



# Installation Instructions

and O & M Manual for MT Mixing Tanks

2012

VER 2.5



# PROTECTOPLAS COMPANY

## Mixing Tank Guidelines/Installation

Thank you for purchasing the MT mixing tank. Please make sure to read all instructions for each component of this system before starting use assemble or use equipment. This manual is intended to familiarize the user owner with the usage of your tank. If you encounter a situation where you are not sure what is the proper action call our service department at 330.562.TANK (8265) , 9 AM to 5 PM, EST.

For more information visit [www.protectoplas.com](http://www.protectoplas.com)

### 1. Assembly

- a. Remove tank and equipment from pallet or trailer. Take care to not to damage any welded fittings/connections/structures. When using a crane ensure all lift point are correct or use choker strap. **Never lift a tank without draining all contents.** Do not allow tank to swing as it can damage lower drain fittings. Remove all dunnage including screws, wood blanks, and braces from all equipment.
- b. Place tank on a flat level surface free of all debris.
  - i. (Tanks with stands ONLY) Move tank and stand to desired location. Ensure tank is sitting upright in stand and that it is placed on a level surface. Surface should be designed to withstand full weight of equipment and tank contents. If required, secure steel stand to surface to prevent movement.
    1. For custom designed tanks that have cable ties to secure tank into stand (see tank drawing), install cables after tank stand has been positioned and secured. Tanks with cable systems must be secured to a level surface.
- c. Mixer may be attached to support bridge from factory. If it is skip to step "F". Open box containing mixer motor. Ensure that all information from mixer mfg company is thoroughly read and saved for future reference. Remove motor from packaging and carefully set it aside.
- d. Follow above procedure to unpack all other parts.
- e. If you have received mounting bolts with your mixer, or if you have a clamp style mixer proceed to step "F". If you did not purchase mounting

bolts with your mixer please refer to the mixer mfg's drawing, or instructions to identify the proper mounting hardware.

- f. Place your mixer motor onto the mixer support that was provided with your tank. To identify what style of support you have purchased please refer to your shop drawing. This may take extra assistance as some mixers supplied can weigh in excess of 60lbs. Tighten mounting hardware or clamp to ensure mixer motor stability. Typically, when using lock washers, the torque can be set at 25 ftlbs for normal operating conditions. You may find your application requires more or less torque. **Do not over tighten bolts as this can damage the plastic support system.** Always check hardware to ensure it is not loose. Loose mixer attachment can result in catastrophic tank failure and may cause injury or death. Routine maintenance is required.
- g. Install prop and shaft with provided hardware. Refer to mixer mfg for instructions. NEVER ENTER A TANK UNLESS PROPERLY TRAINED FOR CONFINED SPACE ENTRY. To obtain mixer instructions visit [www.protectoplas.com](http://www.protectoplas.com) and refer to correct mfg documents or links.
- h. **If you mixer requires grease, gear oil, airset system, or other finalization procedures ensure they are all completed before powering your motor.** Running this equipment without oil and grease can destroy the equipment. Protectoplas will not warrant any equipment that has been damaged due to negligence.
- i. Apply the proper power source to your motor. This can range from electric to air. For electric ensure a licensed professional makes all necessary connection in accordance with mixer mfg instructions. Electrical shock can cause injury or death. For air powered motors, refer to mfg pressure and volume requirements and cross check them with the compressor output you are using. Ensure muffler and air set is properly installed before pressurizing. Improper installation of pressurized parts can cause injury or death. Read all warning labels and comply with all requirements set by MFG, Local, and State regulations.
- j. Power on then off **quickly** and check prop rotation direction. It should be turning in a clockwise direction. If it is not moving in the correct direction the power input is not connected correctly OR you may need to set parameter in VFD controller. Turn off and lock out all power, then reconnect power supply in the correct configuration OR refer to VFD manual for resetting parameter. A PDF copy of all manuals can be found at [www.protectoplas.com](http://www.protectoplas.com). Repeat this step to ensure mixer prop is turning correctly. Do not run mixer unless the prop is adequately submerged, and turning in the correct direction. Failure to follow this

procedure will result in permanent damage to the tank and may cause serious harm or death.

## 2. General Tank Use

### a. Piping

- i. Your tank must always have room for expansion and contraction. Expansion joints must be in place AT THE TANK FITTING as to isolate the tank from any vibration/forces. Proper alignment must be made when piping to a plastic tank. Do not pull/push fitting to match piping under any circumstances as this will break the fitting or tank. Refer to tank drawing for movement required. Protectoplas does not warrant any damage cause due to improper piping.

### b. Water Testing

- i. Your tank has been factory tested to ensure quality but shipping/installing can cause damage. Make sure to perform a water test on your tank prior to use with chemical or product. Water test should be performed at full tank capacity (usable gallonage) and should last a min of 8 hrs.

