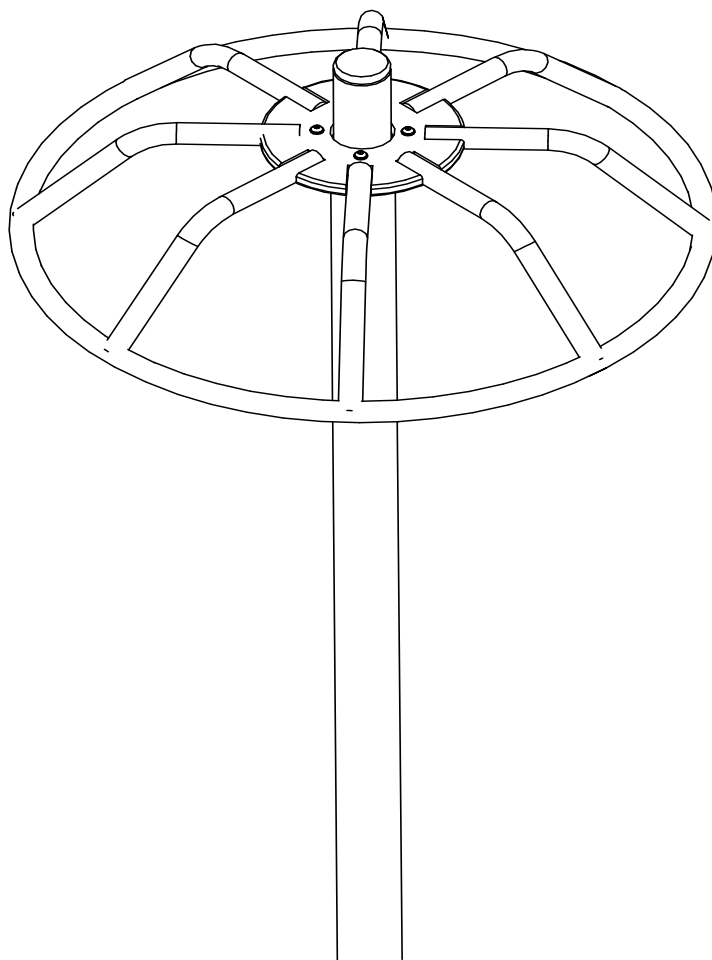


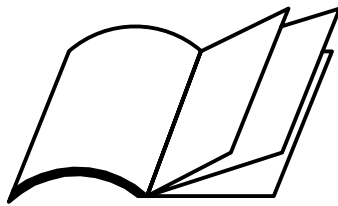


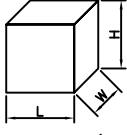
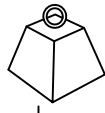

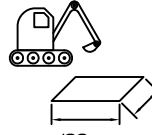
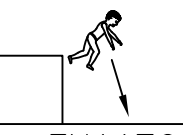

