

# Series JG

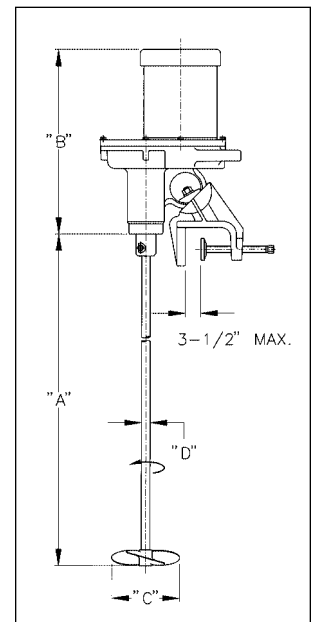
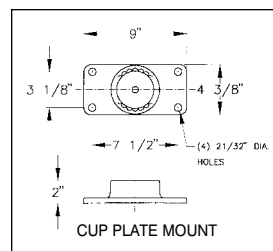
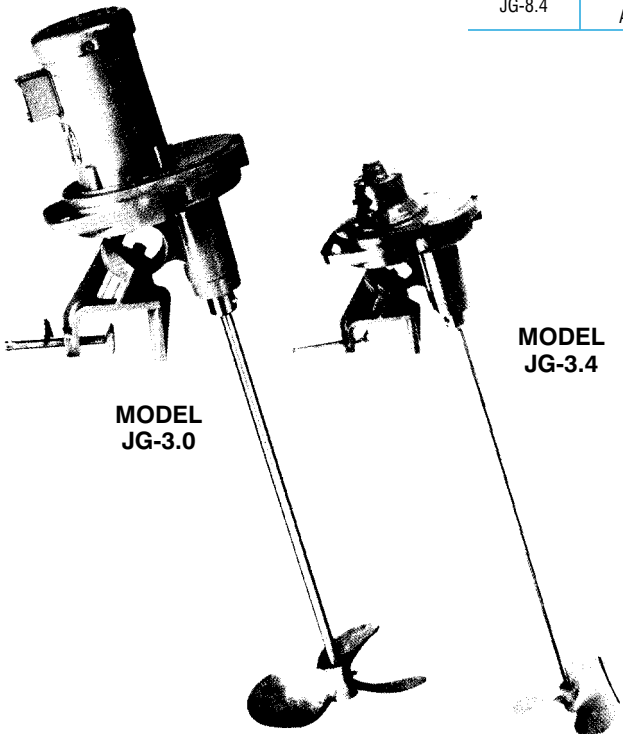
## Gear Drive Mixer, Clamp or Cup Plate Mount Heavy Helical Gear, 350 rpm, Grease Lube

Neptune's most powerful mixers for the most difficult mixing applications. Grease filled gearbox eliminates oil seal and the possibility of oil contamination of process.

### Features

- No clutches to slip, wear or replace.
- 316SS propellers and shafts are standard. Optional coatings such as rubber, PVC or Teflon® also available.
- Square pitch 1.0 ratio marine propellers are used exclusively. Flow coefficients and power consumption characteristics equal those of the best hydrofoil impeller designs.
- Vibration-absorbing pad standard.
- Motors are available in TEFC or explosion-proof enclosures (1750 rpm, 56C frame). Air motors also available.
- Gears run in grease lubrication. Cannot leak oil.
- All JG mixer shaft bearings are permanently lubricated.
- Variable speed drives also available.
- Cast aluminum housing.
- Mounting clamp has adjustable angle of entry by indexed ball-and-socket design to achieve various process results.
- Fixed cup plate mount optional on 1/3 HP through 1½ HP. Standard on 2 HP and larger models.

