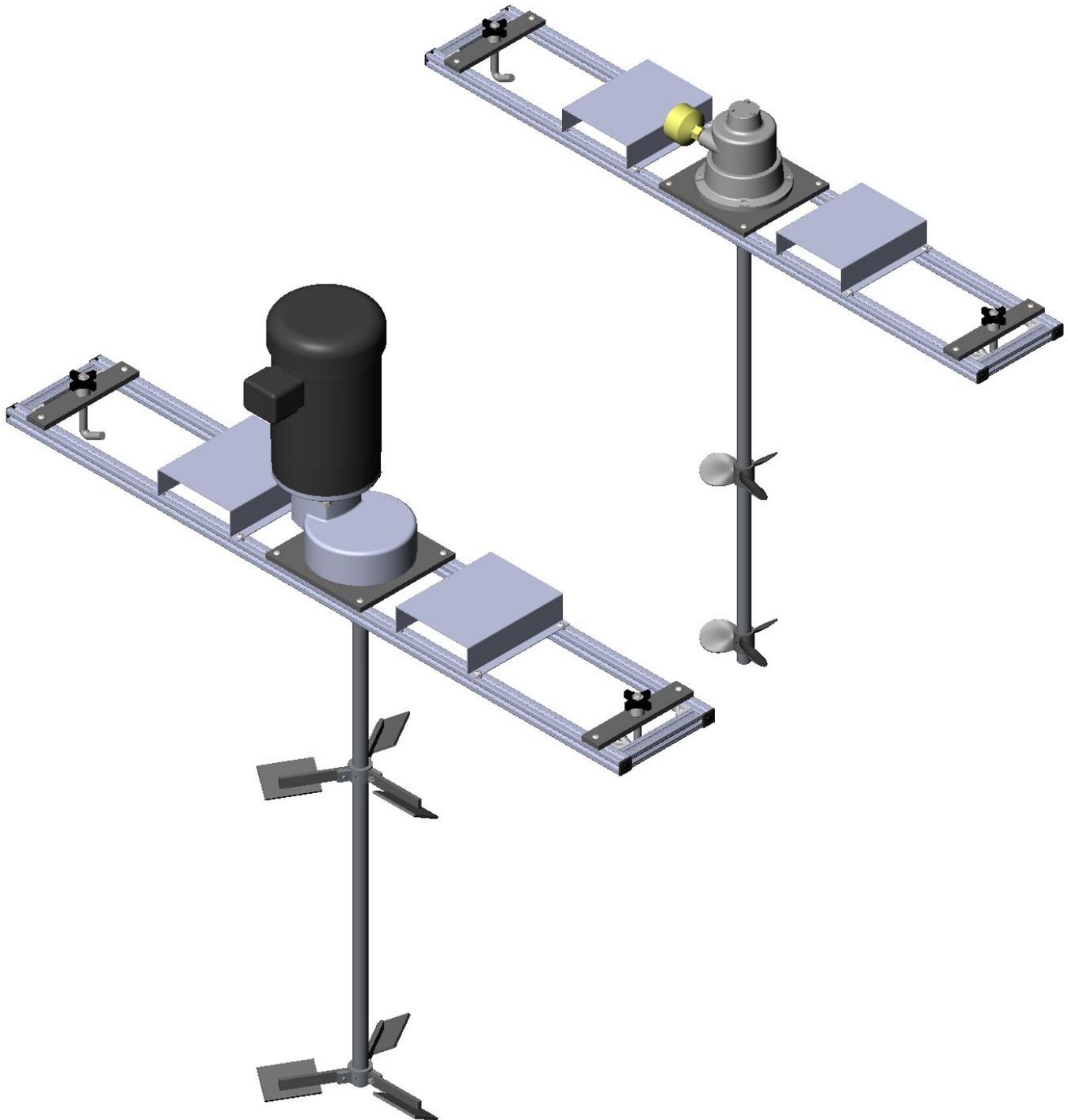


# XTRA-FLO LITE

## INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS for CLEVELAND MIXER: XTRA-FLO LITE, TOTE AGITATORS

GEAR DRIVEN & DIRECT DRIVE AGITATOR MODELS  
XTLA, XTLGA (air powered), XTLE, XTLGE (electric powered)



**Cleveland Mixer**  
A Brand of Subiaco, Inc.

4 Heritage Park Rd.  
Clinton, CT 06413  
USA

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## UNPACKING YOUR MIXER

### **Receiving:**

Cleveland Mixer Xtra-Flo Lite mixers are typically shipped as parcels. If you receive your mixer with holes in the box or other obvious damage, please make note of that with the carrier when receiving the shipment. Double check you received all of the packages and components listed below:

Models XTLA-1/2, XTLA-1 & XTLA-2 will come packaged in a single box. The motor and coupling will be assembled to the mount frame. The shaft, propeller(s), needle valve and J-hook assembly will be packed inside the box with the mixer.

Models XTLGA-1/2, XTLGA-1 & XTLGA-2 will come packed in 2 boxes. The mounting frame, shaft, needle valve and J-hook assembly will be packaged together. The second box will contain the motor, gear reducer, coupling, and impeller(s).

Models XTLE-1/2, XTLE-1, XTLE-2 will come packed in 2 boxes. The mounting frame, shaft and J-hook assembly will be packaged together. The second box will contain the motor, coupling and propeller(s).

Models XTLGE-1/2, XTLGE-1 & XTLGE-2 will come packed in 2 boxes. The mounting frame, shaft and J-hook assembly will be packaged together. The second box will contain the motor, gear reducer, coupling and impeller(s).

### **Unpacking:**

Be sure to check through all of the packaging to be sure you have all the mixer components before discarding the packing.

If you're missing components or the mixer is damaged, please contact the distributor and report the issue right away.

See pages 2 through 3 for a list of components and part numbers.



