

<http://www.br-inflates.co.uk/safety.htm>

Safe operation of inflatables and bouncy castles UK

It is essential for the safe operation of a device that the manufacturer's instructions regarding the use of anchorage points should be followed. The device should be secured to the ground with ground stakes, where the ground is suitable. Some equally effective method can be used on hard standing, eg attaching the anchor to fittings already in the ground, or to sandbags or other weights, if these are capable of taking the load.

Inflatables can be tied to a vehicle or other movable machinery, providing the vehicle or machinery is immobilized and under the control of the operator.

Inflatable should not be used when the wind or gusts are in excess of the maximum safe wind 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. Whistling can be heard in telephone lines and umbrellas can only be handled with difficulty. Weather forecasts can be obtained from the Meteorological Office.

The controller should ensure that the inflatable device is sited well away from possible hazards such as overhead powerlines and other obstacles with hazardous projections (eg 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.

The controller should determine the minimum number of attendants needed to operate the device safely, and ensure that at least this number of attendants are on duty when the device is in operation. In deciding how many attendants are required, the controller needs to consider matters such as the number of people using the device, the age of the users and the type of environment in which the inflatable is being used. Attendants should be 16 or over and the operator should be 18 or over.

If the risk assessment carried out by the controller shows that control measures are required to handle large crowds in the immediate vicinity of the inflatable, then crowd control barriers should be provided by the controller. They should be at least 1 meter high and capable of withstanding people leaning on them, or being pushed against them. 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 is acceptable.

The method of operation drawn up by the controller should ensure that users are admitted to the inflatable in a controlled and safe manner. In particular, the operation and attendants should follow out the following instructions.

Ensure that users remove footwear (except socks) and any other hard, sharp or dangerous objects (such as buckles, pens, purses, badges ect). Glasses are best removed.

Do not allow users to consume food or drink or chew gum on the device.

Do not allow users to obstruct the entrance or exit of any inflatable device. Do not allow anyone to play on the step of front apron of the bouncy castle.

Do not allow users to climb or hang on the walls.

Do not allow users who do not conform to height restrictions to use the device.

Keep the entrance/exit areas clear of onlookers so that the operator or attendant has a clear view and can ensure that users enter/exit safely.

Keep users of the device when it is being inflated or deflated. Deflate the device when not in use.

The operator and attendants should watch the activity on the inflatable constantly. They should use a whistle or other signal and take action at the first sign of any misbehavior. Somersaults and rough play should not be allowed.

It is the operator's responsibility to ensure that the equipment is not overloaded with users. Larger, more boisterous users should be separated from the smaller ones. The number of users at any one time should be limited to allow each user enough room to play safely.

Recognised hazards

The following hazards have been known to occur:

Instability and blowing away in windy conditions.

Situations caused by loss of pressure as a result of Failure of fabric, zips and seams;
Failure or loss of power of the blower; Disconnection of the blower; or Litter blocking the air intake and/or vents.

Falls from the structure;

Tripping (particularly over anchorage);

Injury to users caused by boisterous behavior, overcrowding or not separating larger users from smaller ones;

Access to dangerous (parts of) machinery (eg inadequately protected, or unguarded, blower units);

Electrical hazards (eg shock or burns);

Inadequate means of escape in case of fire;

Lifting injuries caused by manual handling;

Injuries to users caused by wearing inappropriate clothes and shoes;

Suffocation; and Entrapment.

What to do if defects are found

If at any time a defect is found which could possibly lead to danger, the public should not be allowed to use the device until the cause has been identified and remedied. This may include checking all similar components. If there is any doubt about continued safety, the device should not be used until an inspection body has confirmed that it is safe to do so. Keep records of all incidents.

Annual Inspection

Each inflatable should be thoroughly inspected annually or at least once every 14 months. Annual inspection needs to include checks of the following:

Previous inspection reports and certificates where appropriate;

Provision of suitable guards at the air inlet and outlet of the blower;

Condition of blower impeller and fan casing;

Condition of blower's electrical wiring;

Condition of all electrical installations;

Anchorage system for wear, rips or chafing;

Type and number ect of ground anchorage or ballast for conformity with design specification;

Structure for wear or rips in the fabric;

Walls and towers (when fitted) are firm and upright;

Pressure is sufficient in the bouncing area and at the step/front apron to give a reliable and firm footing;

Internal ties for wear and tear, particularly at loose or exposed ends;

Bed seams, wall to bed seams and wall-to-tower connections;

Identification of the device; and

If used on a fixed site, the location.

Inspections of some of these features may need to be done inside the device. The above list is not exhaustive. Annual inspection needs to include any part of the inflatable and its ancillary equipment, which may affect the safe operation of the device.

Daily checks

Checks should be carried out before the first use on any day. These should include checking that:

The site remains suitable; with crowd control measures in place if appropriate;

Anchorage are in tact, and ropes not worn or chafed;

Anchor system secures the inflatables 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;

There are no exposed electrical contacts, there is no wear on electrical cable, and plugs, sockets and switches are not damaged;

If an internal combustion engine is used, that the fuel cap is placed firmly on the fuel tank and any reserve fuel tank remains in a safe position;

Bolts and screws of the blower are properly secured and that 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; and

The blower is positioned correctly, adequately protected or guarded and is not causing a tripping hazard.

The inflatable should not be used by the public until any defects identified in the daily check have been rectified.