

# PRODUCT USER GUIDE

## VERTIPOL-POLE SUPPORT



### Introduction

This user guide is intended to provide basic information for users of the Mabey Vertipole-pole Support. It highlights the key procedures for using this aluminium, mechanical, and portable tool, as well as basic maintenance guidelines. It is recommended to compile a method statement, risk assessment, and safe system of work. It is assumed that clients are already familiar with general safety practices relevant to this type of work.

Our Vertipole-Pole Support is designed to hold or assist in maintaining an object in a vertical position with a weight of up to 19 tons for an extended period. It is ideal for use during the construction or maintenance of underground facilities, or for supporting vertical structures such as poles, columns, traffic signals, walls, beams, or any other vertical elements.

The Vertipole-pole support, is constructed using pins and rods, is notable for its ability to be quickly assembled and disassembled in a few minutes. It is particularly useful in blind easement situations where access by a line or boom truck is not possible. However, it should not be used in seawater applications without prior consultation with the Mabey Engineering Department.

It is advisable, before commencing installation, to read the notes below and to become familiar with the procedures involved when using the Vertipole-pole support.

### Configuration Available

- ▶ Vertipole-Pole Support
- ▶ SAF-T Anchor

### IMPORTANT NOTES

All excavation work must be thoroughly planned before work commences on site to identify hazards and assess risk.

These instructions form guidance for the typical use of Vertipole-Pole Support equipment.

Non-standard applications should be approved by a suitably qualified person.

Ensure all personnel engaged in installation operations are properly briefed and adequately supervised by a competent person.

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## 1. General Guidance notes

### Safe System of Work

Assuming that the appropriate Installation / Setting up area have been chosen for its use, the Health and Safety at Work Act requires that a safe system of work is adopted to carry out the works on site.

These guidance notes are intended to draw the client's attention to practical aspects of Mabey Hire Pty Ltd. range of Vertipol-pole Support components during its use and basic maintenance which need to be considered when completing method statements for a safe system of work.

### Access, Hard standing Areas and Site Storage

- Suitable firm, level, dry areas should be made available on site for storage and pre-assembly work.
- Suitable lifting equipment of adequate capacity should be provided for off-loading and installation.
- The weights of components and assemblies are given in this guide.
- Smaller components should be stored in skips/ bins.

### Personnel

The Management of Health and Safety at Work Regulations require that personnel deployed are suitably trained, experienced, and supervised by a competent person.

The main activities associated with Vertipol-pole Support use are:

- Unloading and loading the delivery vehicle.
- Pinning components together.
- Align the Vertipol-pole support to the pole held

### Warnings:

If Vertipol-pole Support components are to be used for setting up around an excavation. The appliance should be located at a safe distance from the edge of the excavation (300mm minimum) supporting the vertical element and a surcharge for the appliance must have been allowed for in the excavation brief / design.

### Access & Egress and Edge Protection

- Install edge protection promptly to define the the installation area for the Vertipol-pole

support.

- The operator must not leave the equipment controls unattended while the load is suspended, except where all of the following are met:
  - The operator remains adjacent to the equipment and is not engaged in any other duties.
  - The load is to be held suspended for a period of time exceeding normal lifting operations.
  - The competent person determines that it is safe to do so and implements measures necessary to restrain the boom hoist and telescoping, load, swing, and outrigger or stabilizer functions.
- A competent person should inspect the means of access, surrounding and egress regularly.
- Barricades or caution lines, and notices, are raised to prevent all employees from entering the fall zone.

### During Installation Works

- Check that all bolted and straps connections remain tight.
- Check that all pinned connections are intact and complete with an 'R' clip, where required.
- Avoid striking equipment or loading it inappropriately.
- It is recommended to install the Vertipol SAF-T Anchor behind the centre plate, no further than 300mm to 1200mm. In case the Vertipol is on a concrete area or similar it must be attached to a tree, fence or the use of a Kelly block will be necessary.
- The use of a 1T Kelly block can also be used in place of the 1500mm temporary anchor if needed if there are shallow services.