PART LISTS

<b>MODEL</b>	<b>PART DESCRIPTION</b>	<b>QTY</b>	<b>PART NUMBER</b>
<i>(air powered direct drive)</i>			
XTLA-1/2	Mounting Frame	1	330421-XTL
XTLA-1/2	Coupling	1	25792-1
XTLA-1/2	Shaft	1	330553-32Z
XTLA-1/2	Propeller	1	313850-EEZ8
XTLA-1/2	Motor	1	313866-2
XTLA-1/2	Needle valve	1	330127-2
XTLA-1	Mounting Frame	1	330421-XTL
XTLA-1	Coupling	1	25792-1
XTLA-1	Shaft	1	330553-32Z
XTLA-1	Propeller	1	313850-GGZ8
XTLA-1	Motor	1	313866-2
XTLA-1	Needle valve	1	330127-2
XTLA-2	Mounting Frame	1	330421-XTL
XTLA-2	Coupling	1	25792-1
XTLA-2	Shaft	1	330553-32Z
XTLA-2	Propeller	2	313850-GGZ8
XTLA-2	Motor	1	313866-3
XTLA-2	Needle valve	1	330127-12
<i>(air powered gear driven)</i>			
XTLGA-1/2	Mounting Frame	1	330421-XTL
XTLGA-1/2	Gear Drive	1	991-333 B5-B7
XTLGA-1/2	Coupling	1	25792-1-875
XTLGA-1/2	Shaft	1	330553-35Z
XTLGA-1/2	Impeller	1	AXF330C10008Z
XTLGA-1/2	Motor	1	313866-2
XTLGA-1/2	Needle valve	1	330127-2
XTLGA-1	Mounting Frame	1	330421-XTL
XTLGA-1	Gear Drive	1	991-333 B5-B7
XTLGA-1	Coupling	1	25792-1-875
XTLGA-1	Shaft	1	330553-35Z
XTLGA-1	Impeller	1	AXF330C100010Z
XTLGA-1	Motor	1	313866-2
XTLGA-1	Needle valve	1	330127-2
XTLGA-2	Mounting Frame	1	330421-XTL
XTLGA-2	Gear Drive	1	991-333 B5-B7
XTLGA-2	Coupling	1	25792-1-875
XTLGA-2	Shaft	1	330553-35Z
XTLGA-2	Impeller	2	AXF330C100012Z
XTLGA-2	Motor	1	313866-3
XTLGA-2	Needle valve	1	330127-12

PART LISTS

<b>MODEL</b>	<b>PART DESCRIPTION</b>	<b>QTY</b>	<b>PART NUMBER</b>
(electric powered direct drive)			
XTLE-1/2	Mounting Frame	1	330421-XTL
XTLE-1/2	Coupling	1	25792-1
XTLE-1/2	Shaft	1	330553-32Z
XTLE-1/2	Propeller	1	313850-EEZ8
XTLE-1/2	Motor (1 phase)	1	BALVL3504
XTLE-1/2	Motor (3 phase)	1	BALVEM3538
XTLE-1	Mounting Frame	1	330421-XTL
XTLE-1	Coupling	1	25792-1
XTLE-1	Shaft	1	330553-32Z
XTLE-1	Propeller	1	313850-GGZ8
XTLE-1	Motor (1 phase)	1	BALVL3510
XTLE-1	Motor (3 phase)	1	BALVEM3546
XTLE-2	Mounting Frame	1	330421-XTL
XTLE-2	Coupling	1	25792-1
XTLE-2	Shaft	1	330553-32Z
XTLE-2	Propeller	2	313850-GGZ8
XTLE-2	Motor (3 phase)	1	BALVEM3558
(electric powered gear driven)			
XTLGE-1/2	Mounting Frame	1	330421-XTL
XTLGE-1/2	Gear Drive	1	991-333 B5-B7
XTLGE-1/2	Coupling	1	25792-1-875
XTLGE-1/2	Shaft	1	330553-35Z
XTLGE-1/2	Impeller	1	AXF330C10008Z
XTLGE-1/2	Motor (1 phase)	1	BALVL3504
XTLGE-1/2	Motor (3 phase)	1	BALVEM3538
XTLGE-1	Mounting Frame	1	330421-XTL
XTLGE-1	Gear Drive	1	991-333 B5-B7
XTLGE-1	Coupling	1	25792-1-875
XTLGE-1	Shaft	1	330553-35Z
XTLGE-1	Impeller	1	AXF330C100010Z
XTLGE-1	Motor (1 phase)	1	BALVL3510
XTLGE-1	Motor (3 phase)	1	BALVEM3546
XTLGE-2	Mounting Frame	1	330421-XTL
XTLGE-2	Gear Drive	1	991-333 B5-B7
XTLGE-2	Coupling	1	25792-1-875
XTLGE-2	Shaft	1	330553-35Z
XTLGE-2	Impeller	2	AXF330C100012Z
XTLGE-2	Motor (3 phase)	1	BALVEM3558

