



***Operating &  
Maintenance Manual  
T66 Series Mixers***



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## WARNINGS!

1. This Mixer has a rotating shaft and propeller. Never under any circumstances should any Operators or Maintenance Personnel handle, touch or manipulate a rotating shaft on this or any Sonic Typhoon Mixer. Sonic will not be held responsible for any injuries incurred when handling this mixer.
2. It is absolutely necessary to install an emergency E-Stop button next to the Mixer wherever it is installed. This will allow any operators or maintenance personnel working on or near the Mixer, or in the immediate vicinity, to shut the Mixer off in case of an emergency.

## Mounting

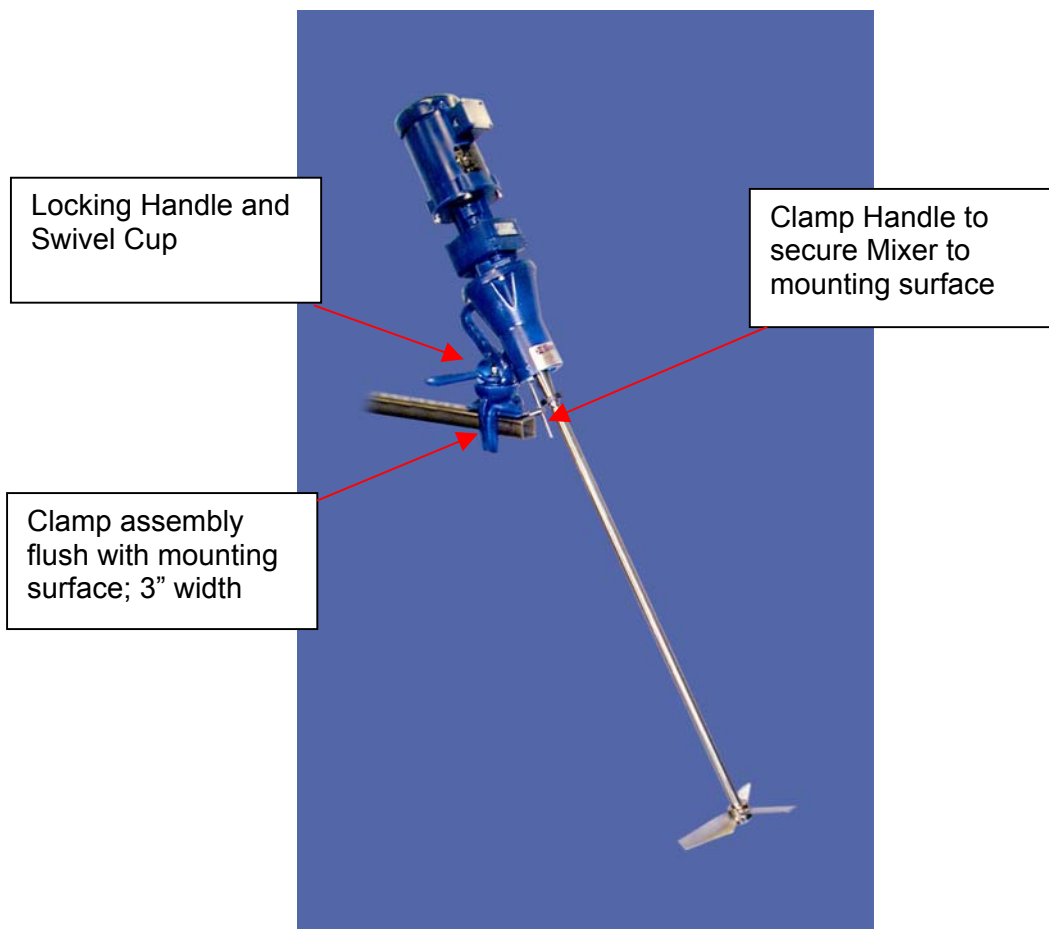
Carefully unpack the Typhoon Mixer. Typhoon series mixers will have 2 standard mounting options: Clamp or 4-Bolt Base.

The Clamp style is simple and only requires that you install the Mixer on a vertical, upright surface no more than 3 inches in width. Make sure the top of the Clamp assembly is pushed down completely and flush with the mounting surface.

Tighten the Clamp by rotating the Clamp Handle clockwise until firm and snug.

