Installation Manual – Freestanding Motion

PlayCo

Congratulations on selecting PlayCo equipment for your playground.

This manual provides you with easy-to-follow instructions that will enable you to install the equipment correctly. Installing your 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 - Playground equipment (Safety requirements and test methods)
- AS/NZS 4422:2016 Playground surfacing – Specifications, requirements and test method
- AS/NZS 4685.0.2017 Playgrounds and playground equipment – Part 1: Development, slide installation, inspection, maintenance, and operation

You may be interested to know that PlayCo is an Australian-owned 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

Contents

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).

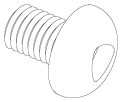
1. Check that the site is clear of underground power and services before you commence digging.
2. Measure the site to ensure that it is large enough to allow for the correct fall zones between the equipment and the outside of the soft-fall surface, and for correct distances between various items of equipment. 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

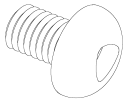
1. Ratchet (or socket set) with ½" driver
2. Ratchet (or socket set) with 3/8" driver
3. Cordless drill
4. Shovel for digging holes (preferably long handled)
5. If digging in hard ground you may need a 300mm auger and a crow bar
6. Spirit level
7. 'G' clamps (for holding items in place prior to bolting)
8. String line
9. 'Vice-grip' pliers (for closing 'S' hooks)
10. Concrete for footings

Fasteners

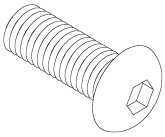
Tri-lobe ,



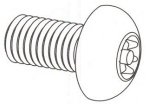
Tap Tight Tri-lobe



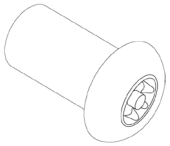
Button Head Bolt



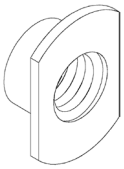
Torx Bolt (Stainless Steel)



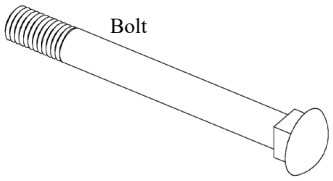
Cap Nut



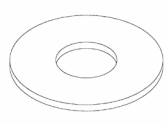
T-nut



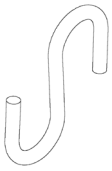
Cup Head Bolt



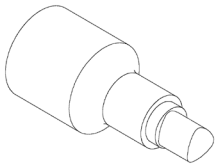
Washer



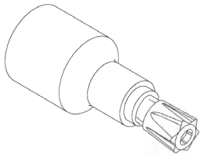
'S' Hook



Tri-lobe Driver



Torx Driver



Concrete

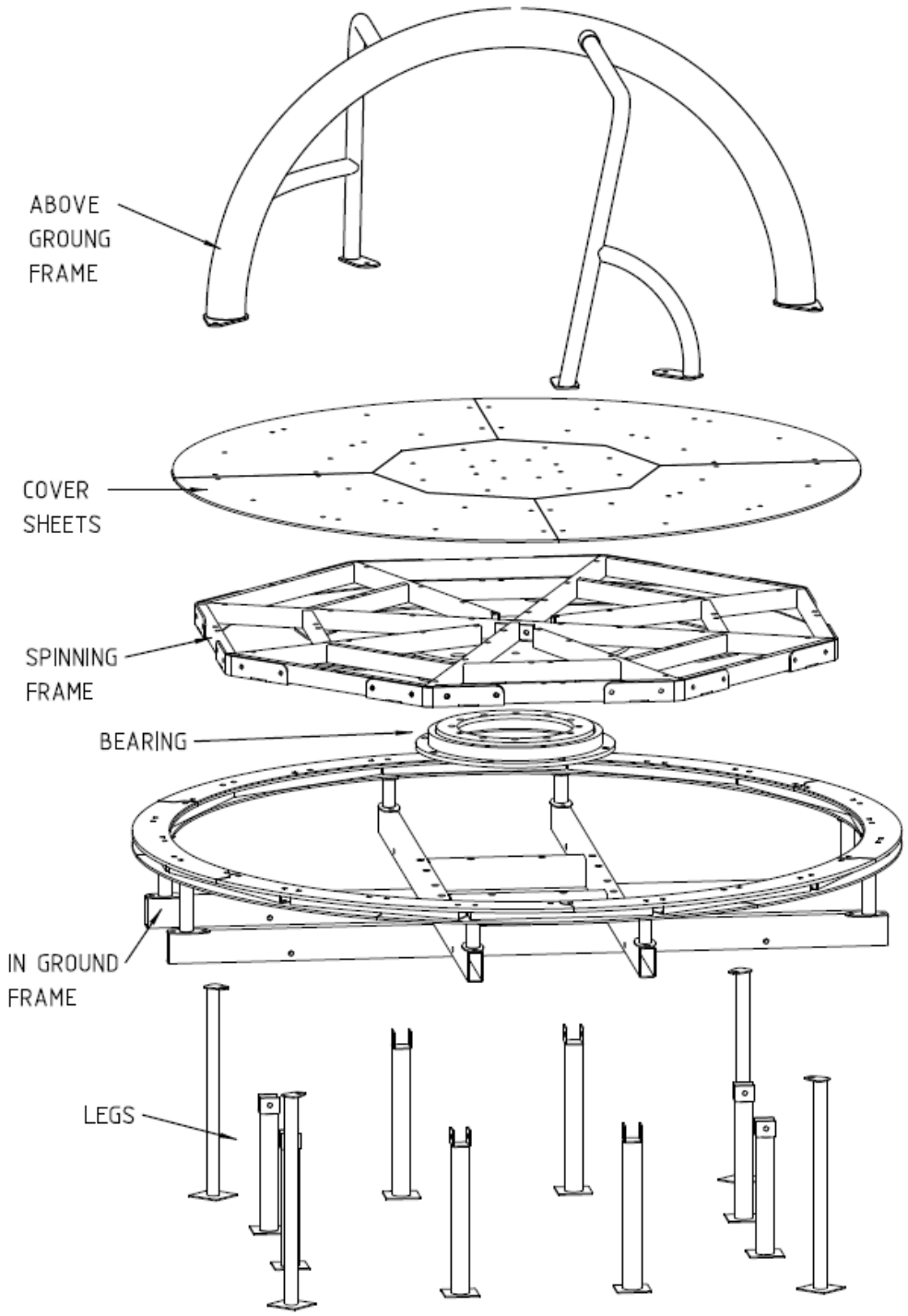
PlayCo recommends General Purpose Concrete. This is a concrete with a compressive strength of 20MPa (at 28 days) or higher.

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

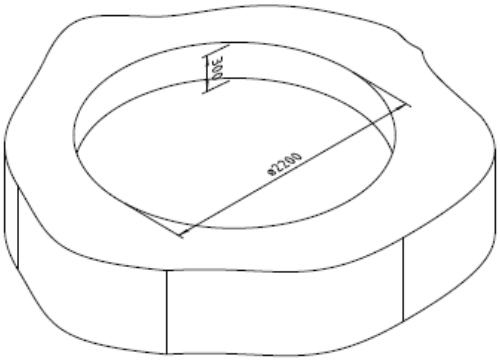
Accessible Carousel

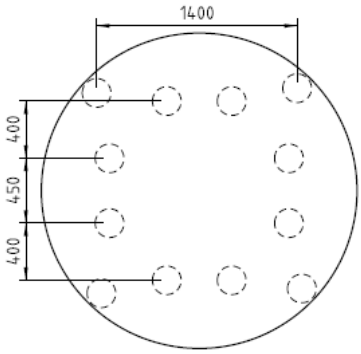
Pre-assembly Notes:

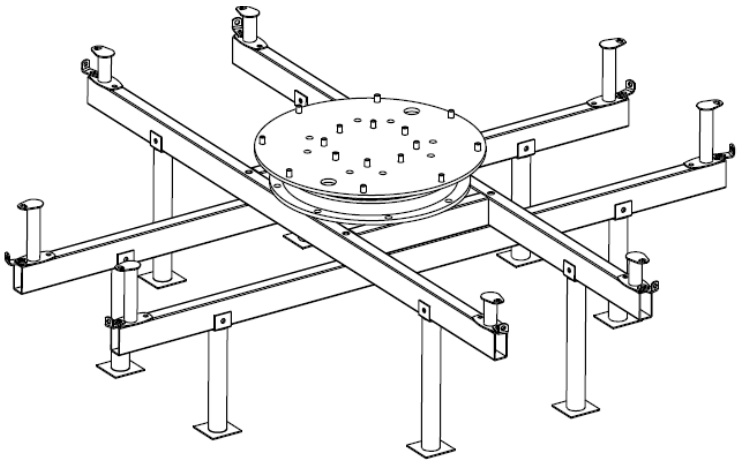
- Check you have all components.
- All fasteners to have Loctite applied before tightening
- Drainage will need to be considered in Areas affected by High rain fall or known flooding.



Step 1 – Mark out and Dig 2200mm Ø hole x 300mm deep. Mark out and dig support leg footing Holes 200 x 300mm D, Drainage will need to be considered.

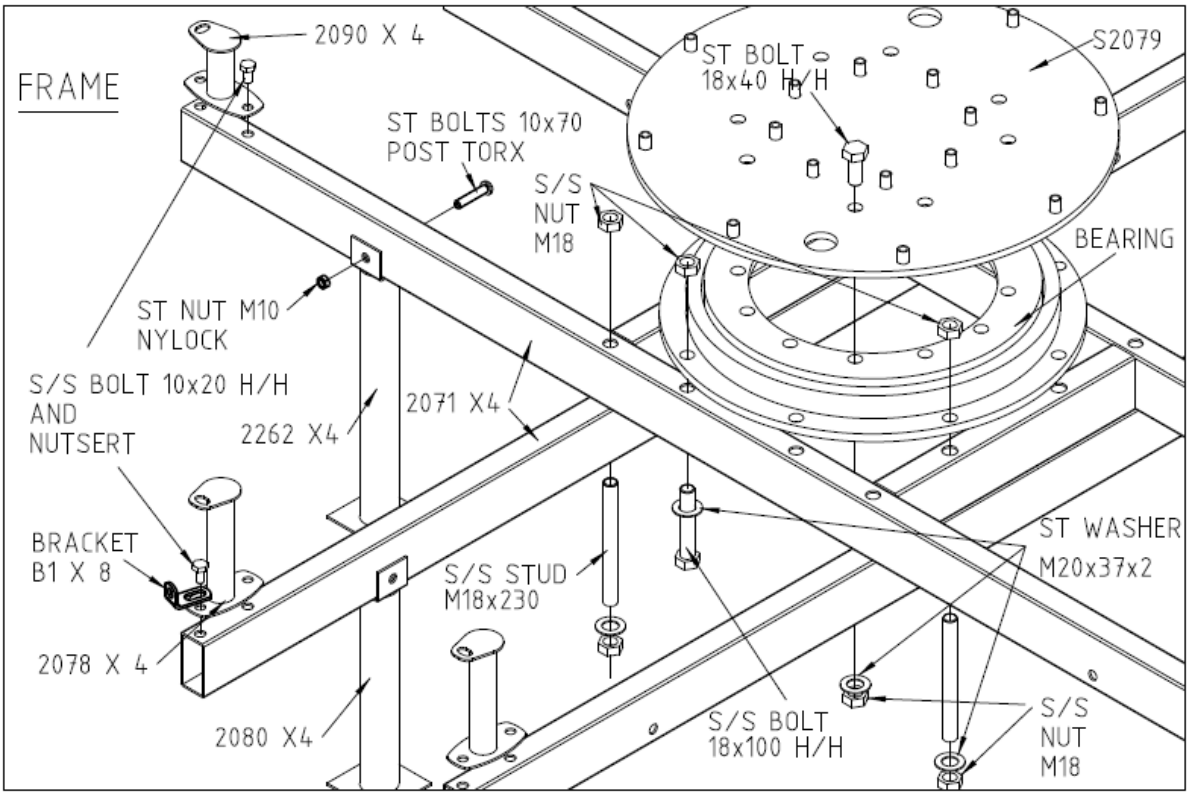






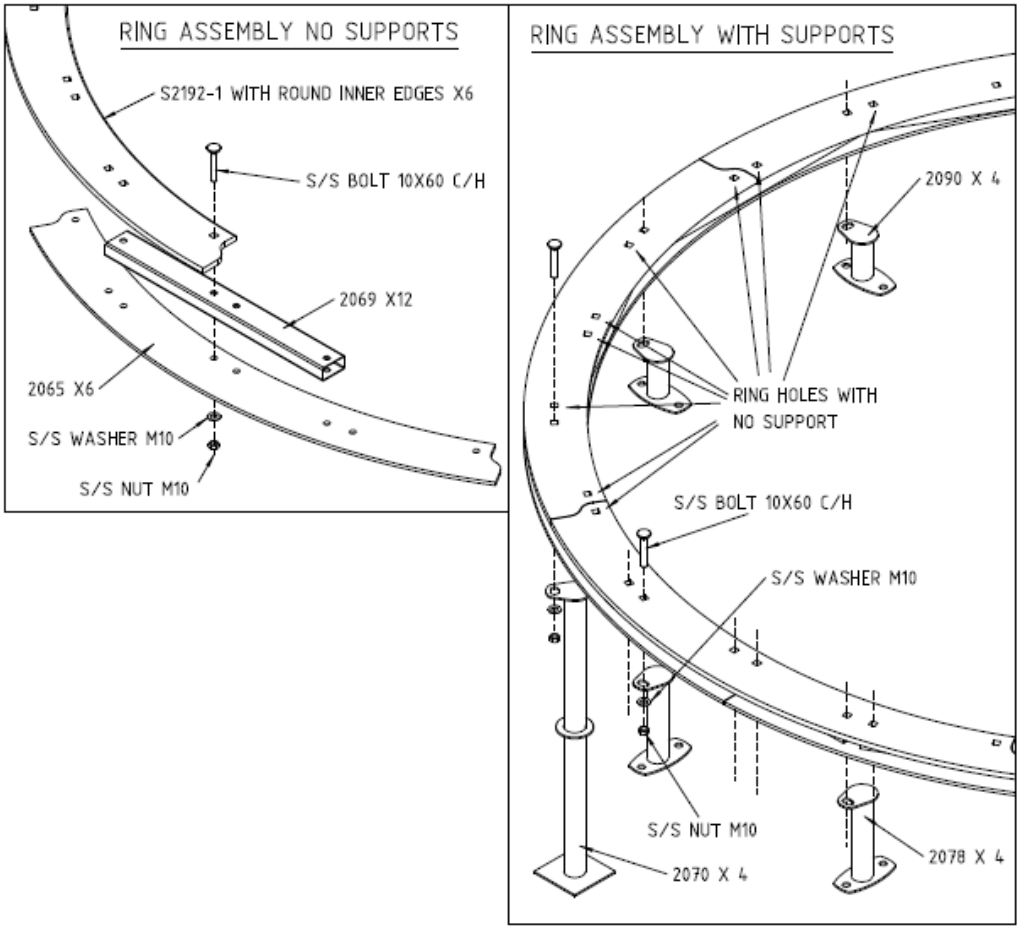
Step 2 - Build the in-ground support frame on level surface attaching the support legs and Skirt B1 brackets.

