



INSTALLATION INSTRUCTIONS

Single Cablerider

INC. SMP MOUND DESIGN

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Single Cablerider

Record RSS Ltd recommend safer surfacing suitable for a Free height of Fall of 1300mm , under this piece of equipment.

The cablerider is designed with a drop of 500 - 700mm when installed on level ground, when sited on sloping ground, will accommodate a fall of up to 1200mm, i.e. slope + cablerider drop = 1200 mm max. For falls greater than 1200 mm, a mound or raised area will need to be created at the finish station end.

IMPORTANT NOTE

The legs for the start (high) station are indicated by the letter "H" welded to the bottom of the legs. Legs are matched to the head "1", "2", "3", "4"(low station), "A", "B", "C" "D" (high station). Leg lengths: High station 4880 and 4280. Low station 4020 and 3520. The tyres used on this unit will wear quickly with high usage and should be replaced at regular intervals.

These instructions are made up of the following sections covering this installation.

PARTS LIST

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BEFORE YOU START

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TOOLS REQUIRED

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INSTALLATION SPECIFICATION

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INSTALLATION PROCEDURE

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FOOTING DETAILS

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CABLE INSTALLATION

MATERIALS SPECIFICATION

Steelwork (ALL COLD FORMED TO EN10219):

Towers: 114 dia x 4.5mm structural cold formed hollow section Grade 43.

Platform & ramp: 40 x 40 x 3 CHS, 33.7dia x 3 CHS, 26.9 dia x 3 CHS

Carriage: 316 Stainless Steel with nylon rollers.

Paintwork: Steelwork is shot-blasted, zinc rich primed (hot zinc spray is available for coastal regions) and then finished with 2 colour topcoats The system does not contain any lead and is virtually inert when maintained in accordance with the Operation and Maintenance requirements.

Single Cablerider

PARTS LIST

CODE	QTY	DESCRIPTION	DETAIL
CRHSL	1	Head section Low station	
CRHSH	1	Head section High station	10
CRL3700	2	Back legs low station	2
CRL4360	2	Front legs low station	3
CRL4200	2	Back legs High station	4
CRL5000	2	Front legs High station	7
CRLM10	8	M10x30 resistorx Leg to head unit bolt	5
CRC20M	1	20M CABLE (Depends on unit ordered)	6
CRC30M	1	30M CABLE (Depends on unit ordered)	
CRC03M	1	3m cable for finish station	
CRTYRE	2	Predrilled tyres/buffers (double for lower end)	1
CRCARR	1	Carriage unit	Fig1 P9
CRSEAT	1	Button seat & rubber hand grip	Fig3 P9
CRCHAIN	1	Chain	Fig3 P9
CRUBOLT	1	Ubolt for button seat to CRCHAIN (Fitted to seat)	
CRSHKL	1	M8 x 35 bolt, washer & nyloc nut (carriage - chain fixing)	Fig2 P9
CRTUBE	3m	Plastic tube	
CRSIKAS	5	Small cable grips	
CRSIKAL	6	Large cable grips	
CRLOG	6	Logs for ramp (100 dia 1/2 round)	
CRCSCR	12	M10 x 30 coach screws, washers & armour rings for ramp	
CRRAMP	1	Ramp (2 sections)	
CRRM10	4	M10 x 30 Resistorx bolts for ramp	
CRRNYL	4	M10 Nyloc nuts for ramp	
CRRWAS	8	M10 washer (ramp both sides)	
CRWASH	4	75mm Dia washers	
CRBOTL	1	Cable tensioning bottle screw c/w locking nuts	
CRRTX	1	Resistorx tool M10	

HEALTH & SAFETY MATTERS

Ensure all persons working on this installation have undergone training in current Health & Safety & COSHH in relation to this equipment, and are wearing the appropriate Personal Protective Equipment required.

Tools required

Plumbline, 50/30m tape measure, spirit level, metric socket set - inc 10-24mm socket, M10 resistorx driver, 3m reach step ladder, min SWL 3000kg Tirfor winch.

Before you start

Inspect all parts for damage and finish, if any parts are missing these must be replaced before attempting the installation. Fence off the surrounding area and erect signs to warn the public of risk of injury.

Installation specification

LENGTH	WIDTH	Min Space	Impact area	PERSONS	CONC	MIX
20 m	3.65 m	20 x 4m	20 x 4m	Min 3	3.5 CuM DBL Unit - 8.96 CuM	20 N/mm ² compressive strength APPROXIMATE: 1 Part cement 2 Parts sand 4 Parts aggregate
30M	3.65m	30 x 4m	30 x 4m	Free height of fall 1.3m	Weight of heaviest part 85kg DBL Unit - 170kg	

Single Cablerider

Installation procedure

1. Ensure you have fenced off the area surrounding the installation, and erected warning signs.
2. Check the location of the unit on site and positions of the Start (high) and Finish (low) stations. Excavate the foundation holes 700mm deep for the stations to dimensions as shown.