### After Installation Works

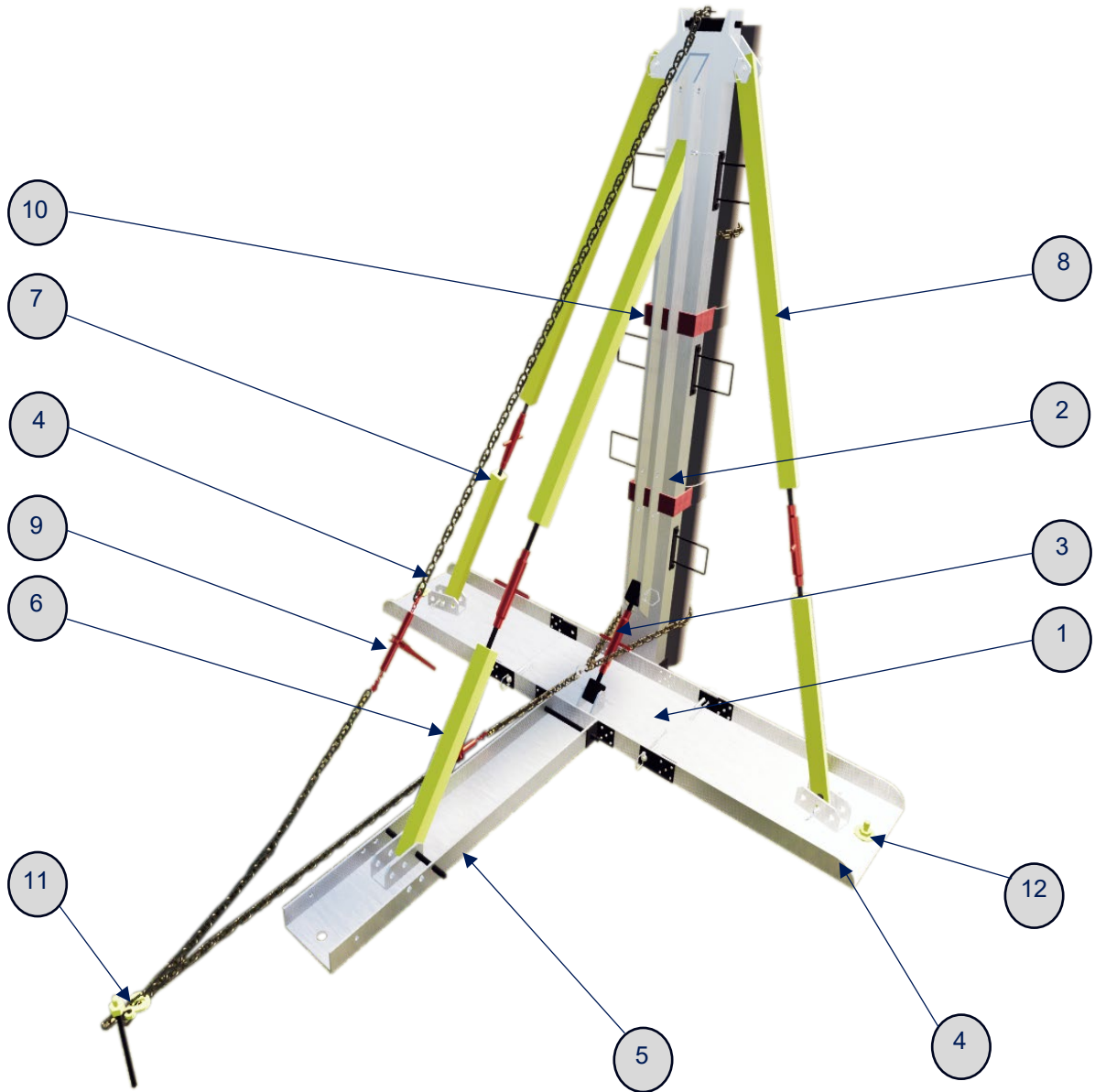
The Pole or vertical element supported by the Vertipol-Pole support, must be inspected daily before personnel begin work in case any soil movement that may cause changes.

### Return of Equipment Off-Hire

Clients should ensure that on removal, the equipment is returned clean and assembled as supplied. Ensure all equipment is loaded to the satisfaction of the vehicle driver and is securely restrained to the vehicle bed.