INSTALLATION INSTRUCTIONS
TORNADO CAROUSEL CAR-TOR

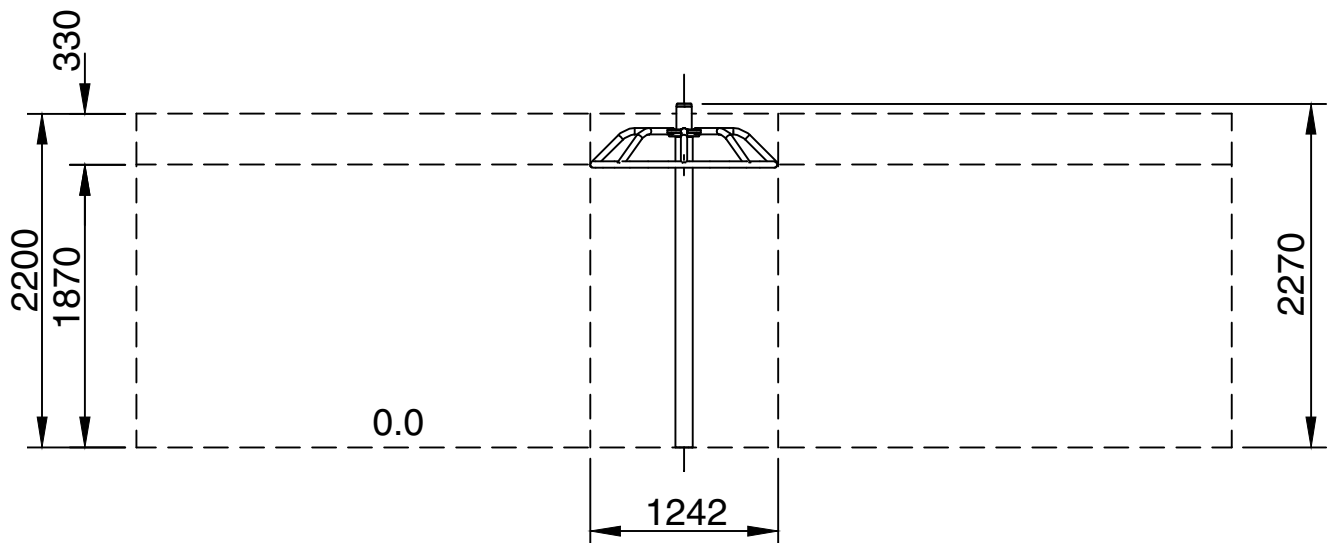
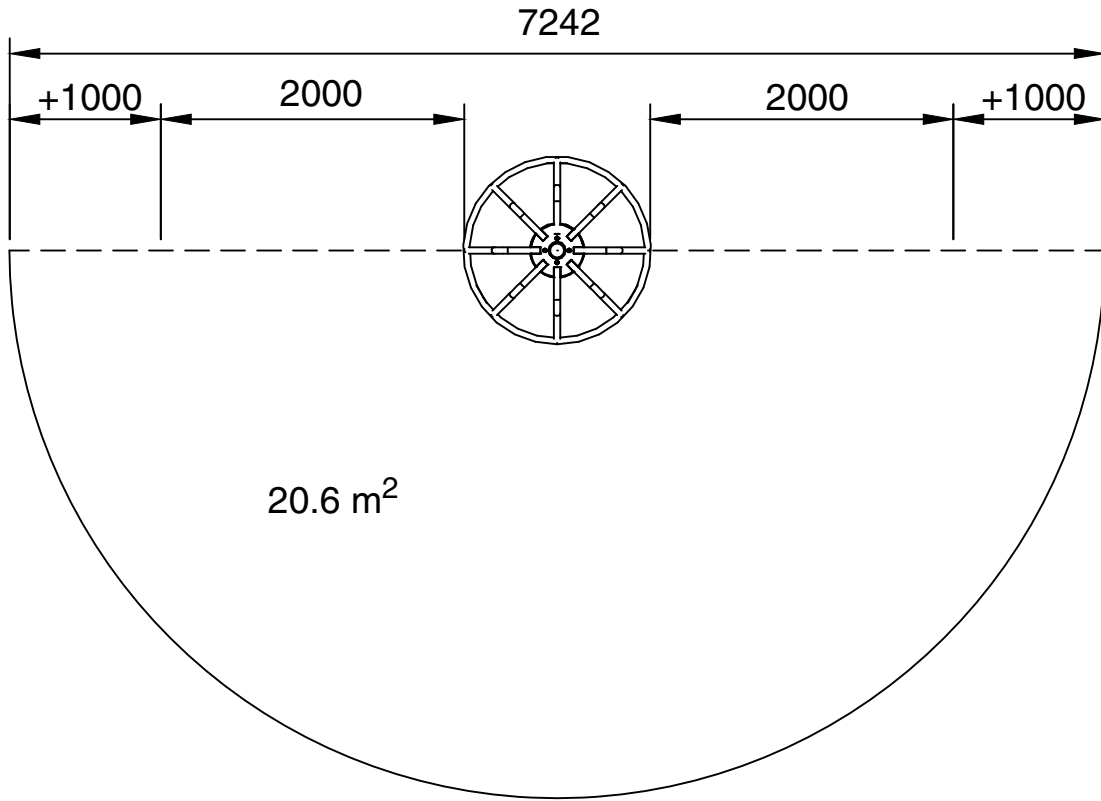


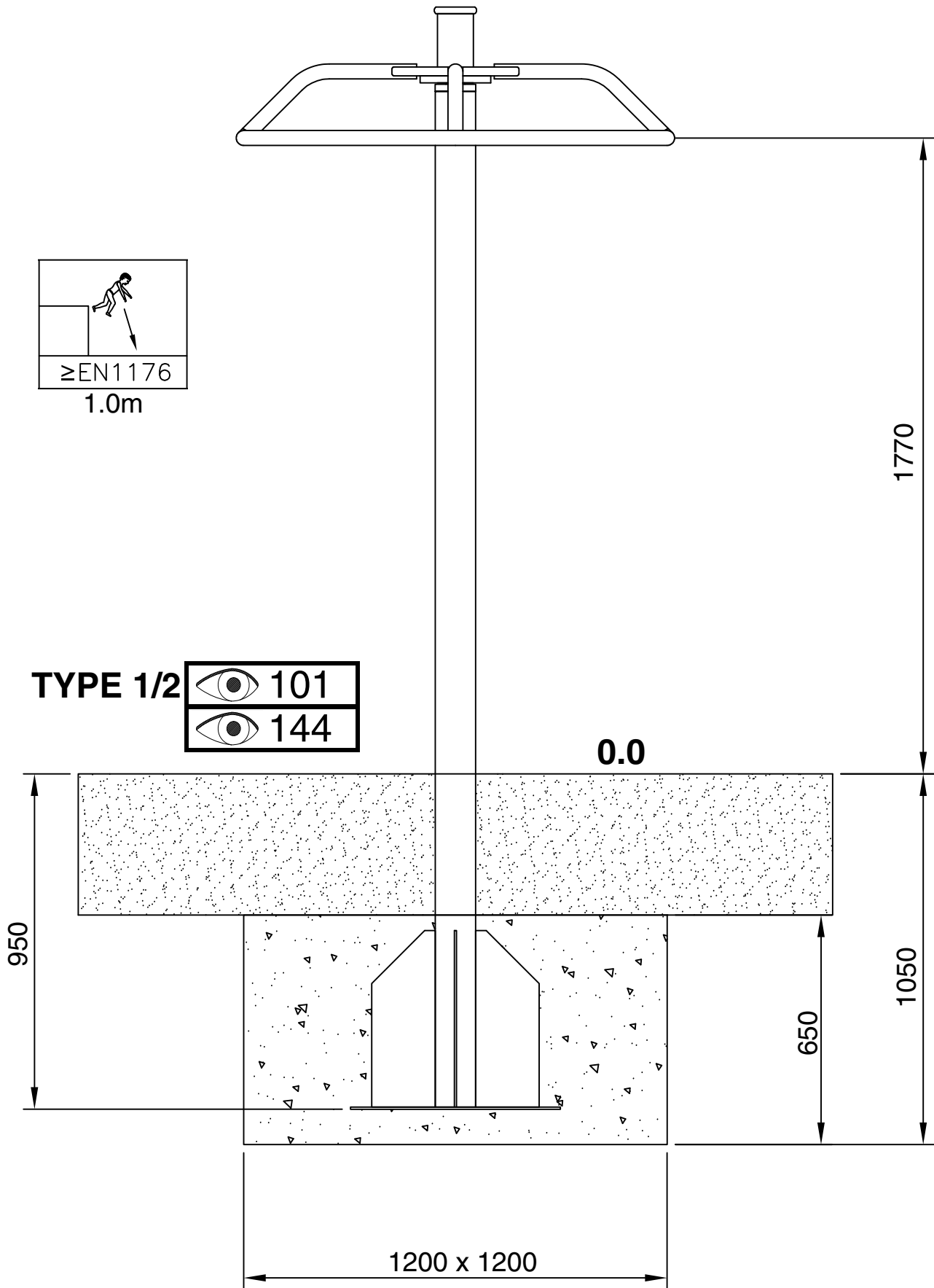
NO PART OF THIS MANUAL OR DOCUMENT MAY BE COPIED OR RE-PRODUCED IN ANY FORM OR BY ANY MEANS WITH OUT THE EXPRESS WRITTEN PERMISSION OF SMP (PLAYGROUNDS) LTD.