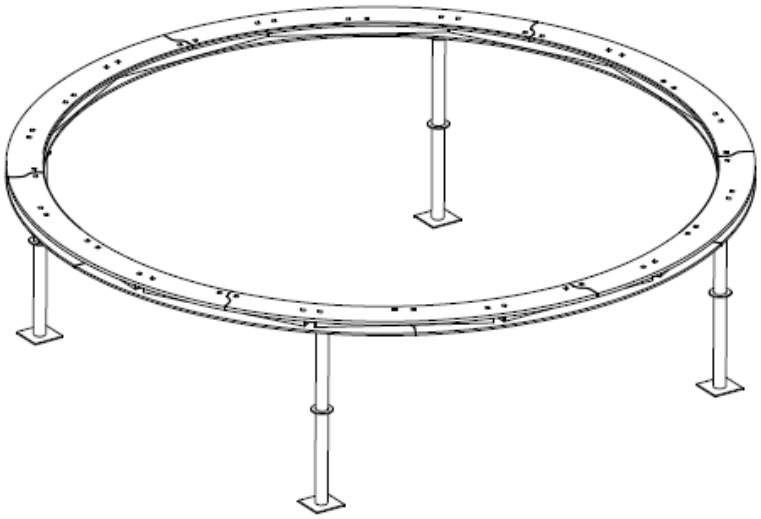
Step 3 - Assemble the Slew Bearing and the Disc (S2079) Fit the Slew bearing and disc assembly to the inner support frame Using S/S Studs M18 x 230 ST, washers and hex nuts.



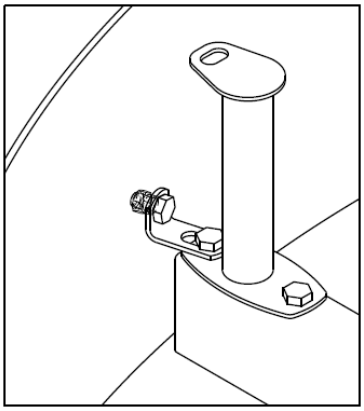
Step 4 - Insert the Inner frame Assembly with bearing and centre disc attached in the Hole. Check the levels across from the centre of the Disc and Slew bearing assembly to the outer edges using a long level or straight edge. Adjust by placing packing under Feet until Frame is level.

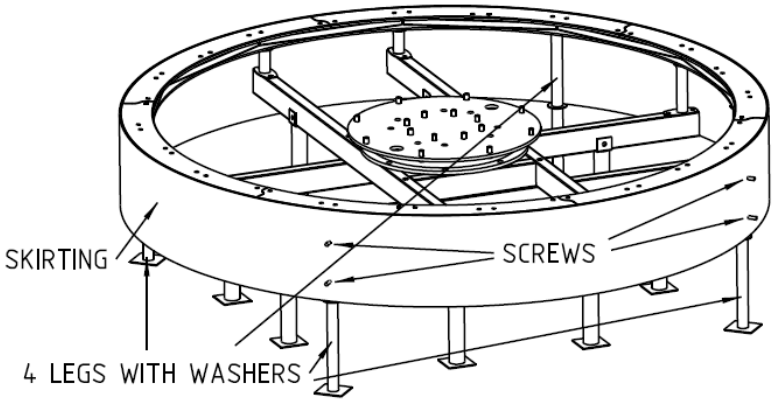
Step 5 - Build the Outer Ring assembly on level Surface and fit the outer ring assembly to the inner frame. Check levels and alignment to the disc & bearing assembly there should be 56 mm between the top of the centre plate and the top of the outer ring assembly.





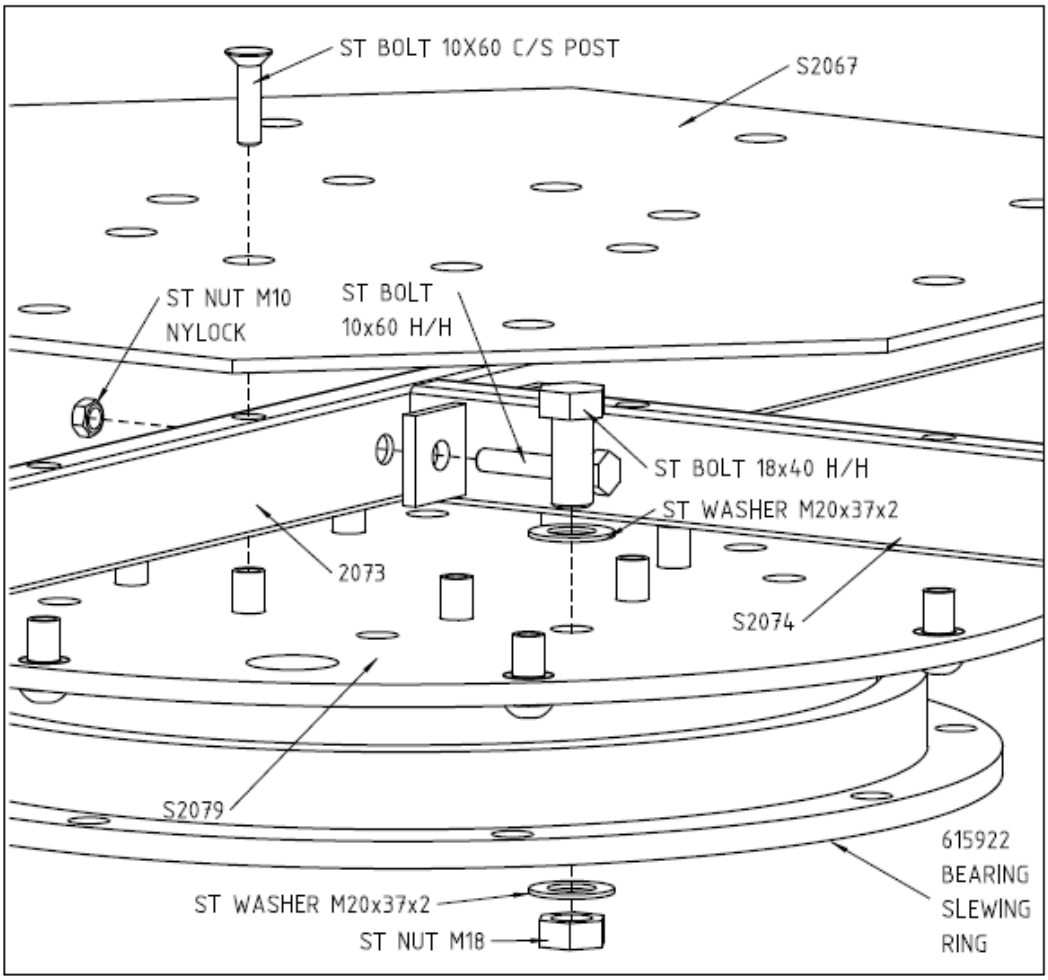
Step 6 - Install the plastic skirts to the outside of the outer ring assembly using the 4 x B1 brackets attached to inner support Frame.





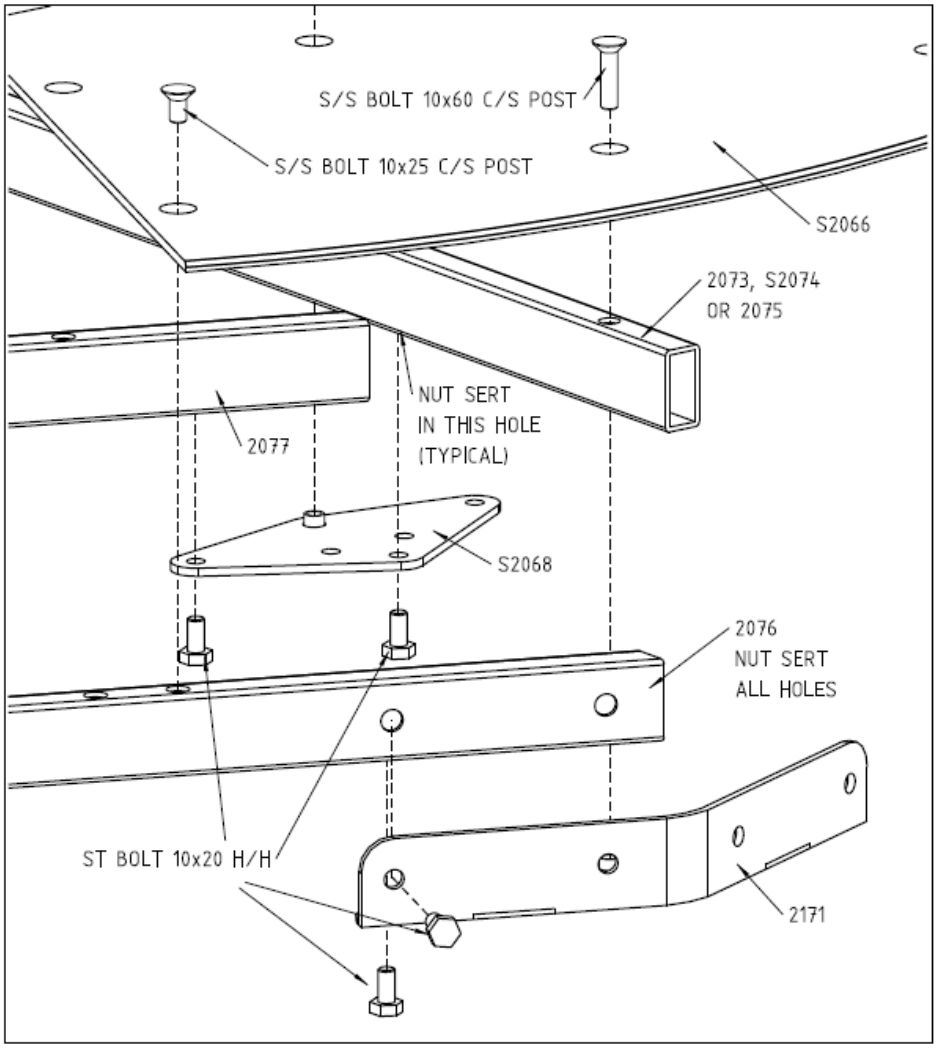
Step 7 - Assemble spinning frame by Install 1x 2073 Support bar to disc of the in-ground frame, using 2 x ST Bolt 10x 60 C/S Post bolts these are to be done up snug to be removed latter for fitment of the centre hex aly plate do not use Loctite at this Stage of fitment. Install the 2 x S2074 support bars connecting to 2073 and tighten using 2 off 10 x 60 HH bolts with Loctite applied.

Step 8 - Install the 4 x 2075 carousel supports bars to the centre Disc using the 2 off ST Bolt 10x 60 C/S Post bolts only. Install the centre disc S2067 using the ST Bolt 10x60C/S Post bolts and tighten.



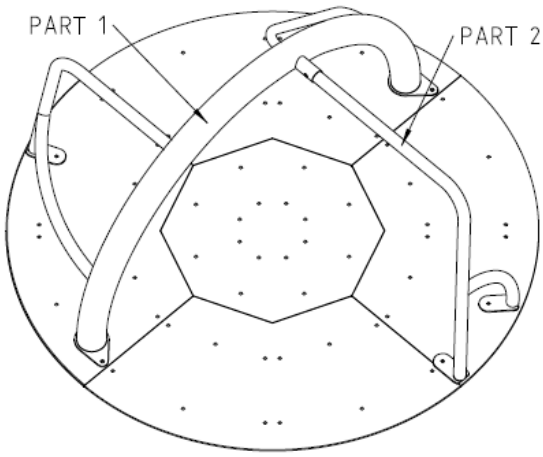
Step 9 – Install the support Plates 2068 to the underside of the 7 Support Bars and fit M10 x 20 HH Bolts and tighten. Install the 8 off 2077 small braces using the St Bolts 10 x 20 H/H and tighten.

Step 10 – Install the Support bracket 2171 to the end of the Supports bars 2073, 2075 & 2075 using St Bolts 10 x 20 H/H. Install 8 off Large Braces 2076 using 8 off St Bolts 10 x 20 H/H per bracket tighten all fasteners. The assembly of the 4 aly sheets to be done after the concrete is placed – see step 12.



Step 11 – Re Check the level of the carousel frame and the outer ring assemblies, to confirm they have not moved. If required re adjust the level. Once level is confirmed, concrete the 12 support legs (200mm diameter, 300mm deep) in place and allow to set then install aggregate to both sides of the plastic skirt and lightly compact.

Step 12 – Install the 4 x S2066 outer floor sections S2066, fit hand rail sections and tighten all bolts.

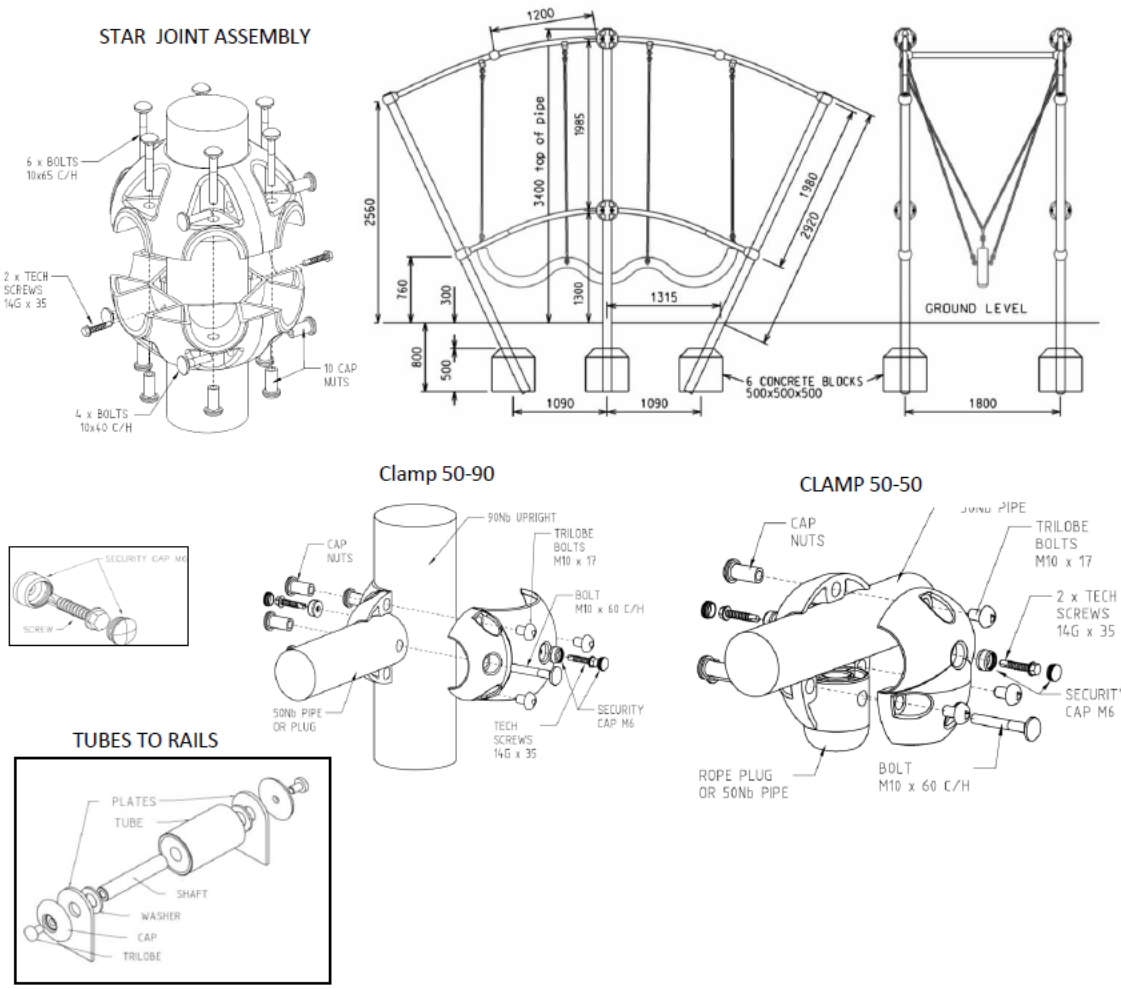


Argonaut

Dig 6 holes according the dimensions in the diagrams below, each hole to a depth of 800mm below finished ground level.

