Go-Dome™ Installation & Care Instructions

Inflation, airlock operation, deflation, folding, storage and care



A Standard Go-Dome™ with its airlock door.

About Go-Dome™

Go-Dome™, a division of Avela Global, makes portable planetariums. Go-Dome™ manufactures the domes and works with distributors around the world who integrate Go-Dome™ products into complete portable planetarium projection systems.

A Go-Dome™ is ideal for schools, outreach programs in public places, special exhibitions in science centers, and any venue where an immersive fulldome experience brings the excitement of science to the public.

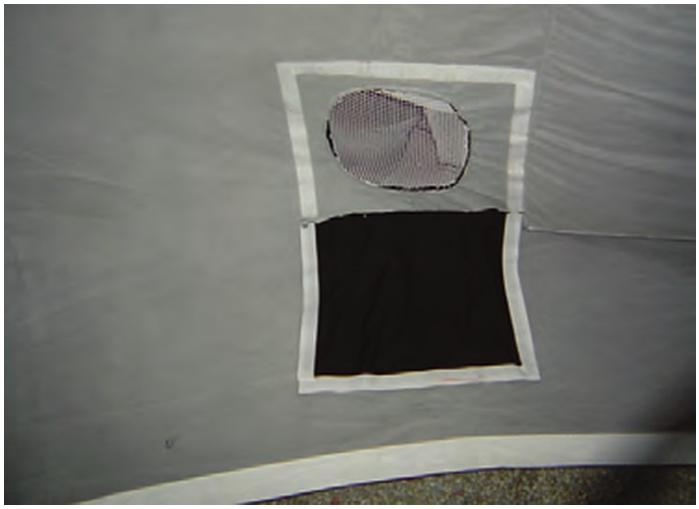
Standard Go-Domes use positive pressure: a fan inflates the dome and the door acts as an airlock, so visitors can come and go without deflating the dome. The constant supply of fresh air keeps audiences cool inside. Go-Dome™ also builds custom inflatable domes on request.

Inflation

1. Make sure the floor where you will inflate the dome is clean.
2. Unroll the dome and spread it into a rough circle, projection surface down.
3. Find the fan intake tube. It is to the right of the door as you enter the dome. Attach the blower fan to the tube. The Velcro tab should hold it securely; if your fan needs it, also wrap a bungee cord around the cloth tube.
4. Find the tubes that branch off the intake tube into the door and into the dome. Reach under the dome where the intake tube branches into the dome and pull the square Velcro flap away from the dome interior. This flap is often closed during folding and must be open so air can inflate the dome. If the door inflates but the dome does not, this flap is closed.
5. Turn the fan on high and support the door, which inflates first. Walk around the dome to check that no air is escaping.
6. When inflation is complete, take a flashlight and enter the dome. Unzip the inner door: reach to the bottom of the door, find the zipper pull tab and unzip upward. You may also need to open the Velcro flap that covers the zipper.
7. Push equipment and chairs under the dome edge or carry them through the door.



Blower fan attached to the intake tube.



Square air intake flap, seen from inside the dome. It must be open for the dome to inflate.



Unzipping the inner door from the bottom.

The airlock door

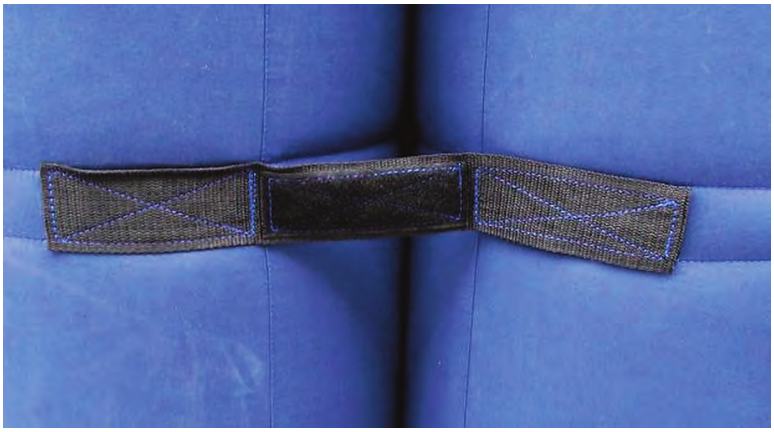
Go-Dome™ invented and pioneered the portable planetarium airlock door. The design allows entry and exit while maintaining positive pressure.

