

FLUID CONTROL PRODUCTS FOR WATER AND WASTEWATER INDUSTRY

GENERAL DESCRIPTION & TERMINOLOGY

SLUICE GATE:

Sluice gates are fluid control products that provide a mechanical means of controlling liquid flow through an opening in a variety of applications within the water and wastewater industry. The Coldwell-Wilcox sluice gates meet and exceed the requirements of the AWWA standard for cast slide gates. Sluice gates can be cast in A126 class B cast iron, ductile cast iron ASTM A536 class B, cast iron ASTM A126 class B with 2% nickel and NiResist ASTM A436 type 1 or 2 in all sizes from 6 inches to 156 inches. Sluice gates shall be fully bronze mounted with side wedges, top wedges and neoprene flushbottom seal or bottom wedges (standard bottom). Sluice gates less than 24" wide shall have side wedges only. Sluice gates are thimble, pipe flange or wall mounted.

SLIDE GATES:

Slide gates are fluid control products that provide a mechanical means of controlling liquid flow through an opening in a variety of applications within the water and wastewater industry. Coldwell-Wilcox designed slide gates are fabricated aluminum or stainless steel with UHMW/neoprene seals on two sides or two sides and top and a neoprene flushbottom seal at the bottom. This construction meets or exceeds the AWWA leakage standard. Adding J-seal to the unseating side will reduce the unseating leakage even further. Slide gate designs are either self-contained or conventional and surface mount or embedded type. Slide gates can be open/close or modulating service.

WEIR GATES:

Weir gates are used to control water flow in different applications by opening downward and holding an elevation of water column or metering water flow by allowing flow over the stainless steel or aluminum disc. Weir gates can be self-contained or conventional in construction and surface mount or embedded type. A weir gate is a downward opening slide gate.

FLAP GATES:

Flap gates are the simplest way to prevent water from returning back into pipes and openings. Flap gates are designed so that whatever the size, a small flow will open the gate with unseating pressure and will remain watertight with seating pressure. Also known as tide gates and floodgates because of their ability to prevent back flow into a discharging system. Normally flap gates are round, square or rectangular cast iron, ductile iron, 2% nickel or NiResist. Square and rectangular flap gates can also be fabricated in A36 steel, 304(L) or 316(L) stainless steel.

FLEXIBLE FLAP GATES:

Flexible flap gates are excellent for water and wastewater applications. Suited for gravity flow by opening under very low unseating head. Also suited for pump discharge and withstanding the pump discharge slamming action. A flexible flap gate usually consists of a stainless steel frame, minimum 1" thick reinforced flexible neoprene cover, flexible cover hinge and neoprene lip seal seat. The resilient seat minimizes leakage.

STOP LOGS:

Stop logs are used for incremental level control of water flow in an open channel. Logs are in 6", 12", 18" or any height combination by any required length with lip seal across the long bottom to create a bottom seal and seal between logs. The logs are inserted in a channel frame with vertical lip seals to seal between the logs and frame. Coldwell-Wilcox stop logs are fabricated in aluminum, stainless steel or a combination of aluminum logs and stainless steel frame. Stop log frames can either be embedded or surface mount. Each length log is provided with a lanyard type lifter for removing and installing logs in the frame one at a time and thus controlling the water level as needed. An overhead crane or mobile crane is needed to install or remove the logs using the lanyard lifter.

STOP GATES:

Stop gates are designed to block water flow in open channel and available in almost any size. They are fabricated from aluminum or stainless steel and include structural reinforcements to limit deflection of the disc under the design head condition. The disc will have either one or two hand holes or handles depending on the gate width for removing and installing the stop gate disc manually. The frame is lined vertically with UHMW/neoprene side seals and a neoprene flushbottom seal across the bottom. Stop gate frames can be either embedded or surface mount type.

TELESCOPING VALVES:

Telescoping valves are designed to regulate fluid levels of tanks and other liquid filled structures. Telescoping valves are available in a full range of sizes with plain top, V-notched or bell mouth opening. CWT standard material of construction is either 304(L) or 316(L) stainless steel. Other materials are available as requested. Telescoping valves are handwheel, handcrank or electric actuator operated pedestal mounted with rising stem, bail, slip tube and 150 pound companion flange with integral neoprene wiper and UHMW seat for mounting to customer flanged standpipe. Slip tube is sealed by the neoprene wiper and UHMW seat Flange mounted and designed to fit customer mating standpipe flange. A slip tube anti-rotation device is stem and pedestal mounted.

TILTING TROUGH SKIMMERS:

Rotating tube type skimmer is designed for wall to wall mounting in rectangular basins. Typical length ranges from six (6) feet to twenty-five (25) feet and six (6) inches to twenty-four (24) inches in diameter. The skimmer tube extends wall to wall and is configured with

approximately thirty (30) inch long slots Twenty (20) to sixty (60) degrees wide on the tube outer diameter and parallel to the longitudinal axis of the tube and only separated by minimum two (2) inch wide stiffeners or as specification required. Manually operated lever arm or electric actuator rotated by a combination pivot link arm arrangement with tilting capacity to sixty (60) degrees either clockwise or counterclockwise. Materials of fabrication are A36 steel, 304(L) stainless steel, 316 (L) stainless steel or a combination of both. The slot edges serve as a weir skimmer when rotated. The adjustable weir skimmer depth is determined by the degrees of tube rotation. Tilting trough skimmers are normally designed to form a continuous obstruction-free path through sedimentation tank walls so that scum can travel continuously across all sedimentation tanks and discharge into a scum decant structure.

FIXED SCUM TROUGH WITH CONTINUOUS DISCHARGE TROUGH:

Fixed scum troughs are adjustable height wall to wall weirs with an accumulation trough integrally side mounted to a high wall to wall flume forming a continuous obstruction-free path through the sedimentation tank walls. A manual or electric actuator operated slide gate is flume sidewall mounted creating a controlled passage way between the weir accumulation trough and the flume. Unlike the tilting trough skimmer, the fixed scum trough adjustable weir is normally permanently set to the required fluid level.