

## Titan Props

### Hazard and Risk Assessments

Before using this equipment, the job you are doing must be assessed for foreseeable hazards and risks and appropriate measures to eliminate, control or reduce those risks must be taken before you commence work.

### Suggested PPE (Personal Protective Equipment):



Protective Gloves Protective Footwear Hard Hat Eye Wear

Note: PPE must be suited to the risks and person(s) using the equipment.

### Installation Requirements:

The Titan propping system is HIGH RISK equipment. Installers must have sufficient training/instruction to properly install and use this equipment.

ENSURE YOU HAVE BEEN PROPERLY INSTRUCTED BEFORE USING THIS EQUIPMENT

### Purpose for which this equipment is designed:

For supporting formwork, concrete, 'dead' and 'live' loads. Can be used as a back prop provided the propping system is installed correctly and its rated load is not exceeded.

### Safety Instructions:

1. **Operating Instructions** – Before using this equipment ensure you have read the 'Operating Instructions' and taken note of the 'Hazards and Risks' detailed on this instruction sheet and taken all necessary steps to prevent injury.
2. **Personal Protective Equipment** – Use appropriate personal protective equipment for the job.
3. **Installation Advice** – The safe use and application of these props must be in accordance with AS3610, the Occupational Health and Safety Act, approved Codes of Practice and any other regulatory requirements. Consultation with a qualified engineer is advised.

#### HAZARD: Risk of Structural Collapse and Crushing

... Incorrectly installed or rated propping systems may cause structural collapse.

... Consultation with a qualified engineer is advised.

#### 4. Work Area

- i. During installation of propping system, ensure all bystanders are kept clear of work area.
- ii. Installations that take place in close proximity to pedestrian or vehicle traffic should be barricaded to minimise risk of personal injury or property damage.

#### 5. Avoid Body Strain

- i. If equipment is too heavy, ask for assistance when loading/unloading, positioning etc. or use a mechanical device.
- ii. Adopt recommended manual handling techniques e.g. keep a straight back when lifting and use your leg muscles to take the weight.

#### 6. Rated Load

- i. Do not exceed the props working load limits.
- ii. The working load limits of these props are for compression loads only. Do not subject them to tension (pulling) loads or forces.
- iii. When props are setup in non-vertical positions, the working load limits are reduced. Additional or higher rated props may be required.

7. **Look Up and Live** – Stay clear of overhead wires and other obstructions when positioning and installing propping systems. Refer to local regulatory authorities for minimum power line clearances.

#### 8. Install the Props Correctly

- i. Ensure props are installed on a firm level surface capable of supporting the load. Where the surface is not firm and level, steel or hard wood 'sole plates' should be used to spread the load and/or provide a level surface.
- ii. When used in vertical applications, ensure prop sections are installed as close to vertically upright as possible. Props installed on an angle may slip, not be able to take the load, cause structural collapse and will reduce load capacities.

#### 9. Avoid Lateral Movement

- i. Be aware of lateral (sideways) movement of the propping system when supporting uneven or 'live' loads, or being subject to a sideways force e.g. Being hit by machinery on site etc. Where possible bolt secure propping system in place.
- ii. Where multiple propping structures are to be installed, 'cross-brace' the assembly to avoid lateral movement.

10. **Do Not Use to Jack Up a Load or Structure** – The screw thread of the prop must not be used to raise or lower the load. Structural failure and/or component damage may occur.

11. **Adjust the Prop into the Load** – Use the thread of the prop to raise or lower the prop under load. Do not hammer the prop into position.

12. **Equipment Inspections** – Prior to use and at regular intervals whilst in use, the propping system components should be inspected by a suitably competent person to ensure they have not been damaged when transported, craned, installed or while in position under load on site.

Any damaged equipment must be returned immediately to Shore Hire for inspection. Do not attempt to repair or modify any propping system equipment.

## Description

For supporting vertically applied stable loads not exceeding their rated load e.g. form work, lintel, joist etc. These props must not be used as a jack.

## Installation Instructions

1. Before installing, adjust the length of the prop until it is slightly shorter than the desired height. To adjust prop length, rotate the adjusting nut located on the threaded end of the prop with the Titan Spanner or similar.
2. Stand prop up and position it under the load to be supported.
3. Using the Titan Spanner or similar, turn the adjusting nut until the prop extends firmly under the load.
4. Secure foot and head of prop if required.



## SPECIFICATIONS AND WORKING LOAD LIMITS (WLL)

Size	WLL (kN)	At Min Height (mm)	WLL (kN)	At Max Height (mm)	Weight of Prop (kg)
No. 2	100.0	1700	42.0	2900	17
No. 4	94.9	2900	41.0	4100	21
No. 6	42.0	4300	27.0	5500	27

### Note:

1. Refer to AS3610 for acceptable criteria for installation of props and eccentricity of loading.
2. To convert the kN loading to kg, multiply by 102.  
e.g. 16.00 kN x 102 = 1632kg

## IMPORTANT NOTICE

Shore Hire will accept no liability, either expressed or implied, for any loss, damage, or injury to any person or property where the hire plant/equipment is misused or, used for purposes not expressly specified by Shore Hire or the manufacturer. It is the customer's responsibility to ensure that properly qualified and experienced operators/riggers use the hire plant/equipment in the manner specified in these operating instructions.

## Dismantling Instructions

### HAZARD: Risk of Structural Collapse and Crushing

... Do not remove 'loaded' props.

... Before removing props, ensure the load is self supporting (or supported by other means) and will not collapse when the props are removed.

With the prop supported to ensure it will not fall over when removing from load, dismantle the prop as follows:

1. If prop previously secured in place, undo securing bolts, remove bracing etc.
2. Shorten the length of the prop approx. 50mm by rotating the adjusting nut with the Titan Spanner or similar. Do not hammer the prop to remove.
3. Lower the prop to the ground.
4. When not in use, turn the adjusting nut to shorten the length of the prop as much as possible as most damage occurs to the inner threaded sections while extended.

### SCAN ME FOR TECH DATA



### RISK ASSESSMENT (1= HIGH RISK, 5 = LOW RISK)

Risk(Ranking)	Description	Control
1	Erecting props on unstable/shifting foundation could cause a collapse seriously injuring personnel.	Always ensure base area is firm, clean and capable of supporting the load without shift or movement.
1	Overloading props creates a very high risk of collapse possibly causing, serious injury or death.	Strictly follow the engineers advice, Do not overload props and always observe props 'load capacity'.
3	When manual handling tightened props, ensure weights are within lifting limits.	Always get assistance or use mechanical lifting device.
3	Cuts and grazes from improper handling procedures.	Observe safety procedures, always wear correct PPE.
2	Dropping units, trapping hands and feet, mishandling.	Follow safety procedures, use PPE and assisted lifts.