## 2. Component Identification

Vertipol-Pole support complete and ready to use weight is 250kg.



<b>1</b>	<b>Centre Base Plate</b>	<b>7</b>	<b>Left leg Brace</b>
<b>2</b>	Pole Adaptor	<b>8</b>	Right leg Brace
<b>3</b>	Short Leg	<b>9</b>	Chain Ratchet Binder
<b>4</b>	Side Base Plate	<b>10</b>	Binder Straps
<b>5</b>	Front Base Plate	<b>11</b>	Vertipol SAF-T Anchor
<b>6</b>	Front Leg Brace	<b>12</b>	Vertipol side Anchor

2.1 Accessories:



1"x 14" Pin



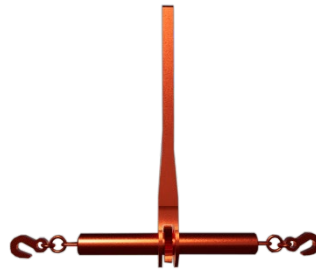
6"x 5/8" Pin



Connector 'R' clip



Chain with Grab hook.



Chain Ratchet Binder



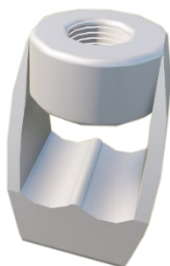
Binder Straps



T- Handle



T- Handle Socket



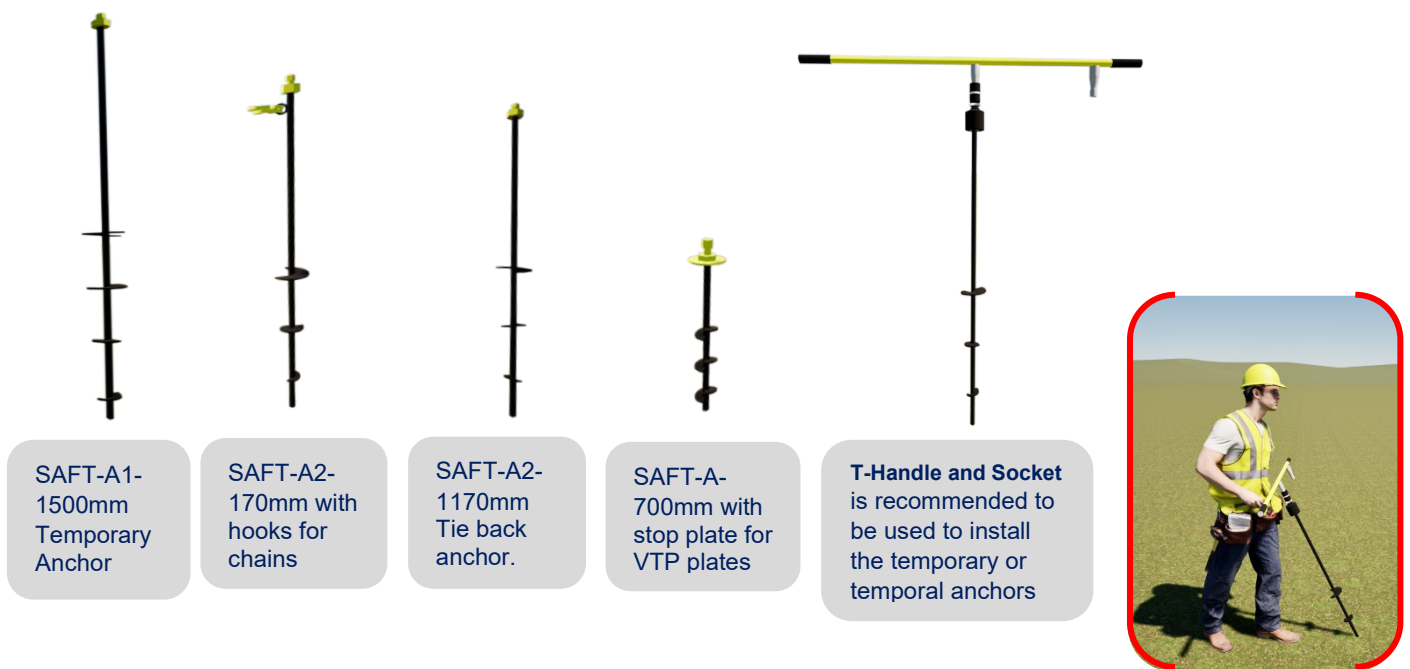
Impact- Thimble eye nut



Rods -Thimble eye nut



### 2.2 Anchors: STAD442N-H<sup>3</sup>/<sub>4</sub>



SAFT-A1-1500mm Temporary Anchor

SAFT-A2-170mm with hooks for chains

SAFT-A2-1170mm Tie back anchor.

SAFT-A-700mm with stop plate for VTP plates

T-Handle and Socket is recommended to be used to install the temporary or temporal anchors



### 2.3 SAFT-Anchor Pull-Out Chart:

SOIL TYPE	CLASS-2	CLASS-3	CLASS-4	CLASS-5	CLASS-6	CLASS-7	CLASS-8
