

PRODUCT DATASHEET

Gates & Flow Control Range

Isolation, level regulation, maintenance and passive backflow protection | six configurable families

DATASHEET NO.

DS-YS-GAT-R03

ENGINEERING BASIS

6 TYPES

FUNCTION BEFORE FORM

Isolation, maintenance stoplogs, level regulation and non-return duty use different gate mechanisms.

HEAD

HYDRAULIC LOAD BASIS

Operating and seating heads, flow direction and unbalanced load govern frame, stem and actuator selection.

LEAK

DEFINED SEALING DUTY

Leakage class and test direction are confirmed for the selected gate rather than assumed as bubble-tight.

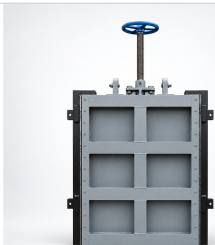
CIVIL

PROJECT INTERFACE

Opening geometry, wall or channel mounting, embeds, access and lifting provisions follow the structure.

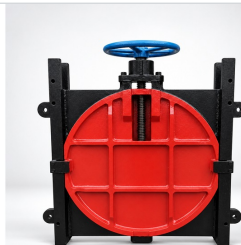
CATEGORY OVERVIEW

YORA gate systems isolate, divert, regulate or protect water and wastewater flows across treatment plants, pumping stations and hydraulic structures. Selection starts with the required function and operating head, then considers opening geometry, seating direction, leakage class, mounting interface, actuation, cycle frequency, access, corrosion environment and safe operating philosophy.



STEEL SLUICE GATE

Vertical-lift isolation and flow routing



COPPER-SEALED CAST-IRON GATE

Compact circular isolation with machined sealing faces



OVERSHOT WEIR GATE

Motorized level control by angular weir adjustment



ADJUSTABLE WEIR GATE

Vertical weir positioning for level regulation



STOPLOG GATE

Stacked removable beams for maintenance isolation



FLAP GATE

Passive non-return protection at drainage outlets

Representative equipment views. Final geometry, materials, finish and operating mechanism are project specific.

PRODUCT DATASHEET

Isolation & Maintenance Gates

Vertical-lift steel, copper-sealed cast-iron and stacked stoplog systems

PRODUCT FAMILY OVERVIEW



SLG

Steel Sluice Gate

ROLE - Process isolation and flow routing in channels, chambers and hydraulic structures; modulating duty is provided only where the gate and actuator are selected for control service.

PRINCIPLE - A flat gate leaf travels vertically in side guides. Manual, geared, electric, winch or synchronized double-point hoists can be selected for operating, drainage, emergency or maintenance duty.

INDICATIVE RANGE - Listed rectangular openings from 1,000 x 800 mm to 4,000 x 1,200 mm and 3,600 x 3,000 mm; larger project-specific arrangements on request.

CONSTRUCTION - SS304 or coated carbon steel as typical, with reinforced leaf, guides, rollers, stem, seals, embedded parts and selected hoist.

ENGINEERING DISTINCTION - Internal rollers reduce opening resistance; duty-specific arrangements can provide controlled closure and bidirectional isolation.



CIG

Copper-Sealed Cast-Iron Gate

ROLE - Compact circular isolation and regulation for potable-water, wastewater, irrigation and flood-control structures.

PRINCIPLE - A rising trapezoidal stem moves a ribbed circular leaf against a wall-mounted frame; precision-machined copper-alloy contact faces provide the sealing interface.

INDICATIVE RANGE - Listed circular clear openings 200-1,200 mm diameter with wall-mounted rising-stem configuration.

CONSTRUCTION - Ribbed cast-iron frame and leaf, machined copper-alloy sealing faces, project-selected stem and manual or powered hoist.

ENGINEERING DISTINCTION - High structural stiffness and durable metal-to-metal sealing in a simple, maintainable wall-mounted assembly.



STL

Stoplog Gate

ROLE - Temporary channel isolation and maintenance access where permanent powered operation is unnecessary.

PRINCIPLE - Individual horizontal beams are lowered into fixed side slots and stacked into a water-retaining barrier. A pre-tightening device can compress the beams against the seals.

INDICATIVE RANGE - Listed clear openings 800 x 800 mm to 2,200 x 2,200 mm; single-point lifting across the listed range.

CONSTRUCTION - SS304 or coated carbon-steel beams and guide frames as typical, with elastomeric seals, lifting lugs and optional pre-tightening hardware.

ENGINEERING DISTINCTION - Light modular beams reduce lifting force and storage demand; pre-tightening improves sealing for maintenance isolation.

Indicative opening ranges support preliminary selection. Larger sizes, higher heads and alternative actuation are engineered to the approved civil and hydraulic basis.

PRODUCT DATASHEET

Level Regulation & Backflow Protection

Overshot, adjustable weir and passive non-return gate systems

PRODUCT FAMILY OVERVIEW



OWG

Overshot Weir Gate

ROLE - Automatic upstream level or flow regulation in treatment tanks, distribution wells and hydraulic channels.

PRINCIPLE - A geared screw hoist rotates the hinged weir leaf, changing its angle and crest elevation relative to the liquid surface.

