

UNITEC Tower Assembly Instructions

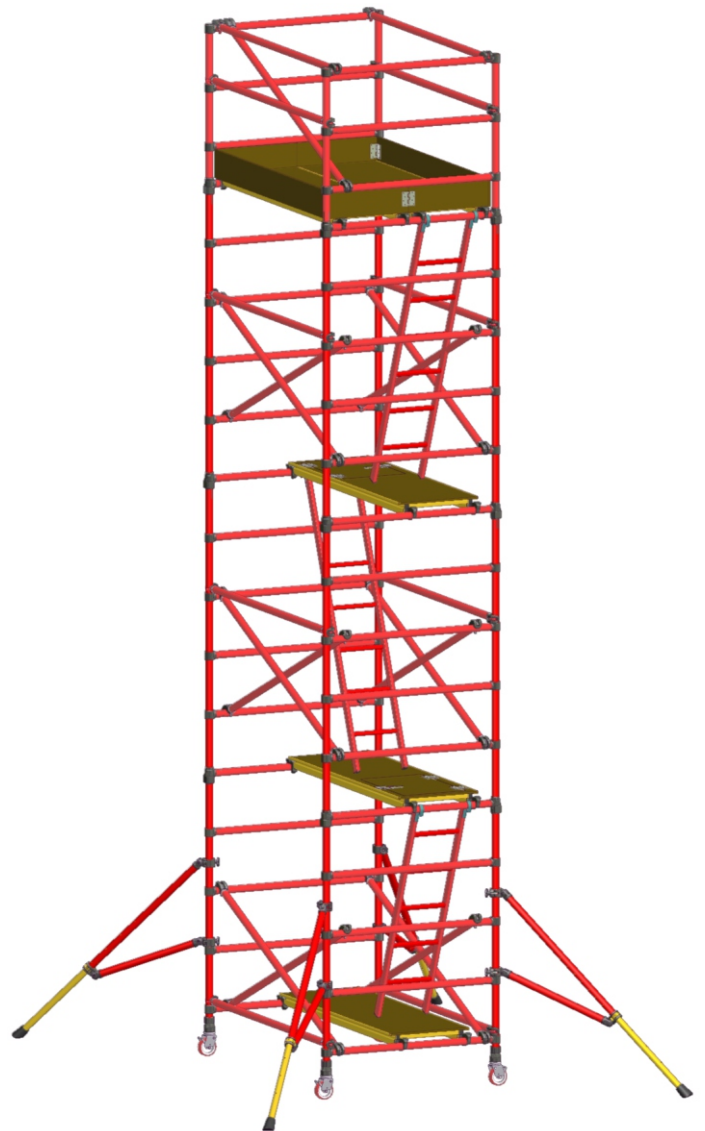
CON VERSION

CERTIFIED:
DIN EN 1004:2005-05
ANSI A10.8
CAN/CSA-S269.2-M87

**Designed to meet Work
at Height Regulations**

Suitable for Electrical Applications

**Suitable for use
in zone One Classified areas**



UNITEC TOWER

Thank you for purchasing the GENEX Tower.

This manual contains all the information required to correctly assemble UNITEC towers.

Please ensure you read and fully understand its content before attempting to assemble a tower.

This manual must be made available to the user / operative at all times.

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RISK ASSESSMENT

Prior to assembling the tower it is important that you perform a risk assessment.

This should be carried out by a competent person.

To aid the assessment, we have listed some of the factors that should be checked. Note that additional factors, not listed, will need to be taken into account.

If assembling the tower outside.

- There are no overhead power or communication cables above the area where the tower is to be assembled.
- The ground at the tower's point of contact (castors, baseplates and stabilisers) is capable of supporting the tower's weight without the risk of subsidence.

If assembling the tower indoors.

- There are no overhead obstructions above the area where the tower is to be assembled.
- The ground at the tower's point of contact (castors, baseplates and stabilisers) is capable of supporting the tower's weight.

If assembling as a free-standing tower.

- Platform height does not exceed the maximum free standing height permitted for the base size of tower (see Maximum Working Height).

DAILY CHECKS

The tower must be checked on a daily basis. Use the checklist on the inside back page and if a box can't be ticked, do not use the tower until the fault is rectified. Where a fault is found, access to the tower must be stopped.

MAXIMUM WORKING HEIGHT

Maximum Free-standing Height		
Base Size	indoor	outdoor
0.73m x 2.00m	8,00m	6,00m
0.73m x 2.50m	8,00m	6,00m
1.37m x 2.00m	12,00m	8,00m
1.37m x 2.50m	12,00m	8,00m

The tower can be assembled as a free standing tower and is perfectly safe to use provided the platform height does not exceed the height stated in the chart below.

GENERAL SAFETY NOTES

- When assembling and using the tower, make sure everyone wears suitable PPE (personal protective equipment).
- Do not roll or level the tower with personnel or materials on platform.
- Do not use the tower near non isolated, live electrical wires or devices, always consult one's the national rules.

Always climb the tower on the inside using the inclined ladder.

