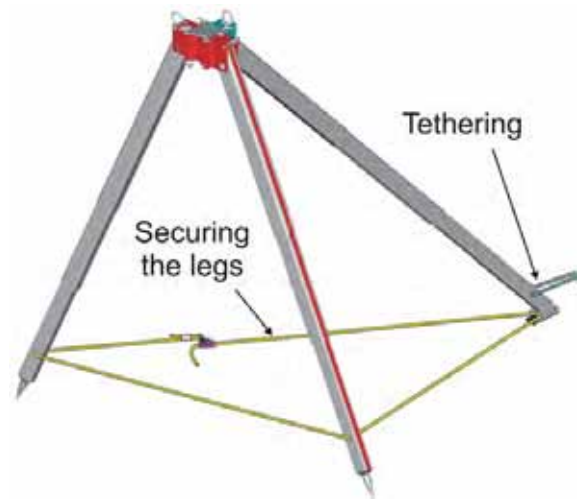
A length of rope and a rope grab can be used to stop the legs from splaying.

Legs may also be lashed into position or some foot options may provide sufficient leg stability without additional rigging.



CAUTION

Legs must be prevented from splaying apart when loaded. Damage to the Arachnipod may result if the splaying of legs is not managed.



Step 7. Assess the resultant force and direction

Tension and pre-load lines may need to be rigged to ensure Arachnipod stability. Please read the section in this manual titled "Assessing the stability of your Arachnipod rigging". Using hand tension, a simulated force can be applied by to the main line to visualise the resultant direction. The positioning of the head and the length of the legs can now be modified so that the resultant direction is located appropriately.

Step 8. Provide additional rigging as required

Add additional tension and pre-load rigging as necessary to ensure stability. Apply tension to all stabilisation rigging as required, then check the Arachnipod for stability.

Step 9. Rig a two rope system wherever possible

Rig a two-rope system to provide a backup to both the main line and the edge management rigging.

Step 10. Carry out a safety check

Visually check all anchors, rigging, karabiners, friction devices, harnesses and personal protective equipment before committing anyone to the edge. Edge safety lines must be provided for any persons who are working close to the edge.

Step 11. Weight the system and recheck the resultant

Before committing a load to the edge, the system should be weighted in a safe manner (for example: backed up with a safety line) and the resultant re-checked. This step should be carried out in a manner that allows retrieval of the load if adjustments to the configuration or rigging are needed.

Step 12. Monitor the Arachnipod for stability

There are many factors that can change the physics of the edge management task and as such the stability of the Arachnipod must be constantly monitored. If any instability is detected then the safety line can be set to safely hold the load whilst adjustments are made.

STABILISATION

Anchoring the Arachnipod

The number of anchors that will be required depends entirely upon the configuration of the Arachnipod.

Safe and secure anchors will be required for:

1. The main line
2. The safety line
3. Edge safety lines (for persons working close to an edge)
4. The initial rope lanyard or tether used to secure the Arachnipod.
5. Each tension line and
6. Each pre-load line

Anchor selection and anchor rigging techniques are not within the scope of this manual.

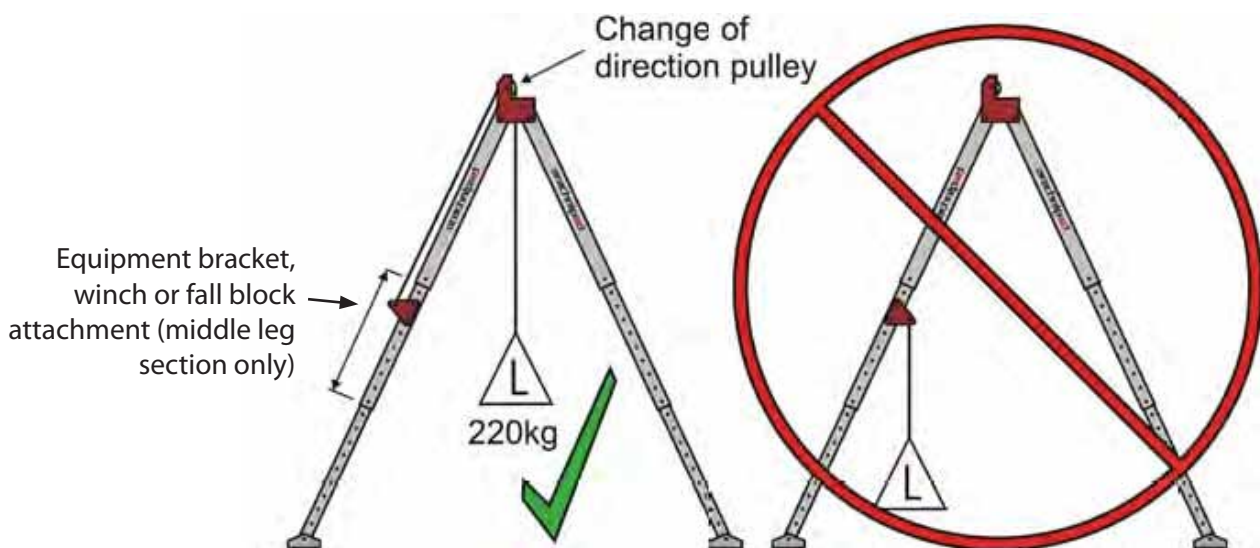
Using an Arachnipod leg as an anchor

The Arachnipod equipment bracket can be used to provide a rated attachment point that connects to a leg of the Arachnipod. Anchoring to a leg is useful in many situations including tripod applications. The WLL is reduced to 220kg when a leg is used as an anchor. The equipment bracket is designed to be attached to the middle telescopic leg.



WARNING

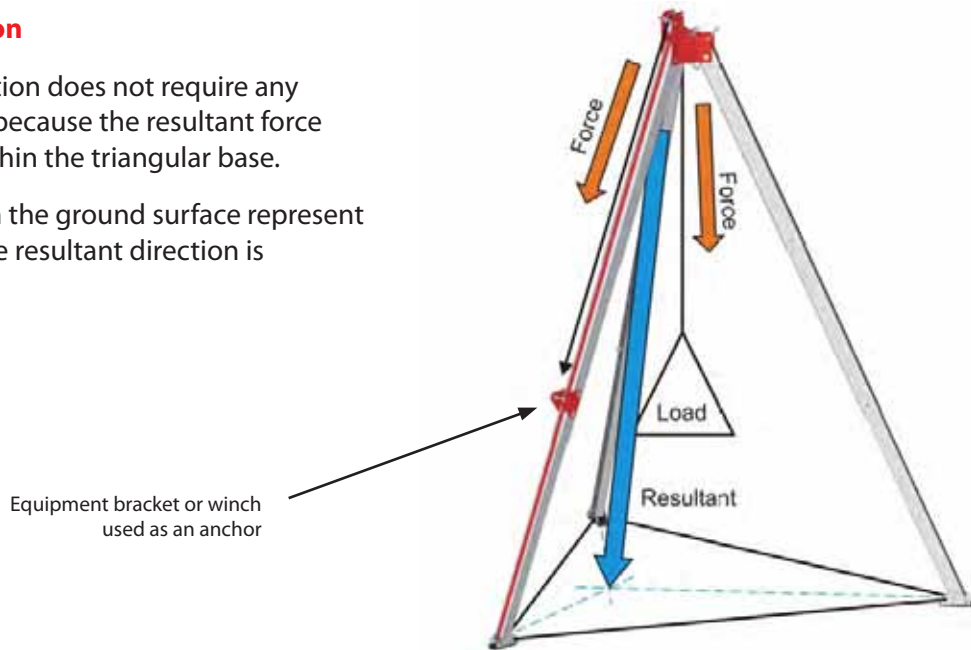
The rigging must include a change of direction at the head when an equipment bracket, winch or fall block is being used as an anchor.



Tripod Stabilisation

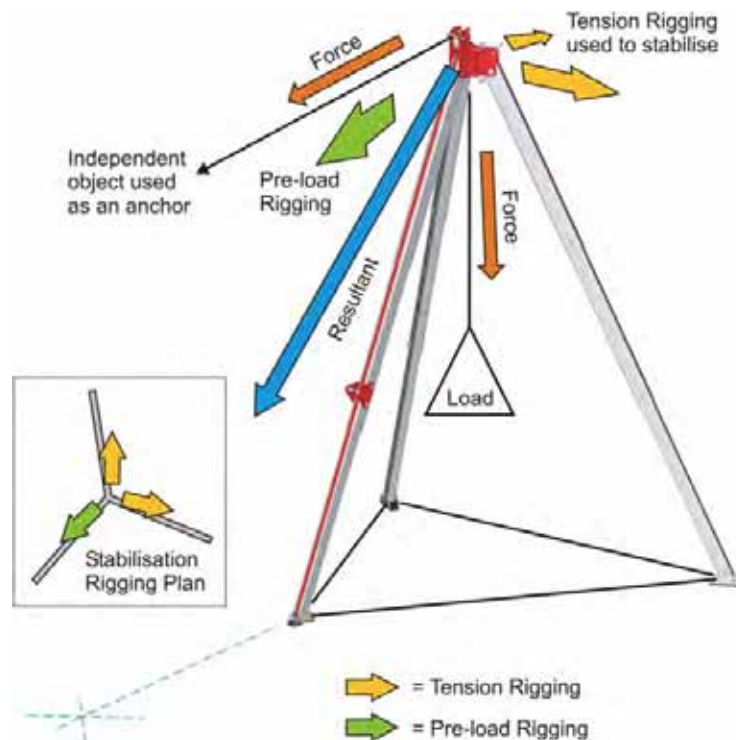
This tripod application does not require any additional rigging because the resultant force and direction is within the triangular base.

The dotted lines on the ground surface represent the point where the resultant direction is focused.



This tripod application requires additional rigging to counteract or balance the resultant force and direction.

The dotted lines on the ground surface represent the point where the resultant direction is focused



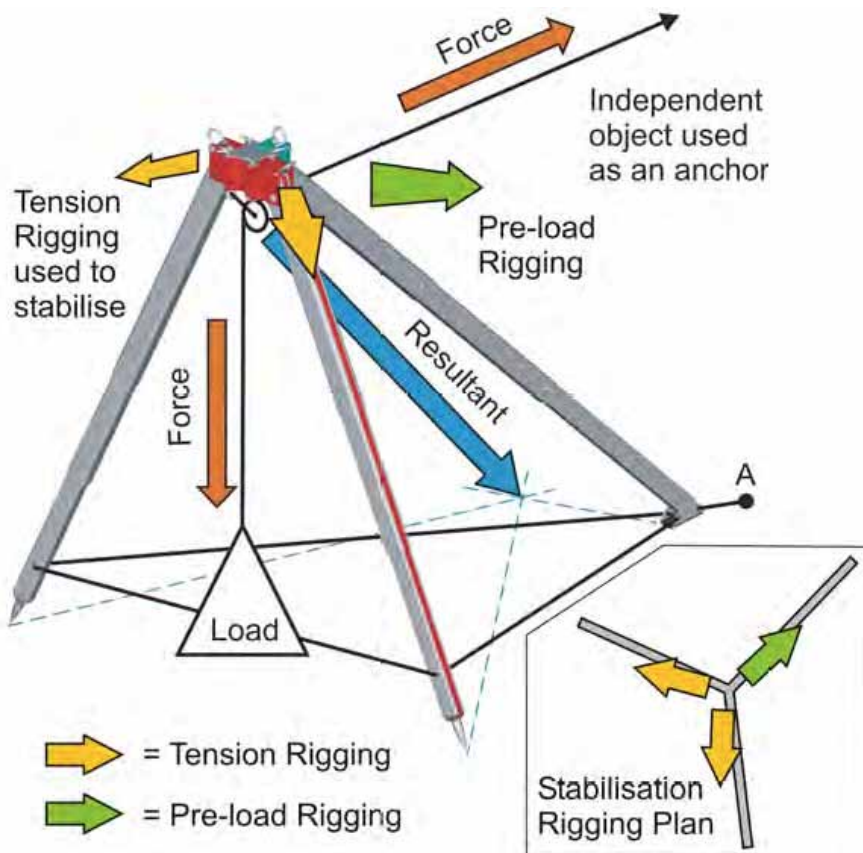
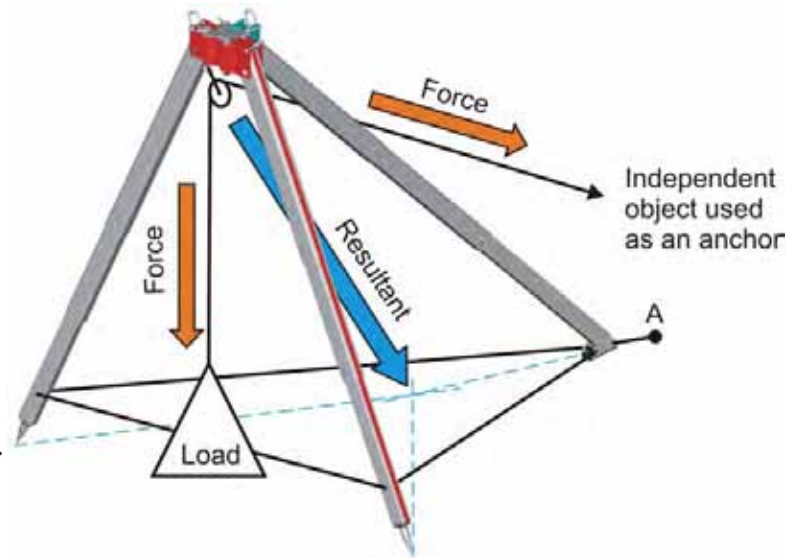
Lazy Leg Tripod Stabilisation

A lazy leg or easel leg tripod is similar to a regular tripod because it uses three legs in compression. A lazy leg tripod is constructed as an A-frame with an additional leg known as the lazy leg. The angle and length of the lazy leg is set so that the resultant force and direction can be managed.

Some lazy leg tripods will require additional rigging to provide sufficient stabilisation and security.

If a lazy leg tripod is rigged so that the resultant force and direction is being applied downwards and within the triangular base then the lazy leg tripod will remain stable. If the load shifts closer to any given leg then the load being applied to that leg increases but the tripod will remain stable.

