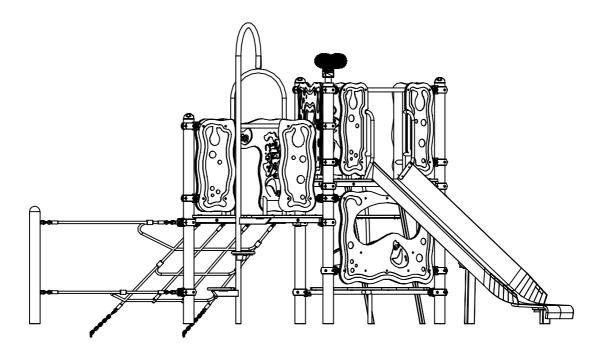


INSTALLATION INSTRUCTIONS

ZINGO DEK

X-010/S, X-010/SD, X-010/P & X-010/PD



MODEL SHOWN = X-010/S

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1 SPECIFICATIONS

REFERENCE		X-010/S	X-010/P
nerenence		ST. STEEL SLIDE	PLASTIC SLIDE
OVERALL HEIGHT (H)	m		2.50
OVERALL LENGTH (L)	m	4.70	4.90
OVERALL WIDTH (W)	m	2.96	3.09
OVERALL WEIGHT	kg	430	480
HEAVIEST PART	kg	31	91
LARGEST PART L x W x H	m	2.50 x 0.40 x 0.30	INFORMATION TO FOLLOW
CONCRETE - RUBBER	m ³	0.56	0.55
CONCRETE - LOOSE FILL	m ³	0.56	0.55
MINIMUM SPACE L x W x H	m	7.23 x 6.81 x 3.70	INFORMATION TO FOLLOW
FALLING SPACE AREA	m ²	31.12	INFORMATION TO FOLLOW
IMPACT AREA (WET POUR)	m ²	31.00	INFORMATION TO FOLLOW
LOOSE FILL AREA (SAND/BARK)	m ²	34.25	INFORMATION TO FOLLOW
MANHOURS	hr		
MANPOWER			
CONSTRUCTIONAL SPACE	m	10.	00 x 9.00
MAXIMUM FREE FALL HEIGHT	m		1.20

Concrete mix is recommended at: 1 part cement; 2 parts sand; 4 parts aggregate; by volume with 20mm aggregate (20 N/mm² min compressive strength)

SMP Playgrounds Ltd. recommends an effective *Impact Absorbing Surface tested to EN1177 & BS7188* beneath this range of play equipment. Refer to manufacturers instructions for details of installation. The surface should have a Critical Fall Height greater than the Maximum Freefall Height of the equipment. Subject to a risk assessment & for certain Fall Heights a grass surface may be used.

Constructional Space (shown in the above table) is the approximate working area required to layout and assemble the equipment.

For the safe operation of this equipment it must be installed on horizontal ground with the required minimum space.

If a loose fill surface is selected for this item it will require a very high level of maintenance to ensure a sufficient thickness is in place at all times to provide 'critical fall height' protection.

The concrete foundations indicated are for average ground. Care should be taken concerning abnormal conditions.

2 PREPARATION

All equipment assembly and fixings must conform to EN1176.

Before commencing the installation the surrounding area must be sufficiently fenced and signs erected to warn the public of the risk of injury.

Tools / ancillary equipment: Plumbline, 10m tape measure, Spirit level, Adjustable set square, Step ladder, Bolt cutters, 10mm A/F Socket, Torque wrench, 3/16" A/F Allen key.

Minimum Personal Protective Equipment: - Hard hat, Gloves, Armoured boots, Goggles.

2.1 ESTABISH ORIENTATION

- i) See Specifications for equipments 'Minimum space'.
- ii) Measure out the site to ensure the space required fits into the allotted area, it is horizontal and free from trip points or other obstructions.
- iii) Ensure the equipment is to be provided with an effective Impact Absorbing Surface which has a tested critical fall height rating greater than the maximum freefall height of the equipment.

2.2 MARK OUT HOLES

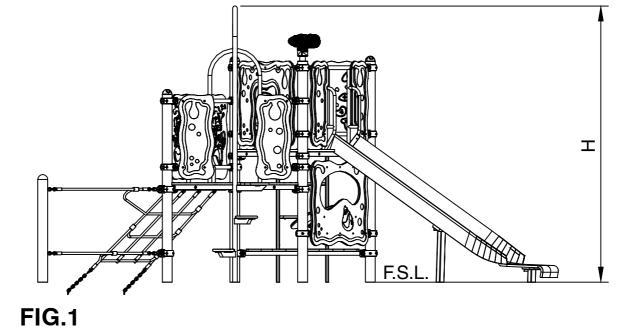
Consult SMP layout drawing for structure position on site.

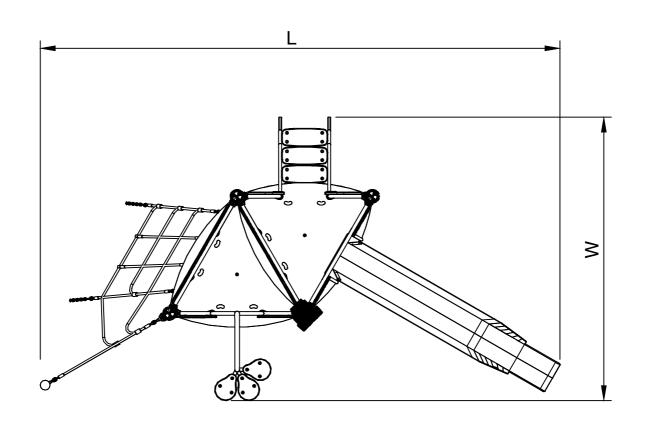
See FIG.3 to 5A for concrete foundation spacings.

NOTE: This is a minimum guide only. Hole excavation should be done progressively as the steelwork is erected.

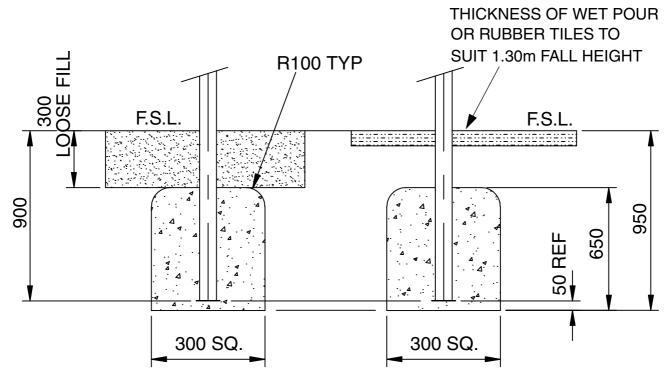
2.3 ESTABLISH DATUM LEVEL

- i) If a rubber tiled Impact Absorbing surface is to be laid, see separate instructions (base may incorporate up to 2% falls etc.).
- ii) If equipment is to sit in loose fill or wet pour rubber surfaces allowances will need to be made for its recommended thickness. With certain loose fill materials, a greater thickness than 300mm may be required. This will need to be determined by allowing 100mm for dispersal in addition to the thickness required for the freefall height of the unit. For installation with a loose-fill type surface all legs on the structure have be marked with a 'Basic Level Mark' to indicate the recommended 'Finished Surface Level' of the surface.





300mm THICKNESS OF LOOSEFILL SURFACE WILL NEED TO BE CONFIRMED IS SUFFICENT DEPENDING ON THE SPECIFIC LOOSEFILL MATERIAL SELECTED.



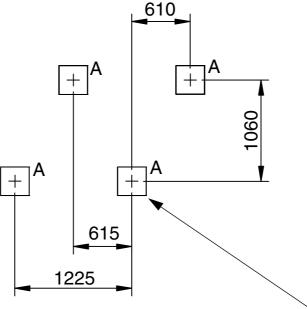
LOOSE FILL SURFACE OPTION

RUBBER SURFACE OPTION

FIG.2 EXCAVATIONS FOR LEG FOUNDATIONS

FOUNDATION SIZES FOR FIG.3 & FIG.4					
REFERENCE		L x W x D			
FOUNDATION 'A'	m	0.30 x 0.30 x 0.95			
FOUNDATION 'B'	m	0.40 x 0.30 x 0.70			
FOUNDATION 'C'	m	0.30 x 0.30 x 0.80			
FOUNDATION 'D'	m	0.30 x 0.30 x 0.70			
FOUNDATION 'E'	m	0.30 x 0.30 x 0.65			
FOUNDATION 'F'	m	0.30 x 0.30 x 0.43			
FOUNDATION 'G'	m	0.30 x 0.30 x 0.80			
FOUNDATION 'H'	m	0.30 x 0.30 x 0.63 (LOOSE FILL ONLY)			

STRAIGHT LEG - 1200 DECK (ITEM 1). WE RECOMMEND THIS LEG IS INSTALLED FIRST TO PROVIDE A DATUM FOR THE REST OF THE STRUCTURE



ALL DIMENSIONS IN MM

FIG.4

Page 6

220 R B В 2045 + |A ١F 000 1000 20 F A F 480 510 650 Ľ Ε +С 615 1230 1615 2055 2125 2350 STRAIGHT LEG - 1200 DECK (ITEM 1). WE RECOMMEND THIS LEG IS INSTALLED FIRST TO PROVIDE A DATUM FOR THE REST OF THE STRUCTURE

220

ALL DIMENSIONS IN MM

ISSUE D

B B В 2045 + |A Η 090 015 Ĉ Η А Ē 480 510 650 +D E C 615 1230 1790 2055 2320 2350 STRAIGHT LEG - 1200 DECK (ITEM 1). WE RECOMMEND THIS LEG IS INSTALLED FIRST TO PROVIDE A DATUM FOR THE REST OF THE STRUCTURE

