

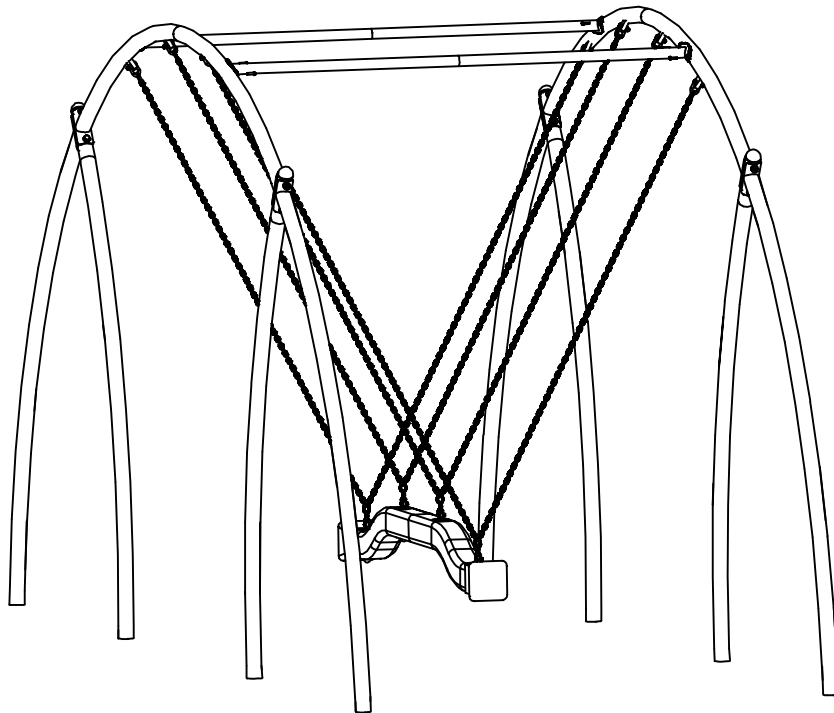


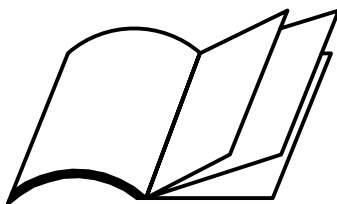
Inspiring all generations

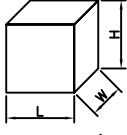
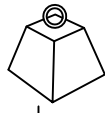


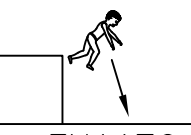
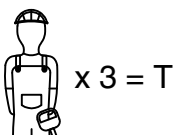
**INSTALLATION INSTRUCTIONS**

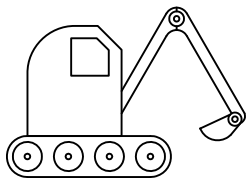
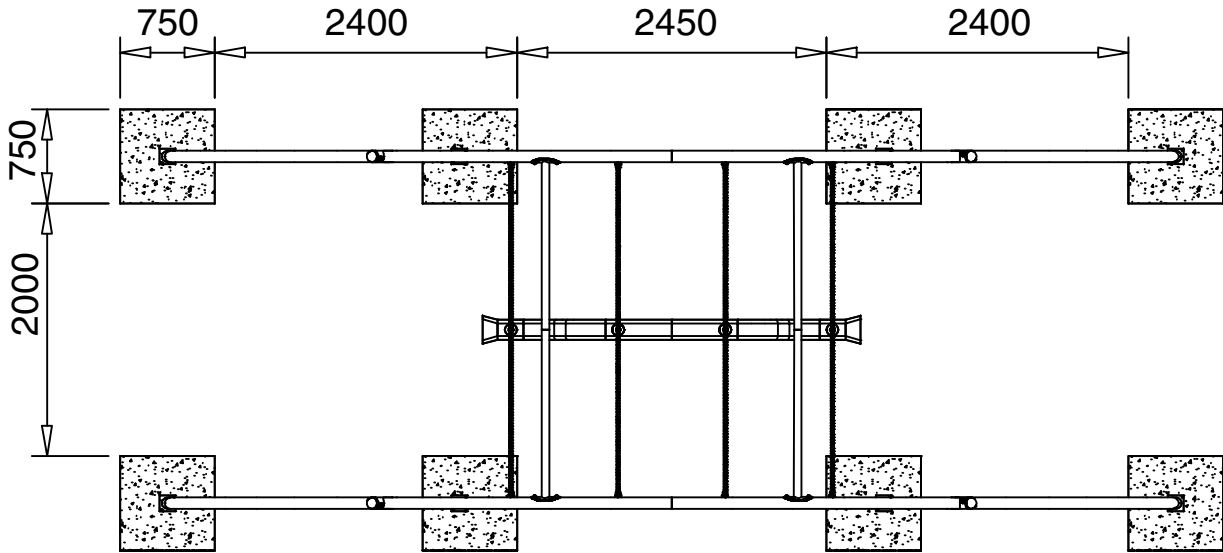
**NEXUS VIPER**

**DSVIP**

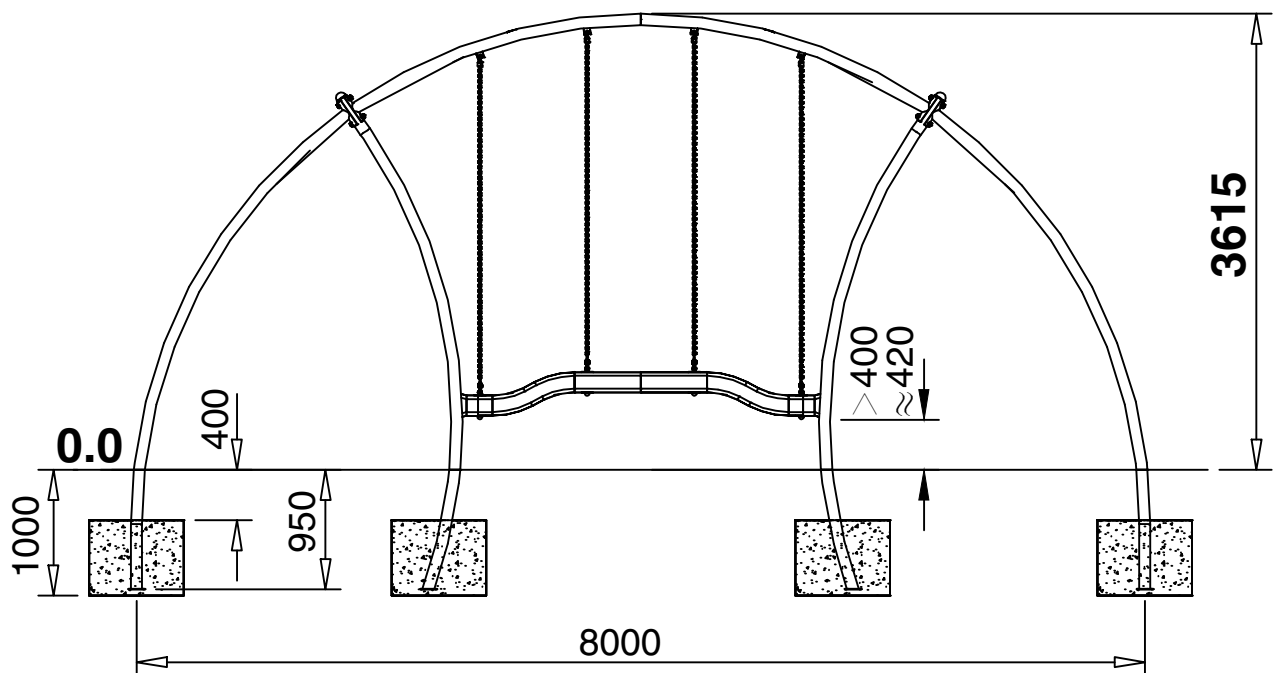
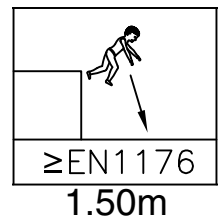