- Do not exert horizontal forces upon the tower in excess of 20kg.
- Never carry items when climbing the tower, keep your hands free.
- Never suspend the tower assembly from another structure.
- Never use steps, trestles or boxes to gain additional height.
- Never step or stand on the guardrail section.
- Never climb from the tower to another structure or vice versa.
- Do cordon off the base of the tower with cones and barriers to prevent members of the public gaining access to the tower.
- Do affix a warning notice to the tower if left unattended.
- Do make sure that a platform hatch is kept closed when not in use.
- When the base section is complete, before processing to add further frames, attach four outriggers, the base width and length must be minimum 1/3 of the tower height.

WIND SPEED SAFETY RULES

Towers assembled outside or in open-ended buildings are at risk from strong winds.

Equivalent speed at 10 metres above ground		
Description	Air Speed	Action to be taken
Moderate Breeze - Small Branches Move	8 m/s	Do not use the tower
Strong Breeze - Large Branches Bend	13 m/s	Tie tower to a rigid structure
Gale - Walking Progress Impeded	17 m/s	Dismantle tower

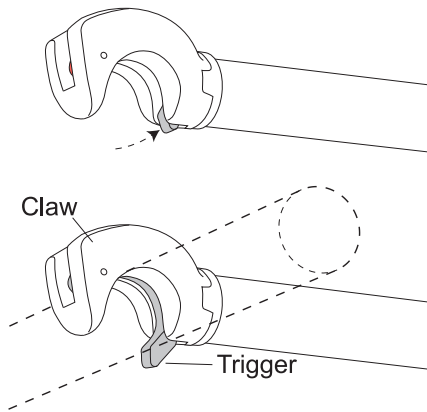
SAFE WORKING LOADS

There are two safe working loads (SWL) to consider when using a tower.

1. The SWL of individual platforms.
Each tower platform has been tested to a SWL of 226 kg
2. The total SWL of a tower.
Each tower has a total SWL of 725 KG with threaded legs extended, or 1360 kg with threaded legs retracted.

GETTING TO KNOW THE COMPONENTS AND HOW THEY WORK

BRACES AND HANDRAIL FRAMES



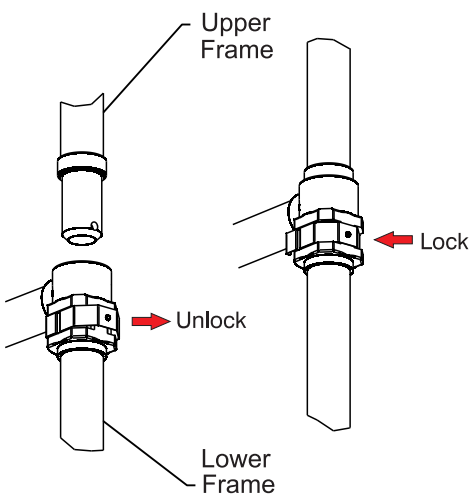
All braces and handrail frames are fitted with locking triggers that are designed to open and close themselves when in contact with the tubing. To release the claw from a tube, move the trigger back and hold as you lift the brace clear.

Braces are colour coded for type and size, see chart

Horizontal Brace (2.00m)	red trigger white seal	UHB06
Diagonal Brace (2.00m)	grey trigger white seal	UDB06
Horizontal Brace (2.50m)	red trigger yellow seal	UHB08
Diagonal Brace (2.50m)	grey trigger yellow seal	UDB08
Horizontal Brace (3.05m)	red trigger blue seal	UHB10
Diagonal Frame (3.05m)	grey trigger blue seal	UDB10
Handrail Frame (2.00m)	red trigger white seal	U24342 06
Handrail Frame (2.50m)	red trigger yellow seal	U23996 08
Handrail Frame (3.05m)	red trigger blue seal	U14997 10

When attaching claws to tubing the opening of the trigger **MUST** either face down (diagonal braces) or face outward from the tower (horizontal braces and handrail frames).

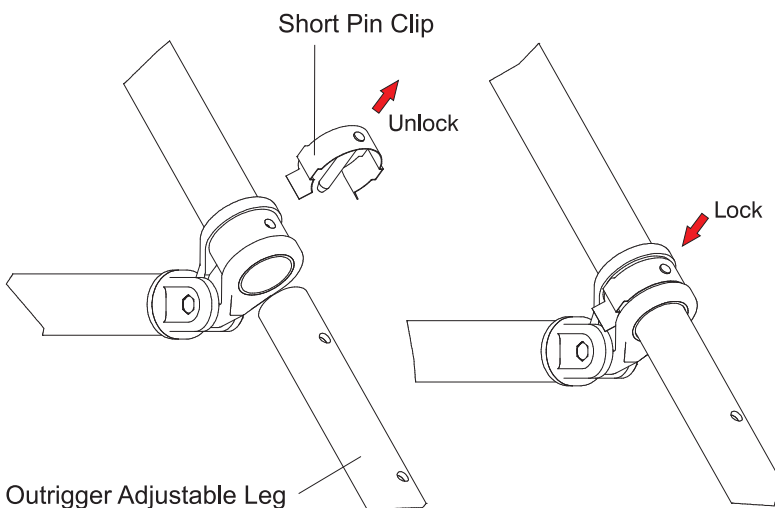
SHORT PIN CLIPS STACKING PIN AND TEE PLUS



To ensure that frames are secured safely to each other the frames are fitted with short pin clips. Before an upper frame can be slotted onto the frame below, the clips on the lower frame must be moved back.

