acrow.
ENGINEERING & CONSTRUCTION

TECHNICAL GUIDE
ACROW POWERSHORE 30

FALSEWORK & SHORING

Any safety provisions as directed by the appropriate governing agencies must be observed when using our products. The pictures in this document are snapshots of situations at different stages of assembly, and therefore are not complete images. For the purpose of safety, they should not be deemed as definitive.

The loads featured in this document, related to the parts of the product, are approximate.

The company reserves the right to introduce any modifications deemed necessary for the technical development of the product.

DOCUMENT NO: ACROWPOWERSHORE30_FEB2024_ISSUEB

Technical Manual Release Notes

This page is intended to record all changes to the **POWERSHORE 30** technical manual pages.

Changes or additions to this manual will be itemised with a brief description and date when the amendments were made.

ISSUE	DATE	Amendment Description
A	SEPT 2023	First Release
B	FEB 2024	Second Release

Contents

1. Technical Specifications

System Description

The Acrow **POWERSHORE 30** is a high load shoring system that provides a fast, efficient and versatile supporting structure. The simplicity of the coupling of strong vertical Standards joined together by Horizontal Bracing Frames enables towers to be easily and safely erected.

Standards are joined together using a rigid full strength Standard Connector. Corner braces are attached at apposing corners and alternated between each level to maintain squareness and rigidity of the tower throughout its height.

Adjustable Bases at the bottom of the tower and Adjustable Bases with U-head attachments at the top of the tower provide infinite height adjustment. These Adjustable Bases can be braced with a Bracing Frame as required. The built in strength of each individual component contributes to construction of a support tower capable of supporting leg load in excess of 300 kN based on tower and bracing frame configuration.

Acrow **POWERSHORE 30** Towers can be configured to support loads up to 1200 kN per tower.

Purpose of the Document

The purpose of this document is to provide guidelines for design, safe handling, transport and installation of the **POWERSHORE 30** system.

The document also outlines the various components of the system and it features illustrations, working load limits, typical assembly arrangements and safe transport and handling measures.

The information contained in this document is provided as a general guide only and does not replace the need for the design to be reviewed and checked by a qualified person in the field of temporary works design and installation, concrete, steel, building construction and services.

This material has been prepared in the context of relevant Australian Standards and the National Construction Code (NCC). Users should make themselves aware of any recent changes to these documents referred to therein and to local variations or requirements.

This document is NOT a substitute for site-specific Safe Operation Procedures. It is the Installation Contractors responsibility to prepare safe work method statements and observe and comply with site specific health and safety regulations, standards and policies.

Acrow has dedicated engineering services available for project assistance. We can provide design support for clients to determine the best way to specify and document **POWERSHORE 30**. Our technical experts can identify the most efficient temporary work design meeting project requirements, specifications and installation process.

Should the users require any further information or guidance, they are encouraged to contact their local Acrow branch.

Safety Information

This safety information is to draw the user's attention to possible musculoskeletal disorders as a result of manual handling during assembly and dismantling of the **POWERSHORE 30** system

It is recommended that users of the **POWERSHORE 30** system employ and implement appropriate procedures and control measures to eliminate or control any risk of Musculoskeletal disorder/injury while handling.

1. Technical Specifications

Safety Information Cont.

Refer to the Code of Practice on manual handling published by local Workcover Authority or other approved and recognised guidelines for correct and appropriate manual handling procedures.

Important Information

The erection and application instructions contained in this manual are the recommended methods to be used for **POWERSHORE 30** products.

The technical function related instructions must be accurately followed to obtain the correct performance of the product. Any deviation from the recommended usage will require a separate design and/or verification by Acrow Engineering.

The safe use and application of the system must be in accordance with Australian Standard AS 3610 Formwork for Concrete, Occupational Health & Safety regulations, approved industry codes of practice and relevant regulatory authority requirements.

The illustrations in these assembly configurations are minimum guidelines only.

The combined use of the **POWERSHORE 30** system with equipment from other suppliers may entail performance issues and therefore requires a design check and/or verification by Acrow Engineering or a qualified experienced engineer.

Hazard Identification/Risk Assessments for the erection and dismantling of the system are available from Acrow branches. Site specific Hazard and Risk assessments may need to be generated for specific projects.

Disclaimer

1. The photographs/illustrations shown within this manual are intended as expressing the diversity and possible applications of the product and as such must not be used as assembly instructions.
2. In line with Acrow commitment to continuous product development and improvement, the information contained in this manual may be changed without notice. Please confirm with Acrow Engineering for latest update.
3. While all reasonable effort has been taken to ensure the accuracy and adequacy of the information contained herein, Acrow, accepts no responsibility or liability for any loss or damage suffered by any person acting or refraining from action as a result of this information.

Should users require any expert assistance, they are encouraged to contact Acrow Engineering department.

Applicable Codes and Standards

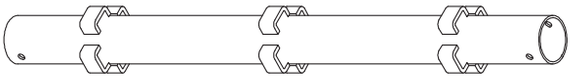
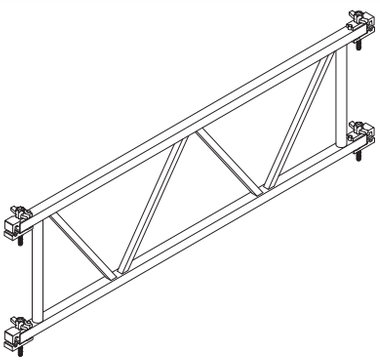
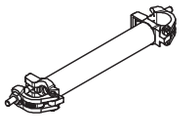
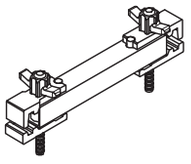
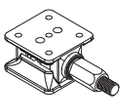
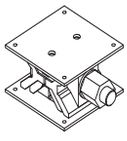
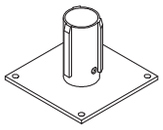
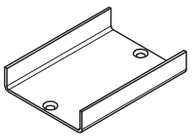
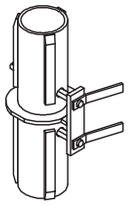
The structural design information and guide provided in this document are limited to the relevant codes nominated below. It does not include certification of any structures or works associated with a project.

ELEMENT	DESCRIPTION	CODE
LOADING	Structural Design Actions – General Principles	AS/NZS 1170.0-2002
	Structural Design Actions – Permanent, Imposed And Other Actions	AS/NZS 1170.1-2002
	Structural Design Actions – Wind Actions	AS/NZS 1170.2-2002
FORMWORK	Formwork for Concrete	AS 3610-1995
	Formwork for Concrete Part 1- Specifications	AS 3610.1-2018

2. GENERAL PRODUCT INFORMATION

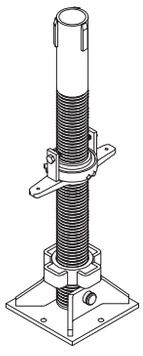
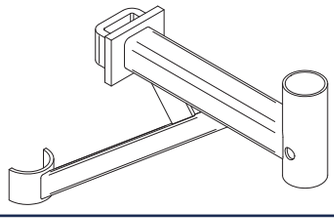
2. General Product Information

Powershore 30 Components

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	**Acrow Powershore Standards**		
	1200 Standard	APSS12	26.0
	1800 Standard	APSS18	39.0
	2400 Standard	APSS24	52.0
	3000 Standard	APSS30	65.0
	**Acrow Powershore Horizontal Bracing Frames**		
	900 Hoz. Bracing Frame	APSF09	24.0
	1200 Hoz. Bracing Frame	APSF12	31.0
	1800 Hoz. Bracing Frame	APSF18	41.0
	2400 Hoz. Bracing Frame	APSF24	51.0
	3000 Hoz. Bracing Frame	APSF30	61.0
	**Acrow Powershore Corner Brace**		
	355mm Corner Brace	APSCB	2.2
	**Acrow Powershore 600 Tie Bar**		
	600 Tie Bar	APSTB06	5.0
 (50T Wedge Jack)  (100T Wedge Jack)	**Acrow Powershore Wedge Jack**		
	50T Wedge Jack	WJ50T	12.5
	100T Wedge Jack	WJ100T	53.3
	**Acrow Powershore Base Plate**		
	Base Plate	APSBP	16.5
	**Acrow Powershore U-Head Attachment**		
	U-Head Attachment	APSUH	4.5
	**Acrow Powershore Standard Connector**		
	Standard Connector	APSC	10.0

2. General Product Information

Powershore 30 Components

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	**Acrow Powershore Adjustable Base**		
	Adjustable Base	APSSJ	51.0
	**Acrow Powershore Hop Up Bracket**		
	Hop-up Bracket	APSHUB	9.4

3. WORKING LOAD LIMITS (WLL)

3. Working Load Limits (WLL)

Geometrical Considerations

Towers:
Two different cases have been considered:
- Case 1: Top unrestrained, bottom restrained towers.
- Case 2: Top and bottom restrained towers.

For each case, different configurations have been checked depending on:

Plan dimension: 1.2 m x 1.2 m
- 1.8 m x 1.8 m
- 2.4 m x 2.4 m
- 3.0 m x 3.0 m

Height is measured from the top to bottom of the tower including adjustable bases. In the top unrestrained condition (ie. case 1) the stability of the load to be supported by Acrow Powershore 30 must be considered to ensure that it does not have adverse effect on the load capacity of the Acrow Powershore 30 towers. Generally, overall height is measured from top to bottom of the tower including adjustable bases. However when stability of the load may be questionable, it would be appropriate to consider the overall height of the tower to be from the top of unrestrained load to the bottom restrained point of the tower, in case 1 and check load capacity from the chart for total height.

In the top & bottom restrained condition (ie. Case 2) the overall height of the tower would be the distance between the restrained points.

Horizontal Bracing frames – the number of horizontal Bracing Frames depends on the tower height , the maximum distance between Bracing Frames shall not exceed 2.4m:

Tower Height	Minimum Horizontal Bracing Frame Levels
4.6 - 5.8m	2
5.8 - 8.8m	3
8.8 - 11.8m	4
11.8 - 14.8m	5

Load charts on following pages provide working load capacities for towers from 4.6 metres to 14.8 metres high and for all available plan configuration.

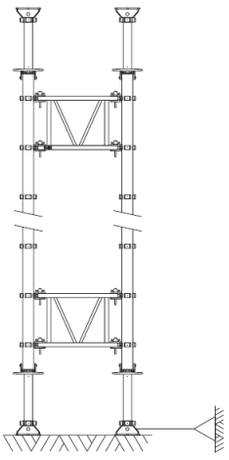
Single Leg Props:
When Acrow Powershore 30 is used as a single leg prop the boundary conditions at the top & bottom of the prop are considered as being restrained. The chart on page 19 provides working load capacities for prop height range of 2.8m-10.0m including overall adjustable base extensions.

3. Working Load Limits (WLL)

Summary of Load Charts

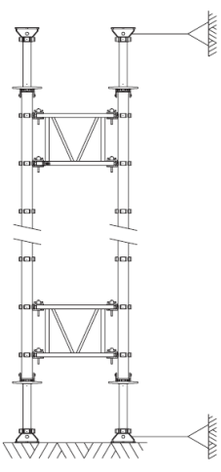
Top unrestrained, bottom restained:

Height 4.6 to 5.8 metres. 2 horizontal frame levels
Height 5.8 to 8.8 metres. 3 horizontal frame levels
Height 8.8 to 11.8 metres. 4 horizontal frame levels
Height 11.8 to 14.8 metres. 5 horizontal frame levels



Top & bottom restrained:

Height 4.6 to 5.8 metres. 2 horizontal frame levels
Height 5.8 to 8.8 metres. 3 horizontal frame levels
Height 8.8 to 11.8 metres. 4 horizontal frame levels
Height 11.8 to 14.8 metres. 5 horizontal frame levels
Single Leg Prop. Height 2.8 to 10.0 metres



- Limit State Load Factor = 1.5
- Towers must be supported on suitably rigid footings to be designed by client.

3. Working Load Limits (WLL)

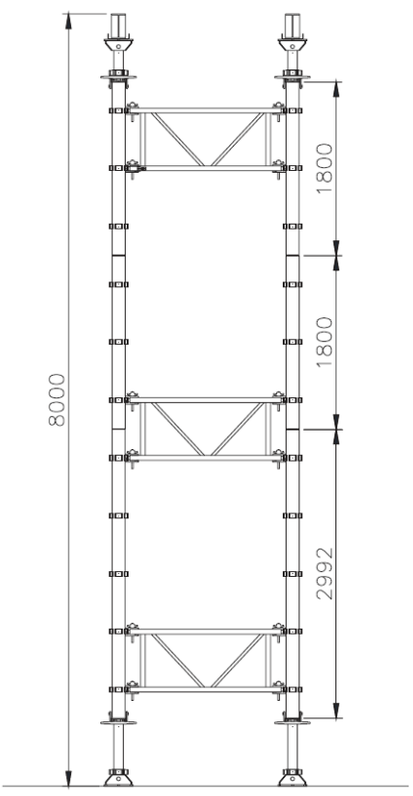
Example

Case: Top unrestrained, bottom restrained
PowerShore 30 Tower overall height (including jacks and unrestrained load) = 8.0m
Plan dimension: 1.80 x 2.40m

- Height 8.0m — 5.80 < 8.0m < 8.80m — 3 horizontal frame levels
- Top unrestrained
- Plan Dimension: 1.80m x 2.40m — 1.80 curve

From Load Chart on Page 3.6
Tower H = 7.60 m — W.L.L. = 142.5 kN
Tower H = 8.20 m — W.L.L. = 130.0 kN
Linear interpolation for overall height of tower & unrestrained load of 8.0m with tower plan dimensions of 1.80 x 2.40 m:

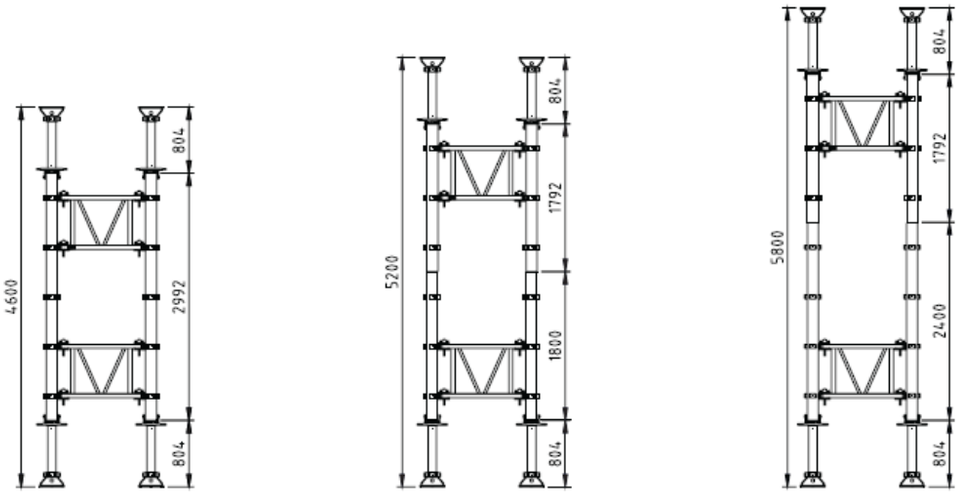
$$Q = \frac{(142.5 - 130.0) \times (8.2 - 8.0)}{(8.2 - 7.6)} + 130 = 134.2\text{kN}$$