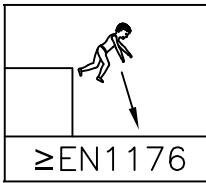


						
	LxWxH (m)	kg	m <sup>3</sup>	m	≥EN1176	x 3 = T
<b>DSVIP</b>	8.09 x 2.84 X 3.62	600	2.7	12.00 x 4.00	1.50m	T = 48h



 101/114

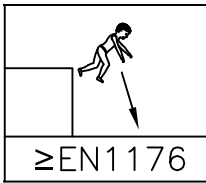
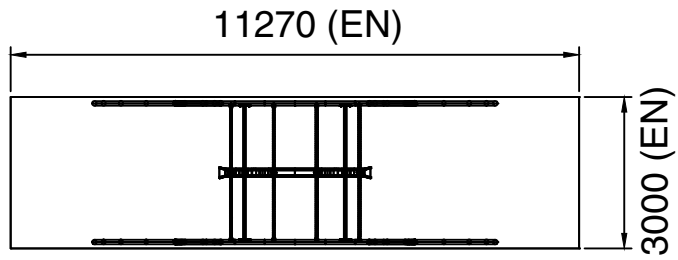




1.50m



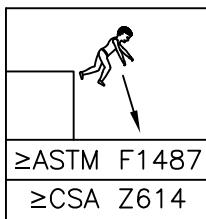
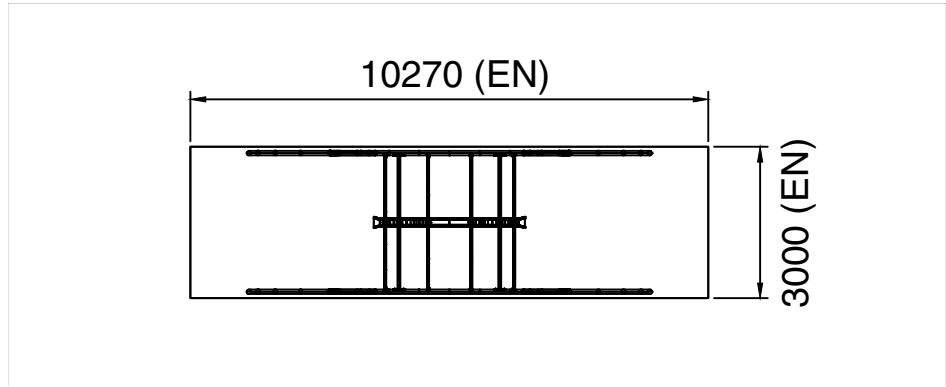
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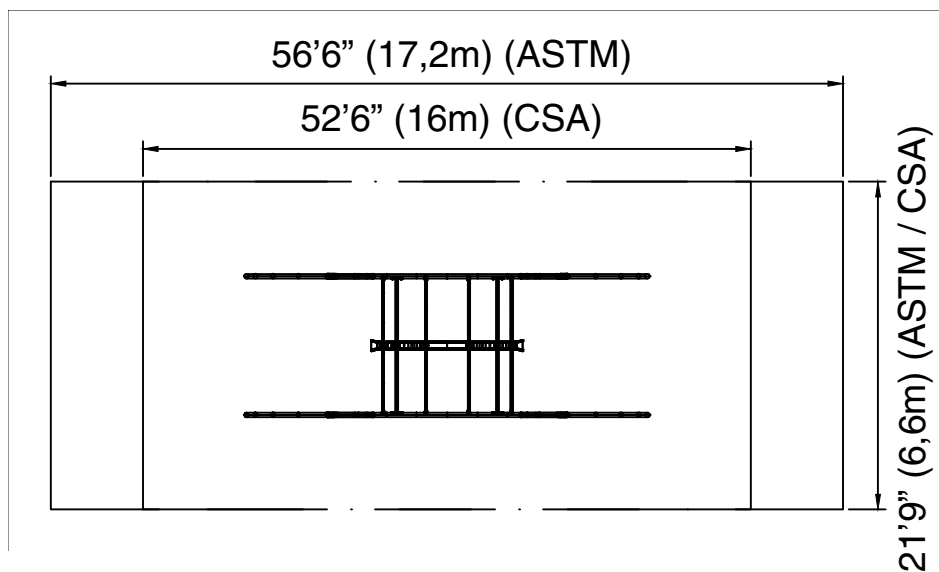
1.50m

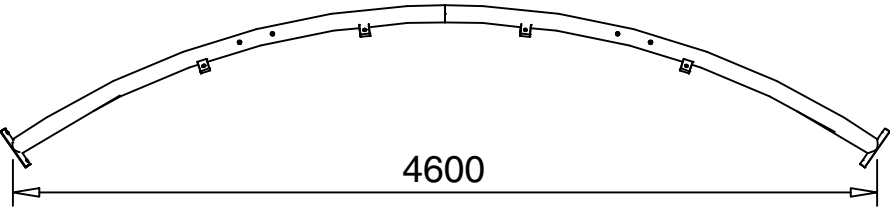
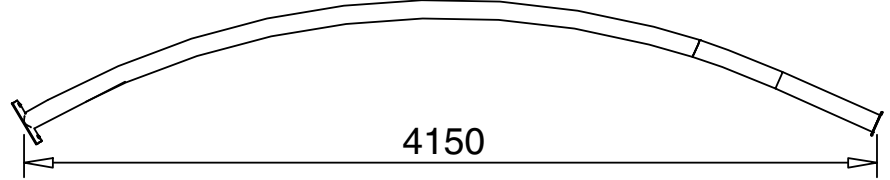
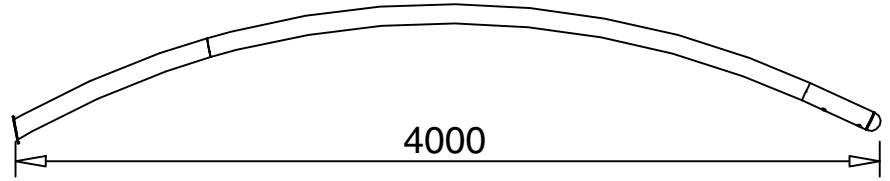
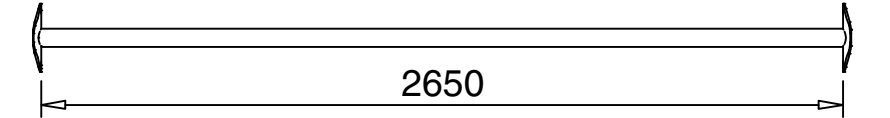
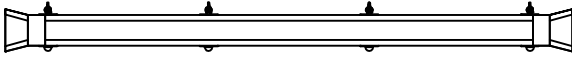
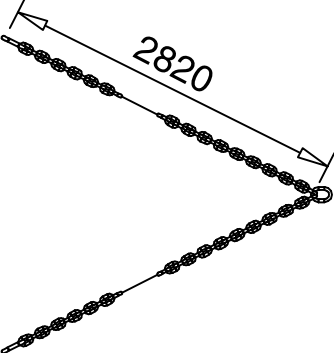
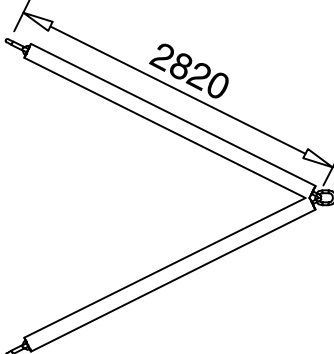


