



Inflate Structures

Guidance Notes on
Handling Inflatable Structures

01 Introduction:

Inflate structures are designed and produced to the highest standards and by following the guidance notes and cleaning instructions your building will provide you with many years of joyful service.

However as with all outdoor events it is very hard to guarantee against the pick up of any dirt or accidents occurring. As such we have the following guidance notes on cleaning your structures. If you are uncertain at all about how to do this we offer our own cleaning service and online support as needed.

02 Installation – General notes:

- Wherever possible, only pull the structure on the webbing loops, pulling two at a time to spread the load.
- Do not pull on the zips or put any unnecessary load on them.
- Ensure hands are clean at all times and that shoes are worn as little as possible throughout the install.
- Remember this structure is only made of fabric. It may be heavy, so the temptation is to pull really hard, but the fabric is not indestructible. If you are all pulling on it and it doesn't move, it probably means you're approaching it the wrong way, or it's snagged on something – always check this first. If pulling out a large structure weighing over 100kg ensure people are spread along the pull line to spread the load.
- Ensure your ground is clean at all times. The usual culprits for snagging include screws, nails and staples. Imagine being dragged, bare bottomed across the floor – once you're happy you could do this without injury, then so can your structure. Ground sheets can be cleaned by using the fans to blow all dust and debris away. Inflate also supply special petrol operated blowers if required. Any marks on ground sheet can transfer onto structure during installation, try to remove them using mop or scrubbing brush.
- Try to roll out and inflate the structure on the same day to avoid it getting damp. If left laid out overnight, condensation can build or it may get rained on.
- If the structure is inflated whilst wet, do not use all fans at first, as the water will have swollen the thread, sealing the seams. This will avoid any unnecessary over inflation. Once you are happy that the structure can take more fans, slowly turn them on one by one until it has reached optimum inflation. The fans can only inflate to a single pressure so once fully inflated over inflation should not occur provided the correct number of fans are used. If at all unsure refer to specific notes on the structure you have or request guidance from Inflate.

03 Troubleshooting:

The structure is not inflating...

Are the fans on? Check your power.

Are the fans attached properly?

Are all the air release zips closed?

The structure is inflating, but not all the way...

Are all the fans plugged in and switched on?

Are the air intakes on the fans clear and unobstructed?

Are all air release zips closed?

Have any of the fan ports been left open?

Check around the structure to make sure there are no rips or slashes in the skin.

Do you have enough power to sufficiently run all the fans? Check with your onsite electrician.

The structure is inflated, but the top wont pop up...

Sometimes our domes need a little help just to pop them into position. This can usually be done with a long handled tool. Our favourite is a broom (the wider the head, the better) with a clean cloth wrapped around the bristle head. Whatever you use, make sure it has a large, flat end that isn't going to damage the inflatable.

If this doesn't work, check that the ballast has been positioned correctly – if the base of structure wall is spread apart too far, it just won't be able to pop up.

The structure specific guidance notes will have information on this. Bespoke structures may require special notes from Inflate.

If this still doesn't work, then check all your fans and air release zips again.

04 During event:

Our structures are relatively low maintenance whilst they are up, but there are just a few things you should know...

Check fans regularly

Make sure that the air intakes are unobstructed. If they are covered, not only will the structure not inflate properly, but the fan will not self cool, and could burn out.

Sometimes plastic bags and other objects get sucked onto the air intake, so it is worth just one person doing a check around the structure every 30 minutes plus subject to site conditions.

Fitting out your structure

Ensure that anything you furnish the structure with is placed at least 500mm away from the wall. This is so that any deflection from wind will not blow the structure into your interior fit out.

In the event of deflation

We recommend in the interest of public safety, that the structure is evacuated. Because of this, it is worth considering everything that goes into the structure for your exhibition. Anything with sharp edges could potentially rip the structure if it were to come down.

In the event of strong winds

Structures are designed as rapid deployment temporary structures take gusting wind speeds of up to 30mph. If wind speeds exceed this, we would recommend that the structure is evacuated in the interest of public safety. Once evacuated leave the structure inflated – it is at its most structural whilst inflated. The structures are capable to withstand higher wind and stay secured to the ground. Higher functional windloads will be with internal trussing or high pressure airbeams.

Please refer to Inflate for information on trussing and higher wind loads as required.

Leaving the structure overnight

Zip in night sheets are provided to close the structure overnight. As with all flexible membrane structures, vandalism and break-ins are possible. It is therefore recommended that night time security staff be employed to monitor the structure if being left in a public place. This person should also be given this checklist to check the fans and wind speed etc. whenever possible.

05 Shipping & Transport

When structures are packed in bags please ensure that all elements of the structure are securely tied in side with no fabric poking out. Structures can be wrapped in cling film for extra protection. If folk lifting and shipping with third party ensure all structures are secure on pallets and will not be damaged by the use of fork lifts.