Slot the lower frame stacking pin into the upper frame then push the short pin clip back to lock the frames together. The tower must not be used if any short pin clips are missing or damaged.

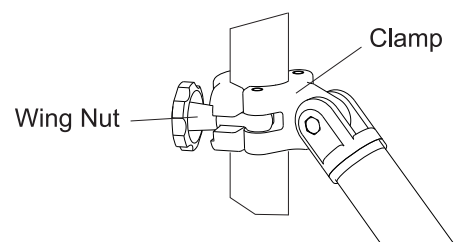
LONG PIN CLIPS AND CLAMPS



Adjust the lengths of the adjustable leg and lock the long pin clip.

To set the outrigger, creating as large a footprint as possible.

Tighten the clamps turning the wing nut.

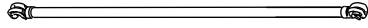


PARTS AND CODES LIST

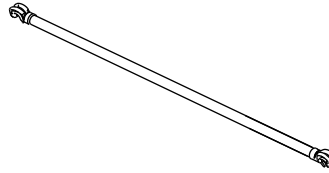
Base Plate
cod. BP00



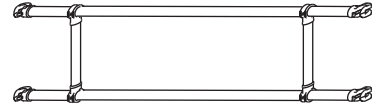
Castor sizes:
cod. CA05 Ø 127mm
cod. CA08 Ø 203mm



Horizontal brace lengths:
2,00m cod. UHB06
2,50m cod. UHB08
3,05m cod. UHB10

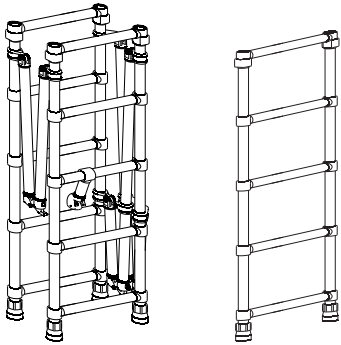


Diagonal brace lengths:
2,00m cod. UDB06
2,50m cod. UDB08
3,05m cod. UDB10



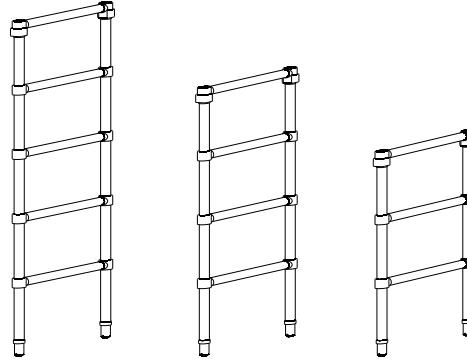
Handrail frame lengths :
2,00m cod. U24342 06
2,50m cod. U23996 08
3,05m cod. U14997 10

Narrow Base Frames



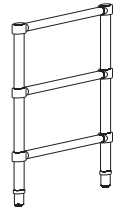
cod. UQB2906A
cod. UQB2908A
cod. USB2900A

Narrow Extension Frames



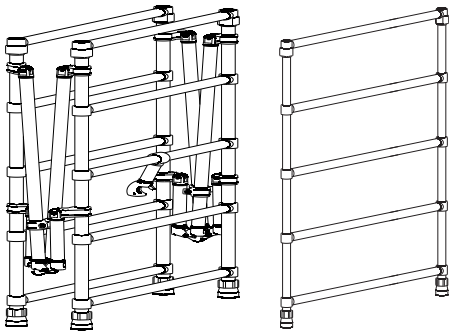
cod. UEX2969A
cod. UEX2956A
cod. UEX2940A

Narrow Guardrail Frames



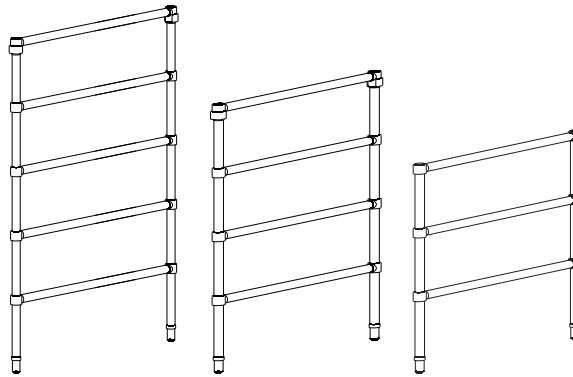
cod. UGR2937

Double Base Frames



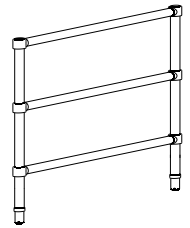
cod. UQB5406A
cod. UQB5408A
cod. USB5400A