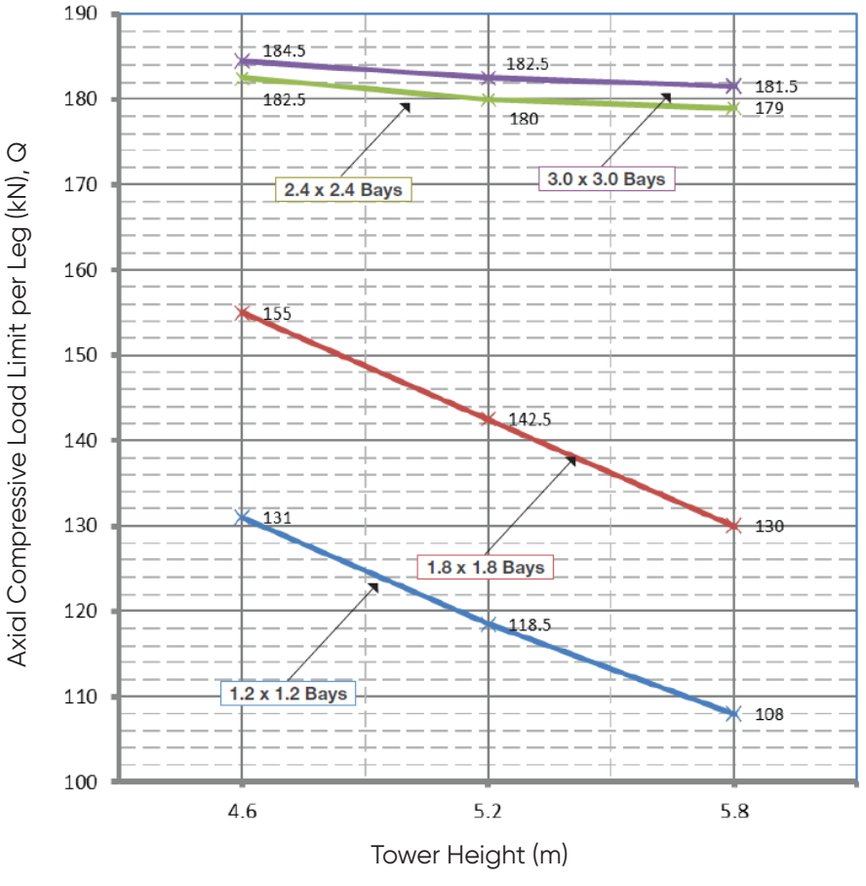


3. Working Load Limits (WLL)

Top Unrestrained & Bottom Restrained 2 Horizontal Frame Levels

Height from 4.60m - 5.80m

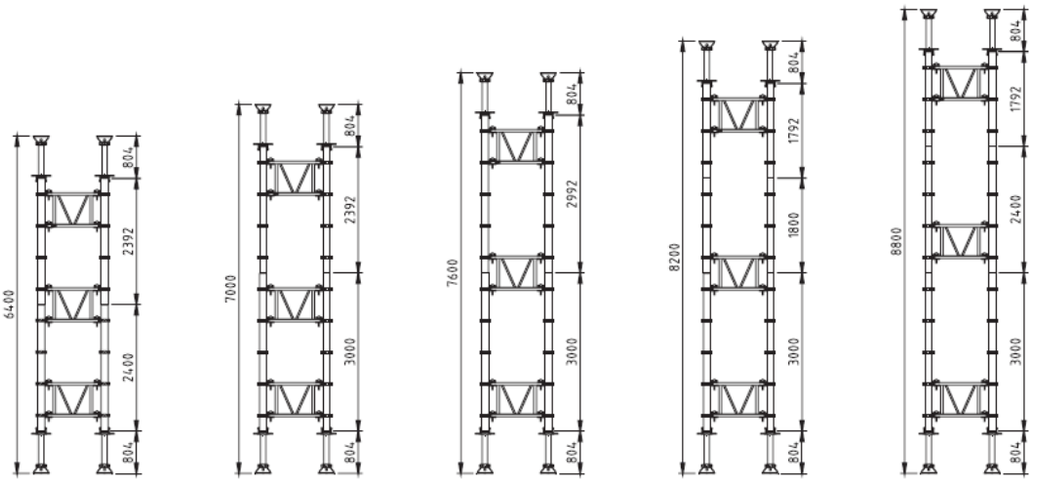


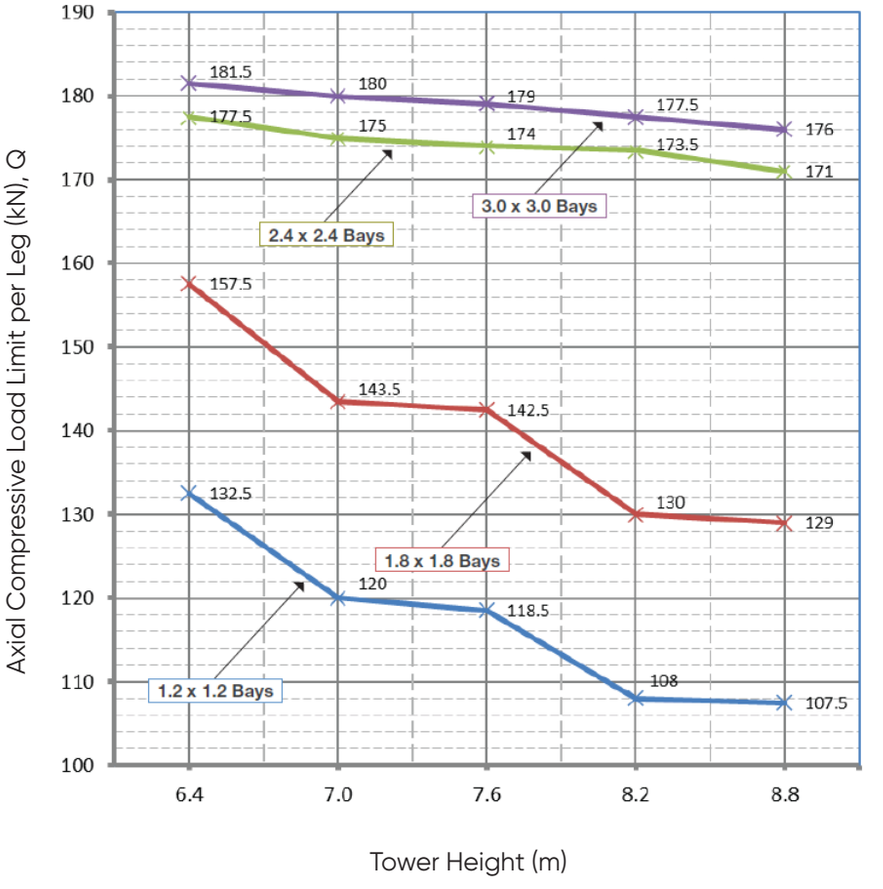


3. Working Load Limits (WLL)

Top Unrestrained & Bottom Restrained 3 Horizontal Frame Levels

Height from 5.80m - 8.80m

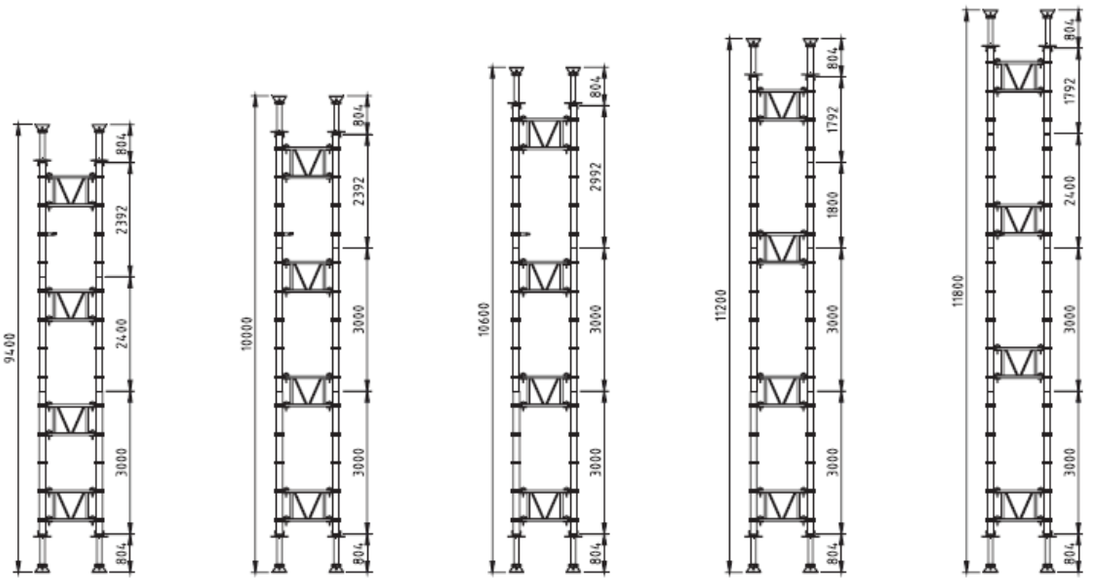


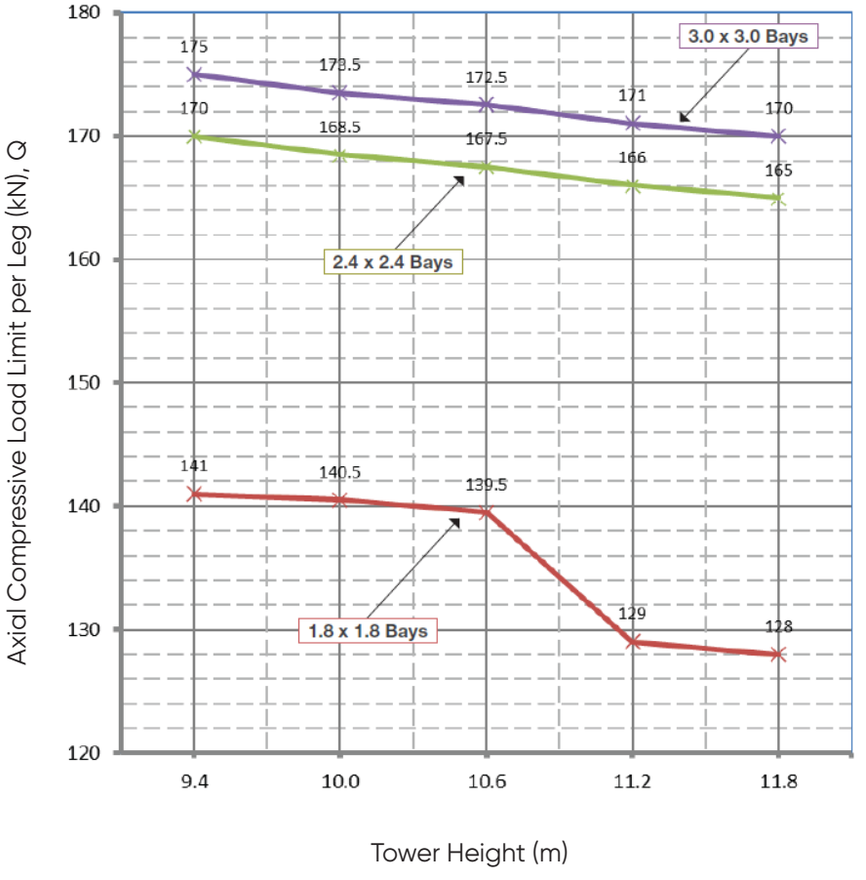


3. Working Load Limits (WLL)

Top Unrestrained & Bottom Restrained 4 Horizontal Frame Levels

Height from 8.80m - 11.80m

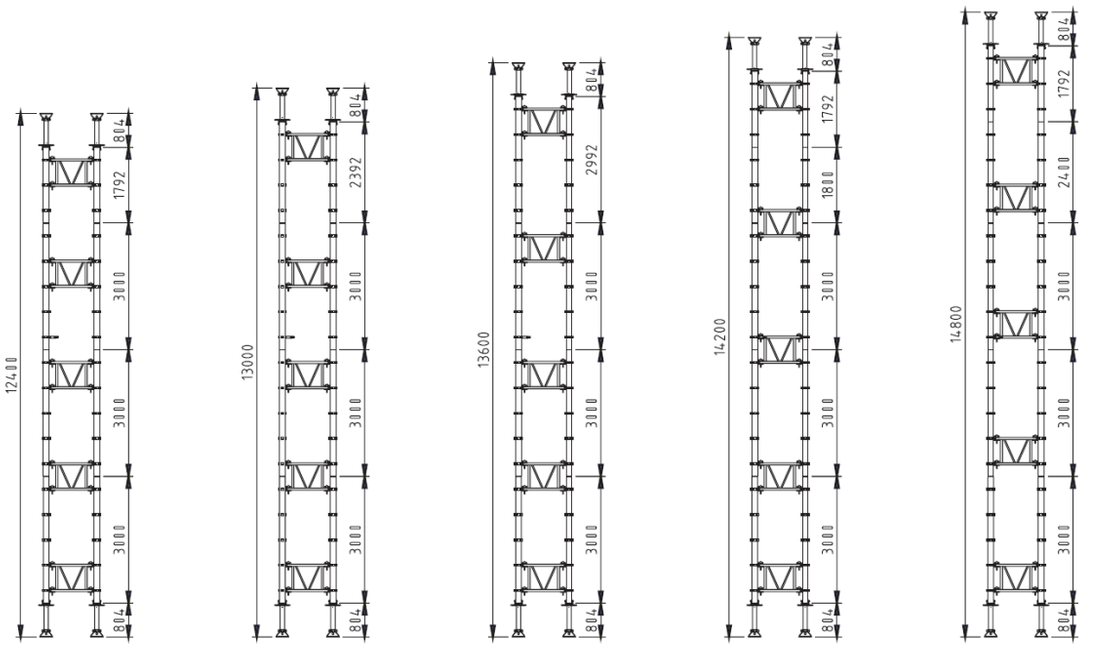


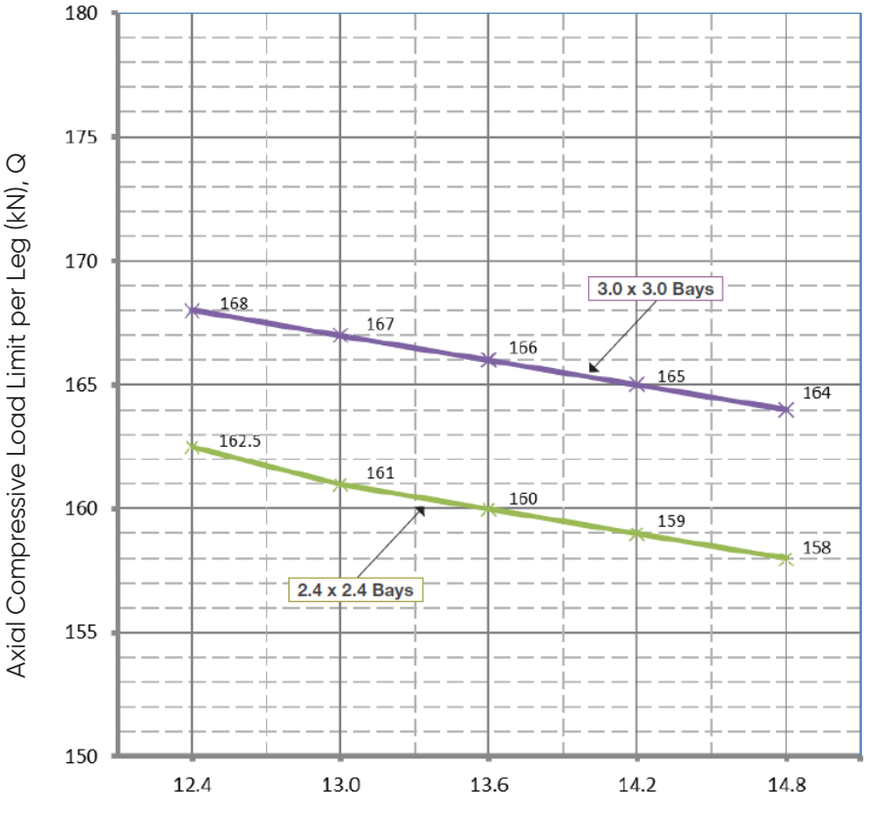


3. Working Load Limits (WLL)

Top Unrestrained & Bottom Restrained 5 Horizontal Frame Levels

Height from 11.80m - 14.80m

