



## Oxidation Ditch Aeration Transformed

### The Challenge

Oxidation ditches (often called racetracks) have long relied on mechanical brush and rotor aerators that struggle to keep solids suspended, require constant upkeep, and fail to deliver dissolved oxygen throughout the full water column.

### The Solution: TITUS TwisterSDF

The TITUS Twister SDF Aerator replaces these outdated systems with powerful, air-driven technology that improves mixing, reduces sludge buildup, and extends equipment life.

### ENGINEERED APPLICATIONS FOR RACETRACK SUCCESS

- Oxidation Ditches (Racetracks)
- Headworks at Wastewater Treatment Facilities
- Polishing Lagoons and Large Ponds that would benefit from a directional flow aerator.
- Systems Replacing Mechanical Brush or Disc Aerators, low speed surface aeration

### SYSTEM ADVANTAGES THAT SET THE SDF APART

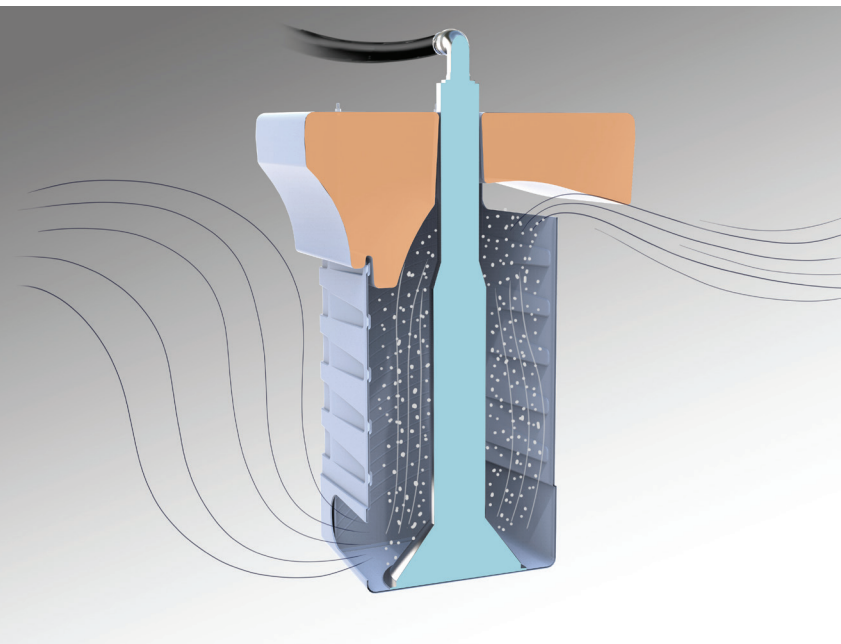
- Equal or superior oxygen transfer
- Enhanced mixing to minimize sludge buildup
- Consistent dissolved oxygen distribution
- Non-clogging, no ragging
- Air-driven system with no moving parts submerged in the water
- Subsurface intake with directional discharge
- Corrosion-Proof HDPE construction
- Quick installation with no tethering required
- Custom "Run Slow" blower technology
- Land-based access and service
- Compatible with DO probes for automated control

## Why We Developed the SDF

Treatment “Racetracks” have long depended on brush, disc, and other mechanical aerators. While these systems throw water into the air to provide aeration, they require constant repairs, suffer frequent breakdowns, and leave operators with high service costs and extended downtime when equipment fails.

Even more problematic, these surface aerators only move water near the top of the racetrack. Without true directional mixing, solids settle to the bottom, creating layers of settled solids that can reach more than ten feet deep. This buildup reduces capacity, increases sludge handling costs, and undermines overall treatment performance.

For municipalities and industrial facilities, the result is the same: unreliable aeration, mounting maintenance expenses, and systems that can’t keep up with long-term wastewater demands.



## Why It Works

The TITUS Twister SDF Aerator solves the challenges of racetracks with an innovative, air-driven design that keeps the entire ditch moving.

Using a subsurface intake and a 15-degree directional discharge, the SDF continuously circulates water from the bottom up. This prevents material buildup and maintains consistent dissolved oxygen levels across the full depth.

Unlike mechanical aerators that throw water into the air and only reach the surface, the SDF delivers true directional flow that protects solids retention time (SRT) and promotes biological treatment.

With no moving parts or electrical components in the water, it eliminates common operational headaches and provides a safer, more durable alternative for long-term racetrack performance.

**AVAILABLE ACROSS NORTH  
AMERICA THROUGH OUR  
DISTRIBUTOR NETWORK**

**TITUS TWISTER SDF AERATORS  
ARE PROUDLY MADE IN THE USA  
AT OUR FACILITY IN CASPER, WY**



**877.582.9899**

tituswws.com  
info@tituswws.com

**Address:**

5301 CY Avenue  
Casper WY 82604 USA