The dotted lines on the ground surface represent the point where the resultant direction is focused.



If the resultant force and direction is being applied outside of the triangular base then the lazy leg tripod will become unstable.

Additional rigging will be required to provide lazy leg tripod security.

The length and position of the lazy leg may be adjusted to assist with the management of the resultant direction.

The dotted lines on the ground surface represent the point where the resultant direction is focused.

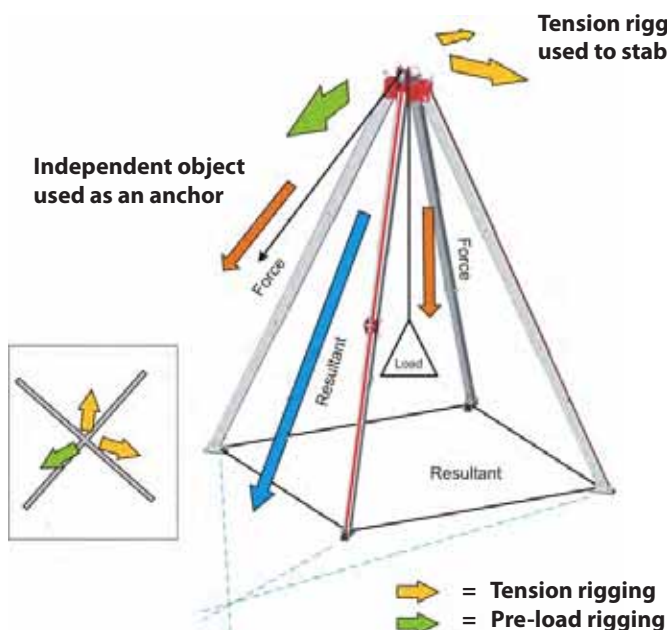
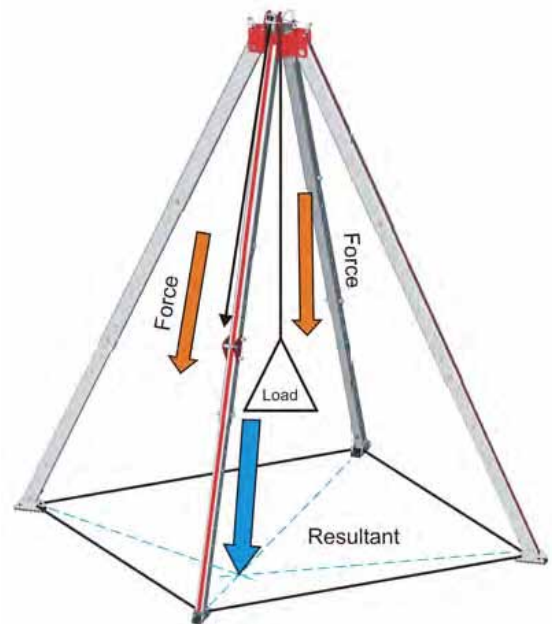
Quadpod Stabilisation

The Quadpod allows for greater versatility and stability combining 4 legs into one system.

A Quad Plate is required to ensure stability of the entire system. The principles of stabilisation are the same as a Tripod with the addition of an extra leg.

This Quadpod application does not require any additional rigging because the resultant force and direction is within the triangular base.

The dotted lines on the ground surface represent the point where the resultant direction is focused.



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The dotted lines on the ground surface represent the point where the resultant direction is focused.

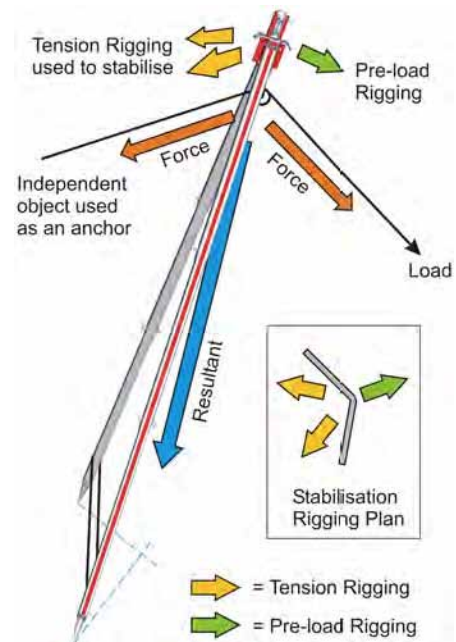
A-Frame Stabilisation

An A-frame makes use of two legs to form two compression members. A-frames always require rigging to provide at least one tension member, additional rigging can be used to provide two or more tensioned members and pre-load rigging can be used to hold the A-frame in position. A-frames can be constructed with Arachnipod components using three methods:

Method 1 Standard A-frame

Two legs positioned perpendicular to the load line. Tension and pre-load rigging is used to hold the A-frame in position.

This method is ideal for holding span lines off an edge.

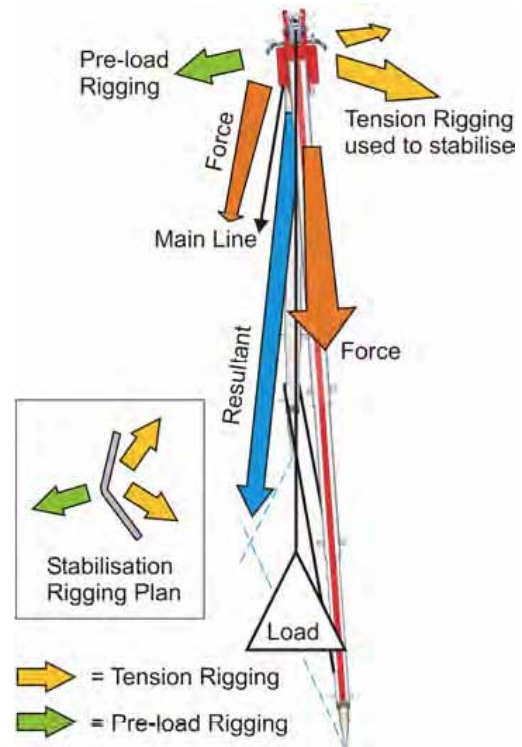


Method 2 Sideways A-frame (SA-frame)

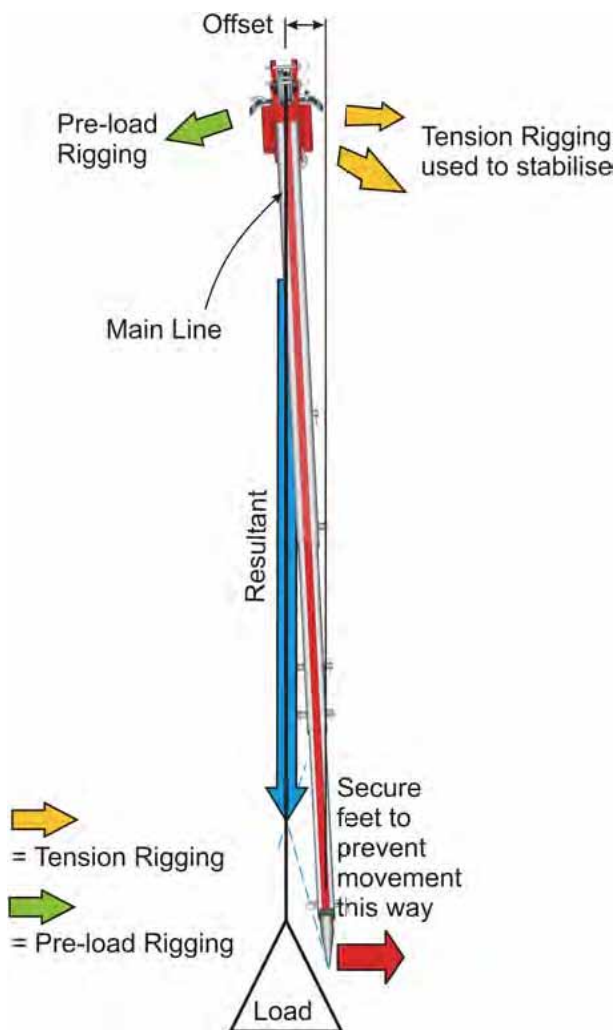
Two legs positioned close to parallel with the load line. The leg lengths and positions are set so that the resultant direction is focused between the two legs but not in direct alignment with the legs.

The SA-frame is tilted to ensure that the resultant direction remains focused at a point that is offset from the alignment of the legs. The dotted lines on the ground surface represent the point where the resultant direction is focused. If the tilt is offset to the right then the tension rigging will need to be on the left. If the tilt is offset to the left then the tension rigging will need to be on the right.

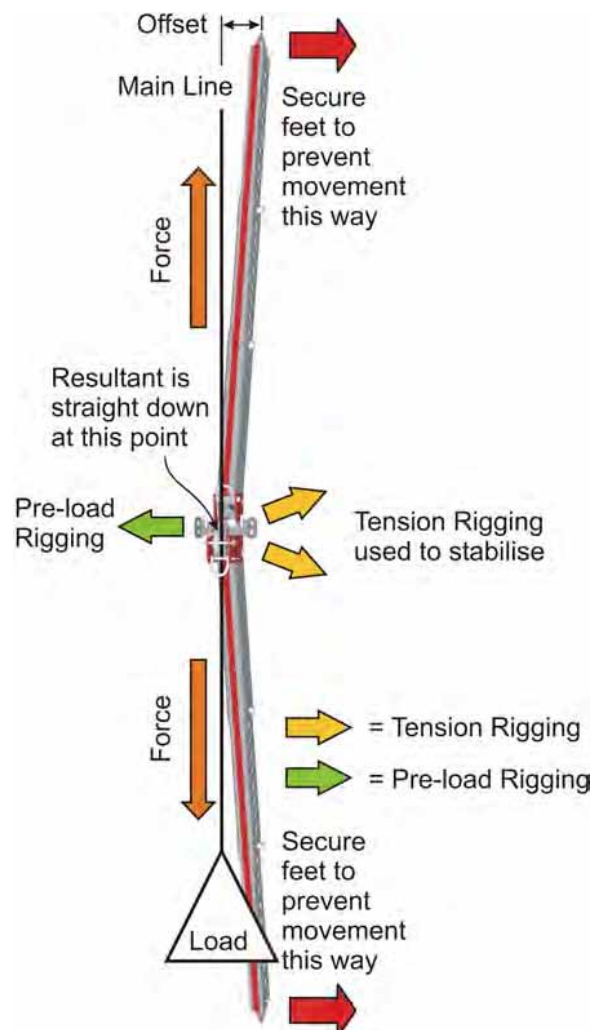
The feet will need to be securely located or lashed into position to resist lateral movement. All rigging should be adjustable so that tensions can be modified as required.



SA Frame: front elevation view



SA Frame: plan view



When rigging an SA-frame, the resultant forces are being applied downwards and balanced mostly by the A-frame legs (front elevation). The SA-frame should be laid over, tilted or offset slightly for the following two reasons:

1. To provide clearance so that the main line does not contact the Arachnipod components, and
2. To ensure that the rigging is clearly identified as being "tension rigging" and "preload rigging"

The tension rigging keeps the A-frame in position and balances out resultant forces created by the lay or offset positioning of the SA-frame whereas the preload rigging is used to preload the SA-frame and hold it firmly against the ground.

The load upon the tension rigging increases as the offset is increased. Sufficient offset is required to ensure that the tension rigging remains in tension with consideration to any changes in load force direction during the operation. Avoid excessive offset because this places unnecessary force upon the tension rigging.

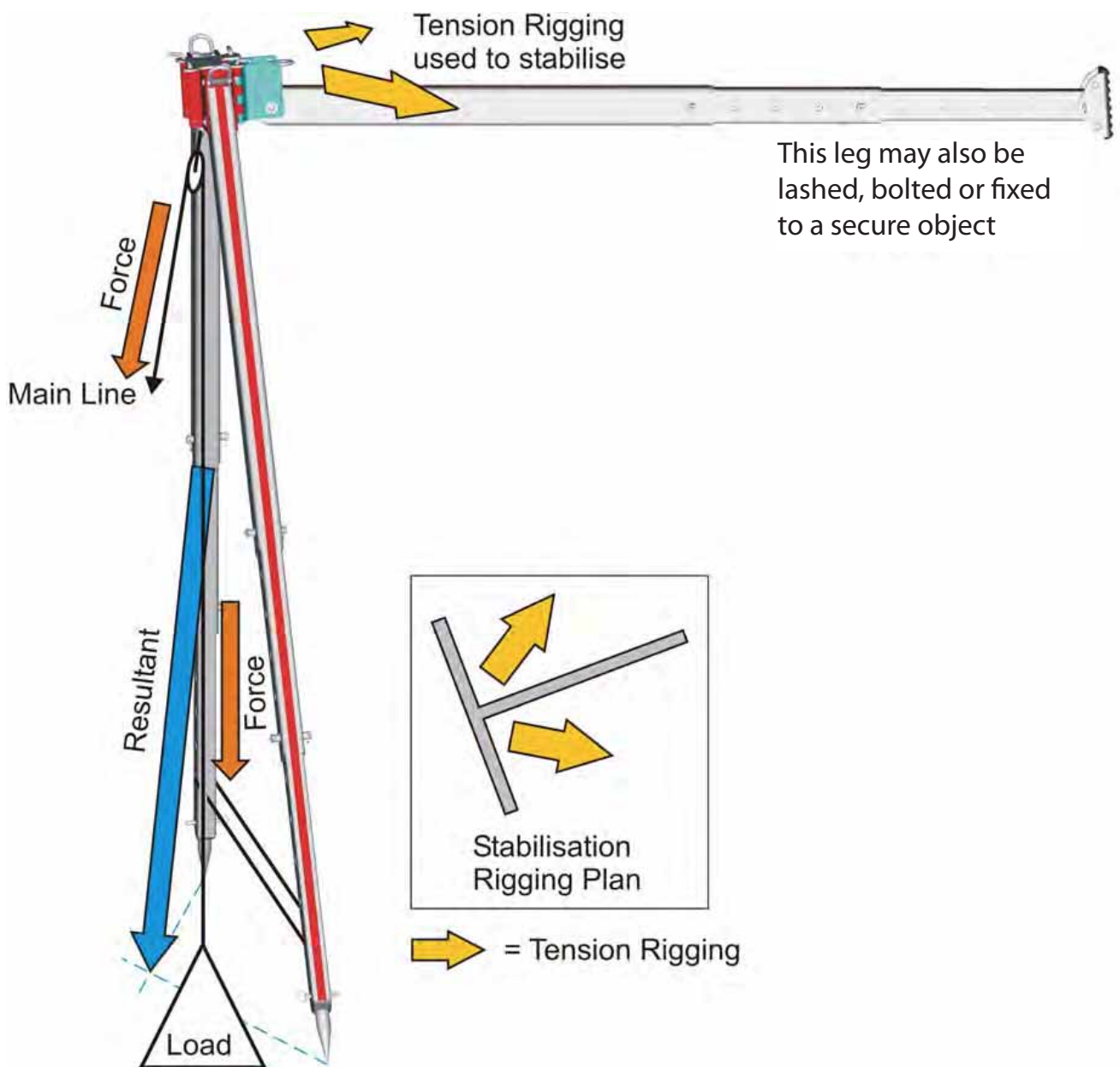
Method 3 A-frame with a lazy leg

Using two legs positioned parallel to the load line, held in place with a third leg (lazy leg) and rigging.