	Dense sand, hard silts, coarse gravel	Dense clays, hard silts, coarse gravel	Medium dense sandy gravel, very stiff to hard silts & clays.	Medium dense coarse sand & sandy gravels: stiff silt & clays	Loose to medium dense fine to coarse sand: firm stiff clays & silts	Loose fine sand: soft-firm clays: varied clays and fill	Peat organic silts, inundated silts & fly ash
A1 (KN)	2105	1920	1735	1500	1100	850	250
A2 (KN)	8200	7000	5800	4700	3350	1850	625

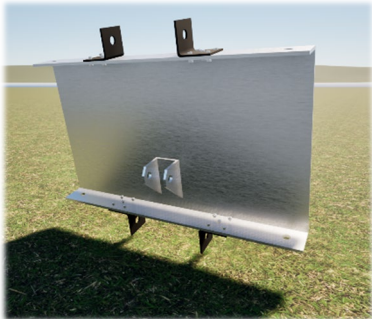
## 3.0 Installation

### 3.1 Before Installation

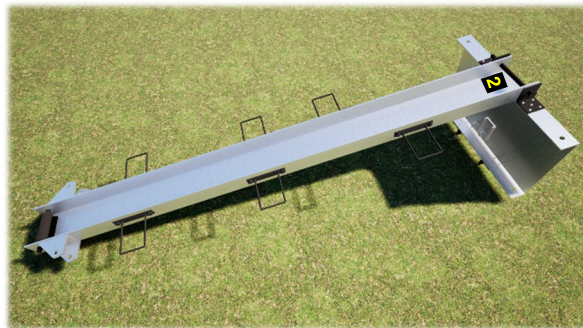
- ▶ Locate markings are present.
- ▶ Perform a Visual check of pole ground conductor (wire) to ensure it is not glowing red or there are no burnt marks on the pole.
- ▶ Ensure all overhead components are not loose, such as conductors off insulators, loose bracket attachment, broken cross arms or damaged pole top.

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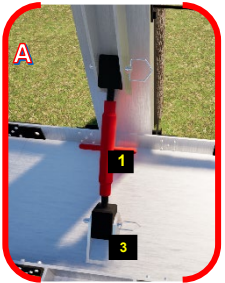
1. Place the base plate (#1) in a vertical position, 4' in front of the structure. Make sure the (#2) is on top to receive the Pole Adaptor.



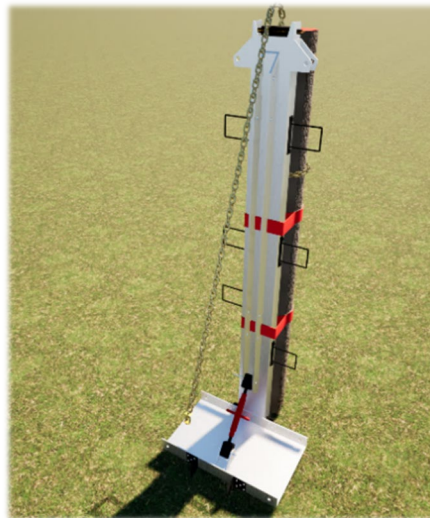
2. Place the Pole Adaptor (#2) into the basket of the Centre Base Plate and insert the large 1"x14" Pin and Secure it with the "R" pin.