Model Number	Standard Motor Description	A Shaft Length	B	C		D Shaft Diameter
				Single	Dual	
<b>Totally-enclosed fan-cooled (TEFC)</b>						
JG-2.0	1/3 HP-1-115/230	48"	17½"	10"	8"	¾"
JG-2.1	1/3 HP-3-230/460	48"	17½"	10"	8"	¾"
JG-3.0	1/2 HP-1-115/230	48"	18½"	12"	10"	¾"
JG-3.1	1/2 HP-3-230/460	48"	17½"	12"	10"	¾"
JG-4.0	3/4 HP-1-115/230	60"	18¾"	13"	11"	¾"
JG-4.1	3/4 HP-3-230/460	60"	18½"	13"	11"	¾"
JG-5.1	1 HP-3-230/460	60"	18¾"	14"	12"	1"
JG-6.1	1½ HP-3-230/460	60"	18¾"	15"	13"	1"
JG-7.1	2 HP-3-230/460	60"	20½"	16"	14"	1¼"
JG-8.1	3 HP-3-230/460	72"	21½"	16"	15"	1¼"
<b>Explosion-proof class 1 group D (EP)</b>						
JG-2.2	1/3 HP-1-115/230	48"	20½"	10"	8"	¾"
JG-2.3	1/3 HP-3-230/460	48"	17½"	10"	8"	¾"
JG-3.2	1/2 HP-1-115/230	48"	21"	12"	10"	¾"
JG-3.3	1/2 HP-3-230/460	48"	19½"	12"	10"	¾"
JG-4.2	3/4 HP-1-115/230	60"	21½"	13"	11"	¾"
JG-4.3	3/4 HP-3-230/460	60"	19½"	13"	11"	¾"
JG-5.3	1 HP-3-230/460	60"	20½"	14"	12"	1"
JG-6.3	1½ HP-3-230/460	60"	20½"	15"	13"	1"
JG-7.3	2 HP-3-230/460	60"	22½"	16"	14"	1¼"
<b>Air motor</b>						
JG-3.4	1/3 HP to 1/2 HP AIR Air Requirements: 12-20CFM at 40-80PSI	48"	17½"	12"	10"	¾"
JG-4.4	3/4 HP AIR Air Requirements: 30CFM at 60PSI	60"	18"	13"	11"	¾"
JG-5.4	1 HP AIR Air Requirements: 40CFM at 40PSI	60"	19½"	14"	12"	1"
JG-6.4	1½ HP AIR Air Requirements: 55CFM at 60PSI	60"	19½"	15"	13"	1"
JG-7.4	2 HP AIR Air Requirements: 65CFM at 70PSI	60"	15½"	16"	14"	1¼"
JG-8.4	4 HP AIR Air Requirements: 125CFM at 90PSI	72"	16¾"	16"	15"	1¼"



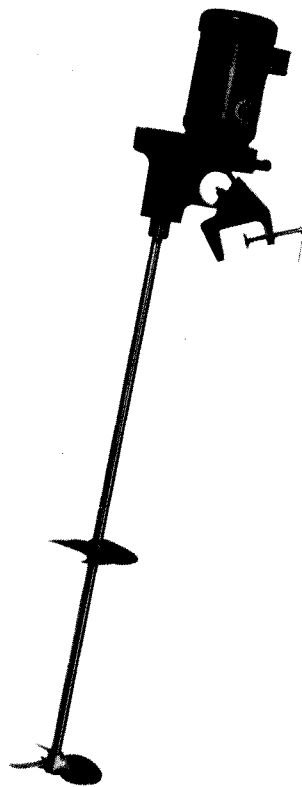


# OPERATING & INSTRUCTION MANUAL

## NEPTUNE

**Series JG Gear Drive and  
Series JD Direct Drive Clamp Mount Mixer**

**PLUS: Series JGR and JDR Angle Riser Mount  
Series JGF and JDF Flange Mount**



# **WARNING**

**LOCKOUTS ARE REQUIRED BEFORE  
SERVICING THIS EQUIPMENT.**

## **SAFETY INSTRUCTIONS:**

**Shut off/Lockout Mixer Power before Servicing.**

**DO NOT OPERATE MIXER UNLESS PROPERLY INSTALLED, AVOID  
ROTATING SHAFT AND BLADES, TURN OFF POWER AND LOCKOUT  
EQUIPMENT BEFORE ADJUSTING OR SERVICING, ETC.**

## WARRANTY

All Neptune mixers are tested at the factory prior to shipment. Each part used in their construction has been carefully checked for workmanship.

If the mixer is installed properly, it is guaranteed against defects in material and workmanship for a period of one year from the date of shipment, providing that the directions on installation and maintenance given in these instructions are carefully followed. Under these conditions, Neptune Mixer Company will replace without charge any part proving defective within the guarantee period, FOB our factory, Lansdale, Pennsylvania. Forward defective parts to the factory for examination, freight prepaid.<sup>1</sup> The company will not, under any condition, be responsible for any charge for labor, repairs, or parts, performed or furnished by others, nor for any consequential damages. Its liability under this warranty is limited to the cost of the part involved and in no case shall exceed the original purchase price of the equipment at Lansdale.

Neptune Mixer Company will not assume any contingent liability through alleged failure or failures of any of its products or accessories.

