## **RDP** Tightseal<sup>™</sup>System

The patented Tightseal<sup>™</sup> is in use on hundreds of slide gates. The seal is not only used on the Diamond metering gate, but also used on conventional (non metering) square or rectangular gates. The seal is installed on screw conveyor discharges, grit/screenings hoppers, sludge pump inlets, anywhere a leak proof slide gate is required, the Tightseal system can be utilized.

The Tightseal uses a special single molded piece ball type sealing system that forms an o-ring seal around the opening. There are no joints or cracks in the rubber ball seal which would allow leakage. The ball seal is a heavy duty large diameter seal (1-1/2" to 2" diameter) formulated from a proprietary blend of materials to provide the proper hardness, flexibility, oil and chemical resistance, and a built in lubricant. The result is a rubber seal with long life and no leakage. As the level of solids increase, increasing pressure on the seal, the Tightseal becomes tighter and seals better.

The seal is mounted to a heavy duty support frame and held in place with a seal retainer. The retainer directs the deformation of the ball seal, under pressure, against the gate blade, creating a seal that gets tighter as more pressure is exerted on the slide gate.

Certain model gates include a ramping system, which pressurizes the seal as the gate reaches the fully closed position. This preloads the seal against the gate blade.

The Tightseal system is in use on gates from 12" to 72" wide.



## **RDP Diamond Metering Gates**





When storing dewatered sewage sludge in storage bins, variations in the solids content, polymer content and the height of sludge in the bin, cause the flow rate of the sludge to vary greatly. The patented Diamond Metering Gate is able to adjust to the flow changes and accurately control the rate of discharge.

The unique diamond shaped orifice provides a gradual increase in open are when compared to conventional square or rectangular gates. This allows the gate to open gradually, for a smooth and controlled flow of sludge. Once the sludge is flowing, the gate will accurately change to keep the rate of discharge within the required range. This prevents splashing and over filling during the load-out process.

Diamond Metering Gates are furnished with the patented Tightseal<sup>™</sup> system which prevents leaking, even when loaded with over 2,000 tons of sludge.

Diamond Metering gates are in operation on fully automatic multiple hopper storage bins and systems to small single hopper bins using only manual control of the gate.

The diamond orifice provides two advantages compared to conventional slide gates. First the orifice provides a gradual change in open area. Second, the orifice allows for a longer travel distance for changing open area. This allows the gate to better control the flow through the orifice and modulate the flow with greater accuracy.