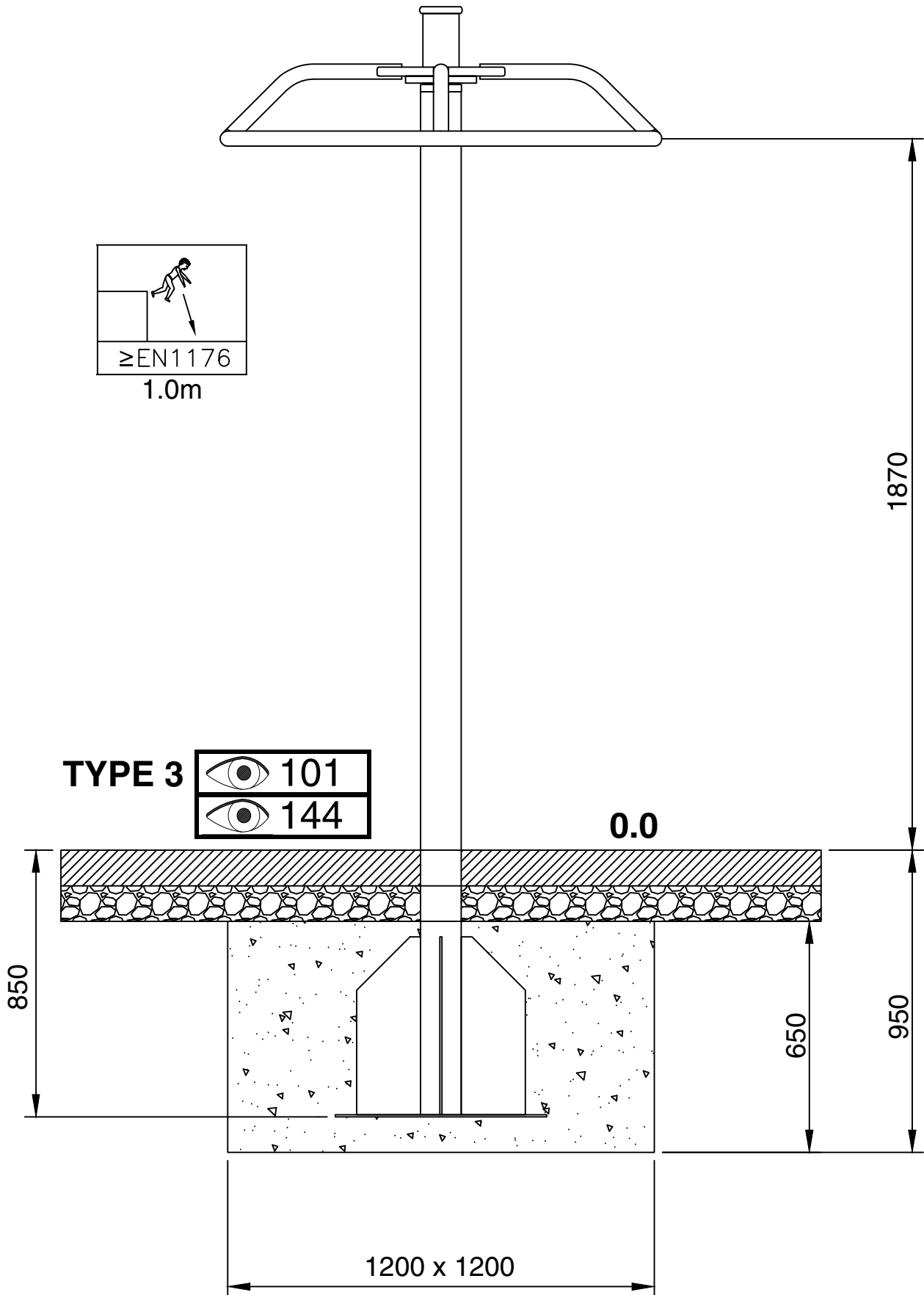
email: sales@smp.co.uk
www.smp.co.uk



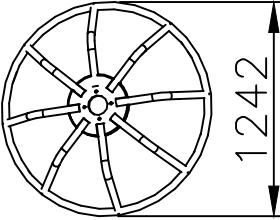
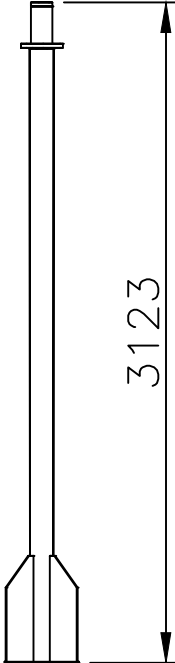
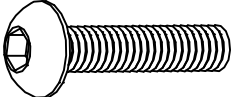
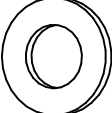
	 LxWxH (m)	 kg	 m ³	 m	 ≥EN1176	 x 3= T
CAR-TOR	ø1.242 x 2.27	165	0.936	3.00 x 3.00	1.00m	T=5h



