



**UET Mixers**  
26 Maple St.  
Mechanic Falls, ME 04256  
Tel: (207)-345-3330  
Toll Free: (888)-838-9131  
Fax: (603)-627-9328

## **Portable Mixers**

**Bulletin 12-100**  
12/19/11  
Supersedes 01/24/05

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# UET Warranty

## 1. Warranty Statement

UET warrants this exclusive product to be free from defects in material or workmanship and to be correct for the process specifications as identified by the end user. If this product does not perform as given in the process specifications by the end user, or is found to be defective in material or workmanship, UET will accept the unit's return at no charge to the customer. Our exclusive remedy will be to repair said unit or replace said unit with a new unit, or money shall be refunded to the purchaser in full.

Said unit is made of new material and is free from defect under specified and normal usage, such usage as having been given per the customer's submitted specifications; however, materials are not guaranteed against chemical attack or abrasion. Mixer components are not guaranteed against normal wear.

This warranty is in effect for a period of twenty-four (24) months from shipment.

Customer records: \_\_\_\_\_

Date of installation: \_\_\_\_\_

Date of start-up: \_\_\_\_\_

Start-up notes: \_\_\_\_\_



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# Operating Instructions for Portable Mixers with Clamp or Saddle Plate

**WARNING:** Read instructions prior to operating or wiring your mixer-damage may result if these instructions are not followed.

## INSTALLATION:

1. Examine the mixer visually for evidence of damage in transit. Take care not to damage the Impeller and shaft.
2. Cross check the motor nameplate with the type of electrical supply in your plant for compatibility. If an air motor is supplied, see the attached manufacturer's instructions.
3. View the front of the mixer bell housing and locate the vertical access slot which appears on the right hand side. Loosen, but take care not to remove, the bottom three (3) set screws on the coupling inside the mixer housing. This allows insertion of the mixer shaft as described in #4.
4. Insert the polished end of the mixer shaft that has the long flat and insert it through the opening in the bottom of the mixer housing and into the coupling. Make certain that the set screws which were loosened in the about step will bear down on the flat when tightened. The shaft should slide into the coupling for about 4.5" and then stop.
5. Tighten the set screws on the coupling to bear down on the flat portion of the mixer shaft with an Allen wrench.
6. Position the impeller on the lowest point of the mixer shaft. The arrow stamped on the impeller hub should point to the bottom of the tank. If two impellers are supplied, locate the bottom impeller as described, and the top impeller approximately one to two impeller diameters above the lower one. In the event your unit is supplied with a stabilizing ring on the impeller, mount this impeller, with the arrow pointing downward, at the lowest position on the mixer shaft.
7. Position and secure your mixer to the tank or mixer bracket you intend to use, arranging the mixer shaft in the position recommended by the diagrams on page 6. In most cases, this will provide the best degree of agitation. We **DO NOT** recommend exceeding 20° from a vertical position.
8. If your unit was not wired at the factory, proceed to wire the unit at this point, insuring that impeller shaft rotation, as viewed from the motor toward the impeller, is clockwise. This step is of the utmost importance! Improper rotation will not only result in poor mixing action, but can seriously damage your unit. For air driven motors, make sure motor is piped into the system to assure rotation as defined above.



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**Operating Instructions for Portable Mixers (continued)**

**USE OF VARIABLE SPEED MOTORS:**

All portable mixers operate above first critical speed which is the first natural frequency of the shaft/impeller system. Operating at or near this speed will cause vibration and may severely damage the mixer. Ask the factory for the calculated critical speed and test for this condition by varying the speed and until vibration is observed. Lock out the speed range through which vibration occurs.

**OPERATION:**

1. Never run the mixer without 12” of impeller submergence as this may cause excessive vibration.
2. At this point, operate your mixer in the normal manner checking for any excessive shaft vibration or whippage which, regardless of shaft length **SHOULD NOT** occur. If this situation of excessive whippage occurs, shut down the unit and retrace steps 3-. If this condition persists, contact your local representative or the home office.
3. Liquid circulation should be as shown in the sketch below. For average conditions, locate the impeller above the tank bottom a distance equal to twice the impeller diameter.

**MAINTENANCE:**

Motors:

1. Re-lubrication Intervals (motors having re-greasing capability):

New motors having been in storage for over a year should be re-lubricated by the procedure outlined below. The following re-lubrication intervals are suggested as a guide for long operating life.

<b>Hours of Service per Year</b>	<b>NEMA Frame Sizes 42 to 215T</b>
<b>5000 hrs</b>	5 yrs.
<b>Continuous Normal</b>	2 yrs.
<b>Season Service Motor is idle for 6 months or more</b>	1yr. (beginning of season)
<b>Continuous high ambient, dirty or moist locations, high vibration, or where shaft end is hot</b>	6 months

2. Procedure for Greasing Bearings:

Over-greasing bearings can cause premature bearing failure. If motor is equipped with Alemite fitting, clean tip of fitting and apply grease gun. Use 1 to 2 full strokes on motors in NEMA 215 frame and smaller. On motors having drain plugs, remove plug and operate motor for 20 minutes before replacing drain plug.

