



# FREESTANDING STATIC INSTALLATION MANUAL

#### Congratulations on selecting Forpark Australia equipment for your playground.

This manual provides you with easy-to-follow instructions that will enable you to install the equipment correctly. Installing your own playground can be a simple and rewarding task and it is satisfying to be able to stand back when the job is finished and say "we did that!"

As a quality assured company our equipment complies with the following standards for play equipment as a minimum, to ensure the safety of your children.

- AS 4685:2021, Parts 1 6, Playground equipment (Safety requirements and test methods)
- AS 4422:2016 Playground surfacing Specifications, requirements and test method
- AS 4685.0.2017 Playgrounds and playground equipment Part 1: Development, slide installation, inspection, maintenance and operation

You may be interested to know that Forpark Australia is a family-owned Australian company and that we are the largest in-house manufacturer of playground equipment in Australia.

We have been manufacturing playground equipment since 1979 and provide you with the benefit of the knowledge and experience that we have developed over these years.

This installation manual should be kept for future reference and to help you with your maintenance program. A recommended maintenance schedule is provided at the rear of this manual.

Good luck with your installation.



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#### PREPARE THE SITE

Prior to any installation you should be familiar with the requirements of AS 4685 (Parts 1-6) – 2021 "Playground equipment – safety requirements and test methods" (particularly relating to fall zone requirements), AS/NZS 4422:2016 "Playground surfacing – specifications, requirements and test method" (relating to the type and depth of your soft-fall surfacing), and AS/NZS 4685.0:2017 "Playgrounds and playground equipment – development, installation, maintenance and operation" (dealing with your site requirements and ongoing maintenance).

- 1. Check that the site is clear of underground power and services before you commence digging.
- 2. Measure the site to ensure that it is large enough to allow for the correct fall zones between the equipment and the outside of the soft-fall surface, and for correct distances between various items of equipment. If you are unsure of these requirements you should check with your Forpark representative.
- 3. For ease of installation, do not put the soft-fall surfacing in until after the equipment has been installed. Ensure that you allow for the required soft-fall depth when excavating the site. Any excavation should take place prior to commencing installation of the equipment.

### **EQUIPMENT REQUIRED FOR INSTALLATION**

- 1. Ratchet (or socket set) with ½" driver
- 2. Ratchet (or socket set) with 3/8" driver
- Cordless drill
- 4. Shovel for digging holes (preferably long handled)
- 5. If digging in hard ground you may need a 300mm auger and a crow bar
- 6. Spirit level
- 7. 'G' clamps (for holding items in place prior to bolting)
- 8. String line
- 9. 'Vice-grip' pliers (for closing 'S' hooks)
- 10. Concrete for footings
- 11. An axe (for cutting tree roots if they are in the way)
- 12. Bricks/pavers/blocks of wood (one per upright) (to provide stability below ground where required)
- 13. A basic first aid kit for emergencies
- 14. 'Occupational Health and Safety' plan and procedures if applicable

### **FASTENERS**

Tri-lobe

Tap Tight Tri-lobe Button Head

Bolt

Torx Bolt

Cap Nut

T-nut









(Stainless Steel)





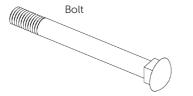
Cup Head



'S' Hook

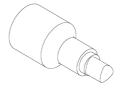
Tri-lobe Driver

Torx Driver











# ADDITIONAL FASTENERS (Orbit Structures only)

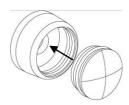
Tri-lobe bolt

Stainless Tech Screw

Security Cap M6







Upright Cap

Star Joint Cap





### CHECK THE CONTENTS OF THE CRATE

In addition to the equipment itself, you should have the following:-

- 1. Plans of the play structure
- 2. Materials or packing list
- 3. Tri-lobe driver (driver with a rounded triangular head which fits onto your 1/2" socket)
- 4. Post Torx Driver (driver with a star shaped head that fits into the ¼ inch socket)
- 5. Tech Screw Driver
- 6. Nuts and bolts, etc
- 7. Touch up paint
- 8. Loctite

### SECURING THE SITE WHILE WORK IS IN PROGRESS

You should ensure that the work site is clearly defined by some sort of barrier or temporary fence to ensure that children or onlookers are not in danger of injury while you work. The concrete footings will need at least 24 hours to set, so a barrier or fence will keep people off the equipment until it is ready to be used and until adequate soft-fall surfacing has been installed.

### **INSTALLING UPRIGHTS**

Uprights should be installed to a depth of 800mm below the finished surface level (ground level). Make sure that you allow for the safety surfacing when digging your holes, ie, if the upright needs to be buried 800mm in the ground, and you have already excavated 300mm for soft-fall, the holes only need to be another 500mm deep. (Note: If the ground is soft or likely to be subject to settling it is best to dig the holes an additional 100mm deep and lay a 100mm thick footing using rapid set concrete prior to inserting the uprights.)

Concrete the uprights (see "concrete footings" below) once the structure is assembled, then compact the footings and ensure that the structure is level before allowing the concrete to set.

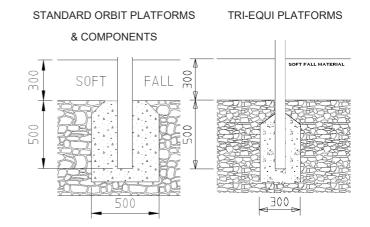
#### **FOOTINGS**

Concrete should be used on all items in the ground as per the diagram. Generally the footing should be 500mm x 500mm x 500mm (deep) with a tapered top so that water won't pool around the upright. Where Tri-equi platforms are used (with 3 uprights per platform) a smaller footing of 300mm x 300mm x 500mm (deep) can be used.

Where loose fill surfacing is used ensure that the concrete is at least 300mm below the finished surface level or that the footing is effectively covered by items of equipment in such a way that they do not present a hazard.

Note: If the ground is soft or likely to be subject to settling it is best to use an additional 100mm of concrete on the footing below the upright. This may need to set before placing the upright in place.

Forpark recommends General Purpose Concrete. This is a concrete with a compressive strength of 20MPa (at 28 days) or higher.

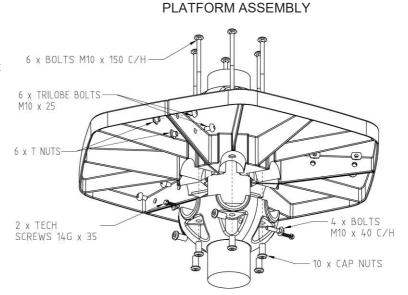


The concrete used in playground footings should only be mixed and/or worked by a suitably experienced person following supplier/manufacturer's instructions.

# INSTALLING PLATFORMS ORBIT PLATFORM

Assemble the Orbit Platform around the upright as shown, ensuring that the top of the platform is 400mm above finished surface level (ground level).

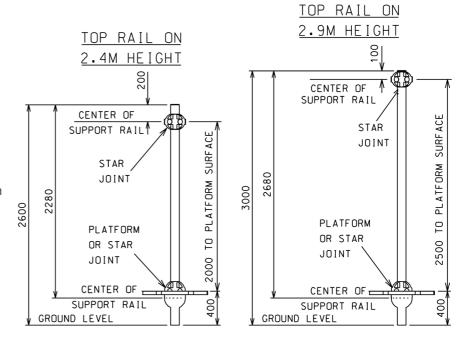
Where rails are to be fitted the top section of the clamp and platform should not be secured until the rails are in place.



#### **INSTALLING CLAMPS AND COMPONENTS - ORBIT**

Measure and mark the positions for the bottom star joint on each upright. Apply the two bottom sections to the upright at the marked level then bolt together using two cap nuts and two 40mm tri-lobes, tightening until they clamp onto the upright (see diagram for star clamp assembly on next page). Do the same for each upright. Rotate the clamps gently until all the bottom rails are able to be dropped into place.

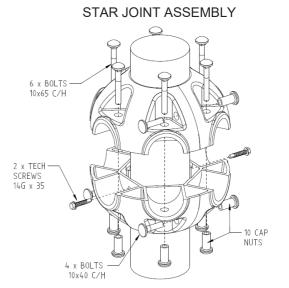
Each star joint section has one hole on the inside for a tech screw which will be used to secure to the upright. Endeavour to rotate the clamp so that the tech screw holes are orientated to a position where there will be no rails. (This is for ease if insertion later. Tech screws will be inserted last once the structure is completely level and square.)



Once all the bottom rails are in place, drop platform sections on top the bottom joint (see diagram) followed by the top star joints and tighten. Use 150mm cup head bolts and cap nuts through the platform. If there is no platforms on an upright just use the top sections of the star joint to secure using 65mm cup head bolts and cap nuts.

Repeat the same process at the top of the upright and secure top rails, using the heights shown on the drawings.

Once all star joints and rails are secure, ensure all horizontal rails are level, then using a cordless drill, insert a tech screw through each of the lower clamp halves (see diagram). Plug all open holes in the star joints with caps provided.



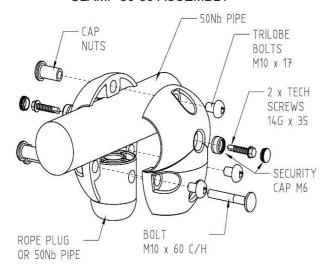
Once the uprights and horizontal rails are in place, attach the large clamps (50-90) onto the uprights and the

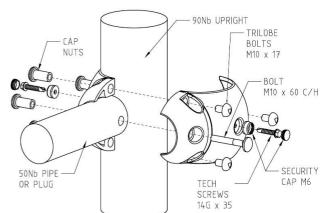
smaller clamps (50-50) onto the rails as per the diagram for each component, using three cap nuts and three 17mm tri-lobes. Each clamp is then secured in place by inserting a tech screw through the small hole on each side and into the post or rail. A security cap should be used with each tech screw as shown, fitting the base to the screw before fastening. The tech screw is inserted using a power drill and the tech screw driver supplied. Once secure, the top of the security

Items secured with gym clamps are positioned at heights

#### CLAMP 50-50 ASSEMBLY

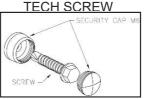
cap should be securely fastened.





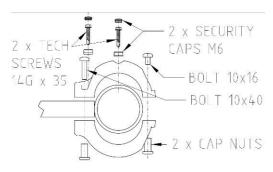
CLAMP 50-90 ASSEMBLY

#### SECURITY CAP FOR

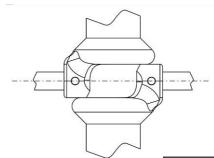


according the plan and secured to uprights as shown. When two items with Gym Clamps are positioned on the same level, place one clamp upside down, so the rails are positioned at the same height.

### GYM CLAMP - TOP VIEW

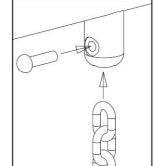


#### GYM CLAMP - SIDE VIEW



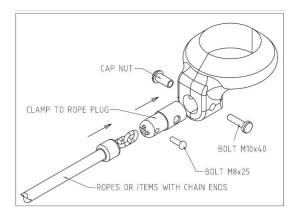
### **CHAIN HOUSING CONNECTIONS**

Several items have chains that attach to a top bar or rail. In these cases, the top bar or rail has chain housings connected. The chain should be inserted into the housing as far as it will go. An 8mm Torx bolt is then inserted into the hole in the housing, through the end link of chain, securing the chain in place. Make sure a small amount of 'Loctite' is applied to the thread before tightening.