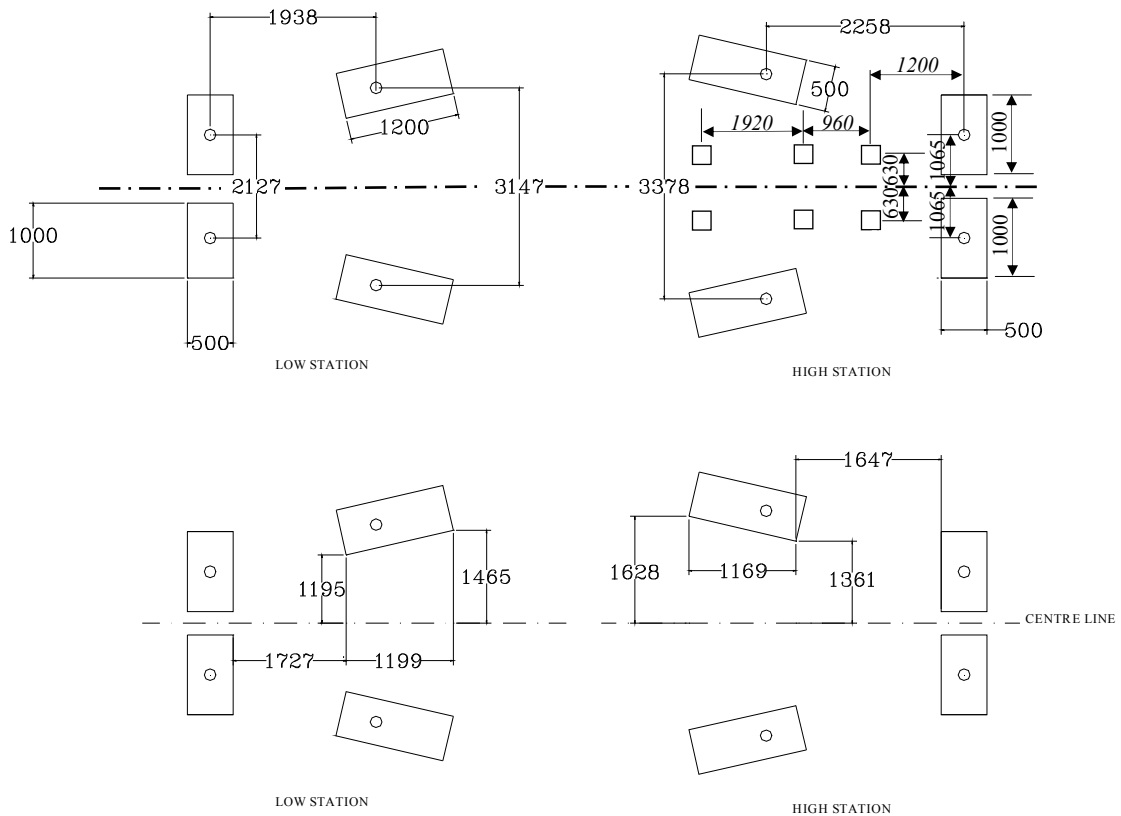
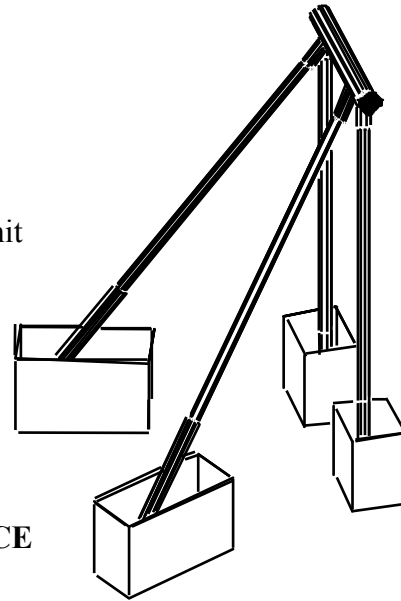
Ensure the bolts go through the head unit into the legs

ALWAYS MATCH A-A, B-B, & 1-1, 2-2 etc., WHEN ASSEMBLING LEGS TO HEAD UNIT.

3. Assemble the short legs marked "H" to the head unit and bolt together using 2 No. M10x30 Resistorx. Place this assembly into the rear footing hole for the Start station.