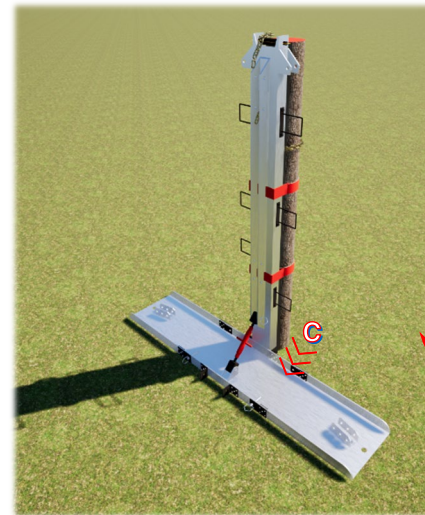
3. Attach the Short Leg (#3) into both, Centre Base Plate (#1) and the Pole Adaptor (#2) with the 6" pins. Then Lay the chain one of the Chains over the Roller on top of the Pole adaptor.



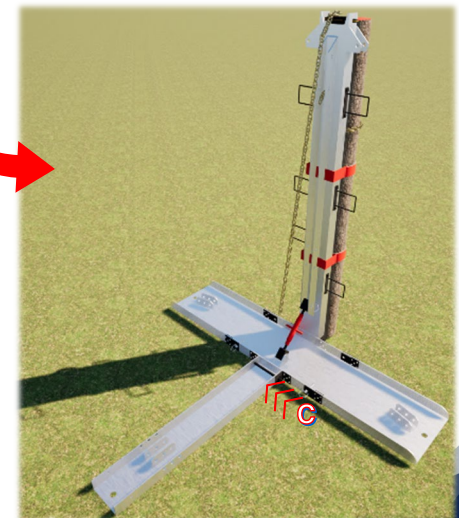
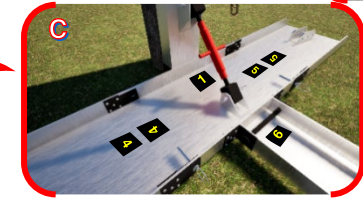
4. Raise the Adaptor so the Centre plate lays flat on the ground. Grab the **Chain** from the back of the Adaptor and wrap it around the pole tightly then slip the chain link into the grab hook to lock the chain in place.



5. Align the Pole Adaptor to the post. Install the lower binder by **inserting the strap** through the slot opening and ratcheting it tight. **Repeat** the same process to install the middle Binder in the same manner

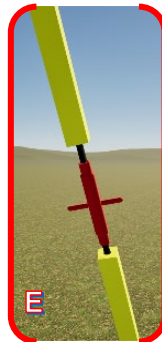
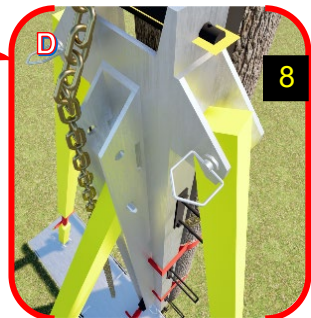
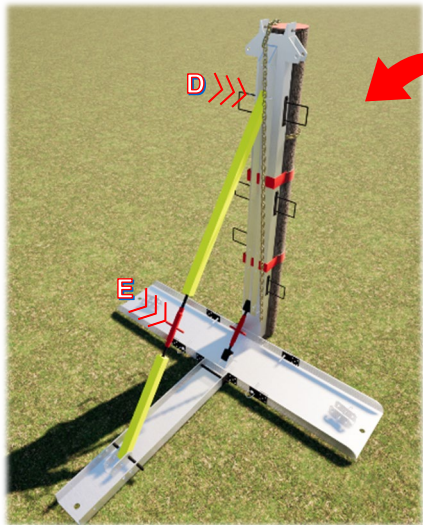


6. Install (#4) and (#5) Sides Base Plate by matching sticker with the corresponding number on the Centre Base Plate with the 6" pins. Following this, install the Front Base Plate (#6) with a 1"x 14" Pin to the Centre Plate matching the sticker 6" to 6".