Connect the 3 uprights on each side of the frame with the curved rails using 'star joints' and '50-90 clamps' as shown. Lift frames and lower into the holes. With the side frames in place, connect the 2 top rails to both frames using the '50-50 clamps'. Apply 'Loctite' to the thread of all bolts and nuts.

Concrete uprights, ensuring that the two central uprights are vertical. Footings should be 500mm x 500mm x 500mm (deep) with 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. After the concrete is set, assemble the bearing units with ropes to top rails using shafts, plastic washers, caps and tri-lobes. Attach the big rope to all vertical ropes with "S" hooks on middle ropes and M8 Post Torx at ends. Apply 'Loctite' to bolts before tightening.



Bouncers – Rectangle and Round

Mark out and dig a pit using the dimensions in the table provided below (install pit size).

Using aggregate, create a drainage layer 225mm deep x 200mm in width around the internal edges of the pit (refer to the table below for the amount of aggregate required).

Compact and level the aggregate layer so that the bouncer frame will sit horizontal and firm once installed.

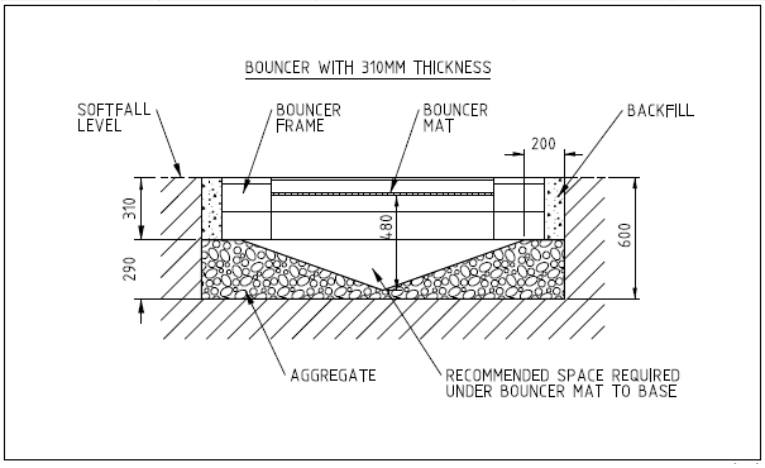
Screw the supplied eyebolts into the existing holes on the side of the bouncer frame. Use the eyebolts as lifting points to lower the bouncer into the pit.

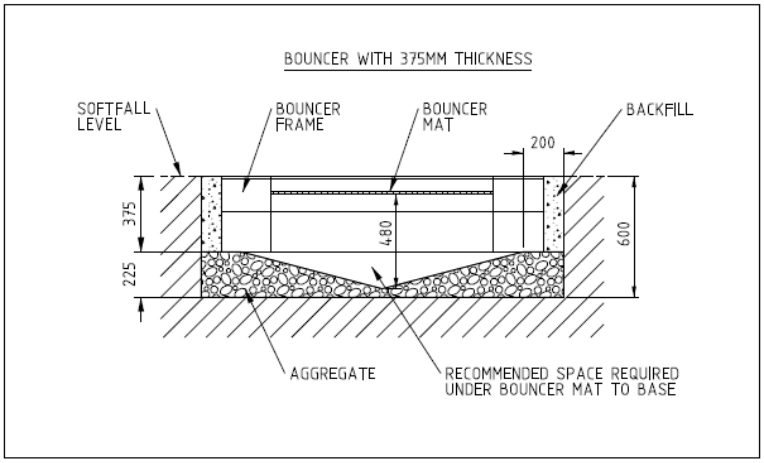
Ensure that all frame outside edges sit centrally on the 200mm wide drainage layer (see image below).

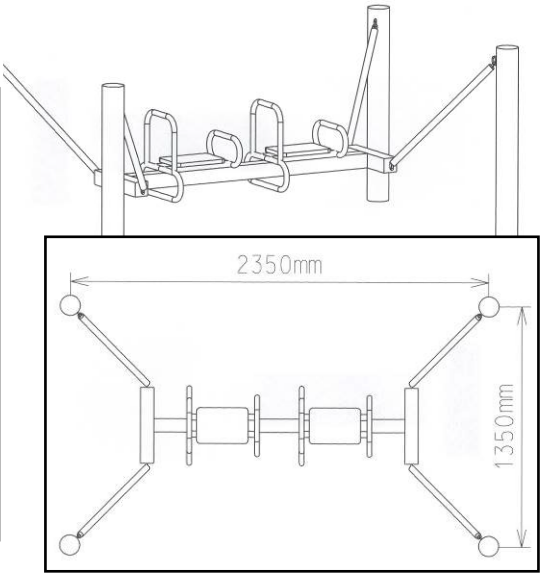
Check that the bouncer rubber surface sits flush with the required softfall ground level. The recommended space between the underside of the jumping mat and the base of the pit is 480mm.

Unscrew the eyebolts, backfill and compact all the edges around the bouncer.

Product	Code	Product Dimensions	Jumping Area	Soft fall Areas	Install Pit Size	Aggregate m^2	Weight
Rectangular	FS157	1750x1500x375mm	1250x1000mm	4750x4500mm	1950x1700x600m	0.5m^3	215kgs
Round	FS158	Ø1700x375mm	Ø1200mm	Ø4200mm	Ø1900x600mm	0.4m^3	225kgs







from the centre of the holes).

The holes should be approximately 800mm deep and 500mm square. Insert the uprights making sure they are level with the top standing 1.0m above the finished surface level.

Pour concrete around the base of the poles forming a footing of 500mm x 500mm x 500mm, the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright.

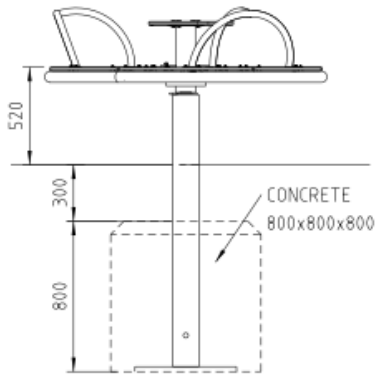
Check levels again after the concrete is poured. Leave the concrete to set for at least 24 hours before attaching the remainder of the Bronco Rider.

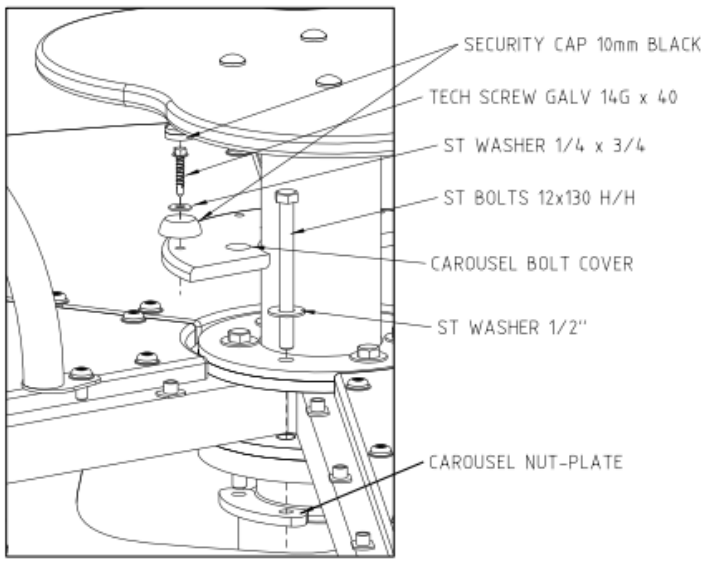
Place the frames on top of the beam, place the seats on top of the frames and fasten using 40mm cup head bolts and aluminium cap nuts. Connect the support rails to the beam and uprights using 'S' hooks, ensuring that the 'S' hooks are fully closed using vice-grips.

Carousel - With rails/no rails

Dig hole for footing and concrete the upright. Make sure the upright is level vertically and horizontally. Leave it for 24 hours for concrete to set **before** attaching the top.

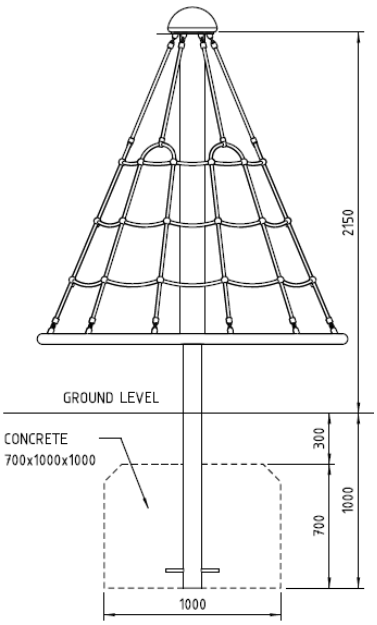
Using Loctite attach the frame using bolts M12x130, washers and nut-plates to the hub. Place the bolt covers and secure to plastic panels with tech screws, washers and security caps as shown.





Concord

The rubber membrane MUST be connected to the upright with bolts, washers and t nuts before the upright goes in ground.



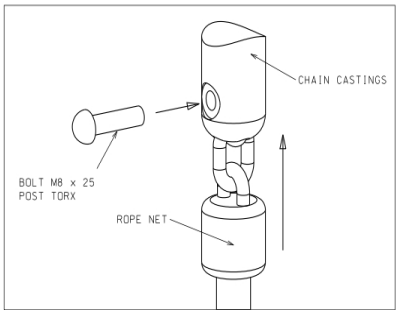
Dig a single hole approximately 1000mm deep (below the finished surface level) and 1000mm square. Insert the anchor and place the upright in the hole.

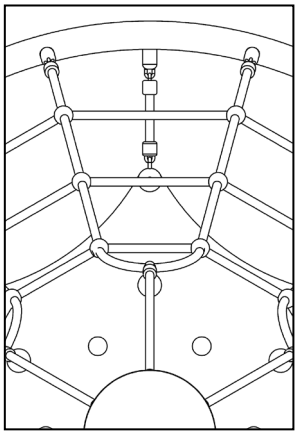
Pour concrete around the base of the pole forming a footing of 700mm x 1000mm x 1000mm, the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. Check levels again after the concrete is poured. Leave the concrete to set for at least 24 hours before connecting the ring with the net.

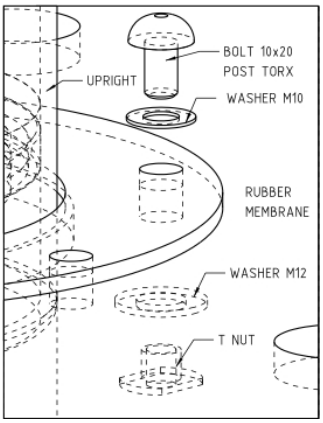
Once the concrete has set, connect the ring to the rubber membrane using cap nuts and 16mm torx bolts to connect the ropes to the rubber and 25mm torx bolts to connect the ropes to the ring.

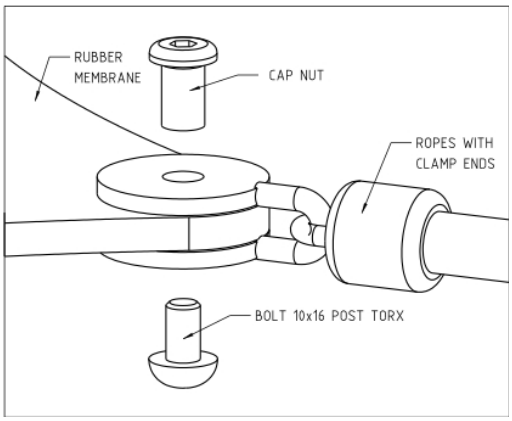
Connect the top of the rope net to the top of the pole using 25mm torx bolts. Ensure that the circular rope rings are on the outside and that 'V' of each of the side ropes aligns to join either side of the ropes connecting the rubber membrane as shown.

Lifting the ring as you work around, join rope net to the ring using 25mm torx bolts. Use 3 bolts 10x20 Post Torx with washers M10 to attach the top cap. Apply Loctite on all bolts.







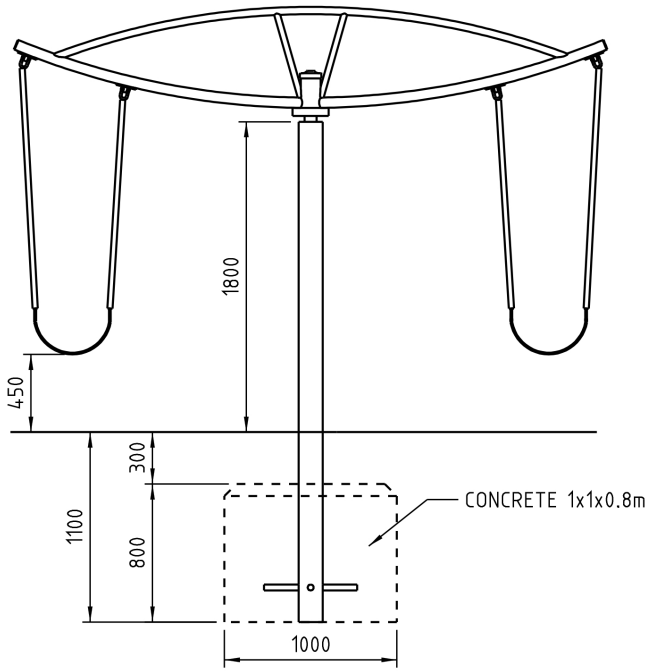


Cyclone

Dig a single hole approximately 1100mm deep (below the finished surface level) and 800mm square. Insert the upright in the hole, making sure it is sitting 1800mmm above the finished surface level.

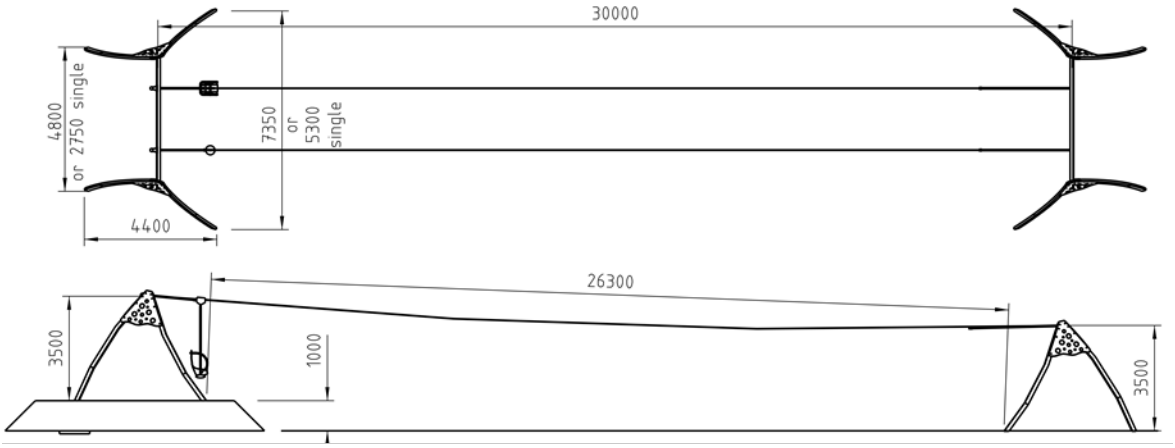
Pour concrete around the base of the pole forming a footing of 1000mm x 1000mm x 800mm, the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. Check levels again after the concrete is poured. Leave the concrete to set for at least 24 hours before connecting the carousel top.