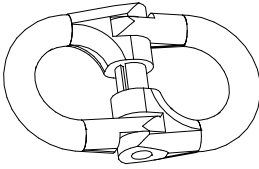
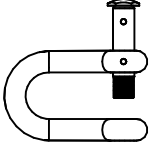


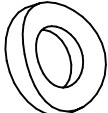
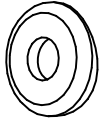
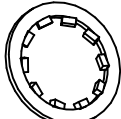
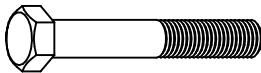
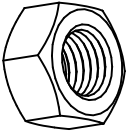
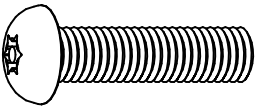
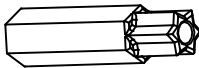
**TYPE 3**



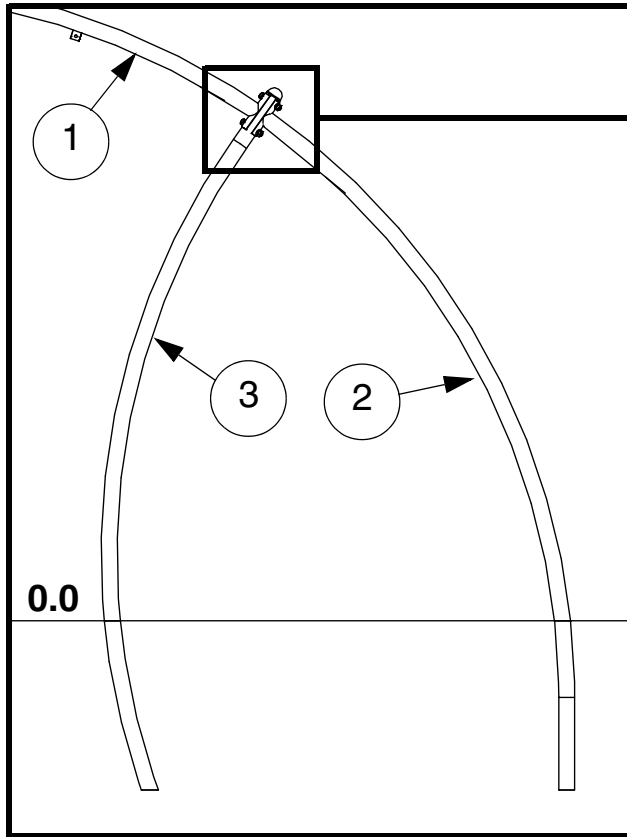
1.50m



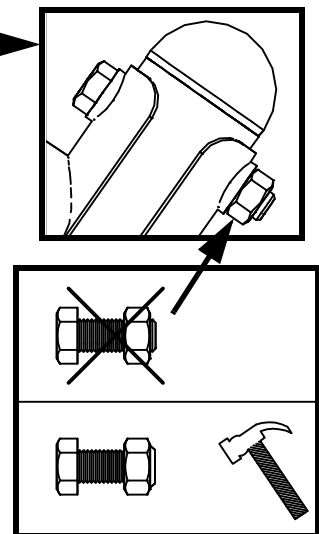
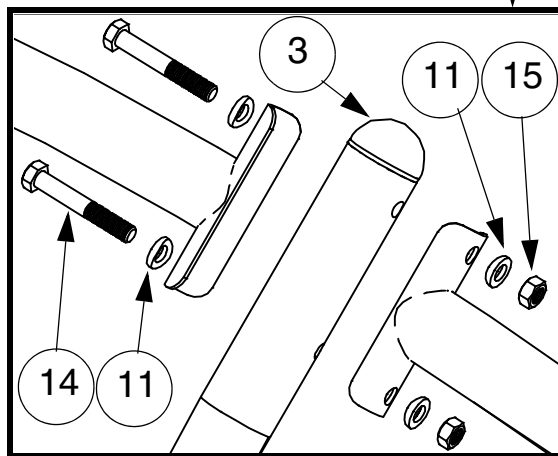
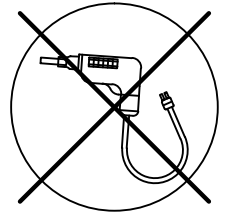
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1	87090001A			2	53.00
2	87090005			4	48.00
3	87090007			4	48.00
4	87090009			2	18.30
5	87091001			1	33.00
6	87091005			4	8.00
	87091010			4	9.60

ITEM	REF.	DSVIP / DSVIP (N)	DSVIP (HS)	QTY.	(kg)
7	15715000			4	0.100
8	88096003			8	0.250
9	10310325			8	0.002
10	19023801			4	0.080
11	10302000	 M20 21X38X8		16	0.039
12	38001019	 M10 12X32X6.5		8	0.002
13	10301000	 M10 12X18X1		8	0.001
14	10252130	 M20 X 130		8	0.362
15	10272000	 M20		8	0.06
16	10121040	 M10 X 40		8	0.037
17	10121000	 T45 M10		1	-