4. Supporting the rear legs, place the front legs marked "H" into the front footing holes, push into the head unit socket. Tighten bolts through head unit into legs using 2 No. M10x30 Resistorx.

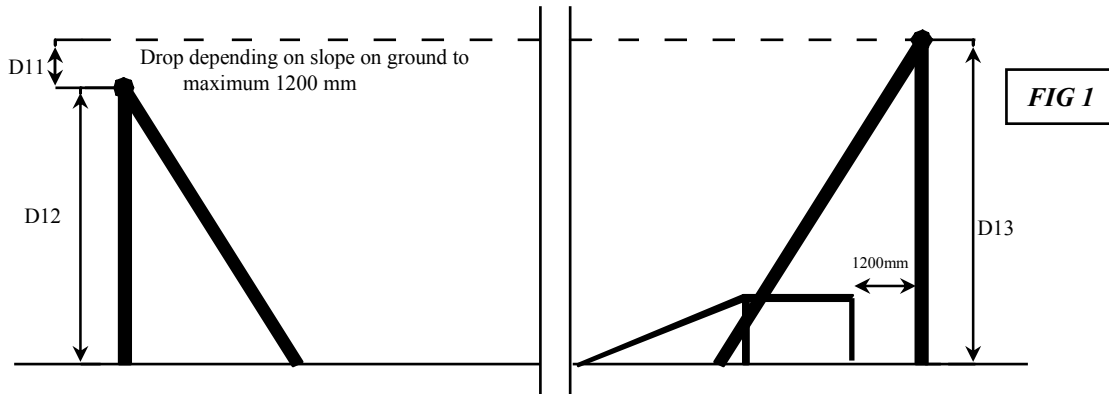
NB: FOR LOOSEFILL INSTALLATION REDUCE DEPTH OF LEG BY 150mm



Single Cablerider

Installation procedure *Continued*

5. Ensure all legs are plumb and level and check the height as *fig 1, table 2*.

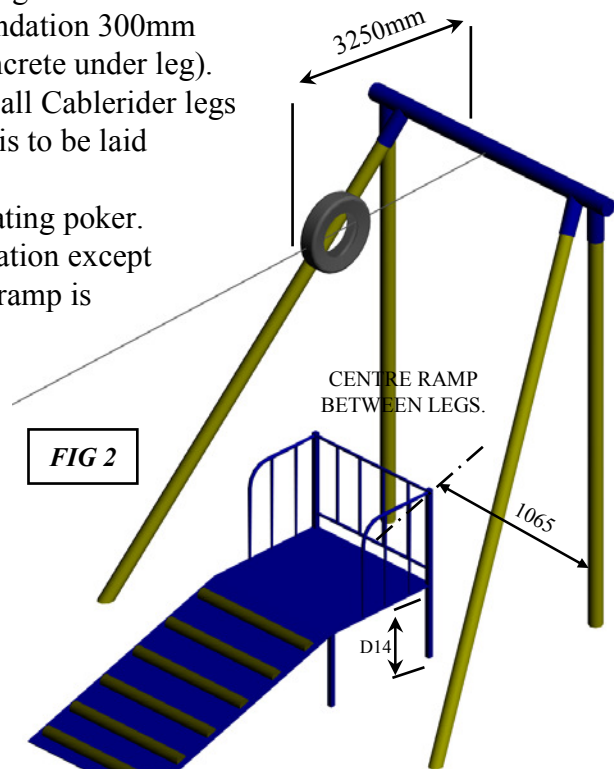
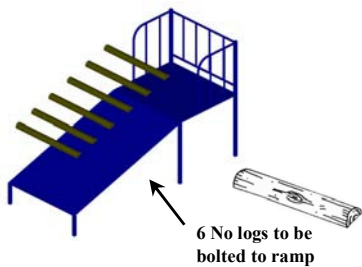


6. Install the ramp as *fig 1&2*, ensure deck height is no more than 580mm from finished surface level. Foundation 300mm square x 400mm deep (allows for 100mm concrete under leg). Ensure the ramp is plumb and level, concrete all Cablerider legs to below finished surface level. If Grassmatt is to be laid concrete 200mm below finish surface.

7. Remove all air in the concrete using a vibrating poker.

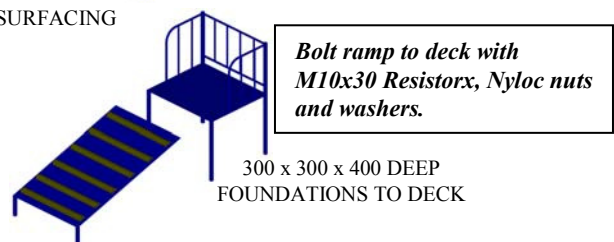
8. Using steps 1- 7 above, install the Finish station except that the legs are not marked with “H” and no ramp is installed with the finish station.