### FITTING OF ROPES AND OTHER COMPONENTS

Once the concrete footings have set, fit the nets and other components as detailed in the following instructions for individual items. They are secured by sliding the plugs into the hole at the end of each clamp and fastening using 40mm cup head bolts and cap nuts. Tension the ropes as required by gently sliding the clamps slightly along the rails and then secure in place using a tech screw on both sides of each clamp into the rail or upright.

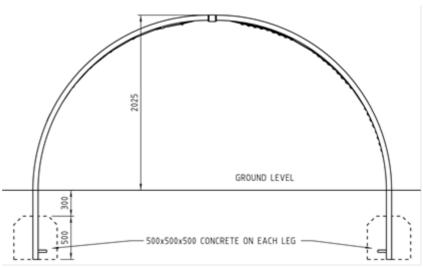


### ARCHED NET CLIMBER

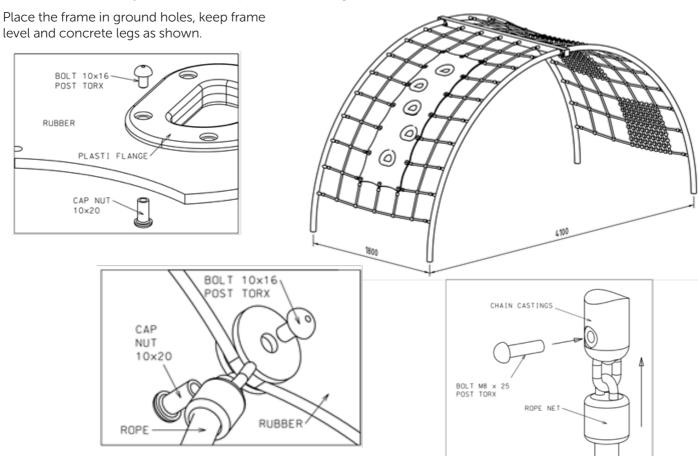
Dig 4 holes 500x500mm and 800mm deep in an 1800 x 4100mm square as shown.

Build the frame by joining the arched legs to the top bar using Stainless Steel Cap Nuts 10x28 and Studs 10x85, with two S/S washers ½" on each Cap Nut.

Attach plastic flanges to rubber membrane with bolts and cap nuts as shown. Attach the rubber membrane to the ropes using bolts and nuts as shown below. Ensure that the rubber membrane to rope attachments are tightened very well and Loctite is used. If the attaching clamps are to come loose, tearing of the

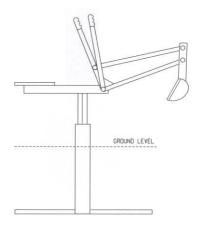


rubber membrane may occur. Attach ropes to frame using bolts M8x24 Post Torx as shown.



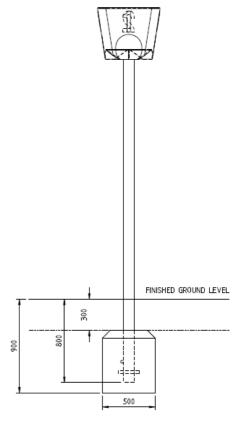
#### **BACKHOE**

Dig a hole approximately 550mm in diameter and 700mm deep. Insert the Backhoe into the hole, ensuring that the seat sits approximately 400mm above finished surface level. Pour concrete approximately 200mm above the base stand and backfill. (Note: Ensure the equipment is not used for at least 24 hours to allow the concrete to set.)

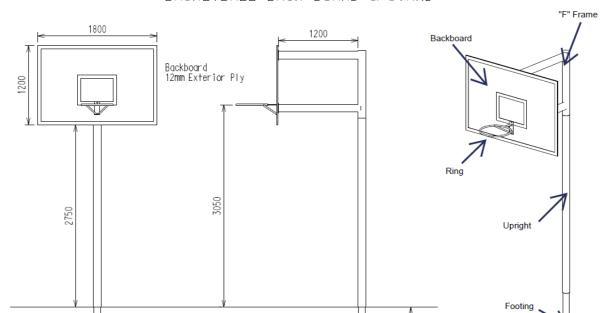


### **BALL TOSS**

Attach the ball toss basket to the top of the upright using 17mm tri-lobe bolts and T-nuts (with the tri-lobe entering from inside the basket. Dig a hole approximately 900mm deep and 500mm square. Insert the upright making sure it is level. Pour concrete around the base of the pole forming a footing of 500mm x 500mm x 600mm (deep), the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. (The footing extends 100m below the base of the upright so either the first 100mm of the footing should be allowed to set first or the pole should be rested on a brick or block before pouring the footing.) Ensure that the upright is vertical after the concrete is poured. (Note: Ensure the equipment is not used for at least 24 hours to allow the concrete to set.)



### **BASKETBALL STAND**



Minimum footing sizes in millimetres

Plan Width

1000

1000

1000

Plan Length

1000

1000

1000

800 900

1000

Wind

region to AS 1170.2

В

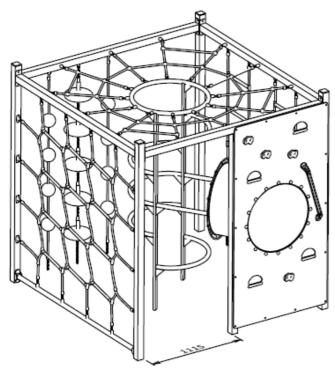
С

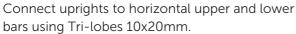
### BASKETBALL BACK-BOARD & STAND

Use 8 Trilobes Tap Tight to join Upright to Footing and "F" Frame.
Use 10 Bolts 10x74, 10 Washers and 10 Nuts to join Ring and Backboard to "F" Frame.

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### CUBE 3P





Mark and dig five (5) holes for the uprights 300mm x 300mm wide and 800mm below finished ground level.

Position the frame in the holes ensuring the top of the upper horizontal bars are 2400mm above finished ground level. The distance between the inside of each upright should be 2250mm (refer below).

Mark the position of the 2 legs of the steel frame and dig 2 holes 300mm x 300mm wide and 800mm below finished ground level.

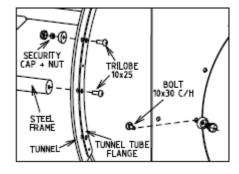
Attach the top net and the steel frame to it. Attach the aluminium panel to the structure with Tri-lobes 10x20mm and the tunnel section to the panel and the steel frame, as shown.

GROUND LEVEL

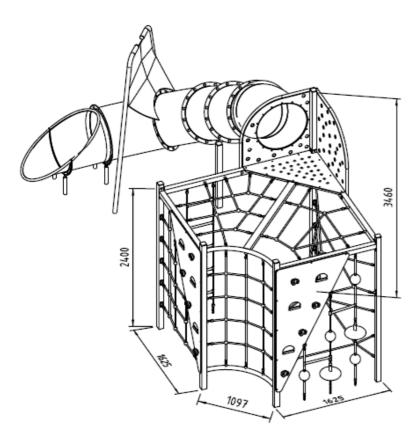
Attach all ropes with chain ends to the frames with bolts M8x25mm.

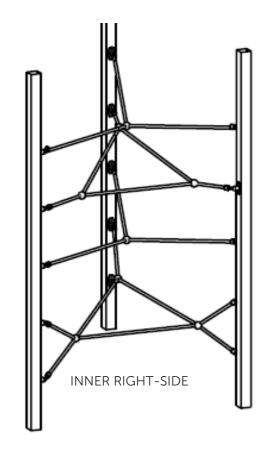
Hang the pommel chain, ball and ladder ropes, mark and dig holes in ground approx. 600mm below finished ground level and 300mm x 300mm wide. Attach anchors to chains, lower in the holes and concrete footings (approx. 300mm x 300mm x 300mm).

Keeping the frame square with corner uprights and steel frame vertical, concrete footings 300mm x300mm x400mm (deep). Back fill holes with soil.



### **CUBE 3P & SLIDE**





Connect uprights to horizontal upper and lower bars using Tri-lobes 10x20mm.

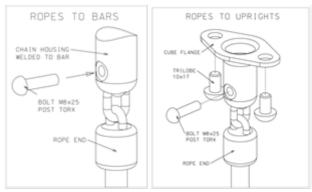
Mark and dig five (5) holes for the uprights 300mm x 300mm wide and 800mm below finished ground level.

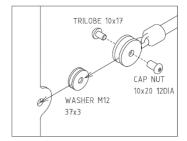
Position the frame in the holes ensuring the top of the upper horizontal bars are 2400mm above finished ground level. Check the distance between the outside of uprights as shown.

Attach the top net and the steel frame to it. Attach the aluminium panels to the structure with Tri-lobes 10x20mm.

Attach all ropes with chain ends to the frames with bolts M8x25mm.

Attach rope ends to all panels with washers, trilobes and cap nuts, as shown.

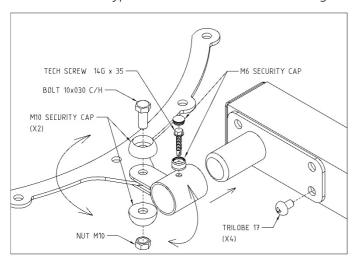




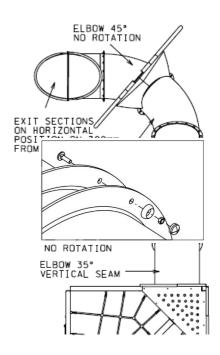
Hang the pommel chain, ball and ladder ropes, mark and dig holes in ground approx. 600mm below finished ground level and 300mm x 300mm wide. Attach anchors to chains, lower in the holes and concrete footings (approx. 300mm x 300mm x 300mm).

Keeping the frame square with corner uprights and steel frame vertical, concrete footings 300mm x300mm x400mm (deep). Back fill holes with soil.

Connect the sections of the tunnel slide together using 10x25 C/H bolts (except where the slide leg cradle attaches - 10x30 C/H bolts), nuts and security caps as shown. Connect the top section to the entry panel and keep going down, section after section. Check plan for the type of slide and the number and type of sections. Attach the slide legs to the support cradle



using 'tap tight' tri-lobes. Each lea should be installed with the base 600mm below finished ground level.



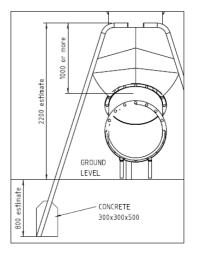
Use the slide as a guide to determine the position of the holes for the exit support legs and dig holes. It is advisable to place a brick or a block of wood below each leg to provide additional stability. Concrete the legs into the ground.

For the slide support, attach the joining plate to upright with tri-lobes 10 x 17.