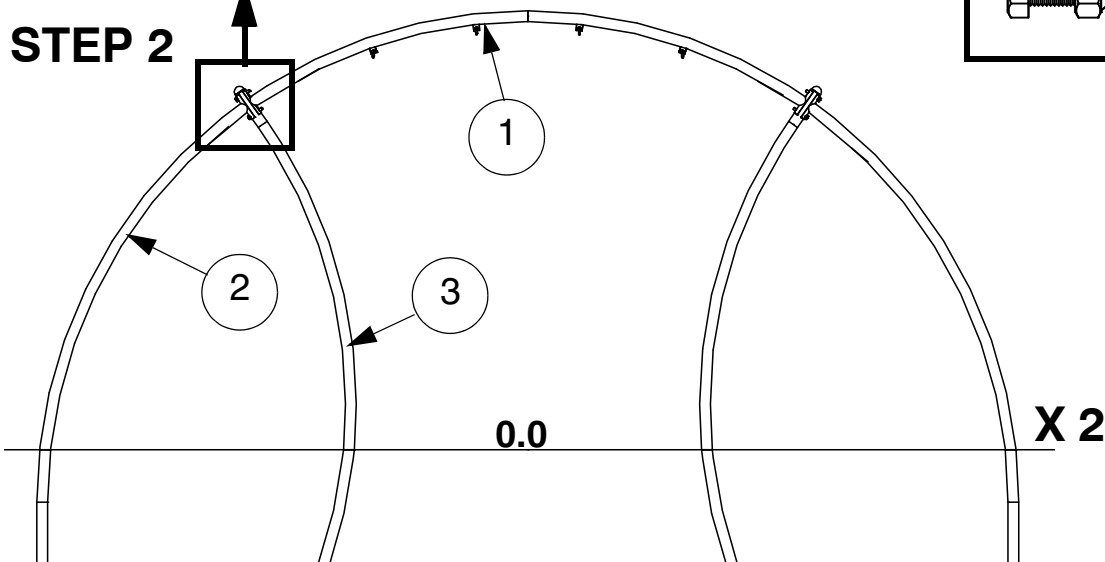
# STEP 1

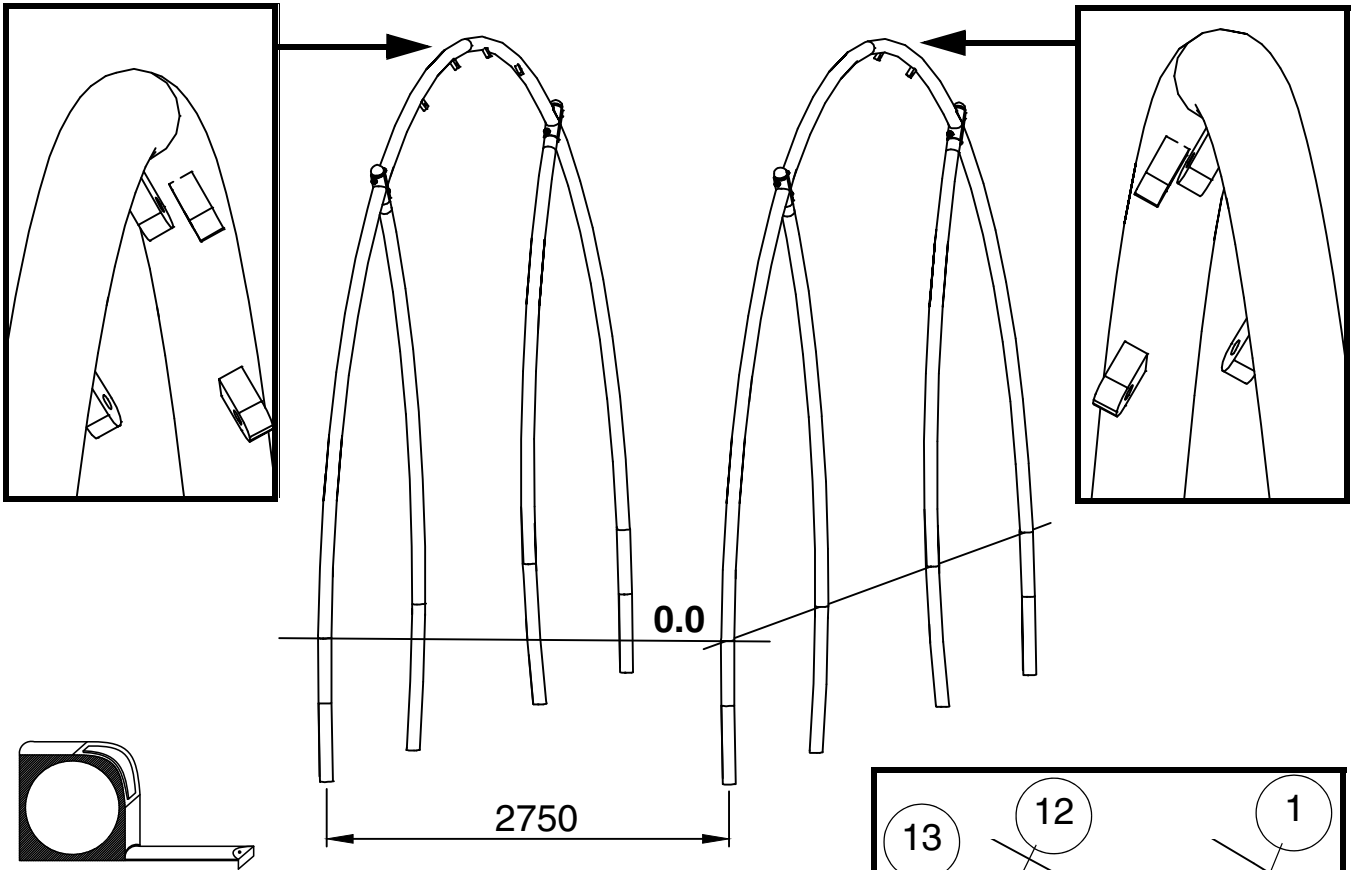


170Nm

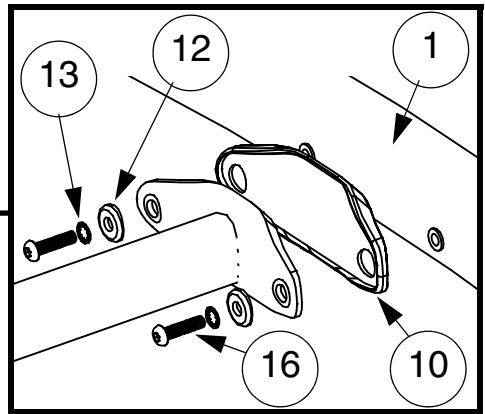


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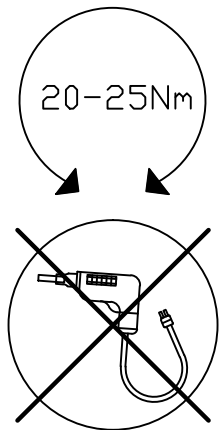
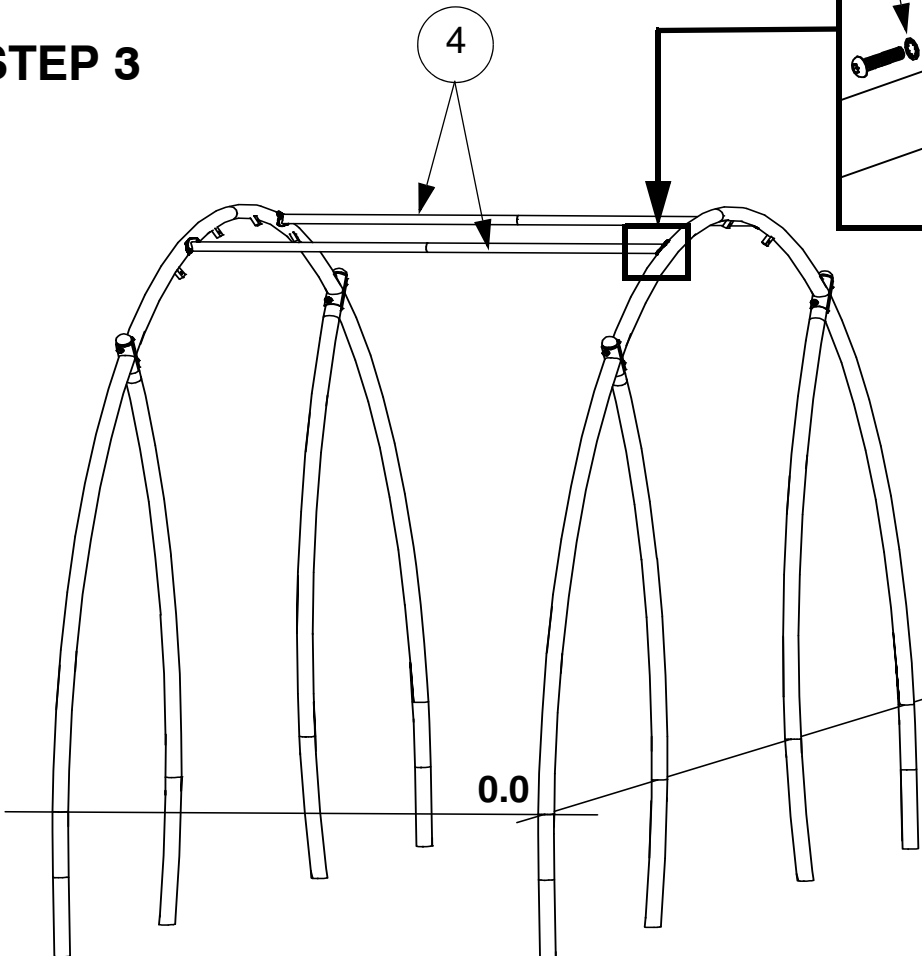