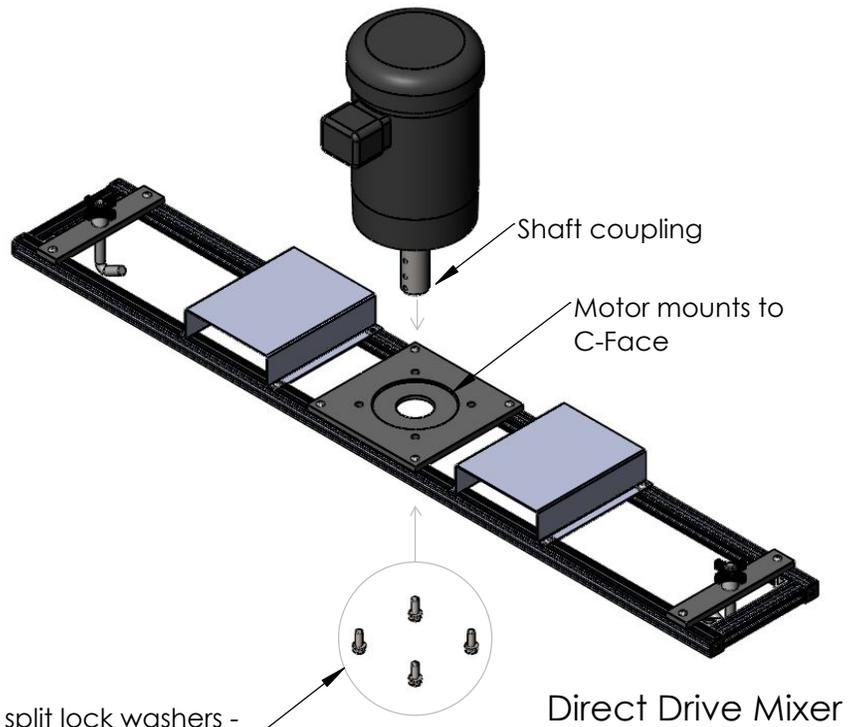
## ASSEMBLY OF AGITATOR

### Connecting motor

The XTLA-1/2 and XTLA-1 models ship with the motor installed on the mount frame. The shaft coupling will be installed on the motor output.

Direct drive models: XTLA-2, XTLE-1/2, XTLE-1, & XTLE-2 will need the motor connected to the mounting frame with the hardware provided as shown to the right:

3/8-16 x 1"  
hardware w/ split lock washers -  
supplied with mixer



Gear driven models: XTLGA-1/2, XTLGA-1, XTLGA-2, XTLGE-1/2, XTLGE-1 & XTLGE-2 will have the motor connected to the gear reducer, the gear reducer will bolt to the mount frame as shown on the right. The shaft coupling will be installed on the reducer output.

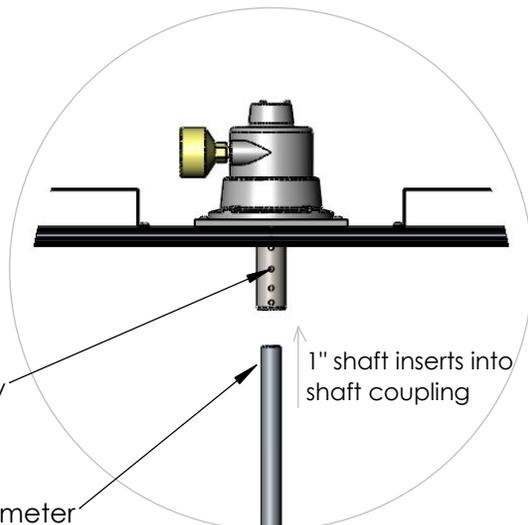
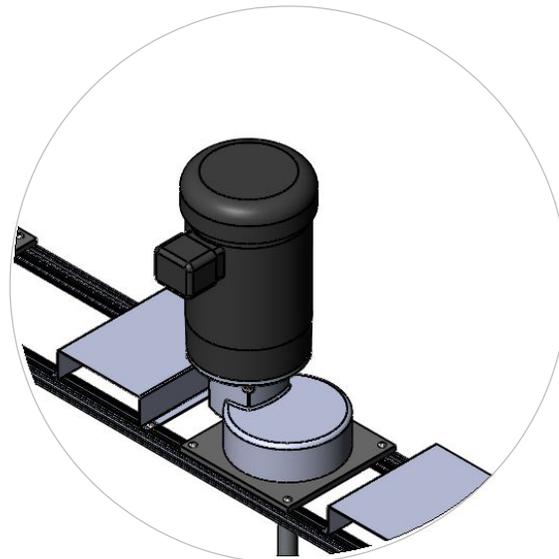
### Shaft Coupling

The shaft coupling connects to the motor output shaft on direct drive units or the reducer output shaft on gear driven units. The coupling is shipped installed from the factory. The shaft coupling connect to the output shaft with set screws tightened down into the key slot. No keys or threading is required.

Carefully insert the shaft into the shaft coupling and tighten down the set screws to secure the shaft in place as shown on the right:

5/16-18 x .375  
cup point set screw

Mixer Shaft 1" diameter

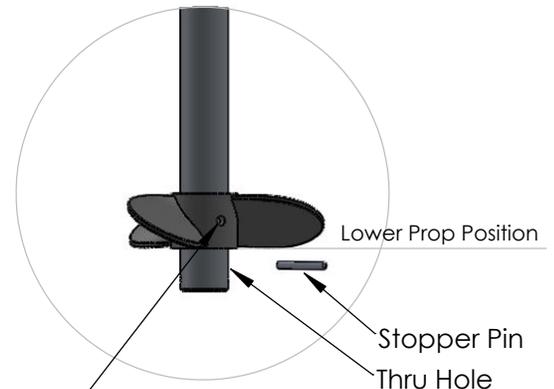


## Propeller Connection

Models XTLE-1/2, XTLE-1, XTLA-1/2 & XTLA-1 are supplied with a single square pitch, marine style propeller. The XTLA-1/2 & XTLE-1/2 use a 5" diameter propeller. The XTLA-1 & XTLE-1 use a 6" diameter propeller.

The propellers secure to the mixer shaft with (2) 3/8-16 x 3/8" 316SS cup point set screws. The set screws are located in the propeller's hub between the blades.

To connect the propellers: slide the propeller(s) onto the shaft (the lower prop should sit at the bottom of the shaft just over the thru hole for the stopper pin) tighten down on the set screws. Cleveland Mixer recommends using thread locker on the set screws to keep them in place.



