STELLAR WATERWORKS

UFO SUBMERSIBLE MIXER INSTALLATION/OPERATOR MANUAL

`

Table of Contents

Safety Instructions .....Page 2-6

Components Included ..... Page 7

Machine/Install Requirements ..... Page 8

Placement ..... Page 8

Installation and Operation .....Page 9-12

Technical Specifications .....Page 13

Warranty.....Page 14

Customer Support..... Page 15-16

`

Safety Instructions

Carefully read safety information when you see any safety symbols. Please obey all safety messages that follow this symbol to avoid death, personal injury, or damage to the unit.

*** Thoroughly read and understand all instructions prior to performing any procedure with this product. Maintain full operator attention and alertness at all times when operating or serving this unit.**

`

Safety Instructions

IMPORTANT: It is the responsibility of the installer and owner to identify all possible hazards associated with the installation of this product. You must determine the necessary safeguards and implement them before beginning any work and throughout the duration of the installation process. Failure to identify risks or follow safety procedures could result in death or serious injury.

This installation/operator's manual is not intended to include a comprehensive listing of all details for all procedures required for placement, operation and maintenance. Do not proceed if you have any questions about a procedure or are uncertain about any detail. Please contact Stellar Waterworks Customer Service at 888-976-3444 to speak to a representative.

IMPORTANT: All personnel must adhere to federal and state safety mandates as required by the U.S. Occupational Safety and Health Administration (OSHA). Proper PPE is mandatory during the placement and maintenance of mixer circulation equipment. Refer to OSHA's official website for specific compliance guidelines."

Please refer to http://www.osha.gov

`

Safety Instructions

ELECTRICAL HAZARD

***WARNING*: THIS EQUIPMENT CONTAINS HIGH VOLTAGE! ELECTRICAL SHOCK CAN CAUSE SERIOUS OR FATAL INJURY. ONLY QUALIFIED PERSONNEL SHOULD ATTEMPT PLACEMENT, OPERATION AND MAINTENANCE OF ELECTRICAL EQUIPMENT. REMOVE ALL SOURCES OF ELECTRICAL POWER BEFORE PERFORMING ANY SERVICE WORK TO THE MACHINE. USE PROPER LOCKOUT TAGOUT (LOTO) PROCEDURES TO ENSURE A SAFE WORK ENVIRONMENT.**

CRUSH HAZARD

***WARNING*: ENSURE HANDS AND FEET ARE CLEAR WHEN LIFTING AND MOVING THE UNIT TO AVOID ANY PINCH OR CRUSH SITUATIONS.**

ENTANGLEMENT HAZARD

***WARNING*: ENSURE THAT PERSONNEL ARE CLEAR OF THE ELECTRIC CORD AND CHAIN TO AVOID ENTANGLEMENT.**

`

Safety Instructions

• A confined space entry plan and operational procedures must be implemented for every water tank entry. Please refer to OSHA's confined space requirements at their website: http://www.osha.gov or your relevant local authority.

• Fall protection is a safety requirement for all work performed on water tanks. Please refer to OSHA's website for fall protection safety requirements: http://www.osha.gov or your relevant local authority.

• Lifting tools and equipment are required during a submersible water mixer installation. Please refer to OSHA's website for more information: http://www.osha.gov or your relevant local authority.

• Recommended OSHA approved Personal Protective Equipment (PPE) should be followed for this installation. Please refer to OSHA's Personal Protective Equipment at their website: http://www.osha.gov.

Lockout Tagout

(Optional Control Panel)

When the ON/OFF switch is in the "ON" position, the mixer can start automatically at any time if it is not already running. To lock out the mixer, turn the switch to "OFF" and place a padlock through the controller door latch. The ON/OFF switch also serves as an emergency stop.

