

Product brochure









US Patent No.: US 10,508,396 B1

Four simple steps. One refined solution.

The Industrial Flood Barrier by Geodesign has been designed and engineered to enable a fast installation without the need for tools, heavy equipment or a large workforce. This innovative steel barrier has become a large-scale favorite with government entities for its great logistical advantages and ingenious simplicity.



PLACE, UNFOLD & LOCK STEEL SUPPORTS

Place the frames 1 m apart to form your intended barrier line. Unfold the a-frame and secure the upright position with the snap lock.

MOUNT STEEL PANELS

Hang the panels between the frames by sliding the cutout over the protruding mount knobs on the supports and overlapping the neighboring panels.

LINE WITH MEMBRANE

Roll out the poly membrane along the barrier and fixate it with panel clips at the top. Add chains as ballast to manage windy conditions.

ANCHORED WITH WATER

Allow water to come onto the liner and the face of the barrier and let it anchor itself using the forces exerted by the flood water.



Design Features

The Industrial Flood Barrier has been continuously developed through dialogue with our clients and has gradually improved its features to become the user friendly and effective flood barrier it is today. The barrier is manufactured in ultra high strength steel with a focus on achieving lightweight components with optimal logistical properties. 25 years of flood protection and continuous feedback from our clients have taught us to prioritize speed and simplicity without ever compromising on safety. This has resulted in a FM certified flood barrier where 12 workers can install 500 meters in less than an hour.

ANCHOR COLLARS WITH POINTS

STRAP HANDLE

point when unfolding.

Nylon handle to avoid pinch

Protruding steel collars underneath the bottom beam to establish a grip and increase friction between the selfanchored barrier and the ground surface.

MOUNT KNOB PANEL LOCK

Smart and innovative solution to

speed up assembly and enhance

flexibility.

LIGHTWEIGHT STEEL PANEL PANEL CLIP

At merely 12 kg per P101-panel, the 1 mm hot-dip galvanized steel sheet is easy to handle and store. The Dual Phase Steel from SSAB, Sweden, has excellent tensile properties and corrosion resistance. Fixates the liner and strengthens the structure.



POLY MEMBRANE

Laminate coated High Density Polyethylene - Optimized in size and quality to minimize seepage and provide maximum anchoring forces.

A-FRAME STEEL SUPPORTS

The barrier frames are collapsible and stackable for better usability and storage properties between floods. In their upright positions, the supporting beams transfer forces from the hydrostatic pressure to the friction-optimized bottom beam, thus increasing the barrier's stability as it absorbs more load.

ULTRA HIGH STRENGTH STEEL

All load-bearing components of the Industrial Barrier are manufactured in high strength and ultra high strength steel with micro-alloy elements. Both steels are hot-dip galvanized with a zinc coating to provide optimal corrosion protection.

SPRING-LOADED SNAP LOCK

Quick and easy snap-in-place lock to fixate the supporting beam in the right angle and prevent the structure from dispositioning in the event of any unforeseen impact to the barrier's dry side.

CHAINS - DIN 763

12 mm x 5 m Galvanized Steel Chain with carabiners as ballast and to weigh down the membrane before water has come onto the barrier.



Fixed obstacles. Flexible modules.

The Industrial Flood Barrier can be installed in places where infrastructure or natural objects create the most challenging conditions. The flexibility in the system allows the barrier to be installed around, over and up against obstacles such as undulations, curbs, walls and other permanent structures. All Geodesign Flood Barriers are interchangeably compatible with each other and can be combined in various constellations to meet the needs of the specific topography and conditions on site.



ADJUSTABLE LENGTH

Assemble from two directions and meet in the middle or adjust the length of the barrier to end up at a specific spot by simply overlapping two panels. Mount one fixture and let the bottom of the panel rest in the slot located by the toe of the frame.



UNEVEN GROUND

Sudden shifts in level, such as curbs, steps or uneven ground is easily handled by placing the a-frames' sloping beams aligned and their sides flush against each other. Clamp together the front beams and continue building the barrier on the new level.