### c. Venting

- i. All tanks are designed for atmospheric pressure. Standard systems come equipped with proper venting for the drain that was included. If you have purchased a custom tank or if you are adding additional inlets/outlets make sure that tank will remain at atmospheric pressure at all times. Tank is subject to failure and/or non-repairable damage if improperly vented. Serious injury or death may also occur if tank were to implode or explode.

**1. Pneumatic (air) unloading chemical/product into any tank is dangerous and can void all warranties given or expressed. Avoid this type of filling procedure. Check with one of our technicians for more information at 800.525.2661.**

### d. Temperature

- i. Unless otherwise noted tanks constructed of polyethylene are designed to handle temperatures of 100 deg f. a link to the resin data can be found at [www.protectoplas.com](http://www.protectoplas.com) .

### e. Maintenance

- i. With a proper tank installation you tank itself will not need service. Mixers and other parts may need some attention from time to time. Please refer to following table:

Mixer	Check oil and grease daily. Ensure all mounting bolts are secure. Ensure prop and shaft are tight and all bolts are secure. Make sure motor is free from dust and debris, and that all electrical connections are secure.
Tank	The tank itself should be maintenance free. If you feel that the tank has become misshapen, brittle, or found to be cracked contact Protectoplas technician before using.
Fittings	Make sure all piping remains independently supported with all expansion joints in place. Expansion joint must remain attached directly to fitting. Check bolt tension on flanges to ensure they are at 11 ftlbs, and make sure fittings are not carrying any weight.
Stand	If you have a steel stand, ladder, platform, or cable hold down system you may want to look over the paint from time to time. Touch up any scrapes/scratches with high quality spray paint. If oxidation is occurring smooth with grinding disk/sand paper and use spray paint to cover. If stand is found to have severe corrosion, consult a Protectoplas technician before continued use.
VFD Drives	VFD drives for motors typically do not require maintenance. Keeping dust and debris away from them is required as they may be operating at elevated temperatures. Keep chemical/product away from electrical connections at all times to avoid potential injury or death from electrical shock.
Metal Platform	See "stand" above
Ladder	See "stand" above
Hold Down system	Cable hold down systems have (2) styles. One connects the tank to a steel stand. This is to prevent the tank from moving or rotating on the stand. The second style system has a powder coated base that sits approx. 1" from the tank side wall. It is anchored to surface by others and will usually come with (2) or (4) bases ranging in various size. Periodically check the tension on the cables and the position of the cable sleeves for either style. Make sure the cable has not come free from cover as it can cut or dig into the plastic hold down lug on the tank. For systems with bases, refer to "stand" above for further instructions.

f. Replacement Parts/ Repairs

- i. If replacement parts are needed please contact a Protectoplas technician to acquire correct parts at 800.525.2661. All parts must be provided by original mfg to maintain any warranties.
- ii. Repairs must be performed by a certified technician. In house or custom repairs to any of this equipment will void warranty. If a repair is required contact a Protectoplas technician at 800.525.2661

g. Warranty

i. **LIMITED WARRANTY & LIABILITY**

All products manufactured by Protectoplas are warranted for a period of (1) YEAR from date of shipment to be free from defects in the material and workmanship, and further warrants all upright storage tanks for an additional three years on a prorated basis, subject to the following:

1. Products must be used in accordance with the chemical resistance table and the temperature limitations furnished by the manufacturer.
2. Products must be mounted and supported in a manner approved by the manufacturer.
3. Where special warranty limitations address the storage of transport of particular materials, due to reactions which might occur under conditions outside the control of the manufacturer, those limitations expressly apply.
4. Warranty does not cover misuse, fire, accident, negligence, or unauthorized alterations to the product.

Liability of the manufacturer under this warranty (and under any other warranty, expressed or implied, statutory or otherwise) is limited to repair, or at the manufacturer's option, replacement of defective product which is shown to have been defective when shipped, and only then if the manufacturer is notified of the defects within the warranty period and items in question are promptly delivered to its factory at Streetsboro, Ohio, transportation charges prepaid. Manufacturer's liability hereunder shall not be enforceable until such equipment has been fully paid for. Except to the extent expressly assumed herein, manufacturer's liability for incidental and consequential damage is hereby excluded to the full extent permitted by the applicable law. Manufacturer's liability as stated herein cannot be altered or enlarged except by a writing signed by an officer of the manufacturer.

Products and equipment supplied by Protectoplas but manufactured by others are subject to warranties of their respective manufacturer. For warranty information on any product of this nature contact the manufacturing company. If the manufacturer is unknown contact Protectoplas Company for assistance.