



Installation Manual SturdiFlex

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, Parts 1 – 6, Playground equipment (Safety requirements and test methods)
- AS 4422 (Int):2022 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 PlayCo 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.

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Prepare the site

Before 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 4422 (Int):2022 “Playground surfacing – specifications, requirements and test method” (relating to the type and depth of your soft-fall surfacing), and AS 4685.0:2017 “Playgrounds and playground equipment – development, installation, maintenance and operation” (dealing with your site requirements and ongoing maintenance).

If you require advice, talk to one of our consultants. Some important things to remember are as follows:

1. Playground equipment is normally designed for installation on a flat level surface so you should ensure that your play area is prepared correctly.
2. Check that the site is clear of underground power and services before you commence digging.
3. 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 the correct distances between various items of equipment. If you are unsure of these requirements you should check with your representative.
4. Where possible, prepare the site to allow for any slides to face south. While not essential, this will minimise the heat build-up on the slide face during the hottest parts of the day.
5. 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 before commencing the 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. 13mm drill bit for drilling platforms
4. Cordless drill
5. Shovel for digging holes (preferably long-handled)
6. If digging in hard ground, you may need a 300mm auger and a crowbar
7. Spirit level
8. ‘G’ clamps (for holding items in place before bolting)
9. String line
10. Wheelbarrow
11. ‘Vice-grip’ pliers (for closing ‘S’ hooks)
12. An axe (for cutting tree roots if they are in the way)
13. Concrete for footings
14. Bricks/pavers (to provide stability below ground where required)
15. Scaffolding/platform ladder/s where necessary
16. A basic first aid kit for emergencies
17. ‘Occupational Health and Safety’ plan and procedures if applicable

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. Hex head Allen keys (where required)
4. Torx Driver (driver with a star-shaped head that fits onto your 3/8" driver)
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 worksite is clearly defined by some sort of barrier or a 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.

1. Preparation for installation
2. Before you commence installation, you should familiarise yourself with the general instructions found on pages 3 to 8 of this manual. The various individual items of your equipment will be covered later in the manual.
3. Once ready to commence installation you should lay out the equipment and ensure that you have all items detailed on the materials or packing list.
4. Group the numbered uprights, in order of their installation so that they are readily available as required (see "Reading Plans").
5. Lay the equipment out roughly on the ground to ensure that it fits within the prepared area and that all required fall zones are met.
6. Determine the proposed finished surface level and use a string line to set this level. This will help in ensuring that the platforms and other items are set at their correct height above ground level.

Table for maximum upright heights. Wind regions A, B, C & D

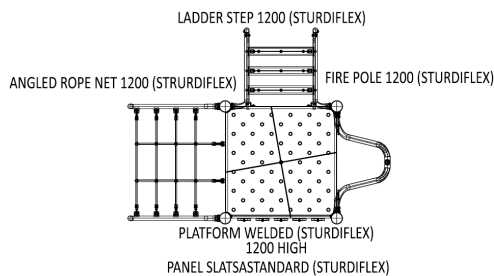
Upright length above finished ground level	Wind Region A	Wind Region B	Wind Region C	Wind Region D
More than 4.7m	NO	NO	NO	NO
4.7m	OK with roof	NO	NO	NO
4.5m	OK with roof	OK with roof	NO	NO
4.2m	OK, no restrictions	OK with roof	NO	NO
4.0m	OK, no restrictions	OK, no restrictions	NO	NO
3.7m	OK, no restrictions	OK, no restrictions	OK with roof	NO
3.5m	OK, no restrictions	OK, no restrictions	OK with roof	NO
3.2m	OK, no restrictions	OK, no restrictions	OK, no restrictions	OK with roof
3.0m or less	OK, no restrictions	OK, no restrictions	OK, no restrictions	OK, no restrictions

Reading the plans

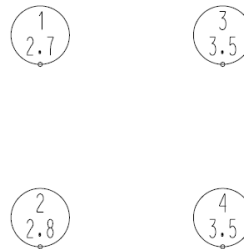
You have been supplied with two types of plans, one showing the actual layout of the equipment and the other showing the position of the uprights. (See below for examples of both plans.)

The upright plan contains several circles representing each upright and their locations corresponding with the uprights in the equipment layout plan. The figures inside each circle represent the upright number and the height of that upright, e.g. upright 1 (below) is 3.0m in length. The small dot at the bottom of each circle in the upright plan provide the orientation of each upright in relation to the items to be attached. On the uprights this dot is an elliptical hole positioned at 300mm below finished ground level. The corresponding upright number is marked on the bottom of each upright supplied (along with the 4-digit job number and the colour code).

Equipment Layout Plan
(As though looking
down from above)



Upright Plan
(as though looking down on
the uprights from above)



Installation

Concrete Footings

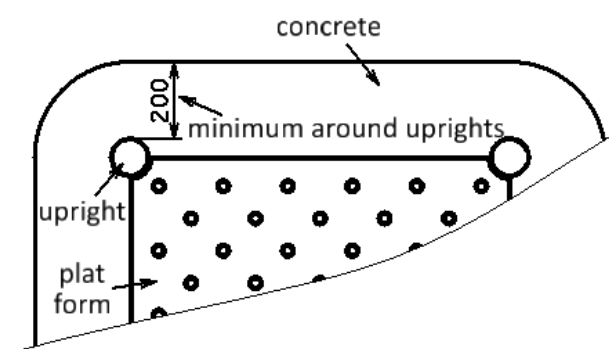
Uprights are pre-drilled with holes with a threaded insert fitted to each hole, corresponding to the components to be attached. Each upright has an aluminium cap on top and black plastic cap at the base (Bolt down uprights have welded plate at the base).

Uprights should normally be installed to a depth of 600mm below the finished surface level. (If rubber surfacing has been specified the uprights may have been cut to allow 400mm below the finished surface level.) Make sure that you allow for the safety soft-fall surfacing when digging your holes, i.e., if the upright needs to be buried 600mm below finished surface level, and you have already excavated 300mm for soft-fall, the holes only need to be 300mm 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 before inserting the uprights.)

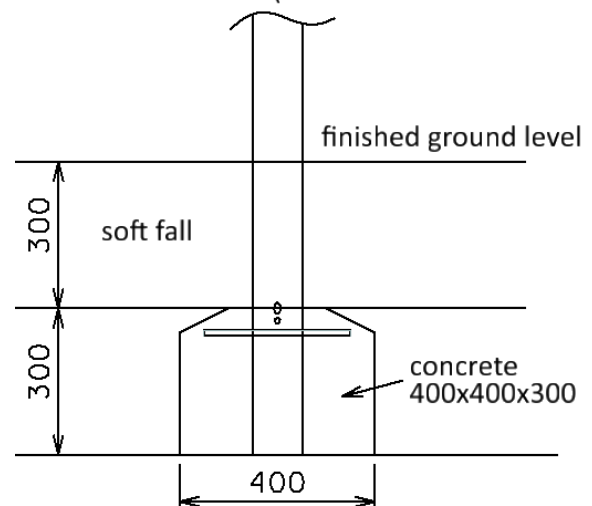
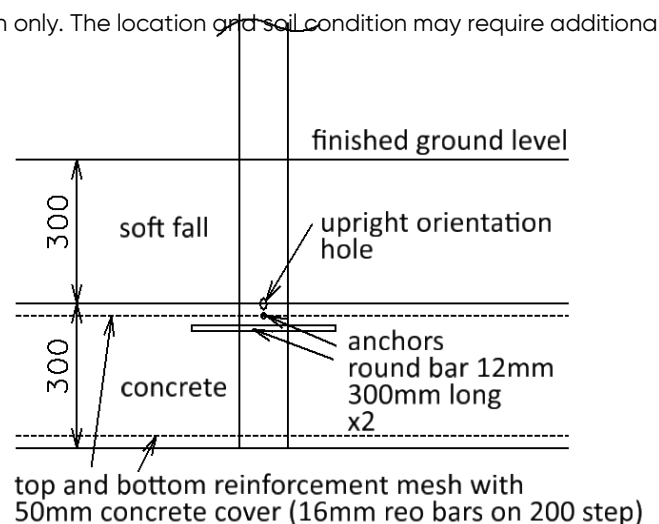
We recommend General Purpose Concrete. This is concrete with a compressive strength of 20MPa (at 28 days) or higher.

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

The below concrete footing instructions are for recommendation only. The location and soil condition may require additional structural check and approval.



Individual upright concrete footing can be used when uprights are shorter than 2.5m above ground.



Loctite

'Loctite' is provided in each bolt pack. This should be used on any bolt used on items subject to movement or vibration. Where an item requires the use of 'Loctite' it is specified in this manual. (Examples of items typically requiring this are the boards on bridges and rope connectors.)

Where 'Loctite' is required only one to two drops need to be applied to the thread of the bolt, immediately before inserting into the nut and tightening.

Uprights and platforms

Uprights are 90Nb (101.6mm diameter) pipes. For the structures in ground, they are aluminium with 2 anchors (12mm round bars, 300mm long). For the bolt down - stainless steel with welded plate.

Choose a platform as a starting point on the structure and prepare to install that platform. This could be in the centre of the structure to enable teams to work outwards in both directions at the same time. Before commencing the installation ensure that you have allowed for the correct fall zone between the equipment and the edge of the soft-fall surface.

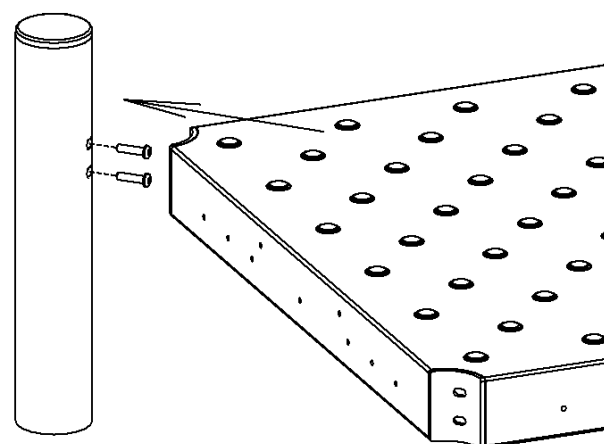
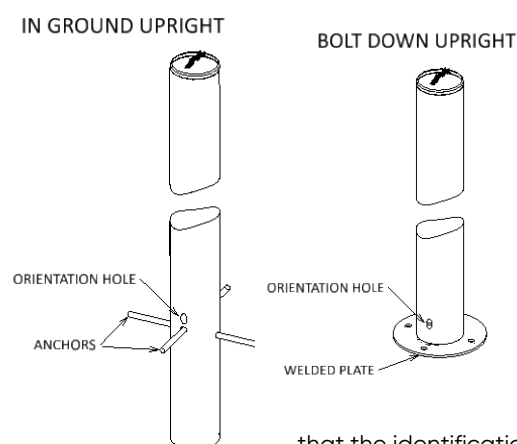
To install the platform, place the uprights into the holes, ensuring elliptical hole on the ground level of each uprights match the upright plan. This will allow uprights to have correct orientation. It may help to place a platform on the ground as a guide to enable you to work out the correct positioning of the upright holes. This initial platform will set the height for many of the other components to be subsequently attached, so its height in relation to the finished ground surface must be correct.

Once the uprights are in the holes at the correct height, lift the platform into place and fasten each corner to the upright by bolting from the underside of the platform into the upright using 40mm Post Torx bolts. Refer to the 'upright plan' to determine the correct orientation of each upright. It is important to make sure that the platform is level and at the correct height, and that the uprights are vertical.

Attach any panels (both over and under the platform) as described in the section of this manual titled "panels". This will provide additional stability before the concrete is poured and sets.

Once satisfied that the platform is level and the uprights vertical, concrete the uprights and fill the holes, packing the soil firmly.

Note: Occasionally, due to human error, some holes in the uprights may be missed. Should this happen, you can drill the holes on-site. (You may need to check with your office first if unsure of the exact hole location.) For aluminium uprights a 13.5mm hole should be drilled and a threaded insert fitted.

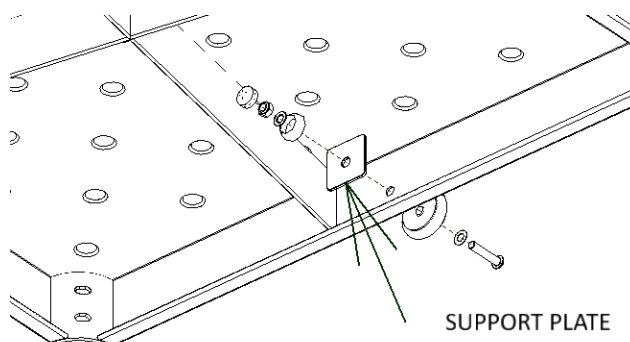


Joints

The way all items from the range are joined to uprights and platforms are shown in the following systems.

Items to Platform

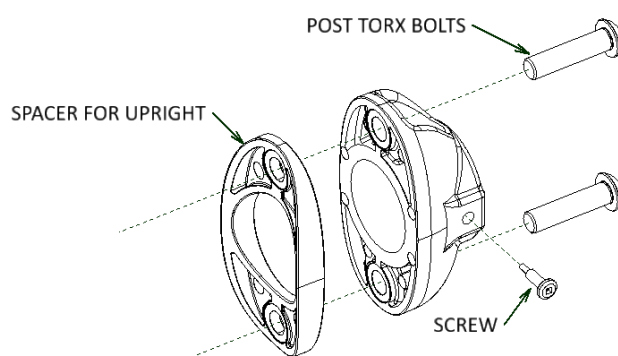
Platforms require drilling for all items attached to them. Use the item's plan and the centre punches on the platform to find what holes need drilling and drill using a 13mm drill. Place support plate inside of platform for every item's bolting.



Pipe to upright

Bolt to upright, insert pipe to the bottom of the flange and secure with self-drill screw.

Use spacer, when pipe goes to upright. By default, the bolts are 40mm.



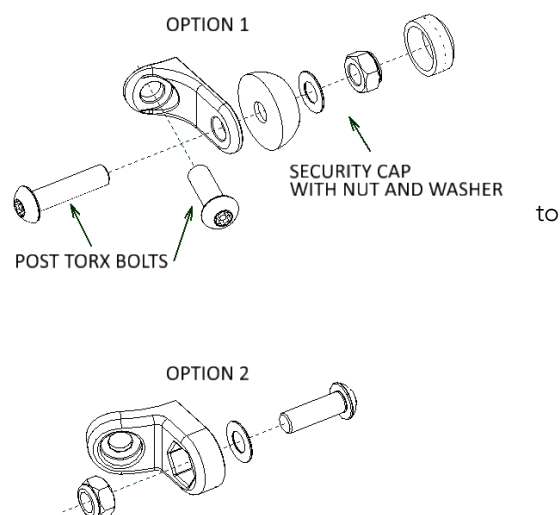
Panel to upright

The panel may have more than one connection to uprights.