Double Extension Frames

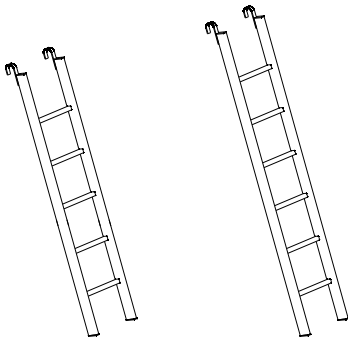


cod. UEX5469A
cod. UEX5456A
cod. UEX5440A

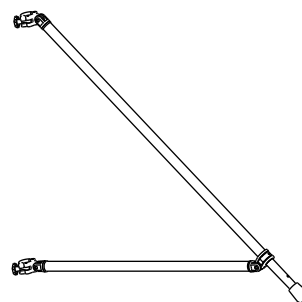
Double Guardrail Frame



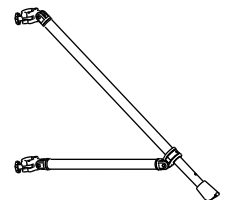
cod. UEX5437



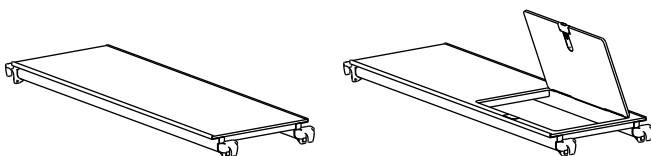
cod. UST56
cod. UST69



Large Outrigger
cod. PSX66 GRP

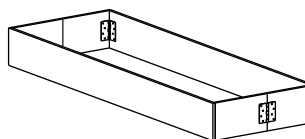


Medium Outrigger
cod. PSR42 GRP

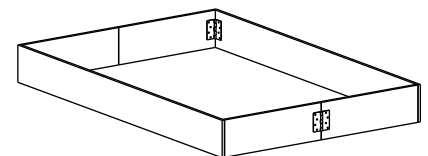


Standard platform lengths:
2,00m – cod. USP06-61
2,50m – cod. USP08-61
2,00m – cod. ASP06-61
2,50m – cod. ASP08-61
3,05m – cod. ASP10-61

Hatch platform lengths:
2,00m – cod. UHP06
2,50m – cod. UHP08
2,00m – cod. AHP06
2,50m – cod. AHP08
3,05m – cod. AHP10

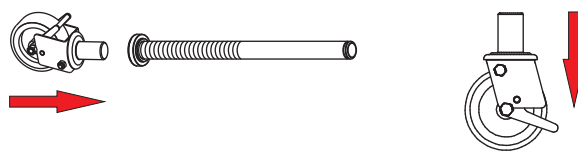
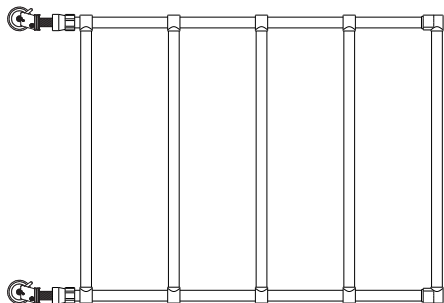


Narrow Toeboard lengths:
2,00m cod. WTB2906
2,50m cod. WTB2908
2,00m cod. ATB2906
2,50m cod. ATB2908
3,05m cod. ATB2910



Double Toeboard lengths:
2,00m cod. WTB5406
2,50m cod. WTB5408
2,00m cod. ATB5406
2,50m cod. ATB5408
3,05m cod. ATB5410

ERECTING THE TOWER



STEP 1

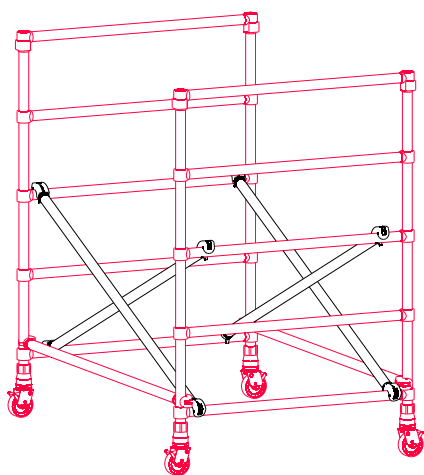
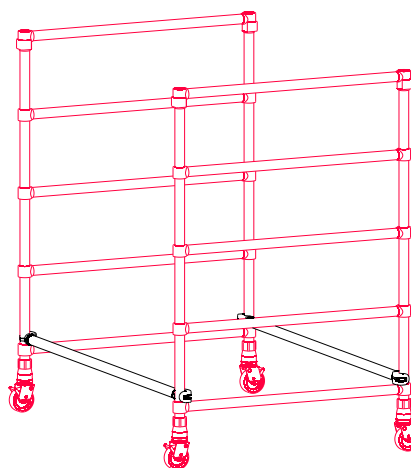
Insert adjustable leg/castor or base plate assemblies into frame.

Lock castors, moving the brake lever fully down.

The base plate doesn't permit to move the tower.

STEP 2

Attach two horizontal braces to the upright of each frame, hooks facing outwards.