`

Safety Instructions

Confined Space Safety Tips

- Never enter a permit-required confined space unless you are properly trained and have an authorized entry permit.
- Review and understand all procedures before entry and know the required exit steps and conditions.
- Identify potential physical hazards prior to entering.
- Test and continuously monitor the atmosphere for oxygen levels, flammable gases, toxic substances, or explosive conditions as required before and during entry.
- Use appropriate safety equipment—such as fall protection, rescue gear, air monitoring devices, ventilation, lighting, and communication tools—according to entry procedures.
- Maintain constant contact with a trained attendant, either visually or through phone or two-way radio. This ensures the attendant or entry supervisor can order an evacuation if needed and notify properly trained rescue personnel in an emergency.

Fall Protection Safety Tips

- Check all fall protection and rescue equipment for damage or defects prior to use.
- Choose, wear, and properly use fall protection and rescue gear suited to the specific task.
- Identify all potential trip and fall hazards before beginning work.
- Watch for risks such as unprotected floor or roof openings and edges, shafts, open hatches, and stairwells.
- Make sure ladders are secured and stable before climbing.
- Do not stand on the top rung or step of a ladder.
- Use handrails when ascending or descending stairs.
- Maintain good housekeeping by keeping cords, ropes, chains, and other materials out of walkways and nearby work areas.

`

Components Included

UFO Submersible Mixer and 75 ft. electrical cable	**75 ft. 316 SS Retrieval Chain**	**Kellum Grip Strain Relief**
Hole Saw	**Junction Box**	**Nylon Cord Grip**
Tank Pass-Through Fitting Assembly	**LEXEL Sealant**	**(Optional) Control Panel**

<u>*RECOMMENDED COMPONENTS FOR INSTALLATION</u>: Cordless Drill, Large Channellock Pliers, Large Crescent Wrench, Chain Grab Tools, 1-Gallon Bucket.

`

Machine/Install Requirements

Hatch Requirement: An 18-inch-diameter hatch opening is required to allow the UFO Submersible Mixer to pass through.

Power Requirement: 115 VAC 60 Hz, 1 Ph, 20-Amp GFCI-Protected Circuit.

Placement

Mixer Placement Guidelines

In many situations, positioning the mixer just below the main access hatch is adequate. When possible, use the following recommendations to guide placement:

Mixer Elevation: Install the mixer at the lowest point in the tank, ensuring it rests or is supported in a vertical orientation.

Short-Circuit Path: Ideally, place the mixer along the short-circuit path between the tank inlet and outlet. This allows incoming water to be thoroughly blended with the tank volume before exiting.

Common Inlet/Outlet: Favor placement near a shared inlet/outlet pipe to help prevent short-circuiting and improve mixing efficiency. However, maintain a clearance of at least 10–15 feet from the common inlet/outlet pipe.

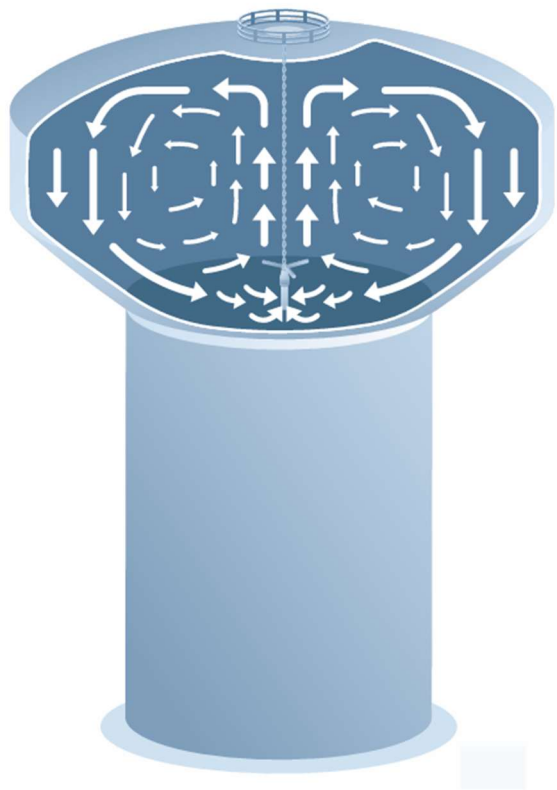
Center Tank Placement: When the inlet and outlet are separate, the mixer is often installed near the center of the tank. In this setup, positioning along the short-circuit path remains the top priority.

