PS Flood Barriers®

TECH-DATA

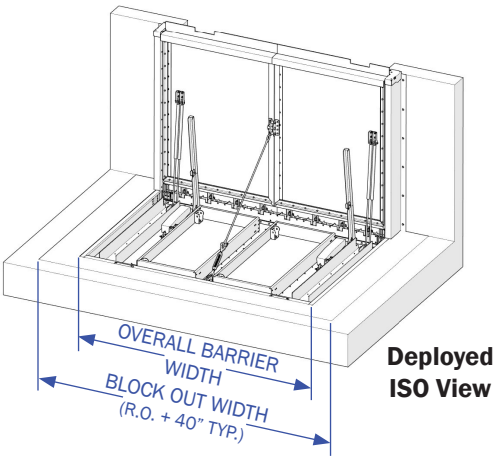
PRE-ENGINEERED BOTTOM HINGE FLOOD BARRIER

MODEL BH-590:

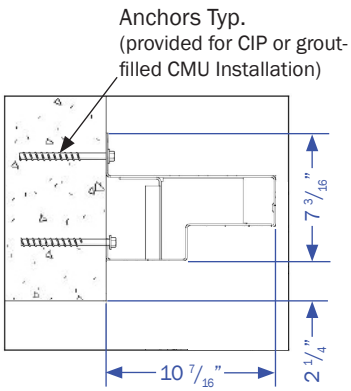
- **24/7 Automatic Flood Protection/ Spill Containment**
- **Passive Flood Protection Barrier**

BH-590 SUGGESTED USE:

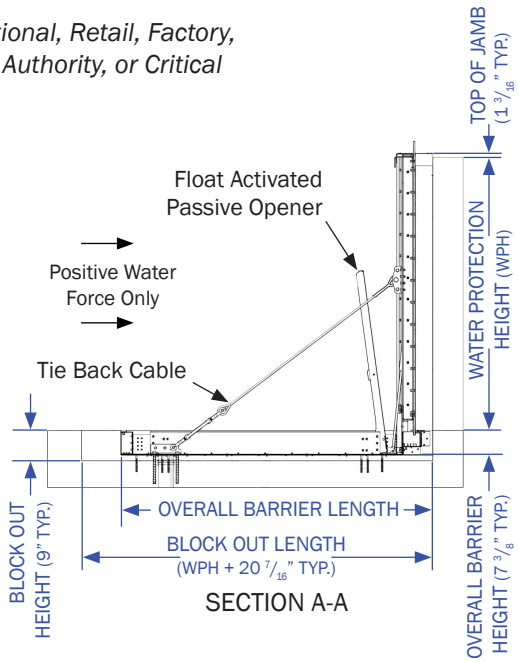
(INTERIOR or EXTERIOR)
Commercial, Health Care, Institutional, Retail, Factory, Warehouse, Government, Transit Authority, or Critical Infrastructure.



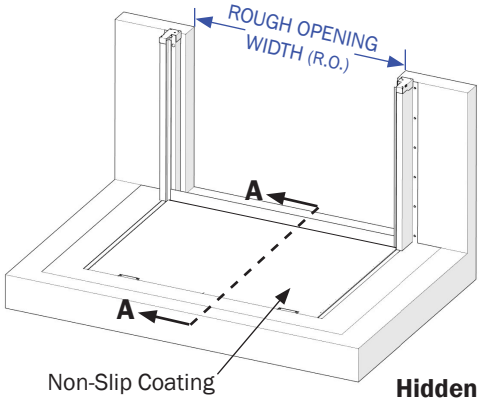
Deployed ISO View



JAMB DETAIL



SECTION A-A



Hidden ISO View

BH-590 STANDARD FEATURES:

- Automatic flood protection with instant passive deployment for critical infrastructure: *This product requires NO human intervention or electricity for deployment. Deploys automatically for flood protection and lies flush for vehicle/ pedestrian traffic when stored.*
- AASHTO H-20/ HS-20 Load Rated: *Standard Vehicle Loading. Can be designed to withstand greater vehicle loading upon request.*
- Minimal Below Grade Depth: *7 3/8" typical product height, 9" typical required leave out depth.*
- Point-of-use Storage: *Out-of-the-way (hidden) storage of barrier.*
- Tested: *Independent party witnessed to exceed ANSI/FM Approvals 2510-2020 4.3.3 hydrostatic test requirements.*
- Pre-Engineered for up to 8 feet of Water Protection Height: *Width is customizable.*
- Multiple Deployment Methods: *Passively and manually triggered deployment. Electrified deployment optional.*
- Protected Gaskets: *Hidden when in stored position. Also protected from weathering, UV exposure, and vandalism. These product seals are not dependent on inflation devices.*
- Simple, Same Day Installation: *Most sizes can be installed in a prepared site on the same day as delivery. Ships fully assembled with leveling bolts, anchors, sealants, and water-stop included. Grout/concrete by contractor.*

AVAILABLE PRODUCT OPTIONS[1]	
OPTION	DESCRIPTION
1	Local Pre-Deployment Warning Devices: *Light, Horn, Float Switch*
2	Electronic Position Sensors: *Feedback Position Down & Feedback Position Up*
3	On-Demand Electronic Deployment Device

[1] All options to be field installed by a systems integrator for the project. Operating sequences and uses of these devices will be determined by the EOR or Systems integrator.