220

220

FIG.4A STAINLESS STEEL SLIDE CONCRETE FOUNDATIONS SECONDARY - LOOSE FILL SURFACE

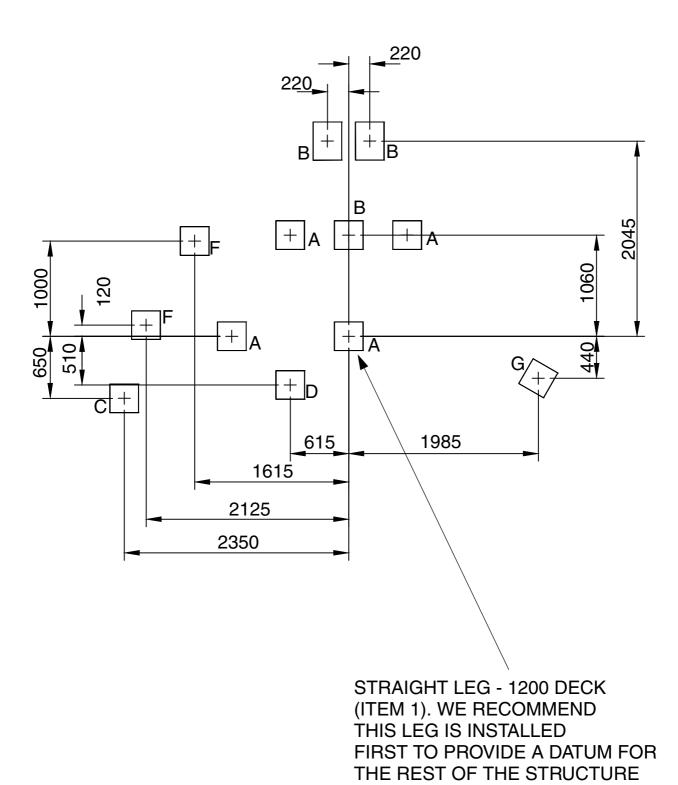
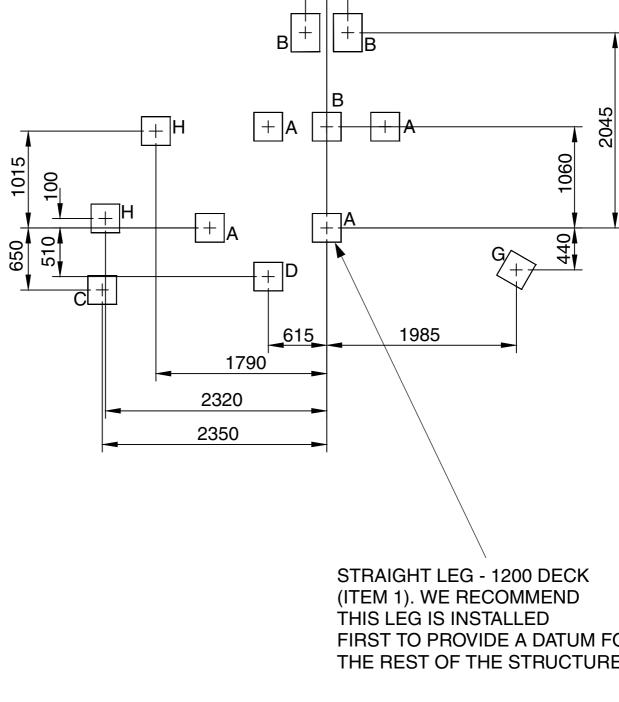


FIG.5 PLASTIC SLIDE CONCRETE FOUNDATIONS SECONDARY - RUBBER SURFACE

STRAIGHT LEG - 1200 DECK (ITEM 1). WE RECOMMEND THIS LEG IS INSTALLED FIRST TO PROVIDE A DATUM FOR THE REST OF THE STRUCTURE

FIG.5A **PLASTIC SLIDE** CONCRETE FOUNDATIONS SECONDARY - LOOSE FILL SURFACE



220

220

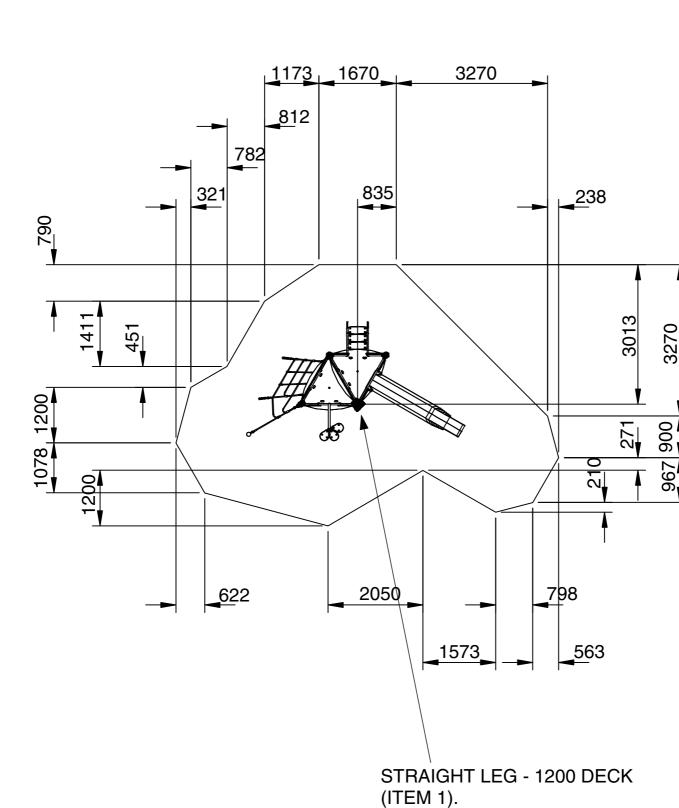


FIG.6 WET POUR AREA - STAINLESS STEEL SLIDE

FIG.7 WET POUR AREA - PLASTIC SLIDE

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INFORMATION TO FOLLOW

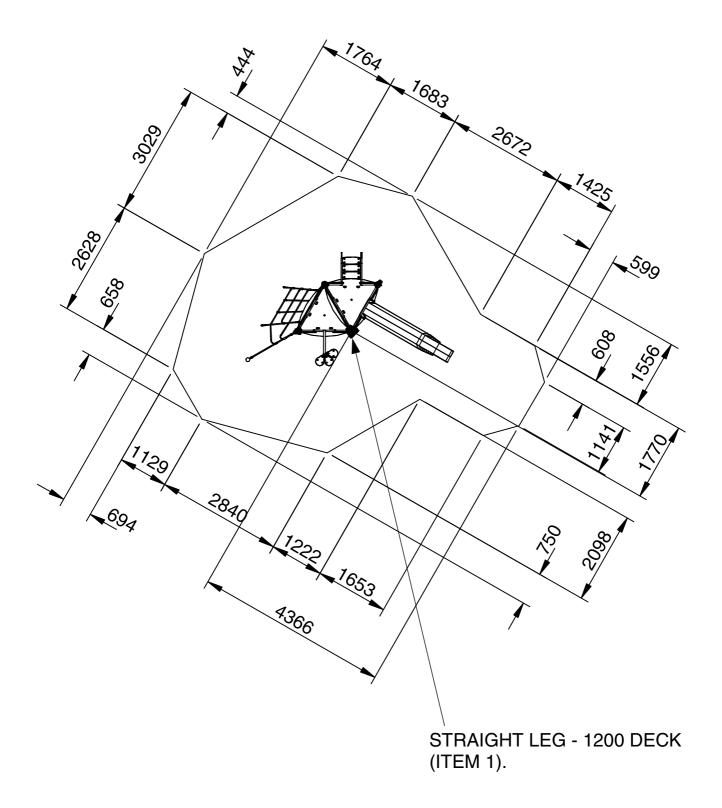


FIG.8 LOOSE FILL AREA - STAINLESS STEEL SLIDE

FIG.9 LOOSE FILL AREA - PLASTIC SLIDE

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INFORMATION TO FOLLOW

ZINGO X-010

235 235 R1500 R1500 R1500 R1545 3279 R1500 R1500 5570 22 30 989 1061 က် 015 262 R1000 R1500 R1600 595 R1600 R1000 Ř1545 503 1045 2350 713 3125 3269 3893 8160 STRAIGHT LEG - 1200 DECK (ITEM 1)

1999

1503

1249

613

FIG.10 FALLING SPACE AREA - STAINLESS STEEL SLIDE

FIG.11 FALLING SPACE AREA - PLASTIC SLIDE

INFORMATION TO FOLLOW

3 PARTS LIST

			X-010/S	X-010/SD	X-010/P	X-010/PD	
ITEM	PART No.	DESCRIPTION	ST. STEEL SLIDE		PLASTIC SLIDE		WEIGHT
			GROUND INSTALLED	DECK MOUNTED F.S.L.+30mm	GROUND INSTALLED	DECK MOUNTED F.S.L.+30mm	kg
	55012900	STRAIGHT LEG - 1200 DECK	3		3		30.00
1	54012900	DECK MOUNTED STRAIGHT LEG - 1200 DECK		3		3	22.00
	55012600	STRAIGHT LEG - 900 DECK	1		1		27.00
2	54012600	DECK MOUNTED STRAIGHT LEG - 900 DECK		1		1	19.00
3	55011725	ROPE LEG SUPPORT	1		1		15.00
0	54011725	DECK MOUNTED ROPE LEG SUPPORT		1		1	12.00
4	55041225	DECK FRAME		2	2		15.00
5	55043002	STEP ACCESS ENTRY FRAME		1 P	AIR		7.00
6	55043001	STEP ACCESS - 1200	1		1		31.00
0	54043001	D/MOUNTED STEP ACCESS - 1200		1		1	28.00
7	55021401	PETAL CLIMBER ENTRY FRAME			1	-	10.00
0	55020409	PETAL CLIMBER - 900	1		1		15.50
8	54020409	DECK MOUNTED PETAL CLIMBER - 900		1		1	13.50
10	55021200	ST. STL. SLIDE ENTRY FRAME		1			10.00
11	55021300	PLASTIC SLIDE ENTRY FRAME				1	7.50
12	55021301	PLASTIC SLIDE ENTRY ANGLE			1		3.00
13	55021082	PANEL FIXING RAIL		;	3		2.50
14	55020332	PANEL FIXING CORNER - PAIR		2 P	AIR		2.00
15	55021087	FIXING RAIL - DASHBOARD			1		5.00
16	55020880	ROPE NET MOUNTING BRACKET			1		3.50
17	55020911	SEAT MOUNTING FRAME	1		1		6.00
17	54020911	DECK MOUNTED SEAT MOUNTING FRAME		1		1	5.50
18	45031200	ST. STL. SLIDE		1			30.00
10	70032701	SLIDE FOOT - 750mm	1				4.50
19	55081202	SLIDE FOOT SHORT DECK MOUNTED		1			1.50
	45039001	SLIDE FOOT - 1000mm	1				5.80
20	55081203	SLIDE FOOT LONG DECK MOUNTED		1			3.00
21	55081200	PLASTIC SLIDE AND FITTINGS				1	91.00
22	55081201	DECK MOUNTING FOR PLASTIC SLIDE				1	3.00
23	55090040	DECK - ST. STL SLIDE		1			16.00
24	55090050	DECK - PLASTIC SLIDE				1	16.00
25	55090010	DECK - STANDARD			1		16.00
26	55090601	PETAL CLIMBER STEP	3			1.00	
27	55090401	APERTURE PANEL	1			10.00	
28	55093002	STEP ACCESS ENTRY PANEL	1 PAIR			8.00	
29	55093001	STEP ACCESS STEP		;	3		2.50
30	55090402	DASHBOARD PANEL ASSY			1		6.00
31	55090501	ST. STL SLIDE ENTRY PANEL	11	PAIR			8.00
32	55090503	PLASTIC SLIDE ENTRY PANEL			1	PAIR	6.00
33	55090611	PETAL CLIMBER ENTRY PANEL		1 P	AIR		8.00
34	55090205	SPOT DIFFERANCE ENTRY PANEL	1		1		9.00
35	55090209	MAZE ENTRY PANEL	1		1		9.00
36	55090030	SEAT			1		4.00
37	55059999	CLIMB ROPE TETHER		:	2		0.50