Keep bolts loose, until the panel is correctly placed, then tighten the bolts. Check assemblies for which option to use.

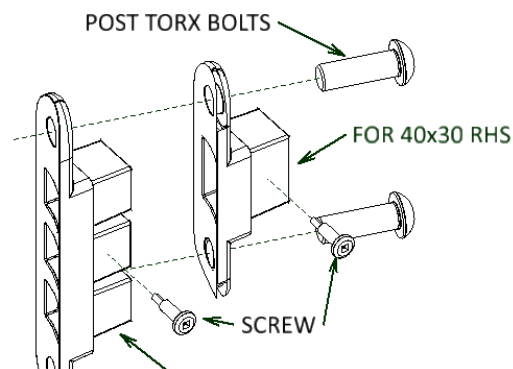
By default, in option 1 the bolts are 40mm for the panel and 30mm upright.

In option 2 the bolt for the panel is 30mm.



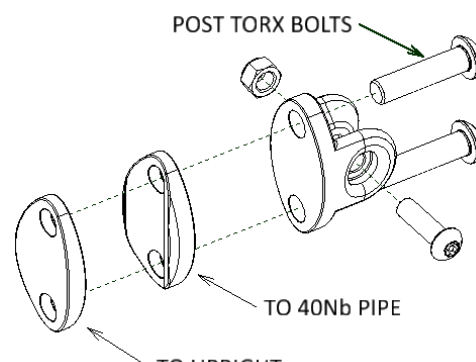
RHS to upright

Bolt flange to upright, insert fully the RHS, leaving no gaps and secure with the self-drill screw. By default, the bolts are 30mm.



Chain to upright/pipe

The joint can be bolted to upright, 40Nb pipe, or flat surface (platform). First bolt to one of these items, then insert chain and secure with the bolt and nut. By default, the bolts are 40mm bracket to pipe and M8x28mm and M8 nut bracket to chain.

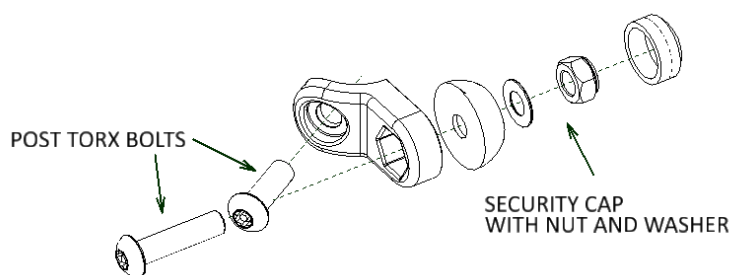


Panel to 40Nb pipe

The panel may have more than one connection to pipes.

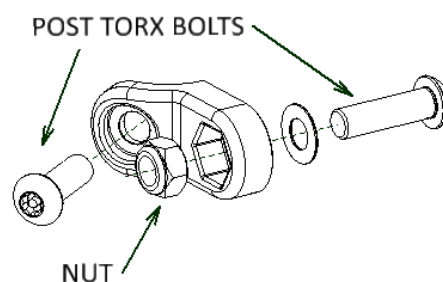
Keep bolts loose, until the panel and pipes are correctly placed,

then tighten the bolts. By default, the bolts are 30mm bracket to pipe and 40mm bracket to panel.



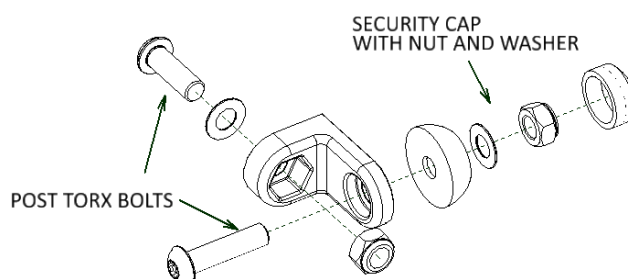
Panel to 32Nb pipe

By default, the bolts are 30mm bracket to pipe and 35mm bracket to panel.



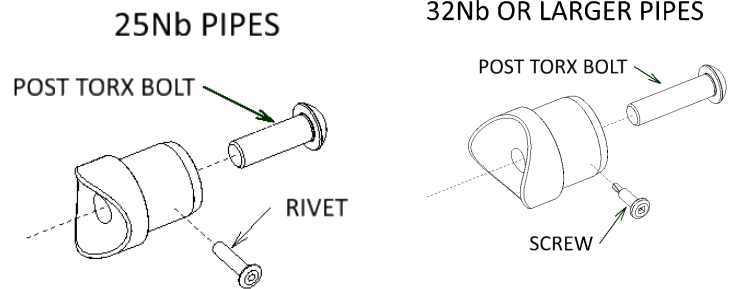
Panel to Panel

Assemble the bracket to both panels, without the lid of the security cap, keeping the bolts loos. Tighten bolts when the panels are in correct position and plug the cap's lids. By default, the bolts are 30mm and 40mm (on security cap).



T joint pipe to pipe

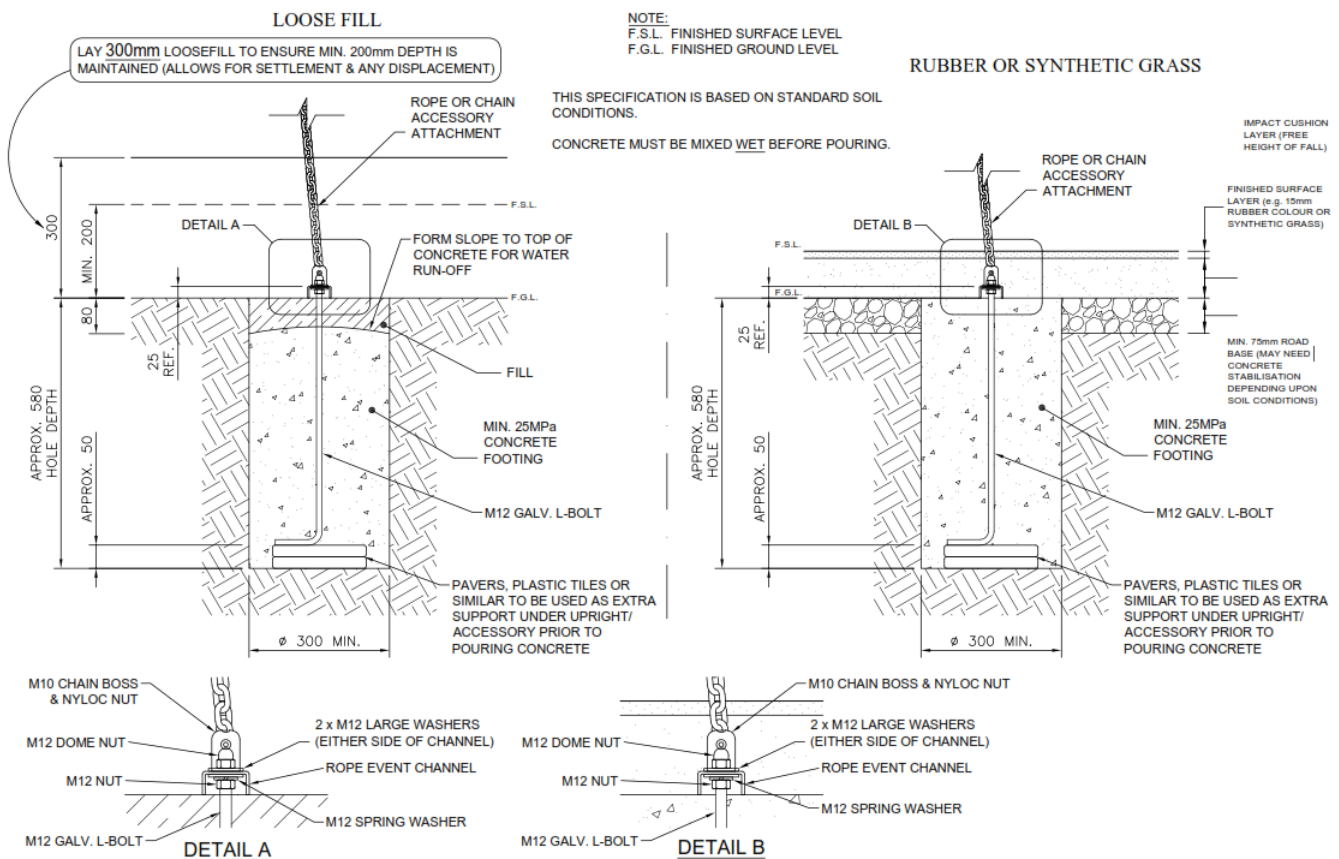
Bolt the T joiner to pipe. Fully insert the other pipe, leaving no gaps. For 25Nb pipes, drill 6mm hole through pipe and joint in 10-15mm from end of pipe, facing down. Secure with Rivet STS 6-6. For larger joints use self-drill screw in same position. By default, the bolts are 30mm for 25NB pipe and 40mm for 32NB pipe.

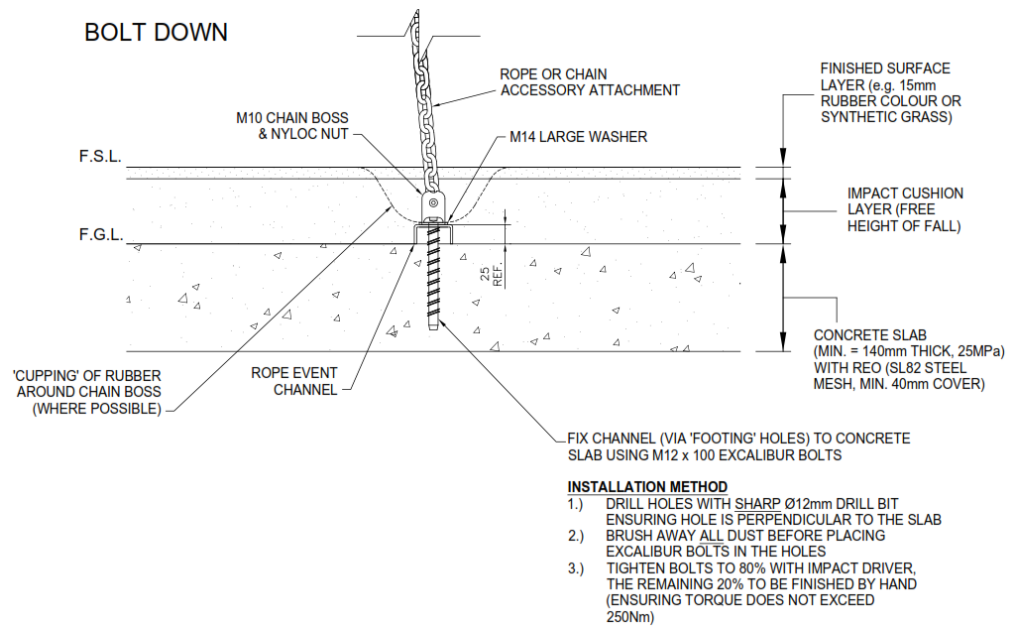


Determining Spacing between Uprights

Where handrails are used to determine the distance between platforms, a tape measure should also be used to check distances, allowing for movement in the flanges if they are not yet secured. Alternatively, a platform (or platforms) laid on the ground could be used as spacers. The distances between most components will be multiple of a single platform width.

Ropes or Chains in ground

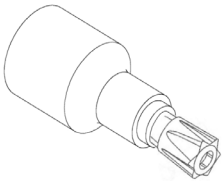




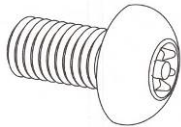
Fasteners

All holes in uprights require nutserts (threaded inserts fitted in the holes). Only stainless-steel fasteners are used. The commonly used fasteners are shown below.

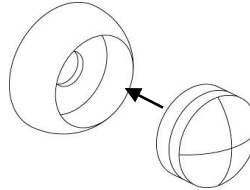
Torx Driver



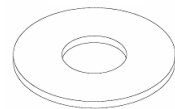
Torx Bolt



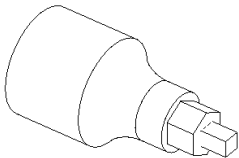
Security Cap



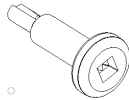
Washer



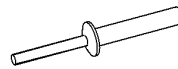
Screw Driver



Self-Drill Screw



Rivet STS 6-6



M10 S/S Nylock Nut

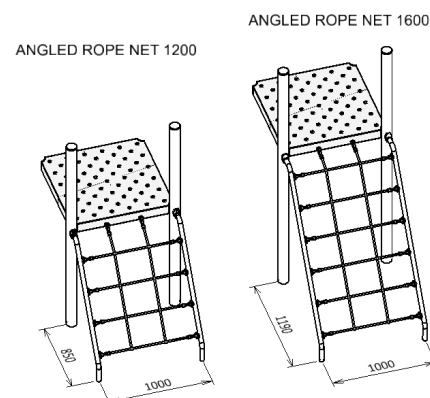


Installation – Playground Components

Access

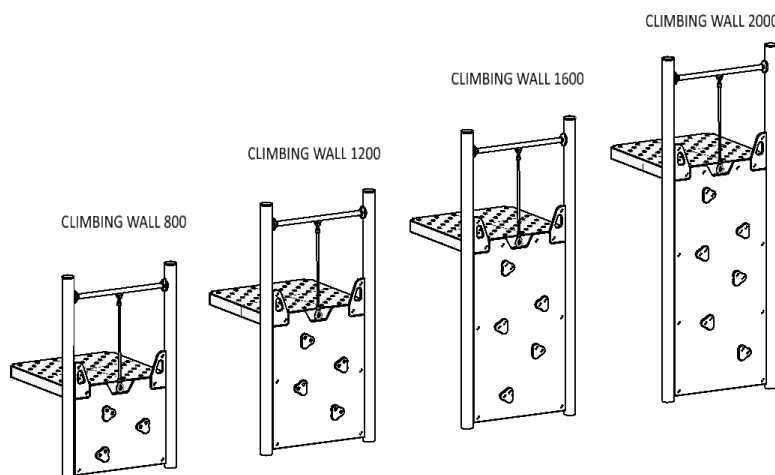
Angled Rope Net

There are 2 angled rope nets – 1200 and 1600, starting from ground level. If the legs are outside of the structure footings, dig holes 300x300x600 (300x300x400 if rubber surface), as per the shown dimensions. Attach rails 'Pipe to upright' using 32Nb flange. Attach net as per 'Chain to upright/pipe'. Attach ends with eye-bolts to platform as in 'Items to Platform'. Secure the positions of the legs as per the shown dimensions, keeping the nets well stretched. Pour the concrete 300x300x300 for each leg.



