



# GUIDE FOR CONTROLLERS

## SAFE USE OF INFLATABLES



## INTRODUCTION

This information sheet uses the applicable parts of BS EN 14960-1:2019 in respect of registration requirements, testing, installation and supervision of inflatable play equipment. Controllers have to comply with their duties under Sections 2 - 6 of the Health and Safety at Work etc. Act 1974. Operators need to take note of the relevant sections of the Provision and Use of Work Equipment Regulations 1998 (PUWER) and all other regulations that apply to the Controllers business.

## DEFINITIONS

**Inflatable devices** - Fairground equipment consisting of air-filled structures designed to allow users to bounce, slide or climb on them. They are made from flexible fabric, kept inflated by one or more blowers and rely on air pressure to keep their shape.

**Controller** - The person, organisation, or hirer (those who hire to others) having the overall control, including responsibility for maintenance, of the inflatable device.

**Operator** - The person over the age of 18 and appointed by the controller to be in charge of the operation of the inflatable at any time when it is intended to be available for public use.

**Attendant** - Any person over the age of 16 and appointed to work under the control and direction of an operator to assist in the operation of the inflatable device.

## Duties of controllers and operators

Owners or operators of inflatable devices will need to carry out a risk assessment of their activities to determine the control measures necessary to avoid risk or reduce risk to acceptable levels. This is relatively easy to do using the manufacturer's information and instructions for safe operation. Carrying out a suitable and sufficient risk assessment is a requirement of the Management of Health and Safety at Work Regulations 1999 (as amended)



# EQUIPMENT CERTIFICATION

There are two schemes available for the inspection and certification of inflatable play devices; the Amusement Devices Inspection Procedure Scheme (ADIPS) and the Performance Inflatable Play Accreditation Scheme (PIPA). Generally inflatables found at traditional fairgrounds and theme parks will have been tested under ADIPS, while inflatables found at galas, fetes, hired for domestic parties etc. tend to have been tested under PIPA. Both schemes allow operators to comply with health and safety law.

An inflatable tested under either scheme should have a safety certificate issued by an independent examiner. Each certificate will have a unique number. If there is any doubt over the status of the certificate, it can be confirmed by contacting the **ADIPS Bureau (Tel: 0191 516 6381 / E-mail office@adips.co.uk)** or in the case of PIPA by checking the tag number of the device against the database at [www.pipa.org.uk](http://www.pipa.org.uk). Further enquiries may be directed to **PIPA at info@pipa.org.uk or via Tel: 01684 252910**. If neither scheme has been used the controller should be able to demonstrate that they have taken equally effective measures to comply with their legal obligations.

**The PIPA scheme currently only covers equipment within the scope of BS EN 14960 - 1:2019.**

**The PIPA scheme is designed to help you meet your obligations under Health and Safety legislation and is considered to be 'best practice'. The Health and Safety at Work etc. Act 1974 and attendant regulations require all inflatable play equipment that is "designed to be used by members of the public for entertainment purposes either as a slide or for bouncing upon" to be tested at suitable intervals by a competent person.**

**Bouncy castles, inflatable slides and obstacle courses are covered by the PIPA scheme; bungee runs and rodeo bulls are not.**

## Regular Inspection of Equipment

In addition to the certification of inflatable devices, The Provision of Work Equipment Regulations 1998 require inflatable devices to be maintained and inspected at suitable intervals to ensure they remain in a good order and state of repair. Any deterioration in the device should be detected, and remedial action taken, in good time.

## Testing of Equipment

Each inflatable must be tested at suitable intervals, which is usually once every 12 months, by a suitably competent person. Inspectors registered under the Register of Play Inspectors International (RPII) and ADIPS Bureau are accepted as competent for this purpose.



# Daily checks

Checks should be carried out before the first use on any day, using advice provided by the manufacturer in the operations manual. These checks should include:

- The site remains suitable, with crowd control measures in place if appropriate;
- Anchorages are intact, protected where necessary, and ropes not worn or chafed;
- The anchor system effectively secures the inflatable device to the ground;
- There are no significant holes or rips in the fabric or seams;
- The correct blower specified for the device is being used and the air pressure is sufficient to give a reliable and firm footing. Internal pressures should be checked at regular intervals with a manometer;
- There are no exposed electrical contacts, no visible damage to electrical cables, plugs, sockets and switches, the installation is not being over-loaded and is adequately RCD protected, and the installation is suitable for the environment it is being used in;
- If an internal combustion engine is used, that the fuel cap is placed firmly on the fuel tank and any reserve fuel tank is suitable and remains in a safe position;
- Bolts and screws of the blower are properly secured and robust guards are secured over the air inlet and outlet;
- The blower/inflation tube connection is in good condition and is firmly fixed to the blower;
- The blower is positioned correctly, adequately protected or guarded and is not causing a tripping hazard;
- Rules of play are clearly displayed (e.g. remove shoes; remove all sharp, hard and dangerous objects; do not eat, drink or chew gum whilst using the inflatable).
- The maximum fall-off height on all open sides is no greater than 750 mm;
- All hard landing surfaces are covered by with a soft landing material such as dense gym mats, or equivalent material, of at least 25 mm thickness extending for a distance of at least 1.2 m from the open side;
- Safety mats used indoors are fire-resistant.
- Never allow an inflatable device to be used until any defects identified during the daily checks are rectified.