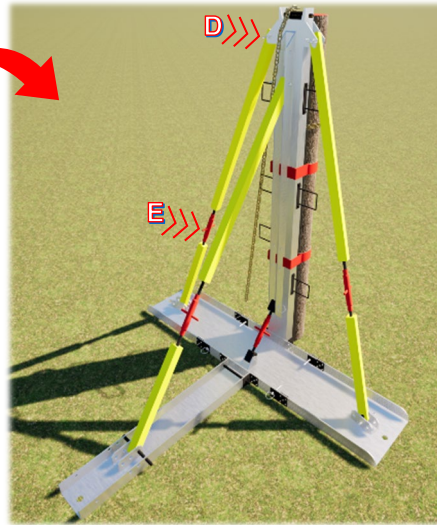
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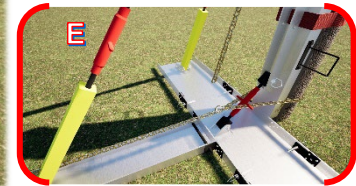


**A.** Ensure the Braces are correctly secured using the 6" pins.

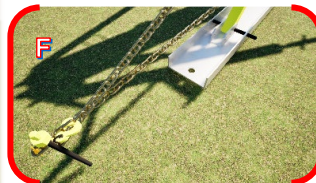
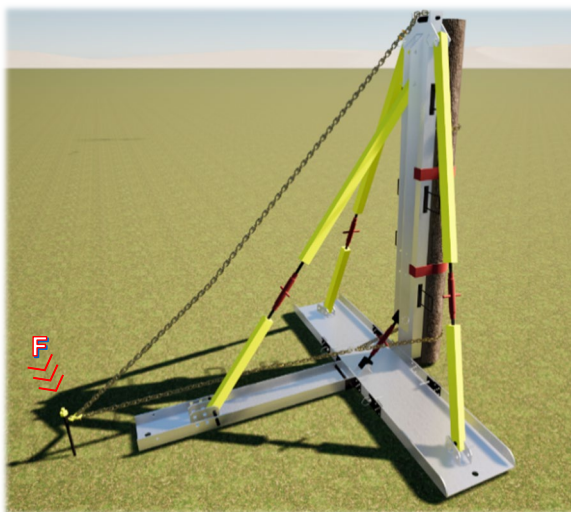
**B.** Adjust the Turn Buckle on the braces to apply slight pressure to the pole adaptor



**8.** Install the Leg Braces (#8-#9) to the Top of the pole Adaptor matching the number stickers using a 6" pin. Then, insert the Leg Braces in the appropriate holes according to the contour of the ground.

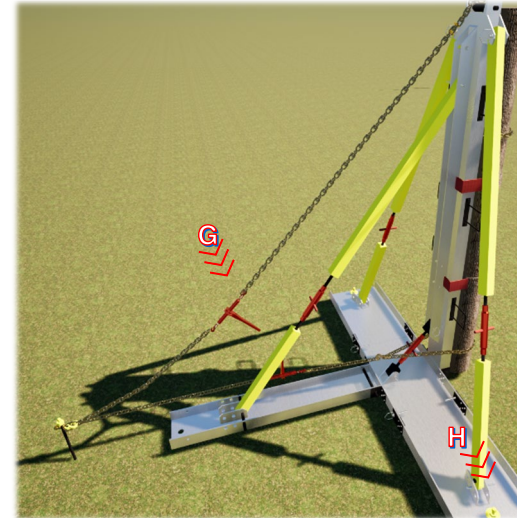


**9.** Install the lower Chain by wrapping it around the base of the pole. Slip the Chain link into the grab hook ensuring it lays on the outside on the Short Leg Brace (#3).



