TT20 OZONE ENHANCED

DEMONSTRATION PROCEDURE

(and Agreement)

Please document any concerns or questions regarding the Demonstration, Installation, Operation and/or Maintenance of the TITUS® Twister Mixing Aerator and submit to manufacturer immediately.

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INTRODUCTION

The TITUS® Twister® Mixing Aerator with Ozone Enhancement is a Chemical Free, safe, and effective solution for extreme odor issues in wastewater structures. The TITUS® Twister® Mixing Aerator is designed as the delivery vehicle of ozone directly into the body of wastewater, attacking H2S gases, bacteria, pathogens, and odors at their source. In addition, the TITUS® Twister® provides robust mixing, increased dissolved oxygen levels, and the mechanical breakdown of fats, oils and greases, making them more bio-available. The result is a healthier wastewater structure, with measurable reduction (or elimination of) odors, FOG and corrosion.

RECOMMENDED DEMONSTRATION PLAN

Each application is unique, with various factors to be evaluated and taken into consideration. The minimum recommendations for a successful demonstration are as follows:

- **EVALUATE APPLICATION**
  - Review size of structure where demonstration will take place
  - Review issues (odor, f.o.g., etc
  - Review daily flow rates ○ Review operating levels
  - Review current data (including but not limited to DO readings and H2S readings)
  - Review any current or previous measures utilized to combat said issues

- **DETERMINE AVAILABILITY OF RESOURCES**
  - Available power must include (1) Hard wiring of blower to 3phase/480v (or 240v) circuit, (1) 20-amp Receptacle, (1) 15-amp Receptacle
  - Area must be safe and secure (for personnel and equipment)
  - Proper data collection must be provided before and during demonstration (see data collection sheet attached)
  - Twister® head and hose must be cleaned and sanitized at conclusion of demonstration
  - Customer must be committed to duration of demonstration, as set forth prior to start. Ozone enhanced system demonstrations are typically 5 – 15 days in length.

DEMONSTRATION COMPONENTS

(1)Single Axle Utility Trailer:

Approximately 1800# total weight (with all equipment)

5' wide x 8' long
Drop Ramp Tailgate
Spare Tire
(1) Heavy Duty Extension Cord (for AC Unit)
(1) Heavy Duty Extension Cord (for Ozone Unit)
(1) 33' EPDM Hose

(1)Stainless Steel Enclosure to house:

(1)TT20 Ozone Generator
(1) Climate Control Air Conditioner
(1) 3hp Blower
(1) Control Panel
(1) EPDM Hose, 33' long

PREPARING FOR THE DEMONSTRATION

Location

The TITUS® Twister® Mixing Aerator is specifically adapted for free, targeted placement within the desired wastewater structure. Every demonstration/installation has some degree of placement planning for optimum performance. Providing asbuilt drawings of the prospective demonstration/installation structure is encouraged and highly recommended, for the following:

a. Proper sizing of TITUS® Twister® Mixing Aerator system (see operating parameters chart for guidelines and consult with TITUS®)
b. Choosing the best location for placing enclosure, for blower assembly, outside of the structure

c. Choosing optimum, temporary/permanent TITUS® Twister® head placement inside of structure
d. Determining hose requirements (length)
e. Understanding above grade factors (pump winches, hatch opening dimensions, etc)

User should follow project documents and/or manufacturer's recommendations regarding placement of above noted components to assure effective operation of system.

Prepare the Structure/Site for Demonstration

- Confirm proper electrical service is available.
  - 3hp Blowers require three phase, 480v or 240v, hard wired connection, grounded (blower can be adjusted for either voltage)
  - Climate Control A/C unit requires (1) 20amp receptacle (Extension cord provided by TITUS)
  - Ozone Generator requires (1) 15amp receptacle (Extension cord provided by TITUS)

- Confirm that area around structure is secure and marked with cones, caution tape or other safety measures

- For demonstrations, the intended structure may be serviced and fully maintained prior to the TITUS® Twister® Mixing Aerator being installed OR the demonstration may take place in a structure that shows signs of issue (FOG, odors, etc)

- If substantial grease mat is present, please use tool or pressure washer to break opening through grease mat for Twister® head to be lowered down through.

- Confirm minimum and maximum liquid levels within the structure during the demonstration period. To avoid head pressure, blower and operational issues, ensure that liquid level does NOT exceed maximum depth over Twister® head.
  - 12"Ø x 36" high Twister Head Maximum liquid depth = 96" ○ 12"Ø x 48" high Twister Head Maximum liquid depth = 120"

- For demonstration purposes, if maximum liquid level of structure is over 120" please proceed with either option listed below:

- Option 1: Customer shall adjust level floats for the duration of the demonstration
- Option 2: Twister® head shall be suspended at level which will not allow for additional liquid level/head pressure over 96"

DEMONSTRATION PROCEDURE

- **Follow all OSHA safety protocols and safety measures outlined in attached TT20 Ozone Generator Operation Manual**
- Please refer to Section (2) Components list as needed.
- Record any pertinent data, including but not limited to information listed on attached Demonstration Data Collection sheet. Include photos.