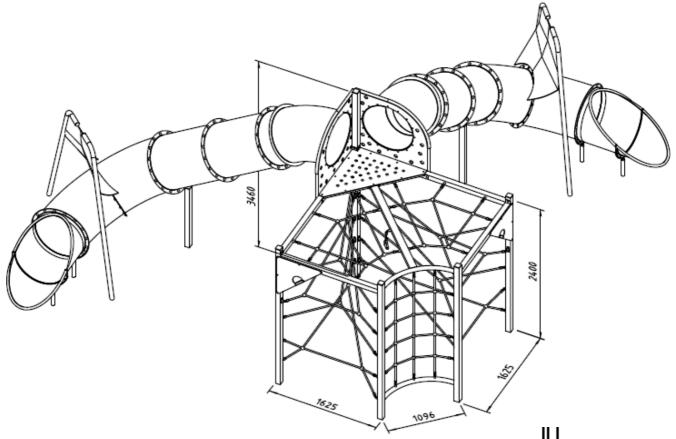
Position the upright under the flange and attach cradle on suitable position. Join the plug to cradle with loose bolt. Insert the plug on the plate's pipe and secure with the Tec Screw. Tighten the bolt and place cover on caps.

Attach rubber membrane to both supports with cup head bolts and security caps. Rise and position the frame above the tunnel flange you will attach the rubber to. The flexible rubber will allow for both legs to keep minimum distance of 250mm to the tunnel tube (no part of the tunnel should come closer than 250mm to the barrier support legs). The rubber should be tilted slightly forwards the exit as shown (check the dimensions). Mark the position for the holes in ground. Dig the holes, insert the frame and bolt the rubber to the flange. If the last holes on the flange of the rubber don't match the holes on tube's flange, drill the needed hole on the tube's flange.

Concrete, keeping the frame vertical.



### CUBE 3P & 2 SLIDES



Connect uprights to horizontal upper bars using Tri-lobes 10x20mm.

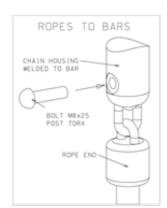
Mark and dig five (5) holes for the uprights 300mm x 300mm wide and 800mm below finished ground level.

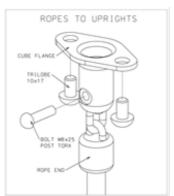
Position the frame in the holes ensuring the top of the upper horizontal bars are 2400mm above finished ground level. Check the distance between the outside of uprights as shown.

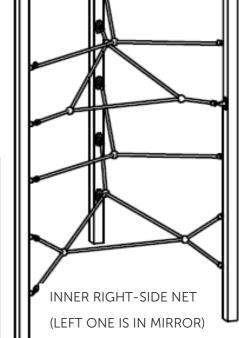
Attach the top net and the steel frame to it. Attach the aluminium panels to the structure with Tri-lobes 10x20mm.

Attach all ropes with chain ends to the frames with bolts M8x25mm.

Hang the pommel chain, ball and ladder ropes, mark and dig holes in ground approx. 600mm below finished ground level and 300mm x 300mm wide.





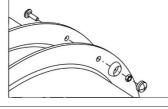


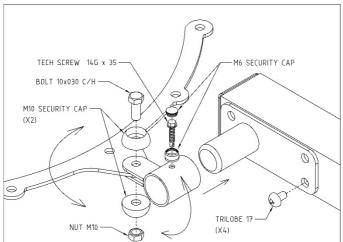
Attach anchors to chains, lower in the holes and concrete footings (approx. 300mm x 300mm x 300mm).

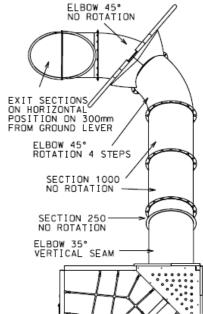
Keeping the frame square with corner uprights and steel frame vertical, concrete footings 300mm x300mm x400mm (deep). Back fill holes with soil.

Connect the sections of the tunnel slide together using 10x25 C/H bolts (except where the slide leg cradle attaches - 10x30 C/H bolts), nuts and security caps as shown. Connect the top section to the entry panel and keep going down, section after section. Check plan for the type of slide and the

number and type of sections. For the position of tunnel sections, the right slide is a mirror of the left one. Attach the slide legs to the support cradle using 'tap tight' tri-lobes. Each leg should be installed with the base 600mm below finished ground level







Use the slide as a guide

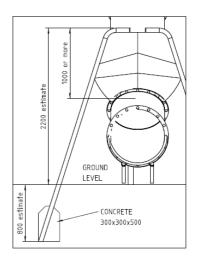
to determine the position of the holes for the exit support legs and dig holes. It is advisable to place a brick or a block of wood below each leg to provide additional stability. Concrete the legs into the ground.

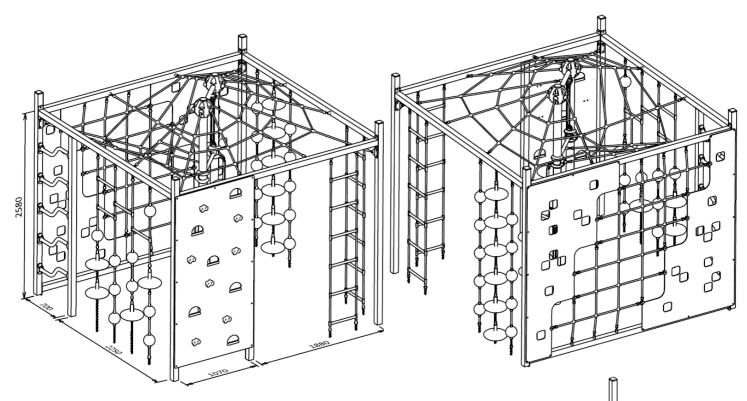
For the slide support, attach the joining plate to upright with tri-lobes 10 x 17.

Position the upright under the flange and attach cradle on suitable position. Join the plug to cradle with loose bolt. Insert the plug on the plate's pipe and secure with the Tec Screw. Tighten the bolt and place cover on caps.

Attach rubber membrane to both supports with cup head bolts and security caps. Rise and position the frame above the tunnel flange you will attach the rubber to. The flexible rubber will allow for both legs to keep minimum distance of 250mm to the tunnel tube (no part of the tunnel should come closer than 250mm to the barrier support legs). The rubber should be tilted slightly forwards the exit as shown (check the dimensions). Mark the position for the holes in ground. Dig the holes, insert the frame and bolt the rubber to the flange. If the last holes on the flange of the rubber don't match the holes on tube's flange, drill the needed hole on the tube's flange.

Concrete, keeping the frame vertical.





### **CUBE 4P**

Connect uprights to horizontal upper and lower bars using Tri-lobes 10x20mm.

Mark and dig four (4) holes for the uprights 300mm x 300mm wide and 800mm below finished ground level.

Position the frame in the holes ensuring the top of the upper horizontal bars are 2580mm above finished ground level. The distance between the inside of each corner upright should be 3025mm. Mark and dig 2 same holes for the steel ladder and rock wall panel uprights. Attach the steel ladder and rock panel with the 2 middle uprights.

The concrete for all 8 uprights is 300x300mm, deep 500mm.

Mark the position of the 2 posts in the centre and dig 2 holes  $300 \text{mm} \times 300 \text{mm}$  wide and 800 mm below

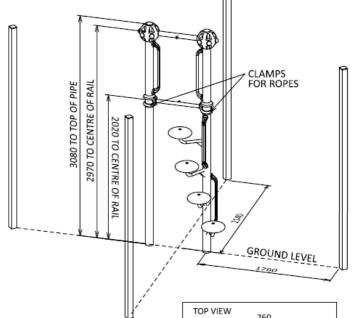
finished ground level. Insert anchor bar through aluminium support post before concreting.

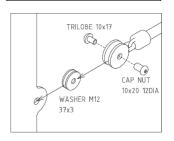
Attach all ropes with chain ends to the frames with bolts M8x25mm.

Hang the pommel chain, ball and ladder ropes, mark and dig holes in ground approx. 600mm below finished ground level and 300mm x 300mm wide. Attach anchors to chains, lower in the holes and concrete footings (approx. 300mm x 300mm).

Attach the panel/rope wall to the structure with Tri-lobes 10x20mm.

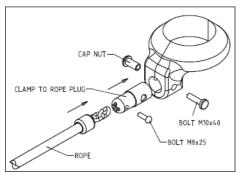
Attach rope ends to aly panels with washers, trilobes and cap nuts, as shown.

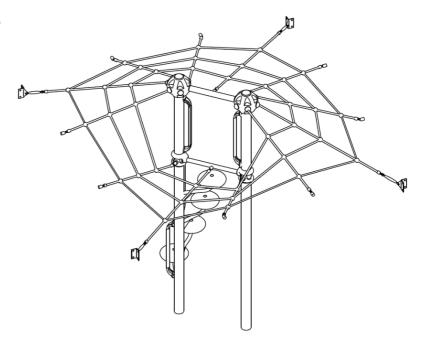


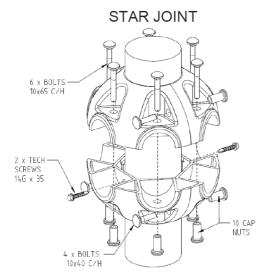


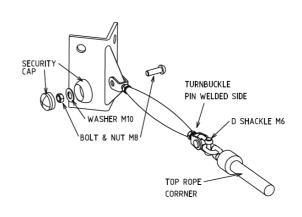
Attach the top net to the posts and with turnbuckles to the corner uprights. "Clamp to rope plugs" are 2 from the gym clams and 8 from the star clamps. Tighten the turnbuckles.

Keeping the frame square with corner uprights and 2 posts vertical, concrete footings 300mm x300mm x400mm (deep). Back fill holes with soil.

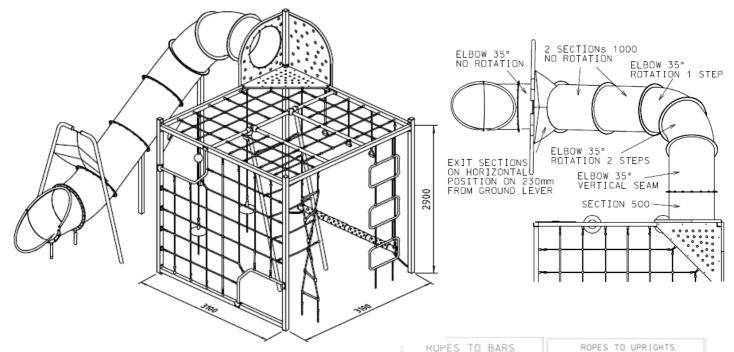








### **CUBE 4P & SLIDE**



Connect uprights to horizontal upper and lower bars using Tri-lobes 10x20mm.

Mark and dig five (5) holes for the uprights 300mm x 300mm wide and 800mm below finished ground level.

Position the frame in the holes ensuring the top of the upper horizontal bars are 2900mm above finished ground level. Check the distance between the center of uprights as shown.

Attach the pipe frame at the top. Attach the 6 ropes to the supporting bars. Attach the 2 supporting bars using clams to the top pipe frame, place them on 15 degrees angle and stretch them until ropes are tight. Mark and dig the holes 300x300x600 deep.

ROPE END

Attach the triangle aluminium panels to the structure with Tri-lobes 10x20mm.

Attach all ropes with chain ends to the frames with bolts M8x25mm.

Hang the pommel chain, ball and ladder ropes, mark and dig holes in ground approx. 600mm below finished ground level and 300mm x 300mm wide. Attach anchors to chains, lower in the holes and concrete footings (approx. 300mm x 300mm x 300mm).