Once the Mixer is secure, position the Mixer within its Swivel Cup to ensure proper placement. Mixer should be on a slight angle with prop positioned to the right within either tank, drum, vessel, etc.

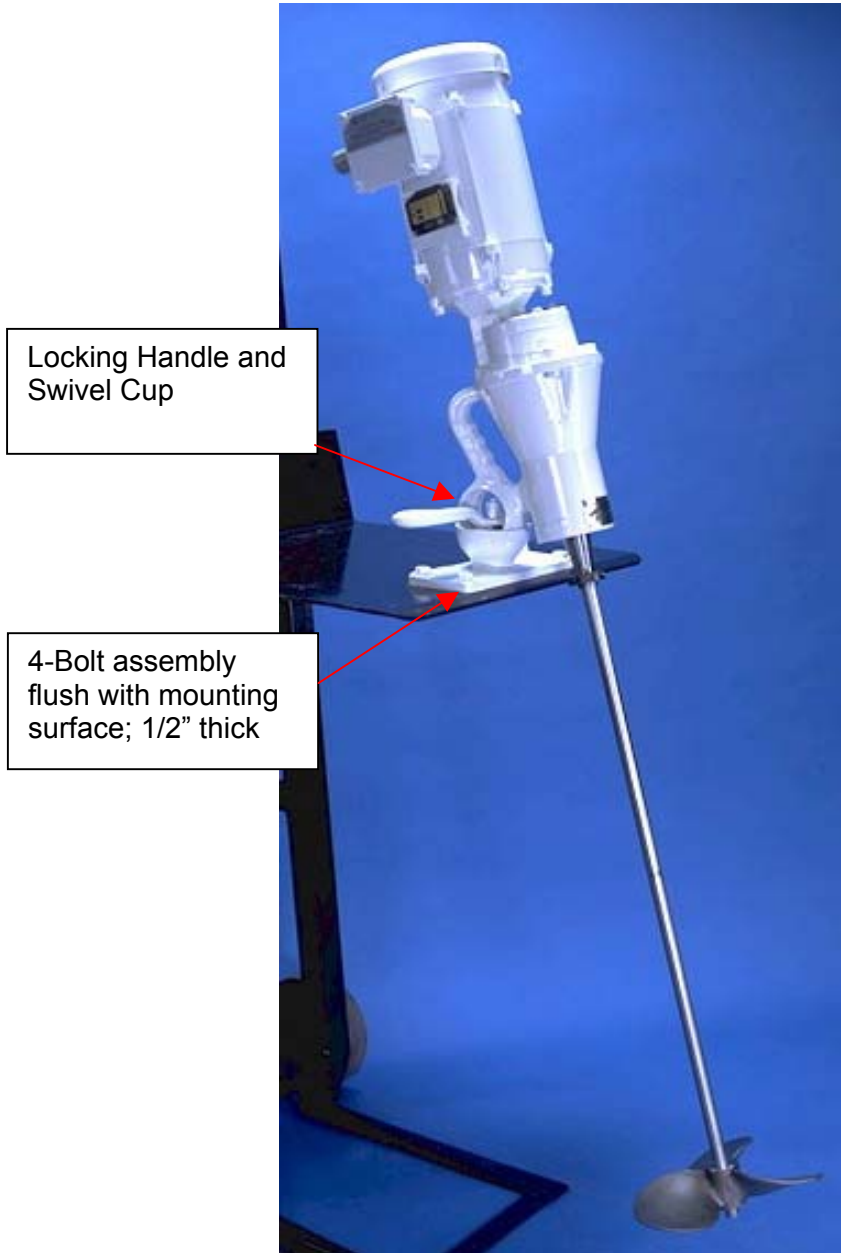
Tighten the Locking Handle to ensure Mixer is rigid and secure within the Swivel Cup.



The 4-Bolt style needs to be secured to a flat, horizontal surface with a thickness of at least ½ inch. Four 7/8 x 5.5 inch hex head bolts should be used to secure the base to the mounting surface.

Once the Mixer is secure, position the Mixer within its Swivel Cup to ensure proper placement. Mixer should be on slight angle with prop positioned to the left within either tanks, drum, vessel, etc.

Tighten the Locking Handle to ensure Mixer is rigid and secure within the Swivel Cup.