Climbing Wall

There are 4 climbing walls – 800, 1200, 1600 and 2000, starting from ground level. Rock grips are preassembled. Attach panels and rope to platforms, shown in 'Item to Platform', using 40mm bolts for panels and 50mm bolt for the rope. Attach panels to uprights shown in 'Panel to upright'. Top bar to uprights using 'Pipe to upright' 32Nb flange.

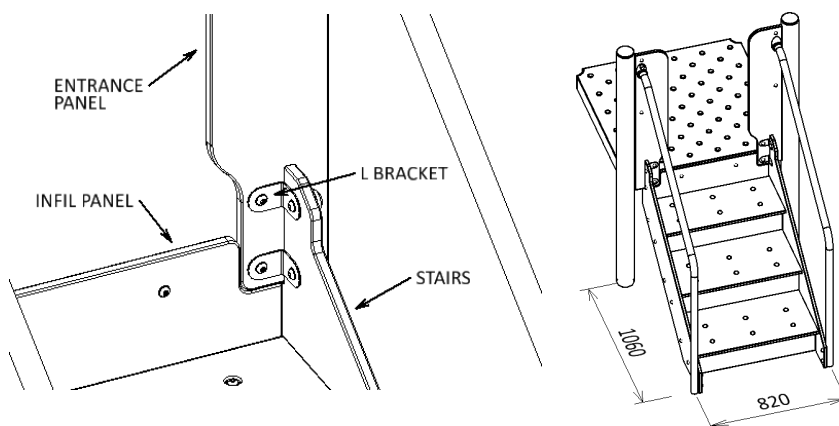


Entry Stairs 800

If the legs are outside of the structure footings, dig holes 300x300x600 (300x300x400 if rubber surface), as per the shown dimensions.

Stairs are pre-assembled. Use 'Panel to upright'

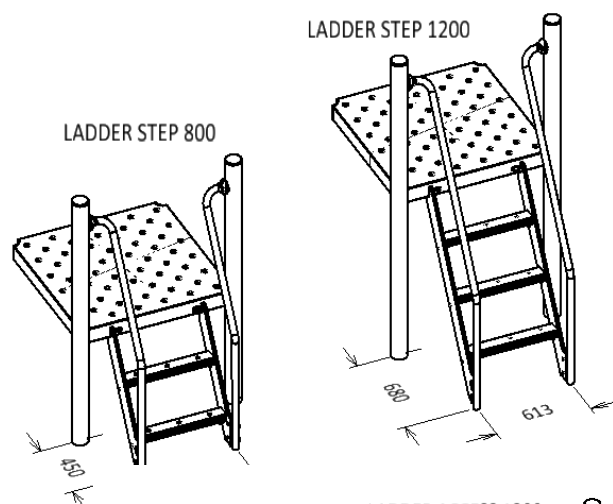
to attach entrance panels to uprights. Attach infill panel and bottom of entrance panels to platform shown in 'Item to Platform' section, with 40mm bolts. Use 4 L brackets to join entrance panels to stairs. The lower L brackets are attached to platform as well. Use 'Pipe to upright' 32Nb flanges to attach rails to entrance panels with 50mm bolts. Use 40mm bolts to attach lower part of the stairs to rails. Concrete 300x300x300 for each leg.



Ladder Step

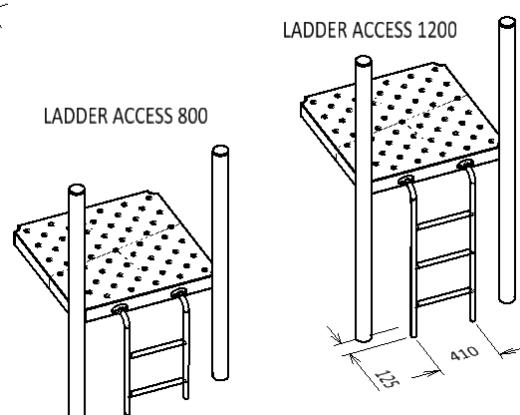
If the legs are outside of the structure footings, dig holes 300x300x600 (300x300x400 if rubber surface), as in the shown dimensions.

Stair are pre-assembled. Use 'Pipe to upright' with 32Nb flanges to attach rails to entrance panels with 40mm bolts. Attach stairs to platform with 'Panel to Panel'. Use 40mm bolts to attach lower part of the stairs to rails. Concrete 300x300x300 for each leg.



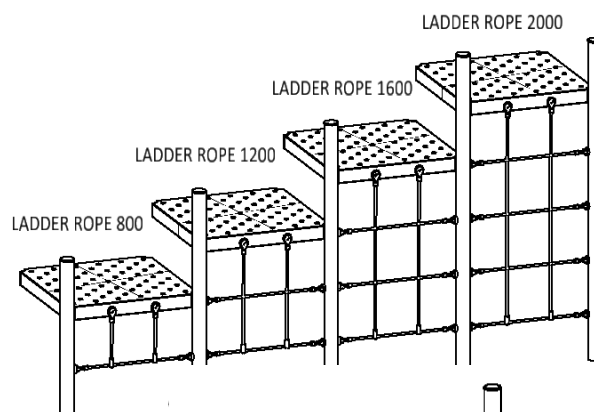
Ladder Access

If the legs are outside of the structure footings, dig holes 300x300x600 (300x300x400 if rubber surface), as in the shown dimensions. Ladders are pre-assembled, as per 'T joint pipe to pipe'. Attach flanges to platform, using 30mm bolts and security caps with nuts on inside of platform (no support plates are needed). Use 'Pipe to upright' with 32Nb flanges to attach rails to platform. Concrete 300x300x300 for each leg.



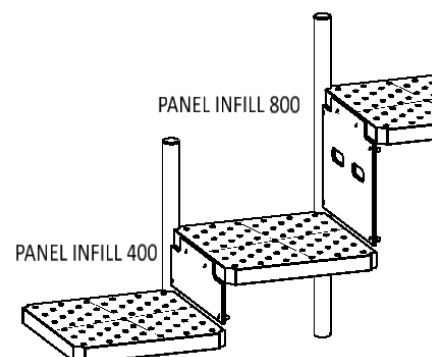
Ladder Rope

Attach rope to platform, shown in 'Item to Platform', using 50mm bolt. Rope chains to uprights as in 'Chain to upright/pipe'.



Panel Infill

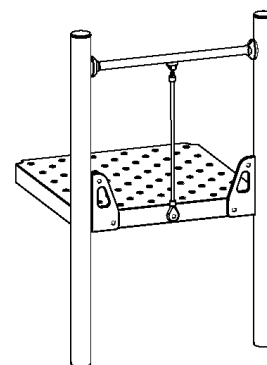
Attach panel to platform, shown in 'Item to Platform', using 40mm bolts. Use 'Panel to upright' to attach entrance panel to uprights.



Panels

Grab Rail-Rope

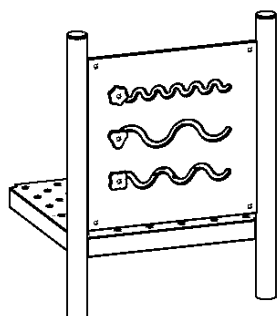
Attach panels and rope to platforms, shown in 'Item to Platform', using 40mm bolts for panels and 50mm bolt for the rope. Attach panels to uprights shown in 'Panel to upright'. Top bar to uprights using 'Pipe to upright' 32Nb flange.



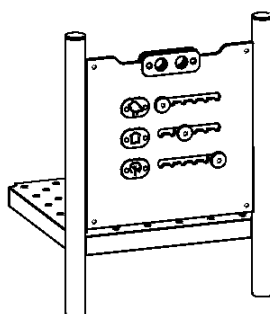
Panel Wave Trace, Panel View Finder, Panel Shape Match, Panel Steer & Gear, Panel Steer & Gear Mini, Panel Solid Standard, Panel Observation Standard, Panel Observation Unit Access L and Panel Observation Unit Access R

Rock grips, wheels and windows are preassembled. Attach all panels to uprights as shown in 'Panel to upright'.

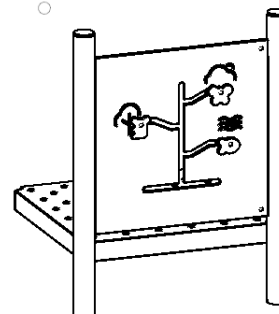
Panel Wave Trace



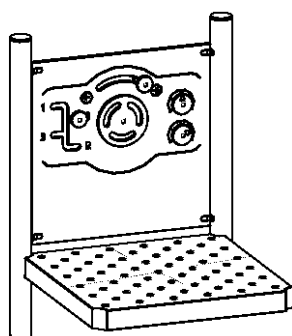
Panel View Finder



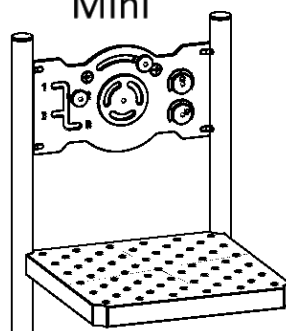
Panel Shape Match



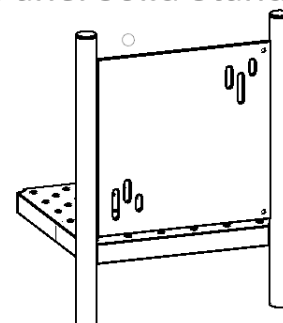
Panel Steer & Gear



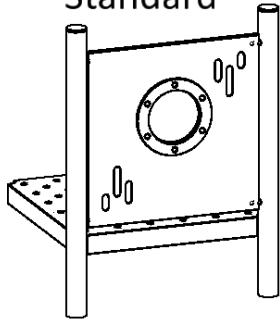
Panel Steer & Gear Mini



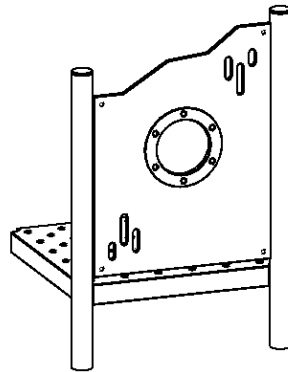
Panel Solid Standard



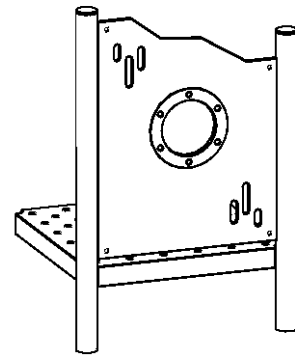
Panel Observation
Standard



Panel Observation
Unit Access L



Panel Observation
Unit Access R

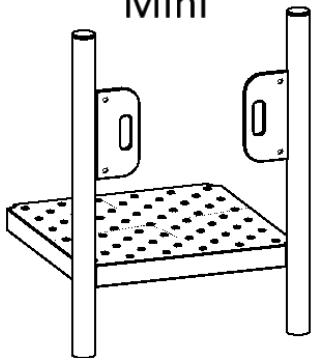


Panel Handgrip Mini, Panel Handgrip HDPE, Panel Handgrip Structural and Panel Climbing Handgrips

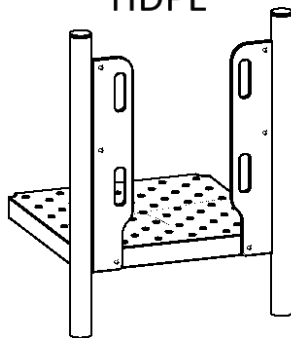
Attach panels to platform, shown in 'Item to Platform', using 40mm bolts. Use 'Panel to upright' to attach entrance panel to uprights.

For the 32Nb flanges in the 'Handgrip structural' use 40mm bolts, shown in 'Pipe to upright' and attach the panel to pipe as in 'Panel to 32Nb pipe'.

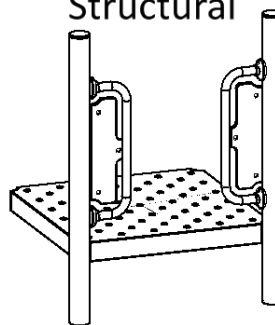
Panel Handgrip
Mini



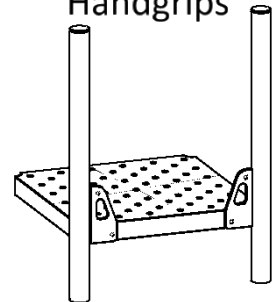
Panel Handgrip
HDPE



Panel Handgrip
Structural



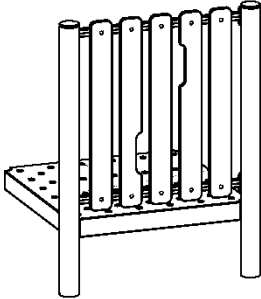
Panel Climbing
Handgrips



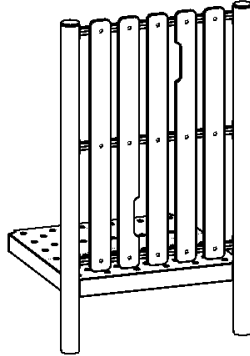
Panel Slats 1200, 1600, 2000, 2400 and Standard

All plastic slats with supporting RHSs and flanges are pre-assembled. Attach horizontal supports to uprights as shown in 'RHS to upright'.

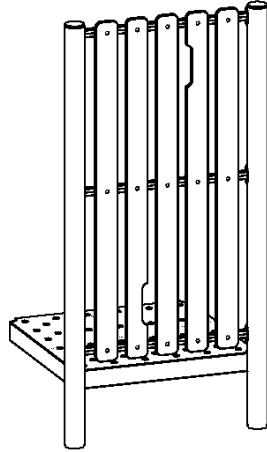
Panel Slats 1200



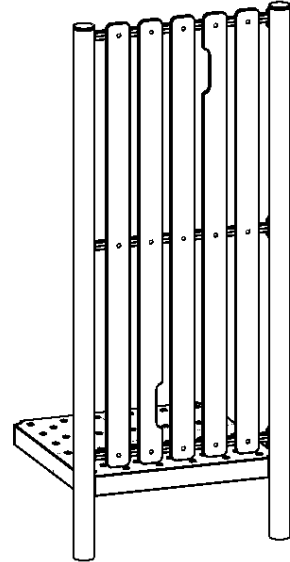
Panel Slats 1600



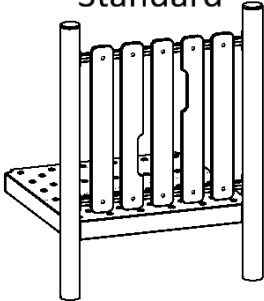
Panel Slats 2000



Panel Slats 2400



Panel Slats
Standard

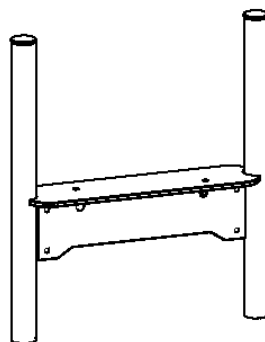


Play Bench and Play Bench Shop Counter

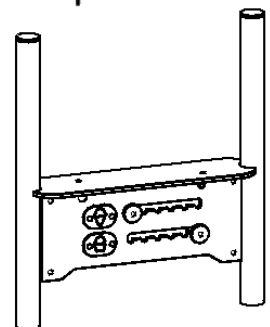
Attach vertical panel to uprights as per 'Panel to upright'. Attach top panels as per 'Panel to Panel'.