Keeping the frame square with corner uprights and steel frame vertical, concrete footings 300mm x300mm x400mm (deep) and 300x300x300 to the inner supports. Back fill holes with soil.

TECH SCREW 14G v 35

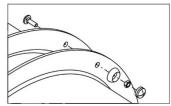
NUT M10

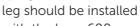
BOLT 10x030 C/H

M10 SECURITY CAP

Connect the sections of the tunnel slide together using 10x25 C/H bolts (except where the slide leg cradle attaches - 10x30 C/H bolts), nuts and security caps as shown. Connect the top section to the entry panel and keep going down, section after section. Check plan for the type of slide and the number and type of sections. Attach the slide legs to the support cradle using 'tap tight' tri-lobes. Each

M6 SECURITY CAP





with the base 600mm below finished ground level.

Use the slide as a guide to determine the position of the holes for the exit support legs and dig holes. It is advisable to place a brick or a block of wood below each leg to provide additional stability. Concrete the legs into the ground.

For the slide support, attach the joining plate to upright with tri-lobes 10 x 17.

Position the 2 uprights under the flanges and attach

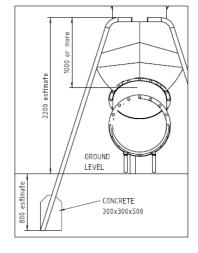
cradles on suitable

position. Join the plug to cradles with loose bolts. Insert the plug on the plate's pipe and secure with the Tec Screw. Tighten the bolts and place cover on caps.

TRILOBE 17

0

Attach rubber membrane to both supports with cup head bolts and security caps. Rise and position the frame above the tunnel flange you will attach the rubber to. The flexible rubber will allow for both legs to keep minimum distance of 250mm to the tunnel tube (no part of the tunnel should come closer than 250mm to the barrier support legs). The rubber should be tilted slightly forwards the exit as shown (check the dimensions). Mark the position for the holes in ground. Dig the holes, insert the frame and bolt the rubber to the flange. If the last holes on the flange of the rubber don't match the holes on tube's flange, drill the needed hole on the tube's flange.



Concrete, keeping the frame vertical.

#### **CUBE**

Connect uprights to horizontal upper and lower bars using Trilobes 10x20mm.

Mark and dig four (4) holes for the uprights 300mm x 300mm wide and 800mm below finished ground level.

Position the frame in the holes ensuring the top of the upper horizontal bars are 2400mm above finished ground level. The distance between the inside of each upright should be 1815mm (refer below).

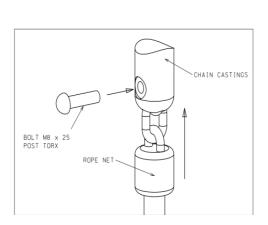
Attach the slant upright to the rock wall using Tri-lobes 10x20mm. Raise the rock wall, mark and dig the hole for the upright. Attach the rock wall to the frame with Tri-lobes 10x20mm.

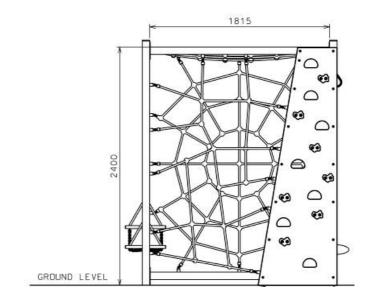
Attach all ropes and chain ends to the frame with bolts M8x25mm as shown below.

Hang the pommel chains, mark and dig holes in ground approx. 600mm below finished ground level and 300mm x 300mm wide.

Attach anchors to chains, lower in the holes and concrete footings (approx. 300mm x 300mm x 300mm).

Keeping the frame square and corner uprights vertical, concrete footings 300mm x400mm (deep). Back fill holes with soil.





#### **CUBE & BASKET**

(Uprights are part of the structure)

Connect uprights to horizontal upper and lower bars using Tri-lobes 10x20mm.

Mark and dig four (4) holes for the uprights 300mm x 300mm wide and 800mm below finished ground level.

Position the frame in the holes ensuring the top of the upper horizontal bars are 2400mm above finished ground level. The distance between the inside of each upright should be 1815mm (refer below).

Attach the slant upright to the rock wall using Tri-lobes 10x20mm. Raise the rock wall, mark and dig the hole for the upright. Attach the rock wall to the frame with Tri-lobes 10x20mm.

Attach all ropes and chain ends to the frame with bolts M8x25mm as shown below.

Attach basket ropes to basket as shown with 17mm Tri-lobes and washers. (Basket is shown separate for clarity)

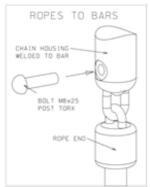
Must use LOCTITE on all bolts.

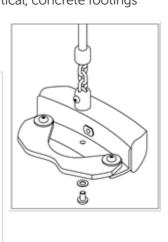
Hang the pommel chains, mark and dig holes in ground approx. 600mm below finished ground level and 300mm x 300mm wide. Attach anchors to chains, lower in the holes and concrete footings (approx. 300mm x 300mm).

Keeping the frame square and corner uprights vertical, concrete footings 300mm x400mm (deep). Back fill

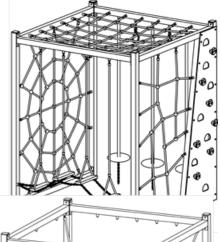
holes with soil.

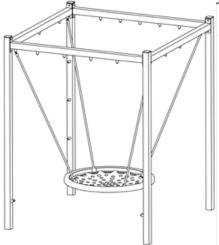


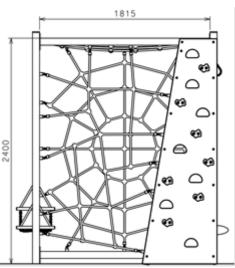




GROUND LEVEL







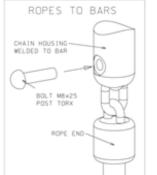
#### **CUBE & SLIDE**

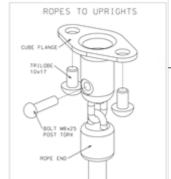
Connect uprights to horizontal upper and lower bars using Tri-lobes 10x20mm.

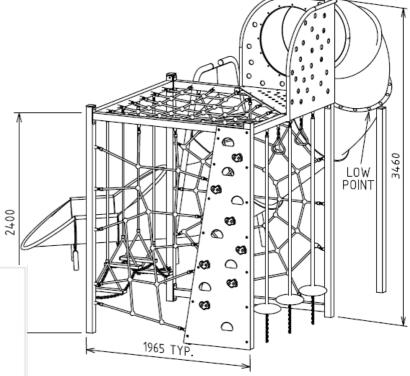
Mark and dig four (4) holes for the uprights 300mm x 300mm wide and 800mm below finished ground level.

Position the frame in the holes ensuring the top of the upper horizontal bars are 2400mm above finished ground level. The distance between the outside of each upright should be 1965mm.

Attach the slant upright to the rock wall using Tri-lobes 10x20mm. Raise the rock wall, mark and dig the hole for the upright. Attach the rock wall to the frame with Tri-lobes 10x20mm.







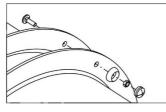
Attach all ropes and chain ends to the frame with bolts M8x25mm as shown below.

Hang the pommel chains, mark and dig holes in ground approx. 600mm below finished ground level and 300mm

x 300mm wide. Attach anchors to chains, lower in the holes and concrete footings (approx. 300mm x 300mm).

Keeping the frame square and corner uprights vertical, concrete footings 300mm x400mm (deep). Back fill holes with soil.

-For the slide, attach entrance panels and platform to frame using Tri-lobes Tap Tight. (When the item uses S/S fasteners, use Trilobes Tap Tight for



tapping only and join parts with S/S Bolts 10x16 Post Torx). Join each tube sections as shown on the plan below. Dig holes approx. 600mm below finished ground level for the 4 legs and the support (between third and fourth tubes) and concrete footings (approx. 300mm x 300mm).

Use the slide as a guide to determine the position of the holes for the exit support legs and dig holes. It is advisable to place a brick or a

ELBOW 45° NO ROTATION ELBOW 35° ROTATION 1 STEP

ROTATION 2 STEPS

ELBOW 35° ROTATION 2 STEPS

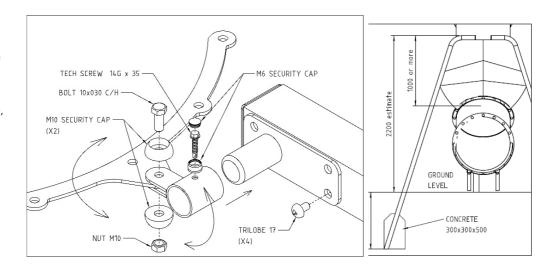
ELBOW 35° FACING DOWN
ON HORIZONTAL POSITION ON 250mm FROM GROUND LEVER

SECTION 500 VERTICAL SEAM

block of wood below each leg to provide additional stability. Concrete the legs into the ground.

For the slide support, attach the joining plate to upright with tri-lobes 10 x 17.

Place the slide support post with the flange bracket centre hole one hole rotation around from the "low point", as shown in the first image, with the bracket on the underside of the tube flange. Join the plug to cradle with loose bolt. Insert the plug on the plate's pipe and secure with the Tec Screw. Tighten the bolt and place cover on caps.



Attach rubber membrane to both supports with cup head bolts and security caps. Rise and position the frame above the tunnel flange you will attach the rubber to. The flexible rubber will allow for both legs to keep minimum distance of 250mm to the tunnel tube (no part of the tunnel should come closer than 250mm to the barrier support legs). The rubber should be tilted slightly forwards the exit as shown (check the dimensions). Mark the position for the holes in ground. Dig the holes, insert the frame and bolt the rubber to the flange. If the last holes on the flange of the rubber don't match the holes on tube's flange, drill the needed hole on the tube's flange.

Concrete, keeping the frame vertical.

### **DINOSAUR**

Install uprights, platforms, slide, cubby panel, stairs and rails as a standard structure.

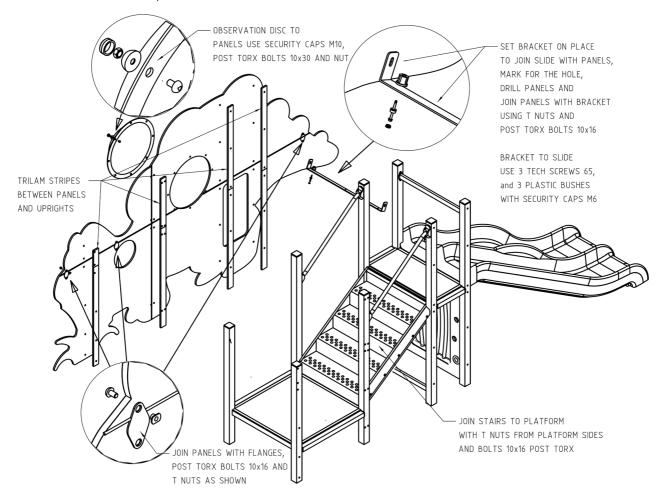
Attach dinosaur panels to uprights with stripes as spacers using M10x50mm torx bolts. Join upper and lower panels with blank flanges as shown. Use Loctite on every bolt.