Inflate can provide fold down shipping and transport crates in addition to the standard heavy duty packing bags for extreme shipping situations.

06 De rigging the structure:

1. Do not turn the fans off yet!
2. Remove everything from inside the structure. Sweep through and ensure the site is clear.
3. Lay out the groundsheet inside the structure and tuck underneath the walls. As with the install, make sure groundsheet is clean and shoes are taken off, or overshoes are worn.
4. Check nobody is inside the structure, and then switch off the fans.

Whilst the structure is deflating, you can do the following...

- Untie fans and remove from fan ports and pack away – leave fan ports open.
 - Open all air release zips and remove ballast – leave zips open.
 - Tidy away cabling and any electrical items.
 - Unzip closures and tunnels – use as much care unzipping them as when you attached them. As with structure, pack up accessories on a ground sheet.
5. Leave the structure to deflate.

The structure should be left to deflate for as long as possible – we recommend at least 1 hour. The longer you leave it, the easier it will be to fold up.

As with the install, before handling the inflatable, ensure everyone's hands are clean and grease free, and if possible, wear disposable latex gloves. And again, make sure that nobody is wearing shoes on the structure. To avoid contamination, one person should remain on the structure while another stays off to pass cleaning equipment.

6. Roll the structure up.

Please follow the rolling diagram for details on how to do this. Whilst rolling the structure If any dirt is seen this should be cleaned as you go as this will prevent the build up of mold during long term storage.

It is important to roll up the structure in a way that allows you to tell where the doorways and tubes are. This will save you time and unnecessary dragging about next time you set it up. Start by taking opposite edges of structure into the mid-line from both sides, continue folding inward to produce a long sausage keeping in mind it's width needs to fit into packing bag.

When you get the structure into a big long sausage, and are about to do the final roll, start rolling from the door end. This way when you finish rolling at the other end, the air can escape out of the open fan ports.

7. Packing the structure away.

Use the supplied packing bag to pack it away. Once inside the bag, the structure should be strapped in tightly using the attached webbing straps and buckle loops.

Inflate also supply upon request shipping crates for guaranteed product safety. Please refer to Inflate UK for details.

If using a forklift or crane to lift the structure, ensure all webbing straps are also tied off as an extra precaution to prevent the webbing slipping loose.

8. With the structure out of the way, you can now fold the ground sheet up. Refer to the ground sheet rolling diagram.
9. If the structure was packed wet...

Whenever possible, try to pack the structure away in dry conditions – delay the de-rig if necessary. If this is not an option, and you are forced to pack the structure away wet, then you should try to get it inflated again and dried out as soon as possible, within 1 week from packing date especially if contaminated with any dirt as well.

If the structure remains packed away and wet for long periods, there is a danger of mould forming on the skin, which will be difficult to clean off but not impossible – please refer to cleaning instructions.

07 How Else Can We Help?

Branding

Branding can be applied permanently to the structures as screen print or off set digital printing at the source of production. Temporary branding can be added as vinyl or Dacron adhesive panels to pre made structures.

Please note that not all artwork is possible to apply to the structures and samples of proposed artwork should be supplied as soon as possible for review by Inflate for sizing and positioning requirements.

Bespoke Colours

Bespoke colours of structures can be supplied, but this will increase the general lead-time by c.30 days. All the designs can be manufactured as black out structures with black or white interiors for enhanced laser and projection effects. The Inflate 10m and 14m domes can have fully branded and coloured over covers joined to them. These over covers will create a smoother effect to the domes.

Fabrics and Materials

All the structures are constructed from Rip Stop Nylon and Polyester Re enforced PVC. Other fabrics can be used in the production subject to the tests and costs.

All fabrics are tested for performance of flammability for textiles used in the construction of marquees and similar textiles structures to standards:

BS 7837:1996 / BS 5438:1989 / Test Method B
DIN 4102-B2 and DIN 4102-B2

*** If there are any fabric test requirements in addition to these – please ensure this is advised prior to ordering as additional treatments and costs may need to be applied.**

Lighting

Inflate offers a range of LED and Florescent lighting to enhance the evening effect of the structures. Florescent Internal lighting provides lower wall ambient lighting effect. The LED lights can be used as colour changing spot lights or wall washers. The internal trussing systems can be used to mount lighting for specialist lighting effects. Inflate will liaise with Lighting specialists to help tailor their buildings where possible to enhance this product offer.

Weather Conditions

Inflate has no control over the weather conditions during use and advise all events are monitored for extreme weather. All the structures are designed as airflow systems and this acts as an air repulsion to stop water from coming into the structure allowing it to run down the outside of the structure to the ground. As with all outdoor events this is 99% effective in most situations.