Although this method is technically a lazy leg tripod it is used in such a way that the lazy leg is only subjected to the tension that is applied by the tension rigging. If the lazy leg was lashed into position and tension rigging was omitted then the lazy leg would be subjected to some tension.

The tension rigging is used to apply some pre-loaded force onto the lazy leg.

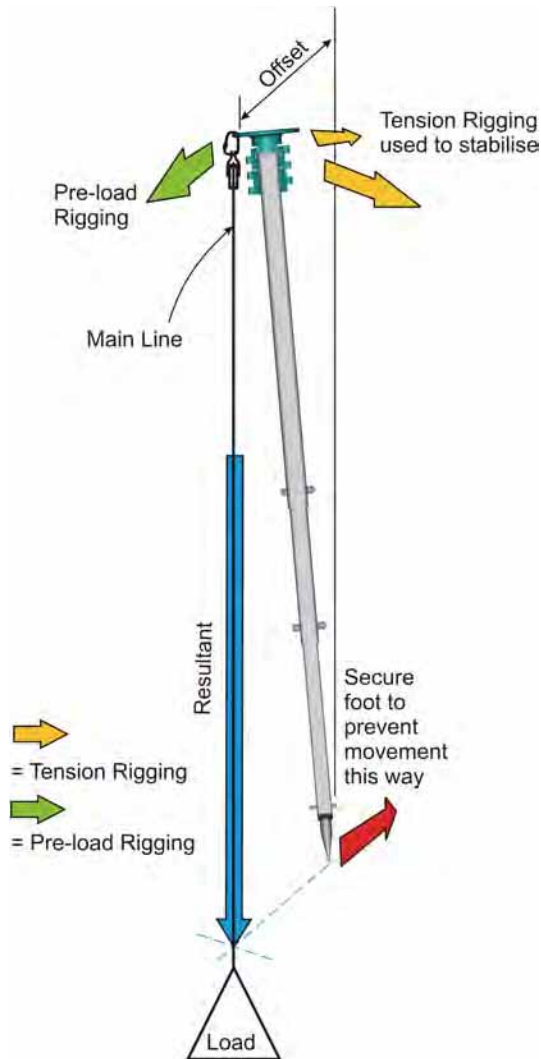
The tension rigging and / or the lazy leg is used to support the SA-frame and the legs of the SA-frame are in compression. This method is ideal when there are no anchors available for pre-loading on the low side of the A-frame.



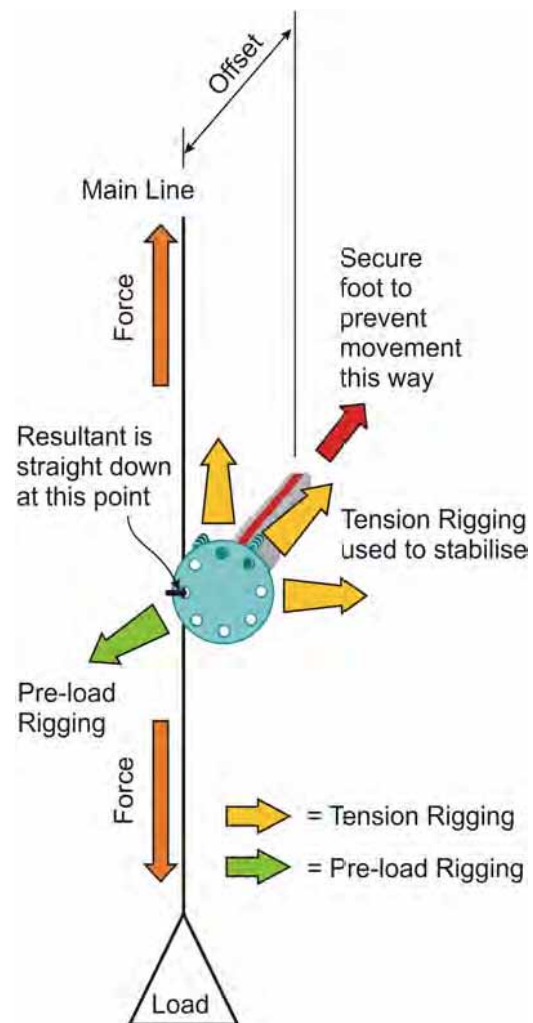
Gin Pole Stabilisation

A gin pole (monopole / monopod) makes use of a single leg to form the compression member. Gin poles always require rigging to provide at least two tension members, additional rigging can be used to provide three or more tensioned members and one or more pre-load members to hold the gin pole into position.

Gin Pole: front elevation view



Gin Pole: plan view



A gin pole is positioned and rigged so that the resultant forces are being applied close to the long axis of the single leg with a slight offset for two reasons:

1. To provide clearance so that the main line does not contact the Arachnipod leg, and
2. To ensure that the tension and pre-load rigging is clearly identified

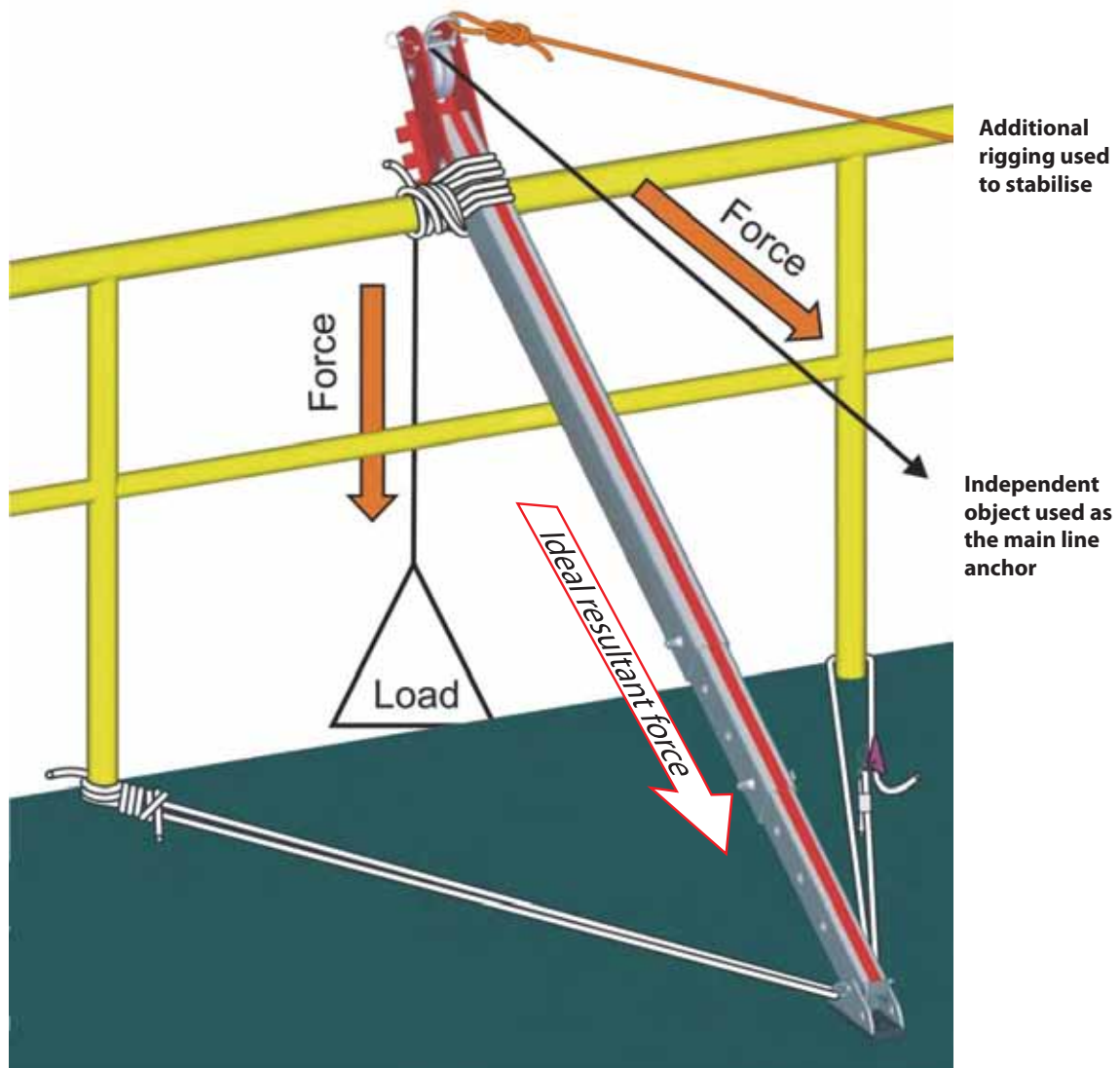
The tension rigging keeps the gin pole in position and balances out any resultant forces created by the slight offset and the pre-load rigging keeps the gin pole in position.

Using a single leg to manage a handrail

A single leg can be used to form a compression member that will help support a handrail. If the resultant direction is focused at a point that is just forward of the foot then most of the force will be transferred to the ground by the leg.

WARNING

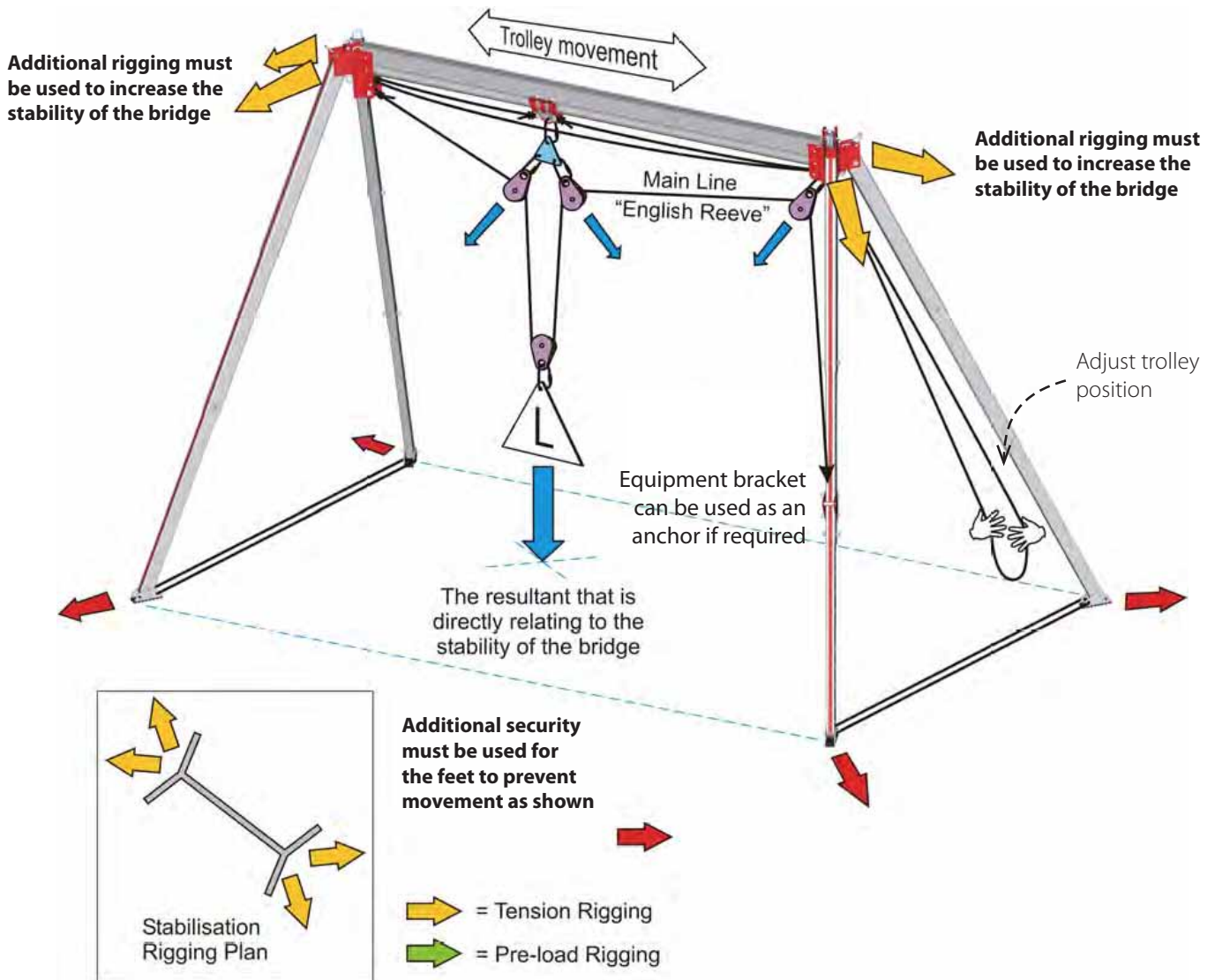
This technique is recommended for advanced users only; incorrect use of this system could be dangerous. An assessment of the handrail is required to ensure that it is suitable for this type of rigging. The angle of the leg and the resultant direction must be considered when assessing the handrail



Leg securing ropes or round lashing can be used to provide tension rigging that keeps the single leg in place. Square lashing can be used to secure the leg to the hand rail.