The vertical panel in 'Shop Counter' is pre-assembled.

Play Bench



Play Bench
Shop Counter



Joiners

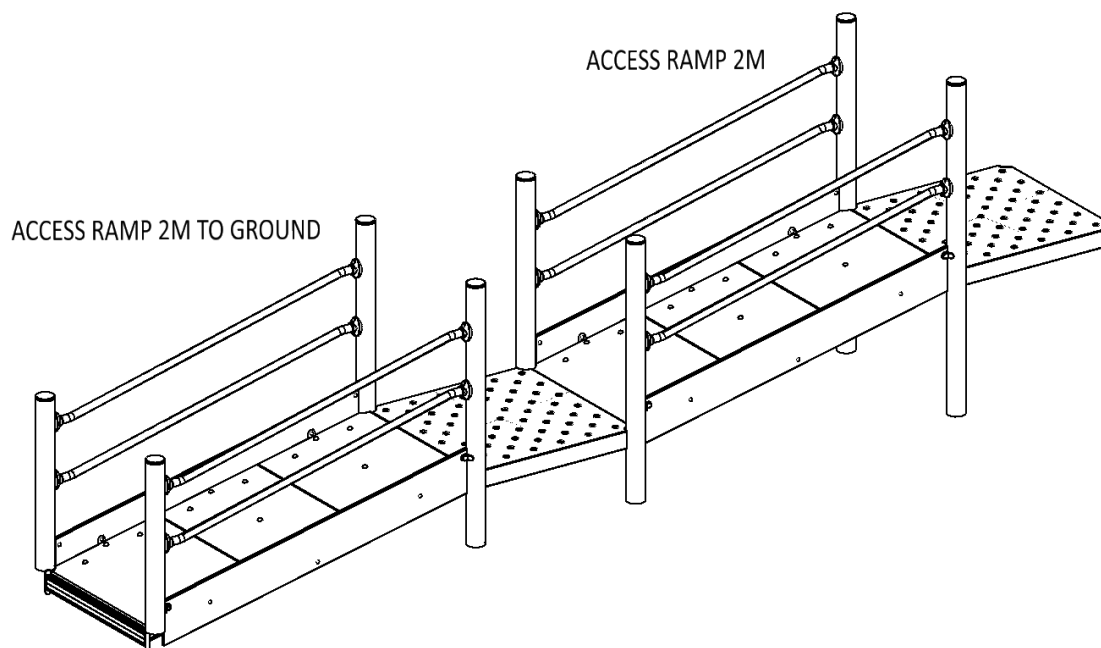
Access Ramp 2m and Access Ramp 2m To Ground

The ramp panels are pre-assembled to the supporting frame.

Attach ramp frame to platforms, using 30mm bolts in 'Items to Platform'. Bolt side skirt panels to uprights with 'Panel to upright' option 2.

Attach rails as per 'Pipe to upright' with 32Nb flanges.

The Access Ramp to Ground has a RHS rail on the lower side, that perform as platform. It is attached to uprights, as shown in 'RHS to upright'.



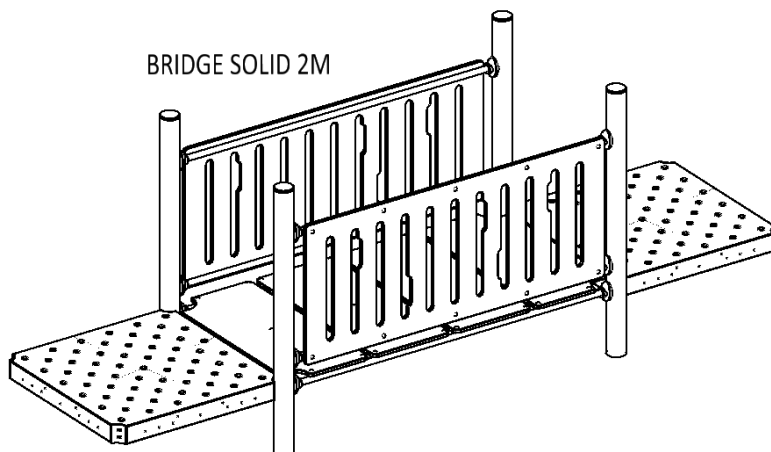
Bridge Solid 2m

The item has no attachments to platforms.

Walk panels are pre-assembled to the supporting frame and vertical panels are pre-assembled to the rails.

Attach support frame to uprights with 40Nb flanges as in 'Pipe to upright' and rails to uprights with 32Nb flanges as in 'Pipe to upright'.

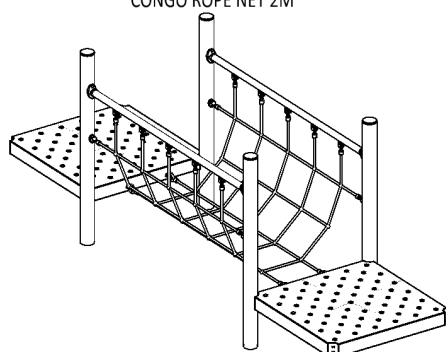
BRIDGE SOLID 2M



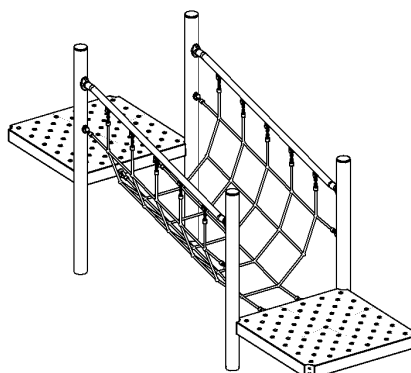
Congo Rope Net 2m, Congo Rope Net 2m inc 400 and Congo Rope Net 2m inc 800

Attach rails to uprights with 32Nb flanges as in 'Pipe to upright'. Attach rope ends to platforms using the ropes ends with eye-bolts in 'Items to Platform'. Attach rope ends to uprights and rails as in 'Chain to upright/pipe'.

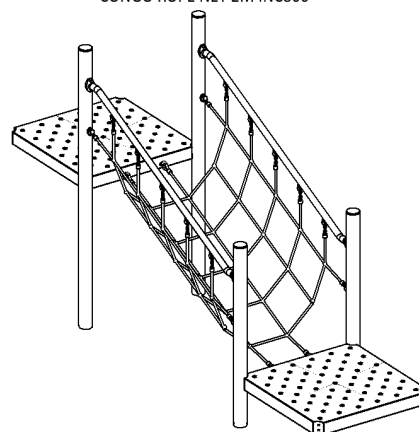
CONGO ROPE NET 2M



CONGO ROPE NET 2M INC400



CONGO ROPE NET 2M INC800

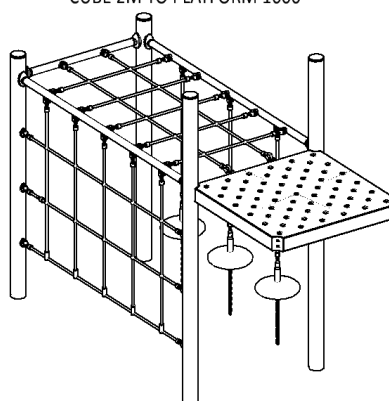


Cube 2m to Platform 1600, Cube 2m 1600 to Upright, Cube 2m to Platform 2000 and Cube 2m 2000 to Upright

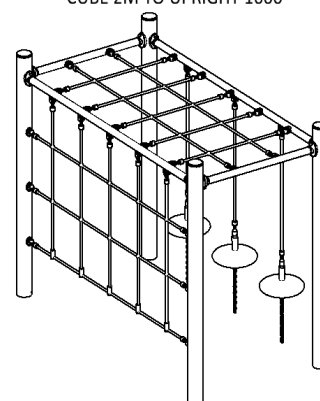
Attach rails to uprights with 40Nb flanges as in 'Pipe to upright'.

Attach all ropes, to uprights and to top rails with 'Chain to upright/pipe' system, then the ropes ends with eye-bolts to platform as in 'Items to Platform' system.

CUBE 2M TO PLATFORM 1600

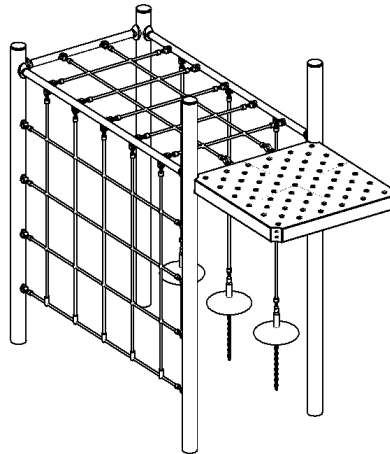


CUBE 2M TO UPRIGHT 1600

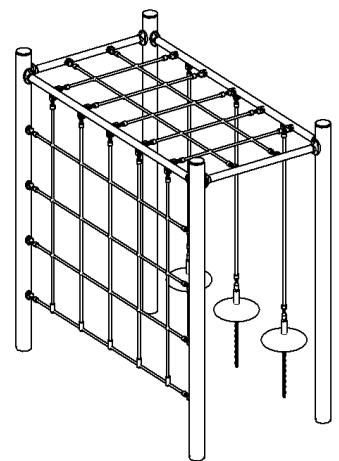


Look in 'Ropes and Chains in Ground' section for the way to connect pommel ropes in ground.

CUBE 2M TO PLATFORM 2000



CUBE 2M TO UPRIGHT 2000

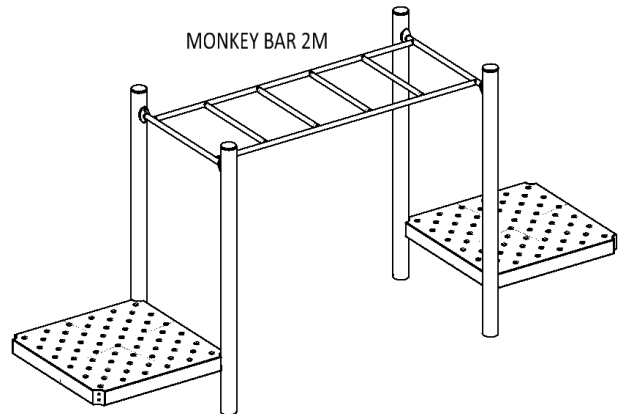


Monkey Bar 2m

This item has 3 standard heights from ground level, 1400, 1750 and 1950.

Attach it to uprights with 32Nb flange as in 'Pipe to upright'.

MONKEY BAR 2M



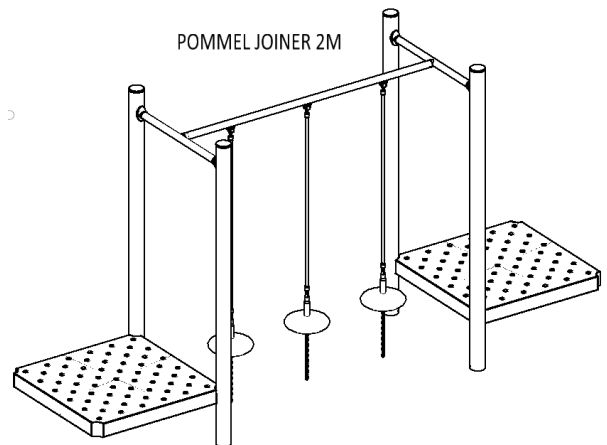
Pommel Joiner 2m

Attach top bar to uprights with 40Nb flanges as in 'Pipe to upright'.

Then ropes to top bar as in 'Chain to upright/pipe' system.

Look in 'Ropes and Chains in Ground' section for the way to connect pommel ropes in ground.

POMMEL JOINER 2M

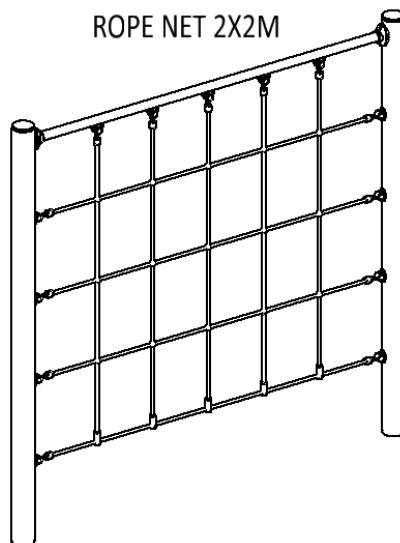


Rope Net 2x2m and Rope Net 2x2.4m

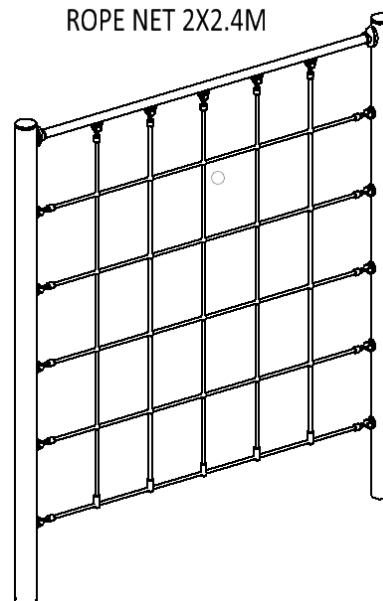
Attach top bar to uprights with 40Nb flanges as in 'Pipe to upright'.

Then ropes to top bar and uprights as in 'Chain to upright/pipe' system.

