



Aeration Industries
International
a newterra company

Tri-Oval® Oxidation Ditch System

Reliable solutions, optimal performance

The Tri-Oval® Oxidation Ditch System, named for our Aire-O₂ Triton® in an oxidation oval, is a subsurface complete mix, looped reactor system that is ideal for municipal and industrial wastewater treatment facilities. The energy efficient Aire-O₂ Triton® TR Series process aerator/mixer, combined with an optimized control strategy, allows for operation at depths as low as 4ft (1.22m) and up to 33ft (10m).

WHY CHOOSE THE TRI-OVAL® SYSTEM?

- Independent aeration and mixing with one piece of equipment for biological nutrient removal
- Simple, flexible operation with easy process control
- Reduced power consumption with low total cost of ownership
- Minimal heat loss offers improved winter performance
- Total reliability, quiet operation, and flexible design for restricted land requirements

FEATURING:

- Full biological nutrient removal (BOD, Nitrogen, Phosphorus)
- No aerosols or splashing
- Complete mixing throughout the water column, eliminating solids settling
- Additional equipment can be provided to create a system package including: controls, instrumentation, secondary clarifiers, RAS/WAS pumps, and/or an aerobic digester

IDEAL SOLUTION FOR:

- Activated sludge treatment
- Nitrification and denitrification
- Enhanced biological phosphorus removal
- New construction, upgrades, and retrofits

Key:

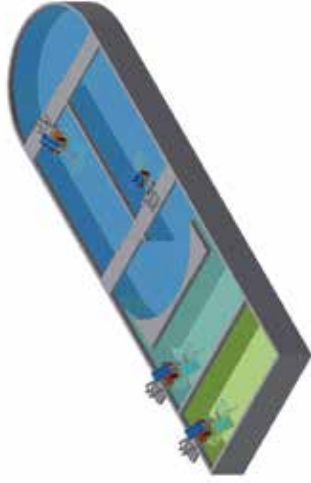
- aerobic phase
- anoxic phase
- anaerobic phase



TYPICAL EFFLUENT	OXIDATION DITCH
BOD	10
NH ₃ -N	1
TN	8
NITRATE	5

TYPICAL EFFLUENT	CYCLICAL AERATION
BOD	10
NH ₃ -N	1
TN	8
NITRATE	5

TYPICAL EFFLUENT	MODIFIED LUDZACK-ETTINGER (MLE)
BOD	10
NH ₃ -N	1
TN	8
NITRATE	5



TYPICAL EFFLUENT	A ² /O
BOD	10
NH ₃ -N	1
TN	8
NITRATE	5
TP	<1**

TYPICAL EFFLUENT	FOUR-STAGE BARDENPHO
BOD	10
NH ₃ -N	1
TN	5*
NITRATE	3*
TP	<1**

TYPICAL EFFLUENT	FIVE-STAGE MODIFIED BARDENPHO
BOD	10
NH ₃ -N	0.5
TN	5*
NITRATE	3*
TP	<1**

NOTE: all numbers are measured in mg/L

*may require external carbon source

**requires filtration/chemical backup

Aeration Industries® International | +1-952-448-6789 | 4100 Peavey Road Chaska, MN, 55318 USA
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