



# Tainter Gates

For Spillway and Open Channel Flow Control



# Tainter Gates

## For Wide, Unobstructed Openings

Rodney Hunt tainter gates are normally used to control the flow of water or wastewater over a dam or drainage structure to provide a wide and unobstructed opening. These gates, which are sometimes very large, are sturdily designed for long life and low maintenance in difficult conditions, but also incorporate a number of “designed-in,” installation and field-adjustment features.



Two 36.5' x 18.85' Rodney Hunt Tainter Gates have been installed at the L.L. Anderson Dam.

### Proven Design

The disc is a flat steel plate curved on the required radius. Vertical T-ribs support the curved plate and are backed by flanged beam supports that span the width of the opening. The radial arms attach to these horizontal supports and extend back to the trunnion. J-seals are mounted across the bottom and up both sides. Steel or stainless steel plates are embedded across the invert and up both sides of the gate to provide a tight seal when the gate is closed.

### Rugged Construction

The radial arms are angled toward the center of the gate so that they intersect the horizontal supports at a point that is approximately one-sixth of the way in from each side. This provides better support and helps to resist lateral thrust. The trunnions and trunnion base plates are steel supported by steel structures embedded in the concrete walls or by a beam that spans the opening. The hinge pin is stainless steel, supported in bronze bearings with fittings for lubrication.

### Field Adjustable

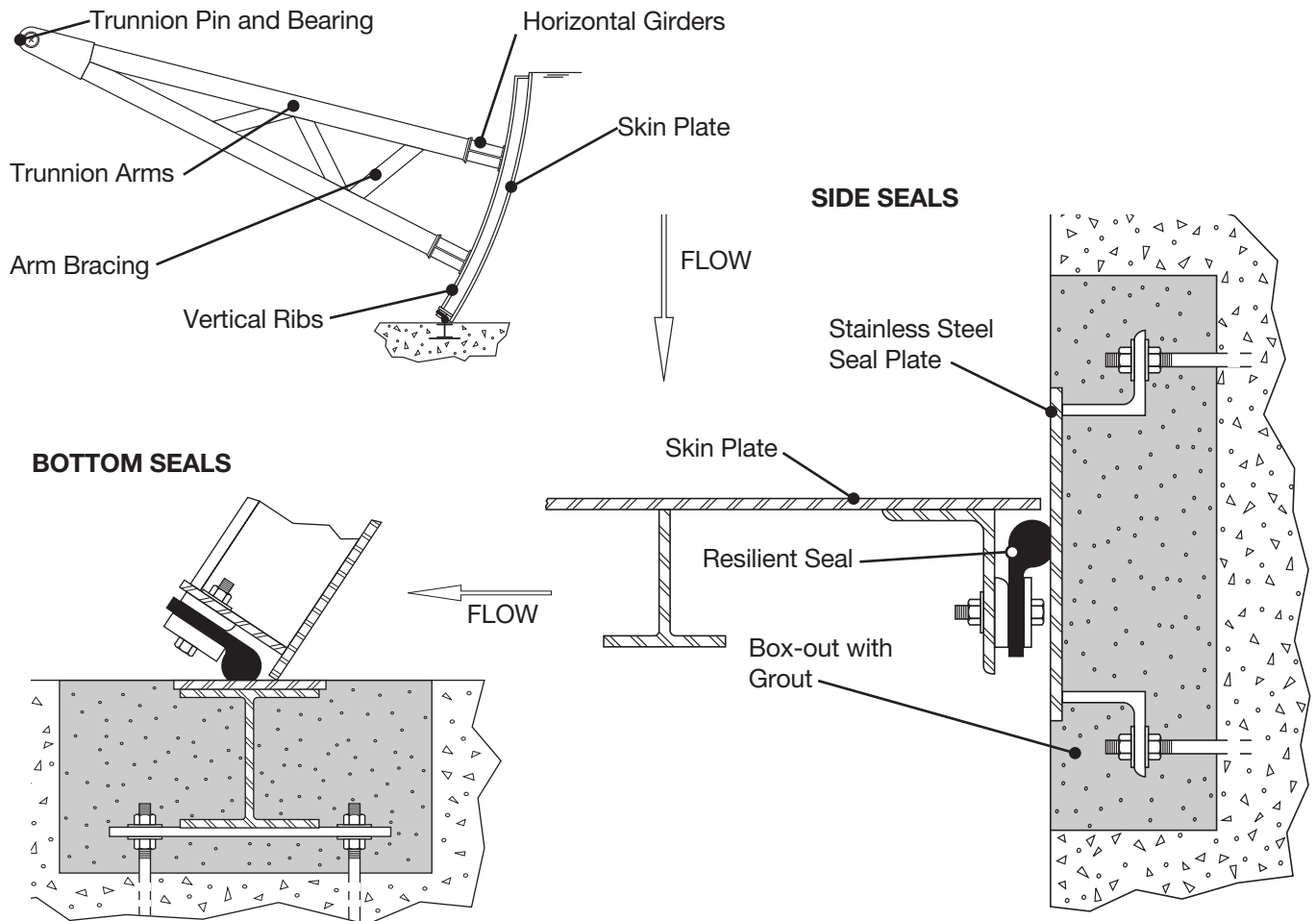
All parts of the gate are field adjustable. This ensures proper installation and a tight seal in the closed position. The seal on the disc can be moved so that proper interference with the side and invert seal plates is obtained. The invert seal plate and both side plates are installed in box-outs in the concrete and are completely adjustable to provide accurate seating of the gate. The trunnion supports are adjustable with adjusting bolts and lock nuts so that precise location of the hinge pins can be obtained.

### Actuation

Cable drum hoists or hydraulic actuation units recommended. Cable drum hoists are electrically driven and utilize fully enclosed gear reduction units, protected and interconnected shafting with flexible couplings, grooved drums, and steel or stainless steel cables. Worm gears are provided and are self locking to hold the gate in position without the use of a motor break. Hoisting units can also incorporate position indicators, limit switches, and automatic opening and closing controls.

## Components

Illustrations show a typical tainter gate arrangement and major components. All the thrust from water pressure is taken by the trunnion set in the concrete.



## Materials

Gate Disc Skin Plate:	Steel Plate	Embedded Side Seal Plates:	Stainless Steel
Gate Disc Frame Members:	Structural Steel	Hoist Base Plate:	Structural Steel
Seals:	J-Type, Rubber ASTM D2000	Cables:	Type 302, S/S IWRC
Retainer Bars and Fasteners for Seals:	Stainless Steel	Cable Drums:	ASTM A126 Cast Iron or Fabricated Steel
Fasteners (Studs, Anchors and Assembly Bolts):	Stainless Steel	Shafts:	Forged Steel ASTM A668 Class F
Metal Contact Surfaces for Bottom Side Seals:	Stainless Steel		
Trunnion Assemblies-			
Arm:	Structural Steel		
Bearing:	Self-lubricating, Sleeve Type		
Trunnion Shaft:	Stainless Steel A564-630, 1075		



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- Flap Gates

### Actuation

Manual, electric, and hydraulic actuation systems are available.

For more information about Rodney Hunt products or to contact a sales representative, visit the Rodney Hunt website ([www.rodneyhunt.com](http://www.rodneyhunt.com)) or call 978-633-4362