

## FLAP GATES

The AWMA Flap Gate is a one way/ non-return flap gate designed to prevent backflow.



### FEATURES

- Automatically isolates stormwater pipes from tidal and flood events.
- Effective backflow prevention device.
- Double pivot arms as standard, for consistent sealing.
- Low head loss.
- Full perimeter sealing.
- Suitable for up to 10m head pressure.
- Custom designed and fabricated to suit any size or shaped orifice.
- Requires minimal civil works to install.
- Gate sits on a 3degree angle to ensure reliable sealing.

### APPLICATIONS

- The Flap Gate range is used for many applications across all industry sectors.
- Primarily used as a backflow prevention device on pipes and pits.
- Commonly used for tidal and flood mitigation as well as stormwater management.
- Flap gates can be incorporated into the body of a penstock as a failsafe measure.



# awma



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### DESIGN

#### DESIGN SUPPORT

- AWMA's design team will provide full support to ensure the most appropriate solution is developed and specified during the preliminary design.

#### SIZES

- All AWMA water control gates are custom sized to ensure they meet specific site and operational requirements.
- Customisation reduces installation costs.

#### MATERIALS

- AWMA select materials to meet a minimum design life of 25 years. Where required, AWMA can offer higher grade materials, coatings and protection systems to extend the design life to 100+ years.
- AWMA use ultra high molecular weight polyethylene (UHMWPE) for penstock door guides and/or wedges to provide maintenance free bearing surfaces.
- Plasticised PVC or EPDM are used for the manufacture of seals. These materials offer superior endurance in wastewater and freshwater applications.
- Materials used for penstock door and frames include marine grade aluminium and grades 304, 316, 2205 and 2507 stainless steel.
- Suitable for corrosive tidal environments.
- Materials used in the construction of the Flap Gate range have a high corrosion resistance and can be operated for many years with minimal maintenance.

#### SEALING

- The Flaps are on a 3 degree angle to ensure sealing under low head differential.
- The sealing ability of this gate exceeds that required by the 'Australian Technical Specification for Fabricated Water Control Infrastructure'.

#### MAINTENANCE

- The Flap Gate range has a minimum 25year design life.
- Minimal maintenance is required offering low "whole of life" costs.
- If required, the seal can be changed with ease, on site.

### MANUFACTURE

#### QUALITY

- All fabrication is in accordance with the 'Australian Technical Specification for Fabricated Water Control Infrastructure'.
- All stainless steel welding is continuous to avoid crevice corrosion.
- All procedures are in accordance with AWMA's accredited ISO 9001 Quality Management System to ensure each gate is manufactured to a high standard, tested and ready for trouble free operation post approved installation.

### INSTALLATION

#### MOUNTING OPTIONS

- Flap Gates are typically mounted to a culvert headwall or pipe.

#### ACTUATION SYSTEMS

- Self actuating device.

#### OPERATION SYSTEMS

- Gravity and head pressure automatically operate gate for one-way flow only.
- Lifting lugs or cable winch optional to raise the gate in emergency situations or to facilitate maintenance.

### COMMISSIONING

#### DOCUMENTATION AND TRAINING

- Detailed documentation on operation, testing procedures and maintenance will be provided with all AWMA water control solutions.
- Comprehensive on and/or off site training available.