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00	EE050040						7.00
38	55050010	CLIMBING NET		1			7.00
39	55030199	ENDCAP GROUND FIXING CHAIN ASSY	2	3	2		0.50
40	38008027		2		2	0	1.50
41	38008026			2		2	1.50
42	55050011 55080030	DECK MOUNT FOR CHAIN ASSYS		2		2	1.00
43	55080030	BINOCULARS (991864LM) TELESCOPE MOUNTING BRACKET		1			1.15
44	55080011	(988630BK)		1			0.50
45	55080012	TELESCOPE SPACER (989963)		1			0.25
46	55030899	DECK SUPPORT CASTING		6			0.15
47	55030799	CLAMP RING (HALF)		48	}		0.20
48	55030399	BAR SOCKET BOTTOM 1.315" (102411)		28	}		0.10
49	55030499	BAR SOCKET TOP 1.315" (102412)		28	}		0.10
50							
51							
52	15715000	COUPLING LINK 5mm	10	12	10	12	0.10
53	10121065	RESISTORX BOLT M10 X 65		1			0.050
54	10121040	RESISTORX BOLT M10 X 40		102	2		0.037
55	10121035	RESISTORX BOLT M10 X 35		9			0.032
56	10121030	RESISTORX BOLT M10 X 30		4		6	0.028
57	10121020	RESISTORX BOLT M10 X 20		6			0.020
58	10120625	RESISTORX BOLT M6 X 25		15	5		0.011
59	10120616	RESISTORX BOLT M6 X 16		12	2		0.007
60	10120610	RESISTORX BOLT M6 X 10		4			0.005
61	10251016	HEX BOLT M10 X 16		4			0.020
62	10303212	WASHER T5		6			0.011
63	10309999	HEAVY DUTY WASHER M10		5		1	0.011
64	10291200	WASHER M12		3			0.006
65	10291000	WASHER M10	1	111		113	0.002
66	10290600	WASHER M6		12	2		0.005
67	10301200	SHOCKPROOF WASHER M12		6			0.002
68	10301000	SHOCKPROOF WASHER M10		9			0.002
69	10261000	NYLOC NUT M10		3			0.010
70	10260600	NYLOC NUT M6		4			0.002
71	10931000	TEE NUT M10		6			0.020
72	10930600	DYNAFIX INSERT M6		12	2		0.035
73	10304010	WASHER M10 (DIN522)				2	0.003
74							
75							
76							
77							
78							
79	14104942	1/4" SCREW INSULATOR (104942)		15	5		0.001
80	14101225	1/2" X 1" BHCS FIXING		6			0.032
81	14104749	1/4" X 1-1/4" BHCS FIXINGS (104749)		48	3		0.007
82	14104750	1/4" X 5/8" BHCS FIXINGS (104750)		56	6		0.005
83							
84	14104285	3/8" X 3/8" SET SCREW (104285)		28	3		0.003
85	14104963	MOULDING FIXING BOLT (104963)		1			0.026
86	14110018	MOULDING FIXING SLEEVE (110018)		1			0.018
87	19024501	PROTECTIVE PLUG		18		15	0.001
88	19055030	WHITE PLASTIC PLUG FOR CLAMP (055 0088 000 03)		33	3		0.001

89	100660/0	BLACK PLASTIC PLUG FOR LEG (054 0802 699 03)	5	0.001
90	10121000	M10 TORX TOOL	1	-
91	10120600	M6 TORX TOOL	1	-
92	10120500	TOOL BIT T-27	2	-
93	10120900	TOOL BIT TX40	1	-
94	10121100	TOOL BIT T55	1	-

NOTE: All "Deck Mounted" component lengths are F.S.L. + 30mm and must be anchored to a suitably prepared surface with the correct type of fixings for that surface. The fixings are not supplied with the equipment.

4 INSTALLATION & ASSEMBLY PROCEDURES

4.1 SAFE WORKING PRACTICE:

A full risk assessment should be carried out prior to commencing the installation, which will be specific to the site selected. The major risks associated with purely the assembly of this product are highlighted below, which can form part of this overall assessment.

4.2 RISKS:

- i) Large parts which could be difficult to lift or handle.
- ii) Structure unstable until concrete footings have fully cured.

4.3 CONTROL MEASURES:

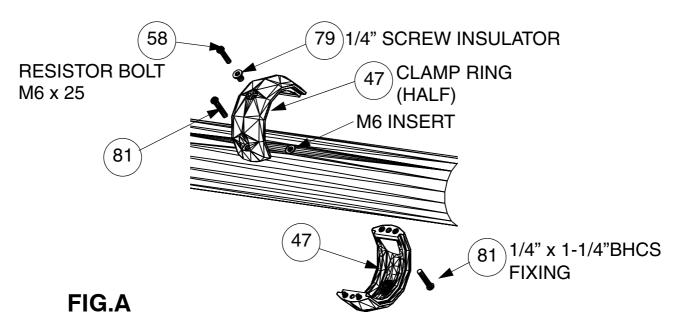
- i) All staff working on installation to wear suitable PPE including Toe Protective Shoes, Hard hat and Gloves.
- ii) Any staff or other persons on site, not working directly on the installation, to be kept away from the installation.
- iii) Ensure adequate personal and equipment are on site to handle and support the structure whilst it is being assembled.

Pre - Installation Inspection:-

- Inspect all parts for damage (that may have occurred during transportation & storage). Finish Coatings, if found to be damaged these should be made good before erection (Refer to maintenance instructions). Any damaged or missing parts must be replaced.
- ii) Warn the public of the risk of injury, by placing signs and fencing the surrounding area, before commencing installation.

4.4 ASSEMBLY METHOD OF CLAMPS TO POSTS

- 1) CLAMP RING (half) WITH LOCATION SCREW
 - i) Position Clamp Ring (half) (item 47) on to leg with fixing hole aligned with appropriate M6 insert. See FIG.A.
 - ii) Place 1/4" Screw Insulator (item 79) into hole and then screw the Resistorx bolt M6 x 25 (item 58) into M6 insert to retain and locate the Clamp Ring (half). (Do not over tighten). See FIG.A.
 - iii) Position the other Clamp Ring (half) (item 47) and assemble to leg using 2 off 1/4" x 1-1/4" BHCS fixings (item 81). Fully tighten bolts to a maximum torque setting of 20Nm. See FIG.A.



2) CLAMP RING (half) WITHOUT LOCATION SCREW

i) Position 2 off Clamp Ring (half) (item 47) at stated height on post and secure using 2 off 1/4" x 1-1/4" BHCS fixings (item 81). Fully tighten bolts to a maximum torque setting of 20Nm. See FIG.B.

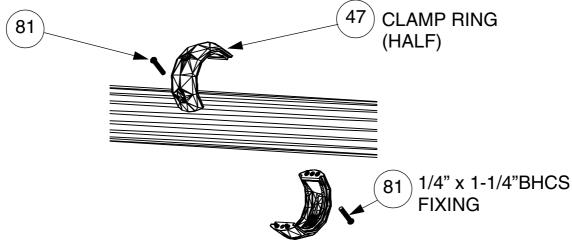
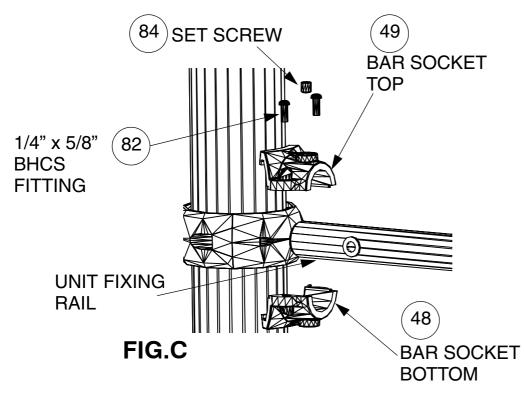


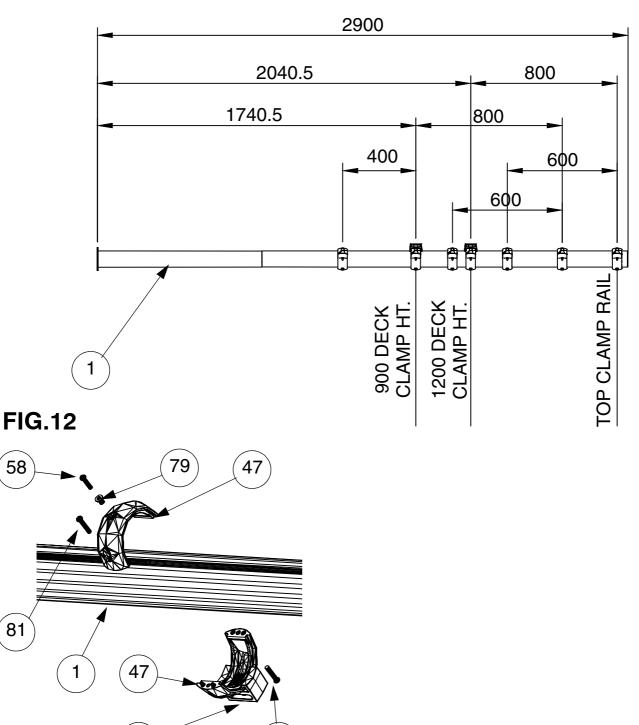
FIG.B

- 3) TOP & BOTTOM SOCKETS TO CLAMP RING (half)
 - i) Hook over the Clamp Ring (half) both the Top & Bottom Bar Sockets to grip the fixing rail of the appropriate unit. See FIG.C.
 - ii) Align the tapped hole in the Bar Socket Top with the hole in the top of the unit fixing rail and secure the sockets together using the 1/4" x 5/8" BHCS fixings (item 82). See FIG.C.
 - iii) Tighten the BHCS fixings up equally to ensure that the Top & Bottom Bar Sockets pull up square and grip the unit fixing rail evenly.
 - iv) When the unit fixing rail is in the correct position with the legs square and plumb tighten fastenings to a maximum torque setting of 20Nm.
 - v) Once clamp is fully tightened lock each Bar Socket Top to unit fixing rail by screwing into the tapped hole a 3/8" x 3/8" Set Screw (item 84) for Bar Socket Top (item 49). See FIG.C.