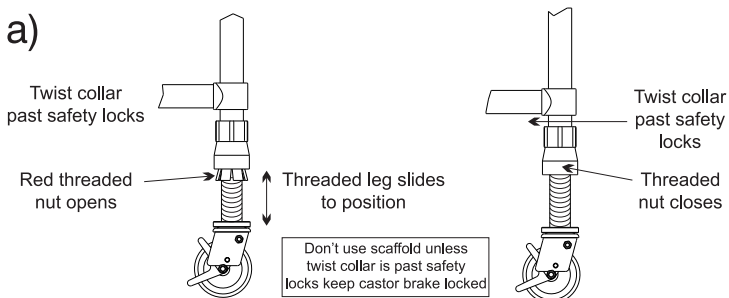


STEP 3

Attach four diagonal braces.

The base section is completed and you should now make any necessary adjustment to set the tower perfectly upright, see below.

a)



Level scaffold using adjustable legs

Lock adjustable legs before climbing scaffold

b) Use the upper mobile ring of the adjustable legs (turn it anticlock wise) if present.

ERECTING THE TOWER

STEP 4

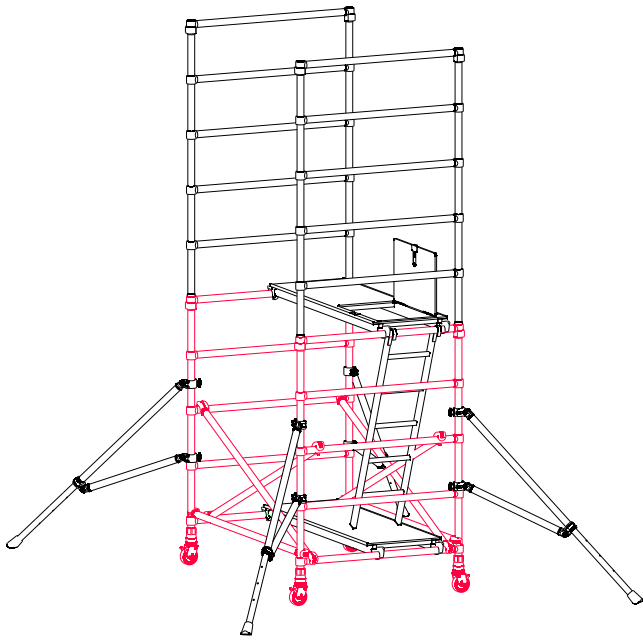
Before processing, attach four outriggers to the base of the tower, unlock the long pin clip to extend their adjustable leg, lock them after the adjustment.

Set a standard platform on lowest rung.

Add two further frames, the short pin clips have to be engaged, lock them after the insertion frames (ref pag. 5)

Attach a inclined ladder (5 rungs).

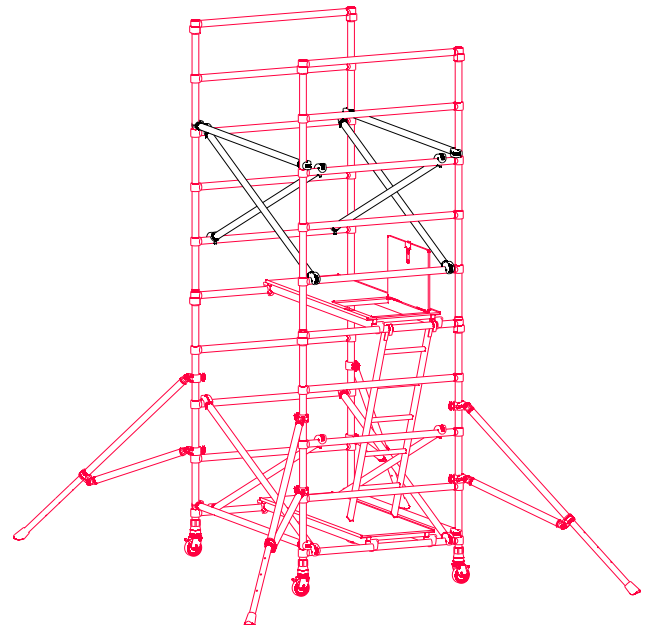
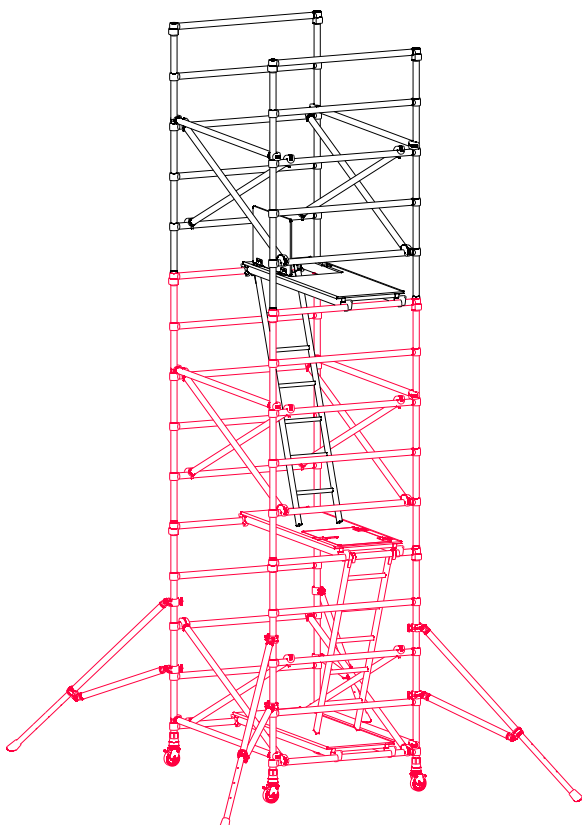
Attach a hatch platform on fourth rung above the lower standard platform.