ALLOW CONCRETE TO CURE FOR MINIMUM 72 HRS BEFORE FIXING AND TENSIONING THE CABLE.



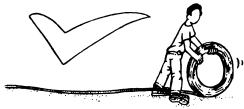
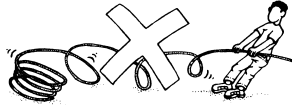
	D11	D12	D13	D14
20M	varies	3000	3500	580
30M	varies	3000	3500	580

Table 2

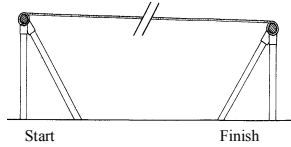


Cablerider

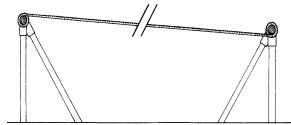
Cable Installation



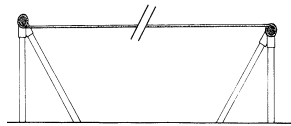
Unwind the two cables ensuring they are not kinked or bent.



Normal setting



Faster setting

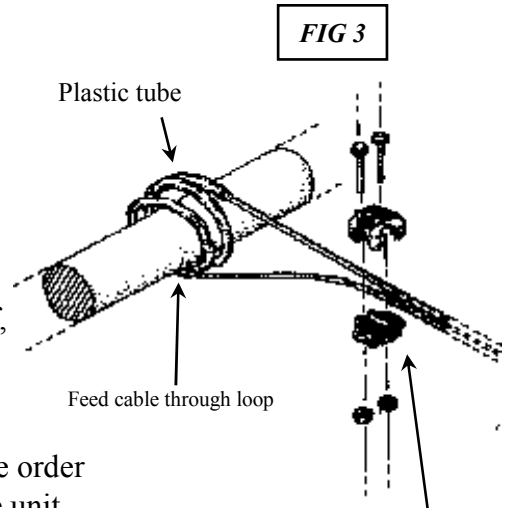


Slower setting

Adjustment for speed of the carriageway can be made by fixing cable over or under the head unit as shown.

Lay the cables on the ground with short length at finish end (with the eye pointing towards the start station, and long length of cable with the eye pointing to the finish station). Extend bottle screw fully and attach to the eyes of the cables.

1. At the finish station, Using the short end, install the cable as shown in *fig 3*. The plastic tube may be in one length in which case you will need to cut it in half, one half for each station. Fit two more large cable grips next to the first one to complete.



Fit two more large cable grips

2. At the start station thread the cable through the tyres in the order shown in *fig 4*, including the washers (see below) & carriage unit, paying particular attention to ensure the cable goes through and under the roller as *fig 5*.