Quantity 2 - 3/8-16 x 3/8" cup point set screw 316SS

## Stopper Pin

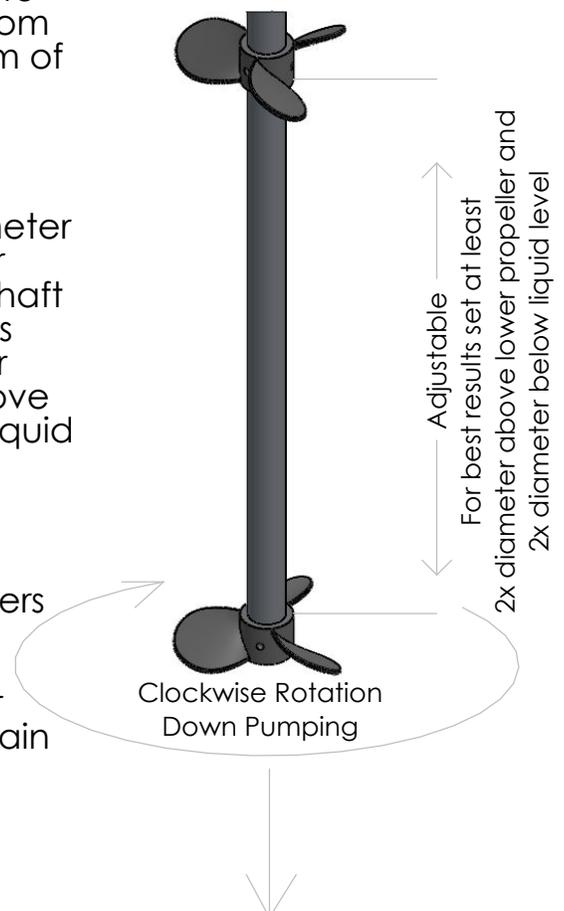
The mixer shaft is supplied with a roll pin that should be inserted in the thru hole located at the bottom of the shaft. This acts as a stop for the propeller if the set screws that hold the propeller in place were to back off or fail. The stopper prevents the prop from falling off the shaft and ending up on the bottom of the tank.

## Dual Propeller - Upper Propeller Position

Models XTLA-2 and XTLE-2 come with (2) 6" diameter square pitch propellers. The position of the lower propeller should be at the bottom of the mixer shaft just above the stopper pin. The upper propeller is adjustable. For the best performance, the upper propeller should be at least 2x the diameter above the lower prop and 2x the diameter below the liquid level.

## Propeller Rotation

The propellers provided with all XTRA-Flo Lite mixers are designed to run clockwise pumping down towards the bottom of the tank. Flipping the propellers upside down or running them counter clockwise will decrease their pumping ability, strain the mixer motor and create vibration that can damage mixer components.



## Impeller Connection

Models XTLGE-1/2, XTLGE-1, XTLGA-1/2 & XTLGA-1 are supplied with a single, 30° pitch axial-flow impeller with folding blades. The XTLGA-1/2 & XTLGE-1/2 use an XX diameter impeller. The XTLGA-1 & XTLGE-1 use an XX diameter impeller.

The impellers secure to the mixer shaft with (2) XX 316SS cup point set screws. The set screws are located in the propeller's hub, between the blades.

To connect the impellers: slide the impeller(s) onto the shaft (the lower impeller should sit at the bottom of the shaft just over the thru hole for the stopper pin) tighten down on the set screws. Cleveland Mixer recommends using thread locker on the set screws to keep them in place.

## Stopper Pin

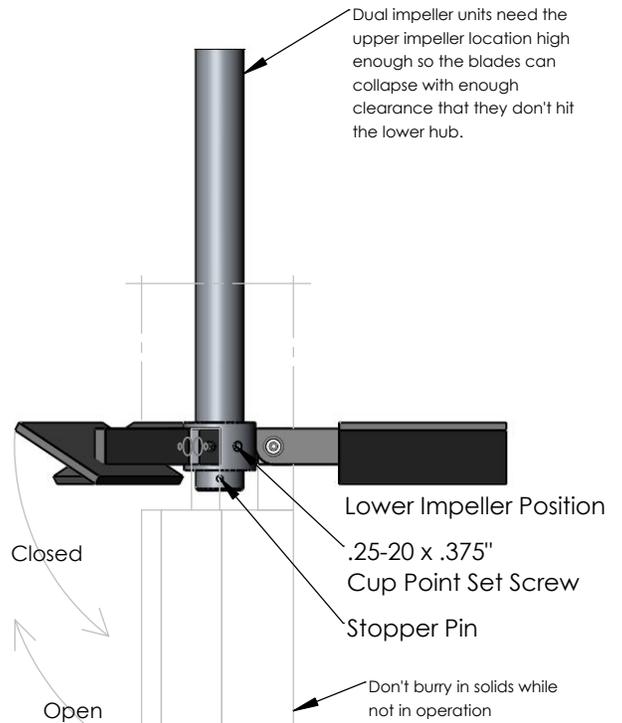
The mixer shaft is supplied with a roll pin that should be inserted in the thru hole located at the bottom of the shaft. This acts as a stop for the impeller if the set screws that hold the impeller in place were to back off or fail. The stopper prevents the impeller(s) from falling off the shaft and ending up on the bottom of the tank.

## Dual Impeller - Upper Impeller Position

Models XTLGA-2 and XTLGE-2 come with (2) 12" diameter 30° pitch, axial-flow impellers with folding blades. The position of the lower impeller should be at the bottom of the mixer shaft just above the stopper pin. The upper impeller is adjustable. For the best performance, the upper impeller should be at least 2x the diameter above the lower impeller and 2x the diameter below the liquid level.