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MATERIALS AND FINISHES			
ASSEMBLY	MATERIAL[1]	INTERIOR FINISH	EXTERIOR FINISH
Panel	Aluminum (5000 & 6000 Series)	Mill Finish	Textured Rubberized non-slip Surface: Gray Standard *(optional: additional colors available)*
Basin			Concrete contact surfaces factory coated
Jambs			Brushed, Painted
Gasket	EPDM		
Fasteners	Grade 5 Steel		Aluminum-Zinc Coated
	Stainless Steel		Mill Finish
Opening Devices	Stainless Steel	Mill Finish	Mill Finish

[1] Components constructed from formed or extruded structural members, sheet metal, and plate. Dissimilar metals isolated by non-conductive material or anti-galling compound.

INDEPENDENT PARTY VALIDATED HYDROSTATIC PERFORMANCE TESTING[1]				
FLOOD BARRIER MODEL	TESTED WATER PROTECTION HEIGHT	TEST STANDARD[2]	MAX. ALLOWED LEAKAGE RATE[3] (gal/hr/lin. ft of wetted perimeter)[5]	MAX. TESTED LEAKAGE RATE[4] (gal/hr/lin. ft of wetted perimeter)[5]
BH590	7.5 ft (90 inches)	ANSI/FM 2510-2020 4.3.3	0.080	0.028 ✓

[1] Testing conducted under factory test conditions. Field conditions and installation tolerances can differ. Always allow for some seepage and condensation from product and adjacent building structure.
[2] Testing conducted according to the latest ANSI/FM Approvals 2510-2020 4.3.3 procedure which requires leakage collection at both 10% and 100% max water protection height.
[3] The MAX. ALLOWED LEAKAGE RATE is 0.080 gal/hr/lin. ft during ANY 15-minute interval of the 22 hour test duration.
[4] The MAX. TESTED LEAKAGE RATE includes all leakage throughout the entire product assembly. Certificates of Testing Performance available.
[5] gal/hr/lin. ft of wetted gasket (Gallons per hour per linear foot of wetted perimeter).

PERFORMANCE PARAMETERS

1. Passive Barrier or Flood Mitigation Product: A permanent barrier or other flood mitigation product that, after its initial installation, either requires no deployment or requires no human intervention for deployment.
2. All water pressure loads and operating loads are transferred to the mounting structure.
3. Barrier panel to be counterbalanced to be capable of manual operation between stored and deployed position.
4. Bottom Hinge Flood Barrier jambs are required to be grouted full height. Grout to be non-metallic, non-shrink type, capable of developing 3000 PSI compressive strength as placed. Grout material is provided by the installer.
5. Flood protection products are engineered to conform to the design requirements of the latest published editions of applicable building and design codes, which may include, but are not limited to: IBC, ASCE/SEI 8& 24, FEMA (ref. IBC 2012), AISC, ACI, and ANSI/FM Approvals 2510-2020.
6. Except as otherwise indicated, requirements for flood barriers, terminology, tolerances, standards for performance and workmanship are those specified as Type 2 Closures in Chapter 7, Section 701.1.2 of U.S. Army Corps of Engineers, EP 1165-2-314, 15 December 1995.
7. These Type 2 Flood Closures/Barriers shall form essentially dry barriers or seals, allowing only slight seepage during the hydrostatic pressure conditions of flooding to the Regulatory Flood Datum (RFD) or the Design Flood Elevation (DFE). Seepage amounts will vary with conditions encountered. This issue should be addressed by the design professional and usage of sump or bilge type pumps should be used to offset potential water build-up.
8. Flood gasket to be factory mounted, continuous, field inspect-able and replaceable without special knowledge. Gasket to be durable, UV stable EPDM which is not dependent on inflation devices.
9. Flood load acts in the direction that forces panels toward the jambs.

POST-INSTALLATION TESTING AND SEASONAL INSPECTION OF AUTOMATIC (PASSIVE) DEPLOYMENT:

1. Automatic (passive) deployment is capable of being tested without constructing temporary above ground cofferdam/retaining wall to max flood elevation. Can be tested and validated by filling below ground basin with simulated flood water. Flood barrier panel shall passively deploy to full vertical position prior to flood water reaching ground level.

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