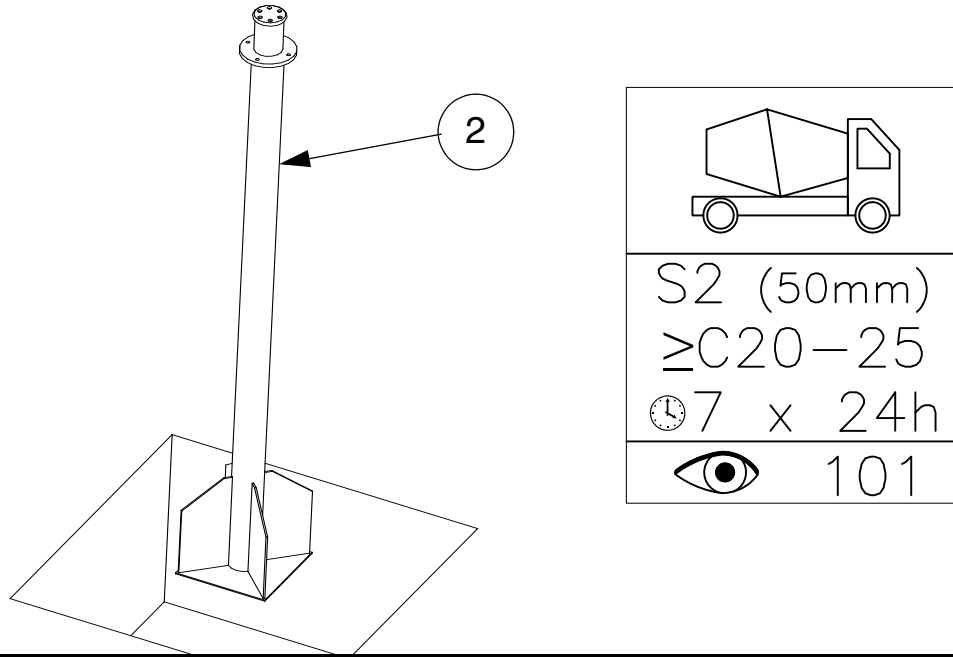




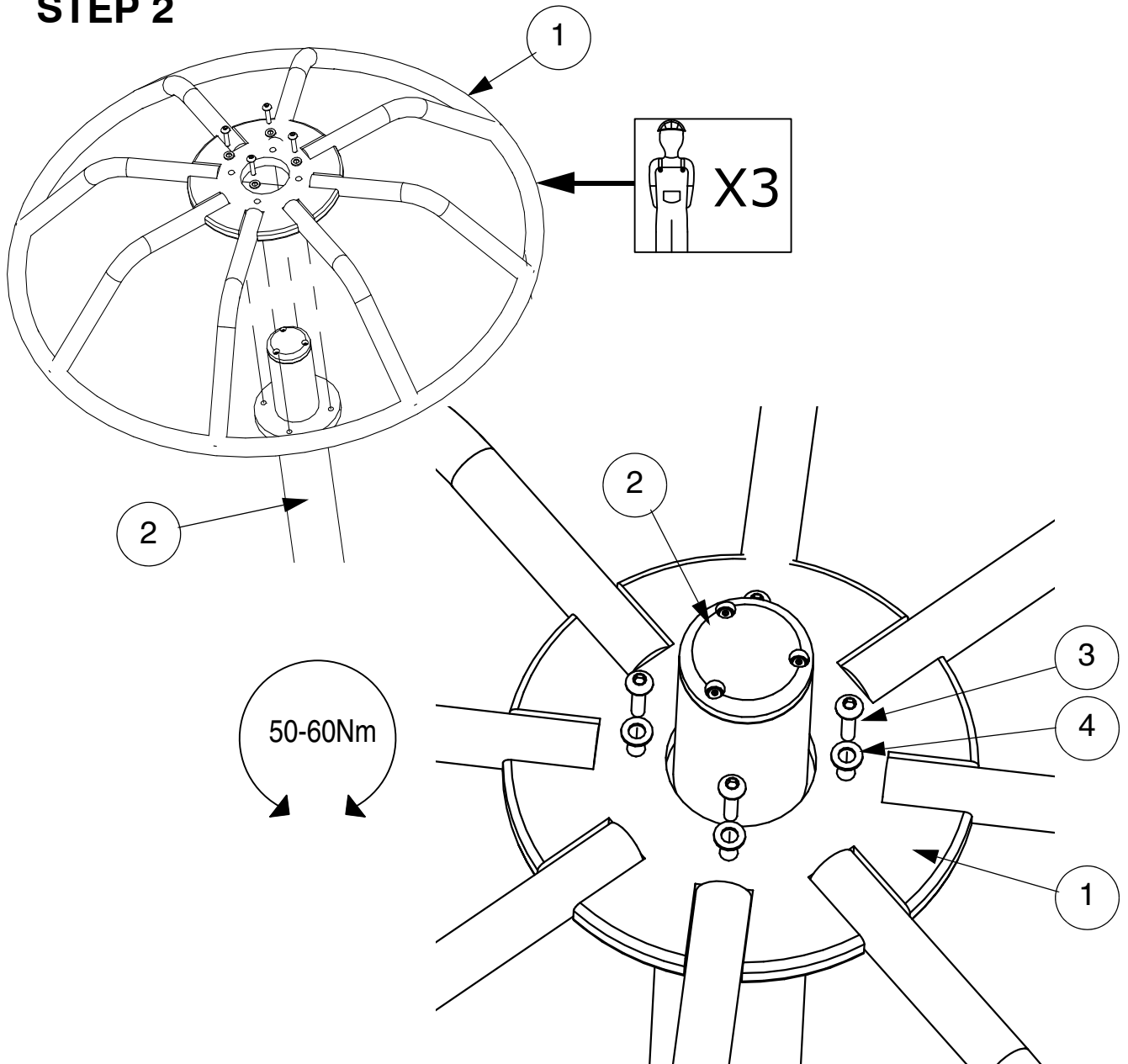
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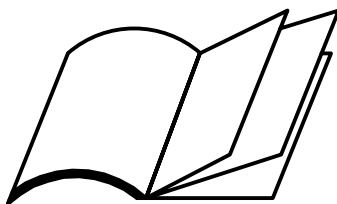
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1	71000907		1	48.100
2	71000104		1	115.50
3	10141245	 M12 X 45	4	0.050
4	10291200	 M12 13X24X2.5	4	0.003

STEP 1



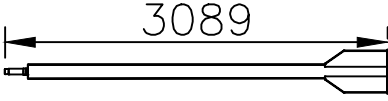
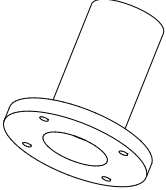

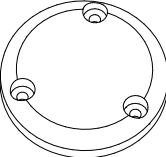


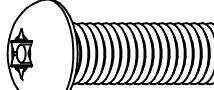
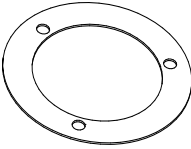
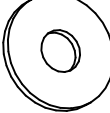