INDICATIVE RANGE - Listed effective widths 3,000, 4,000 and 5,000 mm; adjustable discharge-weir height up to 500 mm; listed motor 0.55 kW with 60:1 gearbox.

CONSTRUCTION - SS304 or coated carbon steel as typical, with reinforced leaf, side plates, hinge, screw hoist, protective sleeve and anchoring system.

ENGINEERING DISTINCTION - Smooth automated positioning with travel limits and overload protection supports repeatable process-level control.



AWG

Adjustable Weir Gate

ROLE - Water-level regulation in wastewater, irrigation, flood-control, water-conservancy and hydropower structures.

PRINCIPLE - An exposed trapezoidal screw raises or lowers a reinforced flat weir plate in wall-mounted side guides, changing the effective overflow level.

INDICATIVE RANGE - Listed nominal openings from 400 x 300 mm to 2,000 x 1,500 mm, including wide low-head weir arrangements.

CONSTRUCTION - SS304 or coated carbon steel as typical, with reinforced frame and leaf, exposed stem, lifting nut, resilient seals and selected operating mechanism.

ENGINEERING DISTINCTION - Wide adjustment range and sealing engagement throughout travel in a straightforward, accessible mechanism.



FLG

Flap Gate

ROLE - Passive backflow prevention at drainage outlets, wet wells and pump-station discharge structures.

PRINCIPLE - Differential water pressure opens the hinged flap for forward discharge and closes it automatically when the external water level rises above the outlet.

INDICATIVE RANGE - Listed circular openings 200-800 mm and square openings 300 x 300 to 900 x 900 mm; listed closed-position leakage not exceeding 20 L/min per m under the applicable test basis.

CONSTRUCTION - Steel or stainless-steel body and flap as typical, with circular or square frame, hinge pins, seals, flange or wall mounting and lifting points.

ENGINEERING DISTINCTION - No external power or actuator is required; controlled closing geometry minimizes vibration and impact.

Final operating range, leakage, test head and method, actuator duty and structural rating depend on the actual water levels, seating direction, required leakage class and approved mounting detail.

PRODUCT DATASHEET

Selection, Configuration & Scope

Hydraulic duty translated into the correct gate, seal and operating mechanism

GATE SELECTION BASIS

DESIGN FACTOR	INFLUENCE ON SELECTION	REQUIRED PROJECT BASIS
Required function	Determines isolation, regulation, maintenance or non-return type	Normal, emergency, drainage, maintenance or level-control duty
Opening geometry	Sets leaf, frame, stem and hoist arrangement	Clear width, height / diameter, sill level and wall / channel thickness
Hydraulic head	Controls structural reinforcement, stem thrust and actuator sizing	Maximum seating and unseating head, flow direction and differential level
Leakage target	Determines seal material, seating direction and pre-tightening	Required leakage class, test basis and one-way / two-way sealing
Operation	Selects manual, geared, electric, winch, double-point or passive motion	Cycles per day, operating time, fail position and available power
Civil interface	Defines wall, channel, embedded, flange or stoplog-slot mounting	Approved drawings, anchor zones, access and lifting route
Environment	Establishes materials, coating and fastener grade	Water chemistry, chlorides, pH, temperature and atmospheric corrosion class

TYPICAL CONFIGURATION

ITEM	AVAILABLE PROJECT CONFIGURATION
Frame and leaf	SS304, SS316, coated carbon steel or cast iron according to hydraulic, corrosion and mounting duty
Sealing	Copper-alloy contact faces, EPDM / NBR resilient seals, one-way or bidirectional arrangement as specified
Stem and guides	Rising or non-rising stainless-steel stem, side guides, rollers, wedges and embedded parts selected by gate type
Operation	Handwheel, geared manual hoist, electric screw hoist, winch, synchronized double-point lift or passive flap action
Protection	Travel limits, torque / overload protection, stem cover, mechanical guards and local emergency operation as applicable
Controls	Local control station, open / close indication, level-based modulation, alarms and remote interface for powered gates

STANDARD SUPPLY SCOPE	EXTRA OPTIONS
› Selected gate frame, leaf and sealing system › Stem, guides, brackets and operating mechanism › Anchors or embedded interface within agreed boundary › Mechanical travel / overload protection as applicable › General arrangement and equipment documentation	› Electric actuator and local control station › Level transmitter and automatic modulating control › Platforms, handrails, stem extensions and lifting beams › SS316 construction and project-specific coating systems › SCADA integration, commissioning, training and service support

INFORMATION REQUIRED FOR FINAL SELECTION

1 HYDRAULICS	2 OPENING	3 OPERATION	4 PROJECT BASIS
Maximum water levels, differential head, flow direction and duty	Clear width / height / diameter, sill level and civil interface	Manual / powered / passive duty, cycles, speed and fail position	Materials, leakage class, controls, access and coating standard

Final dimensions, structural rating, stem thrust, hoist torque, actuator power, leakage performance and test basis, anchor loads, materials, applicable standards and embedded details are confirmed against the approved hydraulic/civil conditions and client technical specifications. Items outside the listed standard supply are offered as Extra Options.