On motors equipped with slotted head grease screw, remove screw and apply grease tube to hole. Insert 2 to 3 inch length of grease string into each hole on motors in NEMA 215 frame and smaller. Motors having grease drain plugs, remove plug and operate motor for 20 minutes before replacing drain plug.

**CAUTION:** Keep grease clean. Lubricate motors at standstill. Remove and replace drain plugs at standstill. Do not mix petroleum grease and silicone grease in motor bearings.



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**Operating Instructions for Portable Mixers (continued)**

3. Motor Lubrication:

The motor supplied with the mixer is a ball bearing type. The bearings have been lubricated at the factory. Motors without re-greasing capability are factory lubricated for normal bearing life.

On re-greaseable motors equipped with an Alemite fitting or slotted head grease screw, we recommend one of the following greases.

<b>Manufacturer</b>	<b>Lubricant</b>
<b>Shell Oil Company</b>	Dolium R
<b>Chevron U.S.A Inc.</b>	SRI No. 2
<b>Texaco Inc.</b>	Premium RB

Gearboxes:

1. Unit Lubrication for Gear Driven Models Only:

Read and carry out all instructions on lubrication plate and heed all warning tags.

For normal operating conditions, change gear R&O lubricants every six months or 2500 hours of operation, whichever occurs first. In dusty areas or where temperatures are high, more frequent changes may be required. Lubricant suppliers can test oil samples from the drive periodically and recommend economical change periods base on the rate of lubricant contamination and degradation.

If the drive is operated in an area where temperatures vary with the seasons, change the oil viscosity grade to suit the temperature.

Oil Type- Use an AGMA No. 5 with 220 ISO viscosity grade and viscosity grade of 918-1122 SSU @ 104°F. Use one of the following or a suitable equivalent.

<b>Manufacturer</b>	<b>Lubricant</b>
<b>Shell Oil Company</b>	Turbo oil 220
<b>Chevron U.S.A Inc.</b>	AW machine Oil 220
<b>Mobil</b>	DTE oil BB

**NOTE:** Be aware that the speed reducer housing temperature will range between 130°F to 180°F during normal operation using the oils listed above. If you reducer surpasses 180°F, there may be cause for concern.



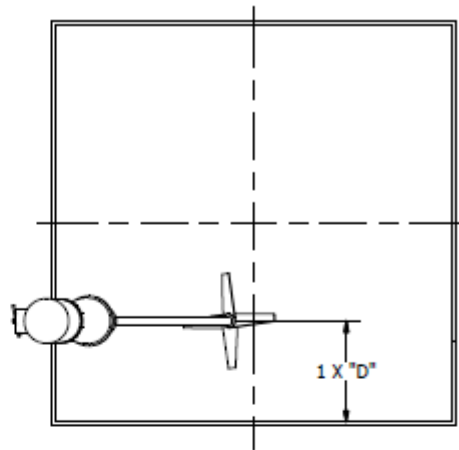
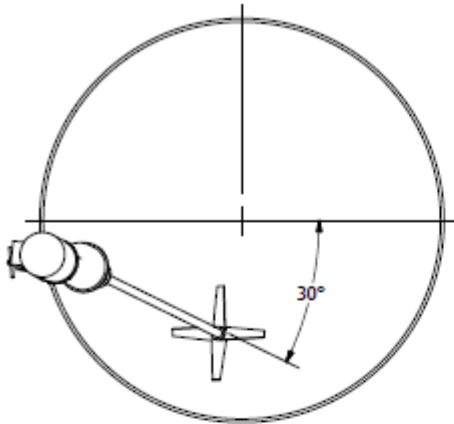
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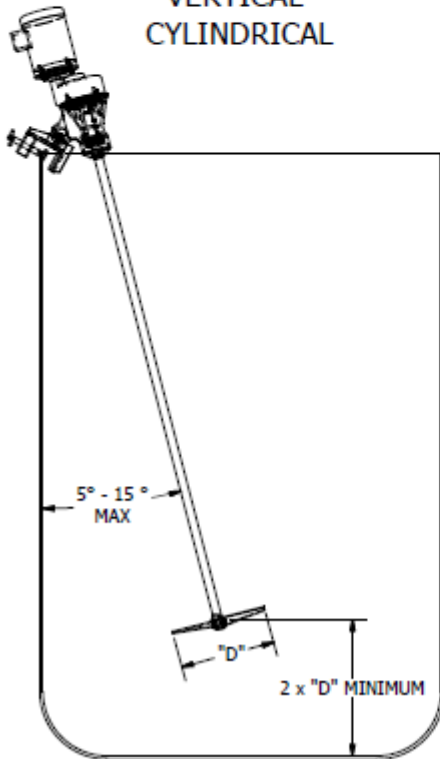
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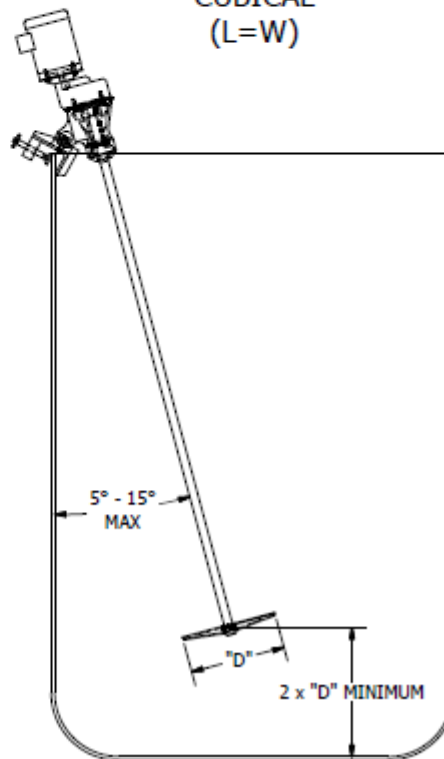
### Mixer Positioning