STEP 5

Sitting through the hatch platform, attach two horizontal braces, hooks facing outwards.

Attach four diagonal braces.



STEP 6

Add two further frames, the short pin clips have to be engaged, lock them after the insertion frames (ref pag. 5).

Attach an inclined ladder (6 rungs).

Attach a hatch platform on the fifth rung above the lower hatch platform.

Sitting through the hatch platform, attach two horizontal braces, hooks facing outwards.

Attach four diagonal braces.

ERECTING THE TOWER

STEP 7

Add two guardrail frames, the short pin clips have to be engaged, lock them after the insertion frames (ref pag. 5).

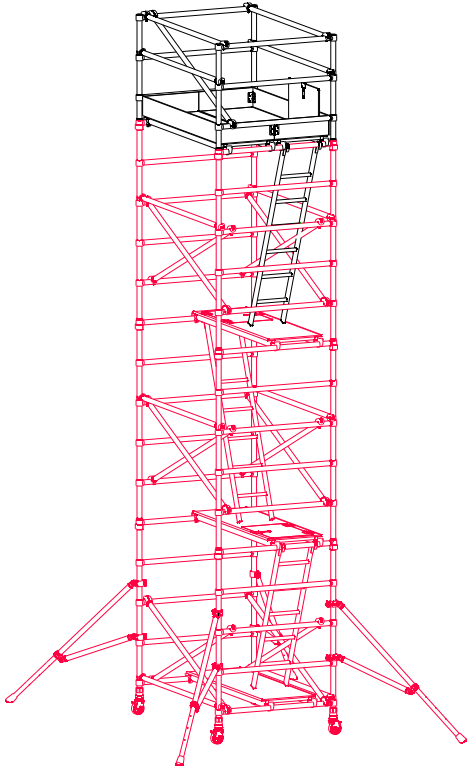
Attach a standard platform(right part).

Attach an inclined ladder (5 rungs).

Attach an hatch platform(left part)next to the inclined ladder, fifth rungs above the lower hatch platform.

Sitting through the hatch platform, attach four orizzontal braces, two on the vertical tubes hooks facing outwards, two on the upper rungs and one diagonal brace.

Fit the folding toeboard.



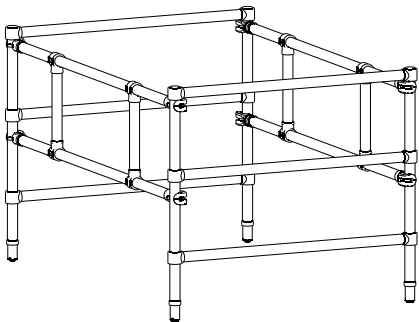
NARROW WIDTH TOWERS

The assembly process for narrow towers is very similar as the double width, other than:

Only one hatch platform is used at every platform level.

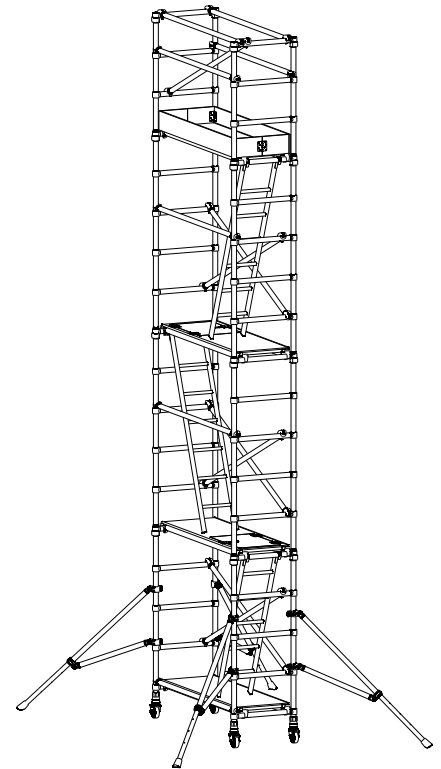
Two horizontal and two diagonal braces are required for single upper section.

The protection section is the same.



TOWER DISASSEMBLY

To disassemble the tower reverse the assembly instruction.



The final protection section can be ultimated using two handrail frames, see the detail.

OUTRIGGER

Outriggers must be used if upper section is added to the base section.

Adjust outrigger to provide a base width at least one-third of the tower height.

ERECTING THE TOWER

The UNITEC tower offers an alternative concerning the base section, it is the quick base, a section base assembled.