**STEP 3**

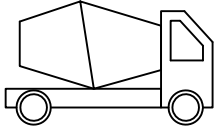




**X 4**



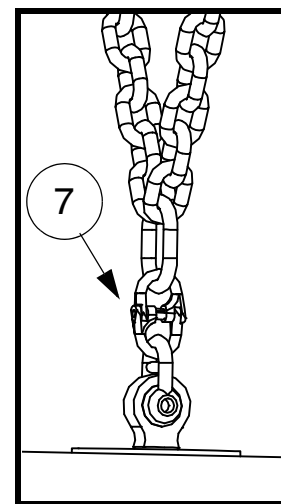
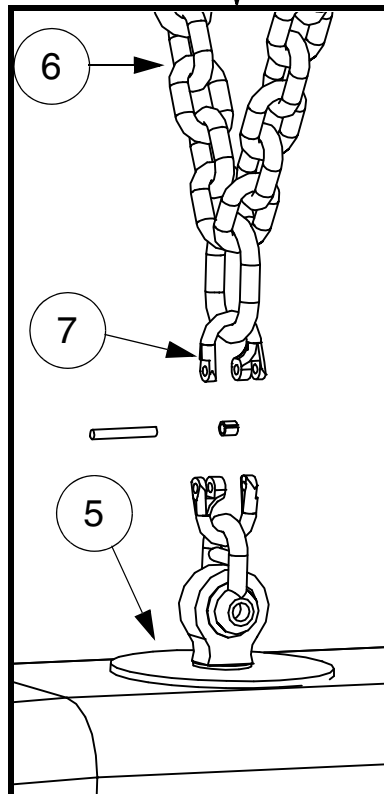
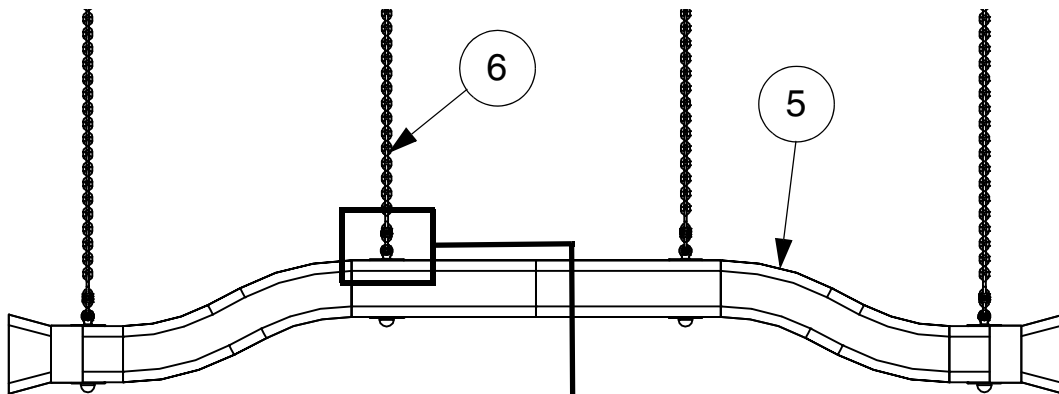


# STEP 4

	
S2 (50mm)	
≥C20-25	
	7 x 24h
	101

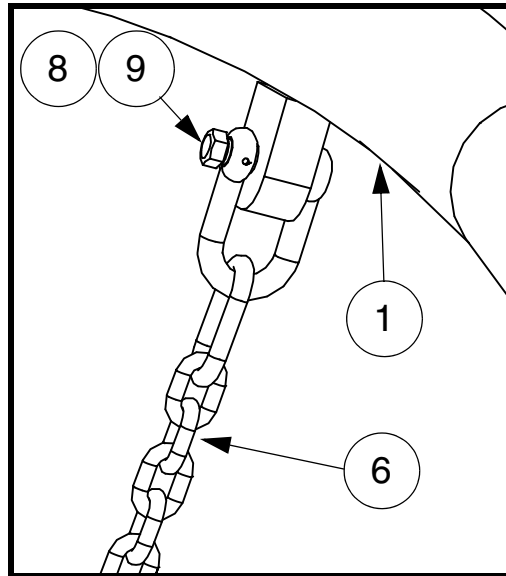
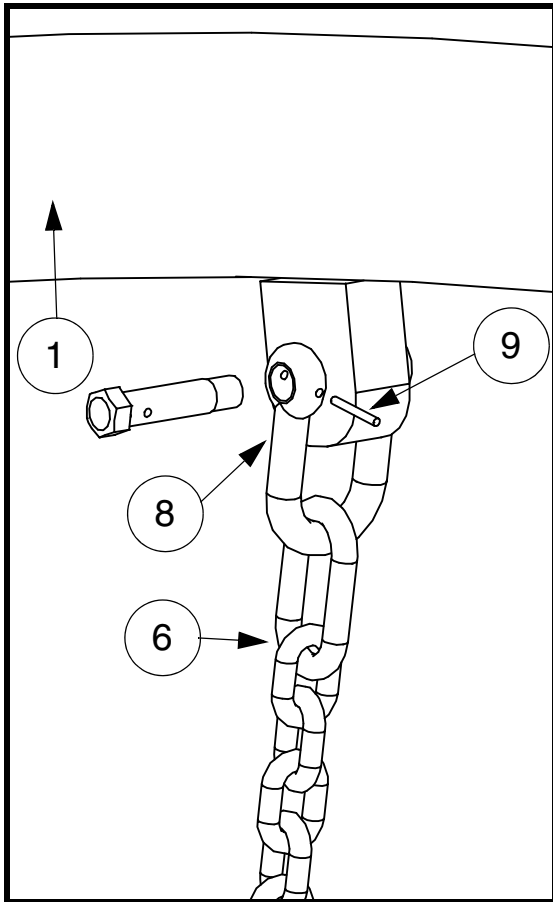
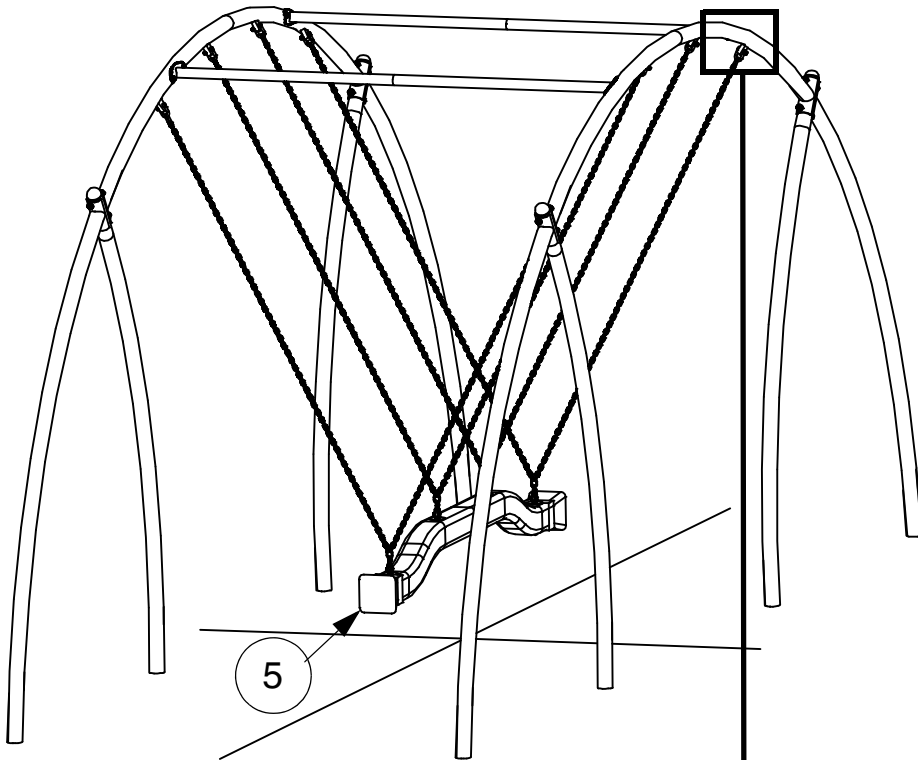
		<b>3</b>
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# STEP 5