Bridge Stabilisation

A bridge makes use of four legs that are all in compression and a bridge beam that spans between two sets of two legs.



If a bridge is rigged in such a way that resultant force and direction remain within the rectangular base then the bridge will remain stable. The strength of the bridge beam and the four legs balances the resultant force. If the load shifts closer to any given leg then the load being applied to that leg is increased but the bridge will remain stable.

Additional rigging must be used to protect against any unplanned shifts in resultant direction. Instability will occur if the resultant direction moves outside of the rectangular base. Always consider the stability of the feet regardless of the configuration being used.

CAUTION

Every change of line direction will create a resultant direction. In this example (above) the resultant below the load is directly relating to the stability of the bridge. A Bridge Ratchet Strap Stabilisation Kit is available as an optional extra (refer later in this manual)

ACCESSORIES

Foot Options for your Arachnipod

Standard Foot

A polyurethane tread molded around an aluminium foot. The standard foot is ideal for flat surface applications



Spike Foot

A pointed aluminium spike with a replaceable stainless steel tip. The spike foot is ideal for point loading and ground penetration applications.



Soft Ground Shoe

A hard polyurethane disc that is used in conjunction with the spike foot to limit ground penetration in soft ground applications.



Hold Down Stakes

A steel picket with an impact plate and a locating pin. The steel picket is driven into the ground after aligning the locating pin with a hole in a standard foot. This secures the foot to the ground.



Tru-bolts

Tru-bolts are supplied in the accessory kit. Tru-bolts can be used in place of hold down stakes to secure the foot to concrete and other hard rock surfaces.

Additional Accessories for your Arachnipod

(All sold separately)

APOD-W20

Winch with 20m cable



Winch with bracket to mount to middle section of any supporting leg. WLL 220 kg / 485 lb

APOD-FA

Fall Arrest Block with Retrieval Winch



Fall arrest block with bracket to mount to middle section of any supporting leg WLL 136 kg/ 300 lb

APOD-LLA

Lazy Leg Adaptor



Converts a Lazy Leg into a Standard Leg

APOD-EKLL

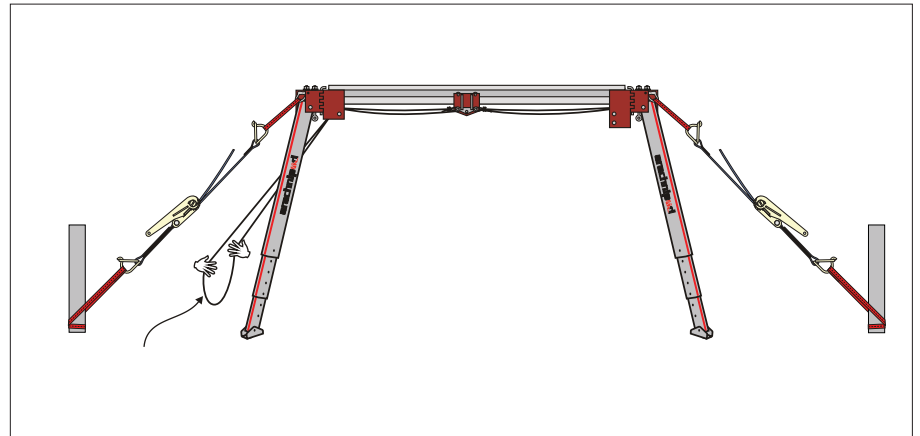
Extension kit for Lazy Leg



Extends the length of Lazy Leg by 1.7 m / 67"

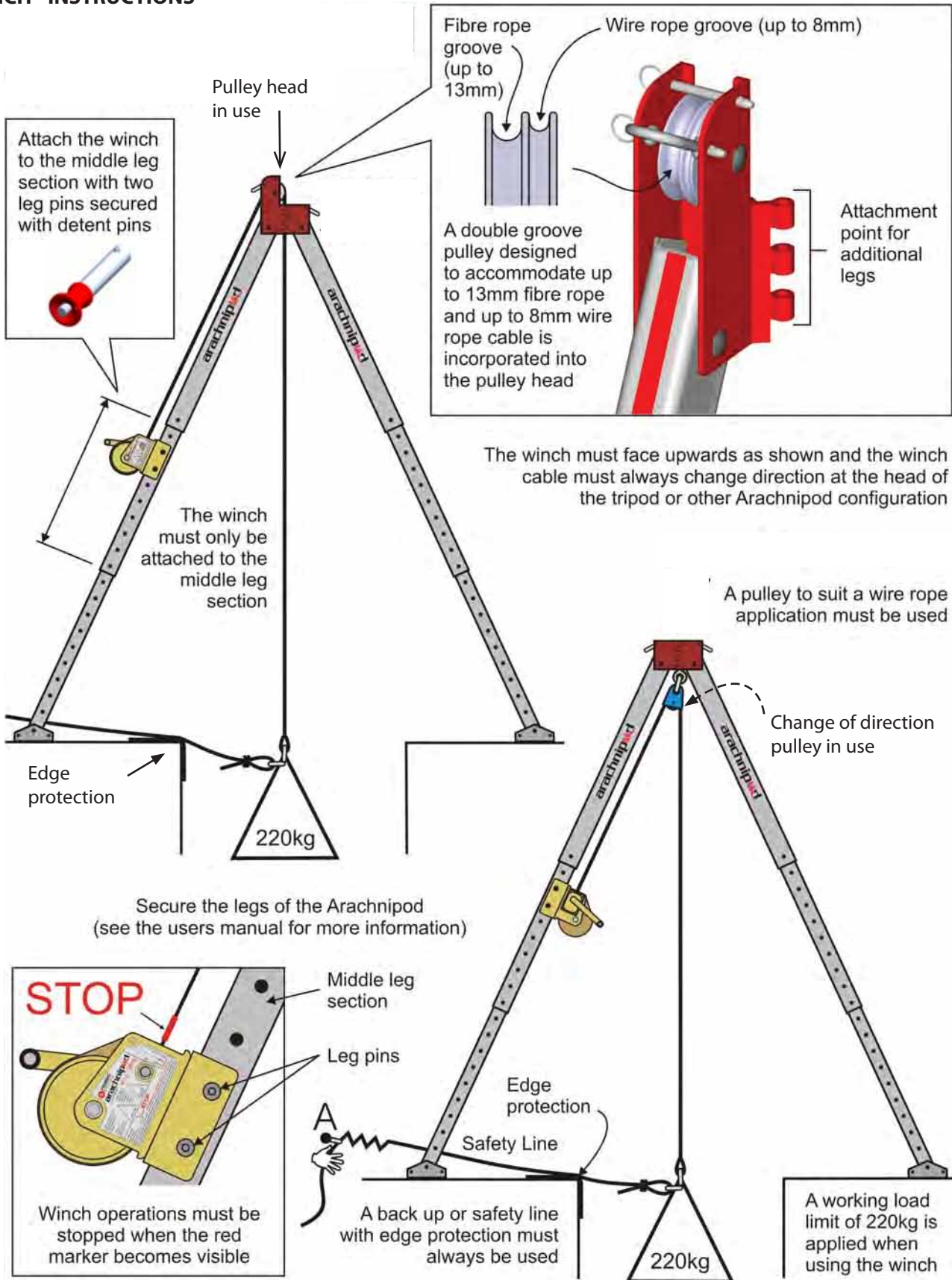
APOD-BRS

Bridge Ratchet Strap Kit



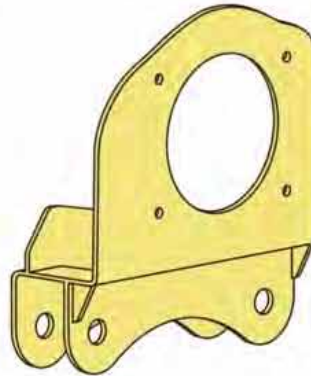
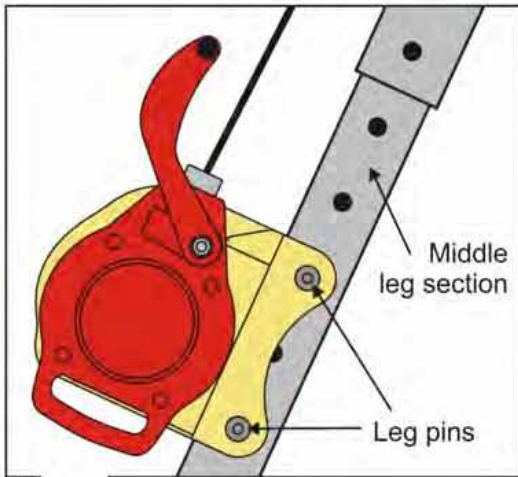
Stabilises the Arachnipod system

WINCH - INSTRUCTIONS



ISC UB171 FALL ARREST ADAPTOR BRACKET - INSTRUCTIONS

This bracket is CE certified to CEN/TS 16415:2013 and EN795:12

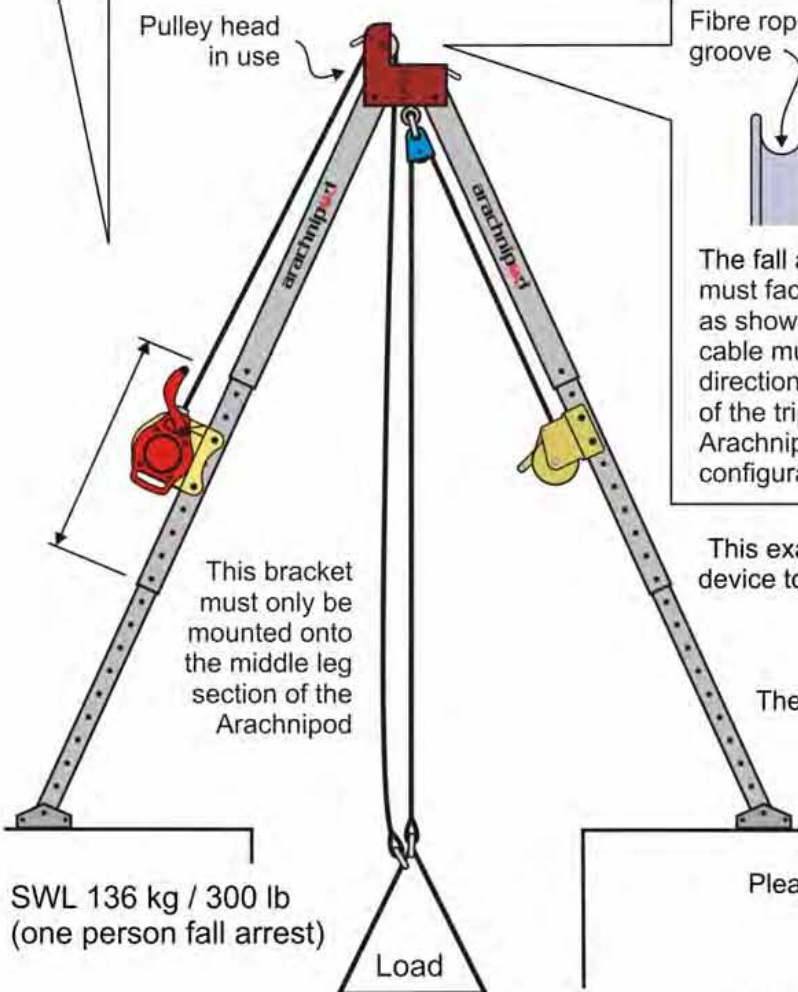


This adaptor bracket is used with the ISC UB171 Type 3 Fall Arrest Block with retrieval capability.

The fall arrest block must be attached to this bracket as per UB 171 manufacturer instructions.

Users to be trained by a competent person or training organisation in the use of this product.

Attach the bracket to the middle leg section with two leg pins secured with lynch pins



Fibre rope groove

Wire rope groove

The fall arrest block must face upwards as shown and the cable must change direction at the head of the tripod or other Arachnipod configuration

Attachment point for additional legs

This example shows a winch being used as the primary device to raise and lower a load. The ISC UB171 Type 3 Fall Arrest Block is being used as a backup or secondary device with a retrieval capability

The Arachnipod would normally be used in a tripod configuration for this type of work

The third leg was omitted from this example for the purpose of clarity

Please refer to the Arachnipod manual for additional configurations and rigging examples

Always secure the legs of the Arachnipod and stabilise depending upon the configuration being used
Refer to the Arachnipod manual for more information

SWL 136 kg / 300 lb
(one person fall arrest)

Load

LAZY LEG EXTENSION KIT - INSTRUCTIONS

A lazy leg is used to provide additional bracing support to an “A” frame, it can act as both a tension or compression member. It does **NOT** provide the structural strength of the configuration.