1. Place the Demonstration Trailer, containing the Blower, Ozone Generator and Air Conditioner in pre-determined location beside the structure. Ensure that all safety measures to secure demonstration area, trailer, and equipment for the duration of the demonstration.

2. Ensure blower is set to proper voltage (480v or 240v).

3. Hard wire electrical conduit from blower to power source. This should be completed by certified electrician, provided by others.

4. Utilize heavy duty, construction grade, extension cord (provided) to plug Climate Control Air Conditioner in to 20amp receptacle.

5. Utilize heavy duty, construction grade, extension cord (provided) to plug Ozone Generator into 15amp receptacle.

6. Turn on the blower to ensure proper rotation of the blower. Confirm there is air **Discharge** at the end of the blower to hose connection.

7. After checking proper blower rotation and operation, TURN BLOWER OFF and proceed with connecting hoses and piping as noted below.

8. Connect hoses and piping:
   a. Locate EPDM hose, Cam-Locks/Disconnect Couplers and Cotter Pins.

b. Connect one end of hose to the blower's air-feed using the provided Stainless-Steel cam-locks and cotter pins.
c. Connect other end of hose to top of Twister® head/manifold using provided Stainless-Steel cam-locks and cotter pins.
d. Check that cam-locks are secured with pins or wire ties to prevent cam-locks from opening.

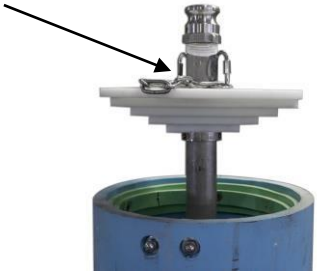
EPDM Hose, Cam-Locks, Couplers


Connection to Blower at Enc.


Connection EPDM Hose to Head

9. Lower the TITUS® Twister® Mixing Aerator Head into the structure
a. Locate Stainless-Steel Eyebolts and Safety Chain. Securely connect a rope or stainless steel cable to the safety chain.
b. Place a loop in the rope or stainless-steel cable approximately 6' to 10' above the Twister® unit.
c. Use a small grappling hook attached to the crane or hoist and engage the loop.
d. Lower the unit in place and detach the grappling hook from the loop.
e. Tie off the rope or stainless-steel cable so it is accessible from the open hatch.
f. To remove the TITUS® Twister® unit, reverse the procedure, snagging the loop with a small grapple hook.

10. Twister® units weigh more than 100 lbs. It is recommended that suitable hoist or small service crane be employed to lower the TITUS® Twister unit into the structure.



11. Turn on Climate Control A/C Unit, Set to 69 degrees Fahrenheit

12. Turn on blower

13. Turn on Ozone Generator **(*SEE BELOW…FOR OZONE GENERATOR OPERATION, PLEASE READ AND FOLLOW PROVIDED TT20 OPERATING INSTRUCTIONS)**

14. Adjust Ozone Levels. Begin with lowest setting recommended by Titus and/or Titus distributors

NOTE: Ozone Generator includes a pressure switch. Although Ozone Generator is turned on, it will not engage until air levels have reached 1psi.

PLEASE REFER TO ATTACHED TT20 OPERATING INSTRUCTIONS TO ENSURE PROPER USE AND OPERATION OF OZONE GENERATOR

DURING DEMONSTRATION

- Although each demonstration and application is unique and project specific, it is recommended that the demonstration unit is checked and data is collected at least (3) times per day throughout demonstration.
- Data must be recorded on attached Data Collections Sheet and shared with your TITUS® Twister® Distributor, responsible for providing your demonstration.
- The demonstration unit must be checked to ensure the following (but not limited to):
    - Power sources are still connected and operational
    - All equipment is operational
    - Ozone Generator is properly set

COMPLETION OF DEMONSTRATION

1. Turn off Ozone Generator

2. Turn off Blower

3. Turn off Air Conditioner Unit

4. Remove Twister® from structure
5. Disconnect EPDM hose or Stainless-Steel Piping from blower and Twister® head

6. Flush Twister® head, including Stainless-Steel Manifold and EPDM hose with clean water until water passes through all air muzzles freely.

7. Flush Twister head, Stainless-Steel Manifold and EPDM hose with sanitizing agent

8. Compressed air may also be used to remove organic sediment from the unit

9. Repackage demonstration components, as found, on the demonstration trailer, for shipment/transport to next location.

10. Complete recording of data, customer feedback, etc.

ADDITIONAL NOTES

- The TITUS® Twister® Mixing Aerator operational liquid levels are limited only by the systems total dynamic head pressure (TDH). The absence of water depth has no impact on the Regenerative Blower performance or health.

- High liquid levels in the structure have the potential to damage or burn out blowers. The blower is fitted with a pressure relief valve calibrated to open at a pre-determined head pressure setting and relieve air pressure below the rated maximum pressure of the blower. When liquid levels return to operational elevations, the valve automatically closes.