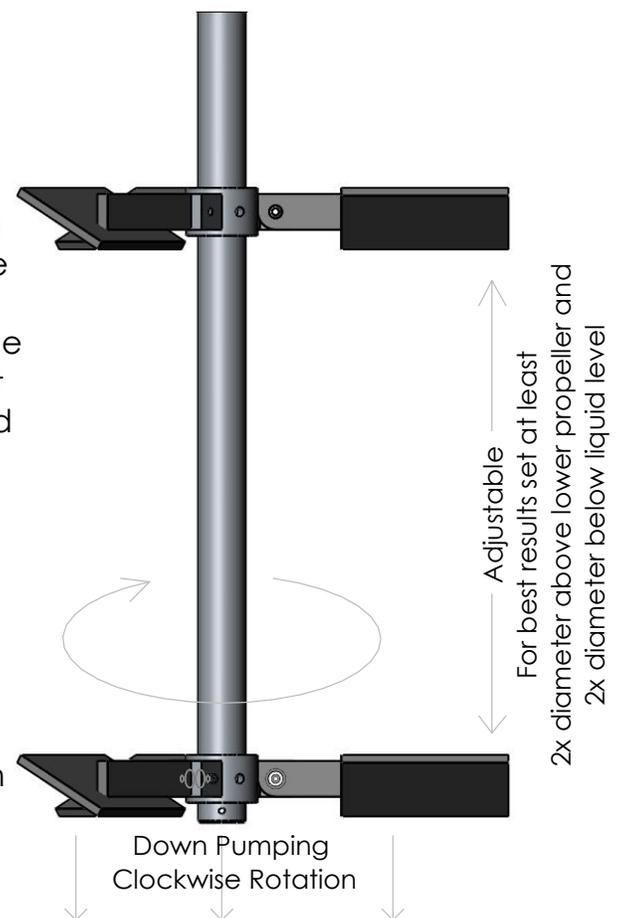
## Impeller Rotation

The impellers provided with all XTRA-Flo Lite mixers are designed to run clockwise pumping down towards the bottom of the tank. Flipping the propellers upside down or running them counter clockwise will decrease their pumping ability, strain the mixer motor and create vibration that can damage mixer components.



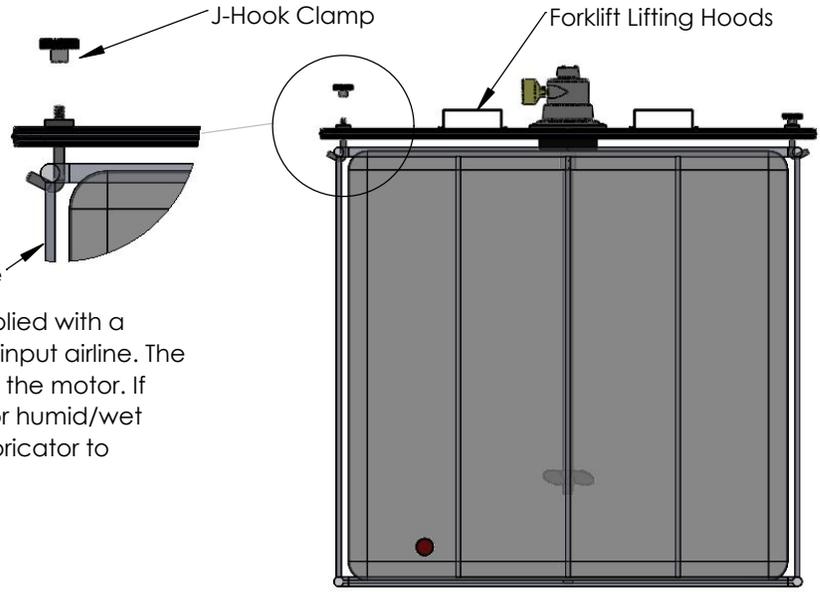
## 90° folding blades

The blades will open when the mixer is running. It's important to keep the blades clean so they move freely. Sticky substances can gum up the hub and prevent the blades from opening properly. If all 3 blades are not open while in operation, an imbalance will create serious vibration.



## Frame/Tote Connection

Xtra-Flo Lite tote mixer mounting frames are supplied with forklift hoods that can be used to raise and lower the mixer onto the tank. Once the mount frame is resting in position on the tank, secure the mixer to the frame with the J-Hook clamps as shown.

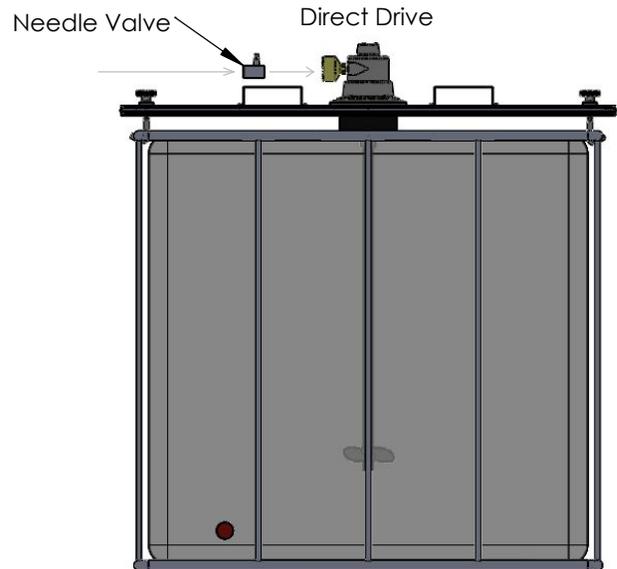


## Air Motors

Air powered, direct drive mixers will come supplied with a needle valve which should be installed on the input airline. The needle valve is used to control the air flow into the motor. If your mixer is operating in an extremely dusty or humid/wet environment, you should use an airline filter/lubricator to replace the needle valve.