Whilst none of our structures have been engineered for specific snow loads, we have been able to maintain our structures in snow conditions by increasing the number of fans used, installing additional trussing support as well as maintaining a higher temperature internally within the structure. However, loads cannot be guaranteed and would need to be reviewed on an individual project, condition and location basis.

Wind Loading

We recommend that all of our structures can be used in wind loads of up to 30mph based on the standard ground fixing specified in this document.

The structures can and will stay stable in higher wind loads with extra ground fixings and can be further enhanced with internal trussing to achieve full building regulations for permanent installations. The structures are either secured to the ground using internal ballast which fits inside the walls of the structures via a zip opening or by tying to ground anchors such as 'platypus' anchors

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or 'terra' bolts. All the structures have 50mm webbing tie loops at approx 450mm around the outer parameter of the structures. Each of these tie points are capable to hold 150kg load.

These structures have been designed for the demand of temporary events to offer efficient installation and de rig time. We recommend a 500kg ground anchor every 2m around the parameter of the structures. These are then connected via 5 ton webbing straps. Please refer to build manual. The higher the wind load the greater the deflection in the structures. This will be subject to the form and the direction the wind comes from. We recommend that any internal fit outs of the structures have no sharp objects closer than 1.5m to inner membrane at heights over 2m unless internal trussing is used.

As a company Inflate cannot be responsible for weather conditions and the health and safety on site is always the responsibility of the projects site manager.

Flooring

There is a range of flooring we can offer: Snap Lock flooring offers a good solution for quick installation of plastic flooring to cover grass. This will stop build up of mud and dirt. It will follow the contours of the grass and should not be expected to give a flat totally level floor. The tiles are 15mm thick. The floor can be further enhanced with carpet or other top finishes. 100mm wooden ply decking shaped to the profile of the structure offers the best opportunity for creating a solid level floor for the buildings. The flooring is leveled using packers up to 150mm. For any installation where the undulations are greater than this may require specific design solutions to achieve a level floor? The flooring is able to have solid wooden doors and other such features combined with it. This flooring can be covered with exhibition carpet / rubber flooring and have recessed lighting etc.

Aluminum adjustable staging is available in various square and rectangular sizes of 1220 by 1220mm / 1830 by 1220mm / 2440 by 1220mm.

Please note the staging cannot be shaped to the profile of all the inflatable structures. The stage heights start at 800mm and the loading capacity varies from 350–750kg subject to the height and design.

Trussing

All Inflate structures are designed to free stand without internal trussing. The internal trussing we offer has been designed specifically for each of the structures as an architectural enhancement that can be used to enhance the interior with lighting / projectors / plasma screens acoustic speakers etc. The Trussing will further aid the wind performance of the buildings by reducing any deflection that could occur in high wind loads. Structural trussing for permanent installations is developed and produced upon site specific requirement and request only.

Connectability

All the Inflate Domes and Tridents have a standardised tunnel connection system for joining them together in any combination possible.

Doors & Closures

Most of our structures come with light weight zip in night sheets and inflatable zip in closures. The structures can also be fitted with painted wooden doors. These doors come as double or single openings subject to the design, and can have push bar fire latches. The doors are recommended for use with ply decking or aluminum adjustable decking, but can be used directly onto other surfaces subject to site conditions and client expectations. Airclad© doors are available for the higher specification architectural designed solutions.

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Noise Reduction

The outdoor structures use a range of 0.75 or 1.5hp fans. These run at 70–90db and for most outdoor events this sound will dissipate. However, Inflate has developed its own patent pending noise reduction system for the outdoor fans. This will reduce the noise to 50db at source and down to 40 db at 15m. This is on par with standard ambient noise outside a city! The noise reduction units allow the structures to be used as intimate working spaces as well as big launch events and parties.

Transportation

By nature of inflatable products they pack down to a fraction of their inflated size. Transportation can be as simple as putting an OIAB on the back of a scooter to fly across a city to make a presentation. The idea of the pop up presentation with Inflate's inflatable products has so much more theatre than other flimsy alternatives.

The larger the buildings become the bigger these packages are with small vans and trailers offering quick and simple transport solutions. Though the Trident (Inflate's largest structure) weighs in around 1400kg it still packs into a case (2m x 1.7m x 1.4m) and can be transported on a trailer. As your event grows and the demands for flooring and other accessories become larger, the transportation can be simply extended to artic trucks.

Inflate Warranty

Inflate offer a one year warranty which covers the quality of fabric, manufacture and suitability for use, in line with our Inflate Build & Care Manuals. However, due to the nature of use and conditions in which some structures are erected, Inflate reserve the right to inspect, decide and advise on a suitable course of action in conjunction with this warranty.

For further information on this please contact us on info@inflate.co.uk



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