4.5 INSTALLATION

- Refer to site layout for position and orientation of product, then mark the outline of the position of the footings with e.g. spray or chalk. Excavate the holes. See FIG.2 & FIG.3 - 5 depending on the type of unit to be installed.
- 2) Assemble to 1 off Straight Leg 1200 deck (item 1), 2 off Clamp Rings (half) (item 47) and 1 off Deck Support Casting (item 46) at the pre-inserted hole position for the 900 Deck Clamp Ht. See FIG.12 & 13.
 - i) For assembly method see Note 4.4, 1), i) to iii) ensuring that the Deck Support Casting (item 46) is slotted over one of the Clamp Ring (half) before assembling the second Clamp Ring (half).
- 3) Assemble to 1 off Straight Leg 1200 deck (item 1), 2 off Clamp Rings (half) (item 47) and 1 off Deck Support Casting (item 46) at the pre-inserted hole position for the 1200 Deck Clamp Ht. See FIG.12 & 13.
 - i) For assembly method see Note 4.4, 1), i) to iii) ensuring that the Deck Support Casting (item 46) is slotted over one of the Clamp Ring (half) before assembling the second Clamp Ring (half).
- 4) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at the pre-inserted hole position for the top clamp rail. See FIG.12 & FIG.A.
 - i) For assembly method see Note 4.4, 1), i) to iii).
- 5) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at 600 position down from the top clamp rail. Align Clamp Ring (half) radially to match with other rings on the post. See FIG.12 & FIG.B.
 - i) For assembly method see Note 4.4, 1), i) to iii).
- 6) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at 800 position up from the 900 Deck Clamp Ht. Align Clamp Ring (half) radially to match with other rings on the post. See FIG.12 & FIG.B.
 - i) For assembly method see Note 4.4, 1), i) to iii).
- 7) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at 600 position down from the previous clamp. Align Clamp Ring (half) radially to match with other rings on the post. See FIG.12 & FIG.B.
 - i) For assembly method see Note 4.4, 2), i).
- Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at 400 position down from the 900 Deck Clamp Ht. Align Clamp Ring (half) radially to match with other rings on the post. See FIG.12 & FIG.B.
 - ii) For assembly method see Note 4.4, 1), i) to iii).



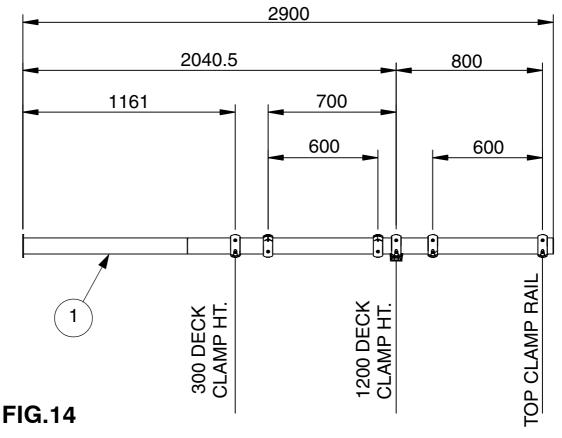
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46

58

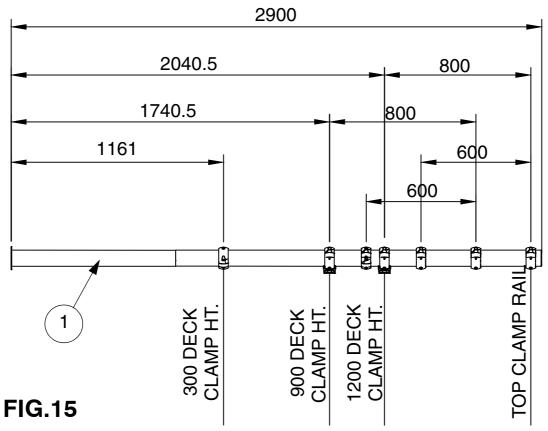
81

- 9) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at the pre-inserted hole position for the 300 Deck Clamp Ht. See FIG.14 & FIG.A.
 - i) For assembly method see Note 4.4, 1), i) to iii).
- 10) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) and 1 off Deck Support Casting (item 46) at the pre-inserted hole position for the 1200 high deck. See FIG.13 & 14.
 - i) For assembly method see Note 4.4, 1), i) to iii) ensuring that the Deck Support Casting (item 46) is slotted over one of the Clamp Ring (half) before assembling the second Clamp Ring (half).
- 11) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at the pre-inserted hole position for the top clamp rail. See FIG.14 & FIG.A.
 - i) For assembly method see Note 4.4, 1), i) to iii).
- 12) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at 600 position down from the top clamp rail. Align Clamp Ring (half) radially to match with other rings on the post. See FIG.14 & FIG.B.
 - i) For assembly method see Note 4.4, 2), i).
- 13) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at 700 position down from the 1200 Deck Clamp Ht. Align Clamp Ring (half) radially to match with other rings on the post. See FIG.14 & FIG.B.
 - i) For assembly method see Note 4.4, 2), i).
- 14) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at 600 position up from the previous Clamp Ring (half). Align Clamp Ring (half) radially to match with other rings on the post. See FIG.14 & FIG.B.

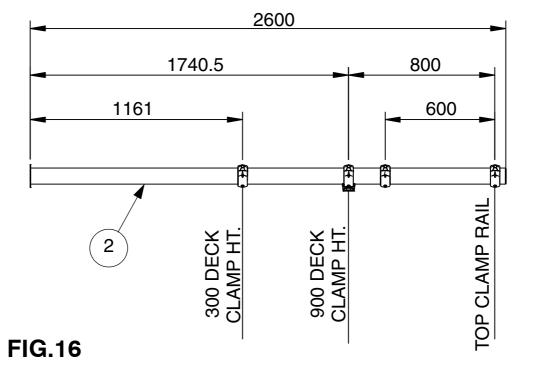


i) For assembly method see Note 4.4, 2), i).

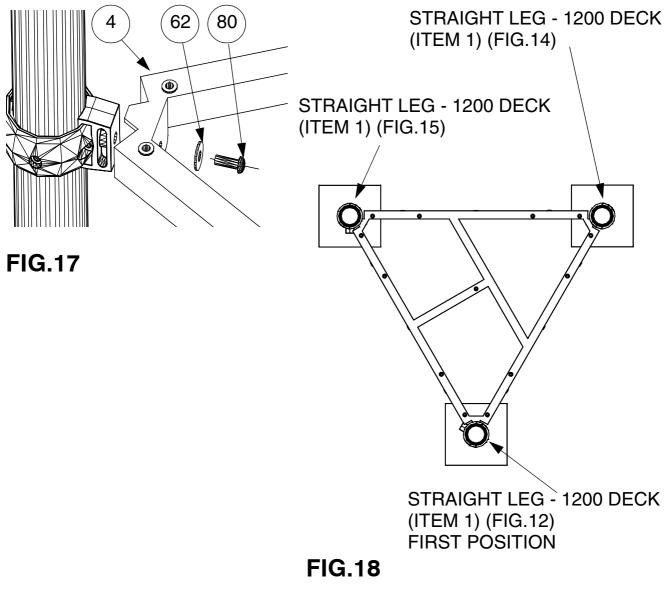
- 15) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) 1 off Deck Support Casting (item 46) at the pre-inserted hole position for the 900 Deck Clamp Ht. See FIG.13 & 15.
 - i) For assembly method see Note 4.4, 1), i) to iii) ensuring that the Deck Support Casting (item 46) is slotted over one of the Clamp Ring (half) before assembling the second Clamp Ring (half).
- 16) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) and 1 off Deck Support Casting (item 46) at the pre-inserted hole position for the 1200 Deck Clamp Ht. See FIG.13 & 15.
 - i) For assembly method see Note 4.4, 1), i) to iii) ensuring that the Deck Support Casting (item 46) is slotted over one of the Clamp Ring (half) before assembling the second Clamp Ring (half).
- 17) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at the pre-inserted hole position for the top clamp rail. See FIG.15 & FIG.A.
 - i) For assembly method see Note 4.4, 1), i) to iii).
- 18) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at 600 position down from the top clamp rail. Align Clamp Ring (half) radially to match with other rings on the post. See FIG.15 & FIG.B.
 - i) For assembly method see Note 4.4, 2), i).
- 19) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at 800 position up from the 900 Deck Clamp Ht. Align Clamp Ring (half) radially to match with other rings on the post. See FIG.15 & FIG.B.
 - i) For assembly method see Note 4.4, 2), i).
- 20) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at 600 position down from the previous Clamp. Align Clamp Ring (half) radially to match with other rings on the post. See FIG.15 & FIG.B.
 - i) For assembly method see Note 4.4, 2), i).
- 21) Assemble to 1 off Straight Leg 1200 deck (item 1) 2 off Clamp Rings (half) (item 47) at the pre-inserted hole position for the 300 Deck Clamp Ht. See FIG.15 & FIG.A.
 - ii) For assembly method see Note 4.4, 1), i) to iii).



- 22) Assemble to 1 off Straight Leg 900 deck (item 2) 2 off Clamp Rings (half) (item 47) at the pre-inserted hole position for the 300 Deck Clamp Ht. See FIG.16 & FIG.A.
 - i) For assembly method see Note 4.4, 1), i) to iii).
- 23) Assemble to 1 off Straight Leg 900 deck (item 2) 2 off Clamp Rings (half) (item 47) and 1 off Deck Support Casting (item 46) at the pre-inserted hole position for the 900 Deck Clamp Ht. See FIG.13 & 16.
 - i) For assembly method see Note 4.4, 1), i) to iii) ensuring that the Deck Support Casting (item 46) is slotted over one of the Clamp Ring (half) before assembling the second Clamp Ring (half).
- 24) Assemble to 1 off Straight Leg 900 deck (item 2) 2 off Clamp Rings (half) (item 47) at the pre-inserted hole position for the top clamp rail. See FIG.16 & FIG.A.
 - i) For assembly method see Note 4.4, 1), i) to iii).
- 25) Assemble to 1 off Straight Leg 900 deck (item 2) 2 off Clamp Rings (half) (item 47) at 600 position down from the top clamp rail. Align Clamp Ring (half) radially to match with other rings on the post. See FIG.16 & FIG.B.
 - i) For assembly method see Note 4.4, 2), i).

