



Beluga™ is a concertina style flood barrier consisting of heavy duty oversized bags, available either in a Single Compartment (BG1) or a 5 Compartment (BG5) version. Use sand or other aggregate or fill material to fill bags and to create a heavy duty levee to hold back water. Beluga™ Barriers use roughly 1/2 the amount of sand required for an equivalent height sandbag barrier and significantly less labor to position and fill.

Staging and Positioning Bags

- Oversized Beluga™ bags are stored flat on pallets for deployment as needed to mitigate flooding.
- Before deploying, be sure to place the expanded large bags such that the “Water Side” is facing the direction of the expected rising flood water.



Expanding Bags

- Two people should transport each 5 compartment bag into position for expansion.
- One person should use the lifting straps on one side to pull open and expand the bag, while the second crew member pulls in the opposite direction.



Connecting Bags

- Beluga™ bags should be nudged together as much as possible, prior to connection and filling to prevent seepage.
- For an even better seal, and more consistent alignment, we suggest putting polyvinyl sheeting over and spanning bag seams.
- You can also use spring clips, prior to filling, to hold adjacent bags together.



Filling Bags

- Use standard material handling equipment, such as a front end loader (preferred), excavator, backhoe, or skid steer, to load sand or other earth fill in bulk into each container bag.
- If bags have not been fastened to each other, hold off on filling the last compartment, until the next Beluga™ bag has been placed adjacent to the run, and connected.
- Bags will contour to the ground below and can follow varying terrain.
- Bags can also be turned slightly during installation and fill.
- Each fully loaded Single Beluga™ Bag (BG1) weighs roughly 3,000lbs, depending on fill material.
- Each fully loaded 5-Compartment Beluga™ Bag (BG5) weighs roughly 15,000lbs, depending on fill material.



Helpful Tips

- We recommend bringing a few standard Garrison Sandbags on site to fill small gaps or seams that may arise due to varying landscape and terrain, and to plug holes at the end of a barrier run.
- As water levels rise, monitor your barrier for breaches. Should there be an unexpected breach, it is possible to deploy a single (or larger if needed) Beluga™ bag behind the existing barrier, to provide reinforcement and to seal the opening. Bags should always be placed at the center of the seam between two Beluga™ bags. You may want to have one or more pre-filled Single Beluga™ bags on hand, as extra security.
- We recommend that you clear any debris that accumulates away from Beluga™ barrier. This prevents any unintentional, though unlikely, puncturing of the bag.
- Should rainwater or overflow enter bags, the non "water side" walls are semi-permeable, allowing the water to slowly drain out of the bag.
- Beluga™ bags can be transported and stored loaded with sand for future use, though we recommend tipping and unloading sand from bags after each use.
- When transporting a fully filled 5 compartment Beluga™ Bag (BG5), a 15ft spreader bar should be used to distribute weight over the 5 bag compartments.
- When moving individual (single compartment Beluga™ Bag - BG1), a standard forklift can be used to transport the Single Beluga™ bag, by placing the forks through the lifting strap loops.
- If you have no need to reuse Beluga™ bags, after a flood protection event, it is possible to cut the bag open, using a sharp utility knife. This allows the sand fill to be released and removed from the site using a standard front-end loader.
- When re-using Beluga™ bags, be sure to carefully wash and dry bags before storage, preventing mold and mildew.

GARRISON
FLOOD CONTROL

For Additional Help or Support -
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