## IMPORTANT

SHOULD IT BE NECESSARY TO SEND THE MIXER TO THE FACTORY FOR REPAIR OR MAINTENANCE REBUILDING, CLEAN ALL CHEMICAL FROM MIXER BEFORE SHIPPING. FAILURE TO DO SO CAN BE HARMFUL.

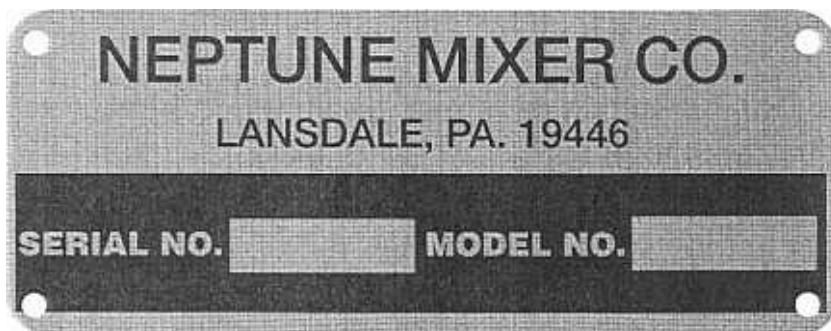
<sup>1</sup> SEE IMPORTANT NOTICE — RETURN GOODS AUTHORIZATION

## IMPORTANT NOTICE RETURN GOODS AUTHORIZATION

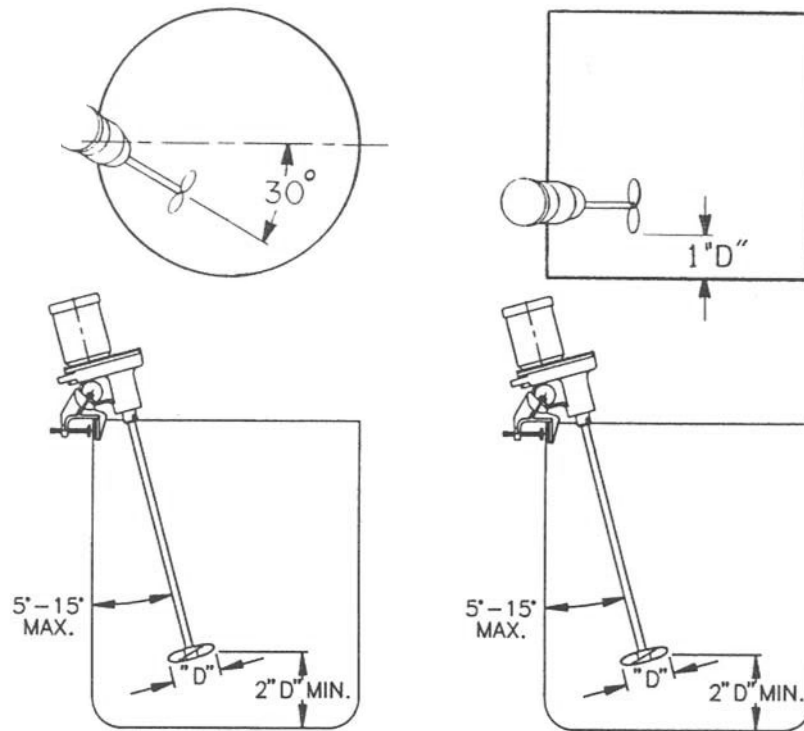
- (1) All equipment returned to Neptune Mixer Company requires proper Returned Goods Authorization Number (RGA) and tags.
- (2) All equipment returned to the factory for repair or service must first be thoroughly flushed and have all chemical contact areas neutralized.
- (3) All equipment which has been in contact with chemicals, must be accompanied by a copy of the Chemical Product Material Safety Data Sheet (MSDS).
- (4) Failure to comply with the above instructions, will result in equipment being returned to sender, freight collect, without service.

## PARTS ORDERING INSTRUCTIONS

The complete model number and serial number of the mixer must be furnished to insure prompt and accurate parts service. These numbers are found on the name plate (sample photo below) located on the side of the mixer. Refer to Pages 6, 7, 9, 11 and 13 for complete parts list.