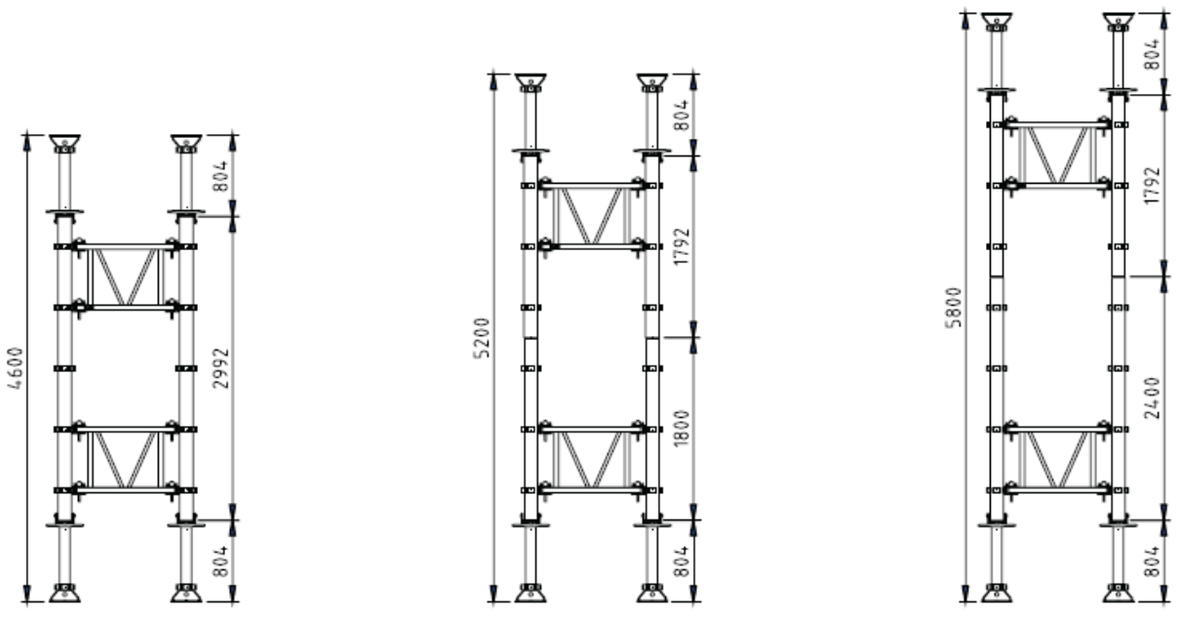


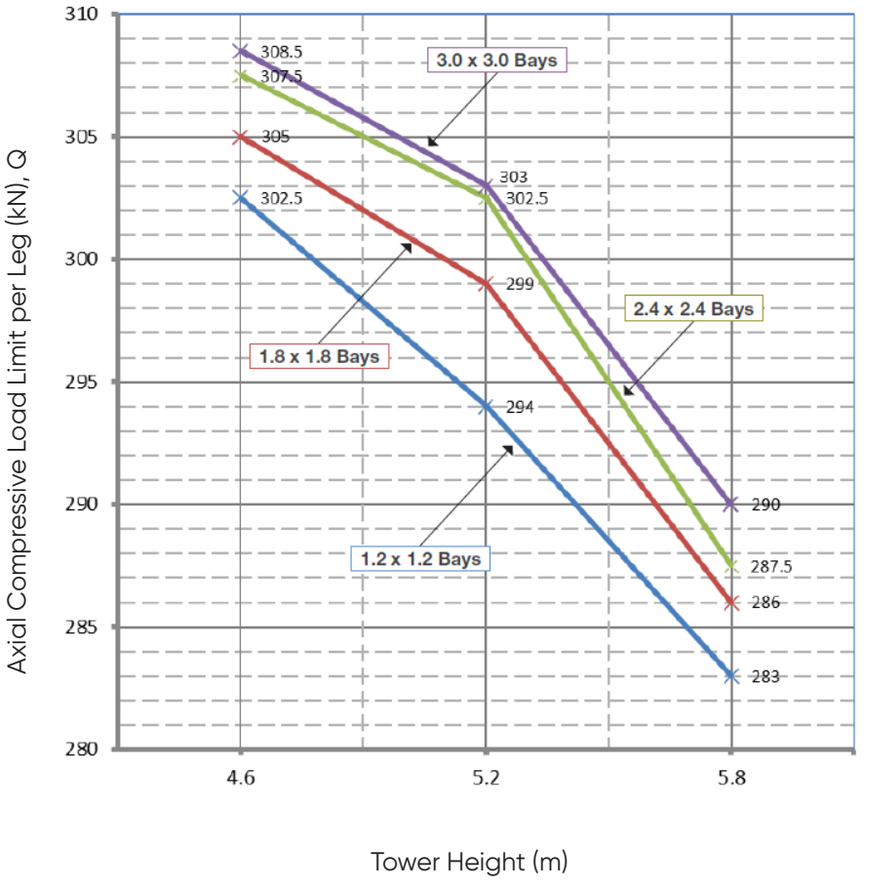


3. Working Load Limits (WLL)

Top & Bottom Restrained 2 Horizontal Frame Levels

Height from 4.60m - 5.80m

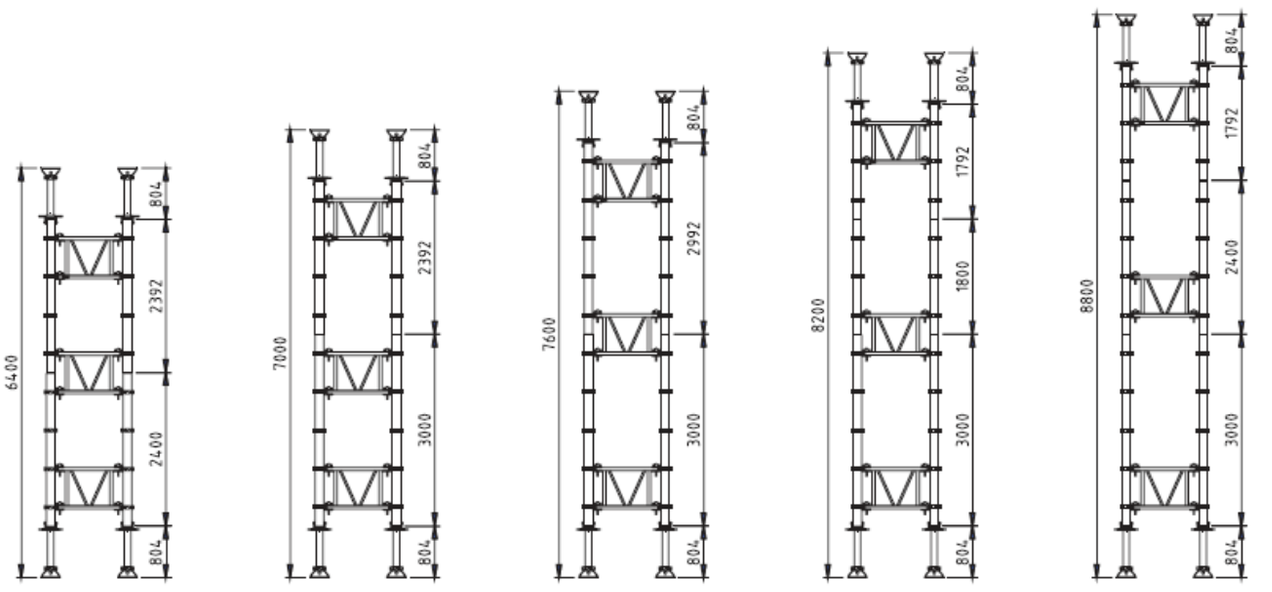


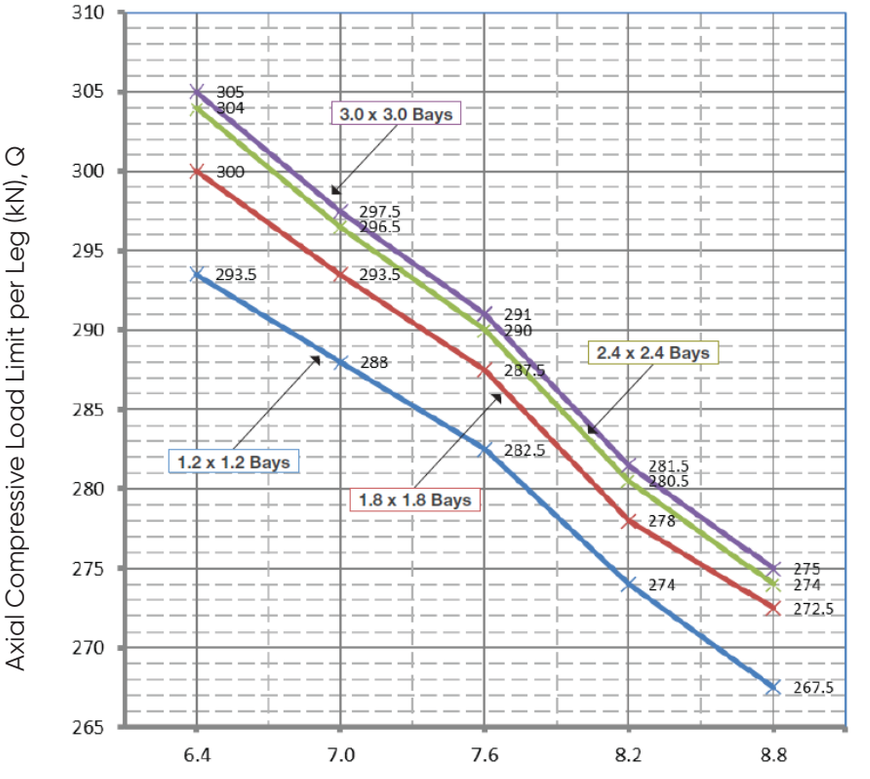


3. Working Load Limits (WLL)

Top & Bottom Restrained 3 Horizontal Frame Levels

Height from 5.80m - 8.80m

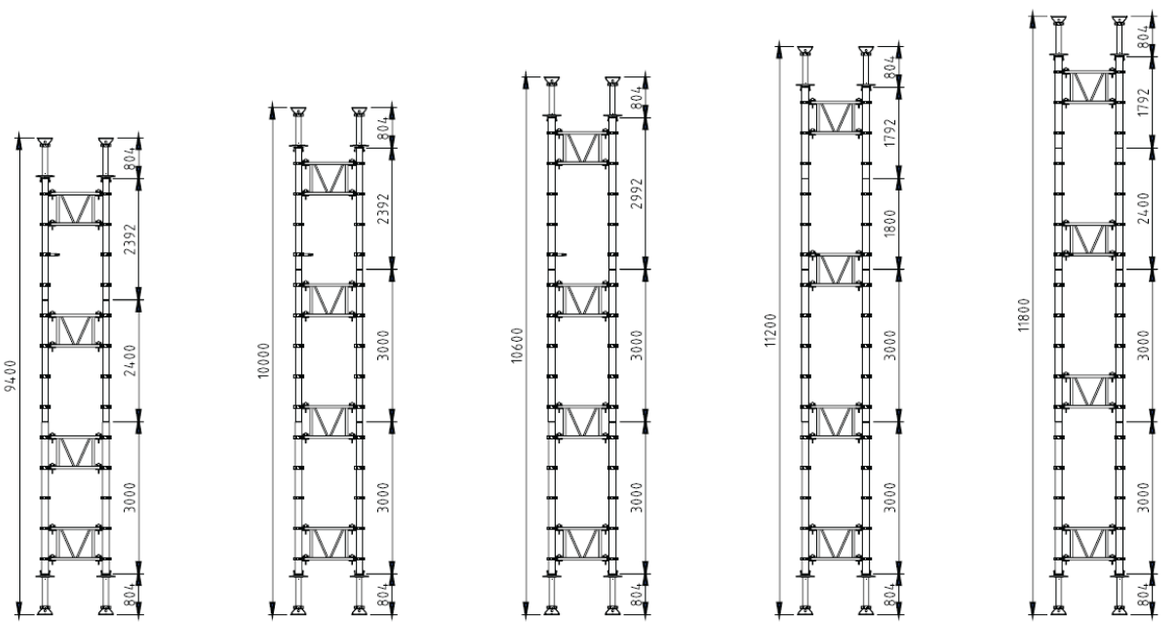


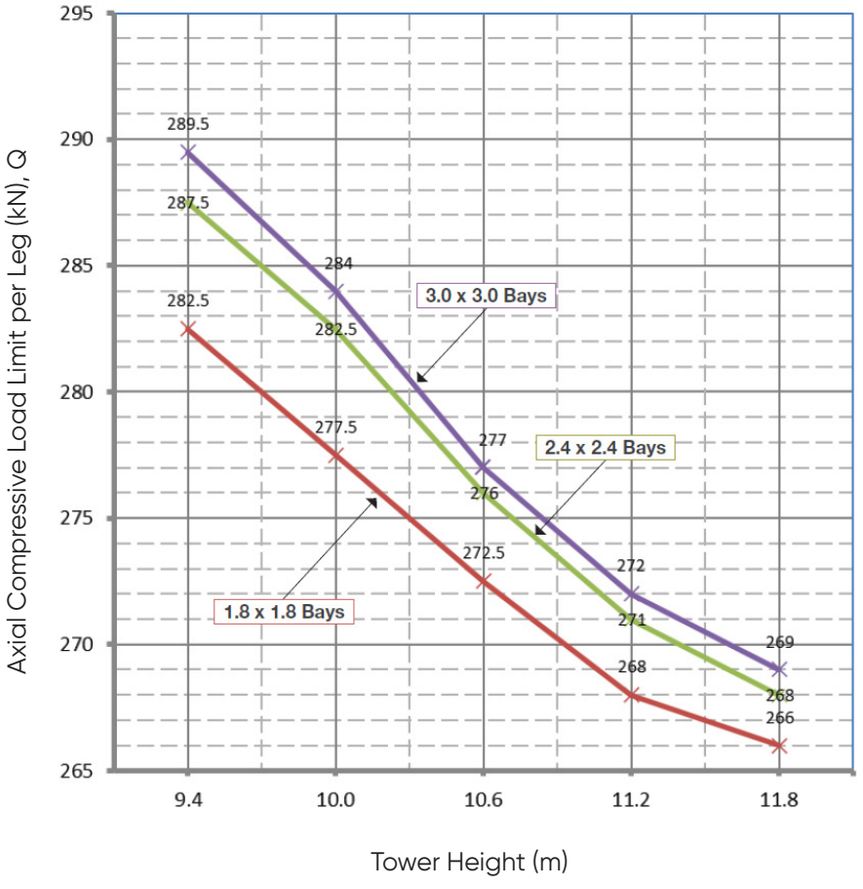


3. Working Load Limits (WLL)

Top & Bottom Restrained 4 Horizontal Frame Levels

Height from 8.80m - 11.80m

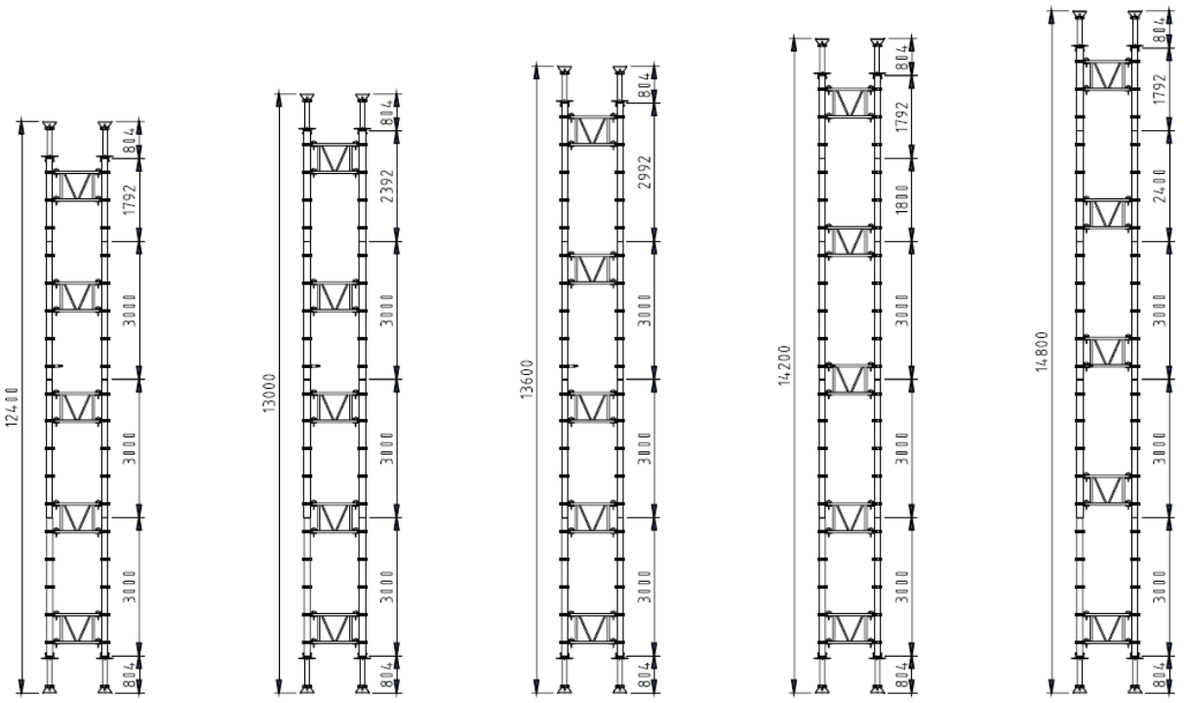


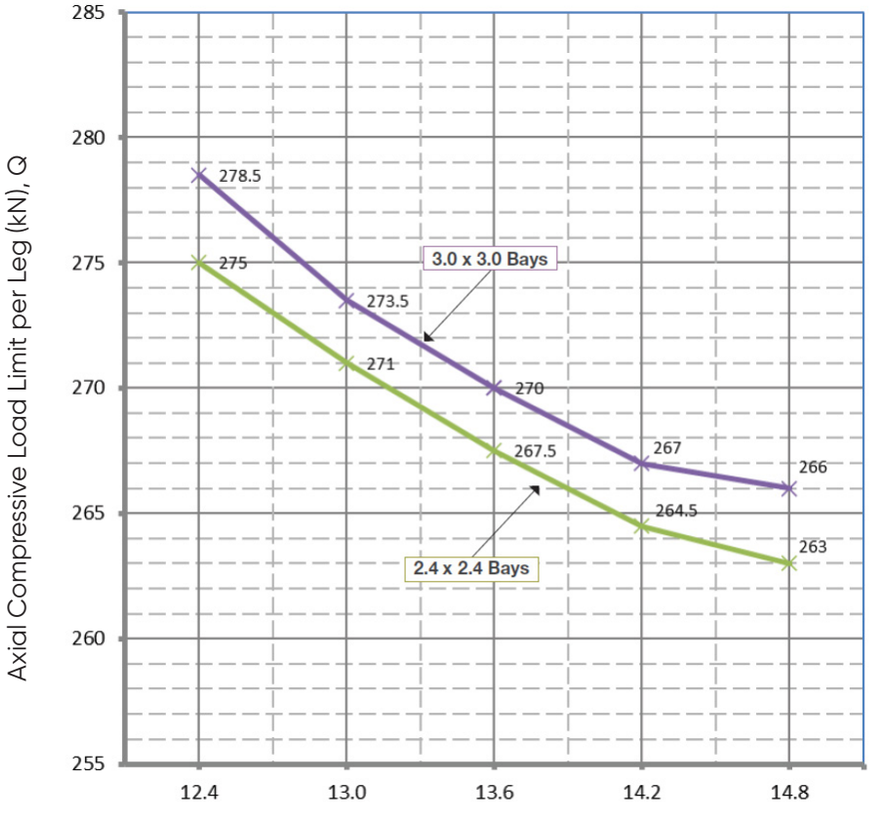


3. Working Load Limits (WLL)

Top & Bottom Restrained 5 Horizontal Frame Levels

Height from 11.80m - 14.80m