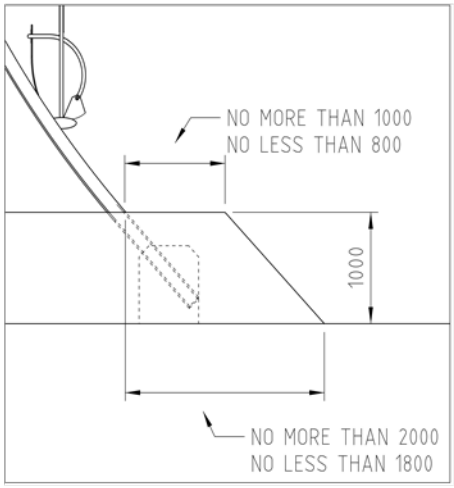
Once the concrete has set, lift the top section and place on top of the hub axle and attach using bolts M16x50 and shear nuts M16. Attach the seats chains keeping longer chain on outside to the top bar using 'S' hooks, ensuring that the 'S' hooks are fully closed using vice-grips. (The large end of the 'S' hook attaches to the swing shackle and the small end to the chain, with the lower opening away from the seat.)

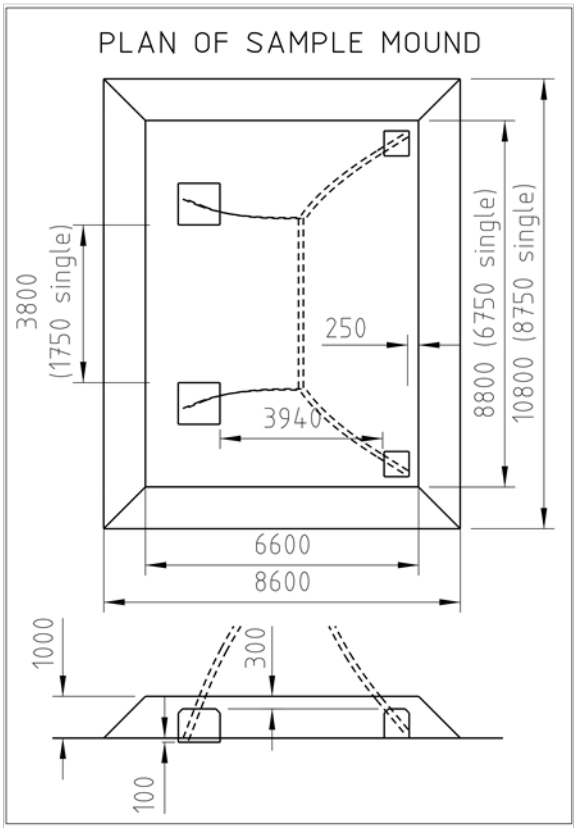


Flying Fox

Prepare ground surface according to the plan with the high end elevated 1000mm above the low end. For best results, area should be level and then build the mound on starting end. The mound should be covered in a medium that will prevent erosion and also provide cushioning from falling e.g. rubber soft fall.

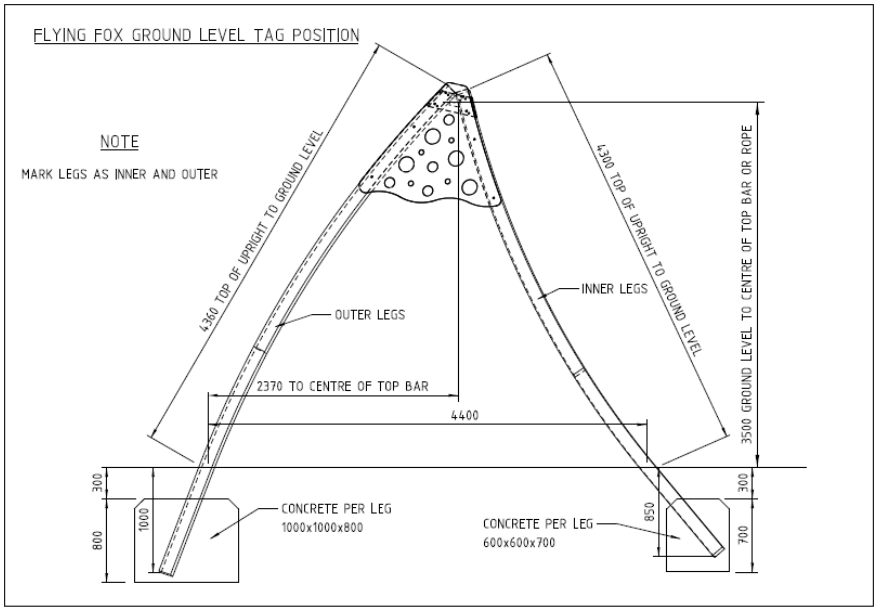




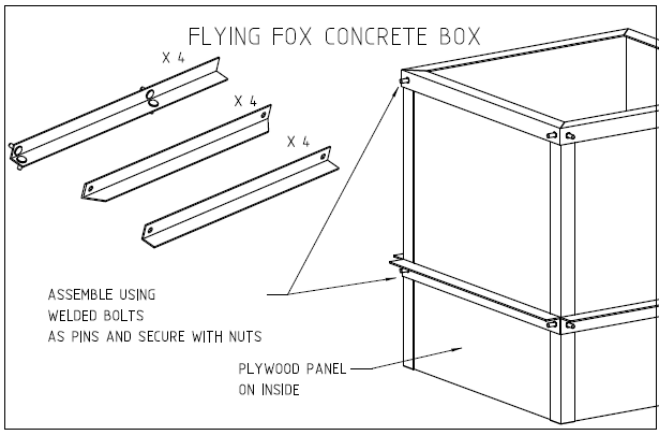


There are 2 options to concrete the legs on mound:

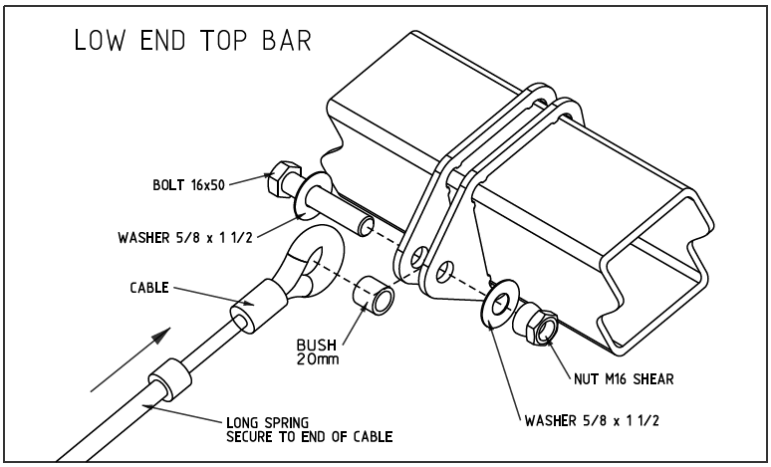
1. Build the mound. Mark and dig holes for the uprights – 1000mm square and1100mm deep for outer uprights and 600mm square, 1000mm deep for inner uprights.
2. Use concrete form work boxes for start end. Mark the positions of the boxes according to the diagrams bellow. Dig 100mm holes in ground for the big boxes. Assemble and place the boxes on right places.



Assemble both frames. The uprights connect to the top bar using M10x120mm cup head bolts and cap nuts through the wide section, and M10x80mm cup head bolts and cap nuts through the narrow section and the side panels. M10x70mm cup head bolts and cap nuts are used to connect the lower sections of the side panels to the uprights.



When the frames are raised into place the legs will need to be rested on blocks or pavers to sit them above the base of the footing as shown (100mm for the back uprights and 150mm for the front uprights). Check the middle (rope line) of the top bar is 3500mm from ground level. Pour the concrete and leave to set for at least 48 hours. When a mound is built and formwork is used for the footing, the concrete boxes should be disassembled and removed prior to building the mound.



Attach the cables to the low end top bar and secure as shown.

Feed the cables through the holes in the low end top bar and secure as shown.

Insert the springs and trolleys by sliding them onto the cable (long springs first, then trolleys, then short springs). Note: The clamping ends on the springs should be positioned toward the ends of the cables, or the top bars.

Do not tighten until cable tension set.

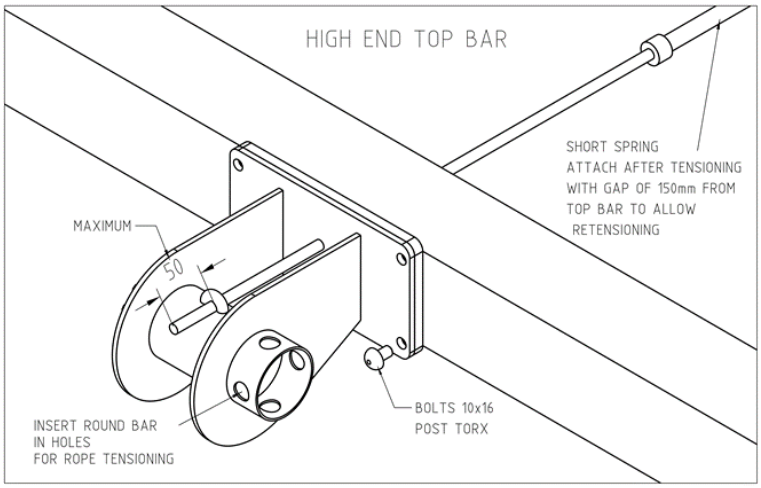
Using a cable winch to pull the other ends of the cables up to the high end top bars, feed the ends of cables through the holes in the top bar as shown and secure to tension adjusters.

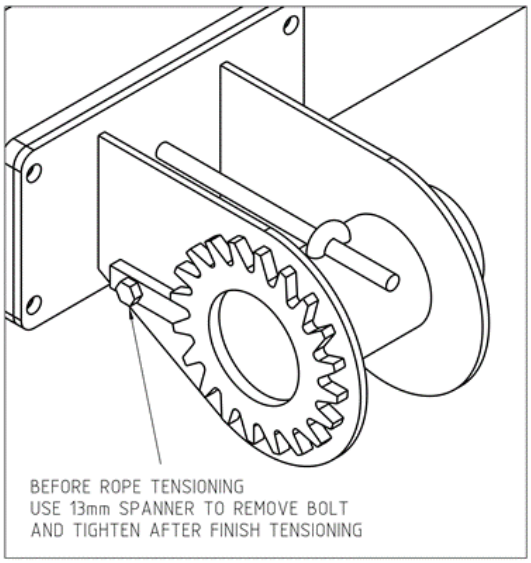
Ratchet up to partly tension the ropes.

Attach chains of the seat and pommel to trolleys using M8x20mm post torx bolts.

Use supplied bar to tension the ropes to a point allowing a loaded seat to reach a low point approximately ¾ of the length of the cable, slowing the ride toward the end. When each seat is fully loaded (about 80-90kg person) the underside of the seat should have ground clearance about 450-700mm.

Cables should be periodically checked and re-tensioned as necessary.



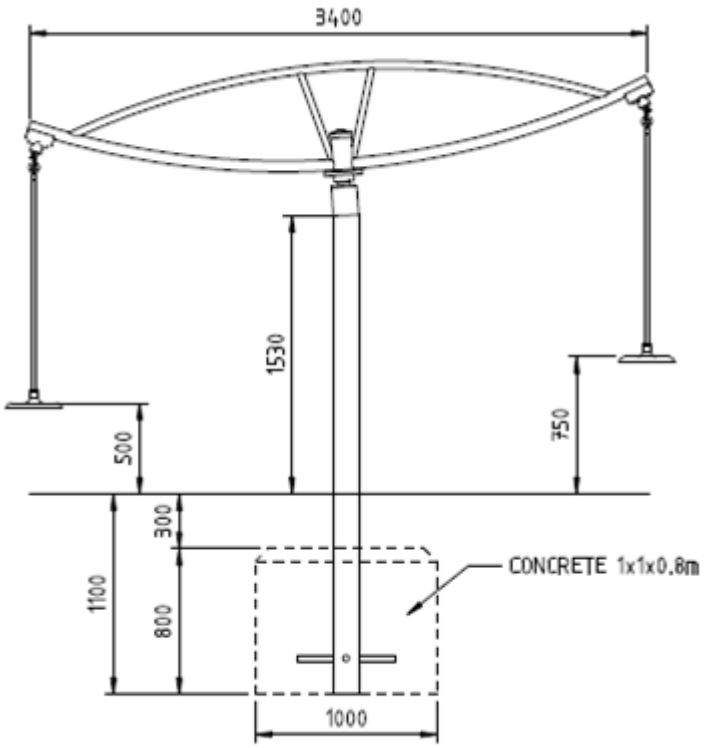


Galaxia

Dig a single hole approximately 1100mm deep (below the finished surface level) and 800mm square. Insert the upright in the hole, making sure it is level with the angled point of the upright angle sitting 1530mmm above the finished surface level.

Pour concrete around the base of the pole forming a footing of 1000mm x 1000mm x 800mm, the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. Check levels again after the concrete is poured. Leave the concrete to set for at least 24 hours before connecting the carousel top.

Once the concrete has set, lift the top section and place on top of the hub axle and attach using bolts M16x50 and shear nuts M16.