Ensure that all panels are secured prior to concreting uprights into the ground.

Note: Variances in the plastic stairs due to shrinkage and environmental conditions while installing may require some manipulation of the stairs to ensure the correct spacing of platforms to enable the dinosaur panels to fasten correctly.

Attach observation discs to panels as shown. Place bracket under slide and bolt to panels.

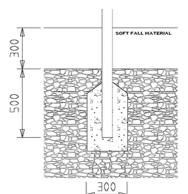
Position bracket as close as possible to the slide and attach with screws and bushes as shown.



### **DOG COURSE ITEMS**

### **Uprights and Footings**

We recommend that concrete be used on all uprights and items in the ground as per the diagram. The footings on uprights should be approximately 300mm x 300mm x 400mm (deep). Attachment components will generally only go 600mm below finished surface level and a smaller footing will be sufficient (approx. 300mm x 300mm x 300mm). All footings should have a tapered top so that water won't pool around the upright. Where loose fill surfacing is used ensure that the concrete is at least 300mm below the finished surface level or that the footing is effectively covered by items of equipment in such a way that they do not present a hazard. (Note: If the ground is soft or likely to be subject to settling it is best to use an additional 100mm of concrete on the footing below the upright. This may need to set before placing the upright in place.)



### DOG COURSE A FRAME

Attach top bar to uprights with C section facing down using Tri lobes 10  $\times$  17mm. Attach climbing ramps to top bar using Tri lobes 10  $\times$  17mm. Keep ramps on 45 degree slope.

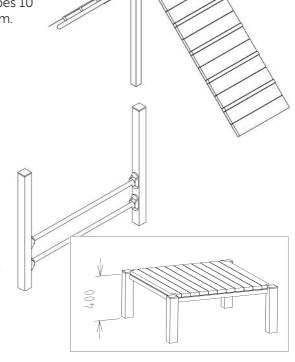


Attach rails to uprights using the standard flange attachment.

### DOG COURSE PAWS TABLE

This is a standard timber platform attached to uprights on 400mm height.

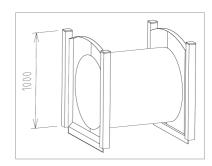
Bolt platform to uprights with tri-lobes 20mm.



#### DOG COURSE TUNNEL

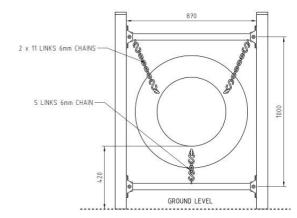
This is a standard tunnel attached to uprights on ground level.

The top of the tunnel is attached to the uprights using 'L brackets with 17mm trilobes and T-nuts on the tunnel and 17mm trilobes into the uprights. At the bottom the tunnel is attached to a 'panel under support bracket' using 17mm trilobes and T-nuts and to the uprights using 17mm trilobes.



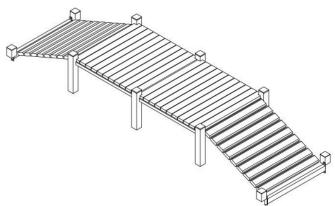
### DOG COURSE TYRE JUMP

Attach rails to uprights using standard flange attachment. Attach the Tyre to rails using S Hooks and Chains as shown.



### DOG COURSE WALK

Use standard structure assemblies for Timber Platforms, Combat Joiners and End Frame Joiners.



### DOG COURSE WEAVE SPIKES

Build as Senior Swing with top bar at 2.5m.

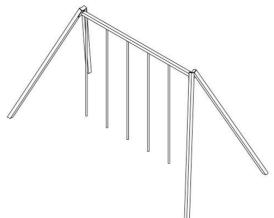
The swing frame is best assembled prior to installation. Assemble the frame while laid on the ground then roll into the upright position. The uprights are fastened to the top bar using 25mm tri-lobe bolts. Must use LOCTITE.

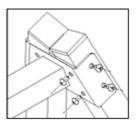
Use the frame in its upright position to determine the correct hole position and dig the holes. Senior - 2.5m from the underside of the top bar to the finished surface level). Concrete the uprights into the ground using footing sizes as shown.

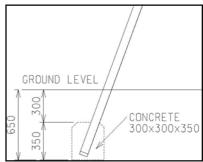
Leave the concrete to set for at least 24 hours then attach the seats to the top bar using 'S' hooks, ensuring that the 'S' hooks are fully closed using vice-grips. (The large end of the 'S' hook attaches to the swing shackle and the small end to the chain, with the lower opening away from the seat.)

Dig a hole directly below each suspended chain. Attach anchors on ends of chains.

Allow the chains to hang into the holes, ensuring that they are taut and pour concrete 300x300x300 in each hole.





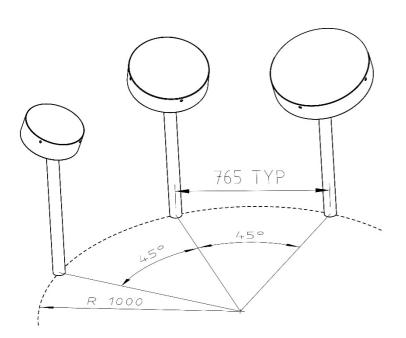


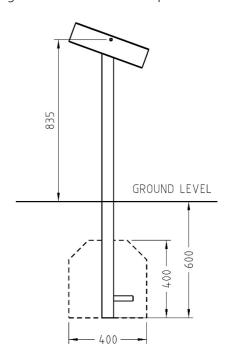
### **DRUM SET**

Attach the drum heads to the legs using stainless 10x20 Post Torx bolts and stainless 10mm Washers.

Draw a section of circle with 1m radius on ground and dig 3 holes 400 x 400mm 600mm deep as shown on the plan. Place legs with the slope of drums facing the centre of the circle.

Keep vertical and pour concrete around legs forming foot size 400 x 400 x 400mm, with the top tapered so the water won't pool around legs. Check legs are vertical and drum slopes again after the concrete is poured.





### **EMBANKMENT SLIDES**

Locate the slide in its position on the ground to determine the position of the holes for slide support legs and

entrance uprights (if require) and dig the holes as per

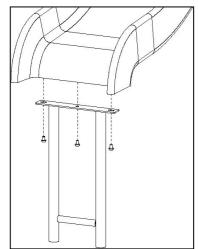
diagram.

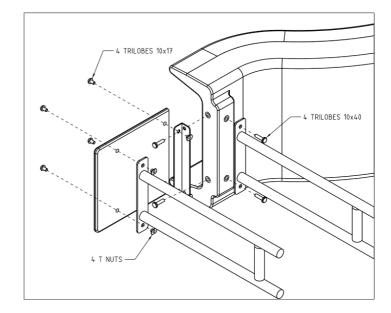
Ground level should follow the shape of the slide. Attach the following together as shown in figures below -

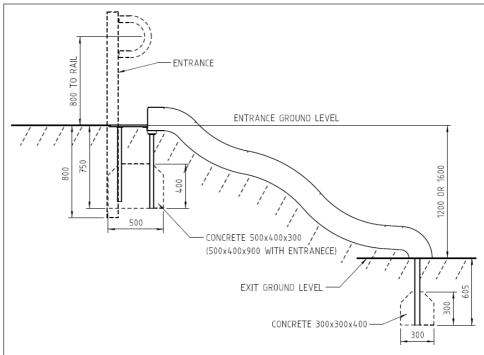
- Beige Platform and Slide Leg (with 2 holed plate)
- Slide Entry base and Slide Leg (with 2 holed plate)
- 3. Slide Exit base and Slide Leg with (with 3 holed plate)

Use Loctite for all fittings.

Place slide with attached legs in the holes and concrete the legs into the ground as per the diagram.







#### **FLOWER TABLE**

Connect the table top to the table leg using 25mm stainless tri-lobe bolts.

Connect each of the seat tops to the seat legs using 17mm stainless tri-lobe bolts and T-nuts (with the tri-lobe entering from the top).

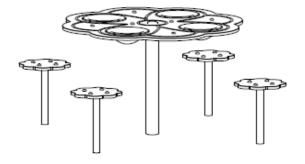
Dig a hole approximately 800mm deep and 300mm x 300mm square.

Insert the table, ensuring that the table top sits approximately

550mm above the finished surface level. Pour concrete around the base of the leg forming a footing of 300mm x 300mm x 500mm with a tapered top so that water won't pool around the leg.

Dig holes for the seats approximately 600mm away from the centre pole of the table and 600mm deep. Insert each seat, ensuring that the seat tops are approximately 300mm above finished surface level.

Pour concrete around each leg forming footings of 300mmx 300mm x 300mm with a tapered top. (Note: Ensure the equipment is not used for at least 24 hours to allow concrete to set.)



#### **MATRIX**

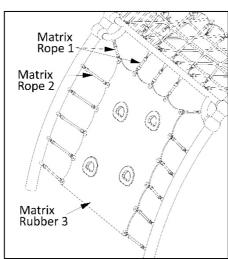
Dig 3 holes 500x500mm and 1000mm deep in line with 2950mm distance on the side of the rock climber.

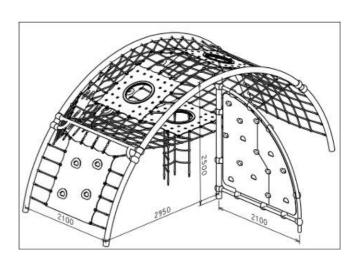
Dig 2 holes 500x500mm and 1000mm deep on 2100mm from the first 3 holes, 5900mm apart for the second arched frame.

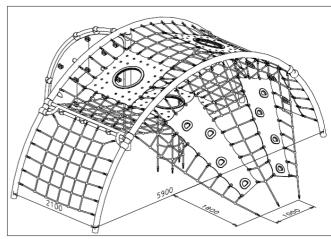
Insert legs into top arches with welded castings towards center of structure and attach using cap nuts and bolts 10x100 C/H as shown. One of the top arches includes an extension for the Arched Rock Wall Upright. Connect top of Arched Rock Wall Upright to frame using cap nut and bolt 10x100 C/H.

Rise frames in the holes and attach cross rails using standard Orbit clamps 50 to 90 fittings.

Mark the position of the arched Rock Wall leg, dig a hole according Orbit Manual and join to main frame.







### **Arched Rock Wall**

2400

423

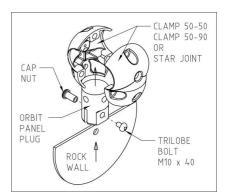
263

Once all rails are in place, connect the panels to the clamps using Orbit Panel Plugs as shown. Once both panels

are in place, connect the two together using rock grips, with one

bolt on either panel. Apply Loctite to threads before tightening.

Note: Do not over-tighten bolts as the nuts may pull through the plastic.





(e)

**69** 

326

382

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**69** 

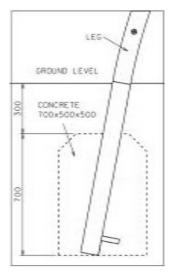
Attach all ropes to frame using bolts M8x24 Post Torx as shown. Ensure that all rubber membrane to rope attachments are tightened very well and Loctite is used. If attaching clamps are to come loose, tearing of the rubber membrane may occur.