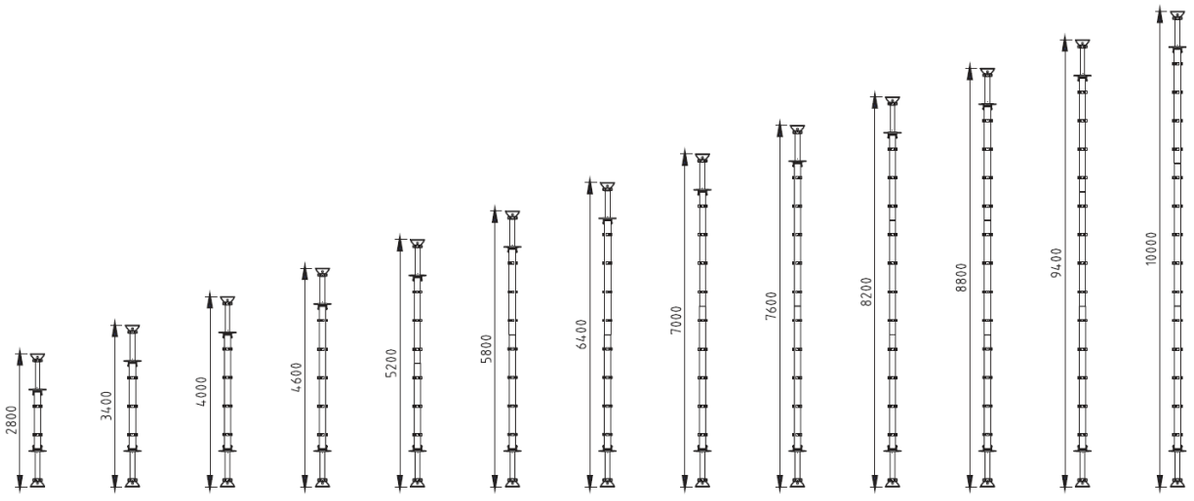


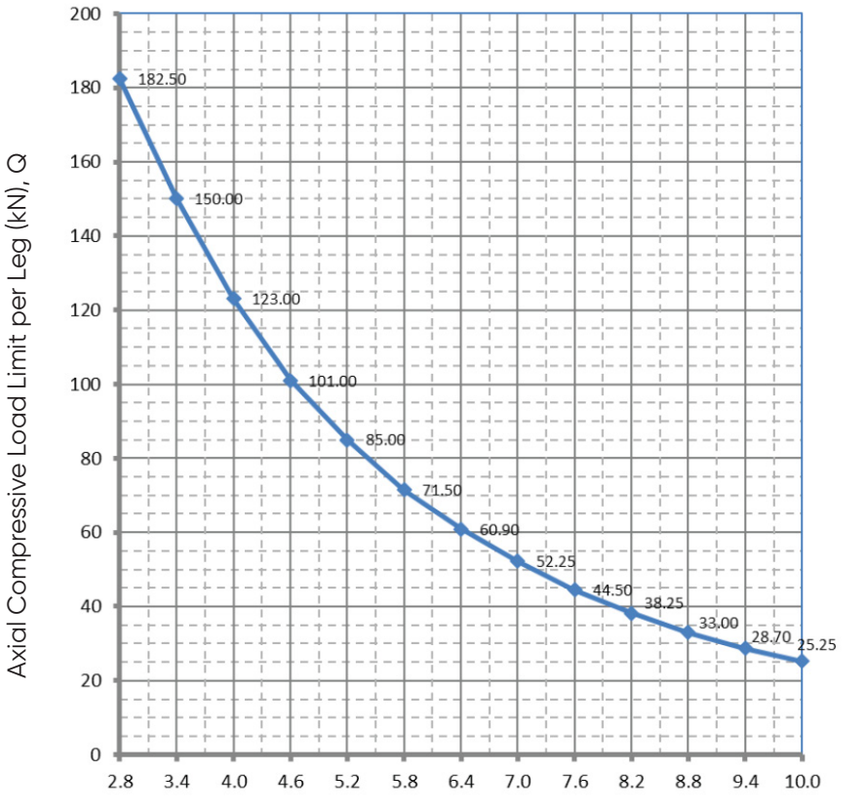


3. Working Load Limits (WLL)

Single Prop - Top & Bottom Restrained

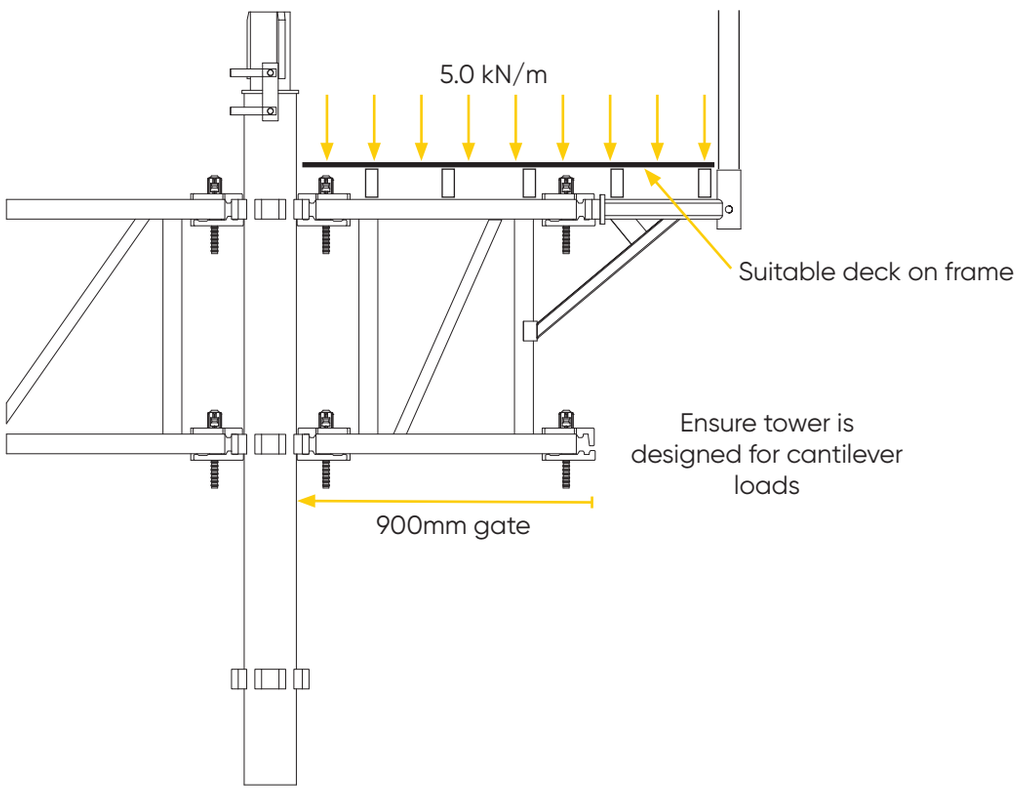
Height from 2.80m - 10.00m



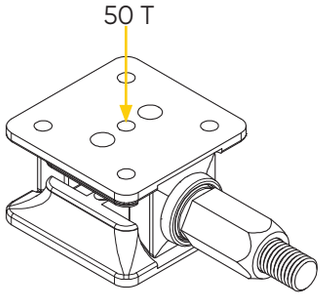


3. Working Load Limits (WLL)

Hop Up WLL

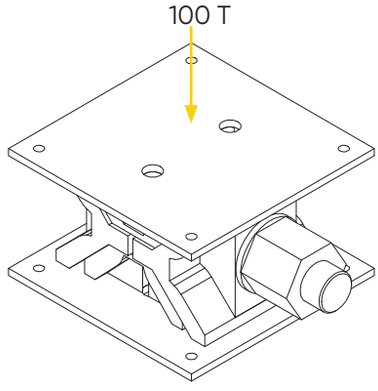


Wedge Jacks



50T Wedge Jack

WLL = 450kN (concentric)
LSCF = 1.4



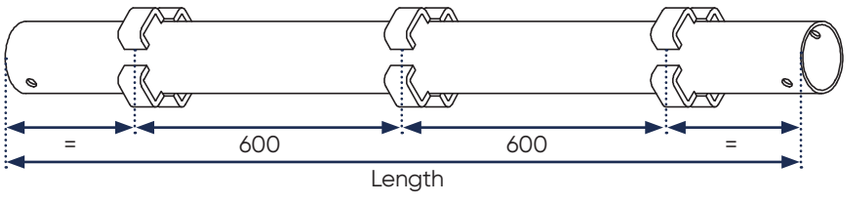
100T Wedge Jack

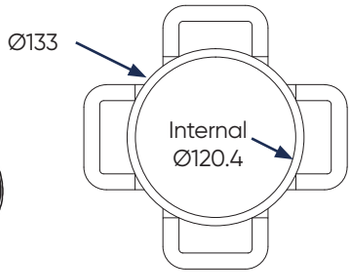
WLL = 1000kN (concentric)
LSCF = 1.4

4. SYSTEM DETAILS

4. System Details

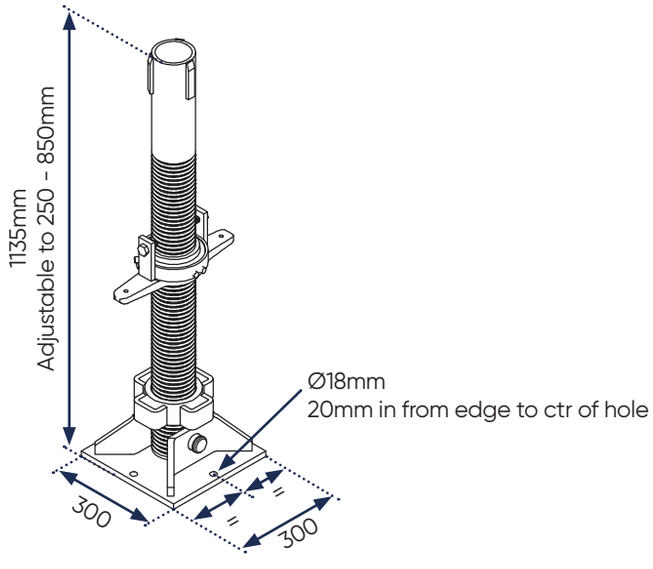
Single Props



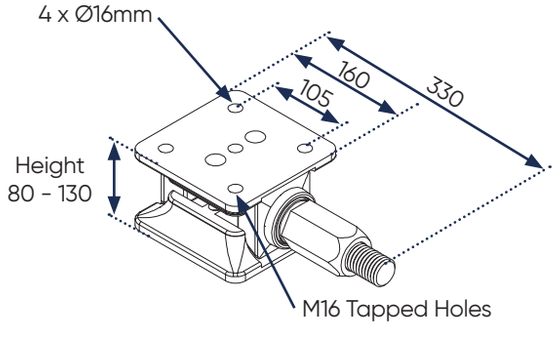


Product	Code
1200 Standard	APSS12
1800 Standard	APSS18
2400 Standard	APSS24
3000 Standard	APSS30