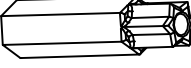
STEP 2

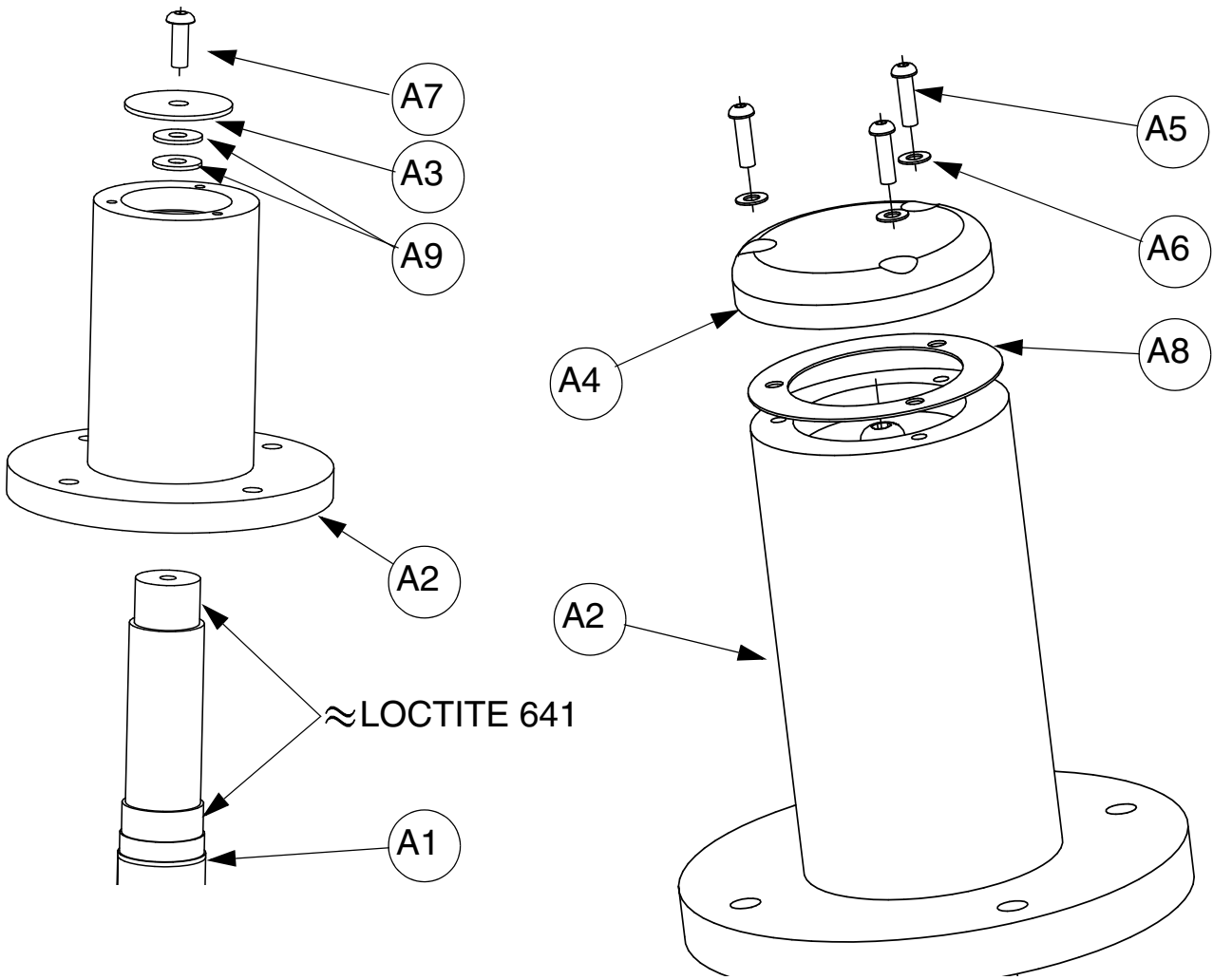




Appendix A:

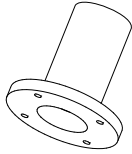
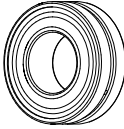
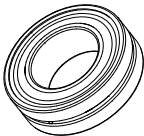
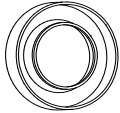
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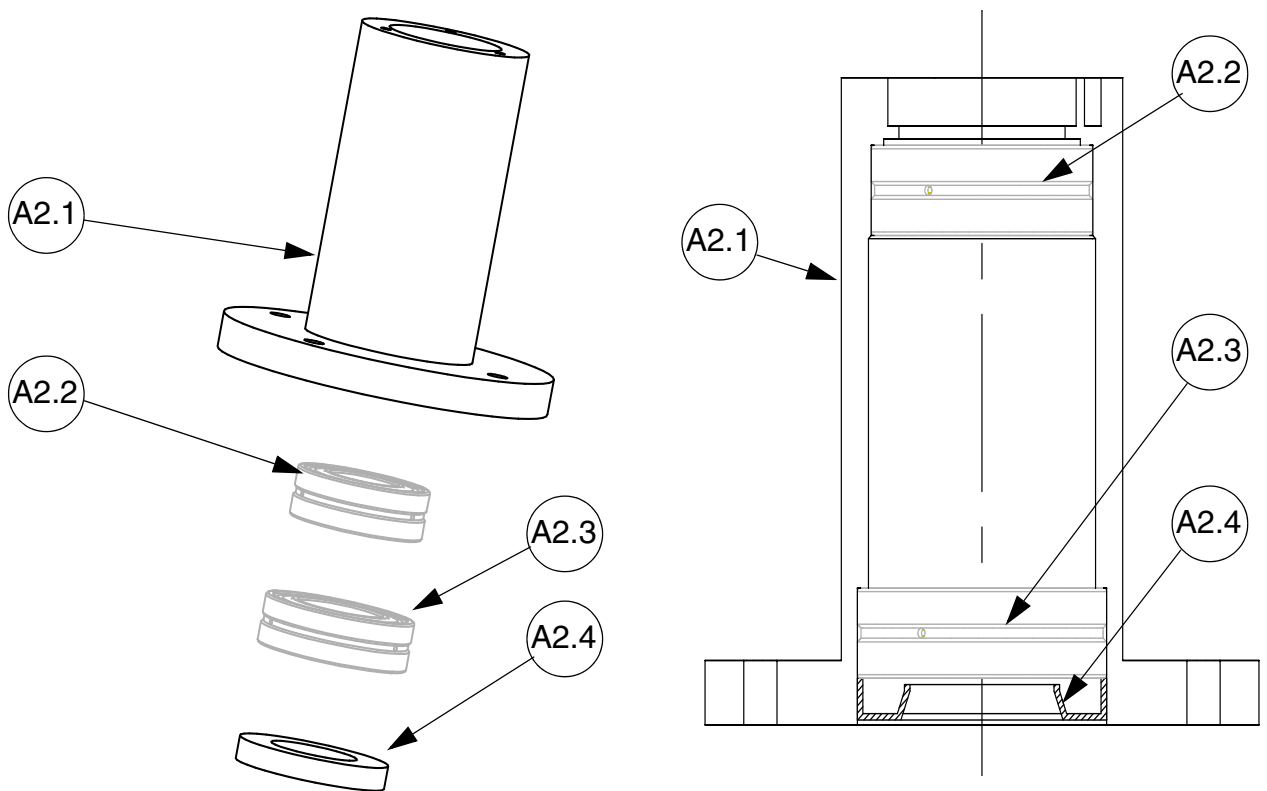
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A1	71000901		1	104.00
A2	71000101		1	11.000
A3	71000109		1	0.080
A4	71000108		1	0.350
A5	10120620	 M6 X 20	3	0.013
A6	10290600	 M6 6.4X12.6X1	3	0.001
A7	10121030	 M10 X 30	1	0.030
A8	71022209		1	0.005
A9	10309999	 M10 11X30X2.5	2	0.011
A10	10120600	 T30 M6	1	-
A11	10121000	 T45 M10	1	-