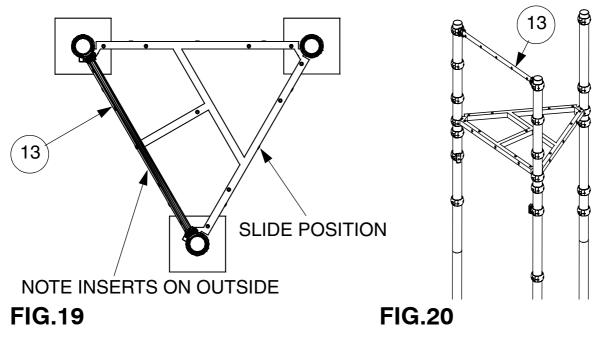


- 26) Place 1 off Straight Leg 1200 deck (item 1) (as seen in FIG.12) into appropriate foundation and shim as required to ensure the leg is plumb and square and with the welded F.S.L. mark at the correct level. See FIG.2 & 18.
- 27) Fill the hole with concrete to the required level. Ensure that a full volume of concrete is used. The top of the concrete should gradually (1:100) slope down & outwards locally from the equipment upstand to the required level to form a watershed.
- 28) The concrete should be completely cured before continuing with the installation.
- 29) Place 1 off Straight Leg 1200 deck (item 1) (as seen in FIG.14) into appropriate foundation and connect each to Deck Frame (item 4) at 1200 deck height using 1 off 1/2" x 1" BHCS fixing (item 80) and T5 washer (item 62) via Deck Support Casting (item 46). See FIG.2, 17 & 18.
- 30) Place 1 off remaining Straight Leg 1200 deck (item 2) (as seen in FIG.15) into appropriate foundation and connect to Deck Frame (item 4) at 1200 deck height using 1 off 1/2" x 1" BHCS fixing (item 80) and T5 washer (item 62) via Deck Support Casting (item 46). See FIG.2, 17 & 18.
- 31) Shim the 2 legs as required ensuring that they are plumb and square and orientated correctly with the welded F.S.L. mark at the correct level. See FIG.2, 17 &18.



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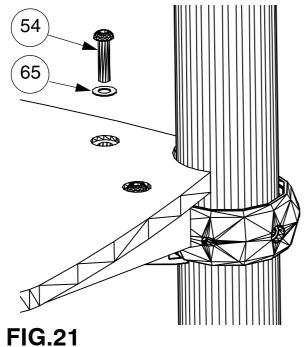
- 32) Attach in 1 place 1 off Panel Fixing Rail (item 13) to the Clamp Rings that are 800mm above the 1200 Deck fixings. Each end of the Panel Fixing Rail is held between a Bar Socket Top (item 49) and a Bar Socket Bottom (item 48) using 2 off BHCS Fixings (item 82) and should be fixed with the plastic panel fixing inserts on the outside of the structure. See FIG.19, 20 & FIG.C.
 - i) For assembly method see Note 4.4, 3), i) to v).



33) Position Deck (item 23) onto Deck frame as shown and secure using 7 off M10 x 40 Resistorx bolts (item 54) and M10 Washer (item 65) in positions shown. See FIG.21 & 22.

NOTE: See "Appendix A Note 1" for assembly of Plastic Slide Entry Frame and deck.

NOTE: Ensure that the cutout in the deck for the mounting of the slide is positioned at the correct orientation.



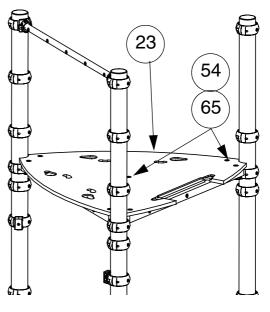
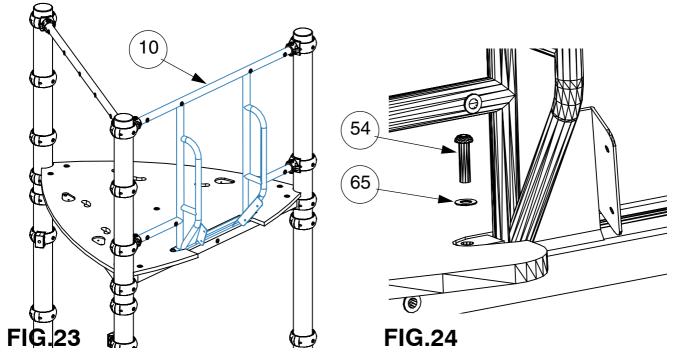
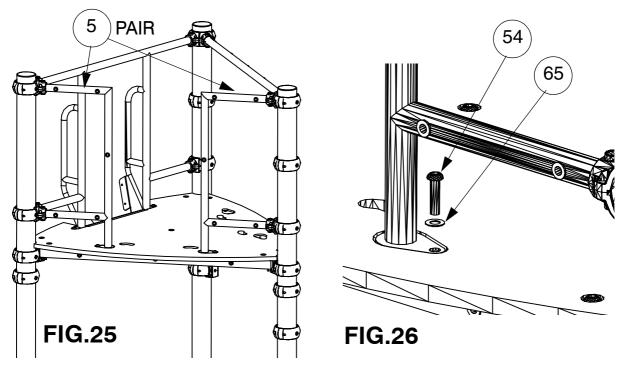


FIG.22

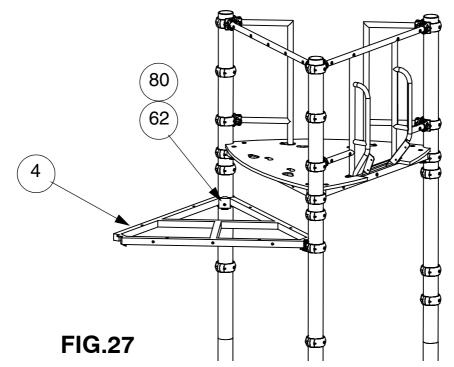
- 34) Attach in 4 places 1 off Slide Entry Frame (item 10) to the Clamp Rings that are 800mm above the Deck fixings and the lower 600mm centers Clamp Rings. Each end of the Slide Entry Frame rails is held between a Bar Socket Top (item 49) and a Bar Socket Bottom (item 48) using 2 off BHCS Fixings (item 81) and should be fixed with the plastic panel fixing inserts and slide mountings on the outside of the structure. See FIG.23, 24 & FIG.C.
 - i) For assembly method see Note 4.4, 3), i) to v).
 - ii) Attach Slide Entry Frame through Deck into Deck Frame using 2 off M10 x 40 Resistorx bolts (item 54) and M10 washers (item 65).



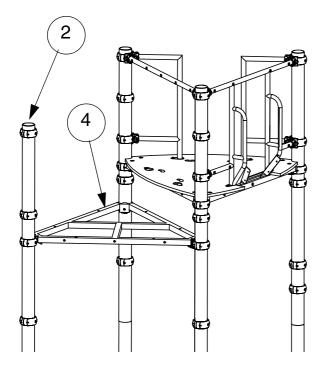
- 35) Attach 1 pair of Step Access Entry Frames (item 5) to the Clamp Rings that are 800mm above the Deck fixings. Also attach this to the lower 600mm centers Clamp Rings and through the Deck to the Deck Frame. Each of the Step Access Entry Frames is held between a Bar Socket Top (item 49) and a Bar Socket Bottom (item 48) using 2 off BHCS Fixings (item 81) and should be fixed with the plastic panel inserts on the outside of the structure. See FIG.25, 26 & FIG.C.
 - i) For assembly method see Note 4.4, 3), i) to v)
 - ii) Attach each Step Access Entry Frame through Deck into Deck Frame using 1 off M10 x 40 Resistorx bolts (item 54) and M10 washers (item 65)



36) Connect Deck Frame (item 4) at 900 Deck Clamp Height using 1 off 1/2" x 1" BHCS Fixing (item 80) and T5 washer (item 62) via Deck Support Casting (item 46). See FIG 17 & 27.



- 37) Place 1 off Straight Leg 900 Deck (item 2) into appropriate foundation and connect to Deck Frame (item 4) using 1 off 1/2" x 1" BHCS Fixing (item 80) and T5 washer (item 62) via Deck Support Casting (item 46) at the 900 Deck Clamp Height.
- 38) Shim leg as required to ensure it is plumb and square and orientated correctly with the welded F.S.L mark at the correct level. See FIG.17, 28 & 29.



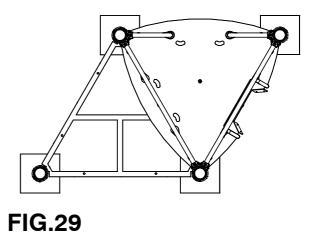
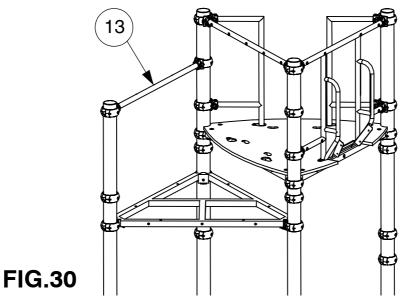
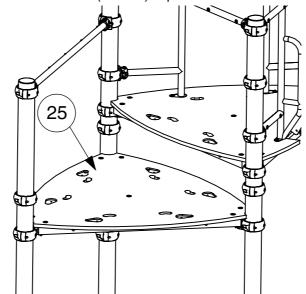


FIG.28

- 39) Attach in 1 place 1 off Panel Fixing Rail (item 13) to the Clamp Ring (half) that are 800mm above the 900mm Deck Fixings. Each end of the Panel Fixing Rail is held between a Bar Socket Top (item 49) and a Bar Socket Bottom (item 48) using 2 off BHCS Fixings (item 81) and should be fixed with the plastic panel fixing insets on the outside of the structure. See FIG.30 & FIG.C
 - i) For assembly method see Note 4.4, 3), i) to v).



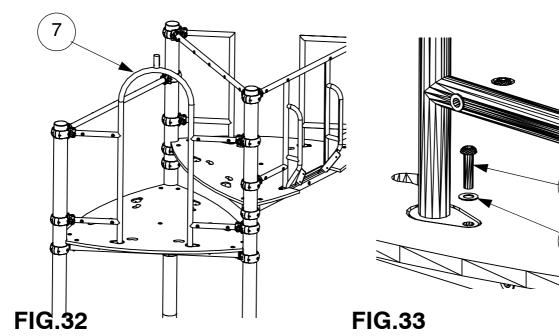
40) Position Deck (item 25) onto Deck Frame as shown at 900mm Deck Height and secure using 7 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65) in positions shown. See FIG.21 & 31.