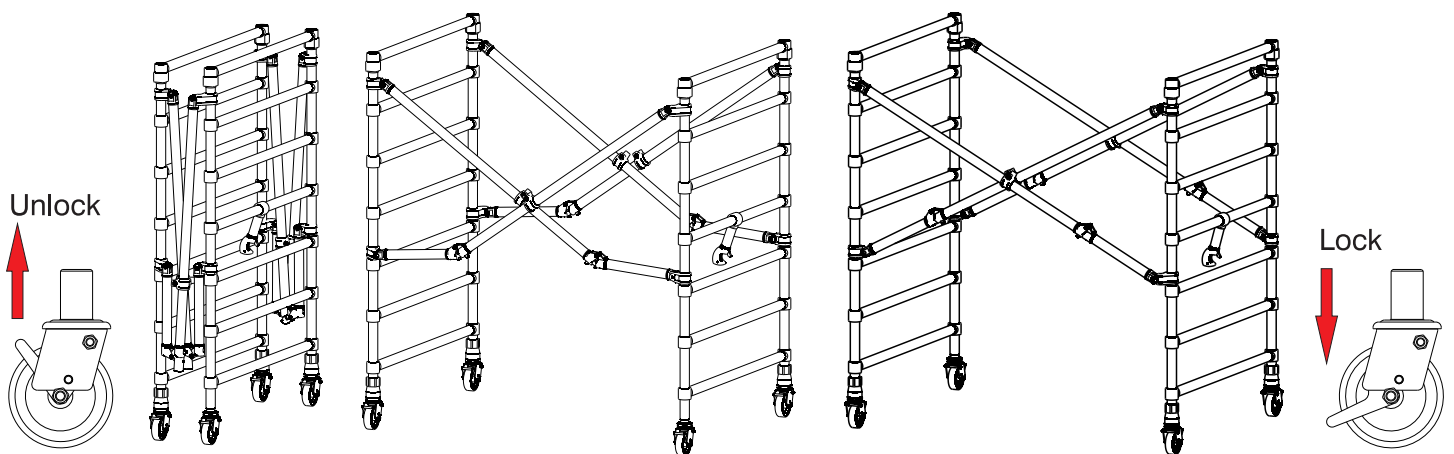
Insert adjustable leg/castor assemblies into quick base frames.

Unlock all castor brakes.

Unlock storage latch of quick base.

Roll end frames away from each other and lift up on the folding diagonal braces until all of the automatic locks engage.

Lock all castor brakes and continue to erect the tower from step 4 (pag. 8).



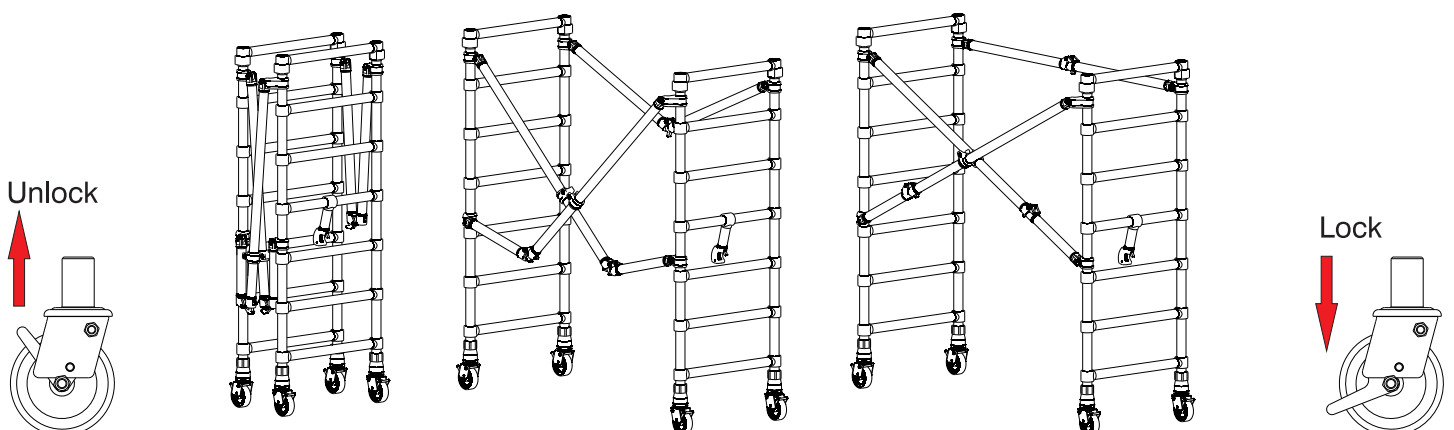
NARROW QUICK BASE

Unlock all castor brakes.

Unlock storage latch.

Roll end frame away from each other and lift up on the folding diagonal braces and the folding horizontal brace until all of the automatic locks engage.

Lock the castor brakes and continue to erect the tower from step 4 (pag.8).



STORAGE & HANDLING

TRANSPORTING

Tower sections should, where practicable, be transported in an upright position rather than laid down. Where components are placed on a vehicle roof rack, ensure the load is balanced and adequately secured. Check that the weight of the load does not exceed the vehicles SWL. Be aware of the height of the load and ensure there is enough clearance when moving under gateways and bridges.