`

Installation and Operation

WARNING: The UFO Submersible Mixer should ALWAYS run underwater. NEVER RUN DRY.

The UFO Submersible mixer is designed to circulate water by bringing water from along the tank floor and sending it upward and out across the water surface in layers causing direct and induced mixing effects. As flow leaves the unit, vertical flow is induced in between the water being drawn below and the water above. At the level of the flow intake, water is drawn from all inner walls along the floor of the tank. As this lower layer of fluid makes its way inward with converging streamlines to the UFO Submersible mixer, the water is forced upward, toward the surface, providing gentle mixing, de-stratification, and surface renewal.



`

Installation and Operation

WARNING

ELECTRIC SHOCK HAZARD

THIS EQUIPMENT CONTAINS HIGH VOLTAGE! ELECTRICAL SHOCK CAN CAUSE SERIOUS OR FATAL INJURY. ONLY QUALIFIED PERSONNEL SHOULD ATTEMPT PLACEMENT, OPERATION AND MAINTENANCE OF ELECTRICAL EQUIPMENT. REMOVE ALL SOURCES OF ELECTRICAL POWER BEFORE PERFORMING ANY SERVICE WORK TO THE MACHINE. USE PROPER LOCKOUT TAGOUT (LOTO) PROCEDURES TO ENSURE A SAFE WORK ENVIRONMENT.

ELECTRICAL POWER:

STEP 1: Ensure that electrical power (115 VAC, 60 Hz, 1-Ph, 20-Amp GFCI-Protected circuit) has been installed at the tank site by a certified electrician prior to installation.

STEP 2: Install a control panel or safety disconnect switch and install power by a certified electrician prior to mixer installation (Ensure the proper lockout/tagout procedures are followed).

STEP 3: After the installation of the mixer, a certified electrician will need to connect the power from the junction box.

`

Installation and Operation

INSTALL TANK PASS-THROUGH FITTING:

STEP 1: Identify the hatch through which the UFO Submersible Mixer will be installed and mark the roof location for the tank pass-through fitting. When choosing the penetration point, verify the following:

A. The penetration will not contact or interfere with any internal structural components.
B. The penetration is centered within a clear area measuring approximately 8 in. x 8 in.
C. The penetration is within arm's reach of the hatch opening.
D. The penetration and junction box are positioned so they do not obstruct or interfere with hatch lid operation.

STEP 2: Use a cordless drill fitted with the hole saw to start cutting through the tank roof. Apply a small amount of food-grade vegetable oil or water to lubricate the hole saw during drilling. Before breaking through, place a catch bucket beneath the drilling area to collect metal shavings and the cut-out piece to prevent any debris from falling into the tank.

STEP 3: Carefully clean all surfaces around the penetration to remove any metal shavings before taking away the catch bucket. The opening is now prepared for installation of the tank pass-through fitting and sealant application.

STEP 4: Install the tank pass-through fitting with both the interior and exterior nuts and gaskets in place before tightening it to the roof. Set the fitting height so the top sits about 3½ inches above the tank roof. Secure the fixture firmly by tightening the jam nut, using a large Channellock pliers and a pipe wrench.

STEP 5: Apply a generous amount of sealant to all surfaces surrounding the penetration—inside, outside, and along the inner wall. This helps protect the roof area around the fitting from future corrosion.

`

Installation and Operation

WARNING

CRUSH HAZARD

ENSURE HANDS AND FEET ARE CLEAR WHEN LIFTING AND MOVING THE UNIT TO AVOID ANY PINCH OR CRUSH SITUATIONS.

WARNING

ENTANGLEMENT HAZARD

ENSURE THAT PERSONNEL ARE CLEAR OF THE ELECTRIC CORD AND CHAIN TO AVOID ENTANGLEMENT.