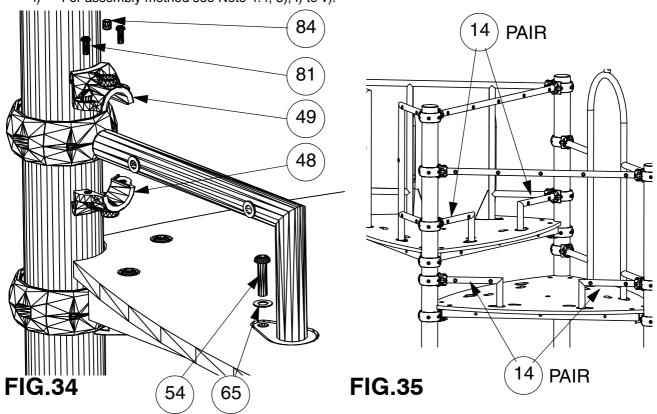


65

- 41) Attach in 4 places 1 off Petal Climber Entry Frame (item 7) to the Clamp Rings that are 800mm above the Deck fixings for the 900mm Deck and the lower 600mm centers Clamp Rings. Each end of the Petal Climber Entry Frame rails is held between a Bar Socket Top (item 49) and a Bar Socket Bottom (item 48) using 2 off BHCS Fixings (item 81) and should be fixed with the plastic panel fixing inserts on the outside of the structure. See FIG.32, 33 & FIG.C.
 - i) For assembly method see Note 4.4, 3), i) to v).
 - ii) Attach Petal Climber Entry Frame through Deck into Deck Frame using 2 off M10 x 40 Resistorx bolts (item 54) and M10 washers (item 65).

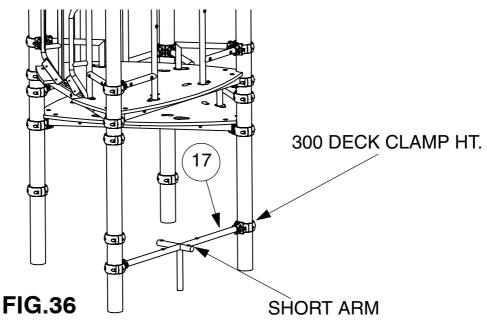


42) Attach 2 pairs of Panel Fixing Corners (item 14) to the Clamp Rings and also through the Deck to the Deck Frame. Each of the Panel Fixing Corners is held between a Bar Socket Top (item 49) and a Bar Socket Bottom (item 48) using 2 off BHCS Fixings (item 81) and should be fixed with the plastic panel fixing inserts on the outside of the structure. The Panel Fixing Corners are secured to the Deck Frame using 1 off M10 x 40 Resistorx bolts (item 54) and M10 washers (item 65). See FIG.34, 35 & FIG.C.

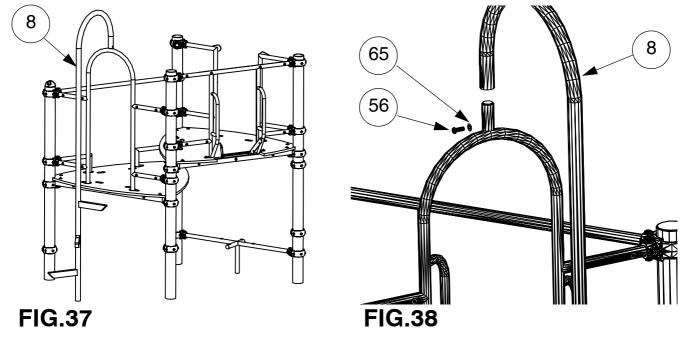


i) For assembly method see Note 4.4, 3), i) to v).

- 43) Assemble Seat Mounting Frame (item 17) to Clamp ring (half) (item 45) at 300 Deck Clamp Height as shown. Each end of the frame is held between a Bar Socket Top (item 49) and a Bar Socket Bottom (item 48) using BHCS Fixings (item 81). See FIG 36 & FIG.C
 - i) For assembly methods see Note 4.4, 3), i) to v).
 - ii) Shim under leg of frame ensuring the it is plumb and square and orientated correctly with the welded F.S.L mark at the correct level.
- **NOTE:** Note the short arm on the top of the Seat Mounting Frame is positioned towards the outside of the main structure.

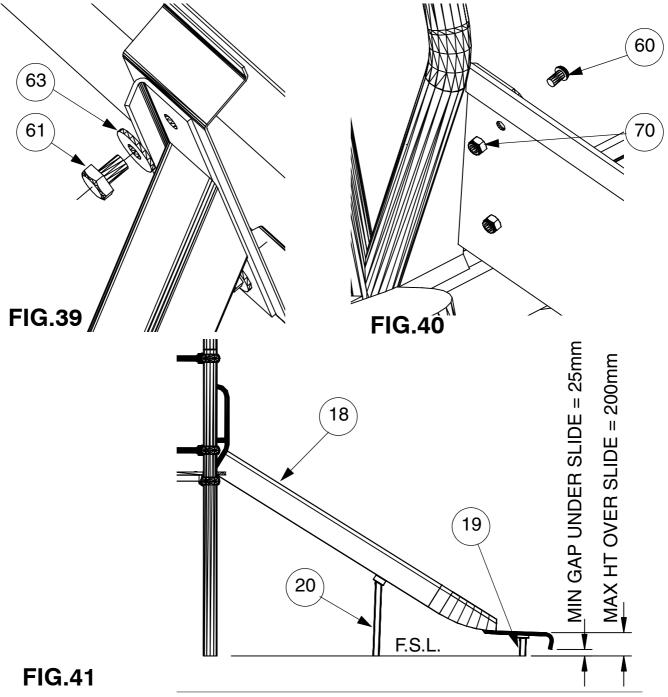


44) Assemble Petal Climber - 900 (item 8) to Petal Climber Entry Frame (item 7) by sliding over mounting stud and standing in its foundation hole. Secure together using 1 off M10 x 30 Resistorx bolt (item 56) and M10 Washer (item 65). Shim under foot of pole in foundation hole to hold the Petal Climber plumb and square. See FIG.37 & 38.



NOTE: See "Appendix A Note 2" for assembly of Plastic Slide and relevant components.

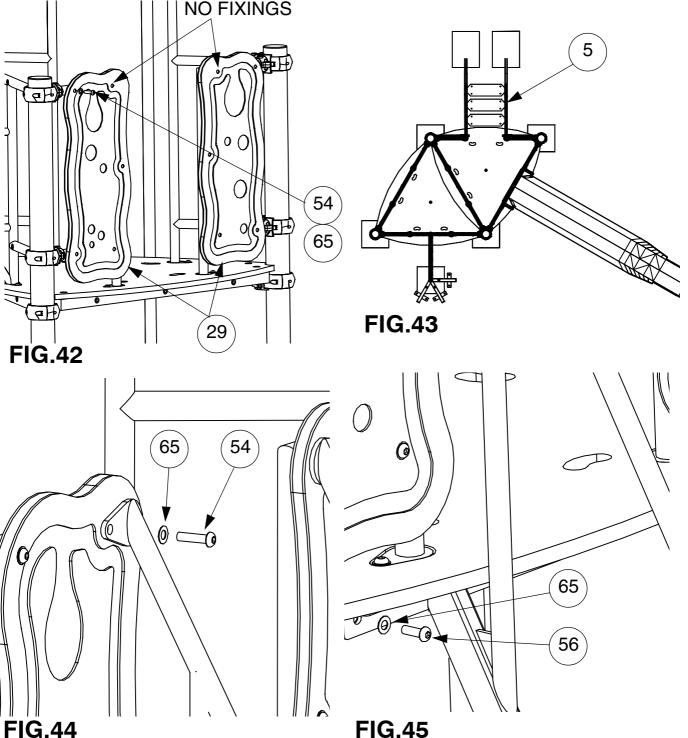
- 45) Assemble Slide Feet (items 19 & 20) to underside of Slide (item 18) and secure using 2 off M10 x 16 Hex. Bolt (item 61) and Heavy Duty Washers (item 63). See FIG.39.
- 46) Offer Slide (item 18) up to Entry Frame (item 10) ensuring the top of the slide rests on the cross member. The walls of the slide must be positioned outside of the gussets on the entry frame.
- 47) Shim under the slide legs to set the slide plumb and square adjust the slide exit to the required height. See FIG.41.
- 48) Secure the slide to the gussets using 2 off M6 x 10 Resistorx bolts (item 60) and M6 Nyloc nuts (item 70). The Resistorx bolts heads must be on the inside of the slide. See FIG.40.
- NOTE: The slide runout should taper towards the ground at a angle of 1.5° max. to allow a watershed.
- **NOTE:** It is very important to check the slide run out section does **not** hold water after installation. It is recommended that an actual test be carried out, on site, prior to concreting the slide into its final position. Should any deformation to the run out section have occurred during transportation and storage this must be corrected prior to final installation.



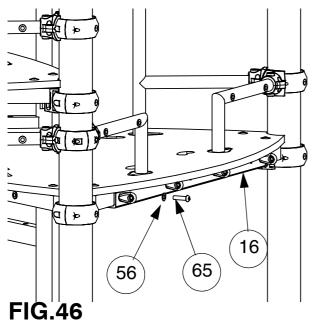
49) Assemble the pair of Step Access Entry Panels (item 29) in position as shown on the Step Access Entry Frame (item 5) using 8 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65). Note two fixings not required in holes marked. See FIG.42.

NOTE: Insure that panels are mounted with the graphics facing in the correct direction.

50) Assemble Step Access - 1200 (item 6) to Deck Frame (item 4) using 3 off M10 x 30 Resistorx bolts (item 56) and M10 Washers (item 65) and to Step Access Entry Frame (item 5) through the panels using 2 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65). Shim under feet in foundation hole to hold frame plumb and square. See FIG.43, 44 & 45.