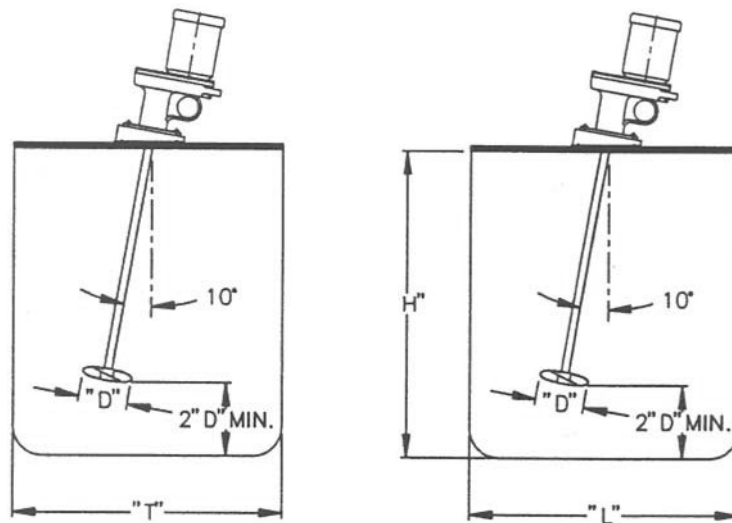
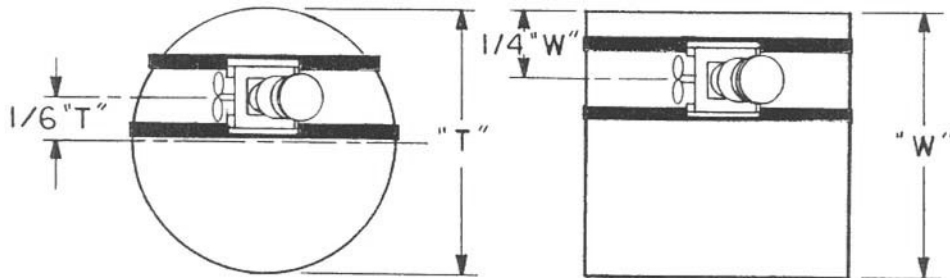


# MIXER POSITIONING



**VERTICAL  
CYLINDRICAL**

**CUBICAL  
(L = W)**



"T" = TANK DIAMETER  
 "D" = IMPELLER DIAMETER

## INTRODUCTION

The Neptune mixer is a carefully designed piece of precision equipment which will give you years of satisfactory service under normal operating conditions.

### A. INSPECTION

All Neptune mixers are shipped in a specially designed carton to insure against damage in shipment. Each shaft is shipped in an individual box. Upon receipt, examine the mixer for damage; report any damage to Neptune and the delivering carrier at once.

### B. LUBRICATION

The outboard ball bearing [30] and upper ball bearing [27] are sealed and pre-greased for bearing life. The gear box is lubricated at the factory. To change grease, remove motor midplate [21]. Clean gear box and gears with solvent. Repack with BR NO-TOX Open Gear Grease, #6245, Food Grade H-1, BEL-RAY CO.

For Mixer Models JG-1.0 through JG-2.3 use HASCO ALASKA CRYSTAL FM GREASE 2.

If lubrication of the motor is required, it will be indicated on the motor name plate.

### C. MOUNTING THE MIXER

Remove the mixer from the carton and attach clamp. Rotate the clamp to an initial position such that the motor will be upright when the unit is clamped to the tank.

Place the clamp on the desired location on the tank, being certain that both the horizontal and vertical surfaces of the clamp are in contact with the top and side of the tank. Rotate the nut clockwise to tighten; counter clockwise to loosen.

### D. MOUNTING MIXER SHAFT

Neptune supplies standard square pitch propellers which may be put on the mixer shaft either face up or face down. Place the propellers on the end of the shaft WITHOUT THE NOTCH. If two propellers are used, they should be spaced at least two propeller diameters apart. Be certain to securely tighten the propeller set screws. Place the end of shaft with the notch into the shaft collar until it bottoms. Insert the retaining pin-bolt [32] with the tapered flat facing the shaft into the collar (half way). Rotate the shaft to line up the shaft notch with the bolt flat and push the bolt-pin [32] into the collar complete. Place the lockwasher [33] on the pin-bolt and tighten with a hex nut [34]. (See Shaft Installation Diagram on pg. 5.)

### E. ELECTRICAL CONNECTIONS

Your Neptune mixer is designed to rotate clockwise when looking down on the end of the motor. This is so indicated by arrows cast on the mixer housing and Motor Midplate.

Follow the wiring directions as indicated on the motor to obtain proper rotation.

### F. MIXER POSITIONING

To utilize energy supplied by the mixer, a top to bottom turnover of the liquid should be created. The mixer shaft should be angled 5° to 15° off vertical wall of tank and pointed 20° to 30° right of the center line.