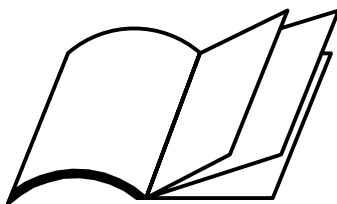


Appendix B:

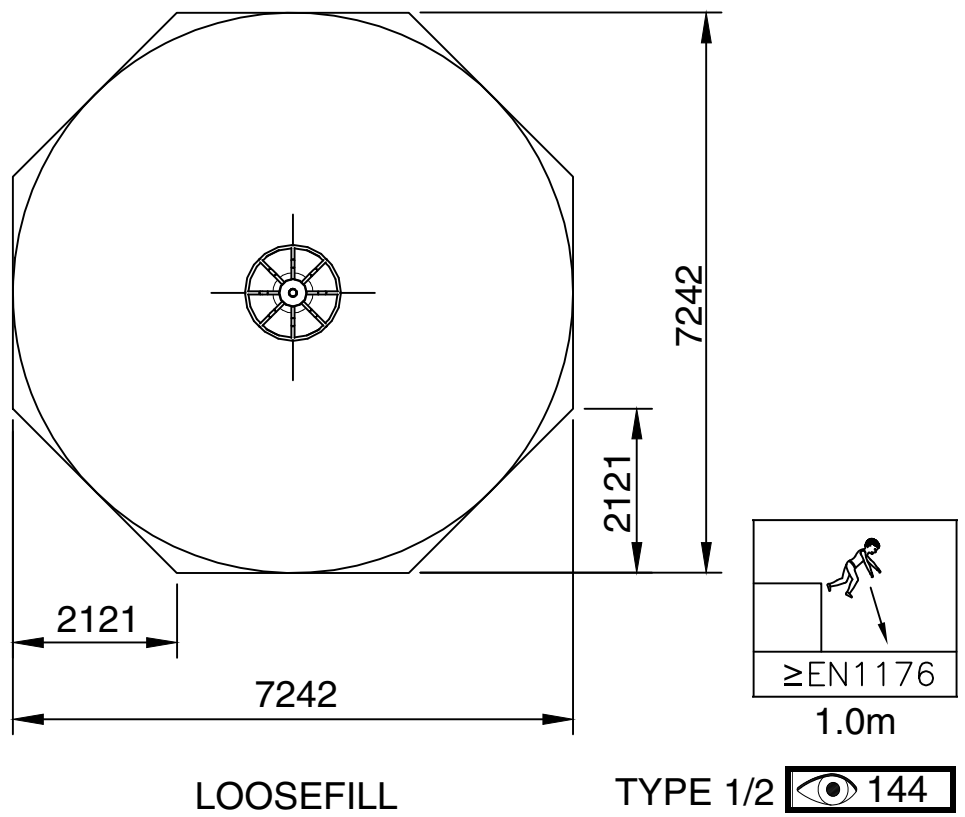
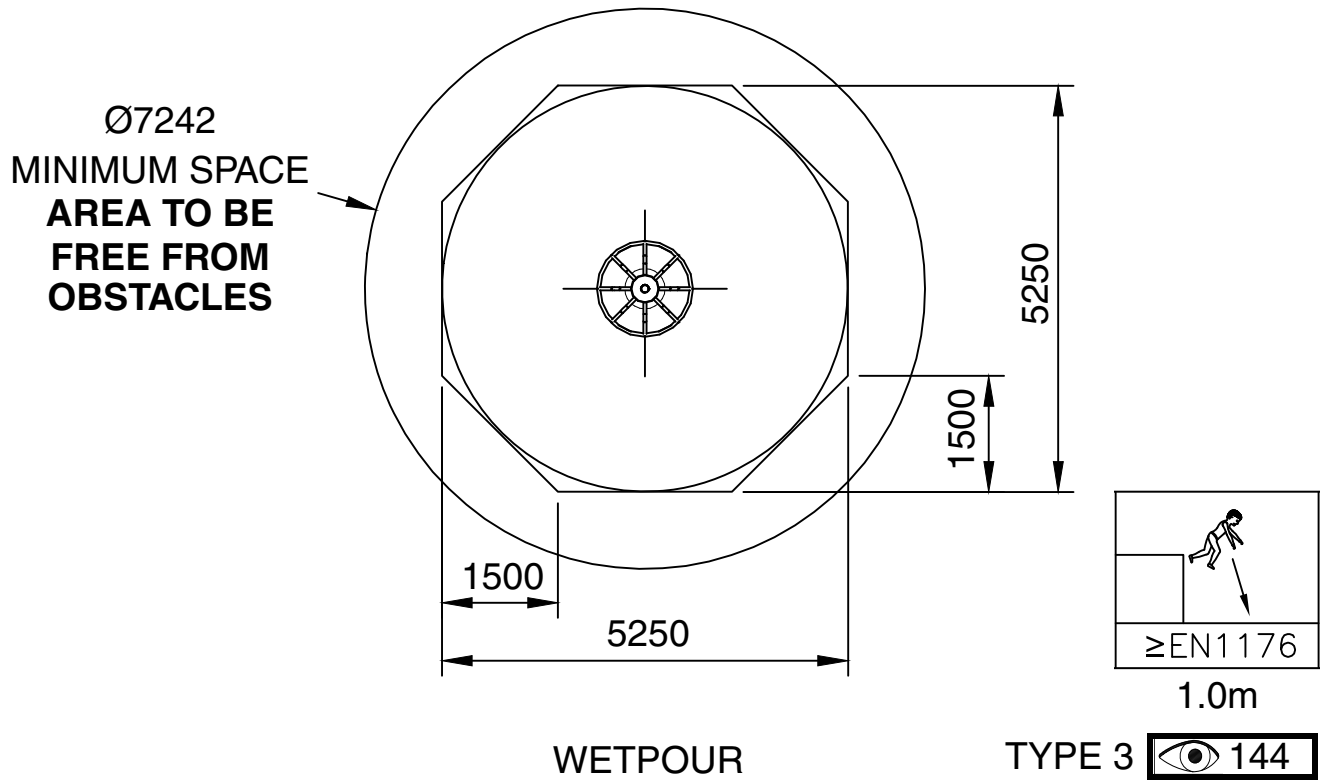
REF 71000101