SHARP CORNERS

Special designed corner panels allow sharp 45-degree inner and outer turns.





CONNECTION TO WALL

Adjust the length of the barrier to finish flush against the wall. Use our wall connection kit to safely attach to a vertical foundation or structure while minimizing seepage.



COMPATIBILITY

H

The Industrial Flood Barrier is not only compatible with other models within the same product family but also with the taller Heavy-Duty series.





Using only straight sections, the Industrial Flood Barrier allows for larger bends with a 90-degree turn radius of 10 meters thanks to the flexibility of the modular structure and the thin steel panels.



Different heights. Same family.

The Industrial Flood Barrier consists of four different models. Same fundamental design and overall features but different in dam height. The Industrial Barrier, also known as the P-series, is distinguished by its crease across the panel and the patented panel mount knob on the front beams.

Max. water column: 121 cm Footp

P121

Section width (ctc):	80 cm
Setup time: (100 meter / 5 men)	1 h 10 min
rint with poly liner:	405 cm
Barrier footprint:	146 cm
Weight / section:	33 kg

Dam heigh

121

cm

Storage volume: 2.9 m³

	F 101
101 cm	Max. water column:
100 cm	Section width (ctc):
50 min	Setup time: (100 meter / 5 men)
305 cm	Footprint with poly liner:
114 cm	Barrier footprint:
27 kg	Weight / section:
2.5 m³	Storage volume: (One set, 50 sections)

Dam heigh

101

cm

P8	
Max. w	

P81	
Max. water column:	81 cm
Section width (ctc):	100 cm
Setup time: (100 meter / 5 men)	50 min
Footprint with poly liner:	310 cm
Barrier footprint:	88 cm
Weight / section:	22 kg
Storage volume: (One set, 50 sections)	2 m³

Dam heigt

81

cm

P61	
Max. water column:	61 cm
Section width (ctc):	100 cm
Setup time: (100 meter / 5 men)	35 min
Footprint with poly liner:	184 cm
Barrier footprint:	57 cm
Weight / section:	17 kg
Storage volume: (One set, 50 sections)	1.5 m ³

Dam height

61

cm



Stability through adversity.

Floods are unpredictable in their nature. Rough weather conditions and other coinciding meteorological events often make it difficult to predict when, where and how severely a flood will hit. The Industrial Flood Barrier has been engineered to perform under the most difficult conditions imaginable and has been tested in both real life environments and hydraulic laboratories.



DEBRIS IMPACT

Uncontrolled floating objects are not uncommon during floods and the impact from such objects can cause severe damage if the barrier structure has a low factor of safety under loads. The Industrial Flood Barrier has been tested and certified with logs weighing 277 kg and 358 kg ramming into the barrier at velocities of over 2 m/s.



OVERTOPPING

Rising flood water is unpredictable and can overwhelm any barrier put up to protect against it. It is of utmost importance that a flood barrier is stable through an overtopping event and that there is no risk of displacement. Geodesign's Industrial Flood Barrier was tested at the US Army Corps of Engineers Coastal and Hydraulics Laboratory with at least 25 mm of overtopping for over an hour.



WAVES

Hydrodynamic loads exert significant forces on a submerged structure and will occur naturally in the form of waves during a flood. The Industrial Flood Barrier has been tested and certified for waves of three different sizes (low, medium, high) at two different water depths in the Coastal and Hydraulics Lab in Vicksburg, MS, United States.



IN-WATER INSTALLATION

The steel frames and panels are easy to install in water. Make sure the liner is properly deployed before starting the pumps.









Everything complete in One crate.

The Industrial Flood Barrier is delivered, transported and stored in a special crate designed to fit all components needed to install 50 meters of a complete barrier. The crate is divided into separate compartments and both short sides have detachable gates that ease and speed up loading and unloading. A fully loaded crate weighs up to 1385 kg and can be moved with a pallet jack. The outer dimensions vary between the models and all crates are stackable three high.





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