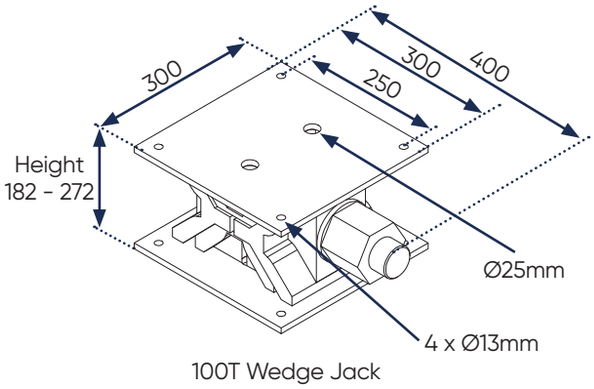
Adjustable Base



Wedge Jacks



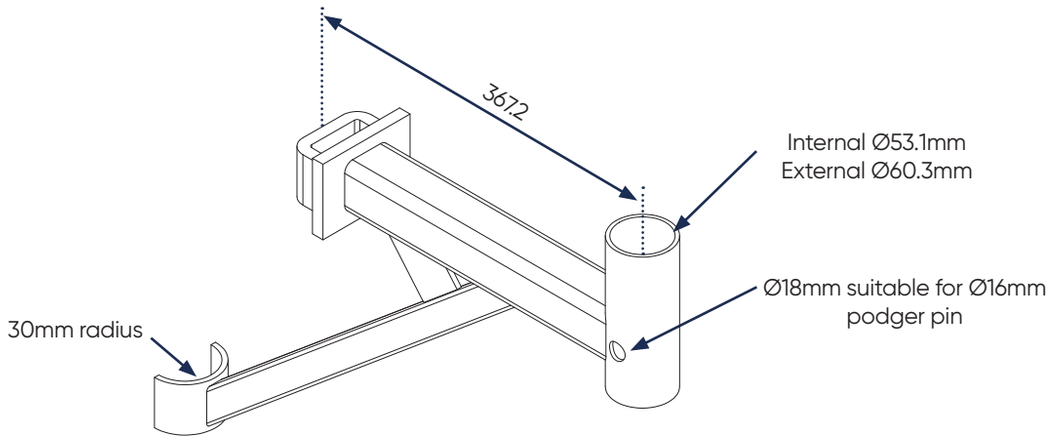
50T Wedge Jack



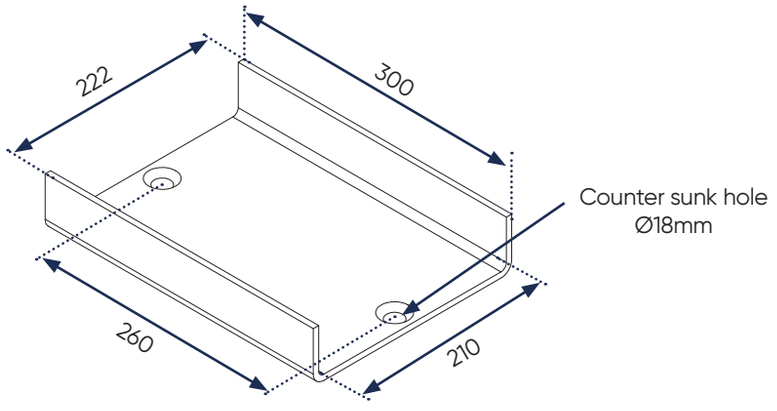
100T Wedge Jack

4. System Details

Hop Up Bracket



U-Head Attachment

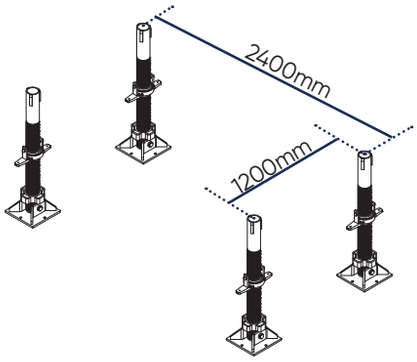


5. ASSEMBLY DETAILS

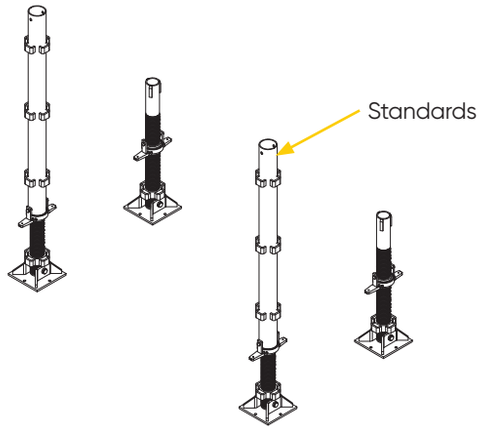
5. Assembly Details

Assembling the Powershore Shoring System - Method A

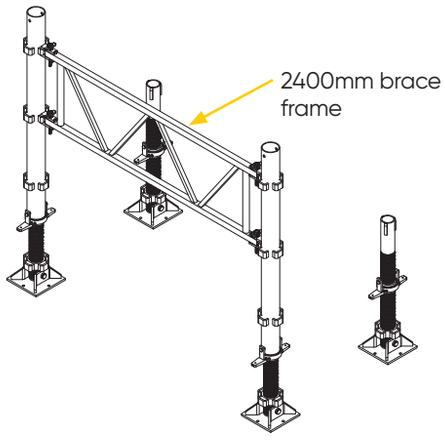
Before commencing, ensure the area set aside to erect the towers is sufficiently large enough to allow for clear access around the tower segments. There must also be an area in which the completed tower segments can be stored near the assembly area. Stand 4 Powershore Adjustable Bases on the ground spaced apart at the required grid of 2400 x 1200.



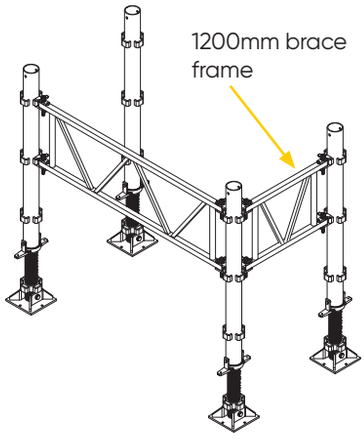
Place Powershore Standards over the top of two adjacent adjustable Bases. The Standards must be held to prevent them from falling.



Connect a 2400 Powershore Horizontal Bracing Frame to join two Standards. The Standards must be held until the next step is completed otherwise they can become unstable.



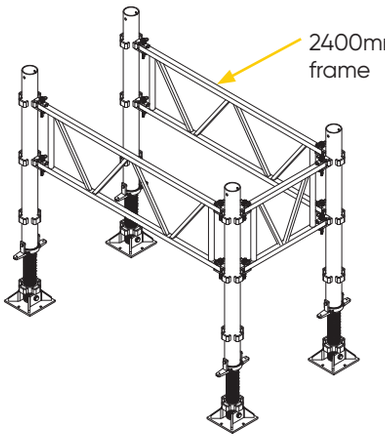
Place a third Standard over one of the remaining adjustable braces and connect a 1200 Powershore Horizontal Bracing Frame to join up the third Standard to its adjacent Standard. The assembly will then be free standing. (Excluding un-restrained jack and standards)



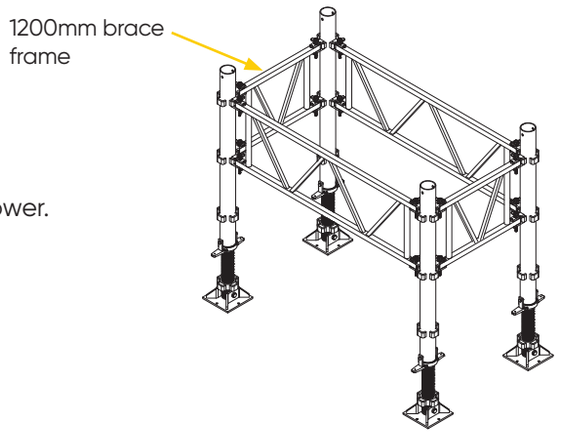
5. Assembly Details

Assembling the Powershore Shoring System - Method A

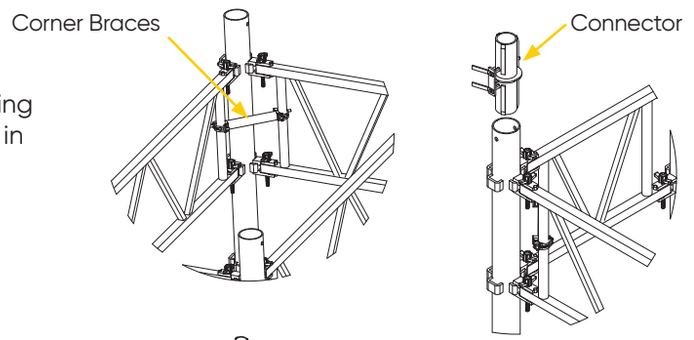
Place the remaining Standard over the remaining Adjustable Base and connect a 2400 Horizontal Bracing Frame to join up the fourth Standard.



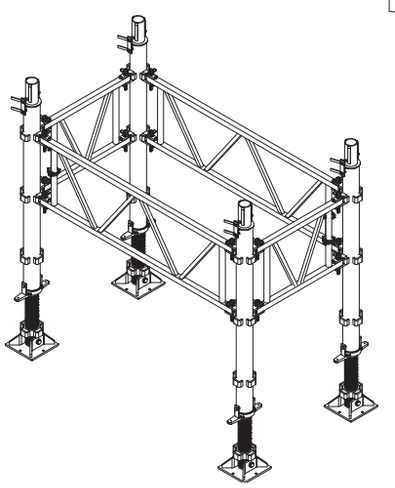
Connect the remaining 1200 Horizontal Bracing Frame to complete the bottom section of the tower.



Connect two Powershore Corner Braces in opposing corners. Insert a Powershore Standard Connector in the end of each Standard and lock in position.



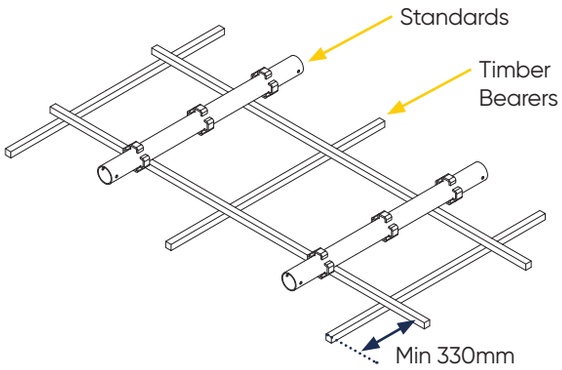
The assembly is now complete and ready for final assembly with the mid section/s and top section assemblies.



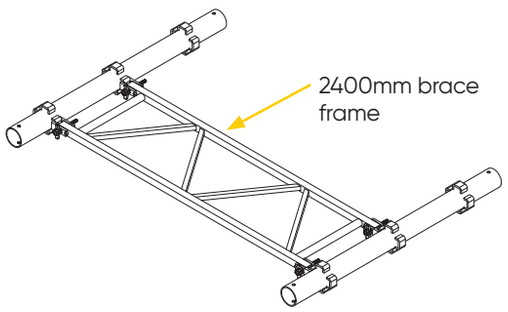
5. Assembly Details

Assembling the Powershore Shoring System - Method B

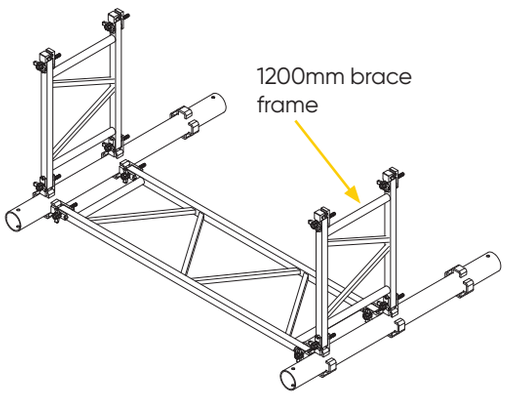
Before commencing ensure the area set aside to erect the towers is sufficiently large enough to allow for clear access around the tower segments. There must also be an area in which the completed tower segments can be stored near the assembly area. Place a grid of timber bearers on the ground to provide a height from the top of the top bearer to the ground of 330mm or greater and place 2 Powershore Standards on top of the bearers spacing the Standards 2400 apart.



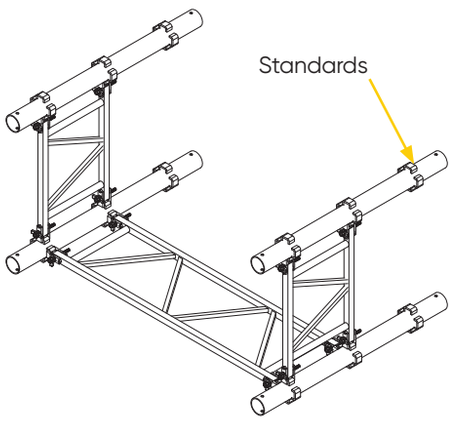
Connect a 2400 Powershore Horizontal Bracing Frame to join the 2 Standards in the position shown on Acrow drawing. Timber bearers are omitted for clarity.



Connect a 1200 Powershore Horizontal Bracing Frame to each standard.



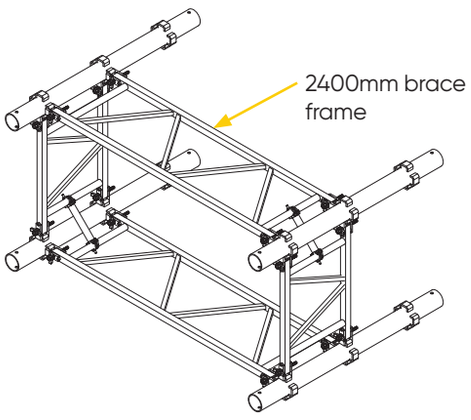
Connect Standards to the top of the 2 vertically standing Horizontal Bracing Frames.