**VERTICAL  
CYLINDRICAL**



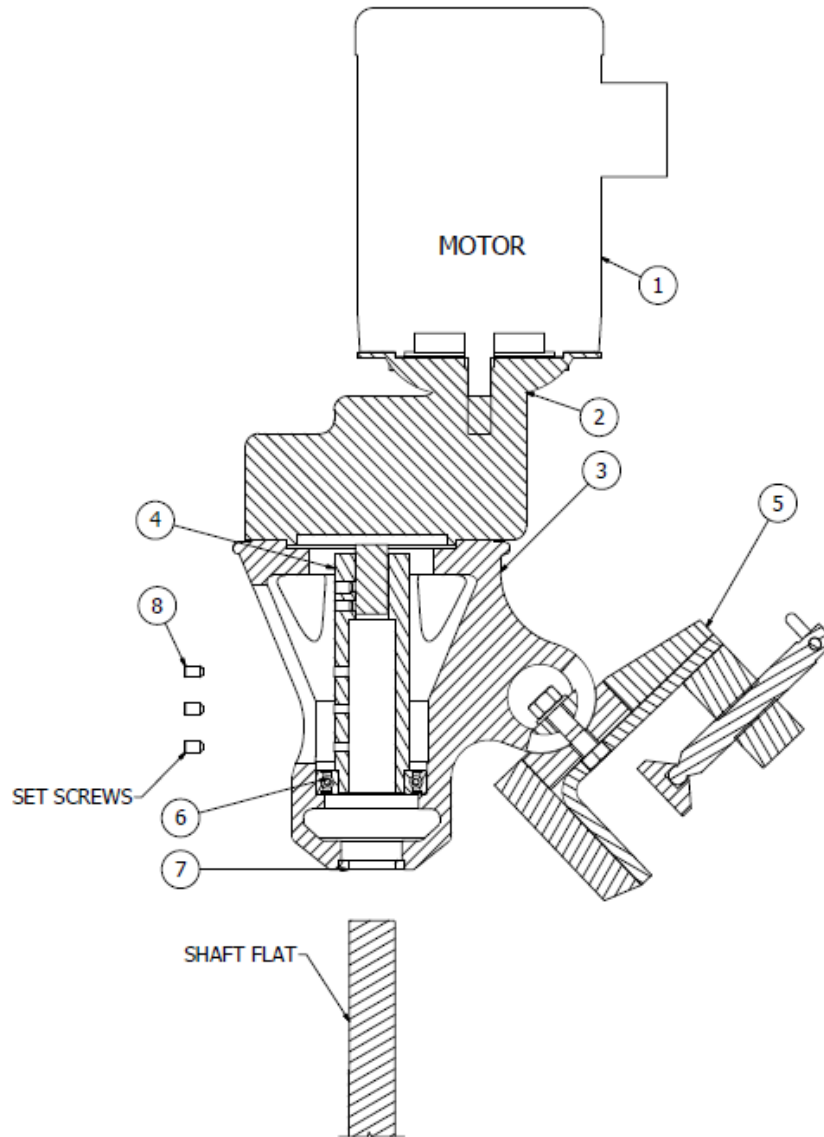
**CUBICAL  
(L=W)**



“D” = IMPELLER DIAMETER



## Mixer Shaft Installation and Parts list



ITEM NUMBER	DESCRIPTION
1	Motor
2	Gearbox (see bulletin 07-125 for parts in gearbox)
3	Cast bearing pedestal
4	Shaft Coupling
5	Clamp
6	Heavy Duty Bearing
7	Shaft Seal
8	Set Screws