INSTALLATION OF UFO SUBMERSIBLE MIXER:

STEP 1: Before installation or operation, confirm the unit has been thoroughly cleaned and disinfected. Remove any visible debris, then sanitize the mixer by wiping it with bleach. Allow it to remain undisturbed for 12–24 hours prior to installation.

STEP 2: Develop a safe lifting plan to raise the UFO Submersible Mixer to the top of the tank near the hatch opening. Leave the mixer in its packaging to protect it during handling. Use a rope or chain to lift and support the load, and stay clear of the rope, chain, and electrical cable to prevent entanglement.

STEP 3: Remove the UFO Submersible Mixer from its packaging and secure the unit, chain, and cable to prevent it from falling off the tank and to avoid any entanglement hazards.

STEP 4: Secure one end of the retrieval chain to the bottom of the tank pass-through fitting using a quick link. Attach the other end to the eye bolt on the mixer with another quick link. Use pliers to tighten both quick links firmly.

STEP 5: Gradually and carefully lower the UFO Submersible Mixer to the tank floor until it makes contact. Then raise it slightly so it hangs just above the bottom, remaining as low as possible and positioned vertically. If there is excess power cord, coil it up and secure it to the ladder or near the top of the hatch.

`

Technical Specifications

Technology Description - UFO Submersible water circulation equipment, designed for continuous operation. Constructed with 316 stainless steel and NSF approved materials for contact with potable drinking water. Designed to be placed into service through roof hatch without tank entry.

Materials of Construction - 316 stainless steel and hardware construction. See certifications section below. (75 ft. of 316 stainless steel retrieval chain included for machine installation and retrieval without requiring tank entry).

Electrical Requirements - 115 VAC, 60 Hz, 1 Ph, 20-Amp Circuit

Power Draw - ~7.9 Amps, Full-Load 845 Watts

Motor Type - 4" Submersible Motor, 0.5 HP, 1 Phase, 115 V, 2-Wire

RPM - 3450

Machine Size - 40” height x 16.5” width.

Machine Weight – 75 lbs.

Certifications – Pump and motor certified NSF/ANSI 61 & 372, all other components approved to these standards.

`

Warranty

UFO Cosmix Submersible Mixer

Limited Replacement Warranty

Cosmix submersible mixers are warranted to be free from defective parts, materials, and workmanship for a period of five (5) years from the date of purchase. This warranty applies only when the equipment is installed, operated and maintained in accordance with the installation/operation manual and all applicable initial and ongoing Stellar recommendations. This warranty does not extend to, nor does it cover normal wear and tear or damage resulting from improper use, installation, or maintenance. There is no liability for consequential damages of any type. The warranty that is submitted and provided with the equipment is the valid warranty.

All optional accessories, including but not limited to control panels and air compressors, are warranted to be free from defect in materials and workmanship for a period of one (1) year from the date of purchase. During the applicable period, any parts determined at the sole discretion of Stellar, to be defective in materials or workmanship under normal use shall be repaired or replaced. Shipping charges may be incurred.

This Limited Replacement Warranty is subject to the terms of Stellar Waterworks Standard Terms and Conditions of Sale. In the event of any inconsistency between the terms of this Limited Replacement Warranty and Stellar Waterworks Standard Terms and Conditions of Sale, the terms of this Limited Replacement Warranty shall prevail to the extent of that inconsistency.

`

Customer Support

We’re here to help. If you have any questions about installing, operating, or maintaining your equipment, please contact us. Our knowledgeable team is ready to assist with troubleshooting, service guidance, and replacement parts.

For faster assistance, please have your model number, serial number, and date of purchase available when you contact us.

You can find contact information and additional support resources on our website or by reaching out to your authorized Stellar Waterwork representative.

`

Customer Support

STELLAR WATERWORKS

888-976-3444

www.stellarwaterworks.com

MAILING ADDRESS

STELLAR WATERWORKS

PO BOX 186

DICKINSON, ND 58602

FACILITY ADDRESS

STELLAR WATERWORKS

3275 104T AVE SW

DICKINSON, ND 58601