**X 4**

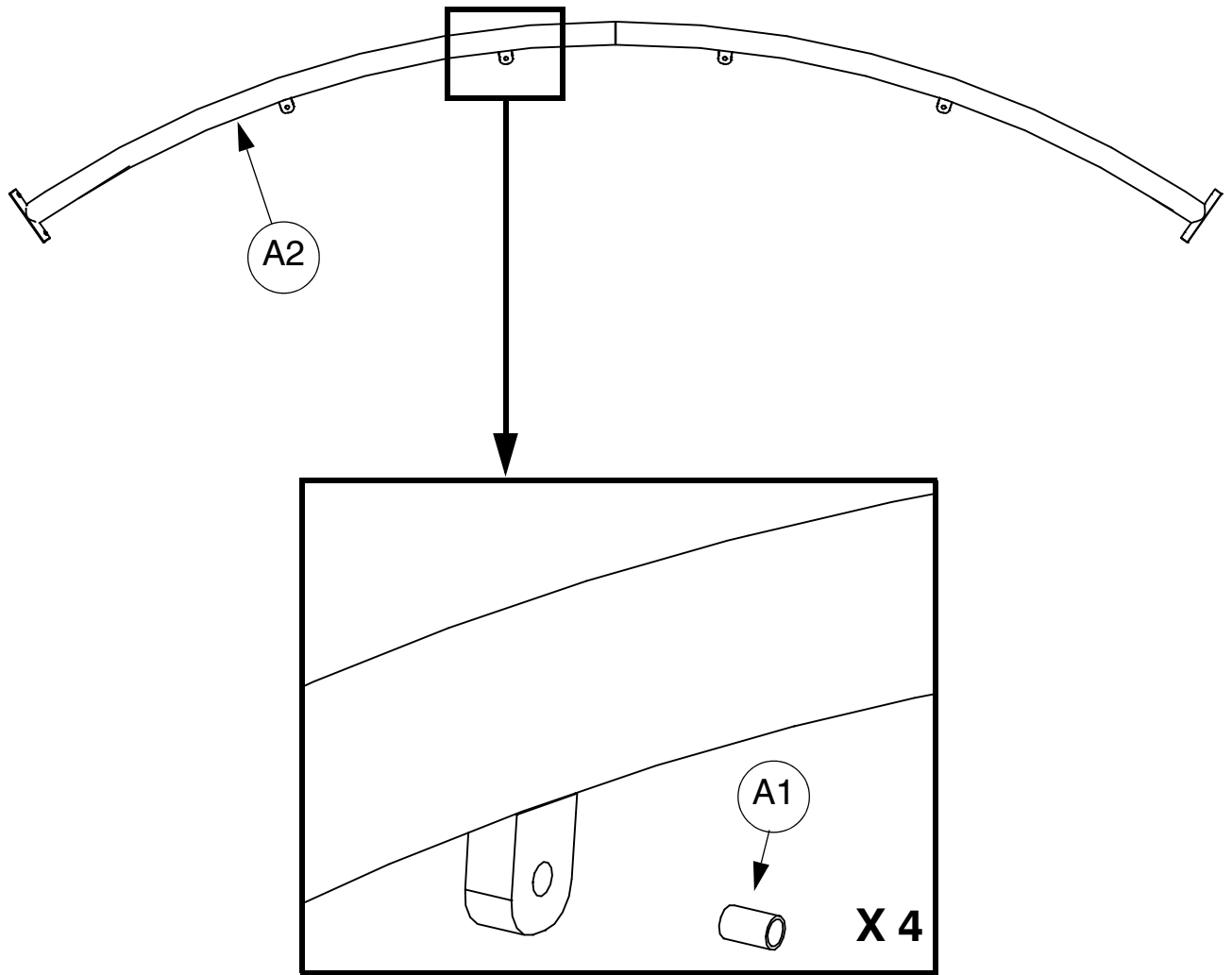
# STEP 6

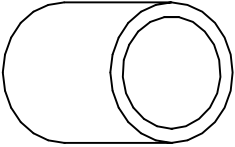
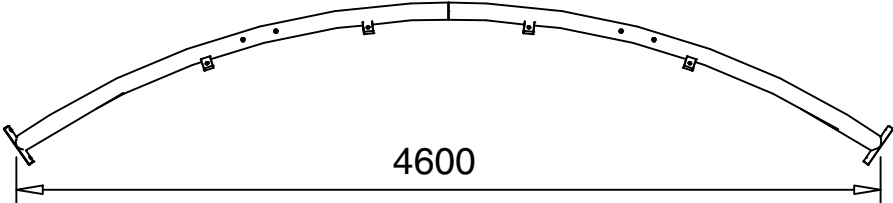


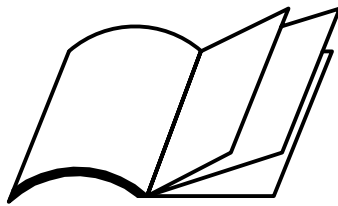
**X 8**

Appendix A:

87090001A

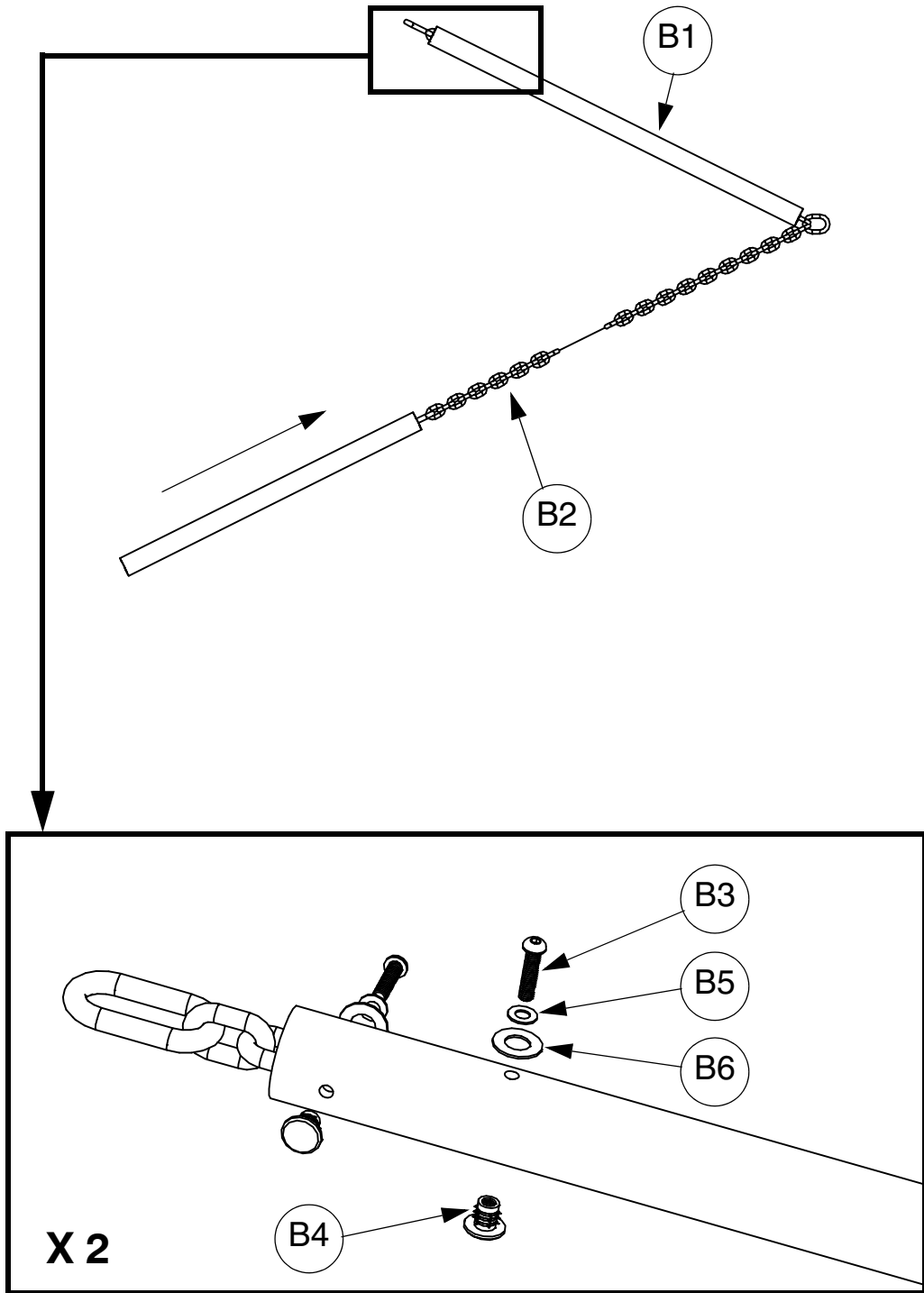


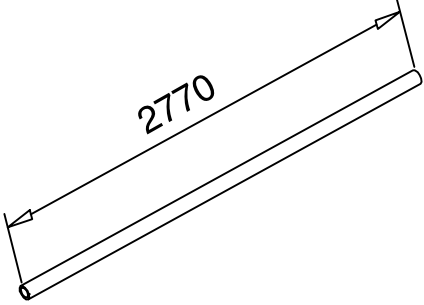
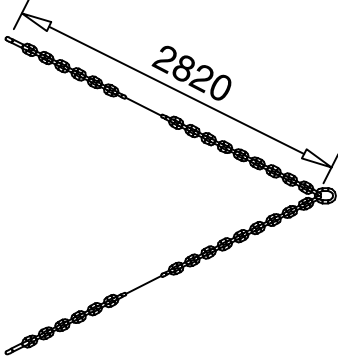
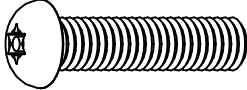
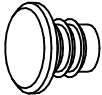
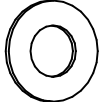
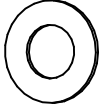
ITEM	REF		QTY.	WEIGHT (kg)
A1	15011612		4	0.002
A2	87090001		1	53.00



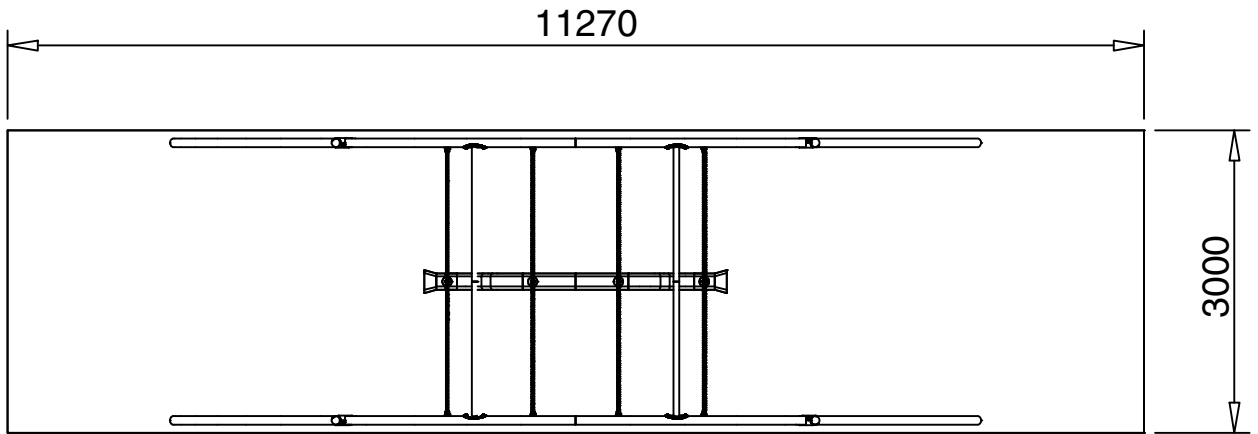
Appendix B:

87091010

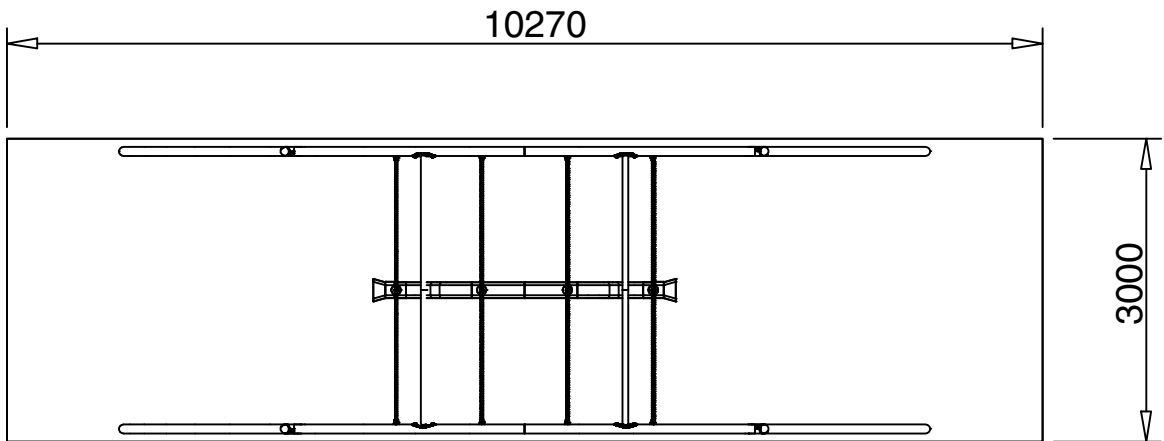


ITEM	REF		QTY.	WEIGHT (kg)
B1	87091020		2	1.70
B2	87091005		1	8.00
B3	10120625	 <p data-bbox="660 1039 871 1081">M6 X 25</p>	4	0.011
B4	10930600	 <p data-bbox="730 1234 793 1274">M6</p>	4	0.006
B5	10290600	 <p data-bbox="639 1431 898 1469">M6 6.4X12.6X1</p>	4	0.001
B6	10291000	 <p data-bbox="639 1617 882 1655">M10 11X21X1</p>	4	0.002

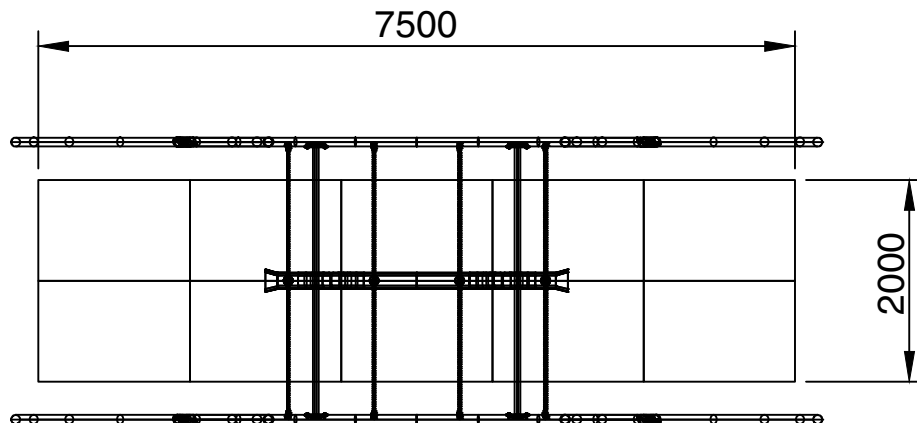
Appendix C:



TYPE 1/2 LOOSEFILL



TYPE 3 SYNTHETIC



TYPE 5 GRASSMATT

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## 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.

### 1.1 RISKS:

- i) Large parts which could be difficult to lift or handle.
- ii) Structure unstable until concrete footings have fully cured.
- iii) Parts at height that may require working overhead.

### 1.2 CONTROL MEASURES:

- i) Warn the public of the risk of injury, by placing signs and fencing the surrounding area, before commencing installation.
- ii) All staff working on installation to wear suitable PPE including Toe Protective Shoes, Hard Hat and Gloves.
- iii) Any staff or other persons on site, not working directly on the installation, to be kept away from the installation.
- iv) Ensure adequate personal and equipment are on site to handle and support the structure whilst it is being assembled.

## 2 SPECIFICATIONS

HAGS SMP 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 Free Fall Height of the equipment.

Constructional Space 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.

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.

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.

## 3 PREPARATION

All equipment assembly and fixings must conform to EN1176.

**Tools / ancillary equipment:** 10m tape measure, Spirit level, Torque wrench, Step Ladder, M10 Torx tool (Supplied with unit).

### 3.1 ESTABLISH 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 Free Fall Height of the equipment.



### 3.2 MARK OUT HOLES

Consult HAGS SMP layout drawing for structure position on site. **See page 3** for concrete foundation spacings.

**NOTE:** This is a minimum guide only.

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

### 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.

## 4 INSTALLATION & ASSY PROCEDURES

- i) 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 etc. Excavate the holes. **See page 3**
- ii) Assemble Top Curved Beam (item 1) and End Curved Leg (item 2) to Curved Support Leg (item 3) using 4 off M20 Saddle Washers (item 11), 2 off M20 x 130 Hex. Bolts (item 14) and 2 off M20 Hex Nut (item 15). Fully tighten bolts to 170Nm torque. Peen over thread ends, ensuring that all sharpe edges and burrs are removed. **(STEP 1)**
- iii) Repeat the above procedure to other end to complete frame 1. **(STEP 2)**
- iv) Repeat processes ii) and iii) to create frame 2. **(STEP 1 & 2)**
- v) Position completed frames into the excavation referring to the site layout, shim as required and check its position and orientation. Ensure the post is plumb and square. Use suitable props to hold legs safely in position.
- vi) Ensure when frames are positioned parallel to each other that the bearing blocks on the Top Curved Beams (item 1) are pointing inwards. **(STEP 2)**
- vii) Position Cross Beams (item 4) between the two frames and retain using 4 off Gaskets (item 10), 8 off M10 x 40 Resistorx Bolts (item 16), 8 off M10 Saddle Washers (item 12) and 8 off M10 Shockproof Washers (item 13). Fully tighten bolts to 20-25Nm torque. **(STEP 3)**

**NOTE: It is very important to check that the legs are in correct relative position to ensure the correct assembly of the Rope Seat & Chain Assembly at a later time. Measure the height of the centre of the Top Curved Beam (item 1) on the frames, to the 0.0 level. See page 3.**

- viii) Fill the holes with concrete to the required level, **(See page 3)** 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. **(STEP 4)**

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

- ix) Keep installation off limits to the public until the concrete has completely cured. (Recommended initial curing time is 48 hours)

- x) Attach Chain Assembly (item 6) to Rope Assembly (item 5) in 4 places using 4 off Coupling 5mm (item 7). **(STEP 5)**
- xi) Attach Chain Assembly (item 6) to each Top Curved Beam (item 1) by sliding shackle (item 8) through last chain link on each length. The shackle is then attached to each bearing block through use of shackle bolt. Hand tighten shackle bolt so that hole in the bolt aligns with the hole in the shackle and then fit the Sel-Lok-Pin (item 9). **(STEP 6)**

## 5 POST INSTALLATION INSPECTION

<b>CHECK</b>	<b>CHECK</b>	✓
1 All fixings are tightened to the correct torque setting and have no protruding sharp edges.	<input type="checkbox"/>	
2 Paint work is not damaged (Any making good should be carried out using the procedure in the Inspection and Maintenance instructions).	<input type="checkbox"/>	
3 Sel-Lok-Pins are inserted.	<input type="checkbox"/>	
4 Swing Shackles move freely.	<input type="checkbox"/>	
5 Concrete foundations are secure.	<input type="checkbox"/>	
6 Concrete has a water shed away from legs.	<input type="checkbox"/>	
7 Adequate provision of impact absorbing surfacing and no trip points within the 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"/>	