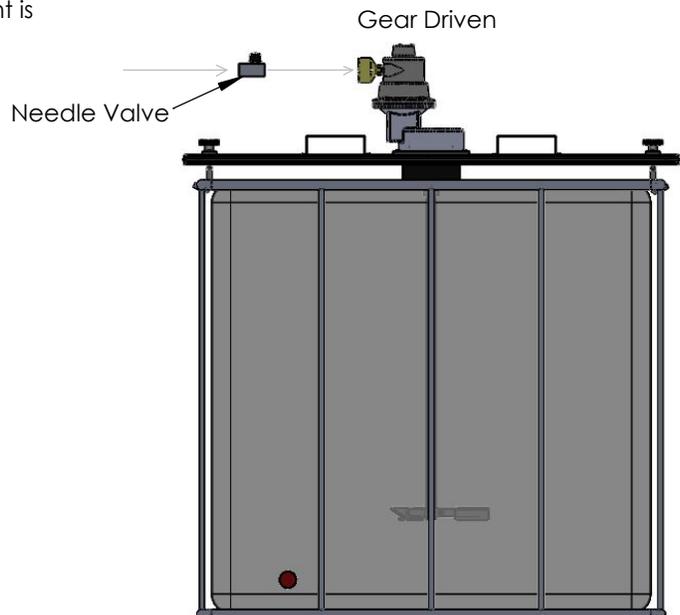
## Direct Drive Connection

The input airline connection for .5-1HP motors is .25" NPT and .50" NPT for 2HP. The airline will connect in through the left port in the air motor with the muffler connected on the right. The mixer shaft should be rotating clockwise with the propeller(s) rotating clockwise when looking down from the top. The motor will need to be lubricated with air tool oil as needed or about once per month.



## Gear Drive Connection

The input airline connection for .5-1HP motors is .25" NPT and .50" NPT for 2HP. The airline will connect in through the right port in the air motor with the muffler connected on the left. The mixer shaft should be rotating clockwise with the impeller(s) rotating clockwise when looking down from the top. The gear drive reverses the rotation of the motor output so when using a gear drive the motor connection will be the opposite of direct drive units. The motor will need to be lubricated with air tool oil as needed or about once per month. The reducer will need the oil changed once per year. Make sure the reducer vent is open and clear while the unit is in operation



## Air Consumption

### Direct Drive (1800 RPM)

Model	HP	Air Pressure	CFM	Input Port
XTLA-1/2	.5	45	25	.25"
XTLA-1	1	90	45	.25"
XTLA-2	2	90	80	.50"

### Gear Driven (350 RPM)

Model	HP	Air Pressure	CFM	Input Port
XTLGA-1/2	.5	45	25	.25"
XTLGA-1	1	90	45	.25"
XTLGA-2	2	90	80	.50"

## Electric Motor

Xtra-Flo Lite tote mixers supplied with single phase motor are supplied with a 10' line cord assembly. The cord has a standard 3 prong 115 volt plug. These units are designed to run single speed. The direct drive models run at 1750 RPM, the gear driven models run at 350 RPM. Mixers supplied with cord and plug assemblies do not require any wiring, they are packaged ready to plug in and put into service. Be sure not to exceed the motor's nameplate ratings for horse power and amperage draw. All single phase motors will be 115 volt, 60 hertz. Running these mixers on different input voltage or increased hertz will damage the motor. Running the mixer in conditions that cause the amperage to spike over the nameplate rating will damage the motor.

Xtra-Flo Lite tote mixers supplied with three phase motors will not come prewired. These motors will need to be hard wired onsite by a professional electrician. The motors supplied with these mixers will be 3 phase, 60 hertz, 230 or 460 volt input. When wiring the motor, check to make sure that the mixer output shaft is running clockwise. For mixers with a gear drive, the motor output shaft will need to spin counter clockwise in order for the reducer output to spin clockwise. Most TEFC motors are not inverter ready. Running these mixers on a speed drive will put extra stress on the motor which can contribute to a shorter life span. Running the motor on high amperage or over speeding the motor will damage the motor.

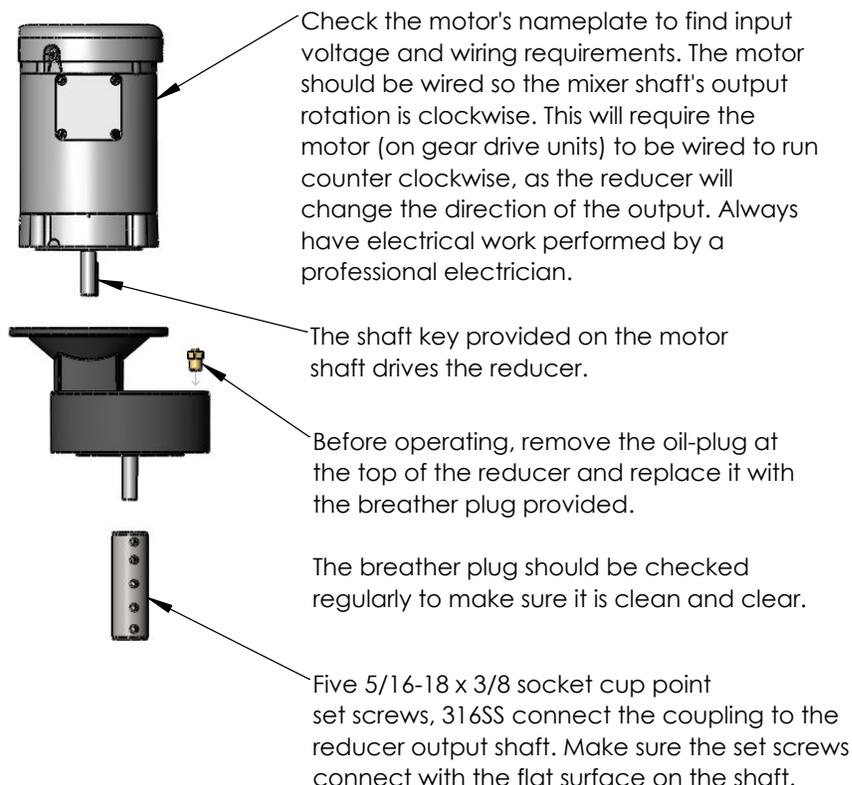
## Gear Drive

For applications with more viscous materials such as paints, syrups, gels, honey, waste water with solid particles, etc. you will need to use an appropriately powered motor with a gear reducer and a larger diameter impeller operating at a slower output speed. Please follow the directions below to run and maintain your gear speed reducer.