1. The airlock door allows continuous entry and exit without significant deflation.

2. Two pairs of touching inflated door columns keep air in while people pass through. They also form a near-perfect light seal, so people can enter or leave during a presentation without disruption.
3. The inside door flap zips shut for a fully light-tight projection environment.
4. The Velcro strap across the outside and inside door columns gives a light seal when you do not want to zip the inside flap. It also discourages people from entering when the outside door is unattended.
5. The two door vents add ventilation and help regulate door firmness.
6. The bottom door columns attach to the vinyl floor mat with Velcro and can be detached. Release the bottom of each set of columns and spread them apart for wheelchair access. We strongly recommend one person on each set of columns, and practicing this procedure ahead of time.



Visitors entering through the airlock door.



Velcro strap across the door columns.



Inner door zipper.



Base of the door columns, attached to the floor mat with Velcro. Detach for wheelchair access.

Light baffle vents

Two light baffle vents sit opposite the door. They let air escape without letting light in, and they keep the dome from bouncing during a presentation.

- If your fan is slightly underpowered, close both vents to keep air in.

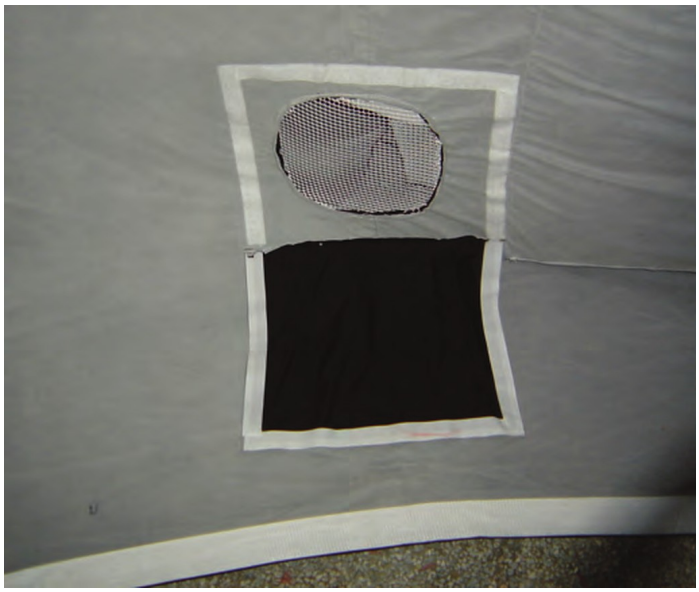
- Open one vent, or partly open one or both, to set the best air pressure during a presentation.
- Even with both vents open, a strong fan can overinflate the dome and make it bounce. This is why we recommend a carpet blower fan with 3 speed settings: adjust the fan and the vents together for the best pressure.



The two light baffle vents opposite the door.

Air Intake Flap

The square air intake flap has Velcro on 3 edges. Detach all three sides for maximum airflow, or attach it partly to direct air left, right or up along the dome. This lets you control how air circulates inside.



Air intake flap detail.

Fan

Go-Dome™ does not normally supply the inflation fan. Carpet blower fans are sold in most local markets, and buying locally is cheaper for distributors and customers.

- For most standard domes, a 3/4 to 1 horsepower carpet blower fan with 3 speeds works best.
- Carpet blowers are rugged, efficient and designed to run quietly, because hotels use them to dry carpets.
- For ringed domes and larger sizes, confirm the correct fan with your distributor before setup.

Deflation and Takedown

1. Remove everything from inside the dome and let the air escape. This is the safest way to deflate. To speed it up, lift the bottom edges of the dome.
2. Wait until the dome is 100% collapsed before folding.
3. Detach the fan. Stretch out the dome with the gray screen inside.
4. Fold the cloth into a long, flat strip about the width of your dome bag.
5. Roll it as tightly as you can, like a sleeping bag, starting at one end.
6. Lay the open bag over the roll, roll everything over, and zip the bag closed. The dome is ready for storage.

Your Go-Dome™ arrives tightly rolled from the factory. Notice how it was folded as you unfold it the first time: that is the most efficient way to refold it. Always roll the dome with the gray projection surface inside. Any folding method is fine as long as you do not stress the fabric by pulling or tugging.