- 51) Assemble Rope Net Mounting Bracket (item 16) to lower deck (900mm) mounting face using 3 off M10 x 30 Resistorx bolts (item 56) and Washers (item 65). See FIG.46 & 47.
- 52) Attach in 2 places 1 off Climb Rope Tether (item 37) to the Clamp Rings (half) that are 900mm Deck Clamp Height and 300mm Deck Clamp Height on Straight Leg 900 Deck (item 2). Each Climb Rope Tether is held between a Bar Socket Top (item 49) and a Bar Socket Bottom (item 48) using 2 off BHCS Fixings (item 81and should be orientated correctly to the leg. See FIG.47, 48 & FIG.C.
 - i) For assembly method see Note 4.4, 3), i) to v).
- 53) Place 1 off Rope Support Leg (item 3) into its foundation hole. Shim as required to align rope fixings with appropriate fixings on leg and check position and orientation. Ensure the post is plumb and square, using suitable props to hold leg safely in position. See FIG.48



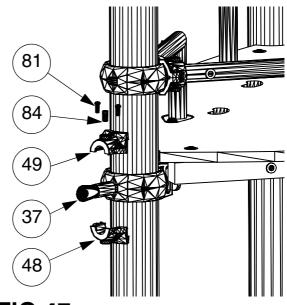


FIG.47

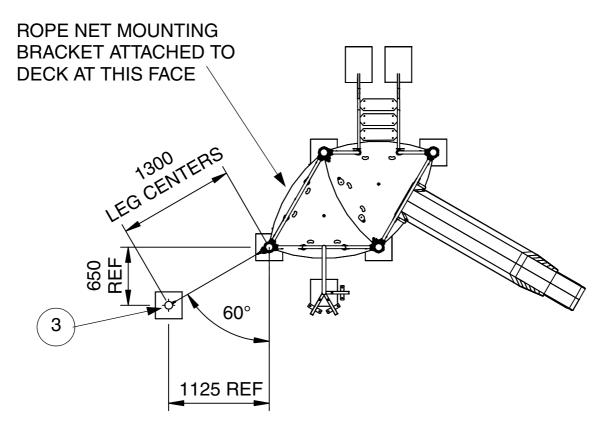


FIG.48

54) Mark out the ground fixing position for the Ground Fixing Chain Assemblies (item 40) in 2 positions in the base of the appropriate foundation holes for the fixing of the Climbing Net (item 38). See FIG.4, 49 & 50.

NOTE: For Loose Fill positions see FIG.4A, 50 & 51.

55) Suspend the Ground Fixing Chain Assembles vertically above the previously marked positions, ensuring that at least 13 chain links are encased in the concrete to provide a secure fixing, with the Hex. bolt at the bottom of the hole. See FIG.50.

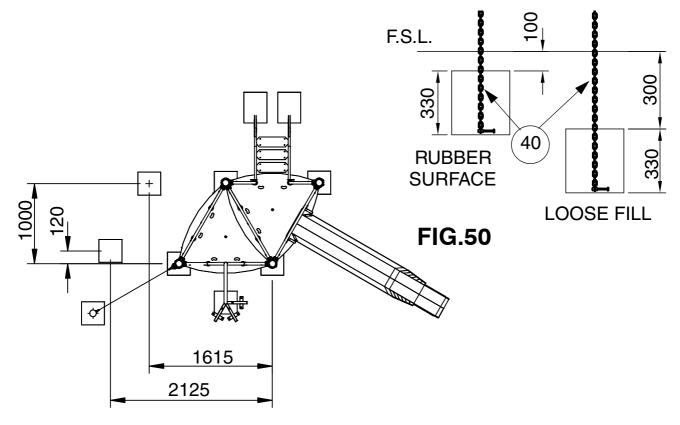
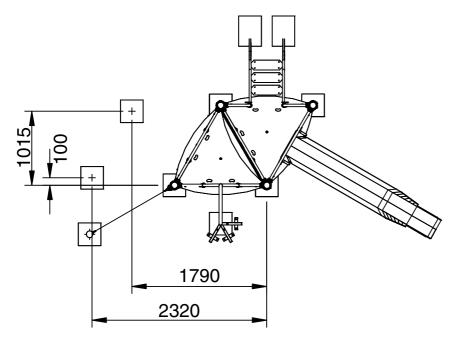


FIG.49 RUBBER SURFACE





NOTE: Check that the completed structure has been positioned in the correct place, that it is plumb and square and all the fasteners are fully tightened to the correct torque settings. Also ensure that the structure is propped safely so that it may be left for the concrete foundations to cure.

- 56) Fill the holes with concrete to the required level, taking into account any Impact Absorbing Surfacing requirements. Ensure that a full volume of concrete is used. The top of the concrete should gradually (1:100) slope down & outwards locally from the equipment upstand to the required level to form a watershed.
- 57) Keep installation off limits to the public until the concrete has completely cured. (Recommended initial curing time is 48 hours).
- 58) Connect the Climbing Net (item 38) to the Rope Net Mounting Bracket (item 16), the Climb Rope Tether (item 37) and the Rope Support Leg (item 3) using 8 off Coupling Links (item 52). See FIG.52 & 53.
- 59) Connect the Climbing Net (item 38) to the Ground Fixing Chains (item 40) previously cemented into the ground using 2 off Coupling Links (item 52). Tension the Climbing Net by removing all excess links before connecting. See FIG.52.

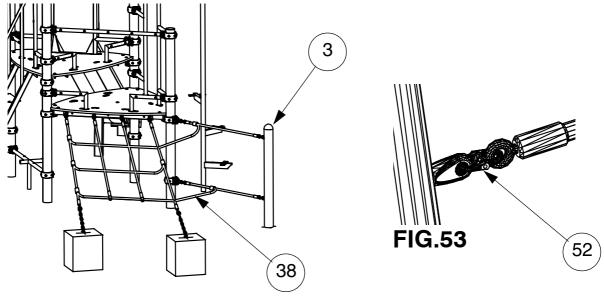


FIG.52

- 60) Attach in 2 places 1 off Panel Fixing Rail (item 13) and 1 off Fixing Rail Dashboard (item 15) to the Clamp Rings. Each end of the fixing rails is held between a Bar Socket Top (item 49) and a Bar Socket Bottom (item 48) using 2 off BHCS Fixings (item 81) and should be fixed with the plastic panel fixing inserts on the outside of the structure. Note Step Access has been removed for clarity. See FIG.54 & FIG.C.
 - i) For assembly method see Note 4.4, 3), i) to v).

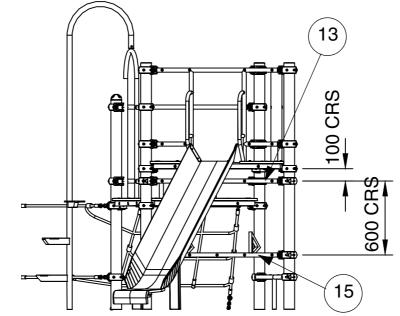


FIG.54

61) Assemble Aperture Panel (item 27) and Dashboard Panel Assembly (item 30) in position as shown on the Panel Fixing Rails beneath the 1200 Deck, using 16 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65). See FIG.55.

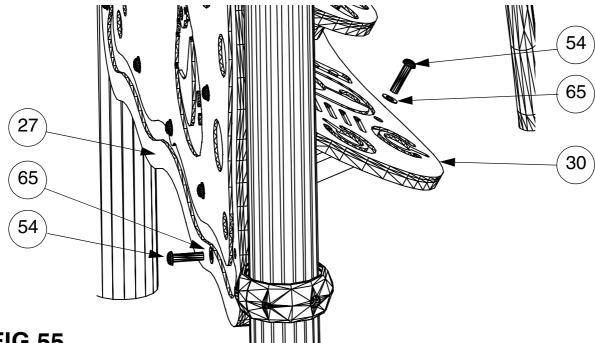
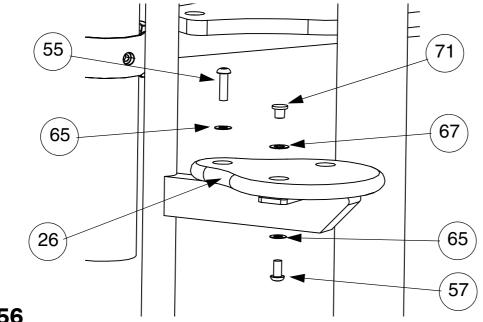


FIG.55

62) Assemble 3 off Petal Climber Steps (item 26) to Petal Climber - 900 (item 8) using 3 off M10 x 35 Resistorx bolts (item 55) and M10 Washers (item 65) to attach one end into inserts on frame and 6 off M10 x 20 Resistorx bolts (item 57), M10 Washers (item 65), M10 Teenut (item 71) and M12 Shockproof washers (item 67) to supports on frame. See FIG.56.



63) Assemble 3 off Step Access Step (item 29) in position as shown on the Step Access (item 6) using 12 off M6 x 16 Resistorx bolts (item 59), Dynafix Inserts (item 72) and M6 Washers (item 67). See FIG.57.

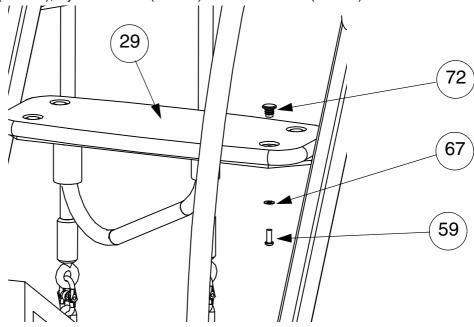
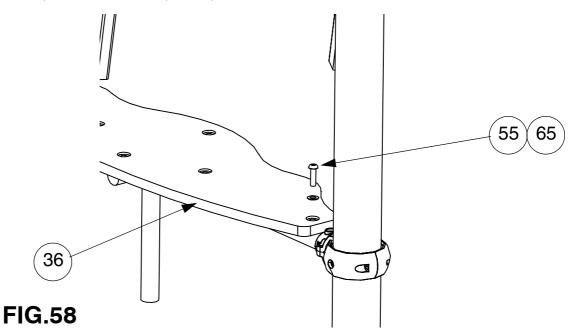


FIG.57

64) Assemble Seat (item 36) into position as shown on the Seat Mounting Frame using 6 off M10 x 35 Resistorx bolts (item 55) and M10 Washers (item 65). See FIG.58.



- 65) Assemble the Maze Entry Panel (item 35) in position as shown on the Panel Fixing Rails using 9 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65). See FIG.59.
- 66) Assemble the Spot Difference Panel (item 34) in position as shown on the Panel Fixing Rails using 9 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65). See FIG.59.
- 67) Assemble the pair of Slide Entry Panels (item 31) in position as shown on the Slide Entry Frame using 10 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65). See FIG.59.

NOTE: See "Appendix A Note 2" for assembly of Plastic Slide and relevant components.

68) Assemble the pair of Petal Climber Entry Panels (item 33) in position as shown on the Petal Climber Entry Frame using 8 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65). See FIG.59.

NOTE: Insure that panels are mounted with the graphics facing in the correct direction.