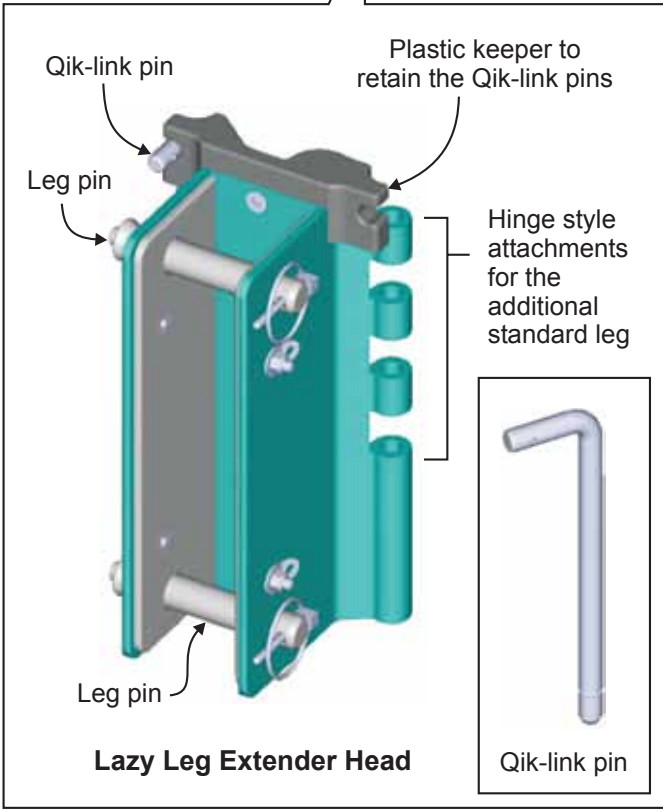
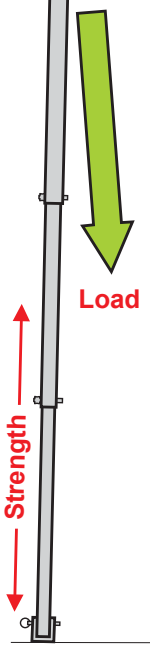
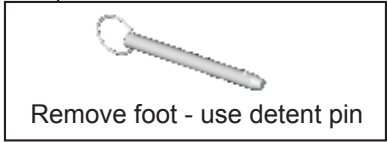
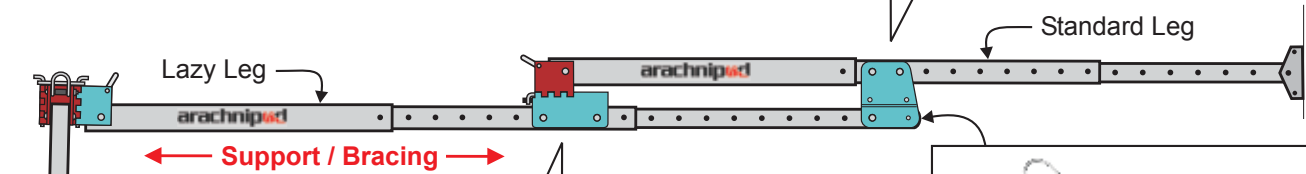
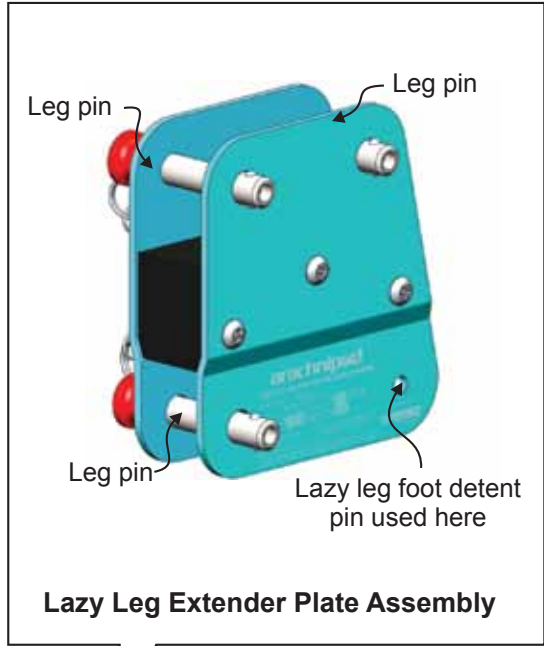
The “Lazy Leg Extension Kit” includes two components that are used to attach an additional standard leg to the lazy leg to provide greater reach.

WARNING

Both the Lazy Leg Extender Head and the Lazy Leg Extender Plate Assembly must be used together.

The Lazy Leg Extension Kit provides bracing support only and must **NOT** be used to extend any structural components.

All the Qik-link pins, leg pins and the detent pin must be used to ensure that the lazy leg and the additional standard leg are properly supported.



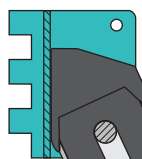
Assembly Guide

1. Attach the “Lazy Leg Extender Head” to the lazy leg
Secure with 2x leg pins
 2. Remove the lazy leg foot (retain the detent pin)
 3. Attach the “Lazy Leg Plate Assembly” to the lazy Leg
Secure with:
1x leg pin and the lazy leg detent pin
 4. Attach the extra “Standard Leg”
Secure with:
2x Qik-link pins and
2x Leg pins
- Check that the Qik-link pins are clipped into the moulded plastic keeper to ensure pin security

LAZY LEG ADAPTOR PLUG -- INSTRUCTIONS

A Lazy Leg Adaptor Plug is used to convert a lazy leg into a standard leg. It is supplied with a detent pin that is used to secure the Lazy Leg Adaptor Plug into position.

Once fitted to the lazy leg, the Lazy Leg Adaptor Plug provides a stop so the leg can only rotate 25 degrees.



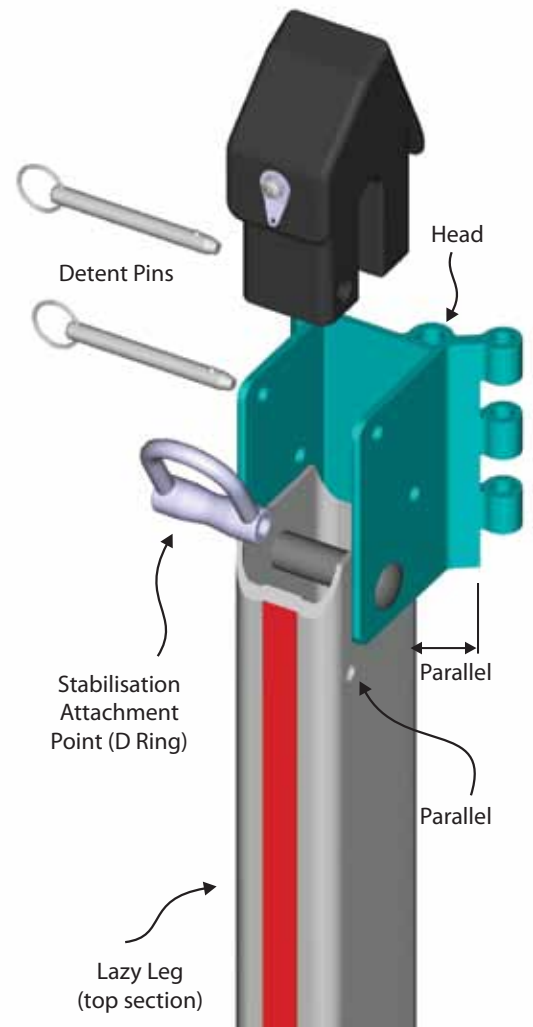
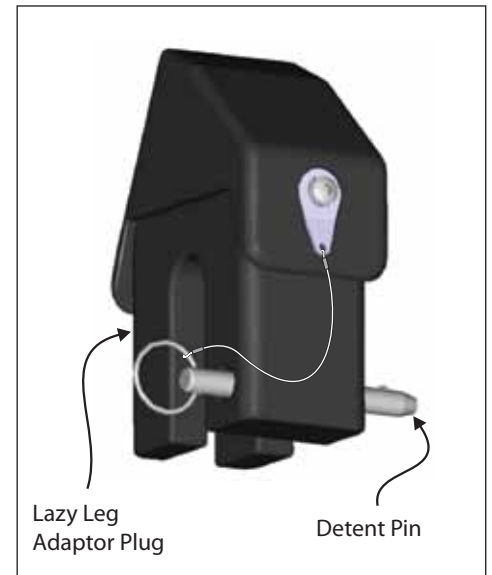
Assembly Guide

NOTE: It is easier to fit the Lazy Leg Adaptor Plug before the lazy leg is attached to any other legs.

1. Remove the detent pin and the stabilisation attachment point (D ring) at the head of the leg
2. Rotate the leg so that it is positioned parallel to the head
3. Remove the detent pin from the Lazy Leg Adaptor and insert the Lazy Leg Adaptor Plug in the top of the leg
4. Insert the detent pin through the accessory attachment hole to secure the Lazy Leg Adaptor Plug
5. Refit the stabilisation attachment point (D Ring)
6. Add the leg to desired configuration eg Tripod

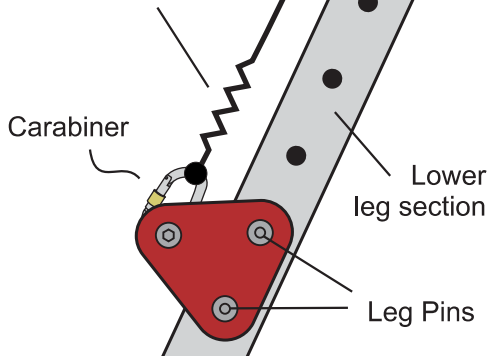
WARNING:

Legs must be prevented from splaying apart when loaded. Damage to the Arachnipod may result if the legs are not properly secured. Refer to Step 6: Securing the Legs in Arachnipod Assembly section.



EQUIPMENT BRACKET WITH 2:1 RIGGING - INSTRUCTIONS

This zig zag line is a schematic representation of friction created with a friction device or a rope grab (mechanical or non-mechanical)



Please Note: The Equipment Bracket is normally attached to the middle leg section and has a 220kg SWL

It is permissible to use the Equipment Bracket attached to the lower leg section only when it is used with mechanical advantage rigging as shown in this instruction sheet. This type of rigging also shares the load between the Equipment Bracket and the eyebolt so that the SWL of the Equipment Bracket is not exceeded. The SWL's listed are derived from manufacturer testing

Users to be trained by a competent person or training organisation in the use of this product



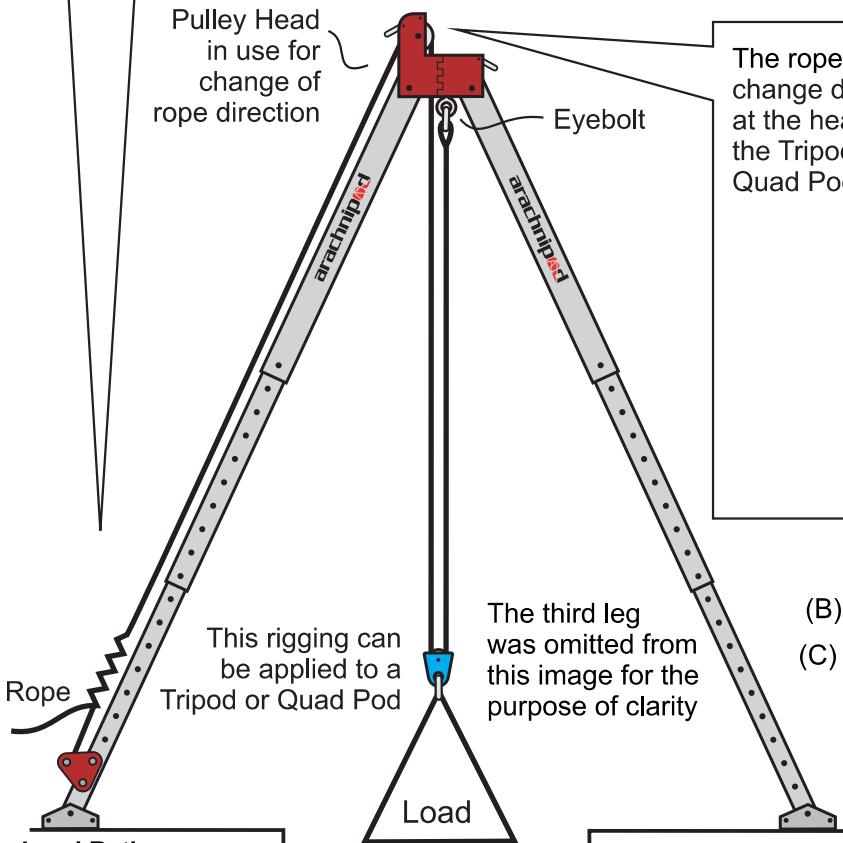
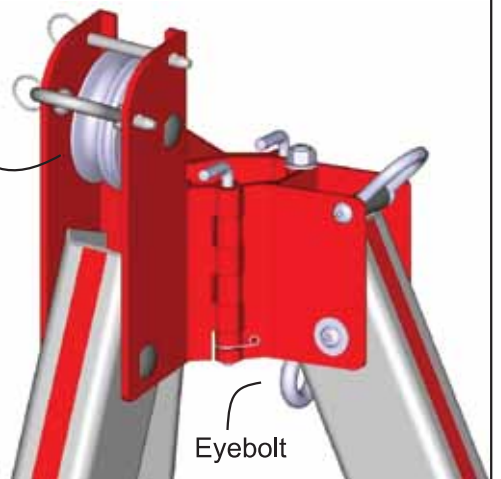
Attach the Equipment Bracket to the leg section with two Leg Pins



Pulley Head in use for change of rope direction

Eyebolt

The rope must change direction at the head of the Tripod or Quad Pod



- Method: (A) The rope is attached to the eyebolt
 (B) The rope is reeved through a pulley at the load
 (C) Reeve the rope through the Pulley Head on leg
 (D) The rope is reeved through a friction device (ascender, descender or a rope grab) which is attached to the Equipment Bracket

The Arachnipod would normally be used in a tripod configuration for this type of work

Always secure the legs of the Arachnipod and stabilise depending upon the configuration being used

Refer to the Arachnipod manual for more information

Load Ratings

Leg Setting	SWL	Ultimate Strength
A1	150kg / 330lb	14.7kN
B2	220kg / 485lb	21.6kN
C3	300kg / 661lb	29.4kN

BRIDGE RATCHET STRAP KIT (APOD BRS) - INSTRUCTIONS

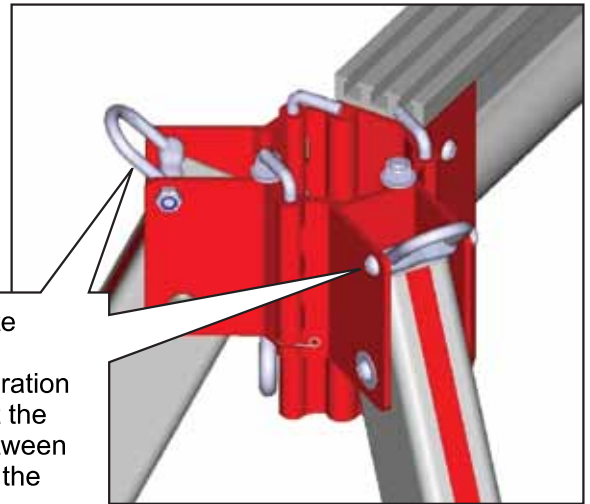
It is very important to ensure that the Arachnipod Bridge has been properly stabilised and the load is focused within the rectangular footprint created by the four legs.