ROPE NET 2X2M



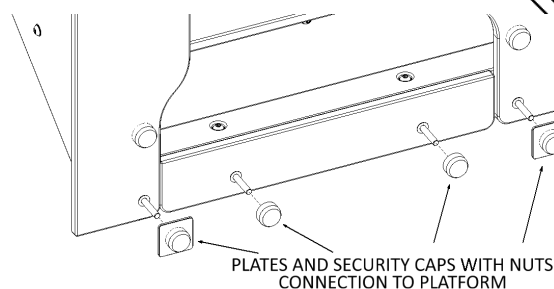
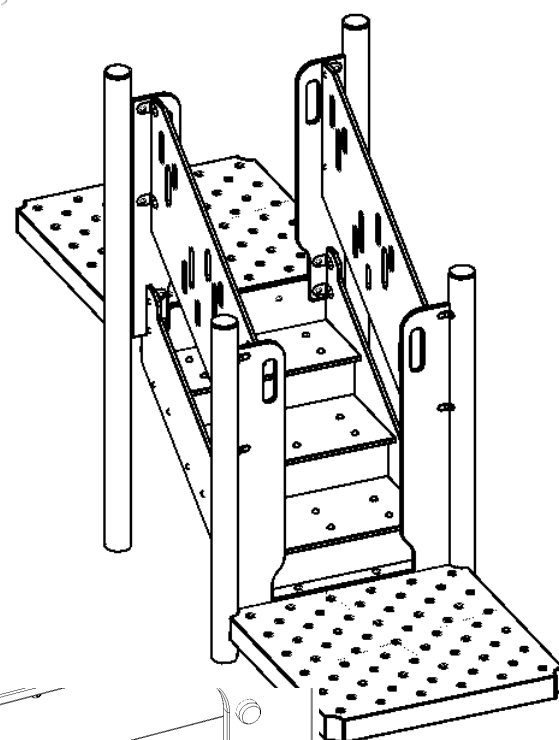
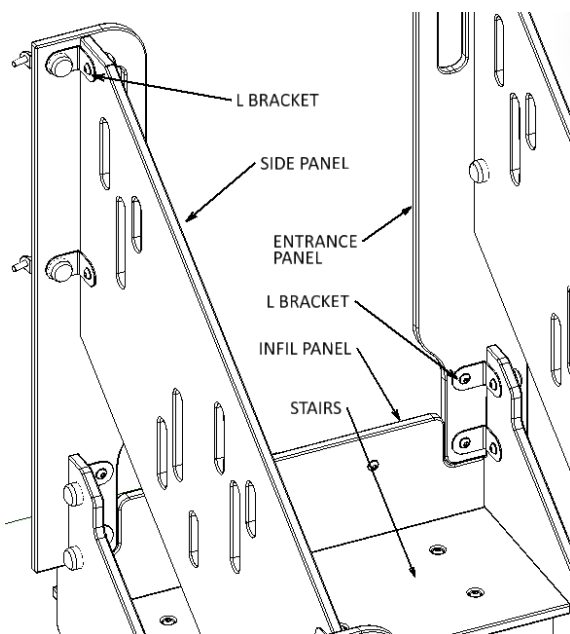
ROPE NET 2X2.4M



Stairs P2P 1m

Stairs are pre-assembled.

Use 'Panel to upright' to attach entrance panels to uprights. Attach infill panel and bottom of entrance panels to platform shown in 'Item to Platform' section, with 40mm bolts. Use 4 L brackets to join entrance panels to stairs. The lower L brackets are attached to platforms. There are another 8 L brackets to join Entrance panels to Side panels. Use 'Pipe to upright' 32Nb flanges to attach rails to entrance panels with 50mm bolts. Use 40mm bolts to attach lower part of the stairs to rails. Concrete 300x300x300 for each leg.



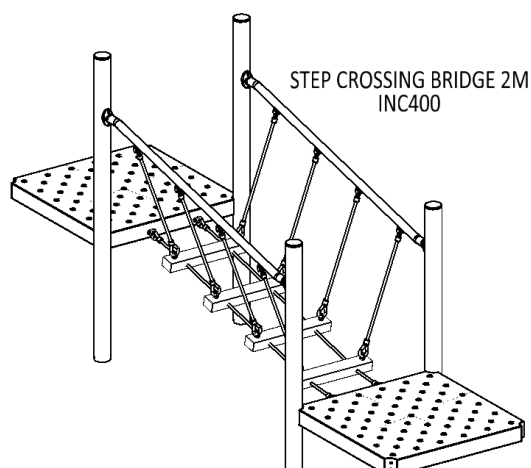
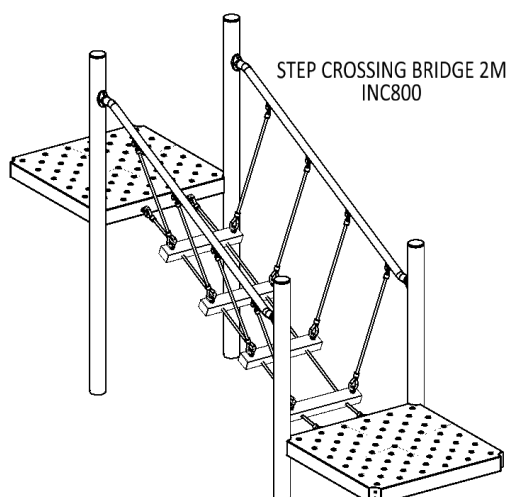
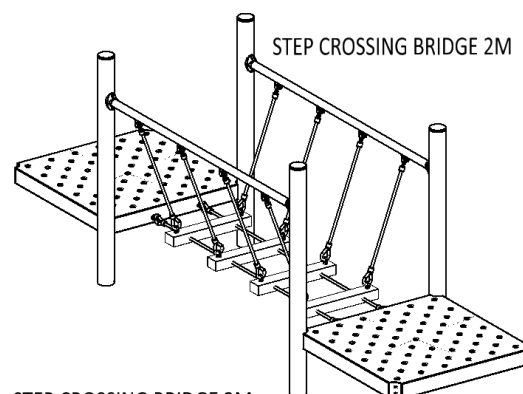
Step Crossing Bridge 2m, Step Crossing Bridge 2m inc400 and Step Crossing Bridge 2m inc800

Attach top bar to uprights with 40Nb flanges as in 'Pipe to upright'.

All ropes and steps are pre-assembled.

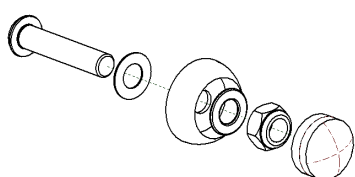
Then ropes to top bar and uprights as in 'Chain to upright/pipe' system.

Then attach the ropes ends with eye-bolts to platform as in 'Items to Platform' system.

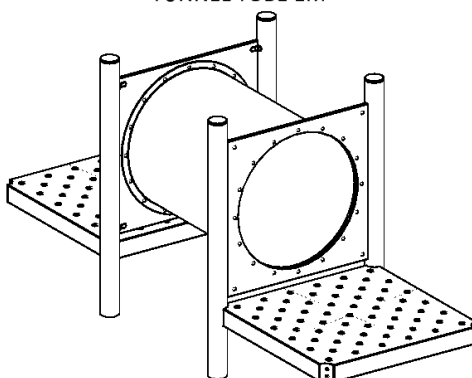


Tunnel Tube 1m and Tunnel Tube 90deg

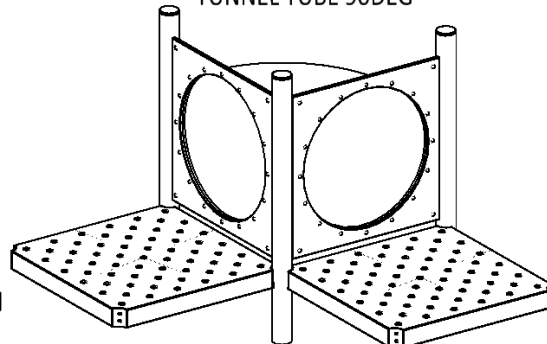
Attach each the flange of tube to panel with 16 sets of security caps, 50mm bolts, nylock nuts and washers.



TUNNEL TUBE 1M



TUNNEL TUBE 90DEG



Use 'Panel to upright' to attach entrance panels to uprights. There are no attachments to platforms.

Fire Poles

Fire Pole 1200, Fire Pole 1600 and Fire Pole 2000

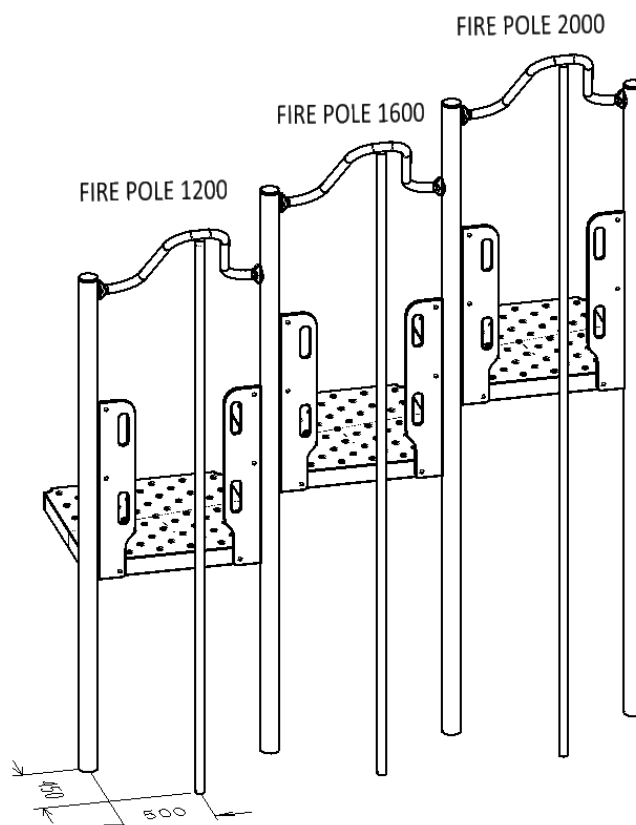
Attach top bar to uprights with 32Nb flange as in 'Pipe to upright'.

If the legs are outside of the structure footings, dig holes 300x300x600 (300x300x400 if rubber surface), as in the shown dimensions.

Use 'T joint pipe to pipe', option 32Nb to attach the pole to top bar.

Attach panels to platform, shown in 'Item to Platform', using 40mm bolts and 'Panel to upright' to attach to uprights.

Keep the pole vertical and concrete with 300x300x300 footing size.



Open Slides

800 Slide and 1200 Wave Slide

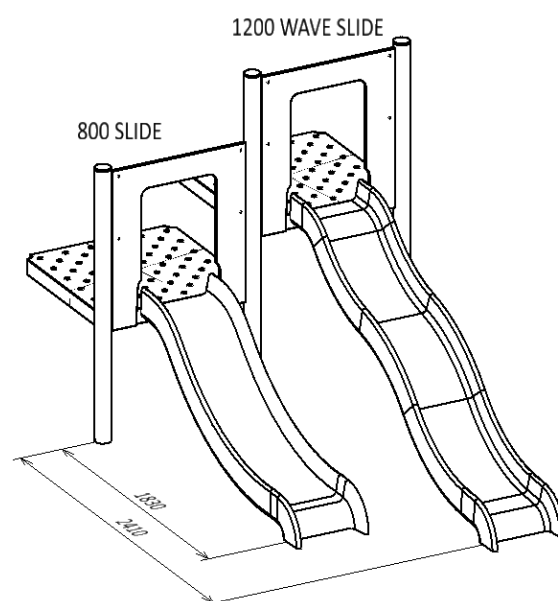
Attach entrance panel to platform, shown in 'Item to Platform', using 40mm bolts and 'Panel to upright' to attach to uprights.

Attach leg to slide with 16mm bolts. Mark the leg position as per the dimensions, dig hole 400x300x600.

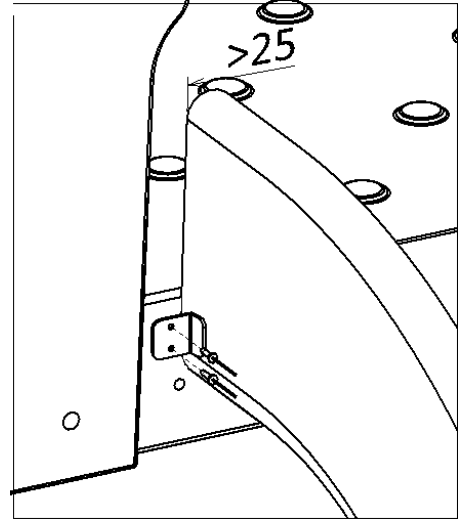
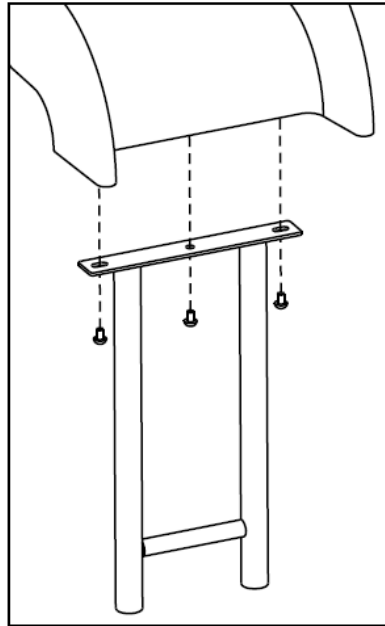
Attach slide to platform as per 'Item to Platform' with 30mm bolts from platform side.

The bottom of the exit of the slide is on the finished ground level.

Concrete the leg with 400x300x300 concrete size.



In some cases, due to the expanding nature of plastics, there may be a small gap between the rear of the slide and the platform. If this gap exceeds 3.5mm there is a risk of clothing becoming caught during use. If this gap occurs the bracket shown in the image should be fastened to either side of the slide, closing the outer opening of the gap. Fasten the bracket to the platform with pop rivets when the bracket is well pressed to the slide as per the image. Check the gaps between slide and entrance panel. They should be more than 25mm and less than 40mm.



Tunnel Slides

Tunnel Slides - general parts and fittings

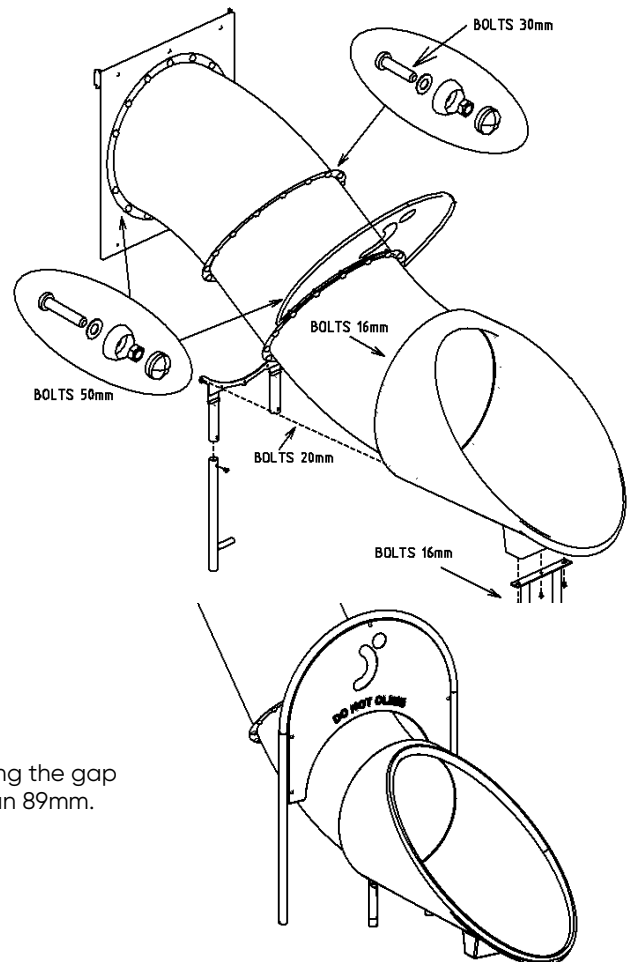
For the entrance attach the panel to platform, shown in 'Item to Platform', using 40mm bolts and attach horizontal supports to uprights as shown in 'RHS to upright'.