Gliding Fox

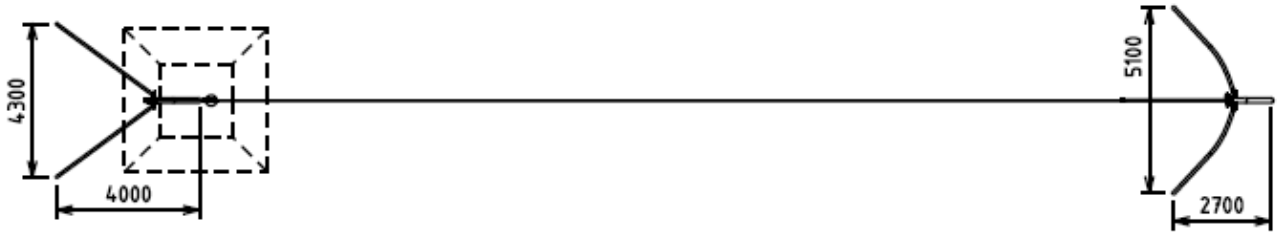
The item has 3 variations:

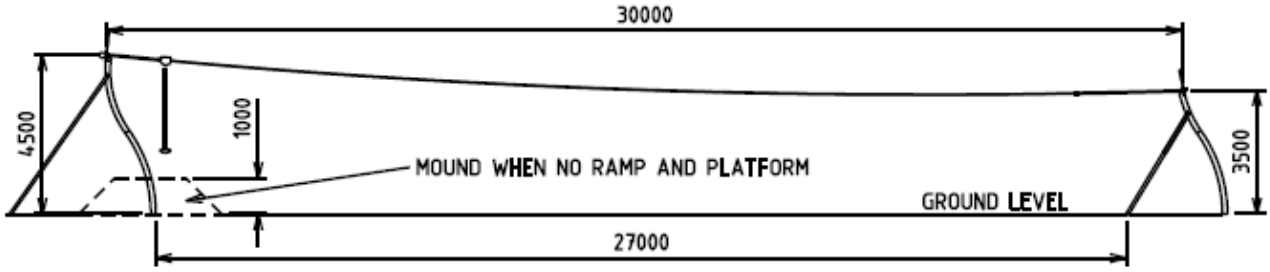
1. Gliding Fox with required mound (pommel or disable seat)
2. Gliding Fox with ramp (pommel or disable seat)
3. Gliding Fox with platform (pommel only)

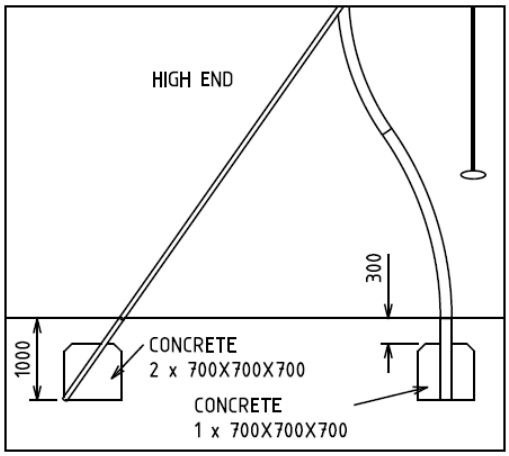
General rules for all 3 options:

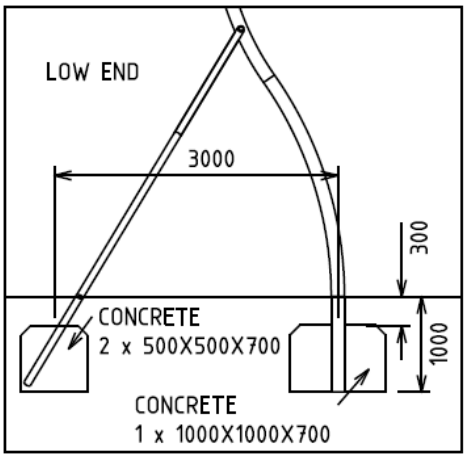
Prepare ground surface according to the plan. For best results, area should be level. Then build the mound (if mound required), ramp or platform on starting end. The mound should be 1000mm high, around high end post and covered in a medium that will prevent erosion and also provide cushioning from falling e.g. rubber soft fall.

Mark and dig the holes for the concrete according to the plan.









Assemble all parts to high and low end posts and insert supporting legs (do not bolt legs). When the frames are raised into place the legs will need to be rested on blocks or pavers to sit them above the base of the footing as shown. Bolt the supporting legs to posts as shown. Pour the concrete and leave to set for at least 48 hours.

Feed the cables through the holes in the low end top bar and secure as shown.

Insert the springs and trolleys by sliding them onto the cable (long springs first, then trolleys, then short springs). Note: The clamping ends on the springs should be positioned toward the ends of the cables, or the top bars.

Do not tighten until cable tension set.

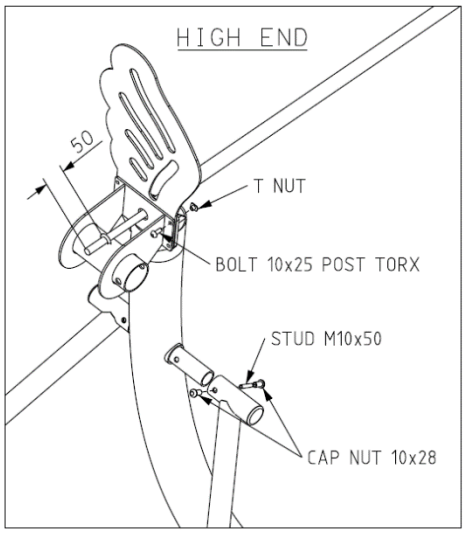
Using a cable winch to pull the other ends of the cables up to the high end top bars, feed the ends of cables through the holes in the top bar as shown and secure to tension adjusters.

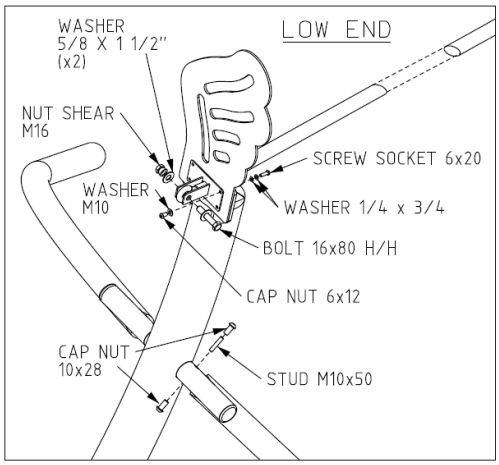
Ratchet up to partly tension the ropes.

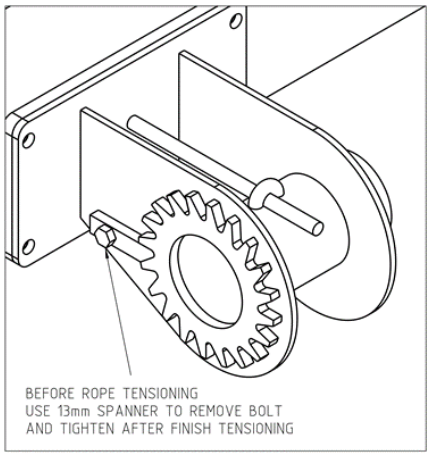
Attach chains of the seat and pommel to trolleys using M8x20mm post torx bolts.

Use supplied bar to tension the ropes to a point allowing a loaded seat to reach a low point approximately ¾ of the length of the cable, slowing the ride toward the end. When each seat is fully loaded (about 80-90kg person) the underside of the seat should have ground clearance about 450-700mm.

Cables should be periodically checked and re-tensioned as necessary.

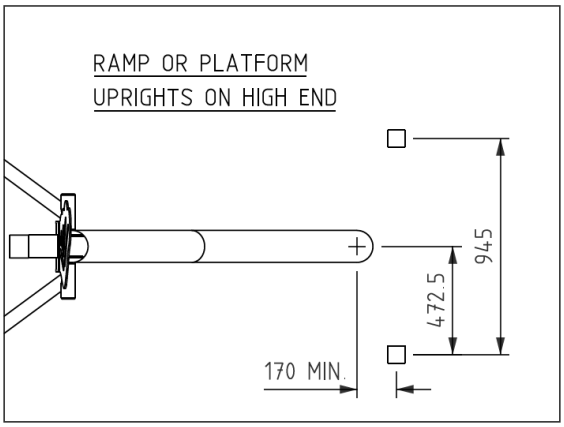




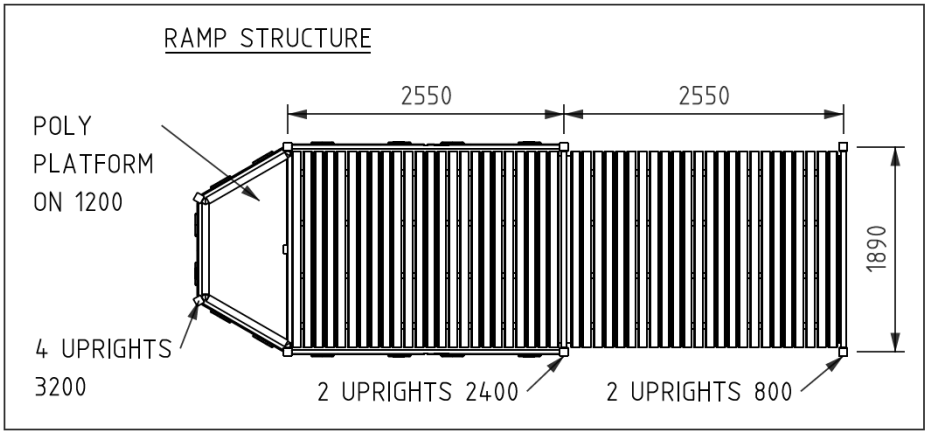


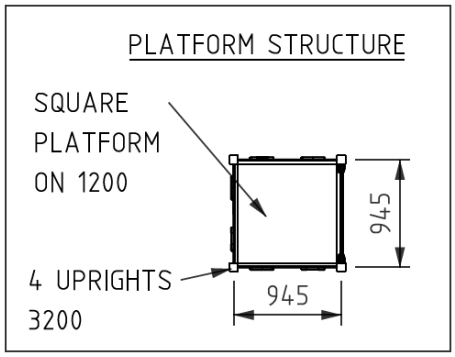
When using Ramp or Platform structures, position the first 2 uprights minimum 170mm from high end post to have correct distance to the platform – see plan.

When Ramp or Platform structures are needed use the plans below for upright positions.

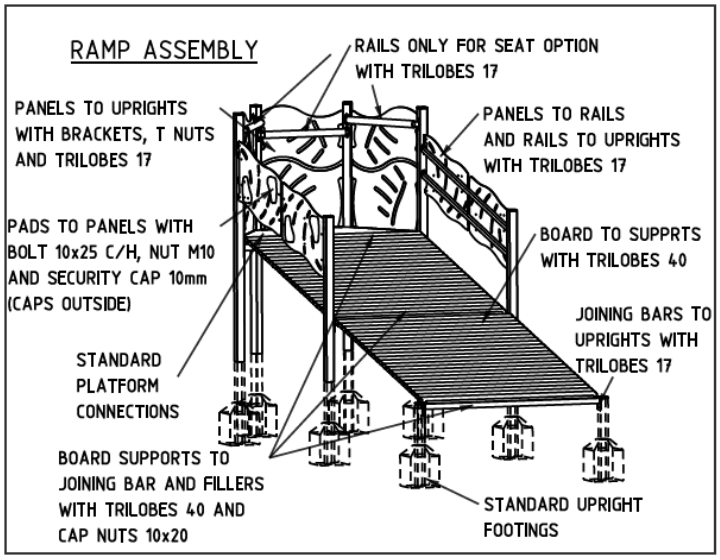


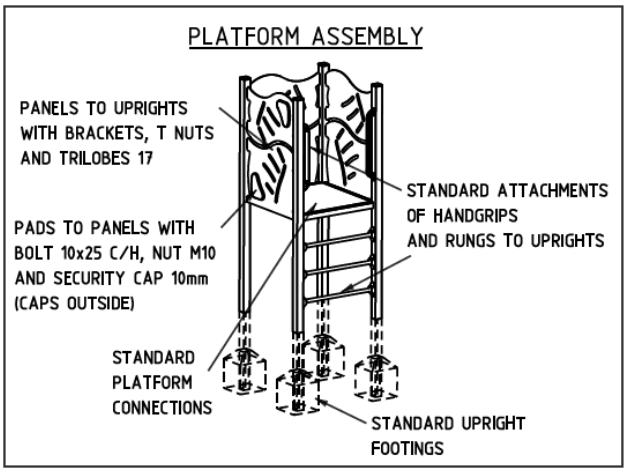
For the ramp assembly attach poly platform, fillers, joining bars and board supports as shown, to build the frame. Then attach all boards and panels. Keep the structure correct with all uprights vertical and concrete to ground.





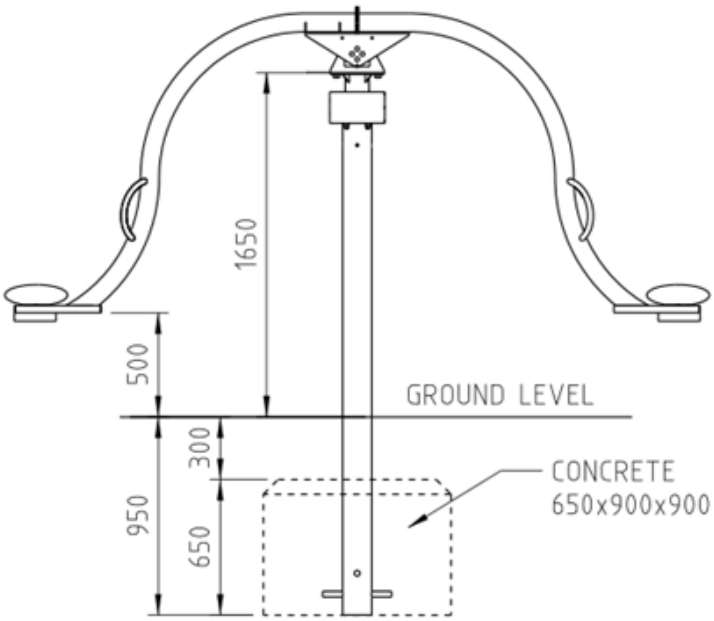
Use same rules for building the platform structure.





Gravitator

Dig a single hole 950mm deep (below the finished surface level) and 900mm square. Insert the upright in the hole, making sure it is level, with the top 1650mm above the finished surface level as shown. Pay attention on upright position as the frame spins about 30deg in both directions and the fall zone is not a circle.

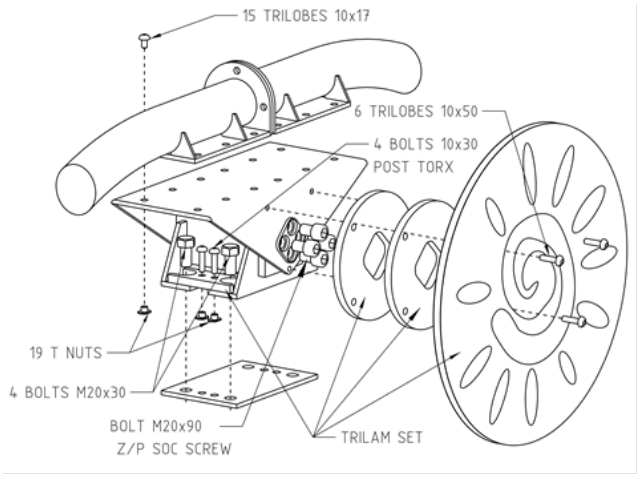


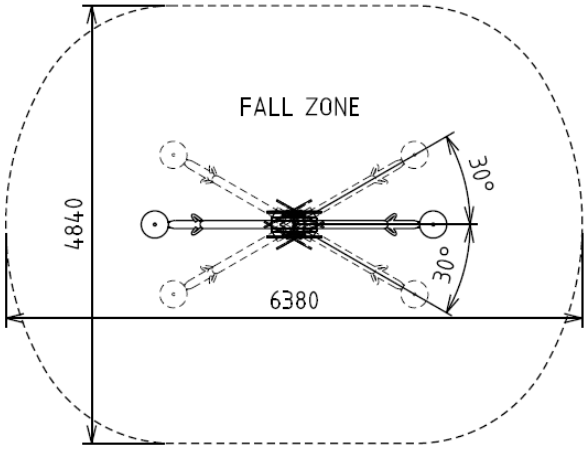
Pour concrete around the base of the pole forming a footing of 650mm x 900mm x 900mm, the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. Check levels again after the concrete is poured.

Leave the concrete to set for at least 24 hours before connecting the Gravitator Arms.

Attach Gravitator Shield under rubber buffers on the upright using 2 tri lobes tap tight.