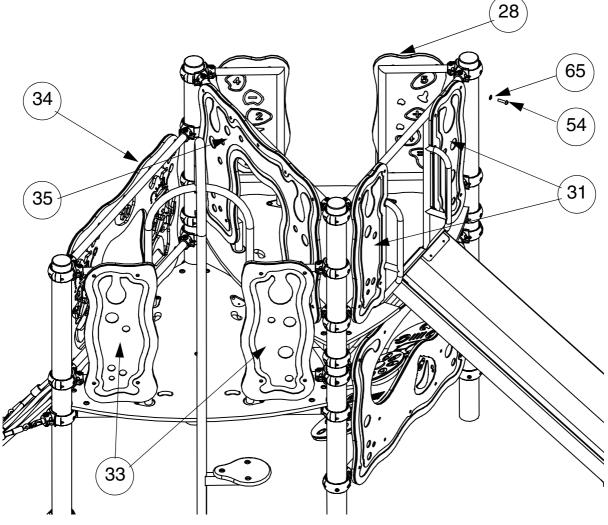
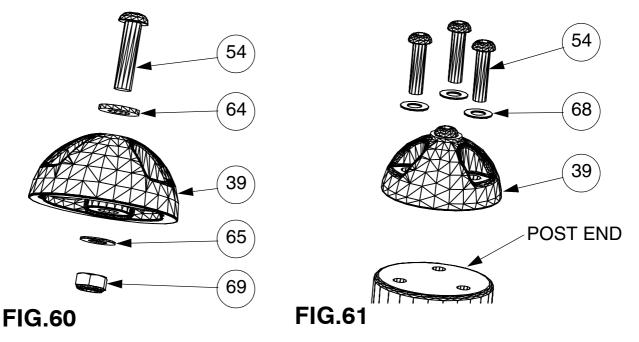
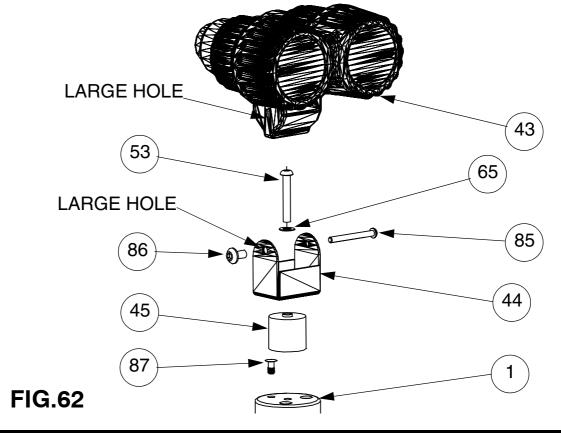


FIG.59

- 69) Assemble through center hole of 3 off Endcaps (item 39) 1 off M10 x 40 Resistorx bolt (item 54) 1 off M12 Washer (item 64), 1 off M10 Washer (item 65) and 1 off M10 Nyloc nut (item 69). See FIG.60.
- 70) Attach Endcaps to top of appropriate Legs using 3 off M10 x 40 Resistorx bolts (item 54) and M10 Shockproof washers (item 68). Fully tighten bolts to a torque setting of 20-25Nm. See FIG.61.



- 71) Insert and knock home with a soft hammer 3 off Protective Plugs (item 87) into the three outside holes in the top of the Straight Leg 1200 Deck (item 1). See FIG.62.
- 72) Place small register diameter of Telescope Spacer (item 45) into hole on bottom of Telescope Mounting Bracket (item 44) and attach to the top of Straight Leg 1200 Deck (item 1) using M10 x 65 Resistorx bolt (item 53) and M10 Washer (item 65). The bolt should be tightened up sufficiently to allow the unit to be rotated with a reasonable force. See FIG.62.
- 73) Place the Binoculars (item 43) the correct way round in the mounting bracket. Large hole to large hole and fix in position using the Moulding Fixing Bolt (item 85) and the Moulding Fixing Sleeve (item 86). **These should be tightened up sufficiently to allow the unit to be tipped with a reasonable force.** See FIG.62.



- 74) In all fixing positions on the steel work that have not been utilised, the protective plug should be removed and the permanent black protective plug (item 89) inserted & knocked home with a soft hammer.
- 75) In all the unused pre-inserted holes in the legs insert and knock home with a soft hammer the black plastic plug (item 89).
- 76) On all the Clamp Rings (item 47) that have not been attached to the legs using the M6 x 25 Resistorx bolt (item 58) insert and knock home with a soft hammer the white plastic plug (item 88) into the appropriate hole.

5 POST INSTALLATION INSPECTION

CHECK

- 1 All fixings are tightened to there appropriate torque settings and have no protruding sharp edges.
- 2 Paint work is not damaged. (Any making good should be carried out using the procedure in the Inspection and Maintenance instructions).
- **3** Concrete foundations are secure.
- 4 Concrete has a water shed away from legs.
- **5** Adequate provision of impact absorbing surfacing and no trip points within the minimum space.
- 6 Ensure all unused fixing holes in steel work, pre-inserted holes in legs and unused fixing holes in clamps have the correct plastic plug fitted.
- 7 Ensure that the Binoculars can rotate and tip with some resistance.
- 8 Site is clear of all tools and rubbish.
- 9 Remove any warning signs.

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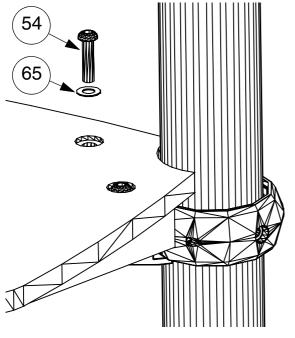
Appendix A:

NOTE: This replaces steps 32), 33) and 45) to 48) of the general instructions.

1 PLASTIC SLIDE ENTRY FRAME ASSEMBLY

1) Position Deck - Plastic Slide (item 24) onto Deck Frame as shown and secure using 7 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65) in positions shown. See FIG.A1 & A2.

NOTE: Ensure that the cutout in the deck for the mounting of the slide is positioned in the correct orientation.



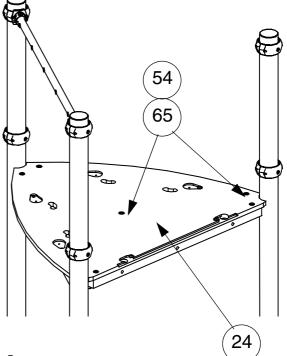
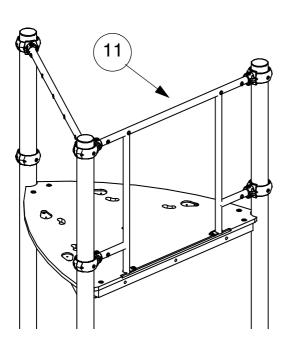


FIG.A1

FIG.A2

- 2) Attach in 4 places 1 off Plastic Slide Entry Frame (item 11) to Clamp Rings that are 800mm above the 1200 Deck fixings and the lower 600mm centers Clamp Rings. Each end of the Plastic Slide Entry Frame rails is held between a Bar Socket Top (item 49) and a Bar Socket Bottom (item 48) using 2 off BHCS Fixings (item 81) and should be fixed with the plastic panel fixing inserts on the outside of the structure. See FIG.A3 & FIG.C.
 - i) For assembly method see Note4.4, 3), i) to v).
 - ii) Attach Plastic Slide Entry Frame through Deck into Deck Frame using 2 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65). See FIG.A4.



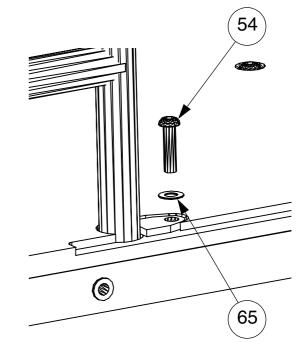


FIG.A3

FIG.A4

2 PLASTIC SLIDE & PANELS ASSEMBLY

- 1) Assemble Slide Mounting Leg to base of Plastic slide (item 21) using 4 off 3/8" x 1" long fixing bolt and washers. See FIG.A5.
- 2) Assemble Plastic Slide Entry Angle (item 12) to front face of Plastic slide using 4 off 3/8" x 3/4" long fixing bolts and washers. The hocked face of the angle must face away from the slide. See FIG.A6.

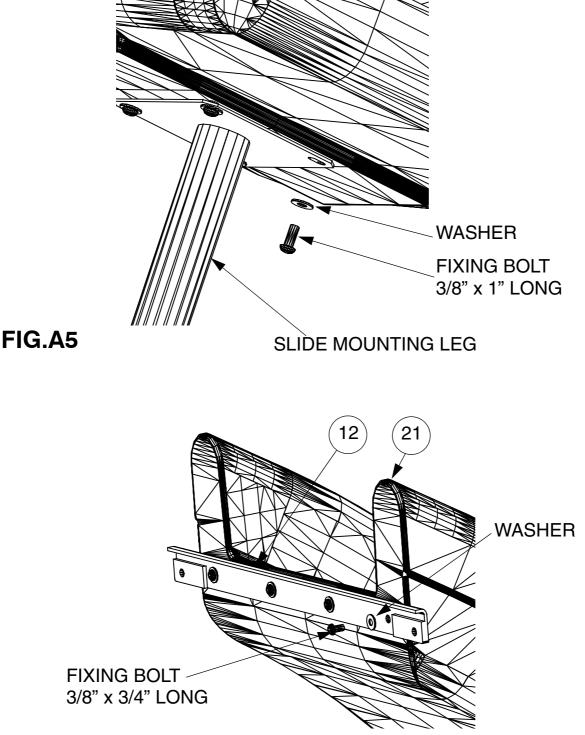


FIG.A6

- 3) Assemble the pair of Plastic Slide Entry Panels (item 32) to the Plastic Slide Entry Frame (item 11) using 4 off M10 x 40 Resistorx bolts (item 54) and M10 Washers (item 65). Do not fully tighten fixings. See FIG.A7.
- 4) Offer the Slide to the Entry Panels and the fixing holes on the edge of the Deck Frame by sliding the angle edge over the recessed edge of the Deck Panel ensuing that the Slide Mounting Leg is placed in its foundation hole. See FIG.A8 & A9.
- 5) Secure the Slide in position using 2 off M10 x 30 Resistorx bolts (item 56) and M10 Washers (item 65) into the Deck Frame edge and 2 off 3/8" x 1-1/4" fixing bolts and M10 washers (item 65) through the back of the panels. See FIG.A8 & A9
- 6) Shim the Slide Mounting Leg in its foundation and ensure that the slide is plumb and square before tightening up all the fixings on the Slide and Panels. See FIG.A8 & 9.

