

# ALUMINUM WEIR GATES

## SERIES: A - 321

SELF-CONTAINED WEIR GATE



### SPECIFICATION:

These weir gates are made in compliance with AWWA C562.

### APPLICATION:

These are downward opening overflow weir gates (not downward opening slide gate) mounted on the face of a wall and are provided with sealing arrangement which ensures continuous sealing on 3 sides (sides and bottom) at any extent of gate opening and allowing water to overflow only from the top side. These are used for (i) decanting of a reservoir or a tank, or (ii) maintaining precise level control in a reservoir or a tank, or (iii) to isolate the flow as well as maintain precise level control by providing 4th side (top side) sealing arrangement.

### FEATURES:

- Extruded aluminum flange back frame suitable for mounting on face of wall using anchor fasteners and secondary grout between wall and frame.
- Gate frame provided with low friction UHMWPE guides to prevent metal to metal rubbing and galling during slide operation.
- Short length frame provided with short length extension guides sufficient to engage at least half the overall vertical height of slide when the gate is fully open.
- Frame and slide made of minimum 6 mm thick material as stipulated in AWWA C562.
- Side frame having dual slot design wherein primary slot engages with slide and secondary slot envelops the side reinforcing ribs of the slide.
- Portion of slide engaging in frame guides to have minimum 12 mm material thickness and 25 mm engagement depth.
- Slide sufficiently ribbed to ensure that deflection under designated water head does not result into leakage over the specified limit.
- Offered with either HARSA-DUO™ rigid sealing system having integral seal/seat or PRESS-ON™ resilient sealing system having seal separate from the seat. Type of sealing system offered depends upon client requirement and application.
- HARSA-DUO™ unique integral seal / seat system can withstand 25,000 cycle operation and reduce the possibility of future seal change. This sealing system offers longevity and necessitates precision in installation to achieve specified leakage criteria.
- HARSA-DUO™ rigid sealing system comprises of low friction, high abrasion resistant self-adjusting seals of UHMWPE fitted in dovetailed slots of frame with dual compression resilient cord seals to ensure forced contact between seal and both the faces of slide.
- GRIT-DEFLECT™ arrangement provided at bottom to prevent embedment of grit in bottom sealing area and thereby avoid scouring of shutter face.
- PRESS-ON™ resilient sealing system to offer leakage limits substantially lesser than that stated in AWWA C562 even for large sized weir gates.
- PRESS-ON™ resilient sealing system comprises of replaceable resilient seal in forced contact with face of slide and provided with flow deflectors to restrict direct exposure of sealing arrangement to hazardous solid materials coming with flow.

- Seal fitment in case of PRESS-ON™ resilient sealing system ensures that no dismounting of weir gate from its location is to be done for future seal replacement.
- Travel stop mounted on frame to limit over travel of slide when opening downwards.
- Rising stem with pedestal / yoke mounted manual gate operating mechanism to operate the weir gate with less than 18 kgs effort on the crank or handwheel.
- Single piece or multi piece stem with coupling to connect the stem block mounted on slide to the gate operating arrangement.
- Stem guides and brackets to prevent buckling of stem.
- Dual or tandem stem for all gates 1200 mm and wider, and having widths greater than twice their height or where decanting requires a precise level weir elevation.
- Anchor bolts with nuts and washers for frame, stem guide brackets and pedestal of lift mechanism.

#### OPTIONAL FEATURES:

- Square / Rectangular shaped wall thimble having section F or E as required.
- Top sealing arrangement for isolation requirement.
- Stems positioned outside the width of opening so that they are not in the path of incoming flow.
- Self contained gate frame with lift mounted directly on yoke provided across the top of gate frame.
- Non rising stem.
- Electric / Pneumatic / Hydraulic operating arrangement.
- Portable electric / hydraulic gate operator.
- Stem cover made of galvanized steel or transparent plastic tube.
- Gate position indicating arrangement.
- Hard epoxy painting on aluminum material.

#### MATERIAL OF CONSTRUCTION:

Depending upon application and requirement, client can select and specify the material of construction option for various components of weir gate from the alternatives stated on page no 53.

#### SHOPTESTING:

- Leakage testing of weir gate at plant with water filled till top of slide to verify weir gate leakage performance.#
- Seat clearance check of each weir gate for clearance between mating sealing faces.
- Movement test for checking interference free movement of complete assembly.
- Torque test to verify gate operating torque for manually operated weir gates.

*# Shop leakage test will be carried out only when a test has been specifically agreed to or when a test is specifically stated in specifications.*