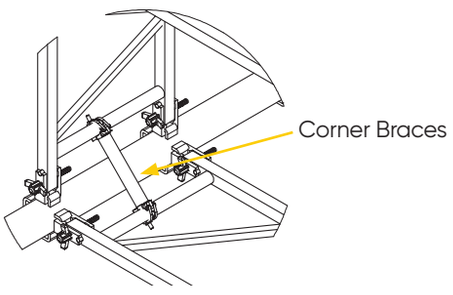
5. Assembly Details

Assembling the Powershore Shoring System - Method B

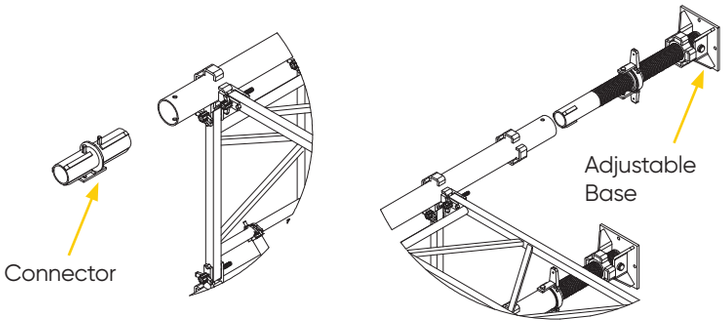
Connect the remaining 2400 Horizontal Bracing Frame to complete the base section of the tower.

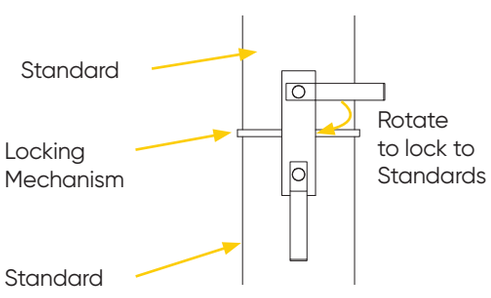


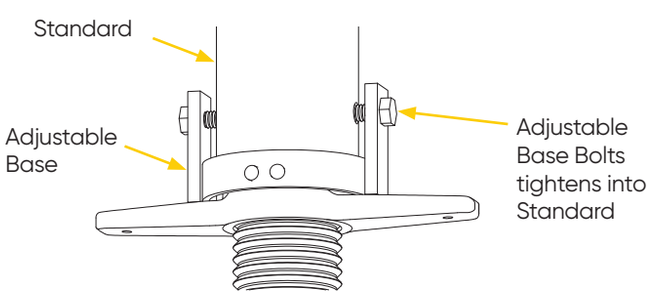
Connect the 2 Powershore Corner Braces in opposing corners.



Insert an Adjustable Base into the lower end of each Standard and lock into position using adjustable bolts. Insert a Powershore Standard Connector in the top end of each Standard and lock in position.

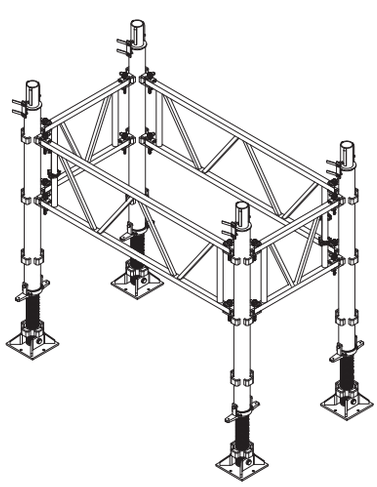






The assembly can now be lifted by the crane to stand upright.

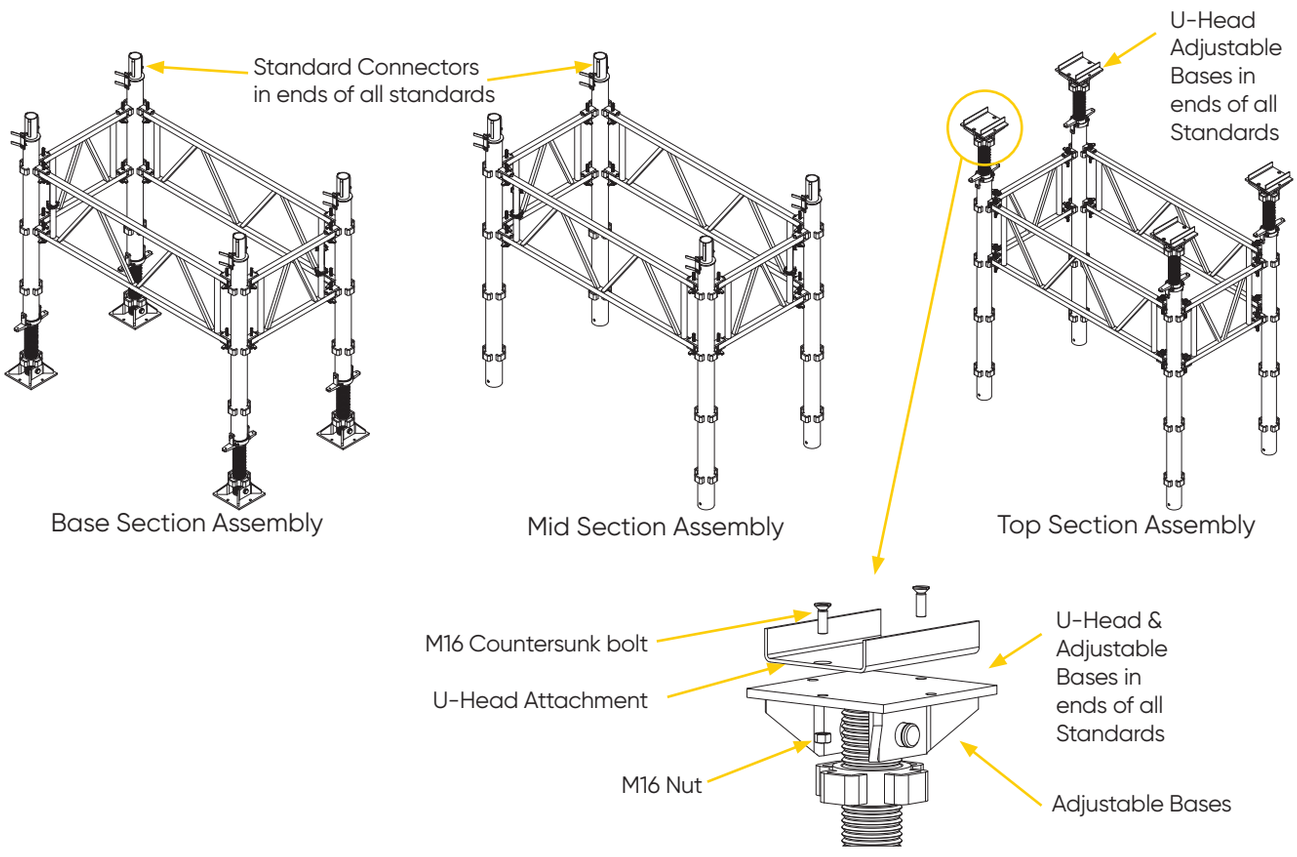
The assembly is now complete and ready for final assembly with the mid section/s and top section assemblies.



5. Assembly Details

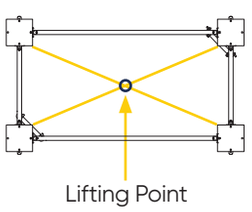
Method A/B Continued

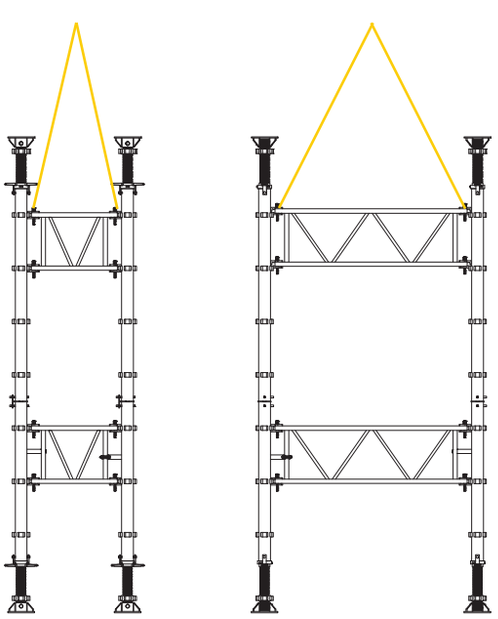
This process is repeated to construct the mid section of the tower (but without the Adjustable Bases) and the top section of the tower taking care to install the Corner Braces in opposite corners to the lower section of the tower so that the tower when assembled will have alternating corner braces. Install a Powershore Standard Connector in the top end of each standard in the mid section unit and place an Adjustable Base complete with U-head attachment in the top of each Standard in the top section unit.



Recommended crane lifting points

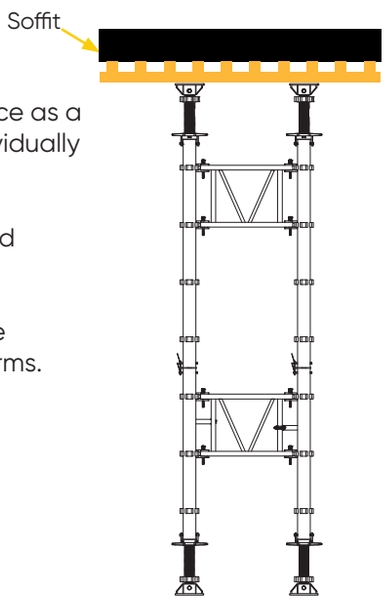
For single Standard 4 legged towers:
Wrap under U clusters below top chord of bracing frames with 4 flat/webbing slings. Pick up from inside the tower with min 60 degree angle to horizontal.





5. Assembly Details

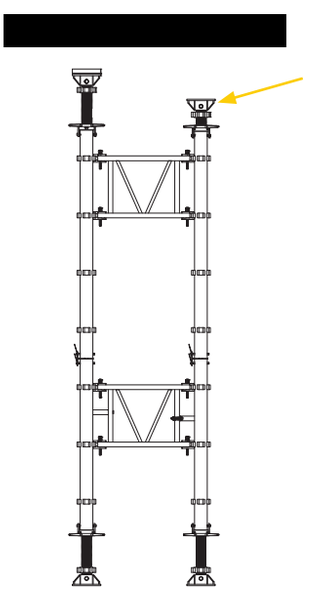
Dismantling the Tower



The Powershore towers supporting the slab soffit formwork were put in place as a completed tower, however each segment of the tower will have to be individually removed.

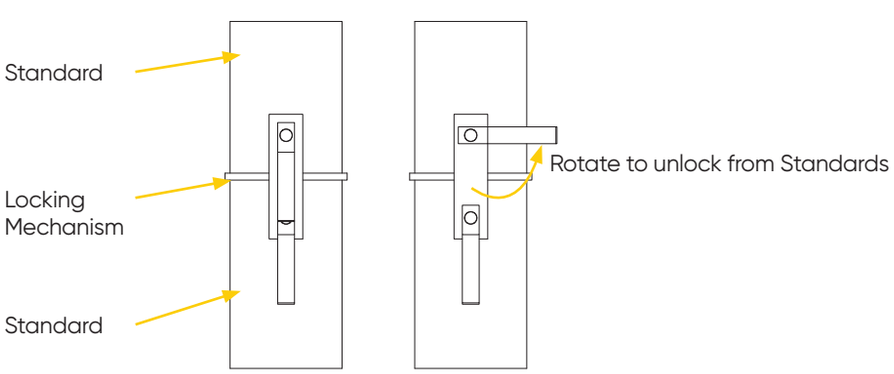
Lower the U-head Adjustable Bases sufficiently to allow plywood, joists and bearers to be removed.

Strip and remove the soffit formwork, working off a platform located on the bottom chord of the top horizontal Bracing frames or other suitable platforms.



After removal of the soffit formwork check there is at least 400mm of clearance between the top of the Uhead and the underside of the slab. If there is not enough clearance lower the U-head Adjustable Base. The clearance is necessary for the top section of the tower to be lifted clear of the Standard Connectors to remove it.

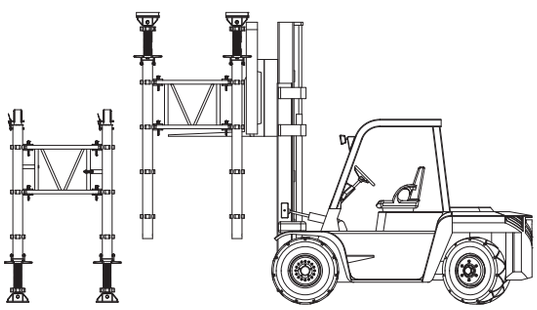
The locking mechanism of the Standard Connectors must be deactivated to enable the segments of the tower to be removed.



5. Assembly Details

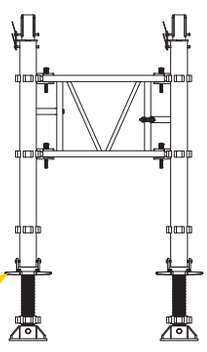
Dismantling the Tower

Remove Top Section



Using mechanical means such as a forklift, lift the top section of the tower clear of the Standard Connectors of the lower section and remove it to a dismantling area.
Repeat this process to remove all other sections of the tower.

Each section of the tower can now be dismantled by hand or with the assistance of mechanical means. During dismantling ensure each section of the tower remains stable. While removing the bracing frames and as the Standards become unstable it is important that they are held individually to prevent from falling.
Stack the components in a manner to enable them to be safely removed from site.



If the tower is only 2 Standards high then depending on the size of the forklift it may be removed as a complete unit. The clearance then required between the top of the U-head and the underside of the slab would only need to be approx 200mm.