DATA COLLECTION RECORD

TITUS TWISTER MIXING AERATOR

DEMONSTRATION/PRODUCT VERIFICATION DATA COLLECTIONS RECORD

Project Name:
Structure Designation:
Structure Location: Address | City | State
End User/Owner:
Demo Conducted By:

Issues of Concern/Reason for Demo: ☐ Odor ☐ FOG ☐ Corrosion ☐ Other _____

Condition of Structure and Wastewater in Structure at start time of demonstration (attached photos and/or videos):

Day 1 *(please copy for multi-day demonstrations)*

Date	
Weather Conditions	
Temperature	
Start Time	
Stop Time	

	Data Collection 1 (Baseline/PreInstall)		Data Collection 2		Data Collection 3		Data Collection 4		Data Collection 5		NOTES
	Time	Reading	Time	Reading	Time	Reading	Time	Reading	Time	Reading	
H2S Levels											
Dissolved Oxygen Levels											
Dissolved Sulfide Levels											
Other_____											
Other_____											

OTHER NOTES, OBSERVATIONS & COMMENTS (please attach photos and/or videos):

ATTACHMENT: TT20 OZONE GENERATOR OPERATING MANUAL (Including safety protocol)

TITUS® Twister® Mixing Aerator
Product Verification/Demonstration Agreement

Customer: City of Ocala
Date of Installation for Product Verification: to be decided
Location of Installation: LS 046
Contact Name: Luis Acosta Phone: 352-572-0421 Email: lacosta@ocalafl.gov
TITUS® Distributor (if applicable): The WASS Company
Agreed upon duration of Product Verification:

- _____Partial Day
- _____24 Hours
- _____48 Hours
- _____1 Week
- _____2 Weeks
- _X_____Other One month

Description of issues to be addressed during Product Verification (include exact measures of data results to be collected/verified):

FOG, odor, H2S

Equipment Issued:
_X_____TITUS® Twister® Mixing Aerator Demonstration/Product Verification Unit including:

- Head
- Hose with connections
- Blower
- SS Enclosure
- Starter/Control Panel
- Ozone Generator

By signing this form, the above listed Customer agrees to the following:

- Customer shall be responsible for the equipment or property issued, as outlined above.
- Equipment shall be used in the manner intended, as outlined above, in Twister® Sizing Request and as directed by Titus® recommendations.
- Customer shall be responsible for any damage incurred due to negligence or improper use.
- Customer shall be responsible for any replacement and/or repair costs for loss or damage incurred during Product Verification period due to negligence or improper use.
- Customer is responsible to report to TITUS® any loss, damage, or operational issues immediately.
- Customer is responsible for either issuing Purchase Order or returning equipment within 5 working days of conclusion of Product Verification period noted above.
- Please note, TITUS® (or TITUS® Distributor) will issue an invoice for the equipment 5 working days after Product Verification period ends, as noted above, unless tracking number has been issued for return of equipment.
- Customer is responsible for cleaning and sanitizing all components at conclusion of demo.
- Customer is responsible for shipping cost associated with returning equipment to TITUS® or distributor .

DocuSigned by:
Signed: Ken Whitehead Print Name: Ken Whitehead Date: 4/22/2025
Representing (Customer Company): City of Ocala

Approved as to form and legality:
DocuSigned by:
William E. Sexton

Certificate Of Completion

Envelope Id: 182E8945-011A-48D6-8878-8D0F6DC28713
Status: Completed
Subject: FOR SIGNATURE - 30 - Day Trial - Titus Twister Mixing Aerator (WRS/250653)
Source Envelope:
Document Pages: 10
Signatures: 2
Certificate Pages: 2
Initials: 0
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-05:00) Eastern Time (US & Canada)

Envelope Originator:
Patricia Lewis
110 SE Watula Avenue
City Hall, Third Floor
Ocala, FL 34471
plewis@ocalafl.org
IP Address: 216.255.240.104

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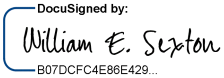
Signer Events	Signature	Timestamp
William E. Sexton wsexton@ocalafl.org City Attorney City of Ocala Security Level: Email, Account Authentication (None)	DocuSigned by:  B07DCFC4E86E429... Signature Adoption: Pre-selected Style Using IP Address: 216.255.240.104	Sent: 4/22/2025 11:01:09 AM Viewed: 4/22/2025 11:06:23 AM Signed: 4/22/2025 11:08:28 AM
Electronic Record and Signature Disclosure: Not Offered via Docusign		
Ken Whitehead kwhitehead@ocalafl.org Assistant City Manager City of Ocala Security Level: Email, Account Authentication (None)	DocuSigned by:  5677F71E38874F4... Signature Adoption: Pre-selected Style Using IP Address: 216.255.240.104	Sent: 4/22/2025 11:08:29 AM Viewed: 4/22/2025 3:14:24 PM Signed: 4/22/2025 3:23:21 PM
Electronic Record and Signature Disclosure: Not Offered via Docusign		

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	4/22/2025 11:01:09 AM
Certified Delivered	Security Checked	4/22/2025 3:14:24 PM
Signing Complete	Security Checked	4/22/2025 3:23:21 PM
Completed	Security Checked	4/22/2025 3:23:21 PM

Payment Events	Status	Timestamps