Helical gear reducer:  
5:1 ratio  
183 lbs output torque  
56C motor mounting flange  
145TC output face

The helical reducer is shipped factory filled with Klubersynth UH1 6-460 synthetic gear lubricant. Check, flush and refill the oil every 3000 hours of service. Do not use mineral oil or any other non-approved lubricants.

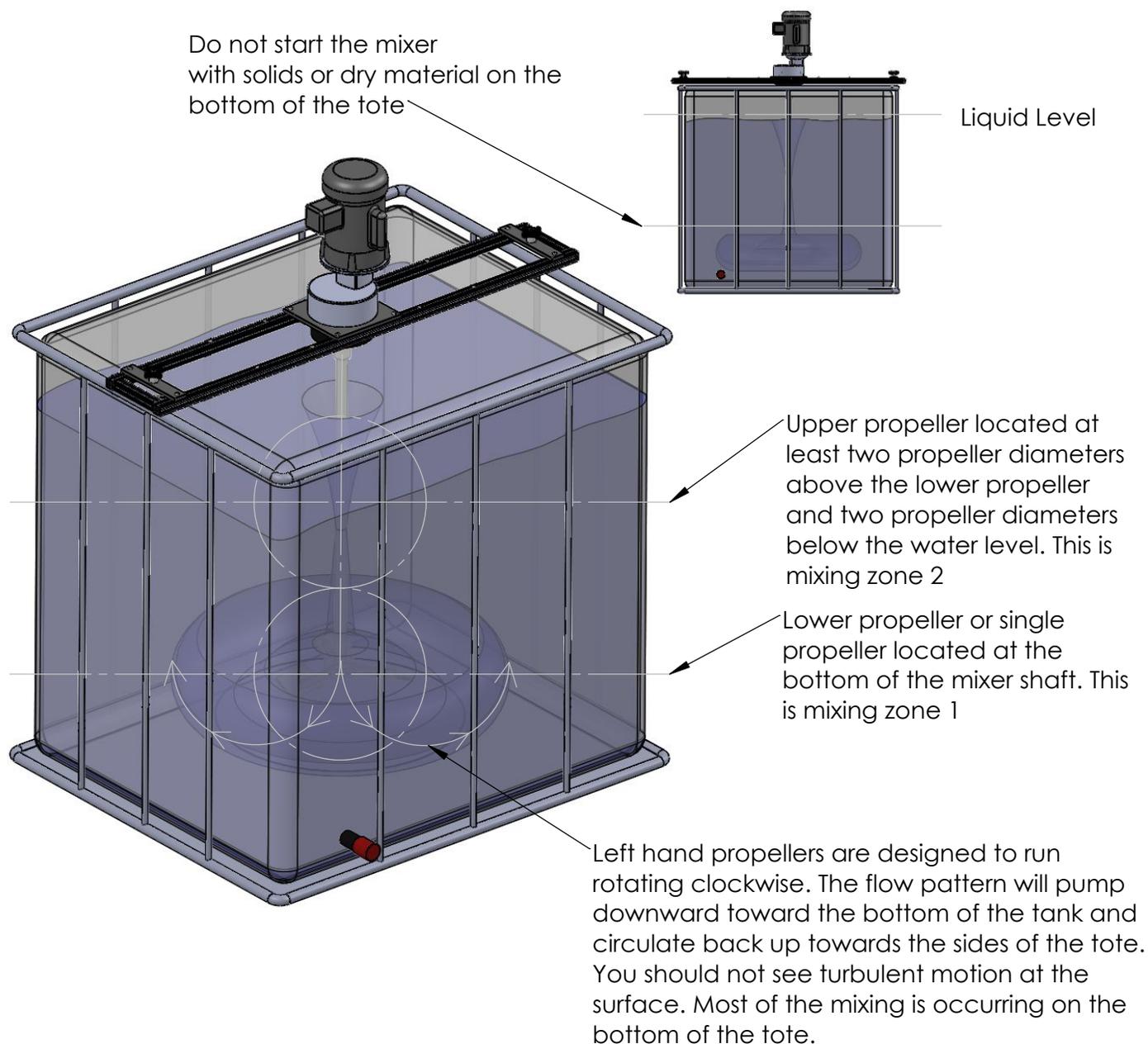
Approved:  
Klubersynth UH1 6-460  
Mobil Glygoil 460

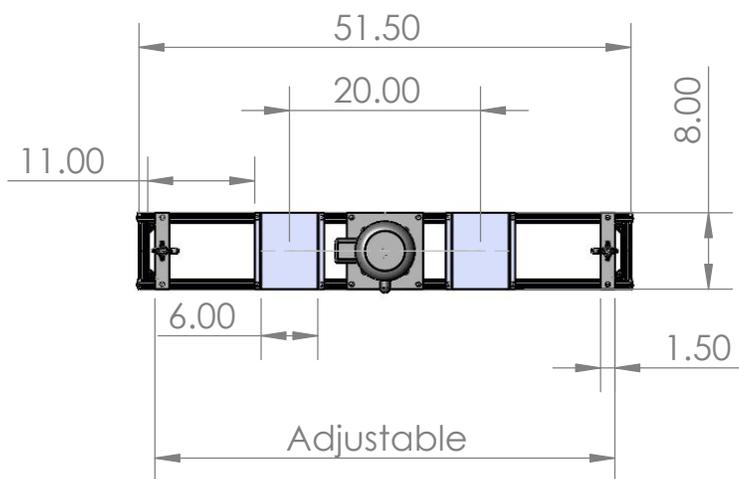


## Running your Cleveland Mixer Tote Tank Agitator

Cleveland Mixer tote tank agitators are designed to run continuously (if necessary) in order to suspend solids and keep the solids from settling out, transfer heat through liquid, blend liquids, etcetera. They are not designed to resuspend solids, mix dry ingredients or shearing of any kind. If you are using the mixer to suspend solids or to mix liquids that can separate, it is best to run the mixer continuously until the batch is complete then drain the tank completely. If you allow the solids to settle around the propeller and then start the mixer up with the propeller buried in solids or in dry, gummy or paste like material, you risk causing catastrophic damage to the mixer.