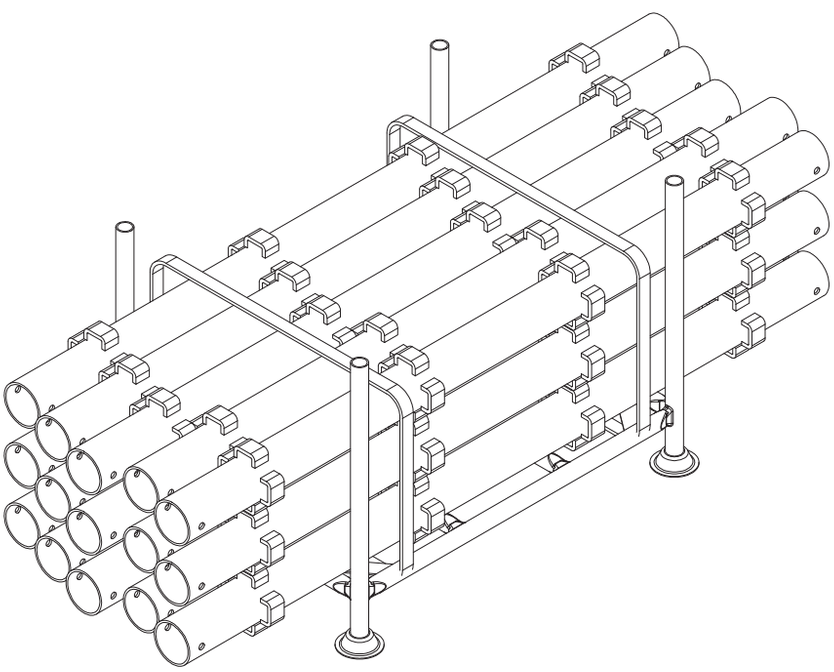
6. TRANSPORT & HANDLING

6. Transport & Handling

Powershore Standards Stillage

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



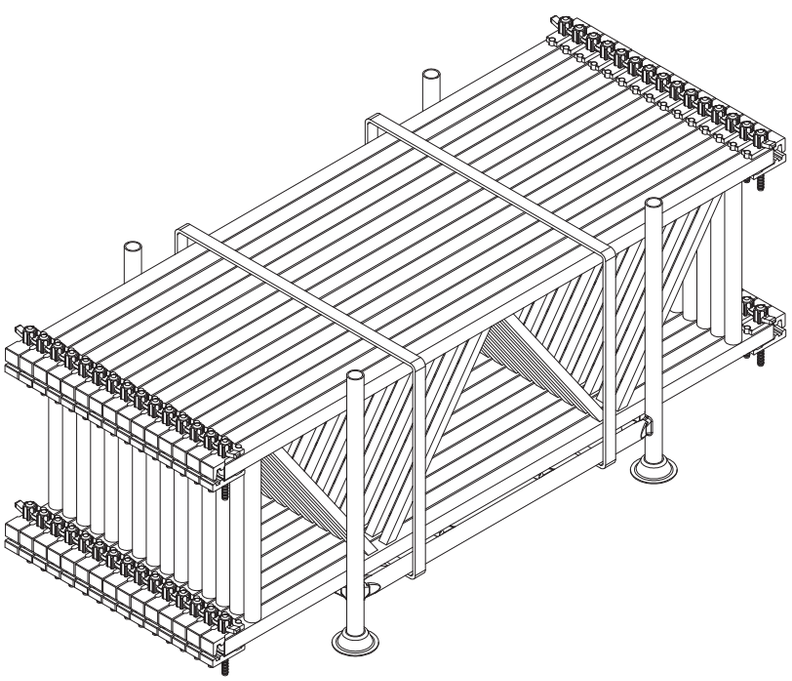
DESCRIPTION	UNIT MASS (KG)	QTY / STILLAGE	TOTAL MASS / STILLAGE (KG)	ACROW STILLAGE TYPE
1200mm Standard	26.0	20	520.0	MP
1800mm Standard	39.0	20	780.0	SP
2400mm Standard	52.0	20	1040.0	SP
3000mm Standard	65.0	20	1300.0	SP

6. Transport & Handling

Horizontal Bracing Frames Stillage

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



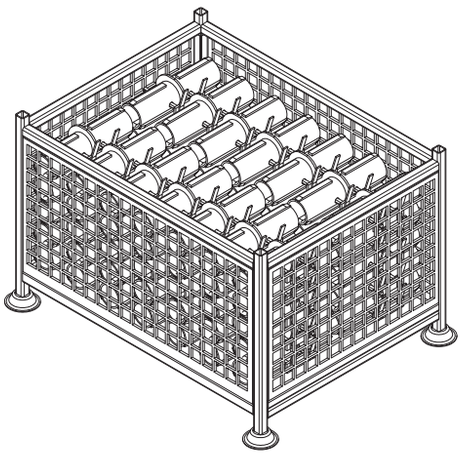
DESCRIPTION	UNIT MASS (KG)	QTY / STILLAGE	TOTAL MASS / STILLAGE (KG)	ACROW STILLAGE TYPE
900 Hoz. Bracing Frame	24.0	15	360.0	MP
1200 Hoz. Bracing Frame	31.0	15	465.0	MP
1800 Hoz. Bracing Frame	41.0	15	615.0	SP
2400 Hoz. Bracing Frame	51.0	15	765.0	SP
3000 Hoz. Bracing Frame	61.0	15	915.0	SP

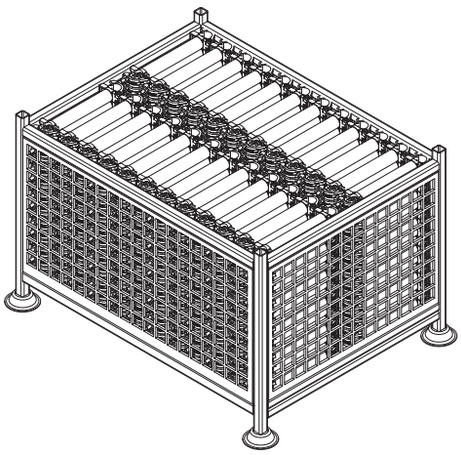
6. Transport & Handling

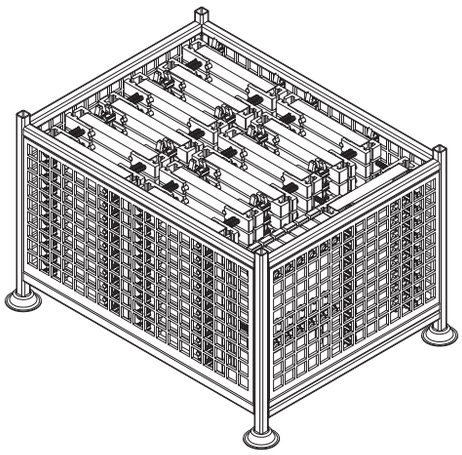
Corner Braces / 600 Tie Bar / Connectors Stillage

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.







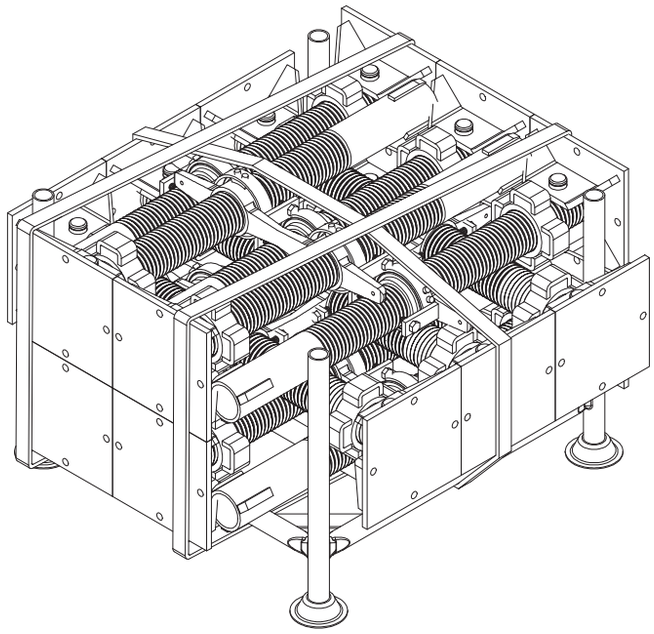
DESCRIPTION	UNIT MASS (KG)	QTY / STILLAGE	TOTAL MASS / STILLAGE (KG)	ACROW STILLAGE TYPE
Corner Brace	2.2	230	506.0	MEP
600mm Tie Bar	5.0	100	500.0	MEP
Standard Connector	10.0	70	700.0	MEP

6. Transport & Handling

Adjustable Bases Stillage

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



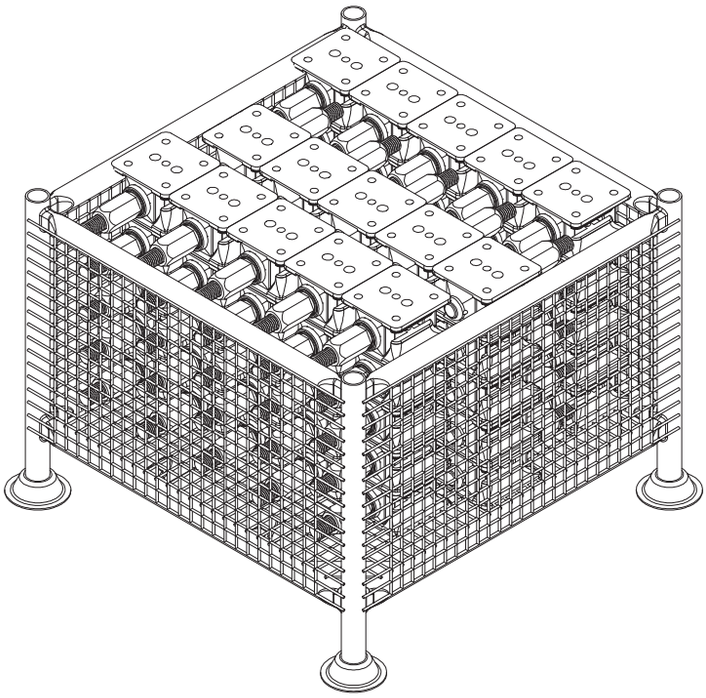
DESCRIPTION	UNIT MASS (KG)	QTY / STILLAGE	TOTAL MASS / STILLAGE (KG)	ACROW STILLAGE TYPE
Adjustable Base	51.0	20	1020.0	SP

6. Transport & Handling

Wedge Jack Stillage

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



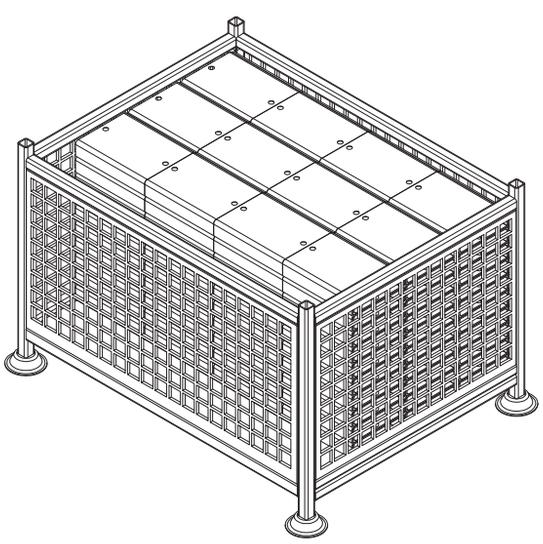
DESCRIPTION	UNIT MASS (KG)	QTY / STILLAGE	TOTAL MASS / STILLAGE (KG)	ACROW STILLAGE TYPE
Wedge Jack	12.5	60	750	MP

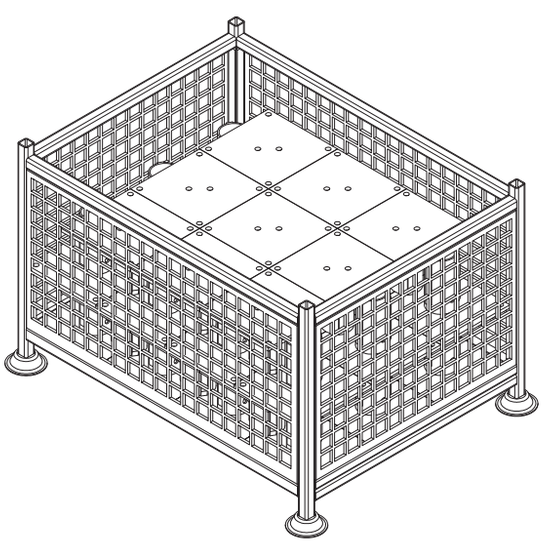
6. Transport & Handling

Base Plate / U-head Attachment Stillage

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



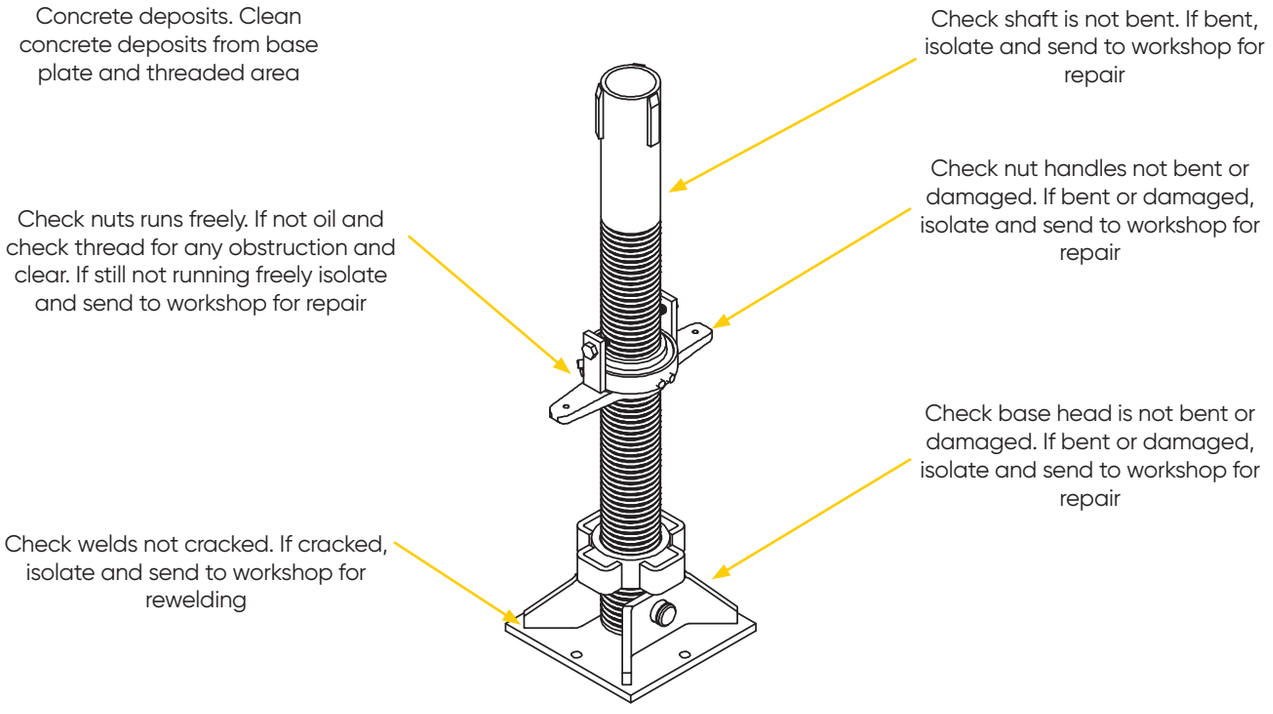


DESCRIPTION	UNIT MASS (KG)	QTY / STILLAGE	TOTAL MASS / STILLAGE (KG)	ACROW STILLAGE TYPE
Base Plate	16.5	50	825	MEP
U-Head Attachment	4.5	200	900	MEP

7. MAINTENANCE & INSPECTION

7. Maintenance & Inspection

Powershore Adjustable Base



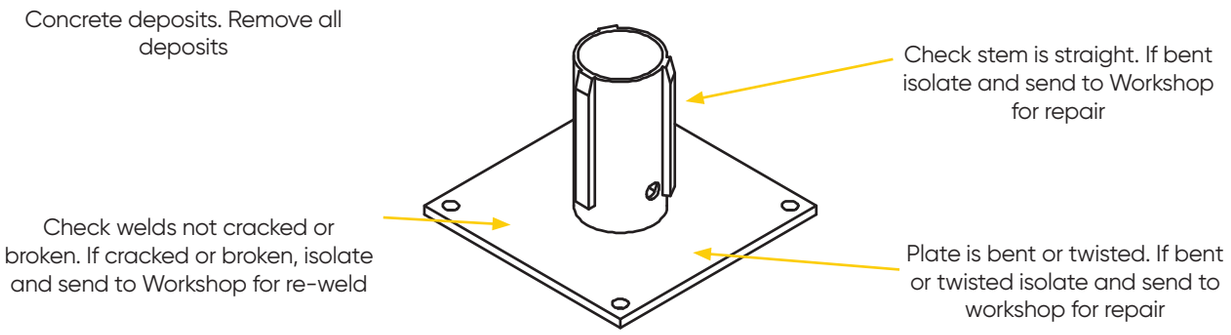
Inspection

Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	No build up permitted on base plate or stem particularly on thread	Remove build up with wire brush and scraper, clean threads and oil
Cracked welds on base head	Cracked welds are not permitted	Grind off welds and re-weld. Refer Work Instruction
Nut not running freely	Nut must run freely along full length of the shaft thread	Remove any obstruction in thread, oil and free up ,if not possible then replace nut
Nut with broken or cracked handles	Handles must be intact	Replace nut
Shaft is bent	Shaft must be straight	Straighten if possible ensure nut runs freely up and down full length of shaft after straightening. If not possible to straighten or nut does not run freely then scrap.
Base head is bent	Base head must be straight and at right angles to shaft	Remove base head and repair if not possible then scrap and replace with a new base head
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