ITEM	REF		QTY.	kg
A2.1	71000105		1	10.100
A2.2	71022208		1	0.60
A2.3	71022210		1	0.70
A2.4	71000110		1	0.015





Appendix C:



SMP Playgrounds Ltd recommends an effective *Impact Absorbing Surface tested to EN1177 & BS7188* beneath this 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.

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

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

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

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.

NOTE: Generally it is recommended that loose fill surfaces are installed to a minimum depth of 300mm, however, with certain loose fill materials a greater depth may be required. This will need to be determined by allowing 100mm for the dispersal in addition to the thickness required for the particular Free Fall Height. The foundation illustrated will allow for a thickness up to 400mm.

Care should be taken when siting this equipment in order to discourage users in the surrounding area from unintentionally coming into contact with the equipment. This can be achieved, for example by placing the equipment at the perimeter of the play area.

NOTE: In addition to the free space and the falling space, there shall be an additional area extending at least 1m free from obstacles.

Tools: 5m tape measure, Spirit level, M10 Torx tool (Supplied with unit), 19mm A/F Socket, Extension bar & Torque wrench.

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.

RISKS:

- i) Large parts which could be difficult to lift or handle.
- ii) Lifting parts overhead.

CONTROL MEASURES:

- i) Mechanical help to be utilised for any awkward lifting that may be required.
- ii) Ensure Hard hats Gloves, Armoured boots and Protective goggles are worn at all times

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.

2 INSTALLATION & ASSY PROCEDURES

- i) Warn the public of the risk of injury, by placing signs and fencing the surrounding area, before commencing installation.
- ii) Mark out foundations and excavate the hole. (refer to site plan for unit location).
- iii) Position support column (item 2) into excavation, pack up to height, level and plumb. **(STEP 1)**
- iv) Brace support column into position.
- v) Fill the hole with concrete to the required level, taking into account any Impact Absorbing Surfacing requirements. Ensure that the 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.

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)

- vi) Keep installation off limits to the public until the concrete has completely cured. (Recommended initial curing time is 48 hours).
- vii) If installation is with a loose fill type surface, the support column should be marked with 'Basic level mark' to indicate the recommended finished surface level.
- viii) Place the hanging frame (item 1) onto the shaft and bearing housing assy (item 2). **Note: This item is heavy, and should be lifted by a minimum of three people.** Secure the hanging frame to the bearing housing using 4-off M12 x 45 Button head screws (items 3) and washers (items 4). Fully tighten to 50-60 Nm. **(STEP 2)**

3 POST INSTALLATION INSPECTION

CHECK	CHECK	✓
1 The unit is installed at the correct height.	<input type="checkbox"/>	
2 All fixings are tightened to the correct torque and have no protruding sharp edges.	<input type="checkbox"/>	
3 Paint work is not damaged.	<input type="checkbox"/>	
4 The polyethylene is not damaged.	<input type="checkbox"/>	
5 The hanging frame rotates freely.	<input type="checkbox"/>	
6 Concrete foundations are secure.	<input type="checkbox"/>	
7 Adequate provision of Impact Absorbing Surfacing with no obstructions or other hazards within the equipments minimum space.	<input type="checkbox"/>	
8 Site is clear of all tools and rubbish.	<input type="checkbox"/>	
9 Remove any warning signs.	<input type="checkbox"/>	