When adding powders, crystals or any other dry or clumped material into the water in the tote tank, make sure to add it slowly and give the mixer a chance to disperse the material evenly. Dumping a heavy mass into the tank while the mixer is running can cause catastrophic or serious damage to the mixer.



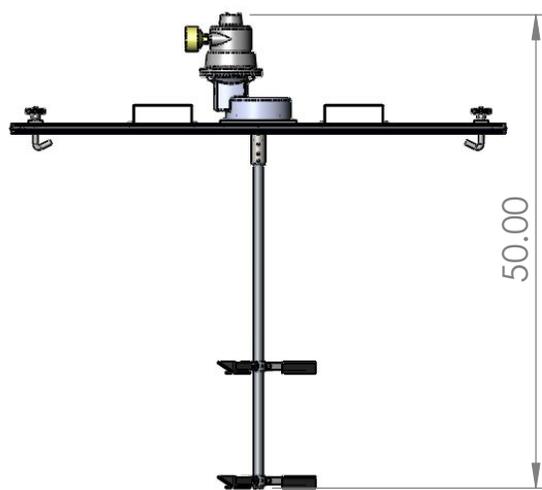
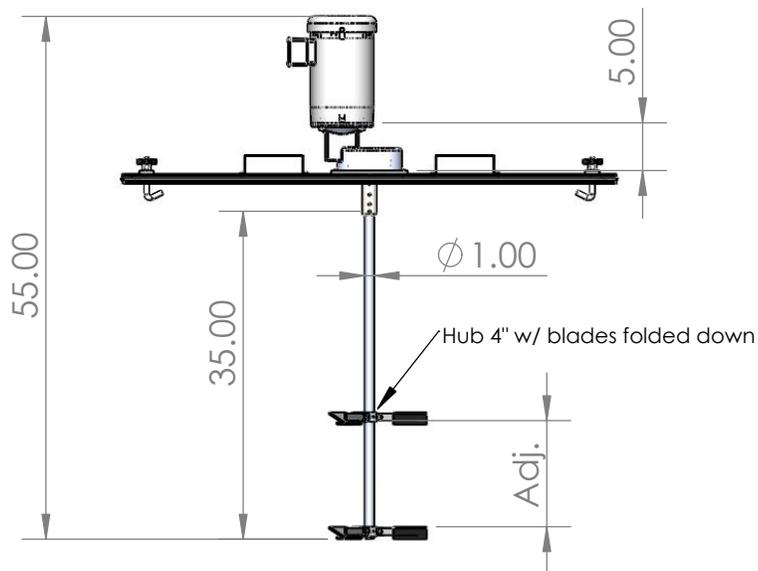
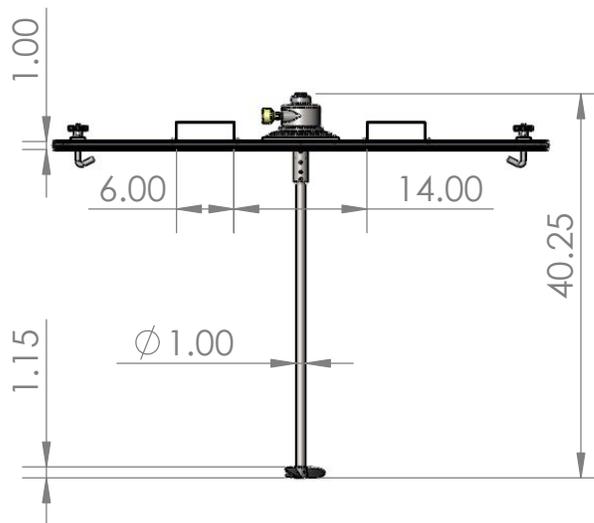
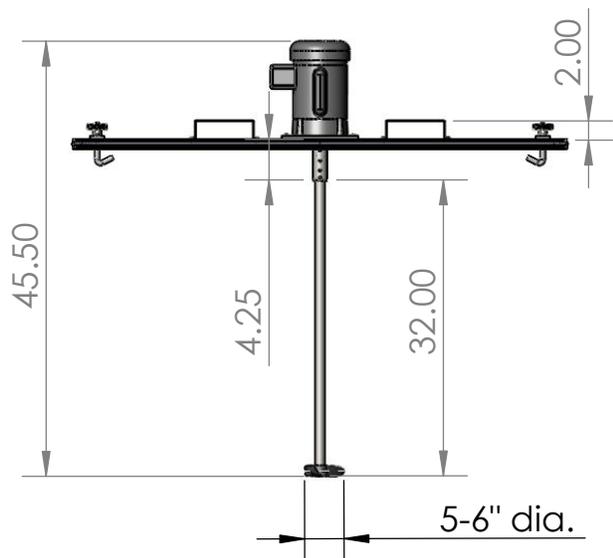


**XTL MODEL DIMENSIONS**

The dimensions shown are for standard XTLA, XTLE, XTLGA and XTLGE mixer models.

The working length of the shaft is from the bottom of the coupling to the bottom of the shaft. The portion of the shaft inside the coupling is 3.5"

AXF folding impellers are designed to fit through the 6" opening in standard IBC totes.



8-14" dia.



# TOTE TANK AGITATOR MANUAL