Connect the top section to the entry panel with 50mm bolts, keep going down, section after section using 30mm bolts. Use 50mm bolts when attaching the barrier panel. Check the 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. Attach the cradle to tube flange with 35mm bolts with security caps and nuts. If the cradle goes to the exit section use 20mm bolts. Each leg should be installed with the base 600mm below the finished ground level.

Use the slide as a guide to determine the position of the holes for the 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 with 400x300x300 concrete footing size.

When the slide starting level is 2.4m or more, use barrier with individual frame concreted to ground. Attach the panel to frame as per 'Panel to 32Nb pipe'.

Mark the place for the 2 holes 300x300x600 for the frame, checking the gap between the panel and tubes to be more than 25mm and less than 89mm. Concrete with 300x300x300 footing size.



Tunnel Slide – Supports

Check the plan for the position and number of supports. Here is a list of support positions per individual slides:

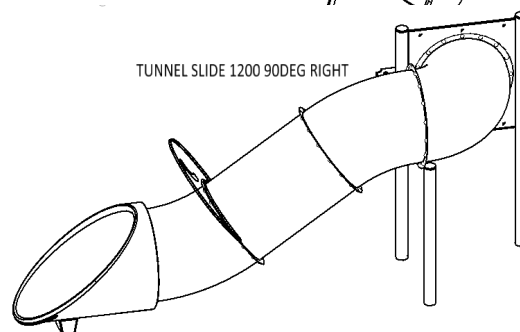
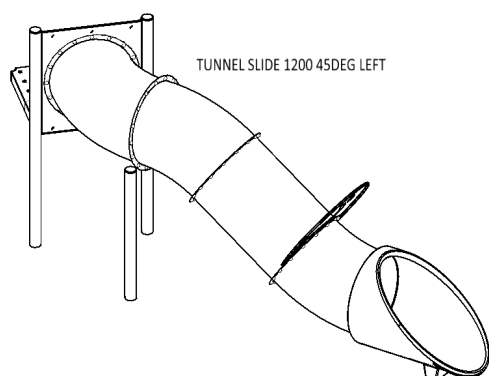
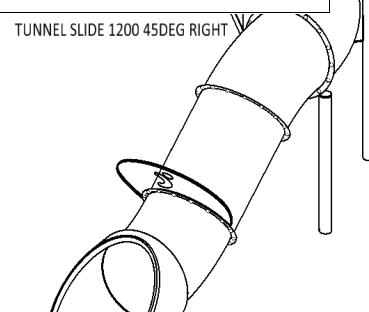
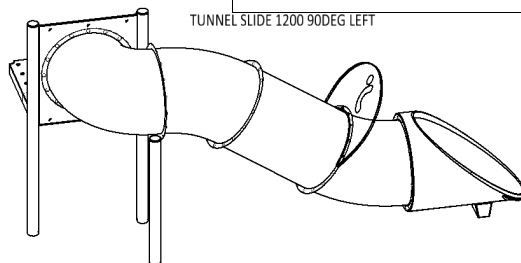
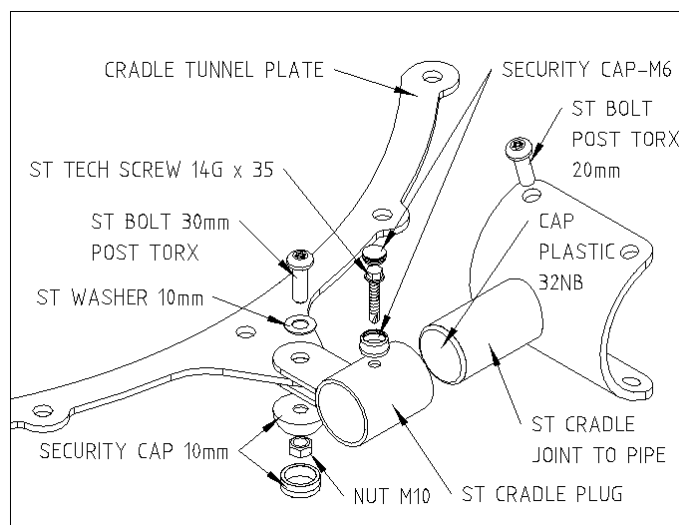
Attach the joining plate to the upright with 20mm bolts.

Position the upright from either under or on the outside section of the flange and attach the cradle in a suitable position (use standard upright footings as shown in 'Concrete footings'). Join the plug to the cradle with a loose bolt. Insert the plug on the plate's pipe and secure it with the Tec Screw.

Tighten the bolt and place the cover on the caps.

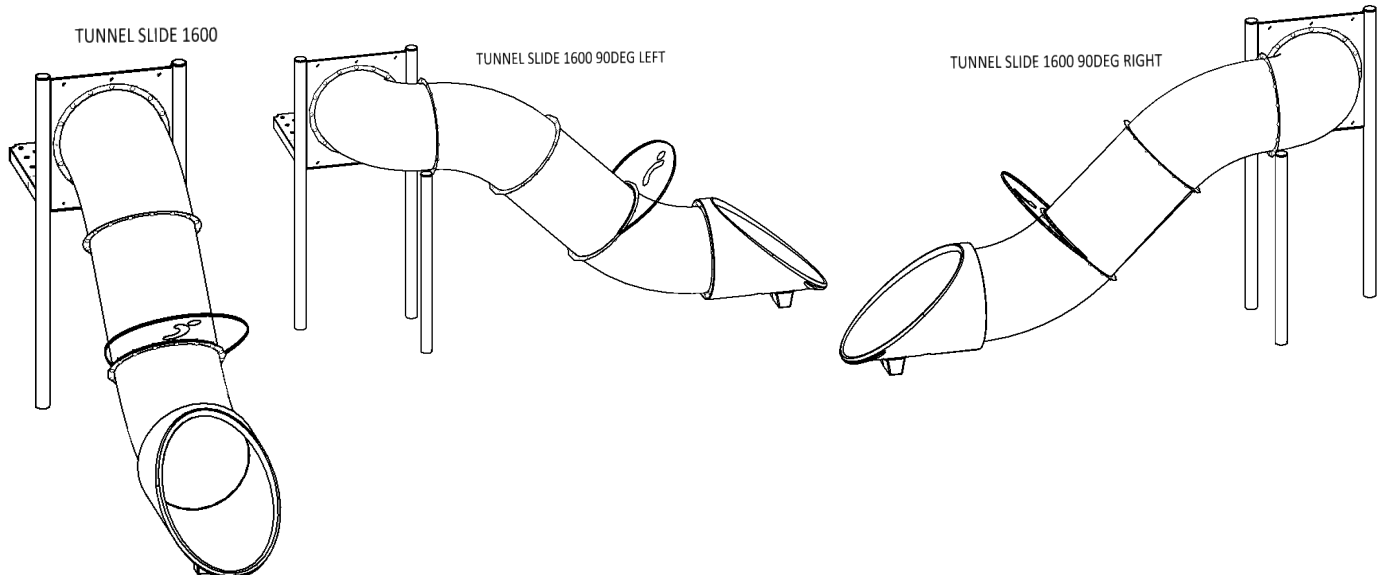
Tunnel slide 1200 45deg left, Tunnel slide 1200 45deg right, Tunnel slide 1200 90deg left and Tunnel slide 1200 90deg right

Attach the first (top) tunnel section to entrance panel, as shown, rotated in the correct direction by 90deg (8 cranking steps). The rest sections are vertical. Use the 'Tunnel Slides – general parts and fittings' and the 'Tunnel Slide – Supports' to complete the installation.



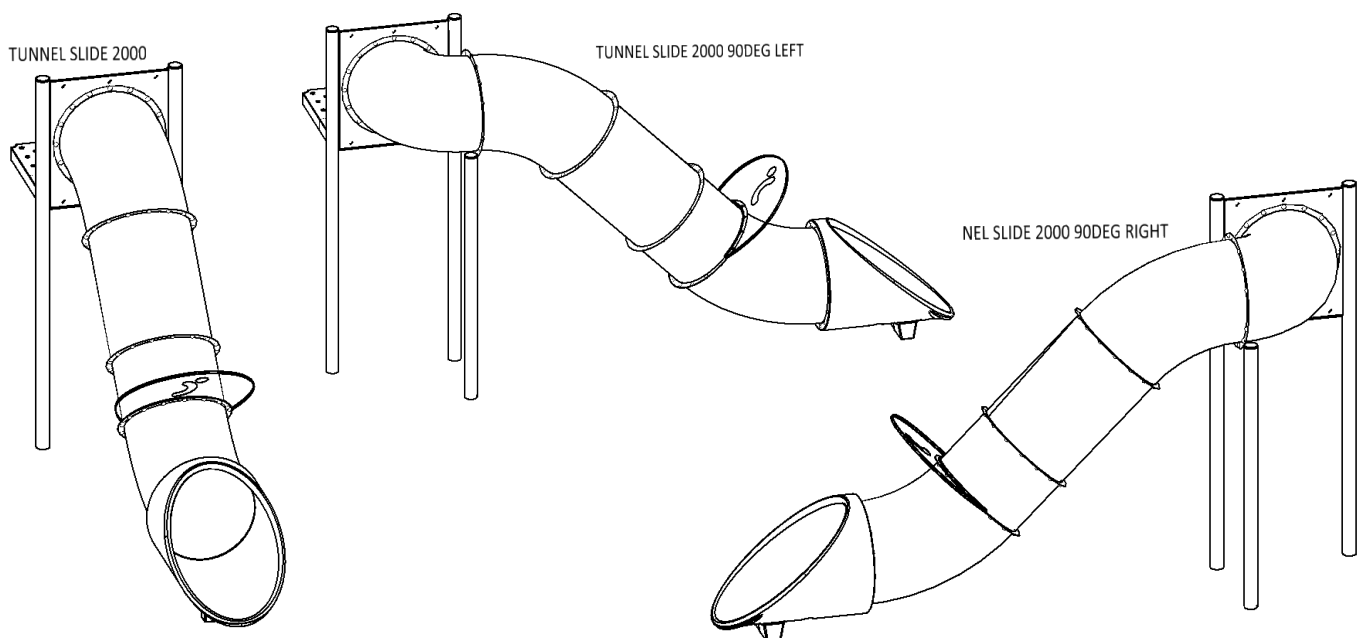
Tunnel slide 1600, Tunnel slide 1600 90deg left and Tunnel slide 1600 90deg right

Only the 90deg slides have attach the first (top) tunnel section to entrance panel, as shown, rotated in the correct direction by 90deg (8 cranking steps). The rest sections are vertical. Use the 'Tunnel Slides - general parts and fittings' and the 'Tunnel Slide - Supports' to complete the installation.



Tunnel slide 2000, Tunnel slide 2000 90deg left and Tunnel slide 2000 90deg right

Only the 90deg slides have attach the first (top) tunnel section to entrance panel, as shown, rotated in the correct direction by 90deg (8 cranking steps). The rest sections are vertical. Use the 'Tunnel Slides - general parts and fittings' and the 'Tunnel Slide - Supports' to complete the installation.



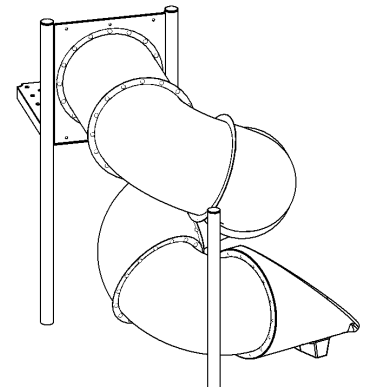
Spiral Tunnel slide 1600 Left and Spiral Tunnel slide 1600 right

Spiral Slide 1600 – Right (Reverse Direction for Slide Left)

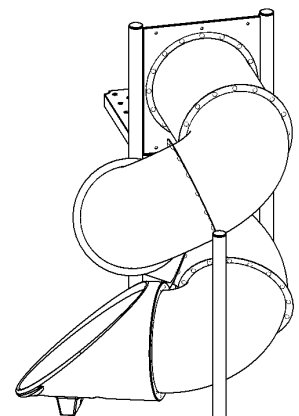
Piece Number	Description	Cranking Steps	Direction
2	1st 90o elbow	3	Clockwise
3	2nd 90o elbow	1	Anti-clockwise
4	3rd 90o elbow	2	Anti-clockwise
5	4th 90o elbow	2	Anti-clockwise
6	5th 90o elbow	1	Anti-clockwise

Use the 'Tunnel Slides - general parts and fittings' and the 'Tunnel Slide - Supports' to complete the installation.