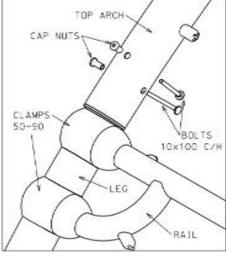
568

Keep frame level and concrete legs as shown

For the 4 vertical ropes in the middle of the structure dig a 300mm wide channel, 600mm deep directly below the 4 ropes. Connect anchors using an 'S' hooks and allow the anchors to hang into the holes, ensuring that they are taut. Pour 300mm deep concrete in anchor holes.

For the 5 rope end anchors dig a 300x1300mm hole, 450mm deep and 2200mm away from the frame as shown. Extend the 5 ropes with open turnbuckles to



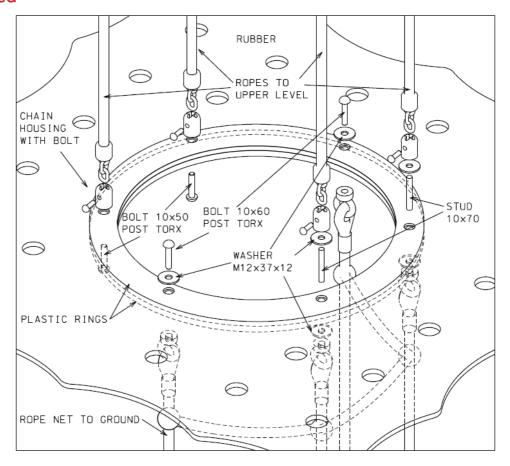


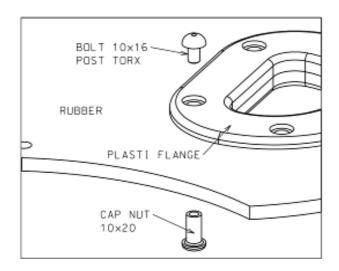
be sure they will reach the anchors in the holes and mark the right places of the 5 anchors. The anchors need to follow the line of the ropes. Place the anchors on the marked position and pour 300mm deep concrete.

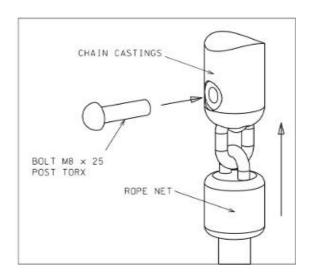
Allow concrete to set for 24 hours. Attach the 5 turnbuckles to anchors as shown.

Adjust the turnbuckles so that ropes are not tight (allow a little slack).

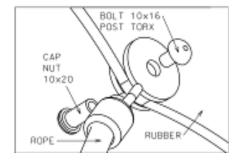
### **Matrix Continued**

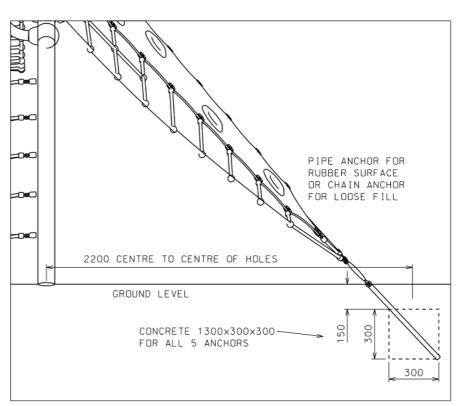


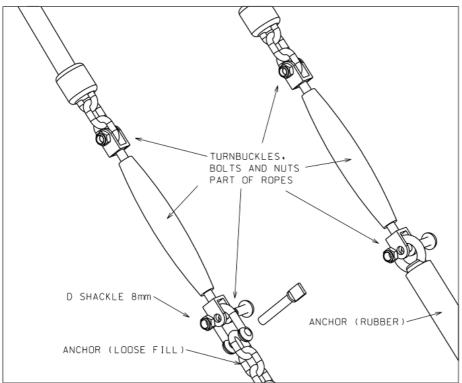




### Matrix (Continued)







### **MUSICAL PIPES**

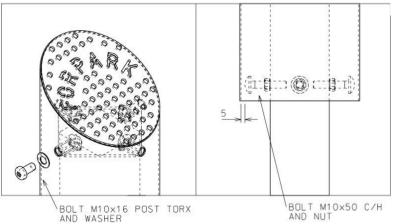
Dig 800mm standard holes in ground for uprights, placed in 1m radius arch and on 334mm step as shown. Arrange uprights, tall to short – left to right, facing centre of arch, keep vertical and concrete.

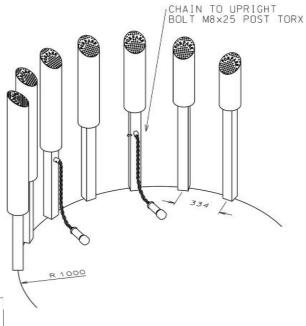
Screw all C/H bolts with nuts to uprights.

Attach all S/S tubes tall to short – left to right with 4 bolts on each as shown. Keep tubes as parallel as possible and tighten

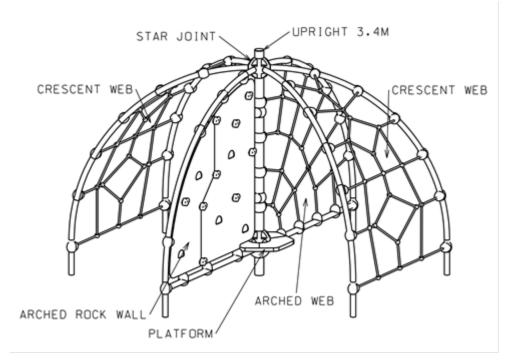
Go back to C/H bolts and adjust them underneath to keep the head of bolts on about 5mm from tubes and secure the position with nuts.

Attach both chains to uprights as shown.



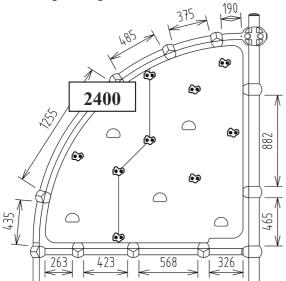


### **ORBIT DOME**

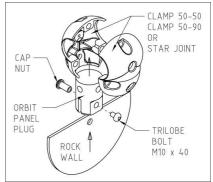


### **Arched Rock Wall**

Once all rails are in place, connect the panels to the clamps using Orbit Panel Plugs as shown. Once both panels are in place, connect the two together using rock grips, with one bolt on either panel. Apply Loctite to threads before tightening.



Note: Do not over-tighten bolts as the nuts may pull through the plastic.



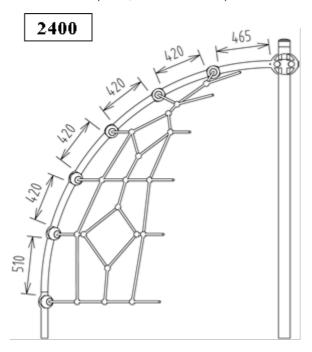
# **Arched Web**

Once all rails are in place, connect the rope net to the clamps as shown.

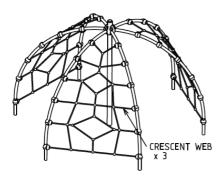
2400 294 294 315

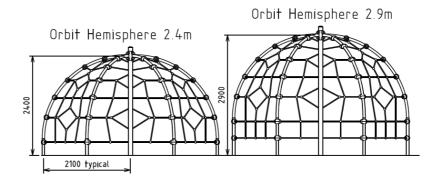
## **Crescent Web**

Make sure that the distance between both rails at finished ground level is 2040mm and that the rails are vertical. Once all rails are in place, connect the rope net to the clamps as shown.



## **ORBIT HEMISPHERE**

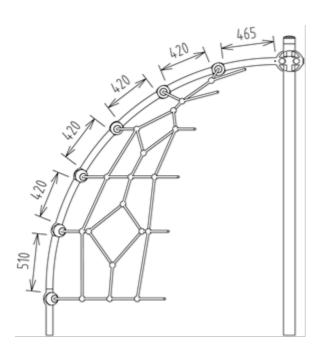




## **Crescent Web**

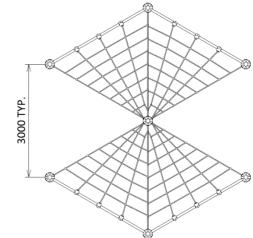
Make sure that the distance between both rails at finished ground level is 2040mm and that the rails are vertical. Once all rails are in place, connect the rope net to the clamps as shown.

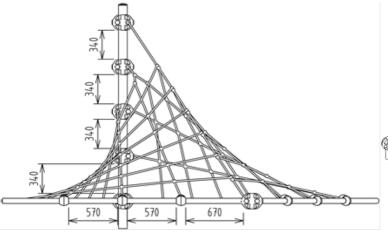
2400

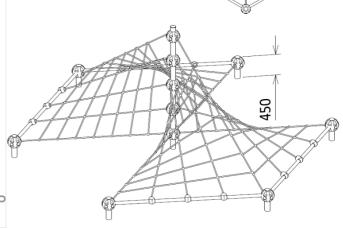


### ORBIT HELIX FREE STANDING

Once all rails are in place, first attach the two outer-lower ropes and then connect all of the lower ropes without fitting the Tek Screw into the 50/50 clamps. Next work up from the bottom of the main post until you get to the top. Any of the plastic clamps can be moved up to 20mm from the dimensions shown to tighten or loosen the net as necessary (when finished the net should be uniformly tight). When the correct tension is received, fit all Tek Screws and security caps. If the net will not fit, please contact your Forpark representative for tips and advice.



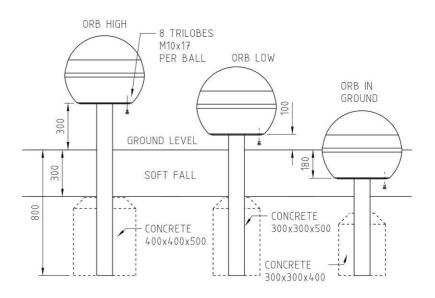




### **ORBS**

Attach plastic ball to the plate using 8 x 17mm tri-lobes.

Dig a hole approximate 800mm deep and according to the concrete size shown. Insert the Orb leg into the hole making sure the distance between the bottom of the ball to the finished ground surface is according to the plan. (Use a spirit level to ensure the leg is perfectly vertical.) Pour concrete around the leg forming a footing size as shown, with the top tapered so the water won't pool around the leg. Check levels again after the concrete is poured.

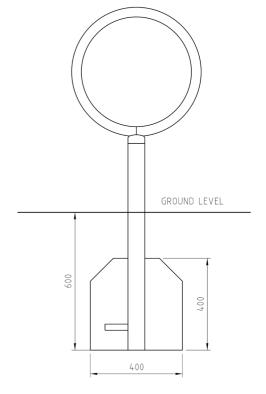


### **PLAY HOOP**

Dig a hole 400 x 400mm 600mm deep as shown on the plan.

Keep vertical and pour concrete around leg forming foot size  $400 \times 400 \times 400 = 400 \times 400$ 

(If different height of the loop is required, make correction of the depth of the footing, but do not make hole less than 500mm deep)



### **PYRAMID NET**

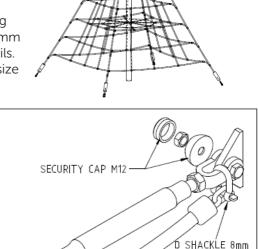
The Pyramid Net has four uprights forming a square (each upright is 2835mm apart when measured from centre to centre) and a central post. The outside uprights are held in position by four rails which will sit 200mm below finished ground level.