ASSEMBLING & DISMANTLING

Tower components can be safely handed from helper to assembler (and vice versa) if the assembler can safely grasp the component without over reaching.

NEVER drop a component onto the ground from a height, it is extremely dangerous and could damage it.

STORING

The tower components should be stored under cover in a clean, dry and secure place.

CLEANING

To clean the tower components, a combination of soapy water and jet wash may be used.

MOVING THE TOWER

A tower fitted with base plates cannot be moved when assembled and must be fully dismantled and reassembled at the new location.

A tower fitted with castors can be moved a short distance if the ground surface is suitable. Make sure there are no potholes or manhole covers in the path of the tower.

Remove all materials, tools and personnel. Reposition and lock the outriggers so that the feet are no more than 25mm of the ground. Once ready release the castor breaks and push the tower to its new location.

DO NOT TOW the tower from a vehicle.

Once in position, lock all castors and make any necessary adjustments to set the tower perfectly upright. If the tower is out of square, twisted or leaning extend or retract the legs (turn the adjustment collar) until corrected.

Reposition and lock the stabilisers and where applicable, replace any upper sections.

DAILY CHECK

The tower must be checked on a daily basis. Photocopy the checklist below when required and if a box can't be ticked, do not use the tower until the fault is rectified. Where a fault is found, access to the tower must be stopped.

Date of inspection: _____ Description: _____

Inspector: _____ Location: _____

Site Address: _____

	OK	Damaged		OK	Damaged
Extension Frames			Handrail Frames		
Square	<input type="checkbox"/>	<input type="checkbox"/>	Brace Hooks	<input type="checkbox"/>	<input type="checkbox"/>
Bonded Joints	<input type="checkbox"/>	<input type="checkbox"/>	Triggers	<input type="checkbox"/>	<input type="checkbox"/>
Interlock Clips (2 per frame)	<input type="checkbox"/>	<input type="checkbox"/>	Trigger Springs	<input type="checkbox"/>	<input type="checkbox"/>
Tubes No Splits/cracks	<input type="checkbox"/>	<input type="checkbox"/>	Tubes - No Splits/cracks	<input type="checkbox"/>	<input type="checkbox"/>
			Bonded Joints	<input type="checkbox"/>	<input type="checkbox"/>
Braces			Outriggers		
Brace Claws	<input type="checkbox"/>	<input type="checkbox"/>	Knurled Nuts	<input type="checkbox"/>	<input type="checkbox"/>
Brace Trigger	<input type="checkbox"/>	<input type="checkbox"/>	Stabiliser Coupler	<input type="checkbox"/>	<input type="checkbox"/>
Trigger Springs	<input type="checkbox"/>	<input type="checkbox"/>	Nuts/Bolts/Washers/cracks	<input type="checkbox"/>	<input type="checkbox"/>
Tube - No Splits/cracks	<input type="checkbox"/>	<input type="checkbox"/>	Rubber Foot	<input type="checkbox"/>	<input type="checkbox"/>
			Bonded Joints	<input type="checkbox"/>	<input type="checkbox"/>
Standard Platform			Castors		
Square	<input type="checkbox"/>	<input type="checkbox"/>	Brake Mechanism	<input type="checkbox"/>	<input type="checkbox"/>
Platform Hooks	<input type="checkbox"/>	<input type="checkbox"/>	Housing	<input type="checkbox"/>	<input type="checkbox"/>
Bolts/Nuts/Washers (Tight)	<input type="checkbox"/>	<input type="checkbox"/>	Spigot	<input type="checkbox"/>	<input type="checkbox"/>
Timber	<input type="checkbox"/>	<input type="checkbox"/>	Tyre	<input type="checkbox"/>	<input type="checkbox"/>
Rivets	<input type="checkbox"/>	<input type="checkbox"/>			
Profiles	<input type="checkbox"/>	<input type="checkbox"/>			
Hatch Platform			Adjustable Legs		
Square	<input type="checkbox"/>	<input type="checkbox"/>	Thread	<input type="checkbox"/>	<input type="checkbox"/>
Platform Hooks	<input type="checkbox"/>	<input type="checkbox"/>	Collar	<input type="checkbox"/>	<input type="checkbox"/>
Hatch Hinges & trapdoor Latch	<input type="checkbox"/>	<input type="checkbox"/>	Straight	<input type="checkbox"/>	<input type="checkbox"/>
Bolts/Nuts/Washers (Tight)	<input type="checkbox"/>	<input type="checkbox"/>			
Timber	<input type="checkbox"/>	<input type="checkbox"/>	General condition		
Rivets	<input type="checkbox"/>	<input type="checkbox"/>	Clean	<input type="checkbox"/>	<input type="checkbox"/>
Profiles	<input type="checkbox"/>	<input type="checkbox"/>			
Toeboards					
Wooden	<input type="checkbox"/>	<input type="checkbox"/>			
Rivets	<input type="checkbox"/>	<input type="checkbox"/>			
Hinges	<input type="checkbox"/>	<input type="checkbox"/>			

Notes/Comments: _____

NOTES

A series of horizontal dotted lines for writing notes.



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