

**Product information and design reasoning for :-**

## **Moonwalker**

**Product Number**

**IP03**



The Moonwalker roundabout revolves around a central point at a fixed angle. Users can lie on the dish and spin or be spun round or they can walk or run on the soft surface spinning the dish as they go.

## **Materials**

All products are designed to have the minimum amount of components for ease of assembly and to prolong the working life of the equipment

Steel is widely used throughout the range for its structural properties and manufacturing flexibility. Moulded plastics and HDPE are also used in the skills /science products to offer a more tactile surface.

Our standard warranty on steel and structural elements is 10yrs with a 3yr warranty available for moving /wearing parts.

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## Classification compliance as per BS EN 1176 2008

BS EN 1176 part 5 Additional specific safety requirements and test methods for carousels

As per BS EN 1176 , the definition of a carousel is given below :-

### 3.1

#### **Carousel**

playground equipment intended for more than one user, that rotates around a central vertical axis without oscillation

As the unit does rotate it is clearly defined as a roundabout .

**BS EN 1176 part 5 Additional specific safety requirements and test methods for carousels**

### Classification

### 3.6

#### **Carousel type E**

giant revolving disks

giant revolving disks are carousels having an inclined axis (as specified in 4.5) whose user stations are not clearly definable (see Figure 5)

The moonwalker does not fit this criteria as it is not inclined at an angle of greater than 5° from the vertical

### Speed

#### **4.6 Speed of rotation**

Carousels that use a mechanical advantage to raise the speed, e.g. pedal or hand wheel driven, should be so designed that the maximum speed at the periphery, under normal conditions or reasonably foreseeable conditions of use, is not more than 5 m/s.

Due to the unit being on a near horizontal plane the user will not be able to use their body weight as an advantage to rotate the unit faster.

### Ground clearance

#### **5.5.3 Underside**

The underside of a giant revolving disk shall be a continuous smooth surface with no radial variations to the ground clearance.

The unit is not defined as a giant revolving disk , but does comply where relevant

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## 5.2 Carousel type B (classic carousel)

### 5.2.1 General

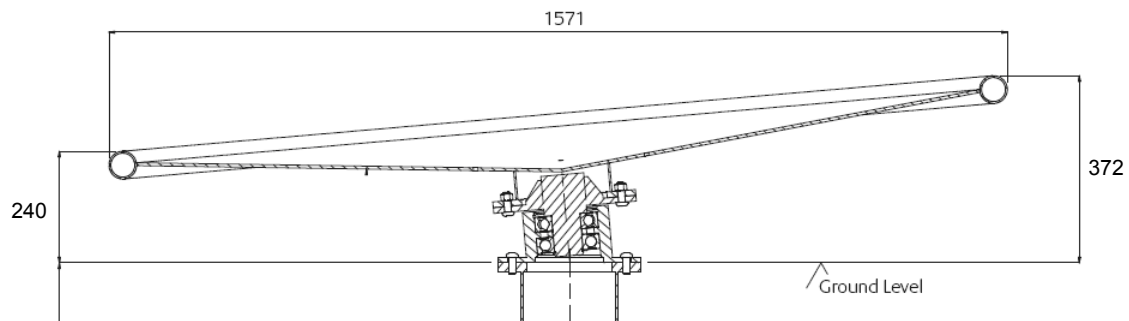
To prevent risks occurring from such hazards, carousels shall conform to 5.2.2 to 5.2.6.

### 5.2.6 Rotating platform over 110 mm without skirt

For rotating platforms over 110 mm the underside of the carousel platform shall be a continuous smooth surface.

The distance between the smooth surface and the ground shall either be constant (Figure 8b)) or decrease in a radial line from the perimeter to the axis (Figure 8c)).

Due to a lack of classification, that the moonwalker is neither a Type B or a Type E it is a logical approach to follow 5.2.6 and the unit is constructed with a decrease in the radial line.



### Surfacing

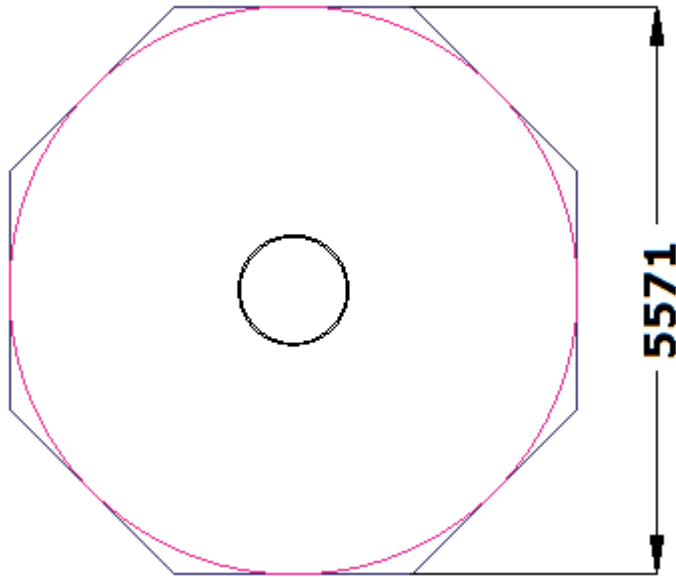
As the foreseeable speed attained and the lack of inertia created in the horizontal, it has been designed to have 2m of surfacing outside its furthest perimeter, as per :-

### 4.3 Free space/falling space

Unless otherwise specified, the free space/falling space shall be as follows:  
c) to the side of the carousel, at least 2 000 mm;

The free height of fall will be 240mm on the lowest edge and 412mm when elevated at 5 degrees, 785.5mm from the central axis. This is to reduce the risk of a head entrapment.





The equipment has been designed to minimise the risks where possible by either designing the risk out or by the incorporating of the standards where possible to reduce the risk in doing so creating a piece of equipment with a low risk rating. It would be my recommendation that this item of equipment is installed using loosefill safer surfacing.

As per the standards

: - the aim is first and foremost to prevent accidents with a disabling or fatal consequence, and secondly to lessen serious consequences caused by the occasional mishap that inevitably will occur in children's pursuit of expanding their level of competence, be it socially, intellectually or physically.

A handwritten signature in black ink, appearing to read 'John Bedford Clark'.

John Bedford Clark DipSM MIIRSM  
Rynat Limited

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