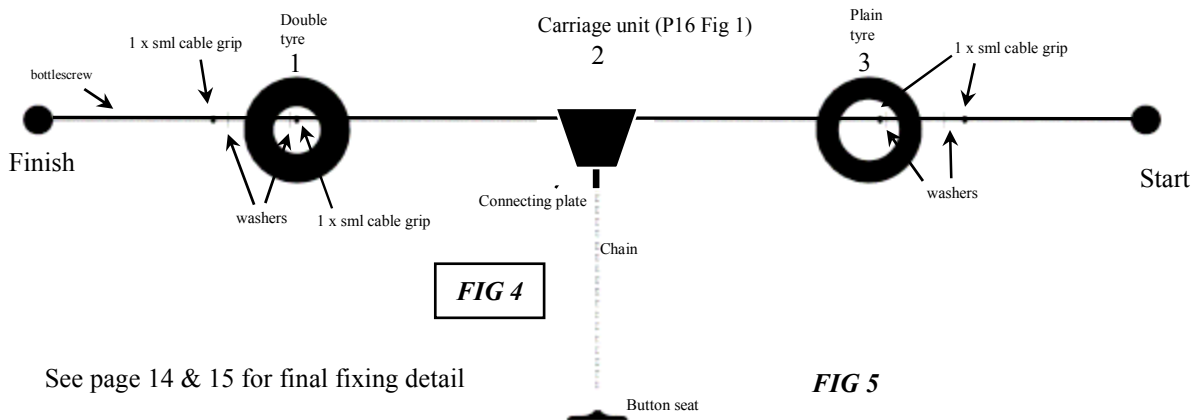


FIG 4

FIG 5

See page 14 & 15 for final fixing detail

Cablerider

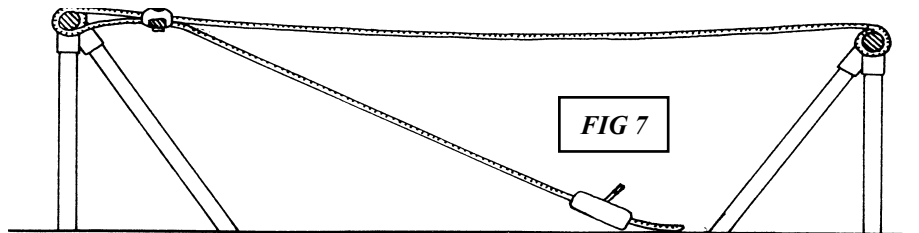
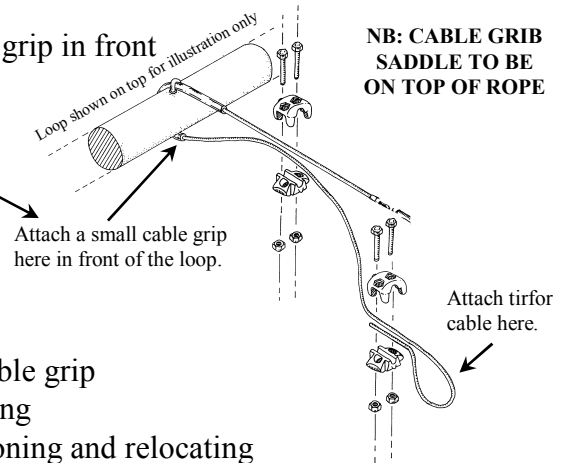
Cable Installation *Continued*

3. At the Start station thread the end of the cable over the head unit through the plastic tube, the loop underneath the head section and back on itself, loosely clamp a large cable grip as shown in *fig 6*. Create a loop in the end of the cable and clamp with a cable grip. Attach a small cable grip in front of the loop on the head section as shown.

4. Using a tirfor winch, attach the end of the tirfor cable to the loop and crank the winch to tension the cable.

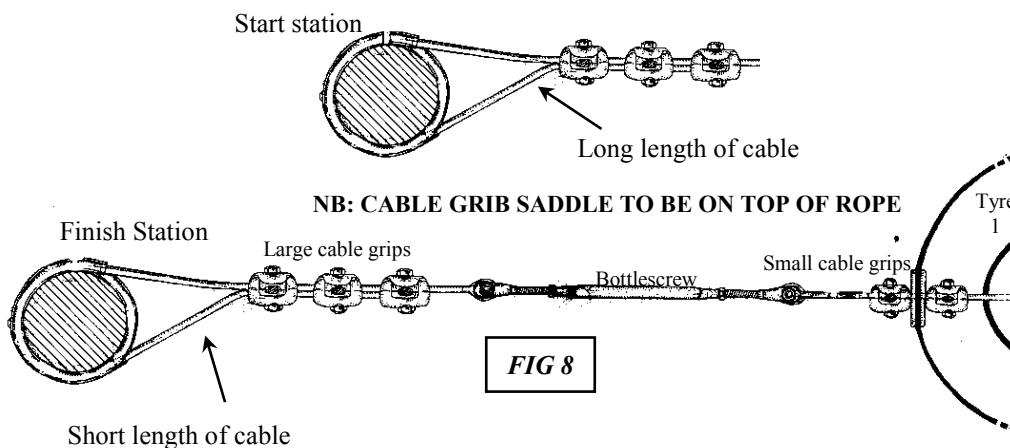
(Pulling the end of the cable back towards the finish station end), *fig 7*.

As you tighten the cable undo and relocate the small cable grip back against the loop, (this stops the cable from loosening when you release the tension on the tirfor.) Keep tensioning and relocating the small cable grip back to the loop until you have the correct tension. (Always ensure the small cable grip is fully tightened).



5. When the cable is taut *, release the tension on the tirfor winch and dismantle the large cable grips, wind the cable over the head section and fix with large cable grips as you did with the finish station. (leave the small cable grip against the loop). The end result should look like *Fig 8*.

*(ie, with seat loaded with 130kg, underside of seat should be not less than 400mm to surface at lowest point)



Cablerider

Cable Installation Continued

6. Fig 9., shows the fixing detail for the tyres. use the small cable grips for this fixing.

IMPORTANT:

Fit tyre 3 (see fig 2) 2500mm from centre of back legs to front of tyre.