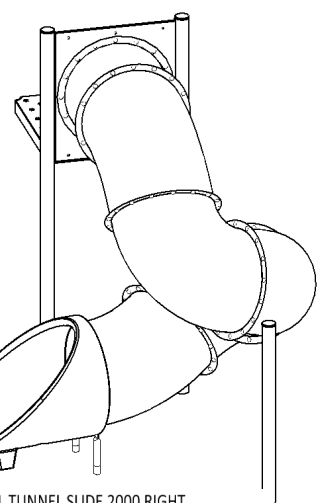
SPIRAL TUNNEL SLIDE 1600 LEFTT



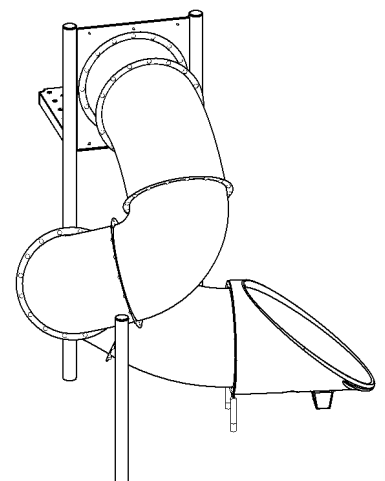
SPIRAL TUNNEL SLIDE 1600 RIGHT



SPIRAL TUNNEL SLIDE 2000 LEFTT



SPIRAL TUNNEL SLIDE 2000 RIGHT



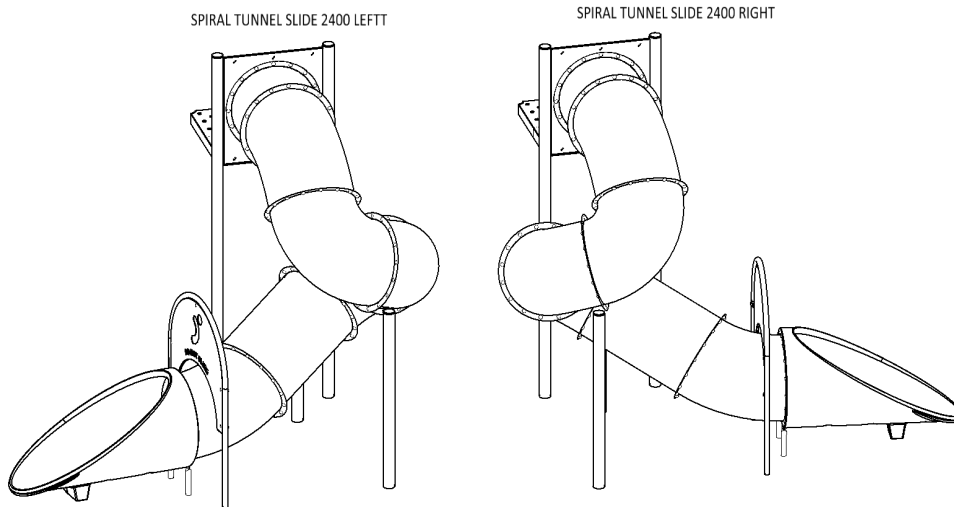
Spiral Tunnel slide 2000 Left and Spiral Tunnel slide 2000 right

2000 Spiral Slide– Right (Reverse Direction for Slide Left)

Piece Number	Description	Cranking Steps	Direction
3	1st 90o elbow	3	Clockwise
4	2nd 90o elbow	3	Anti-clockwise
5	3rd 90o elbow	2	Anti-clockwise
6	35o elbow	5	Clockwise

Use the 'Tunnel Slides - general parts and fittings' and the 'Tunnel Slide - Supports' to complete the installation.

Spiral Tunnel slide 2400 Left and Spiral Tunnel slide 2400 right



Use the 'Tunnel Slides - general parts and fittings' and the 'Tunnel Slide - Supports' to complete the installation. These slides have 2 supports - under the third and under the fifth sections.

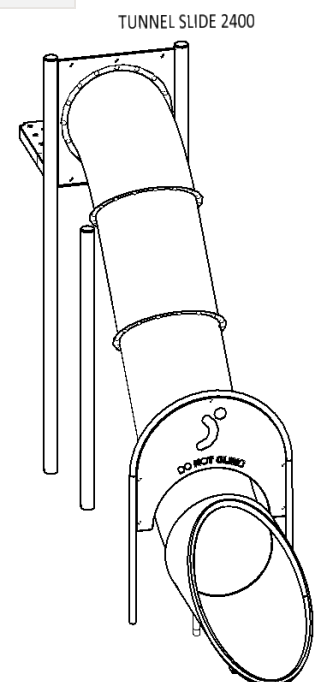
2400 Spiral Slide- Right (Reverse Direction for Slide Left)

Piece Number	Description	Cranking Steps	Direction
3	1st 90o elbow	3	Clockwise
4	2nd 90o elbow	3	Anti-clockwise
5	3rd 90o elbow	2	Anti-clockwise
7	35o elbow	2	Clockwise

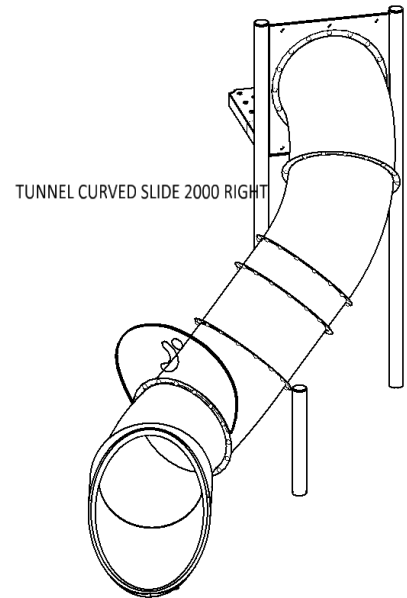
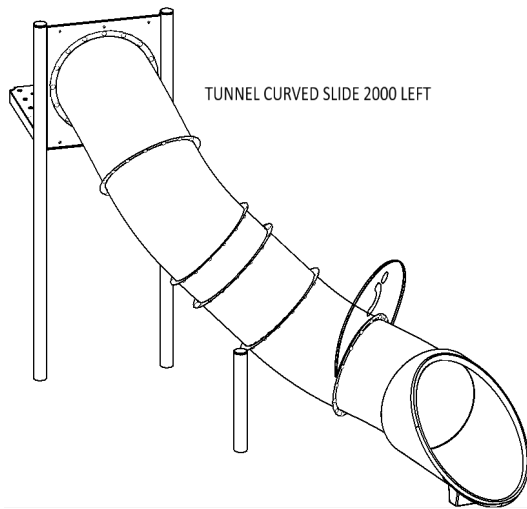
Tunnel slide 2400

Use the 'Tunnel Slides - general parts and fittings' and the 'Tunnel Slide - Supports' to complete the installation.

These slides have 1 support - under the first sections.



Tunnel Curved Slide 2000 left and Tunnel Curved Slide 2000 right



Use the 'Tunnel Slides - general parts and fittings' and the 'Tunnel Slide - Supports' to complete the installation.

These slides have 1 support - under the fourth sections.

Tunnel Curved Slide 2000 - Right (Reverse Direction for Slide Left)

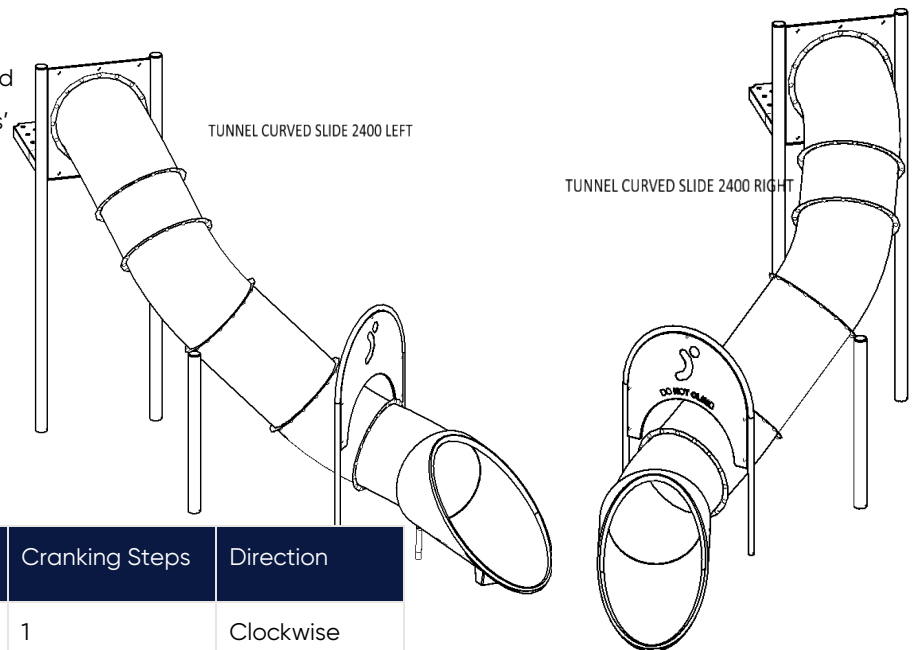
Piece Number	Description	Cranking Steps	Direction
1	45o elbow	1	Clockwise
2	1st 35o elbow	2	Clockwise
5	2nd 35o elbow	5	Clockwise
6	3rd 35o elbow	2	Clockwise

Tunnel Curved Slide 2400 left and Tunnel Curved Slide 2400 right

Use the 'Tunnel Slides - general parts and fittings' and the 'Tunnel Slide - Supports' to complete the installation.

These slides have 1 support - under the third sections.

Tunnel Curved Slide 2400 - Right
(Reverse Direction for Slide Left)



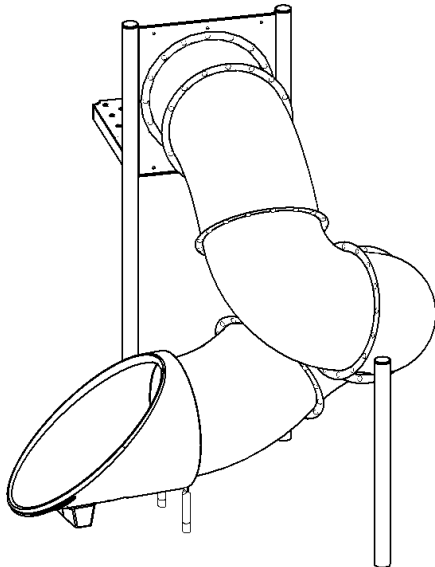
Piece Number	Description	Cranking Steps	Direction
1	45o elbow	1	Clockwise
3	1st 35o elbow	2	Clockwise
5	2nd 35o elbow	5	Clockwise
6	3rd 35o elbow	2	Clockwise

Spiral Tunnel Slide left 2000 and Spiral Tunnel Slide right 2000

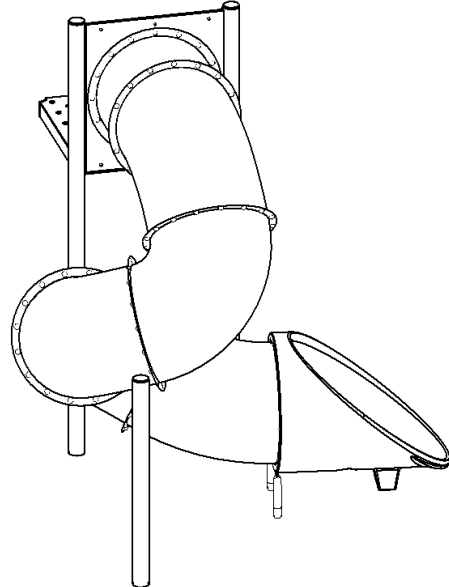
Use the 'Tunnel Slides - general parts and fittings' and the 'Tunnel Slide - Supports' to complete the installation.

These slides have 1 support - under the third sections.

SPIRAL TUNNEL SLIDE LEFT 2000



SPIRAL TUNNEL SLIDE RIGHT 2000



Spiral Tunnel Slide 2000 – Right (Reverse Direction for Slide Left)

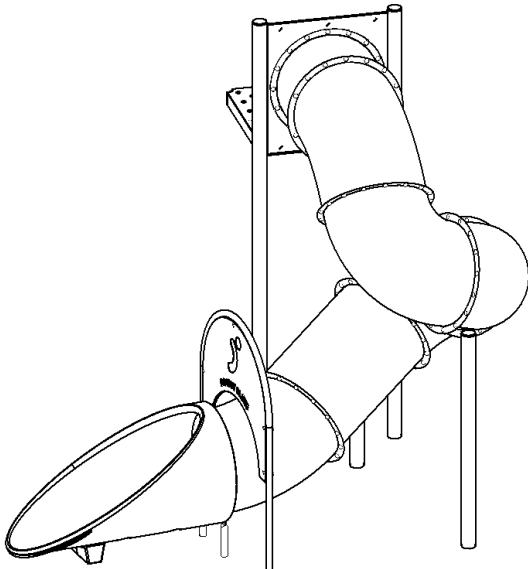
Piece Number	Description	Cranking Steps	Direction
3	1st 90o elbow	3	Clockwise
4	2nd 90o elbow	3	Anti-clockwise
5	3rd 90o elbow	2	Anti-clockwise
6	35o elbow	5	Clockwise

Spiral Tunnel Slide left 2400 and Spiral Tunnel Slide right 2400

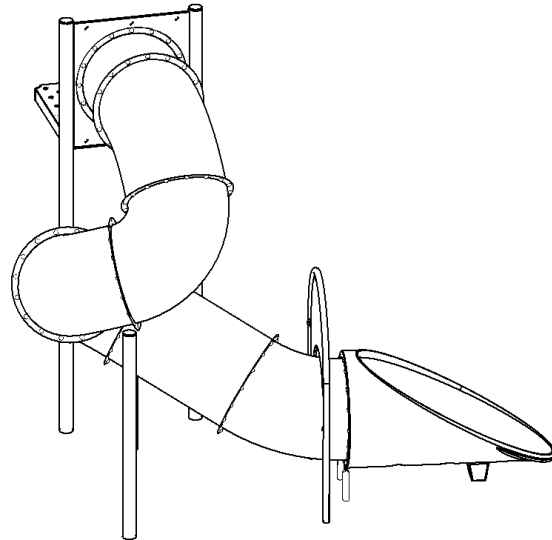
Use the 'Tunnel Slides - general parts and fittings' and the 'Tunnel Slide - Supports' to complete the installation.

These slides have 1 support - under the third sections.

SPIRAL TUNNEL SLIDE LEFT 2400



SPIRAL TUNNEL SLIDE RIGHT 2000



Spiral Tunnel Slide 2400 – Right (Reverse Direction for Slide Left)

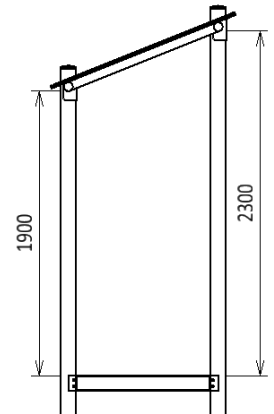
Piece Number	Description	Cranking Steps	Direction
3	1st 90o elbow	3	Clockwise
4	2nd 90o elbow	3	Anti-clockwise
5	3rd 90o elbow	2	Anti-clockwise
7	35o elbow	5	Clockwise

Roofs

All roofs have inclination from the low to high upright connections of 400mm. In standard position the distance from platform to low point of supporting frame is 1900mm (2300 to the high).

The reason all roofs have solid supporting frames is to provide structural strength.

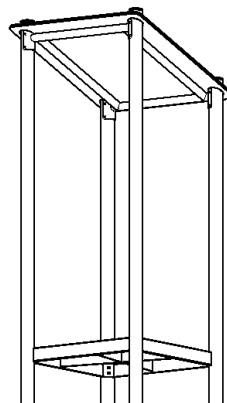
There are 2 ways to attach the roofs, considering the weight. Pre-assemble panels to frames with 40mm bolts on ground, rise and attach to uprights with 30mm bolts, or attach the frame to uprights first and then panels to frames on top. The first is preferable if lifting equipment is available. Pay additional attention to avoid scratches and marks on the uprights when sliding frames in position.