# Safe Operation of the Inflatable

## Securing the inflatable:

It is essential for the safe operation of a device that the manufacturer's instructions regarding the use of anchorage points is followed. Where the ground is suitable, the device should be secured with ground stakes. Some equally effective method can be used on hard standings, e.g. attaching the anchor ropes to fittings already in the ground, sandbags or other weights, if the load tolerance of these items is known. Any ballast system used instead of ground stakes must allow the angle of the tether to the ground to be maintained between 30 and 45 degrees and be capable of withstanding a force of 1600 N or 163Kg to each of the anchor points provided.

Suitable ballast could be made up of (for example)

- Sealed, secure water filled containers – with appropriate fixing point & weighing a minimum of 163kg
- Ballast bags, sandbags or similar – with appropriate fixing point & weighing a minimum of 163kg
- Concrete blocks – with appropriate fixing point & weighing a minimum of 163kg

**The use of fixed structures (e.g. fence posts, benches), or large mobile objects such as cars/vans, with unknown load tolerances must not be used to anchor inflatable devices. Ropes and straps must be in sound condition and have no superfluous knots; all linking devices must be close such as D shackles or screw gate carabiners.**

For further information please visit [is05-securing-inflatables-on-hard-standing-outside.pdf](https://www.pipa.org.uk/is05-securing-inflatables-on-hard-standing-outside.pdf) (pipa.org.uk)

## Windy conditions & inclement weather:

Inflatables should not be used when the wind or gusts are in excess of the maximum safe wind speed specified by the manufacturer. The industry recommends a maximum wind speed of Force 5 on the Beaufort scale of 30-38 kph (19-24 mph). Force 5 is a fresh breeze when small trees in leaf begin to sway; whereas Force 6 is a strong breeze when large branches are in motion and umbrellas can only be handled with difficulty. Weather forecasts should be obtained from the Meteorological Office ahead of inflatable amusement devices being used outdoors, and wind speeds must be regularly monitored with an anemometer.

## Other hazards:

The controller or operator should ensure the inflatable device is sited well away from possible hazards such as overhead power lines and obstacles with hazardous projections (e.g. fences). If the ground surface is abrasive, oily or dirty, a ground sheet should be used to prevent wear and tear of the base material. Ropes and straps must be positioned or protected to eliminate trip hazards.



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# Supervision

The controller should determine the minimum number of attendants needed to operate the device safely and ensure that at least these numbers of attendants are on duty when the device is in operation. When deciding how many attendants are required, the controller needs to consider factors such as the number of people using the device; the age of the users and the environment the inflatable is being used in. Attendants should be aged 16 years or over and the operator should be at least 18 years old.

# Crowd control

If the risk assessment process identifies that control measures are required to safely manage large crowds in the immediate vicinity of the inflatable, crowd control barriers should be provided by the controller. Barriers should be at least 1m high and be capable of withstanding people leaning on them, or being pushed against them. The perimeter fence should be at least 1.8m to 2.5m from all closed sides, and 3.5m to 4m from any open side of the inflatable. The gateway should be 1m wide. Where the public does not have access to the sides or back of the inflatable, or crowd pressures are not anticipated, then a lower standard may be acceptable.

# Training

If the controller is leaving the private event, you must brief the person who has hired the inflatable from you and complete a thorough handover to ensure that all operators receive effective training in the working of the device; including:

- The method of operating the device;
- Safe methods of assembly/dismantling, where applicable; and how to undertake a daily check;

The controller should ensure that all operators and attendants receive effective training in the operation of the device including:

- Safe entry/exit for users;
- Safe anchoring of the inflatable;
- Crowd control measures and barrier systems;
- Measures to be taken in the event of power failure;
- Procedures for reporting accidents, defects or breakdowns;
- Your contact details in the case of an emergency.



## Accident Reporting

It should be ensured that in the event of an accident any casualties are dealt with first. Any accidents which cause injury, including acts of violence and dangerous occurrences should be notified to the enforcing authority by the “responsible person” (who is likely to be either the controller or the operator).

Further information is given in the HSE publication” A guide to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 can be found at <http://www.hse.gov.uk/riddor/index.htm>

## Sources of further information

**PIPA Inflatable Play Inspection** - <http://www.pipa.org.uk/>

**Amusement Devices Inspection Procedure Scheme (ADIPS)**  
<http://www.adips.co.uk/>

**HSE website** – [www.hse.gov.uk](http://www.hse.gov.uk)

**Management of Health and Safety at Work Regulations 1999**  
<http://www.legislation.gov.uk/uksi/1999/3242/contents/made>

**Provision and Use of Work Equipment Regulations 1998 (PUWER)**  
<http://www.hse.gov.uk/pUbns/indg291.pdf>

**HSE Information Sheet – Safe use and operation of play inflatables, including bouncy castles** -  
<http://www.krmgroup.com/PDF/HSE-INFLATABLE-GUIDE.PDF>  
<http://www.hse.gov.uk/entertainment/fairgrounds/faqs.htm#inflatables>

**Fairgrounds and Amusement Parks: Guidance on Safe Practices HSG175**  
<http://www.hse.gov.uk/pubns/books/hsg175.htm>

**BS EN 14960 - 1:2019 Inflatable play equipment. Safety requirements and test methods (for manufacture and operation).**

**Register of Play Inspectors International - Making Play Safe**  
[www.playinspectors.com](http://www.playinspectors.com)



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