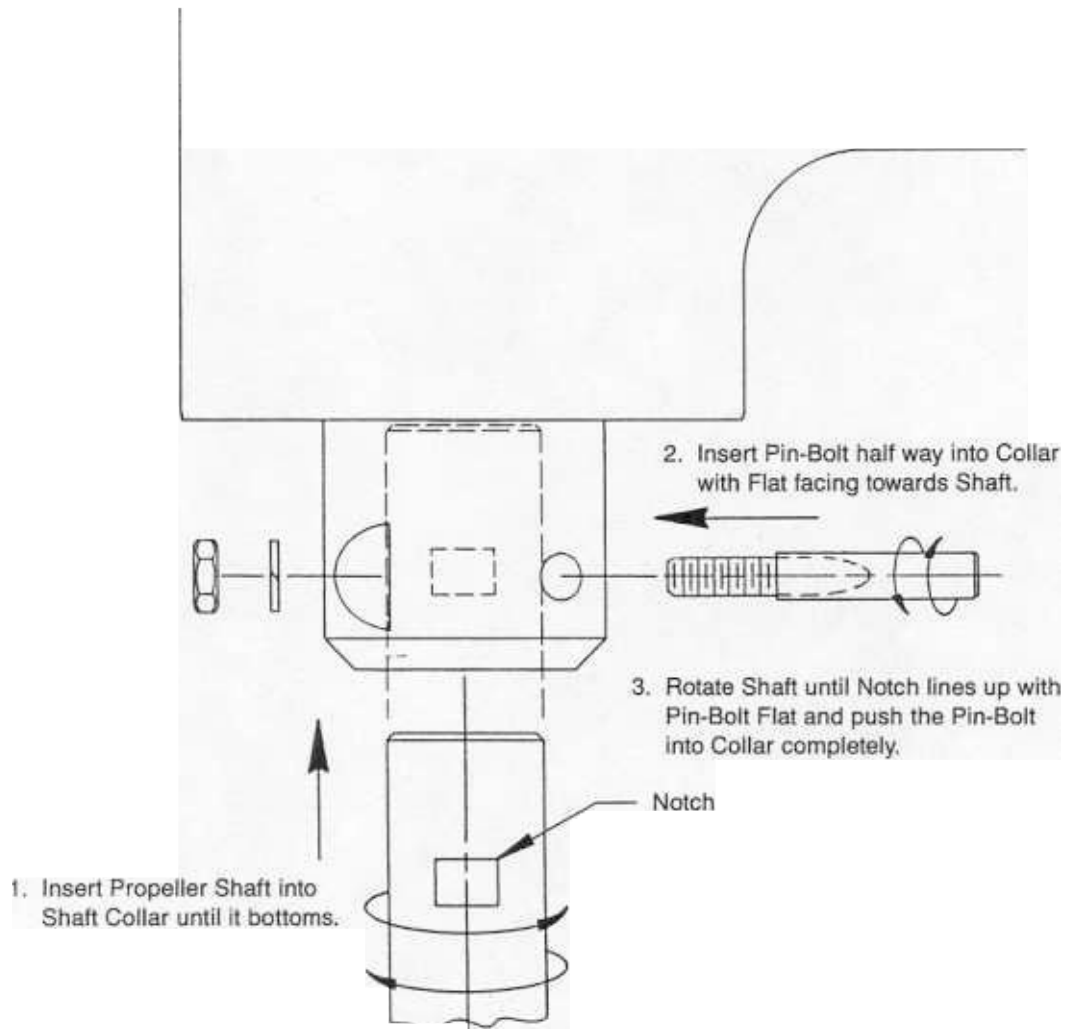
Moving the shaft to the left of the position described will increase swirl of vortex. This helps to submerge light powders or to aerate the mix but decreases mixing efficiency.

### G. MIXER OPERATION

Neptune mixers are designed for continuous operation under most normal conditions. It is not good practice to operate continuously when extreme vortexing occurs.

After mixer has been turned on and the mixing pattern developed, adjust mixer position if necessary.

After ten days of operation, check the Motor Midplate screws, the clamp screw, and shaft collar Hex Nut for tightness. At the end of a mixing period, it is a good practice to turn off the mixer before the tank is drained. Turn mixer off when liquid level is one propeller diameter above lower propeller.



**SHAFT INSTALLATION DIAGRAM**  
 (Refer to Section D.)

**SHAFT AND PROPELLER PARTS LIST**  
**For Series JG, JD Clamp Mount Model Mixers**  
**and Series JGR and JDR Angle Riser Mount Model Mixers**  
(Refer to Drawing on Page 8)

**ITEM  
NUMBER**

**MODEL  
JG7.1 – JG8.1**

**MODEL  
JG9.1**