Roof Single Standard

This roof is over single square platform and is made of one-piece single frame and single panel.

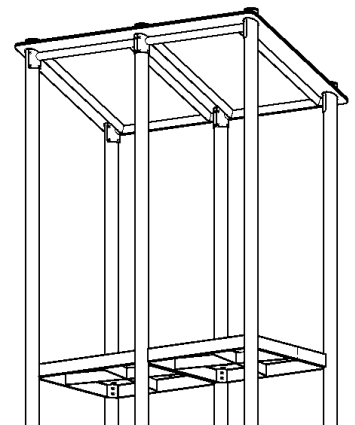
ROOF SINGLE STANDARD



Roof Double Standard

This roof is over 2 square platforms, has 2 identical frames and a single double size panel.

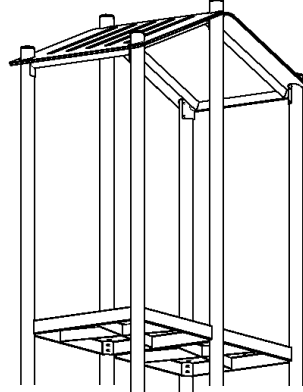
ROOF DOUBLE STANDARD



Roof Double Half

This roof is over 2 square platforms and has one-piece single frame and 2 identical panels.

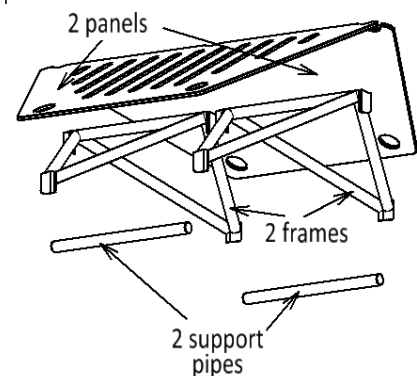
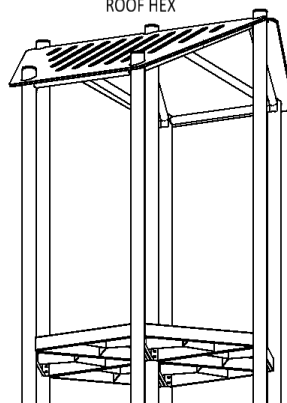
ROOF DOUBLE HALF



Roof Hex

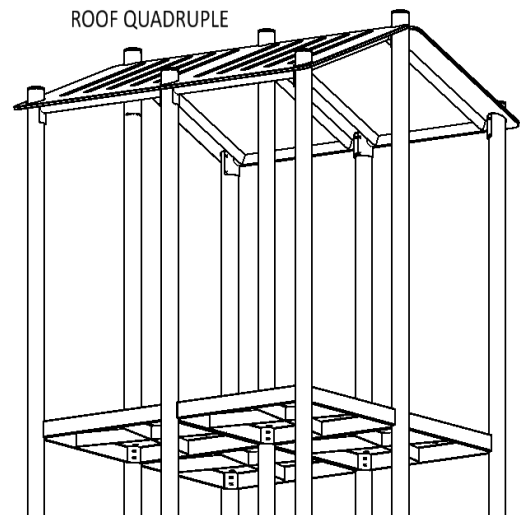
This roof goes over triangle platforms. 2 panels, 2 frames and 2 separate pipes. The 2 pipes are not attached to frames and uprights. Their purpose is design style and to keep panel's ends straight.

ROOF HEX



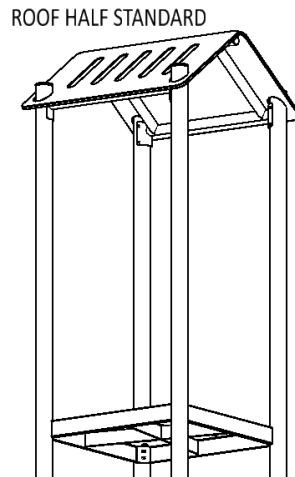
Roof Quadruple

This roof goes over 4 square platforms, has 2 single frames as in 'Roof Double Half' and 2 identical panels.



Roof Half Standard

This roof goes over a single square platform, has a single frame and 2 identical panels.

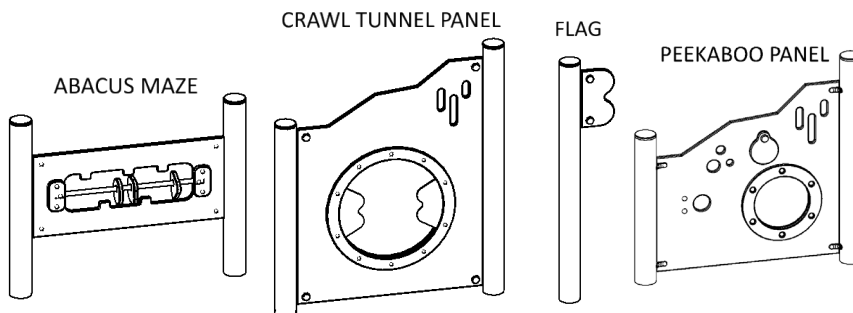


Toddler Trails Panels

This group of items are attached to uprights and are set up to ground level only.

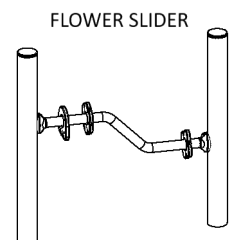
Abacus Maze, Crawl Tunnel Panel, Flag and Peekaboo Panel

All parts on panels are pre-assembled. Attach all panels to uprights as shown in 'Panel to upright'.



Flower Slider

Insert the flower pads in the rail and attach the rail to uprights with 40Nb flanges as in 'Pipe to upright'.

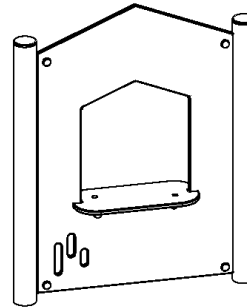


Playhouse Panel

Attache the small panel the big one as per 'Panel to Panel'.

Attach the big panel to uprights as shown in 'Panel to upright'.

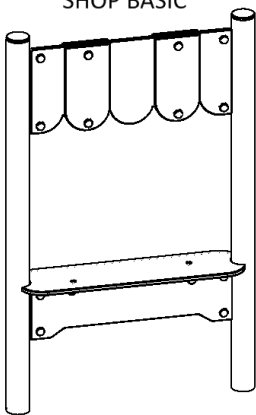
PLAYHOUSE PANEL



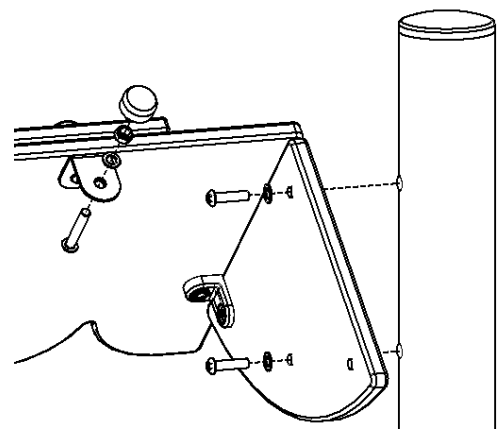
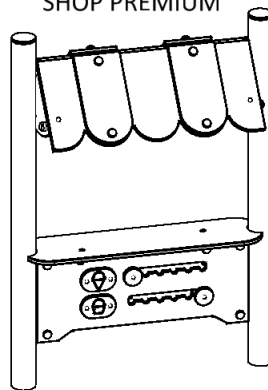
Shop Basic and Shop Premium

The roof and the vertical panel from 'Shop Premium' are pre-assembled. Attache the desk panels the vertical ones as per 'Panel to Panel'. Attach the vertical panels to uprights as shown in 'Panel to upright'. For 'Shop Basic' attach the roof panel to uprights as in 'Panel to upright'. In 'Shop Premium' attach first the 2 side panels to uprights with 40mm bolts. Then the 2 roof panes to each other with the L brackets, 60mm bolts, nuts and security caps and then to side ones as per 'Panel to Panel'.

SHOP BASIC



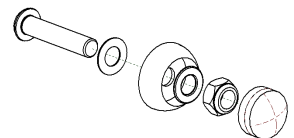
SHOP PREMIUM



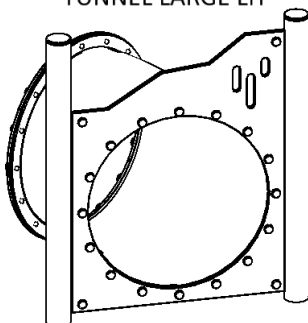
Tunnel Large LH, Tunnel Large RH, Standard Tunnel LH and Standard Tunnel RH

Attch the flange of tube to front panel and the stripes on the back with sets of security caps, 50mm bolts, nylock nuts and washers.

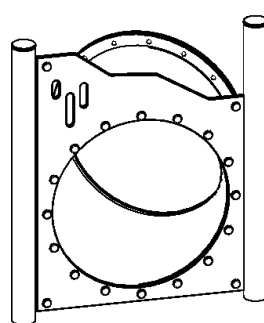
Use 'Panel to upright' to attach entrance panels to uprights.



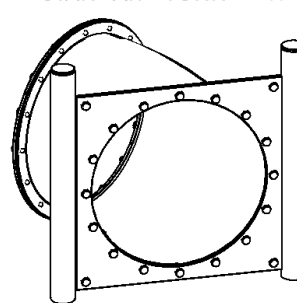
TUNNEL LARGE LH



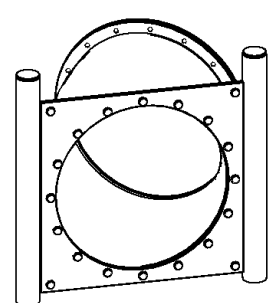
TUNNEL LARGE RH



STANDARD TUNNEL LH

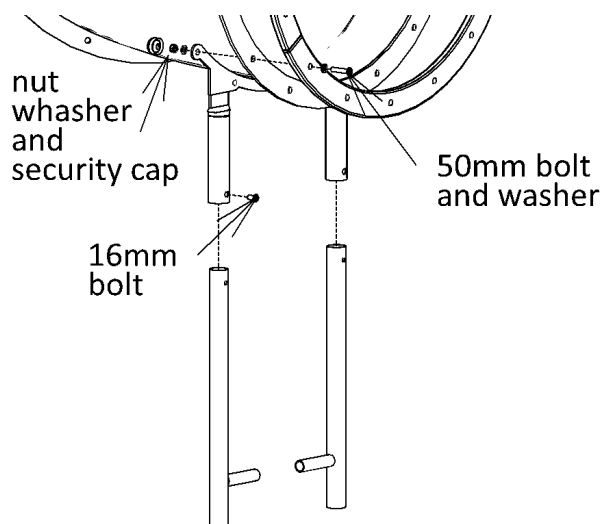


STANDARD TUNNEL RH



See the way how to attach the support leg on the back side.

Mark the position of the legs and dig a hole in ground 600x200mm, 600mm deep from ground level. Place the legs in the hole and concrete with 600x200x300 footing.



Safety and Maintenance Inspections

To ensure that your equipment remains in a safe condition, we recommend that you establish a schedule of safety and maintenance inspections and record the details of your inspections in a logbook. In this manner, any minor repairs are done as soon as they are required, and your equipment will remain in a safe condition. In the event of an accident occurring on your play equipment, your records of these inspections are proof that your 'duty of care' has been maintained.

We recommend that your play equipment be inspected with varying degrees of detail on a frequency basis as outlined on the following page.

Any spare parts that may be required for your play equipment will be available through your local PlayCo branch, and our sales staff will be able to help you with any queries you may have regarding your equipment.

Please remember! Play equipment that is well maintained remains safe and will last for many years.

Routine Visual Inspection

Frequency – At least weekly. Daily inspections may be required where loose fill surfacing is used or in cases where the equipment is subject to heavy use or vandalism.

Surfacing

- ☐ Check that the soft-fall surfacing area is free of debris and contamination.
- ☐ Check that displacement of your loose-fill surfacing material has not resulted in areas becoming shallower than the recommended depth, particularly below items of equipment where falls are likely. Such areas should be levelled or filled to ensure that the recommended depth is maintained.

Equipment

- ☐ Check for vandalism, and any damaged or missing parts. In the event of any damage or missing parts, isolate the play equipment until repairs have been carried out.

Operational Inspection

Frequency – Every one (1) to three (3) months, depending on the level of use. Equipment subject to heavy use or vandalism may need to be inspected more frequently. Any problems identified should be addressed on a priority basis taking into account any safety implications.

Surfacing & Surrounds

- ☐ Check that the soft-fall surfacing area is free of debris and contamination.
- ☐ Check that a loose fill soft-fall surfacing is at the recommended depth, and top up if necessary.
- ☐ Check that a synthetic surface is in good condition and securely in place to provide impact absorption.
- ☐ Check that any soft-fall surfacing borders are secure in the ground, do not constitute trip points, and have no rough or sharp edges.
- ☐ Check the area for overgrown bushes or hazards that may have intruded into the play area over time.

Equipment

- ☐ Check all fasteners and tighten and replace any that are missing.
- ☐ Check that all uprights and components are secure in the ground and that no footings are showing through the soft-fall.
- ☐ Check steel play equipment for rust or corrosion. (All metal play equipment will show some signs of breakdown over time, and this may be exacerbated by a marine environment.) Replace any badly corroded parts.
- ☐ Check timber equipment for splintering and warping; and coat with Sikken's Cetol Mahogany if required. Replace any damaged items.
- ☐ Check all moving parts for excessive wear, and replace any worn items.
- ☐ Check all chain links for wear and replace any damaged items.
- ☐ Check for any bending or cracking of steel components and replace them where necessary.
- ☐ Check all paintwork, and touch up any areas that are worn or chipped.
- ☐ Large rope net structures with tensioning aids (e.g., turn buckles) need to be checked for sufficient tension and re-tensioned if necessary.
- ☐ In highly corrosive environments it is strongly recommended that all equipment is regularly washed with clean water to prevent any build-up of rust-causing minerals. This is particularly important where the equipment is positioned under a permanent shade structure and cannot be naturally washed by rain.
- ☐ Check for any grease points and apply Molycoat Long Term grease to all grease nipples.

Comprehensive Inspection

Frequency – Annually. Yearly it is advisable to have your equipment checked by someone who is qualified in playground equipment maintenance, or by an engineer.

Surfacing & Equipment

- ☐ In addition to a detailed inspection of all areas covered in an "Operational Inspection", the following checks should be made.
- ☐ Check the structural integrity of equipment subject to corrosion or rotting.
- ☐ Check for any changes in the safety of the equipment resulting from repairs made, or added or replaced components.