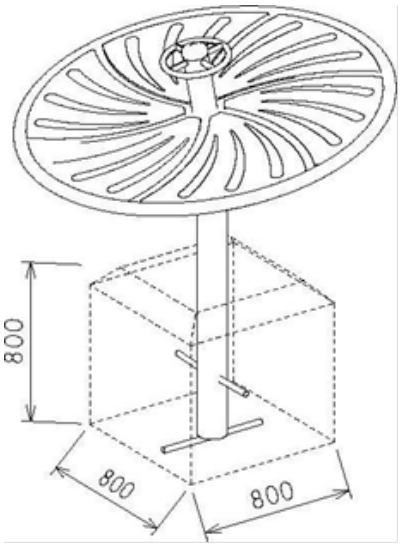
Assemble the top section as shown. Once the concrete has set, lift the top section and place on top of the upright and attach as shown.

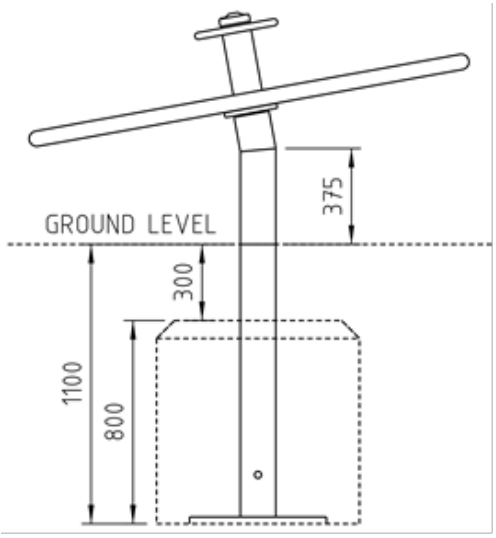




Gyro Disc

Dig a single hole approximately 1100mm deep (below the finished surface level) and 800mm square. Insert the upright in the hole, making sure the top of the straight section of the upright is 375mm above the finished surface level as shown.

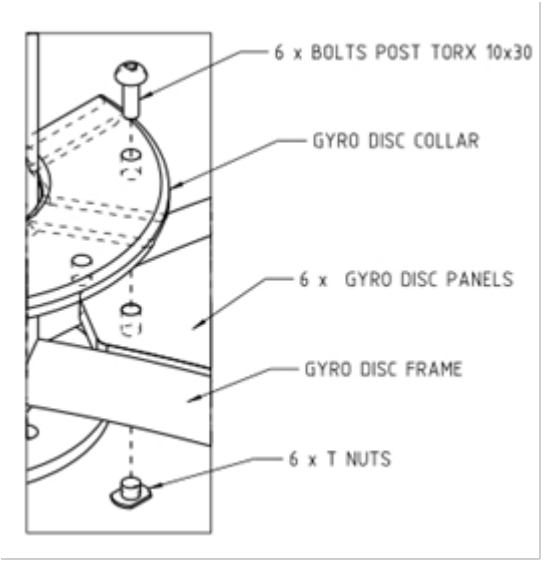




For the footing, pour concrete around the base of the pole (forming a footing of 800mm x 800mm x 800mm), the top of which should be 300mm below the finished surface level with a tapered top so that water won't pool around the upright. Check levels and the upright's vertical position again after the concrete is poured. Leave the concrete to set for at least 24 hours before connecting the Gyro Top.

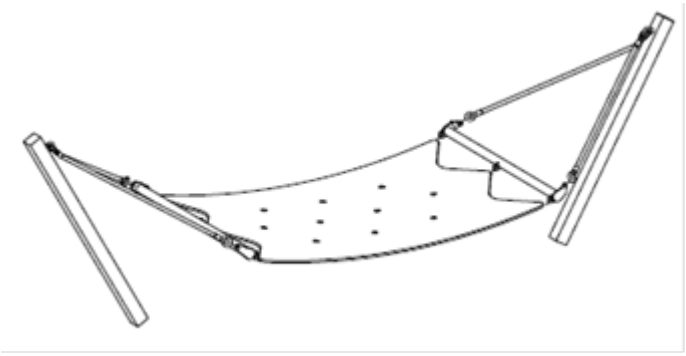
Once the concrete has set, place Gyro Top on top of the hub axle and attach using stainless cap nuts, 17mm tri-lobe bolts and washers.

Fasten the two collars around the central column of the Gyro Top. First use the collars as a template (with channels underside positioned over the pipes coming from the central column) to mark and drill 13mm holes through plastic below. Then attach collars using 6 torx bolts on top and 6 T-nuts on bottom as shown.

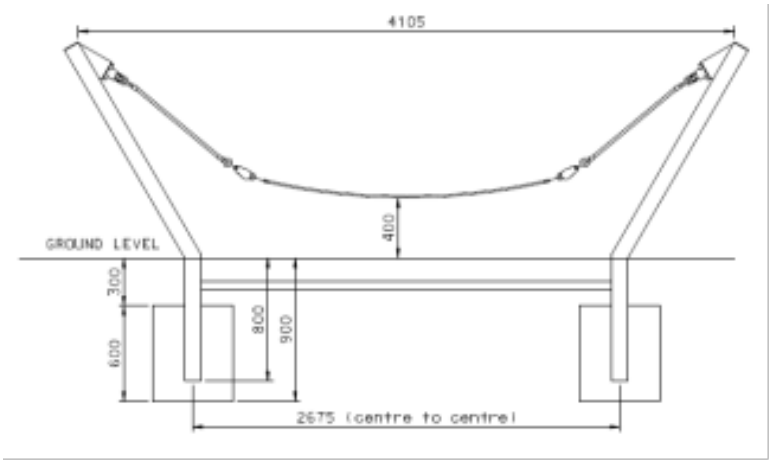


Hammock

Dig holes for the two uprights spaced at 2675mm apart (when measured from the centre of the holes), with a trench between the two holes approximately 250mm in depth.



The holes should be approximately 900mm deep and 500mm square. Attach the rail to the uprights using 'tap-tight' tri-lobes and insert the uprights to a depth of 800mm below finished ground level. 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 Hammock.

Once the concrete is set, connect the hammock to the ropes using the 'S' hooks already attached to the ropes, ensuring that the 'S' hooks are fully closed using vice-grips.

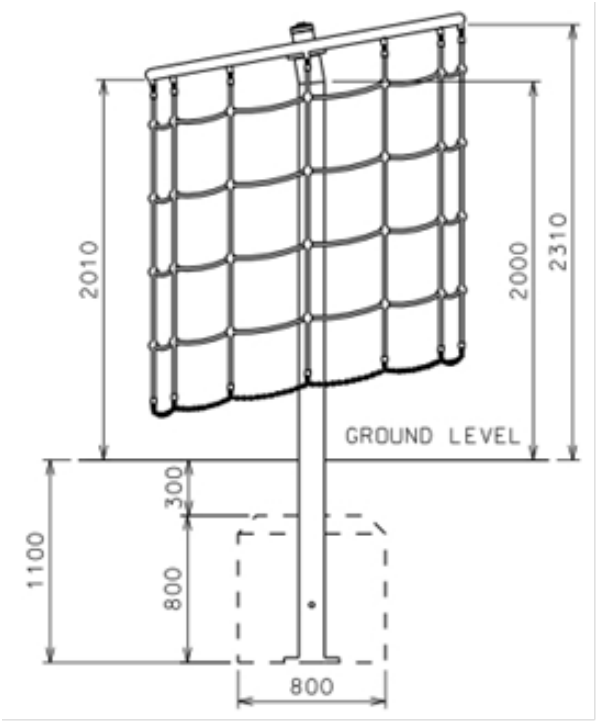
Hurricane

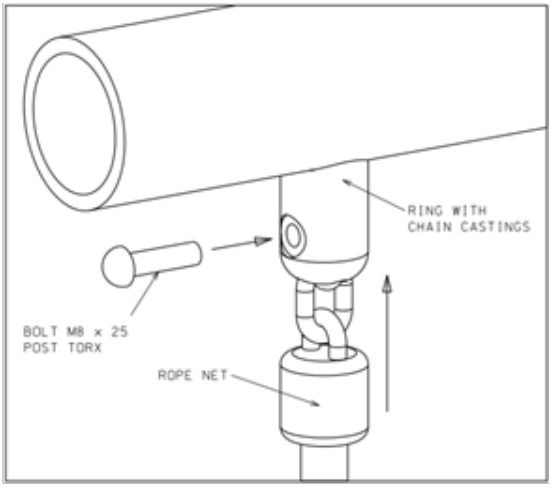
Dig a single hole approximately 1100mm deep (below the finished surface level) and 800mm square. Insert the upright in the hole, making sure it is level with the angled point of the upright angle sitting 1640mmm above the finished surface level as shown.

Pour concrete around the base of the pole forming a footing of 800mm x 800mm x 800mm, the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. Check levels again after the concrete is poured. Leave the concrete to set for at least 24 hours before connecting the carousel top.

Connect the rope net to the top ring inserting chains into chain castings and secure with bolts M8 x 25 Post Torx as shown.

Once the concrete has set, lift the top section and place on top of the hub axle and attach using stainless cap nuts, 17mm tri-lobe bolts and washers. Apply Loctite on all bolts.

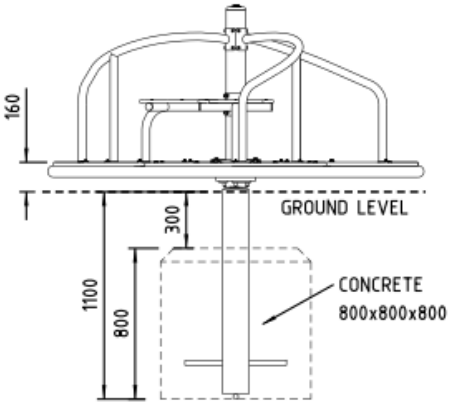


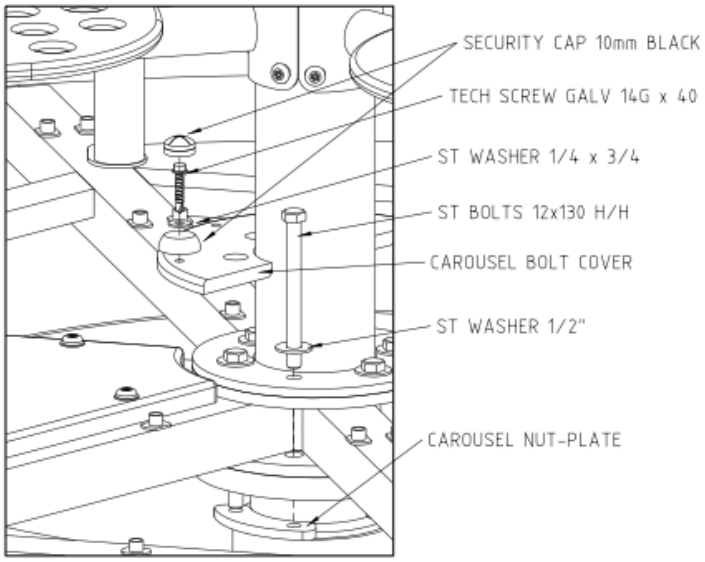


Merry-Go-Round

Dig hole for footing and concrete the upright. Make sure the upright is level vertically and horizontally. Leave it for 24 hours for concrete to set **before** attaching the top.

Using Loctite attach the frame using bolts M12x130, washers and nut-plates to the hub. Place the bolt covers and secure to plastic panels with tek screws, washes and security caps as shown.

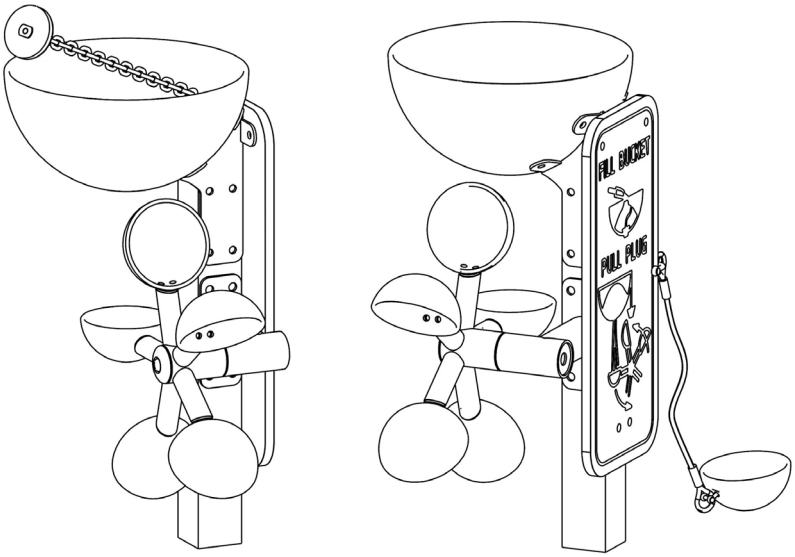




Sand Wheel

Dig a hole approximately 300mm in diameter and 800mm deep. Insert the Sand Wheel Upright into the hole making sure it is perfectly vertical. Pour concrete around the leg forming a footing of 300x300x500mm, with the top on 300mm below ground level and tapered so the water won't pool around the upright. Check levels again after the concrete is poured.

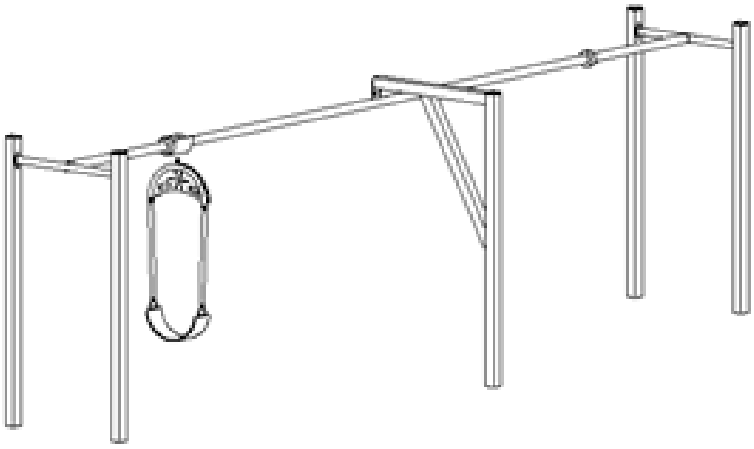
Attach plates to upright using 17mm tri-lobes. For the plastic panel low 2 holes use 40mm tri-lobes and 17 tri-lobes with T nuts for top 2 holes. Attach bucket with 17mm tri-lobes and T nuts (use plug chain to join bucket's top left hole to tag with T nut). Top of bucket should be 780mm from finished ground level.



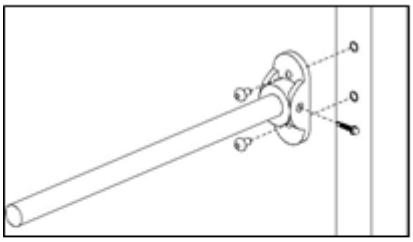
Seat Glide

The Seat Glide can be installed with or without platforms. If platforms are included in the design these should be added once the top bar is in place (as described in the front section of this manual).

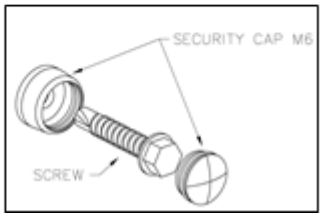
Connect both sections of the top bar and position on the ground in the location it is to stand. Using the top bar as a guide, mark the spot for the uprights on both ends. Dig the holes and insert the uprights to the correct height. (The centre of the flanges at the top of the uprights where the top bar joins should be 1850mm above finished ground level on the item without platforms and 2250mm where platforms are included.)