Use the rails to determine the hole positions for the corner uprights, ensuring that they form a perfect square. Dig holes 500mm x 500mm wide and 900mm (deep), then dig trenches 250mm deep between each of the holes for the rails.

GROUND LEVEL 006 500 The hole for the centre post is the same size and must be exactly in the centre of the

square (the intersection of diagonal lines between opposing corners).

After connecting the rails to the corner uprights using flanges, attach the brackets to the uprights using 17mm tri-lobes. Insert the uprights into the holes and rest the base on bricks or blocks. The hole in the triangular part of the bracket



should sit at finished ground level as shown.

The centre pole should be oriented so that the 2 holes at the top of the pole and the 4 holes on the flange midway up the pole face directly toward the corner uprights. The top of the centre pole should be 3270mm above finished ground level. The centre pole may need support until the concrete has set.

ROPE END

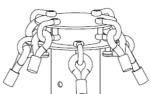
Pour concrete around the base of the four corner uprights and the centre pole, forming a footing of 500mm x 500mm x 600mm (deep). Taper the top of the concrete so that water won't pool around the uprights. Be sure the top of each concrete footing is 300mm and the rails 200mm below finished surface level. Check that the uprights and centre pole are vertical and leave for 2 days ideally to allow concrete to set.

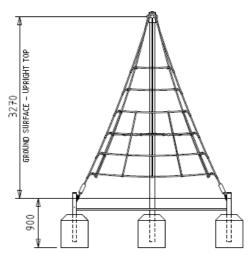
# Connecting the Net

Lower the rubber membrane over the centre pole and fasten to the flange using 17mm tri-lobes and T-nuts with a washer between the bolt head and the rubber. (The rubber sits on top of the flange, with tri-lobe and washer entering from the top and T-nut underneath.) Apply 'Loctite' to the bolt thread before fastening.

Lift the net over the centre upright and sit the cap on top of the centre pole, ensuring that the net is orientated so that the holes in the cap line up with the

holes





### **Pyramid Net Continued**

in the pole. (One or two ladders will be required for this.) Insert 2 'tap tight' tri-lobes through the lower holes on the cap section and into the centre pole to secure.

Attach the outside of the rubber membrane to the ropes using the stainless steel clamps supplied, 25mm tri-lobes and T-nuts. Apply 'Loctite' to the bolt thread before fastening.

Connect the turnbuckles at the corners of the net to the brackets on the corner uprights using security caps (M12 blue) on nuts. Apply 'Loctite' to the nut before tightening. Tighten the turnbuckles uniformly (using a screwdriver or similar tool inserted into the hole in the turnbuckle and rotating the turnbuckle clockwise), allowing for deflection of corner ropes of no more that 100mm, then tighten the locking nuts on the turnbuckle.

About one to three weeks after installation (depending on use) it should be necessary to re-tension the corner ropes of the net. To re-tension, loosen the lock nuts at either end of the turnbuckle and tighten as explained above. Apply Loctite to the thread before re-tightening the locking nuts against the turnbuckle. Monthly inspections should be undertaken to check for tension.

### **ROCK PEAK / ROCK PEAK TIMBER**

Use 10x35 Post Torx to join panels to frames.

Rock grips are preassembled to panels.

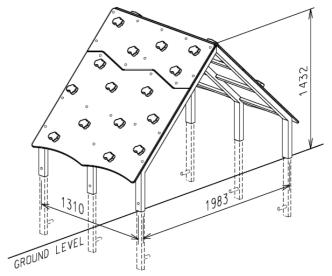
Join both frames with the top ridge (angle placed between panels and frames) with 10x35 Post Torx.

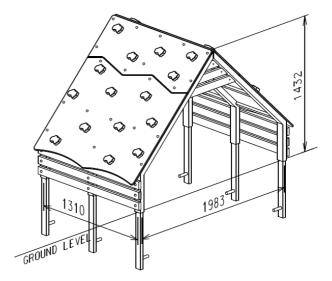
Insert legs and secure with bolts 10x35 Post Torx. Use Loctite on all bolts.

Raise frame and mark the holes. Dig holes for the legs approximately 600mm deep and 300mm x 300mm.

Assemble everything before pouring concrete. Place frame in holes and use concrete 300x300x400mm deep.

For Rock Peak Timber there are additional timber boards attached to frames. Use 10x60 Post Torx for timber/frame/legs connection and 10x50 Post Torx for top timber/frame connections with nuts and security caps on inside (tag's side).



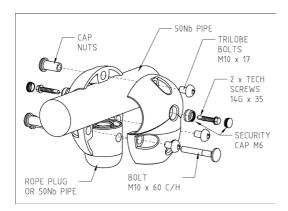


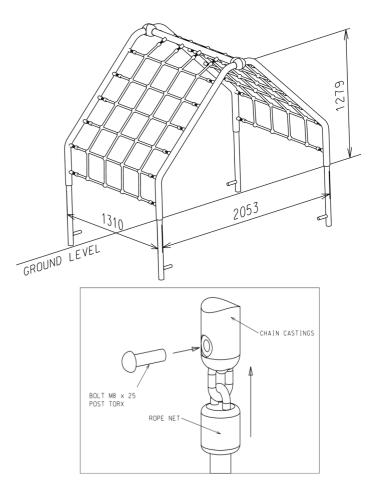
### **ROPE PEAK**

Use plastic clamps to join top ridge to both frames and join nets to frame as shown.

Insert legs and secure with bolts 10x20 Post Torx. Use Loctite on all bolts.

Raise frames and mark the holes. Dig holes for the legs approximately 600mm deep and 300mm x 300mm. Place frames in holes and use concrete 300x300x400mm deep.





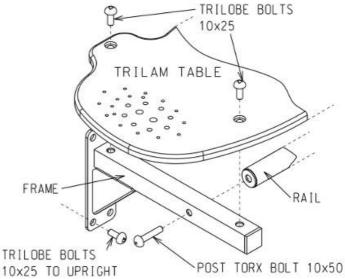
### SAND TABLE (FREESTANDING)

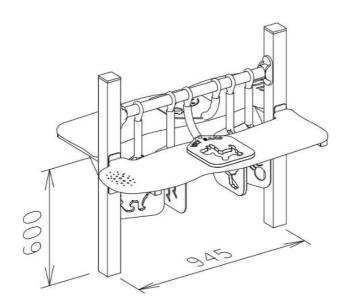
Attach table tops to frames with 25mm tri-lobes and the two table rails with 50mm torx bolts. Attach frames to uprights with 25mm tri-lobes.

Insert the rings at the end of the pads onto top rail (alternating plastic and polycarbonate pads). Place flanges on both ends of the rail and bolt flanges to uprights with 25mm tri-lobes. Fasten the rail to the flanges using 14x35 tech screws.

Dig 2 holes approximately 800mm deep and 300mm x 300mm (945mm apart at centre of holes). Insert the uprights, ensuring that the table tops sit approximately 600mm above the finished ground surface and is level. Pour concrete around the base of the legs forming a footing of 300mm x 300mm x 500mm with a tapered top so that water won't pool around the legs.

(Note: Ensure the equipment is not used for at least 24 hours to allow concrete to set.)



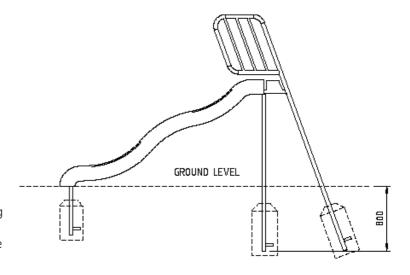


### SLIDES - FREESTANDING

Locate the slide in its approximate position on the ground to determine the position of the holes for slide support legs and slide ladder and dig the holes (800mm deep for the centre support leg and the slide ladder and 600mm deep for legs at the base of the slide).

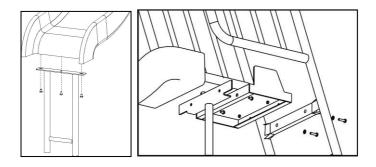
Attach the slide leg bracket to the underside of the base of the slide using 17mm tri-lobes.

Attach the slide support leg between the slide and the slide platform using 40mm torx bolts, entering from the underside of the platform. Attach the slide ladder to the slide platform using 40mm torx bolts, washers and nyloc nuts (all with the nyloc nuts fastening on the inside of the platform) with a washer between the bolt head and the platform.



Insert the assembled ladder and platform section into the holes and ensure the level is correct. (The top of the platform should be 1200mm above the finished ground level for a 1200 slide and so forth.)

Concrete the legs into the ground. The centre slide support leg and the ladder legs each require footings of 300mm x 300mm x 400mm (deep), the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. The base slide legs require one footing of 400mm x 300mm x 400mm (deep).



### SPRING BRIDGE

Connect the top rails ② to each pair of long uprights ① using flanges and 'tap tight' tri-lobes. Connect the Spring Bridge Brackets 4 to each pair of short uprights 3 using 'tap tight' tri-lobe bolts. Dig holes for the uprights using the spacing shown in the diagram. (Note: the long uprights will be installed at an angle so the distance between these uprights and the end short uprights will vary from top to bottom of the hole.) The width between each of the two end uprights is 945mm when measured from the centre of the uprights and between each if the middle uprights is 1275mm. Uprights should be installed to a depth of 800mm below the finished surface level. Make sure that you allow for the safety surfacing when digging your holes. Place a brick or similar object in the base of each hole on which to rest the uprights prior to concreting to stop them sinking. (Note: If the ground is soft or likely to be subject to settling it is best to dig the holes an additional 100mm deep and lay a 100mm thick footing using rapid set concrete prior to inserting the uprights.) The two uprights on each end should share concrete footings of 1500mm x 500mm x 600mm (deep). Each centre upright should have its own footing of 400mm x 400mm x 600mm (deep).

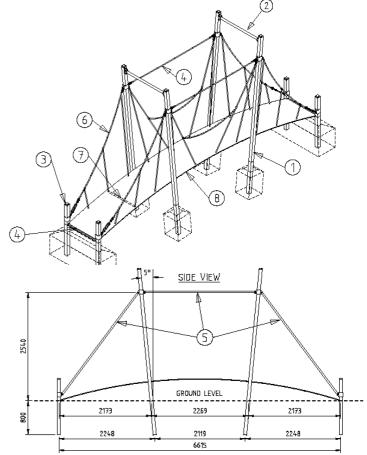
Insert the uprights in position starting at one end and use the Spring Bridge Set-up Rails ⑤ to temporarily hold the uprights in position while the concrete sets. The Set-up Rails attach to the brackets near the top of each upright and should be left in place long enough for the concrete to set sufficiently to hold the uprights in position. Ensure all uprights are square (except for the lean in the centre uprights as shown) and pour concrete. The concrete should be left at least 3 days prior to fitting the rest of the bridge to allow it to set fully.