### ***Mixer Position***

The positioning of propeller style mixers directly affects the time and cost of most mixing operations. Improper positioning can waste energy and cause undesired results. Standard mixers will employ a Left-Hand Prop attached to a Shaft with clockwise rotation. Position the prop and shaft so that they are angled and slightly to the right. Angle the mixer upward slight, but still to the right, for Mixers with Right-Hand Prop and counter-clockwise rotation.

Single prop Mixers should have a shaft extensions that allows the prop to be 1.5 times the prop diameter from the bottom. For example, using a 12 inch diameter prop would require the prop and shaft end to be 18 inches from the bottom surface of the tank, drum or vessel.

If your Mixer uses more than 1 prop, space each prop by 3 prop diameters; i.e. 8 inch props require 24 inch spacing.

## ***Motors***

Most Typhoon Mixer motors are standard TEFC or XP, 1800 rpm, 230/460 dual voltage electric motors. A certified electrician should wire the Mixer for proper power from a circuit breaker with sufficient amperage to accommodate the nameplate requirements of the motor. Ensure that the Mixer is properly grounded when wired to power source. This circuit breaker requires Lock Out/Tag Out protocol so that the power can be shut off and locked out during maintenance or cleaning.

A motor starter needs to be used to start/stop the Mixer. Such a Starter should be specified and installed by a certified electrician and should meet the amp and voltage requirements of the motor. This Starter should be mounted in a proper location and highly visible so that any personnel can shut the Mixer down quickly in case of emergency.

**WARNING:** It is absolutely necessary to install an emergency E-Stop button next to the Mixer wherever it is installed. This will allow any operators or maintenance personnel working on or near the Mixer, or in the immediate vicinity, to shut the Mixer off in case of an emergency.

Air driven motors need to utilize air lines that are equal size or larger than the air inlet port on the motor. A moisture trap, air filter and oiler should also be installed on the inlet port of the air motor. These items can be purchased with the Mixer from Sonic and are generally included. A pressure regulator can also be used to vary Mixer speed. Do not allow air motors to run at high speed without a load or improper lubrication as this will cause damage to the motor.

## ***Lubrication***

The Mixer bearing is pre-lubricated.

Consult with motor and gearbox manufacturers for lubrication information on these items. All gearboxes leave the factory with proper lubrication.

## ***Mixer Operation***

Once the Mixer is installed and secured as well as properly wired by a certified electrician, you are ready to start the mixer.

Ensure that the tank or mix vessel is loaded with material.

Ensure all personnel are standing clear of the Mixer and the shaft and rotating components. All Mixers are shipped with proper Warning Labels indicating that the Mixer has moving/rotating parts and can cause serious injury.

When the immediate area is safe and secure and no personnel are within immediate proximity to the Mixer, start the Mixer by pressing the Start button on the motor Starter installed.

It is customary to confirm that the motor does not overheat under the load of the material in the tank. At times, the original material to be mixed is replaced by material with different properties that might force the Mixer to work harder.

In order to check that the motor is at a comfortable temperature, have a certified electrician shut the power off, lock out the circuit breaker that brings power to the Mixer, and then check the motor temperature with the proper gauge. The motor nameplate will indicate temperature limits. Confirm that the motor is OK.