Attach the flanges to the top bar. Loosely fit the flanges in place on the component then fasten the flanges to the upright. Each flange attaches to the upright using two 20mm tri-lobes.



Once satisfied that the uprights are correctly positioned and square, each flange can be secured to the component using a tech screw. 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 through the dimpled hole in the side of the flange and into the steel pipe using a power drill and the tech screw driver supplied. Once secure, the top of the security cap should be securely fastened.



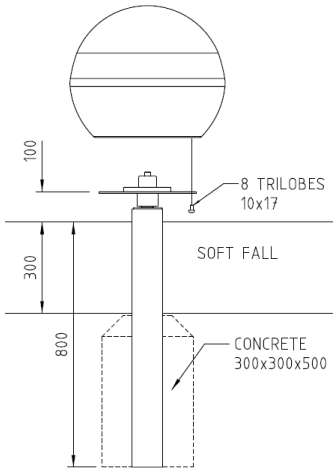
Lift the top bar into place then attach to the uprights using 20mm tri-lobes, applying a small amount of 'Loctite' to the threads before tightening. Dig a hole for the support leg and insert into the ground then connect to the bracket at the top of the top bar using 17mm tri-lobes and T-nuts. Ensure that the bolts are tightened, the uprights vertical and the top bar horizontal. If platforms are included attach them with the other uprights, then concrete all uprights into the ground.

The section of the seat glide will already be connected to the top bar. Once the concrete has set, the seat and chains should be connected using 'S' Hooks (ensure that the 'S' hooks are fully closed using vice-grips with the small end of the 'S' Hook joining the chain.)

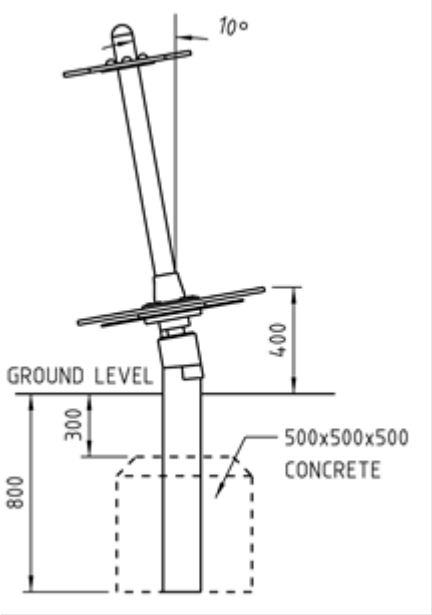
Sfera

Attach plastic ball to hub plate using 8 tri-lobes m10x17.

Dig a hole approximately 300mm in diameter and 800mm deep. Insert the Sfera leg into the hole making sure the bottom of plastic ball is 100mm from the finished ground surface. (Use a spirit level to ensure the leg is perfectly vertical.) Pour concrete around the leg forming a footing of 300x300x500mm, with the top tapered so the water won't pool around the leg. Check levels again after the concrete is poured.



Sonic

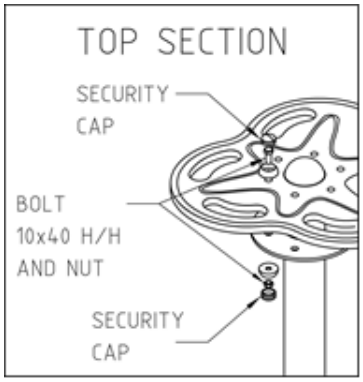


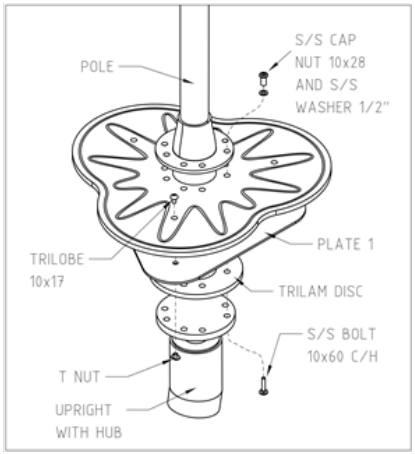
Dig a single hole 800mm deep (below the finished surface level) and 500mm square. Insert the upright in the hole, making sure it is level, with the base if the top plate 100mm above the finished surface level.

Pour concrete around the base of the pole forming a footing of 500mm x 500mm x 500mm, the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. Check levels again after the concrete is poured.

Leave the concrete to set for at least 24 hours before connecting the Sonic top.

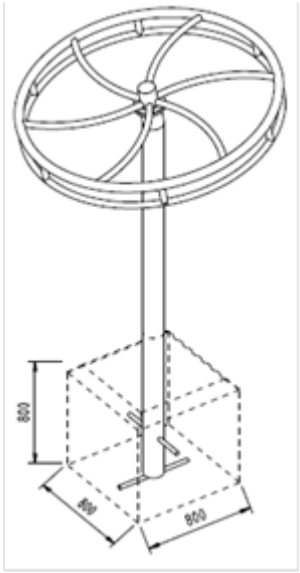
Assemble the top section as shown, then connect the top section to the hub.

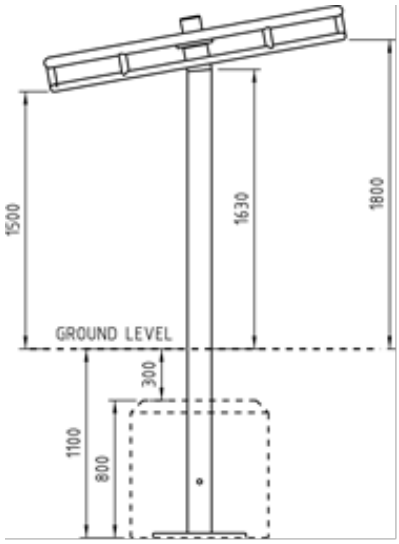




Spin-a-way

Dig a single hole approximately 1100mm deep (below the finished surface level) and 800mm square. Insert the upright in the hole, making sure it is level with the angled point of the upright angle sitting 1630mmm above the finished surface level as shown.



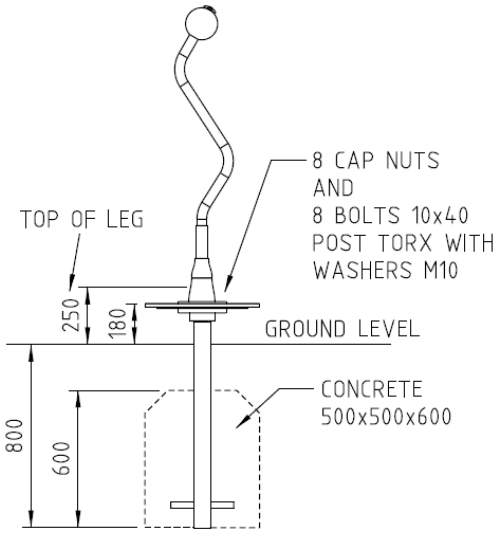


Pour concrete around the base of the pole forming a footing of 800mm x 800mm x 800mm, the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. Check levels again after the concrete is poured. Leave the concrete to set for at least 24 hours before connecting the carousel top.

Once the concrete has set, lift the top section and place on top of the hub axle and attach using stainless cap nuts, 17mm tri-lobe bolts and washers.

Spinna

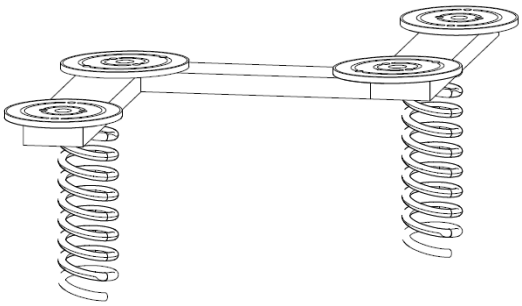
Dig a hole approximately 500mm in diameter and 800mm deep. Insert the Spinna leg into the hole making sure the top is level with the finished ground surface. (Use a spirit level to ensure the plate is perfectly level.) Pour concrete around the leg forming a footing of 500mm diameter x 600mm, with the top tapered at an angle of 45 degrees with no sharp edges around the top surface. Check levels again after the concrete is poured. Leave the concrete to set for at least 24 hours before bolting the top section onto the base using cap nuts on top and 40mm post torx bolts, with an M10 washer on bottom.

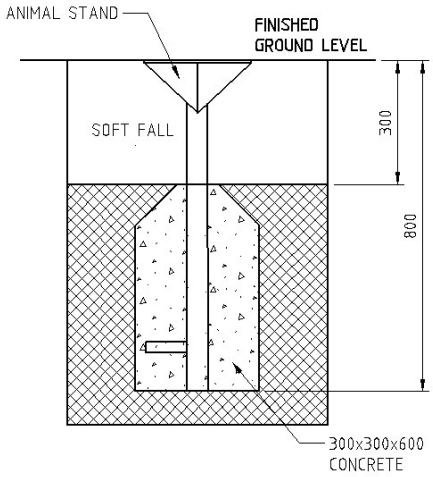


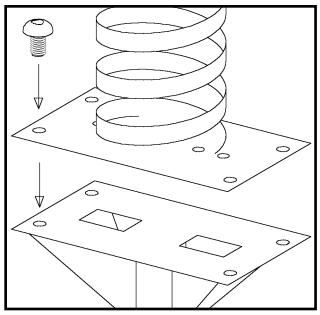
Spring Balance

Dig two holes for footings (use the underside of the Spring Balance rail as a template to locate holes). Insert the stands (cases) into these holes, ensuring that the top of the stands are at finished ground level (they will protrude above concrete footing prior to the addition of soft-fall, as shown).

Leave the concrete to set for at least 24 hours before bolting the spring onto the stands using 'tap tight' tri-lobes, and the top beam rail onto springs using 25mm tri-lobes.







Sway N Stay

Attach the platform frame, plastic panels and rope flanges to rubber.

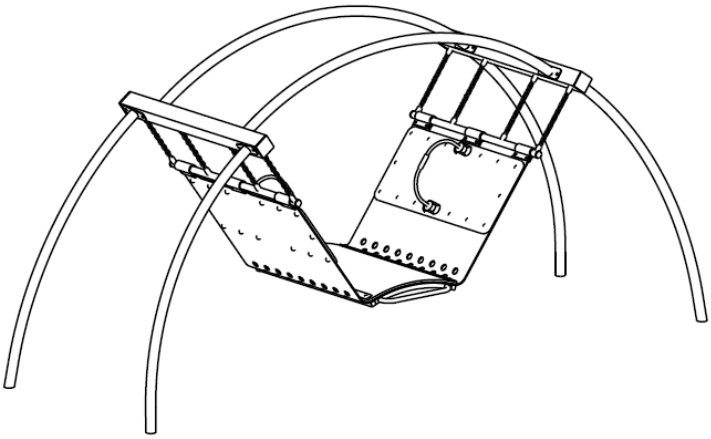
Clamp rubber to round bars with round edges of plates to inner rubber side.

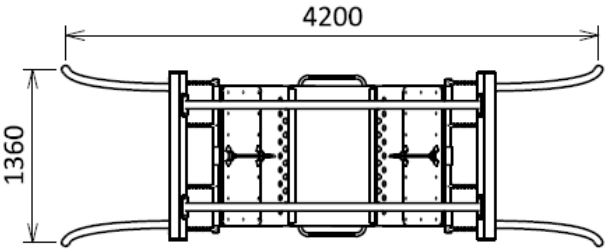
Assemble the frame.

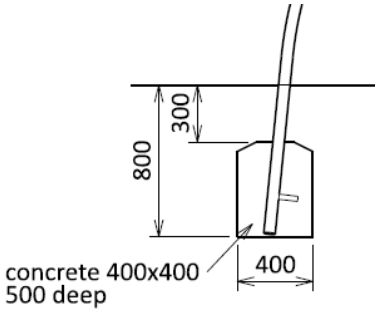
Dig holes in ground according to the top view dimensions.

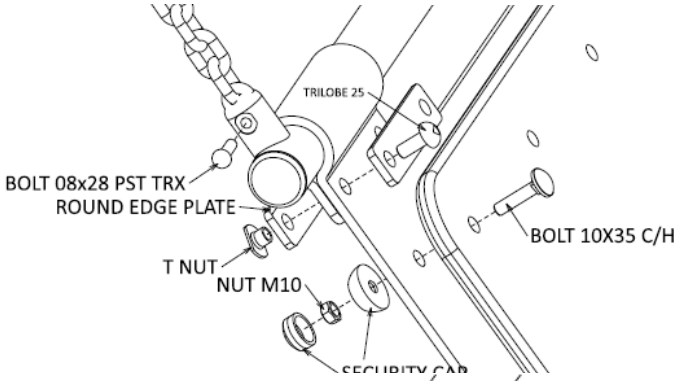
Place frame in holes and concrete.

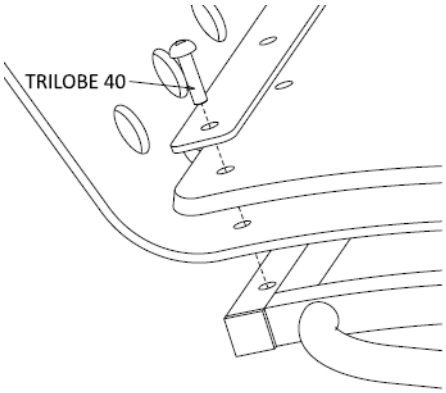
After concrete is set up, attach chains and rubber bedway.

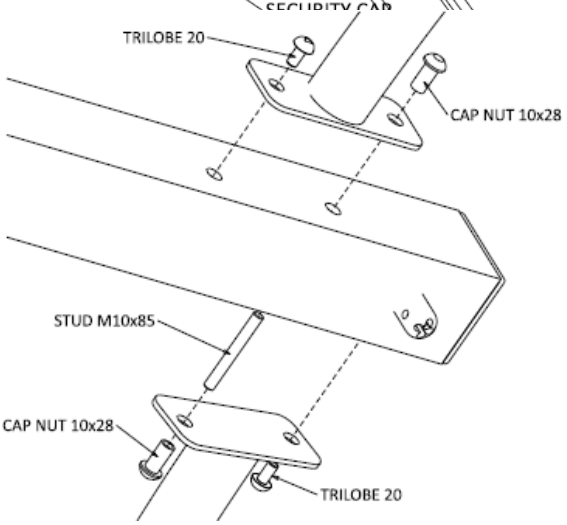


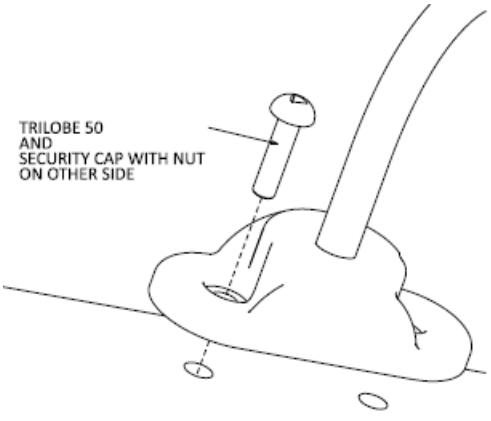




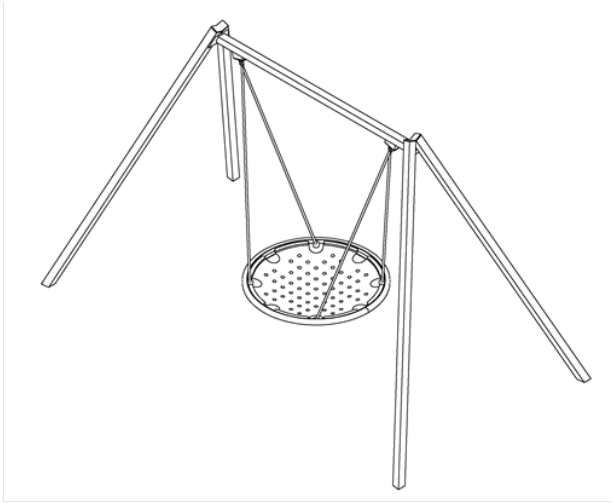








Swing-A-Way



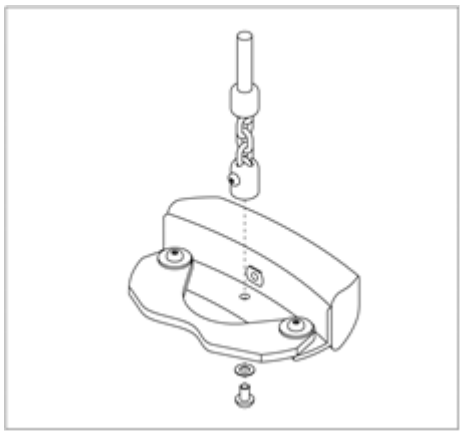
The swing frame is best assembled prior to installation. Assemble the frame while laid on the ground then roll into the upright position.