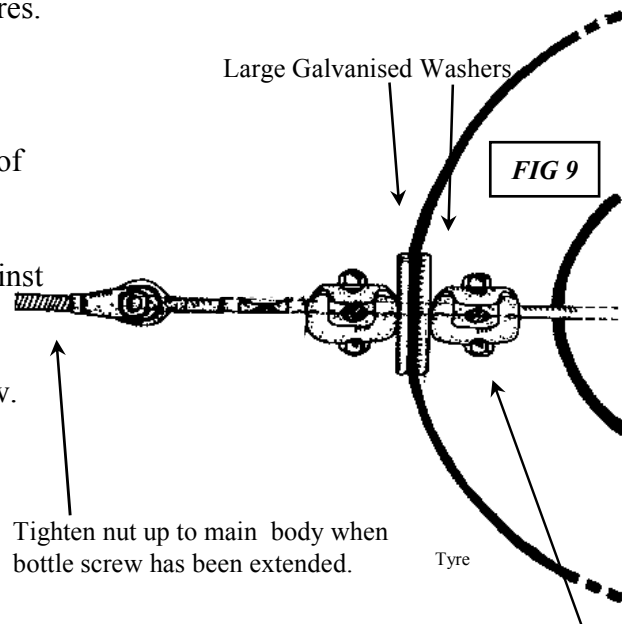
NOTE: The grips must be installed up against the tyre with the large washers as shown.

7. Tighten the lock nuts on the bottle screw.

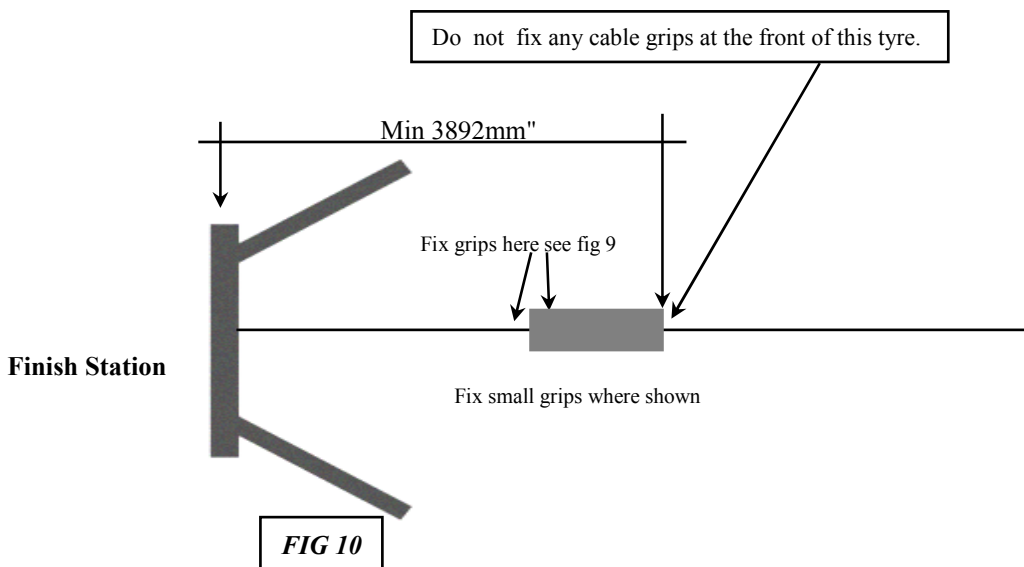
8. The tyres at the finish station should be fitted positioned as shown in fig 10., leaving min 3.25m from finish station legs to front of landing tyre.

9. Carry out post installation inspection in accordance with instructions on separate sheet.

10. The cable should be checked and re tensioned as necessary after approximately two weeks of use. (see item 6)



Tighten the small grips and washer up tight against the inside of tyre to stop movement of the tyre along the cable.



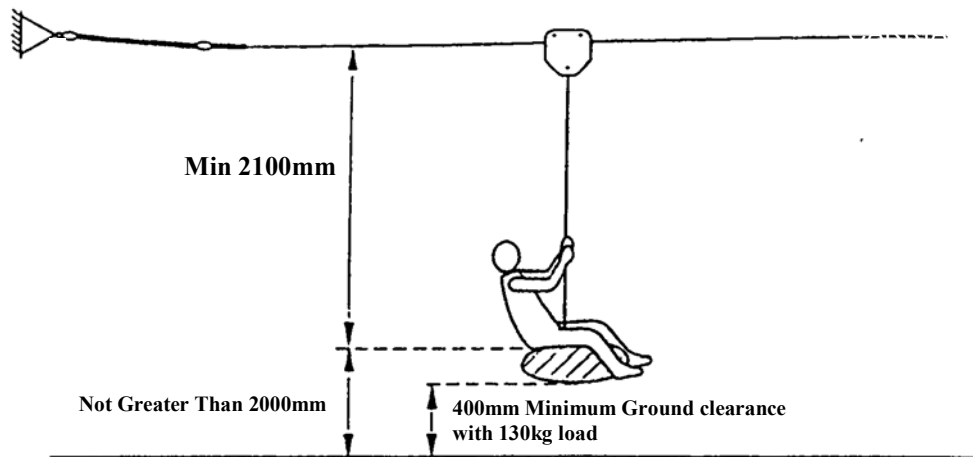
Cablerider

Seat/Carriage Installation

Determination of cable clearance, ground clearance and seat height.

