
Flooding Solutions

Hinged (Swinging) Gates

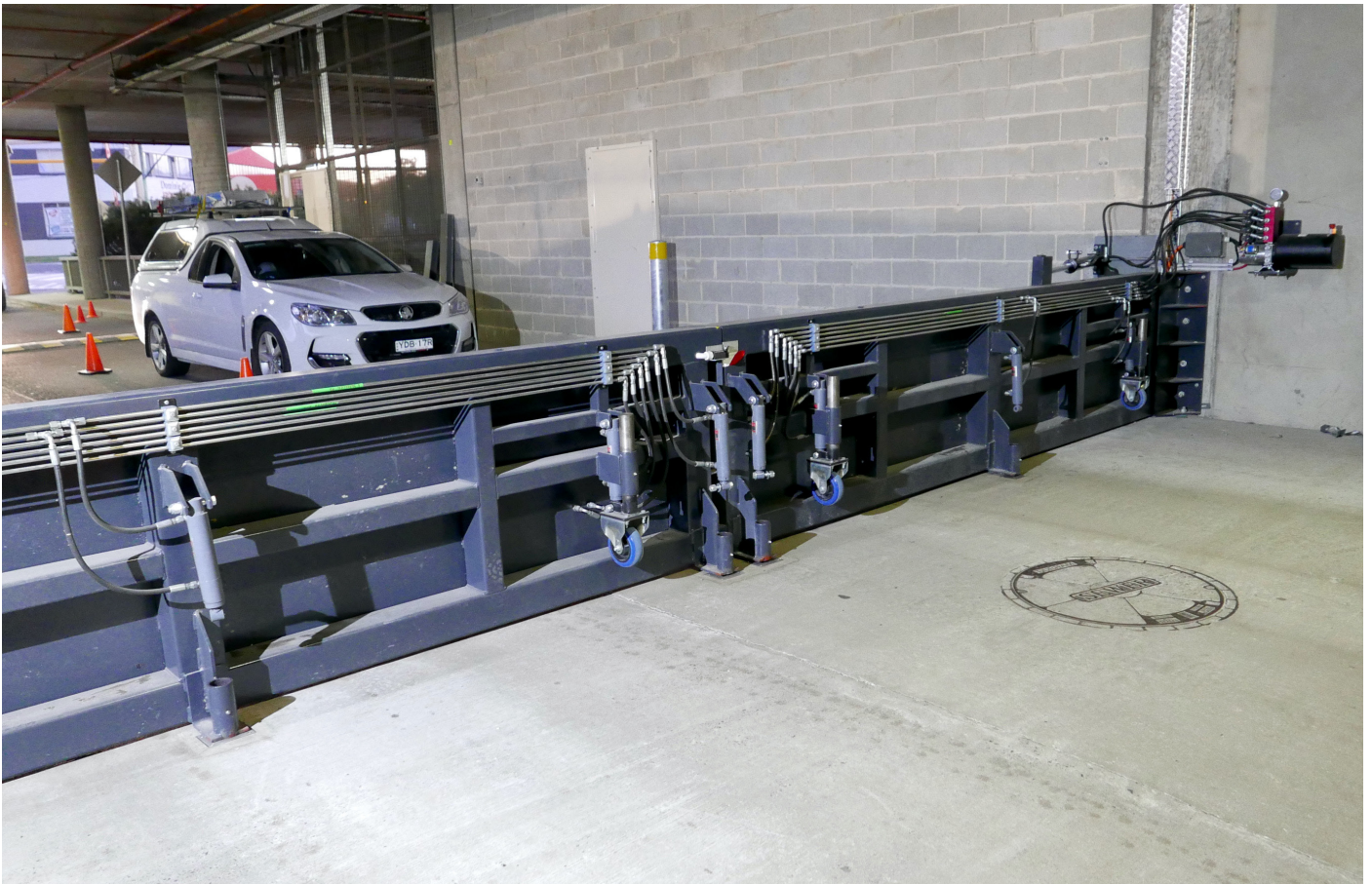
The Hinged Floodgate is a Self-Closing flood barrier designed to be activated automatically when floodwaters reach a pre-determined level.

The concept is based on a single or pair of swing gates with operational auxiliary equipment attached to gates and building structure.

System deployment from open position to closed is achieved via hydraulic rams. Operational safety is built into the system via audible and visual pre-deployment alarms. Sensors can be used to detect entrance obstructions and prevent barrier deployment.

Flooding Solutions have developed a fail-safe 24 volt power supply system that isolates the barrier from mains failure.

A manually closing version of the hinged floodgate is available for applications where automation is not required.



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Applications

Car park entry ramps
Driveway entries
Public walkways
Retail shop entry protection

Features

Standby flood protection, permanently in place.
Fully automatic or discretionary closing via control panel.
In-built two stage alarm system for pre-flood and barrier closing warning
BMS integration.
No excavation or barrier housing pits required.

Benefits

Easy, regular performance testing at any time.

Design

Hinged floodgates are designed to transfer the developed hydrostatic loads to building structure walls and floors.

Design safety factor of barrier supporting elements are rated against design flood levels to maintain a minimum 2:1 relationship. Metal yield strengths are selected based on the total N/m² able to be developed as a result of design flood height.

Finish

A & I Coatings vitrethane630 two pack aliphatic polyurethane min. 50 micron thickness.

Sealing

Dura foam series 6110 E.P.D.M selected profile

Performance

Hinged floodgate barriers are designed for nominated flood water heights and will transfer developed imposed (hydrostatic) loads to adjacent structure.

Materials

1. Barrier Support Frame

Heavy duty Duragal R.H.S grade C450LO to AS 1163.

2. Barrier Gate Section

One steel zinalume sheet, thickness to project design flood height loadings-Selected heavy duty tapered roller bearings and high tensile steel axel shaft.

4. Operational Hydraulic Rams

Hydraulic cylinders with industrial type pin eyes, 50mm to 100mm DIA bore, stroke length as required. Operational force range (14 PSI to 125 PSI – dependent on site-specific requirements).

5. Hydraulic Power Pack Unit

Booker hydraulics double acting 24 volt D.C model M –3551.

6. Operational Control Float Level Switches

Matelec9006 series/cable length max 40m.

7. Operational Control Panel

Australian made 240 volt / 24 volt D.C panel including 24 volt battery pack for system function and charger with powder coated cabinet.

Controls include interface of level sensor float level switches with:

- Warning alarms, audible and visual
- Security gates (if required)
- Remote signal (if required)
- Adjustable time step to barrier deployment signal
- System testing function