



FLOOD MITIGATION SOLUTIONS

Flex-Gate® Stairwell



The Flex-Gate® Stairwell is a high-strength, dry flood-proofing closure that can be deployed rapidly for flood mitigation of tunnels, doors or portals of any kind, and can fit openings of any shape, size or orientation. Originally developed by ILC Dover for use in the New York City subway system, it can be used in any industry. The Flex-Gate is simple to operate and can be easily deployed or retracted in just a few minutes by a single person with very little training. The patented Flex-Gate has few moving parts, resulting in increased reliability, with minimal maintenance, thus providing low life-cycle costs.

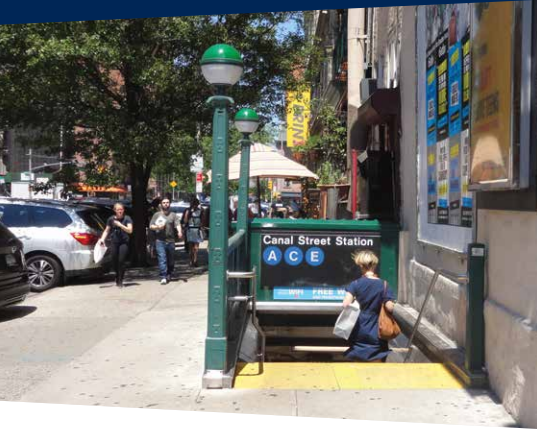
The Flex-Gate has been validated via a stairwell shop test against 16 ft. and 10 ft. water head pressure challenges.



FEATURES AND BENEFITS

- **Point-of-use storage** — Deploys at the last moment for minimal operational disruption, resumes operations faster, components won't be lost over time
- **Rapid deployment** — Site secured in minutes by one person
- **Compact storage** — Stores in small spaces
- **Scalable design** — Sized to fit any opening
- **Prevents flooding** — Seepage is <math><0.5 \text{ gal/min/ft}</math> of perimeter

Flex-Gate Stairwell

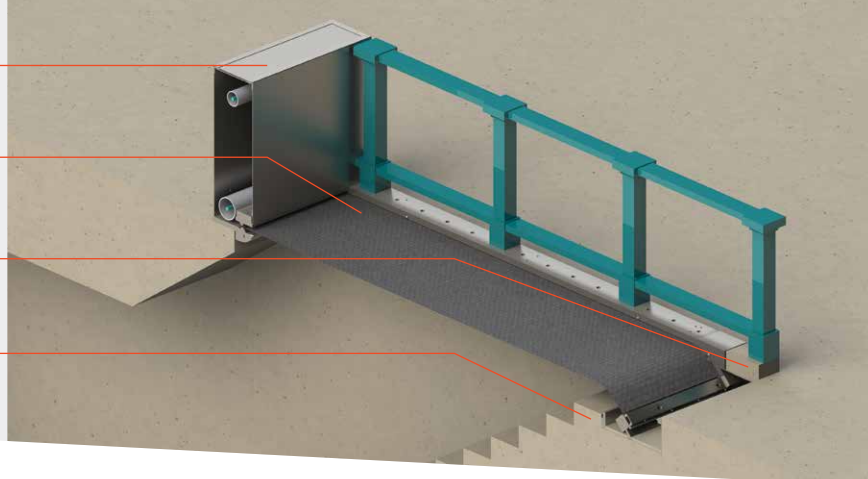


STORAGE
CONTAINER

FABRIC
COVER

GATE
GUIDES

TOP-STEP
BOX



OPERATION

The Flex-Gate functions similarly to a window shade or roll-up storefront security door in that it resides in a small container and is pulled across the opening when an event occurs. Deployment can be performed manually by one person in a matter of minutes. The flexible cover travels in guides during deployment, and seals against them when challenged with water.

SYSTEM COMPONENTS

Fabric Cover — Three-layer flexible and damage-tolerant structure

- Outer layers made of Kevlar® webbing and fabric
- Water-retention layer made of CSM/Hypalon®-coated Kevlar

Container — Metal storage box-and-spool mechanism

Gate Guides — Side beams that seal and provide structural support

Seal Bar — Clamped at closing end of the cover to seal at top step

Top-Step Box — Houses deployment mechanism and seal bar clamp

INSTALLATION

Surface-Mounted — Simple to install, limited site downtime, frame supports inward loads

Anchored — Simple to install, limited site downtime, structure shares inward loads

Architecture — Can blend with existing site features

CONFIGURATION

Horizontal

- Rapid response approach
- Surface- or interior-mounted
- Tamper-proof covers on exposed hardware
- Can be automated or manually activated

Good for stairwells or ventilation shafts

Vertical

- Reference the Portal Flex-Gate® Cut Sheet

Good for stairwells, person/vehicle doors, car/rail portals, loading docks, etc.



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