

When purchasing a large portable inflatable screen, it is important to know how to evaluate feature qualities of projection screens from any manufacturer you may be considering.

Most inflatable screens are easily inflated and deflated, and they are ultra-portable compared to aluminum framed screens. Because they all are made from fabric or vinyl, they can all be punctured if proper care is not taken. All inflatables are sold with easy to use repair kits for that purpose. That is where the similarities end, however. Some of the obvious differences can be seen by simply looking at inflated screens. However, here are some very important things you can't see, or may not be thinking of:

Fabrication method and materials. An inflatable screen frame is either sewn or welded.

Sewn frames are usually made of 8 – 16 oz vinyl fabric. The sewing process results in thousands of tiny needle punctures in the seams. A lot of air leaks through these punctures, as well as through the thin fabric. A constant air blower is the only way to keep the frame standing. Noisy blowers detract from the experience, even with heavy “sound dampening” devices.

HF Welded frames are high frequency welded. HF welded frames are typically made of 18 oz vinyl, which will leak some air through the porous material, and must also depend on a constant air blower. HF welded frames on the market do not have back braces. They are not freestanding, and can only stand after being tethered, so cannot be re-positioned after inflation.

Hot air welded frames are typically made of 22 – 28 oz vinyl. No constant air blower is required with hot air welded frames, since there are no microscopic pores that leak air in this material. All seams are overlapped, and all attachment points and seams are reinforced, with no needle punctures. So, hot air welded frames are air-tight – the same construction as a heavy duty boat dinghy.

The welded construction of both HF and hot air welded materials is very dependable. Frames for commercial use should be made of heavy duty material capable of withstanding the abuse associated with frequent use, possibly rugged terrain, or abrasive surfaces. Compare thickness of the material and tear strength (denier) of the polyester scrim inside. Look for minimum 500 denier specifications, with 1000 denier the strongest for this type vinyl.

- Bottom surfaces. When the frame is inflated, it is imperative that there be extra reinforcement, such as grooved rubber anti-abrasion overlays along the bottom of the frame, to protect against damage from rough surfaces, or sharp objects on the ground. Although ground tarps are usually included by most manufacturers, the tarps may be occasionally overlooked by staff in a hurry during set up.
- Positioning after inflation. Most frames have no handles to facilitate lifting and placing in proper position, so they must be dragged into place. Look for a frame with handles that will facilitate easy lifting for positioning, once inflated. Some frames have no back support, so will not stand unless tethered, making them impossible to move after inflation.
- Strength and firmness. An inflated frame should be very taut for maximum strength. Although welded frames have smaller diameter tubes, the frames are stronger and much more firm than sewn frames because they hold a greater volume of air. Strength is important, so that the projection screen surface does not droop or sag at the center of the frame. Only one inflatable frame on the market can ensure this important detail. (Many photos are edited to take this sagging out, so it is difficult to detect in a picture).
- Footprint. If space is limited, be aware of the overall dimensions of the frame, including height, width, and depth of the legs. Typically, tube diameter of hot air welded frames will be approximately **half** the tube diameter of a sewn or HF Welded frame, and can be moved away from electrical outlets, once inflated, for more flexibility with use.
- Mold and mildew. If kept clean and dry, all types of inflatables will resist mold or mildew. But if a sewn frame gets wet and is not dried out thoroughly, it could be susceptible to mold or mildew inside the frame, due to water seepage through the needle holes at the seams. Once inside, there is no way to remove the water completely before mold forms. Choose a frame that is welded air tight, with overlapped seams, so no moisture can get inside the frame.
- Safety. Is the frame safe for use on wet surfaces, such as a pool deck? Choose a frame that does not require constant electrical power. Wet surfaces could be dangerous to your audience if the constant air blower were not adequately grounded. Also, if a sudden wind were to blow the frame into a pool, an attached blower with power cord could be a safety issue. It is very important to securely anchor all sizes of inflatable frames. Be sure the frame has sufficient tethers and the means to secure the tethers to stakes or other tie down ballasts.
- Easily removable screen viewing surface. Is the viewing surface zip-in, or does it require bungee cord fasteners every 8” around the perimeter? A zip-in surface allows quick removal of the screen for cleaning or storage. If a screen utilizes zippers, make sure that there is a means for removing and replacing the screen retainer band, in the event a zipper in the band is damaged. Otherwise the entire frame must be returned to the factory for a very expensive replacement of the zipper.

Now you are ready to easily compare products with the Comparison Chart on the following page...

## Inflatable Screen Comparison Chart



Important Features	Epic projection screens		Other manufacturers	
	Hot air welded	HF welded	Sewn	
Construction method	Hot air welded	HF welded	Sewn	
Fabric	28 oz. vinyl 1000 denier	18 oz. vinyl *denier?	8 - 16 oz. vinyl *denier?	
Overlapped, reinforced seams	√	√	No	
Abrasion resistant reinforcement on bottom surfaces	√	No	No	
Padded handles at each end for easy positioning after inflation	√	No	No	
Air-tight frames – no constant air blower required	√	Constant air blower	Constant air blower	
Can float safely in a pool with <u>no</u> electric power attached	√	No	No	
Zip in screen surfaces for all size frames	√	Bungee cords attach screen surfaces	Some bungee; some zip-in	
Easily removable screen retainer bands for inexpensive zipper repair	√ (patent pending)	No	No	
NO sag or droop at top of screen viewing surface	√	Noticeable sag	Noticeable sag	
Stable, freestanding base with small footprint, for hands-free inflation and efficient use of space	√	Not freestanding	Some freestanding Some are not	
Logo panel for bottom skirt, with your logo full color digitally printed - Included at no charge	√	No	No	
Bottom skirt attachment system for easily attaching sponsor's banners	√	No	No	

\*Varies with different brands and models

Choose a sealed hot air welded frame that is airtight. You will not need the constant air blower, so your screen can be used anywhere...inside or outside...even in the pool! If your screen depends on a constant air blower, and the blower malfunctions, the screen will deflate in seconds and ruin your event!