**F.** Attach both chains to the Anchor by placing the slip hooks into the anchor rod eyelet.

If the Vertipol-Pole Support is on a roadway or on concrete, the Base plate can be anchored using bolts, then that chain would be attached to the 1"x14" pin at the base of the Leg Brace and the Front base plate (#6). (see in Page 10)



**G.** Ratchet Binders close to each other to be able to lock its handles

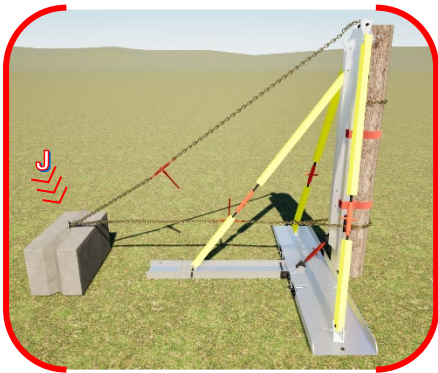


**H.** Install the side short Anchors to stack the Vertipol-Pole support completely.

**10.** Install the Back Anchor within 300mm from the edge of the Base plate (#6). If for any reason the anchor cannot be installed, attach the chains to a tree or fence post to provide the anchoring attachment point. **The minimum size Anchor** to be used with a pole is a 4' rod with a 4" helix to be set in the ground at a minimum of 1000mm or install the **Saft-T-Anchor** included in the kit using an impact wrench. (See VTP anchored with a Kelly Block, page 10)

**11.** Attach the **Chain Ratchet Binders** to the chain to remove the slack from of the chains locating it near each other to be able to lock the handles together with a pad lock for security and safety purposes.

Kentledge Blocks / Kelly Blocks acting as an Anchor



## 4 Usages

- ▶ Pole supporter during construction or maintenance of underground facilities when there are facilities near the pole.
- ▶ Pole supporter for stabilizing or changing a broken pole.
- ▶ Assisting a set pole when no motorized vehicle can set a pole.
- ▶ Holds a dead-end pole when down guys must be temporarily removed from construction.
- ▶ Can be use in downtown underground network, to help train/guide underground cables into manholes.
- ▶ Support Bridge columns, traffic signal poles, walls, beams, or anything vertical.
- ▶ Can be used for rescuing emergencies in earthquakes in prone areas.

## 5 Specifications

- ▶ Constructed out of high tensile aluminum and steel.
- ▶ Designed to support 19 vertical tons.
- ▶ Constructed using/ pins to be quickly assembled and disassembled in the field.
- ▶ Designed to be maintenance free and to be easily upgraded.
- ▶ Chains are 5/16, high-grade (30 tons), steel construction.
- ▶ The hooks are high-grade (30 tons), steel construction.
- ▶ Recommended installation of anchor: 300mm behind center base plate, no further than 1500mm. The use of a 1T Kelly block can also be used in place of the 1500mm temporary anchor if needed if there are shallow services.
- ▶ Top Support chain attached to pole, roughly 1500mm from ground level.
- ▶ The bottom tension chain attached roughly 600mm above ground level.
- ▶ Chains and 3 nylon straps to be used when excavation near or around pole.
- ▶ One wrap on nylon strap will hold 6.7 tons; two straps will hold 13.4 tons.
- ▶ For rotted or broken poles, chains and anchor will not be required. Two 3" straps are required (drive bars can be driven into the end of each leg in the pre-punched holes)
- ▶ The heaviest piece weighs 30kg and the complete unit weighs 250kg

## 6 General

### Do's and Don'ts

- ▶ DO wear a safety helmet to minimize the risk of head injury.
- ▶ DO ensure that the unsupported part of the trench is safely battered.
- ▶ Do NOT climb up or down the lateral handles.
- ▶ Do NOT use any unsupported part of the trench for access.
- ▶ Do NOT move the Vertipol-pole Support when personnel are working near the post supported.

### General Maintenance

- ▶ Regularly check that all pins are in place and 'R' clips fit.
- ▶ Replace damaged components.
- ▶ Remove debris from Pins and 'R' clips.

While information in this Guide is correct at time of printing, product specifications and product availability are subject to change without further notice. Please visit our website for the most up to date information. Job site photos are strictly intended for general product illustration only and may not comply with all applicable safety standards or site requirements. Specification data has been taken from manufacturers' serialised specific tabulated data.

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