Emergency Takedown in a Power Outage

If the power goes out, the fan and projector stop. Always keep a working flashlight (the one you used to enter the dome).

1. Turn on the flashlight so no one is frightened.
2. Ask everyone to move away from the dome edge quickly while staying seated. Pull any chairs away from the edge.
3. Quickly and firmly pull down on the door vents so the dome rises over the audience and piles up on top of the door. Direct the audience to clear exits under the operator's supervision; practice the emergency procedure before use.

Note: Many customers use this method routinely, but pulling the door vents too hard or too abruptly can damage them. Go-Dome™ recommends flipping the dome this way only in an emergency.

Care

- **Outdoor use:** Go-Dome™ does not recommend or warrant its inflatable domes for outdoor use. Sudden rain, wind and overheating in direct sunlight can damage the dome, and domes used outside are not guaranteed. Customers who choose to go outside do so at their own risk; with proper weighting, domes have worked under a carport, awning or tree, out of direct sunlight. Ringed domes are heavier and more stable outdoors. Go-Dome™ assumes no responsibility for injury or damage to the dome or equipment from weather during outdoor use.
- **If the dome gets wet:** inflate it indoors and let it dry completely. Cloth stored wet can mildew. Mold weakens the glue that holds the cloth strips over the seams and can permanently stain the projection surface.
- **Cold:** never store the dome where the temperature can drop below freezing. The interior flocking loses flexibility and can crack, leaving many pinholes.
- **Lights:** never inflate the dome close to an overhead light. Fire-retardant cloth can still be scorched by a hot light and turn the inside brown.

Cloth Maintenance and Repairs

Most tears come from students pulling on the door as they enter or leave too quickly; the next most common cause is overstressing the cloth during folding. Managing entry and exit and folding carefully will give years of use. Most Go-Domes are still in good condition after 4 years of operation or longer when cared for properly. With heavy use over many years, small repairs are normal.

Go-Dome™ guarantees against manufacturing defects under the written warranty supplied with your order. Cotton and polyester cloth requires normal care; wear and occasional repairs should be expected. Contact your distributor for warranty terms and service.

Repairing a tear

1. Stitch the tear closed with white thread.
2. Cut a patch from the extra dome material supplied with each order.
3. Apply fabric cement to the gray (inside) face of the patch and to the damaged area on the outside of the dome.
4. Wait 15 to 30 seconds until the glue is tacky, apply the patch, and press it down firmly with your fingers to push out air and make a good seal.

Repairing a pinhole

1. Cut a small round patch, about the size of a dime, from the extra dome fabric.
2. Coat the underside of the patch and the area around the hole with fabric cement. Always patch on the outside of the dome, never on the projection surface.
3. When both are tacky (15 to 30 seconds), press them firmly together.
4. The bond becomes permanent in about an hour. Wait about an hour before packing the dome.

Tip: patching is easiest with the dome inflated. If the hole is hard to find from outside, find it from inside and push a needle through it to mark the spot.

Important notices

1. Store domes between 45 and 100 degrees Fahrenheit (7 and 38 degrees Celsius). The flocked interior coating can crack or delaminate if the dome is unfolded while frozen. If the dome is exposed to freezing temperatures, move it to a warm room and let the whole bundle, center and outside, reach room temperature before unfolding. The time needed depends on dome size, how cold it is and how warm the room is, so allow plenty of time.
2. Be careful of overhead lights. Go-Dome™ cloth meets a high standard for fire retardancy (NFPA 701:2023 Test Method 1, PASS), but a hot light near or touching the cloth will scorch it brown on the inside.
3. The dome is stitched cloth and will tear under enough strain. Fold it with care.

Note: Questions, parts and repairs: info@go-dome.com

Placement and anchoring

Use on a clean, level indoor floor. Keep exits and walkways clear and route blower cables to prevent trips. Follow the supplied configuration-specific securing instructions. Do not improvise outdoor anchoring or ballast; inflatable domes are not recommended or warranted for outdoor use.

Cleaning and dry storage

Keep the projection surface protected from dirt and abrasive contact. Remove loose dust gently without scrubbing the flocked interior. Ask your distributor for an approved cleaning method before applying chemicals or wet-cleaning the surface. Never pack the dome damp; inflate indoors until completely dry before storage.