C

In order to comply with BS EN1176 1/4, the clearances shown must be maintained.



Seat/Carriage Assembly

TOOLS REQUIRED: 2No 13mm & 17mm SPANNER / SOCKET

BEFORE HANGING THE CABLE, THREAD CABLE THROUGH CARRIAGE UNIT: NOTE BRAKE (A) FIG. 1 BELOW WILL REQUIRE PULLING OUT TO ALLOW THE CABLE TO THREAD THROUGH THE ROLLERS. IF REQUIRED THE CARRIAGE CAN BE FITTED TO THE CABLE AFTER CABLE INSTALLATION.

CHAIN FIXED TO CARRIAGE UNIT WITH JOINER LINK, M8 BOLT, WASHER & NYLOC NUT FIG. 2 BELOW.

THREAD SLEEVE (C) OVER BOTTOM END OF CHAIN FIG. 3 BELOW.

ATTACH BOTTOM END OF CHAIN TO SEAT (D) WITH U-BOLT (E) .

PULL SLEEVE (C) DOWN INTO SOCKET IN SEAT FIG. 3 BELOW.



FIG. 1



FIG. 2

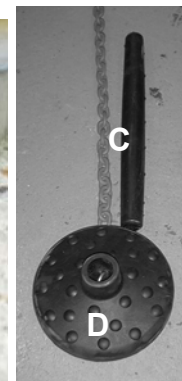


FIG. 3

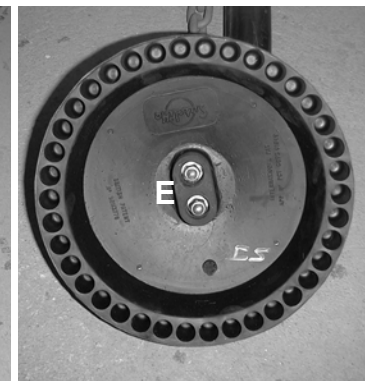


FIG. 4

SMP Appendix A:

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Cablerider

Landscape Mound Installation

Building the Mound

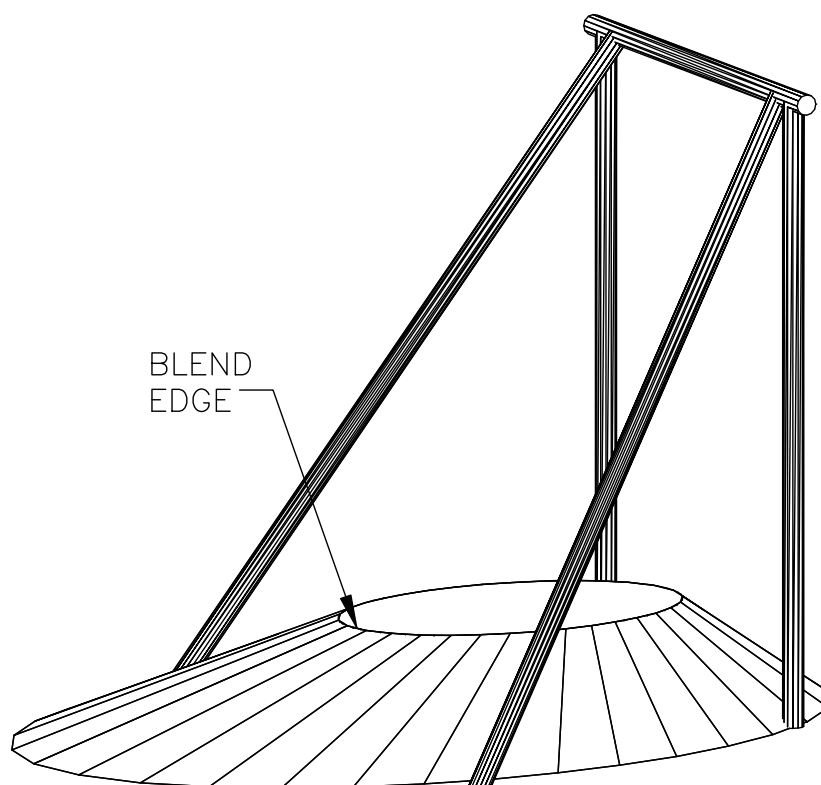


FIG.1

NB :- This Recommended, minimum, take-off mound is suitable for grassmatt type surfacing. However if wet pour is required, including a hand edge, a different mound construction may be required.