7. Maintenance & Inspection

Powershore Base Plate



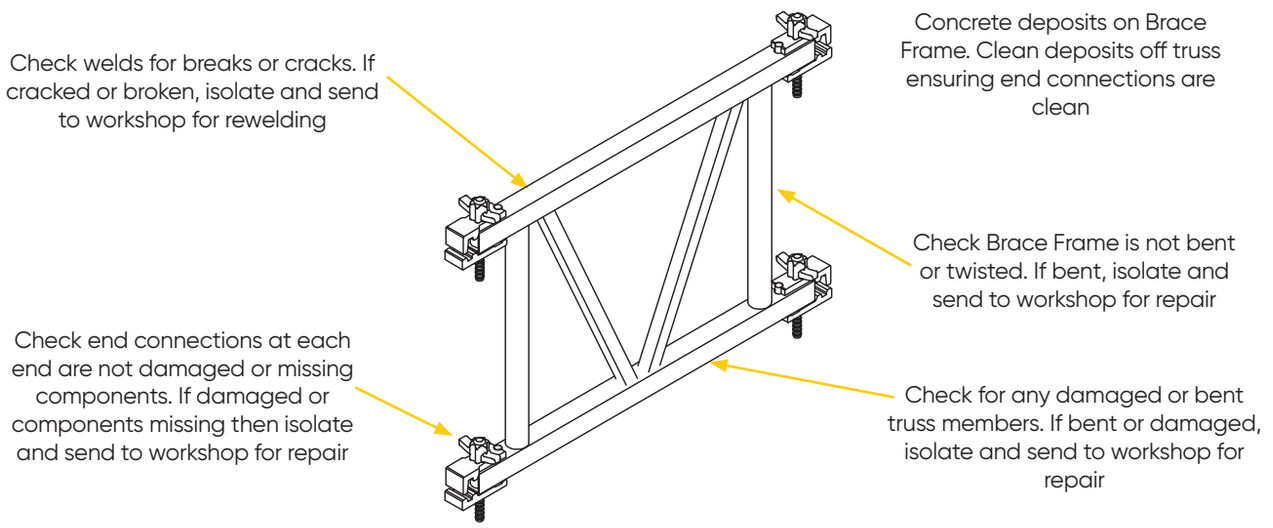
Inspection

Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Base plate must be clear of all concrete	Remove all concrete build up with wire brush and clean threads
Stem bent or damaged	Stem must be straight and square to base plate	Straighten or replace
Cracked welds at base of stem	Cracked welds not permitted	Grind and re-weld. Refer Work Instruction
End plate is bent or twisted	End plate must be straight and at right angles to stem	Straighten if possible otherwise scrap
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

7. Maintenance & Inspection

Powershore Brace Frame



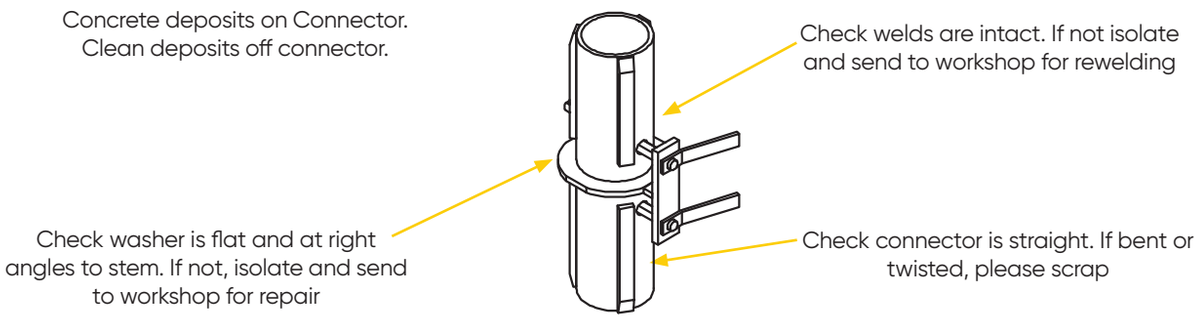
Inspection

Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	No build up permitted on truss members. All end connections must be clear of any concrete	Remove build up with wire brush and/ or chipping hammer
Bracing Frame bent or twisted	Bracing Frame must be straight and free of twist	Straighten if possible otherwise scrap See WI-GE-103 for reference
Damaged end connections or missing components	End connections must be intact with all components	Repair or replace any damaged ends and replace any missing components
Cracked welds on Brace Frame members	Cracked welds not permitted	Grind back cracked welds then re-weld
Truss members damaged or bent	Truss members must be straight and undamaged	Straighten members or replace
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

7. Maintenance & Inspection

Powershore Connector



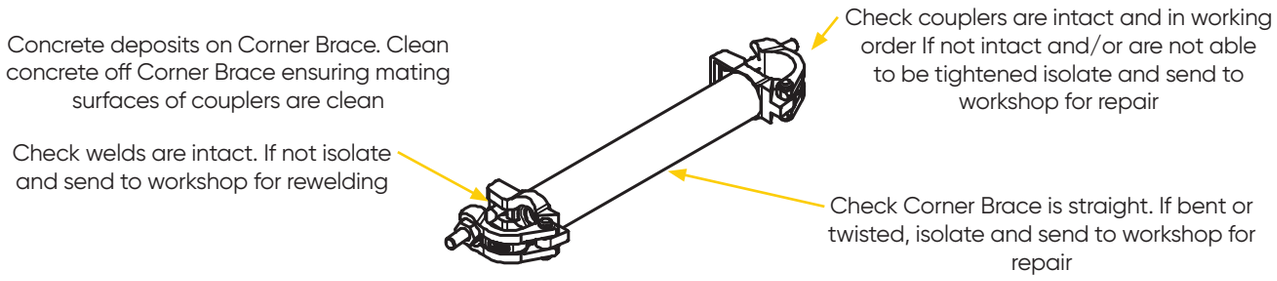
Inspection

Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Connector is bent or twisted	Connector must be straight	Scrap* (* See WI-GE-103)
Welds are broken or cracked	Welds must be intact	Grind back and reweld* (* See WI-GE-100)
Washer is bent	Washer must be straight and at right angles to stem	Straighten if possible, otherwise scrap* (* See WI-GE-103)
Concrete deposits on Connector	Connector must be free of concrete	Clean concrete off connector especially around the washer area
Components are missing and/or are bent	Components must be intact and not bent or out of shape	Straighten and repair if not possible then scrap
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

7. Maintenance & Inspection

Powershore Corner Brace



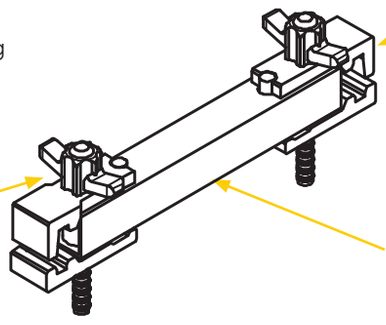
Inspection

Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Corner brace is bent or twisted	Corner Brace must be straight	Straighten if possible otherwise Scrap* (* See WI-GE-103)
Welds are broken or cracked	Welds must be intact	Grind back and reweld* (* See WI-GE-100)
Concrete deposits on Corner Brace	Corner Brace must be free of concrete	Clean concrete off connector especially the mating surfaces of the couplers
Coupler ends are damaged or not working properly	Couplers must be intact and in working condition	Repair and replace cap and/or Tee bolt if necessary or replace the entire half coupler
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

7. Maintenance & Inspection

Powershore Tie Bar



Inspection

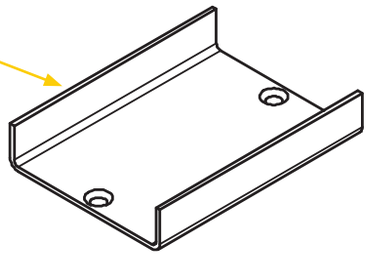
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Tie Bar is bent or twisted	Tie Bar must be straight	Straighten if possible otherwise Scrap* (* See WI-GE-103)
Welds are broken or cracked	Welds must be intact	Grind back and reweld* (* See WI-GE-100)
Concrete deposits on Tie Bar	Tie Bar must be free of concrete	Clean concrete off Tie Bar especially the end assemblies
End assemblies are damaged or not working properly	End assemblies must be intact and in working condition	Repair and/or replace components that are damaged or missing
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

7. Maintenance & Inspection

Powershore U-Head

Check sides and bearing surface are not bent. Distorted or Damaged. If bent or damaged, isolate and send to workshop for repair



Concrete deposits on U-Head
Clean concrete deposits off U-Head paying particular attention to ensure bearing surface is clean and holes are clear.

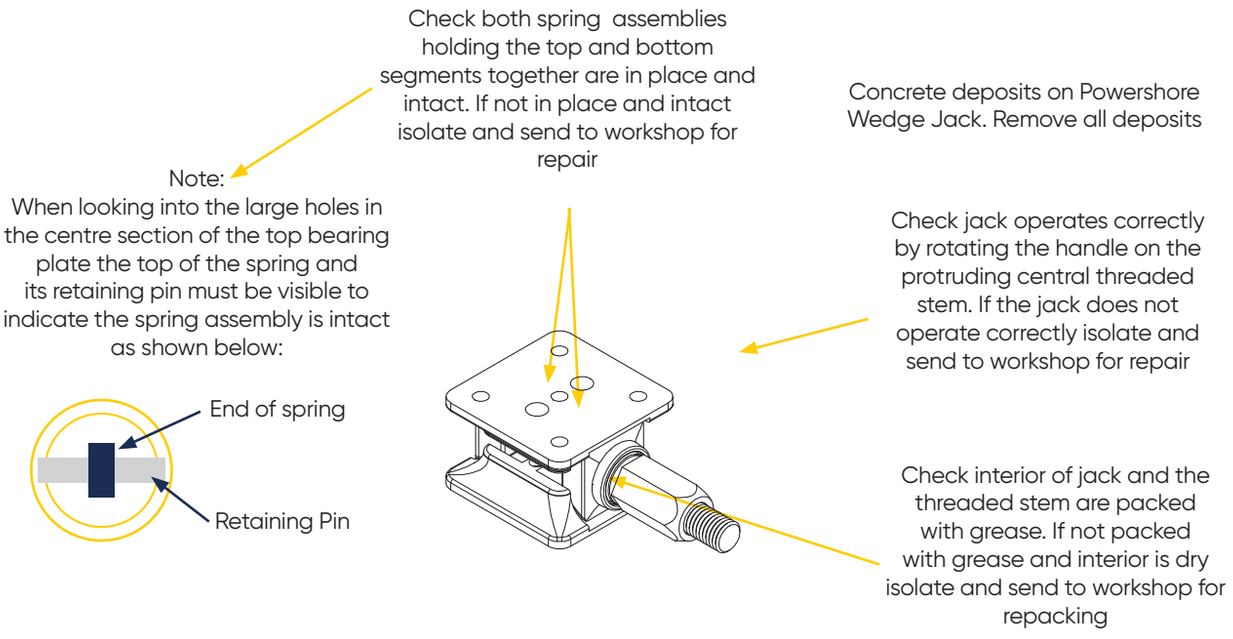
Inspection

Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Concrete deposits on head	U-Head must be free of concrete deposits	Remove concrete deposits, particularly between mating surfaces
Base & sides of U-Head bent or twisted	Base & sides must be straight & not twisted. Sides must be square to base	Straighten if unable to straighten then the unit must be scrapped
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

7. Maintenance & Inspection

Powershore Wedge Jack



Inspection

Generally, visual inspection checking for the possible faults listed below.

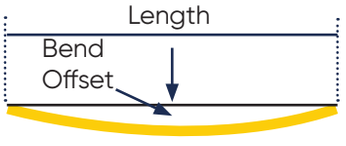
POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Wedge Jack must be clear of all concrete	Remove all concrete build up with wire brush and clean threads
Jack does not operate correctly	Jack must operate easily with little effort	Check thread for sand or dirt clogging it - clean off Check spring assemblies - rectify. Check threaded stem is not bent - replace
Interior of jack dry	Jack thread and mating surfaces between top and bottom segments must have a thick layer of grease	Wind jack down to lowest height then pull the top and bottom segments apart by hand pulling against the spring and apply grease into the centre of the jack using a narrow spatula
Spring assembly not connected properly or spring and/or retaining pin missing	Spring assemblies must be intact and tight	Construct a new spring assembly using new springs or existing springs if tension is OK. Spring assembly consists of 2 springs in each hole the longer one having a loop at its end to receive the retaining pin. Assemble the 2 springs in the hole then with a pair of long nose pliers griping the top of the loop pull it upwards until it is clear of the top surface of the top segment. Insert the retaining pin then release the spring into place
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

7. Maintenance & Inspection

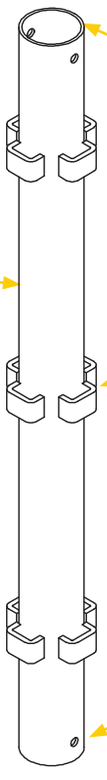
Powershore Leg

Concrete deposits on Powershore Leg. Clean concrete deposits off Powershore Leg paying particular attention to ensure connecting brackets are clean. Ensure the inside of tube at each end is clear to enable full inserting of connectors and adjustable base.

Check tube is not bent. If bent isolate and send to workshop for repair



Length of Standard	Acceptable offset mm
3000	4
2400	4
1800	3
1200	2



Check end of standard is square cut. If not square isolate and send to workshop for repair

Check welds are intact. If not isolate and send to workshop for rewelding

Check end of Powershore Leg is not damaged. If damaged isolate and send to workshop for repair

Inspection

Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Corner brace is bent or twisted	Corner Brace must be straight	Straighten if possible otherwise Scrap* (* See WI-GE-103)
Welds are broken or cracked	Welds must be intact	Grind back and reweld* (* See WI-GE-100)
Concrete deposits on Corner Brace	Corner Brace must be free of concrete	Clean concrete off connector especially the mating surfaces of the couplers
Coupler ends are damaged or not working properly	Couplers must be intact and in working condition	Repair and replace cap and/or Tee bolt if necessary or replace the entire half coupler
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

LOCATIONS

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E: info@acrow.com.au

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St Marys NSW 2760
P: 02 9219 1566

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P: 07 3265 2266

Screens & Formwork
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Beenleigh QLD 4207
P: 07 3807 9800

Industrial Scaffold
22a Spanns Road
Beenleigh QLD 4207
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Formwork & Scaffold
65 Boland Street
Launceston TAS 7250
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11 Jackson Street
Bassendean WA 6054
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26 Circuit Drive
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