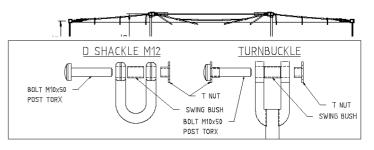
Once the concrete has fully set, attach the each rope ® to the higher uprights using a D-shackle, 50mm torx bolt, T-nut and a stainless steel bush over the thread as

shown. The turnbuckles attach to the lower uprights using a 50mm torx bolt, 2 T-nuts and a stainless steel bush as shown. Apply Loctite to the thread on each connection.

To tighten the ropes, turn the turnbuckles uniformly (using a screwdriver or similar tool inserted into the hole in the turnbuckle and rotating the turnbuckle clockwise), allowing for deflection of corner ropes of no more that 100mm. When the ropes are taut, drill through the hole in the lower end of each of the turnbuckles, right through the threaded bolts and out the other side, using a 9/64" (or 3.5mm) drill bit and insert a spring pin. (This can be hammered out and replaced at a later date if the net needs adjusting.

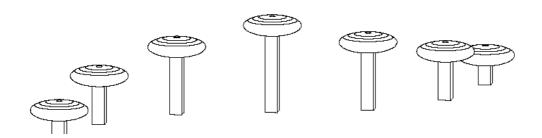
Lay out the rubber belt ® and fasten each end to the Spring Bridge Brackets ®, sandwiching the rubber between the underside of the bracket and plates supplied, using 20mm tri-lobe bolts and T-nuts (with the tri-lobe entering from the top). Connect each rope through rubber to the support rails ② using 40mm tri-lobes entering from underneath, through a washer, the support rail, the rubber and into the eye-nut on the rope. Apply Loctite to the thread of the eye-nut and tighten.





### **STEPPERS**

Fasten steppers to the uprights using 17mm tri-lobes. Dig holes for each upright. The Steppers can be arranged in varying configurations but the distance between each should be approximately 500mm from centre to centre. The heights to from finished ground level to the top of each stepper should be 200mm, 300mm, 400mm, 500mm, 400mm, 300mm and 200mm respectively. After placing the uprights in the holes and ensuring that their depth is correct and that the uprights are vertical, concrete them into the ground. Fill the top of the holes with soil, packing firmly.

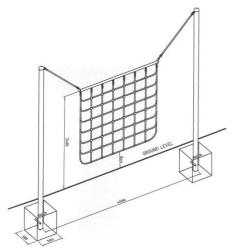


### ST HOOP (FOR RUBBER) (POLISHED)

For keeping the right distance between legs, attach the legs to the ring. Mark and dig the holes 300mm x 300mm x 600mm deep. Pour concrete around the base of the pole forming a footing of 400mm deep concrete, the top being 200mm below the finished surface level (rubber). Ensure that the legs are vertical and allow 24h before bolting the ring using S/S Bolts M10x16 Post Torx, S/S washers M10 and T nuts.

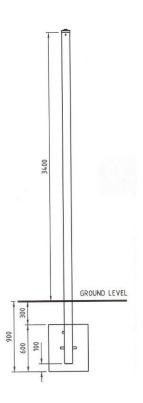
### **SWAY NET**

Dig holes for the two uprights spaced at approximately 4000mm apart (when measured from the centre of the holes). The holes should be approximately 900mm deep and 500mm square. Insert the uprights making sure they are level with the top standing 3.4m above the finished surface level. Ensure the through holes at the top are facing inwards.



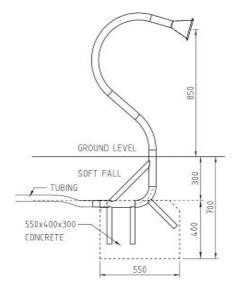
Pour concrete around the base of the poles forming a footing of 500mm x 500mm x 600mm (deep), the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. (The footing extends 100m below the base of the upright so either the first 100mm of the footing should be allowed to set first or the pole should be rested on a brick or block before pouring the footing.) Ensure that the uprights are vertical after the concrete is poured. Leave the concrete to set for at least 24 hours before attaching the remainder of the Sway Net. Once the concrete is set, assemble the 2 top ropes to top bar with 'D' Shackles. Snap tags off and file sharp edges. Attach net to top bar with M8 bolts. Rise and

attach the eye nuts of the ropes to uprights with the M12 bolts.



### **TALK TUBE**

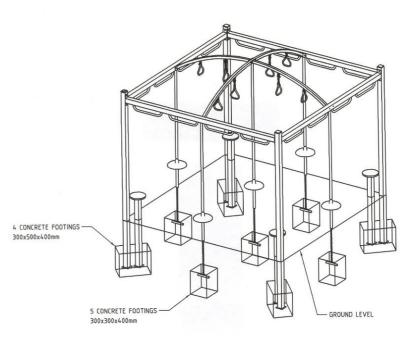
Dig 2 holes approximately 700mm deep and 400mm x 300mm, 6m apart according to the plan. Dig a channel 300mm deep for the tubing between holes. Insert the tubing in the frames 100mm (use silicone or duct tape to seal the joints, preventing water leaking in) and place the frames in the holes and the tubing in the channel. Support the Tube Frames in the holes, ensuring that the pipe ends for tubing connection sits approximately 300mm from the finished surface level. Pour concrete around the base of the legs forming a footing of 400mm x 400mm x 300mm with a tapered top so that water won't pool around the leg.



#### TARZAN MAZF

Use the side bars to determine the correct position of the four uprights, ensuring that they form a perfect square. After placing the uprights in the holes and ensuring that their depth is correct (with the top of the upright approximately 2.2m above the finished surface level), attach the side bars to the uprights using 17mm tri-lobes. Attach the longer arch bar to the opposing side bars and then the two half arch bars to the other sides and centre bar using 17mm tap tight tri-lobes.

The five pommels on chains will hang from the outside of each arch bar and the centre where they connect (the centre chain being longer than the four outside chains). Dig five holes approximately 700mm deep below each of these attachment points. Attach the pommel chains and the chain anchors to the base of the chain using 'S' hooks. (Ensure that the 'S' hooks are fully closed using vice-grips, with the small



end of the 'S' hook attaching to the chain and the large end connecting to the lug on the top rail). Ensure the chains are taut and vertical.

Insert the steppers into the same holes as the uprights (as shown) with the top of the steppers approximately 400mm above the finished surface level. Ensure that all uprights and steppers are vertical and that the pommel chains are taut, and then concrete into the ground. The pommel chains each require footings of 300mm x 300mm x 400mm (deep) and the upright/stepper holes require footings of 300mm x 500mm x 400mm (deep).

Tension the ropes as required by gently sliding the clamps slightly along the rails and then secure in place (see the diagram bellow) using a tech screw on both sides of each clamp into the rail.

### TWIN PEAKS

Position all uprights according the plan with 800mm deep in ground for corners and 1000mm deep in ground for

center uprights. Join uprights with pipes using plastic clamps. Concrete uprights when are vertical using 500mm x 500mm x 500mm footings with tapered top so that water won't pool around uprights.

After the concrete is set attach middle and top star joints.

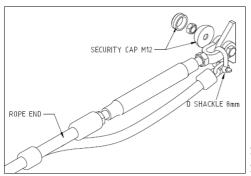
### \*\*IMPORTANT - The top 2 star joints have 12 screw attachment to the uprights, not 4 like the rest.\*\*

Attach the net using 6 Orbit Aly Plugs with 6 Orbit Bolts for top net connection.

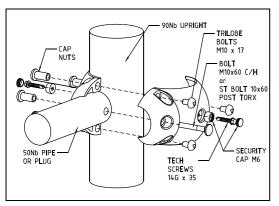
Connect the turnbuckles of the net to the brackets of the pipes at the corners using security caps (M12 blue) on nuts as shown and ropes to the middle star joints.

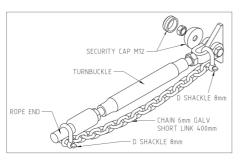
Attach D shackles with chains as shown, cut tags from D shackle bolts and file any sharp corners.

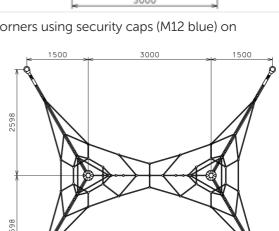
Apply 'Loctite' to all bolts, nuts and turnbuckles. Apply equal tension on all 4 corners using the turnbuckles.



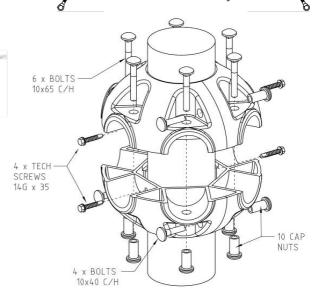
Security Cap (for Tech Screws)







Star Joint Assembly

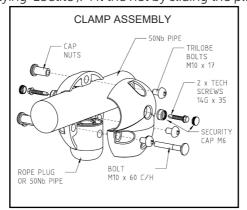


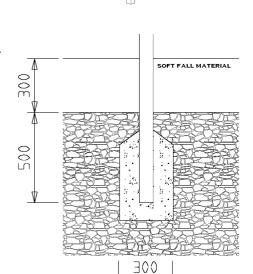
### **TWISTA**

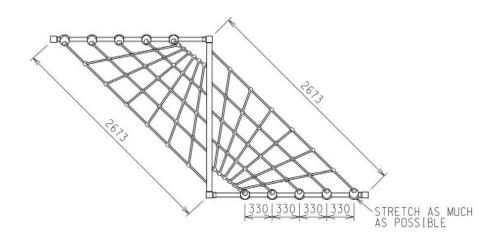
Use the bottom bars and the top bar to determine the distance between uprights. Dig holes for the uprights. After placing the uprights in the holes and ensuring that their depth is correct, bolt the bottom bars in place using flanges and top bar using 17mm tri-lobes (applying a small amount of 'Loctite' to the thread before tightening). After ensuring that the bolts are tightened and the uprights vertical and on right position (see the diagram bellow), concrete (300x300x500) them into the ground.

The net should not be attached until the next day, allowing for the concrete to set. Attach the top of each net to the top bar using 20mm tri-lobes (applying 'Loctite'). Attach the clamps (that will be used to secure the ropes) to the bottom rails 17mm trilobes and cap nuts (applying 'Loctite'). Fit the net by sliding the plugs on

the ends of the ropes into the hole at the end of each clamp (see diagram) and securing in place using a 60mm cup head bold and a cap nut (applying 'Loctite').



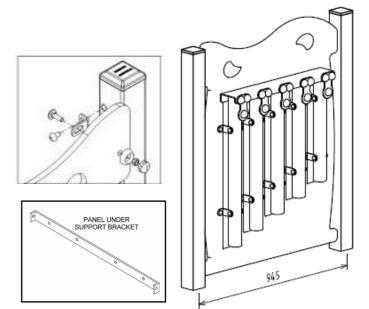




### **XYLOPHONE**

The panel is preassembled.

The top of the panel is connected to the upright using 'L' brackets. The 'L' bracket is fastened directly to the upright using 17mm tri-lobes and to the panel using 30mm cup head bolts, with the nut on the outside face of the panel enclosed in a security cap. The support bracket at the bottom is then fastened to the uprights using 25mm tri-lobes and to the panel with 10x35(S/S option) or 40 C/H and security caps on outside.





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