The Mound must have a horizontal top surface of 2000mm x 1260mm at a height of 580mm. The mound must then form a 35° slope all the way round except for the front slope which will be at 16°, this allows easier access. Make sure all edges are blended in. (See FIG.2)

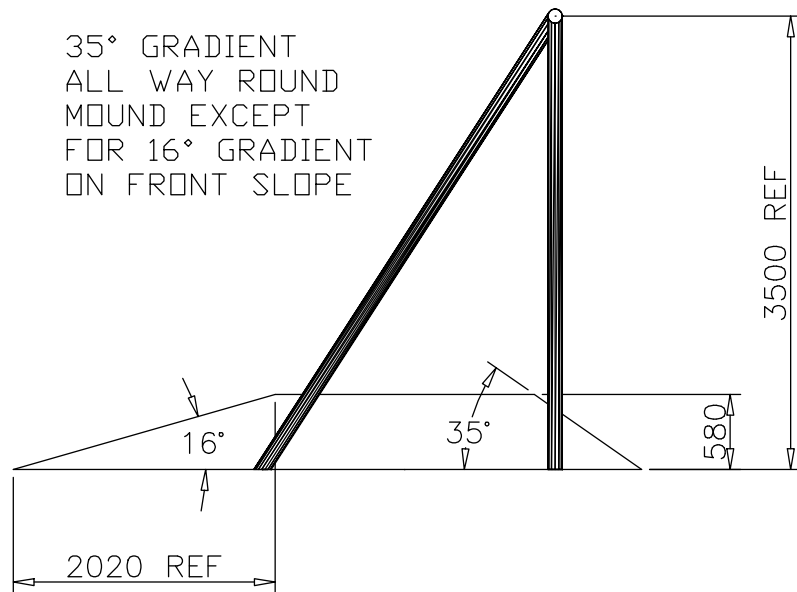


FIG.2

Aim to make the base of the mound an oval shape 4851 x 3115. This Mound will only be placed on the Start (high) position.

Erect the Cablerider Start (high) section in the same manner as stated in Installation Procedure section 3 & 4.

Position the Cablerider Start around the mound making sure the back legs are 160mm from the end of the platform base. This will ensure the mound is in a similar position to replace the ramp. (see FIG.3)

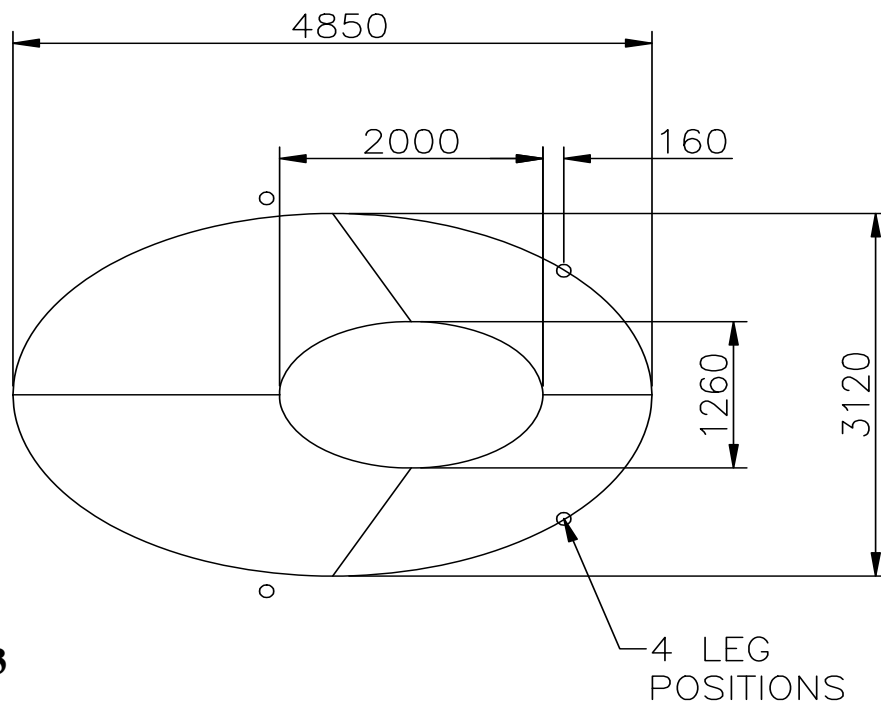


FIG.3