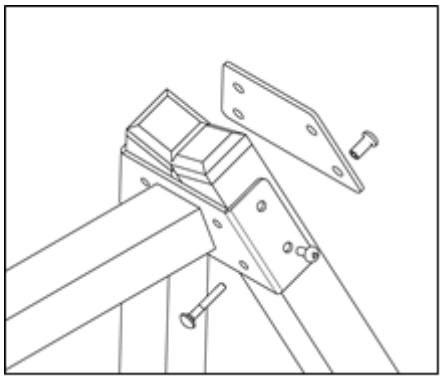
The uprights are fastened to the top bar using cap nuts and 75mm cup head bolts with the plate on the reverse side as shown, and 25mm tri-lobe bolts into the side of the uprights.

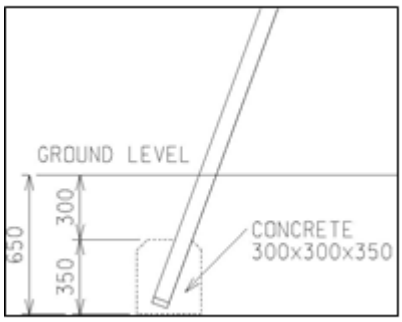
Use the frame in its upright position to determine the correct hole position and dig the holes. Lower the frame into the holes, ensuring that the top bar is level and at the correct height of 2.5m from the underside of the top bar to the finished surface level).

Concrete the uprights into the ground using footing sizes as shown.

Leave the concrete to set for at least 24 hours then attach the basket to the ropes using 20mm tri lobes and 3/8" galv washers (must use LOCTITE).





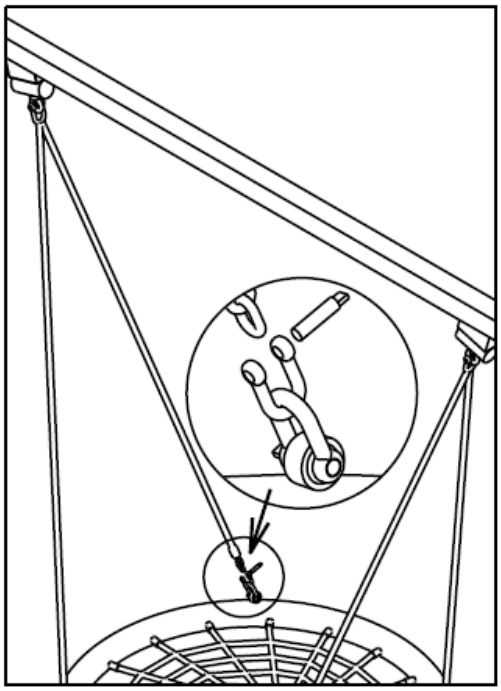


Rope Basket Position

The position of the basket to frame and ropes (chain) is important.

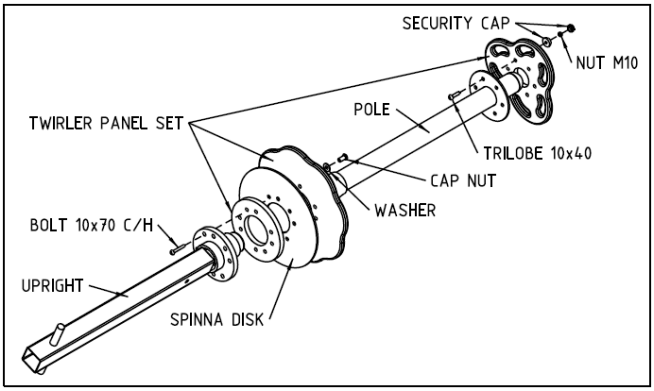
The bush on the basket with attached D Shackle to be as shown.

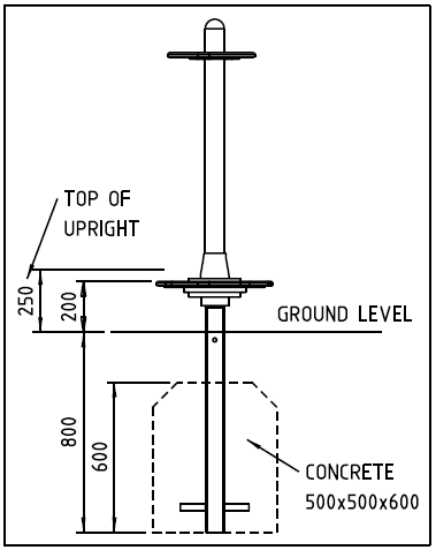
Attach D Shackles, cut tags and file sharp edges.



Twirler

Dig a hole approximately 500mm in diameter and 800mm deep. Insert the upright into the hole making sure the top is on 250 from the finished ground surface. Pour concrete around the leg forming a footing of 500x500x600mm, with the top tapered at an angle of 45 degrees with no sharp edges around the top surface. Check upright is vertical again after the concrete is poured. Leave the concrete to set for at least 24 hours before bolting the rest of the parts to the upright as shown.

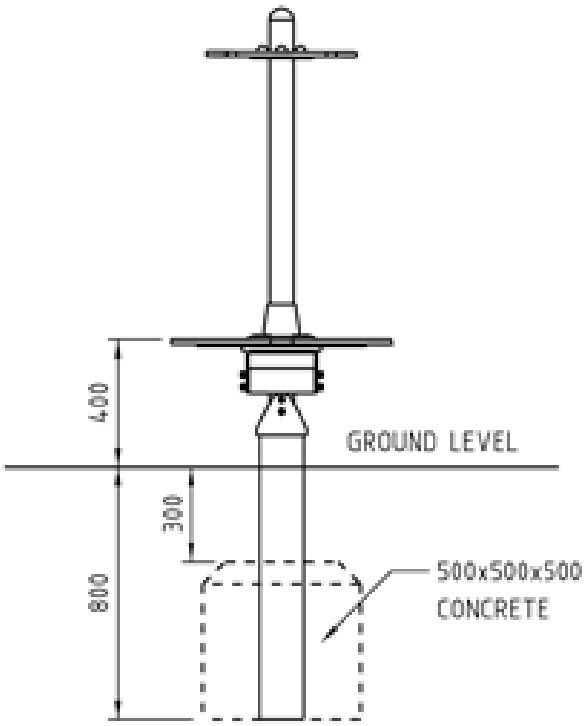




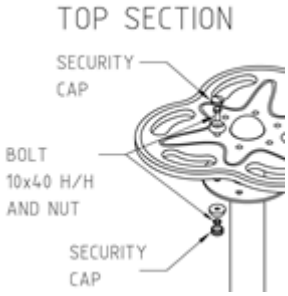
Wind Rider

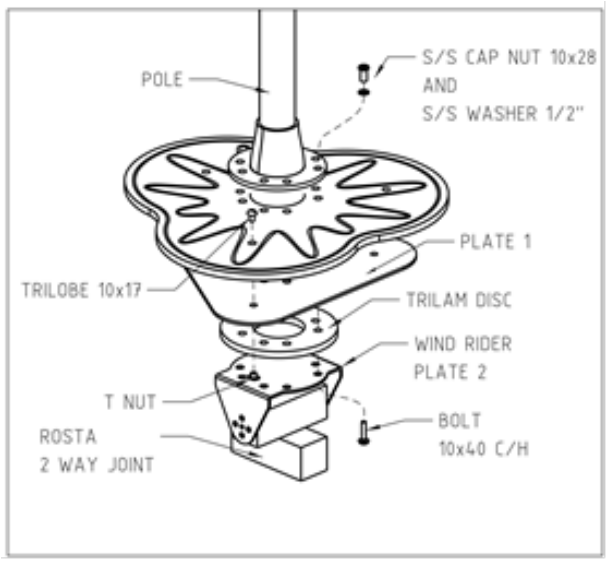
Dig a single hole 800mm deep (below the finished surface level) and 500mm square. Insert the upright in the hole, making sure it is level, with the base if the top plate 100mm above the finished surface level.

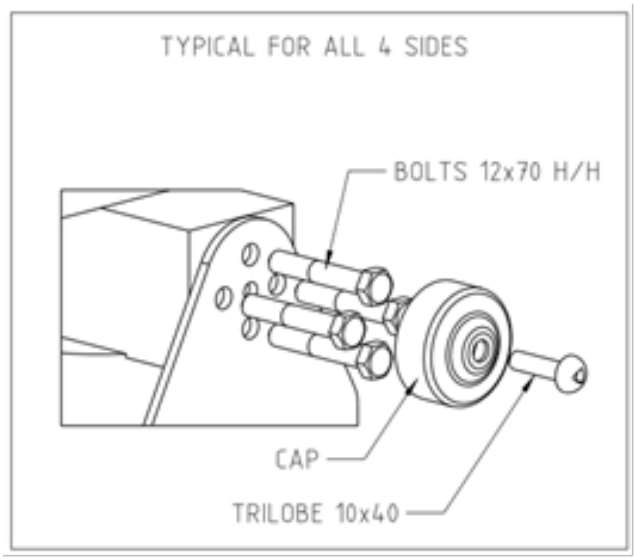
Pour concrete around the base of the pole forming a footing of 500mm x 500mm x 500mm, the top being 300mm below the finished surface level with a tapered top so that water won't pool around the upright. Check levels again after the concrete is poured. Leave the concrete to set for at least 24 hours before connecting the Wind Rider top.



Assemble the top section and then connect the Pole to Wind Rider Plate 2 as shown. Join Rosta 2 Way Joint to leg and upper part as shown (be sure the bolts are well tightened). Apply loctite to all threads.







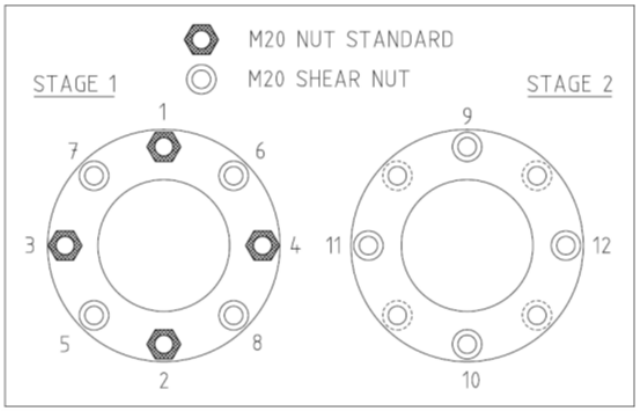
Whirl Wind

Dig 3 holes 9.6m apart (centre to centre) in a triangular configuration approximately 0.6m by 0.6m wide and 1m below finished ground level. Mark the centre of the triangle and sit top joint here.

Join flanges on legs in 2 stages each.

Stage 1: Use 4 bolts M20x75 and 4 standard nuts M20 in order from 1 to 4. First lightly tighten and then fully tighten in the second round.

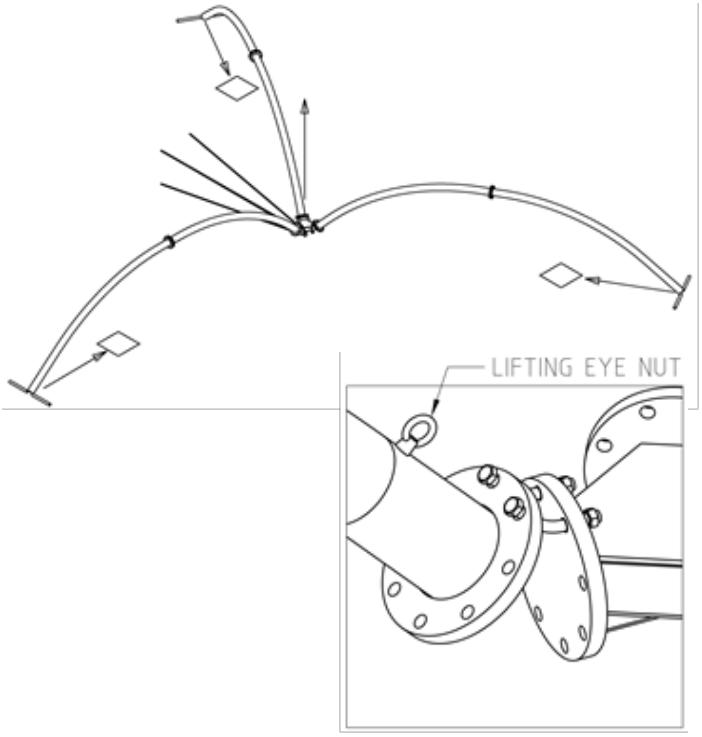
Attach next 4 bolts and 4 shear nuts in order 5 to 8 using same tightening procedure with snapping hexagonal sections in full tightening. Apply Loctite on all shear nuts.



Stage 2: Remove the 4 standard M20 nuts and replace with 4 shear nuts in order 9 to 12 using same tightening procedure mentioned above.

Position each leg over its corresponding hole. Attach legs to the top joint with bent bolts M16x200 as shown.

Using a crane, lift all legs and the top joint together using D shackles attached to the lifting eye nuts until flanges comes together. Remove foot supports from legs and lower in the ground holes. (A block or brick may be required under each leg to ensure the structure doesn't sink.) Fix M20x75 bolts and nuts to the 6 empty holes on each flange. Remove bended bolts and replace with M20x75 and shear nuts (Apply Loctite to each nut before fastening). Keep the bolts and nuts loose.



Once the frame is loosely in place tighten M20x75 bolts and nuts. Tighten each shear nut until the hexagonal head snaps from the body.

Ensure underside of top joint is 4.5m above finished ground level and level. Add concrete for footings (600x600x700) and leave concrete for 24 hours to set.

Fit Swing-A-Way basket to the ends of ropes using 17mm tri lobes and washers, (must use LOCTITE).

Note: The bearing unit contains 2 grease nipples which should be greased approximately every 6 months using 'Molycote Long Term 2 Plus' grease.