Please refer to the Arachnipod manual for more information relating to the correct use and rigging of the Arachnipod Bridge configuration.

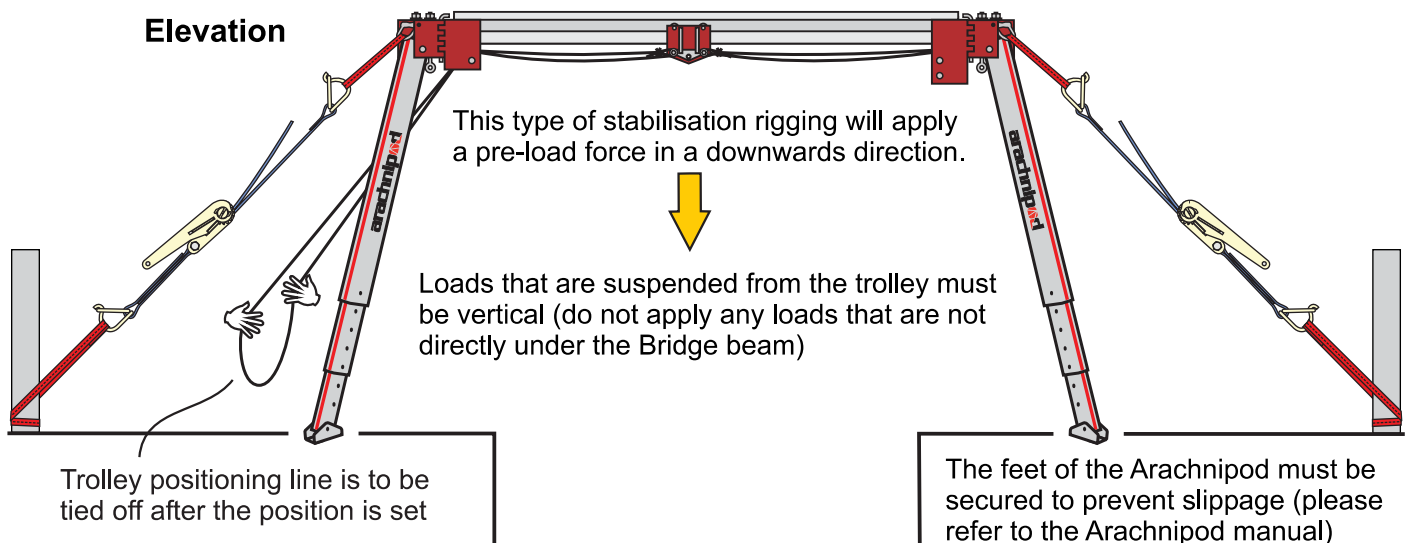
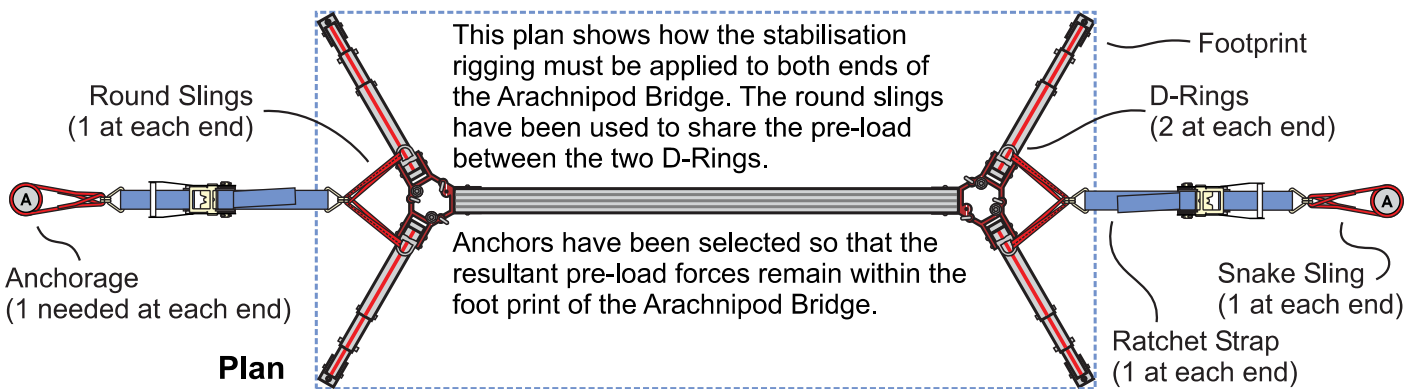
The Arachnipod Bridge Ratchet Strap Kit includes the following equipment to aid in the stabilisation process:

- 2 x 15m Ratchet Straps
- 2 x 1200mm Round Slings
- 2 x 2500mm Snake Slings
- 2 x 2500mm Round Slings
- 1 x Carry Bag

The rigging must incorporate both leg D-Rings using the Round Slings in the configuration shown below to ensure that the pre-load force is shared between the two legs at each end of the Arachnipod Bridge



Rigging Diagrams

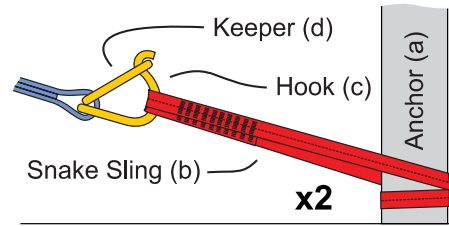


Users to be trained by a competent person or training organisation in the use of this product

Use and Operation

Step One. Establishing the anchors

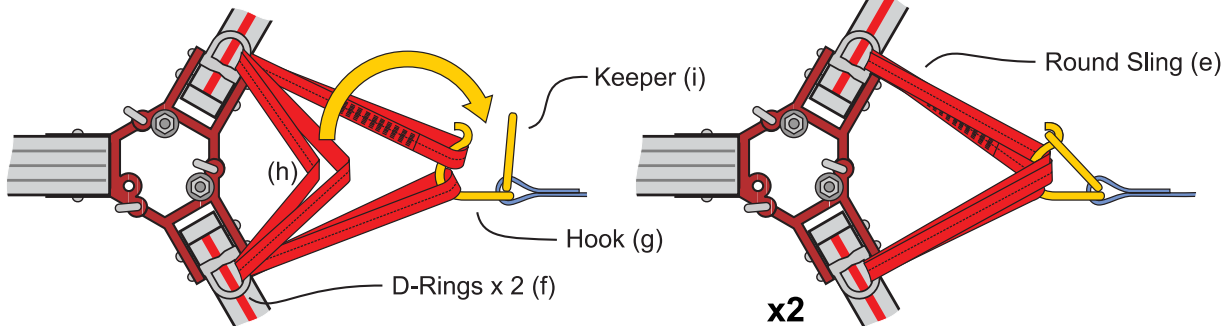
1. Use the Snake Sling (b) and find a strong anchor point (a)
2. Rig the Snake Sling to suit the anchorage and connect both sewn eyes to the hook (c) on the ratchet strap
3. Secure the hook (c) using the triangular shaped keeper (d)



Repeat step one at the other end of the Arachnipod Bridge

Step Two. Rigging at each end of the Arachnipod Bridge

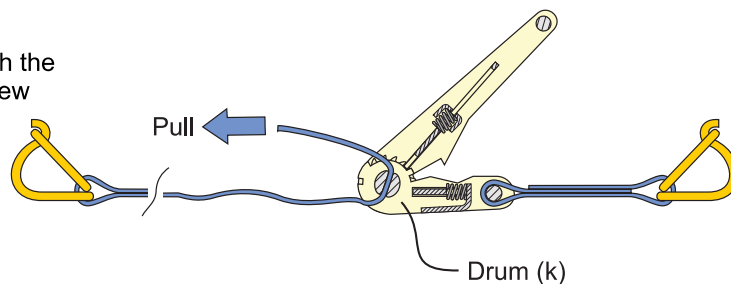
1. Feed both ends of the Round Sling (e) through the D-Rings (f) and connect the ends to the hook (g)
2. Connect the section of the Round Sling (h) that is between the two D-Rings, to the hook (g)
3. Secure the hook (g) using the triangular shaped keeper (i)



Step Three. Threading the Ratchet Strap

1. Thread the Ratchet Strap webbing through the Drum (k) as shown in the cross sectioned view
2. Pull the webbing to remove most of the slack

Don't remove all slack because the drum needs approximately 1 turn of webbing to create sufficient holding friction

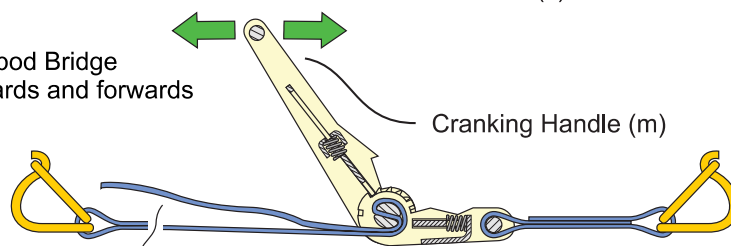


Step Four. Applying pre-load tension

1. Apply tension to both ends of the Arachnipod Bridge by working the Cranking Handle (m) backwards and forwards until the rigging is firm

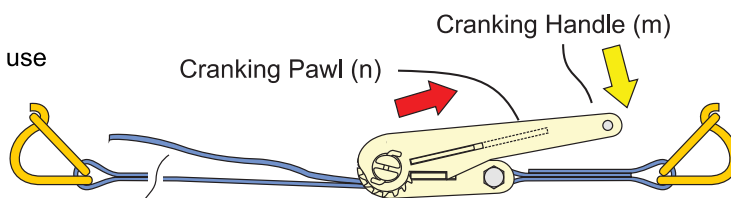
NOTE

Do not use excessive force, the Ratchet Strap is being used to apply pre-loading for stabilisation purposes only



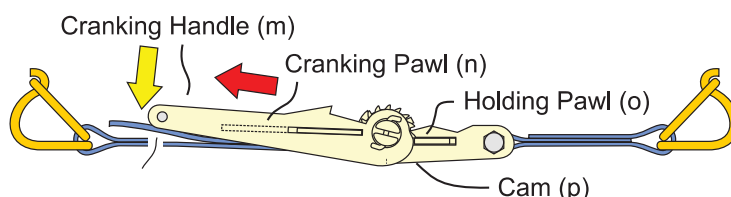
Step Five. Locking the operating handle.

1. Whilst grasping the Cranking Handle (m), use your fingers to slide the Cranking Pawl (n) away from the Drum
2. Move the Cranking Handle (m) to close the Ratchet mechanism
3. Release the Cranking Pawl



Releasing the pre-load tension.

1. Whilst grasping the Cranking Handle (m) use your fingers to slide the Cranking Pawl (n) away from the Drum
2. Move the Cranking Handle (m) to fully open the Ratchet mechanism



This action causes a cam (p) to release the Holding Pawl (o)

Arachnipod Inspection

ARACHNIPOD DISASSEMBLY

The disassembly and rigging process for the Arachnipod depends upon a number of factors including:

- The type of Arachnipod kit
- The configuration that is used.

It is recommended that two or more people work together to disassemble the Arachnipod components as follows:

Step 1: Preparation

- Establish a working area where the Arachnipod components can be laid out
- A working area is a location that is safe, away from fall, slip and other hazards that would impede the inspection process
- A clean tarp or work area is beneficial for the inspection process

Step 2: legs

- Remove the Arachnipod from the storage bag (if supplied)
- Lay the unit down on the work/ inspection area
- Remove the Qik-Link pins from each of the heads (Fig 3)
- Repeat this process for any other legs to ensure all the legs are independent to each other



Fig 3

LEG INSPECTION

Extend and Inspection of Legs and Pins

1. Remove both leg pins from the legs and extend the legs to their maximum extension. During the process of extending the legs, ensure the legs move smoothly without any snagging.
2. When legs are at maximum extension, ensure the legs do not come apart and are stopped by the internal leg stopper.
3. Inspect the legs for damage, deep gouging, deformation and straightness. If there are any signs of bending, deformation or deep gouging the leg must be replaced.
4. Check each leg pin hole on the leg (Fig 4), looking for lower deep indentations on the pin area. If deep (more than 0.5mm) indents are evident, this may be an indication that the leg has been subjected to overloading and should be removed from service.

Leg Pin Assembly Inspection

1. Inspect the leg pin holes (Fig 4) and ensure there is no deformation, deep gouging or obvious damage.
2. Inspect the leg pin (Fig 5) ensuring smooth operation. When button is depressed, small ball stoppers on other end of pin should release.
3. Inspect the cable that attaches the leg pin to the leg. If the cable is damaged, replace the cable accordingly.



CABLE, 150mm with rings #91-0004
ARACHNIPOD BALL LOCK LEG PIN #68-0054

Labels

Red labels are adhered to the outside face of each leg. The middle and lower leg have alpha and numeric markings at each hole position to allow all legs to be easily set to the same height (eg B-3). Check all labels are present and legible. Replace any damaged labels.