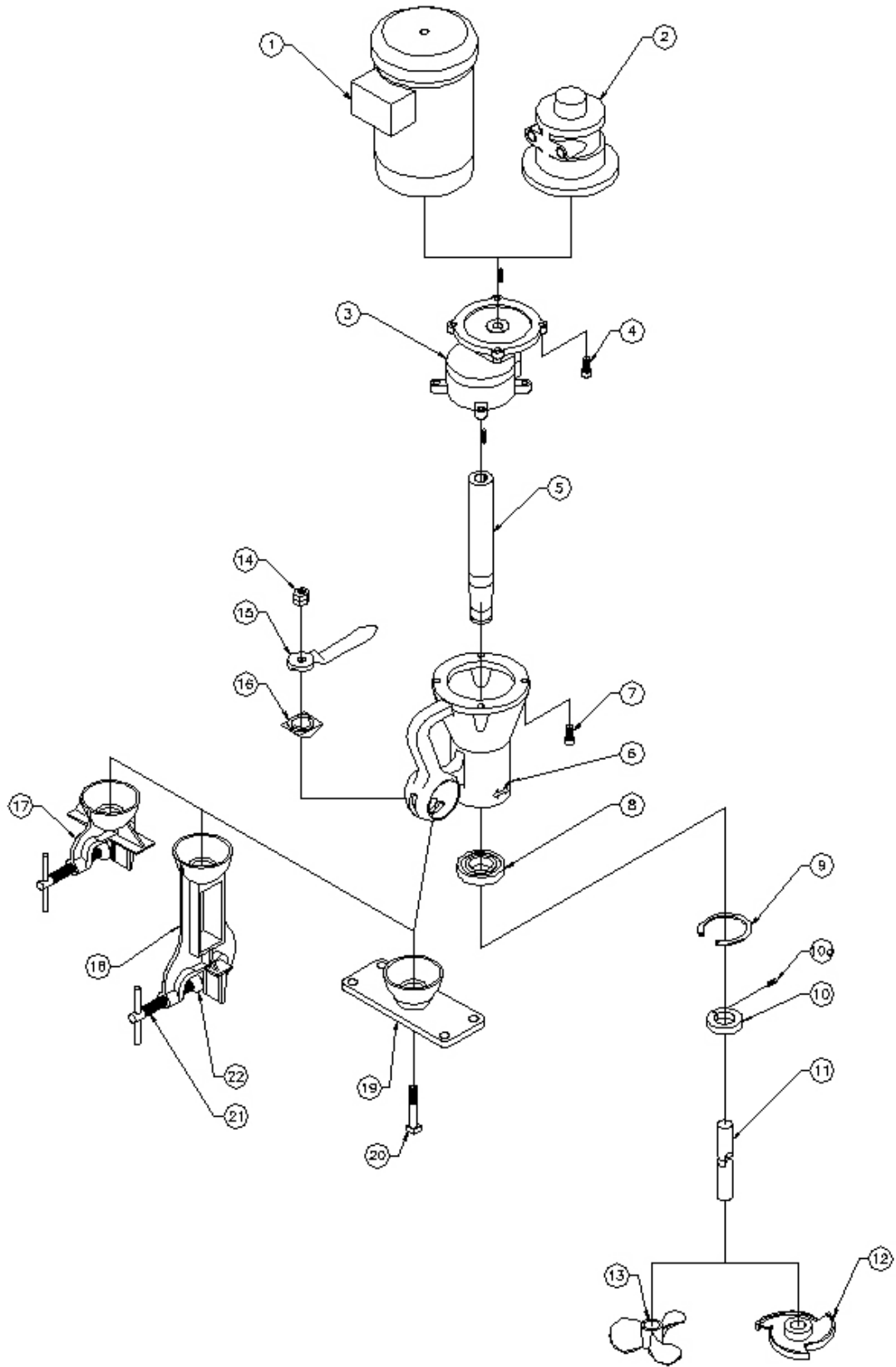
## Maintenance

**WARNING:** In order to maintenance the Mixer, or clean and service, it is imperative that a certified electrician shut the power off and lock out the circuit breaker that brings power to the Mixer. Only then can any personnel work in close proximity to the Mixer or work on the Mixer itself.

A list of the Mixer standard parts and components is below:

1	ELECTRIC MOTOR	1		
2	AIR MOTOR (OPTIONAL)	1		
3	GEARED REDUCER (OPTIONAL)	1		
4	SHCS, 3/8-16 X 1" LG, ONLY USED WITH REDUCER	4		
5	HOLLOW SHAFT	1		
6	HOUSING	1		
7	SHCS, 3/8-16 X 1" LG	4		
8	BEARING	1		
9	RING, RETAINING, EXTERNAL	1		
10	COLLAR, CLAMP, 1 PIECE	1		
11	PROPELLER SHAFT	1		
12	TURBINE, CAVITATION DISPERSER (OPTIONAL)	1		
13	PROPELLER	1		
14	NUT, 1/2-13, HEX	2		
15	LOCKING HANDLE	1		
16	LOCKING CAM	1		
17	SINGLE CLAMP ASSY	1		
18	EXTENDED CLAMP (OPTIONAL)	1		
19	4 BOLT CLAMP (OPTIONAL)	1		
20	SQUARE HD BOLT, 1/2-13 X 3.75 LG	1		
21	"T" HANDLE CLAMP SCREW	1		
22	CUP, CLAMP SCREW	1		

Mixer exploded view on next page.



All parts including Motor and Gear Reducers are available through Sonic Corp, (203) 375-0063.