IMPORTANT
<p>If the stoppers are missing or do not work, the leg sections can separate completely from one another. Any legs with missing or damaged stoppers must be returned to Ferno or an authorised repair agent for repair.</p>

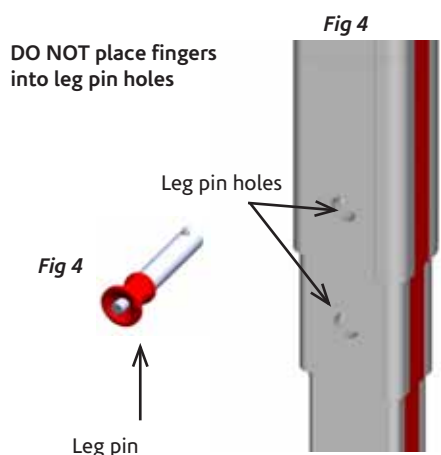


Fig 4

Leg pin



ARACHNIPOD RED LEG LABELS
- set of 3 #51-0058

ARACHNIPOD LABEL - Reflective Silver #51-0050

INSPECTING THE HEADS OF EACH LEG

Standard Leg (Fig 5)

1. Remove the Qik Link pin from the leg and inspect the pin for any damage or deformation. Inspect the cable on the Qik Link pin that holds the pin on to the head for damage. In the event of damage or deformation, replace cable with:
CABLE, 250mm with rings #91-0005
ARACHNIPOD QIK LINK Head Pin #22-1002
2. Inspect the attachment points (cutouts) and ensure they are not damaged and that the Qik Link pin inserts easily into the cutouts. Ensure the Qik Link pin locks into the spring keeper and that the Qik Link pin is held firmly into place once inserted into the head attachment point.
3. Inspect the rated load attachment point (eyebolt) and ensure it can swivel 360° and that the top holding nut weld is intact and has not been tampered with. Ensure the eye is not deformed and there is no evidence that the attachment point has been overloaded. In the event of overloading or deformation the leg must be permanently removed from service.
4. Inspect Stabilisation Attachment Point (D-shackle) for deformation or damage. In the event of deformation or damage, replace the D-shackle.
D-SHACKLE with hardware #91-0006
5. Ensure head moves and swivels easily on the leg and there is no binding up of the movement.
6. Ensure the Head/ Leg bolt is tight and secure. If the head/ leg connecting bolt is loose, remove the bolt and apply Loctite® 7262 thread locking compound to the threads and retighten the bolt. **Be careful not to cross-thread the bolts as the product will become unsafe, dramatically reduce the WLL and be dangerous to use.** If cross threaded, the unit must be sent back to Ferno Australia.
7. Inspect the entire head for damage and indentations. Normal wear and tear is acceptable. However if obvious damage is noticeable, return to Ferno or an authorised agent for repair or replace the entire leg unit.
8. Inspect the load rating labels on either the head or leg and ensure all the information is legible.

Pulley Leg (Fig 6)

1. Follow all the inspection procedures as laid down for the Standard Leg.
2. Inspect the pulley and ensure that the pulley rotates freely and there is no binding up or resistance on the bearings of the pulley. Inspect the grooves of the pulley and ensure there is no damage or sharp edges within the sheave.
3. Ensure the two detent pins are fully operational and insert easily into the holes of the head. If they show signs of rust, lubricate with a Teflon based spray lubricant. The pulley has been designed to accommodate up to 13mm fibre rope as well as up to 8mm steel/stainless steel wire rope cable.
4. The stabilisation attachment point (D-shackle) is removable. It is attached with the two detent pins via a cable. Ensure the cable is intact and free from damage. If any parts are damaged, replace with the following parts:

D-shackle on cable, with ring #90-0007
SS Detent Pin - 3/8" dia x 3" #68-0036

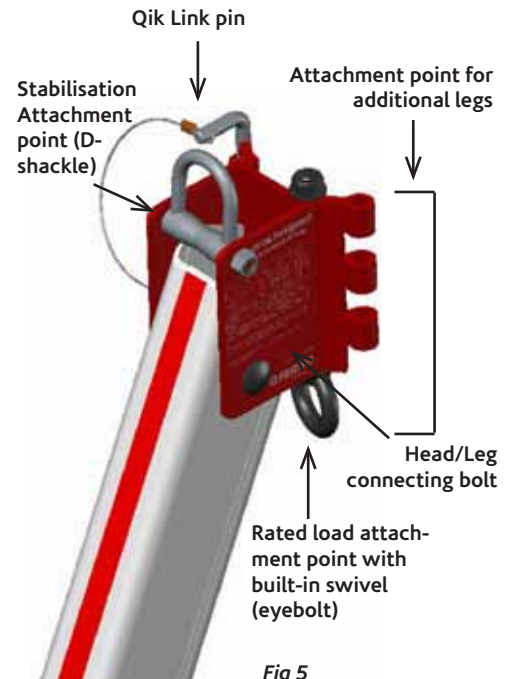


Fig 5

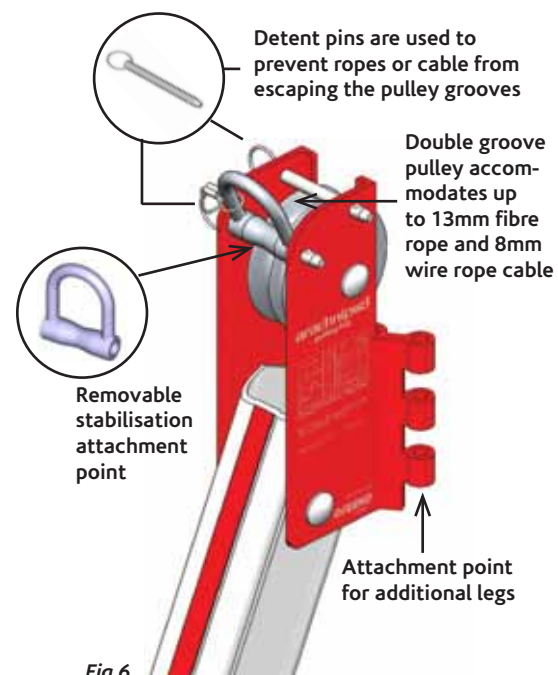

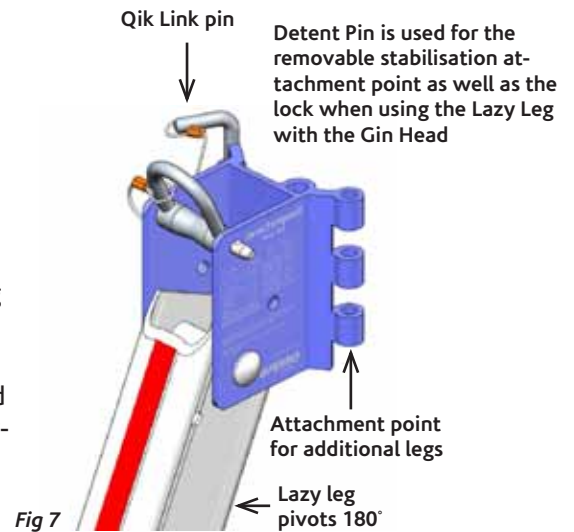


Fig 6

Lazy Leg (Fig 7)

1. Follow all the inspection procedures as laid down for the Standard Leg.
2. The Lazy Leg is coloured blue for easy identification. It has a pivot range of 180°. Remove the Detent Pin and Stabilisation Attachment Point (D-shackle) from the head. If a Lazy Leg Adaptor is present, remove it. Refer to Arachnipod Operators' Instructions regarding the Lazy Leg Adaptor application and use.
3. Ensure the Lazy Leg Head can pivot 180° and that there is no binding up or stiffness in the pivot action.
4. The stabilisation attachment point (D-shackle) is removable. It is attached with the Detent Pin via a cable. Ensure the cable is intact and free from damage. If any parts are damaged, replace with the following parts:

-  **D-SHACKLE on cable, with ring #90-0007**
- SS DETENT PIN 3/8" dia x 3" #68-0036**
- ARACHNIPOD QIK LINK Head Pin #22-1002**




FOOT INSPECTION

Standard Feet (Fig 8)

Standard feet are supplied with all legs.

1. Remove the Detent Pin from the leg and inspect the Detent Pin and cable attachment. Replace the cable if it is damaged with part:

-  **CABLE, 150mm with rings #91-0004**
- SS Detent Pin - 3/8" dia x 2.5" #68-0035**


2. Inspect the foot ensuring the polyurethane plastic tread is not damaged.
3. Inspect the foot and lashing holes for deformation, damage and sharp edges. If any of these are evident, replace the foot with part:

-  **ARACHNIPOD FOOT, with tread #07-1024-0**

Spike Foot (Fig 9)

A Spike Foot can be used for point loading and ground penetration applications. A stainless steel tip has been incorporated to extend the service life of the Spike Foot. The Spike Foot inserts in to the foot socket on the leg end and is held in place with a Detent Pin.

1. Inspect the Spike Foot for deformation, damage and sharp edges. If the Spike Foot's stainless steel tip is deformed and damaged, it can be replaced by unscrewing the tip and replacing it with a new tip. **SPIKE FOOT TIP #22-1004; SPIKE FOOT with tip #90-0120** Prior to inserting the new tip, place Loctite® 7262 thread-locking compound on to the thread and then tighten.

-  **FOOT TIP #22-1004; SPIKE FOOT with tip #90-0120** Prior to inserting the new tip, place Loctite® 7262 thread-locking compound on to the thread and then tighten.

2. Insert the Spike Foot into the foot socket on the leg, ensuring the Spike Foot slides smoothly into the socket. Align the Spike Foot Detent Pin hole and insert the Detent Pin through these holes. The insertion and locking process should be smooth and easy.

3. Remove the Detent Pin and Spike Foot from the leg and repeat this process for all the Spike feet.

Fig 8

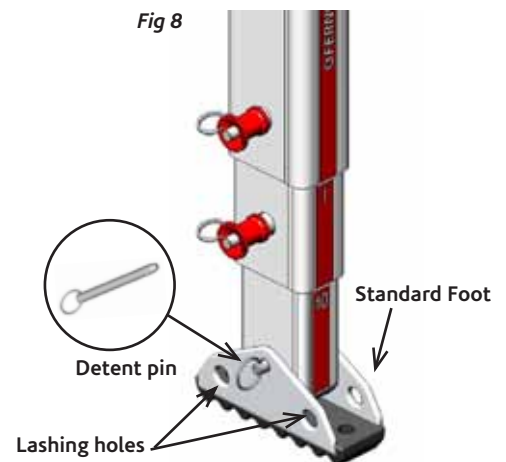
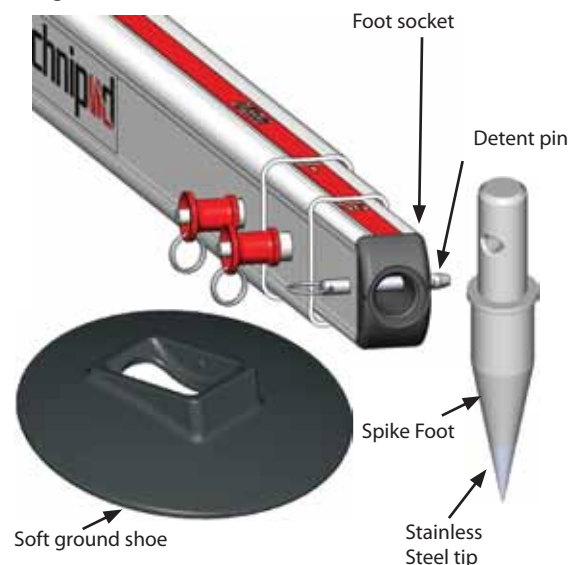


Fig 9



Soft Ground Shoe (Fig 10)

The Soft Ground shoe is used in conjunction with the Spike Foot and is fitted to the leg over the Spike Foot.

1. Inspect each Soft Ground shoe ensuring there is no deformation or cracking present.
2. Insert a Spike Foot into the leg prior to checking the operation of the Soft Ground Shoe.
3. Place the Soft Ground Shoe on to the curved part of the foot adaptor plug on the bottom of the leg, ensuring the Soft Ground Shoe moves freely and stays in place once inserted on to the leg.

Replacement/ additional Soft Ground shoes part number:
 **ARACHNIPOD SOFT GROUND DISC #34-0032**




Fig 10



HOLD DOWN STAKE INSPECTION (Fig 11)

A Hold Down Stake can be used to secure a Standard Foot to the ground. The Foot Locating Spike lines up with one of the holes in a Standard Foot.

1. Inspect the Hold Down Stake and ensure there is no deformation or damage. Ensure the welding on the component is intact and there is no cracking on the welded areas.
2. Ensure the Foot Locating Spike feeds easily through Standard Foot hole as illustrated in Fig 12.

Replacement/additional hold down stakes are available:
 **ARACHNIPOD SOFT GROUND STAKE #16-1046-0**

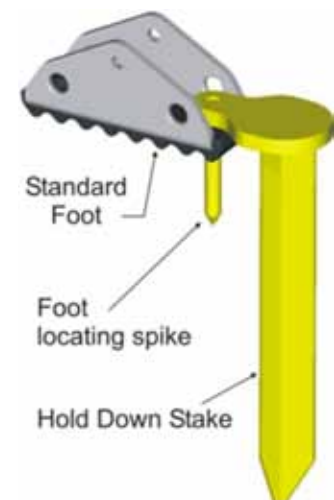


Fig 11

GIN HEAD INSPECTION (Fig 12)

The Gin Head is used with a Lazy Leg to form a Gin Pole.

1. Inspect the Gin Head for any damage, deformation and sharp edges.
2. Insert the Gin Head into the Lazy Leg ensuring there is no binding or resistance during insertion.
3. Place the Lazy Leg Detent Pin into the Lazy Leg and ensure the pin moves smoothly through the Detent Pin hole of the Gin Head and Lazy leg.
4. Ensure the label on the Gin Head is legible and that all information on the label is intact. If the information is obscured or illegible, replace the label or remove the unit from service.

Replacement label part: **GIN HEAD LABEL #51-0063**

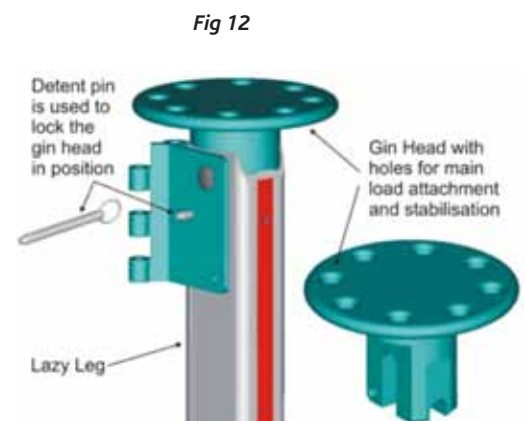



Fig 12

RIGGING PLATE INSPECTION (Fig 13)

A rigging plate is used when two legs are connected as an A-Frame.

1. Inspect Rigging Plate and ensure there is no deformation, damage or sharp edges.

Replacement/additional rigging plates are available:

 **ARACHNIPOD RIGGING PLATE #26-0007-0**

Qik Link pins used to lock the Rigging Plate into position

Holes for stabilisation rigging of A-Frame

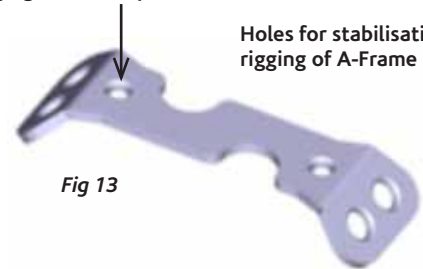


Fig 13

EQUIPMENT BRACKET (Fig 14)

The Equipment Bracket must only be used when attached to the mid section of the telescopic leg.

1. Remove lynch pins from leg pins to release and remove leg pins from Equipment Bracket.
2. Inspect cables that attach the leg and lynch pins and ensure cables are not damaged. If there is any damage, replace the cables.
3. Ensure the bolts on the attachment point are tight and secure. If either of the bolts are loose, remove the bolt and apply Loctite® 7262 thread locking compound to the threads and re-tighten the bolt. **Be careful not to cross-thread the bolts as the product will become unsafe, dramatically reduce the WLL and be dangerous to use.** If cross threaded, the unit must be sent back to Ferno Australia.
4. Ensure the label on the Equipment Bracket is readable and that no writing/information is obscured. If there is damage to the label, replace it.

 **EQUIPMENT BRACKET LABEL #51-0064**
CABLE, 150mm with rings #91-0004
ARACHNIPOD BALL LOCK Leg Pin #68-0054

Attachment Point

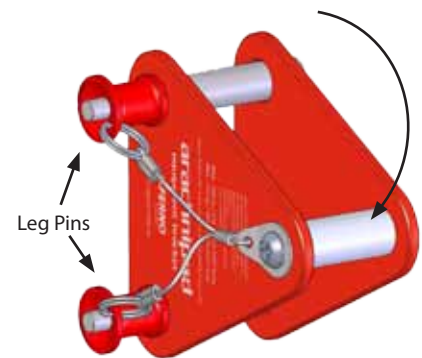


Fig 14

REVERSE HEAD (Fig 15)

1. Remove the Qik Link pin from the head and inspect the pin for any damage or deformation. Inspect the cable on the Qik Link pin that holds the pin on the head for damage. In the event of damage or deformation, replace cable with:

 **CABLE, 250mm with rings #91-0005**

2. Inspect the attachment points (cutouts) and ensure they are not damaged and that the Qik Link pin inserts easily into the cutouts. Ensure the Qik Link pin locks into the spring keeper and the pin is held firmly into place once inserted into the head attachment point.
3. Inspect the entire head and D-shackle for damage and indentations. Normal wear and tear is acceptable. If obvious damage is noticed, replace the entire unit.
4. Ensure the D-shackle centre bolt is tight and the actual D-shackle pivots freely on the bolt. If the bolt and nut are loose, retighten Nylock nut on the side of the Head.
5. Inspect the load rating label on the Head and ensure all the information is legible.

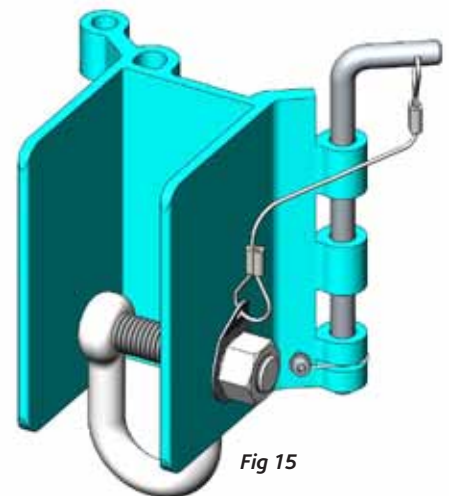


Fig 15

BRIDGE BEAM & TROLLEY INSPECTION *(Fig 16)*

Bridge Beams are available in lengths up to 6m.

Bridge Beam

1. Lay the Bridge Beam on a flat surface and ensure there is no bending or deformation of the beam. Ensure there are no sharp edges, deep indentations or cracks within the Bridge Beam.
2. Inspect each Head attachment point ensuring the Qik Link pins are aligned and they insert smoothly into the cutout sections. Ensure the Qik Link pins bed securely into Spring Keeper.
3. Ensure all the bolts that hold the head attachment points on to the beam are tight and fastened. If any bolts are loose, re-tighten them.
4. Inspect the Trolley rope. The rope should be tied to the eyebolts on the Bridge Trolley with Yosemite bowline knots. Check the knots are secure and ensure there is no damage, evidence of chemical contamination or abrasion of the rope. If any of these are present, the rope must be replaced. It is important to replace the rope with 8mm kernmantle rope as supplied by Ferno Australia.
5. Inspect the pulleys through which the trolley guide rope runs at each end of the Bridge. Ensure that pulleys move freely and do not bind up. If the bearings need replacing, return the unit to Ferno or an authorised Ferno repair agent.

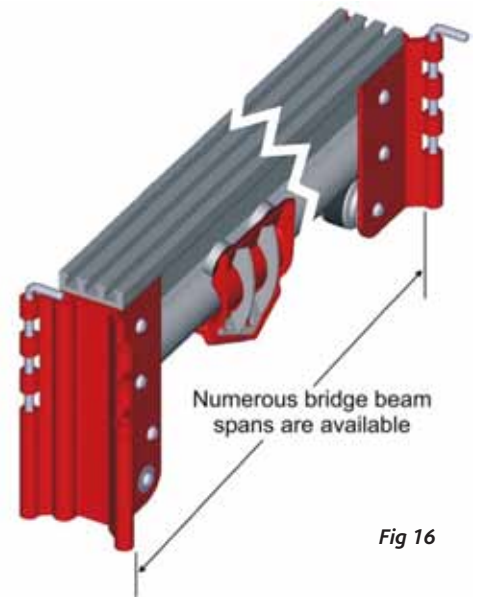


Fig 16

Bridge Beam Trolley

1. Inspect the Bridge Beam Trolley ensuring there is no deformation, damage or rust on the trolley.
2. Check all the bolts on the Bridge Beam Trolley are fastened and secure.
3. Ensure the Trolley or bearings on the Bridge Beam Trolley are not corroded and that the bearings rotate freely without any resistance. If the bearings need replacing, return the unit to Ferno or an authorised Ferno repair agent.
4. Check the trolley has the SWL/ WLL label present. If illegible or missing, replace the label with:

 **ARACHNIPOD BRIDGE TROLLEY 250kg WLL Label #51-0069**

ARACHNIPOD WINCH INSPECTION *(Fig 17)*

The Winch is supplied with a bracket to mount it to the mid-section of any Arachnipod supporting leg. It is rated to 220kg/ 485lb.

Thorough Inspection of Arachnipod Winch

1. Clean if required and visually inspect the winch and mount bracket for physical damage and chemical contamination.
2. Check for cracks, corrosion, deformation, abrasions and any other damage.



Fig 17

BRIDGE BEAM & TROLLEY INSPECTION cont'd

3. Check the label is in good condition and legible. Replace if necessary.

ARACHNIPOD WINCH LABEL #51-0066

NOTE: When replacing a label, the Winch serial number must be transferred to the new label and recorded in the equipment log.

Thorough Inspection of Winch Wire Rope Cable

1. Unwind the drum until the cable is completely unwound.
2. Visually inspect the entire length of the wire rope by passing the wire rope through gloved hands, flexing the cable every few inches to expose any broken strands of wires.
3. Inspect for any degradation or damage. Especially look for cuts, local surface abrasion, signs of chemical contamination, corrosion (rust), discolouration and glazing. Special attention should be paid to the wire rope around the swaged eye.
4. The cable has a red indicator to alert users when there is only 1m of cable left on the drum. Check this red heat shrink marker is still present on the cable. It should be approximately 1m from the drum.
5. Ensure wire rope end is securely fastened to the drum of winch. Check that the wire rope is threaded through the hole within the bolt and that the nut is securely fastened.
6. Check there are three (3) wraps of cable secured together with a swage, and that the swage is tight.
7. The cable should be replaced if there are six or more randomly broken wires in one lay, or three or more broken wires in one strand in one lay. If the cable needs replacing, return the complete winch to Ferno or a Ferno authorised repair agent.

Winch Notes

- LAY is a length of wire rope that it takes for one strand to complete one revolution or twist along the cable
- STRAND is a larger group of wires that make up a cable.
- The cable should be replaced if there are any broken wires within 25mm (1") of the metal swages at either end of the cable.
- The cable assembly should be replaced if the cable is severely kinked, cut, crushed, burnt, corroded or suffering any other type of damage.

Thorough Inspection Function Test

1. Extract 600mm to 1000mm of rope
2. Apply 50kg weight to the rope. The rope should lock off with no slippage.
3. Wind the winch making sure that the gears aren't slipping.

Lubrication on the Winch

The only lubrication to be used on the winch is an aerosol spray chain lube. This should only be applied to the gears.

ARACHNIPOD KIT RECORDS

Each Arachnipod Kit is assigned a Kit Number. This is one collective number recorded on Ferno Australia's database, which references all individual serial numbers contained within the Arachnipod kit.

A kit contains more than one item with a serial number. It can be just a tripod, a tripod plus accessories, a Bridge Kit, a full TEMS kit etc. The Kit Number can be found next to the serial number on ONE of the standard legs contained within the kit. **Please record this number in the space below along with all the individual serial numbers for your own reference.** *Additional copies of this form can be downloaded from Ferno's website: www.ferno.com.au*

KIT NUMBER:	<input style="width: 250px; height: 30px;" type="text"/>	DATE PURCHASED:	<input style="width: 150px; height: 30px;" type="text"/>
		DATE COMMISSIONED INTO SERVICE:	<input style="width: 150px; height: 30px;" type="text"/>

TICK TYPE OF KT PURCHASED BELOW:

Tripod	<input type="checkbox"/>	Bridge Kit	<input type="checkbox"/>	Lazy Leg Kit	<input type="checkbox"/>
Lazy Leg Extension Kit	<input type="checkbox"/>	Rescue	<input type="checkbox"/>	Rescue Plus	<input type="checkbox"/>
Advantage Basic	<input type="checkbox"/>	Advantage Plus	<input type="checkbox"/>	Total Edge Management System	<input type="checkbox"/>

Record serial numbers and commission dates in the table below.

ITEM		SERIAL NUMBER	DATE COMMISSIONED INTO SERVICE
Tripod	Leg 1	AP-	
	Leg 2	AP-	
	Leg 3	AP-	
Lazy Leg		AP-	
Additional Leg		AP-	
Bridge		AP-	
Reverse Head		AP-	
Fall Arrest Block		AP-	
Winch		AP-	
Lazy Leg Extender	Head Assy	AP-	
	Plate Assy	AP-	
		AP-	
		AP-	
		AP-	
		AP-	

REGULAR & ANNUAL INSPECTIONS

- The unit must be inspected before and after every use by the competent person/s using the equipment.
- Additionally, the Arachnipod must be inspected by a competent, instructed, accredited person at least once a year to ensure the unit is fully functional.
- Details of this annual inspection should be recorded using the Inspection Record Form below.
- Please make additional copies of this Inspection Record Form as required or download the Form from Ferno Australia's website: www.ferno.com.au

Record details of Annual Inspection in the table below. Download this Record Form from www.ferno.com.au

<input type="checkbox"/> REGULAR	<input type="checkbox"/> ANNUAL	INSPECTION RECORD	
MODEL #	KIT #	DOM	ORGANISATION
<input type="checkbox"/> Tripod	<input type="checkbox"/> Lazy Leg	<input type="checkbox"/> Spare Legs	<input type="checkbox"/> Bridge
<input type="checkbox"/> Reverse Head	<input type="checkbox"/> Fall Arrest Block	<input type="checkbox"/> Winch	<input type="checkbox"/> Accessory Kit
<input type="checkbox"/> Lazy leg Extender Kit			
<i>Detail any items requiring maintenance and action taken. Use additional Forms as required.</i>			
ITEM & SERIAL #	MAINTENANCE & ACTION TAKEN	PARTS REPLACED	
Inspected by: NAME (print clearly) SIGNATURE:	Inspection Date (DD/MM/YYYY): Next Inspection Due Date (DD/MM/YYYY):		

EC Declaration of Conformity

We: Ferno Australia

Of: 11 Johnstone Road, Brendale Qld Australia 4500

In accordance with the following directive:

59/686/EEC Personal Protective Equipment Directive

Hereby declare that:

Equipment: APOD - Ferno Arachnipod in versions Tripod, Quadpod and Quadpod with Bridge

Model Numbers:

APOD-IND	Arachnipod Industrial tripod,
APOD-IND+	Arachnipod Industrial plus tripod
APOD-ADV	Arachnipod Advantage tripod
APOD-ADVB	Arachnipod Advantage Basic tripod
APOD-BR2	2m bridge Kit
APOD-BR3	3m bridge Kit
APOD-BR4	4m bridge Kit
APOD-QUAD	Arachnipod Quadpod

In conformity to the applicable requirements of the following documents:

Ref No	Title	Edition
EN795	Personal Fall Protection Equipment – Anchor Devices	2012
PD CEN/TS 16415	Personal Fall Protection Equipment – Anchor Devices – Recommendations for Anchor Devices for use by more than one person simultaneously	2013

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all applicable Essential Requirements of the Directives. The above mentioned equipment is therefore marked with the CE sign.

The manufacturer also declares that the technical construction file is kept by Ferno UK Limited, Ferno House, Stubs Beck Lane, Cleckheaton, West Yorkshire BD19 4TZ, United Kingdom 44 (0) 1274 851999.

Signed:
Name
Position:
Company
Date:



Scott West
Managing Director
Ferno Australia
21st May 2015

NB2056



Issue Date: 21st May 2015
Expiry Date: 20th May 2020

arachnipod

Total Edge Management System



Designed and made in Australia

www.ferno.com.au